Test Report for
DCU D603 Vent
at the
ExxonMobil Baytown Refinery
Performed July 14 through July 17, 2011

Prepared for:

ExxonMobil

ExxonMobil Corporation
Baytown, Texas

Prepared by:

TRC

TRC Environmental Corporation
Austin, Texas

Report Issued November 2011

TRC Report No. 182129.0000.0000

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Prepared for:

ExxonMobil Corporation
5000 Bayway Drive
Baytown, TX 77520

Prepared by:

TRC Environmental Corporation
9225 US 183 South
Austin, TX 78747
(512) 243-0202

TRC Report No. 182129.0000.0000

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REPORT CERTIFICATION

I certify that to the best of my knowledge:

- Testing data and all corresponding information have been checked for accuracy and completeness.
- Sampling and analysis have been conducted in accordance with the approved protocol and applicable reference methods (as applicable).
- All deviations, method modifications, or sampling and analytical anomalies are summarized in the appropriate report narrative(s).
- Total number of pages in this report - 2770

Michael J Krall
TRC Project Manager

December 14, 2011
Date

TRC was operating in conformance with the requirements of ASTM D7036-04 during this test program.

Jeffrey W. Burdette
TRC Air Measurements Technical Director

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1.0 EXECUTIVE SUMMARY

ExxonMobil owns and operates a petroleum refinery in Baytown, Texas that is subject to the U.S. Clean Air Act (CAA) Sections 111 and 112. ExxonMobil collected emissions data from the delayed coking unit (DCU) to generate information to compare to a database from similar units and sources within the U.S. to inform future rulemaking under Sections 111 and 112. Based on U.S. EPA's guidance for the test procedures, methods, and reporting requirements for creating such databases, a test program was designed that provided a plan to conduct emissions sampling at the DCU. This report presents the results of the test program conducted July 14 through 17, 2011.

TRC of Austin, Texas was contracted by ExxonMobil to conduct the testing program. TRC performed the sampling and particulate matter analyses, while Enthalpy Analytical, Inc. (Enthalpy); First Analytical, Inc.; and Test America performed the remainder of the analyses of the samples. Tables 1-1 through 1-9 present a summary of the test results.

Table 1-1. Quality Assurance Summary

ICR Group	Parameter	EPA Method	Section of Report	Sampling and Analytical Anomalies	Discussion Points	Effects on Data Quality
a	Volatile Organic HAPs	EPA Method 18 (XAD)	4.2.1	Matrix Spike (pre-sampling spikes)	Matrix spike is a quality assurance tool. Unable to use spikes due to high background baseline.	Unknown
		EPA Method 18 (bag)		None	Methane/Ethane emissions are more than total hydrocarbon emissions, and higher than expected using PV=NRT calculation.	Unknown
		EPA Method 18 (MeOH)		None	None	None
	Semi-Volatile Organic HAPs	SW 846 Method 0010	4.2.2	Surrogate Spike (pre-analysis spikes)	Surrogate spike is a quality assurance tool. Unable to use spikes due to high background baseline.	Unknown
				Run 2's Moisture content was low enough to be considered an outlier (79% vs. average of 98%)	Results from Run 2 may be inaccurate due to low moisture content.	Run 2's results were not used in the average emission rate calculations.
				Isokinetic specifications not met-Run 1=64.4%, Run 2 (not used), Run 3=204%	Isokinetic should be 100% +/- 10%. Known anomaly going into testing due to high velocity and low amount of dry sample.	Unknown
	Aldehydes	SW 846 Method 0011	4.2.3	Sample split for analysis due to high sample volumes (3-4 liters)	Sample volume is normally 1 L but had 3 to 5 L of sample. Sample was homogenized prior to split and lab composited prior to analyzing.	None (method deviation)
				Isokinetic specifications not met-Run 1=54.5%, Run 2=223%, Run 3=264%.	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	Unknown

ICR Group	Parameter	EPA Method	Section of Report	Sampling and Analytical Anomalies	Discussion Points	Effects on Data Quality
a	Total Hydrocarbons	EPA Method 25A	4.2.4/4.2.5	None	Very high O2 at beginning of run and by the end of run was about 2%. System passed all leak checks. Methane/Ethane emissions are more than total hydrocarbon emissions.	Unknown
	Methane and Ethane	EPA Method 18	4.2.1	None	Very high O2 at beginning of run and by the end of run was about 2%. System passed all leak checks. Methane/Ethane emissions are more than total hydrocarbon emissions.	Unknown
	Carbon Monoxide	EPA Method 10	4.2.6	None	Very high O2 at beginning of run and by the end of the run was about 2%. System passed all leak checks.	Unknown
c	Acid Gases	EPA Method 26A	4.2.7	Isokinetic specifications not met-Run 1=78.3%, Run 2=208%, Run 3+238%	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	Unknown
	Hydrogen Sulfide, Carbonyl Sulfide, and Carbon Disulfide	EPA Method 15	4.2.4/4.2.8	None	Large variability in Baytown results which may be due to the GC cycle time of 8 minutes. Baytown Run 2 had the most sample analysis due to the duration of the vent cycle. Very high O2 at beginning of run and by the end of the run was about 2%. System passed all leak checks.	Unknown

ICR Group	Parameter	EPA Method	Section of Report	Sampling and Analytical Anomalies	Discussion Points	Effects on Data Quality
c	Total Reduced Sulfur	EPA Method 15	4.2.4/4.2.8	None	Very high O2 at beginning of run and by the end of the run was about 2%. System passed all leak checks.	Unknown
d	Mercury	ASTM D6784-02	4.2.9	Reagent Blank	Blank and sample concentrations are comparable	None
				Lack of color from KMnO4	Due to the amount of liquid sample going through the impinger probably diluted the KCl concentration	Spike recovery was 83%. Results possibly biased low but considered valid.
				Isokinetic specifications not met-Run 1=68.9, Run 2+226%, run 3=271%	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	Unknown
	Metals	EPA Method 29	4.2.10	Isokinetic specifications not met-Run 1=66.3%, Run 2=205%, run 3=232%	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	Unknown
	PM / PM2.5 filterable	EPA Method 5	4.2.11	Isokinetic specifications not met-Run 1=51.6%, Run 2=196%, run 3+215	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	Unknown
	PM2.5 Condensable	EPA Method 202	4.2.11	Isokinetic specifications no met-Run 1=51.6%, Run 2=196%, Run 3=215%	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	Unknown
	Oxides of Nitrogen	EPA Method 7E	4.2.13	None	Very high O2 at beginning of run and by the end of the run was about 2%. System passed all leak checks.	Unknown
	Sulfur Dioxide	EPA Method 6C	4.2.14	None	Very high O2 at beginning of run and by the end of the run was about 2%. System passed all leak checks.	Unknown

ICR Group	Parameter	EPA Method	Section of Report	Sampling and Analytical Anomalies	Discussion Points	Effects on Data Quality
a,c,d	Gas Flow Rate	EPA Method 2	4.2.12	The vent flow rate was extremely variable over the testing periods. Isokinetic sampling was not possible since the sampling rate was fixed at maximum vacuum settings.	Isokinetic should be 100% +/- 10%. Known anomaly due to high velocity and low amount of dry sample.	None
	Oxygen and Carbon Dioxide	EPA Method 3A	4.2.15	None	Very high O2 at beginning of run and by the end of the run was about 2%. System passed all leak checks	Unknown
	Moisture	EPA method 4	4.2.16	None. Standard combustion gas methods used on vent gas that was nearly 100% steam.	Run 2 of Semi-Volatile Organic HAPs was the only moisture sample result which was not within the expected concentrations. This sample was not used in the calculation of averages.	All sampling was adversely affected due to the method modifications necessary to manage the high water content.

Table 1-1A. Volatile Organic HAPs (by Bag Sampling) Summary of Results

***Average Flow Rate: 9,346 dscfh**	**3-Run Average Emissions**	
Compound	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**
Acetone	<1.67	<0.00130
Acrolein	<0.958	<0.00066
Benzene	<379	<0.341
1,3-Butadiene	<0.987	<0.00065
Carbon disulfide	<5.91	<0.00471
1,2-Dibromoethane	189	0.500
Hexane	<101	<0.119
Methylene chloride	<1.73	<0.00181
Pentane	<308	<0.292
Tetrachloroethene	<2.88	<0.00644
Toluene	<1,205	<1.30
Trichloroethene	<7.84	<0.00753

< = A minimum of one sample result was less than detection limit

* Average flow rate obtained from the Ontario Hydro Sampling data

Table 1-1B. Volatile Organic HAPs by Tube Sampling Summary of Results

*** Average Flow Rate: 9,346 dscfh**	**3-Run Average Emissions**	
Compound	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
Acetonitrile	<36,295	<0.0125
Acrylonitrile	<5,263	<0.00175
Chlorobenzene	<2,763	<0.0008
Cumene (isopropylbenzene)	<13,910	<0.00478
Ethylbenezene	355,562	0.120
Methy1 isobuty1 ketone	<1,984	<0.00057
Methy1 t-buty1 ether	25,018	0.00950
Nitrobenzene	175,676	0.0419
2-Nitropropane	<59991	<0.0211
Styrene	<9374	<0.00340
2,2,4-Trimethylpentane	<1,721	<0.00049
m,p-Xylene	2,339,445	0.762
o-Xylene	561,079	0.185
Methanol([a])	<2,753	<0.00089

< = A minimum of one sample result was less than detection limit

([a]) Methanol (MeOH) collected by EPA Method 308 sampling train.
*Average flow rate obtained from the Ontario Hydro Sampling data

Table 1-2. Semi-Volatile Organic HAPs Summary of Results

*Average Flow Rate: 9,346 dscfh	2-Run Average[(a)] Emissions	
Compound	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
Acenaphthene	22,602	0.00610
Acenaphthylene	<27,818	<0.00786
Aniline	<27,818	<0.00786
Anthracene	51,510	0.01231
Benz(a)anthracene	<19,056	<0.00644
Benzidine	<278,183	<0.0786
Benzo(b)fluoranthene	<27,818	<0.00786
Benzo(k)fluoranthene	<27,818	<0.00786
Benzo(g,h,i)perylene	<27,818	<0.00786
Benzo(a)pyrene	<18,546	<0.00427
Benzo(e)pyrene	<14,336	<0.00264
Biphenyl	16,506	0.00406
Chrysene	<27,818	<0.00786
Cresols	<27,818	<0.00786
Dibenz(a,h)anthracene	<27,818	<0.00786
Dibenzofuran	12,727	0.00307
Dibenzo(a,e)pyrene	<27,818	<0.00786
3,3'-Dimethoxybenzidine	<150,219	<0.02906
p-Dimethylaminoazobenzene	<27,818	<0.00786
7,12-Dimethylbenz(a)anthracene	<27,818	<0.00786
3,3'-Dimethylphenol	<278,183	<0.0786
Alpha, alpha-Dimethylphenethylamine	<69,546	<0.01966
2,4-Dimethylphenol	<27,818	<0.00786
Fluoranthene	<27,818	<0.00786
Fluorene	62,823	0.0152
Indeno-1,2,3-cd-pyrene	<27,818	<0.00614
Isophorone	<27,818	<0.00614
3-Methylcholanthrene	<27,818	<0.00614
2-Methylnaphthalene	1,008,414	0.256
Naphthalene	565,639	0.1463
Nitrobenzene	<27,818	<0.00786
Perylene	<27,818	<0.00786
Phenanthrene	108,028	0.0251
Phenol	<27,818	<0.00786
1,4-Phenylenediamine	<278,183	<0.07863
Pyrene	22,440	0.00521
o-Toluidine	<21,652	<0.00686

< = A minimum of one sample result was less than detection limit
* Average flow rate obtained from the Ontario Hydro Sampling data
[(a)]Run 2 not included in average due to low moisture result for that run.

Table 1-3. Aldehydes Summary of Results

*Average Flow Rate: 9,346 dscfh	3-Run Average Emissions	
Compound	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
Formaldehyde	950	0.00026
Acetaldehyde	12,060	0.00360
Propionaldehyde	1,233	0.00037

*Average flow rate obtained from the Ontario Hydro Sampling data

Table 1-4. Other Gaseous Compounds Summary of Results

*Average Flow Rate: 9,346 dscfh	3-Run Average Emissions	
Compound	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**
Total Hydrocarbons[(a)]	40,200	24.7
Methane	403,193	75.3
Ethane	58,971	21.4
Carbon Monoxide[(a)]	7.0	0.00278
Nitrogen Oxides[(a)]	1.6	0.000938
Sulfur Dioxide[(a)]	50.2	0.0447
Hydrogen Sulfide[(a)]	8,565	3.72
Carbonyl Sulfide[(a)]	<526	<0.369
Carbon Disulfide[(a)]	<178	<0.158
Total Reduced Sulfur[(a)]	<9,446	<4.25

< = A minimum of one sample result was less than detection limit

* Average flow rate obtained from the Ontario Hydro Sampling data

[(a)]Samples collected through dilution probe – see Section 4.2.4 for data qualification

Table 1-5. Acid Gases Summary of Results

***Average Flow Rate: 9,346 dscfh**	**3-Run Average Emissions**	
Compound	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**
Hydrogen Chloride	<11.7	<0.00324
Chlorine Gas	<3.39	<0.00113
Hydrogen Fluoride	<11.6	<0.00318
Hydrogen Cyanide	<0.642	<0.000181

< = A minimum of one sample result was less than detection limit

*Average flow rate obtained from the Ontario Hydro Sampling data

Table 1-6. Mercury Summary of Results

***Average Flow Rate: 9,346 dscfh**	**3-Run Average Emissions**	
Compound	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
Mercury - Oxidized	<48.8	<0.0000141
Mercury - Elemental	<98.7	<0.0000303

< = A minimum of one sample result was less than detection limit

*Average flow rate obtained from the Ontario Hydro Sampling data

Table 1-7. Metals Summary of Results

***Average Flow Rate: 9,346 dscfh**	**3-Run Average Emissions**	
Compound	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**
Antimony	<0.0603	<0.000016
Arsenic	<0.0345	<0.00000965
Beryllium	<0.00302	<0.000000798
Cadmium	<0.120	<0.000032
Chromium	0.487	0.000140
Cobalt	<0.274	<0.000099
Lead	0.0462	0.000012
Manganese	2.88	0.000747
Nickel	1.23	0.000331
Selenium	<0.262	<0.000092

< = A minimum of one sample result was less than detection limit

*Average flow rate obtained from the Ontario Hydro Sampling data

Table 1-8. Particulate Matter Summary of Results

***Average Flow Rate: 9,346 dscfh**	**3-Run Average Emissions**	
Compound	**Gas Conc. (gr/dscf)**	**Emission Rate (lb/vent cycle)**
Filterable PM	1.31	0.823
Inorganic (Aqueous) Condensable PM	0.857	0.475
Organic Condensable PM	1.17	0.881
Total Condensable PM [(a)]	2.027	1.356
Total PM	3.33	2.18

* Average flow rate obtained from the Ontario Hydro Sampling data

(a) Total condensable PM is considered a surrogate for PM2.5 per EPA ICR Component 4

Table 1-9. General Sampling Data Summary of Results

Stack Gas Parameter	**3-Run Average Measured Value**	**Units**
Oxygen[(a)]	14.4	**Vol. %, dry**
Carbon Dioxide[(a)]	0.0	**Vol. %, dry**
Moisture	97.9	**Vol. %**
Flow Rate	10,208	**acfm**
Flow Rate	7,147	**scfm**
Flow Rate	155.8	**dscfm**

[(a)]Samples collected through dilution probe – see Section 3.1.2 for data qualification

2.0 INTRODUCTION

ExxonMobil owns and operates a petroleum refinery in Baytown, Texas that is subject to the U.S. Clean Air Act (CAA) Sections 111 and 112. ExxonMobil collected emissions data from the delayed coking unit (DCU) to generate information to compare to a database from similar units and sources within the U.S. to inform future rulemaking under Sections 111 and 112. Based on U.S. EPA's guidance for the test procedures, methods, and reporting requirements for creating such databases, a test program was designed that provided a plan to conduct emissions sampling at the DCU. This report presents the results of the test program conducted July 14 through 17, 2011.

TRC of Austin, Texas was contracted by ExxonMobil to conduct the testing program. TRC performed the sampling and particulate matter analyses, while Enthalpy Analytical, Inc. (Enthalpy), First Analytical, Inc. and Test America performed the remainder of the analyses of the samples. Table 2-1 presents the general facility and testing information for this test program.

Section 3.0 presents the complete findings of the test results. Section 4.0 presents the sampling and analytical procedures followed during the test program. Section 5.0 specifies the description of the Quality Assurance/Quality Control (QA/QC) procedures followed throughout the test program.

2.1 Process Description

The Delayed Coker Unit (DCU) is a thermal process used to upgrade bottom-of-the-barrel material, typically vacuum residuum, but also asphalt/bottoms from a deasphalter into higher value gas and liquid products and a byproduct, coke.

The feed material is heated in a furnace and sent to a coke drum under proper conditions to allow the feed to be converted to vapor and coke. The overall reaction is endothermic with the furnace supplying the necessary heat for vaporization and cracking. The DCU has a total of four coke drums, and the coke drums operate in pairs. While one drum is coking the other drum is out of service for cooling, draining, depressurizing, unheading and decoking. After all coke has been removed, the out of service drum is reheaded, air-freed; pressure tested, and warmed up to prepare it for coking service. On a regular scheduled cycle, feed is switched from the drum in coking service to the drum that is warming up.

Baytown tested one coke drum during the depressurization step. This drum would be representative of the other three coke drums. Figure 2-1 presents a schematic drawing of the DCU tested during this program.

Table 2-1. General Facility and Testing Information

Facility Name and Address	ExxonMobil 5000 Bayway Drive Baytown, Texas 77520
Contact Person	Ms. Diane Otto
Contact Telephone No.	(281) 834-1169
Testing Company Name and Address	TRC Environmental Corporation 9225 US Hwy 183 South Austin, Texas 78747
Contact Person	Mr. Michael J Krall
Contact Information	(512) 809-8507/ mkrall@trcsolutions.com
Report Number	182129.0000.0000
Persons Conducting Test	Michael J Krall, John Glass Arthur Nava, Randy Monson Clayton Elliott, Dave Williams Ken Allmendinger, Stuart Lockwood Steve Bell, Greg Wallentine Marc Christal
Source(s) Tested	DCU D603 Vent
Applicable Regulation	U.S EPA Clean Air Act (CAA) Section 114 Refinery ICR
Date of Test	July 14, 2011 and July 16-17, 2011
Test Parameters	EPA Method 2 - Gas flow rate EPA Method 3A - Oxygen (O2) and carbon monoxide (CO) EPA Method 4 - Moisture content EPA Methods 5B/202 – Particulate matter EPA Method 6C – Sulfur dioxide EPA Method 7E – Nitrogen oxides EPA Method 10 - Carbon monoxide (CO) SW-846 Method 0010 - Speciated semi-volatile organic HAPs SW-846 Method 0011 – Aldehydes EPA Method 15 – Speciated sulfur compounds EPA Method 16B - Total reduced sulfur (TRS) EPA Method 18 - Speciated volatile organic HAPs; methane/ethane EPA Method 25A - Total hydrocarbons (THC) EPA Method 26A – Acid gases EPA Method 29 – Metals Ontario Hydro - Mercury

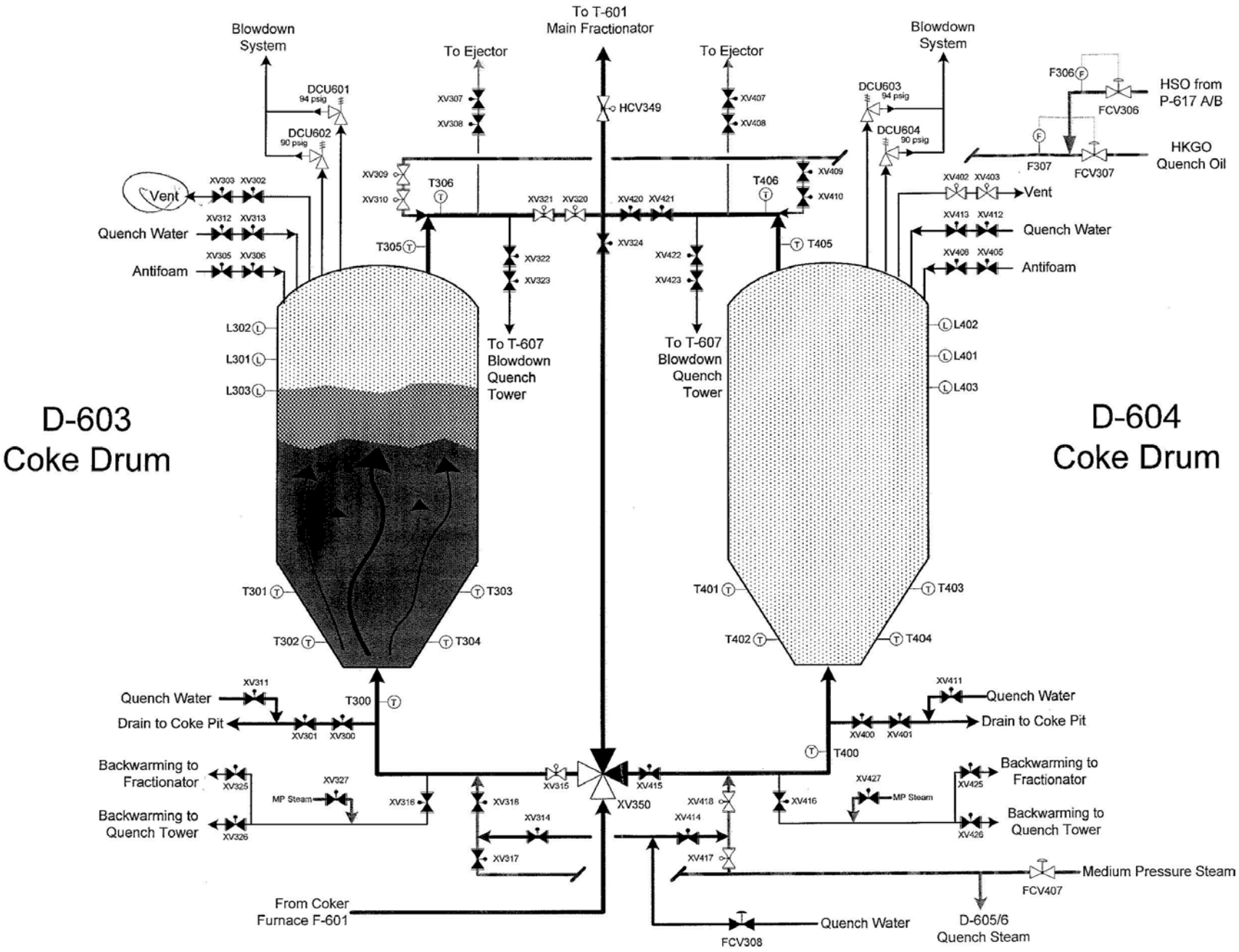


Figure 2-1. DCU Process Schematic

3.0 DETAILED RESULTS

The test results are presented in this section. Tables 3-1 through 3-9 present the run-by-run detailed test results conducted on the DCU D603 Vent. Detailed data are located in the appendices along with field data and the analytical reports.

3.1 Data Qualifications

3.1.1 *Sample Moisture*

To calculate the mass rates for all parameters, the dry flow rates from the Ontario Hydro (OH) sampling data were used due to the consistency in the OH sampling train moisture content from run to run (lowest standard deviation), and the average OH flow rate was representative of the overall average from all the sampling trains (Run 2 of the semivolatile HAPs train was an outlier data point at 79% moisture and biased the overall average low). Since the velocity determinations for all sampling trains were taken from a single point in the duct and applied to all sampling trains, the moisture content of each individual train was the most significant factor in the dry flow rate calculations used to determine mass rates. Table 4-1 provides a statistical presentation of moisture content for all sampling trains and the justification for using the Ontario Hydro train's moisture data.

3.1.2 *CEMS Dilution Probe*

A dilution probe system was used for the measurement of O_2, CO_2, THC, NOx, SO_2, CO, and reduced sulfur compounds. This system was equipped with critical orifice technology to precisely meter the sample and nitrogen gas dilution gas and was used to reduce the high moisture content of the vent gas to allow the analyzers to accurately measure each parameter.

Table 3-1A. Volatile Organic HAPs Results by Bag Sampling

Run No.:	1					
Date:	7/14/2011					
Time:	2006 – 2026					
Sample Gas Volume (dsl):	10.115					
Flow Rate (dscfh):	18,614				3-Run Average	
Compound	**Bag Gas Conc[(a)] (ppmvd)**	**Condensate Equiv. Conc. (ppmvd)**	**Total Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**
Acetone	<0.415	0.852	<1.27	<0.00118	<1.67	<0.00130
Acrolein	<0.283	<0.543	<0.826	<0.00075	<0.958	<0.00066
Benzene	264	<0.335	<264	<0.332	<379	<0.341
1,3-Butadiene	<0.282	<0.567	<0.849	<0.00074	<0.987	<0.00065
Carbon disulfide	1.42	<0.133	<1.55	<0.00190	<5.91	<0.00471
1,2-Dibromoethane	242	1.21	243	0.736	189	0.500
Hexane	92.6	<0.254	<93.0	<0.129	<101	<0.119
Methylene chloride	<0.958	0.624	<1.58	<0.00216	<1.73	<0.00181
Pentane	245	<0.666	<246	<0.285	<308	<0.292
Tetrachloroethene	<0.291	2.42	<2.71	<0.00725	<2.88	<0.00644
Toluene	902	<0.555	<903	<1.34	<1205	<1.30
Trichloroethene	<0.401	<0.226	<0.627	<0.00133	<7.84	<0.00753

< = Sample result was less than detection limit

[(a)] Bag sample results may be biased high. See Section 4.2.1 for data qualification.

Table 3-1B. Volatile Organic HAPs Results by Bag Sampling

Run No.:	2				3-Run Average	
Date:	7/16/2011					
Time:	0043 – 0143					
Sample Gas Volume (dsl):	6.976					
Flow Rate (dscfh):	5,508					
Compound	**Bag Gas Conc.[(a)] (ppmvd)**	**Condensate Equiv. Conc. (ppmvd)**	**Total Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**
Acetone	<0.415	2.48	<2.89	<0.00240	<1.67	<0.00130
Acrolein	<0.283	<0.787	<1.07	<0.00086	<0.958	<0.00066
Benzene	387	2.61	390	0.435	<379	<0.341
1,3-Butadiene	<0.282	<0.822	<1.10	<0.00085	<0.987	<0.00065
Carbon disulfide	6.61	<0.193	<6.81	<0.00741	<5.91	<0.00471
1,2-Dibromoethane	246	2.35	248	0.667	189	0.500
Hexane	162	<0.369	<162	<0.200	<101	<0.119
Methylene chloride	<0.958	<0.905	<1.86	<0.00226	<1.73	<0.00181
Pentane	472	2.84	475	0.490	<308	<0.292
Tetrachloroethene	<0.291	4.05	<4.35	<0.0103	<2.88	<0.00644
Toluene	1,252	4.34	1,256	1.65	<1205	<1.30
Trichloroethene	<0.401	0.504	<0.905	<0.00170	<7.84	<0.00753

< = Sample result was less than detection limit

[(a)] Bag sample results may be biased high. See Section 4.2.1 for data qualification.

Table 3-1C. Volatile Organic HAPs Results by Bag Sampling

Run No.:	3				3-Run Average	
Date:	7/17/2011					
Time:	0626 – 0706					
Sample Gas Volume (dsl):	7.912					
Flow Rate (dscfh):	3,916					
Compound	**Bag Gas[(a)] Conc. (ppmvd)**	**Condensate Equiv. Conc. (ppmvd)**	**Total Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**
Acetone	<0.415	0.424	<0.839	<0.00033	<1.67	<0.00130
Acrolein	<0.283	<0.694	<0.977	<0.00037	<0.958	<0.00066
Benzene	481	0.607	482	0.255	<379	<0.341
1,3-Butadiene	<0.282	<0.725	<1.01	<0.00037	<0.987	<0.00065
Carbon disulfide	9.19	<0.171	<9.40	<0.00483	<5.91	<0.00471
1,2-Dibromoethane	74	1.49	75.5	0.0961	189	0.500
Hexane	48.0	<0.325	<48.3	<0.0282	<101	<0.119
Methylene chloride	<0.958	0.798	<1.76	<0.00101	<1.73	<0.00181
Pentane	204	<0.851	<205	<0.100	<308	<0.292
Tetrachloroethene	<0.291	1.28	<1.57	<0.00176	<2.88	<0.00644
Toluene	1,456	0.822	1,457	0.910	<1,205	<1.30
Trichloroethene	21.7	<0.289	<22.0	<0.0196	<7.84	<0.00753

< = Sample result was less than detection limit

[(a)] Bag sample results may be biased high. See Section 4.2.1 for data qualification.

Table 3-2. Volatile Organic HAPs Results by Tube Sampling

Run No.:	1			2			3			3-Run Average	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dsl):	9.447			13.176			8.204				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (µg)**	**Gas Conc. (µg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (µg/dscm)**	**Emission Rate (lb/vent cycle)**
Acetonitrile	316	33,492	0.0130	897	68,078	0.0234	<60.0	<7,314	<0.00119	<36,295	<0.0125
Acrylonitrile	<97.1	<10283	<0.00398	<27.8	<2113	<0.00073	<27.8	<3393	<0.00055	<5263	<0.00175
Chlorobenzene	<27.3	<2890	<0.0011	<27.3	<2072	<0.0007	<27.3	<3328	<0.00054	<2763	<0.0008
Cumene (isopropylbenzene)	100	10,585	0.00410	376	28,537	0.00981	<21.4	<2608	<0.00043	<13910	<0.00478
Ethylbenezene	2,942	311,422	0.121	8,530	647,389	0.223	885	107,874	0.018	355,562	0.120
Methyl isobutyl ketone	<19.6	<2075	<0.00080	<19.6	<1488	<0.00051	<19.6	<2389	<0.00039	<1984	<0.00057
Methyl t-butyl ether	675	71,451	0.0277	16.0	1,214	0.00042	19.6	2,389	0.00039	25,018	0.00950
Nitrobenzene	833	88,176	0.0342	1,454	110,352	0.0379	2,695	328,498	0.0535	175,676	0.0419
2-Nitropropane	<449	<47545	<0.0184	<1,690	<128276	<0.0441	<34.1	<4152	<0.00068	<59991	<0.0211
Styrene	224	23,711	0.00919	<22.3	<1692	<0.00058	<22.3	<2718	<0.00044	<9374	<0.00340
2,4-Trimethylpentane	<17.0	<1800	<0.00070	<17.0	<1290	<0.00044	<17.0	<2072	<0.00034	<1721	<0.00049
m,p-Xylene	18,460	1,954,059	0.757	51,349	3,897,162	1.34	9,575	1,167,114	0.190	2,339,445	0.762
o-Xylene	4,738	501,535	0.194	12,244	929,265	0.320	2,071	252,438	0.0411	561,079	0.185
Methanol[a]	12.6	4,325	0.00168	30.3	1,995	0.00069	<6.75	<1939	<0.00032	<2753	<0.00089

< = Sample result was less than detection limit

a Methanol (MeOH) collected by EPA Method 308 sampling train.

MeOH sample volumes (dsl): Run 1 2.913
Run 2 15.190
Run 3 3.481

Table 3-3A. Semi-Volatile Organic HAPs Results

Run No.:	1			2			3			2-Run Average[a]	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dscf):	0.952			3.617			1.088				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (µg)**	**Gas Conc. (µg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
Acenaphthene	580	21513	0.0083	680	6638	0.00228	730	23692	0.00386	22602	0.00610
Acenaphthylene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Aniline	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Anthracene	940	34866	0.0135	810	7908	0.00272	2100	68155	0.01111	51510	0.01231
Benz(a)anthracene	<800	<29673	<0.0115	450	4393	0.00151	260	8438	0.00138	<19056	<0.00644
Benzidine	<8000	<296729	<0.115	<8000	<78099	<0.0269	<8000	<259638	<0.04232	<278183	<0.0786
Benzo(b)fluoranthene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Benzo(k)fluoranthene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Benzo(g,h,i)perylene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Benzo(a)pyrene	300	11127	0.0043	580	5662	0.00195	<800	<25964	<0.00423	<18546	<0.00427
Benzo(e)pyrene	73	2708	0.0010	300	2929	0.00101	<800	<25964	<0.00423	<14336	<0.00264
Biphenyl	330	12240	0.0047	460	4491	0.00154	640	20771	0.00339	16506	0.00406
Chrysene	<800	<29673	<0.0115	450	4393	0.00151	<800	<25964	<0.00423	<27818	<0.00786
Cresols	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Dibenz(a,h)anthracene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Dibenzofuran	240	8902	0.0034	270	2636	0.000906	510	16552	0.00270	12727	0.00307
Dibenzo(a,e)pyrene	<800	<29673	<0.0115	370	3612	0.00124	<800	<25964	<0.00423	<27818	<0.00786
3,3'-Dimethoxybenzidine	1100	40800	0.0158	1100	10739	0.00369	<8000	<259638	<0.0423	<150219	<0.02906

< = Sample result was less than detection limit.

(a) Run 2 not included in average due to low moisture result for that run.

Table 3-3B. Semi-Volatile Organic HAPs Results (Continued)

Run No.:	1			2			3			2-Run Average[a]	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dscf):	0.952			3.617			1.088				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (µg)**	**Gas Conc. (µg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
p-Dimethylaminoazobenzene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
7,12-Dimethylbenz(a)anthracene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
3,3'-Dimethylphenol	<8000	<296729	<0.115	<8000	<78099	<0.0269	<8000	<259638	<0.0423	<278183	<0.0786
Alpha,alpha-Dimethylphenethylamine	<2000	<74182	<0.0287	<2000	<19525	<0.00671	<2000	<64909	<0.0106	<69546	<0.01966
2,4-Dimethylphenol	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Fluoranthene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Fluorene	1200	44509	0.0172	1200	11715	0.00403	2500	81137	0.01322	62823	0.0152
Indeno-1,2,3-cd-pyrene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00614
Isophorone	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00614
3-Methylcholanthrene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00614
2-Methylnaphthalene	22000	816004	0.3161	31000	302636	0.104	37000	1,200,825	0.19573	1,008,414	0.256
Naphthalene	13000	482,184	0.1868	15000	146,437	0.0504	20000	649,094	0.10580	565,639	0.1463
Nitrobenzene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Perylene	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
Phenanthrene	1800	66764	0.0259	1700	16596	0.00571	4600	149292	0.02433	108028	0.0251
Phenol	<800	<29673	<0.0115	<800	<7810	<0.00269	<800	<25964	<0.00423	<27818	<0.00786
1,4-Phenylenediamine	<8000	<296729	<0.115	<8000	<78099	<0.0269	<8000	<259638	<0.0423	<278183	<0.07863
Pyrene	370	13724	0.0053	540	5272	0.00181	960	31157	0.00508	22440	0.00521
o-Toluidine	<800	<29673	<0.0115	<800	<7810	<0.00269	420	13631	0.00222	<21652	<0.00686

< = Sample result was less than detection limit

(a) Run 2 not included in average due to low moisture result for that run.

Table 3-4. Aldehydes Results

Run No.:	1			2			3			3-Run Average	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dscf):	0.813			3.219			1.103				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (µg)**	**Gas Conc. (µg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (µg)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ug/dscm)**	**Emission Rate (lb/vent cycle)**
Formaldehyde	24.5	1,064	0.00041	46	505	0.00017	40	1,281	0.00021	950	0.00026
Acetaldehyde	410	17,807	0.00690	455	4,991	0.00172	418	13,382	0.00218	12,060	0.00360
Propionaldehyde	39.7	1,724	0.00067	63.9	701	0.00024	39.8	1,274	0.00021	1,233	0.00037

Table 3-5. Other Gaseous Compounds Results

Run No.:	1		2		3		3-Run Average	
Date:	7/14/2011		7/16/2011		7/17/2011			
Time:	2006 – 2026		0043 – 0143		0626 – 0706			
Flow Rate (dscfh):	18,614		5,508		3,916			
Compound	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (ppmvd)**	**Emission Rate (lb/vent cycle)**
Total Hydrocarbons[(a)]	13,370	9.50	97,883	61.7	9,319	2.79	40,200	24.7
Methane	241,708	62.3	484,034	111	483,837	52.6	403,193	75.3
Ethane	39,250	19.0	76,346	32.8	61,316	12.5	58,971	21.4
Carbon Monoxide[(a)]	4.2	0.00190	15.5	0.00620	1.3	0.000253	7.0	0.00278
Nitrogen Oxides[(a)]	1.1	0.000800	2.6	0.00170	1.0	0.000313	1.6	0.000938
Sulfur Dioxide[(a)]	30.8	0.0317	103	0.0950	16.8	0.00733	50.2	0.0447
Hydrogen Sulfide[(a)]	552	0.303	19,696	9.60	5,446	1.26	8,565	3.72
Carbonyl Sulfide[(a)]	<468	<0.452	<448	<0.385	<661	<0.269	<526	<0.369
Carbon Disulfide[(a)]	<158	<0.194	<152	<0.165	<224	<0.115	<178	<0.158
Total Reduced Sulfur[(a)]	<1,337	<0.950	<20,447	<10.2	<6,555	<1.64	<9,446	<4.25

< = Sample result was less than detection limit.

[(a)] Samples collected through dilution probe – see Section 4.2.4 for data qualification.

Table 3-6. Acid Gases Results

Run No.:	1			2			3			3-Run Average	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dscf):	0.887			3.102			1.032				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (mg)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (mg)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (mg)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**
Hydrogen Chloride	0.320	12.7	0.00493	<0.567	<6.46	<0.00222	<0.461	<15.8	<0.00257	<11.7	<0.00324
Chlorine Gas	0.177	7.05	0.00273	<0.069	<0.786	<0.000270	<0.0682	<2.33	<0.000380	<3.39	<0.00113
Hydrogen Fluoride	<0.301	<12.0	<0.00464	<0.581	<6.62	<0.00227	<0.472	<16.2	<0.00263	<11.6	<0.00318
Hydrogen Cyanide	<0.0198	<0.788	<0.000305	<0.0252	<0.287	<0.0000986	<0.0249	<0.852	<0.000139	<0.642	<0.000181

< = Sample result was less than detection limit

Table 3-7. Mercury Results

Run No.:	1			2			3			3-Run Average	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dscf):	0.978			2.845			1.618				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	Mass Detected (ug)	Gas Conc. (ug/dscm)	Emission Rate (lb/vent cycle)	Mass Detected (ug)	Gas Conc. (ug/dscm)	Emission Rate (lb/vent cycle)	Mass Detected (ug)	Gas Conc. (ug/dscm)	Emission Rate (lb/vent cycle)	Gas Conc. (ug/dscm)	Emission Rate (lb/vent cycle)
Mercury - Oxidized	<1.56	<56.3	<0.0000218	<2.60	<32.3	<0.0000111	<2.65	<57.8	<0.00000943	<48.8	<0.0000141
Mercury - Elemental	<3.67	<133	<0.0000513	<5.73	<71.1	<0.0000245	<4.22	<92.1	<0.000015	<98.7	<0.0000303

< = All sample fractions except one (Run 2 filter = 0.02 ug) were less than detection limit.

Table 3-8. Metals Results

Run No.:	1			2			3			3-Run Average	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 -0706				
Gas Volume (dscf):	1.370			1.863			0.773				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (mg)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (mg)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (mg)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (mg/dscm)**	**Emission Rate (lb/vent cycle)**
Antimony	<0.002	<0.0516	<0.0000200	<0.002	<0.0379	<0.0000130	<0.002	<0.0914	<0.0000149	<0.0603	<0.0000160
Arsenic	<0.0015	<0.0387	<0.0000150	<0.001	<0.0190	<0.00000652	<0.001	<0.0457	<0.00000745	<0.0345	<0.00000965
Beryllium	<0.0001	<0.00258	<0.000000998	<0.0001	<0.00190	<0.000000652	<0.0001	<0.00457	<0.000000745	<0.00302	<0.000000798
Cadmium	<0.0032	<0.0825	<0.0000320	0.0055	0.104	0.0000358	0.0038	0.174	0.0000283	<0.120	<0.0000320
Chromium	0.0164	0.423	0.000164	0.0256	0.485	0.000167	0.0121	0.553	0.0000901	0.487	0.000140
Cobalt	<0.0267	<0.688	<0.000267	<0.0023	<0.0436	<0.0000150	<0.0020	<0.0914	<0.0000149	<0.274	<0.0000988
Lead	0.0014	0.0361	0.0000140	0.0018	0.0341	0.0000117	0.0015	0.0685	0.0000112	0.0462	0.0000123
Manganese	0.0087	0.224	0.0000869	0.228	4.32	0.00149	0.0898	4.10	0.000669	2.88	0.000747
Nickel	0.0148	0.382	0.000148	0.0898	1.70	0.000585	0.035	1.60	0.000261	1.23	0.000331
Selenium	0.0206	0.531	0.000206	<0.0086	<0.163	<0.0000561	<0.0020	<0.0914	<0.0000149	<0.262	<0.0000922

< = Sample result was less than detection limit

Table 3-9. Particulate Matter Results

Run No.:	1			2			3			3-Run Average	
Date:	7/14/2011			7/16/2011			7/17/2011				
Time:	2006 - 2026			0043 - 0143			0626 - 0706				
Gas Volume (dscf):	0.666			2.488			0.738				
Flow Rate (dscfh):	18,614			5,508			3,916				
Compound	**Mass Detected (mg)**	**Gas Conc. (gr/dscf)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (mg)**	**Gas Conc. (gr/dscf)**	**Emission Rate (lb/vent cycle)**	**Mass Detected (mg)**	**Gas Conc. (gr/dscf)**	**Emission Rate (lb/vent cycle)**	**Gas Conc. (gr/dscf)**	**Emission Rate (lb/vent cycle)**
Filterable PM	17.1	0.396	0.351	313.2	1.94	1.53	75.6	1.58	0.590	1.31	0.823
Inorganic(Aqueous) Condensable PM	28.1	0.651	0.577	51.8	0.321	0.253	76.4	1.60	0.596	0.857	0.475
Organic Condensable PM	24.8	0.575	0.509	405.7	2.52	1.98	19.8	0.414	0.154	1.17	0.881
Total Condensable PM[(a)]	52.9	1.226	1.086	457.5	2.841	2.233	96.2	2.014	0.750	2.027	1.356
Total PM	70.0	1.62	1.44	770.7	4.78	3.76	171.8	3.59	1.34	3.33	2.18

(a) Total condensable PM is considered a surrogate for PM2.5 per EPA ICR Component 4

Table 3-10. General Sampling Data Results

Run No.: Date: Time:	1 7/14/2011 2006 – 2026	2 7/16/2011 0043 – 0143	3 7/17/2011 0626 – 0706	3-Run Average
Vent Gas Parameter	**Measured Value**	**Measured Value**	**Measured Value**	**Measured Value**
Oxygen (Vol. %, Dry) [(a)]	14.0	12.8	16.5	14.4
Carbon Dioxide (Vol. %, Dry) [(a)]	0.0	0.1	0.0	0.0
Moisture (Vol. %)	97.7	97.6	98.4	97.9
Flow rate (acfm)	19,967	5,062	5,595	10,208
Flow rate (scfm)	13,570	3,845	4,027	7,147
Flow Rate (dscfm)	310.2	91.8	65.3	155.8

[(a)] Samples collected through dilution probe – see Section 3.1.2 for data qualification.

4.0 SAMPLING AND ANALYTICAL PROCEDURES

Method-specific quality assurance and control measures were generally followed as much as possible. All testing was performed following EPA protocols as outlined in the EPA's Information Collection Request (ICR), Component 4, Part VIII. "Test Procedures, Methods and Reporting Requirements for the Information Collection Request for Petroleum Refineries" and 40 CFR Part 60 unless detailed in the respective sections of the test plan.

This section briefly presents the sampling and analysis methods that were followed during the DCU D603 Vent test as well as any method deviations and/or problems encountered. A test plan was developed in May 2011 that included details specific to this test program. The testing was performed consistent with the ICR request to perform simultaneous sampling. The parameters measured were as follows:

- Speciated volatile organic HAPs
- Speciated semi-volatile organic HAPs
- Aldehydes
- Total hydrocarbons (THC);
- Methane/ethane;
- Carbon monoxide (CO);
- Acid gases (HCl, Cl2, HF, HCN);
- Hydrogen sulfide (H_2S)/carbonyl sulfide (COS)/carbon disulfide (CS_2);
- Total reduced sulfur (TRS)
- Particulate matter (PM);
- Mercury;
- Metals;
- Nitrogen oxides (NOx);
- Sulfur dioxide (SO_2);
- Flow rate
- Oxygen and Carbon Dioxide

In addition, during each test run, the DCU D603 Vent flow rate, gas composition (oxygen (O_2) and carbon dioxide (CO_2)), and moisture content was measured. Figure 4-1 presents a schematic drawing of the DCU D603 Vent sampling locations.

During the test, the DCU D603 was vented under normal conditions. Three test runs were performed that were at least 20 minutes in duration. Due to the short duration of the test runs, each sample was collected at a single point in the centroid of the stack.

The gas velocity values used for all of the measured parameters in this testing were measured using a Type-S pitot tube located at the middle of the 8-inch ID pipe manifold used for the testing. This gas velocity was used to calculate the dry standard cubic feet per hour flow rates used to determine all of the emission rates.

To correct the gas flow rate to a dry basis, the moisture determined from the Ontario Hydro mercury train was used. This train was chosen based on its consistent run-by-run moisture results. To provide a common basis for data reduction, it was decided to use a single moisture value for all corrections from wet to dry basis for those parameters that did not generate their own moisture value during the testing (dilution probe data). The Ontario Hydro train's moisture was also used to correct these parameters to a dry basis. These parameters include O_2, CO_2, CO, THC, SO_2, NOx and TRS.

Moisture results were generated from many of the sampling trains used during this testing. A summary of these results are shown in Table 4-1 below. This data can provide a means of evaluating the quality of each train's sample integrity. It appeared that the second run of the Method 0010 train may have had sample collection problems that were not detected by the standard pre and post-test leak check procedures. Based on the Dixon "Q" test, its moisture can be considered an outlier with a confidence level of 95%.

Table 4-1. Sampling Train Moisture Results

Port No.	Sampling Train	Moisture (%) Run 1	Run 2	Run 3	Average	Test Run Standard Deviation
1	Method 29 - Metals	96.7	98.3	99.1	98.0	1.22
2	Methods 5/202 – Particulate Matter	97.9	97.6	99.1	98.2	0.79
3	Method 0010 – Semivolatile HAPs	97.6	79.4([a])	98.5	98.1	10.78
4	Ontario Hydro – Mercury	97.7	97.6	98.4	97.9	0.44
5	Method 0011 - Aldehydes	98.1	97.2	98.9	98.1	0.85
6	Method 26A - Acid Gases	98.2	97.3	98.9	98.1	0.80

(a) This moisture value was rejected as being an outlier per the Dixon Outlier Test.

Overall Average Moisture **98.1**

Figure 4-1. ExxonMobil DCU D603 Vent – Sampling Location Schematic

Drawing below is a nominal 8”I.D. pipe.

Drawing below is a 15 ft straight run of pipe.

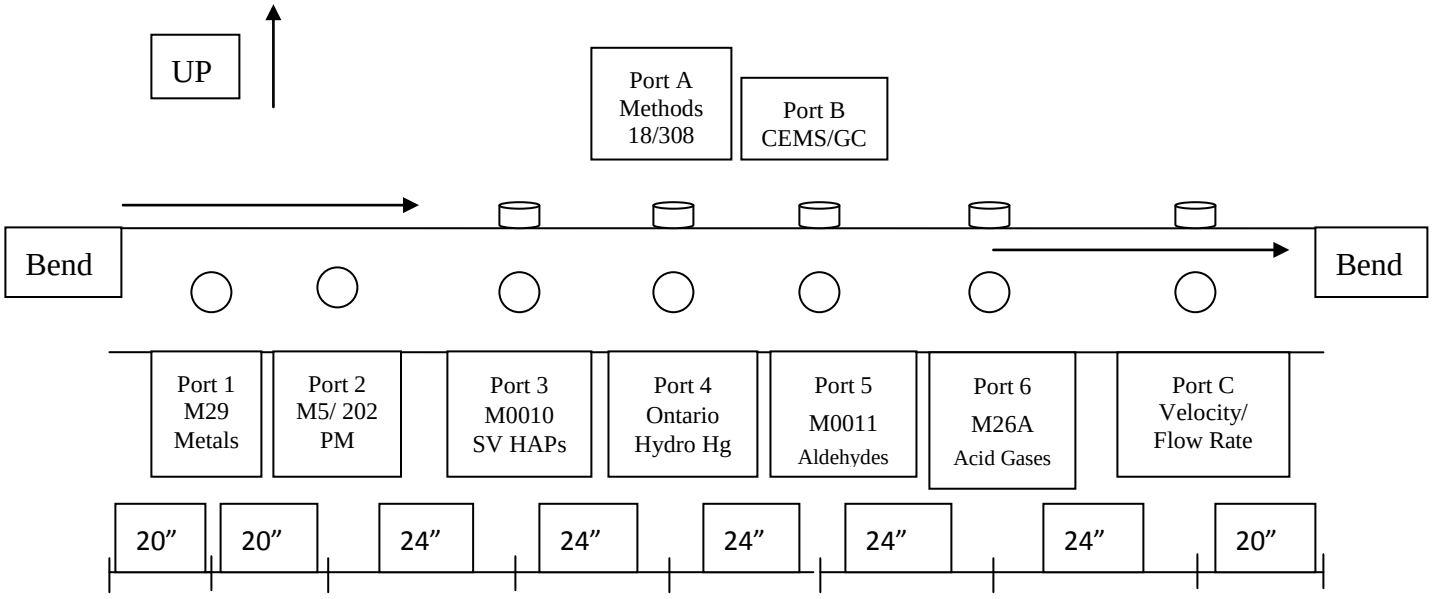
Port – 3”I.D. Flanged with gate valve (Installed packing glands to valves to seal sampling probes).

At least 16”(2 pipe diameters) upstream of each port to the nearest port or flow disturbance.

At least 4” (0.5 pipe diameters) downstream of each port to the nearest port or flow disturbance.

Ports 1 through 6 are isokinetic sampling locations.

Ports A though C are non-isokinetic sampling locations.



4.1 ICR Test

Three test runs for each parameter were performed to generate the emissions data. Three test runs were successfully completed on July 14, 16, and 17, 2011, respectively. ExxonMobil personnel continuously monitored and recorded process data during the testing. The process data is presented in the Appendix K of the report as confidential business information (CBI).

4.2 Sampling and Analysis

The following describes the sampling and analysis procedures that were used during the DCU D603 Vent test. Enthalpy Analytical, Inc. located in Durham, North Carolina performed the analyses for the speciated volatile HAPs, aldehydes, and acid gases. First Analytical, Inc. located in Raleigh, North Carolina performed the analyses for the metals and mercury. Test America located in Knoxville, Tennessee performed the analyses for the semi-volatile HAPs. TRC performed all other sampling and analyses.

As mentioned in Section 3.0, Table 4-1 provides a statistical presentation of moisture content for all sampling trains and the justification for using the OH data in the mass rates calculations for all parameters.

4.2.1 *Speciated Volatile HAPs and Methane/Ethane*

Volatile organic compounds from Table 1.3 of the ICR were collected and analyzed following the procedures of EPA Method 18 from 40 CFR Part 60, Appendix A. Figure 4-2 presents a schematic drawing of the volatiles sampling train. Due to the types of compounds included in the ICR table, samples were collected on three separate trains:

1) Train 1: EPA Method 18 Tedlar Bag
2) Train 2: EPA Method 18 XAD Adsorbent Tubes
3) Train 3: EPA Method 308

These trains were modified by the inclusion of a water-cooled condenser prior to the first impinger. Three test runs were performed at least 20 minutes duration with at least 1 liter of sample, one per normal vent cycle.

The tube sampling analysis included a separate analysis of each of the five fractions generated from each test run. These analyses often resulted in runs where one or more

fractions were below the detection or reporting limit for the analysis. The reported results from the lab for each run consisted of a single value. For the cases where any of the fractions had a result above the detection limit (aka a "hit"), the reported result is the sum of all the hits and the non-detects are ignored. For the cases where all the fraction were below the detection limits, the results were reported as less than the largest detection limit.

The Methane/Ethane results appear inflated since the calculated pounds/cycle is larger than what would have been calculated using the equation PV=NRT and results being larger than the total hydrocarbon results.

The standard QA/QC for the tube sampling method included matrix-spiked tubes to check for recovery of certain analytes. For many of these spikes the results were not useable due to the high concentration levels of organic compounds in the samples. These high compound levels overwhelmed spikes and made the spike detection indistinguishable. In other cases, the spike was not detectable due to the high background/baseline caused by the number of organic species collected on the tubes. From these results it may be concluded that the spike levels need to be much higher to be of any benefit in evaluating recoveries.

4.2.2 *Speciated Semi-volatile Organic HAPs*

The Method 0010 Modified Method 5 (MM5) sampling protocol from SW-846, "Test Methods for Evaluating Solid Waste," Third Edition; Volume One was used during the testing to collect samples of the SRU 28 stack gas for quantification of semi-volatile organic HAPs (analysis by SW-846 Method 8270C). The sampling train consisted of a flexible, heated probe, heated filter, Teflon transfer line, XAD-2 sorbent module, and pumping and metering unit. Figure 4-3 presents a schematic drawing of the Method 0010 (MM5) sampling train. Three test runs were performed at least 20 minutes duration with at least 0.5 cubic feet of sample, one per normal vent cycle.

Figure 4-2. Method 18 and 308 Sampling Train Manifold Schematic

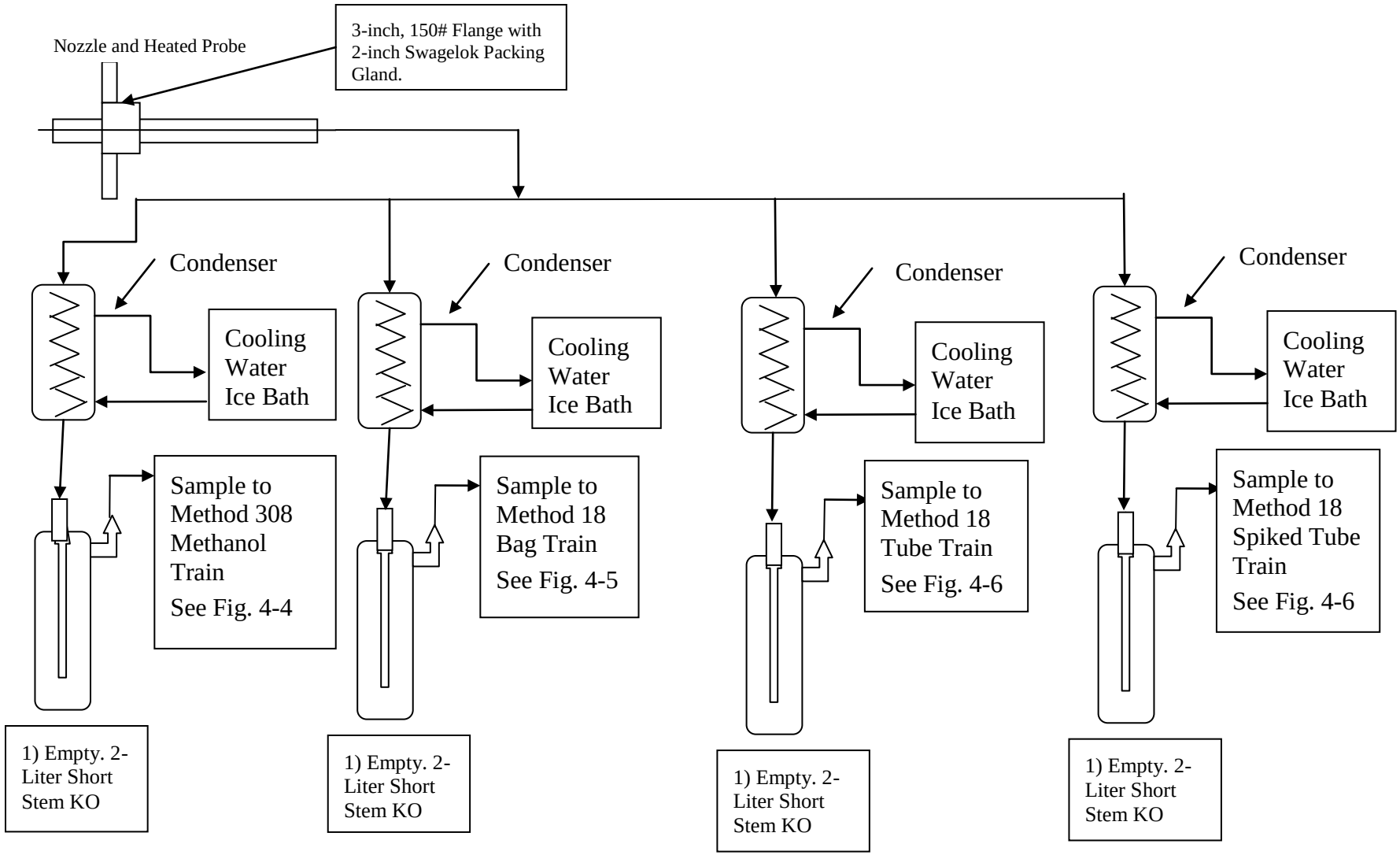
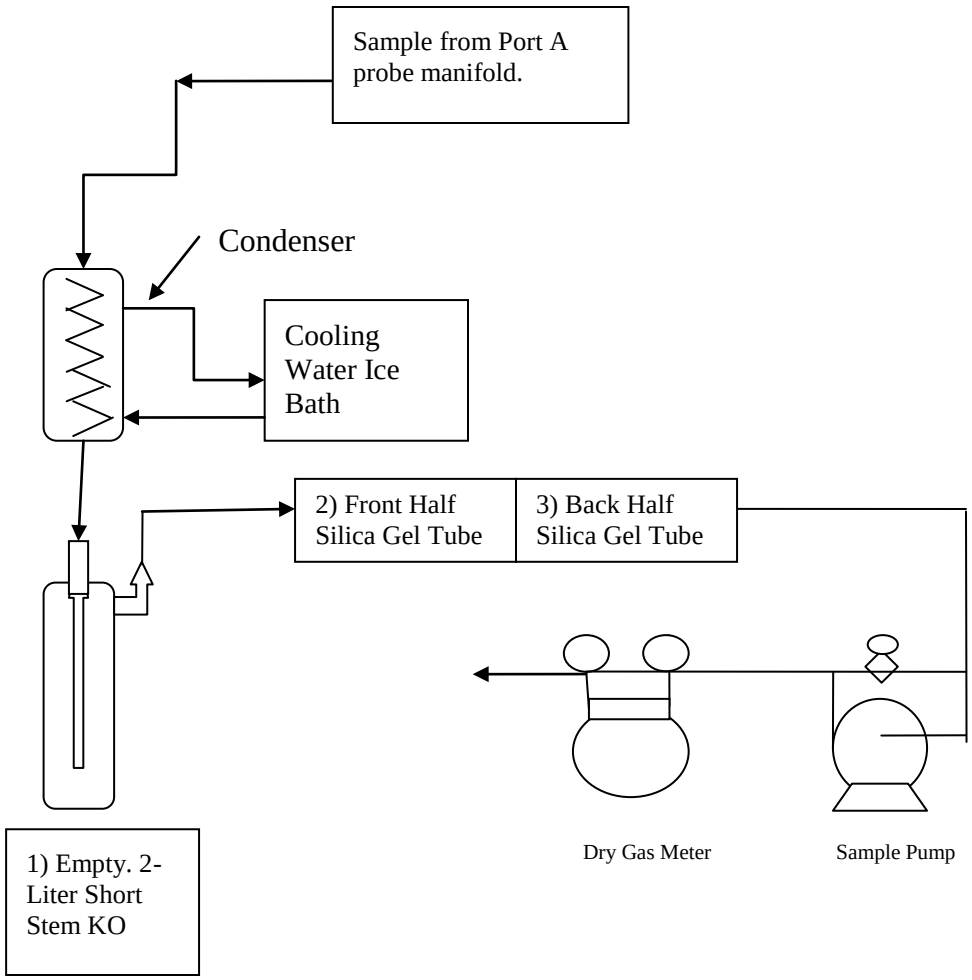


Figure 4-3. Method 308 Sampling Train Schematic



Method 308 Methanol

Sample Fractions:

1) Condensate
2) Silica gel tube front half
3) Silica gel tube back half

All fractions analyzed separately and total micrograms in all three fractions reported for each run.

Figure 4-4. Method 18 Tube Sampling Train Schematic

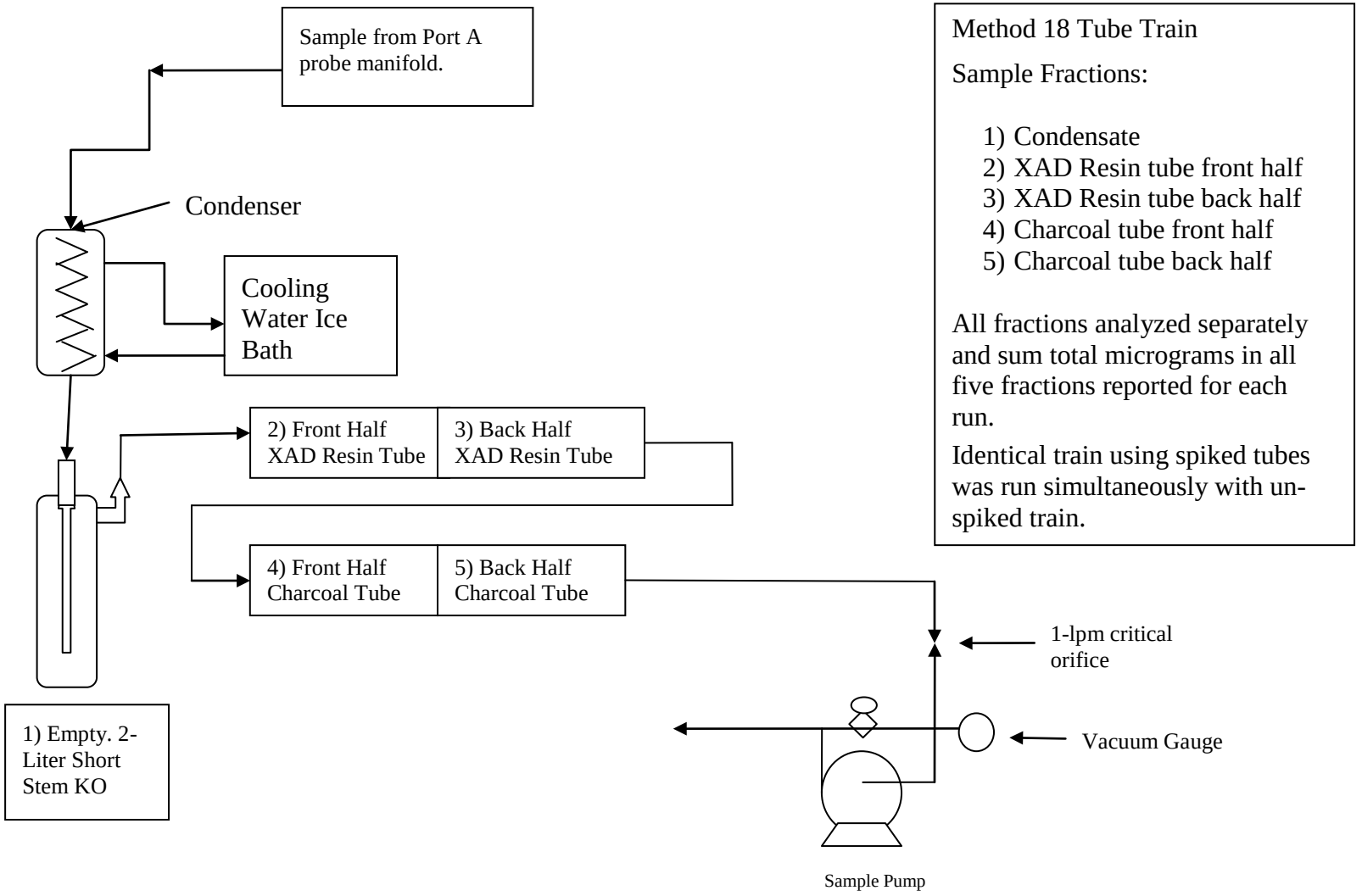


Figure 4-5. Method 18 Bag Sampling Train Schematic

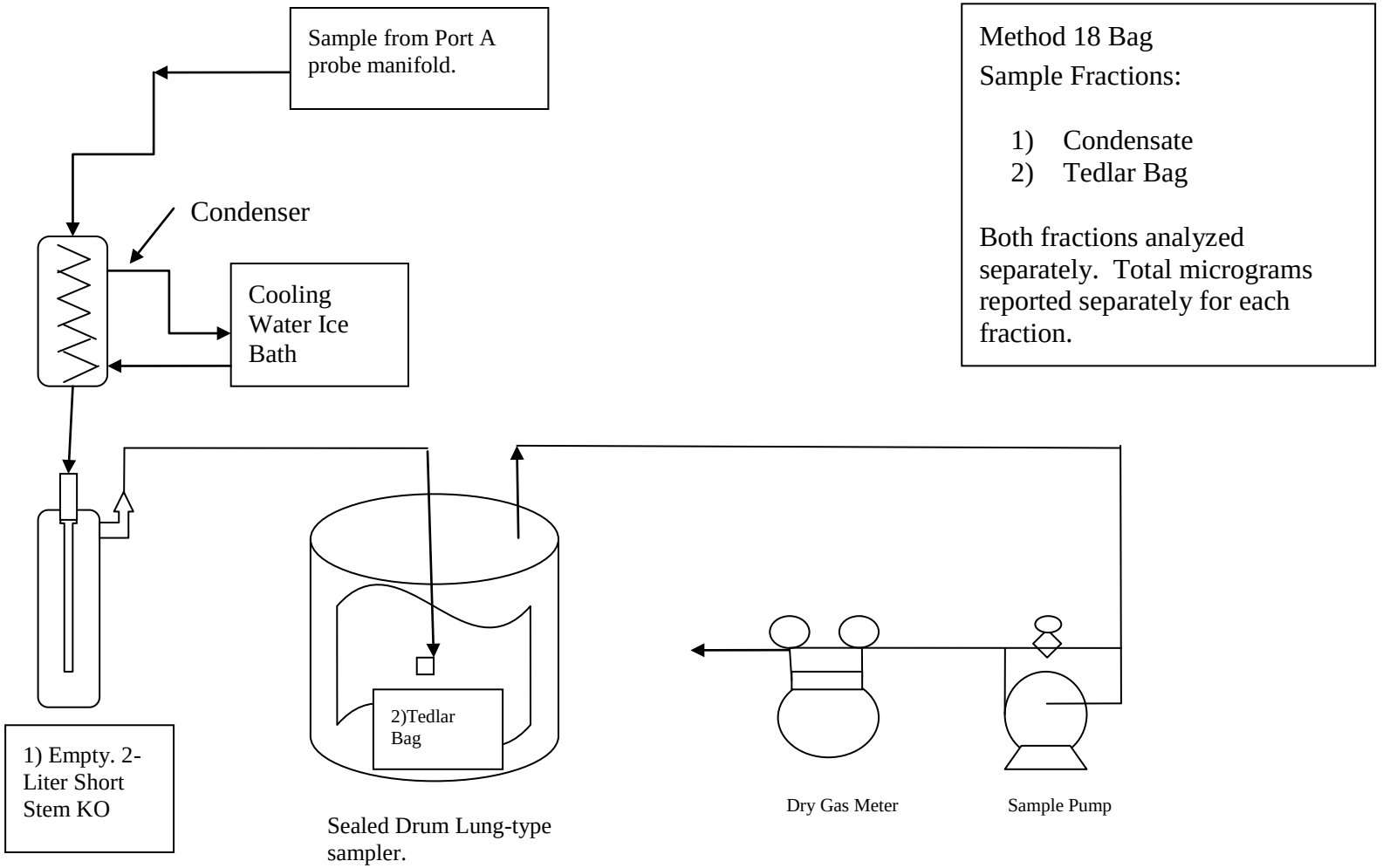
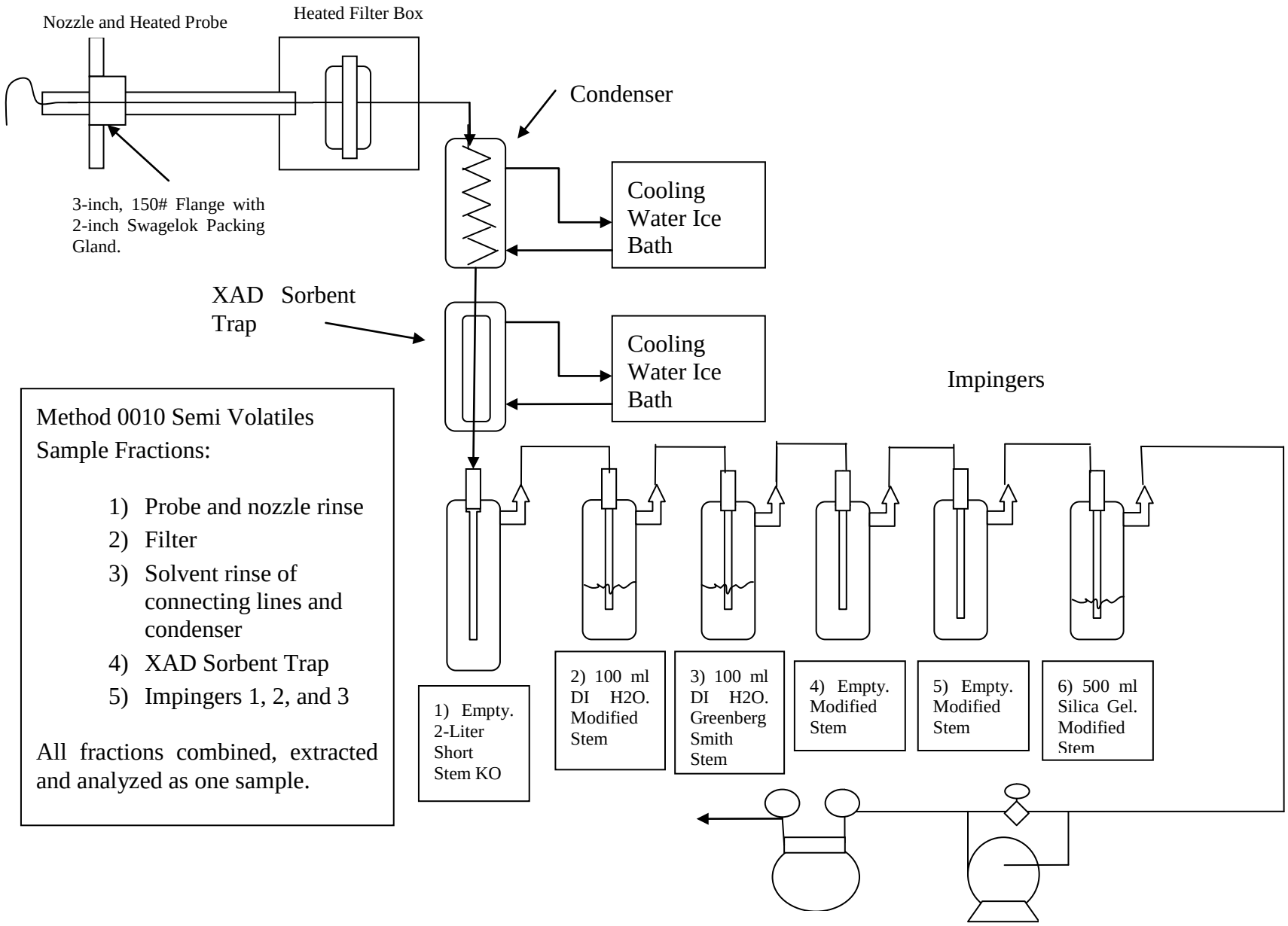


Figure 4-6. Method 0010 (MM5) Semi-Volatiles Sampling Train Schematic



The standard QA/QC for the Method 0010 XAD sampling method included surrogate spikes to check for recovery of certain analytes. For many of these spikes the results were not useable due to the high concentration levels of actual target compounds in the samples. These high levels overwhelmed the spikes due to the native levels being many times higher than the spike levels making spike detection indistinguishable. In other cases, the spike was not detectable due to the high background/baseline caused by the number of organic species collected on the tubes. From these results it may be concluded that the spike levels need to be much higher to be of any benefit in evaluating recovery.

Method 0010 is designed to collect its sample at a rate within ±10% of 100% isokinetic conditions. These isokinetic sampling limits were not met. Since the sample gas was essentially steam, controlling the collection of the sample within these limits was not possible. The effect of non-isokinetic sampling is unknown.

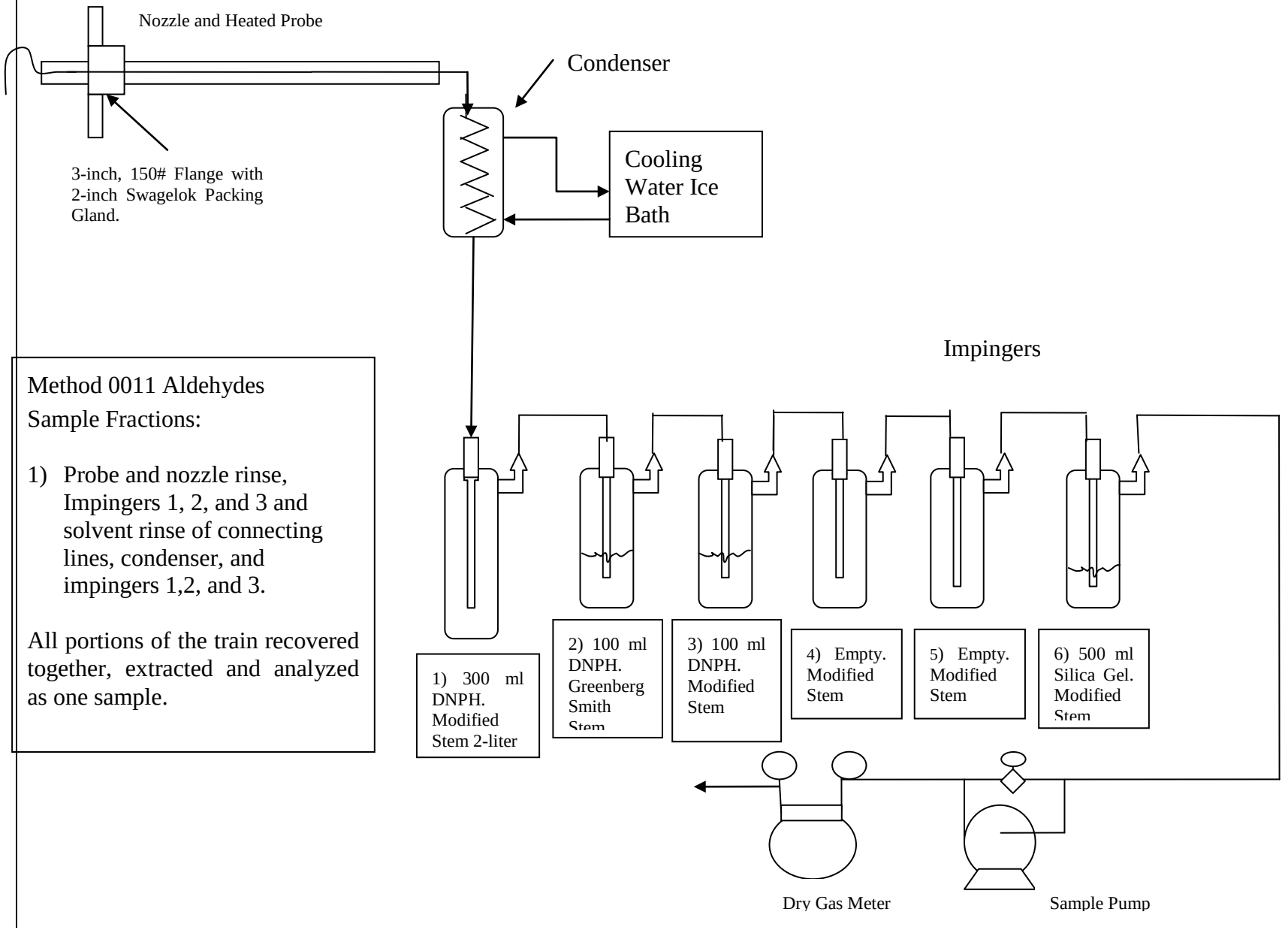
The results for all of the samples were reported with elevated reporting limits due to the complex sample matrix.

4.2.3 *Aldehydes (Acetaldehyde, Formaldehyde, Propionaldehyde)*

The DCU D603 Vent samples for determination of aldehydes were collected using SW-846 Method 0011 from SW-846, "Test Methods for Evaluating Solid Waste," Third Edition; Volume One. The Method 0011 impingers were filled with a carbonyl-specific derivatizing agent: 2,4-dinitro-phenylhydrazine (2,4-DNPH). 2,4-DNPH reacted with aldehydes to form a nonvolatile derivative which was measured by high performance liquid chromatography (HPLC, SW-846 Method 8315A). Figure 4-4 presents a schematic drawing of the Method 0011 sampling train. This train was modified by the inclusion of a water-cooled condenser prior to the first impinger. Three test runs were performed at least 20 minutes in duration with at least 0.5 cubic feet of sample, one per normal vent cycle.

Like all of the other sampling trains, the aldehydes train collected upwards of three liters of water during the run. The amount of water exceeds the amount of sample specified for a standard 0011 analysis (one liter). The Run 2 and 3 samples were therefore split in half to allow the standard sample preparation methodology to be used. Although this constituted a deviation from the method, it can be assumed that the samples were well mixed, single-phase liquids and separating an aliquot for analysis would not impact the quality of the data.

Figure 4-7. Method 0011 Aldehydes Sampling Train Schematic



Method 0011 is designed to collect its sample at a rate within ±10% of 100% isokinetic conditions. These isokinetic sampling limits were not met. Since the sample gas was essentially steam, controlling the collection of the sample within these limits was not possible. The effect of non-isokinetic sampling is unknown. The effect of non-isokinetic sampling is unknown.

4.2.4 *Dilution Probe*

For the measurement of O2, CO2, THC, NOx, SO2, CO, and sulfur compounds, an EPM brand dilution probe system, equipped with critical orifice technology to precisely meter the sample gas with nitrogen gas dilution, was used to mitigate the detrimental effects of the high moisture content of the vent gas on the analyzers to accurately measure each parameter. The probe was heated to 300 degrees F and configured to deliver a dilution ratio of approximately 50:1. The trailer housing the continuous monitors was located approximately 300 feet away from the sampling location. The diluted sample was transferred to the analyzers via unheated, ¼-inch Teflon line at a flow rate of approximately 5 liters/minute.

Prior to the test, the dilution system was calibrated using the manufacturer's specifications and EPA guidelines using dilution probes with CEMS. A dilution ratio of 51:1 was established. The dilution calibration is included in Appendix I. In addition to the calibrations, a shakedown run was performed on July 13, 2011 to trial the system. One vent cycle lasting approximately 50 minutes was measured with the CEMS on line. No obvious problems were noted and the CEMS QA/QC checks, pre- and post-, were within the acceptance criteria for each of the parameter methods.

Run 1 was conducted on July 14, 2011 and the vent cycle duration was 20 minutes. The CEMS QA/QC checks, both pre- and post-, were within the acceptance criteria for each of the parameter methods. The CEMS calibrations and bias checks are also included in Appendix I. No obvious problems were noted during Run 1 and the CEMS operation appeared to be optimal. Runs 2 and 3, conducted on July 16 and 17, 2011, respectively, followed. The CEMS QA/QC checks, both pre- and post-, were within the acceptance criteria for each of the parameter methods. No obvious problems were noted during the runs and the CEMS operation appeared to be optimal.

In the development and review of report results, the CEMS data was scrutinized to the extent of reviewing the minute by minute values for each parameter. It was noted that the CEMS parameters spiked at the beginning of each of the runs (with the exception of O_2 that was

at a level approximately 2-3%, adjusted for dilution) then dropped to nearly baseline levels for the first half of each run (with the exception of O_2 that was at a level approximately 20%, adjusted for dilution). Approximately at the halfway point of each run, the parameter values gradually trended up (O_2 trended down to approximately 2-3%, adjusted for dilution) and became consistent through the remainder of each run. This pattern was not obvious to the field personnel and the operation of the CEMS was acceptable based on the system compliance with the QA/QC criteria required in the methods.

Based on the system's compliance with each method's QA/QC acceptance criteria, the data appear valid for each run.

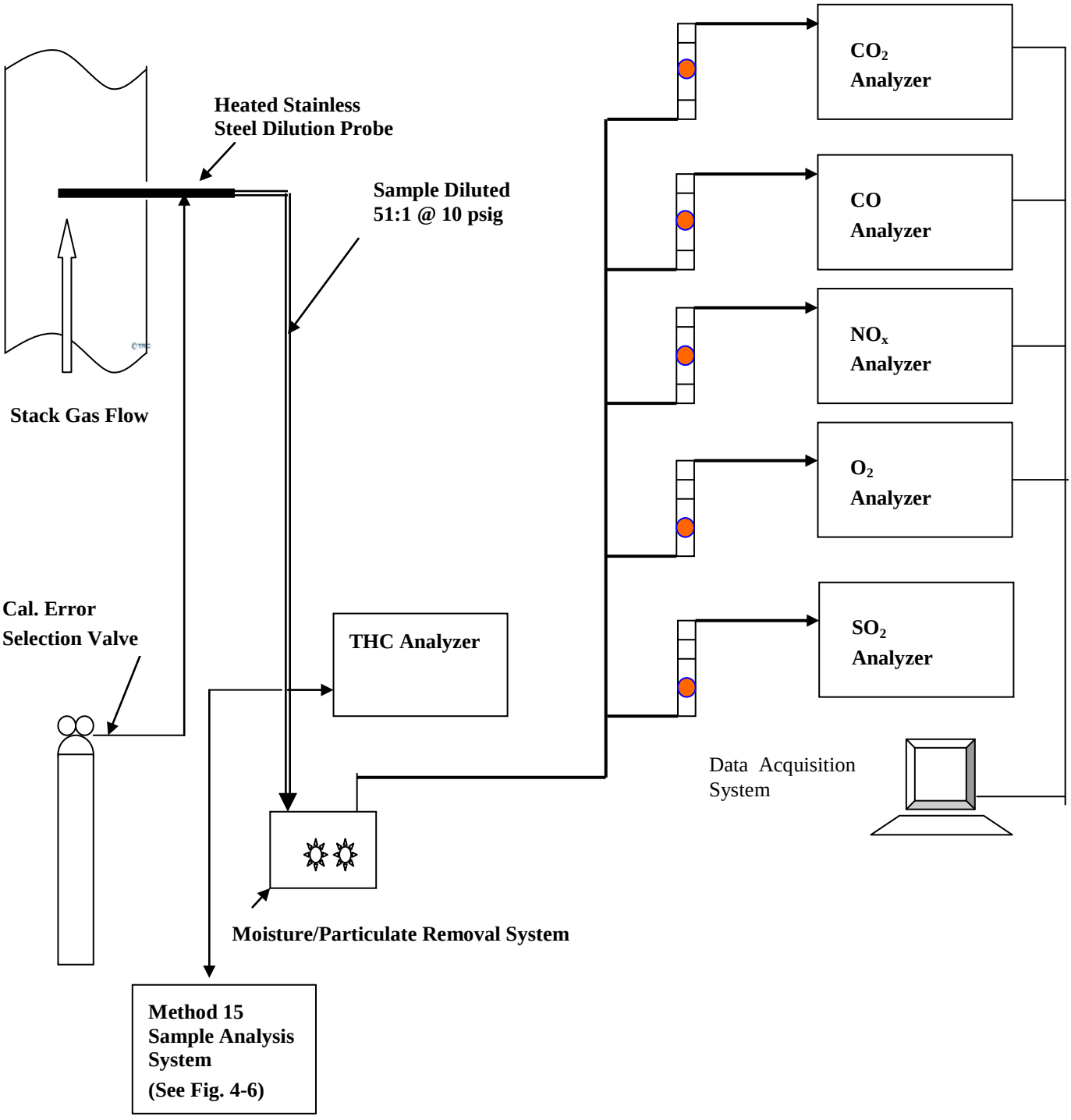
4.2.5 *Total Hydrocarbons (THC)*

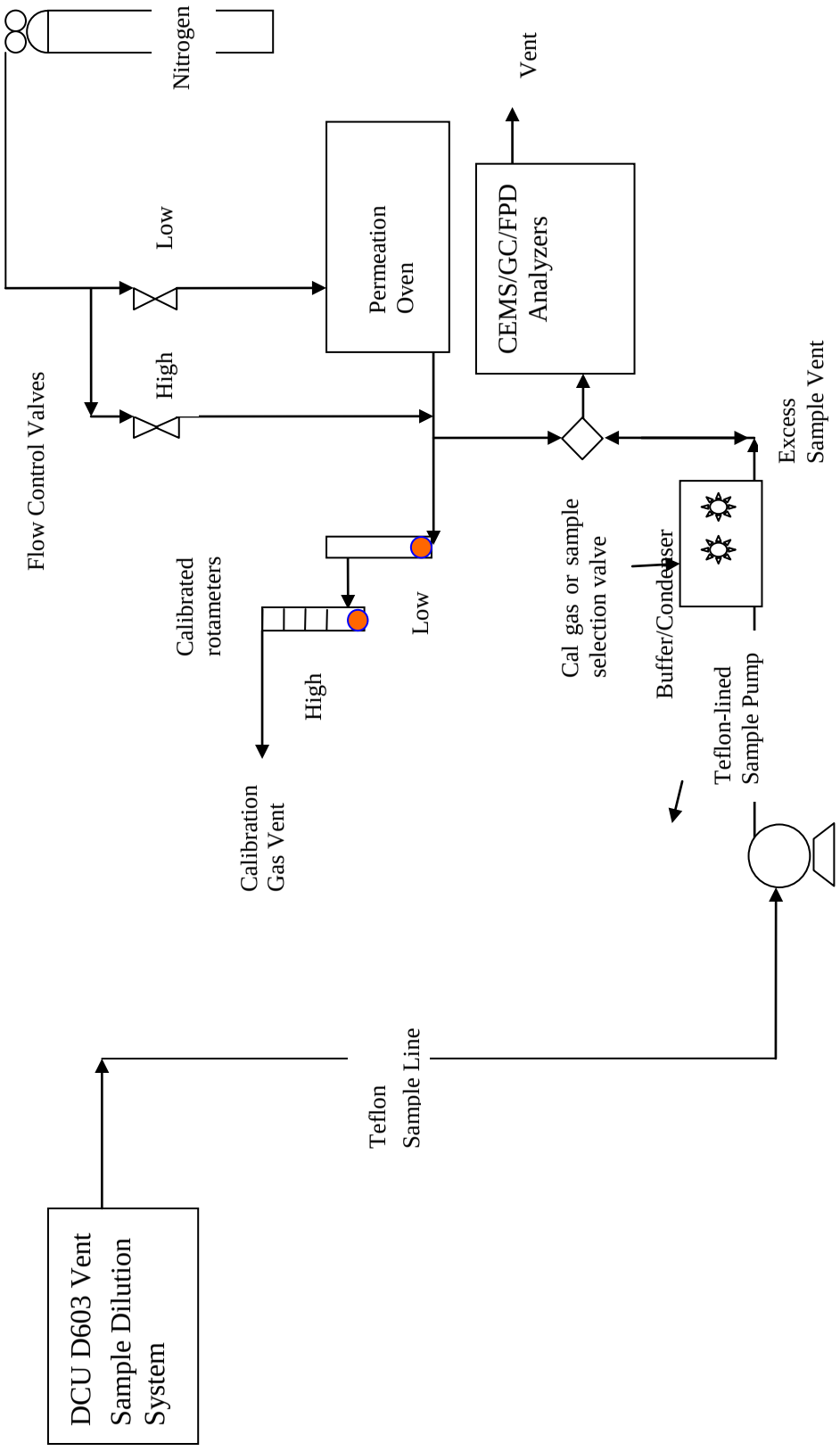
During each test run sampling was conducted for THC following EPA Method 25A from 40 CFR Part 60 Appendix A. A total hydrocarbon analyzer measured the stack gas continuously in propane equivalents. The analyzer was calibrated with propane standards following the requirements in the method. A 51:1 dilution system was used to mitigate the high moisture content. Figure 4-8 presents a schematic drawing of the Method 25A sampling system. Three test runs were performed that were at least 20 minutes in duration, one per normal vent cycle. Each sample was collected non-isokinetically at a single point in the centroid of the vent duct.

4.2.6 *Carbon Monoxide (CO)*

During each test run sampling was conducted for CO following EPA Method 10 from 40 CFR Part 60 Appendix A. A CO analyzer measured the vent gas continuously. The analyzer was calibrated with EPA protocol CO gas standards following the requirements in the method. A 51:1 dilution system was used to mitigate the high moisture content. Figure 4-8

Figure 4-8. CEMS Sample System Diagram





EM-BTRF-000054

Figure 4-9. TRS Method 15 Sample System Diagram

presents a schematic drawing of the Method 10 sampling system. Three test runs were performed that were at least 20 minutes in duration, one per normal vent cycle. Each sample was collected non-isokinetically at a single point in the centroid of the vent duct.

4.2.7 *HCl/Cl_2/HF/HCN*

During each test run, a combination sampling train from 40 CFR Part 60 Appendix A Method 26A and CTM-033, was utilized for the collection of hydrogen chloride (HCl), chlorine (Cl_2), hydrogen fluoride (HF), and hydrogen cyanide present in the DCU vent gas. The impinger catch from the first and second impingers, the sulfuric acid impingers, was analyzed for HCl, HF, and HCN. The impinger catch from the third and fourth impingers, the sodium hydroxide impingers, was analyzed for Cl_2 and HCN. Figure 4-10 presents a schematic drawing of the Method 26A sampling train. This train was modified by the inclusion of a water-cooled condenser prior to the first impinger. Three test runs were performed, one per normal vent cycle.

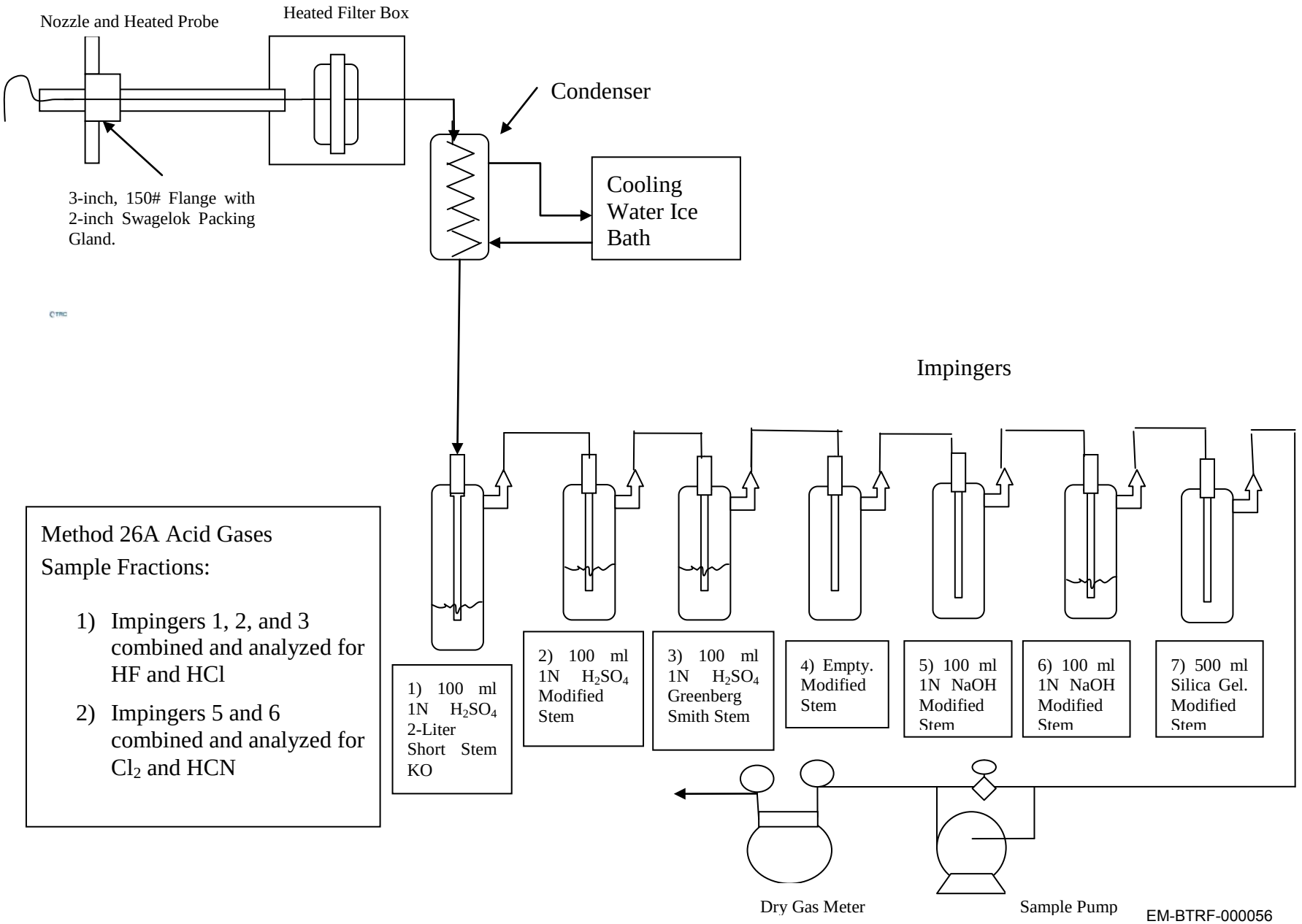
The standard CTM-033 HCN train does not include any impingers upstream of the NaOH impingers used to collect HCN. The HCN collection depends on maintaining a high pH (> 12) in the impingers. HCN was not expected to be retained in the highly acidic aqueous solution in the first impingers (1N H2SO4). Therefore the modified version of CTM-033 used for this sampling, where the NaOH impingers were after the acidic impingers, was considered to be an accurate way to collect HCN.

Method 26A is designed to collect its sample at a rate within ±10% of 100% isokinetic conditions. These isokinetic sampling limits were not met. Since the sample gas was essentially steam, controlling the collection of the sample within these limits was not possible.

4.2.8 *H_2S/COS/CS_2/TRS*

During each test run, sampling was conducted for H_2S/COS/CS_2/TRS following a combination of EPA Methods 15 and 16B from 40 CFR Part 60 Appendix A. A gas chromatograph (GC) equipped with a flame photometric detector (FPD) measured the stack gas semi-continuously every 5 minutes. The GC was calibrated with H_2S/COS/CS_2 gas standards following the requirements in the method. TRS was determined as the total

Figure 4-10. Method 26A Acid Gas Sampling Train Schematic



amount of the 3 reduced sulfur compounds. A 51:1 dilution system was used to mitigate the high moisture content. Figure 4-9 presents a schematic drawing of the Method 15 sampling system. Three test runs were performed that were at least 20 minutes in duration, one per normal vent cycle. Each sample was collected non-isokinetically at a single point in the centroid of the vent duct.

4.2.9 *Mercury (Hg)*

During each test run, the Ontario Hydro sampling train from ASTM Method D6784-02 (2008) was utilized for the collection of oxidized and elemental mercury forms present in the DCU D603 vent gas. The DCU vent gas was withdrawn through a probe/filter system, maintained at 300°F followed by a series of impingers in an ice bath. Particle-bound mercury was collected in the front half of the sampling train. Oxidized mercury was collected in impingers containing a chilled aqueous potassium chloride solution. Elemental mercury was collected in subsequent impingers (one impinger containing a chilled aqueous acidic solution of hydrogen peroxide and three impingers containing chilled aqueous acidic solutions of potassium permanganate). Samples were recovered, digested, and then analyzed for mercury using cold-vapor atomic absorption (CVAAS). Figure 4-11 presents a schematic drawing of the Ontario Hydro sampling train. This train was modified by the inclusion of a water-cooled condenser prior to the first impinger. Three test runs were performed, one per normal vent cycle.

Sample fraction number three (KCl) of all three trains was noted to have lost its purple color after sample collection. This loss of color was probably due to the large dilution of the KCl solution by the condensed water in the sample (300 mls was diluted to approximately 1900 mls). The spike recovery from this sample fraction did not exhibit acceptable recovery (83% recovery) due to a matrix interference. The results are still considered to be valid.

Also, the Fraction 5 sample ($4\%KMNO_4/10\%H_2SO_4$) from Run 2 did not retains its purple color after sampling. This was probably due to some carryover of the nitric acid/hydrogen peroxide reagent from the impingers immediately upstream of the Fraction 5 impingers. The matrix spike for all of the Fraction 5 samples exhibited acceptable recoveries so this loss of color did not affect the data quality.

The Ontario HydroMethod is designed to collect its sample at a rate within ±10% of 100% isokinetic conditions. These isokinetic sampling limits were not met. Since the sample gas was essentially steam, controlling the collection of the sample within these limits was not possible.

Figure 4-11. Ontario Hydro Method Mercury Sampling Train Schematic

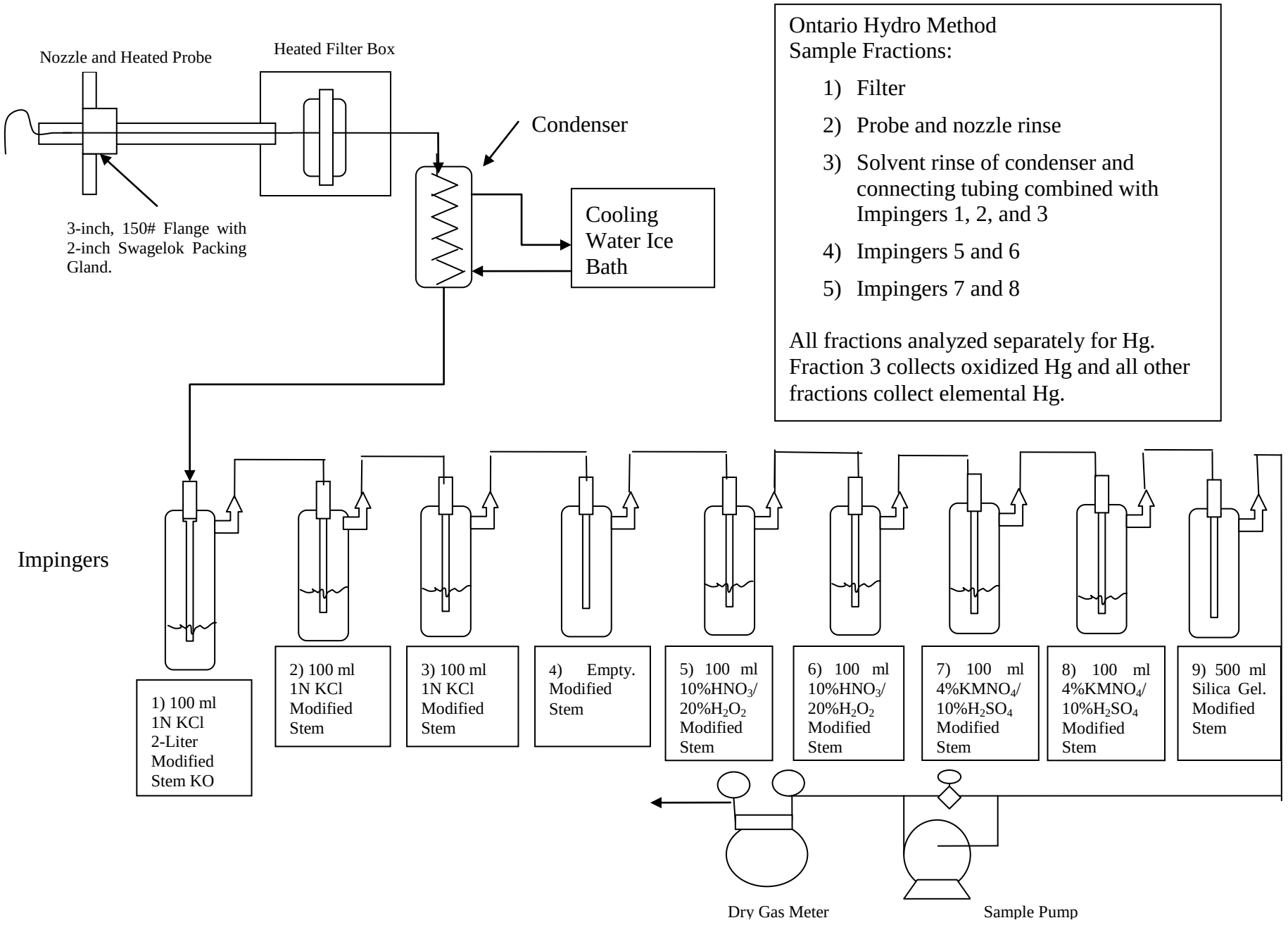
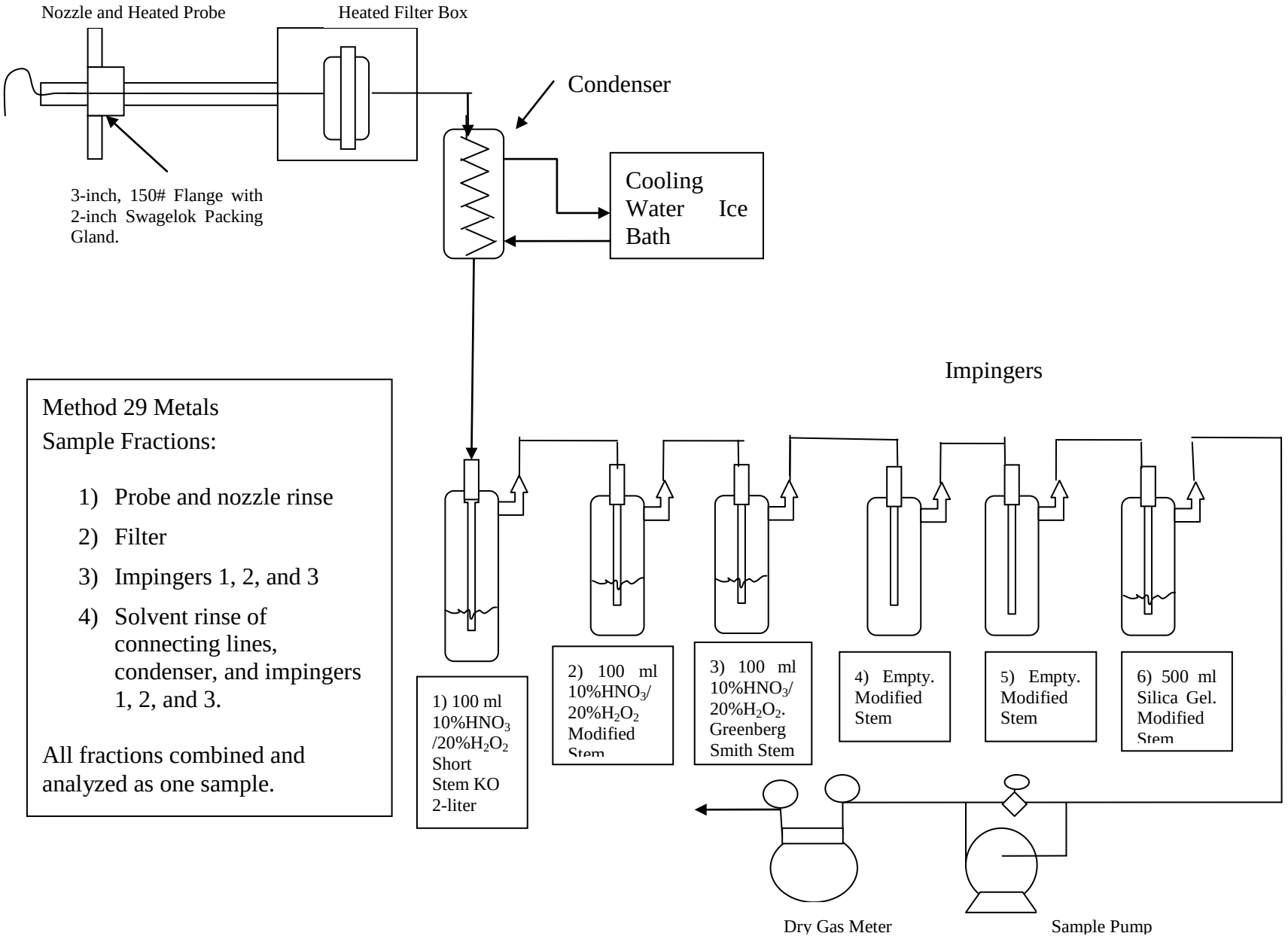


Figure 4-12. Method 29 Metals Sampling Train Schematic



4.2.10 *Metals (except Hg)*

During each test run, the EPA Method 29 sampling train from 40 CFR Part 60 Appendix A was utilized for the collection of metals (except Hg) present in the DCU D603 vent gas. The Method 29 sampling train consisted of a nozzle/probe assembly, heated filter, three impingers with HNO_3/H_2O_2 solution, one empty impinger, and an impinger with silica gel dessicant. The front half of the sampling train (through to the filter) was rinsed with 0.1 N HNO_3 to recover the metals. The back half of the sampling train (through the HNO_3/H_2O_2 impingers) was recovered and analyzed for the metals. Trace inductively coupled argon plasma emission mass spectroscopy (TICAPEMS) was used for the metals analyses. Figure 4-12 presents a schematic drawing of the Method 29 sampling train. This train was modified by the inclusion of a water-cooled condenser prior to the first impinger. Three test runs were performed, one per normal vent cycle.

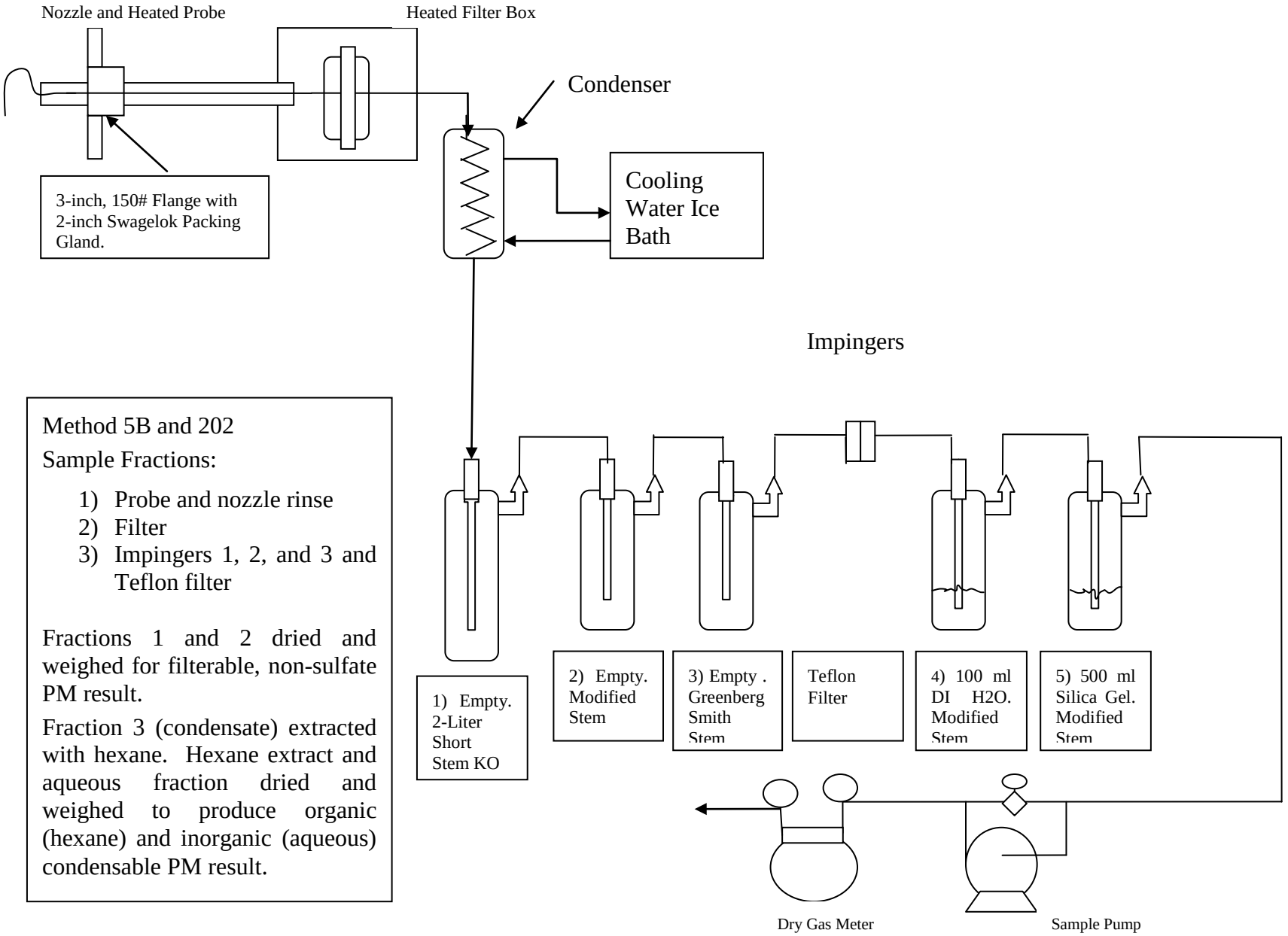
Method 29 is designed to collect its sample at a rate within ±10% of 100% isokinetic conditions. These isokinetic sampling limits were not met. Since the sample gas was essentially steam, controlling the collection of the sample within these limits was not possible.

4.2.11 *Particulate Matter (PM) / Condensable PM*

EPA Methods 5B/202 from 40 CFR Part 60 Appendix A were used for the determination of particulate concentration and emissions from the DCU D603 vent gas. This method is applicable for the determination of particulate matter in stack gases containing sulfur compounds. The sampling train consisted of a heated (>300^{o}F), pre-weighed glass fiber filter behind a heated probe followed by four impingers to collect moisture. The sampling system incorporated a nozzle, probe, heated oven (housing the filter holder), a condenser assembly, and a calibrated extraction system. The probe/nozzle rinse as well as the filter catch was gravimetrically analyzed for total PM. The first impinger catch was also collected and analyzed for condensable PM. For the purposes of this test program, PM2.5 emissions are reported using the total condensable PM measured concentrations. Figure 4-13 presents a schematic drawing of the Method 5B/202 sampling train. This train was modified by the inclusion of a water-cooled condenser prior to the first impinger. Three test runs were performed, one per normal vent cycle.

Method 5B is designed to collect its sample at a rate within ±10% of 100% isokinetic conditions. These isokinetic sampling limits were not met. Since the sample gas was essentially steam, controlling the collection of the sample within these limits was not possible.

Figure 4-13. Method 5B and 202 PM Sampling Train Schematic



Method 5B and 202

Sample Fractions:

1) Probe and nozzle rinse
2) Filter
3) Impingers 1, 2, and 3 and Teflon filter

Fractions 1 and 2 dried and weighed for filterable, non-sulfate PM result.

Fraction 3 (condensate) extracted with hexane. Hexane extract and aqueous fraction dried and weighed to produce organic (hexane) and inorganic (aqueous) condensable PM result.

4.2.12 *Vent Gas Velocity*

As part of each test run, sampling was conducted for DCU D603 vent gas velocity following EPA Method 2 from 40 CFR Part 60 Appendix A. Vent gas pressure differential was determined using an S-type pitot tube and Capsuhelic® while vent gas temperature was measured using a thermocouple. The vent gas velocity (in feet per second) was correlated with the 8-inch duct area to calculate the volumetric flow rate in actual cubic feet per minute (acfm). Three test runs were performed, one per normal vent cycle.

The vent gas velocity was characterized by a very large burst of flow at the beginning of the vent cycle that quickly tapered off to a much lower rate as the cycle progressed. The sample trains were not capable of sampling this change in velocity as the runs progressed. This impacted the isokinetic sampling inasmuch as there was no ongoing control of the isokinetic sampling rates due to the steam-like nature of the vent gas. This un-adjustable sampling rate may have biased the sampling results if the composition of the gas changed significantly as the velocity changed.

4.2.13 *Nitrogen Oxides (NOx)*

During each test run sampling was conducted for NOx following EPA Method 7E from 40 CFR Part 60 Appendix A. A stainless steel dilution probe was placed in the vent duct at a location near the centroid of the duct. The probe was connected to a Teflon sample line that ran from the duct platform area to the ground. A 51:1 dilution system was used to mitigate the high moisture content. The NOx analyzer measured the vent gas continuously using chemiluminescence analysis principles. The analyzer was calibrated with EPA protocol NOx gas standards following the requirements in the method. NO_2 in the sample is measured by the catalytic reduction of NO_2 to NO using a heated iron oxide catalyst. Passing the sample through the catalyst prior to the detector allows the total NO_x in the sample to be determined. The efficiency of the catalyst is determined on a daily basis as part of the test method as required by the method. Figure 4-8 presents a schematic drawing of the Method 7E sampling system. Three test runs were performed, one per normal vent cycle.

4.2.14 *Sulfur Dioxide (SO2)*

During each test run sampling was conducted for SO2 following EPA Method 6C from 40 CFR Part 60 Appendix A. A stainless steel dilution probe was placed in the vent duct at a location near the centroid of the duct. The probe was connected to a Teflon sample line that ran from the duct platform area to the ground. A 51:1 dilution system was used to mitigate the high

moisture content. The SO_2 analyzer measured the vent gas continuously using infrared analysis principles. The analyzer was calibrated with EPA protocol SO2 gas standards following the requirements in the method. Figure 4-8 presents a schematic drawing of the Method 6C sampling system. Three test runs were performed, one per normal vent cycle.

4.2.15 *Oxygen and Carbon Dioxide for Composition*

During each test run, sampling was conducted for oxygen and carbon dioxide following EPA Method 3A from 40 CFR Part 60 Appendix A. Stack gas oxygen was determined using a paramagnetic analyzer while stack gas carbon dioxide using an infrared analyzer. The analyzers measured the gas continuously during each test run. A stainless steel dilution probe was placed in the vent duct at a location near the centroid of the duct. The probe was connected to a Teflon sample line that ran from the duct platform area to the ground. A 51:1 dilution system was used to mitigate the high moisture content. Figure 4-8 presents a schematic drawing of the Method 3A sampling system. Three test runs were performed, one per normal vent cycle.

4.2.16 *Vent Gas Moisture*

As part of each isokinetic test run, sampling was conducted for DCU D603 Vent gas moisture content following EPA Method 4 from 40 CFR Part 60 Appendix A. The vent gas moisture weight gain in the sampling train impingers was determined gravimetrically and correlated to the sample volumes of each of the sampling trains. Three test runs were performed, one per normal vent cycle.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

To ensure accurate results, strict quality assurance and control measures were followed. All testing was performed following standard EPA protocol. The test criteria was thoroughly documented and checked for completeness.

5.1 Sample System QA/QC

Before and after each test run, all sampling trains were leak checked. The CEMS sampling trains were likewise leak checked prior to and after each run. CEMS bias checks were performed per the test methods.

- A S-type pitot tube meeting the specifications in EPA Method 2 was used to measure the velocity head pressures. At the completion of testing, the pitot tube was inspected for damage following the procedures in EPA Method 2.
- The pitot tube/manometer system was leak checked before and after each run at a pressure higher than 3 in.H_2O and the results were stable for at least 15 seconds.
- The manometer was leveled and zeroed prior to each run.
- At the completion of testing, the K-type thermocouple systems used were checked for proper calibration following the procedures in EPA Method 2 and the results were acceptable at $\leq \pm 1.5\%$ of the reference value.
- The onsite barometer was checked for proper calibration following the procedures in EPA Method 2.
- During each run, emission gas was collected over a period consistent with of the ICR protocol at specific rates.
- The metering system used to determine the sample volumes was leak checked after each run at a vacuum equal to or higher than the operating vacuum observed during the run.

At the completion of testing, the dry gas meter's calibration was checked for proper calibration at a single orifice setting and the results were acceptable at $\leq \pm 5$ % of the yearly calibration factor.

The CEMS methods followed the QA procedures set out in their respective methods with the exception of the speciated volatile HAPs that employed specific spike cocktails (per ICR guidance) to assess laboratory collection and analysis efficiencies.

5.2 Analytical QA/QC

TRC, Enthalpy Analytical, Inc., First Analytical, Inc. and Test America performed the analysis of the samples and was responsible for providing pertinent QA/QC. The analytical reports, which also contain their QA/QC are provided in the appendix.

5.3 Data Reduction QA/QC

Data was checked for completeness and accuracy. The review is documented in the appendix.

5.4 External QA/QC

No test method performance audit samples were received from the administrator for this test program. No system audits were performed by the administrator onsite during the testing to determine the quality of instrument calibration, data validation, and field activities.

APPENDIX A: EPA METHOD 18—VOLATILE ORGANIC HAPS SAMPLING DATA

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: M-18 Volatile Organic HAPS (Bag)
Dates: July 14, 16, 17, 2011

Test	Bag	Condition	Normal		Source Dimension	NA
Run	ALL	DGMCF	1.000		Barometric ("Hg)	29.77
	Time	DGM (L)	DGM ("H_2O)	DGM In (F)	DGM Out (F)	
Run 1	Start 2006	0.00	0.0	93	93	
Sample ID				93	93	
				93	93	
DSL			0.0	93	93	
10.115	Stop 2026	10.654				
Run 2	Start 0043	0.00	0.0	90.5	90.5	
Sample ID				90	90	
				90	90	
DSL			0.0	90	90	
6.976	Stop 0143	7.309				
Run 3	Start 0626	0.00	0.0	77	77	
Sample ID				78	78	
				78	78	
DSL			0.0	78	78	
7.912	Stop 0706	8.103				

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7-14-11
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 1
Operator MM
Meter Box I.D. 3602456 HB-220-2088
Y Factor 1.000
Bar. Press. 29.65

Leak Checks	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	16	16	60	0
Train after test:	10	10	60	0

Condensate volume: _____ Sample ID EM-R1-DCU-Bag

Time		Dry Gas Meter	Rotameter	Dry Gas Meter	Dry Gas Meter	Pump Vacuum				
24 hour	Min	(L)	(L/min)							
2006	0	0.000	.5	93		0				
	5	3.6	.5	93		3				
	10	6.5	.5	93		5				
	15	8.5	.2	93		7				
2026	20	10.654		END						
	25									
	30									
	35									
	40									
	45									

Date/Time

Comments: Blue Bag
300 ml condensate

Train Set Up By: _____
To Location: _____
Received @ Location: _____
To Lab: _____
Received @ Lab: _____

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7-16-11
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 2
Operator HAA
Meter Box I.D. 3602456 H6-220-2038
Y Factor 1.000
Bar. Press.

Leak Checks

	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	15	15	60	0
Train after test:				

Condensate volume:

Sample ID EM-R2-DCU-Bag

Time		Dry Gas Meter	Rotameter	Dry Gas Meter Temp (°C)	Dry Gas Meter (In. H2O)	Pump Vacuum (In. Hg)	Temperatures (°C)			
24 hour	Min	(L)	(L/min)				Probe	Filter	Condenser	Impinger
0943	0	0.000	.2	91		0				
	5	3.23	.2	90		0				
	10	4.55	.2	90		0				
	15	7.25	.2	90		20				
	20	7.31	0	90		22				
	25	7.31	0	90		22				
0113	30	7.309		EWP						

Date/Time

Comments: blue

127 mls Condensate

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7/17/2011
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 3
Operator MJK
Meter Box I.D. 3602456
Y Factor 1.000
Bar. Press. 29.85

Leak Checks

	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	15.0	15.0	60	0.0
Train after test:	25.0	25.0	60	0.0

Condensate volume: 250 ml/s

Sample ID EM-R3-DCU-Bag

Time		Dry Gas Meter	Rotameter	Dry Gas Meter Temp (°C)	Dry Gas Meter (In. H2O)	Pump Vacuum (In. Hg)	Temperatures (°C)			
24 hour	Min	(L)	(L/min)				Probe	Filter	Condenser	Impinger
0626	0	0.000	0.2	77		15				
0631	5	1.16	0.2	77		25				
0636	10	2.32	0.2	78		25				
0641	15	3.48	0.2	78		25				
0646	20	4.64	0.2	78		25				
0651	25	5.80	0.1	78		25				
0656	30	6.96	0.0	78		25				
STOP 0701	35	8.103								

Date/Time

Comments: Blue

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: M-18 Volatile Organic HAPS (Bag)
Dates: July 14, 16, 17, 2011

Run No. 1 - 3

Dry Gas Volume, corrected to standard conditions, L - as per US EPA Method 5, Eq. 5-1

Run No. 1

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	10.654	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		553	degR

$$V_{m(std)} = \frac{17.64 \times 10.654 \times 1 \times (29.77 + (0 / 13.6))}{553}$$

$V_{m(std)}$ = 10.12

Run No. 2

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	7.309	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		550.1	degR

$$V_{m(std)} = \frac{17.64 \times 7.309 \times 1 \times (29.77 + (0 / 13.6))}{550.125}$$

$V_{m(std)}$ = 6.98

Run No. 3

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	8.103	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		537.8	degR

$$V_{m(std)} = \frac{17.64 \times 8.103 \times 1 \times (29.77 + (0 / 13.6))}{537.75}$$

$V_{m(std)}$ = 7.91

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: M-18 Methanol
Dates: July 14, 16, 17, 2011

Test	Methanol	Condition	Normal		Source Dimension	NA
Run	ALL	DGMCF	1.000		Barometric ("Hg)	29.77
	Time	DGM (L)	DGM ("H_2O)	DGM In (F)	DGM Out (F)	
Run 1	Start 2006	0.00	0.0	94	94	
Sample ID				94	94	
				93	93	
DSL			0.0	93	93	
2.913	Stop 2026	3.071				
Run 2	Start 0043	0.00	0.0	91	91	
Sample ID				91	91	
				92	92	
DSL			0.0	92	92	
15.190	Stop 0143	15.955				
Run 3	Start 0626	0.00	0.0	75	75	
Sample ID				75	75	
				76	76	
DSL			0.0	76	76	
3.481	Stop 0706	3.550				

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7.14.11
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 1
Operator MSH
Meter Box I.D. 3602457 HG-220-2038
Y Factor 1.000
Bar. Press. 29.65

Leak Checks	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	16	16	60	0
Train after test:	25	25	60	0

Condensate volume: _____ Sample ID EM-R1-DCU-SG

Time		Dry Gas Meter	Rotameter	Dry Gas Meter	Dry Gas Meter	Pump Vacuum	Temperature (°C)			
24 hour	Min	(L)	(L/min)	Temp (°F)						
2006	0	0.000	.5	94		4				
	5	2.55	0	93		23				
2014	8 ~~10~~	3.071	END							
	15									
	20									
	25									
	30									
	35									
	40									
	45									

Date/Time

Comments: Red M-308
SG 370450152 9
200ml condensate

Train Set Up By: _____
To Location: _____
Received @ Location: _____
To Lab: _____
Received @ Lab: _____

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7-16-11
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 2
Operator MAJ
Meter Box I.D. 3602457 HG-220-2058
Y Factor 1.000
Bar. Press.

Leak Checks	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	18	18	60	0
Train after test:				

Condensate volume:

Sample ID EM-RZ-DCU-56

Time		Dry Gas Meter	Rotameter	Dry Gas Meter Temp (°C)	Dry Gas Meter (In. H2O)	Pump Vacuum (In. Hg)	Temperatures (°C)			
24 hour	Min	(L)	(L/min)				Probe	Filter	Condenser	Impinger
0843	0	0.000	~~.3~~ .25	91		0				
	5	5.27	.2	91		0				
	10	5.03	.2	91		3				
	15	5.83	.2	91		19				
	20	5.83	0	91		24				
	25	5.83	0	91		24				
	30	6.03	.1	91		16				
	35	7.52	.1	92		9				
	40	9.20	.1	92		9				
	45	10.84	.1	92		9				
	50	12.56	.1	92		9				
	55	14.15	.1	92		9				
0143	60	15.955		END						

Date/Time

Comments: Red

50 mls Condensate

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7/17/2011
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 3
Operator MJK
Meter Box I.D. 3602457
Y Factor 1.000
Bar. Press. 29.85

Leak Checks

	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	15	15	60	0
Train after test:	25	25	60	0

Condensate volume: 300 ml

Sample ID EM-B3-1X4-56

Time		Dry Gas Meter	Rotameter	Dry Gas Meter Temp (°C)	Dry Gas Meter (In. H2O)	Pump Vacuum (In. Hg)	Temperatures (°C)			
24 hour	Min	(L)	(L/min)				Probe	Filter	Condenser	Impinger
0626	0	0.000	0.2	75		10				
0631	5	1.82	0.1	75		25				
0636	10	3.459	0.0	76		25				
0641	15	3.52	0.0	76		25				
STOP 0646	20	3.550								

Date/Time

Comments: Red M308

300 ml Condensate

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: M-18 Volatile Organic HAPS (MeOH)
Dates: July 14, 16, 17, 2011

Run No. 1 - 3

Dry Gas Volume, corrected to standard conditions, L - as per US EPA Method 5, Eq. 5-1

Run No 1

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	3.071	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		553.5	degR

$$V_{m(std)} = \frac{17.64 \times 3.071 \times 1 \times (29.77 + (0 / 13.6))}{553.5}$$

$V_{m(std)}$ = 2.91

Run No 2

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	15.955	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		551.5	degR

$$V_{m(std)} = \frac{17.64 \times 15.955 \times 1 \times (29.77 + (0 / 13.6))}{551.5}$$

$V_{m(std)}$ = 15.19

Run No 3

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	3.550	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		535.5	degR

$$V_{m(std)} = \frac{17.64 \times 3.55 \times 1 \times (29.77 + (0 / 13.6))}{535.5}$$

$V_{m(std)}$ = 3.48

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: XAD Tube
Dates: July 14, 16, 17, 2011

Test	XAD Tube	Condition	Normal		Source Dimension	NA
Run	ALL	DGMCF	1.000		Barometric ("Hg)	29.77
	Time	DGM (L)	DGM ("H_2O)	DGM In (F)	DGM Out (F)	
Run 1	Start 2006	0.00	0.0	68	68	
Sample ID				68	68	
				68	68	
DSL			0.0	68	68	
9.447	Stop 2026	9.500				
Run 2	Start 0043	0.00	0.0	68	68	
Sample ID				68	68	
				68	68	
DSL			0.0	68	68	
13.176	Stop 0143	13.250				
Run 3	Start 0626	0.00	0.0	68	68	
Sample ID				68	68	
				68	68	
DSL			0.0	68	68	
8.204	Stop 0706	8.250				

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7/14/11
[illegible].0000.0000
[illegible]ExxonMobil
[illegible], TX Refinery
[illegible] DCU Drum 603 Vent

Run No. 1A
Operator NAA
Meter Box I.D. R-8 I
Y Factor NA calibrated rotometer orifice
Bar. Press. 29.65

Leak Checks

	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	16	16	60	0
Train after test:	25	25	60	0

Condensate volume: 400 ml

Sample ID EM-A1A-DCU-XAD

Time		Dry Gas Meter (L)	Rotameter (L/m)	Dry Gas [illegible]	Dry Gas [illegible]	Pump [illegible]	
24 hour	Min						
2006	0	0.000	.35			22	
	5		.45			22	
	10		.45			22	
	15		.45			22	
STOP 2026	20	9.50		END			
	25						
	30						
	35						
	40						
	45						

Date/Time

Comments: Yellow - unspiked XAD

XAD 3507301867
charcoal 3022202563

400 ml condensate

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7.16.11
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 2A
Operator WSF
Meter Box I.D. R-8
Y Factor NA calibrated rotameter orifice
Bar. Press. 29.80

Leak Checks

	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	18	18	60	0
Train after test:	20	20	60	0

Condensate volume: 775 ml's

Sample ID EM-R2A-DCU-XAD

Time		Dry Gas Meter	Rotameter	Dry Gas Meter Temp (°C)	Dry Gas Meter (In. H2O)	Pump Vacuum	Temperatures (°C)			
24 hour	Min	(L)	(L/min)			(In. Hg)	Probe	Filter		
0043	0	0.000	.45			20				
	5		.3			7				
	10		.25			9				
	15		.3			7				
	20		.3			4				
	25		.3			4				
	30		.25			8				
	35		.1			18				
	40		.1			18				
	45		.1			18				
	50		.1			18				
	55		.1			18				
0143	60	13.25	END							

Date/Time

Comments: Yellow

775 ml's condensate

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

TEDLAR BAG/TUBE/IMPINGER SAMPLE COLLECTION

Date 7/17/2011
Project No. 182129.0000.0000
Client ExxonMobil
Facility Baytown, TX Refinery
Source DCU Drum 603 Vent

Run No. 3A
Operator MJK
Meter Box I.D. R-8 I
Y Factor NA Calibrated rotometer orifice
Bar. Press. 29.85

Leak Checks

	Initial Vac. ("Hg)	Final Vac ("Hg)	Time (sec)	Vac Drop ("Hg)
Train before test:	15	15	60	0
Train after test:	25	25	60	0

Condensate volume: 550 ml/s Sample ID

Time		Dry Gas Meter	Rotameter	Dry Gas Meter Temp	Dry Gas Meter	Pump Vacuum	Temperatures (°C)			
24 hour	Min	(L)	(L/min)	(°C)	(In. H2O)	(In. Hg)	Probe	Filter	Condenser	Impinger
0626	0	0.000	0.50			15				
0631	5		0.35			25				
0636	10		0.20			25				
0641	15		0.20			25				
0646	20		0.10			25				
0651	25		0.10			25				
0656	30		0.10			25				
0701	35		0.10			25				
STOP 0706	40	8.25								

Date/Time

Comments:

Train Set Up By:

To Location:

Received @ Location:

To Lab:

Received @ Lab:

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: M-18 Volatile Organic HAPS (XAD)
Dates: July 14, 16, 17, 2011

Run No. 1 - 3

Dry Gas Volume, corrected to standard conditions, L - as per US EPA Method 5, Eq. 5-1

Run No. 1

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	9.500	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		528	degR

$$V_{m(std)} = \frac{17.64 \times 9.5 \times 1 \times (29.77 + (0 / 13.6))}{528}$$

$V_{m(std)}$ = 9.45

Run No. 2

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	13.250	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		528.0	degR

$$V_{m(std)} = \frac{17.64 \times 13.25 \times 1 \times (29.77 + (0 / 13.6))}{528}$$

$V_{m(std)}$ = 13.18

Run No. 3

$$V_{m(std)} = \frac{K_1 \times V_m \times Y \times (P_{bar} + (deltaH / 13.6))}{T_m}$$

K_1 = Constant	=	17.64	degR/in.Hg
V_m = Volume of gas sample, dry	=	8.250	L
Y = Dry gas meter calibration factor	=	1.000	
P_{bar} = Barometric pressure at the sampling site	=	29.77	in. Hg
deltaH=Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor		13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature		528.0	degR

$$V_{m(std)} = \frac{17.64 \times 8.25 \times 1 \times (29.77 + (0 / 13.6))}{528}$$

$V_{m(std)}$ = 8.20

SHEET NO. 1 OF 1
PROJECT NO. 18229
DATE 10/23/2011
BY MJKrall
CHK'D

TRC

SUBJECT Exxon Mobil DCU ICR Benzene Calculation

Run 1

264 ppmv detected in bag (Enthalpy)

< 11.0 ug detected in condensate (Enthalpy)

detected	conv liters	conv	Benzene MW	conv	ppm conv	
< 11.0 ug	28.32	lb	lb.mole	385.3 ft³	10^6	= < 0.33 ppmvd in condensate
10.115 dry liters sample volume	1 ft³	453.6 x 10^6 ug	78.11 lb	lb.mole		

264 ppmvd in bag + < 0.33 ppmvd in condensate = < 264.33 ppmvd Total

ppmvd	dry flow	Conv	Benzene MW	Duration	Conv
< 264.33 ft³ / 10^6 ft³	1861 ft³ / hr	lb.mole / 385.3 ft³	78.11 lb / lb.mole	20 min / Vent Cycle	hr / 60 min

⇓

< 0.33 lb / Vent Cycle

A

SHEET NO. 1 OF 1
PROJECT NO. 182129
DATE 10/23/14
BY J Glass
CHK'D

SUBJECT m,p-Xylene Example Calc.

Run 1

18,460 ng detected on Tube

9.447 l dry sample volume

18,614 dscfh vent flow rate

$$\frac{18{,}460\ ng}{9.447\ l} \left| \frac{lb}{453.6 \times 10^6\ ng} \right| \frac{28.32\ l}{ft^3} \left| \frac{18{,}614\ dscf}{hr} \right| \frac{0.3333\ hr}{Vent\ Cycle}$$

$$= 0.757\ lb/vent\ cycle$$

A

Hg-220 Console Calibration

Quality - Service - Reliability

ENVIRONMENTAL SUPPLY COMPANY

Console Model Number :	Hg-220
Console Serial Number :	HG-220-2038

DGM Model Number :	Actaris ACD-G1.6
DGM Serial Number :	3602456

Calibration Date : 11/6/2010

Digital Counter	
Model Number :	Red Lion Cub 5000
Scale Factor :	1.8900
CPL :	529.1

Standard Pressure (in Hg)	Standard Temperature (°R)
29.92	528

Reference Meter	
Model Number :	Shinagawa WSK-1A
Serial Number :	338787
Y_c :	1.080

	Digital Volume Hg-220 Console						Reference Meter						
Flow Rate (lpm)	DGM Counter	Volume (liters)	Volume std liters)	DGM Temperatures Initial (°F)	Final (°F)	AVG (°F)	Volume Initial (liters)	Volume Final (liters)	Volume Total (liters)	Temp (°F)	Bar. Pressure (in Hg)	Y_c	% deviation
3.00	2627	49.665	48.857	66.0	67.0	66.5	223.509	273.206	49.697	67.0	29.35	1.000	0.03
1.00	9245	17.473	17.207	67.0	68.0	66.5	273.206	290.668	17.462	67.0	29.38	0.998	0.16
0.50	6551	12.382	12.193	68.0	67.0	66.5	290.668	303.085	12.417	67.0	29.38	1.002	-0.19

Y_c Avg	1.000

Dave Henry
signature

11/6/10
date

EM-BTRF-000084

Hg-220 Console Calibration

Quality - Service - Reliability

ENVIRONMENTAL SUPPLY COMPANY

Console Model Number :	Hg-220
Console Serial Number :	HG-220-2038

DGM Model Number :	Actaris ACD G1.6
DGM Serial Number :	3602457

Calibration Date : 11/6/2010

Digital Counter	
Model Number :	Red Lion Cub 5000
Scale Factor :	1.8749
CPL :	533.4

Standard Pressure (in Hg)
29.92

Standard Temperature (°R)
528

Reference Meter	
Model Number :	Shinagawa W-NK-1A
Serial Number :	538789
Y_c :	1.000

	Digital Volume Hg-220 Console						Reference Meter						
Flow Rate (lpm)	DGM Counter	Volume (liters)	Volume (std liters)	DGM Temperatures Initial (°F)	Final (°F)	AVG (°F)	Volume Initial (liters)	Volume Final (liters)	Volume Total (liters)	Temp (°F)	Bar. Pressure (in Hg)	Y_c	% deviation
3.00	26381	49.462	48.566	67.0	68.0	67.5	837.477	886.875	49.398	67.0	29.35	1.000	0.03
1.00	9025	16.921	16.616	68.0	68.0	68.0	886.875	903.806	16.931	66.0	29.38	1.004	-0.44
0.50	7109	13.329	13.076	68.0	69.0	68.5	903.806	917.043	13.237	67.0	29.38	0.996	0.41

signature

11/6/10
date

Y_c Avg	1.000

EM-BTRF-000026

ExxonMobil BTRF ICR Test - DCU D603 Vent Volatile Organics

Bags				Run 1 (ppmv)		Run 2 (ppmv)		Run 3 (ppmv)		Average (ppmv)
Compound	MW	CAS Number								
Acetone	58.08	67-64-1	<	<0.415	<	<0.415	<	<0.415	<	<0.415
Acrolein	56.06	107-05-8	<	<0.283	<	<0.283	<	<0.283	<	<0.283
Benzene	78.11	71-43-2		264		387		481		377
1,3-Butadiene	54.09	106-99-0	<	<0.282	<	<0.282	<	<0.282	<	<0.282
Carbon disulfide	76.139	75-15-0		1.42		6.61		9.19		5.74
1,2-Dibromoethane	187.86	106-93-4		242		246		74		187
Hexane	86.18	110-54-3		92.6		162		48.0		101
Methylene chloride	84.93	75-09-2	<	<0.958	<	<0.958	<	<0.958	<	<0.958
Pentane	72.15	109-66-0		245		472		204		307
Tetrachloroethene	165.83	127-18-4	<	<0.291	<	<0.291	<	<0.291	<	<0.291
Toluene	92.14	108-88-3		902		1252		1456		1203
Trichloroethene	131.39	79-01-6	<	<0.401	<	<0.401		21.7	<	<7.50

XAD Tubes				Run 1		Run 2		Run 3		Average			
	Sample Volume (liters):			9.447 (ug/dscm)		13.176 (ug/dscm)		8.204 (ug/dscm)		10.276 (ug/dscm)	ug	ug	ug
Compound		CAS Number											
Acetonitrile		75-05-8		33,492		68,078	<	<7314	<	<36295	316	897	60.0
Acrylonitrile		107-13-1	<	<10283	<	<2113	<	<3393	<	<5263	97.1	27.8	27.8
Chlorobenzene		108-90-7	<	<2890	<	<2072	<	<3328	<	<2763	27.3	27.3	27.3
Cumene (isoproylbenzene)		98-82-8		10,585		28,537	<	<2608	<	<13910	100	376	21.4
Ethylbenzene		100-41-4		311,422		647,389		107,874		355,562	2942	8530	885
Methyl isobutyl ketone		108-10-1	<	<2075	<	<1488	<	<2389	<	<1984	19.6	19.6	19.6
Methyl t-butyl ether		91-20-3		71,451		1,214		2,389		25,018	675	16.0	19.6
Nitrobenzene		98-95-3		88,176		110,352		328,498		175,676	833	1454	2695
2-Nitropropane		79-46-9	<	<47545		128276	<	<4152	<	<59991	449	1690	34.1
Styrene		100-42-5		23,711	<	<1692	<	<2718	<	<9374	224	22.3	22.3
2,4-Trimethylpentane		540-84-1	<	<1800	<	<1290	<	<2072	<	<1721	17.0	17.0	17.0
m,p-Xylene		1330-20-7		1,954,059		3,897,162		1,167,114		2,339,445	18460	51349	9575
o-Xylene		1330-20-7		501,535		929,265		252,438		561,079	4738	12244	2071

Methanol (Method 308)				Run 1		Run 2		Run 3		Average			
	Sample Volume (liters):			2.913 (ug/dscm)		15.190 (ug/dscm)		3.481 (ug/dscm)		7.195 (ug/dscm)			
Compound		CAS Number											
Methanol		67-56-1		4,325		1,995	<	<1939	<	<2753	12.6	30.3	6.75

Bags				Run 1 (ppmv)		Run 2 (ppmv)		Run 3 (ppmv)		Average (ppmv)
Compound		CAS Number								
Methane	16.04	74-82-8		241708		484034		483837		403193
Ethane	30.07	74-84-0		39250		76346		61316		58971

EM-BTRF-000026

ExxonMobil BTRF ICR Test - DCU D603 Vent Volatile Orgar

Bags			Condensate		10.115 Run 1 (ppmv)		6.976 Run 2 (ppmv)		7.912 Run 3 (ppmv)		Average (ppmv)		TOTAL Run 1 (ppmv)		TOTAL Run 2 (ppmv)		TOTAL Run 3 (ppmv)		TOTAL Average (ppmv)		20 min 1 (lb/VC)		60 min 2 (lb/VC)		40 min 3 (lb/VC)		Average (lb/VC)
Compound	**MW**	**CAS Number**																									
Acetone	58.08	67-64-1			0.852		2.48		0.424		1.250	<	<1.27	<	<2.89	<	<0.839	<	<1.67	<	<0.00118	<	<0.00240	<	<0.00033	<	<0.00130
Acrolein	56.06	107-05-8		<	<0.543	<	<0.787	<	<0.694	<	<0.6749	<	<0.826	<	<1.07	<	<0.977	<	<0.958	<	<0.00075	<	<0.00086	<	<0.00037	<	<0.00066
Benzene	78.11	71-43-2		<	<0.335		2.61		0.607	<	<1.1838	<	<264		390		482	<	<379	<	<0.332		0.435		0.255	<	<0.341
1,3-Butadiene	54.09	106-99-0		<	<0.567	<	<0.822	<	<0.725	<	<0.7049	<	<0.849	<	<1.10	<	<1.007	<	<0.987	<	<0.00074	<	<0.00085	<	<0.00037	<	<0.00065
Carbon disulfide	76.139	75-15-0		<	<0.133	<	<0.193	<	<0.171	<	<0.1658	<	<1.55	<	<6.80	<	<9.36	<	<5.91	<	<0.00190	<	<0.00741	<	<0.00483	<	<0.00471
1,2-Dibromoethane	187.86	106-93-4			1.21		2.35		1.49		1.681		243		248		75.5		189		0.736		0.667		0.0961		0.500
Hexane	86.18	110-54-3		<	<0.254	<	<0.369	<	<0.325	<	<0.3162	<	<92.9	<	<162	<	<48.3	<	<101	<	<0.129	<	<0.200	<	<0.0282	<	<0.119
Methylene chloride	84.93	75-09-2			0.624		0.905		0.798		0.776	<	<1.58	<	<1.86	<	<1.76	<	<1.73	<	<0.00216	<	<0.00226	<	<0.00101	<	<0.00181
Pentane	72.15	109-66-0		<	<0.666		2.84	<	<0.851	<	<1.4536	<	<246		475	<	<205	<	<308	<	<0.285		0.490	<	<0.100	<	<0.292
Tetrachloroethene	165.83	127-18-4			2.42		4.05		1.28		2.586	<	<2.71	<	<4.35	<	<1.57	<	<2.88	<	<0.00725	<	<0.0103	<	<0.00176	<	<0.00644
Toluene	92.14	108-88-3		<	<0.555		4.34		0.822	<	<1.9060	<	<903		1256		1457	<	<1205	<	<1.34		1.65		0.910	<	<1.30
Trichloroethene	131.39	79-01-6		<	<0.226		0.504	<	<0.289	<	<0.3398	<	<0.627		0.905	<	<22.0	<	<7.84	<	<0.00133		0.00170	<	<0.0196	<	<0.00753

XAD Tubes

	Sample Volume (liters):			20 min 1 18614 (lb/VC)		60 min 2 5508 (lb/VC)		40 min 3 3916 (lb/VC)		Average (lb/VC)
Compound		**CAS Number**								
Acetonitrile		75-05-8		0.0130		0.0234	<	<0.00119	<	<0.0125
Acrylonitrile		107-13-1	<	<0.00398	<	<0.00073	<	<0.00055	<	<0.00175
Chlorobenzene		108-90-7	<	<0.0011	<	<0.0007	<	<0.00054	<	<0.0008
Cumene (isoproylbenzene)		98-82-8		0.00410		0.00981	<	<0.00043	<	<0.00478
Ethylbenzene		100-41-4		0.121		0.223		0.018		0.120
Methyl isobutyl ketone		108-10-1	<	<0.00080	<	<0.00051	<	<0.00039	<	<0.00057
Methyl t-butyl ether		91-20-3		0.0277		0.00042		0.00039		0.00950
Nitrobenzene		98-95-3		0.0342		0.0379		0.0535		0.0419
2-Nitropropane		79-46-9	<	<0.0		0.0441	<	<0.00068	<	<0.0211
Styrene		100-42-5		0.00919	<	<0.00058	<	<0.00044	<	<0.00340
2,4-Trimethylpentane		540-84-1	<	<0.00070	<	<0.00044	<	<0.00034	<	<0.00049
m,p-Xylene		1330-20-7		0.757		1.34		0.190		0.762
o-Xylene		1330-20-7		0.194		0.320		0.0411		0.185

Methanol (Method 308)

	Sample Volume (liters):			20 min 1 18614 (lb/VC)		60 min 2 5508 (lb/VC)		40 min 3 3916 (lb/VC)		Average (lb/VC)
Compound		**CAS Number**								
Methanol		67-56-1		0.00168		0.00069	<	<0.00032	<	<0.00089

Bags				20 min 1 18614 (lb/VC)		60 min 2 5508 (lb/VC)		40 min 3 3916 (lb/VC)		Average (lb/VC)
Compound		**CAS Number**								
Methane	16.04	74-82-8		62.4		111		52.6		7.53E+01
Ethane	30.07	74-84-0		19.0		32.8		12.5		2.14E+01

EM-BTRF-000880

TRC Environmental Corporation

9225 US Hwy 183 S
Austin, TX 78747

ExxonMobil - DCU, D603 Vent

Project # 182129.0000.0000

Analytical Report
(0711-64)

EPA Method 18 (Bags and Condensates)

1,3-Butadiene, Acetonitrile, Acrolein, Acetone, Acrylonitrile, Pentane, Methylene chloride, Hexane, Benzene, Trichloroethene, Toluene, 1,2-Dibromoethane, Tetrachloroethene, Carbon disulfide, Methane and Ethane

EPA Method 18 (Adsorbents)

Acetonitrile, Acrylonitrile, Methyl t-butyl ether (MTBE), 2-Nitropropane, Isooctane, Methyl isobutyl ketone (MIBK), Chlorobenzene, Ethylbenzene, m/p-Xylene, Styrene, o-Xylene, Cumene, and Nitrobenzene,

EPA Method 308

Methanol

Enthalpy Analytical, Inc.
Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 1102 pages.

Valgena Respass

QA Review Performed by – Valgena Respass

Report Issued: 09/22/2011

Summary of Results

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

Compound	Sample ID / Adjusted Concentration (ppm)		
	EM-R2-Bag-DCU	***EM-R3-Bag-DCU***	***EM-R1-Bag-DCU***
1-3 Butadiene	0.282 ND	0.282 ND	0.282 ND
Acetonitrile	44.3	27.8	26.9
Acrolein	0.283 ND	0.283 ND	0.283 ND
Acetone	0.415 ND	0.415 ND	0.415 ND
Acrylonitrile	132	74.1	67.1
Pentane	472	204	245
Methylene chloride	0.958 ND	0.958 ND	0.958 ND
Hexane	162	48.0	92.6
Benzene	387	481	264
Trichloroethene	0.401 ND	21.7	0.401 ND
Toluene	1,252	1,456	902
1,2 Dibromoethane	246	74.0	242
Tetrachloroethene	0.291 ND	0.291 ND	0.291 ND

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 16 - Type

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

Compound	Sample ID / Sample Concentration (ppm)		
	EM-R1-Bag-DCU	***EM-R2-Bag-DCU***	***EM-R3-Bag-CDU***
Carbon disulfide	1.42	6.61	9.19

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R

Compound	Sample ID / Adjusted Concentration (ppm)		
	EM-R2-Bag-DCU	***EM-R3-Bag-DCU***	***EM-R1-Bag-DCU***
Methane	484,034	483,837	241,708
Ethane	76,346	61,316	39,250

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

Compound	Sample ID / Catch Weight (ug)		
	R1 Bag COND	***R2 Bag COND***	***R3 Bag COND***
1,3-Butadiene	12.9 ND	12.9 ND	12.9 ND
Pentane	20.2 ND	59.5	20.2 ND
Acrolein	12.8 ND	12.8 ND	12.8 ND
Acetone	20.8 J	41.7 J	8.09 J
Dichloromethane	22.3 ND	22.3 ND	22.3 ND
Hexane	9.22 ND	9.22 ND	9.22 ND
Benzene	11.0 ND	59.1 J	15.6 J
Trichloroethylene	12.5 ND	19.2 J	12.5 ND
Toluene	21.5 ND	116	24.9 J
Tetrachloroethylene	169	195	69.7 J
1,2-Dibromoethane	95.2 J	128 J	91.9 J

	Bag COND FB
1,3-Butadiene	12.9 ND
Pentane	20.2 ND
Acrolein	12.8 ND
Acetone	7.60 ND
Dichloromethane	22.3 ND
Hexane	9.22 ND
Benzene	11.0 ND
Trichloroethylene	12.5 ND
Toluene	21.5 ND
Tetrachloroethylene	59.2 ND
1,2-Dibromoethane	28.6 ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

Compound	Sample ID / Catch Weight (ug)		
	R1 Bag COND	***R2 Bag COND***	***R3 Bag COND***
Carbon disulfide	4.27 ND	4.27 ND	4.27 ND
	Bag COND FB		
Carbon disulfide	4.27 ND		

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18 Adsorbents

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Compound	Sample ID / Adjusted Catch Weight (ug)		
	M18 R1A	***M18 R2A***	***M18 R3A***
Acetonitrile	292	760	19.3 ND
Acrylonitrile	88.7	19.4 ND	19.4 ND
MTBE	675	16.0	19.6
2-Nitropropane	439	1,680	23.9 ND
Isooctane	17.0 ND	17.0 ND	17.0 ND
MIBK	19.6 ND	19.6 ND	19.6 ND
Chlorobenzene	27.3 ND	27.3 ND	27.3 ND
Ethylbenzene	2,942	8,530	885
m/p-Xylene	18,460 E	51,349 E	9,575
Styrene	224	22.3 ND	22.3 ND
o-Xylene	4,738	12,244	2,071
Cumene	100	376	21.4 ND
Nitrobenzene	833	1,454	2,695

	M18 H2O Cond FB-A	***M18 H2O XAD FB-A***
Acetonitrile	19.3 ND	15.7 ND
Acrylonitrile	19.4 ND	15.7 ND
MTBE	18.2 ND	14.7 ND
2-Nitropropane	23.9 ND	19.3 ND
Isooctane	17.0 ND	13.7 ND
MIBK	19.6 ND	15.9 ND
Chlorobenzene	27.3 ND	22.1 ND
Ethylbenzene	21.3 ND	17.3 ND
m/p-Xylene	21.2 ND	17.2 ND
Styrene	22.3 ND	18.1 ND
o-Xylene	21.7 ND	17.5 ND
Cumene	21.4 ND	17.3 ND
Nitrobenzene	29.6 ND	23.9 ND

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

Compound	Sample ID / Adjusted Catch Weight (ug)	
	M18 R1A Cond Raff	***M18 R1B Spkd Cond Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	24.4 J	21.2 J
2-Nitropropane	10.16 ND	10.16 ND
	M18 R2A Cond Raff	***M18 R2B Spkd Cond Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	137	122
2-Nitropropane	10.16 ND	10.16 ND
	M18 R3A Cond Raff	***M18 R3B Spkd Cond Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	40.7 J	34.5 J
2-Nitropropane	10.16 ND	10.16 ND
	M18 H2O Cond FB-A Raff	***M18 H2O Cond RB Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	9.99 ND	9.99 ND
2-Nitropropane	10.16 ND	10.16 ND

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

Compound	Sample ID / Catch Weight (ug)		
	M308-Run 1	***M308-Run 2***	***M308-Run 3***
Methanol	12.6 J	30.3 J	6.75 ND
	M308-H2O-FB	***M308-SG-FB***	
Methanol	6.75 ND	0.790 ND	

Results

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.282 (ppm)
LOQ 2.57 (ppm)
Compound 1-3 Butadiene

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	2.63	2.63	2.63	0.0	93.2	93.2	93.0	0.1	93.1	1	100	93.1	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	90.6%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 1.12 (ppm)
LOQ 4.85 (ppm)
Compound Acetonitrile

Lower Curve Limit 4.85 (ppm)
Upper Curve Limit 250 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	3.47	3.47	3.47	0.0	43.7	43.4	45.9	3.6	44.3	1	100	44.3	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	3.45	3.45	3.45	0.1	27.9	28.1	27.5	1.1	27.8	1	100	27.8	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	3.48	3.48	3.48	0.0	26.3	27.1	27.2	2.1	26.9	1	100	26.9	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	1.12	1.12	1.12	0.0	1.12	1	100	1.12	ND
EM-R3-Bag-DCU Baseline	018B0201.D	018B0202.D	018B0203.D	GC114P176R_ICR.M	3.46	3.47	3.47	0.1	21.1	20.7	20.9	1.0	20.9	1	100	20.9	
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	3.46	3.46	3.46	0.1	21.4	22.0	20.7	3.1	21.4	1	100	21.4	
gc119p176 #l4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	NA	NA	NA	NA	1.12	1.12	1.12	0.0	1.12	1	100	1.12	ND
															Spike Amount (ppm)	NA	
															Spike Recovery (%)	NA	

EM-BTRF-000194

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.283 (ppm)
LOQ 2.57 (ppm)
Compound Acrolein

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	3.60	3.60	3.60	0.0	75.0	74.6	74.0	0.7	74.6	1	100	74.6	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	72.5%	

EM-BTRF-000193

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.415 (ppm)
LOQ 4.99 (ppm)
Compound Acetone

Lower Curve Limit 4.99 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	3.70	3.70	3.71	0.0	84.1	83.7	83.2	0.6	83.6	1	100	83.6	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	81.4%	

EM-BTRF-000196

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.319 (ppm)
LOQ 4.97 (ppm)
Compound Acrylonitrile

Lower Curve Limit 4.97 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.1	131	132	132	0.5	132	1	100	132	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.0	74.5	74.2	73.7	0.6	74.1	1	100	74.1	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	4.11	4.11	4.11	0.0	68.2	66.7	66.3	1.7	67.1	1	100	67.1	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.319	0.319	0.319	0.0	0.319	1	100	0.319	ND
EM-R3-Bag-DCU Baseline	018B0201.D	018B0202.D	018B0203.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.1	80.2	78.6	78.7	1.4	79.2	1	100	79.2	
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.0	94.9	91.6	94.1	2.1	93.5	1	100	93.5	
gc119p176 #l4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	4.11	4.11	4.11	0.0	60.8	60.9	60.6	0.3	60.7	1	100	60.7	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	59.3%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.257 (ppm)
LOQ 2.57 (ppm)
Compound Pentane

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P176R_ICR.M	4.19	4.19	4.20	0.1	15.3	15.3	15.1	0.9	15.2	31	100	472	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	4.19	4.19	4.19	0.0	205	203	203	0.6	204	1	100	204	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	4.19	4.19	4.19	0.0	244	245	245	0.3	245	1	100	245	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	100	0.257	ND
gc119p176 #l4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	4.20	4.20	4.20	0.0	94.4	94.4	94.2	0.1	94.3	1	100	94.3	
															Spike Amount (ppm)		103
															Spike Recovery (%)		91.8%

EM-BTRF-000196

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.958 (ppm)
LOQ 2.57 (ppm)
Compound Methylene chloride

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	4.53	4.53	4.53	0.2	361	360	352	1.5	358	1	100	358	E
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	4.53	4.53	4.53	0.0	708	697	693	1.2	699	1	100	699	E
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	4.51	4.51	4.51	0.0	85.8	86.3	86.4	0.4	86.2	1	100	86.2	
															Spike Amount (ppm)		103
															Spike Recovery (%)		83.8%

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.259 (ppm)
LOQ 2.57 (ppm)
Compound Hexane

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	5.78	5.78	5.78	0.0	197	187	202	4.3	195	1	121	162	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	5.78	5.78	5.78	0.0	58.6	57.3	58.0	1.2	57.9	1	121	48.0	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	5.78	5.78	5.78	0.0	111	111	113	1.2	112	1	121	92.6	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.259	0.259	0.259	0.0	0.259	1	100	0.259	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	5.77	5.78	5.78	0.1	176	177	170	2.7	175	1	100	175	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	5.79	5.79	5.79	0.0	93.4	93.5	93.1	0.2	93.3	1	100	93.3	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	90.8%	

EM-BTRF-000100

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.256 (ppm)
LOQ 2.56 (ppm)
Compound Benzene

Lower Curve Limit 2.56 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	12.9	12.7	12.6	1.3	12.7	31	102	387	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	16.1	16.1	15.1	4.1	15.8	31	102	481	
EM-R1-Bag-DCU	020B0901.D	020B0902.D	020B0903.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	8.76	8.63	8.62	1.0	8.67	31	102	264	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.256	0.256	0.256	0.0	0.256	1	100	0.256	ND
EM-R1-Bag-DCU S&R	019B0201.D	019B0202.D	019B0203.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	13.4	13.2	13.1	1.7	13.2	31	100	410	
gc119p176 #l4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	88.5	88.5	88.1	0.3	88.4	1	100	88.4	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	86.3%	

EM-BTRF-000108

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.401 (ppm)
LOQ 4.97 (ppm)
Compound Trichloroethene

Lower Curve Limit 4.97 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.401	0.401	0.401	0.0	0.401	1	100	0.401	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	6.89	6.89	6.89	0.1	22.6	21.7	20.8	4.1	21.7	1	100	21.7	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.401	0.401	0.401	0.0	0.401	1	100	0.401	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.401	0.401	0.401	0.0	0.401	1	100	0.401	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	6.89	6.89	6.89	0.1	48.1	51.7	48.8	4.4	49.5	1	100	49.5	
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	6.89	6.89	6.89	0.1	117	118	119	0.8	118	1	100	118	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	6.90	6.90	6.90	0.0	84.6	84.5	84.1	0.3	84.4	1	100	84.4	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	82.4%	

EM-BTRF-000102

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.256 (ppm)
LOQ 4.97 (ppm)
Compound Toluene

Lower Curve Limit 4.97 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P176R_ICR.M	7.56	7.57	7.57	0.0	34.1	32.9	32.2	3.1	33.1	31	82.0	1,252	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P176R_ICR.M	7.57	7.57	7.57	0.0	38.7	38.6	38.3	0.6	38.5	31	82.0	1,456	
EM-R1-Bag-DCU	020B0901.D	020B0902.D	020B0903.D	GC114P176R_ICR.M	7.57	7.57	7.57	0.0	23.8	23.8	23.9	0.2	23.8	31	82.0	902	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.256	0.256	0.256	0.0	0.256	1	100	0.256	ND
EM-R1-Bag-DCU S&R	019B0201.D	019B0202.D	019B0203.D	GC114P176R_ICR.M	7.56	7.56	7.56	0.0	36.3	35.5	35.2	1.7	35.7	31	100	1,106	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	7.57	7.57	7.57	0.0	80.6	80.5	80.1	0.4	80.4	1	100	80.4	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	78.5%	

EM-BTRF-000109

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.257 (ppm)
LOQ 4.99 (ppm)
Compound 1,2 Dibromoethane

Lower Curve Limit 4.99 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	250	242	246	1.7	246	1	100	246	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	74.3	74.1	73.6	0.6	74.0	1	100	74.0	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	237	244	244	1.9	242	1	100	242	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	100	0.257	ND
gc119p176 #l4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	71.9	71.9	71.5	0.4	71.8	1	100	71.8	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	69.8%	

EM-BTRF-000104

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.291 (ppm)
LOQ 4.99 (ppm)
Compound Tetrachloroethene

Lower Curve Limit 4.99 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
gc119p176 #l4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	7.98	7.98	7.98	0.0	82.3	82.3	81.8	0.4	82.1	1	100	82.1	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	79.9%	

EM-BTRF-000103

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp	Client #	182129.0000.0000
Analyst	MGM	Job #	0711-64
Parameters	Bag Spike & Recovery	Unspiked Sample ID	EM-R1-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	1-3 Butadiene MW 54.090			Acrolein MW 56.063			Acetone MW 58.079		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avg ppm		0.00			0.00			0.00	
What was added to the bag?									
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	10.00			10.0			10.0		
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	25.00			25.0			25.0		
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	0.00			0.00			0.00		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	508	29.73	69.0	501	29.73	69.0	495	29.73	69.0
Volume Added (mL)	60.0	Total ug	67.9	60.0	Total ug	69.5	60.0	Total ug	71.1
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
Total Vol (mL) vaporized	11.8			11.8			11.8		
Total Vol (mL) added as gas	60.0			60.0			60.0		
Other volume (mL) Added	0.00			0.00			0.00		

What volume was in the bag before spiking?

Wedge Volume	4.882	(L)	Sampled	7/14/11 12:01 AM	Hours	
			Analyzed	7/20/11 1:22 PM	Delta	157:21:15
			Spiked	7/21/11 11:00 AM	Hours	
			Spike Analyzed	7/28/11 9:05 AM	Delta	166:05:00
Total Vol. After Spiking	4,954	(mL)	Spike hold equal to or greater than original hold		YES	

Ending Volume in Bag (mL)	4,954		
Original volume in the bag (mL)	4,882	4,882	4,882
Total volume added (mL)	71.8	71.8	71.8
Dilution Factor caused by addition	1.01	1.01	1.01
Dilution Adjusted Base Conc (ppm) "U"	0.00	0.00	0.00
Theoretical Spike Conc (ppm) "S"	6.10	6.02	5.94

What was the conc of the bag after spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Concentration (ppm) "T"	Avg ppm	0.00		Avg ppm	0.00		Avg ppm	0.00	
RECOVERY %		0.0	%		0.0	%		0.0	%

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R1-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration

U = before spike concentration

S = theoretical spike concentration

	Methylene chloride MW 84.933			Hexane MW 84.160			Benzene MW 78.113		
	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
What was the conc of the bag before spiking? U' (before spiking)	0.00	0.00	0.00	111	111	113	272	266	267
	Avg ppm	0.00		Avg ppm	112		Avg ppm	269	
What was added to the bag?	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
	0.00	0.00		0.00	0.00		0.00	0.00	
	10.00			10.0			10.0		
Liquid Spike #1 uL Added	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
	0.00	0.00		32,785	820		87,856	2,196	
	25.00			25.0			25.0		
Liquid Spike #2 uL Added	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
	0.00	0.00		0.00	0.00		0.00	0.00	
	0.00			0.00			0.00		
Liquid Spike #3 uL Added	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
	500	29.73	69.0	501	29.73	69.0	505	29.73	69.0
	60.0	Total ug	105	60.0	Total ug	104	60.0	Total ug	97.5
Gas Spike #1 Volume Added (mL)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
Gas Spike #2 Volume Added (mL)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
Gas Spike #3 Volume Added (mL)	11.8			11.8			11.8		
	60.0			60.0			60.0		
Total Vol (mL) vaporized	0.00			0.00			0.00		
Total Vol (mL) added as gas									
Other volume (mL) Added									

What volume was in the bag before spiking?

Wedge Volume 4.882 (L)

Total Vol. After Spiking 4,954 (mL)

		Hours
Sampled	6/9/11 1:12 PM	
		Delta 157:21:15
Analyzed	6/13/11 1:42 PM	
Spiked	6/15/11 1:30 PM	
		Delta 166:05:00
Spike Analyzed	7/28/11 9:05 AM	
Spike hold equal to or greater than original hold		YES

Ending Volume in Bag (mL)	4,882	4,882	4,882
Original volume in the bag (mL)	71.8	71.8	71.8
Total volume added (mL)	1.01	1.01	1.01
Dilution Factor caused by addition	0.00	110	265
Dilution Adjusted Base Conc (ppm) "U"	6.00	53.3	143
Theoretical Spike Conc (ppm) "S"			
What was the conc of the bag after spiking?	Inj 1 (ppm) 361	Inj 1 (ppm) 176	Inj 1 (ppm) 417
	Inj 2 (ppm) 360	Inj 2 (ppm) 177	Inj 2 (ppm) 408
	Inj 3 (ppm) 352	Inj 3 (ppm) 170	Inj 3 (ppm) 406
	Avg ppm 358	Avg ppm 175	Avg ppm 410
Final Concentration (ppm) "T"			
RECOVERY %	5958 %	121 %	102 %

9/20/2011

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R1-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	Trichloroethene MW 131.388			Toluene MW 92.140		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	0.00	0.00	0.00	738	738	741
	Avg ppm	0.00		Avg ppm	739	
What was added to the bag?						
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0.00	0.00		863,270	8,633	
uL Added	10.0			10.0		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0.00	0.00		0.00	0.00	
uL Added	25.0			25.0		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0.00	0.00		0.000	0.000	
uL Added	0.00			0.000		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	507	29.73	69.0	508	29.73	69.0
Volume Added (mL)	60.0	Total ug	164.71	60.0	Total ug	116
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00
Total Vol (mL) vaporized	11.8			11.8		
Total Vol (mL) added as gas	60.0			60.0		
Other volume (mL) Added	0.00			0.00		

What volume was in the bag before spiking?

Wedge Volume 4.882 (L)

Sampled	7/14/11 12:01 AM	Hours Delta	157:21:15
Analyzed	7/20/11 1:22 PM		
Spiked	7/21/11 11:00 AM	Hours Delta	166:05:00
Spike Analyzed	7/28/11 9:57 AM		

Total Vol. After Spiking 4,954 (mL) Spike hold equal to or greater than original hold: YES

			Trichloroethene	Toluene
Ending Volume in Bag (mL)			4,954	
Original volume in the bag (mL)			4,882	4,882
Total volume added (mL)			71.8	71.8
Dilution Factor caused by addition			1.01	1.01
Dilution Adjusted Base Conc (ppm)	"U"		0.00	728
Theoretical Spike Conc (ppm)	"S"		6.09	461

What was the conc of the bag after spiking?	Trichloroethene Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Toluene Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	48.1	51.7	48.8	1,125	1,102	1,091
Final Concentration (ppm) "T"	Avg ppm	49.5		Avg ppm	1,106	
RECOVERY %		814 %			82.0 %	

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R1-Bag-DCU

Logbook Reference
Neat Toluene

Liquid Spike #1

		Solvent									
		Neat									Toluene
Total ug		0									8632.7
Specific Gravity		0									0.865
MW		0									92.1402
Vol of cmpd (uL)		0.02									9.980
Total Volume added (uL)	10										
Weight Fraction		0.00									1.0000
SG Contribution		0.00									0.8650
Average SG	0.87										
MW Contribution		0.00	-	-	-	-	-	-	-	-	92.140
Average MW	92.14										
Vaporized Volume (mL)	2.3										

Logbook Reference
gc126 pg 21

Liquid Spike #2

		Solvent								
		CS2						Hexane	Benzene	
Total ug		26784						819.63125	2196.4013	
Specific Gravity		1.26						0.659	0.879	
MW		76.14						84.16	78.1134	
Vol of cmpd (uL)		21.3						1.244	2.499	
Total Volume added (uL)	25									
Weight Fraction		0.90						0.0275	0.0737	
SG Contribution		1.13						0.0181	0.0648	
Average SG	1.22									
MW Contribution		68.43	-	-	-	-	-	2.315	5.757	
Average MW	76.51									
Vaporized Volume (mL)	9.6									

EM-BTRF-000109

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R3-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	Acetonitrile			Acrylonitrile		
	MW 41.05			MW 53.06		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)		Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	21.1	20.7	20.9	80.2	78.6	78.7
	Avg ppm	20.9		Avg ppm	79.2	
What was added to the bag?						
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0	0		16,104	322	
uL Added	20			20		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0	0		0	0	
uL Added	0			0		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0	0		0	0	
uL Added	0			0		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1		29.73	70.0	0	29.73	70.0
Volume Added (mL)	120	Total ug	0.0	120	Total ug	0.0
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	249	29.73	70.0	0	29.73	70.0
Volume Added (mL)	140	Total ug	58.9	140	Total ug	0.0
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0	29.73	70.0		29.73	70.0
Volume Added (mL)		Total ug	0.0	0	Total ug	0.0
Total Vol (mL) vaporized	8.0			8.0		
Total Vol (mL) added as gas	260			260		
Other volume (mL) Added	0			0		

What volume was in the bag before spiking?

Wedge Volume	2.980	(L)	Sampled	4/5/06 8:00 AM	Hours
			Analyzed	4/6/06 10:00 AM	Delta 26:00:00
			Spiked	4/6/06 11:00 AM	Hours
			Spike Analyzed	5/5/06 4:00 AM	Delta 689:00:00
Total Vol. After Spiking	3,248	(mL)	Spike hold equal to or greater than original hold		YES

Ending Volume in Bag (mL)	3,248		
Original volume in the bag (mL)	2,980		2,980
Total volume added (mL)	268		268
Dilution Factor caused by addition	1.09		1.09
Dilution Adjusted Base Conc (ppm) "U"	19.20		72.64
Theoretical Spike Conc (ppm) "S"	**10.62**		**44.96**

What was the conc of the bag after spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	21.4	22.0	20.7	94.9	91.6	94.1
Final Concentration (ppm) "T"	Avg ppm	21.4		Avg ppm	93.5	
RECOVERY %		20.3	%		46.4	%

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R3-Bag-DCU

Logbook Reference
gc126 pg 32

Liquid Spike #1

		Solvent CS2	Acetonitrile	Methane	Acrylonitrile
Total ug		24697	0	0	322.08
Specific Gravity		1.26	0.882	0.829	0.806
MW		76.14	41.0519	16.04	53.06
Vol of cmpd (uL)		19.60	0.000	0.000	0.400
Total Volume added (uL)	20				
Weight Fraction		0.99	0.0000	0.0000	0.0129
SG Contribution		1.24	0.0000	0.0000	0.0104
Average SG	1.25				
MW Contribution		75.16	-	-	0.683
Average MW	75.84				
Vaporized Volume (mL)	8.0				

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 16 - Type

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

MDL 0.0454 (ppm)
LOQ 0.626 (ppm)
Compound Carbon disulfide

Lower Curve Limit 0.626 (ppm)
Upper Curve Limit 7.90 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
EM-R1-Bag-DCU	007B0401.D	007B0402.D	007B0403.D	GC125P025_POST_CS2.M	5.51	5.51	5.51	0.0	1.44	1.40	1.41	1.8	1.42	1	1.42	
EM-R2-Bag-DCU	007B0901.D	007B0902.D	007B0903.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.06	1.11	1.13	3.5	1.10	6	6.61	
EM-R3-Bag-CDU	006B0401.D	006B0402.D	006B0403.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.46	1.51	1.63	6.3	1.53	6	9.19	
Blank	007B0803.D	007B0804.D	007B0805.D	GC125P031_POST_CS2.M	NA	NA	NA	NA	0.0454	0.0454	0.0454	0.0	0.0454	1	0.0454	ND

EM-BTRF-000112

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

MDL 0.0450 (ppm)
LOQ 0.626 (ppm)
Compound Carbon disulfide

Lower Curve Limit 0.626 (ppm)
Upper Curve Limit 7.90 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
EM-R1-Bag-DCU	007B0401.D	007B0402.D	007B0403.D	GC125P025_POST_CS2.M	5.51	5.51	5.51	0.0	1.44	1.40	1.41	1.8	1.42	1	1.42	
EM-R3-Bag-CDU	007B0901.D	007B0902.D	007B0903.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.06	1.11	1.13	3.5	1.10	6	6.61	
EM-R3-Bag-CDU	006B0401.D	006B0402.D	006B0403.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.46	1.51	1.63	6.3	1.53	6	9.19	
Blank	007B0803.D	007B0804.D	007B0805.D	GC125P031_POST_CS2.M	NA	NA	NA	NA	0.0450	0.0450	0.0450	0.0	0.0450	1	0.0450	ND

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R

MDL 0.284 (ppm)
LOQ 2.00 (ppm)
Compound Methane

Lower Curve Limit 2.00 (ppm)
Upper Curve Limit 80,000 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P172R_0711-64.M	1.40	1.40	1.40	0.1	15,575	15,717	15,550	0.7	15,614	31	100	484,034	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P172R_0711-64.M	1.40	1.40	1.40	0.0	15,716	15,645	15,462	0.9	15,608	31	100	483,837	
EM-R1-Bag-DCU	020B0901.D	020B0902.D	020B0903.D	GC114P172R_0711-64.M	1.40	1.40	1.40	0.0	7,825	7,768	7,798	0.4	7,797	31	100	241,708	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P172R_0711-64.M	NA	NA	NA	NA	0.284	0.284	0.284	0.0	0.284	1	100	0.284	ND
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P172R_0711-64.M	1.38	1.38	1.38	0.1	619,377	611,745	613,504	0.7	614,875	1	100	614,875	E

EM-BTRF-000124

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R

MDL 0.284 (ppm)
LOQ 2.00 (ppm)
Compound Ethane

Lower Curve Limit 2.00 (ppm)
Upper Curve Limit 49,660 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P172R_0711-64.M	1.53	1.53	1.53	0.1	2,463	2,476	2,450	0.5	2,463	31	100	76,346	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P172R_0711-64.M	1.53	1.53	1.53	0.0	1,986	1,984	1,964	0.7	1,978	31	100	61,316	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P172R_0711-64.M	1.53	1.53	1.53	0.0	39,106	39,339	39,306	0.4	39,250	1	100	39,250	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P172R_0711-64.M	NA	NA	NA	NA	0.284	0.284	0.284	0.0	0.284	1	100	0.284	ND
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P172R_0711-64.M	1.51	1.52	1.52	0.1	75,462	66,969	74,748	7.5	72,393	1	100	72,393	E

EM-BTRF-000123

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R3-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

		Methane	
	MW	16.04	
What was the conc of the bag before spiking?	Inj 1	Inj 2	Inj 3
	(ppm)	(ppm)	(ppm)
U' (before spiking)	75,346	74,871	74,688
	Avg ppm	74,962	
What was added to the bag?			
	ug/mL	Total ug	
Liquid Spike #1	0	0	
uL Added	20		
	ug/mL	Total ug	
Liquid Spike #2	0	0	
uL Added	0		
	ug/mL	Total ug	
Liquid Spike #3	0	0	
uL Added	0		
	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	990,000	29.73	70.0
Volume Added (mL)	120	Total ug	78381.8
	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0	29.73	70.0
Volume Added (mL)	140	Total ug	0.0
	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0	29.73	70.0
Volume Added (mL)	0	Total ug	0.0
Total Vol (mL) vaporized	8.0		
Total Vol (mL) added as gas	260		
Other volume (mL) Added	0		
	0		

What volume was in the bag before spiking?

Wedge Volume	2.980	(L)	Sampled	4/5/06 8:00 AM		Hours
					Delta	26:00:00
			Analyzed	4/6/06 10:00 AM		
			Spiked	4/6/06 11:00 AM		Hours
					Delta	689:00:00
			Spike Analyzed	5/5/06 4:00 AM		
Total Vol. After Spiking	3,248	(mL)	Spike hold equal to or greater than original hold			YES

Ending Volume in Bag (mL)			2,980
Original volume in the bag (mL)			268
Total volume added (mL)			1.09
Dilution Factor caused by addition			68777.34
Dilution Adjusted Base Conc (ppm) "U"			
Theoretical Spike Conc (ppm) "S"			36192.95
What was the conc of the bag after spiking?	Inj 1	Inj 2	Inj 3
	(ppm)	(ppm)	(ppm)
Final Concentration (ppm) "T"	75,461	66,969	74,748
	Avg ppm	72,393	
RECOVERY %		10.0 %	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.301 (ug/mL)
LOQ 2.19 (ug/mL)
Compound 1,3-Butadiene

Lower Curve Limit 2.19 (ug/mL)
Upper Curve Limit 183 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	4.46	4.46	4.46	0.1	11.5	11.8	11.5	1.9	11.6	1	2.14	24.8	
															Spike Amount (ug)	22.0	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	113%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	1.00	0.301	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	4.41	4.41	4.41	0.0	11.3	11.2	11.2	0.5	11.2	1	1.00	11.2	
															Spike Amount (ug)	11.1	
															Spike Recovery (%)	101%	

EM-BTRF-000127

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.473 (ug/mL)
LOQ 1.25 (ug/mL)
Compound Pentane

Lower Curve Limit 1.25 (ug/mL)
Upper Curve Limit 104 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	42.7	20.2	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	5.53	5.54	5.54	0.3	1.41	1.38	1.39	1.0	1.39	1	42.7	59.5	
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	42.7	20.2	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	42.7	20.2	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	5.47	5.47	5.47	0.1	6.71	6.64	6.69	0.6	6.68	1	2.14	14.3	
																Spike Amount (ug)	12.5
																Native Amount (ug)	0.00
																Spike Recovery (%)	115%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	1.00	0.473	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	5.36	5.36	5.36	0.0	12.1	12.1	12.2	0.7	12.1	1	1.00	12.1	
																Spike Amount (ug)	12.4
																Spike Recovery (%)	98.0%

EM-BTRF-000129

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.300 (ug/mL)
LOQ 1.65 (ug/mL)
Compound Acrolein

Lower Curve Limit 1.65 (ug/mL)
Upper Curve Limit 39.4 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.00	6.00	6.00	0.1	9.33	8.89	8.51	4.7	8.91	1	2.14	19.1	
															Spike Amount (ug)	16.5	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	115%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	1.00	0.300	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	5.94	5.94	5.94	0.0	14.8	14.7	14.8	0.6	14.7	1	1.00	14.7	
															Spike Amount (ug)	16.4	
															Spike Recovery (%)	89.7%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.178 (ug/mL)
LOQ 1.58 (ug/mL)
Compound Acetone

Lower Curve Limit 1.58 (ug/mL)
Upper Curve Limit 132 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	6.16	6.16	6.16	0.0	0.498	0.479	0.481	2.5	0.486	1	42.7	20.8	J
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	6.16	6.17	6.16	0.0	1.00	0.972	0.966	1.8	0.978	1	42.7	41.7	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	6.16	6.16	6.16	0.0	0.191	0.192	0.186	2.0	0.190	1	42.7	8.09	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.178	0.178	0.178	0.0	0.178	1	42.7	7.60	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.15	6.16	6.15	0.1	7.54	7.67	7.48	1.4	7.57	1	2.14	16.2	
															Spike Amount (ug)	15.8	
															Native Amount (ug)	1.04	
															Spike Recovery (%)	95.9%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.178	0.178	0.178	0.0	0.178	1	1.00	0.178	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	6.10	6.10	6.10	0.0	16.7	16.5	16.6	0.8	16.6	1	1.00	16.6	
															Spike Amount (ug)	15.6	
															Spike Recovery (%)	106%	

EM-BTRF-000120

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.522 (ug/mL)
LOQ 2.64 (ug/mL)
Compound Dichloromethane

Lower Curve Limit 2.64 (ug/mL)
Upper Curve Limit 221 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.58	6.59	6.58	0.1	9.75	10.2	10.6	4.3	10.2	1	2.14	21.8	
															Spike Amount (ug)	26.5	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	82.3%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	1.00	0.522	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	6.52	6.52	6.52	0.0	26.8	26.6	25.3	3.6	26.2	1	1.00	26.2	
															Spike Amount (ug)	26.2	
															Spike Recovery (%)	100.0%	

EM-BTRF-000128

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.216 (ug/mL)
LOQ 1.31 (ug/mL)
Compound Hexane

Lower Curve Limit 1.31 (ug/mL)
Upper Curve Limit 109 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.95	6.95	6.95	0.0	5.14	4.99	4.77	4.0	4.97	1	2.14	10.6	
															Spike Amount (ug)	13.1	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	81.1%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	1.00	0.216	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	6.88	6.88	6.88	0.0	13.2	12.8	12.9	1.9	13.0	1	1.00	13.0	
															Spike Amount (ug)	12.9	
															Spike Recovery (%)	100.3%	

EM-BTRF-000122

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.257 (ug/mL)
LOQ 1.74 (ug/mL)
Compound Benzene

Lower Curve Limit 1.74 (ug/mL)
Upper Curve Limit 146 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	42.7	11.0	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	8.42	8.42	8.42	0.0	1.40	1.38	1.37	1.2	1.38	1	42.7	59.1	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	8.42	8.42	8.42	0.0	0.363	0.368	0.364	0.8	0.365	1	42.7	15.6	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	42.7	11.0	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	8.41	8.41	8.41	0.1	8.23	8.70	8.50	2.9	8.48	1	2.14	18.1	
															Spike Amount (ug)	17.5	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	104%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	1.00	0.257	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	8.37	8.37	8.37	0.0	17.3	17.1	17.0	0.8	17.1	1	1.00	17.1	
															Spike Amount (ug)	17.4	
															Spike Recovery (%)	98.6%	

EM-BTRF-000129

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.292 (ug/mL)
LOQ 2.92 (ug/mL)
Compound Trichloroethylene

Lower Curve Limit 2.92 (ug/mL)
Upper Curve Limit 244 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	42.7	12.5	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	8.89	8.89	8.89	0.0	0.385	0.441	0.525	16.6	0.450	1	42.7	19.2	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	42.7	12.5	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	42.7	12.5	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	8.88	8.88	8.88	0.1	13.4	13.6	13.2	1.5	13.4	1	2.14	28.6	
															Spike Amount (ug)	29.3	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	97.9%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	1.00	0.292	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	8.84	8.84	8.84	0.0	28.8	28.6	28.5	0.5	28.6	1	1.00	28.6	
															Spike Amount (ug)	27.9	
															Spike Recovery (%)	103%	

EM-BTRF-000124

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.504 (ug/mL)
LOQ 1.72 (ug/mL)
Compound Toluene

Lower Curve Limit 1.72 (ug/mL)
Upper Curve Limit 144 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.504	0.504	0.504	0.0	0.504	1	42.7	21.5	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	9.86	9.86	9.86	0.0	2.61	2.88	2.70	5.5	2.73	1	42.7	116	
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	9.86	9.86	9.86	0.0	0.595	0.576	0.579	2.0	0.583	1	42.7	24.9	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.504	0.504	0.504	0.0	0.504	1	42.7	21.5	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	9.85	9.86	9.86	0.0	7.57	7.89	7.95	3.0	7.80	1	2.14	16.7	
															Spike Amount (ug)	17.3	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	96.7%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.504	0.504	0.504	0.0	0.504	1	1.00	0.504	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	9.83	9.83	9.83	0.0	17.5	17.3	17.2	1.0	17.3	1	1.00	17.3	
															Spike Amount (ug)	17.1	
															Spike Recovery (%)	101%	

EM-BTRF-000123

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 1.39 (ug/mL)
LOQ 3.22 (ug/mL)
Compound Tetrachloroethylene

Lower Curve Limit 3.22 (ug/mL)
Upper Curve Limit 269 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	10.29	10.29	10.29	0.0	4.01	3.92	3.93	1.4	3.95	1	42.7	169	
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	10.29	10.29	10.29	0.0	4.50	4.47	4.75	3.8	4.57	1	42.7	195	
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	10.29	10.29	10.29	0.0	1.69	1.63	1.57	3.8	1.63	1	42.7	69.7	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	1.387	1.387	1.387	0.0	1.387	1	42.7	59.2	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	10.28	10.28	10.28	0.0	14.8	27.8	29.4	38.3	24.0	1	2.14	51.4	
															Spike Amount (ug)		32.3
															Native Amount (ug)		8.46
															Spike Recovery (%)		133%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	1.387	1.387	1.387	0.0	1.387	1	1.00	1.387	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	10.26	10.26	10.26	0.0	34.2	32.0	32.0	4.4	32.7	1	1.00	32.7	
															Spike Amount (ug)		32.0
															Spike Recovery (%)		102%

EM-BTRF-000126

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.669 (ug/mL)
LOQ 4.31 (ug/mL)
Compound 1,2-Dibromoethane

Lower Curve Limit 4.31 (ug/mL)
Upper Curve Limit 360 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	10.65	10.65	10.66	0.1	2.17	2.29	2.23	2.6	2.23	1	42.7	95.2	J
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	10.65	10.65	10.65	0.0	3.06	2.92	3.00	2.5	2.99	1	42.7	128	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	10.65	10.65	10.65	0.0	2.07	2.15	2.24	3.9	2.15	1	42.7	91.9	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.669	0.669	0.669	0.0	0.669	1	42.7	28.6	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	10.70	10.70	10.70	0.0	17.9	18.2	18.2	1.1	18.1	1	2.14	38.7	
															Spike Amount (ug)	43.2	
															Native Amount (ug)	4.77	
															Spike Recovery (%)	78.6%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.669	0.669	0.669	0.0	0.669	1	1.00	0.669	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	10.68	10.68	10.68	0.0	43.8	43.4	43.3	0.6	43.5	1	1.00	43.5	
															Spike Amount (ug)	42.7	
															Spike Recovery (%)	102%	

EM-BTRF-000127

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.100 (ug/mL)
LOQ 0.503 (ug/mL)
Compound Carbon disulfide

Lower Curve Limit 0.503 (ug/mL)
Upper Curve Limit 9.88 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	054B5401.D	054B5402.D	054B5403.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
R2 Bag COND	055B5501.D	055B5502.D	055B5503.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
R3 Bag COND	056B5601.D	056B5602.D	056B5603.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
Bag COND FB	053B5301.D	053B5302.D	053B5303.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
RB H2O	052B5201.D	052B5202.D	052B5203.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	1.00	0.100	ND
R1 Bag COND #MS	057B5702.D	057B5703.D	057B5704.D	GC116P46B.M	1.69	1.69	1.70	0.3	2.56	2.52	2.46	2.3	2.51	1	2.14	5.38	
															Spike Amount (ug)		5.04
															Spike Recovery (%)		107%

EM-BTRF-000126

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.13 (ug/mL)
LOQ 3.13 (ug/mL)
Compound Acetonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 261 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.1	3.31	3.28	3.36	1.4	3.31	1.000	5.00	16.6	100.0	16.6	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	51.1	52.4	49.0	3.6	50.9	1.000	5.00	254	100.0	254	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	2.69	2.69	2.69	0.0	4.20	4.17	4.12	1.0	4.17	1.000	5.00	20.8	100.0	20.8	
																		292	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.2	3.25	3.17	3.20	1.3	3.21	1.000	5.00	16.0	100.0	16.0	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	2.68	2.67	2.68	0.1	3.73	3.43	3.57	4.3	3.58	1.000	5.00	17.9	100.0	17.9	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	2.68	NA	2.68	NA	24.3	3.13	24.1	81.8	17.2	1.000	5.00	86.0	100.0	86.0	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	2.69	NA	NA	3.13	3.89	3.13	14.9	3.38	1.000	5.00	16.9	100.0	16.9	J
																		137	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	97.6	95.8	96.9	1.0	96.8	1.000	5.00	484	100.0	484	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.1	57.2	54.0	54.5	3.6	55.3	1.000	5.00	276	100.0	276	
																		760	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.1	114	108	110	2.7	111	1.000	5.00	553	100.0	553	
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	24.3	22.8	22.4	4.9	23.2	1.000	5.00	116	100.0	116	
																		669	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
																		19.3	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	2.69	2.69	2.69	0.0	3.44	3.31	3.48	2.9	3.41	1.000	5.00	17.1	100.0	17.1	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
																		17.1	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	1.00	3.13	100.0	3.13	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.13 (ug/mL)
LOQ 3.13 (ug/mL)
Compound Acetonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 261 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	2.68	2.68	NA	NA	3.21	4.32	3.13	21.6	3.55	1.000	5.00	17.8	100.0	17.8	
																	difference	10.8%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	23.4	22.7	22.7	2.2	22.9	1.000	5.00	115	100.0	115	
																	difference	33.3%	

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

MDL 0.238 (ug/mL)
LOQ 1.96 (ug/mL)
Compound Acetonitrile

Lower Curve Limit 1.96 (ug/mL)
Upper Curve Limit 1,965 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Raff	056B6301.D	056B6302.D	056B6303.D	GC122P038.M	3.91	3.90	3.90	0.1	0.612	0.541	0.593	7.1	0.582	1.235	34.0	24.4	100	24.4	J
M18 R1B Spkd Cond Raff	057B6401.D	057B6402.D	057B6403.D	GC122P038.M	3.91	3.90	3.91	0.1	0.485	0.500	0.528	4.7	0.504	1.235	34.0	21.2	100	21.2	J
M18 R1B Spkd Cond Raff-LD	058B6501.D	058B6502.D	058B6503.D	GC122P038.M	3.90	3.90	3.90	0.1	0.499	0.483	0.459	4.4	0.481	1.235	34.0	20.2	100	20.2	J
																	difference	4.7%	
M18 R2A Cond Raff	059B6601.D	059B6602.D	059B6603.D	GC122P038.M	3.90	3.90	3.90	0.0	3.26	3.21	3.32	1.7	3.26	1.235	34.0	137	100	137	
M18 R2B Spkd Cond Raff	060B6901.D	060B6902.D	060B6903.D	GC122P038.M	3.90	3.90	3.90	0.1	2.86	2.94	2.92	1.6	2.90	1.235	34.0	122	100	122	
M18 R3A Cond Raff	061B7001.D	061B7002.D	061B7003.D	GC122P038.M	3.90	3.90	3.90	0.0	0.952	0.959	1.00	3.0	0.970	1.235	34.0	40.7	100	40.7	J
M18 R3B Spkd Cond Raff	062B7101.D	062B7102.D	062B7103.D	GC122P038.M	3.90	3.90	3.90	0.0	0.829	0.852	0.784	4.6	0.822	1.235	34.0	34.5	100	34.5	J
M18 H2O Cond FB-A Raff	063B7201.D	063B7202.D	063B7203.D	GC122P038.M	NA	NA	NA	NA	0.238	0.238	0.238	0.0	0.238	1.235	34.0	9.99	100	9.99	ND
M18 H2O Cond RB Raff	064B7301.D	064B7302.D	064B7303.D	GC122P038.M	NA	NA	NA	NA	0.238	0.238	0.238	0.0	0.238	1.235	34.0	9.99	100	9.99	ND
AQ LCS 1 Raff	065B7401.D	065B7402.D	065B7403.D	GC122P038.M	3.90	3.90	3.90	0.0	20.9	20.7	20.8	0.4	20.8	1.235	10.0	257	100	257	
																	Spike Amount (ug)	235	
																	Spike Recovery (%)	109%	
AQ LCS 2 Raff	066B7501.D	066B7502.D	066B7503.D	GC122P038.M	3.90	3.90	3.90	0.0	20.9	20.3	21.2	2.6	20.8	1.235	10.0	257	100	257	
																	Spike Amount (ug)	235	
																	Spike Recovery (%)	109%	

EM-BTRF-000138

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.14 (ug/mL)
LOQ 3.14 (ug/mL)
Compound Acrylonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 1,571 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	3.17	3.17	3.14	0.9	7.39	7.31	6.25	10.5	6.98	1.000	5.00	34.9	100.0	34.9	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	3.16	3.17	3.14	0.8	11.4	10.8	10.0	6.8	10.7	1.000	5.00	53.7	100.0	53.7	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		88.7	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	1.00	3.14	100.0	3.14	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.14 (ug/mL)
LOQ 3.14 (ug/mL)
Compound Acrylonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 1,571 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																	difference	0.0%	

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

MDL 0.201 (ug/mL)
LOQ 2.01 (ug/mL)
Compound Acrylonitrile

Lower Curve Limit 2.01 (ug/mL)
Upper Curve Limit 2,013 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Raff	056B6301.D	056B6302.D	056B6303.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R1B Spkd Cond Raff	057B6401.D	057B6402.D	057B6403.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R1B Spkd Cond Raff-LD	058B6501.D	058B6502.D	058B6503.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
																	difference	0.0%	
M18 R2A Cond Raff	059B6601.D	059B6602.D	059B6603.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R2B Spkd Cond Raff	060B6901.D	060B6902.D	060B6903.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R3A Cond Raff	061B7001.D	061B7002.D	061B7003.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R3B Spkd Cond Raff	062B7101.D	062B7102.D	062B7103.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 H2O Cond FB-A Raff	063B7201.D	063B7202.D	063B7203.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 H2O Cond RB Raff	064B7301.D	064B7302.D	064B7303.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
AQ LCS 1 Raff	065B7401.D	065B7402.D	065B7403.D	GC122P038.M	3.77	3.77	3.77	0.0	17.8	17.5	17.5	1.2	17.6	1.235	10.0	217	100	217	
																	Spike Amount (ug)	236	
																	Spike Recovery (%)	92.2%	
AQ LCS 2 Raff	066B7501.D	066B7502.D	066B7503.D	GC122P038.M	3.77	3.77	3.77	0.0	18.0	17.4	18.6	3.3	18.0	1.235	10.0	222	100	222	
																	Spike Amount (ug)	236	
																	Spike Recovery (%)	94.2%	

EM-BTRF-000134

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.95 (ug/mL)
LOQ 2.95 (ug/mL)
Compound MTBE

Lower Curve Limit 1.48 (ug/mL)
Upper Curve Limit 1,476 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	20.5	20.3	20.1	1.0	20.3	1.000	5.00	102	100	102	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.1	25.1	24.0	24.2	2.9	24.4	1.000	5.00	122	100	122	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	88.0	88.9	84.8	2.8	87.2	1.000	5.00	436	100	436	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	3.956	3.954	NA	NA	3.12	2.96	2.95	3.7	3.01	1.000	5.00	15.0	100	15.0	
																		675	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		18.2	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	3.16	3.20	3.21	0.9	3.19	1.000	5.00	16.0	100	16.0	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		16.0	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.1	11.7	11.3	11.2	2.7	11.4	1.000	5.00	57.2	100	57.2	
																		57.2	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	3.96	3.90	3.88	1.2	3.91	1.000	5.00	19.6	100	19.6	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		19.6	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	5.38	5.25	5.32	1.2	5.32	1.000	5.00	26.6	100	26.6	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		26.6	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	1.00	2.95	100	2.95	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.95 (ug/mL)
LOQ 2.95 (ug/mL)
Compound MTBE

Lower Curve Limit 1.48 (ug/mL)
Upper Curve Limit 1,476 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	4.05	4.05	4.05	0.0	4.35	4.31	4.37	0.7	4.34	1.000	5.00	21.7	100	21.7	
																	Spike Amount (ug)	22.1	
																	Spike Recovery (%)	98.1%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	4.05	4.05	4.05	0.0	4.31	4.15	4.09	3.0	4.18	1.000	5.00	20.9	100	20.9	
																	Spike Amount (ug)	22.1	
																	Spike Recovery (%)	94.5%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	4.05	4.05	4.05	0.1	16.2	16.3	15.4	3.6	15.9	1.000	5.00	79.7	100	79.7	
																	Spike Amount (ug)	88.6	
																	Spike Recovery (%)	89.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	4.05	4.05	4.05	0.0	30.0	30.2	29.4	1.6	29.8	1.000	1.00	29.8	100	29.8	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	0.896	

EM-BTRF-000136

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.87 (ug/mL)
LOQ 3.87 (ug/mL)
Compound 2-Nitropropane

Lower Curve Limit 3.87 (ug/mL)
Upper Curve Limit 1,936 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	5.33	5.33	5.33	0.0	87.6	86.9	88.8	1.2	87.8	1.000	5.00	439	100	439	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		439	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	5.33	5.33	5.33	0.0	340	332	336	1.2	336	1.000	5.00	1,680	100	1,680	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		1,680	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	1.00	3.87	100	3.87	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.87 (ug/mL)
LOQ 3.87 (ug/mL)
Compound 2-Nitropropane

Lower Curve Limit 3.87 (ug/mL)
Upper Curve Limit 1,936 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	5.28	5.28	5.28	0.0	5.44	5.54	5.50	1.0	5.49	1.000	5.00	27.5	100	27.5	
																	Spike Amount (ug)	29.0	
																	Spike Recovery (%)	94.6%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	5.28	5.28	5.28	0.0	5.51	5.25	5.24	3.4	5.33	1.000	5.00	26.7	100	26.7	
																	Spike Amount (ug)	29.0	
																	Spike Recovery (%)	91.8%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	5.28	5.28	5.28	0.0	20.7	20.4	19.4	3.8	20.2	1.000	5.00	101	100	101	
																	Spike Amount (ug)	116	
																	Spike Recovery (%)	86.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	5.28	5.28	5.28	0.0	38.9	39.4	38.2	1.6	38.8	1.000	1.00	38.8	100	38.8	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.17	

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

MDL 0.242 (ug/mL)
LOQ 2.42 (ug/mL)
Compound 2-Nitropropane

Lower Curve Limit 2.42 (ug/mL)
Upper Curve Limit 2,420 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Raff	056B6301.D	056B6302.D	056B6303.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R1B Spkd Cond Raff	057B6401.D	057B6402.D	057B6403.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R1B Spkd Cond Raff-LD	058B6501.D	058B6502.D	058B6503.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
																	difference	0.0%	
M18 R2A Cond Raff	059B6601.D	059B6602.D	059B6603.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R2B Spkd Cond Raff	060B6901.D	060B6902.D	060B6903.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R3A Cond Raff	061B7001.D	061B7002.D	061B7003.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R3B Spkd Cond Raff	062B7101.D	062B7102.D	062B7103.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 H2O Cond FB-A Raff	063B7201.D	063B7202.D	063B7203.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 H2O Cond RB Raff	064B7301.D	064B7302.D	064B7303.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
gc122p038 #3ss	007B0801.D	007B0802.D	007B0803.D	GC122P038.M	4.78	4.78	4.78	0.0	49.7	49.8	49.4	0.6	49.7	1.000	1.00	49.7	100	49.7	
																	Spike Amount (ug)	48.2	
																	Spike Recovery (%)	103%	

EM-BTRF-000139

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.75 (ug/mL)
LOQ 2.75 (ug/mL)
Compound Isooctane

Lower Curve Limit 2.75 (ug/mL)
Upper Curve Limit 1,377 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	1.00	2.75	100	2.75	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND

EM-BTRF-000140

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.75 (ug/mL)
LOQ 2.75 (ug/mL)
Compound Isooctane

Lower Curve Limit 2.75 (ug/mL)
Upper Curve Limit 1,377 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	5.49	5.49	5.49	0.0	5.07	5.02	5.05	0.5	5.05	1.000	5.00	25.2	100	25.2	
																	Spike Amount (ug)	24.1	
																	Spike Recovery (%)	105%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	5.49	5.49	5.49	0.0	4.93	4.69	4.73	3.0	4.78	1.000	5.00	23.9	100	23.9	
																	Spike Amount (ug)	24.1	
																	Spike Recovery (%)	99.2%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	5.49	5.49	5.49	0.0	18.9	18.6	17.7	3.7	18.4	1.000	5.00	92.1	100	92.1	
																	Spike Amount (ug)	96.4	
																	Spike Recovery (%)	95.5%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	5.49	5.49	5.49	0.0	27.6	28.0	27.2	1.5	27.6	1.000	1.00	27.6	100	27.6	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	0.829	

EM-BTRF-000148

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.18 (ug/mL)
LOQ 3.18 (ug/mL)
Compound MIBK

Lower Curve Limit 3.18 (ug/mL)
Upper Curve Limit 1,595 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	1.00	3.18	100	3.18	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND

EM-BTRF-000142

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.18 (ug/mL)
LOQ 3.18 (ug/mL)
Compound MIBK

Lower Curve Limit 3.18 (ug/mL)
Upper Curve Limit 1,595 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	5.79	5.79	5.79	0.0	4.83	4.79	4.82	0.4	4.82	1.000	5.00	24.1	100	24.1	
																	Spike Amount (ug)	23.9	
																	Spike Recovery (%)	101%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	5.79	5.79	5.79	0.0	4.69	4.50	4.54	2.4	4.58	1.000	5.00	22.9	100	22.9	
																	Spike Amount (ug)	23.9	
																	Spike Recovery (%)	95.8%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	5.79	5.79	5.79	0.0	18.7	18.3	17.5	3.7	18.2	1.000	5.00	90.9	100	90.9	
																	Spike Amount (ug)	95.5	
																	Spike Recovery (%)	95.2%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	5.79	5.79	5.79	0.0	31.9	32.3	31.4	1.5	31.9	1.000	1.00	31.9	100	31.9	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	0.957	

EM-BTRF-000169

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.42 (ug/mL)
LOQ 4.42 (ug/mL)
Compound Chlorobenzene

Lower Curve Limit 4.42 (ug/mL)
Upper Curve Limit 2,212 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	6.91	6.91	6.91	0.1	14.2	13.4	14.1	3.4	13.9	1.000	5.00	69.5	100	69.5	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		69.5	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	1.00	4.42	100	4.42	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND

EM-BTRF-000144

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.42 (ug/mL)
LOQ 4.42 (ug/mL)
Compound Chlorobenzene

Lower Curve Limit 4.42 (ug/mL)
Upper Curve Limit 2,212 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	6.92	6.92	6.92	0.0	7.08	7.08	7.06	0.2	7.07	1.000	5.00	35.4	100	35.4	
																	Spike Amount (ug)	33.2	
																	Spike Recovery (%)	107%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	6.92	6.92	6.92	0.0	6.81	6.38	6.39	4.3	6.53	1.000	5.00	32.6	100	32.6	
																	Spike Amount (ug)	33.2	
																	Spike Recovery (%)	98.4%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	6.92	6.92	6.92	0.0	27.4	26.7	25.5	3.8	26.5	1.000	5.00	133	100	133	
																	Spike Amount (ug)	133	
																	Spike Recovery (%)	99.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	6.91	6.91	6.91	0.0	14.0	15.1	14.1	4.7	14.4	1.000	5.00	71.9	100	71.9	
																	difference	3.4%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	6.92	6.92	6.92	0.0	44.3	45.2	44.0	1.6	44.5	1.000	1.00	44.5	100	44.5	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.34	

EM-BTRF-000153

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Ethylbenzene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 1,731 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	380	379	370	1.6	376	1.000	5.00	1,882	100	1,882	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	79.8	75.6	75.8	3.5	77.1	1.000	5.00	385	100	385	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	138	135	132	2.3	135	1.000	5.00	675	100	675	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		2,942	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	131	141	143	5.0	138	1.000	5.00	692	100	692	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	54.7	53.3	52.7	2.1	53.6	1.000	5.00	268	100	268	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	413	409	399	2.0	407	1.000	5.00	2,034	100	2,034	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		2,994	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	831	862	842	2.0	845	1.000	5.00	4,225	100	4,225	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	7.05	7.04	7.05	0.0	529	537	535	0.9	534	1.000	5.00	2,668	100	2,668	
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	7.04	7.05	7.04	0.0	332	322	328	1.5	327	1.000	5.00	1,637	100	1,637	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		8,530	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	7.05	7.04	7.04	0.0	26.5	24.7	27.2	5.4	26.1	1.235	5.00	161	100	161	
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	882	822	862	3.9	855	1.000	5.00	4,277	100	4,277	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	196	198	191	2.2	195	1.000	5.00	975	100	975	
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		5,413	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	147	146	146	0.6	146	1.000	5.00	732	100	732	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	30.5	30.7	30.8	0.5	30.7	1.000	5.00	153	100	153	
																		885	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	32.2	31.1	31.4	1.9	31.6	1.000	5.00	158	100	158	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	20.9	23.8	22.5	6.8	22.4	1.000	5.00	112	100	112	
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	226	220	227	1.8	224	1.000	5.00	1,122	100	1,122	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	33.0	32.6	32.4	1.1	32.7	1.000	5.00	163	100	163	
																		1,555	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	1.00	3.46	100	3.46	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Ethylbenzene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 1,731 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.05	7.05	7.05	0.0	5.66	5.62	5.66	0.5	5.65	1.000	5.00	28.2	100	28.2	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	109%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.05	7.05	7.05	0.0	5.38	5.05	5.07	4.1	5.17	1.000	5.00	25.8	100	25.8	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	99.5%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.05	7.05	7.05	0.0	21.3	20.7	19.8	3.7	20.6	1.000	5.00	103	100	103	
																	Spike Amount (ug)	104	
																	Spike Recovery (%)	99.1%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.04	7.04	7.05	0.0	140	145	141	2.1	142	1.000	5.00	710	100	710	
																	difference	2.5%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	423	403	412	2.5	413	1.000	5.00	2,064	100	2,064	
																	difference	1.4%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.04	7.04	7.04	0.0	35.0	35.8	34.7	1.7	35.2	1.000	1.00	35.2	100	35.2	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.06	

EM-BTRF-000167

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.43 (ug/mL)
LOQ 3.43 (ug/mL)
Compound m/p-Xylene

Lower Curve Limit 3.43 (ug/mL)
Upper Curve Limit 1,719 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	2,423	2,409	2,357	1.6	2,396	1.000	5.00	11,982	100	11,982	E
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	519	489	491	3.8	499	1.000	5.00	2,497	100	2,497	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	810	799	779	2.1	796	1.000	5.00	3,980	100	3,980	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		18,460	E
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	829	889	906	5.3	875	1.000	5.00	4,374	100	4,374	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	367	359	357	1.7	361	1.000	5.00	1,806	100	1,806	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	2,455	2,488	2,423	1.3	2,455	1.000	5.00	12,277	100	12,277	E
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		18,457	E
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	59.9	64.1	62.5	3.6	62.2	1.235	5.00	384	100	384	
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	5,544	5,706	5,610	1.5	5,620	1.000	5.00	28,100	100	28,100	E
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	3,251	3,306	3,293	1.0	3,284	1.000	5.00	16,418	100	16,418	E
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	1,309	1,269	1,290	1.6	1,289	1.000	5.00	6,446	100	6,446	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		51,349	E
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	183	170	183	4.9	179	1.235	5.00	1,104	100	1,104	
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	5,447	5,088	5,329	3.8	5,288	1.000	5.00	26,441	100	26,441	E
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	901	910	875	2.3	895	1.000	5.00	4,477	100	4,477	
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		32,022	E
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	48.8	49.1	47.5	2.0	48.5	1.235	5.00	299	100	299	
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	181	171	175	3.0	176	1.000	5.00	880	100	880	
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	106	102	100	3.1	102	1.000	5.00	512	100	512	
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	1,341	1,326	1,322	0.9	1,329	1.000	5.00	6,647	100	6,647	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	246	248	248	0.5	247	1.000	5.00	1,237	100	1,237	
																		9,575	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	29.7	29.5	28.3	3.1	29.2	1.235	5.00	180	100	180	
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	256	254	257	0.6	256	1.000	5.00	1,280	100	1,280	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	175	187	180	3.5	180	1.000	5.00	902	100	902	
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	1,903	1,854	1,904	1.8	1,887	1.000	5.00	9,437	100	9,437	E
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	195	193	192	1.0	193	1.000	5.00	967	100	967	
																		12,766	E
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	1.00	3.43	100	3.43	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.43 (ug/mL)
LOQ 3.43 (ug/mL)
Compound m/p-Xylene

Lower Curve Limit 3.43 (ug/mL)
Upper Curve Limit 1,719 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.12	7.12	7.12	0.0	9.47	9.42	9.46	0.3	9.45	1.000	5.00	47.2	100	47.2	
																	Spike Amount (ug)	43.0	
																	Spike Recovery (%)	110%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.12	7.12	7.12	0.0	8.94	8.45	8.46	3.7	8.62	1.000	5.00	43.1	100	43.1	
																	Spike Amount (ug)	43.0	
																	Spike Recovery (%)	100.3%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17 '	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.12	7.12	7.12	0.0	35.4	34.4	33.0	3.8	34.3	1.000	5.00	171	100	171	
																	Spike Amount (ug)	172	
																	Spike Recovery (%)	99.7%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	889	913	894	1.6	899	1.000	5.00	4,493	100	4,493	
																	difference	2.7%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	2,575	2,451	2,462	3.2	2,496	1.000	5.00	12,479	100	12,479	E
																	difference	1.6%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.12	7.12	7.12	0.0	34.7	35.4	34.4	1.7	34.9	1.000	1.00	34.9	100	34.9	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.05	

EM-BTRF-000149

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.61 (ug/mL)
LOQ 3.61 (ug/mL)
Compound Styrene

Lower Curve Limit 3.61 (ug/mL)
Upper Curve Limit 1,810 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.24	7.24	7.24	0.0	45.7	45.0	43.8	2.3	44.8	1.000	5.00	224	100	224	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		224	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	6.31	6.92	6.70	5.0	6.64	1.000	5.00	33.2	100	33.2	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	9.58	9.96	9.29	3.6	9.61	1.000	5.00	48.0	100	48.0	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		81.3	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	1.00	3.61	100	3.61	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND

EM-BTRF-000150

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.61 (ug/mL)
LOQ 3.61 (ug/mL)
Compound Styrene

Lower Curve Limit 3.61 (ug/mL)
Upper Curve Limit 1,810 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.27	7.27	7.27	0.0	5.93	5.89	5.89	0.4	5.90	1.000	5.00	29.5	100	29.5	
																	Spike Amount (ug)	27.2	
																	Spike Recovery (%)	109%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.27	7.27	7.27	0.0	5.56	5.25	5.25	3.8	5.35	1.000	5.00	26.8	100	26.8	
																	Spike Amount (ug)	27.2	
																	Spike Recovery (%)	99%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.27	7.27	7.27	0.0	22.3	21.7	20.8	3.7	21.6	1.000	5.00	108	100	108	
																	Spike Amount (ug)	109	
																	Spike Recovery (%)	99.4%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	6.08	7.02	6.83	8.5	6.65	1.000	5.00	33.2	100	33.2	
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	10.5	9.60	9.58	6.2	9.90	1.000	5.00	49.5	100	49.5	
																	difference	3.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.27	7.27	7.27	0.0	36.4	37.2	36.1	1.7	36.6	1.000	1.00	36.6	100	36.6	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.10	

EM-BTRF-000158

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.51 (ug/mL)
LOQ 3.51 (ug/mL)
Compound o-Xylene

Lower Curve Limit 3.51 (ug/mL)
Upper Curve Limit 1,756 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	647	642	628	1.7	639	1.000	5.00	3,197	100	3,197	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	121	115	116	2.9	117	1.000	5.00	587	100	587	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	194	191	187	2.2	191	1.000	5.00	954	100	954	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		4,738	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	247	265	270	5.2	261	1.000	5.00	1,304	100	1,304	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	86.6	86.8	86.3	0.3	86.6	1.000	5.00	433	100	433	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	624	637	619	1.6	627	1.000	5.00	3,133	100	3,133	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		4,870	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	1,620	1,639	1,636	0.7	1,632	1.000	5.00	8,159	100	8,159	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	649	661	659	1.1	656	1.000	5.00	3,282	100	3,282	
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	163	158	161	1.6	161	1.000	5.00	803	100	803	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		12,244	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	54.4	49.3	53.5	6.0	52.4	1.235	5.00	324	100	324	
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	1,411	1,337	1,379	2.8	1,376	1.000	5.00	6,879	100	6,879	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	139	140	135	2.2	138	1.000	5.00	688	100	688	
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		7,891	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	40.5	37.7	38.0	4.6	38.7	1.000	5.00	194	100	194	
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	22.2	23.8	23.0	3.4	23.0	1.000	5.00	115	100	115	
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	303	300	299	0.9	301	1.000	5.00	1,503	100	1,503	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	51.7	52.0	52.1	0.5	51.9	1.000	5.00	260	100	260	
																		2,071	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	53.4	50.2	51.9	3.1	51.8	1.000	5.00	259	100	259	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	33.6	38.2	36.6	7.0	36.1	1.000	5.00	181	100	181	
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	378	367	377	1.8	374	1.000	5.00	1,871	100	1,871	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	32.1	31.8	31.5	1.0	31.8	1.000	5.00	159	100	159	
																		2,469	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	1.00	3.51	100	3.51	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.51 (ug/mL)
LOQ 3.51 (ug/mL)
Compound o-Xylene

Lower Curve Limit 3.51 (ug/mL)
Upper Curve Limit 1,756 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.32	7.32	7.32	0.0	5.82	5.79	5.79	0.4	5.80	1.000	5.00	29.0	100	29.0	
																	Spike Amount (ug)	26.3	
																	Spike Recovery (%)	110%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.32	7.32	7.32	0.0	5.46	5.15	5.15	3.9	5.25	1.000	5.00	26.3	100	26.3	
																	Spike Amount (ug)	26.3	
																	Spike Recovery (%)	100%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	18	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.32	7.32	7.32	0.0	21.7	21.1	20.2	3.8	21.0	1.000	5.00	105	100	105	
																	Spike Amount (ug)	172	
																	Spike Recovery (%)	61.1%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	264	271	266	1.6	267	1.000	5.00	1,336	100	1,336	
																	difference	2.5%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	660	628	628	3.3	638	1.000	5.00	3,192	100	3,192	
																	difference	1.9%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.32	7.32	7.32	0.0	35.2	35.9	34.8	1.7	35.3	1.000	1.00	35.3	100	35.3	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.06	

EM-BTRF-000169

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Cumene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 7.33.4 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	20.6	20.0	19.7	2.3	20.1	1.000	5.00	100	100	100	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		100	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		21.4	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	74.6	75.5	75.3	0.8	75.2	1.000	5.00	376	100	376	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		376	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	61.6	57.7	59.8	3.3	59.7	1.000	5.00	298	100	298	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		298	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		21.4	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		21.4	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	1.00	3.46	100	3.46	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND

EM-BTRF-000164

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Cumene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 17.33.41 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.56	7.56	7.56	0.0	5.84	5.84	5.88	0.4	5.85	1.000	5.00	29.3	100	29.3	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	113%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.56	7.56	7.56	0.0	5.46	5.17	5.18	3.6	5.27	1.000	5.00	26.3	100	26.3	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	101%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.56	7.56	7.56	0.0	21.4	20.7	19.9	3.7	20.7	1.000	5.00	103	100	103	
																	Spike Amount (ug)	104	
																	Spike Recovery (%)	99.5%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	16.5	16.8	15.9	3.0	16.4	1.000	5.00	82.1	100	82.1	
																	difference	374.6%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.56	7.56	7.56	0.0	34.9	35.7	34.6	1.8	35.0	1.000	1.00	35.0	100	35.0	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.05	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.79 (ug/mL)
LOQ 4.79 (ug/mL)
Compound Nitrobenzene

Lower Curve Limit 4.79 (ug/mL)
Upper Curve Limit 2,404 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	158	175	167	5.1	167	1.000	5.00	833	100	833	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		833	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	107	154	155	22.7	139	1.000	5.00	693	100	693	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	75.3	76.5	74.8	1.3	75.5	1.000	5.00	378	100	378	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		1,071	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	264	269	339	16.6	291	1.000	5.00	1,454	100	1,454	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		1,454	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	200	178	182	7.3	187	1.000	5.00	934	100	934	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		934	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	8.74	8.69	8.70	0.6	164	279	277	31.7	240	1.000	5.00	1,200	100	1,200	
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	237	44.6	45.5	117.3	109	1.000	5.00	544	100	544	
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	196	186	188	3.0	190	1.000	5.00	950	100	950	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		2,695	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	8.69	8.69	NA	4.79	132	146	94.9	94.2	1.000	5.00	471	100	471	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	81.2	78.7	81.8	2.3	80.6	1.000	5.00	403	100	403	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		874	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	1.00	4.79	100	4.79	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.79 (ug/mL)
LOQ 4.79 (ug/mL)
Compound Nitrobenzene

Lower Curve Limit 4.79 (ug/mL)
Upper Curve Limit 2,404 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	8.71	8.71	8.71	0.0	7.73	7.57	7.67	1.1	7.66	1.000	5.00	38.3	100	38.3	
																	Spike Amount (ug)	36.1	
																	Spike Recovery (%)	106%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	8.71	8.71	8.71	0.0	7.22	6.82	6.78	4.0	6.94	1.000	5.00	34.7	100	34.7	
																	Spike Amount (ug)	36.1	
																	Spike Recovery (%)	96%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	24	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	8.71	8.71	8.71	0.0	29.3	28.5	27.7	2.8	28.5	1.000	5.00	143	100	143	
																	Spike Amount (ug)	144	
																	Spike Recovery (%)	98.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	159	164	164	2.1	163	1.000	5.00	813	100	813	
																	difference	17.3%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	80.0	75.7	75.6	3.8	77.1	1.000	5.00	385	100	385	
																	difference	2.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	8.71	8.71	8.71	0.0	48.8	49.7	48.3	1.6	48.9	1.000	1.00	48.9	100	48.9	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.47	

EM-BTRF-000157

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **MTBE**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	675	22.1	24.0	-3048.0
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	16.0	22.1	24.0	186.1
M18 R2B Spk	Spike	57.2		24.0	
M18 R3A	Sample	19.6	22.1	24.0	31.7
M18 R3B Spk	Spike	26.6		24.0	

Avg Recovery: -943.4

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **2-Nitropropane**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	439	29.0	24.0	-1510.9
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	1,680	29.0	24.0	-5784.7
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	29.0	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	

Avg Recovery: -2431.9

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Isooctane**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	0.00	24.1	24.0	0.0
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	0.00	24.1	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	24.1	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	
				Avg Recovery:	0.0

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **MIBK**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	0.00	23.9	24.0	0.0
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	0.00	23.9	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	23.9	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	

Avg Recovery: 0.0

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Chlorobenzene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	0.00	33.2	24.0	209.6
M18 R1B Spk	Spike	69.5		24.0	
M18 R2A	Sample	0.00	33.2	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	33.2	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	
				Avg Recovery:	69.9

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Ethylbenzene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	2,942	26.0	24.0	201.9
M18 R1B Spk	Spike	2,994		24.0	
M18 R2A	Sample	8,530	26.0	24.0	-12001.5
M18 R2B Spk	Spike	5,413		24.0	
M18 R3A	Sample	885	26.0	24.0	2579.4
M18 R3B Spk	Spike	1,555		24.0	

Avg Recovery: -3073.4

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **p-Xylene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	18,460	43.0	24.0	-5.8
M18 R1B Spk	Spike	18,457		24.0	
M18 R2A	Sample	51,349	43.0	24.0	-44983.7
M18 R2B Spk	Spike	32,022		24.0	
M18 R3A	Sample	9,575	43.0	24.0	7426.7
M18 R3B Spk	Spike	12,766		24.0	

Avg Recovery: -12520.9

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Styrene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	224	27.2	24.0	-526.5
M18 R1B Spk	Spike	81.3		24.0	
M18 R2A	Sample	0.00	27.2	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	27.2	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	

Avg Recovery: -175.5

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **o-Xylene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	4,738	26.3	24.0	500.3
M18 R1B Spk	Spike	4,870		24.0	
M18 R2A	Sample	12,244	26.3	24.0	-16524.8
M18 R2B Spk	Spike	7,891		24.0	
M18 R3A	Sample	2,071	26.3	24.0	1511.1
M18 R3B Spk	Spike	2,469		24.0	

Avg Recovery: -4837.8

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Cumene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	100	26.0	24.0	-386.4
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	376	26.0	24.0	-297.5
M18 R2B Spk	Spike	298		24.0	
M18 R3A	Sample	0.00	26.0	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	

Avg Recovery: -228.0

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Nitrobenzene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	833	36.1	24.0	659.5
M18 R1B Spk	Spike	1,071		24.0	
M18 R2A	Sample	1,454	36.1	24.0	-1444.6
M18 R2B Spk	Spike	934		24.0	
M18 R3A	Sample	2,695	36.1	24.0	-5050.0
M18 R3B Spk	Spike	874		24.0	
				Avg Recovery:	-1945.0

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

MDL 0.158 (ug/mL)
LOQ 1.58 (ug/mL)
Compound Methanol

Lower Curve Limit 1.58 (ug/mL)
Upper Curve Limit 3,161 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
M308-Run 1 Cond	023F2501.D	023F2502.D	GC120P139.M	3.27	3.26	0.2	0.279	0.311	5.5	0.295	1	42.7	12.6	J
M308-Run 1 SG FH	067B2001.D	067B2002.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
M308-Run 1 SG BH	069B2201.D	069B2202.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
													12.6	J
M308-Run 2 Cond	025F2701.D	025F2702.D	GC120P139.M	3.26	3.27	0.2	0.620	0.633	1.0	0.627	1	42.7	26.8	J
M308-Run 2 SG FH	070B2301.D	070B2302.D	GC120P150.M	3.90	3.90	0.0	0.675	0.735	4.3	0.705	1	5.00	3.53	J
M308-Run 2 SG BH	071B2401.D	071B2402.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
													30.3	J
M308-Run 3 Cond	026F2801.D	026F2802.D	GC120P139.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	42.7	6.75	ND
M308-Run 3 SG FH	072B2501.D	072B2502.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
M308-Run 3 SG BH	073B2601.D	073B2602.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
													6.75	ND
M308-H2O-FB	027F2901.D	027F2902.D	GC120P139.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	42.7	6.75	ND
M308-SG-FB	074B2701.D	074B2702.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
m308-H2O-rb	028F3201.D	028F3202.D	GC120P139.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	1.00	0.158	ND
m308-sg-mb	075B2801.D	075B2802.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
LB 3%p	056B0701.D	056B0702.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	1.00	0.158	ND
m308-sg-lcs	076B3101.D	076B3102.D	GC120P150.M	3.92	3.92	0.1	31.8	33.2	2.1	32.5	1	5.00	163	
													Spike Amount (ug)	198
													Spike Recovery (%)	82.2%

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

MDL 0.158 (ug/mL)
LOQ 1.58 (ug/mL)
Compound Methanol

Lower Curve Limit 1.58 (ug/mL)
Upper Curve Limit 3,161 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1-Cond-LD-m308	024F2601.D	024F2602.D	GC120P139.M	3.25	3.26	0.2	0.187	0.245	13.5	0.216	1	42.7	9.22	J
												difference	26.8%	
m308-r1-sg-fh-ld	068B2101.D	068B2102.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
												difference	0.0%	

EM-BTRF-000170

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18 Bags

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 2 S/R

Custody

Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at ambient temperature after being relinquished by TRC Environmental Corporation of Austin, TX. The bag samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The bag samples were analyzed for 1,3-butadiene, pentane, acrolein, acetonitrile, acetone, dichloromethane (methylene chloride), hexane, benzene, trichloroethene, toluene, tetrachloroethene, and 1,2-dibromoethane using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. All target analytes were referenced to certified gas phase standards.

The Agilent Technologies Model 6890, Gas Chromatograph "Gummo" (S/N US00028451) was equipped with front and rear Flame Ionization Detectors, along with Restek Rtx-624 30m x 0.32mm (S/N 926828) and Rtx-1 30m x 0.32mm x 4.0um (S/N 869999) capillary columns, for these analyses.

Calibration

The calibration curves are included in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Chromatographic Conditions

The acquisition method, GC114P165.M, is included in the Calibration Curve Chromatograms section of this report.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes

As required by the method, a recovery study was performed on a bag sample. The bag sample ***EM-R1-Bag-DCU*** was spiked with 1, 3 butadiene, acrolein, acetone, methylene chloride, hexane, benzene, trichloroethene, and toluene on 7/21/11 at 11:00 AM. The recovery efficiency values met the method-required limits of 70 to 130% for hexane, benzene, and toluene, only. The recovery efficiency values were used to adjust the results for hexane, benzene and toluene, only. Due to high concentations of, or interference from, target and non-target compounds, recoveries of the remaining compounds could not be determined. Bag sample ***EM-R2-Bag-DCU*** was also spiked and similar results were attained.

Because the collocated tube train was not spiked with acetonitrile and acryloniltrile, a baseline analyses was preformed on bag ***EM-R3-Bag-DC*** and it was subsequently spiked with methane, acetonitrile, acrylonitrile. The methane spike was not appropriate for the concentration of that compounds in the sample. The recovery efficiency values did not met recovery criteria for these compounds.

Reporting Notes

Included in the report are the analyses of all three spiked bags. The spike recovery values are presented in the Results section of the report for bags ***EM-R1-Bag-DCU*** and ***EM-R3-Bag-DC***. The results for the applicable spiked bag are presented on the individual compound results pages.

These analytical results are reported on a wet basis. The user of this report should determine the percent moisture in the sample and correct the reported value to ppmvd as appropriate.

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 16 - Type

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

Custody

Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/2011 at ambient temperature after being relinquished by TRC Environmental Corporation of Austin, TX. The bag samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The bag samples were analyzed for carbon disulfide using the Hewlett Packard Model 5890, Series II Gas Chromatograph "Zeppo" (S/N 3235A4448X) was equipped with a Flame Photometric Detector and a Restek Rtx-1 60m x 0.53mm x 5.0um (S/N 663119) capillary column.

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. Carbon disulfide was referenced to gas phase standards prepared by certified permeation devices.

Calibration

The calibration curves are located in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Chromatographic Conditions

The acquisition method, FPDTEST2.M, is included in the Calibration Curve Chromatograms section of this report.

QC Notes

None.

Enthalpy Analytical Narrative Summary
(continued)

Reporting Notes

These analytical results are reported on a wet basis. The user of this report should determine the percent moisture in the sample and correct the reported value to ppmvd as appropriate.

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags Condensates

Custody

Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at 5.8 °C after being relinquished by TRC Environmental Corporation of Austin, TX. The bag condensate samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for 1,3-butadiene, pentane, acrolein, acetone, dichloromethane, hexane, benzene, trichloroethene, toluene, tetrachloroethene, 1,2-dibromoethane, and carbon disulfide using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. All target analytes were referenced to certified standards.

Analyses for all compounds except carbon disulfide, were preformed using the Agilent Technologies Model 6890N, Gas Chromatograph "Veronica" (S/N US10645052) was equipped with a Flame Ionization Detector and a Restek Rtx-624 105m x 0.53mm x 3.0um (S/N 1032767) capillary column.

The carbon disulfide analysis was performed using a Hewlett Packard Model 5890, Series II Gas Chromatograph "Oscar" (S/N 2938A2) equipped with a Flame Photometric Detector and a Restek Stabilwax 30m x 0.53mm x 1.5um (S/N 1033248) capillary column.

Calibration

The calibration curves are included in the Calibration Curve Chromatograms sections of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Enthalpy Analytical Narrative Summary
(continued)

Chromatographic Conditions	The acquisition methods GC118P140.M and GC118P46.M are included in the Calibration Curve Chromatograms sections of this report.
QC Notes	The analyses of the field blank contained no target compounds at concentrations greater than the detection limit.
	The analyses of the matrix spike prepared using aliquots for sample ***R1 Bag Cond*** exhibited recovery values ranging from 78.6 to 133%.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	KAM
Parameters	EPA Method 18 Adsorbents

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Custody

Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at 5.8 °C after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received in good condition with the following exceptions. The XAD A and B tubes for ***R1*** and ***R3*** were received wet. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for acetonitrile, acrylonitrile, methyl t-butyl ether (MTBE), 2-nitropropane, isooctane, methyl isobutyl ketone (MIBK), chlorobenzene, ethylbenzene, m/p-xylene, styrene, o-xylene, cumene, and nitrobenzene using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

Each sample train consisted of a knockout impinger, a SKC Xad-4 (Cat# 226-93), and a SKC Charcoal (Cat# 226-16) sample tube. All sample tubes were divided into front half (FH) and back half (BH) fractions. Each fraction was desorbed using 5 mL of carbon disulfide.

The volume of one zero headspace vial was measured and recorded for the condensates. An 8 mL aliquot of each sample was removed and archived. The remaining sample was extracted with 5 mL of carbon disulfide. The carbon disulfide and aqueous layers were seperated and analyzed seperately. The aqueous fraction is termed the raffinate. The analyst noted that the carbon disulfide extracts were yellow and that their color increased in intensity from ***R1*** to ***R3***.

The Hewlett Packard Model 6890, Gas Chromatograph "Lucy" (S/N US00039147) was equipped with a Flame Ionization Detector and a Restek Rtx-1 30m x 0.32mm x 4.0um (S/N 450928) capillary column, for the analyses of the extract fractions.

Analysis (continued)

The Hewlett Packard Model 5890, Series II Gas Chromatograph "Teller" (S/N 3033A3174) was equipped with a Flame Ionization Detector and a Restek Stabilwax 30m x 0.53mm x 2.0um (S/N 808560) capillary column, for the analyses of the raffinate fractions.

Enthalpy Analytical Narrative Summary
(continued)

Calibration

The calibration curves are included in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Chromatographic Conditions

The acquisition methods GC121P078.M and GC121P078B.M are included in the Calibration Curve Chromatograms section of this report.

QC Notes

The m/p-xylene results for samples ***R1A*** and ***R2A*** were flagged with "E", because the concentrations in the XAD FH fractions exceded the instrument's calibration range.

The large amount of unknown compound peaks caused an increase in the baseline which caused the precision between some triplicate injections of the samples to be greater than the method required 5% difference. The precision values are presented in the Results section of this report. In order to achieve the best integration of these samples, the slope sensitivity was increased causing an increase in the detection limit for this analysis.

A spike recovery study was performed for the compounds of interest during the field test. The laboratory provided aqueous spikes for acetonitrile and acrylonitrile, at 235 µg and 236 µg, respectively. The lab provided XAD-2 tubes spiked with the remaining compounds of interest. Each tube was spiked with 22.1 µg of MTBE, 29.1 µg of 2-nitropropane, 24.1 µg of isooctane, 23.9 µg of MIBK, 33.2 µg of chlorobenzene, 26.0 µg of ethylbenzene, 43.0 µg of p-xylene, 27.2 µg of styrene, 26.4 µg of o-xylene, 26.0 µg of cumene, and 36.1 µg of nitrobenzene.

Because of the low ratio of spike level to sample loading the recovery study was not useable. Spike recovery values for the laboratory control samples prepared from the retained spikes are presented in the Results section of this report.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)

The m- and p- xylene isomers are inseparable and indistinguishable with the equipment and conditions used for this analyis. These two isomers have virtually identical responses. Therefore the instrument was calibrated using p-xylene. Any results shown are accurate representatations of the total of m-xylene and p-xylene present in the sample. The asociated results have been labeled as both isomers.

Reporting Notes

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 308

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

Custody

Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at 5.8 °C after being relinquished by TRC Environmental Corporation of Austin, TX. The silica gel tubes for samples ***R1*** and ***R3*** were received wet. The silica gel tube for ***R2*** was received broken. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for methanol using the analytical procedures in EPA Method 308, Procedure for Determination of Methanol Emission from Stationary Sources (40 CFR Part 63, Appendix A).

Although the silica gel tube for ***R2*** was broken it was also wet so most of the media remained adhered to the tube and to the outside of the condensate container. The analyst noted that more than 95% of the media contents were recovered and desorbed. All silica gel tubes were desorbed using 5.00 mL of a 3% n-propanol in deionized water solution.

The Hewlett Packard Model 5890, Series II Gas Chromatograph "Penn" (S/N 2750A17269) was equipped with front and rear Flame Ionization Detectors and two Restek Stabilwax 30m x 0.53mm x 2.0 um (S/N 810087 and S/N 808560) capillary columns, for these analyses.

Calibration

The calibration curves are included in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Chromatographic Conditions

The acquisition methods GC120P139.M and GC120P150.M are included in the Calibration Curve Chromatograms section of this report.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes

Methanol was not detected at concentrations above the detection limit in the analyses of the field and laboratory blanks.

The analysis of the laboratory control sample desorbed with these samples exhibited a spike recovery of 82.2%.

Reporting Notes

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody

1/2

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU TCR Test
Project No.: 18229.0000.0002
Sampling Date(s): 7/07, 16, 17/2011
Laboratory: Enthalpy Analytical
Laboratory P.O. #:
Shipping Airbill No.:
Shipping Date(s): 7/19/2011
Shipper's Name: MJKrall

Premium TAT Request

Sample Code	Sampled Date	Container Size	Container G/P	MATRIX: Aqueous	Organic Solvent	Ash/Soil/Sediment	Acidic	Basic	Other	Source Description	ANALYSIS: Trace Metals*	Mercury	Hexavalent Chromium	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semi-Volatile Organics	Volatile Organics	Physical Parameters*	TCE HHAs	Methane/Ethane	Comments
EM-R1-BAG-DCU	7/14/11	10L	BAG					X		DCU D603 Vent								X			X		Tedlar bags
EM-R2-BAG-DCU	7/16/11	↓	↓					X										X			X		
EM-R3-BAG-DCU	7/17/11							X										X			X		
EM-R1-SG-DCU	7/14/11	NA	NA	X				X															Condensate/SG Tube
* EM-R2-SG-DCU	7/16/11			X				X		* R2 SilGel received broken LMC 7/20/11													
* EM-R3-SG-DCU	7/17/11			X				X		* R1, R3 SilGels received wet LMC 7/20/11													
EM-BLANK-SG-DCU	7/17/11	↓	↓	X				X															
* EM-R1A-XAD-DCU	7/14/11	NA	NA	X				X		* R1A, R1B, R3A, R3B Tubes received wet LMC 7/20/11													Cond/XAD/Carbon Tube
EM-R1B-XAD-DCU	7/14/11			X				X															
EM-R2A-XAD-DCU	7/16/11			X				X															
EM-R2B-XAD-DCU	7/16/11			X				X															
* EM-R3A-XAD-DCU	7/17/11			X				X															
EM-R3B-XAD-DCU	7/17/11			X				X															
EM-BLANKA-XAD-DCU	7/17/11			X				X															
EM-BLANKB-XAD-DCU	7/17/11	↓	↓	X				X															Spiked XAD tube

Relinquished by: MJKrall	Date/Time: 7/19/2011 1600	Relinquished by:	Date/Time:		
Received by: [illegible]	Date/Time: 7/20/11 9:36 am	Received by:	Date/Time:		

REMARKS (*): Temp = 5.8° Raytek Gun #2

EM-BTRF-000196

WHITE — LABORATORY YELLOW — LABORATORY COPY PINK — OFFICE COPY GOLD — FIELD COPY

TRC Environmental Corporation

2/2

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR Test
Project No.: 182129.0000.0000
Sampling Date(s): 7/14, 16, 17/2011
Laboratory: Enthalpy Analytical
Laboratory P.O. #:
Shipping Airbill No.:
Shipping Date(s): 7/19/2011
Shipper's Name: MJ Krall

Premium TAT Request

Sample Code	Sampled Date	Container Size	Container G/P	MATRIX: Aqueous	Organic Solvent	Ash/Soil/Sediment	Acidic	Basic	Other	Source Description	ANALYSIS: Trace Metals*	Mercury	Hexavalent Chromium	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semi-Volatile Organics	Volatile Organics BAG TEDLAR	Physical Parameters*	Comments
EM-R1-BAGCOND-DCU	7/14/11	40ml	VOA G	X						DCU D603 Vent								X			Bag Condensate
EM-R2-BAGCOND-DCU	7/16/11	↓	↓	X						↓								X			↓
EM-R3-BAGCOND-DCU	7/17/11			X														X			
EM-BLANK-BAGCOND-DCU	7/17/11			X														X			

Relinquished by: MJ Krall	Date/Time: 7/19/2011 1600	Relinquished by:	Date/Time:
Received by: Liz M Cox	Date/Time: 7/20/11 9:36 am	Received by:	Date/Time:

REMARKS (*): Temp = 5.9° Raytek Gun #2

EM-BTRF-000197

WHITE — LABORATORY YELLOW — LABORATORY COPY PINK — OFFICE COPY GOLD — FIELD COPY

TRC Environmental Corporation

Sample Chromatograms

APPENDIX B: SW-846 METHOD 0010—SEMIVOLATILE ORGANIC HAPS SAMPLING DATA

Project Number	182129		
Client / Location	ExxonMobil		
Source	DCU		
Sampling Location	D603 Vent		
Sample Type / Method	M0010 Semivolatile Organic HAPs		
Condition Number	Vent Cycle	Vent Cycle	Vent Cycle
Run Number	1	2	3
Method Number	M0010	M0010	M0010
Date	07/14/11	07/16/11	07/17/11
Time Start (24-hr clock)	2006	0043	0626
Time Stop (24-hr clock)	2026	0143	0706
Total Collection Time (min)	20	60	40
Pitot Tube Correction Factor	0.84	0.84	0.84
Nozzle Diameter (in.)	0.120	0.120	0.120
Nozzle Area (ft^2)	0.000079	0.000079	0.000079
Equivalent Duct Diameter (in)	8.00	8.00	8.00
Equivalent Duct Diameter (ft)	0.67	0.67	0.67
Duct Cross-Sectional Area (ft^2)	0.349	0.349	0.349
Barometric Pressure (in. Hg)	29.65	29.80	29.85
Elevation of Sampling Location Relative to Barometer (ft)			
Barometric Pressure at Sampling Location (in. Hg)	29.65	29.80	29.85
Static Pressure (in. H_2O)	1.1	0.9	1.5
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96
O_2 (%)	14.0	12.8	16.5
CO_2 (%)	0.0	0.1	0.0
Dry Molecular Weight (g/g-mole)	28.56	28.53	28.66
Condensate (mL)	813.6	295.9	1549.1
Moisture Content (%) (measured)	97.58	79.41	98.53
Moisture Content at Saturation (%)	538.07	152.34	303.94
Moisture Content (%) (used in further calculations)	97.58	79.41	98.53
Wet Molecular Weight (g/g-mole)	18.26	20.17	18.16
Initial Meter Volume (ft^3)	640.751	645.410	693.984
Final Meter Volume (ft^3)	641.762	649.210	695.120
Leak Check Volume (ft^3)	0.000	0.000	0.000
Meter Volume (ft^3)	1.011	3.800	1.136
Meter Calibration Factor, Y	0.9721	0.9721	0.9721
Average Meter Temperature (F)	80.3	77.1	74.6
Absolute Meter Temperature (F)	540.3	537.1	534.6
Average Delta H (in. H_2O)	0.0	0.0	0.0
Elevation of Meter Relative to Barometer (ft)			
Corrected Meter Volume (dscf)	0.952	3.617	1.088
Average Stack Temperature (F)	312.0	234.0	274.5
Absolute Stack Temperature (R)	772.0	694.0	734.5
Average Delta P (in. H2O)	124.00	9.42	11.73
Average Square Root of delta P	11.13	2.98	3.20
Unadjusted Gas Velocity (ft/sec)	952.98	229.95	267.25
WAF	1.00	1.00	1.00
Adjusted Gas Velocity (ft/sec)	952.98	229.95	267.25
Adjusted Gas Velocity (ft/min)	57,179	13,797	16,035
Actual Flow Rate (acfh)	1,197,544	288,959	335,832
Actual Flow Rate (acfm)	19,959	4,816	5,597
Corrected Flow Rate (wscfh)	813,869	219,447	241,725
Corrected Flow Rate (wscfm)	13,564	3,657	4,029
Corrected Flow Rate (kwscfh)	814	219	242
Corrected Flow Rate (kwscfm)	14	4	4
Corrected Flow Rate (dscfh)	19,704	45,179	3,549
Corrected Flow Rate (dscfm)	328	753	59
Corrected Flow Rate (kdscfh)	20	45	4
Corrected Flow Rate (kdscfm)	0.33	0.75	0.06
Isokinetic Sampling Rate (%)	64.40	35.58	204.44
Average Isokinetic Sampling Rate (%)		101.47	

STP is defined as 528 R and 29.92 "Hg

TRC

Source Collection Data Sheet

Contract No. 182129	Method M0010 Semi Volatiles		Page 1 of 1
Facility ExxonMobil BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.005 @ 15" Hg		Operator MJKrall
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.004 @ 25" Hg		Pitot No. NA
Date 7/14/2011	Start Time 2006	Meter No. 1446	PTCF 0.84
Condition Normal/Vent Cycle	End Time 2026	DGMCF 0.9721	Init. Pitot Leak Check ✓
Run No. 1	Duration (min) 20	ΔH@ 1.707	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.1	Bar. Press. ("Hg) 29.65	Nozzle Diam. (") 0.120	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	Cond T(F)
MID	2006	640.751	—	—	—	296	299	75	83	83	25	73
M	2011	641.35	—	—	—	295	300	68	80	81	25	70
M	2016	641.44	—	—	—	295	300	62	79	80	25	67
M	2021	641.50	—	—	—	296	298	59	77	81	25	63
STP	2026	641.762	—	—	—	297	299	57	79	80	25	60

Comments

Checked By: JL Peeples 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	M0010 (Sem, Vol)
Condition	Normal Vent Cycle	Run No.	1
Date	7-14-11	Operator	km

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	-	Initial Wt. (g)	=	Net Gain (g)
1	—	—	100	1649.7	-	842.2	=	807.5
2	HPLC H2O	100	Mod	719.6	-	717.7	=	1.9
3	HPLC H2O	100	C/S	700.0	-	700.3	=	-0.3
4	MT	—	Mod	609.5	-	609.8	=	-0.3
5	MT	—	↓	583.9	-	584.3	=	-0.4
6	Sigel	500	↓	949.3	-	944.1	=	5.2
7					-		=	
8					-		=	
9					-		=	
10					-		=	
						Total Net Gain (g) =		813.6

Comments:

XAD blot 061411-3

Run 1

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	842.2	1649.7	807.5
2	717.7	719.6	1.9
3	700.3	700.0	-0.3
4	609.8	609.5	-0.3
5	584.3	583.9	-0.4
6	944.1	949.3	5.2
		sum =	813.6

IRC

Source Collection Data Sheet

Contract No. 182129		Method 8010 (Seq. Vol.)		Page 1 of 1	
Facility ExxonMob. / BTRF		Init. System Leak Rate (ft3 @ "Hg) 0.004@15"Hg		Operator MDK	
Source DCU D603 Vent		Final System Leak Rate (ft3 @ "Hg) 0.004@25"Hg		Pitot No. NA	
Date 7/16/2011	Start Time 0043		Meter No. 1446	PTCF 0.84	
Condition Normal Ventcycle	End Time 0143		DGMCF 0.972	Init. Pitot Leak Check ✓	
Run No. 2	Duration (min) 60		ΔH@ 1.707	Final Pitot Leak Check ✓	
Stat. Press. ("H2O) +0.9	Bar. Press. ("Hg) 29.80		Nozzle Diam. (") 0.120	Kf	

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	Cond T(F)
M1D	0043	648.410	—	—	—	292	302	78	77	76	21	72
M	0048	648.25	—	—	—	293	302	74	77	76	25	70
M	0053	648.62	—	—	—	293	302	68	77	76	25	69
M	0058	648.81	—	—	—	293	303	64	77	76	25	67
M	0103	648.90	—	—	—	293	303	64	78	76	25	65
M	0108	648.97	—	—	—	295	303	62	78	76	25	64
M	0113	648.11	—	—	—	294	302	60	78	77	25	62
M	0118	648.25	—	—	—	294	303	61	78	77	25	62
M	0123	648.41	—	—	—	295	303	63	78	77	25	63
M	0128	649.56	—	—	—	295	302	64	78	77	25	64
M	0133	649.76	—	—	—	296	303	65	78	77	25	65
M	0138	649.92	—	—	—	297	303	66	78	77	25	66
STP	0143	649.210										

Comments

Checked By: JL Peduzzi 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	0010 Semi Volatiles
Condition	Normal Vent Cycle	Run No.	2
Date	7/16/2011	Operator	RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	—	—	IC	1236.7	- 850.0	= 386.7
2	HPLC H2O	100	Mod	671.8	- 717.2	= -45.4
3	↓	100	GIS	645.2	- 700.3	= -55.1
4	—	—	Mod	610.8	- 609.8	= 1.0
5	—	—	↓	584.2	- 584.5	= -0.3
6	Silica	~500	↓	958.2	- 949.2	= 9.0
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	295.9

Comments:

XAD lot 071111-2

Run 2

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	850.0	1236.7	386.7
2	717.2	671.8	-45.4
3	700.3	645.2	-55.1
4	609.8	610.8	1
5	584.5	584.2	-0.3
6	949.2	958.2	9
		sum =	295.9

IRC

Source Collection Data Sheet

Contract No. 182129	Method 0010 Semivolatiles	Page 1 of 1	
Facility ExxonMobil BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.003 @15" Hg	Operator RWM	
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.004 @27" Hg	Pitot No. NA	
Date 7-17-11	Start Time 0626	Meter No. 3446	PTCF 0.84
Condition Normal Vent Cycle	End Time 0706	DGMCF 19.721	Init. Pitot Leak Check ✓
Run No. 3	Duration (min) 40	ΔH@ 1.707	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.5	Bar. Press. ("Hg) 29.85	Nozzle Diam. (") 0.120	Kf

	Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	Cond CF
0	M/D	0626	693.984	—	—	—	305	302	75	~~76~~	~~76~~	17	77
5	M	0631	694.11	—	—	—	302	302	72	71	72	25	70
10	M	0636	694.51	—	—	—	302	302	70	73	73	25	63
15	M	0641	694.60	—	—	—	303	303	68	73	73	25	61
20	M	0646	694.72	—	—	—	303	299	66	74	73	26	60
25	M	0651	694.85	—	—	—	299	303	64	75	74	27	59
30	M	0656	694.94	—	—	—	295	303	63	80	78	27	59
35	M	0701	695.00	—	—	—	297	303	62	80	75	27	58
STOP 40	STOP	0706	695.12	—									

Comments

Checked By: M Pedzyk 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	0010 Semi-Volatiles
Condition	Normal Vent Cycle	Run No.	3
Date	7-17-11	Operator	RPM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	Initial Wt. (g)	Net Gain (g)
1	—		KO	2374.0	847.0	1527.0
2	~~DI~~ H2O	100	Mod	680.7	672.1	8.6
3	DI H2O	100	GS	647.3	645.5	1.8
4	—	—	Mod	612.1	611.4	0.7
5	—	—	↓	585.4	584.4	1.0
6	Sigel	500	↓	954.6	944.6	10.0
7						
8						
9						
10						
					Total Net Gain (g) =	1549.1

Comments:

Run 3

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	847.0	2374.0	1527
2	672.1	680.7	8.6
3	645.5	647.3	1.8
4	611.4	612.1	0.7
5	584.4	585.4	1
6	944.6	954.6	10
		sum =	1549.1

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Semi Volatile Organic HAPS
Dates: July 14, 16, 17, 2011
Run No. 1

Barometric Pressure at Sampling Site, corrected for elevation

$$P_{bar(corr)} = P_{bar,meas} - (Elev \times 0.001)$$

$P_{bar,meas}$ = Barometric pressure as measured at ground level	=	29.65	in. Hg
Elev = elevation of sampling location relative to barometer	=	0	feet
0.001 = Conversion factor	=	0.00100	in. Hg/ft of elevation

$$Pbar(corr) = 29.65 - 0 \times 0.001$$

$$P_{bar(corr)} = 29.65 \text{ in Hg}$$

Absolute Stack Pressure, Corrected, in. Hg, as per EPA Method 2, Section 6.5

$$P_s = P_{bar(corr)} + (Pg/13.6)$$

$P_{bar(corr)}$ = Barometric pressure at the sampling site	=	29.65	in. Hg
P_g = Stack Static Pressure	=	1.10	in. H2O
13.6 = Conversion factor	=	13.6	in. H2O/in. Hg

$$P_s = 29.65 + \left(\frac{1.10}{13.6}\right)$$

$$P_s = 29.73 \text{ in Hg}$$

Absolute Stack Temperature, R

$$T_s = T + 460$$

T = Average Stack Temperatue	=	312.0	degF
460 = Conversion factor from deg F to R	=	460	

$$Ts = 312.0 + 460$$

$$Ts = 772.0 \text{ R}$$

Absolute Meter Temperature, R

$$Tm = T + 460$$

T = Average Meter Temperatue	=	80.3	degF
460 = Conversion factor from deg F to R	=	460	

$$Tm = 80.3 + 460$$

$$Tm = 540.3 \text{ R}$$

Volume of Water Vapor Condensed, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-2

$$V_{w(std)} = \frac{V_{lc} \times R_w \times R \times T_{std}}{M_w \times P_{std}}$$

V_{lc} = Total weight of liquid collected	=	813.6	g
R_w = Density of water	=	0.002201	lb/ml
R = Ideal Gas Constant	=	21.85	inHg - ft^3/degR - lbmole
T_{std} = Standard absolute temperature	=	528.00	degR
M_w = Molecular Weight of Water	=	18.00	lb/lbmole
P_{std} = Standard absolute pressure	=	29.92	inHg

$$V_{w(std)} = \frac{813.6 \times 0.002201 \times 21.85 \times 528}{18 \times 29.92}$$

$$V_{w(std)} = 38.36$$

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Semi Volatile Organic HAPS
Dates: July 14, 16, 17, 2011
Run No. 1

Dry Gas Volume, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-1

$$V_{m(std)} = V_m \times Y \times \frac{T_{std} \times (P_{bar} + (deltaH / 13.6))}{T_m \times P_{std}}$$

V_m = Volume of gas sample, dry	=	1.011	ft^3
Y = Dry gas meter calibration factor	=	0.972	
Tstd = Standard Temperature	=	528	R
P_{bar} = Barometric pressure at the sampling site	=	29.65	in. Hg
deltaH = Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor	=	13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature	=	540.3	R
Pstd = Standard Pressure	=	29.92	in Hg

$$V_{m(std)} = \frac{1.01 \times 0.972 \times 528 \times (29.65 + (0.00 / 13.6))}{540.3 \times 29.92}$$

$V_{m(std)}$ = 0.952 dscf 0.02832 m3/ft3
$V_{m(std)}$ = 0.027 dscm

Moisture Content, proportion, by volume - as per US EPA Method 5, Eq. 5-3

$$\frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

$V_{w(std)}$ = Volume of water vapor condensed	=	38.360	ft^3
$V_{m(std)}$ = Dry Gas Volume	=	0.952	ft^3

$$B_{ws} = \frac{38.360}{0.952 + 38.360}$$

B_{ws} = 0.9758

Moisture content at saturation

This calculated by polynomial fit: $(86.7222826792858 + T_s*(-0.645483277572566) + T_s^2*0.00181527101645074 + T_s^3 * (-2.28823297043421E-06) + (T_s)^4*1.09201445204276E-09)*100*29.92/P_s)$

86.722282679285800			=	86.7
-0.645483277572566	X	772.0	=	-498.3
0.00181527101645074	X	595984	=	1081.9
-2.28823297043421E-06	X	460099648	=	-1052.8
1.09201445204276E-09	X	3.55197E+11	=	387.9
		sum	=	5.3467

sum x 100 x $\frac{29.92}{29.73}$ = 538.07 %

for further calculations

B_{ws} = 0.9758 97.58 %

Dry Molecular Weight of Stack Gas, lb/lb-mole - as per US EPA Method 3, Eq. 3-1

$$M_d = MW_{CO}(\%CO) + MW_{CO2}(\%CO_2) + MW_{O2}(\%O_2) + MW_{H2}(\%H_2) + MW_{CH4}(\%CH_4) + MW_{N2}(\%N_2)$$

MW_{CO}= Molecular weight of CO, divided by 100	=	0.28	lb/lb-mole
%CO = Percent CO by volume, dry basis	=	0.0	%
MW_{CO2}= Molecular weight of CO_2, divided by 100	=	0.44	lb/lb-mole
$\%CO_2$ = Percent CO_2 by volume, dry basis	=	0.0	%
MW_{O2} = Molecular weight of O_2, divided by 100	=	0.32	lb/lb-mole
$\%O_2$ = Percent O_2 by volume, dry basis	=	14.0	%
MW_{H2} = Molecular weight of H_2, divided by 100	=	0.02	lb/lb-mole
$\%H_2$ = Percent H_2 by volume, dry basis	=	0.0	%
MW_{CH4} = Molecular weight of CH_4, divided by 100	=	0.16	lb/lb-mole
$\%CH_4$ = Percent CH_4 by volume, dry basis	=	0.0	%
MW_{N2} = Molecular weight of N2, divided by 100	=	0.28	lb/lb-mole
$\%N_2$ = 100% - %CO - $\%CO_2$ - $\%O_2$ - %H2 - %CH4	=	86.0	%

$$M_d = \frac{(0.28 \times 0.0) + (0.44 \times 0.0) + (0.32 \times 14.0) +}{(0.02 \times 0.0) + (0.16 \times 0.0) + (0.28 \times 86.0)}$$

M_d = 28.56 lb/lb-mole

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Semi Volatile Organic HAPS
Dates: July 14, 16, 17, 2011
Run No. 1

Molecular Weight of stack gas, lb/lb-mole - as per US EPA Method 2, Eq. 2-6

$$M_s = M_d (1-B_{ws})+18.0(B_{ws})$$

M_d= Dry molecular weight of stack gas	=	28.56	lb/lb-mole
B_{ws}= Proportion of water vapor, by volume	=	0.9758	proportion
18.0 = Molecular Weight of H_2O	=	18.00	lb/lb-mole

M_s = 28.56 x (1 - 0.976) + (18.00 x 0.976)
M_s = 18.26 lb/lb-mole

Average Stack Gas Velocity, ft/sec - as per US EPA Method 2, Eq. 2-7

$$v_s = K_p \times C_p \times \text{deltaP}_{avg} \times \text{sqrt}(T_s/(P_s \times M_s))$$

K_p= Velocity equation constant	=	85.49	ft/sec[((lb/lb-mole)(in.Hg))/((degR)(in.H2O))]$^{1/2}$
C_p = S type pitot tube coefficient	=	0.84	
deltaP$_{avg}$=ave. sqrt. of the velocity head of stack gas	=	11.1271	in.H_2O
T_s = Absolute stack temperature	=	772.0	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
M_s = Molecular Weight of stack gas	=	18.26	lb/lb-mole

$$v_s = 85.49 \times 0.84 \times 11.13 \times \left(\frac{772.0}{29.73 \times 18.26}\right)^{0.5}$$

v_s = 952.98 ft/sec 15.8829 ft/min
WAF = 1.00
v_s(WAF Adjusted)= 952.98 ft/sec

Stack Area

$A = 3.14 \times (\text{Stack Diameter}/2)^2$

3.1415927 = PI	=	3.14	
Stack Diameter		0.67	ft2

$$A = 3.14 \times \left(\frac{0.67}{2}\right)^2$$

A = 0.35 ft2

Average Stack Gas Volumetric Flow Rate - Actual Conditions

Q_{actual} = vs X A

v_s= Average stack gas velocity	=	952.98	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2

Q_{actual} = 952.98 x 0.35

Q_{actual} = 333 ft3/sec
Q_{actual} = 19,959 ft3/min
Q_{actual} = 1,197,544 ft3/hr

Average Stack Gas Dry Volumetric Flow Rate, dscf/hr - as per US EPA Method 2, Eq. 2-8

$$Q = \frac{3600 \times (1-B_{ws}) \times v_s \times A \times T_{std} \times P_s}{T_s \times P_{std}}$$

3600= Conversion factor	=	3600	sec/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9758	proportion
v_s= Average stack gas velocity	=	952.98	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2
T_{std} = Standard absolute temperature	=	528	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
T_s = Absolute stack temperature	=	772.0	degR
P_{std} = Standard absolute pressure	=	29.92	in. Hg

$$Q = \frac{3600 \times (1.00 - 0.976) \times 952.98 \times 0.349 \times 528 \times 29.73088}{772.0 \times 29.92}$$

Q = 19,704 dscfh
Q = 328 dscfm
Q = 20 kdscfh
Q = 0 kdscfm

Conversions
60 min/hr
1/1000 k

SHEET NO. 1 OF 1
PROJECT NO. 182129
DATE 10/23/2011
BY MJKrall
CHK'D

SUBJECT ExxonMobil BTRF DCU ICR 2-Methylnaphthalene Calculations

Run 1

22000 ug detected (Test America)
0.952 dscf sample volume
18,614 dscfh flow rate from Ontario Hydro train

$$\text{Concentration} = \frac{\text{detected ug } 22000 \times \text{Conv } \frac{\text{ft}^3}{\text{liters}} \; 1000}{\text{0.952 dscf sample volume} \times 28.32 \text{ liters/dscm}} = 816{,}004 \text{ ug/dscm}$$

$$\frac{\text{detected ug } 22000 \times \text{dry flow } \frac{\text{dscf}}{\text{hr}} \; 18{,}614 \times \text{Conv } \frac{\text{lb}}{453.6 \times 10^6 \text{ ug}} \times \text{VC duration } \frac{20 \text{ min}}{\text{Vent Cycle}} \times \text{Conv } \frac{\text{hr}}{60 \text{ min}}}{\text{0.952 dscf sample volume}} = 0.316 \text{ lb/Vent Cycle}$$

A

Project Name: ExxonMobil ICR DCU D603
Parameter: Semivolatile Organic Compounds
Date: July 14, 16-17, 2011

	Run 1 Sample Volume (dscf) D603 Exhaust Flow Rate (dscfh) Amount Detected (ug)	Reporting Limit (ug)	0.952 18,614	Total (ug)	20 minute vent cycle Concentration (ug/dscm)	Emission Rate (lb/vent cycle)
Acenaphthene	**580**			**580**	**21513**	**0.0083**
Acenaphthylene		800		<800	<29673	<0.0115
Aniline		800		<800	<29673	<0.0115
Anthracene	**940**			**940**	**34866**	**0.0135**
Benz(a)anthracene		800		<800	<29673	<0.0115
Benzidine		8000		<8000	<296729	<0.115
Benzo(b)fluoranthene		800		<800	<29673	<0.0115
Benzo(k)fluoranthene		800		<800	<29673	<0.0115
Benzo(g,h,i)perylene		800		<800	<29673	<0.0115
Benzo(a)pyrene	**300**			**300**	**11127**	**0.0043**
Benzo(e)pyrene	**73**			**73**	**2708**	**0.0010**
Biphenyl	**330**			**330**	**12240**	**0.0047**
Chrysene		800		<800	<29673	<0.0115
Cresols		800		<800	<29673	<0.0115
Dibenz(a,h)anthracene		800		<800	<29673	<0.0115
Dibenzofuran	**240**			**240**	**8902**	**0.0034**
Dibenzo(a,e)pyrene		800		<800	<29673	<0.0115
3,3'-Dimethoxybenzidine	**1100**			**1100**	**40800**	**0.0158**
p-Dimethylaminoazobenzene		800		<800	<29673	<0.0115
7,12-Dimethylbenz(a)anthracene		800		<800	<29673	<0.0115
3,3'-Dimethylbenzidine		8000		<8000	<296729	<0.115
alpha, alpha-Dimethylphenethylamine		2000		<2000	<74182	<0.0287
2,4-Dimethylphenol		800		<800	<29673	<0.0115
Fluoranthene		800		<800	<29673	<0.0115
Fluorene	**1200**			**1200**	**44509**	**0.0172**
Indeno-1,2,3-cd-pyrene		800		<800	<29673	<0.0115
Isophorone		800		<800	<29673	<0.0115
3-Methylcholanthrene		800		<800	<29673	<0.0115
2-Methylnaphthalene	**22000**			**22000**	**816004**	**0.3161**
Naphthalene	**13000**			**13000**	**482184**	**0.1868**
Nitrobenzene		800		<800	<29673	<0.0115
Perylene		800		<800	<29673	<0.0115
Phenanthrene	**1800**			**1800**	**66764**	**0.0259**
Phenol		800		<800	<29673	<0.0115
1,4-Phenylenediamine		8000		<8000	<296729	<0.115
Pyrene	**370**			**370**	**13724**	**0.0053**
o-Toluidine		800		<800	<29673	<0.0115

EM-BTRF-000204

Project Name: ExxonMobil ICR DCU D603
Parameter: Semivolatile Organic Compounds
Date: July 14, 16-17, 2011

	Run 2 Sample Volume (dscf) D603 Exhaust Flow Rate (dscfh) Amount Detected (ug)	Reporting Limit (ug)	3.617 5,508	Total (ug)	60 minute vent cycle Concentration (ug/dscm)	Emission Rate (lb/vent cycle)
Acenaphthene	**680**			**680**	**6638**	**0.00228**
Acenaphthylene		800		<800	<7810	<0.00269
Aniline		800		<800	<7810	<0.00269
Anthracene	**810**			**810**	**7908**	**0.00272**
Benz(a)anthracene	**450**			**450**	**4393**	**0.00151**
Benzidine		8000		<8000	<78099	<0.0269
Benzo(b)fluoranthene		800		<800	<7810	<0.00269
Benzo(k)fluoranthene		800		<800	<7810	<0.00269
Benzo(g,h,i)perylene		800		<800	<7810	<0.00269
Benzo(a)pyrene	**580**			**580**	**5662**	**0.00195**
Benzo(e)pyrene	**300**			**300**	**2929**	**0.00101**
Biphenyl	**460**			**460**	**4491**	**0.00154**
Chrysene	**450**			**450**	**4393**	**0.00151**
Cresols		800		<800	<7810	<0.00269
Dibenz(a,h)anthracene		800		<800	<7810	<0.00269
Dibenzofuran	**270**			**270**	**2636**	**0.000906**
Dibenzo(a,e)pyrene	**370**			**370**	**3612**	**0.00124**
3,3'-Dimethoxybenzidine	**1100**			**1100**	**10739**	**0.00369**
p-Dimethylaminoazobenzene		800		<800	<7810	<0.00269
7,12-Dimethylbenz(a)anthracene		800		<800	<7810	<0.00269
3,3'-Dimethylbenzidine		8000		<8000	<78099	<0.0269
alpha, alpha-Dimethylphenethylamine		2000		<2000	<19525	<0.00671
2,4-Dimethylphenol		800		<800	<7810	<0.00269
Fluoranthene		800		<800	<7810	<0.00269
Fluorene	**1200**			**1200**	**11715**	**0.00403**
Indeno-1,2,3-cd-pyrene		800		<800	<7810	<0.00269
Isophorone		800		<800	<7810	<0.00269
3-Methylcholanthrene		800		<800	<7810	<0.00269
2-Methylnaphthalene	**31000**			**31000**	**302636**	**0.104**
Naphthalene	**15000**			**15000**	**146437**	**0.0504**
Nitrobenzene		800		<800	<7810	<0.00269
Perylene		800		<800	<7810	<0.00269
Phenanthrene	**1700**			**1700**	**16596**	**0.00571**
Phenol		800		<800	<7810	<0.00269
1,4-Phenylenediamine		8000		<8000	<78099	<0.0269
Pyrene	**540**			**540**	**5272**	**0.00181**
o-Toluidine		800		<800	<7810	<0.00269

EM-BTRF-000203

Project Name: ExxonMobil ICR DCU D603
Parameter: Semivolatile Organic Compounds
Date: July 14, 16-17, 2011

	Run 3 Sample Volume (dscf) D603 Exhaust Flow Rate (dscfh) Amount Detected (ug)	Reporting Limit (ug)	1.088 3,916	Total (ug)	40 minute vent cycle Concentration (ug/dscm)	Emission Rate (lb/vent cycle)
Acenaphthene	**730**			**730**	**23692**	**0.00386**
Acenaphthylene		800		800	<25964	<0
Aniline		800		800	<25964	<0
Anthracene	**2100**			**2100**	**68155**	**0.01111**
Benz(a)anthracene	**260**			**260**	**8438**	**0.00138**
Benzidine		8000		8000	<259638	<0
Benzo(b)fluoranthene		800		800	<25964	<0
Benzo(k)fluoranthene		800		800	<25964	<0
Benzo(g,h,i)perylene		800		800	<25964	<0.00423
Benzo(a)pyrene		800		800	<25964	<0.00423
Benzo(e)pyrene		800		800	<25964	<0.00423
Biphenyl	**640**			**640**	**20771**	**0.00339**
Chrysene		800		800	<25964	<0.00423
Cresols		800		800	<25964	<0.00423
Dibenz(a,h)anthracene		800		800	<25964	<0.00423
Dibenzofuran	**510**			**510**	**16552**	**0.00270**
Dibenzo(a,e)pyrene		800		800	<25964	<0.00423
3,3'-Dimethoxybenzidine		8000		8000	<259638	<0.0423
p-Dimethylaminoazobenzene		800		800	<25964	<0.00423
7,12-Dimethylbenz(a)anthracene		800		800	<25964	<0.00423
3,3'-Dimethylbenzidine		8000		8000	<259638	<0.0423
alpha, alpha-Dimethylphenethylamine		2000		2000	<64909	<0.0106
2,4-Dimethylphenol		800		800	<25964	<0.00423
Fluoranthene		800		800	<25964	<0.00423
Fluorene	**2500**			**2500**	**81137**	**0.01322**
Indeno-1,2,3-cd-pyrene		800		800	<25964	<0.00423
Isophorone		800		800	<25964	<0.00423
3-Methylcholanthrene		800		800	<25964	<0.00423
2-Methylnaphthalene	**37000**			**37000**	**1200825**	**0.19573**
Naphthalene	**20000**			**20000**	**649094**	**0.10580**
Nitrobenzene		800		800	<25964	<0.00423
Perylene		800		800	<25964	<0.00423
Phenanthrene	**4600**			**4600**	**149292**	**0.02433**
Phenol		800		800	<25964	<0.00423
1,4-Phenylenediamine		8000		8000	<259638	<0.0423
Pyrene	**960**			**960**	**31157**	**0.00508**
o-Toluidine	**420**			**420**	**13631**	**0.00222**

EM-BTRF-000206

Project Name: ExxonMobil ICR DCU D603
Parameter: Semivolatile Organic Compounds
Date: July 14, 16-17, 2011

	Average **Run 2 not included in average. Average Concentration (ug/dscm)**	**Run 2 not included in average. Average Emission Rate (lb/vent cycle)**
Acenaphthene	**22602**	**0.00610**
Acenaphthylene	<27818	<0.00786
Aniline	<27818	<0.00786
Anthracene	**51510**	**0.01231**
Benz(a)anthracene	<19056	<0.00644
Benzidine	<278183	<0.0786
Benzo(b)fluoranthene	<27818	<0.00786
Benzo(k)fluoranthene	<27818	<0.00786
Benzo(g,h,i)perylene	<27818	<0.00786
Benzo(a)pyrene	<18546	<0.00427
Benzo(e)pyrene	<14336	<0.00264
Biphenyl	**16506**	**0.00406**
Chrysene	<27818	<0.00786
Cresols	<27818	<0.00786
Dibenz(a,h)anthracene	<27818	<0.00786
Dibenzofuran	**12727**	**0.00307**
Dibenzo(a,e)pyrene	<27818	<0.00786
3,3'-Dimethoxybenzidine	<150219	<0.02906
p-Dimethylaminoazobenzene	<27818	<0.00786
7,12-Dimethylbenz(a)anthracene	<27818	<0.00786
3,3'-Dimethylbenzidine	<278183	<0.0786
alpha, alpha-Dimethylphenethylamine	<69546	<0.01966
2,4-Dimethylphenol	<27818	<0.00786
Fluoranthene	<27818	<0.00786
Fluorene	**62823**	**0.01523**
Indeno-1,2,3-cd-pyrene	<27818	<0.00786
Isophorone	<27818	<0.00786
3-Methylcholanthrene	<27818	<0.00786
2-Methylnaphthalene	**1008414**	**0.25592**
Naphthalene	**565639**	**0.14629**
Nitrobenzene	<27818	<0.00786
Perylene	<27818	<0.00786
Phenanthrene	**108028**	**0.0251**
Phenol	<27818	<0.00786
1,4-Phenylenediamine	<278183	<0.07863
Pyrene	**22440**	**0.00520**
o-Toluidine	<21652	<0.00686

EM-BTRF-000207

Meter Box: Orifice Full Calibration

Date:	2/22/2011
Prev. Calib. Date:	1/19/2010
Location:	TRC Austin, TX Lab
Technician:	MRL
Meter Serial No:	1446
Meter Box ID:	1446.00
Atm. Pressure (corr. In H	29.41 ncorrected: 29.57
Critical Vacuum + 2 in Hg	16 in. Hg. (required minimum)
Prev. Calib Factor (Y):	0.9861

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	0.2353
Model:	LA40-73	48	0.3451
Tested By:	EW	55	0.4549
		63	0.5886

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
40	0.2353	0.27	31	929.125	938.912	9.787	73	73	73	74	24	73.0	74.0
48	0.3451	0.57	29	938.912	952.369	13.457	73	74	74	74	21	74.0	75.0
55	0.4549	1.1	38	952.369	975.626	23.257	74	74	75	75	19	75.0	76.0
63	0.5886	1.8	39	975.626	1,006.479	30.853	75	75	78	76	17	76.0	78.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y)		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
9.53	269.77	0.316	9.29	262.97	0.975	0.003	1.640	-0.07
13.10	370.87	0.464	12.73	360.46	0.972	0.000	1.617	-0.09
22.63	640.90	0.612	21.97	622.03	0.971	-0.002	1.803	0.10
29.99	849.32	0.791	29.13	824.87	0.971	-0.001	1.768	0.06

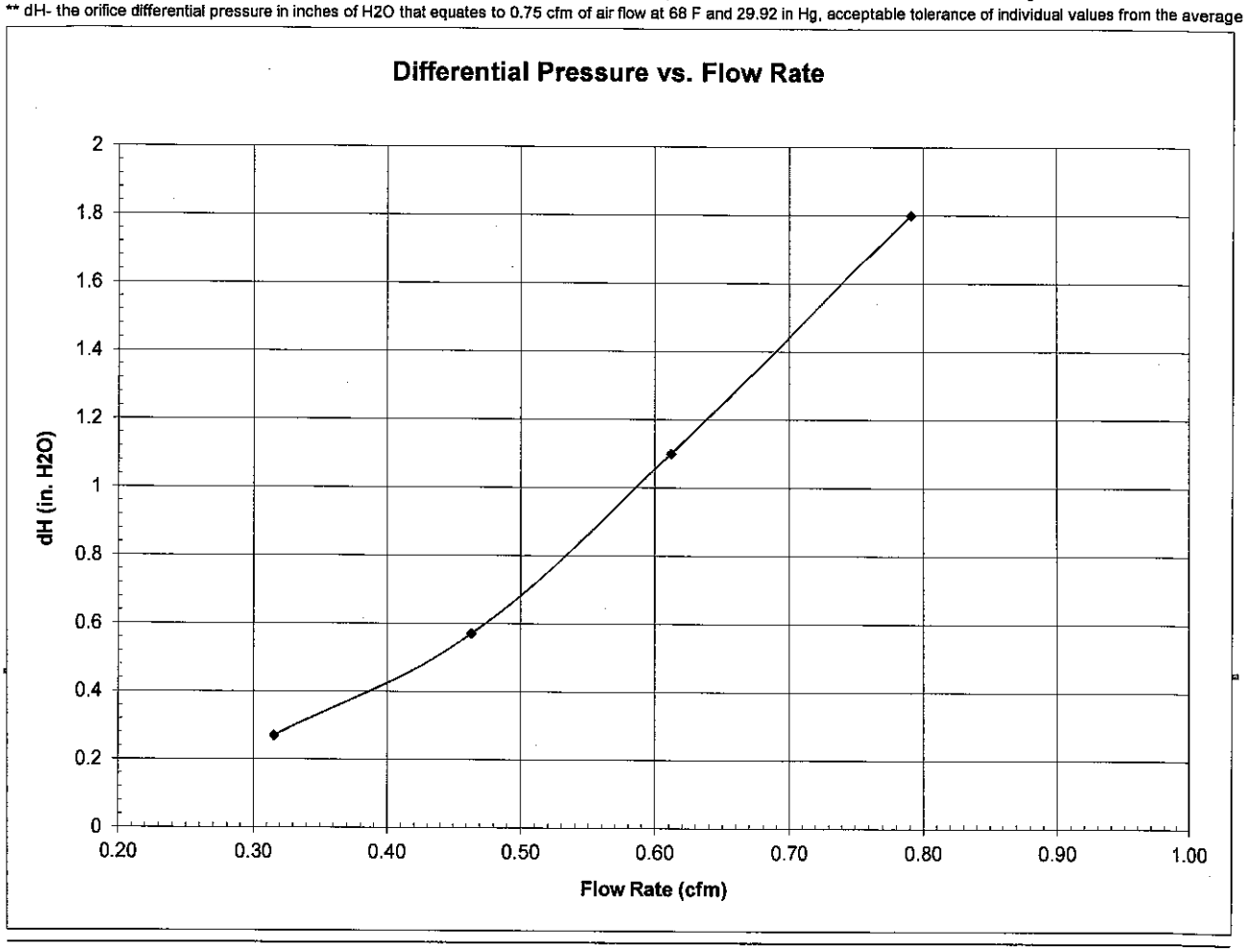
Meter Box

Calibration Test Results		**Pass/Fail**
*** Average Y:**	**0.9721**	***PASS***
Ave. Y w/in 5% of previous value:		*YES*
0.95 >= Y <= 1.05:		*PASS*
**** Average dH:**	**1.707**	***PASS***

Criteria:

* Y- ratio of the reading of the calibration meter (critical orifice) to the Meter Box DGM. Acceptable tolerance of individual values from the average is +/- 0.02.

** dH- the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air flow at 68 F and 29.92 in Hg, acceptable tolerance of individual values from the average



TRC

Console No. 1446

Temperature Display Type Jenco-965

Temperature Display Serial No. JC 08190

S. O. P. Reference AM - 103

Calibrator Type Omega Model CL23A

Calibrator Serial No. T239267

	Reference Temperature (°F)	32	Reference Temperature (°F)	212	Reference Temperature (°F)	500	Reference Temperature (°F)	1000	Reference Temperature (°F)	1500
Display Channel No.	Measured Temperature (oF)	Relative Error (%)	Measured Temperature (oF)	Relative Error (%)	Measured Temperature (oF)	Relative Error (%)	Measured Temperature (oF)	Relative Error (%)	Measured Temperature (oF)	Relative Error (%)
1 (Stack)	31	0.2	214	-0.3	501	-0.1	1001	-0.1	1502	-0.1
2 (Probe)	31	0.2	214	-0.3	501	-0.1	1000	0.0	1500	0.0
3 (Filter)	31	0.2	213	-0.1	500	0.0	1001	-0.1	1502	-0.1
4 (Dryer)	31	0.2	213	-0.1	500	0.0	1000	0.0	1500	0.0
5 (Aux)	31	0.2	213	-0.1	500	0.0	1000	0.0	1501	-0.1
6 (DGM Outlet)	31	0.2	212	0.0	497	0.3	1000	0.0	1499	0.1

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, R)°

Operator _____ Date 2/22/2011

Note: * Meter does not have inlet temperature

Display Type - type J, K, T etc...

Calibrator Type - must match display type

Display Serial Number - Located on T/C readout, not the same as meter box number

Enter data in shaded boxes

Pre/Post-Test Meter Box Calibration Check

WORKING METER

Date:	7/22/2011
Prev. Calib. Date:	2/22/2011
Location:	TRC South Austin, TX
Technician:	MRL
Meter Serial No:	1446
TRC DGM ID	1446
Current Calib. Factor (Y):	0.9721

REFERENCE METER

Calibration Date:	9/8/2010
Location:	TRC South
Technician:	KRH
Meter Serial No:	04E469822
TRC DGM ID:	LAB
Calib. Factor (Y):	0.9920

REFERENCE METER

Calibration Run #	Time (min)	Start Temp (deg F)	Stop Temp (deg F)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Meter Rate (cu•ft /min)	Corr. Vol @ EPA STP (cu ft)
1	18	79	78	0.000	7.561	7.561	0.4201	7.301
2	19	78	77	0.000	7.975	7.975	0.4197	7.715
3	18	77	76	0.000	7.558	7.558	0.4199	7.326

WORKING METER

Calibration Run #	Time (min)	Ambient Temp (deg F)	Start Temp (deg F)	Stop Temp (deg F)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Meter Rate (cu•ft /min)	Corr. Vol @ EPA STP (cu ft)	Calculated DGM Factor (Y)
1	18	80	88	86	707.488	715.064	7.576	0.421	7.202	1.0138
2	19	79	86	85	715.064	723.048	7.984	0.420	7.611	1.0137
3	18	78	85	84.0	723.048	730.615	7.567	0.420	7.227	1.0137

Dry Gas Meter
Calibration Check Results

Average Y = 1.0137
Are Y's within 2% of previous values? YES
Are Y's between 0.95 and 1.05? PASS
Ind Y values +/- 0.02 from Ave? PASS

Signature:

TRC Nozzle Calibration and Inspection Data Sheet

Company Name: ExxonMobil BTRF DCU ICR
Nozzle Number: SV - Glass - 1

Measure three diameters (in inches) as shown below. Average the diameters and calculate area according to the calculations below.

Calibration Measurement

*Diameter 1 (in):	0.121	**Date:** 7/12/2011
*Diameter 2 (in):	0.119	
*Diameter 3 (in):	0.119	
Average Diameter (in):	0.120	= (Sum of Diameters 1-3) / 3
Average Radius (in):	0.0600	= Average Diameter (in) / 2
Average Radius (ft):	0.00500	= Average Radius (in) / 12
Nozzle Area (ft2):	0.0000785	= π x radius (ft) ^2

*Maximum allowable difference between largest diameter and smallest diameter is 0.004 inches.

Nozzle is round, sharp-edged, free of nicks and dents

TRC

Michael J Kuhl
signature

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 182129

ExxonMobil DCU ICR - M0010

Lot #: H1G250406

Michael Krall

TRC Environmental Corporation
9225 US Highway 183 South
Austin, TX 78747

TESTAMERICA LABORATORIES, INC.

Kevin S. Woodcock
Project Manager

August 18, 2011

ANALYTICAL METHODS SUMMARY

H1G250406

PARAMETER	ANALYTICAL METHOD
PAHs & Selected SVOCs by HRGC/LRMS	KNOX ID-0016
Semivolatile Organic Compounds by GC/MS	SW846 8270C

References:

KNOX TestAmerica Laboratories Inc., Knoxville Laboratory Standard Operating Procedure

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

H1G250406

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MK5C3	001	EXM-DCU-M0010-R1-COMBINED	07/14/11	
MK5C5	002	EXM-DCU-M0010-R2-COMBINED	07/15/11	
MK5C6	003	EXM-DCU-M0010-R3-COMBINED	07/17/11	
MK5C7	004	EXM-DCU-M0010-RGTBLK-COMBINED	07/17/11	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H1G250406

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Sample RGTBLK-FLT was received, but was not listed on the chain of custody documentation.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

Semivolatiles

The semivolatile organic sampling train components were extracted and analyzed using TestAmerica Knoxville standard operating procedures KNOX-OP-0009 and KNOX-MS-0016, based on the following methods:

- SW-846 3542, "Extraction of Semivolatile Analytes Collected Using Method 0010 (Modified Method 5 Sampling Train)"
- SW-846 8270C, "Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)".

The sampling trains are prepared as one analytical fraction: The particulate filter and front half of the filter holder, nozzle and probe solvent rinses, XAD-2 resin trap and back half of the filter holder, coil condenser and connecting glassware solvent rinses are combined as a single sample.

The combined sample components are spiked with the method 8270C surrogates and Soxhlet extracted with methylene chloride. The extracts are concentrated to 1 mL and analyzed by GCMS.

Sample results were calculated using the following equation:

PROJECT NARRATIVE
H1G250406

$$\text{Result, ug} = (\text{On column concentration, ng/uL}) \times \left(\frac{\text{Volume final extract, uL}}{\text{1 Sample}} \right) \times \left(\frac{\text{1ug}}{\text{1000 ng}} \right) \times \text{DF} \times \text{SF}$$

Where: DF = Bench Dilution Factor
SF = Extraction Split Factor

The dilution factor reported on the sample result form represents a combination of factors (such as dilution, sample weight/volume adjustment, split ratio, etc.) used to adjust the reporting limits and method detection limits.

Samples EXM-DCU-M0010-R1-COMBINED, EXM-DCU-M0010-R2-COMBINED and EXM-DCU-M0010-R3-COMBINED were reported with elevated reporting limits for all analytes. Based on screening results, a dilution was necessary prior to analysis; the reporting limits were adjusted accordingly.

The concentration of naphthalene and/or 2-methylnaphthalene in samples EXM-DCU-M0010-R1-COMBINED EXM-DCU-M0010-R2-COMBINED and EXM-DCU-M0010-R3-COMBINED exceeded the calibration level of the instrument. The samples were analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits.

SIM PAH

The labeled internal standards added prior to extraction serve both as a measure of extraction efficiency and as a measure of cleanup recovery.

Method 0010 Sampling Train Preparation and Analysis

The method 0010 sampling train components were extracted and analyzed for polyaromatic hydrocarbons (PAHs) using TestAmerica Knoxville standard operating procedures KNOX-OP-0009 and KNOX-ID-0016, based on the following methods:

- SW-846 3542, "Extraction of Semivolatile Analytes Collected Using Method 0010 (Modified Method 5 Sampling Train)"
- Method 429 - Determination of Polycyclic Aromatic Hydrocarbon (PAH) emissions from Stationary Sources, California Environmental Protection Agency Air Resources Board, Adopted: September 12, 1989, Amended: July 28, 1997.

The sampling trains are prepared as two analytical fractions and the extracts from these fractions are combined into a single sample for analysis. The first fraction consists of the particulate filter and the XAD-2 resin trap. The second fraction includes the condensate, impinger contents and their related glassware solvent rinses, as well as the front half and back half solvent rinses.

The filters and XAD components are spiked with SIM PAH internal standards and the components are Soxhlet extracted with methylene chloride. The condensates are extracted using a continuous liquid-liquid extractor. The extracts are combined and concentrated to 0.5 mL and analyzed by by SIM-HRGC/LRMS.

PROJECT NARRATIVE
H1G250406

Sample results were calculated using the following equation:

$$\text{Result, ng} = (\text{On column conc, ug/mL}) \times \left(\frac{\text{Nominal Vol final extract, (500 uL)}}{\text{1 Sample}} \right) \times \left(\frac{\text{1 mL}}{\text{1000 uL}} \right) \times \left(\frac{\text{1000 ng}}{\text{1 ug}} \right) \times \text{SF}$$

Where: SF = Extraction Split Factor

*If the entire sample is not extracted, the fractional amount of sample used is entered into the above equation.

Sampling surrogates fluorene-d_{10}, 13C_6-fluorene & terphenyl-d_{14} are added to the XAD by the laboratory prior to sampling. Their results appear with the "Internal Standard" percent recovery results. However these field surrogates were diluted out in samples EXM-DCU-M0010-R1-COMBINED, EXM-DCU-M0010-R2-COMBINED, and EXM-DCU-M0010-R3-COMBINED.

The dilution factor reported on the sample result form represents a combination of factors (such as dilution, sample weight/volume adjustment, split ratio, etc.) used to adjust the reporting limits and method detection limits.

All QC criteria were met with the following exceptions:

All sample extracts in the batch had internal standard recovery for benzo(a)anthracene-d12 that exceeded QC limits. As indicted by the referenced method, isotope dilution techniques produce results that are independent of internal standard recovery. The affected internal standards are flagged on the final result forms.

Samples EXM-DCU-M0010-R1-COMBINED, EXM-DCU-M0010-R2-COMBINED, and EXM-DCU-M0010-R3-COMBINED were reported with elevated reporting limits for all analytes due to the difficult sample matrix. These extracts were diluted and underwent an additional silica gel clean-up; then the extracts were further diluted and post-spiked with recovery and internal standards and the reporting limits were adjusted accordingly. The sample was analyzed with minimum dilution even though some analytes were outside of the calibration range. Compounds that exceeded calibration range were flagged with an "E" qualifier; please refer to the 8270 analysis for results of these compounds within calibration range.

QC DATA ASSOCIATION SUMMARY

H1G250406

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	
002	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	
003	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	
004	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	

Sample Data Summary

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001 Work Order #...: MK5C31AA Matrix.....: AIR
Date Sampled...: 07/14/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**580 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**940**	**800**	**ug**	**260**
Benz(a)anthracene	ND	800	ug	250
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	**300 J**	**800**	**ug**	**300**
Benzo(e)pyrene	**73 J**	**800**	**ug**	**67**
Biphenyl	**330 J**	**800**	**ug**	**80**
Chrysene	ND	800	ug	250
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**240 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	ND	800	ug	54
3,3'-Dimethoxybenzidine	**1100 J**	**8000**	**ug**	**1100**
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**1200**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**25000 E**	**800**	**ug**	**230**
Naphthalene	**13000**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**1800**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**370 J**	**800**	**ug**	**280**
o-Toluidine	ND	800	ug	220

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001 Work Order #...: MK5C31AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001	Work Order #...: MK5C32AA	Matrix.....: AIR	
Date Sampled...: 07/14/11	Date Received..: 07/23/11		
Prep Date.....: 07/26/11	Analysis Date..: 08/04/11		
Prep Batch #...: 1207013			
Dilution Factor: 200	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	22000 D	2000	ug	580

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C51AA Matrix.....: AIR
Date Sampled...: 07/15/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**680 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**810**	**800**	**ug**	**260**
Benz(a)anthracene	**450 J**	**800**	**ug**	**250**
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	**580 J**	**800**	**ug**	**300**
Benzo(e)pyrene	**300 J**	**800**	**ug**	**67**
Biphenyl	**460 J**	**800**	**ug**	**80**
Chrysene	**450 J**	**800**	**ug**	**250**
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**270 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	**370 J**	**800**	**ug**	**54**
3,3'-Dimethoxybenzidine	ND	8000	ug	1100
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**1200**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**33000 E**	**800**	**ug**	**230**
Naphthalene	**17000 E**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**1700**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**540 J**	**800**	**ug**	**280**
o-Toluidine	ND	800	ug	220

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C51AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C52AA Matrix.....: AIR
Date Sampled...: 07/15/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 200 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	31000 D	2000	ug	580
Naphthalene	15000 D	2000	ug	620

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C61AA Matrix.....: AIR
Date Sampled...: 07/17/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**730 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**2100**	**800**	**ug**	**260**
Benz(a)anthracene	**260 J**	**800**	**ug**	**250**
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	ND	800	ug	300
Benzo(e)pyrene	ND	800	ug	67
Biphenyl	**640 J**	**800**	**ug**	**80**
Chrysene	ND	800	ug	250
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**510 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	ND	800	ug	54
3,3'-Dimethoxybenzidine	ND	8000	ug	1100
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**2500**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**38000 E**	**800**	**ug**	**230**
Naphthalene	**21000 E**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**4600**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**960**	**800**	**ug**	**280**
o-Toluidine	**420 J**	**800**	**ug**	**220**

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TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C61AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003
Date Sampled...: 07/17/11
Prep Date.....: 07/26/11
Prep Batch #...: 1207013
Dilution Factor: 400

Work Order #...: MK5C62AA
Date Received..: 07/23/11
Analysis Date..: 08/04/11

Method.....: SW846 8270C

Matrix.....: AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	37000 D	4000	ug	1200
Naphthalene	20000 D	4000	ug	1200

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-004 Work Order #...: MK5C71AA Matrix.....: AIR
Date Sampled...: 07/17/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 2 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	20	ug	5.4
Acenaphthylene	ND	20	ug	5.6
Aniline	ND	20	ug	17
Anthracene	ND	20	ug	6.4
Benz(a)anthracene	ND	20	ug	6.2
Benzidine	ND	200	ug	120
Benzo(b)fluoranthene	ND	20	ug	8.2
Benzo(k)fluoranthene	ND	20	ug	9.8
Benzo(ghi)perylene	ND	20	ug	6.4
Benzo(a)pyrene	ND	20	ug	7.6
Benzo(e)pyrene	ND	20	ug	1.7
Biphenyl	ND	20	ug	2.0
Chrysene	ND	20	ug	6.2
Cresols (total)	ND	20	ug	16
Dibenz(a,h)anthracene	ND	20	ug	6.0
Dibenzofuran	ND	20	ug	5.6
Dibenzo(a,e)pyrene	ND	20	ug	1.4
3,3'-Dimethoxybenzidine	ND	200	ug	28
p-Dimethylaminoazobenzene	ND	20	ug	4.8
7,12-Dimethylbenz(a)-anthracene	ND	20	ug	7.0
3,3'-Dimethylbenzidine	ND	200	ug	36
alpha,alpha-Dimethylphenethylamine	ND	50	ug	17
2,4-Dimethylphenol	ND	20	ug	13
Fluoranthene	ND	20	ug	7.2
Fluorene	ND	20	ug	6.0
Indeno(1,2,3-cd)pyrene	ND	20	ug	6.2
Isophorone	ND	20	ug	5.6
3-Methylcholanthrene	ND	20	ug	7.6
2-Methylnaphthalene	ND	20	ug	5.8
Naphthalene	ND	20	ug	6.2
Nitrobenzene	ND	20	ug	5.8
Perylene	ND	20	ug	1.5
Phenanthrene	ND	20	ug	6.0
Phenol	ND	20	ug	6.2
1,4-Phenylenediamine	ND	200	ug	50
Pyrene	ND	20	ug	7.0
o-Toluidine	ND	20	ug	5.6

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TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-004 Work Order #...: MK5C71AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
Phenol-d5	78	(48 - 118)
Nitrobenzene-d5	77	(43 - 110)
2-Fluorobiphenyl	80	(48 - 111)
2,4,6-Tribromophenol	80	(34 - 125)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AA Matrix.....: AIR
MB Lot-Sample #: H1G260000-013

Prep Date.....: 07/26/11
Analysis Date..: 08/04/11 Prep Batch #...: 1207013
Dilution Factor: 2

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	20	ug	SW846 8270C
Acenaphthylene	ND	20	ug	SW846 8270C
Aniline	ND	20	ug	SW846 8270C
Anthracene	ND	20	ug	SW846 8270C
Benz(a)anthracene	ND	20	ug	SW846 8270C
Benzidine	ND	200	ug	SW846 8270C
Benzo(b)fluoranthene	ND	20	ug	SW846 8270C
Benzo(k)fluoranthene	ND	20	ug	SW846 8270C
Benzo(ghi)perylene	ND	20	ug	SW846 8270C
Benzo(a)pyrene	ND	20	ug	SW846 8270C
Benzo(e)pyrene	ND	20	ug	SW846 8270C
Biphenyl	ND	20	ug	SW846 8270C
Chrysene	ND	20	ug	SW846 8270C
Cresols (total)	ND	20	ug	SW846 8270C
Dibenz(a,h)anthracene	ND	20	ug	SW846 8270C
Dibenzofuran	ND	20	ug	SW846 8270C
Dibenzo(a,e)pyrene	ND	20	ug	SW846 8270C
3,3'-Dimethoxybenzidine	ND	200	ug	SW846 8270C
p-Dimethylaminoazobenzene	ND	20	ug	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	20	ug	SW846 8270C
3,3'-Dimethylbenzidine	ND	200	ug	SW846 8270C
alpha,alpha-Dimethylphene	ND	50	ug	SW846 8270C
2,4-Dimethylphenol	ND	20	ug	SW846 8270C
Fluoranthene	ND	20	ug	SW846 8270C
Fluorene	ND	20	ug	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	20	ug	SW846 8270C
Isophorone	ND	20	ug	SW846 8270C
3-Methylcholanthrene	ND	20	ug	SW846 8270C
2-Methylnaphthalene	ND	20	ug	SW846 8270C
Naphthalene	ND	20	ug	SW846 8270C
Nitrobenzene	ND	20	ug	SW846 8270C
Perylene	ND	20	ug	SW846 8270C
Phenanthrene	ND	20	ug	SW846 8270C
Phenol	ND	20	ug	SW846 8270C
1,4-Phenylenediamine	ND	200	ug	SW846 8270C
Pyrene	ND	20	ug	SW846 8270C
o-Toluidine	ND	20	ug	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AA Matrix.....: AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(22 - 105)
Phenol-d5	72	(48 - 118)
Nitrobenzene-d5	76	(43 - 110)
2-Fluorobiphenyl	79	(48 - 111)
2,4,6-Tribromophenol	75	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	87	(63 - 107)			SW846 8270C
	87	(63 - 107)	0.11	(0-36)	SW846 8270C
Acenaphthylene	89	(64 - 112)			SW846 8270C
	90	(64 - 112)	0.56	(0-36)	SW846 8270C
Aniline	86	(48 - 109)			SW846 8270C
	87	(48 - 109)	1.3	(0-50)	SW846 8270C
Anthracene	89	(59 - 114)			SW846 8270C
	92	(59 - 114)	2.8	(0-36)	SW846 8270C
Benz(a)anthracene	96	(50 - 130)			SW846 8270C
	95	(50 - 130)	0.52	(0-50)	SW846 8270C
Benzidine	72	(10 - 150)			SW846 8270C
	75	(10 - 150)	3.4	(0-50)	SW846 8270C
Benzo(b)fluoranthene	107	(63 - 122)			SW846 8270C
	108	(63 - 122)	0.93	(0-50)	SW846 8270C
Benzo(k)fluoranthene	89	(69 - 118)			SW846 8270C
	90	(69 - 118)	1.3	(0-50)	SW846 8270C
Benzo(ghi)perylene	93	(71 - 122)			SW846 8270C
	94	(71 - 122)	1.3	(0-50)	SW846 8270C
Benzo(a)pyrene	88	(67 - 122)			SW846 8270C
	90	(67 - 122)	1.4	(0-50)	SW846 8270C
Benzo(e)pyrene	90	(50 - 130)			SW846 8270C
	90	(50 - 130)	0.11	(0-50)	SW846 8270C
Biphenyl	78	(50 - 130)			SW846 8270C
	79	(50 - 130)	1.4	(0-50)	SW846 8270C
Chrysene	91	(67 - 114)			SW846 8270C
	91	(67 - 114)	0.33	(0-41)	SW846 8270C
Cresols (total)	90	(50 - 130)			SW846 8270C
	94	(50 - 130)	3.8	(0-50)	SW846 8270C
Dibenz(a,h)anthracene	93	(67 - 122)			SW846 8270C
	94	(67 - 122)	0.42	(0-50)	SW846 8270C
Dibenzofuran	90	(60 - 108)			SW846 8270C
	91	(60 - 108)	0.99	(0-37)	SW846 8270C
Dibenzo(a,e)pyrene	86	(50 - 130)			SW846 8270C
	86	(50 - 130)	0.34	(0-50)	SW846 8270C
3,3'-Dimethoxybenzidine	93	(30 - 130)			SW846 8270C
	92	(30 - 130)	1.2	(0-50)	SW846 8270C
p-Dimethylaminoazobenzene	93	(50 - 130)			SW846 8270C
	93	(50 - 130)	0.64	(0-50)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	58	(50 - 130)			SW846 8270C
	60	(50 - 130)	3.9	(0-50)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
3,3'-Dimethylbenzidine	93	(30 - 130)			SW846 8270C
	95	(30 - 130)	2.1	(0-50)	SW846 8270C
alpha,alpha-Dimethylphenet	74	(30 - 130)			SW846 8270C
	77	(30 - 130)	4.4	(0-50)	SW846 8270C
2,4-Dimethylphenol	88	(10 - 125)			SW846 8270C
	88	(10 - 125)	0.68	(0-41)	SW846 8270C
Fluoranthene	95	(55 - 120)			SW846 8270C
	96	(55 - 120)	1.0	(0-34)	SW846 8270C
Fluorene	90	(64 - 114)			SW846 8270C
	92	(64 - 114)	2.3	(0-36)	SW846 8270C
Indeno(1,2,3-cd)pyrene	97	(72 - 126)			SW846 8270C
	99	(72 - 126)	1.3	(0-50)	SW846 8270C
Isophorone	90	(56 - 111)			SW846 8270C
	92	(56 - 111)	2.8	(0-37)	SW846 8270C
3-Methylcholanthrene	81	(50 - 130)			SW846 8270C
	82	(50 - 130)	1.1	(0-30)	SW846 8270C
2-Methylnaphthalene	91	(56 - 111)			SW846 8270C
	93	(56 - 111)	2.0	(0-38)	SW846 8270C
Naphthalene	83	(59 - 104)			SW846 8270C
	85	(59 - 104)	2.0	(0-38)	SW846 8270C
Nitrobenzene	83	(58 - 109)			SW846 8270C
	85	(58 - 109)	2.1	(0-38)	SW846 8270C
Perylene	88	(50 - 130)			SW846 8270C
	89	(50 - 130)	0.78	(0-50)	SW846 8270C
Phenanthrene	86	(58 - 109)			SW846 8270C
	88	(58 - 109)	2.1	(0-35)	SW846 8270C
Phenol	84	(54 - 114)			SW846 8270C
	86	(54 - 114)	2.7	(0-39)	SW846 8270C
1,4-Phenylenediamine	11	(5.0- 130)			SW846 8270C
	13	(5.0- 130)	17	(0-50)	SW846 8270C
Pyrene	97	(76 - 118)			SW846 8270C
	98	(76 - 118)	1.1	(0-41)	SW846 8270C
o-Toluidine	90	(30 - 130)			SW846 8270C
	90	(30 - 130)	0.55	(0-50)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
	61	(22 - 105)
Phenol-d5	80	(48 - 118)
	83	(48 - 118)
Nitrobenzene-d5	81	(43 - 110)
	83	(43 - 110)
2-Fluorobiphenyl	82	(48 - 111)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	84	(48 - 111)
	95	(34 - 125)
	98	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	100	86.9	ug	87		SW846 8270C
	100	86.8	ug	87	0.11	SW846 8270C
Acenaphthylene	100	89.0	ug	89		SW846 8270C
	100	89.5	ug	90	0.56	SW846 8270C
Aniline	100	85.5	ug	86		SW846 8270C
	100	86.6	ug	87	1.3	SW846 8270C
Anthracene	100	89.2	ug	89		SW846 8270C
	100	91.7	ug	92	2.8	SW846 8270C
Benz(a)anthracene	100	95.7	ug	96		SW846 8270C
	100	95.2	ug	95	0.52	SW846 8270C
Benzidine	200	145	ug	72		SW846 8270C
	200	150	ug	75	3.4	SW846 8270C
Benzo(b)fluoranthene	100	107	ug	107		SW846 8270C
	100	108	ug	108	0.93	SW846 8270C
Benzo(k)fluoranthene	100	88.6	ug	89		SW846 8270C
	100	89.8	ug	90	1.3	SW846 8270C
Benzo(ghi)perylene	100	92.6	ug	93		SW846 8270C
	100	93.8	ug	94	1.3	SW846 8270C
Benzo(a)pyrene	100	88.5	ug	88		SW846 8270C
	100	89.8	ug	90	1.4	SW846 8270C
Benzo(e)pyrene	100	89.9	ug	90		SW846 8270C
	100	90.0	ug	90	0.11	SW846 8270C
Biphenyl	100	78.2	ug	78		SW846 8270C
	100	79.3	ug	79	1.4	SW846 8270C
Chrysene	100	90.7	ug	91		SW846 8270C
	100	91.0	ug	91	0.33	SW846 8270C
Cresols (total)	200	180	ug	90		SW846 8270C
	200	187	ug	94	3.8	SW846 8270C
Dibenz(a,h)anthracene	100	93.2	ug	93		SW846 8270C
	100	93.6	ug	94	0.42	SW846 8270C
Dibenzofuran	100	89.7	ug	90		SW846 8270C
	100	90.6	ug	91	0.99	SW846 8270C
Dibenzo(a,e)pyrene	100	86.1	ug	86		SW846 8270C
	100	85.8	ug	86	0.34	SW846 8270C
3,3'-Dimethoxybenzidine	100	93.3	ug	93		SW846 8270C
	100	92.2	ug	92	1.2	SW846 8270C
p-Dimethylaminoazobenzene	100	92.8	ug	93		SW846 8270C
	100	93.4	ug	93	0.64	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	100	57.8	ug	58		SW846 8270C
	100	60.1	ug	60	3.9	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
3,3'-Dimethylbenzidine	100	93.3	ug	93		SW846 8270C
	100	95.3	ug	95	2.1	SW846 8270C
alpha,alpha-Dimethylphenet	100	74.1	ug	74		SW846 8270C
	100	77.4	ug	77	4.4	SW846 8270C
2,4-Dimethylphenol	100	87.5	ug	88		SW846 8270C
	100	88.1	ug	88	0.68	SW846 8270C
Fluoranthene	100	94.7	ug	95		SW846 8270C
	100	95.7	ug	96	1.0	SW846 8270C
Fluorene	100	89.6	ug	90		SW846 8270C
	100	91.7	ug	92	2.3	SW846 8270C
Indeno(1,2,3-cd)pyrene	100	97.4	ug	97		SW846 8270C
	100	98.7	ug	99	1.3	SW846 8270C
Isophorone	100	89.9	ug	90		SW846 8270C
	100	92.5	ug	92	2.8	SW846 8270C
3-Methylcholanthrene	100	81.4	ug	81		SW846 8270C
	100	82.3	ug	82	1.1	SW846 8270C
2-Methylnaphthalene	100	91.4	ug	91		SW846 8270C
	100	93.2	ug	93	2.0	SW846 8270C
Naphthalene	100	83.1	ug	83		SW846 8270C
	100	84.8	ug	85	2.0	SW846 8270C
Nitrobenzene	100	83.2	ug	83		SW846 8270C
	100	85.0	ug	85	2.1	SW846 8270C
Perylene	100	88.4	ug	88		SW846 8270C
	100	89.1	ug	89	0.78	SW846 8270C
Phenanthrene	100	86.0	ug	86		SW846 8270C
	100	87.8	ug	88	2.1	SW846 8270C
Phenol	100	83.6	ug	84		SW846 8270C
	100	85.9	ug	86	2.7	SW846 8270C
1,4-Phenylenediamine	100	10.8	ug	11		SW846 8270C
	100	12.8	ug	13	17	SW846 8270C
Pyrene	100	97.0	ug	97		SW846 8270C
	100	98.1	ug	98	1.1	SW846 8270C
o-Toluidine	100	89.5	ug	90		SW846 8270C
	100	90.0	ug	90	0.55	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
	61	(22 - 105)
Phenol-d5	80	(48 - 118)
	83	(48 - 118)
Nitrobenzene-d5	81	(43 - 110)
	83	(43 - 110)
2-Fluorobiphenyl	82	(48 - 111)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	84	(48 - 111)
	95	(34 - 125)
	98	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Sample Data Summary

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-001	Work Order #...:	MK5C33AC	Matrix.....:	AIR
Date Sampled...:	07/14/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2500	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	620000	50000	ng/sample	12000
Acenaphthylene	74000	50000	ng/sample	6000
Anthracene	940000	25000	ng/sample	9500
Benzo(a)anthracene	93000	25000	ng/sample	9500
Benzo(b)fluoranthene	ND	250000	ng/sample	75000
Benzo(k)fluoranthene	ND	250000	ng/sample	110000
Benzo(ghi)perylene	47000	25000	ng/sample	13000
Benzo(a)pyrene	110000	25000	ng/sample	7200
Benzo(e)pyrene	79000	25000	ng/sample	14000
Chrysene	120000	25000	ng/sample	6200
Dibenz(a,h)anthracene	19000 J	25000	ng/sample	9800
Fluoranthene	100000	25000	ng/sample	16000
Fluorene	1400000	25000	ng/sample	10000
Indeno(1,2,3-cd)pyrene	19000 J	25000	ng/sample	6500
2-Methylnaphthalene	15000000 E	120000	ng/sample	52000
Naphthalene	10000000 E	1000000	ng/sample	620000
Perylene	12000 J	25000	ng/sample	7800
Phenanthrene	2200000	75000	ng/sample	60000
Pyrene	370000	150000	ng/sample	90000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	104	(30 - 120)
Naphthalene-d8	99	(30 - 120)
2-Methylnaphthalene-d10	104	(30 - 120)
Acenaphthylene-d8	115	(30 - 120)
Phenanthrene-d10	93	(30 - 120)
Fluoranthene-d10	109	(30 - 120)
Benzo(a)anthracene-d12	136 *	(30 - 120)
Chrysene-d12	92	(30 - 120)
Benzo(b)fluoranthene-d12	112	(30 - 120)
Benzo(k)fluoranthene-d12	89	(30 - 120)
Benzo(a)pyrene-d12	102	(30 - 120)
Perylene-d12	93	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	104	(30 - 120)
Dibenz(ah)anthracene-d14	103	(30 - 120)
Benzo(ghi)perylene-d12	99	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-001	Work Order #...:	MK5C33AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-002	Work Order #...:	MK5C53AC	Matrix.....:	AIR
Date Sampled...:	07/15/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	5000	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	690000	100000	ng/sample	24000
Acenaphthylene	68000 J	100000	ng/sample	12000
Anthracene	740000	50000	ng/sample	19000
Benzo(a)anthracene	340000	50000	ng/sample	19000
Benzo(b)fluoranthene	150000 J	500000	ng/sample	150000
Benzo(k)fluoranthene	ND	500000	ng/sample	220000
Benzo(ghi)perylene	180000	50000	ng/sample	26000
Benzo(a)pyrene	350000	50000	ng/sample	14000
Benzo(e)pyrene	260000	50000	ng/sample	28000
Chrysene	370000	50000	ng/sample	12000
Dibenz(a,h)anthracene	75000	50000	ng/sample	20000
Fluoranthene	120000	50000	ng/sample	32000
Fluorene	1200000	50000	ng/sample	20000
Indeno(1,2,3-cd)pyrene	59000	50000	ng/sample	13000
2-Methylnaphthalene	24000000 E	250000	ng/sample	100000
Naphthalene	14000000 E	2000000	ng/sample	1200000
Perylene	19000 J	50000	ng/sample	16000
Phenanthrene	1900000	150000	ng/sample	120000
Pyrene	500000	300000	ng/sample	180000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	97	(30 - 120)
Naphthalene-d8	95	(30 - 120)
2-Methylnaphthalene-d10	98	(30 - 120)
Acenaphthylene-d8	103	(30 - 120)
Phenanthrene-d10	95	(30 - 120)
Fluoranthene-d10	103	(30 - 120)
Benzo(a)anthracene-d12	131 *	(30 - 120)
Chrysene-d12	95	(30 - 120)
Benzo(b)fluoranthene-d12	109	(30 - 120)
Benzo(k)fluoranthene-d12	89	(30 - 120)
Benzo(a)pyrene-d12	98	(30 - 120)
Perylene-d12	86	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	104	(30 - 120)
Dibenz(ah)anthracene-d14	104	(30 - 120)
Benzo(ghi)perylene-d12	100	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-002	Work Order #...:	MK5C53AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-003	Work Order #...:	MK5C63AC	Matrix.....:	AIR
Date Sampled...:	07/17/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	1000	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	720000	20000	ng/sample	4900
Acenaphthylene	100000	20000	ng/sample	2400
Anthracene	1900000	10000	ng/sample	3800
Benzo(a)anthracene	190000	10000	ng/sample	3800
Benzo(b)fluoranthene	ND	100000	ng/sample	30000
Benzo(k)fluoranthene	ND	100000	ng/sample	43000
Benzo(ghi)perylene	24000	10000	ng/sample	5100
Benzo(a)pyrene	65000	10000	ng/sample	2900
Benzo(e)pyrene	42000	10000	ng/sample	5600
Chrysene	210000	10000	ng/sample	2500
Dibenz(a,h)anthracene	9700 J	10000	ng/sample	3900
Fluoranthene	240000	10000	ng/sample	6400
Fluorene	2600000 E	10000	ng/sample	4100
Indeno(1,2,3-cd)pyrene	8400 J	10000	ng/sample	2600
2-Methylnaphthalene	8800000 E	50000	ng/sample	21000
Naphthalene	5900000 E	400000	ng/sample	250000
Perylene	3200 J	10000	ng/sample	3100
Phenanthrene	3800000 E	30000	ng/sample	24000
Pyrene	820000	60000	ng/sample	36000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	96	(30 - 120)
Naphthalene-d8	98	(30 - 120)
2-Methylnaphthalene-d10	99	(30 - 120)
Acenaphthylene-d8	116	(30 - 120)
Phenanthrene-d10	88	(30 - 120)
Fluoranthene-d10	105	(30 - 120)
Benzo(a)anthracene-d12	134 *	(30 - 120)
Chrysene-d12	87	(30 - 120)
Benzo(b)fluoranthene-d12	111	(30 - 120)
Benzo(k)fluoranthene-d12	87	(30 - 120)
Benzo(a)pyrene-d12	100	(30 - 120)
Perylene-d12	92	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	103	(30 - 120)
Dibenz(ah)anthracene-d14	102	(30 - 120)
Benzo(ghi)perylene-d12	99	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-003	Work Order #...:	MK5C63AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-004	Work Order #...:	MK5C71AC	Matrix.....:	AIR
Date Sampled...:	07/17/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/03/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**58**	**40**	ng/sample	9.8
Acenaphthylene	**7.6 J**	**40**	ng/sample	4.8
Anthracene	**170**	**20**	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	**6.5 J**	**20**	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	**32**	**20**	ng/sample	13
Fluorene	**220**	**20**	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	**1400**	**100**	ng/sample	42
Naphthalene	**620 J**	**800**	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	**500**	**60**	ng/sample	48
Pyrene	**120**	**120**	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	99	(50 - 150)
Terphenyl-d14	104	(50 - 150)
13C6-Fluorene	97	(50 - 150)
Anthracene-d10	92	(30 - 120)
Naphthalene-d8	85	(30 - 120)
2-Methylnaphthalene-d10	91	(30 - 120)
Acenaphthylene-d8	105	(30 - 120)
Phenanthrene-d10	82	(30 - 120)
Fluoranthene-d10	95	(30 - 120)
Benzo(a)anthracene-d12	133 *	(30 - 120)
Chrysene-d12	87	(30 - 120)
Benzo(b)fluoranthene-d12	108	(30 - 120)
Benzo(k)fluoranthene-d12	87	(30 - 120)
Benzo(a)pyrene-d12	105	(30 - 120)
Perylene-d12	102	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	108	(30 - 120)
Dibenz(ah)anthracene-d14	106	(30 - 120)
Benzo(ghi)perylene-d12	101	(30 - 120)

NOTE(S):

1 13C6-anthracene recovery = 81 %

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...:	H1G250406				
MB Lot-Sample #:	H1G260000-014	Work Order #...:	MK51E1AA	Matrix.....:	AIR
Prep Date.....:	07/26/11	Analysis Date..:	08/03/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	40	ng/sample	9.8
Acenaphthylene	ND	40	ng/sample	4.8
Anthracene	ND	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	ND	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	ND	20	ng/sample	13
Fluorene	ND	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	ND	100	ng/sample	42
Naphthalene	ND	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	ND	60	ng/sample	48
Pyrene	ND	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	100	(60 - 140)
Naphthalene-d8	88	(60 - 140)
2-Methylnaphthalene-d10	94	(60 - 140)
Acenaphthylene-d8	109	(60 - 140)
Phenanthrene-d10	87	(60 - 140)
Fluoranthene-d10	100	(60 - 140)
Benzo(a)anthracene-d12	135	(60 - 140)
Chrysene-d12	93	(60 - 140)
Benzo(b)fluoranthene-d12	110	(60 - 140)
Benzo(k)fluoranthene-d12	82	(60 - 140)
Benzo(a)pyrene-d12	105	(60 - 140)
Perylene-d12	101	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	108	(60 - 140)
Dibenz(ah)anthracene-d14	106	(60 - 140)
Benzo(ghi)perylene-d12	101	(60 - 140)

NOTE(S):

1 13C6-anthracene recovery = 85 %

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/03/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	90	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	2.2	(0-25)	KNOX ID-0016
Acenaphthylene	91	(60 - 140)			KNOX ID-0016
	93	(60 - 140)	1.7	(0-25)	KNOX ID-0016
Anthracene	86	(60 - 140)			KNOX ID-0016
	90	(60 - 140)	4.6	(0-25)	KNOX ID-0016
Benzo(a)anthracene	80	(60 - 140)			KNOX ID-0016
	81	(60 - 140)	1.5	(0-25)	KNOX ID-0016
Benzo(b)fluoranthene	82	(60 - 140)			KNOX ID-0016
	83	(60 - 140)	1.9	(0-25)	KNOX ID-0016
Benzo(k)fluoranthene	105	(60 - 140)			KNOX ID-0016
	107	(60 - 140)	1.5	(0-25)	KNOX ID-0016
Benzo(ghi)perylene	96	(60 - 140)			KNOX ID-0016
	97	(60 - 140)	1.2	(0-25)	KNOX ID-0016
Benzo(a)pyrene	96	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	2.1	(0-25)	KNOX ID-0016
Benzo(e)pyrene	89	(60 - 140)			KNOX ID-0016
	90	(60 - 140)	1.8	(0-25)	KNOX ID-0016
Chrysene	103	(60 - 140)			KNOX ID-0016
	104	(60 - 140)	1.2	(0-25)	KNOX ID-0016
Dibenz(a,h)anthracene	95	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	2.9	(0-25)	KNOX ID-0016
Fluoranthene	94	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	0.85	(0-25)	KNOX ID-0016
Fluorene	101	(60 - 140)			KNOX ID-0016
	103	(60 - 140)	2.0	(0-25)	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	91	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	0.87	(0-25)	KNOX ID-0016
2-Methylnaphthalene	105	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	2.6	(0-25)	KNOX ID-0016
Naphthalene	106	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	0.93	(0-25)	KNOX ID-0016
Perylene	86	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	13	(0-25)	KNOX ID-0016
Phenanthrene	104	(60 - 140)			KNOX ID-0016
	104	(60 - 140)	0.76	(0-25)	KNOX ID-0016
Pyrene	91	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	1.3	(0-25)	KNOX ID-0016

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	98	(60 - 140)
	95	(60 - 140)
Naphthalene-d8	90	(60 - 140)
	89	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
	95	(60 - 140)
Acenaphthylene-d8	110	(60 - 140)
	109	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	102	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	138	(60 - 140)
	136	(60 - 140)
Chrysene-d12	94	(60 - 140)
	92	(60 - 140)
Benzo(b)fluoranthene-d12	114	(60 - 140)
	112	(60 - 140)
Benzo(k)fluoranthene-d12	90	(60 - 140)
	89	(60 - 140)
Benzo(a)pyrene-d12	108	(60 - 140)
	105	(60 - 140)
Perylene-d12	102	(60 - 140)
	98	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	111	(60 - 140)
	110	(60 - 140)
Dibenz(ah)anthracene-d14	109	(60 - 140)
	108	(60 - 140)
Benzo(ghi)perylene-d12	104	(60 - 140)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/03/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	250	225	ng/sample	90		KNOX ID-0016
	250	230	ng/sample	92	2.2	KNOX ID-0016
Acenaphthylene	250	228	ng/sample	91		KNOX ID-0016
	250	232	ng/sample	93	1.7	KNOX ID-0016
Anthracene	250	214	ng/sample	86		KNOX ID-0016
	250	224	ng/sample	90	4.6	KNOX ID-0016
Benzo(a)anthracene	250	199	ng/sample	80		KNOX ID-0016
	250	202	ng/sample	81	1.5	KNOX ID-0016
Benzo(b)fluoranthene	250	204	ng/sample	82		KNOX ID-0016
	250	208	ng/sample	83	1.9	KNOX ID-0016
Benzo(k)fluoranthene	250	263	ng/sample	105		KNOX ID-0016
	250	267	ng/sample	107	1.5	KNOX ID-0016
Benzo(ghi)perylene	250	240	ng/sample	96		KNOX ID-0016
	250	243	ng/sample	97	1.2	KNOX ID-0016
Benzo(a)pyrene	250	239	ng/sample	96		KNOX ID-0016
	250	244	ng/sample	98	2.1	KNOX ID-0016
Benzo(e)pyrene	250	222	ng/sample	89		KNOX ID-0016
	250	226	ng/sample	90	1.8	KNOX ID-0016
Chrysene	250	257	ng/sample	103		KNOX ID-0016
	250	260	ng/sample	104	1.2	KNOX ID-0016
Dibenz(a,h)anthracene	250	237	ng/sample	95		KNOX ID-0016
	250	244	ng/sample	98	2.9	KNOX ID-0016
Fluoranthene	250	234	ng/sample	94		KNOX ID-0016
	250	236	ng/sample	94	0.85	KNOX ID-0016
Fluorene	250	253	ng/sample	101		KNOX ID-0016
	250	258	ng/sample	103	2.0	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	250	228	ng/sample	91		KNOX ID-0016
	250	230	ng/sample	92	0.87	KNOX ID-0016
2-Methylnaphthalene	250	263	ng/sample	105		KNOX ID-0016
	250	270	ng/sample	108	2.6	KNOX ID-0016
Naphthalene	2000	2130	ng/sample	106		KNOX ID-0016
	2000	2150	ng/sample	108	0.93	KNOX ID-0016
Perylene	250	216	ng/sample	86		KNOX ID-0016
	250	246	ng/sample	98	13	KNOX ID-0016
Phenanthrene	250	259	ng/sample	104		KNOX ID-0016
	250	261	ng/sample	104	0.76	KNOX ID-0016
Pyrene	250	228	ng/sample	91		KNOX ID-0016
	250	231	ng/sample	92	1.3	KNOX ID-0016

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	98	(60 - 140)
	95	(60 - 140)
Naphthalene-d8	90	(60 - 140)
	89	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
	95	(60 - 140)
Acenaphthylene-d8	110	(60 - 140)
	109	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	102	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	138	(60 - 140)
	136	(60 - 140)
Chrysene-d12	94	(60 - 140)
	92	(60 - 140)
Benzo(b)fluoranthene-d12	114	(60 - 140)
	112	(60 - 140)
Benzo(k)fluoranthene-d12	90	(60 - 140)
	89	(60 - 140)
Benzo(a)pyrene-d12	108	(60 - 140)
	105	(60 - 140)
Perylene-d12	102	(60 - 140)
	98	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	111	(60 - 140)
	110	(60 - 140)
Dibenz(ah)anthracene-d14	109	(60 - 140)
	108	(60 - 140)
Benzo(ghi)perylene-d12	104	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...:	H1G250406				
MB Lot-Sample #:	H1G260000-014	**Work Order #...:**	MK51E2AA	**Matrix.....:**	AIR
Prep Date.....:	07/26/11	**Analysis Date..:**	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	**Method.....:**	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	40	ng/sample	9.8
Acenaphthylene	ND	40	ng/sample	4.8
Anthracene	ND	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	ND	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	ND	20	ng/sample	13
Fluorene	ND	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	ND	100	ng/sample	42
Naphthalene	ND	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	ND	60	ng/sample	48
Pyrene	ND	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	92	(60 - 140)
Naphthalene-d8	92	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
Acenaphthylene-d8	95	(60 - 140)
Phenanthrene-d10	90	(60 - 140)
Fluoranthene-d10	99	(60 - 140)
Benzo(a)anthracene-d12	128	(60 - 140)
Chrysene-d12	102	(60 - 140)
Benzo(b)fluoranthene-d12	109	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
Benzo(a)pyrene-d12	94	(60 - 140)
Perylene-d12	86	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	99	(60 - 140)
Dibenz(ah)anthracene-d14	98	(60 - 140)
Benzo(ghi)perylene-d12	95	(60 - 140)

NOTE(S):

1 13C6-anthracene recovery = 91 %

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/14/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	98	(60 - 140)			KNOX ID-0016
	101	(60 - 140)	2.4	(0-25)	KNOX ID-0016
Acenaphthylene	95	(60 - 140)			KNOX ID-0016
	96	(60 - 140)	0.84	(0-25)	KNOX ID-0016
Anthracene	92	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	0.87	(0-25)	KNOX ID-0016
Benzo(a)anthracene	82	(60 - 140)			KNOX ID-0016
	83	(60 - 140)	1.4	(0-25)	KNOX ID-0016
Benzo(b)fluoranthene	84	(60 - 140)			KNOX ID-0016
	84	(60 - 140)	0.47	(0-25)	KNOX ID-0016
Benzo(k)fluoranthene	105	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	2.2	(0-25)	KNOX ID-0016
Benzo(ghi)perylene	93	(60 - 140)			KNOX ID-0016
	93	(60 - 140)	0.0	(0-25)	KNOX ID-0016
Benzo(a)pyrene	95	(60 - 140)			KNOX ID-0016
	101	(60 - 140)	5.7	(0-25)	KNOX ID-0016
Benzo(e)pyrene	92	(60 - 140)			KNOX ID-0016
	96	(60 - 140)	4.7	(0-25)	KNOX ID-0016
Chrysene	102	(60 - 140)			KNOX ID-0016
	105	(60 - 140)	2.3	(0-25)	KNOX ID-0016
Dibenz(a,h)anthracene	93	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	1.7	(0-25)	KNOX ID-0016
Fluoranthene	95	(60 - 140)			KNOX ID-0016
	95	(60 - 140)	0.0	(0-25)	KNOX ID-0016
Fluorene	101	(60 - 140)			KNOX ID-0016
	102	(60 - 140)	1.6	(0-25)	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	87	(60 - 140)			KNOX ID-0016
	88	(60 - 140)	0.91	(0-25)	KNOX ID-0016
2-Methylnaphthalene	107	(60 - 140)			KNOX ID-0016
	110	(60 - 140)	2.6	(0-25)	KNOX ID-0016
Naphthalene	109	(60 - 140)			KNOX ID-0016
	111	(60 - 140)	1.8	(0-25)	KNOX ID-0016
Perylene	93	(60 - 140)			KNOX ID-0016
	103	(60 - 140)	10	(0-25)	KNOX ID-0016
Phenanthrene	106	(60 - 140)			KNOX ID-0016
	106	(60 - 140)	0.37	(0-25)	KNOX ID-0016
Pyrene	93	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	0.42	(0-25)	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AE-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	94	(60 - 140)
	91	(60 - 140)
Naphthalene-d8	94	(60 - 140)
	92	(60 - 140)
2-Methylnaphthalene-d10	98	(60 - 140)
	96	(60 - 140)
Acenaphthylene-d8	102	(60 - 140)
	101	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	101	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	139	(60 - 140)
	138	(60 - 140)
Chrysene-d12	104	(60 - 140)
	104	(60 - 140)
Benzo(b)fluoranthene-d12	112	(60 - 140)
	110	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
	93	(60 - 140)
Benzo(a)pyrene-d12	104	(60 - 140)
	100	(60 - 140)
Perylene-d12	100	(60 - 140)
	89	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	110	(60 - 140)
	109	(60 - 140)
Dibenz(ah)anthracene-d14	107	(60 - 140)
	105	(60 - 140)
Benzo(ghi)perylene-d12	102	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/14/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	250	246	ng/sample	98		KNOX ID-0016
	250	252	ng/sample	101	2.4	KNOX ID-0016
Acenaphthylene	250	237	ng/sample	95		KNOX ID-0016
	250	239	ng/sample	96	0.84	KNOX ID-0016
Anthracene	250	229	ng/sample	92		KNOX ID-0016
	250	231	ng/sample	92	0.87	KNOX ID-0016
Benzo(a)anthracene	250	205	ng/sample	82		KNOX ID-0016
	250	208	ng/sample	83	1.4	KNOX ID-0016
Benzo(b)fluoranthene	250	210	ng/sample	84		KNOX ID-0016
	250	209	ng/sample	84	0.47	KNOX ID-0016
Benzo(k)fluoranthene	250	263	ng/sample	105		KNOX ID-0016
	250	269	ng/sample	108	2.2	KNOX ID-0016
Benzo(ghi)perylene	250	232	ng/sample	93		KNOX ID-0016
	250	232	ng/sample	93	0.0	KNOX ID-0016
Benzo(a)pyrene	250	238	ng/sample	95		KNOX ID-0016
	250	252	ng/sample	101	5.7	KNOX ID-0016
Benzo(e)pyrene	250	229	ng/sample	92		KNOX ID-0016
	250	240	ng/sample	96	4.7	KNOX ID-0016
Chrysene	250	256	ng/sample	102		KNOX ID-0016
	250	262	ng/sample	105	2.3	KNOX ID-0016
Dibenz(a,h)anthracene	250	232	ng/sample	93		KNOX ID-0016
	250	236	ng/sample	94	1.7	KNOX ID-0016
Fluoranthene	250	238	ng/sample	95		KNOX ID-0016
	250	238	ng/sample	95	0.0	KNOX ID-0016
Fluorene	250	252	ng/sample	101		KNOX ID-0016
	250	256	ng/sample	102	1.6	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	250	218	ng/sample	87		KNOX ID-0016
	250	220	ng/sample	88	0.91	KNOX ID-0016
2-Methylnaphthalene	250	268	ng/sample	107		KNOX ID-0016
	250	275	ng/sample	110	2.6	KNOX ID-0016
Naphthalene	2000	2180	ng/sample	109		KNOX ID-0016
	2000	2220	ng/sample	111	1.8	KNOX ID-0016
Perylene	250	232	ng/sample	93		KNOX ID-0016
	250	257	ng/sample	103	10	KNOX ID-0016
Phenanthrene	250	265	ng/sample	106		KNOX ID-0016
	250	266	ng/sample	106	0.37	KNOX ID-0016
Pyrene	250	233	ng/sample	93		KNOX ID-0016
	250	234	ng/sample	94	0.42	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AE-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	94	(60 - 140)
	91	(60 - 140)
Naphthalene-d8	94	(60 - 140)
	92	(60 - 140)
2-Methylnaphthalene-d10	98	(60 - 140)
	96	(60 - 140)
Acenaphthylene-d8	102	(60 - 140)
	101	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	101	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	139	(60 - 140)
	138	(60 - 140)
Chrysene-d12	104	(60 - 140)
	104	(60 - 140)
Benzo(b)fluoranthene-d12	112	(60 - 140)
	110	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
	93	(60 - 140)
Benzo(a)pyrene-d12	104	(60 - 140)
	100	(60 - 140)
Perylene-d12	100	(60 - 140)
	89	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	110	(60 - 140)
	109	(60 - 140)
Dibenz(ah)anthracene-d14	107	(60 - 140)
	105	(60 - 140)
Benzo(ghi)perylene-d12	102	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Sample Receipt Documentation

CHAIN OF CUSTODY RECORD

H162307O6

Box No.:

Project Name: ExxonMobil DCU ICR
Project No.: 182129
Sampling Date(s): July 14-17, 2011
Laboratory: Test America
Laboratory P.O.:
Shipping Date(s): 7/21/2011
Shipper's Name: Randall Monson

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M0010-R1-FHR 7-14		250 amber glass	Organic	run 1	M 0010	
EXM-DCU-M0010-R1-FIL		petri dish	Filter	run 1	M 0010	
EXM-DCU-M0010-R1-BHR		500 amber glass	Organic	run 1	M 0010	
EXM-DCU-M0010-R1-XAD		xad	XAD	run 1	M 0010	
EXM-DCU-M0010-R1-COND		500 ml glass amber	Aqueous	run 1	M 0010	
EXM-DCU-M0010-R2-FHR 7-15		250 amber glass	Organic	run 2	M 0010	
EXM-DCU-M0010-R2-FIL		petri dish	Filter	run 2	M 0010	
EXM-DCU-M0010-R2-BHR		500 amber glass	Organic	run 2	M 0010	
EXM-DCU-M0010-R2-XAD		xad	XAD	run 2	M 0010	
EXM-DCU-M0010-R2-COND		500 ml glass amber	Aqueous	run 2	M 0010	
EXM-DCU-M0010-R3-FHR 7-17		250 amber glass	Organic	run 3	M 0010	
EXM-DCU-M0010-R3-FIL		petri dish	Filter	run 3	M 0010	
EXM-DCU-M0010-R3-BHR		500 amber glass	Organic	run 3	M 0010	REC. @ 1.6, 2.3°C
EXM-DCU-M0010-R3-XAD		xad	XAD	run 3	M 0010	NO CUSTODY SEALS
EXM-DCU-M0010-R3-COND		500 ml glass amber	Aqueous	run 3	M 0010	2 COOLERS RH 7/25/11
						FED EX # 782705378475
EXM-DCU-M0010-RGTBLK-XAD		250 amber glass	XAD	xad reagent blank	M 0010	795003588103
EXM-DCU-M0010-RGTBLK-rinse		250 amber glass	Orgganic	MeCl2/MeOH reagent blank	M 0010	

Relinquished by: Randall Monson	**Date/Time:** 7-22-11 1230	**Relinquished by:**	**Date/Time:**
Received by: Kyan Henry	**Date/Time:** 7/23/11 0930	**Received by:**	**Date/Time:**
Remarks (*):			

EM-BTRF-000202

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H162SD406

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **1a** Do not match COC ☐ **1b** Incomplete information ☐ **1c** Marking smeared ☐ **1d** Label torn ☐ **1e** No label ☐ **1f** COC not received ☐ **1g** Other:	4a 5a - RECEIVED "... RGTBLK-FILT" NOT ON COC
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C)	✓			☐ **2a** Temp Blank = _____ ☐ **2b** Cooler Temp = _____ ☐ **2c** Cooling initiated for recently collected samples, ice present.	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **3a** Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☑ **4a** Not present ☐ **4b** Not intact ☐ **4c** Other:	
5. Were all of the samples listed on the COC received?	✓			☑ **5a** Samples received-not on COC ☐ **5b** Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ **6a** Leaking ☐ **6b** Broken	
7. Were VOA samples received without headspace?			✓	☐ **7a** Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ **8a** Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ **9a** Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ **10a** Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ **13a** Leaking ☐ **13b** Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **14a** Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ **15a** Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ **15a** Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ **15a** Incomplete information	
18. Is the client and project name/# identified?	✓			☐ **15a** Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 89094 PM Instructions: NA

Sample Receiving Associate: Ryan Henry Date: 7/25/11

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Semivolatiles

APPENDIX C: SW-846 METHOD 0011—ALDEHYDES SAMPLING DATA

Project Number	182129		
Client / Location	ExxonMobil		
Source	DCU		
Sampling Location	D603 Vent		
Sample Type / Method	M0011 Aldehydes		
Condition Number	Vent Cycle	Vent Cycle	Vent Cycle
Run Number	1	2	3
Method Number	M0011	M0011	M0011
Date	07/14/11	07/16/11	07/17/11
Time Start (24-hr clock)	2006	0043	0626
Time Stop (24-hr clock)	2026	0143	0706
Total Collection Time (min)	20	60	40
Pitot Tube Correction Factor	0.84	0.84	0.84
Nozzle Diameter (in.)	0.120	0.120	0.120
Nozzle Area (ft^2)	0.000079	0.000079	0.000079
Equivalent Duct Diameter (in)	8.00	8.00	8.00
Equivalent Duct Diameter (ft)	0.67	0.67	0.67
Duct Cross-Sectional Area (ft^2)	0.349	0.349	0.349
Barometric Pressure (in. Hg)	29.65	29.80	29.85
Elevation of Sampling Location Relative to Barometer (ft)			
Barometric Pressure at Sampling Location (in. Hg)	29.65	29.80	29.85
Static Pressure (in. H_2O)	1.1	0.9	1.5
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96
O_2 (%)	14.0	12.8	16.5
CO_2 (%)	0.0	0.1	0.0
Dry Molecular Weight (g/g-mole)	28.56	28.53	28.66
Condensate (mL)	866.7	2385.1	2004.7
Moisture Content (%) (measured)	98.05	97.22	98.85
Moisture Content at Saturation (%)	606.86	152.34	303.94
Moisture Content (%) (used in further calculations)	98.05	97.22	98.85
Wet Molecular Weight (g/g-mole)	18.21	18.29	18.12
Initial Meter Volume (ft^3)	574.013	575.356	639.073
Final Meter Volume (ft^3)	574.875	578.718	640.216
Leak Check Volume (ft^3)	0.000	0.000	0.000
Meter Volume (ft^3)	0.862	3.362	1.143
Meter Calibration Factor, Y	0.9893	0.9893	0.9893
Average Meter Temperature (F)	89.1	83.3	79.8
Absolute Meter Temperature (F)	549.1	543.3	539.8
Average Delta H (in. H_2O)	0.0	0.0	0.0
Elevation of Meter Relative to Barometer (ft)			
Corrected Meter Volume (dscf)	0.813	3.219	1.103
Average Stack Temperature (F)	320.6	234.0	274.5
Absolute Stack Temperature (R)	780.6	694.0	734.5
Average Delta P (in. H2O)	88.50	9.42	11.73
Average Square Root of delta P	9.03	2.98	3.20
Unadjusted Gas Velocity (ft/sec)	778.65	241.44	267.49
WAF	1.00	1.00	1.00
Adjusted Gas Velocity (ft/sec)	778.65	241.44	267.49
Adjusted Gas Velocity (ft/min)	46,719	14,486	16,050
Actual Flow Rate (acfh)	978,485	303,403	336,143
Actual Flow Rate (acfm)	16,308	5,057	5,602
Corrected Flow Rate (wscfh)	657,666	230,416	241,949
Corrected Flow Rate (wscfm)	10,961	3,840	4,032
Corrected Flow Rate (kwscfh)	658	230	242
Corrected Flow Rate (kwscfm)	11	4	4
Corrected Flow Rate (dscfh)	12,823	6,413	2,792
Corrected Flow Rate (dscfm)	214	107	47
Corrected Flow Rate (kdscfh)	13	6	3
Corrected Flow Rate (kdscfm)	0.21	0.11	0.05
Isokinetic Sampling Rate (%)	84.49	223.12	263.48
Average Isokinetic Sampling Rate (%)		190.37	

STP is defined as 528 R and 29.92 "Hg

TRC

Source Collection Data Sheet

Contract No. 182129	Method 0011 Aldehydes		Page 1 of 1
Facility Exxon Mobil-Baytown	Init. System Leak Rate (ft3 @ "Hg) 0.004 @ 16"Hg		Operator GSW
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.005 @ 25"Hg		Pitot No. - NA
Date 7/14/11	Start Time 2006	Meter No. 905411	PTCF - 0.84
Condition Vent Cycle	End Time 2026	DGMCF 0.9893	Init. Pitot Leak Check ✓
Run No. 1	Duration (min) 20	ΔH@ 1.759	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.1	Bar. Press. ("Hg) 29.65	Nozzle Diam. (") 0.120	Kf ~~0.84~~ 0.84

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	
MID	20:06	574.013	—	—	—	314	292	[illegible]	89	90	25
M	20:11	574.431	—	—	—	301	303	71	89	90	25
M	20:16	574.510	—	—	—	299	302	62	89	88	25
M	20:21	574.606	—	—	—	296	302	57	89	89	25
STOP	20:26	574.875	—	—	—	—	—	—	—	—	—

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	0011
Condition	Normal Vent Cycle	Run No.	1
Date	7-14-11	Operator	pm

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	DNPH soln	300	Mod	2199.3	1235.8	963.5
2	↓	100	G/S	679.4	734.0	-54.6
3	↓	100	Mod	618.4	672.0	-53.6
4	MT	—	↓	514.9	515.1	-0.2
5	MT	—		636.6	636.6	0.0
6	Sigel	—	↓	978.0	966.4	11.6
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	866.7

Comments:

Run 1

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	1235.8	2199.3	963.5
2	734.0	679.4	-54.6
3	672.0	618.4	-53.6
4	515.1	514.9	-0.2
5	636.6	636.6	0
6	966.4	978.0	11.6
		sum =	866.7

TRC

Source Collection Data Sheet

Contract No. 182129	Method 0011 (alt/ver)		Page 1 of 1
Facility Exxon Mobil-Baytown	Init. System Leak Rate (ft3 @ "Hg) 0.001 @ 24"Hg		Operator GSW
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.002 @ 25"Hg		Pitot No. - NA
Date 7/16/11	Start Time 0043	Meter No. 905411	PTCF - 0.84
Condition Vent Cycle	End Time 0143	DGMCF 0.9893	Init. Pitot Leak Check - ✓
Run No. 2	Duration (min) 60	ΔH@ 1.759	Final Pitot Leak Check - ✓
Stat. Press. ("H2O) +0.9	Bar. Press. ("Hg) 29.80	Nozzle Diam. (") 0.120	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	
MID	00:43	575.356	—	—	—	301	301	74	83	82	18
M	00:48	576.228	—	—	—	298	302	72	84	82	25
M	00:53	576.460	—	—	—	296	302	70	84	82	26
M	00:58	576.681	—	—	—	300	302	69	84	83	26
M	01:03	576.912	—	—	—	296	302	67	84	82	26
M	01:08	577.126	—	—	—	298	303	65	84	83	26
M	01:13	577.334	—	—	—	299	303	63	84	83	26
M	01:18	577.512	—	—	—	300	302	62	84	83	26
M	01:23	577.671	—	—	—	299	303	61	84	83	26
M	01:28	577.818	—	—	—	297	302	61	84	83	26
M	01:33	577.987	—	—	—	298	303	62	84	83	26
M	01:38	578.194	—	—	—	299	304	62	84	83	26
STOP	01:43	578.718	—	—	—	—	—	—	—	—	—

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No. 182129	Method 2011 (ald/ext)
Condition Normal Vent cycle	Run No. 2
Date 7/16/2011	Operator PN

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	DNPH soln	300	Mod	2528.0	- 1231.6	= 1296.4
2	↓	100	Mod	932.3	- 738.3	= 194.0
3	↓	↓	6/2	818.9	- 674.4	= 144.5
4	—	—	Mod	810.0	- 517.6	= 292.4
5	—	—	↓	901.2	- 636.5	= 264.7
6	Si gel	500	↓	1171.1	- 978.0	= 193.1
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	2385.1

Comments:

Silica gel has liquid in bottom & may have lost soln out impinger exit.

Run 2

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	1231.6	2528.0	1296.4
2	738.3	932.3	194
3	674.4	818.9	144.5
4	517.6	810.0	292.4
5	636.5	901.2	264.7
6	978.0	1171.1	193.1
		sum =	2385.1

TRC

Source Collection Data Sheet

Contract No. 182129		Method 0011 Aldehydes			Page 1 of 1
Facility Exxon BTRF		Init. System Leak Rate (ft3 @ "Hg) 0.803 @15"Hg			Operator GSW
Source DCU D603 Vent		Final System Leak Rate (ft3 @ "Hg) 0.004@27"Hg			Pitot No. NA
Date 7/17/2011	Start Time 0626		Meter No. 90541		PTCF 0.84
Condition Normal Vent Cycle	End Time 0706		DGMCF 0.9893		Init. Pitot Leak Check ✓
Run No. 3	Duration (min) 40		ΔH@ 1.759		Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.5	Bar. Press. ("Hg) 29.85		Nozzle Diam. (") 0.120		Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	
MID	0626	639.073	—	—	—	299	302	76	80	80	27
M	0631	639.572	—	—	—	300	301	73	80	80	27
M	0636	639.699	—	—	—	300	300	70	80	79	27
M	0641	639.822	—	—	—	299	298	68	80	79	27
M	0646	639.951	—	—	—	299	300	65	80	79	27
M	0651	640.071	—	—	—	300	299	64	80	80	27
M	0656	640.151	—	—	—	300	300	62	80	80	27
M	0701	640.195	—	—	—	298	301	62	80	80	27
STOP	0706	640.216	—								

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No. 182129	Method 0011 Aldehydes
Condition Normal Vent Cycle	Run No. 3
Date 7-17-11	Operator RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	DNPH soln	300	Mod	2767.0	- 1199.6	= 1567.4
2	↓	100	G/S	959.1	- 735.3	= 223.8
3		100	Mod	822.8	- 679.5	= 143.3
4	—	—	↓	566.4	- 517.9	= 48.5
5	—	—	↓	639.3	- 640.1	= -0.8
6	Sigel	500	Mod	946.1	- 923.6	= 22.5
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	2004.7

Comments:

Run 3

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	1199.6	2767.0	1567.4
2	735.3	959.1	223.8
3	679.5	822.8	143.3
4	517.9	566.4	48.5
5	640.1	639.3	-0.8
6	923.6	946.1	22.5
		sum =	2004.7

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Aldehydes
Dates: July 14, 16, 17, 2011
Run No. 1

Barometric Pressure at Sampling Site, corrected for elevation

$$P_{bar(corr)} = P_{bar,meas} - (Elev \times 0.001)$$

$P_{bar,meas}$ = Barometric pressure as measured at ground level	=	29.65	in. Hg
Elev = elevation of sampling location relative to barometer	=	0	feet
0.001 = Conversion factor	=	0.00100	in. Hg/ft of elevation

Pbar(corr) = 29.65 - 0 X 0.001

$P_{bar(corr)}$ = 29.65 in Hg

Absolute Stack Pressure, Corrected, in. Hg, as per EPA Method 2, Section 6.5

$$P_s = P_{bar(corr)} + (Pg/13.6)$$

$P_{bar(corr)}$ = Barometric pressure at the sampling site	=	29.65	in. Hg
P_g = Stack Static Pressure	=	1.10	in. H2O
13.6 = Conversion factor	=	13.6	in. H2O/in. Hg

$$P_s = 29.65 + \left(\frac{1.10}{13.6}\right)$$

P_s = 29.73 in Hg

Absolute Stack Temperature, R

$$T_s = T + 460$$

T = Average Stack Temperatue	=	320.6	degF
460 = Conversion factor from deg F to R	=	460	

Ts = 320.6 + 460

Ts = 780.6 R

Absolute Meter Temperature, R

$$Tm = T + 460$$

T = Average Meter Temperatue	=	89.1	degF
460 = Conversion factor from deg F to R	=	460	

Tm = 89.1 + 460

Tm = 549.1 R

Volume of Water Vapor Condensed, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-2

$$V_{w(std)} = \frac{V_{lc} \times R_w \times R \times T_{std}}{M_w \times P_{std}}$$

V_{lc} = Total weight of liquid collected	=	866.7	g
R_w = Density of water	=	0.002201	lb/ml
R = Ideal Gas Constant	=	21.85	inHg - ft^3/degR - lbmole
T_{std} = Standard absolute temperature	=	528.00	degR
M_w = Molecular Weight of Water	=	18.00	lb/lbmole
P_{std} = Standard absolute pressure	=	29.92	inHg

$$V_{w(std)} = \frac{866.7 \times 0.002201 \times 21.85 \times 528}{18 \times 29.92}$$

$V_{w(std)}$ = 40.86

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Aldehydes
Dates: July 14, 16, 17, 2011
Run No. 1

Dry Gas Volume, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-1

$$V_{m(std)} = V_m \times Y \times \frac{T_{std} \times (P_{bar} + (deltaH / 13.6))}{T_m \times P_{std}}$$

V_m = Volume of gas sample, dry	=	0.862	ft^3
Y = Dry gas meter calibration factor	=	0.989	
Tstd = Standard Temperature	=	528	R
P_{bar} = Barometric pressure at the sampling site	=	29.65	in. Hg
deltaH = Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor	=	13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature	=	549.1	R
Pstd = Standard Pressure	=	29.92	in Hg

$$V_{m(std)} = \frac{0.86 \times 0.989 \times 528 \times (29.65 + (0.00 / 13.6))}{549.1 \times 29.92}$$

$V_{m(std)}$ = 0.813 dscf 0.02832 m3/ft3
$V_{m(std)}$ = 0.023 dscm

Moisture Content, proportion, by volume - as per US EPA Method 5, Eq. 5-3

$$\frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

$V_{w(std)}$ = Volume of water vapor condensed	=	40.864	ft^3
$V_{m(std)}$ = Dry Gas Volume	=	0.813	ft^3

$$B_{ws} = \frac{40.864}{0.813 + 40.864}$$

B_{ws} = 0.9805

Moisture content at saturation

This calculated by polynomial fit: $(86.7222826792858 + T_s*(-0.645483277572566) + T_s^2*0.00181527101645074 + T_s^3 * (-2.28823297043421E-06) + (T_s)^4*1.09201445204276E-09)*100*29.92/P_s)$

86.722282679285800			=	86.7
-0.645483277572566	X	780.6	=	-503.9
0.00181527101645074	X	609336.36	=	1106.1
-2.28823297043421E-06	X	475647962.6	=	-1088.4
1.09201445204276E-09	X	3.71291E+11	=	405.5
		sum	=	6.0302
sum x 100 x $\frac{29.92}{29.73}$ =				606.86 %

for further calculations

B_{ws} = 0.9805 98.05 %

Dry Molecular Weight of Stack Gas, lb/lb-mole - as per US EPA Method 3, Eq. 3-1

$$M_d = MW_{CO}(\%CO) + MW_{CO2}(\%CO_2) + MW_{O2}(\%O_2) + MW_{H2}(\%H_2) + MW_{CH4}(\%CH_4) + MW_{N2}(\%N_2)$$

MW_{CO}= Molecular weight of CO, divided by 100	=	0.28	lb/lb-mole
%CO = Percent CO by volume, dry basis	=	0.0	%
MW_{CO2}= Molecular weight of CO_2, divided by 100	=	0.44	lb/lb-mole
$\%CO_2$ = Percent CO_2 by volume, dry basis	=	0.0	%
MW_{O2} = Molecular weight of O_2, divided by 100	=	0.32	lb/lb-mole
$\%O_2$ = Percent O_2 by volume, dry basis	=	14.0	%
MW_{H2} = Molecular weight of H_2, divided by 100	=	0.02	lb/lb-mole
$\%H_2$ = Percent H_2 by volume, dry basis	=	0.0	%
MW_{CH4} = Molecular weight of CH_4, divided by 100	=	0.16	lb/lb-mole
$\%CH_4$ = Percent CH_4 by volume, dry basis	=	0.0	%
MW_{N2} = Molecular weight of N2, divided by 100	=	0.28	lb/lb-mole
$\%N_2$ = 100% - %CO - $\%CO_2$ - $\%O_2$ - %H2 - %CH4	=	86.0	%

$$M_d = \frac{(0.28 \times 0.0) + (0.44 \times 0.0) + (0.32 \times 14.0) + (0.02 \times 0.0) + (0.16 \times 0.0) + (0.28 \times 86.0)}{}$$

M_d = 28.56 lb/lb-mole

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Aldehydes
Dates: July 14, 16, 17, 2011
Run No. 1

Molecular Weight of stack gas, lb/lb-mole - as per US EPA Method 2, Eq. 2-6

$$M_s = M_d (1-B_{ws}) + 18.0(B_{ws})$$

M_d= Dry molecular weight of stack gas	=	28.56	lb/lb-mole
B_{ws}= Proportion of water vapor, by volume	=	0.9805	proportion
18.0 = Molecular Weight of H_2O	=	18.00	lb/lb-mole

$$M_s = 28.56 \times (1 - 0.981) + (18.00 \times 0.981)$$
$$M_s = 18.21 \text{ lb/lb-mole}$$

Average Stack Gas Velocity, ft/sec - as per US EPA Method 2, Eq. 2-7

$$v_s = K_p \times C_p \times \text{deltaP}_{avg} \times \text{sqrt}(T_s/(P_s \times M_s))$$

K_p= Velocity equation constant	=	85.49	ft/sec[((lb/lb-mole)(in.Hg))/((degR)(in.H2O))]$^{1/2}$
C_p = S type pitot tube coefficient	=	0.84	
deltaP$_{avg}$=ave. sqrt. of the velocity head of stack gas	=	9.0291	in.H_2O
T_s = Absolute stack temperature	=	780.6	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
M_s = Molecular Weight of stack gas	=	18.21	lb/lb-mole

$$v_s = 85.49 \times 0.84 \times 9.03 \times \left(\frac{780.6}{29.73 \times 18.21}\right)^{0.5}$$

v_s = 778.65 ft/sec 12.9776 ft/min
WAF = 1.00
v_s(WAF Adjusted)= 778.65 ft/sec

Stack Area

$$A = 3.14 \times (\text{Stack Diameter}/2)^2$$

3.1415927 = PI	=	3.14	
Stack Diameter		0.67	ft2

$$A = 3.14 \times \left(\frac{0.67}{2}\right)^2$$
$$A = 0.35 \text{ ft2}$$

Average Stack Gas Volumetric Flow Rate - Actual Conditions

$$Q_{actual} = vs \times A$$

v_s= Average stack gas velocity	=	778.65	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2

$$Q_{actual} = 778.65 \times 0.35$$

Q_{actual} = 272 ft3/sec
Q_{actual} = 16,308 ft3/min
Q_{actual} = 978,485 ft3/hr

Average Stack Gas Dry Volumetric Flow Rate, dscf/hr - as per US EPA Method 2, Eq. 2-8

$$Q = \frac{3600 \times (1-B_{ws}) \times v_s \times A \times T_{std} \times P_s}{T_s \times P_{std}}$$

3600= Conversion factor	=	3600	sec/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9805	proportion
v_s= Average stack gas velocity	=	778.65	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2
T_{std} = Standard absolute temperature	=	528	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
T_s = Absolute stack temperature	=	780.6	degR
P_{std} = Standard absolute pressure	=	29.92	in. Hg

$$Q = \frac{3600 \times (1 - 0.981)}{780.6} \times \frac{778.65 \times 0.349 \times 528 \times 29.73088}{29.92}$$

$$\frac{\text{Conversions}}{60 \text{ min/hr}}$$

$$\frac{1}{1000} \text{ k}$$

Q = 12,823 dscfh
Q = 214 dscfm
Q = 13 kdscfh
Q = 0.21 kdscfm

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Aldehydes
Dates: July 14, 16, 17, 2011
Run No. 1

Average Stack Gas Wet Volumetric Flow Rate, wscf/hr

$$Q_w = \frac{Q}{(1-Bws)}$$

Q = Average Stack Gas Dry Volumetric Flow Rate	=	12,823	dscf/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9805	proportion

$$Q_w = \frac{12{,}823}{(\ 1.00 - 0.981\ )}$$

$$Q_w = 657{,}666 \text{ wscfh} \times \frac{\text{Conversions}}{60 \text{ min/hr}}$$

$$= 10{,}961 \text{ wscfm}$$

$$= 658 \text{ kwscfh} \times \frac{1}{1000}\text{k}$$

$$= 11 \text{ kwscfm}$$

Nozzle Area

$$An = 3.1415927 \times (\text{Nozzle Diameter}/12/2)^2$$

3.1415927 = PI	=	3.14	
12 = Conversion Factor		12.00	in/ft
Nozzle Diameter		0.120	in

$$An = 3.14 \times \left(\frac{0.12000}{12} \times \frac{1}{2}\right)^2$$

$$An = 7.85E\text{-}05 \text{ ft2}$$

SHEET NO. 1 OF 11
PROJECT NO. 182129
DATE 10/23/2011
BY MJKrall
CHK'D

TRC

ExxonMobil BTRF DCU ICR

SUBJECT Acetaldehyde Calculations

Run 1

410 ug detected (Enthalpy)
0.813 dscf sample volume
18,614 dscfh flow rate from Ontario Hydro train

$$\frac{\text{detected ug } 410 \;|\; \text{Conv } ft^3 \;|\; \text{Conv liters } 1000}{0.813 \text{ dscf sample volume} \;|\; 28.32 \text{ liters} \;|\; \text{dscm}} = 17{,}807 \text{ ug/dscm}$$

$$\frac{\text{detected ug } 410 \;|\; \text{dry flow dscf } 18{,}614 \;|\; \text{Conv lb} \;|\; \text{duration } 20 \text{ min} \;|\; \text{Conv hr}}{0.813 \text{ dscf sample volume} \;|\; \text{hr} \;|\; 453.6 \times 10^6 \text{ ug} \;|\; \text{Vent Cycle} \;|\; 60 \text{ min}} = 6.90\text{E-}03 \text{ lb/Vent Cycle}$$

A

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Aldehydes
Dates: July 14, 16, 17, 2011
Run No. : 1

Aldehydes	Sample Volume (dscf)		0.813	20 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		18,614			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 1 Concentration (ug/dscm)	Run 1 Emission Rate (lb/vent cycle)
Formaldehyde	24.5			24.5	1064	0.00041
Acetaldehyde	410			410	17807	0.00690
Priopionaldehyde	39.7			39.7	1724	0.00067

Run No. : 2

Aldehydes	Sample Volume (dscf)		3.219	60 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		5,508			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 2 Concentration (ug/dscm)	Run 2 Emission Rate (lb/vent cycle)
Formaldehyde	46			46	505	0.00017
Acetaldehyde	455			455	4991	0.00172
Priopionaldehyde	63.9			63.9	701	0.00024

Run No. : 3

Aldehydes	Sample Volume (dscf)		1.103			
	Stack Gas Flow Rate (dscfh)		3,916			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 3 Concentration (ug/dscm)	Run 3 Emission Rate (lb/vent cycle)
Formaldehyde	40			40	1281	0.00021
Acetaldehyde	418			418	13382	0.00218
Priopionaldehyde	39.8			39.8	1274	0.00021

Aldehydes	**Average Concentration (ug/dscm)**	**Average Emission Rate (lb/vent cycle)**
Formaldehyde	950	0.00026
Acetaldehyde	12060	0.00360
Priopionaldehyde	1233	0.00037

Meter Box: Orifice Full Calibration

Date:	2/24/2011
Prev. Calib. Date:	2/1/2010
Location:	TRC Austin, TX Lab
Technician:	MRL
Meter Serial No:	28417
Meter Box ID:	"I" 90541
Atm. Pressure (corr. In H	29.45 corrected: 29.61
Critical Vacuum + 2 in Hg	16 in. Hg. (required minimum)
Prev. Calib Factor (Y):	0.9846

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	0.2353
Model:	SX40-63	48	0.3451
Tested By:	EW	55	0.4549
Date:	4/12/11	63	0.5886

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
40	0.2353	0.27	18	534.539	540.119	5.58	69	69	71	69	23	72.0	72.0
48	0.3451	0.6	19	540.119	548.733	8.614	71	69	74	71	21	72.0	74.0
55	0.4549	1.1	12	548.733	555.928	7.195	74	71	74	72	20	74.0	75.0
63	0.5886	1.9	18	555.928	569.885	13.957	74	72	80	74	18	75.0	76.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y)		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
5.48	155.13	0.310	5.41	153.13	0.987	-0.002	1.659	-0.10
8.44	238.88	0.453	8.36	236.85	0.991	0.002	1.709	-0.05
7.04	199.22	0.600	6.95	196.90	0.988	-0.001	1.808	0.05
13.62	385.59	0.775	13.48	381.81	0.990	0.001	1.860	0.10

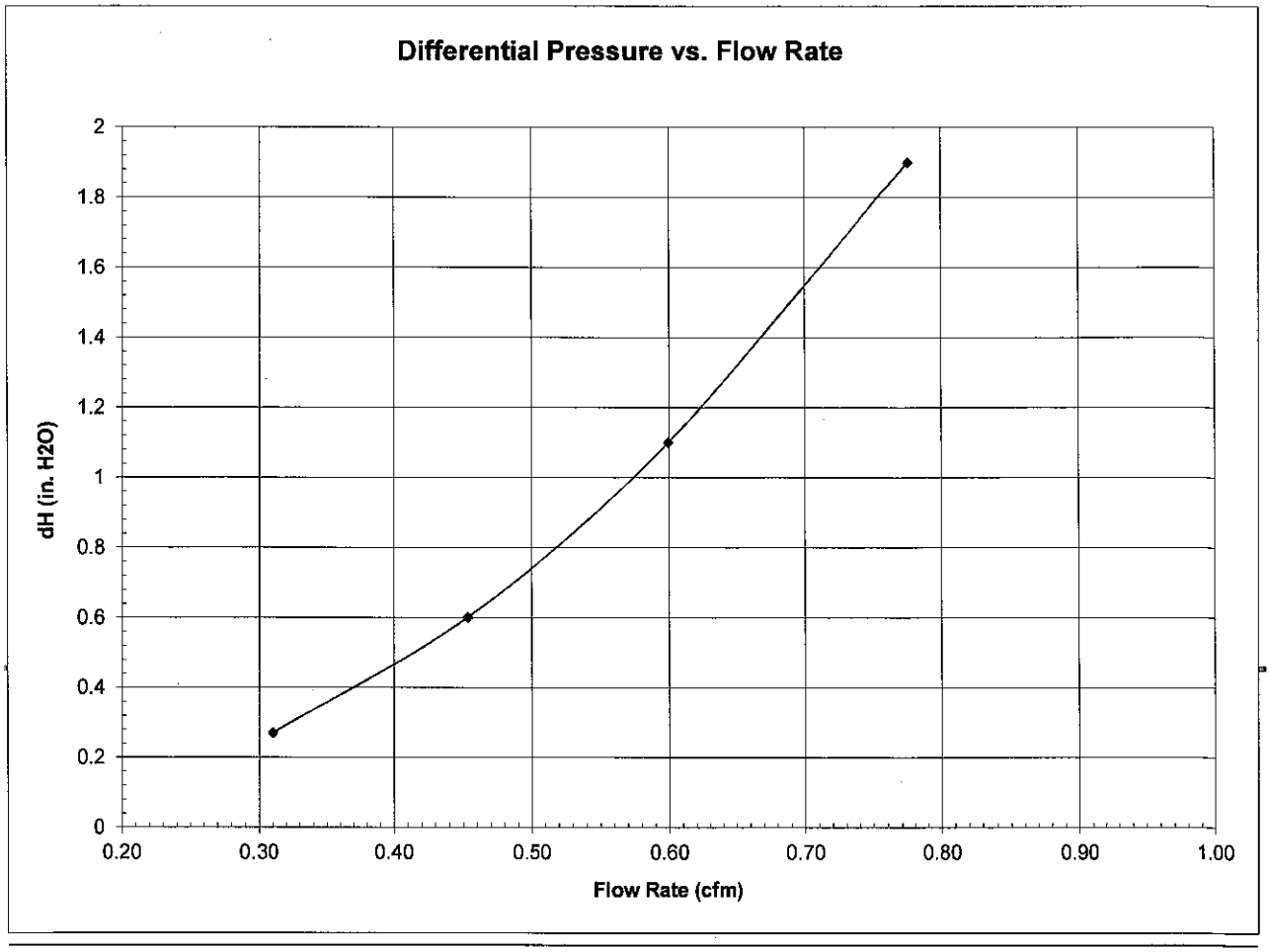
Meter Box

Calibration Test Results		**Pass/Fail**
*** Average Y:**	**0.9893**	***PASS***
Ave. Y w/in 5% of previous value:		*YES*
0.95 >= Y <= 1.05:		*PASS*
**** Average dH:**	**1.759**	***PASS***

Criteria:

* Y- ratio of the reading of the calibration meter (critical orifice) to the Meter Box DGM. Acceptable tolerance of individual values from the average is +/- 0.02.

** dH- the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air flow at 68 F and 29.92 in Hg, acceptable tolerance of individual values from the averag



TRC

Console No.	90541	S. O. P. Reference	AM - 103
Temperature Display Type	Total Group Corp.	Calibrator Type	Omega CL23A
Temperature Display Serial No.	748L-38	Calibrator Serial No./Date	T-239267/9-16-11

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)
1 (Stack)	33	-0.2	213	-0.1	500	0.0	1001	-0.1	1499	0.1
2 (Probe)	32	0.0	213	-0.1	501	-0.1	1001	-0.1	1500	0.0
3 (Filter)	33	-0.2	212	0.0	500	0.0	1000	0.0	1501	-0.1
4 (Dryer)	32	0.0	211	0.1	501	-0.1	1000	0.0	1500	0.0
5 (Aux)	31	0.2	212	0.0	500	0.0	1001	-0.1	1499	0.1

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, ° R)

Operator _____ Date 2/24/2011

	Dry Gas Meter Thermocouple Calibration[3]		
	Readout Display Temperature °F	Reference Thermometer °F	Percent Difference
DGM-Inlet	32	32	0.0%
DGM-Outlet	32	32	0.0%

Pre/Post-Test Meter Box Calibration Check

WORKING METER

Date:	7/25/2011
Prev. Calib. Date:	2/24/2011
Location:	TRC South Austin, TX
Technician:	MRL
Meter Serial No:	28417
TRC DGM ID	90541
Current Calib. Factor (Y):	0.9893

REFERENCE METER

Calibration Date:	9/8/2010
Location:	TRC South
Technician:	KRH
Meter Serial No:	04E469822
TRC DGM ID:	LAB
Calib. Factor (Y):	0.9920

REFERENCE METER

Calibration Run #	Time (min)	Start Temp (deg F)	Stop Temp (deg F)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Meter Rate (cu•ft /min)	Corr. Vol @ EPA STP (cu ft)
1	18	70	70	0.000	7.521	7.521	0.4178	7.379
2	19	71	71	0.000	7.891	7.891	0.4153	7.728
3	16	72	73	0.000	6.699	6.699	0.4187	6.542

WORKING METER

Calibration Run #	Time (min)	Ambient Temp (deg F)	Start Temp (deg F)	Stop Temp (deg F)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Meter Rate (cu•ft /min)	Corr. Vol @ EPA STP (cu ft)	Calculated DGM Factor (Y)
1	18	71	76	77	660.003	667.383	7.380	0.410	7.153	1.0316
2	19	71	77	78	667.383	675.108	7.725	0.407	7.473	1.0340
3	16	72	78	78.0	675.108	681.705	6.597	0.412	6.376	1.0259

Dry Gas Meter Calibration Check Results

* Average Y:	1.0305
Ave. Y w/in 5% of previous value:	*YES*
Ave. Y between 0.95 and 1.05:	*PASS*
Ind. Y values +/- 0.02 from Ave.:	*PASS*

Signature: 

TRC

Console No.	90541	S. O. P. Reference	AM - 103
Temperature Display Type	Total Group Corp.	Calibrator Type	Omega CL23A
Temperature Display Serial No.	748L-38	Calibrator Serial No./Date	T-239267/9-16-11

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)
1 (Stack)	33	-0.2	213	-0.1	501	-0.1	1001	-0.1	1501	-0.1
2 (Probe)	32	0.0	213	-0.1	501	-0.1	1001	-0.1	1501	-0.1
3 (Filter)	32	0.0	213	-0.1	501	-0.1	1001	-0.1	1501	-0.1
4 (Dryer)	33	-0.2	213	-0.1	501	-0.1	1001	-0.1	1501	-0.1
5 (Aux)	32	0.0	213	-0.1	501	-0.1	1001	-0.1	1501	-0.1

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, ° R)

Operator _____ Date 7/25/2011

	Dry Gas Meter Thermocouple Calibration[3]		
	Readout Display Temperature °F	Reference Thermometer °F	Percent Difference
DGM-Inlet	32	32	0.0%
DGM-Outlet	32	32	0.0%

TRC Nozzle Calibration and Inspection Data Sheet

Company Name: ExxonMobil BTRF Duluth
Nozzle Number: ALD-Glass-1

Measure three diameters (in inches) as shown below. Average the diameters and calculate area according to the calculations below.

Calibration Measurement

*Diameter 1 (in):	0.120	Date: 7/12/2011
*Diameter 2 (in):	0.121	
*Diameter 3 (in):	0.120	
Average Diameter (in):	0.120	= (Sum of Diameters 1-3) / 3
Average Radius (in):	0.0600	= Average Diameter (in) / 2
Average Radius (ft):	0.00500	= Average Radius (in) / 12
Nozzle Area (ft2):	0.0000785	= π x radius (ft) ^2

*Maximum allowable difference between largest diameter and smallest diameter is 0.004 inches.

Nozzle is round, sharp-edged, free of nicks and dents

TRC

Michael J Kuhl
signature

TRC Environmental Corporation

9225 US Hwy 183 S
Austin, TX 78747

ExxonMobil - DCU

Project # 182129
PO # 35483

Analytical Report (0611-122)

EPA SW-846 Method 0011

Formaldehyde, Acetaldehyde, and Propionaldehyde

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 80 pages.

Bonnie L Evans

QA Review Performed by – Bonnie L Evans

Report Issued: 08/10/2011

Summary of Results

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

Compound	Sample ID / Catch Weight (ug)		
	EXM-DCU-R1	***EXM-DCU-R2***	***EXM-DCU-R3***
Formaldehyde	24.5	46.0	40.0
Acetaldehyde	410	455	418
Propionaldehyde	39.7	63.9	39.8
	EXM-DCU-Spike	***EXM-DCU-DNPH RB***	***EXM-DCU-MeCl2 RB***
Formaldehyde	47.2	5.46 J	20.9
Acetaldehyde	0.443 ND	0.609 ND	0.879 ND
Propionaldehyde	0.437 ND	0.600 ND	0.867 ND

Results

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00271 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Formaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
EXM-DCU-R1	077-1101.D	HPLC54PG120ICR.M	5.02	0.0792	2	155	24.5	
EXM-DCU-R1	077-1201.D	HPLC54PG120ICR.M	5.01	0.0783	2	155	24.2	
						% Difference	1.1%	
LD/EXM-DCU-R1	078-1401.D	HPLC54PG120ICR.M	5.00	0.0713	2	157	22.4	J
						% Difference	8.7%	
EXM-DCU-R2	079-1501.D	HPLC54PG120ICR.M	5.00	0.134	2	172	46.0	
EXM-DCU-R3	080-1601.D	HPLC54PG120ICR.M	5.00	0.110	1	362	40.0	
EXM-DCU-Spike	083-1901.D	HPLC54PG120ICR.M	5.01	0.478	1	98.9	47.2	
EXM-DCU-DNPH RB	081-1701.D	HPLC54PG120ICR.M	5.00	0.0402	1	136	5.46	J
EXM-DCU-MeCl2 RB	082-1801.D	HPLC54PG120ICR.M	5.00	0.106	1	196	20.9	
MB-1	084-2001.D	HPLC54PG120ICR.M	5.00	0.0202	1	143	2.89	J
MB-2	017-0901.D	HPLC54PG120ICR.M	NA	0.00271	1	133	0.360	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00271	1	1.00	0.00271	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00271	1	1.00	0.00271	ND
MS/EXM-DCU-R2	015-0701.D	HPLC54PG120ICR.M	5.01	1.65	1	114	188	
						Spike Amount (ug)	301	
						Native Amount (ug)	7.67	
						Spike Recovery (%)	60.2%	
MSD/EXM-DCU-R2	016-0801.D	HPLC54PG120ICR.M	5.02	1.92	1	115	220	
						Spike Amount (ug)	301	
						Native Amount (ug)	7.67	
						Spike Recovery (%)	70.8%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00271 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Formaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	085-2101.D	HPLC54PG120ICR.M	5.00	6.34	1	139	881	
						Spike Amount (ug)	1,002	
						Spike Recovery (%)	87.9%	
LCS-2	018-1001.D	HPLC54PG120ICR.M	5.01	1.87	1	139	260	
						Spike Amount (ug)	301	
						Spike Recovery (%)	86.4%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00271	1	1.00	0.00271	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00271	1	1.00	0.00271	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00271	1	1.00	0.00271	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	5.06	3.07	1	1.00	3.07	
						Spike Amount (ug)	2.90	
						Spike Recovery (%)	106%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00448 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Acetaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
EXM-DCU-R1	077-1101.D	HPLC54PG120ICR.M	6.32	1.32	2	155	410	
EXM-DCU-R1	077-1201.D	HPLC54PG120ICR.M	6.31	1.32	2	155	409	
						% Difference	0.3%	
LD/EXM-DCU-R1	078-1401.D	HPLC54PG120ICR.M	6.30	1.27	2	157	399	
						% Difference	2.7%	
EXM-DCU-R2	079-1501.D	HPLC54PG120ICR.M	6.30	1.32	2	172	455	
EXM-DCU-R3	080-1601.D	HPLC54PG120ICR.M	6.30	1.15	1	362	418	
EXM-DCU-Spike	083-1901.D	HPLC54PG120ICR.M	NA	0.00448	1	98.9	0.443	ND
EXM-DCU-DNPH RB	081-1701.D	HPLC54PG120ICR.M	NA	0.00448	1	136	0.609	ND
EXM-DCU-MeCl2 RB	082-1801.D	HPLC54PG120ICR.M	NA	0.00448	1	196	0.879	ND
MB-1	084-2001.D	HPLC54PG120ICR.M	NA	0.00448	1	143	0.639	ND
MB-2	017-0901.D	HPLC54PG120ICR.M	NA	0.00448	1	133	0.595	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00448	1	1.00	0.00448	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00448	1	1.00	0.00448	ND
MS/EXM-DCU-R2	015-0701.D	HPLC54PG120ICR.M	6.31	2.11	1	114	241	
						Spike Amount (ug)	293	
						Native Amount (ug)	75.9	
						Spike Recovery (%)	56.3%	
MSD/EXM-DCU-R2	016-0801.D	HPLC54PG120ICR.M	6.31	2.47	1	115	283	
						Spike Amount (ug)	293	
						Native Amount (ug)	75.9	
						Spike Recovery (%)	70.8%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00448 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Acetaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	085-2101.D	HPLC54PG120ICR.M	6.30	5.77	1	139	801	
						Spike Amount (ug)	978	
						Spike Recovery (%)	81.9%	
LCS-2	018-1001.D	HPLC54PG120ICR.M	6.30	2.91	1	139	404	
						Spike Amount (ug)	489	
						Spike Recovery (%)	82.6%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00448	1	1.00	0.00448	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00448	1	1.00	0.00448	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00448	1	1.00	0.00448	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	6.39	3.11	1	1.00	3.11	
						Spike Amount (ug)	2.90	
						Spike Recovery (%)	107%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00442 (ug/mL)
LOQ 0.0746 (ug/mL)
Compound Propionaldehyde

Lower Curve Limit 0.0746 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
EXM-DCU-R1	077-1101.D	HPLC54PG120ICR.M	8.58	0.128	2	155	39.7	
EXM-DCU-R1	077-1201.D	HPLC54PG120ICR.M	8.56	0.126	2	155	39.0	
						% Difference	1.9%	
LD/EXM-DCU-R1	078-1401.D	HPLC54PG120ICR.M	8.54	0.124	2	157	39.0	
						% Difference	1.9%	
EXM-DCU-R2	079-1501.D	HPLC54PG120ICR.M	8.55	0.186	2	172	63.9	
EXM-DCU-R3	080-1601.D	HPLC54PG120ICR.M	8.56	0.110	1	362	39.8	
EXM-DCU-Spike	083-1901.D	HPLC54PG120ICR.M	NA	0.00442	1	98.9	0.437	ND
EXM-DCU-DNPH RB	081-1701.D	HPLC54PG120ICR.M	NA	0.00442	1	136	0.600	ND
EXM-DCU-MeCl2 RB	082-1801.D	HPLC54PG120ICR.M	NA	0.00442	1	196	0.867	ND
MB-1	084-2001.D	HPLC54PG120ICR.M	NA	0.00442	1	143	0.630	ND
MB-2	017-0901.D	HPLC54PG120ICR.M	NA	0.00442	1	133	0.587	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00442	1	1.00	0.00442	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00442	1	1.00	0.00442	ND
MS/EXM-DCU-R2	015-0701.D	HPLC54PG120ICR.M	8.56	1.72	1	114	196	
						Spike Amount (ug)	289	
						Native Amount (ug)	10.7	
						Spike Recovery (%)	64.3%	
MSD/EXM-DCU-R2	016-0801.D	HPLC54PG120ICR.M	8.58	2.04	1	115	234	
						Spike Amount (ug)	289	
						Native Amount (ug)	10.7	
						Spike Recovery (%)	77.2%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00442 (ug/mL)
LOQ 0.0746 (ug/mL)
Compound Propionaldehyde

Lower Curve Limit 0.0746 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	085-2101.D	HPLC54PG120ICR.M	8.57	6.54	1	139	908	
						Spike Amount (ug)	962	
						Spike Recovery (%)	94.4%	
LCS-2	018-1001.D	HPLC54PG120ICR.M	8.56	1.82	1	139	253	
						Spike Amount (ug)	289	
						Spike Recovery (%)	87.7%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00442	1	1.00	0.00442	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00442	1	1.00	0.00442	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00442	1	1.00	0.00442	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	8.62	3.08	1	1.00	3.08	
						Spike Amount (ug)	2.90	
						Spike Recovery (%)	106%	

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

Custody

Thorne Gregory of Enthalpy Analytical, Inc. received the samples on 7/23/11 at 9.1°C after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for acetaldehyde, formaldehyde, and propionaldehyde using the analytical procedures in EPA SW-846 Method 0011, Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources.

Due to the large volume of DNPH, the sample, ***EXM-DCU – Run 3*** was split in half (both DNPH and MeCl2), extracted each with 100 mL of methylene chloride and then combined.

The Agilent Model 1100, High Performance Liquid Chromatograph ("Bart") was equipped with an Ultraviolet (UV) Detector operating at 360 nm and a Restek Ultra C18, 150 x 4 mm (S/N 100316P) column.

Calibration

The calibration curves are located in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Chromatographic Conditions

The acquisition method 8315ICR.M is included in the Calibration Curve Chromatograms section of this report.

QC Notes

During sample preparation, ***EXM-DCU-R1*** was split in two equal halves. The first half was extracted and analyzed as ***EXM-DCU-R1***. The second half was extracted and analyzed as ***LD/ EXM-DCU-R1***. To determine the catch weights, this splitting is compensated for by use of the 'Aliquot Factor' (2) shown in the detailed results spreadsheet.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)

The percent difference value of the formaldehyde analysis from the initial result was within 9% for all target compounds.

A replicate injection was made of the sample ***EXM-DCU-R1*** and the difference between the results of the replicate was within 2% for all target compounds.

EXM-DCU-R2 was also split in half. The first half was analyzed as the sample, and has an aliquot factor of two. The remaining half was split in thirds for use as the Matrix Spike (MS), Matrix Spike Duplicate (MSD), and an archive fraction. These spikes do not have an aliquot factor, and their results are calculated on the basis of what was prepared. Therefore the native amount of the sample used in determining the spike recovery values was 1/6 the calculated final result for the sample itself. The MS and MSD exhibited recovery values of 87.9% and 86.4% for formaldehyde, 81.9% and 82.6% for acetaldehyde, and 94.4% and 87.7% for propionaldehyde.

Prior to sample collection, five aqueous spikes were prepared from a spike solution; three were shipped to the client. The spikes contained 1,002 µg of formaldehyde.

Reporting Notes

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy

Laboratory P.O.:

Shipping Date(s): 7/21/2011

Shipper's Name:

Box No.:

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M0011-Run1	07/14/11	1000 ml glass amber	Acidic	run 1 (2 containers)	ald/ket	2 containers
EXM-DCU-M0011-Run2	07/16/11	1000 ml glass amber	Acidic	run 2 (3 containers)	ald/ket	3 containers
EXM-DCU-M0011-Run3	07/17/11	1000 ml glass amber	Acidic	run 3 (3 containers)	ald/ket	3 containers
EXM-DCU-M0011-DNPH-RGTBLK	07/17/11	250 glass amber	Acidic	DNPH RGT BLK	ald/ket	
EXM-DCU-M0011-MeCl2RGTBLK	07/17/11	250 glass amber	Acidic	METHYLENE CHLORIDE RGT BLK	ald/ket	
EXM-DCU-M0011-SPIKE	07/17/11	250 glass amber	Acidic	200 ul of 1000 ppm into 200 ml	ald/ket	

Relinquished by: Kandee Mason	**Date/Time:** 7-22-11 1230	**Relinquished by:**	**Date/Time:**
Received by:	**Date/Time:** 7-22-11 1000	**Received by:**	**Date/Time:**

Remarks (*): 9.1 °C 11 bottles rcvd

EM-BTRF-000804

TRC

Sample Chromatograms

APPENDIX D: EPA METHOD 26A—ACID GASES SAMPLING DATA

Project Number	182129		
Client / Location	ExxonMobil		
Source	DCU		
Sampling Location	D603 Vent		
Sample Type / Method	M26A Acid Gases		
Condition Number	Vent Cycle	Vent Cycle	Vent Cycle
Run Number	1	2	3
Method Number	M26A	M26A	M26A
Date	07/14/11	07/16/11	07/17/11
Time Start (24-hr clock)	2006	0043	0626
Time Stop (24-hr clock)	2026	0143	0706
Total Collection Time (min)	20	60	40
Pitot Tube Correction Factor	0.84	0.84	0.84
Nozzle Diameter (in.)	0.123	0.123	0.123
Nozzle Area (ft^2)	0.000083	0.000083	0.000083
Equivalent Duct Diameter (in)	8.00	8.00	8.00
Equivalent Duct Diameter (ft)	0.67	0.67	0.67
Duct Cross-Sectional Area (ft^2)	0.349	0.349	0.349
Barometric Pressure (in. Hg)	29.65	29.80	29.85
Elevation of Sampling Location Relative to Barometer (ft)			
Barometric Pressure at Sampling Location (in. Hg)	29.65	29.80	29.85
Static Pressure (in. H_2O)	1.1	0.9	1.5
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96
O_2 (%)	14.0	12.8	16.5
CO_2 (%)	0.0	0.1	0.0
Dry Molecular Weight (g/g-mole)	28.56	28.53	28.66
Condensate (g)	1048.5	2339.6	1902.0
Moisture Content (%) (measured)	98.24	97.26	98.86
Moisture Content at Saturation (%)	538.07	152.34	303.94
Moisture Content (%) (used in further calculations)	98.24	97.26	98.86
Wet Molecular Weight (g/g-mole)	18.19	18.29	18.12
Initial Meter Volume (ft^3)	64.158	65.681	119.466
Final Meter Volume (ft^3)	65.111	68.970	120.555
Leak Check Volume (ft^3)	0.000	0.000	0.000
Meter Volume (ft^3)	0.953	3.289	1.089
Meter Calibration Factor, Y	0.9636	0.9636	0.9636
Average Meter Temperature (F)	81.5	77.2	75.7
Absolute Meter Temperature (F)	541.5	537.2	535.7
Average Delta H (in. H_2O)	0.0	0.0	0.0
Elevation of Meter Relative to Barometer (ft)			
Corrected Meter Volume (dscf)	0.887	3.102	1.032
Average Stack Temperature (F)	312.0	234.0	274.5
Absolute Stack Temperature (R)	772.0	694.0	734.5
Average Delta P (in. H2O)	124.00	9.42	11.73
Average Square Root of delta P	11.13	2.98	3.20
Unadjusted Gas Velocity (ft/sec)	954.79	241.47	267.51
WAF	1.00	1.00	1.00
Adjusted Gas Velocity (ft/sec)	954.79	241.47	267.51
Adjusted Gas Velocity (ft/min)	57,288	14,488	16,050
Actual Flow Rate (acfh)	1,199,829	303,444	336,159
Actual Flow Rate (acfm)	19,997	5,057	5,603
Corrected Flow Rate (wscfh)	815,421	230,447	241,960
Corrected Flow Rate (wscfm)	13,590	3,841	4,033
Corrected Flow Rate (kwscfh)	815	230	242
Corrected Flow Rate (kwscfm)	14	4	4
Corrected Flow Rate (dscfh)	14,378	6,304	2,753
Corrected Flow Rate (dscfm)	240	105	46
Corrected Flow Rate (kdscfh)	14	6	3
Corrected Flow Rate (kdscfm)	0.24	0.11	0.05
Isokinetic Sampling Rate (%)	78.32	208.19	237.89
Average Isokinetic Sampling Rate (%)		174.80	

STP is defined as 528 R and 29.92 "Hg

TRC

Source Collection Data Sheet

Contract No. 182129	Method M26A HCl/Cl2/HF/HCN		Page 1 of 1
Facility Exxon Mobil-Baytown	Init. System Leak Rate (ft3 @ "Hg) 0.003 @ 18"Hg		Operator GSW
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.005 @ 25"Hg		Pitot No. – NA
Date 7/13/11	Start Time 20:06	Meter No. 80715	PTCF 0.84
Condition Vent Cycle	End Time 2026	DGMCF 0.9636	Init. Pitot Leak Check ✓
Run No. 1	Duration (min) 20	ΔH@ 1.746	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.1	Bar. Press. ("Hg) 29.65	Nozzle Diam. (") 0.123	Kf –

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)
MID	20:06	64.158	–	–	–	299	303	79	82	80	25
M	20:11	64.550	–	–	–	299	307	72	82	81	25
M	20:16	64.618	–	–	–	299	305	64	82	81	25
M	20:21	64.790	–	–	–	299	303	58	82	81	25
STOP	20:26	65.111	–	–	–	–	–	–	–	–	–

Comments

Checked By: [signature] 10/13/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	26A
Condition	Normal Vent Cycle	Run No.	1
Date	7-14-11	Operator	RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	1N H_2SO_4	100	IC	1868.5	- 922.8	= 945.7
2	1N H_2SO_4	100	Mod	807.9	- 759.3	= 48.6
3	1N H_2SO_4	100	C/S	780.1	- 765.2	= 14.9
4	MT	-	Mod	788.1	- 664.4	= 123.7
5	1N NaOH	100	↓	732.3	- 764.5	= -32.2
6	1N NaOH	100	↓	696.6	- 754.1	= -57.5
7	Sigel	~600	↓	981.3	- 976.0	= 5.3
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	1048.5

Comments:

there was some backflush into imp 4,
imp 4 pH = 12

Run 1

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	922.8	1868.5	945.7
2	759.3	807.9	48.6
3	765.2	780.1	14.9
4	664.4	788.1	123.7
5	764.5	732.3	-32.2
6	754.1	696.6	-57.5
7	976	981.3	5.3
		sum =	1048.5

TRC

Source Collection Data Sheet

Contract No. 182129	Method 26A HCl/Cl2/HF/HCN	Page 1 of 1
Facility Exxon Mobil-Baytown	Init. System Leak Rate (ft3 @ "Hg) 0.005 @ 23"Hg	Operator GSW
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.004 @ 25"Hg	Pitot No. — NA
Date 7/16/11	Start Time 00:43	Meter No. 80715
Condition Vent Cycle	End Time 0143	DGMCF 69636
Run No. 2	Duration (min) 60	ΔH@ 1.746
Stat. Press. ("H2O) +0.9	Bar. Press. ("Hg) 29.80	Nozzle Diam. (") 0.123
		PTCF — 0.84
		Init. Pitot Leak Check — ✓
		Final Pitot Leak Check — ✓
		Kf —

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	
MID	00:43	65.681	—	—	—	298	313	74	78	76	13
M	00:48	66.300	—	—	—	308	301	71	78	76	26
M	00:53	66.500	—	—	—	297	299	68	78	76	26
M	00:58	66.782	—	—	—	298	302	66	78	76	26
M	01:03	66.971	—	—	—	298	302	63	78	77	26
M	01:08	67.053	—	—	—	300	301	62	78	77	26
M	01:13	67.255	—	—	—	300	300	61	78	76	26
M	01:18	67.305	—	—	—	299	298	60	78	76	26
M	01:23	67.555	—	—	—	299	300	60	78	77	26
M	01:28	67.781	—	—	—	300	299	60	78	77	26
M	01:33	67.840	—	—	—	300	300	61	78	77	26
M	01:38	67.983	—	—	—	299	301	62	78	76	26
STOP	01:43	68.970	—	—	—	—	—	—	—	—	—

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	26A HCl/Cl₂/HF/HCN
Condition	Normal Vent Cycle	Run No.	2
Date	7/16/2011	Operator	GSW

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	1N H₂SO₄	100	IC	2842.4	933.5	1908.9
2	↓	↓	Mod	818.8	771.2	47.6
3	↓	↓	GK	852.3	770.8	81.5
4	—		Mod	854.1	669.7	184.4
5	1N NaOH	100	↓	743.6	770.8	-27.2
6	↓	↓	↓	850.4	760.1	90.3
7	Sgel	500	↓	1034.1	980.0	54.1
8					=	
9					=	
10					=	
				Total Net Gain (g) =		2339.6

Comments:

Caustic impingers pH = 12.

Run 2

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	933.5	2842.4	1908.9
2	771.2	818.8	47.6
3	770.8	852.3	81.5
4	669.7	854.1	184.4
5	770.8	743.6	-27.2
6	760.1	850.4	90.3
7	980	1034.1	54.1
		sum =	2339.6

TRC

Source Collection Data Sheet

Contract No. 182129	Method 26A HCl/Cl2/HF/HCN		Page 1 of 1
Facility Exxon BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.004 @15"Hg		Operator AN
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.005@26"Hg		Pitot No. NA
Date 7/17/2011	Start Time 0626	Meter No. 80715	PTCF 0.84
Condition Normal Vent Cycle	End Time 0706	DGMCF 0.9836	Init. Pitot Leak Check ✓
Run No. 3	Duration (min) 40	ΔH@ 1.746	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.5	Bar. Press. ("Hg) 29.85	Nozzle Diam. (") 0.123	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	
MID	0626	119.466	—	—	—	295	303	76	75	75	26
M	0631	119.936	—	—	—	294	303	74	74	74	26
M	0636	120.056	—	—	—	294	303	70	75	74	26
M	0641	120.181	—	—	—	295	299	68	76	74	26
M	0646	120.297	—	—	—	293	301	66	77	74	26
M	0651	120.422	—	—	—	293	302	63	77	76	26
M	0656	120.482	—	—	—	293	303	62	77	76	26
M	0701	120.533	—	—	—	292	303	61	78	76	26
STOP	0706	120.555	—	—	—	-	—	—	78	77	26

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	26A Acid gases
Condition	Normal Vent Cycle	Run No.	3
Date	7-17-11	Operator	JMM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	1N H_2SO_4	100	KO	2291.1	935.8	1355.3
2	↓	↓	Mod	947.9	775.3	172.6
3	↓	↓	G/S	902.9	772.2	130.7
4	—	—	Mod	728.5	617.0	111.5
5	1N NaOH	100	↓	832.5	771.4	61.1
6	↓	↓	↓	806.1	762.3	43.8
7	Sigel	600	↓	1061.7	1034.7	27.0
8						
9						
10						
					Total Net Gain (g) =	1902.0

Comments:

Imp 5 pH=12

Run 3

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	935.8	2291.1	1355.3
2	775.3	947.9	172.6
3	772.2	902.9	130.7
4	617.0	728.5	111.5
5	771.4	832.5	61.1
6	762.3	806.1	43.8
7	1034.7	1061.7	27
		sum =	1902

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: 26A - Acid Gases
Dates: July 14, 16, 17, 2011
Run No. 1

Barometric Pressure at Sampling Site, corrected for elevation

$$P_{bar(corr)} = P_{bar,meas} - (Elev \times 0.001)$$

$P_{bar,meas}$ = Barometric pressure as measured at ground level	=	29.65	in. Hg
Elev = elevation of sampling location relative to barometer	=	0	feet
0.001 = Conversion factor	=	0.00100	in. Hg/ft of elevation

$$Pbar(corr) = 29.65 - 0 \times 0.001$$

$$P_{bar(corr)} = 29.65 \text{ in Hg}$$

Absolute Stack Pressure, Corrected, in. Hg, as per EPA Method 2, Section 6.5

$$P_s = P_{bar(corr)} + (Pg/13.6)$$

$P_{bar(corr)}$ = Barometric pressure at the sampling site	=	29.65	in. Hg
P_g = Stack Static Pressure	=	1.10	in. H2O
13.6 = Conversion factor	=	13.6	in. H2O/in. Hg

$$P_s = 29.65 + \left(\frac{1.10}{13.6}\right)$$

$$P_s = 29.73 \text{ in Hg}$$

Absolute Stack Temperature, R

$$T_s = T + 460$$

T = Average Stack Temperatue	=	312.0	degF
460 = Conversion factor from deg F to R	=	460	

$$Ts = 312.0 + 460$$

$$Ts = 772.0 \text{ R}$$

Absolute Meter Temperature, R

$$Tm = T + 460$$

T = Average Meter Temperatue	=	81.5	degF
460 = Conversion factor from deg F to R	=	460	

$$Tm = 81.5 + 460$$

$$Tm = 541.5 \text{ R}$$

Volume of Water Vapor Condensed, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-2

$$V_{w(std)} = \frac{V_{1c} \times R_w \times R \times T_{std}}{M_w \times P_{std}}$$

V_{1c} = Total weight of liquid collected	=	1048.5	g
R_w = Density of water	=	0.002201	lb/ml
R = Ideal Gas Constant	=	21.85	inHg - ft^3/degR - lbmole
T_{std} = Standard absolute temperature	=	528.00	degR
M_w = Molecular Weight of Water	=	18.00	lb/lbmole
P_{std} = Standard absolute pressure	=	29.92	inHg

$$V_{w(std)} = \frac{1048.5 \times 0.002201 \times 21.85 \times 528}{18 \times 29.92}$$

$$V_{w(std)} = 49.44$$

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: 26A - Acid Gases
Dates: July 14, 16, 17, 2011
Run No. 1

Dry Gas Volume, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-1

$$V_{m(std)} = V_m \times Y \times \frac{T_{std} \times (P_{bar} + (deltaH / 13.6))}{T_m \times P_{std}}$$

V_m = Volume of gas sample, dry	=	0.953	ft^3
Y = Dry gas meter calibration factor	=	0.964	
Tstd = Standard Temperature	=	528	R
P_{bar} = Barometric pressure at the sampling site	=	29.65	in. Hg
deltaH = Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor	=	13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature	=	541.5	R
Pstd = Standard Pressure	=	29.92	in Hg

$$V_{m(std)} = \frac{0.95 \times 0.964 \times 528 \times (29.65 + (0.00 / 13.6))}{541.5 \times 29.92}$$

$V_{m(std)}$ = 0.887 dscf 0.02832 m3/ft3
$V_{m(std)}$ = 0.025 dscm

Moisture Content, proportion, by volume - as per US EPA Method 5, Eq. 5-3

$$\frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

$V_{w(std)}$ = Volume of water vapor condensed	=	49.436	ft^3
$V_{m(std)}$ = Dry Gas Volume	=	0.887	ft^3

$$B_{ws} = \frac{49.436}{0.887 + 49.436}$$

B_{ws} = 0.9824

Moisture content at saturation

This calculated by polynomial fit: (86.7222826792858 + T_s*(-0.645483277572566) + T_s^2*0.00181527101645074 + T_s^3 * (-2.28823297043421E-06) + (T_s)^4*1.09201445204276E-09)*100*29.92/P_s)

86.722282679285800			=	86.7
-0.645483277572566	X	772.0	=	-498.3
0.00181527101645074	X	595984	=	1081.9
-2.28823297043421E-06	X	460099648	=	-1052.8
1.09201445204276E-09	X	3.55197E+11	=	387.9
		sum	=	5.3467

$$\text{sum} \times 100 \times \frac{29.92}{29.73} = 538.07\ \%$$

for further calculations

B_{ws} = 0.9824 98.24 %

Dry Molecular Weight of Stack Gas, lb/lb-mole - as per US EPA Method 3, Eq. 3-1

$$M_d = MW_{CO}(\%CO) + MW_{CO2}(\%CO_2) + MW_{O2}(\%O_2) + MW_{H2}(\%H_2) + MW_{CH4}(\%CH_4) + MW_{N2}(\%N_2)$$

MW_{CO}= Molecular weight of CO, divided by 100	=	0.28	lb/lb-mole
%CO = Percent CO by volume, dry basis	=	0.0	%
MW_{CO2}= Molecular weight of CO_2, divided by 100	=	0.44	lb/lb-mole
$\%CO_2$ = Percent CO_2 by volume, dry basis	=	0.0	%
MW_{O2} = Molecular weight of O_2, divided by 100	=	0.32	lb/lb-mole
$\%O_2$ = Percent O_2 by volume, dry basis	=	14.0	%
MW_{H2} = Molecular weight of H_2, divided by 100	=	0.02	lb/lb-mole
$\%H_2$ = Percent H_2 by volume, dry basis	=	0.0	%
MW_{CH4} = Molecular weight of CH_4, divided by 100	=	0.16	lb/lb-mole
$\%CH_4$ = Percent CH_4 by volume, dry basis	=	0.0	%
MW_{N2} = Molecular weight of N2, divided by 100	=	0.28	lb/lb-mole
$\%N_2$ = 100% - %CO - $\%CO_2$ - $\%O_2$ - %H2 - %CH4	=	86.0	%

$$M_d = \frac{(0.28 \times 0.0) + (0.44 \times 0.0) + (0.32 \times 14.0) + (0.02 \times 0.0) + (0.16 \times 0.0) + (0.28 \times 86.0)}{}$$

M_d = 28.56 lb/lb-mole

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: 26A - Acid Gases
Dates: July 14, 16, 17, 2011
Run No. 1

Molecular Weight of stack gas, lb/lb-mole - as per US EPA Method 2, Eq. 2-6

$$M_s = M_d (1-B_{ws}) + 18.0(B_{ws})$$

M_d= Dry molecular weight of stack gas	=	28.56	lb/lb-mole
B_{ws}= Proportion of water vapor, by volume	=	0.9824	proportion
18.0 = Molecular Weight of H_2O	=	18.00	lb/lb-mole

$$M_s = 28.56 \times (1 - 0.982) + (18.00 \times 0.982)$$

$$M_s = 18.19 \text{ lb/lb-mole}$$

Average Stack Gas Velocity, ft/sec - as per US EPA Method 2, Eq. 2-7

$$v_s = K_p \times C_p \times \text{deltaP}_{avg} \times \text{sqrt}(T_s/(P_s \times M_s))$$

K_p= Velocity equation constant	=	85.49	ft/sec[((lb/lb-mole)(in.Hg))/((degR)(in.H2O))]$^{1/2}$
C_p = S type pitot tube coefficient	=	0.84	
deltaP$_{avg}$=ave. sqrt. of the velocity head of stack gas	=	11.1271	in.H_2O
T_s = Absolute stack temperature	=	772.0	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
M_s = Molecular Weight of stack gas	=	18.19	lb/lb-mole

$$v_s = 85.49 \times 0.84 \times 11.13 \times \left(\frac{772.0}{29.73 \times 18.19}\right)^{0.5}$$

v_s = 954.79 ft/sec 15.9132 ft/min
WAF = 1.00
v_s(WAF Adjusted)= 954.79 ft/sec

Stack Area

$$A = 3.14 \times (\text{Stack Diameter}/2)^2$$

3.1415927 = PI	=	3.14	
Stack Diameter		0.67	ft2

$$A = 3.14 \times \left(\frac{0.67}{2}\right)^2$$

A = 0.35 ft2

Average Stack Gas Volumetric Flow Rate - Actual Conditions

$$Q_{actual} = vs \times A$$

v_s= Average stack gas velocity	=	954.79	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2

$$Q_{actual} = 954.79 \times 0.35$$

Q_{actual} = 333 ft3/sec
Q_{actual} = 19,997 ft3/min
Q_{actual} = 1,199,829 ft3/hr

Average Stack Gas Dry Volumetric Flow Rate, dscf/hr - as per US EPA Method 2, Eq. 2-8

$$Q = \frac{3600 \times (1-B_{ws}) \times v_s \times A \times T_{std} \times P_s}{T_s \times P_{std}}$$

3600= Conversion factor	=	3600	sec/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9824	proportion
v_s= Average stack gas velocity	=	954.79	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2
T_{std} = Standard absolute temperature	=	528	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
T_s = Absolute stack temperature	=	772.0	degR
P_{std} = Standard absolute pressure	=	29.92	in. Hg

$$Q = \frac{3600 \times (1.00 - 0.982) \times 954.79 \times 0.349 \times 528 \times 29.73088}{772.0 \times 29.92}$$

Q = 14,378 dscfh

Conversions: 60 min/hr; $\frac{1}{1000}$ k

Q = 240 dscfm
Q = 14 kdscfh
Q = 0.24 kdscfm

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: 26A - Acid Gases
Dates: July 14, 16, 17, 2011
Run No. 1

Average Stack Gas Wet Volumetric Flow Rate, wscf/hr

$$Q_w = \frac{Q}{(1-Bws)}$$

Q = Average Stack Gas Dry Volumetric Flow Rate	=	14,378	dscf/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9824	proportion

$$Q_w = \frac{14{,}378}{(1.00 - 0.982)}$$

$$\frac{\text{Conversions}}{60 \text{ min/hr}}$$

$$\frac{1}{1000}\text{k}$$

Q_w = 815,421 wscfh
= 13,590 wscfm
= 815 kwscfh
= 14 kwscfm

Nozzle Area

An = 3.1415927 x (Nozzle Diameter/12/2)^2

3.1415927 = PI	=	3.14	
12 = Conversion Factor		12.00	in/ft
Nozzle Diameter		0.123	in

$$An = 3.14 \times \left(\frac{0.12300}{12} \times \frac{1}{2}\right)^2$$

An = 8.25E-05 ft2

SHEET NO. 1 OF 1
PROJECT NO. 182129
DATE 10/23/2011
BY MJKrall
CHK'D

SUBJECT ExxonMobil BTRF DCU ICR HCN Calculations

Run 1

< 19.8 ug detected (Enthalpy)
0.887 dscf sample volume
18,614 dscfh flow rate from Ontario Hydro train

detected ug <19.8	Conv ft³	Conv liter 1000	Conv mg
0.887 dscf sample volume	28.32 liters	dscm	1000 ug

= < 0.7882 mg/dscm

detected ug <19.8	dry flow dscf 18,614	Conv lb	duration 20 min	Conv hr
0.887 dscf sample volume	hr	453.6x10⁶ ug	Vent Cycle	60 min

= < 3.05E-04 lb/Vent Cycle

A

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Acid Gases
Dates: July 14, 16, 17, 2011

Run No. : 1

Acid Gases	Sample Volume (dscf)		0.887	20 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		18,614			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 1 Concentration (ug/dscm)	Run 1 Emission Rate (lb/vent cycle)
Hydrogen cyanide		19.8		19.8	788	0.00031
Chlorine	177			177	7046	0.00273
Hydrogen chloride	320			320	12739	0.00493
Hydrogen flouride		301		301	11983	0.00464

Run No. : 2

Acid Gases	Sample Volume (dscf)		3.102	60 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		5,508			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 2 Concentration (ug/dscm)	Run 2 Emission Rate (lb/vent cycle)
Hydrogen cyanide		25.2		25.2	287	0.00010
Chlorine		69		69	785	0.00027
Hydrogen chloride		567		567	6454	0.00222
Hydrogen flouride		581		581	6614	0.00227

Run No. : 3

Acid Gases	Sample Volume (dscf)		1.032	40 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		3,916			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 3 Concentration (ug/dscm)	Run 3 Emission Rate (lb/vent cycle)
Hydrogen cyanide		24.9		24.9	852	0.00014
Chlorine		68.2		68.2	2334	0.00038
Hydrogen chloride		461		461	15773	0.00257
Hydrogen flouride		472		472	16150	0.00263

Acid Gases	**Average Concentration (ug/dscm)**	**Average Emission Rate (lb/vent cycle)**
Hydrogen cyanide	642	0.00018
Chlorine	3388	0.00113
Hydrogen chloride	11656	0.00324
Hydrogen flouride	11582	0.00318

Meter Box: Orifice Full Calibration

Date:	2/2/2011
Prev. Calib. Date:	2/2/2010
Location:	TRC S Austin
Technician:	MRL
Meter Serial No:	80715.00
Meter Box ID:	A
Atm. Pressure (corr. In H	29.30 ncorrected: 29.88
Critical Vacuum + 2 in Hg	16 in. Hg. (required minimum)
Prev. Calib Factor (Y):	0.9865

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	0.2353
Model:	LA40-73	48	0.3451
Tested By:	EW	55	0.4549
		63	0.5886

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
40	0.2353	0.3	25	925.682	933.424	7.742	48	46	51	49	23	56.0	57.0
48	0.3451	0.6	23	933.424	943.887	10.463	51	49	53	51	22	57.0	58.0
55	0.4549	1	21	943.887	956.517	12.63	53	51	53	51	21	58.0	58.0
63	0.5886	1.6	15	956.517	968.179	11.662	53	51	58	53	19	58.0	59.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y)		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
7.88	223.00	0.310	7.58	214.75	0.963	-0.001	1.915	0.17
10.60	300.13	0.455	10.22	289.49	0.965	0.001	1.767	0.02
12.78	361.94	0.601	12.30	348.25	0.962	-0.001	1.693	-0.05
11.78	333.56	0.777	11.36	321.70	0.964	0.001	1.611	-0.14

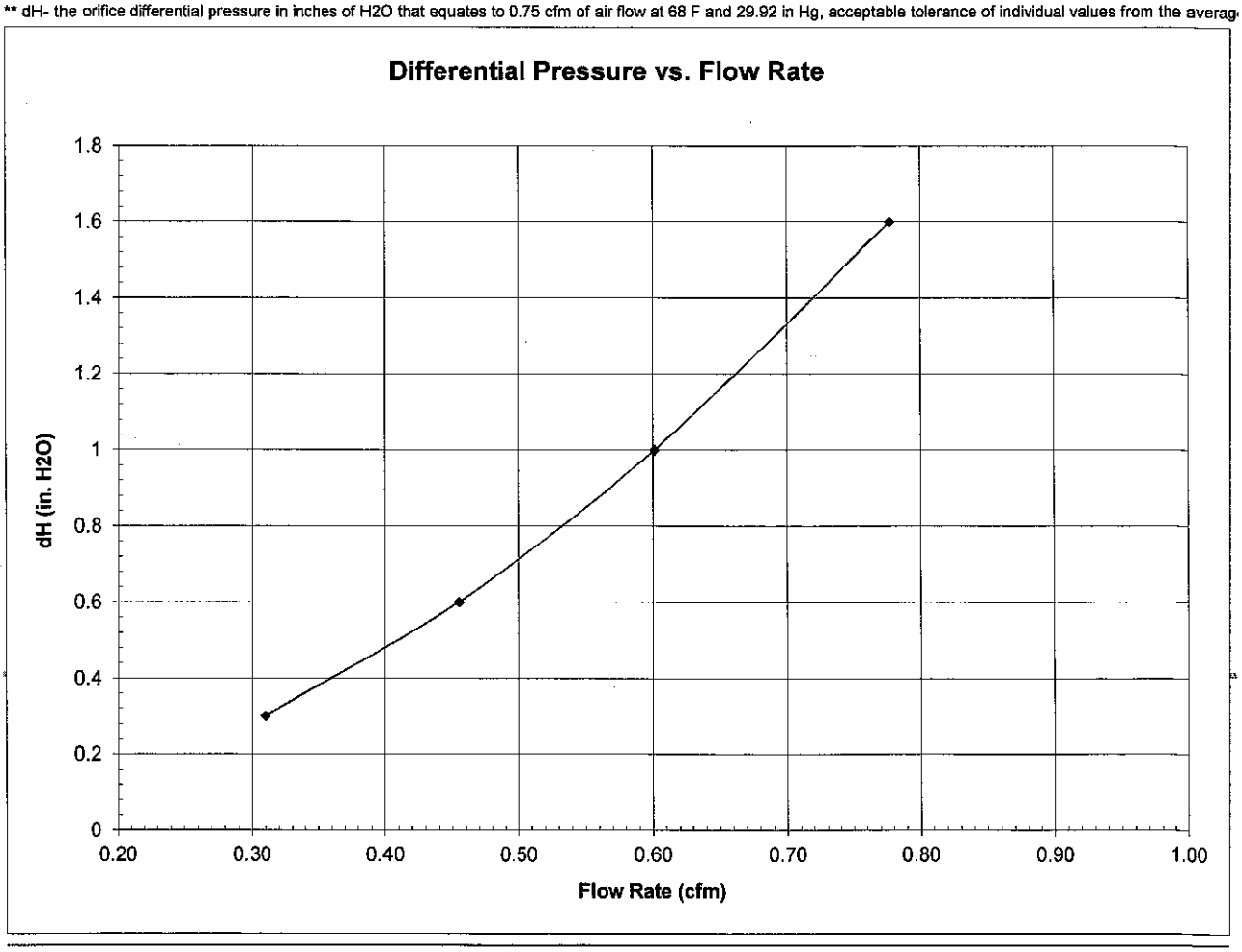
Meter Box

Calibration Test Results		**Pass/Fail**
*** Average Y:**	**0.9636**	***PASS***
Ave. Y w/in 5% of previous value:		*YES*
0.95 >= Y <= 1.05:		*PASS*
**** Average dH:**	**1.746**	***PASS***

Criteria:

* Y- ratio of the reading of the calibration meter (critical orifice) to the Meter Box DGM. Acceptable tolerance of individual values from the average is +/- 0.02.

** dH- the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air flow at 68 F and 29.92 in Hg, acceptable tolerance of individual values from the averag



Meter Box: Post-Test Calibration Check

Date: 10/13/2011
Prev. Calib. Date: 2/2/2011
Location: TRC S Austin
Technician: MRL
Meter Serial No: 80715
Meter Box ID: A
Atm. Pressure (corr. In 29.18 corrected: 29.47
Critical Vacuum + 2 in 16 in. Hg. (required minimum)
Calibration Factor (Y): 0.9636

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	
Model:	SX40-73	48	
Tested By:	EW	55	
		63	0.61

							Initial Temperatures		Final Temperatures			mbient Temperature	
Orifice Serial #	K' coefficien (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
63	0.61	1.8	27.0	457.057	479.316	22.259	66	67	69	68	18	70.0	70.0
63	0.61	1.8	20.0	479.316	495.816	16.5	69	68	72	69	18	70.0	71.0
63	0.61	1.8	16.0	495.816	509.064	13.248	72	69	72	70	18	71.0	71.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y_{check})		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
21.82	617.85	0.824	20.88	591.14	0.957	-0.001	1.674	0.01
16.11	456.26	0.825	15.46	437.67	0.959	0.001	1.659	0.00
12.91	365.47	0.828	12.36	349.97	0.958	0.000	1.652	-0.01

Meter Box
Post-Test Calibration Check Results

Ave. Y_{check}:	0.9579	***PASS***
Ave. Y_{check} w/in 5% of previous value:		***YES***
0.95 >= Y_{check} <= 1.05:		***PASS***

Post-Test Meter Factor Check

TRC

Console No.	80715	S. O. P. Reference	AM - 103
Temperature Display Type	Nutech	Calibrator Type	Omega model CL23A
Temperature Display Serial No.	N/A	Calibrator Serial No.	T239267

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)
1 (Stack)	31	0.2	210	0.3	497	0.3	994	0.4	1493	0.4
2 (Probe)	32	0.0	211	0.1	496	0.4	994	0.4	1493	0.4
3 (Filter)	32	0.0	210	0.3	496	0.4	994	0.4	1493	0.4
4 (Dryer)	32	0.0	211	0.1	496	0.4	994	0.4	1493	0.4
5 (Aux)	32	0.0	211	0.1	497	0.3	994	0.4	1493	0.4
6 (DGM Inlet)	31	0.2	213	-0.1	497	0.3	995	0.3	1495	0.3
7 (DGM Outlet)	32	0.0	212	0.0	496	0.4	993	0.5	1493	0.4

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, ° R)

Operator Michael Lopez

Date 2/2/2011

	Dry Gas Meter Thermocouple Calibration[3]		
	Readout Display Temperature °F	Reference Thermometer °F	Percent Difference
DGM-1	66	67.7	-0.3%
DGM-2	66	67.5	-0.3%

TRC

Console No.	80715	S. O. P. Reference	AM - 103
Temperature Display Type	Nutech	Calibrator Type	Omega model CL23A
Temperature Display Serial No.	N/A	Calibrator Serial No.	T239267

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)
1 (Stack)	30	0.4	209	0.4	494	0.6	993	0.5	1492	0.4
2 (Probe)	30	0.4	209	0.4	496	0.4	994	0.4	1492	0.4
3 (Filter)	29	0.6	211	0.1	495	0.5	993	0.5	1492	0.4
4 (Dryer)	28	0.8	209	0.4	495	0.5	993	0.5	1492	0.4
5 (Aux)	29	0.6	212	0.0	494	0.6	993	0.5	1493	0.4
6 (DGM Inlet)	28	0.8	209	0.4	495	0.5	994	0.4	1493	0.4
7 (DGM Outlet)	28	0.8	209	0.4	494	0.6	993	0.5	1492	0.4

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, ° R)

Operator Michael Lopez Date 7/25/2011

	Dry Gas Meter Thermocouple Calibration[3]		
	Readout Display Temperature °F	Reference Thermometer °F	Percent Difference
DGM-1	66	67.7	-0.3%
DGM-2	66	67.5	-0.3%

TRC Nozzle Calibration and Inspection Data Sheet

Company Name: ExxonMobil BTRF Duluth
Nozzle Number: M26A - Glass - 1

Measure three diameters (in inches) as shown below. Average the diameters and calculate area according to the calculations below.

Calibration Measurement

*Diameter 1 (in): 0.122 **Date:** 7/12/2011
*Diameter 2 (in): 0.122
*Diameter 3 (in): 0.125

Average Diameter (in): 0.123 = (Sum of Diameters 1-3) / 3

Average Radius (in): 0.0615 = Average Diameter (in) / 2
Average Radius (ft): 0.005125 = Average Radius (in) / 12

Nozzle Area (ft2): 0.0000825 = π x radius (ft) ^2

*Maximum allowable difference between largest diameter and smallest diameter is 0.004 inches.

Nozzle is round, sharp-edged, free of nicks and dents

TRC

Michael J Kuhl
signature

TRC Environmental Corporation

9225 US Hwy 183 S
Austin, TX 78747

ExxonMobil - DCU ICR

Project #182129

Analytical Report (0711-163)

EPA Method 26A

Hydrogen chloride, Hydrogen fluoride
Chloride

EPA OTM 29

Hydrogen cyanide

Enthalpy Analytical, Inc.
Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 135 pages.

Bonnie L Evans

QA Review Performed by – Bonnie L Evans

Report Issued: 09/20/2011

Summary of Results

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A

Client #	182129
Job #	0711-163
# Samples	3 Runs, 2 Blanks

Compound	Sample ID / Catch Weight (ug)		
	R1 H2SO4	***R2 H2SO4***	***R3 H2SO4***
Hydrogen fluoride	301 ND	581 ND	472 ND
Hydrogen chloride	320 J	567 ND	461 ND
	Rgtblk-H2SO4		
Hydrogen fluoride	25.3 ND		
Hydrogen chloride	24.7 ND		
	R1 NaOH	***R2 NaOH***	***R3 NaOH***
Chloride	177 J	69.0 ND	68.2 ND
	Rgtblk-NaOH		
Chloride	40.0 ND		

Company	TRC Environmental Corp.
Analyst	AMP
Parameters	EPA OTM 29

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

Compound	Sample ID / Catch Weight (ug)		
	R1-NaOH	***R2-NaOH***	***R3-NaOH***
Hydrogen Cyanide	19.8 ND	25.2 ND	24.9 ND
	Rgtblk-NaOH		
Hydrogen Cyanide	14.6 ND		

Results

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A H2SO4

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Hydrogen fluoride as Fluoride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Acid Conversion Factor	Catch Weight (ug)	Qual
R1 H2SO4	037-5101.D	037-5102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	1,431	1.053	301	ND
R2 H2SO4	040-5401.D	040-5402.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,760	1.053	581	ND
R3 H2SO4	041-5501.D	041-5502.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,242	1.053	472	ND
H2SO4 Blank	042-5801.D	042-5802.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	120	1.053	25.3	ND
0.01N H2SO4/NaOH RB	064-4701.D	064-4702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
0.01N H2SO4/NaOH RB	064-7101.D	064-7102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
MS R1 H2SO4	038-5201.D	038-5202.D	HPLC55PG192.M	2.71	2.71	0.0	3.24	3.24	0.1	3.24	1	10.0	1.053	34.1	
													Spike Amount (ug)	31.6	
													Native Amount (ug)	0.00	
													Spike Recovery (%)	108%	
MSD R1 H2SO4	039-5301.D	039-5302.D	HPLC55PG192.M	2.71	2.71	0.0	3.26	3.23	0.4	3.24	1	10.0	1.053	34.1	
													Spike Amount (ug)	31.6	
													Native Amount (ug)	0.00	
													Spike Recovery (%)	108%	
HPLC55pg192 #SS	063-4601.D	063-4602.D	HPLC55PG192.M	2.71	2.71	0.0	1.32	1.33	0.2	1.32	1	1.00	1.053	1.40	
													Spike Amount (ug)	1.32	
													Spike Recovery (%)	106%	
HPLC55pg192 #SS	063-7001.D	063-7002.D	HPLC55PG192.M	2.71	2.71	0.0	1.34	1.34	0.2	1.34	1	1.00	1.053	1.41	
													Spike Amount (ug)	1.32	
													Spike Recovery (%)	107%	

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A H2SO4

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Hydrogen chloride as Chloride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Acid Conversion Factor	Catch Weight (ug)	Qual
R1 H2SO4	037-5101.D	037-5102.D	HPLC55PG192.M	3.60	3.59	0.2	0.0214	0.0222	1.7	0.0218	10	1,431	1.028	320	J
R2 H2SO4	040-5401.D	040-5402.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,760	1.028	567	ND
R3 H2SO4	041-5501.D	041-5502.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,242	1.028	461	ND
H2SO4 Blank	042-5801.D	042-5802.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	120	1.028	24.7	ND
0.01N H2SO4/NaOH RB	064-4701.D	064-4702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
0.01N H2SO4/NaOH RB	064-7101.D	064-7102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
MS R1 H2SO4	038-5201.D	038-5202.D	HPLC55PG192.M	3.60	3.60	0.0	2.89	2.89	0.0	2.89	1	10.0	1.028	29.7	
													Spike Amount (ug)	30.8	
													Native Amount (ug)	0.224	
													Spike Recovery (%)	95.6%	
MSD R1 H2SO4	039-5301.D	039-5302.D	HPLC55PG192.M	3.60	3.60	0.1	2.88	2.87	0.2	2.87	1	10.0	1.028	29.5	
													Spike Amount (ug)	30.8	
													Native Amount (ug)	0.224	
													Spike Recovery (%)	95.0%	
HPLC55pg192 #SS	063-4601.D	063-4602.D	HPLC55PG192.M	3.62	3.62	0.0	2.43	2.44	0.2	2.43	1	1.00	1.028	2.50	
													Spike Amount (ug)	2.57	
													Spike Recovery (%)	97.2%	
HPLC55pg192 #SS	063-7001.D	063-7002.D	HPLC55PG192.M	3.61	3.61	0.1	2.46	2.45	0.1	2.46	1	1.00	1.028	2.52	
													Spike Amount (ug)	2.57	
													Spike Recovery (%)	98.2%	

EM-BTRF-000333

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A NaOH

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Chloride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 NaOH	052-7201.D	052-7202.D	HPLC55PG192.M	3.56	3.56	0.1	0.0659	0.0647	0.9	0.0653	10	271	177	J
R2 NaOH	055-7501.D	055-7502.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	345	69.0	ND
R3 NaOH	056-7601.D	056-7602.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	341	68.2	ND
NaOH Blank	057-7701.D	057-7702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	200	40.0	ND
0.01N H2SO4/NaOH RB	064-4701.D	064-4702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	0.0200	ND
0.01N H2SO4/NaOH RB	064-7101.D	064-7102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	0.0200	ND
MS R1 NaOH	053-7301.D	053-7302.D	HPLC55PG192.M	3.56	3.56	0.0	3.03	3.02	0.2	3.03	1	10.0	30.3	
													Spike Amount (ug)	30.0
													Native Amount (ug)	0.653
													Spike Recovery (%)	98.7%
MSD R1 NaOH	054-7401.D	054-7402.D	HPLC55PG192.M	3.56	3.56	0.0	3.03	3.03	0.1	3.03	1	10.0	30.3	
													Spike Amount (ug)	30.0
													Native Amount (ug)	0.653
													Spike Recovery (%)	98.8%

EM-BTRF-000336

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A NaOH

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Chloride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
HPLC55pg192 #SS	063-4601.D	063-4602.D	HPLC55PG192.M	3.62	3.62	0.0	2.43	2.44	0.2	2.43	1	1.00	2.43	
												Spike Amount (ug)	2.50	
												Spike Recovery (%)	97.2%	
HPLC55pg192 #SS	063-7001.D	063-7002.D	HPLC55PG192.M	3.61	3.61	0.1	2.46	2.45	0.1	2.46	1	1.00	2.46	
												Spike Amount (ug)	2.50	
												Spike Recovery (%)	98.2%	

EM-BTRF-000337

Company	TRC Environmental Corp.
Analyst	AMP
Parameters	EPA OTM 29

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0146 (ug/mL)
LOQ 0.0998 (ug/mL)
Compound Hydrogen Cyanide

Lower Curve Limit 0.0998 (ug/mL)
Upper Curve Limit 2.50 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1-NaOH	hplc60pg24 #42	hplc60pg24 #43	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	271	19.8	ND
R2-NaOH	hplc60pg24 #48	hplc60pg24 #49	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	345	25.2	ND
R3-NaOH	hplc60pg24 #50	hplc60pg24 #51	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	341	24.9	ND
Rgtblk-NaOH	hplc60pg24 #56	hplc60pg24 #57	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	200	14.6	ND
Hplc60pg20 #RB	hplc60pg24 #16	hplc60pg24 #17	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	1	1.00	0.0146	ND
MS / R1-NaOH	hplc60pg24 #44	hplc60pg24 #45	HCN-Method	8.37	8.37	0.0	1.01	1.01	0.4	1.01	1	1.05	1.06	
													Spike Amount (ug)	1.25
													Native Amount (ug)	0.00
													Spike Recovery (%)	84.7%
MSD / R1-NaOH	hplc60pg24 #46	hplc60pg24 #47	HCN-Method	8.37	8.37	0.0	0.995	1.00	0.3	1.00	1	1.05	1.05	
													Spike Amount (ug)	1.25
													Native Amount (ug)	0.00
													Spike Recovery (%)	83.7%
Hplc60pg20 #SS	hplc60pg24 #14	hplc60pg24 #15	HCN-Method	8.07	8.07	0.0	0.491	0.485	0.6	0.488	1	1.00	0.488	
													Spike Amount (ug)	0.440
													Spike Recovery (%)	111%

EM-BTRF-000336

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corporation - Austin
Analyst	EO
Parameters	EPA Method 26A

Client #	182129
Job #	0711-163
# Samples	3 Runs, 2 Blanks

Custody

Heather Tarjeft received the samples on 7/27/11 after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received at 16.7°C in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for hydrogen chloride (HCl), hydrogen fluoride (HF), and chloride using the analytical procedures in EPA Method 26A, Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method (40 CFR Part 60, Appendix A).

The samples were analyzed following the procedures in Section 11.0, Analytical Procedures. All samples and standards are prepared, stored, and analyzed using high-density polyethylene containers.

The Metrohm 861 Compact IC ("Smithers" S/N 1861002007189) was equipped with a Metrohm 861 Conductivity Detector and a Metrosep A Supp 5 - 110/4.0mm column (S/N # 7908289).

Calibration

The calibration curve(s) is (are) located in the back of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Chromatographic Conditions

The acquisition method Metrohm.M is included in the Calibration Curve Chromatograms section of this report.

QC Notes

As required in Section 7.2.2, Absorbing Solution Blanks, client-provided reagent blanks were analyzed. Additionally, a quality control check sample was analyzed at the same time as the blanks and samples. All method required acceptance criteria were met.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)

HCl, HF, and chloride were not identified above the MDL in the analyses of the method blanks and run blanks.

A matrix spike and matrix spike duplicate (MS and MSD) were prepared using aliquots of the samples ***R1-H2SO4*** and ***R1-NaOH***. The recovery values were 108% and 108% for HF, 95.6% and 95.0% for HCl, and 98.7% and 98.8% for Cl.

A second source standard (hplc55pg192 #SS) was prepared and used as a Laboratory Control Sample and analyzed with the samples. The recovery values were 106% and 107% for HF and 97.2% and 98.2% for HCl.

All sample preparation and analytical holding times specified in the method were met. Section 13.2, Sample Stability, specifies an analytical holding time of four weeks.

Reporting Notes

The volumes as recorded on the chain of custody were used for the catch weight calculations, with the exception of the reagent blanks which were measured.

The H_2SO_4 matrix samples were analyzed for Cl^- and F^- but are reported as HCl and HF. The results were converted using an acid conversion factor of 1.028 for HCl and 1.053 for HF.

These analyses met the requirements of the NELAC Standard. Any deviations from the requirements of the reference method and/or the NELAC Standard have been previously noted in this narrative. The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp.
Analyst	AMP
Parameters	EPA OTM-29

Client #	182129
Job #	0711-163
# Samples	3 runs, 1 blank

Custody

Heather Tarjeft received the samples on 7/27/11 after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received at 16.7°C in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for hydrogen cyanide (HCN) using the analytical procedures in OTM-29, Sampling and Analysis of Hydrogen Cyanide Emissions from Stationary Sources.

The pH of the NaOH samples was 14.

The ICS-3000 Ion Chromatograph ("Flanders") was equipped with an Electrochemical Detector and a Dionex Ion Pac AS7, 4 x 250 mm (S/N 011640) column, for these analyses.

Calibration

The calibration curve is located in the back of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Some of the calibration check standards analyzed with the samples were not within the 10% method criteria. The recoveries of the check standards ranged from 49% to 105%.

Chromatographic Conditions

The acquisition method (HCN.Back) is included in the Calibration Curve Chromatograms section of this report.

QC Notes

Hydrogen cyanide was not detected in the field reagent blank or the laboratory reagent blank.

The samples were analyzed 34 days outside the method recommended holding time of 30 days.

A matrix spike was performed in duplicate (MS and MSD) on sample ***R1-NaOH***. The recovery values were 84.7% and 83.7%.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)

A second source standard (#SS) was prepared and used as a Laboratory Control Sample and analyzed with the samples. The recovery value was 111%.

Reporting Notes

The volumes as recorded on the chain of custody were used for the catch weight calculations, with the exception of the reagent blanks which were measured.

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

APPENDIX E: EPA METHODS 15/16B—SPECIATED SULFUR COMPOUNDS AND TRS DATA

ExxonMobil BTRF DCU ICR Test - Sulfur Compounds Summary

				MW	34.08		60.07		76.14		
	Date	Time	Moisture (%)	H2S ppmv, wet	H2S ppmv, dry	COS ppmv, wet	COS ppmv, dry	CS2 ppmv, wet	CS2 ppmv, dry		TRS ppmv, dry
Run 1	7/14/2011	2006 - 2026	97.71	0.248	552	<0.21	<468	<0.0711	<158		<1336.69
Run 2	7/16/2011	0043 - 0143	97.61	9.230	19696	<0.21	<448	<0.0711	<152		<20447.37
Run 3	7/17/2011	0626 - 0706	98.38	1.730	5446	<0.21	<661	<0.0711	<224		<6555.07
Average:			97.90	3.736	8565	<0.21	<526	<0.0711	<178		<9446.38

51:1 dilution

	Flow Rate	Units	H2S lb/hr	H2S lb/vent cycle	COS lb/hr	COS lb/vent cycle	CS2 lb/hr	CS2 lb/vent cycle	TRS lb/vent cycle
Run 1	18614	dscfh	0.909	0.303	<1.357	<0.452	<0.582	<0.194	<0.950
Run 2	5508	dscfh	9.596	9.596	<0.385	<0.385	<0.165	<0.165	<10.145
Run 3	3916	dscfh	1.886	1.258	<0.404	<0.269	<0.173	<0.115	<1.642
Average			4.130	3.719	<0.715	<0.369	<0.307	<0.158	<4.246

ExxonMobil BTRF Method 15 Sample Log

Filename	Date	Time	Description	Cmpnd.	Area	Conc.	Units	Cmpnd.	Area	Conc.	Units	Cmpnd.	Area	Conc.	Units
DCU FPD GC-1 163.CHR	7/14/2011	19:18:34	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 164.CHR	7/14/2011	19:27:04	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 166.CHR	7/14/2011	20:05:08	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 167.CHR	7/14/2011	20:13:38	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 168.CHR	7/14/2011	20:22:08	DCU Vent	H2S	4.06	1.24	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
				Run 1 Average=		0.248	ppmv								
DCU FPD GC-1 183.CHR	7/16/2011	0:42:15	DCU Vent	H2S	1083.74	14.05	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 184.CHR	7/16/2011	0:50:22	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 185.CHR	7/16/2011	0:58:52	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 186.CHR	7/16/2011	1:07:15	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 187.CHR	7/16/2011	1:13:51	DCU Vent	H2S	960.76	13.34	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 188.CHR	7/16/2011	1:21:51	DCU Vent	H2S	751.89	11.98	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 189.CHR	7/16/2011	1:29:58	DCU Vent	H2S	1458.49	16	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 190.CHR	7/16/2011	1:38:09	DCU Vent	H2S	2029.11	18.47	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
				Run 2 Average=		9.23	ppmv								
DCU FPD GC-1 200.CHR	7/17/2011	6:24:03	DCU Vent	H2S	455.59	9.64	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 201.CHR	7/17/2011	6:32:21	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 202.CHR	7/17/2011	6:40:39	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 203.CHR	7/17/2011	6:48:57	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 204.CHR	7/17/2011	6:57:15	DCU Vent	H2S	0	0	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
DCU FPD GC-1 205.CHR	7/17/2011	7:05:33	DCU Vent	H2S	2.48	0.76	ppmv	COS	0	0	ppmv	CS2	0	0	ppmv
				Run 3 Average=		1.73	ppmv								

Method 15 Analyte Detection Limit Study
ExxonMobil BTRF Method 15 Sample Log

Filename	Date	Time	Description	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units
DCU FPD GC-1 118.CHR	7/12/2011	12:51:41	1922 ml/min Oven Flow	H2S	1.131	7.1	36.36	3.74	ppmv	COS	1.701	15.1	97.26	3.23	ppmv	CS2	5.173	4.4	34.63	1.63	ppmv
DCU FPD GC-1 119.CHR	7/12/2011	12:59:55	1923 ml/min Oven Flow	H2S	1.113	6.7	34.87	3.7	ppmv	COS	1.683	14	89.3	3.09	ppmv	CS2	5.173	4.1	30.35	1.58	ppmv
DCU FPD GC-1 120.CHR	7/12/2011	13:08:50	1924 ml/min Oven Flow	H2S	1.13	6.6	34.54	3.68	ppmv	COS	1.7	13.7	85.92	3.03	ppmv	CS2	5.175	4	30.36	1.58	ppmv
DCU FPD GC-1 121.CHR	7/12/2011	13:17:32	1925 ml/min Oven Flow	H2S	1.143	6.6	34.41	3.68	ppmv	COS	1.705	13.8	86.89	3.05	ppmv	CS2	5.175	4.1	30.88	1.59	ppmv
DCU FPD GC-1 122.CHR	7/12/2011	13:25:44	1926 ml/min Oven Flow	H2S	1.115	6.7	34.94	3.7	ppmv	COS	1.68	14.2	89.83	3.11	ppmv	CS2	5.165	4.3	34.36	1.65	ppmv
DCU FPD GC-1 123.CHR	7/12/2011	13:34:31	1927 ml/min Oven Flow	H2S	1.138	6.7	34.36	3.67	ppmv	COS	1.706	13.9	87.25	3.06	ppmv	CS2	5.181	4.2	31.4	1.6	ppmv
DCU FPD GC-1 124.CHR	7/12/2011	13:43:25	1928 ml/min Oven Flow	H2S	1.133	6.9	35.36	3.71	ppmv	COS	1.705	14.4	92.06	3.15	ppmv	CS2	5.176	4.2	31.86	1.61	ppmv
DCU FPD GC-1 125.CHR	7/12/2011	13:51:42	1929 ml/min Oven Flow	H2S	1.11	7.1	37.52	3.78	ppmv	COS	1.675	14.7	92.06	3.15	ppmv	CS2	5.171	4.4	32.5	1.62	ppmv
DCU FPD GC-1 126.CHR	7/12/2011	14:00:40	1930 ml/min Oven Flow	H2S	1.13	7.7	39.48	3.83	ppmv	COS	1.698	15.1	95.09	3.2	ppmv	CS2	5.173	4.3	32.91	1.62	ppmv
							Std Dev=	0.0533					Std Dev=	0.0688					Std Dev=	0.0237	
							Det Limit=	0.160	(3x Std dev)				Det Limit=	0.206	(3x Std dev)				Det Limit=	0.0711	(3x Std dev)

EM-BTRF-000349

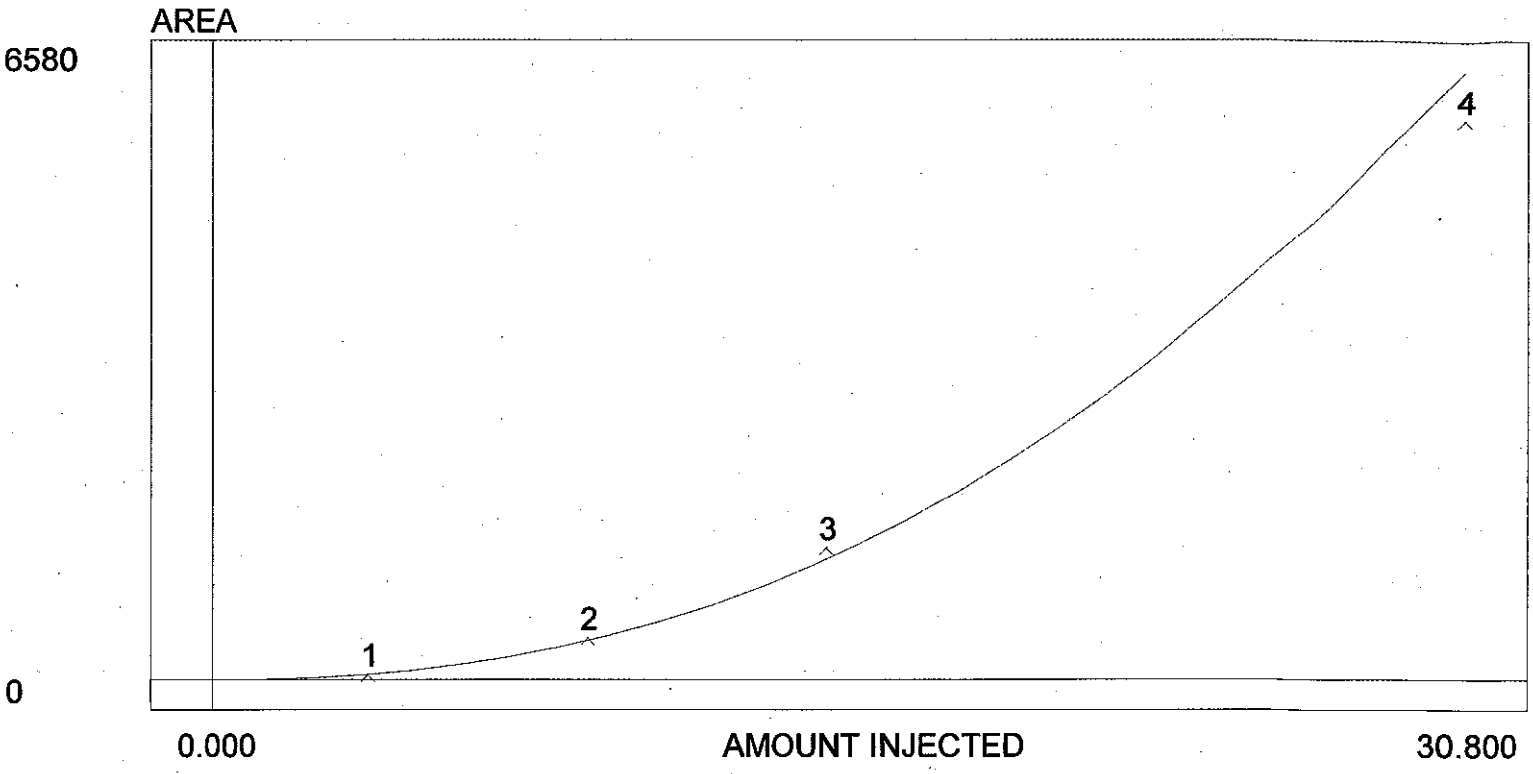
ExxonMobil BTRF Method 15 Sample Log

Filename	Date	Time	Description	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units
DCU FPD GC-1 131.CHR	7/13/2011	10:32:00	239.5 ml/min Oven Flow	H2S	1.138	1258.4	6004.77	30.75	ppmv	COS	1.706	1596.7	9693.59	37.36	ppmv	CS2	5.186	579.6	4031.43	14.01	ppmv
DCU FPD GC-1 132.CHR	7/13/2011	10:41:57	239.5 ml/min Oven Flow	H2S	1.143	1171.7	5690.04	30.83	ppmv	COS	1.715	1474.6	8991	35.97	ppmv	CS2	5.188	546.8	3783.71	12.7	ppmv
DCU FPD GC-1 133.CHR	7/13/2011	10:51:48	239.5 ml/min Oven Flow	H2S	1.143	1234.7	6042.38	31.15	ppmv	COS	1.715	1540.9	9457.23	36.32	ppmv	CS2	5.186	577.2	4025	12.85	ppmv
DCU FPD GC-1 134.CHR	7/13/2011	11:00:12	239.5 ml/min Oven Flow	H2S	1.128	1241.9	6105.82	30.96	ppmv	COS	1.7	1427.1	9088.27	35.91	ppmv	CS2	5.185	566.9	3943.55	12.74	ppmv
DCU FPD GC-1 135.CHR	7/13/2011	11:09:10	485.4 ml/min Oven Flow	H2S	1.138	307	1486.95	15.82	ppmv	COS	1.706	436.2	2616.57	20.17	ppmv	CS2	5.188	141.2	983.61	6.82	ppmv
DCU FPD GC-1 136.CHR	7/13/2011	11:18:18	485.4 ml/min Oven Flow	H2S	1.138	284.7	1382.1	15.57	ppmv	COS	1.708	411.9	2478.81	19.84	ppmv	CS2	5.19	136.4	941.48	6.73	ppmv
DCU FPD GC-1 137.CHR	7/13/2011	11:27:53	485.4 ml/min Oven Flow	H2S	1.141	286.2	1389.73	15.5	ppmv	COS	1.711	410.9	2475.71	19.78	ppmv	CS2	5.188	133.2	934.14	6.71	ppmv
DCU FPD GC-1 138.CHR	7/13/2011	11:37:14	792.4 ml/min Oven Flow	H2S	1.14	88.5	439.3	10.02	ppmv	COS	1.708	146.8	887.03	12.32	ppmv	CS2	5.19	44.1	311.6	4.2	ppmv
DCU FPD GC-1 139.CHR	7/13/2011	11:45:53	792.4 ml/min Oven Flow	H2S	1.145	90.7	445.47	10.06	ppmv	COS	1.706	146.9	885.21	12.31	ppmv	CS2	5.186	43.4	308.22	4.1	ppmv
DCU FPD GC-1 140.CHR	7/13/2011	11:54:08	792.4 ml/min Oven Flow	H2S	1.116	92	454.54	10.13	ppmv	COS	1.68	150	900.91	12.39	ppmv	CS2	5.18	43.7	311.67	4.13	ppmv
DCU FPD GC-1 141.CHR	7/13/2011	12:02:55	1932 ml/min Oven Flow	H2S	1.145	10.2	52.95	3.76	ppmv	COS	1.71	20.3	128.98	4.57	ppmv	CS2	5.188	5.6	42.9	1.61	ppmv
DCU FPD GC-1 142.CHR	7/13/2011	12:11:13	1932 ml/min Oven Flow	H2S	1.118	9.7	50.78	3.72	ppmv	COS	1.685	19.6	121.74	4.53	ppmv	CS2	5.186	5.3	40.01	1.56	ppmv
DCU FPD GC-1 143.CHR	7/13/2011	12:19:44	1932 ml/min Oven Flow	H2S	1.13	9.7	50.06	3.7	ppmv	COS	1.71	19.5	121.28	4.52	ppmv	CS2	5.186	5.2	38.46	1.54	ppmv
DCU FPD GC-1 144.CHR	7/13/2011	12:29:53	25 ppm H2S recovery Check	H2S	1.148	0.4	1.99	0.61	PPMV	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 145.CHR	7/13/2011	12:38:01	25 ppm H2S recovery Check	H2S	1.103	0.4	1.8	0.55	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 146.CHR	7/13/2011	12:41:05	25 ppm H2S recovery Check	H2S	1.145	0.4	1.96	0.6	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 147.CHR	7/13/2011	12:44:44	25 ppm H2S recovery Check	H2S	1.138	0.3	1.78	0.55	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 148.CHR	7/13/2011	13:32:18	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 150.CHR	7/13/2011	13:46:30	DCU Vent	H2S	1.13	2177.5	10269.05	38.5	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 151.CHR	7/13/2011	13:54:41	DCU Vent	H2S	1.11	542.6	2543.44	20.36	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 152.CHR	7/13/2011	14:03:12	DCU Vent	H2S	1.121	599.6	2833.74	21.35	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 153.CHR	7/13/2011	14:11:42	DCU Vent	H2S	1.12	957.7	4554.16	26.24	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 154.CHR	7/13/2011	14:20:12	DCU Vent	H2S	1.121	443	2088.93	18.7	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 155.CHR	7/13/2011	14:28:42	Zero N2	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 156.CHR	7/13/2011	14:37:37	485.4 ml/min Oven Flow	H2S	1.136	284.2	1348.11	15.45	ppmv	COS	1.701	431.9	2570.32	19.56	ppmv	CS2	5.183	139	962.68	6.6	ppmv
DCU FPD GC-1 157.CHR	7/13/2011	14:46:20	485.4 ml/min Oven Flow	H2S	1.14	306.9	1470.54	16.06	ppmv	COS	1.7	432.5	2589.34	19.63	ppmv	CS2	5.181	137.6	959.62	6.59	ppmv
DCU FPD GC-1 158.CHR	7/13/2011	14:55:21	485.4 ml/min Oven Flow	H2S	1.133	309.3	1486.14	16.13	ppmv	COS	1.696	437.6	2612.72	19.71	ppmv	CS2	5.18	140.4	975.58	6.64	ppmv
DCU FPD GC-1 159.CHR	7/14/2011	16:21:06	485.4 ml/min Oven Flow	H2S	1.14	216.2	1021.81	13.7	ppmv	COS	1.703	419.5	2479.23	19.21	ppmv	CS2	5.166	145.9	1009.16	6.74	ppmv
DCU FPD GC-1 160.CHR	7/14/2011	16:30:33	485.4 ml/min Oven Flow	H2S	1.133	312.5	1491.69	16.15	ppmv	COS	1.7	450	2686.51	19.97	ppmv	CS2	5.185	143.7	991.9	6.69	ppmv
DCU FPD GC-1 161.CHR	7/14/2011	16:39:48	485.4 ml/min Oven Flow	H2S	1.131	327.2	1565.13	16.49	ppmv	COS	1.698	455.2	2730.31	20.13	ppmv	CS2	5.191	148.1	1023.3	6.78	ppmv
DCU FPD GC-1 162.CHR	7/14/2011	16:57:16	485.4 ml/min Oven Flow	H2S	1.148	312.8	1504.33	16.21	ppmv	COS	1.72	455.4	2728.7	20.12	ppmv	CS2	5.191	151.6	1046.04	6.85	ppmv
DCU FPD GC-1 163.CHR	7/14/2011	19:18:34	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 164.CHR	7/14/2011	19:27:04	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 166.CHR	7/14/2011	20:05:08	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 167.CHR	7/14/2011	20:13:38	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 168.CHR	7/14/2011	20:22:08	DCU Vent	H2S	1.12	0.9	4.06	1.24	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 169.CHR	7/14/2011	20:30:39	485.4 ml/min Oven Flow	H2S	1.131	267	1258.41	15	ppmv	COS	1.706	420.3	2520.5	19.37	ppmv	CS2	5.183	138.4	953.46	6.57	ppmv
DCU FPD GC-1 170.CHR	7/14/2011	20:39:03	485.4 ml/min Oven Flow	H2S	1.128	317.7	1524.17	16.3	ppmv	COS	1.695	412.9	2563.79	19.54	ppmv	CS2	5.185	143.6	985.57	6.67	ppmv
DCU FPD GC-1 171.CHR	7/14/2011	20:47:21	485.4 ml/min Oven Flow	H2S	1.12	328.5	1585.57	16.58	ppmv	COS	1.685	448.9	2692.07	19.99	ppmv	CS2	5.181	143.8	990.55	6.69	ppmv
DCU FPD GC-1 172.CHR	7/14/2011	20:55:57	485.4 ml/min Oven Flow	H2S	1.138	298.9	1518.19	16.27	ppmv	COS	1.71	457.6	2714	20.07	ppmv	CS2	5.188	144	997.66	6.71	ppmv
DCU FPD GC-1 173.CHR	7/15/2011	10:13:38	485.4 ml/min Oven Flow	H2S	1.145	221.6	1055.74	13.89	ppmv	COS	1.711	404.3	2402.38	18.92	ppmv	CS2	5.171	141.1	969.54	6.62	ppmv
DCU FPD GC-1 174.CHR	7/15/2011	10:22:47	485.4 ml/min Oven Flow	H2S	1.14	309.7	1486.81	16.13	ppmv	COS	1.71	442.5	2637.18	19.8	ppmv	CS2	5.191	141	965.04	6.6	ppmv
DCU FPD GC-1 175.CHR	7/15/2011	23:12:53	485.4 ml/min Oven Flow	H2S	1.143	209.7	997.68	13.57	ppmv	COS	1.711	406.2	2417.19	18.98	ppmv	CS2	5.171	147.3	1012.88	6.75	ppmv
DCU FPD GC-1 176.CHR	7/15/2011	23:21:16	485.4 ml/min Oven Flow	H2S	1.131	324.8	1559.88	16.46	ppmv	COS	1.701	412.2	2567.81	19.55	ppmv	CS2	5.191	145.4	1007.03	6.74	ppmv
DCU FPD GC-1 177.CHR	7/15/2011	23:29:30	485.4 ml/min Oven Flow	H2S	1.121	340.5	1632.79	16.79	ppmv	COS	1.69	451.2	2697.38	20.01	ppmv	CS2	5.193	146.4	1010.96	6.75	ppmv
DCU FPD GC-1 178.CHR	7/15/2011	23:38:50	485.4 ml/min Oven Flow	H2S	1.141	334.2	1619.7	16.73	ppmv	COS	1.713	447.4	2691.36	19.99	ppmv	CS2	5.196	147.5	1021.41	6.78	ppmv
DCU FPD GC-1 179.CHR	7/15/2011	23:58:44	25 ppm H2S recovery Check	H2S	1.165	0.3	1.45	0.45	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 180.CHR	7/16/2011	0:02:21	25 ppm H2S recovery Check	H2S	1.143	0.3	1.67	0.51	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 181.CHR	7/16/2011	0:05:09	25 ppm H2S recovery Check	H2S	1.148	0.3	1.59	0.49	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 182.CHR	7/16/2011	0:07:46	25 ppm H2S recovery Check	H2S	1.146	0.3	1.5	0.46	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 183.CHR	7/16/2011	0:42:15	DCU Vent	H2S	1.15	228	1083.74	14.05	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 184.CHR	7/16/2011	0:50:22	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 185.CHR	7/16/2011	0:58:52	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 186.CHR	7/16/2011	1:07:15	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 187.CHR	7/16/2011	1:13:51	DCU Vent	H2S	1.138	203.4	960.76	13.34	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 188.CHR	7/16/2011	1:21:51	DCU Vent	H2S	1.126	161.4	751.89	11.98	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv

ExxonMobil BTRF Method 15 Sample Log

Filename	Date	Time	Description	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units	Cmpnd.	RT(min)	Hgt(mv)	Area	Conc.	Units
DCU FPD GC-1 189.CHR	7/16/2011	1:29:58	DCU Vent	H2S	1.116	314.1	1458.49	16	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 190.CHR	7/16/2011	1:38:09	DCU Vent	H2S	1.113	434.7	2029.11	18.47	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 191.CHR	7/16/2011	1:50:27	485.4 ml/min Oven Flow	H2S	1.146	310.3	1489.39	16.14	ppmv	COS	1.715	439.2	2621.12	19.74	ppmv	CS2	5.186	142.6	981.67	6.66	ppmv
DCU FPD GC-1 192.CHR	7/16/2011	1:58:48	485.4 ml/min Oven Flow	H2S	1.131	352.7	1711.24	17.15	ppmv	COS	1.705	429.7	2690.28	19.99	ppmv	CS2	5.183	147.4	1028.9	6.8	ppmv
DCU FPD GC-1 193.CHR	7/16/2011	2:07:15	485.4 ml/min Oven Flow	H2S	1.13	343.2	1674.14	16.98	ppmv	COS	1.705	428.5	2656.38	19.87	ppmv	CS2	5.181	150.3	1036.32	6.82	ppmv
DCU FPD GC-1 194.CHR	7/16/2011	14:58:48	485.4 ml/min Oven Flow	H2S	1.145	229.2	1098.08	14.13	ppmv	COS	1.713	433.4	2574.69	19.58	ppmv	CS2	5.175	162.8	1113.74	7.05	ppmv
DCU FPD GC-1 195.CHR	7/17/2011	4:25:11	485.4 ml/min Oven Flow	H2S	1.145	237.9	1126.85	14.29	ppmv	COS	1.715	431.8	2579.27	19.59	ppmv	CS2	5.178	158.3	1094.03	6.99	ppmv
DCU FPD GC-1 196.CHR	7/17/2011	5:31:41	485.4 ml/min Oven Flow	H2S	1.145	262.1	1250.15	14.96	ppmv	COS	1.716	430.8	2586.37	19.62	ppmv	CS2	5.178	154	1058.72	6.89	ppmv
DCU FPD GC-1 197.CHR	7/17/2011	5:42:24	485.4 ml/min Oven Flow	H2S	1.15	334.5	1618.63	16.73	ppmv	COS	1.723	456.5	2715.9	20.08	ppmv	CS2	5.19	151.3	1040.06	6.83	ppmv
DCU FPD GC-1 198.CHR	7/17/2011	5:51:16	485.4 ml/min Oven Flow	H2S	1.143	359.3	1726.26	17.22	ppmv	COS	1.711	470	2797.01	20.36	ppmv	CS2	5.183	154.2	1059.73	6.89	ppmv
DCU FPD GC-1 199.CHR	7/17/2011	5:59:32	485.4 ml/min Oven Flow	H2S	1.125	350.1	1697.56	17.09	ppmv	COS	1.693	450.4	2708.63	20.05	ppmv	CS2	5.186	148.1	1021.18	6.78	ppmv
DCU FPD GC-1 200.CHR	7/17/2011	6:24:03	DCU Vent	H2S	1.146	94	455.59	9.64	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 201.CHR	7/17/2011	6:32:21	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 202.CHR	7/17/2011	6:40:39	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 203.CHR	7/17/2011	6:48:57	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 204.CHR	7/17/2011	6:57:15	DCU Vent	H2S	0	0	0	0	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 205.CHR	7/17/2011	7:05:33	DCU Vent	H2S	1.12	0.4	2.48	0.76	ppmv	COS	0	0	0	0	ppmv	CS2	0	0	0	0	ppmv
DCU FPD GC-1 207.CHR	7/17/2011	7:15:39	485.4 ml/min Oven Flow	H2S	1.148	315.8	1515.57	16.26	ppmv	COS	1.723	456.6	2712.11	20.06	ppmv	CS2	5.185	150.6	1029.51	6.8	ppmv
DCU FPD GC-1 208.CHR	7/17/2011	7:32:05	485.4 ml/min Oven Flow	H2S	1.12	355.3	1701.65	17.1	ppmv	COS	1.685	459.8	2731.09	20.13	ppmv	CS2	5.183	145.2	1001.59	6.72	ppmv
DCU FPD GC-1 209.CHR	7/17/2011	7:40:24	485.4 ml/min Oven Flow	H2S	1.12	384.9	1860.92	17.78	ppmv	COS	1.685	494.3	2961.21	20.94	ppmv	CS2	5.171	159.1	1100.03	7.01	ppmv
DCU FPD GC-1 210.CHR	7/17/2011	8:31:57	485.4 ml/min Oven Flow	H2S	1.146	363.4	1745.33	17.3	ppmv	COS	1.718	471.6	2808.15	20.4	ppmv	CS2	5.186	152.9	1047.02	6.85	ppmv
DCU FPD GC-1 211.CHR	7/17/2011	8:44:24	792.4 ml/min Oven Flow	H2S	1.158	100.7	500.92	10.04	ppmv	COS	1.733	158.1	962.23	12.18	ppmv	CS2	5.193	49.1	341.26	4.13	ppmv
DCU FPD GC-1 212.CHR	7/17/2011	8:52:44	792.4 ml/min Oven Flow	H2S	1.138	106.4	531.92	10.3	ppmv	COS	1.711	151.7	956.89	12.15	ppmv	CS2	5.196	47.5	336.2	4.1	ppmv
DCU FPD GC-1 213.CHR	7/17/2011	9:00:47	792.4 ml/min Oven Flow	H2S	1.131	115.1	561.83	10.55	ppmv	COS	1.7	173.1	1038.16	12.62	ppmv	CS2	5.185	49.9	345.51	4.15	ppmv
DCU FPD GC-1 214.CHR	7/17/2011	9:10:35	239.5 ml/min Oven Flow	H2S	1.141	1412.4	6937.57	28.88	ppmv	COS	1.715	1618.5	9873.57	37.41	ppmv	CS2	5.18	591.2	4095.13	12.71	ppmv
DCU FPD GC-1 215.CHR	7/17/2011	9:18:47	239.5 ml/min Oven Flow	H2S	1.126	1392.8	6859.72	28.84	ppmv	COS	1.698	1572.2	9636	36.97	ppmv	CS2	5.186	578.7	4014.3	12.59	ppmv
DCU FPD GC-1 216.CHR	7/17/2011	9:27:07	239.5 ml/min Oven Flow	H2S	1.131	1455.8	7132.97	29.18	ppmv	COS	1.701	1541.7	9831.37	37.33	ppmv	CS2	5.186	593.5	4131.42	12.76	ppmv

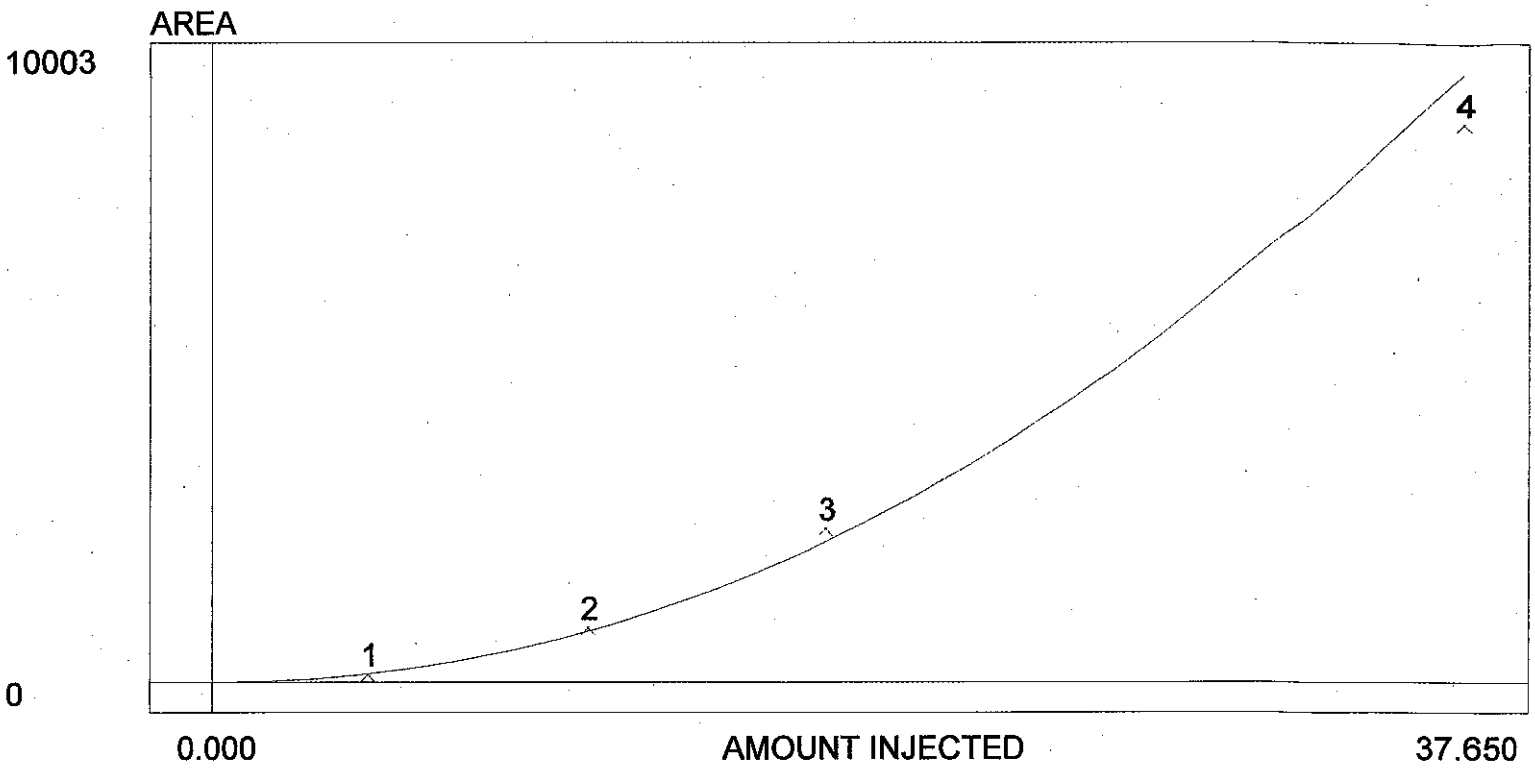
Calibration file: DCU H2S 071211 Pre-2.cal



Avg slope of curve: 213.64
Y-axis intercept: 0.00
Linearity: 0.45
Number of levels: 4
SD/rel SD of CF's: 80.3/91.4
Y=2.4729X^2.3009
r2: 0.9900
Last calibrated: Wed Jul 13 12:28:56 2011

Lvl.	Area/ht.	Amount	CF	Current	Previous #1	Previous #2
1	51.263	3.840	13.350	50.060	50.780	52.950
2	446.437	9.320	47.901	454.540	445.470	439.300
3	1419.593	15.220	93.272	1389.730	1382.100	1486.950
4	6050.990	30.800	196.461	6105.820	6042.380	6004.770

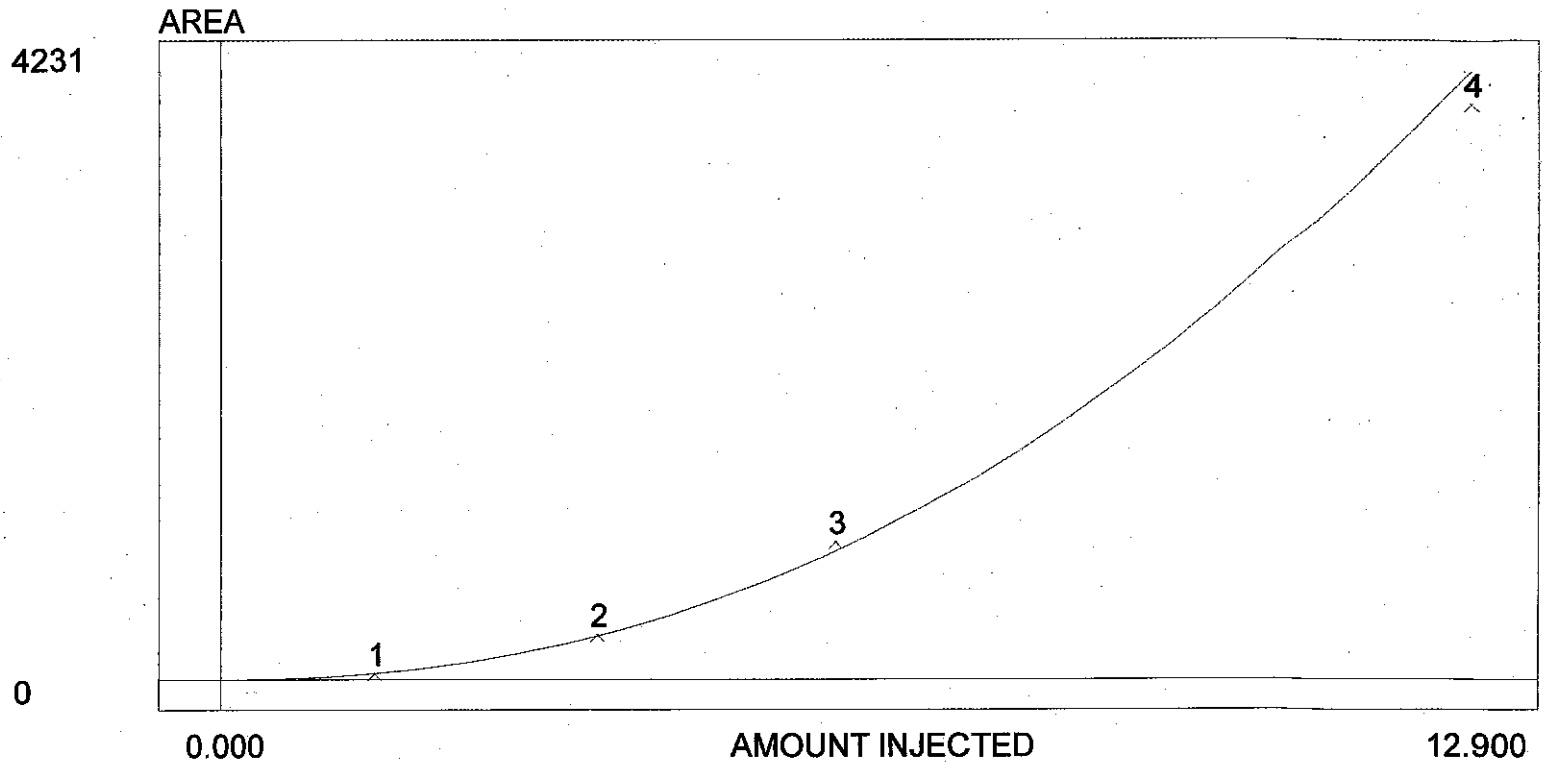
Calibration file: DCU COS 071211 Pre-2.cal



Avg slope of curve: 265.69
Y-axis intercept: 0.00
Linearity: 0.49
Number of levels: 4
SD/rel SD of CF's: 92.1/76.8
Y=5.3655X^2.0755
r2: 0.9826
Last calibrated: Wed Jul 13 12:25:56 2011

Lvl.	Area/ht.	Amount	CF	Current	Previous #1	Previous #2
1	124.000	4.690	26.439	121.281	121.739	128.980
2	891.049	11.380	78.300	900.907	885.215	887.025
3	2522.833	18.580	135.782	2475.710	2476.216	2616.571
4	9178.814	37.650	243.793	9088.271	9457.171	8991.000

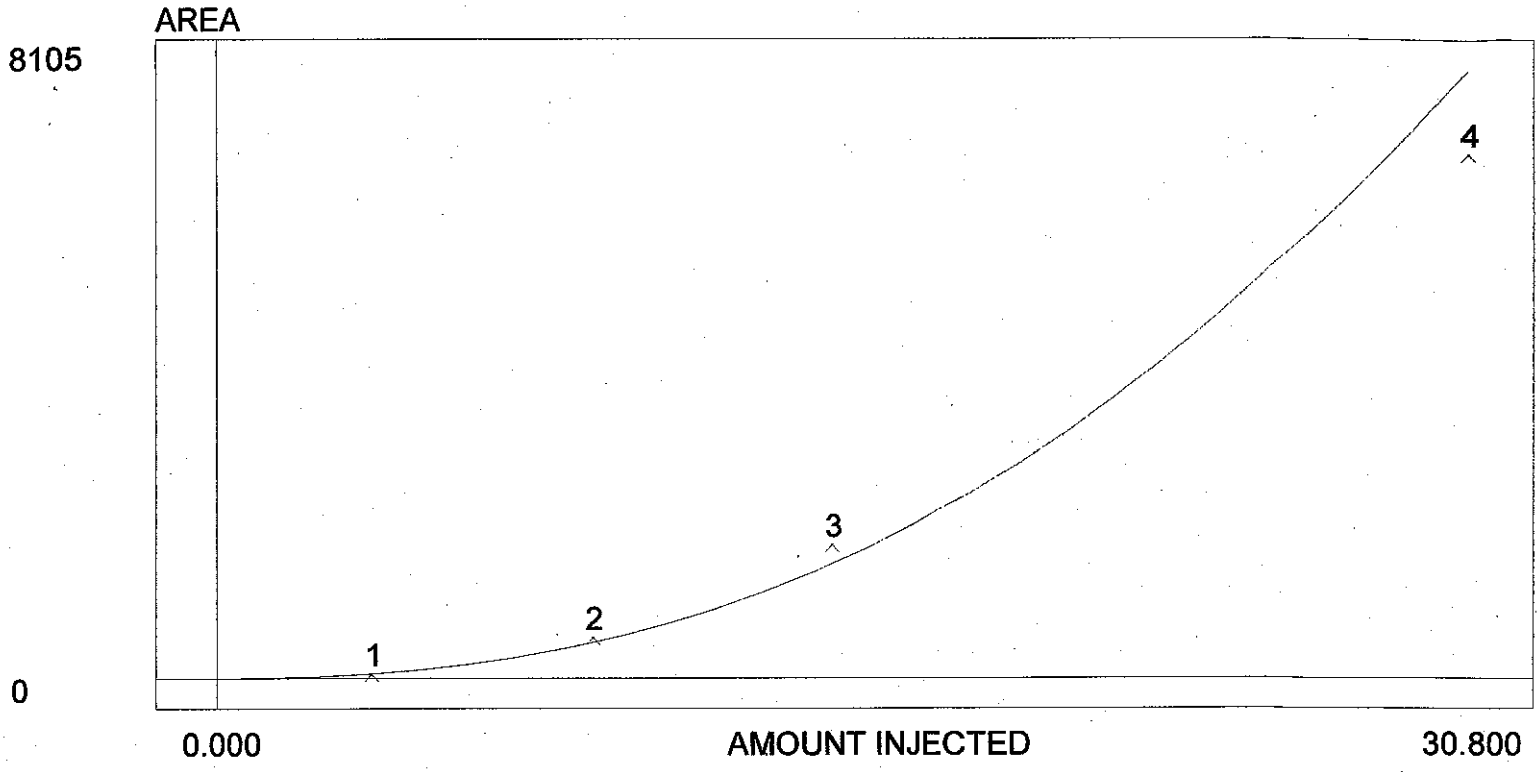
Calibration file: DCU CS2 071211-Pre2.cal



Avg slope of curve: 328.01
Y-axis intercept: 0.00
Linearity: 0.46
Number of levels: 4
SD/rel SD of CF's: 122.0/87.9
Y=14.8804X^2.2095
r2: 0.9913
Last calibrated: Wed Jul 13 12:26:02 2011

Lvl.	Area/ht.	Amount	CF	Current	Previous #1	Previous #2
1	40.456	1.600	25.285	38.462	40.006	42.900
2	309.251	3.900	79.295	307.934	308.217	311.601
3	952.153	6.370	149.475	934.143	941.484	980.834
4	3999.997	12.900	310.077	3943.555	4025.003	4031.432

Calibration file: DCU H2S 071711 Post-1.cal



Avg slope of curve: 263.14
Y-axis intercept: 0.00
Linearity: 0.43
Number of levels: 4
SD/rel SD of CF's: 94.1/89.7
Y=2.3601X^2.3753
r2: 0.9685
Last calibrated: Sun Jul 17 09:30:11 2011

Lvl.	Area/ht.	Amount	CF	Current	Previous #1	Previous #2
1	51.263	3.840	13.350	50.060	50.780	52.950
2	531.557	9.320	57.034	561.830	531.920	500.920
3	1769.300	15.220	116.248	1745.330	1860.920	1701.650
4	6976.659	30.800	226.515	7132.970	6859.441	6937.567

TRC Method 15 Permeation Tube Concentrations
DCU D603
7/12/2011

Temp = 35 C	H2S (ng/min)	Cert. ID	COS (ng/min)		CS2 (ng/min)	
Tube 1	10452	56-29654	22495.9	59-38917	9770.97	89-38918
Tube 2						
Tube 3						
Total (ng/min)	**10452**		**22495.9**		**9770.97**	

Rotameter TUBE ID	Rotameter Setting	Bubble N2 Rate (ml/min)	Bubble Temp (Deg C)	Bubble Pressure (in Hg)	SCCM	H2S (ppmv)	COS (ppmv)	CS2 (ppmv)
		4/27/2011						
N112-02	20	92.1	20	29.92	92.1	80.2	97.90	33.56
N112-02	35	159.3	20	29.92	159.3	46.4	56.60	19.40
N112-02	50	239.5	20	29.92	239.5	30.8	37.65	12.90
N112-02	90	485.4	20	29.92	485.4	15.22	18.58	6.37
N112-03	150	792.4	20	29.92	792.4	9.32	11.38	3.90
092-04-N	55	1922	20	29.92	1922.0	3.84	4.69	1.61

ExxonMobil BTRF
DCU D603 **07/13/11**

Permeation Tube Example Calculation For H2S

H2S Permation Rate = 10452 ng/min

Total Diluent Flow Rate= 0.2395 SLPM

PPMV = $\frac{0.000010452 \text{ grams}}{\text{min}} \left| \frac{\text{gmole}}{34 \text{ grams}} \right| \frac{24.04 \text{ Std Liters}}{\text{gmole}} \left| \frac{\text{min}}{0.2395 \text{ Std. Liters}} \right| \frac{1.00E+06 \text{ parts}}{\text{million}}$

PPMV = 30.9

EM-BTRF-0003[illegible]

Method 15 H2S Sampling System Recovery Check

Expected Value = 24.9/51 = 0.488235

DCU FPD GC-1 145.CHR	7/13/2011	12:38:01	25 ppm H2S recovery Check	H2S	1.103	0.4	1.8	0.55 ppmv
DCU FPD GC-1 146.CHR	7/13/2011	12:41:05	25 ppm H2S recovery Check	H2S	1.145	0.4	1.96	0.6 ppmv
DCU FPD GC-1 147.CHR	7/13/2011	12:44:44	25 ppm H2S recovery Check	H2S	1.138	0.3	1.78	0.55 ppmv

Average= 0.567
Recovery = 116%

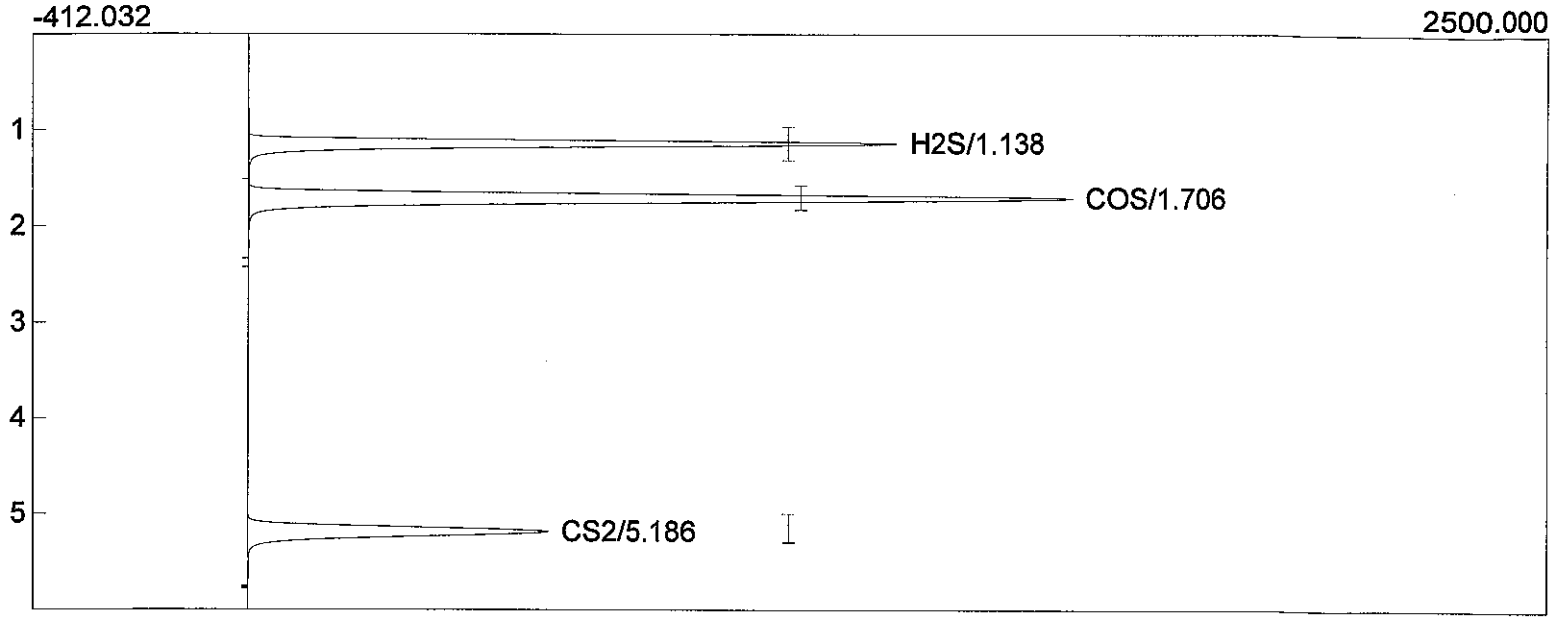
DCU FPD GC-1 180.CHR	7/16/2011	0:02:21	25 ppm H2S recovery Check	H2S	1.143	0.3	1.67	0.51 ppmv
DCU FPD GC-1 181.CHR	7/16/2011	0:05:09	25 ppm H2S recovery Check	H2S	1.148	0.3	1.59	0.49 ppmv
DCU FPD GC-1 182.CHR	7/16/2011	0:07:46	25 ppm H2S recovery Check	H2S	1.146	0.3	1.5	0.46 ppmv

Average= 0.487
Recovery = 99.7%

Average Recovery = 108%

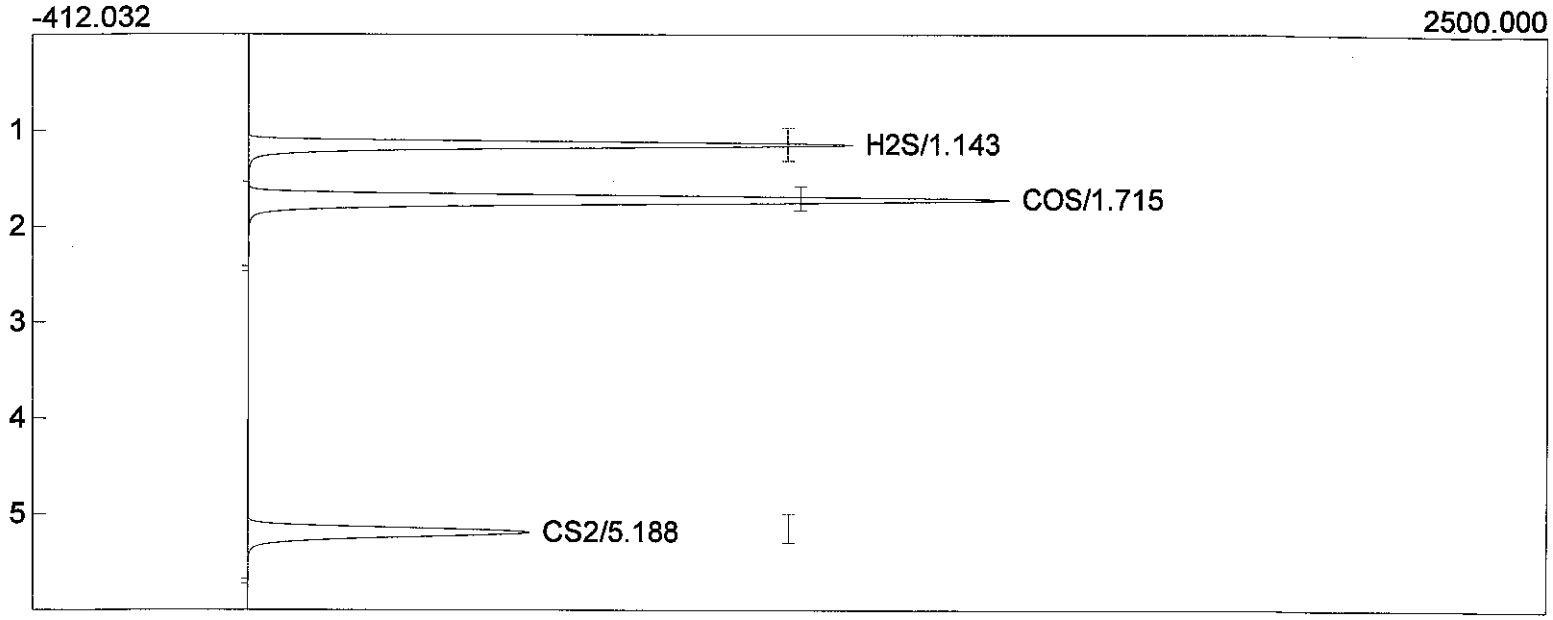
No correction to be performed.

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 10:32:00
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 131.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



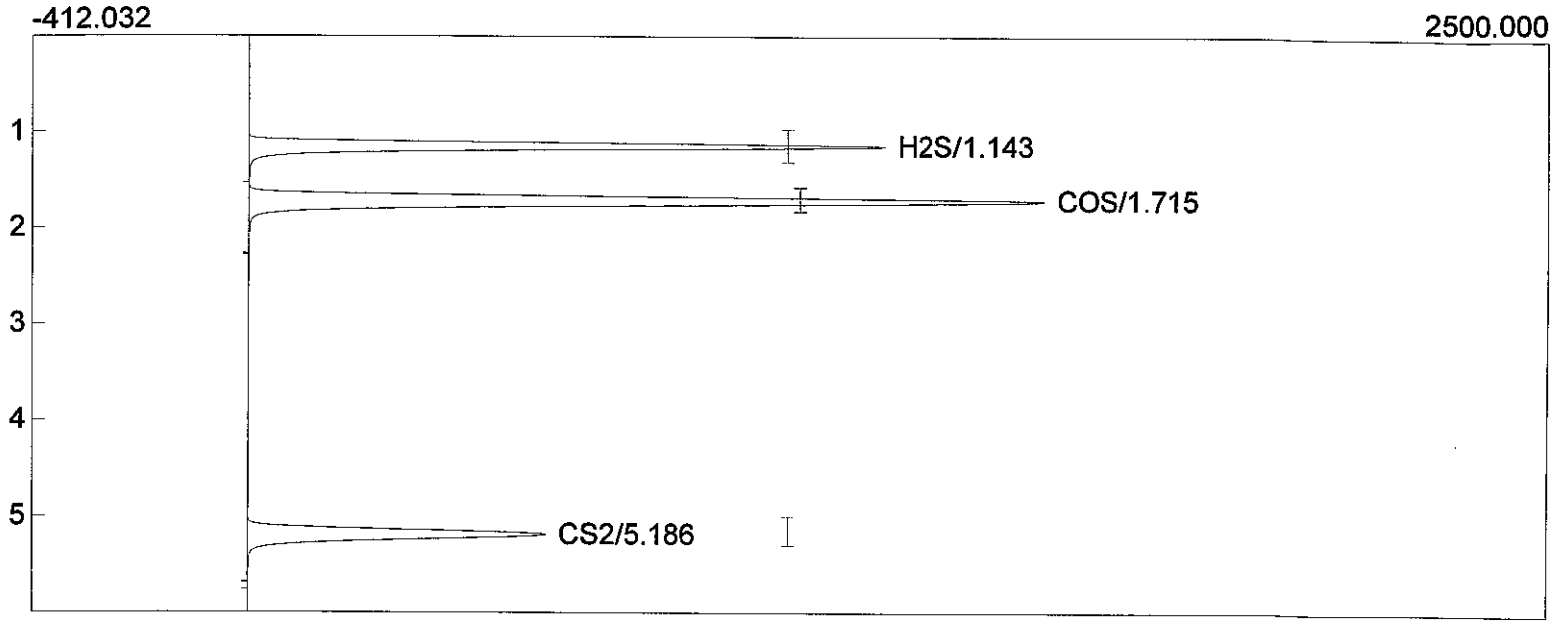
Component	Retention	Height	Area	External	Units
H2S	1.138	1258.4	6004.8	29.60	ppmv
COS	1.706	1596.7	9693.6	37.08	ppmv
CS2	5.186	579.6	4031.4	12.62	ppmv
			19729.8	79.29	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 10:41:57
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 132.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



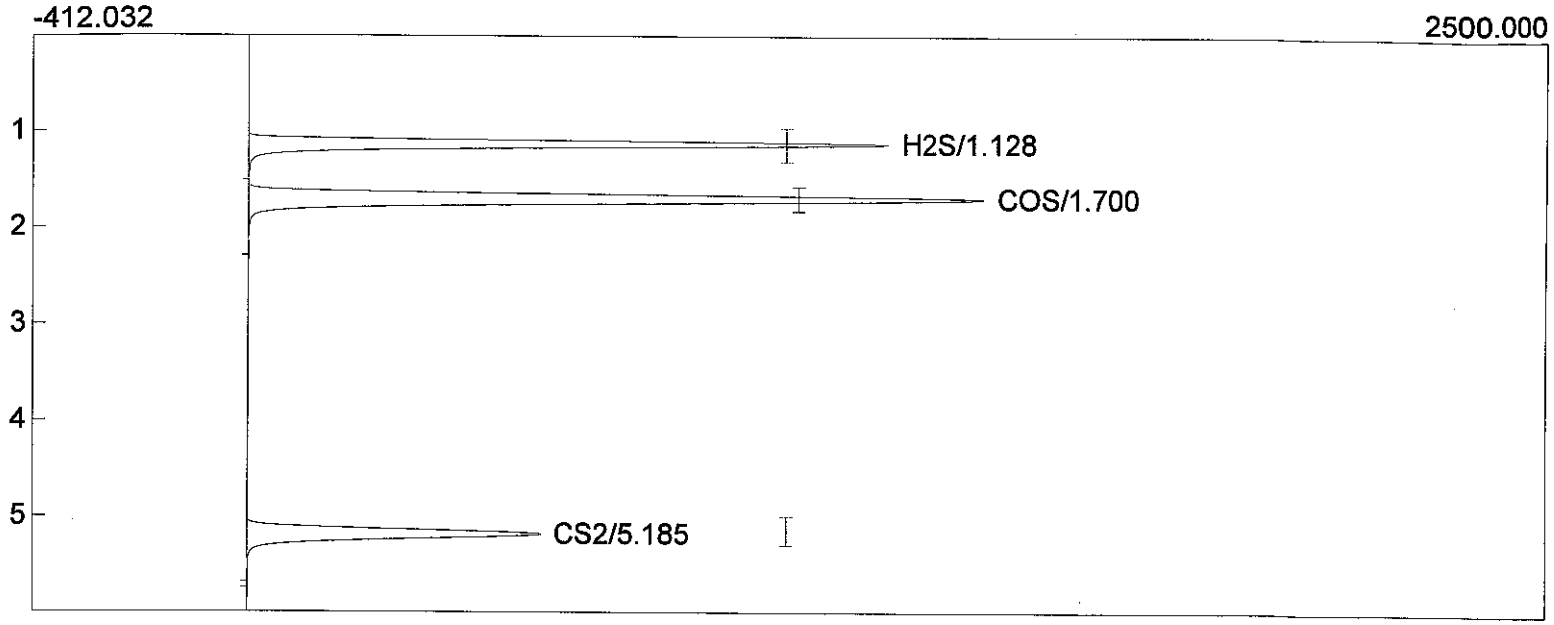
Component	Retention	Height	Area	External	Units
H2S	1.143	1171.7	5690.0	28.91	ppmv
COS	1.715	1474.6	8991.0	35.76	ppmv
CS2	5.188	546.8	3783.7	12.26	ppmv
			18464.8	76.92	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 10:51:48
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 133.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



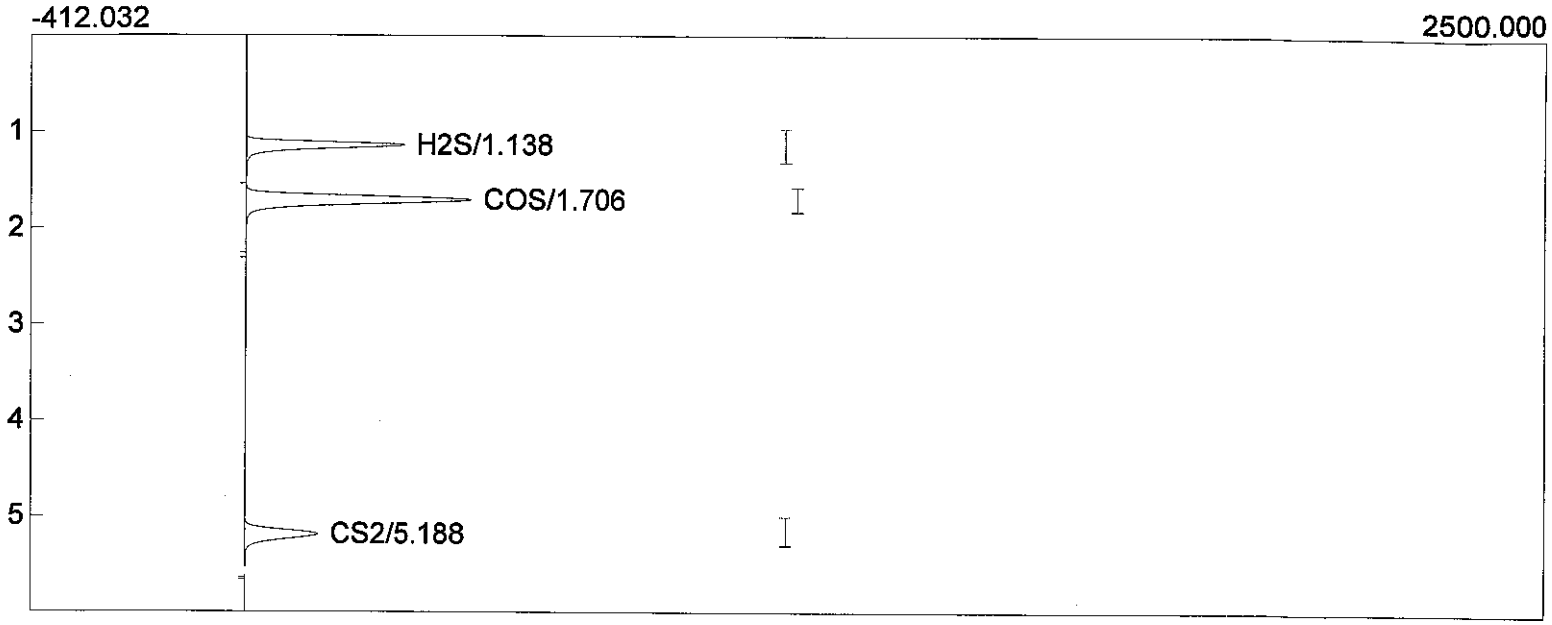
Component	Retention	Height	Area	External	Units
H2S	1.143	1234.7	6042.4	29.68	ppmv
COS	1.715	1540.9	9457.2	36.64	ppmv
CS2	5.186	577.2	4025.0	12.61	ppmv
			19524.6	78.92	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:00:12
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 134.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



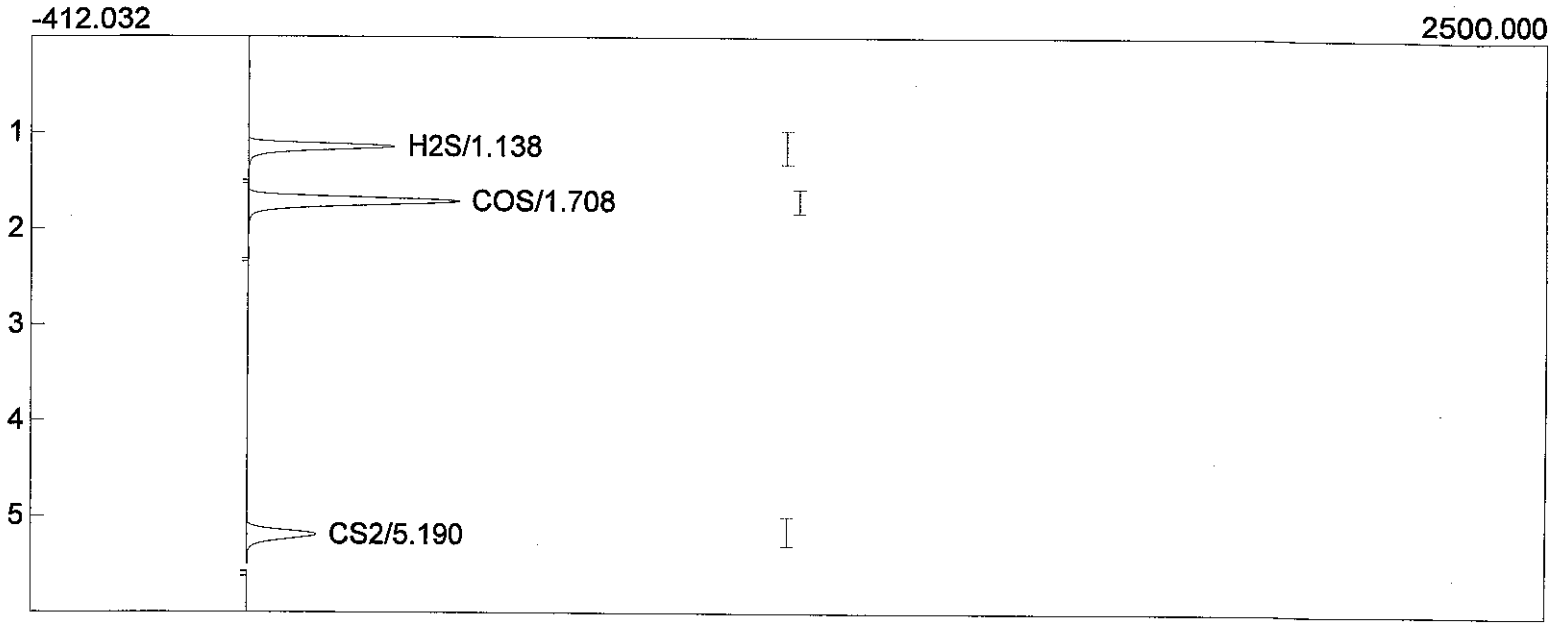
Component	Retention	Height	Area	External	Units
H2S	1.128	1241.9	6105.8	29.81	ppmv
COS	1.700	1427.1	9088.3	35.95	ppmv
CS2	5.185	566.9	3943.6	12.49	ppmv
			19137.6	78.25	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:09:10
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 135.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



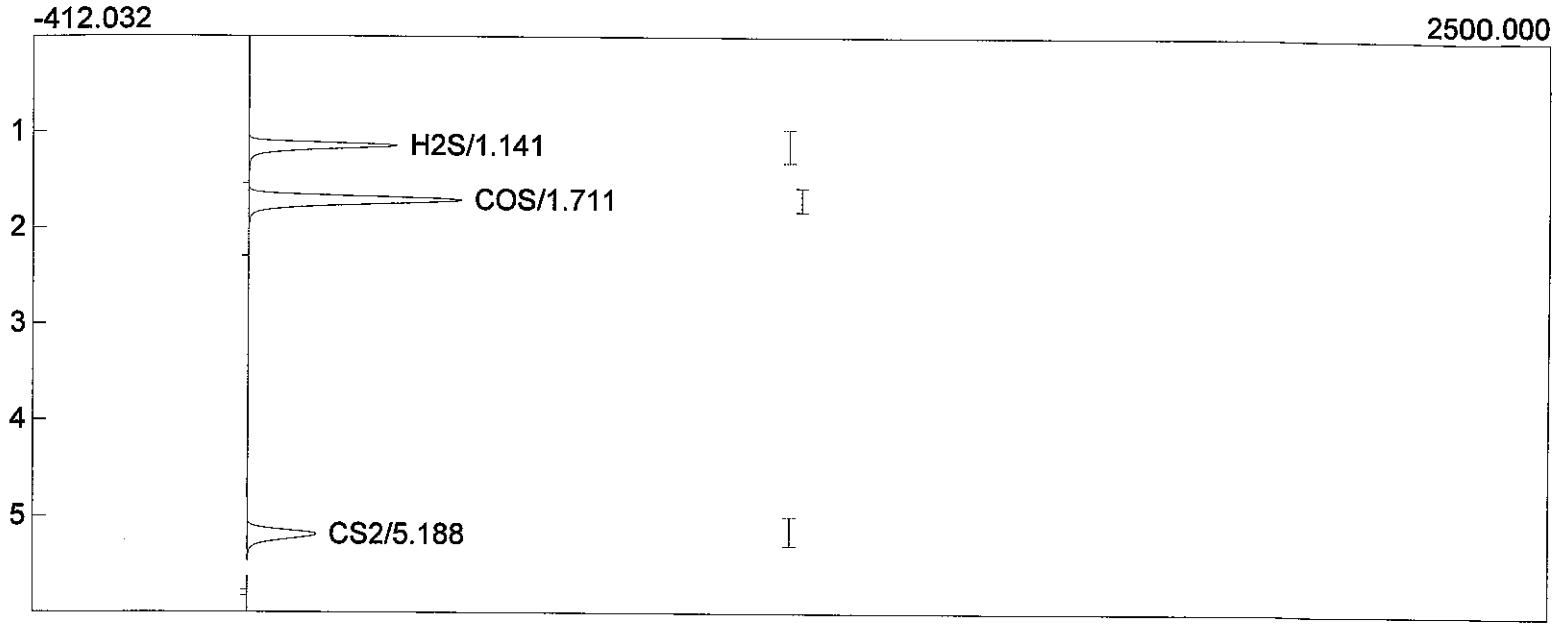
Component	Retention	Height	Area	External	Units
H2S	1.138	307.0	1486.9	16.13	ppmv
COS	1.706	436.2	2616.6	19.73	ppmv
CS2	5.188	141.2	983.6	6.66	ppmv
			5087.1	42.52	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:18:18
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 136.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



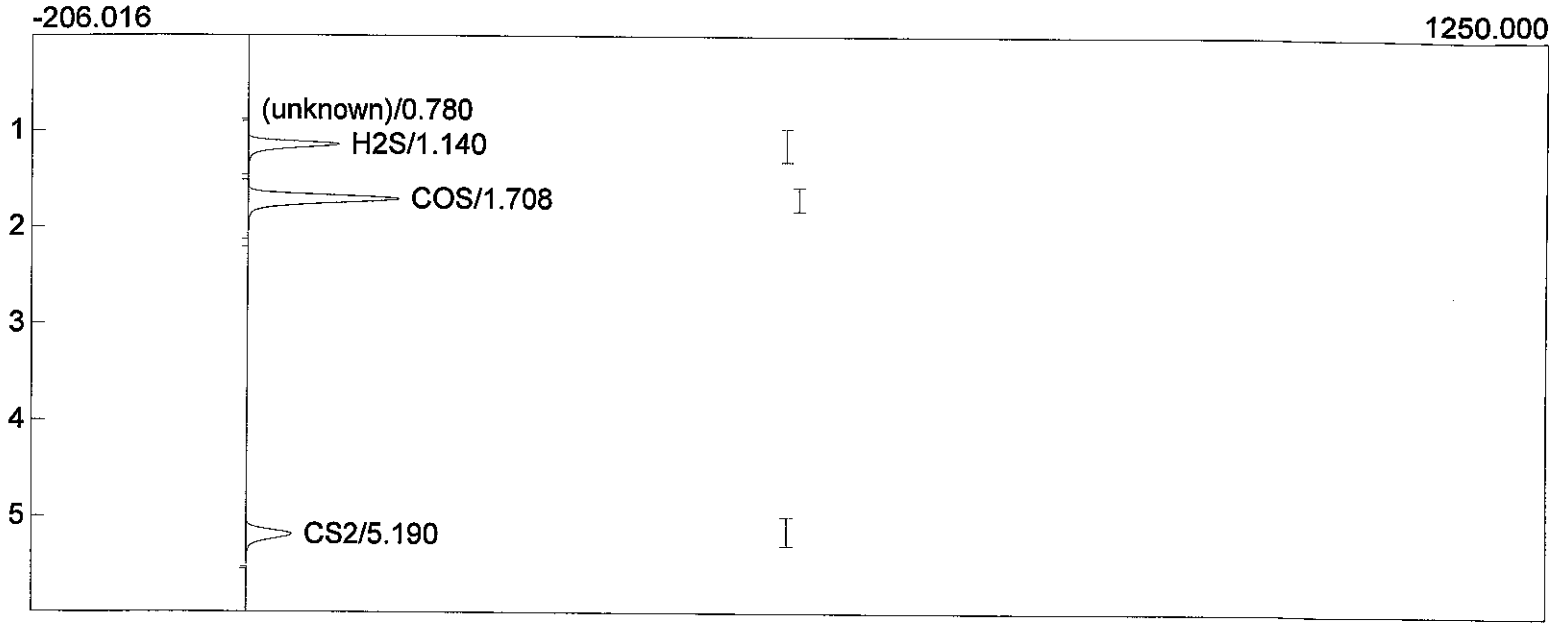
Component	Retention	Height	Area	External	Units
H2S	1.138	284.7	1382.1	15.62	ppmv
COS	1.708	411.9	2478.8	19.21	ppmv
CS2	5.190	136.4	941.5	6.53	ppmv
			4802.4	41.36	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:27:53
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 137.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



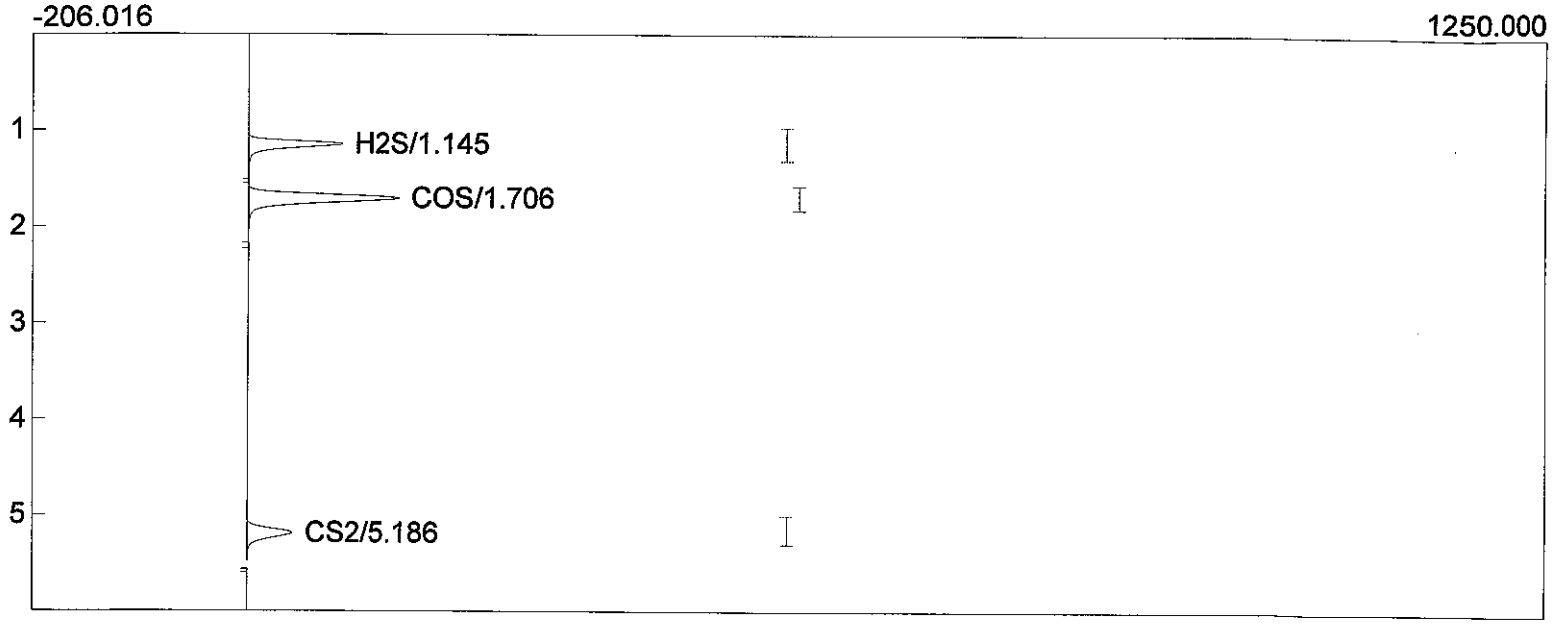
Component	Retention	Height	Area	External	Units
H2S	1.141	286.2	1389.7	15.66	ppmv
COS	1.711	410.9	2475.7	19.20	ppmv
CS2	5.188	133.2	934.1	6.51	ppmv
			4799.6	41.36	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:37:14
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 138.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



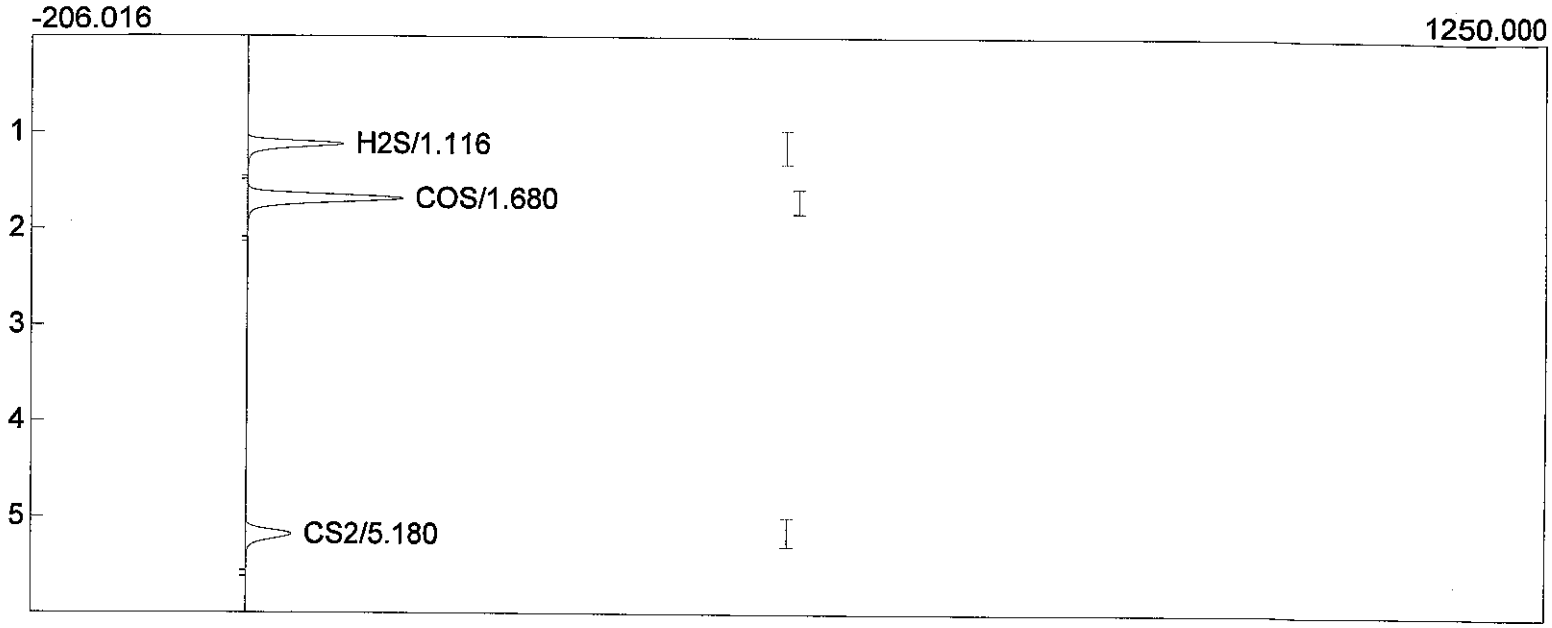
Component	Retention	Height	Area	External	Units
H2S	1.140	88.5	439.3	9.48	ppmv
COS	1.708	146.8	887.0	11.70	ppmv
CS2	5.190	44.1	311.6	3.95	ppmv
			1637.9	25.13	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:45:53
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 139.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



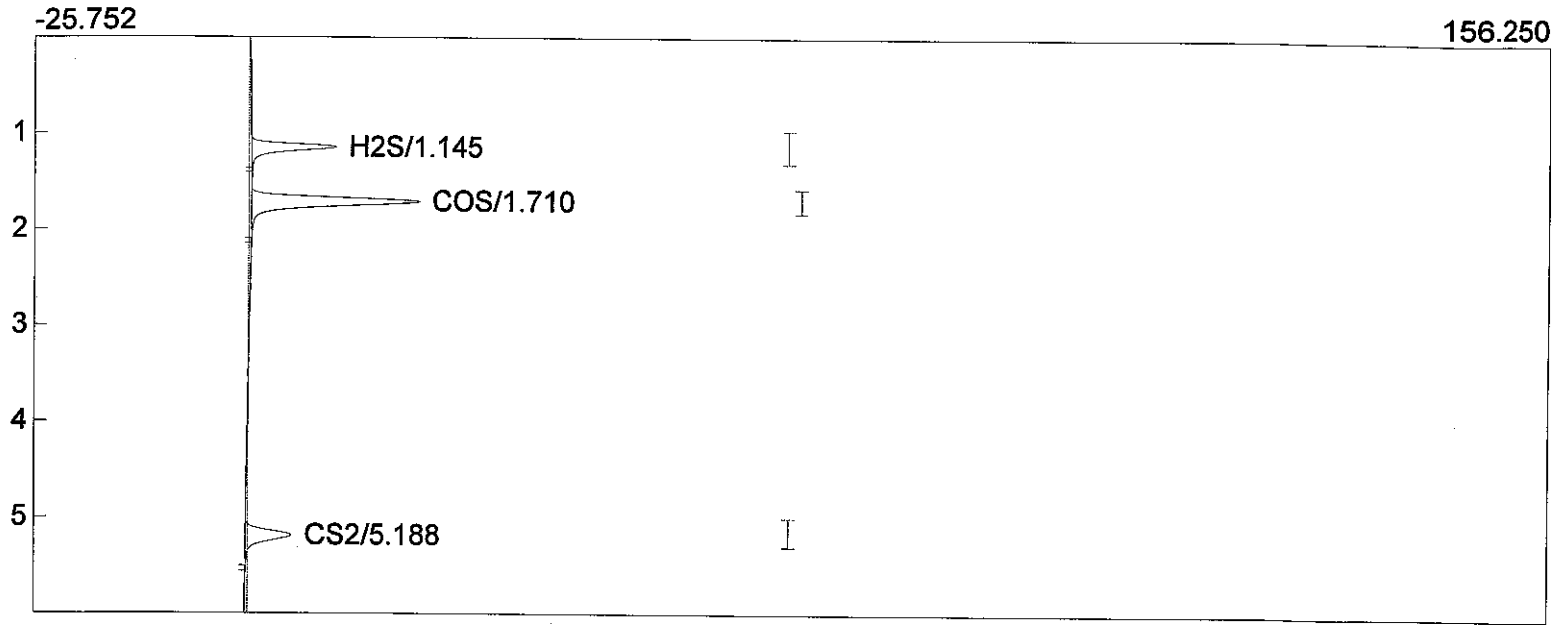
Component	Retention	Height	Area	External	Units
H2S	1.145	90.7	445.5	9.54	ppmv
COS	1.706	146.9	885.2	11.69	ppmv
CS2	5.186	43.4	308.2	3.93	ppmv
			1638.9	25.16	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 11:54:08
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 140.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



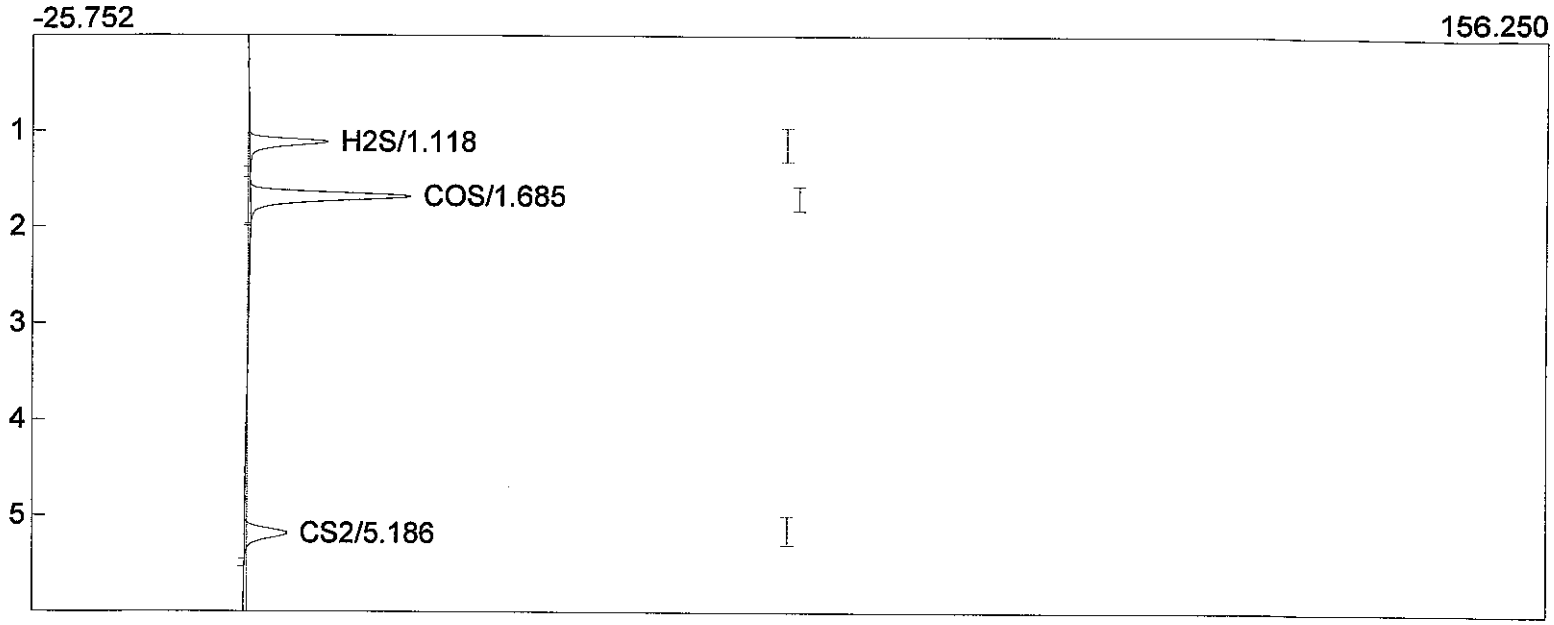
Component	Retention	Height	Area	External	Units
H2S	1.116	92.0	454.5	9.63	ppmv
COS	1.680	150.0	900.9	11.79	ppmv
CS2	5.180	43.7	311.7	3.95	ppmv
			1667.1	25.37	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:02:55
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 141.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



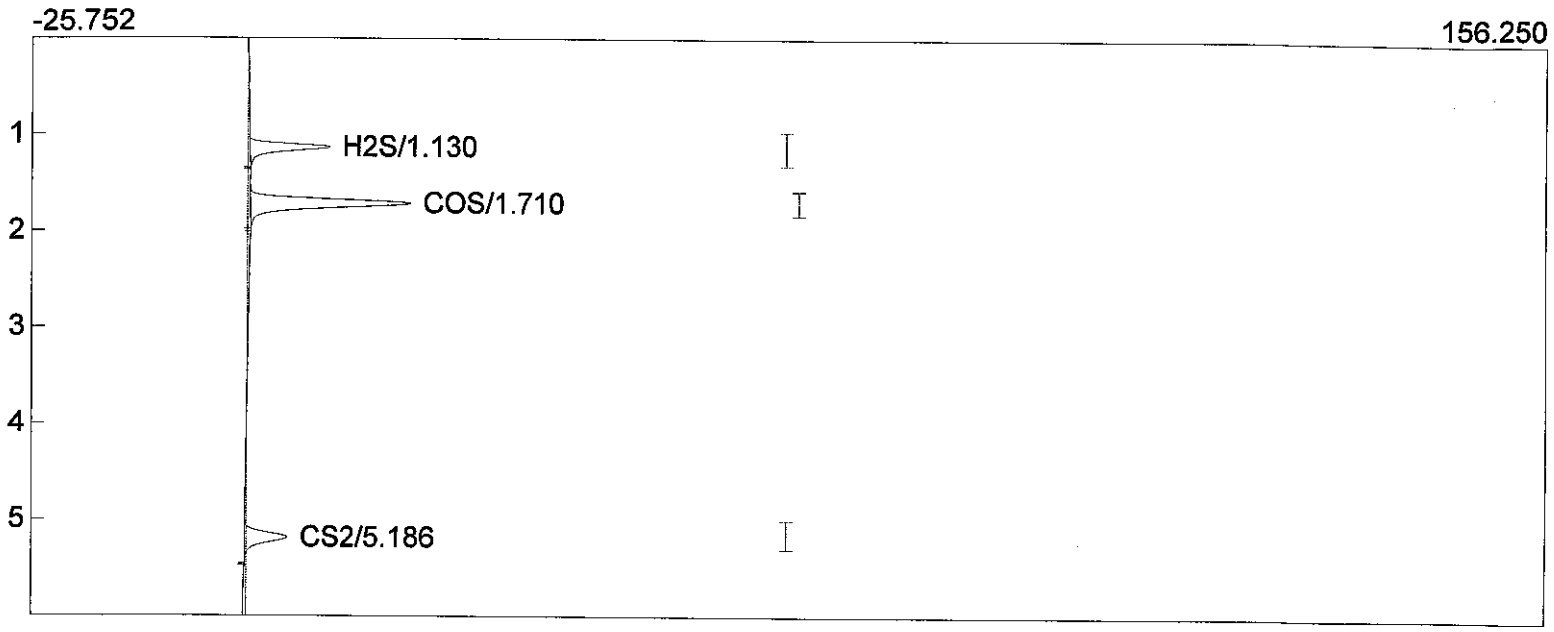
Component	Retention	Height	Area	External	Units
H2S	1.145	10.2	52.9	3.77	ppmv
COS	1.710	20.3	129.0	4.61	ppmv
CS2	5.188	5.6	42.9	1.60	ppmv
			224.8	9.99	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:11:13
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 142.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



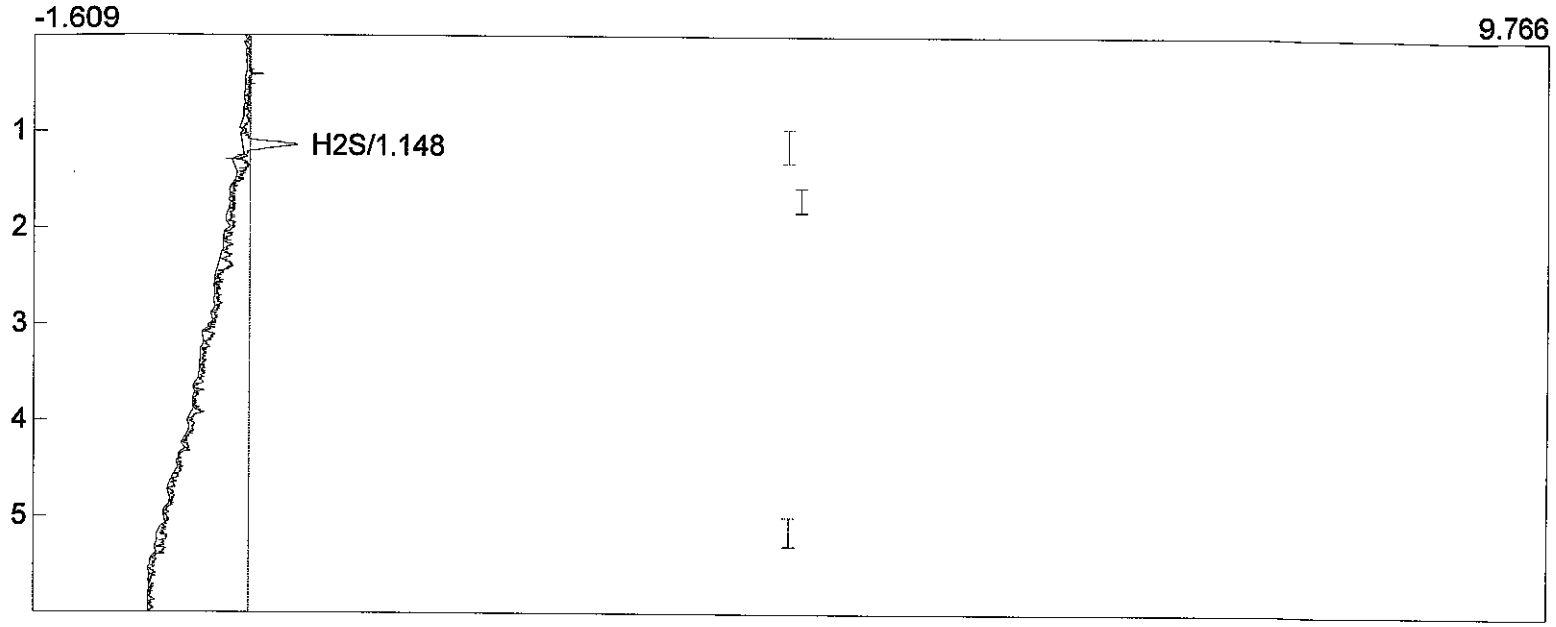
Component	Retention	Height	Area	External	Units
H2S	1.118	9.7	50.8	3.71	ppmv
COS	1.685	19.6	121.7	4.50	ppmv
CS2	5.186	5.3	40.0	1.56	ppmv
			212.5	9.77	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:19:44
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 143.CHR (C:\DCU ICR 7-2011)
Sample: Pre-test cals
Operator: J. Glass



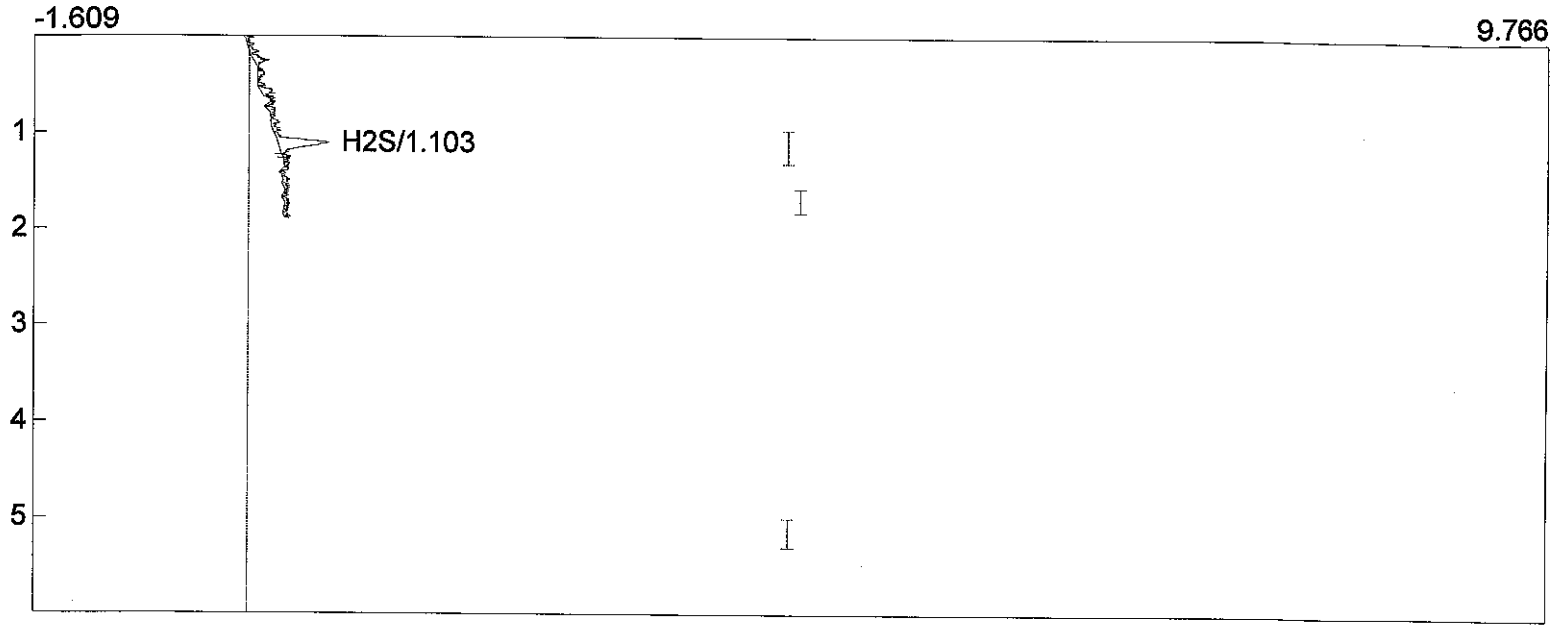
Component	Retention	Height	Area	External	Units
H2S	1.130	9.7	50.1	3.70	ppmv
COS	1.710	19.5	121.3	4.49	ppmv
CS2	5.186	5.2	38.5	1.53	ppmv
			209.8	9.72	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:29:53
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 144.CHR (C:\DCU ICR 7-2011)
Sample: Pre-TEST 25 ppm recovery
Operator: J. Glass



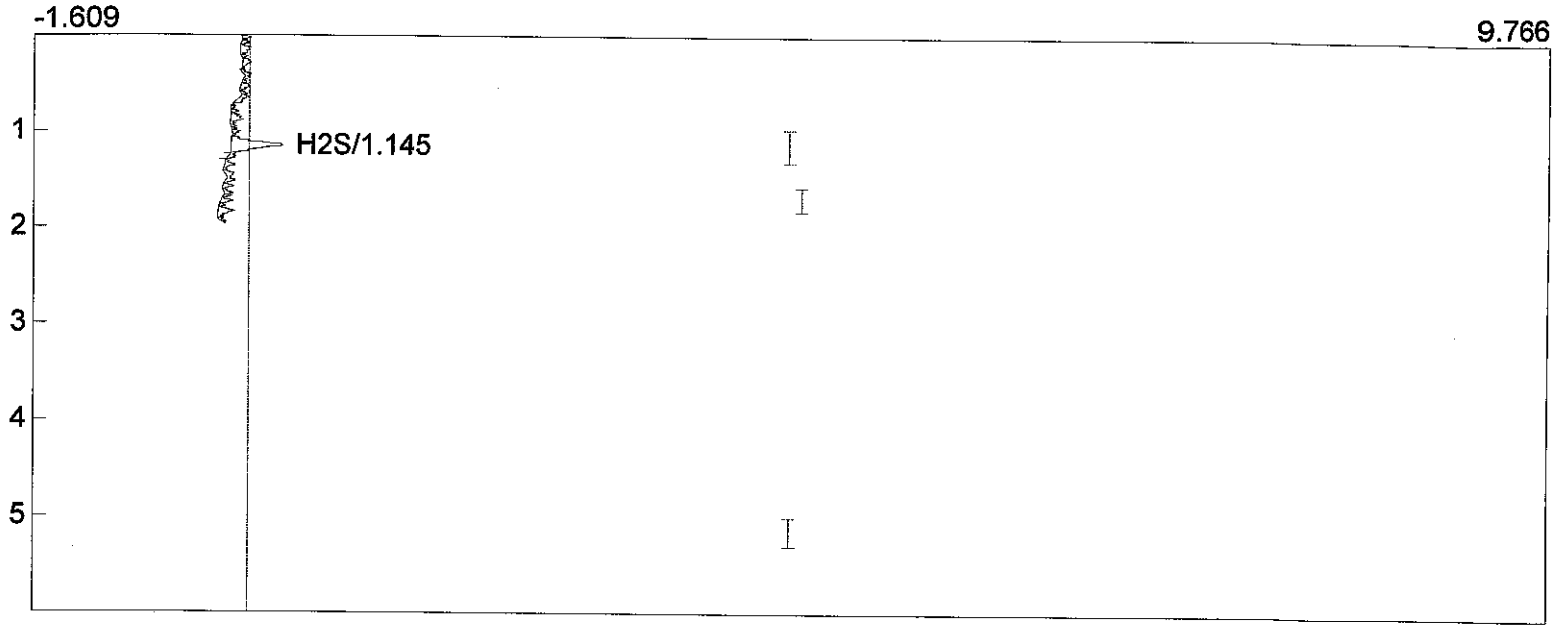
Component	Retention	Height	Area	External	Units
H2S	1.148	0.4	2.0	0.61	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2.0	0.61	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:38:01
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 145.CHR (C:\DCU ICR 7-2011)
Sample: Pre-TEST 25 ppm recovery
Operator: J. Glass



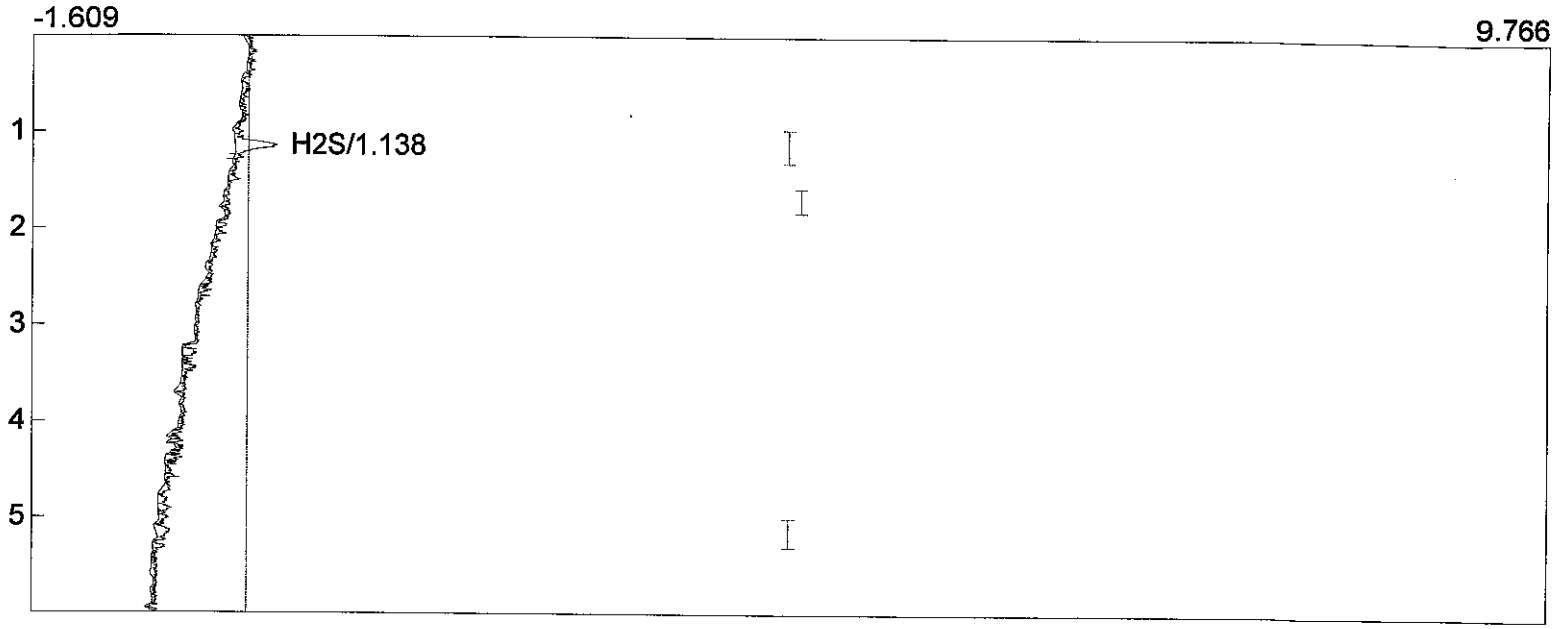
Component	Retention	Height	Area	External	Units
H2S	1.103	0.4	1.8	0.55	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1.8	0.55	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:41:05
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 146.CHR (C:\DCU ICR 7-2011)
Sample: Pre-TEST 25 ppm recovery
Operator: J. Glass



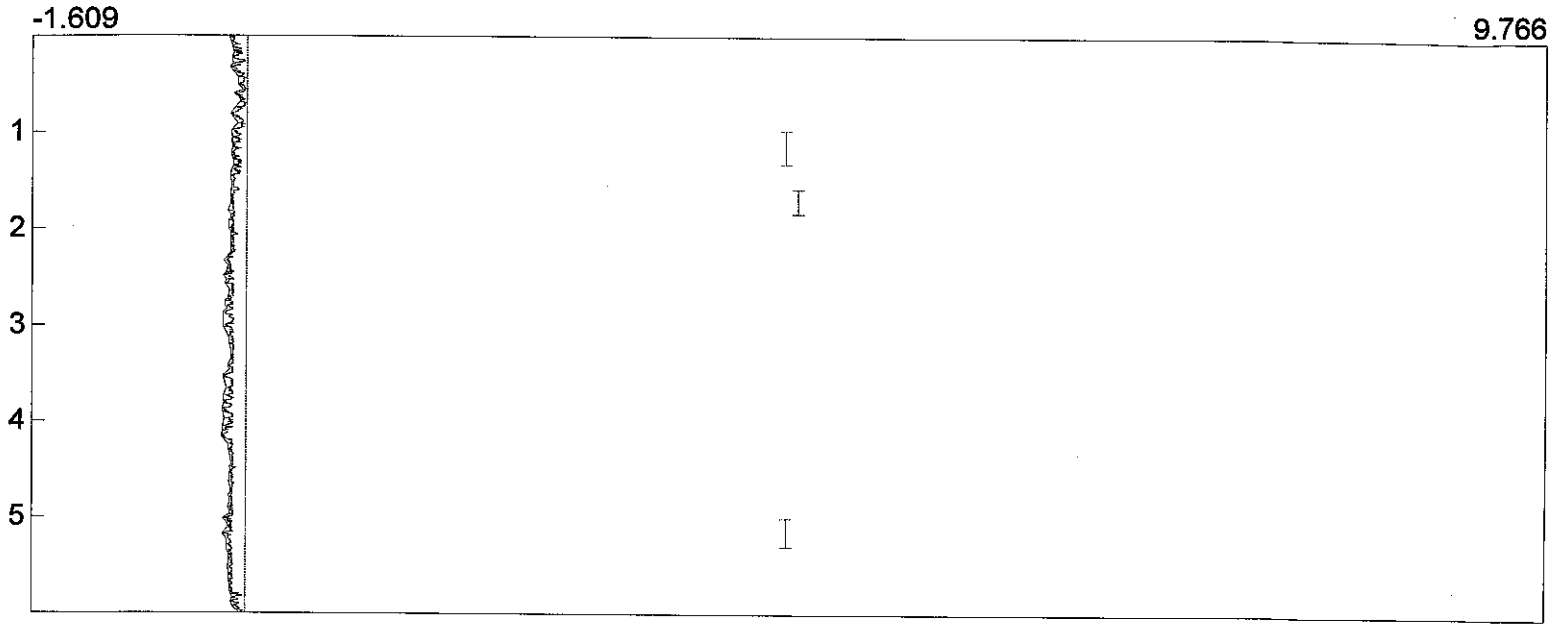
Component	Retention	Height	Area	External	Units
H2S	1.145	0.4	2.0	0.60	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2.0	0.60	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 12:44:44
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 147.CHR (C:\DCU ICR 7-2011)
Sample: Pre-TEST 25 ppm recovery
Operator: J. Glass



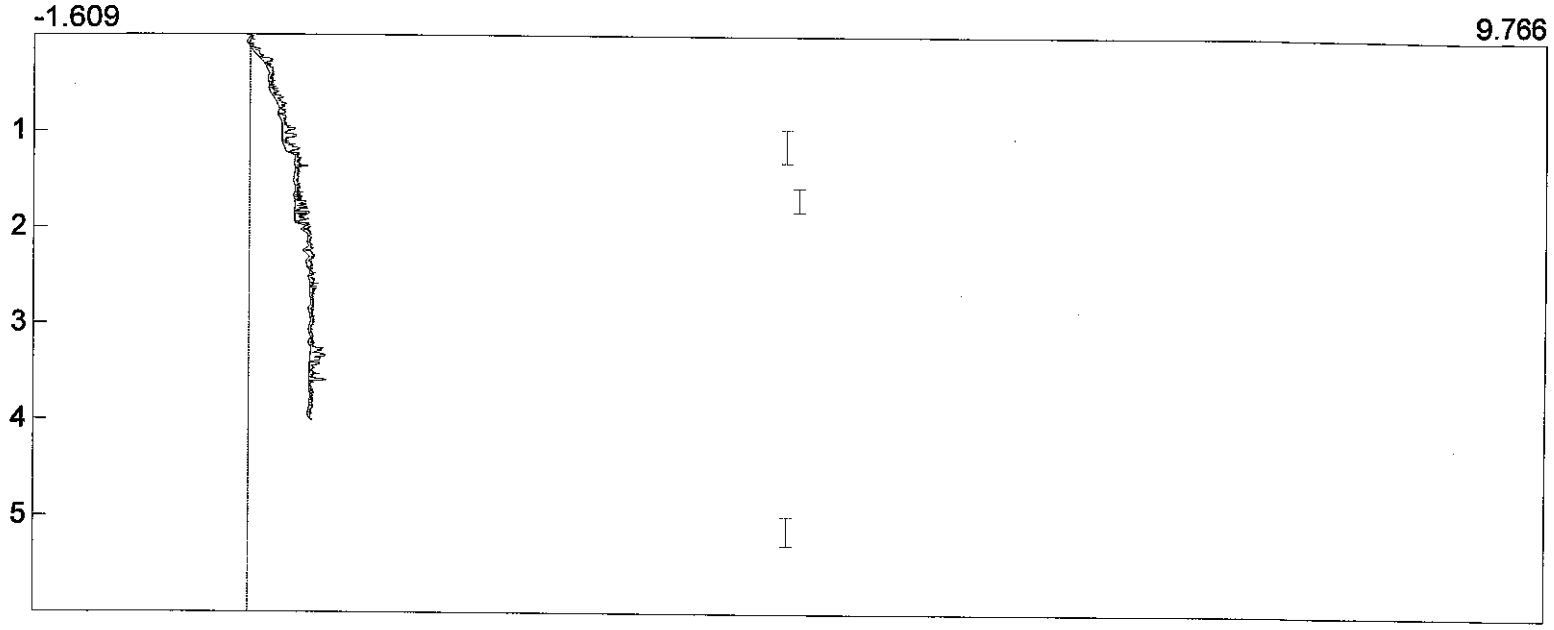
Component	Retention	Height	Area	External	Units
H2S	1.138	0.3	1.8	0.55	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1.8	0.55	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 13:32:18
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 148.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



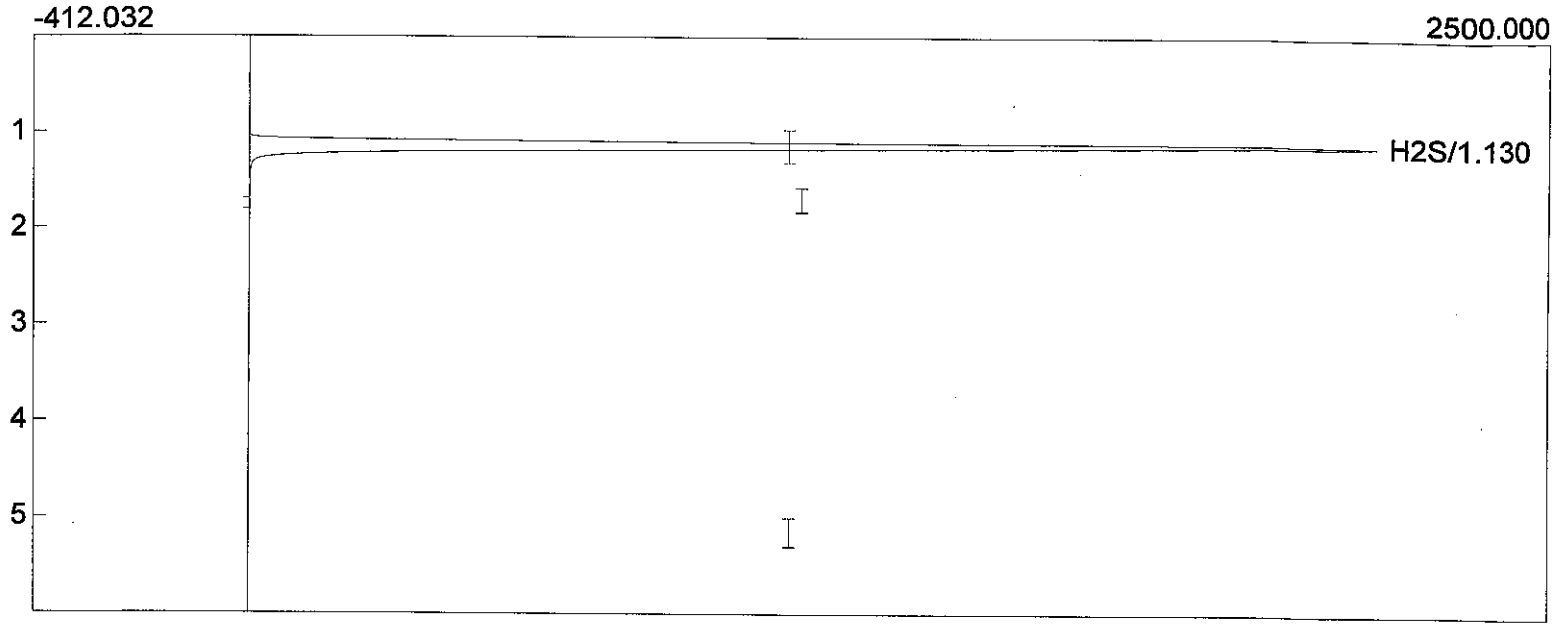
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 13:40:49
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 149.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



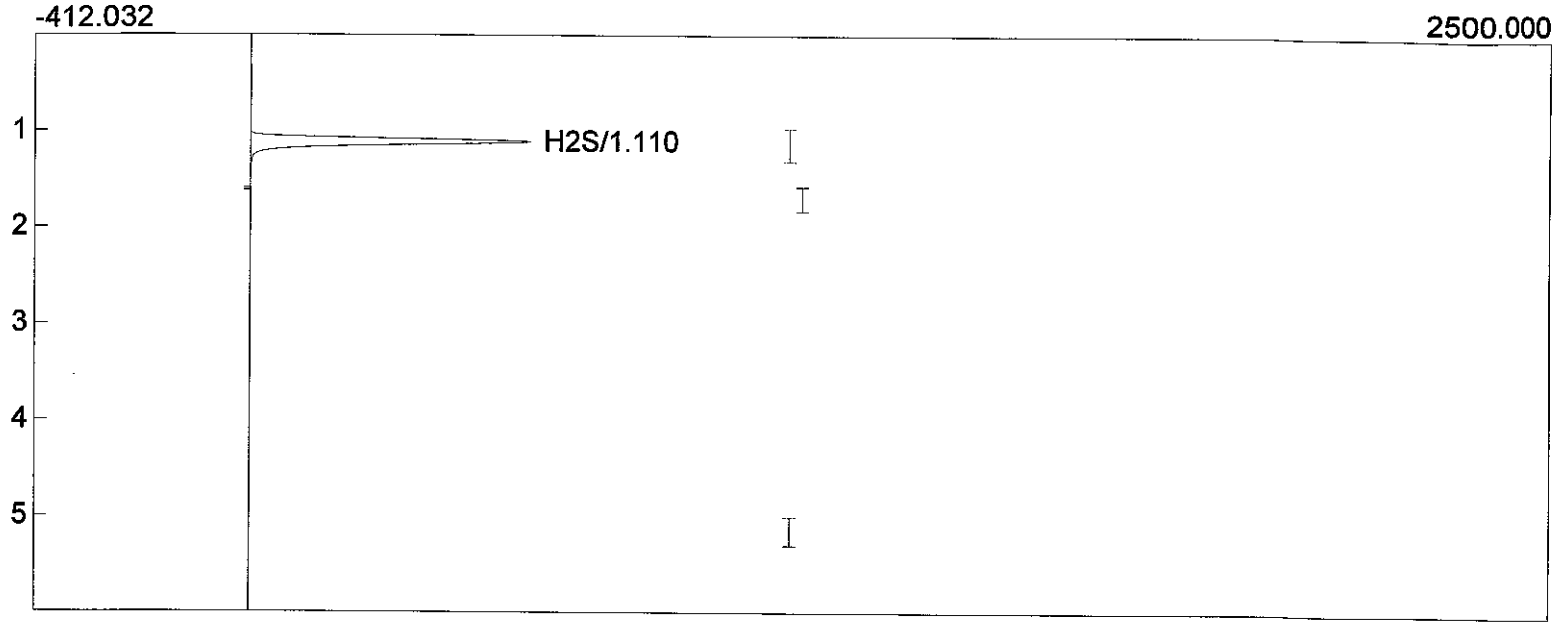
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 13:46:30
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 150.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



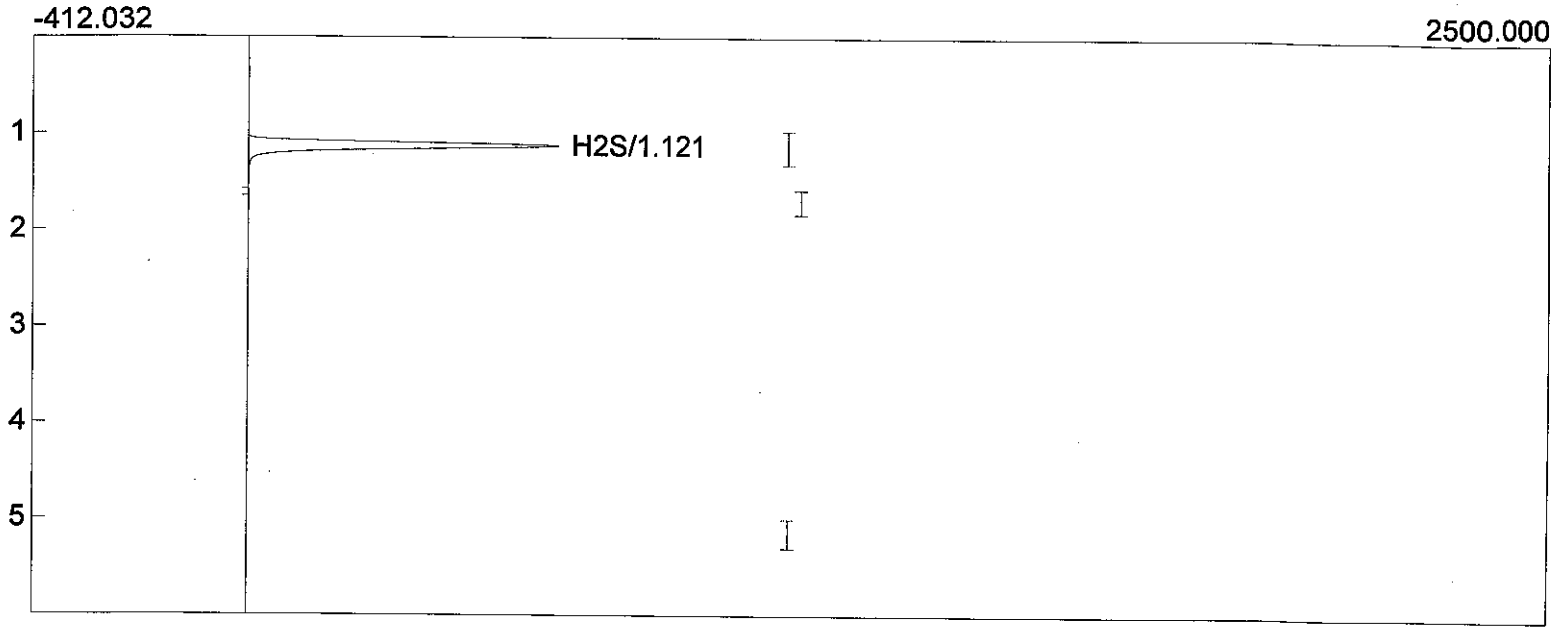
Component	Retention	Height	Area	External	Units
H2S	1.130	2177.5	10269.0	38.50	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			10269.0	38.50	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 13:54:41
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 151.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



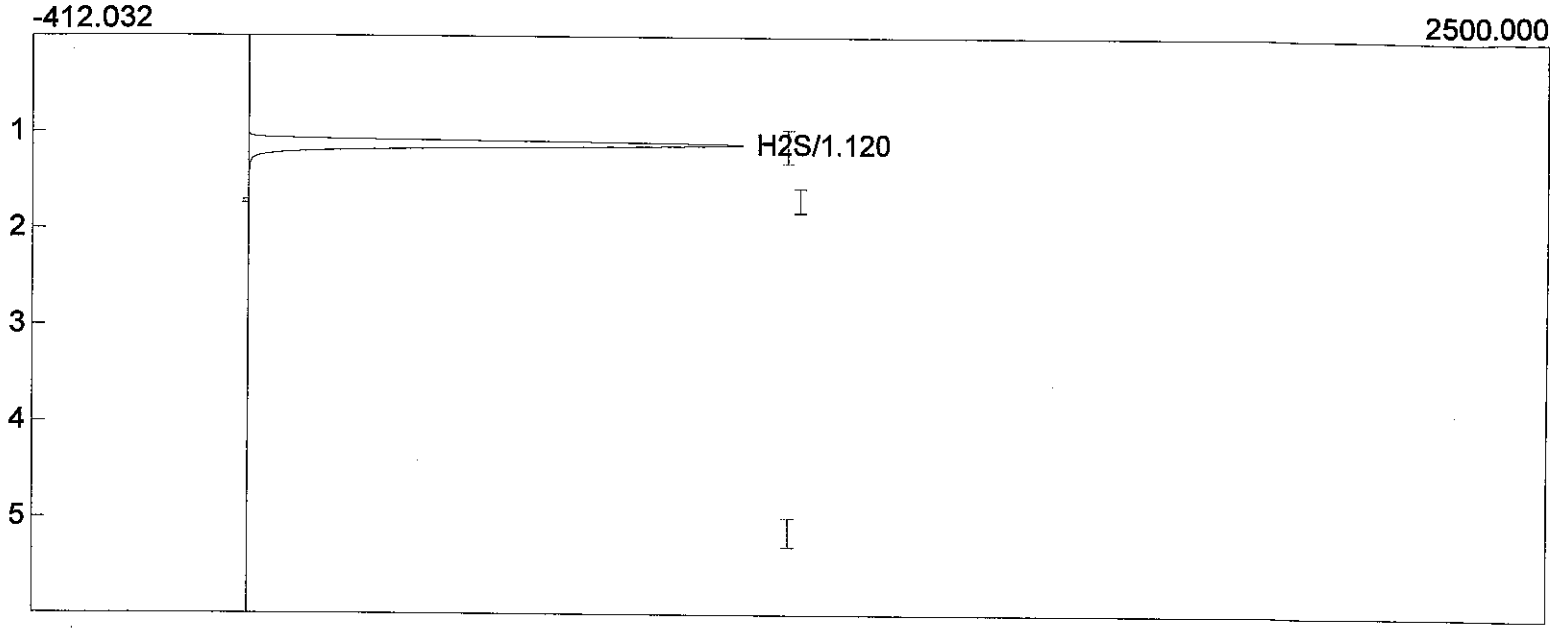
Component	Retention	Height	Area	External	Units
H2S	1.110	542.6	2543.4	20.36	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2543.4	20.36	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:03:12
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 152.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



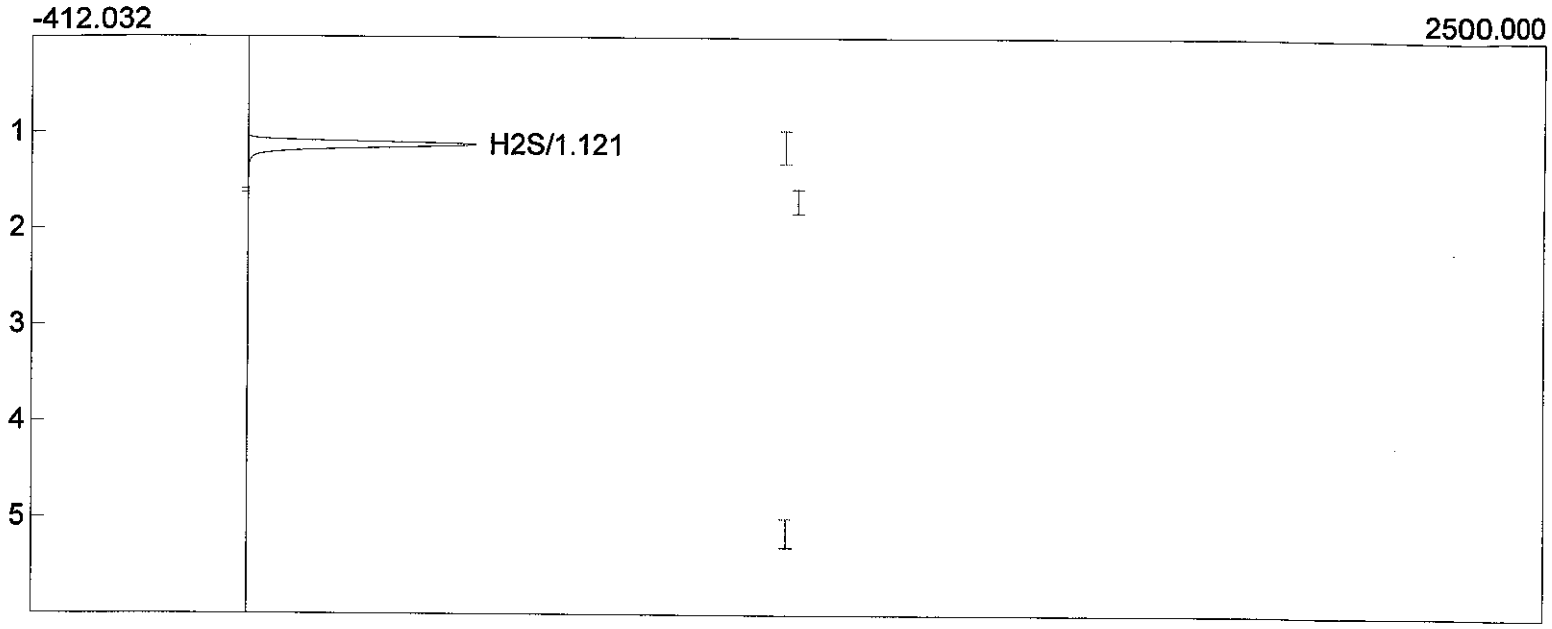
Component	Retention	Height	Area	External	Units
H2S	1.121	599.6	2833.7	21.35	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2833.7	21.35	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:11:42
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 153.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



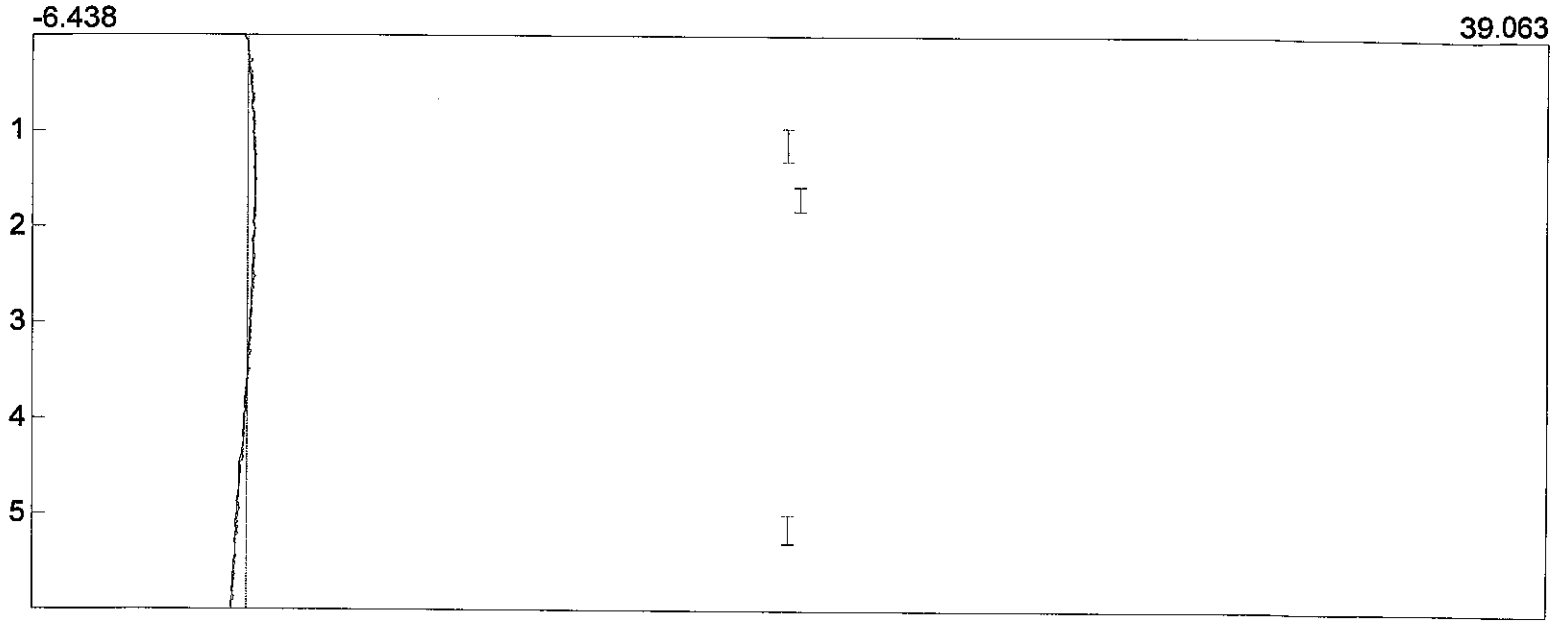
Component	Retention	Height	Area	External	Units
H2S	1.120	957.7	4554.2	26.24	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			4554.2	26.24	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:20:12
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 154.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



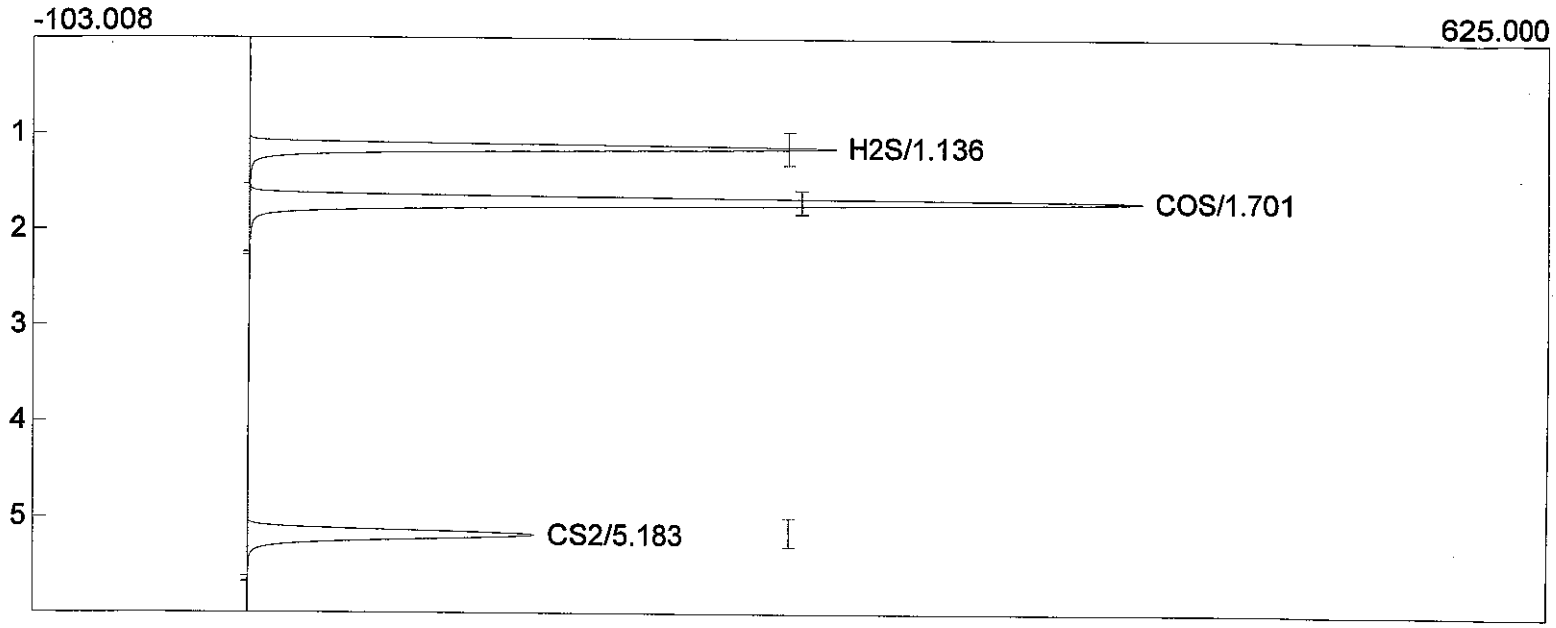
Component	Retention	Height	Area	External	Units
H2S	1.121	443.0	2088.9	18.70	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2088.9	18.70	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:28:42
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 155.CHR (C:\DCU ICR 7-2011)
Sample: CEMS System Zero gas
Operator: J. Glass



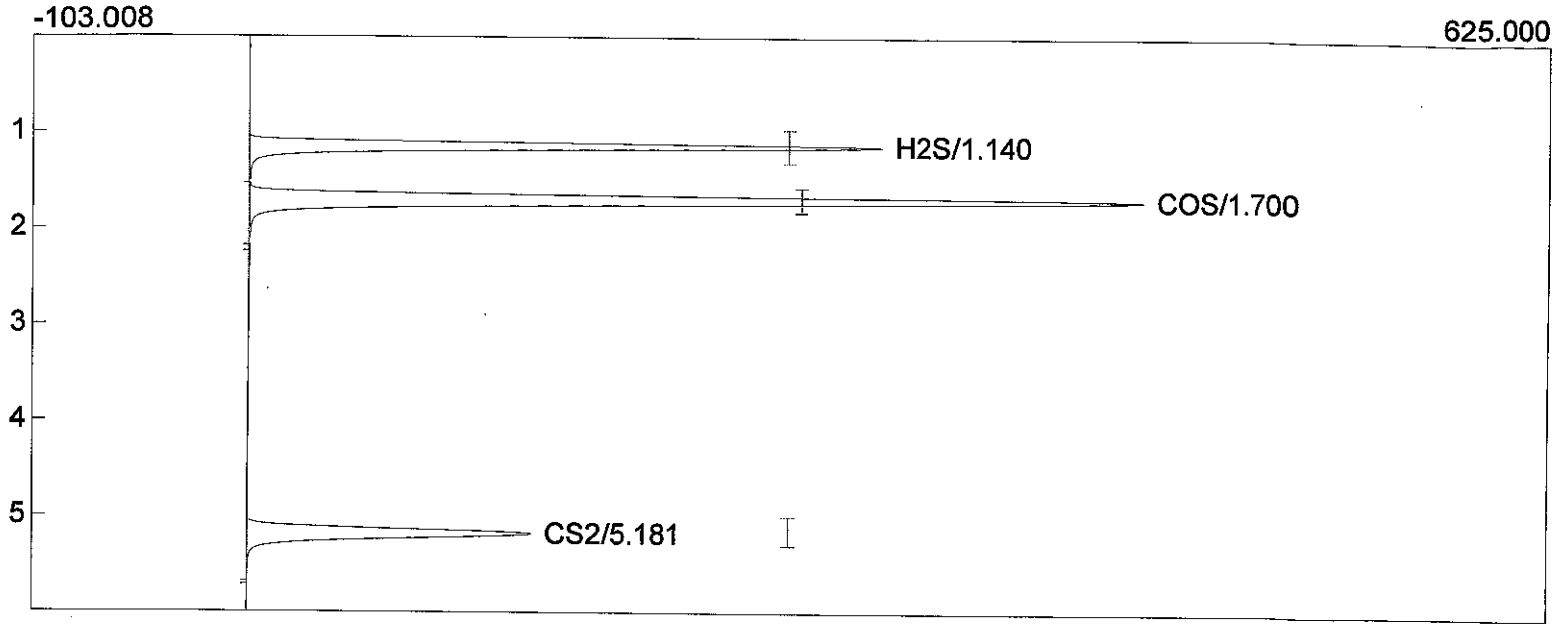
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:37:37
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 156.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass



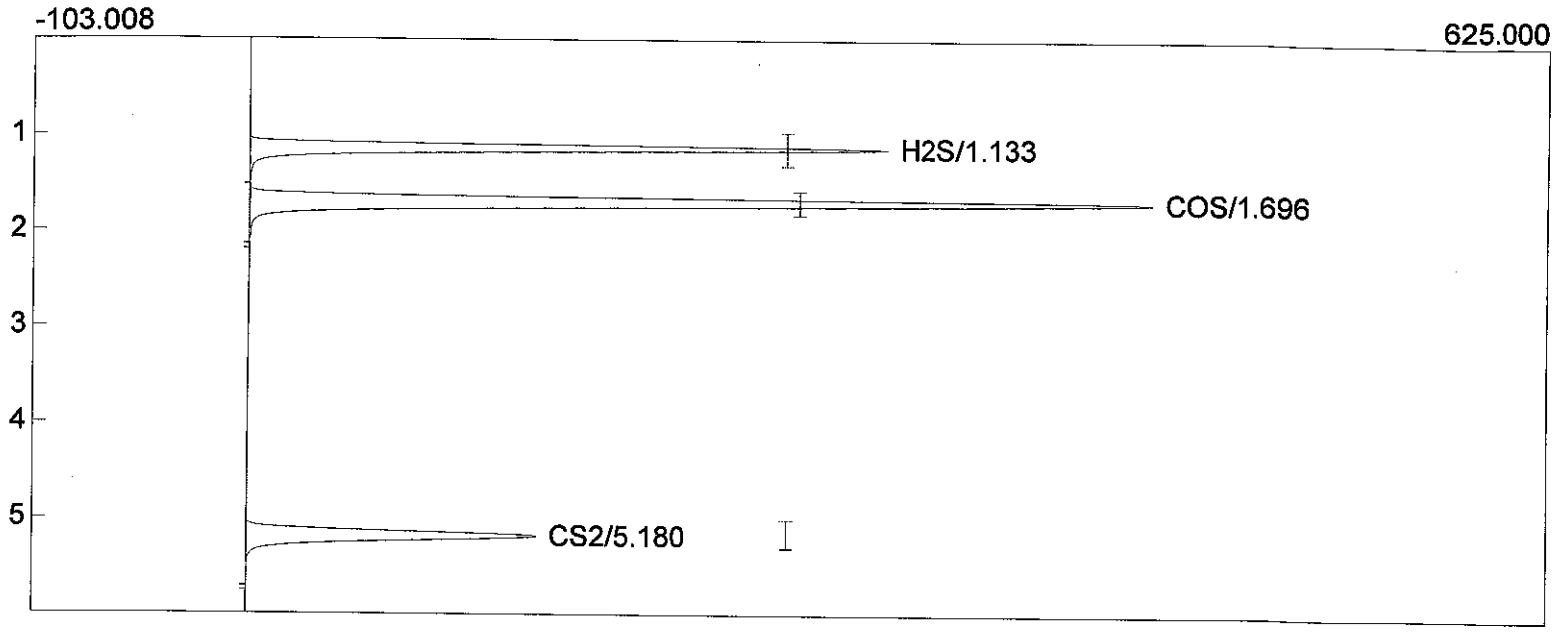
Component	Retention	Height	Area	External	Units
H2S	1.136	284.2	1348.1	15.45	ppmv
COS	1.701	431.9	2570.3	19.56	ppmv
CS2	5.183	139.0	962.7	6.60	ppmv
			4881.1	41.61	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:46:20
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 157.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass



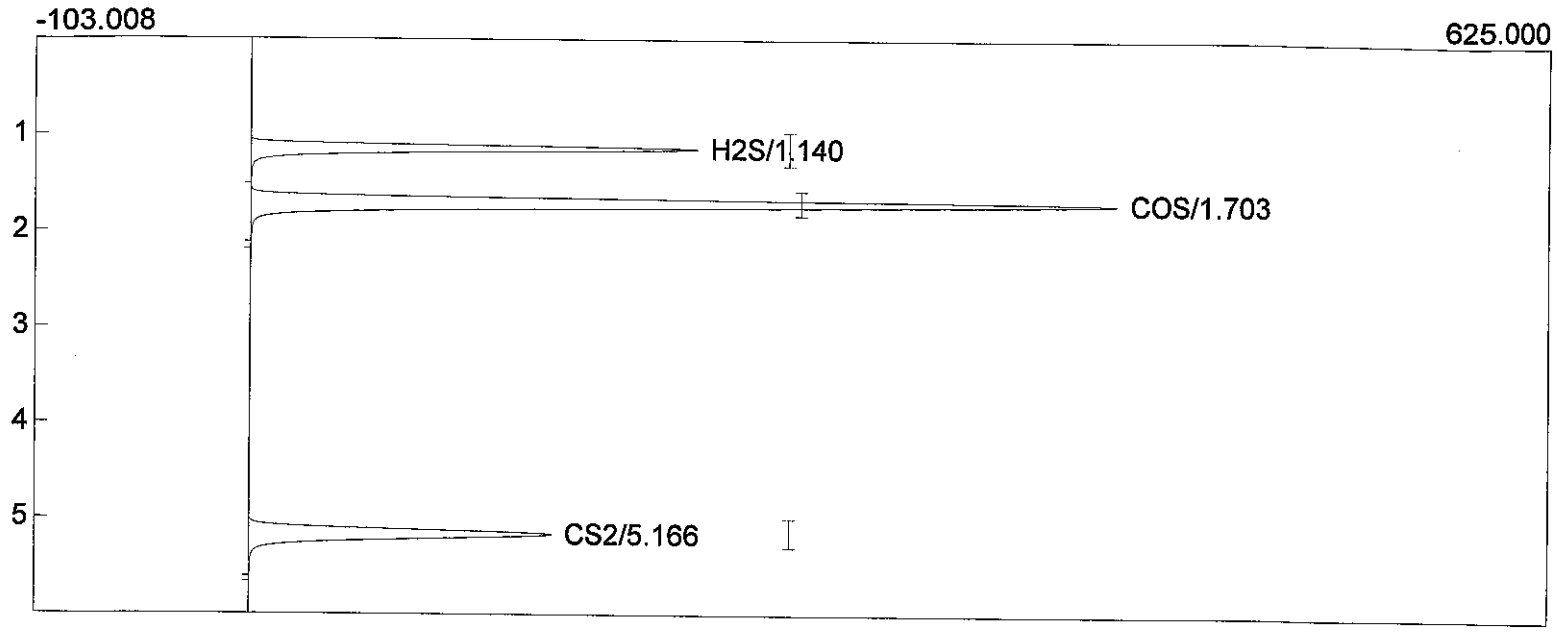
Component	Retention	Height	Area	External	Units
H2S	1.140	306.9	1470.5	16.06	ppmv
COS	1.700	432.5	2589.3	19.63	ppmv
CS2	5.181	137.6	959.6	6.59	ppmv
			5019.5	42.27	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/13/2011 14:55:21
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 158.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass



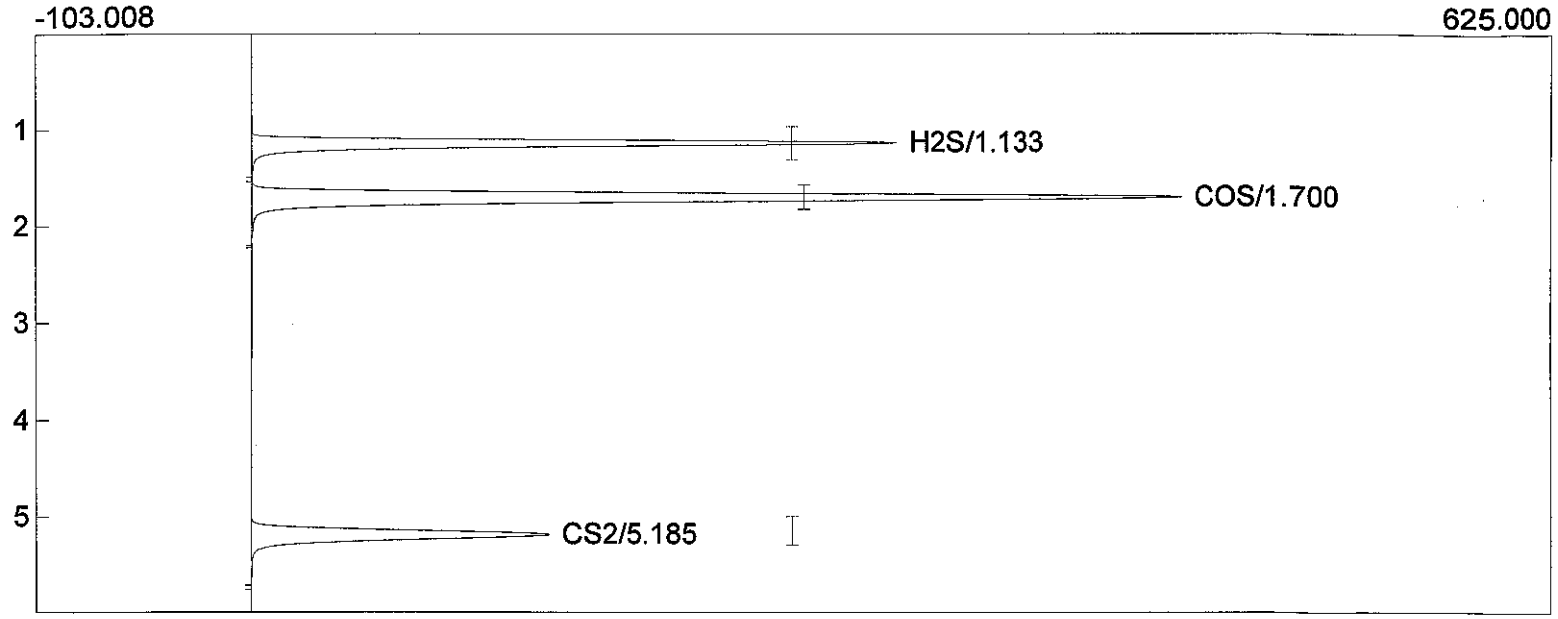
Component	Retention	Height	Area	External	Units
H2S	1.133	309.3	1486.1	16.13	ppmv
COS	1.696	437.6	2612.7	19.71	ppmv
CS2	5.180	140.4	975.6	6.64	ppmv
			5074.4	42.48	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 16:21:06
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 159.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass



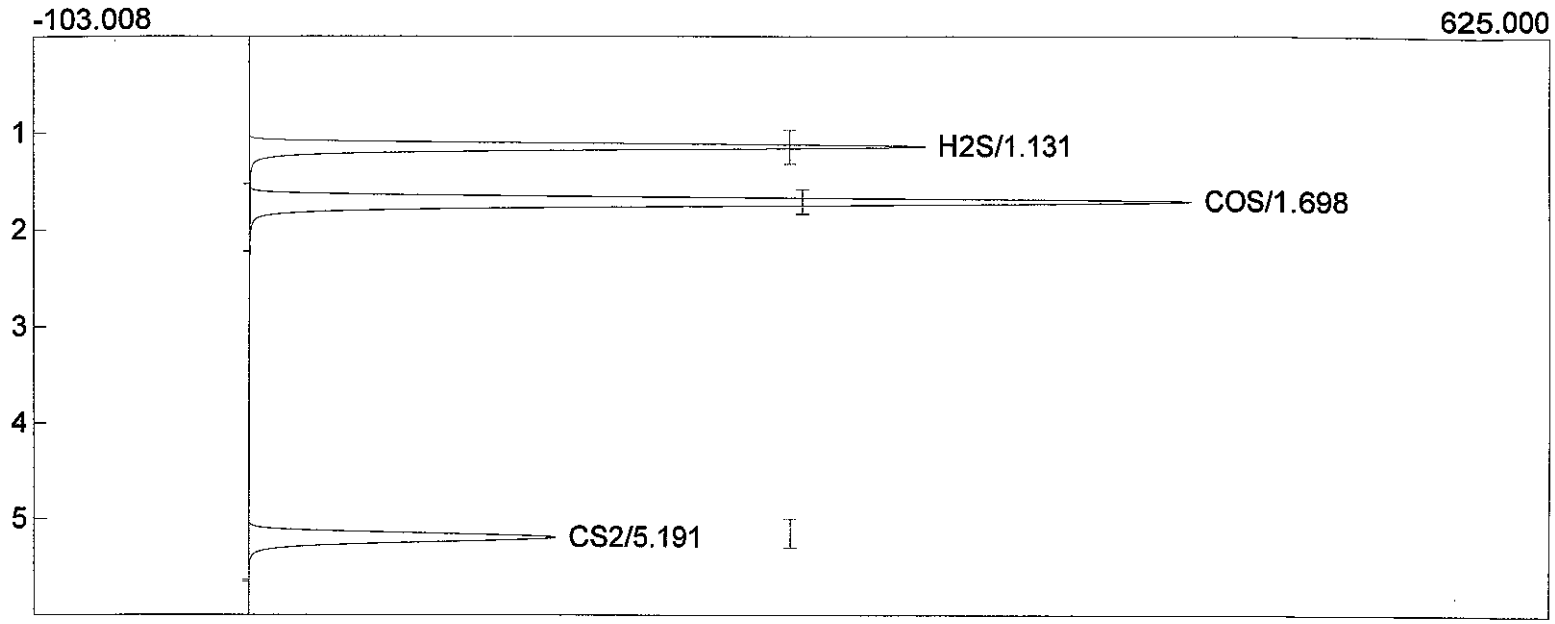
Component	Retention	Height	Area	External	Units
H2S	1.140	216.2	1021.8	13.70	ppmv
COS	1.703	419.5	2479.2	19.21	ppmv
CS2	5.166	145.9	1009.2	6.74	ppmv
			4510.2	39.66	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 16:30:33
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 160.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass



Component	Retention	Height	Area	External	Units
H2S	1.133	312.5	1491.7	16.15	ppmv
COS	1.700	450.0	2686.5	19.97	ppmv
CS2	5.185	143.7	991.9	6.69	ppmv
			5170.1	42.81	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 16:39:48
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 161.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass

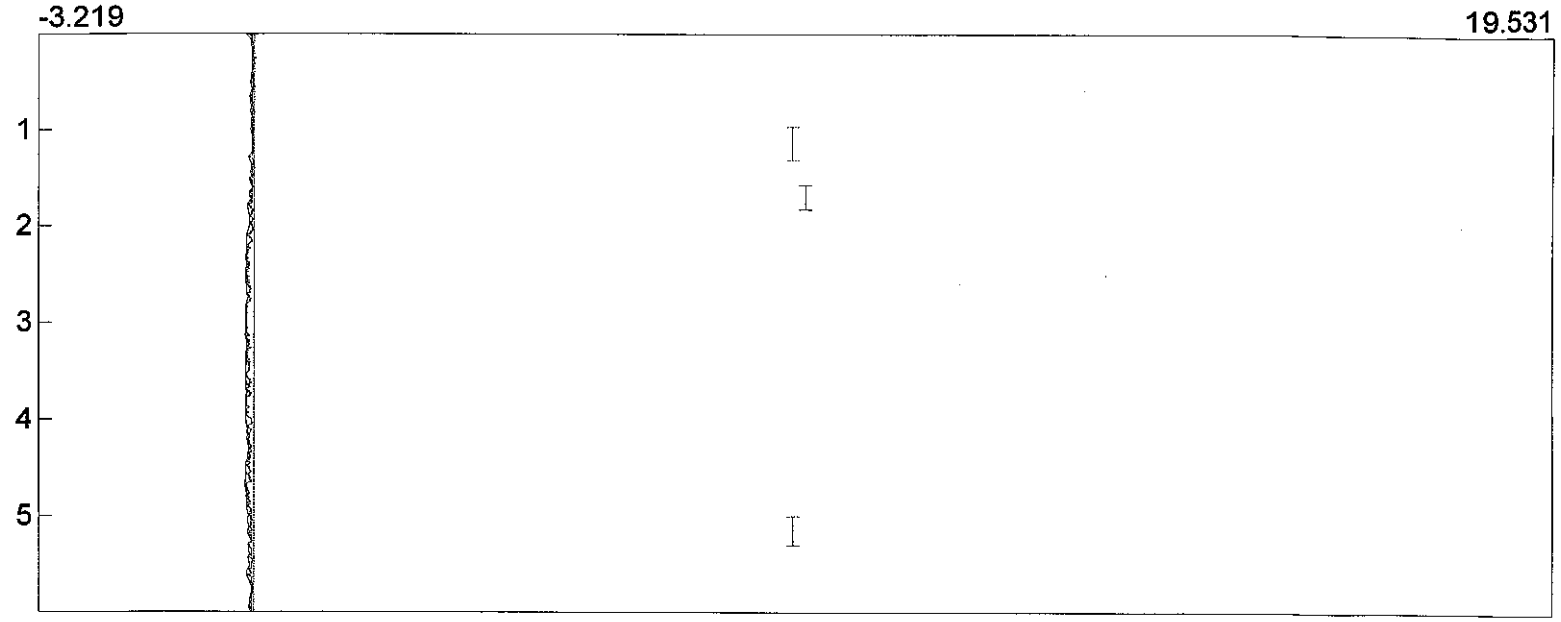


Component	Retention	Height	Area	External	Units
H2S	1.131	327.2	1565.1	16.49	ppmv
COS	1.698	455.2	2730.3	20.13	ppmv
CS2	5.191	148.1	1023.3	6.78	ppmv
			5318.7	43.39	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 16:57:16
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 162.CHR (C:\DCU ICR 7-2011)
Sample: Post test cat @ 15.2 H2S
Operator: J. Glass

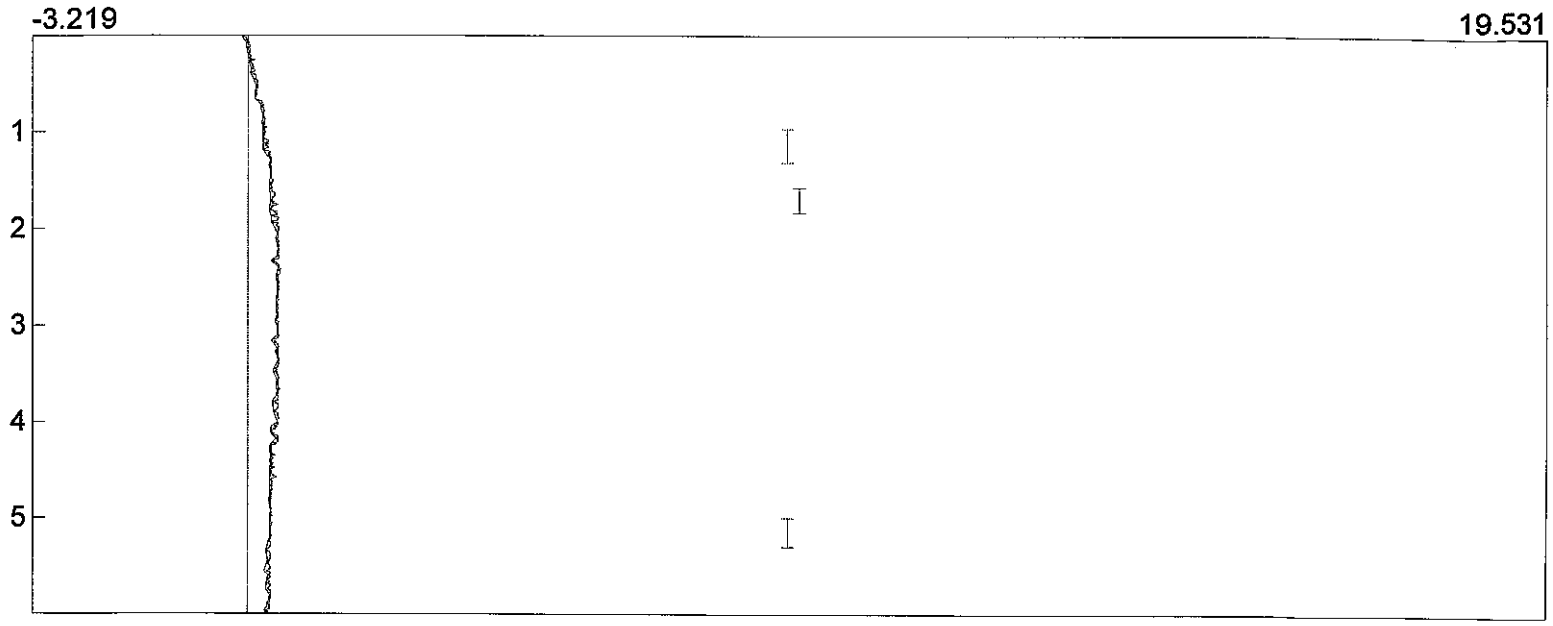
Component	Retention	Height	Area	External	Units
H2S	1.148	312.8	1504.3	16.21	ppmv
COS	1.720	455.4	2728.7	20.12	ppmv
CS2	5.191	151.6	1046.0	6.85	ppmv
			5279.1	43.18	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 19:18:34
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 163.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



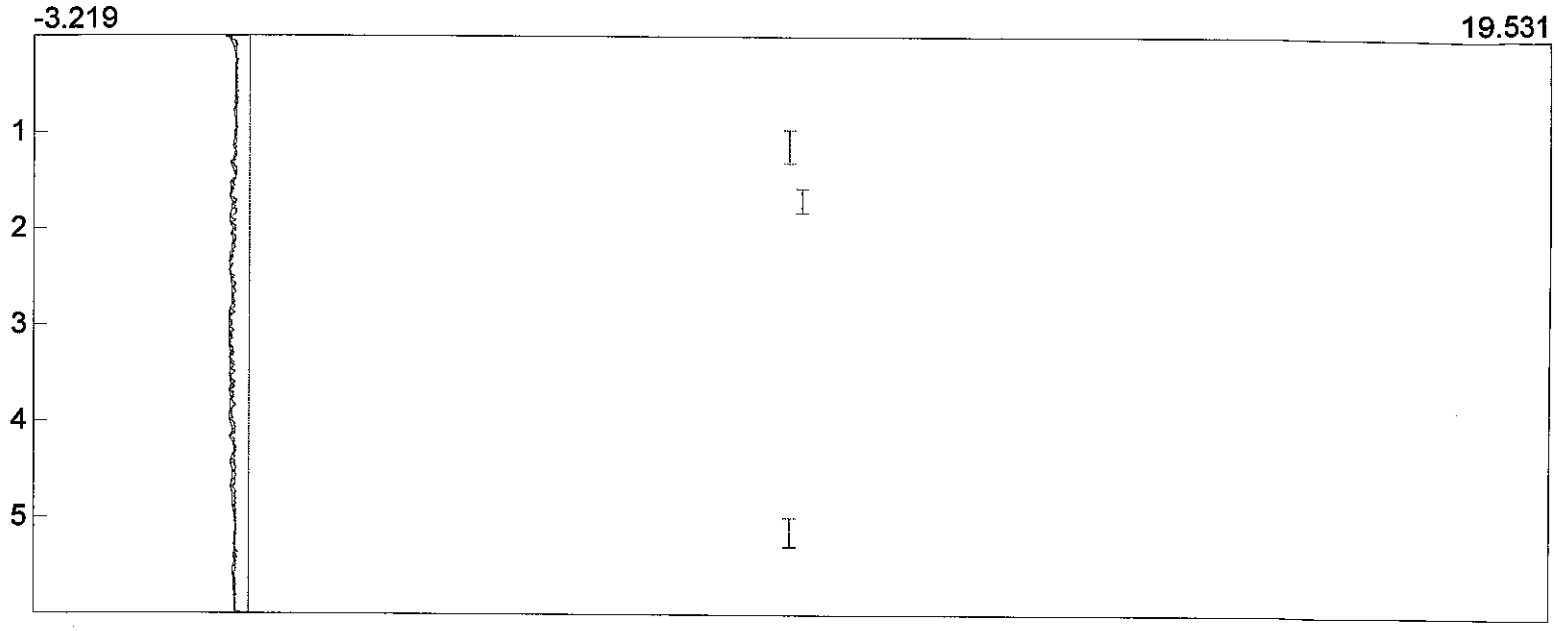
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 19:27:04
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 164.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



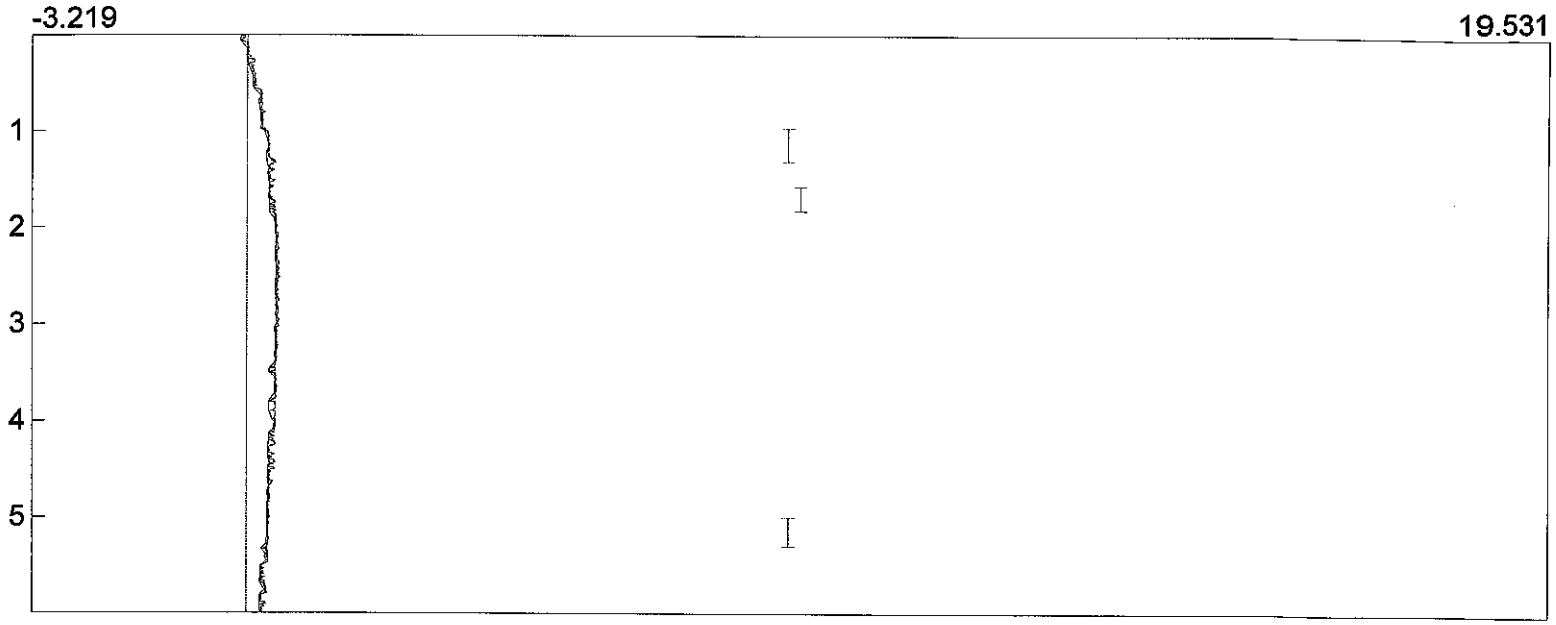
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:05:08
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 166.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



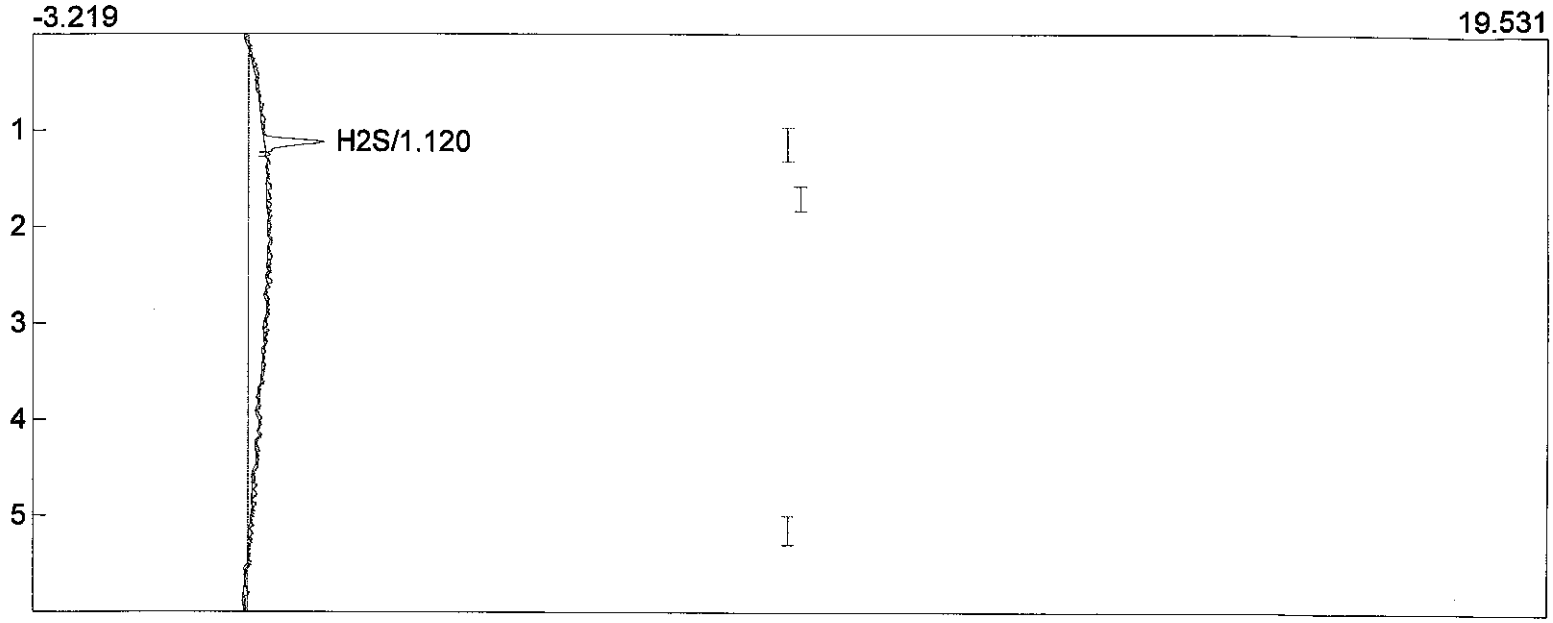
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:13:38
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 167.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



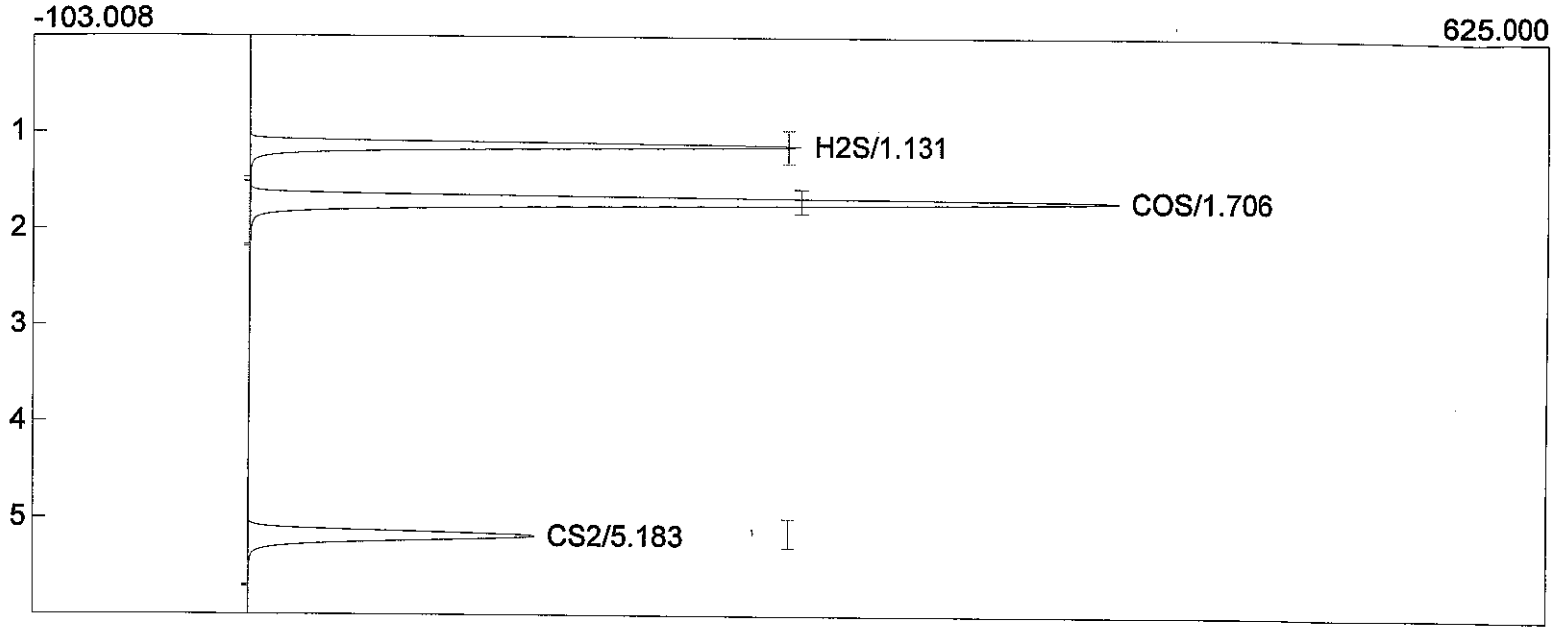
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:22:08
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 168.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



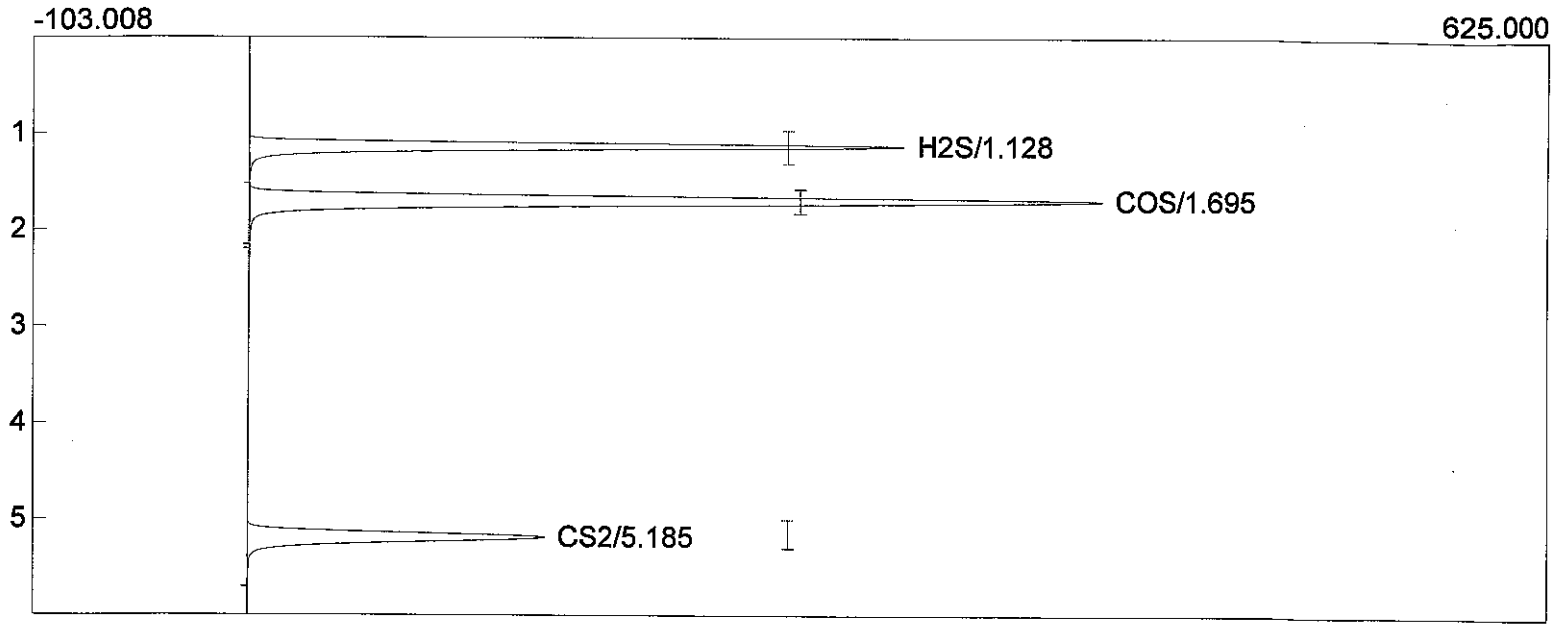
Component	Retention	Height	Area	External	Units
H2S	1.120	0.9	4.1	1.24	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			4.1	1.24	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:30:39
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 169.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



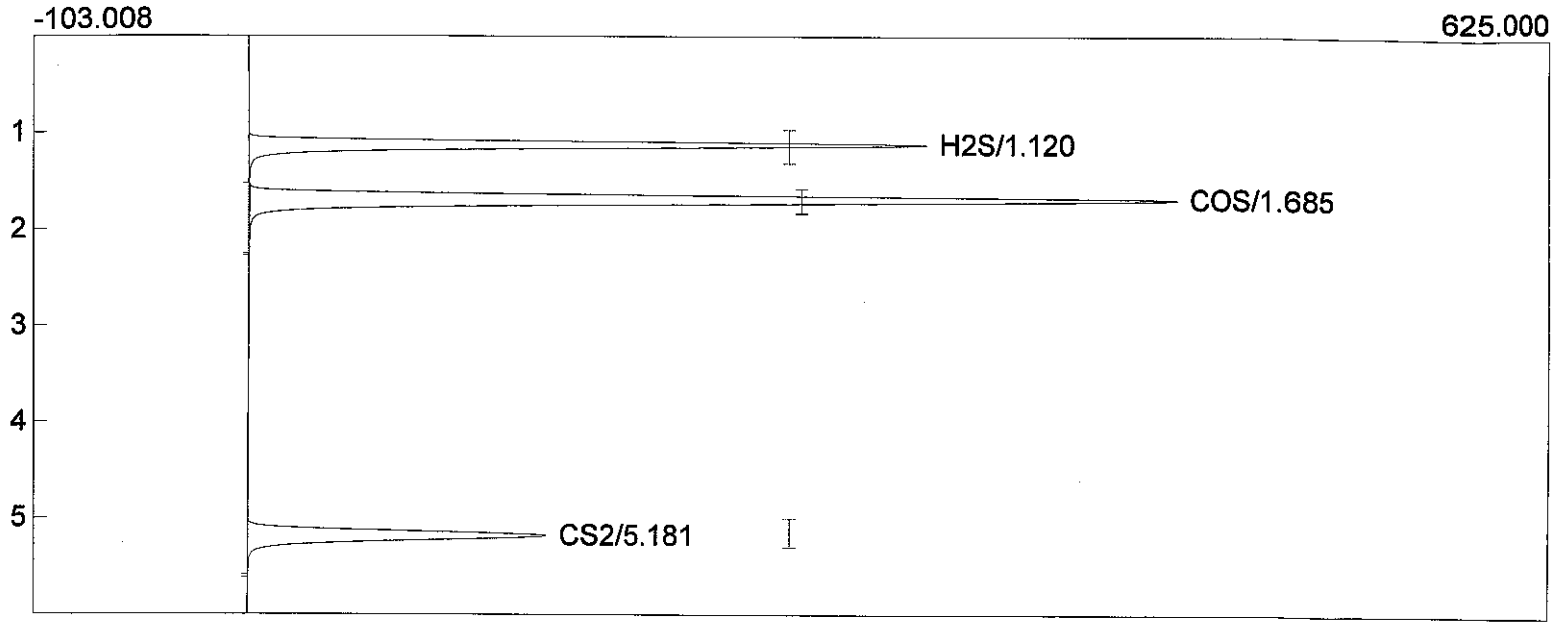
Component	Retention	Height	Area	External	Units
H2S	1.131	267.0	1258.4	15.00	ppmv
COS	1.706	420.3	2520.5	19.37	ppmv
CS2	5.183	138.4	953.5	6.57	ppmv
			4732.4	40.94	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:39:03
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 170.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



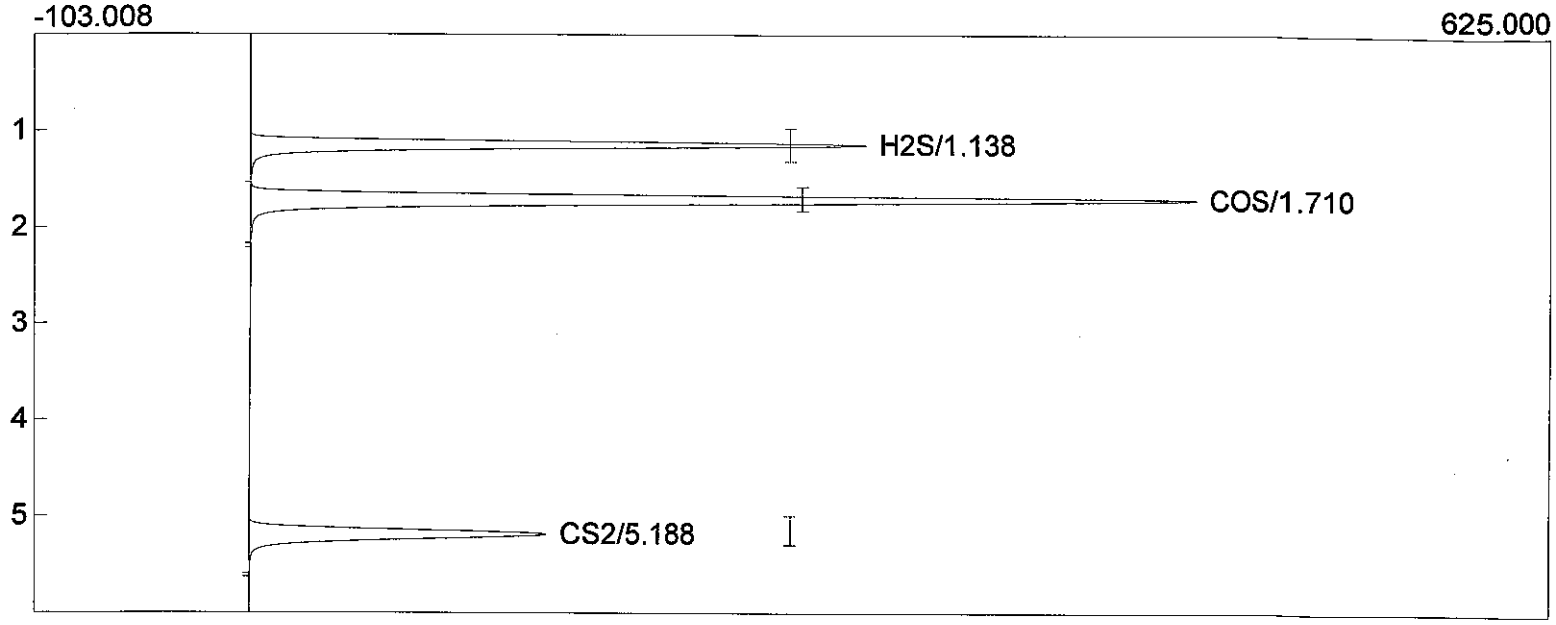
Component	Retention	Height	Area	External	Units
H2S	1.128	317.7	1524.2	16.30	ppmv
COS	1.695	412.9	2563.8	19.54	ppmv
CS2	5.185	143.6	985.6	6.67	ppmv
			5073.5	42.51	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:47:21
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 171.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



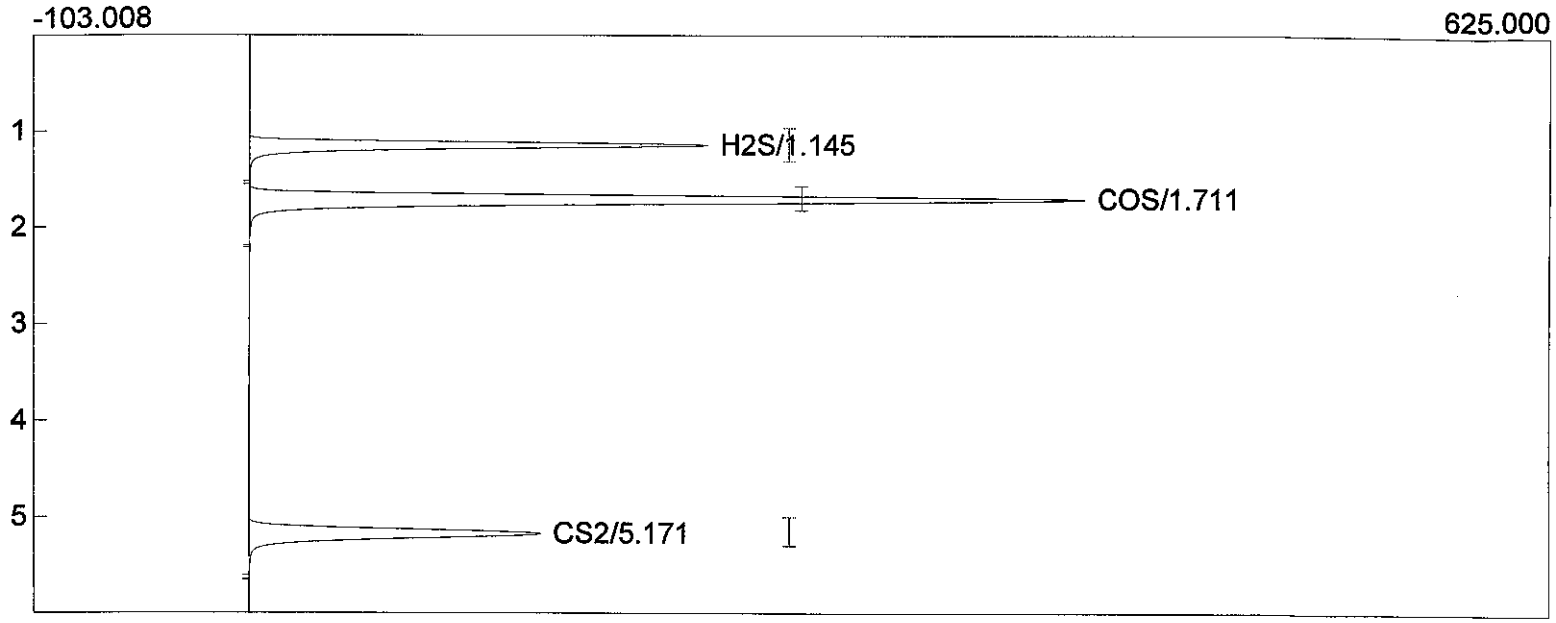
Component	Retention	Height	Area	External	Units
H2S	1.120	328.5	1585.6	16.58	ppmv
COS	1.685	448.9	2692.1	19.99	ppmv
CS2	5.181	143.8	990.5	6.69	ppmv
			5268.2	43.26	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/14/2011 20:55:57
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 172.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



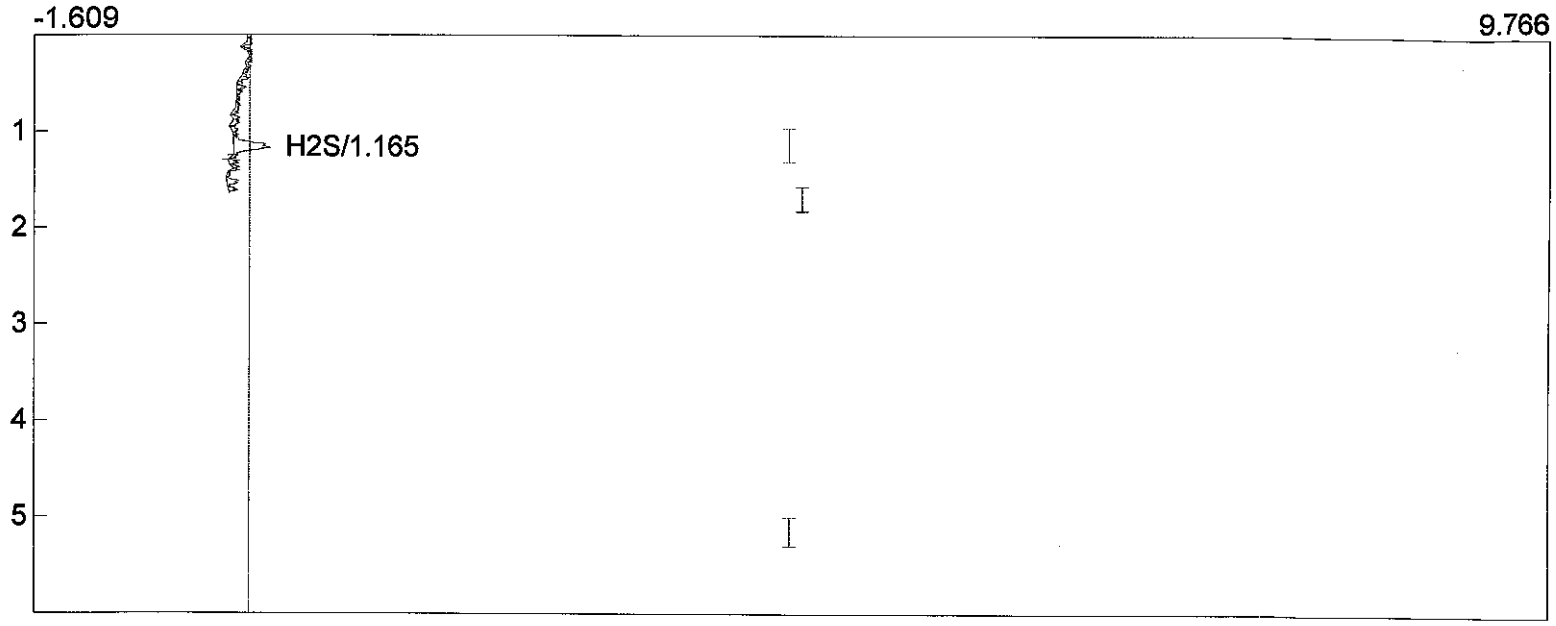
Component	Retention	Height	Area	External	Units
H2S	1.138	298.9	1518.2	16.27	ppmv
COS	1.710	457.6	2714.0	20.07	ppmv
CS2	5.188	144.0	997.7	6.71	ppmv
			5229.9	43.05	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 10:13:38
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 173.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



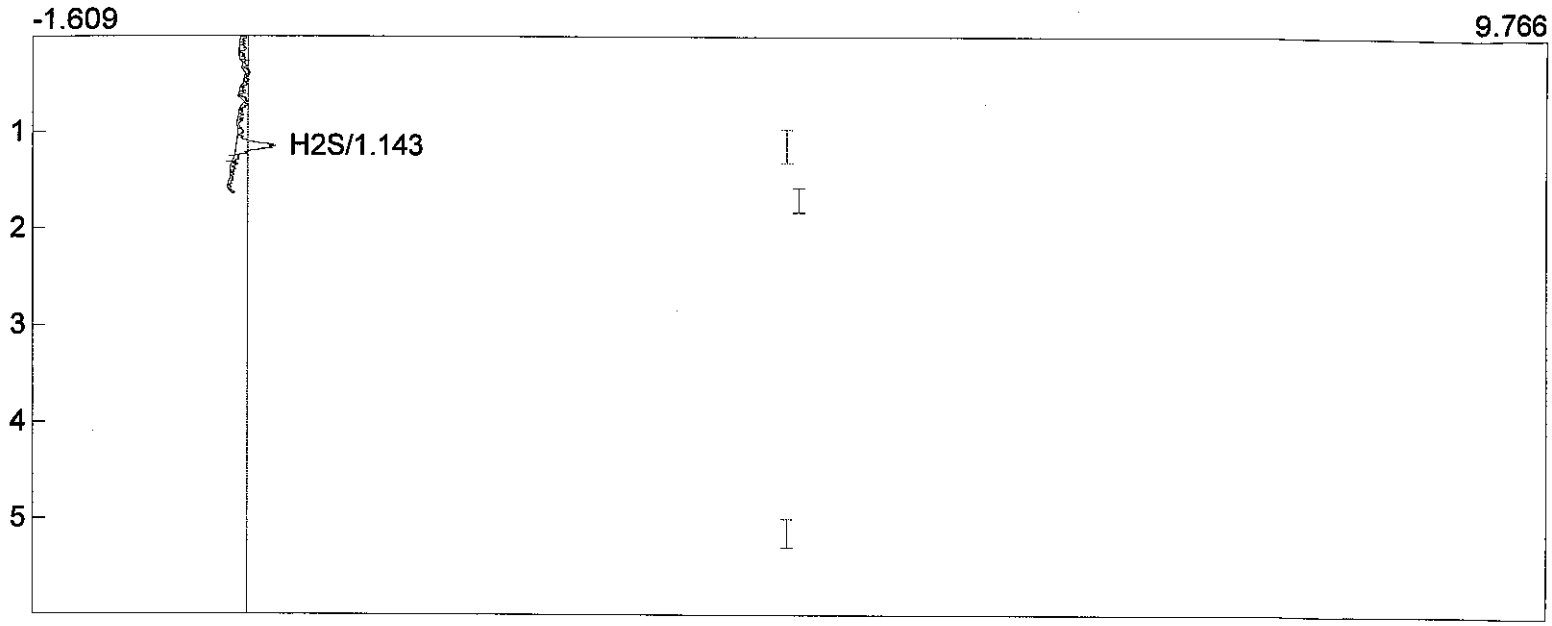
Component	Retention	Height	Area	External	Units
H2S	1.145	221.6	1055.7	13.89	ppmv
COS	1.711	404.3	2402.4	18.92	ppmv
CS2	5.171	141.1	969.5	6.62	ppmv
			4427.7	39.43	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 23:58:44
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 179.CHR (C:\DCU ICR 7-2011)
Sample: H2S Recovery 25 ppm
Operator: J. Glass



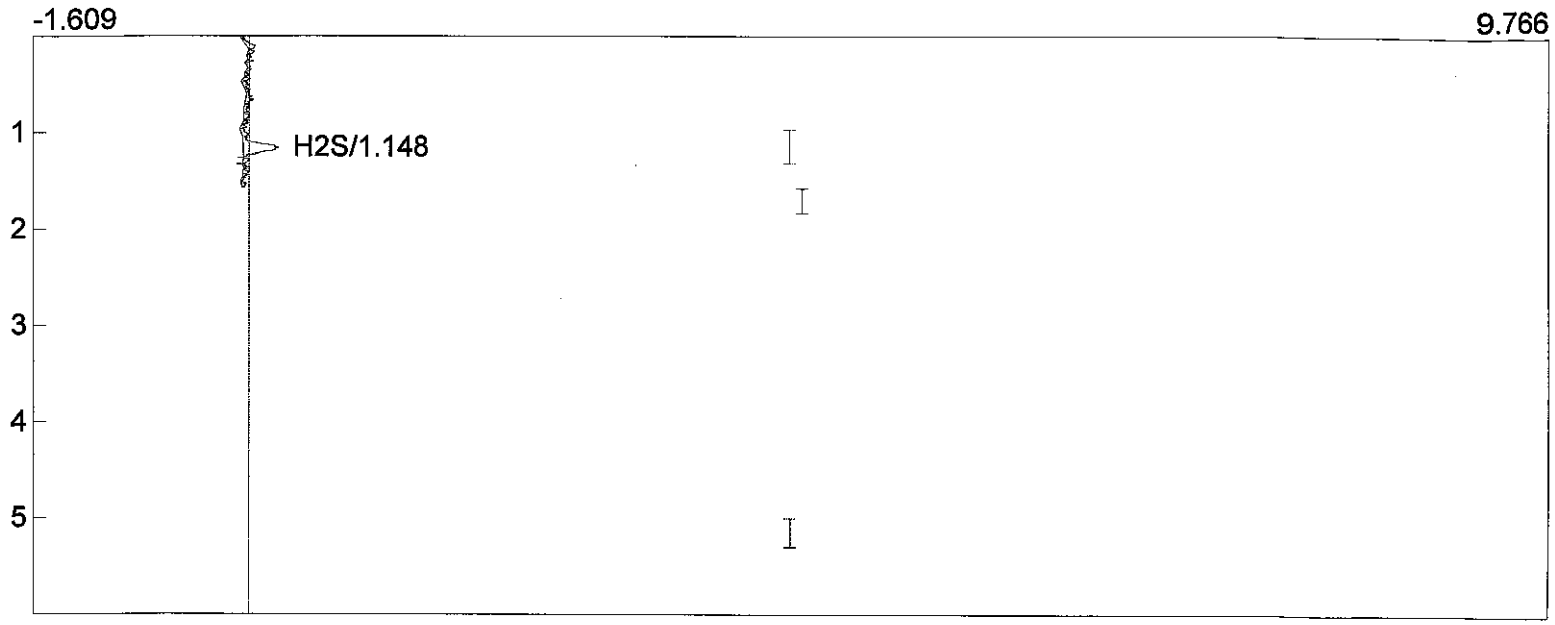
Component	Retention	Height	Area	External	Units
H2S	1.165	0.3	1.4	0.45	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1.4	0.45	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 00:02:21
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 180.CHR (C:\DCU ICR 7-2011)
Sample: H2S Recovery 25 ppm
Operator: J. Glass



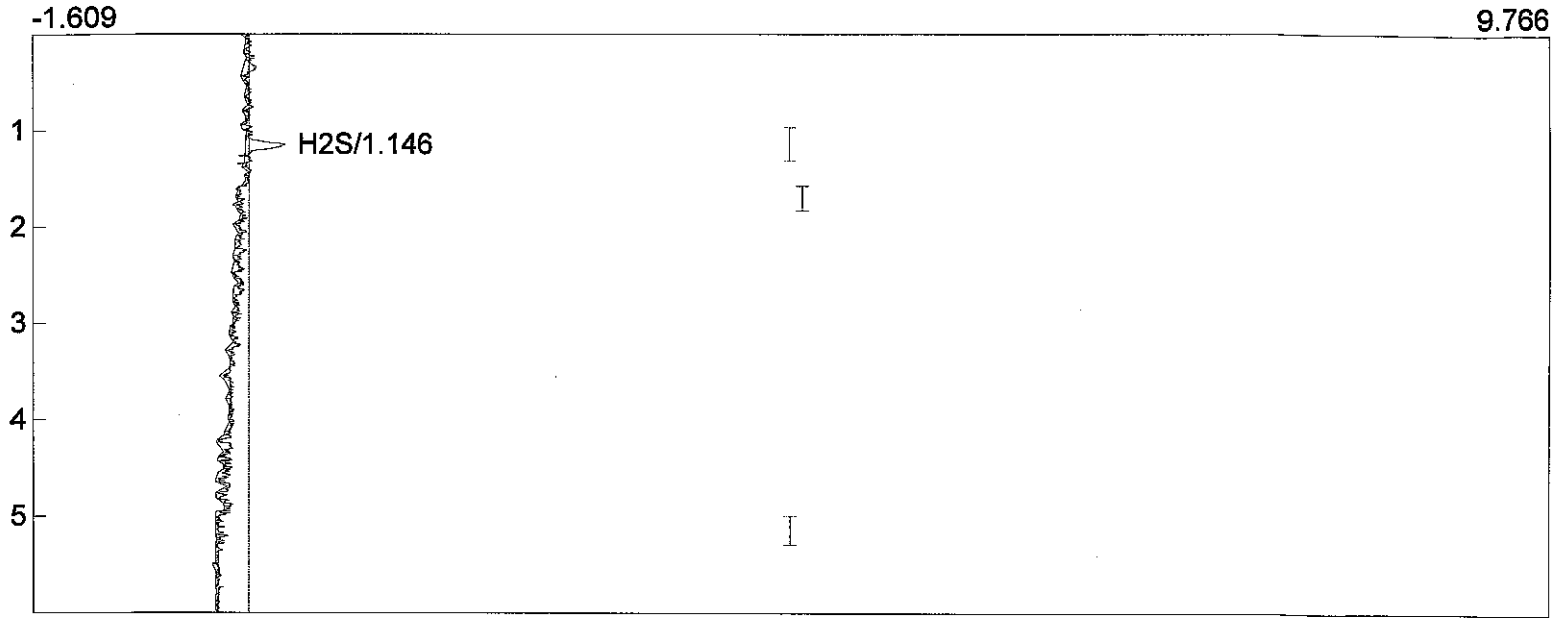
Component	Retention	Height	Area	External	Units
H2S	1.143	0.3	1.7	0.51	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1.7	0.51	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 00:05:09
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 181.CHR (C:\DCU ICR 7-2011)
Sample: H2S Recovery 25 ppm
Operator: J. Glass



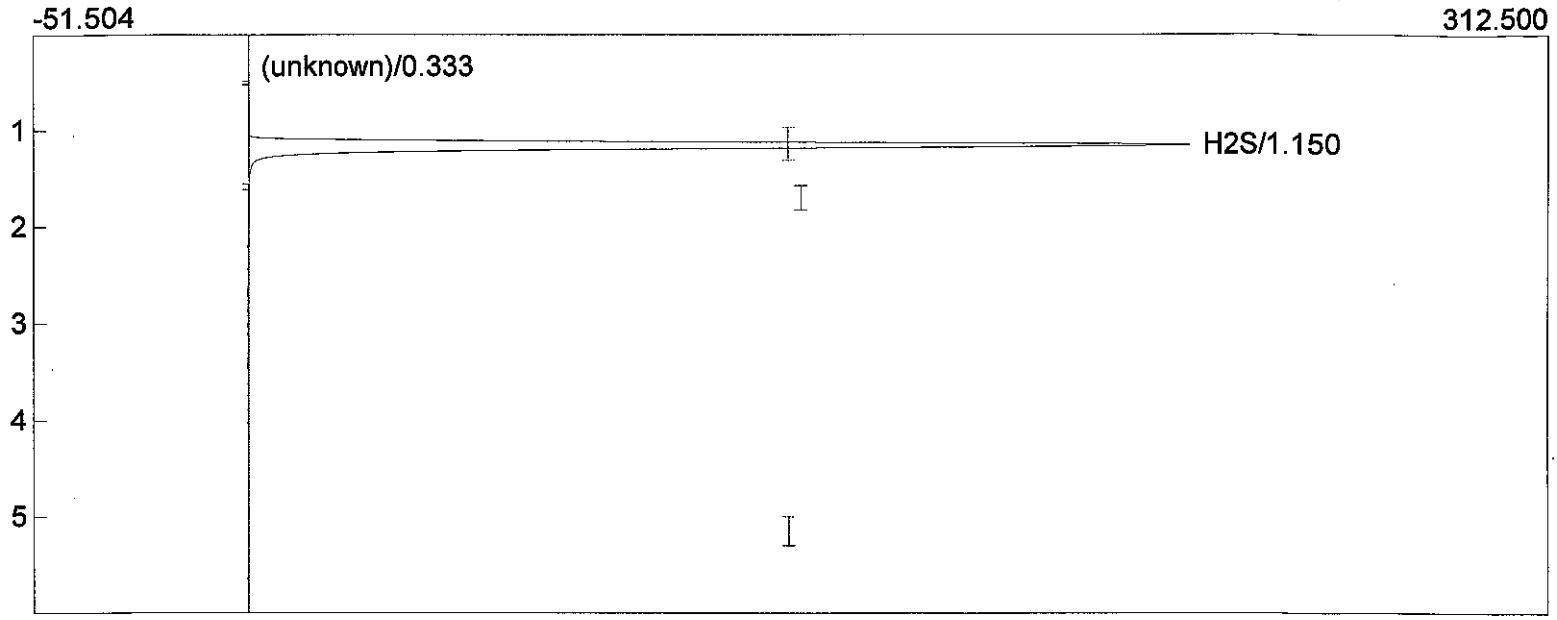
Component	Retention	Height	Area	External	Units
H2S	1.148	0.3	1.6	0.49	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1.6	0.49	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 00:07:46
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 182.CHR (C:\DCU ICR 7-2011)
Sample: H2S Recovery 25 ppm
Operator: J. Glass



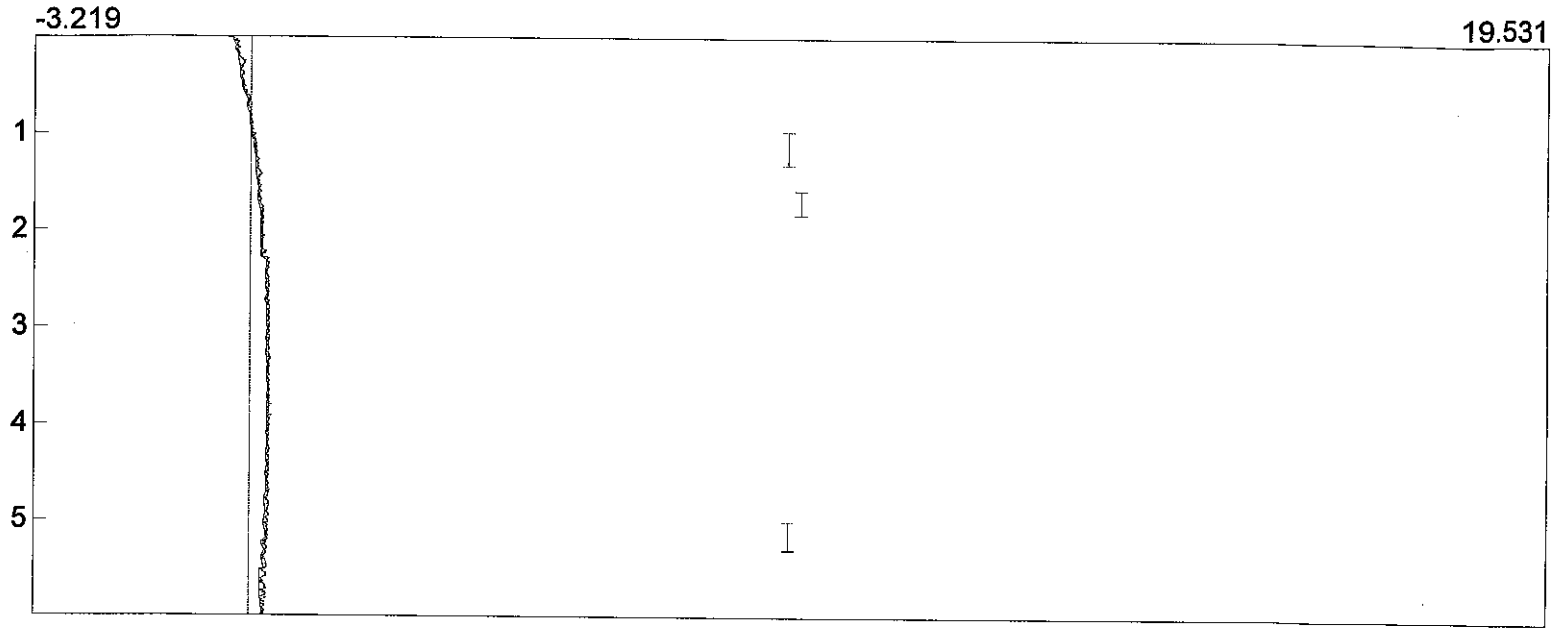
Component	Retention	Height	Area	External	Units
H2S	1.146	0.3	1.5	0.46	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1.5	0.46	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 00:42:15
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 183.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



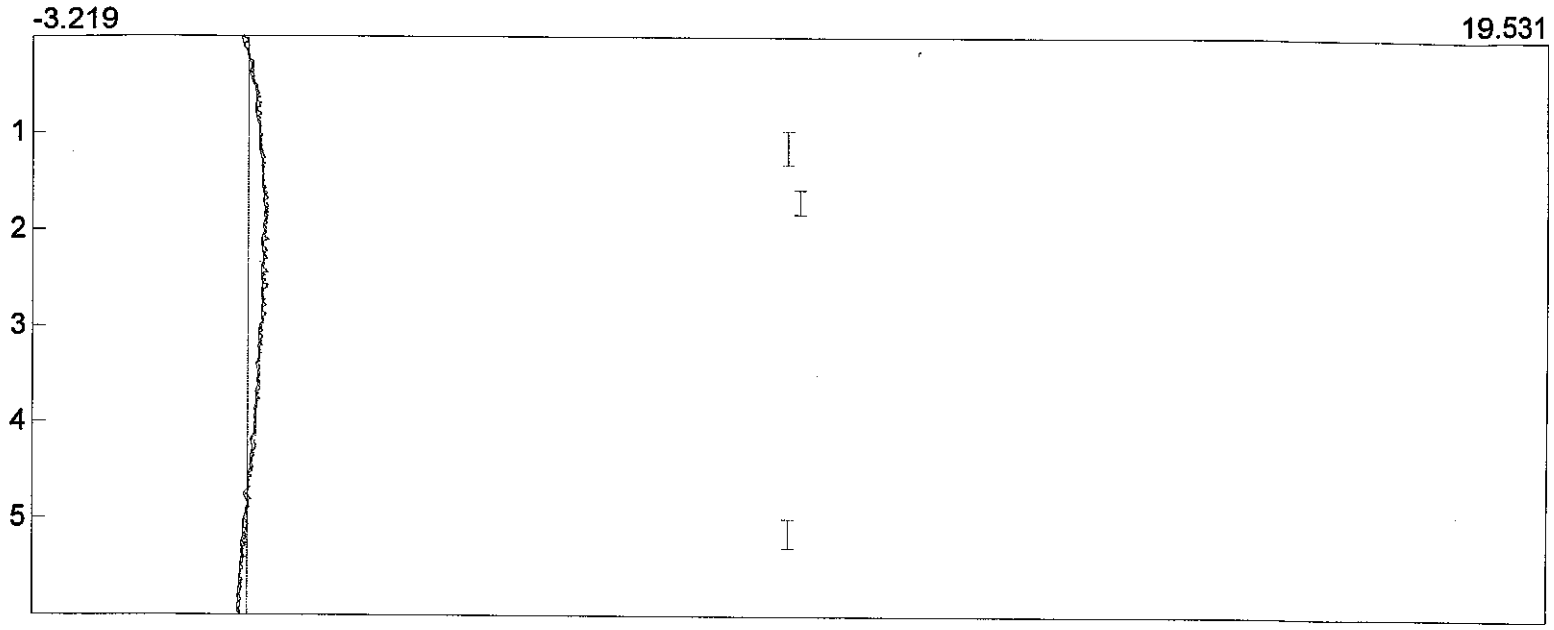
Component	Retention	Height	Area	External	Units
H2S	1.150	228.0	1083.7	14.05	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1083.7	14.05	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 00:50:22
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 184.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



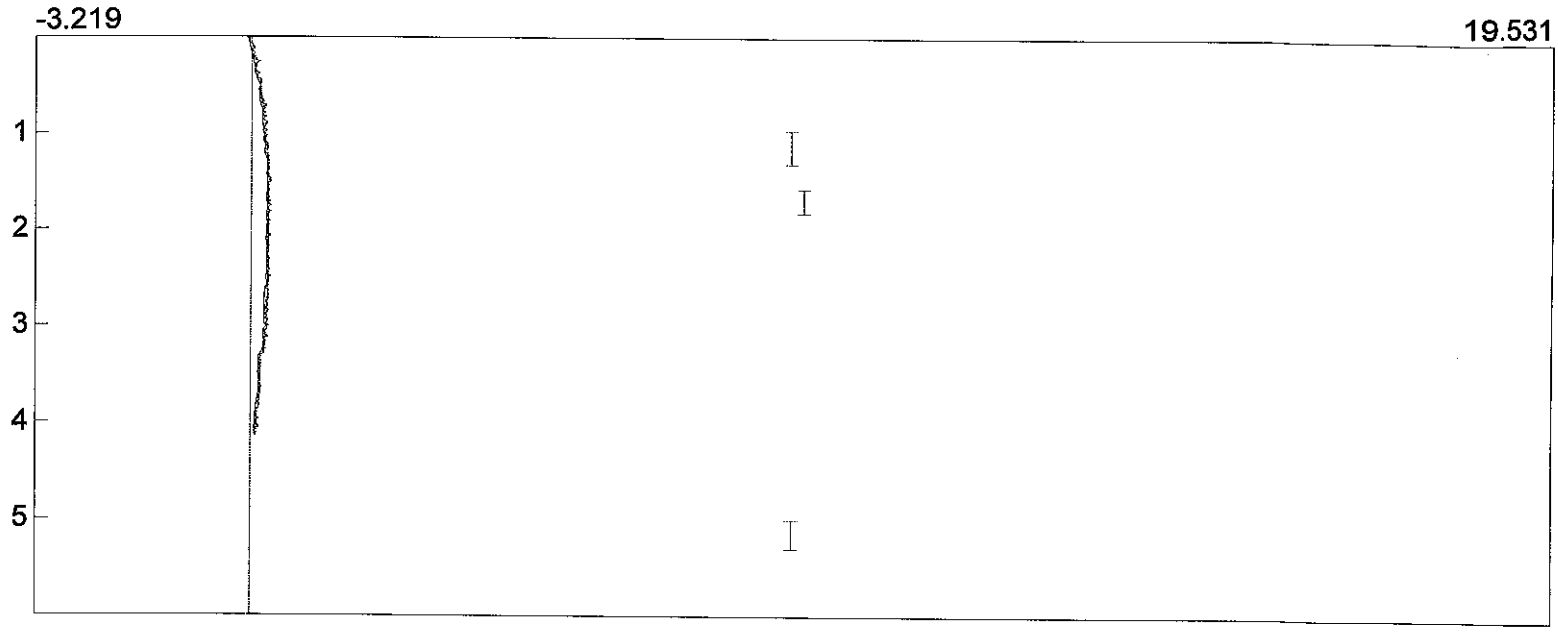
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 00:58:52
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 185.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



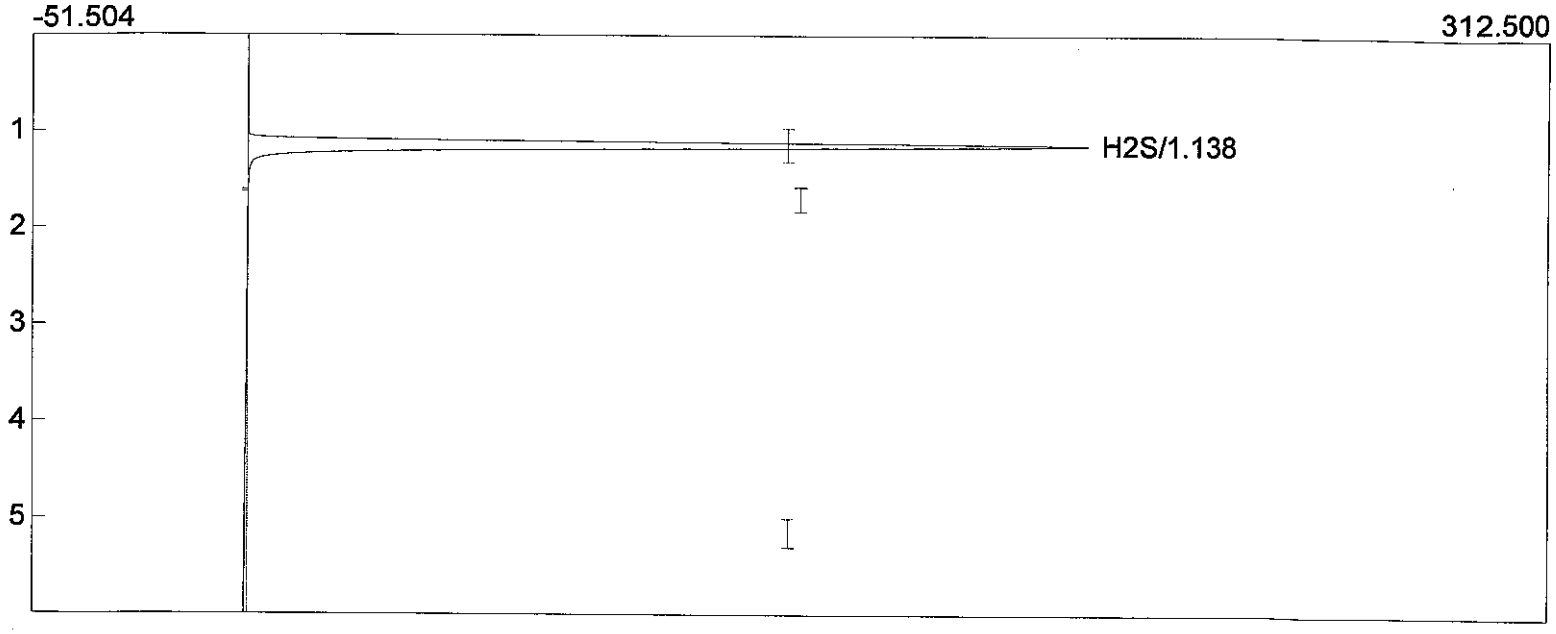
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:07:15
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 186.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



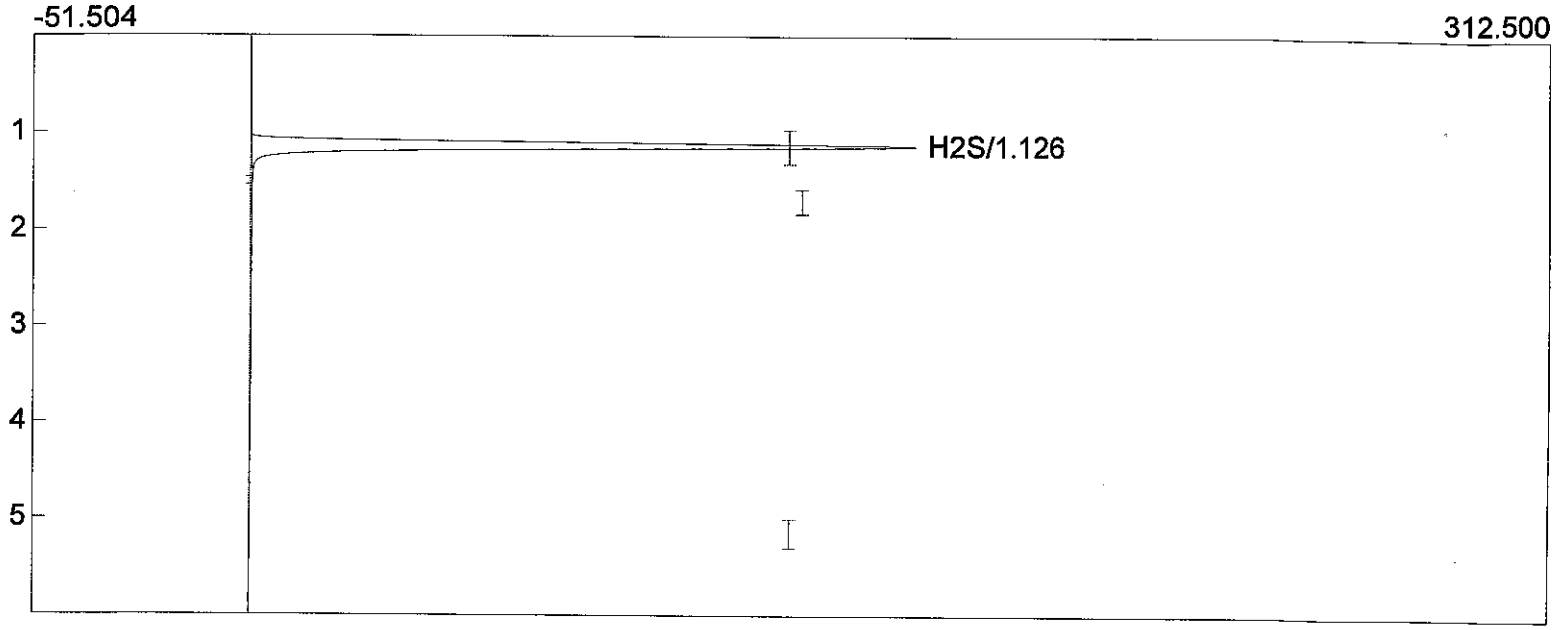
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:13:51
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 187.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



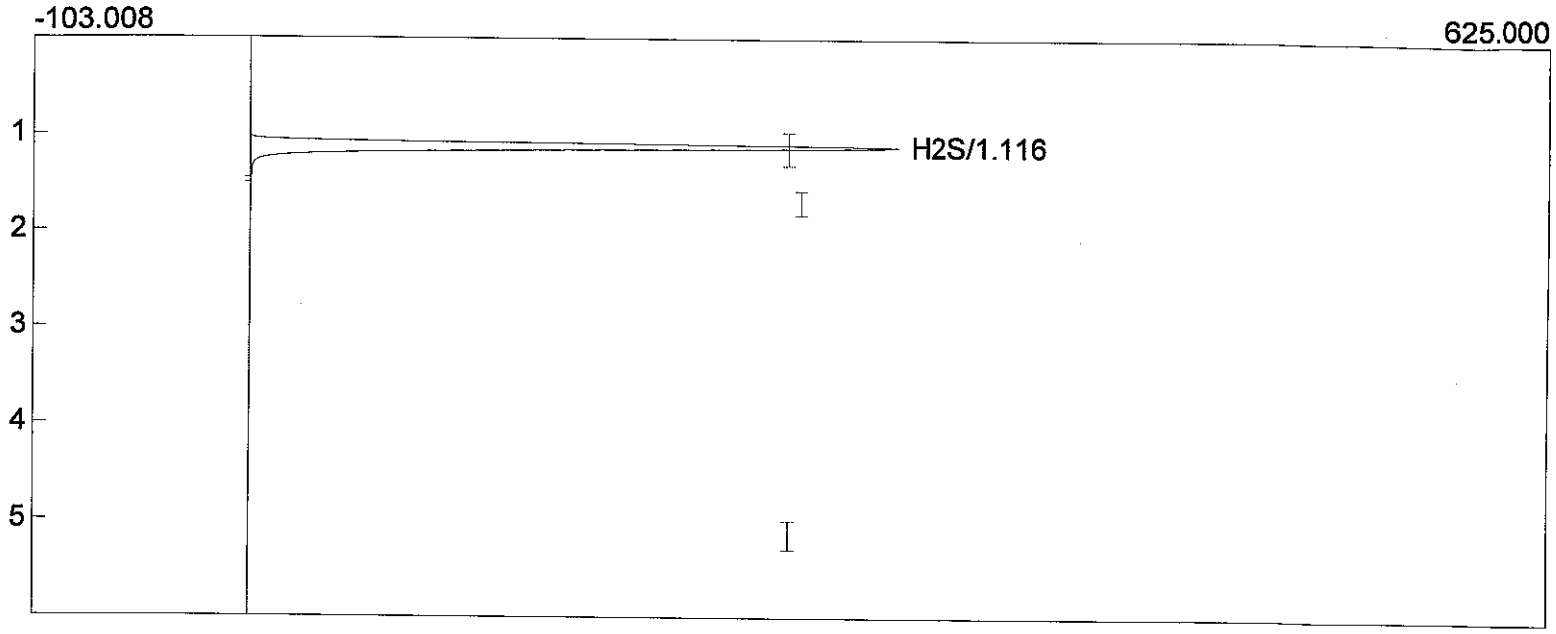
Component	Retention	Height	Area	External	Units
H2S	1.138	203.4	960.8	13.34	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			960.8	13.34	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:21:51
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 188.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



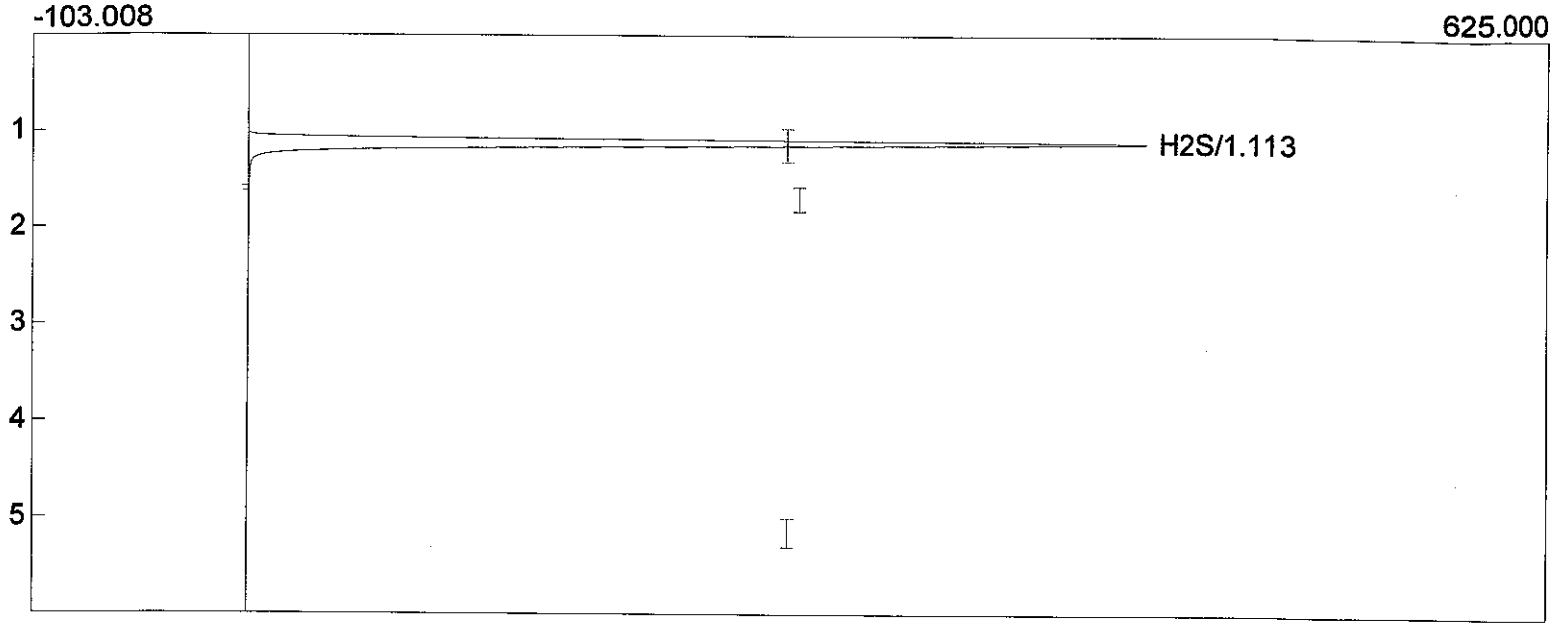
Component	Retention	Height	Area	External	Units
H2S	1.126	161.4	751.9	11.98	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			751.9	11.98	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:29:58
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 189.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



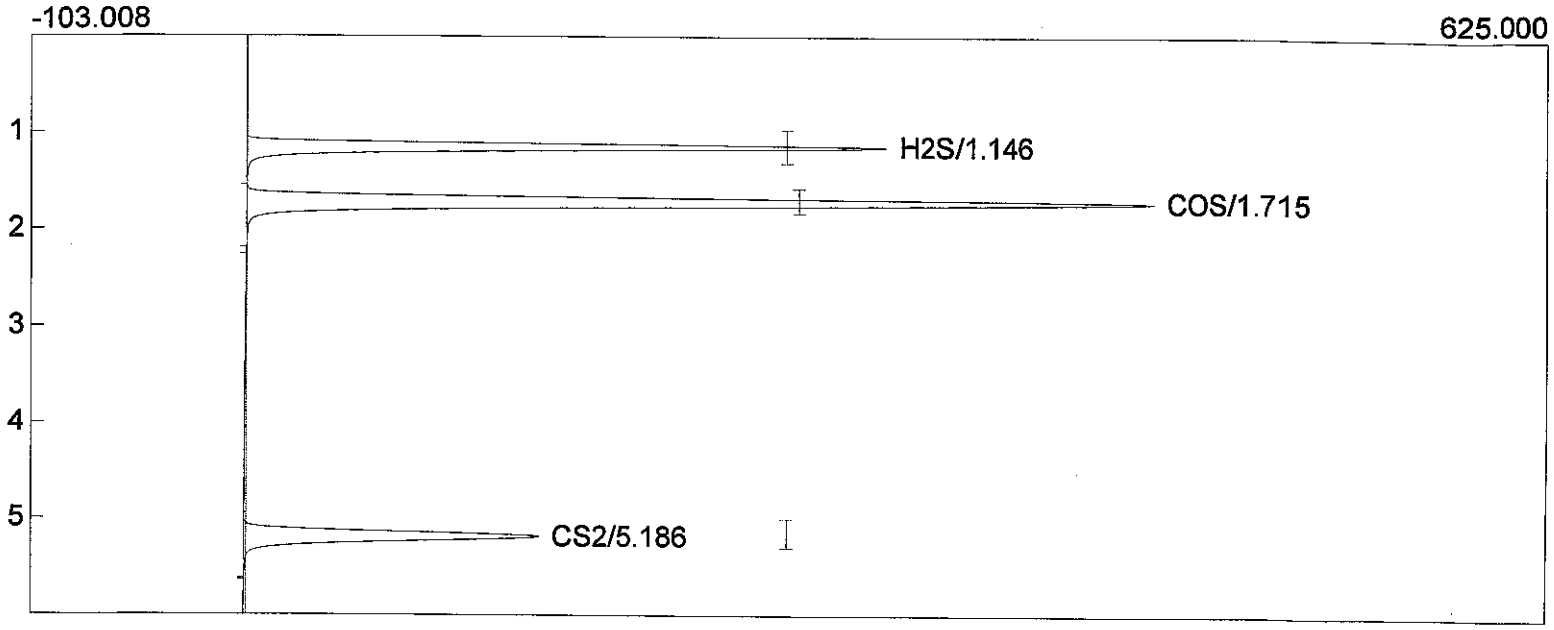
Component	Retention	Height	Area	External	Units
H2S	1.116	314.1	1458.5	16.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			1458.5	16.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:38:09
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 190.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



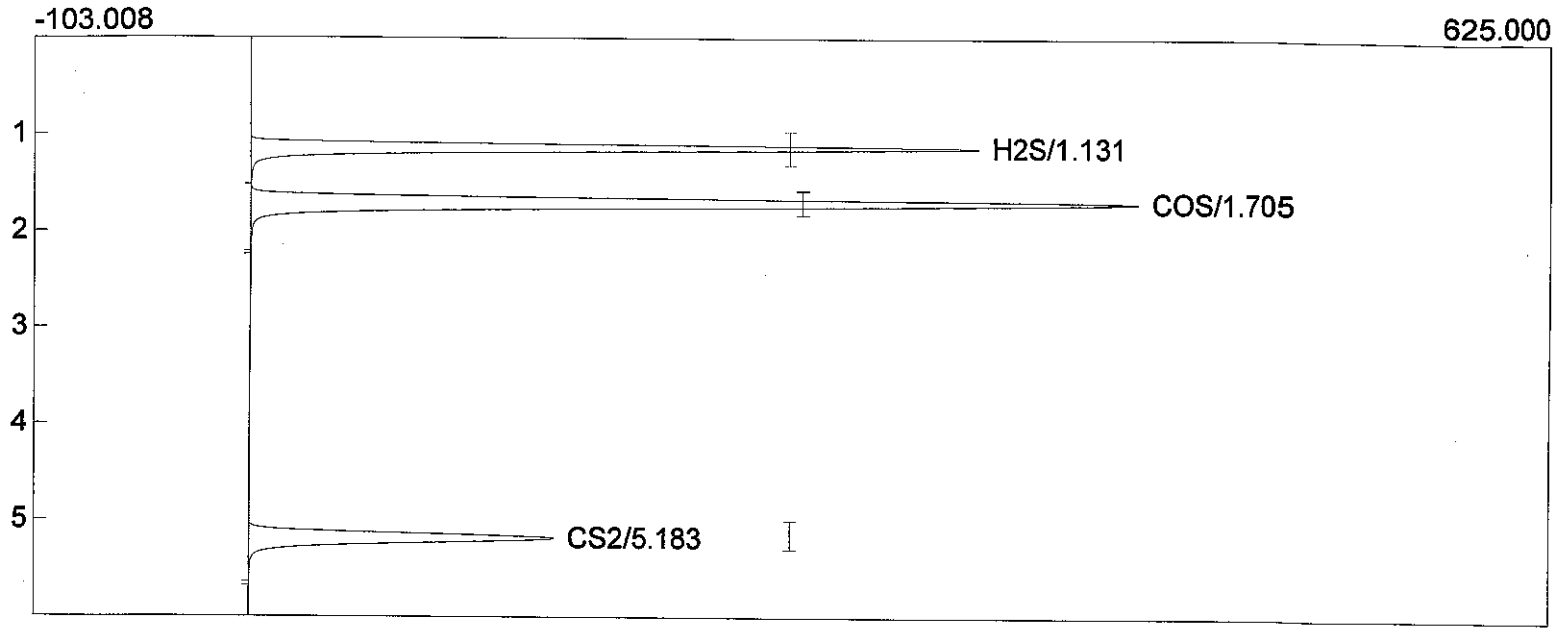
Component	Retention	Height	Area	External	Units
H2S	1.113	434.7	2029.1	18.47	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2029.1	18.47	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:50:27
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 191.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



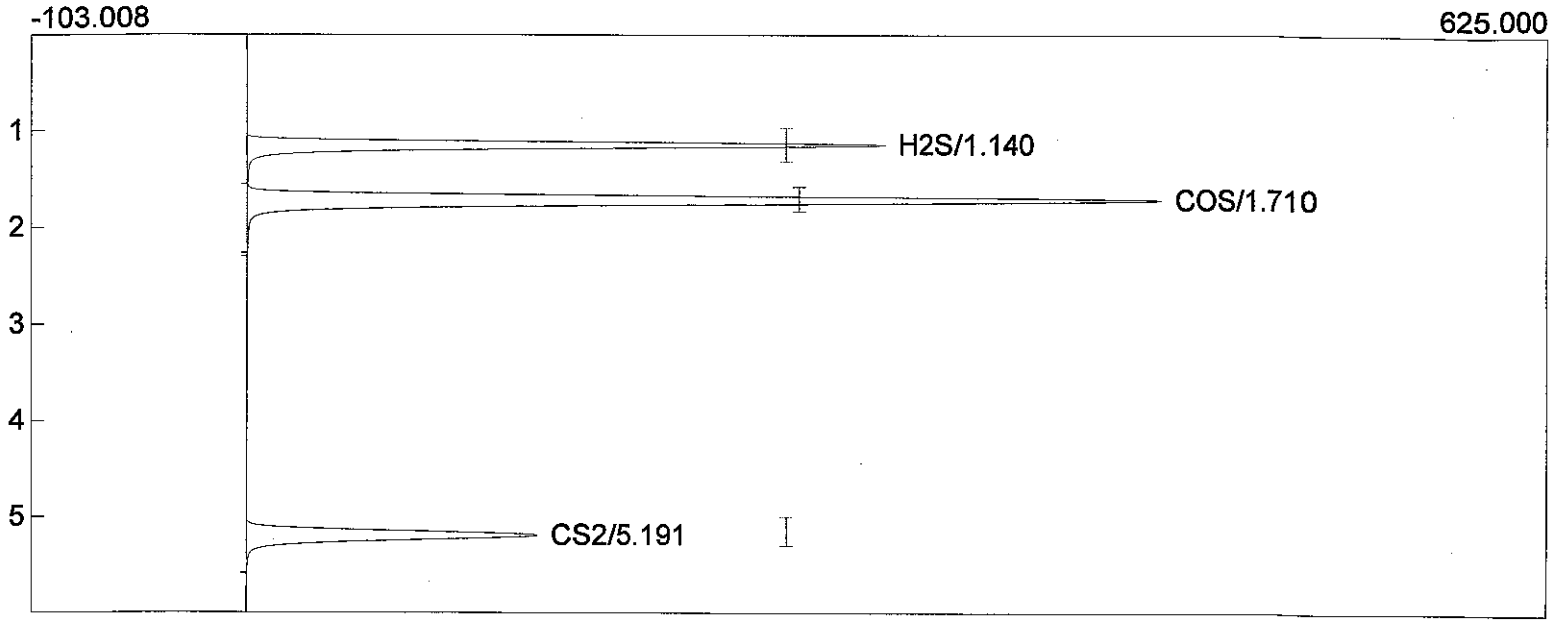
Component	Retention	Height	Area	External	Units
H2S	1.146	310.3	1489.4	16.14	ppmv
COS	1.715	439.2	2621.1	19.74	ppmv
CS2	5.186	142.6	981.7	6.66	ppmv
			5092.2	42.54	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 01:58:48
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 192.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



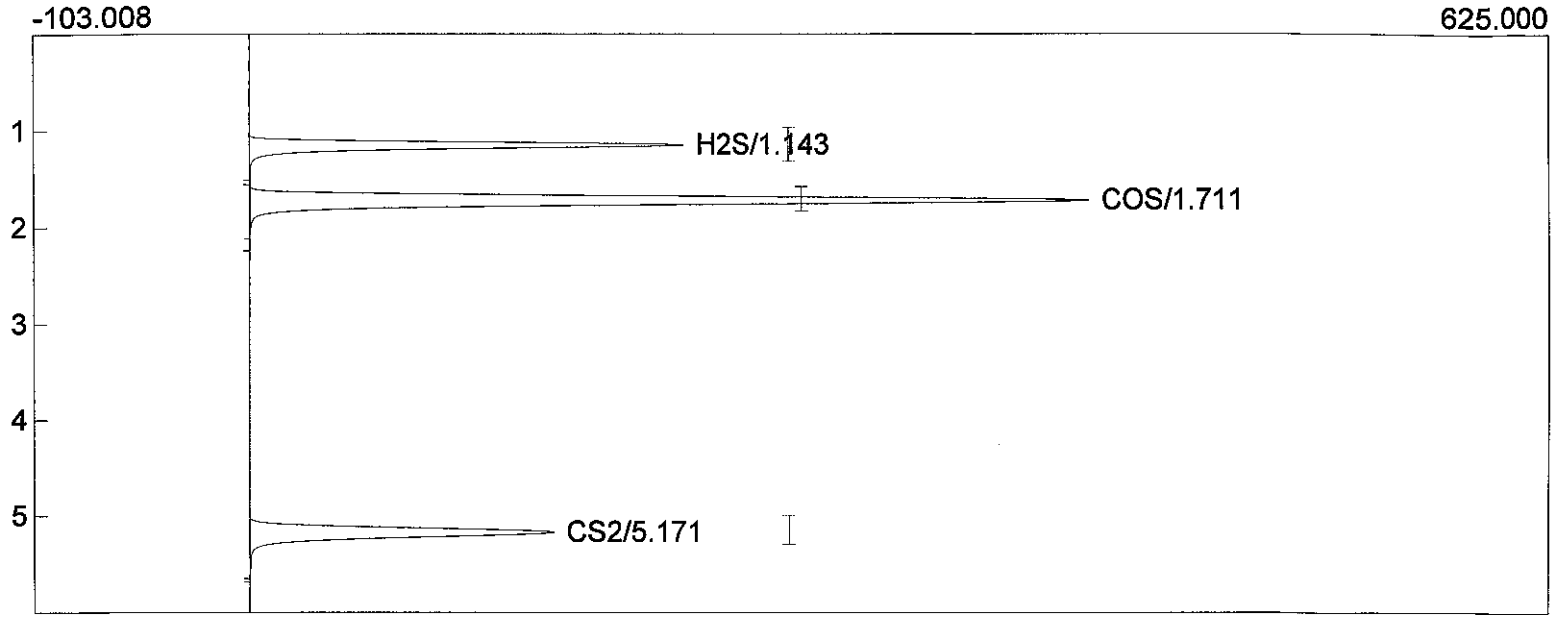
Component	Retention	Height	Area	External	Units
H2S	1.131	352.7	1711.2	17.15	ppmv
COS	1.705	429.7	2690.3	19.99	ppmv
CS2	5.183	147.4	1028.9	6.80	ppmv
			5430.4	43.93	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 10:22:47
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 174.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



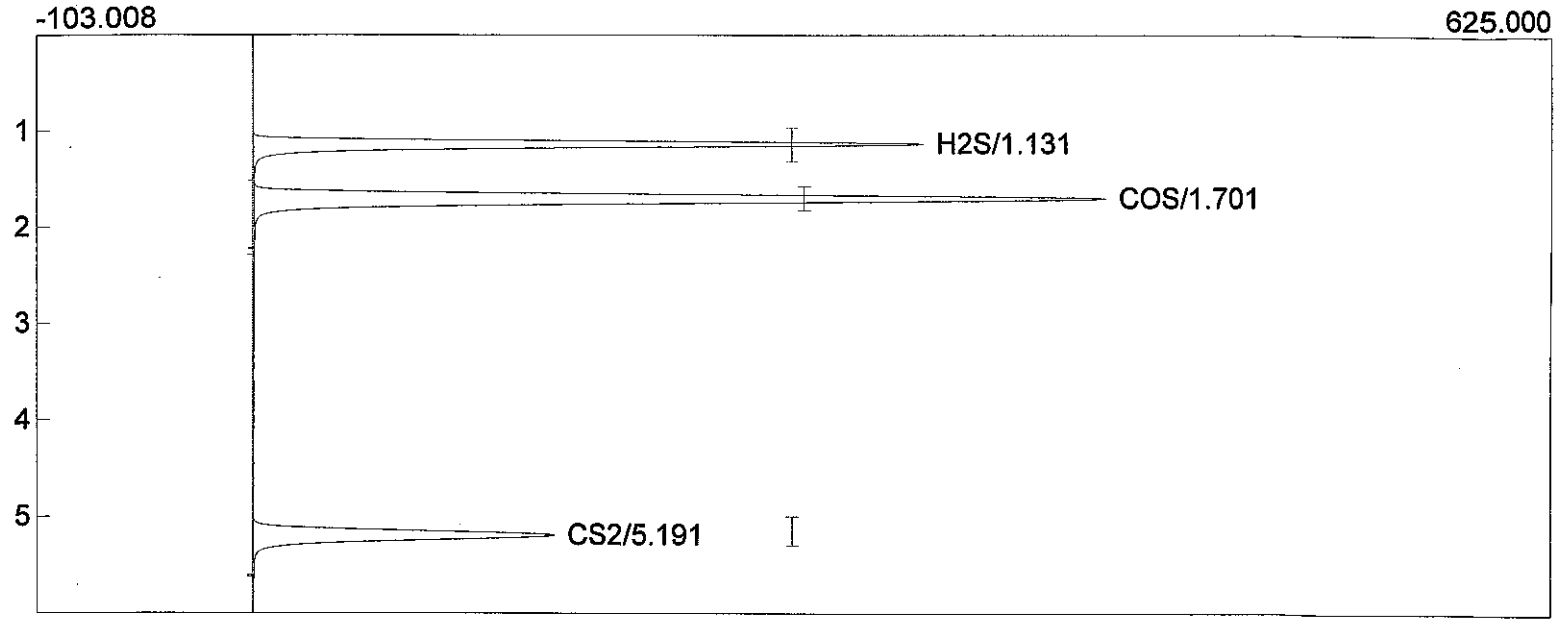
Component	Retention	Height	Area	External	Units
H2S	1.140	309.7	1486.8	16.13	ppmv
COS	1.710	442.5	2637.2	19.80	ppmv
CS2	5.191	141.0	965.0	6.60	ppmv
			5089.0	42.53	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 23:12:53
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 175.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



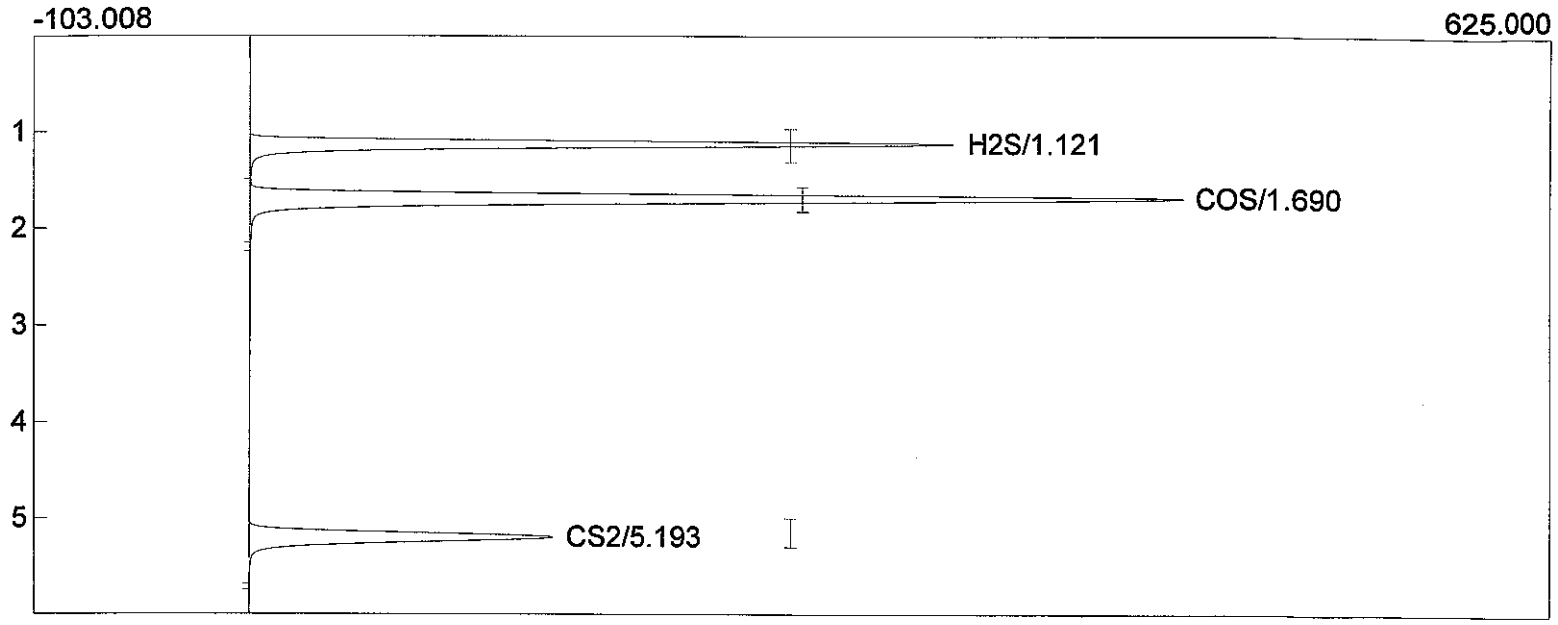
Component	Retention	Height	Area	External	Units
H2S	1.143	209.7	997.7	13.57	ppmv
COS	1.711	406.2	2417.2	18.98	ppmv
CS2	5.171	147.3	1012.9	6.75	ppmv
			4427.8	39.30	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 23:21:16
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 176.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



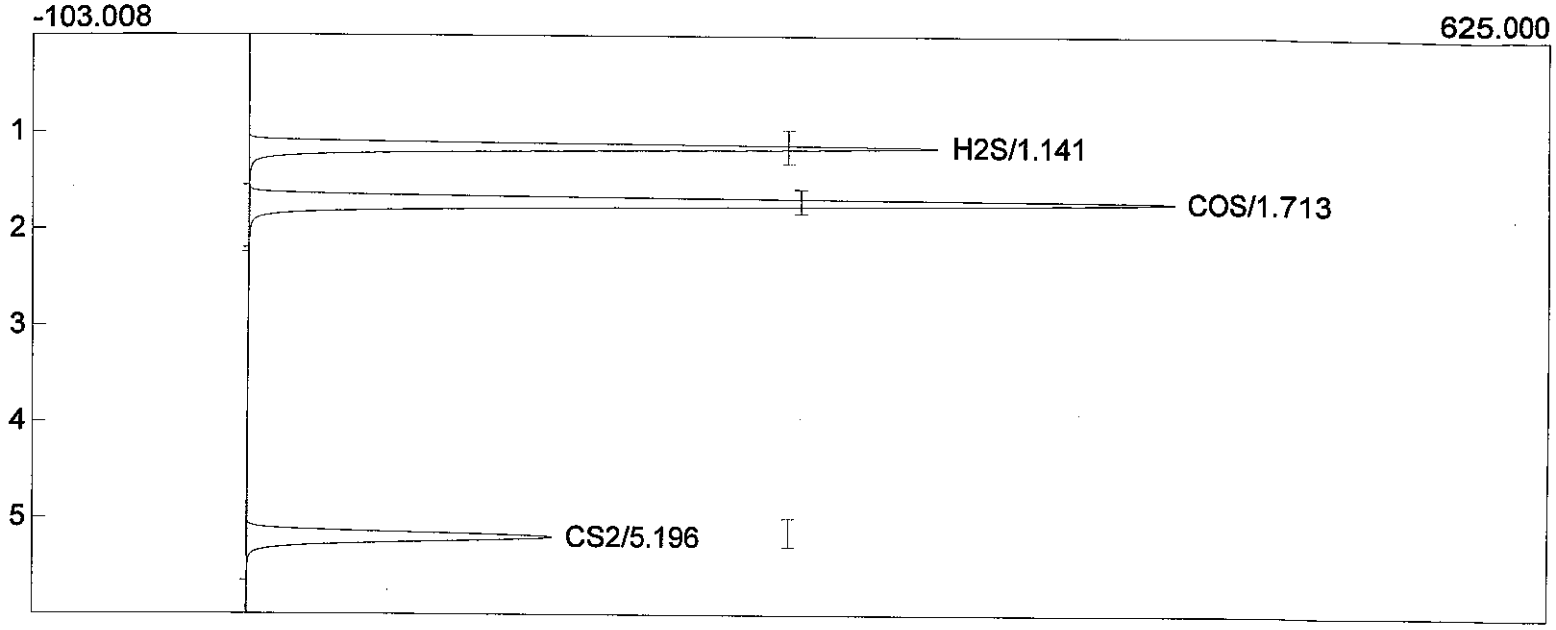
Component	Retention	Height	Area	External	Units
H2S	1.131	324.8	1559.9	16.46	ppmv
COS	1.701	412.2	2567.8	19.55	ppmv
CS2	5.191	145.4	1007.0	6.74	ppmv
			5134.7	42.75	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 23:29:30
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 177.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



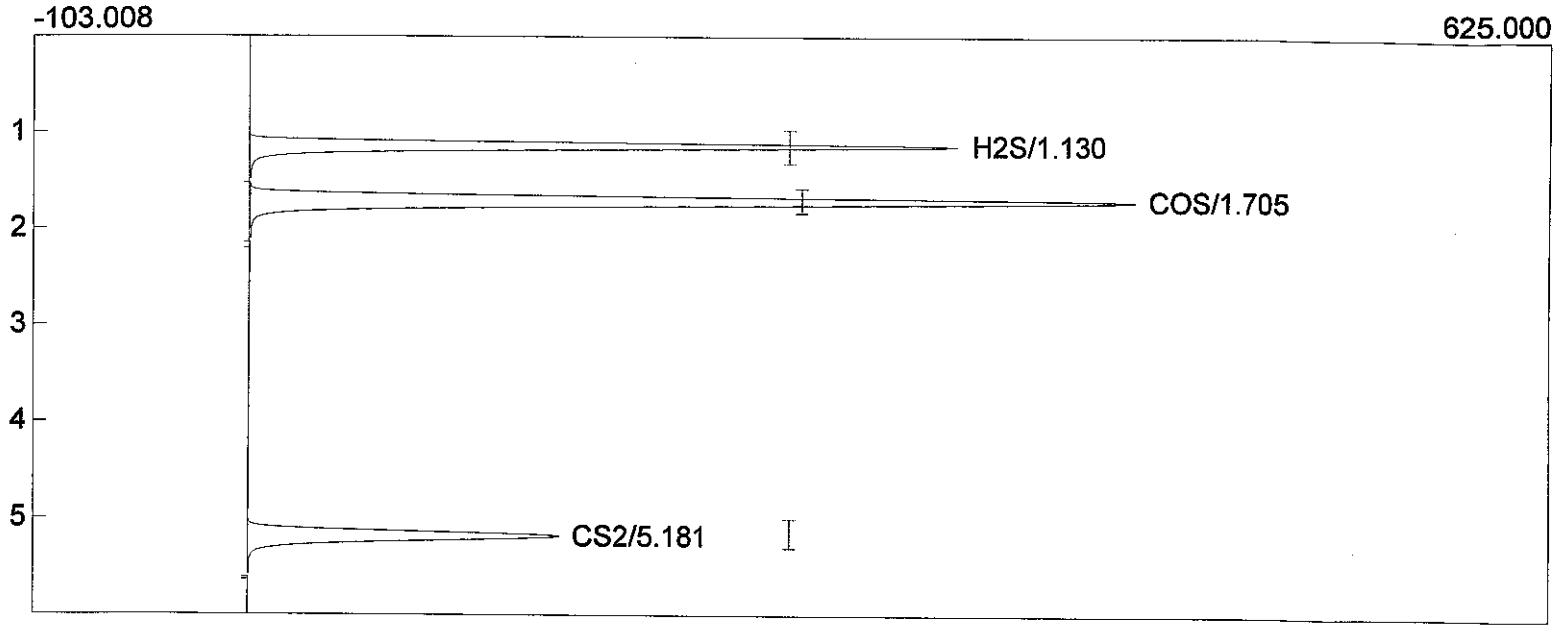
Component	Retention	Height	Area	External	Units
H2S	1.121	340.5	1632.8	16.79	ppmv
COS	1.690	451.2	2697.4	20.01	ppmv
CS2	5.193	146.4	1011.0	6.75	ppmv
			5341.1	43.55	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/15/2011 23:38:50
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 178.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



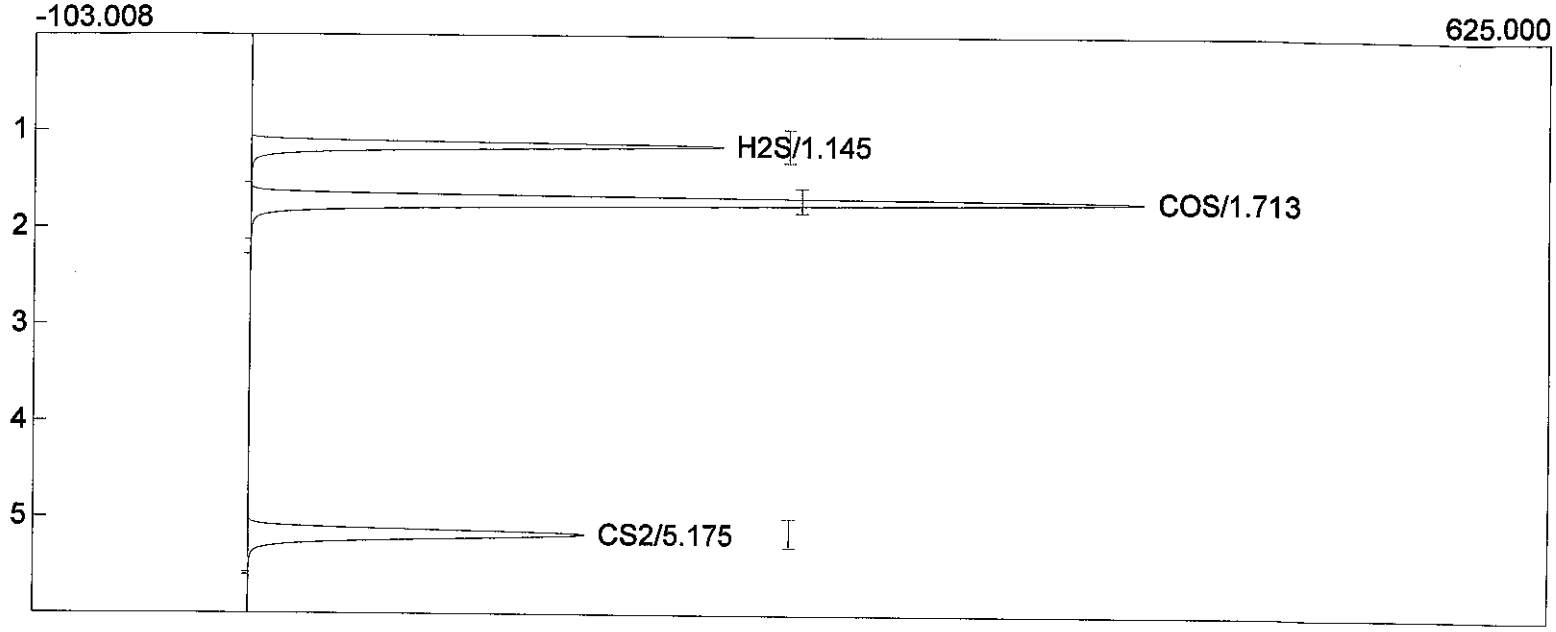
Component	Retention	Height	Area	External	Units
H2S	1.141	334.2	1619.7	16.73	ppmv
COS	1.713	447.4	2691.4	19.99	ppmv
CS2	5.196	147.5	1021.4	6.78	ppmv
			5332.5	43.50	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 02:07:15
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 193.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



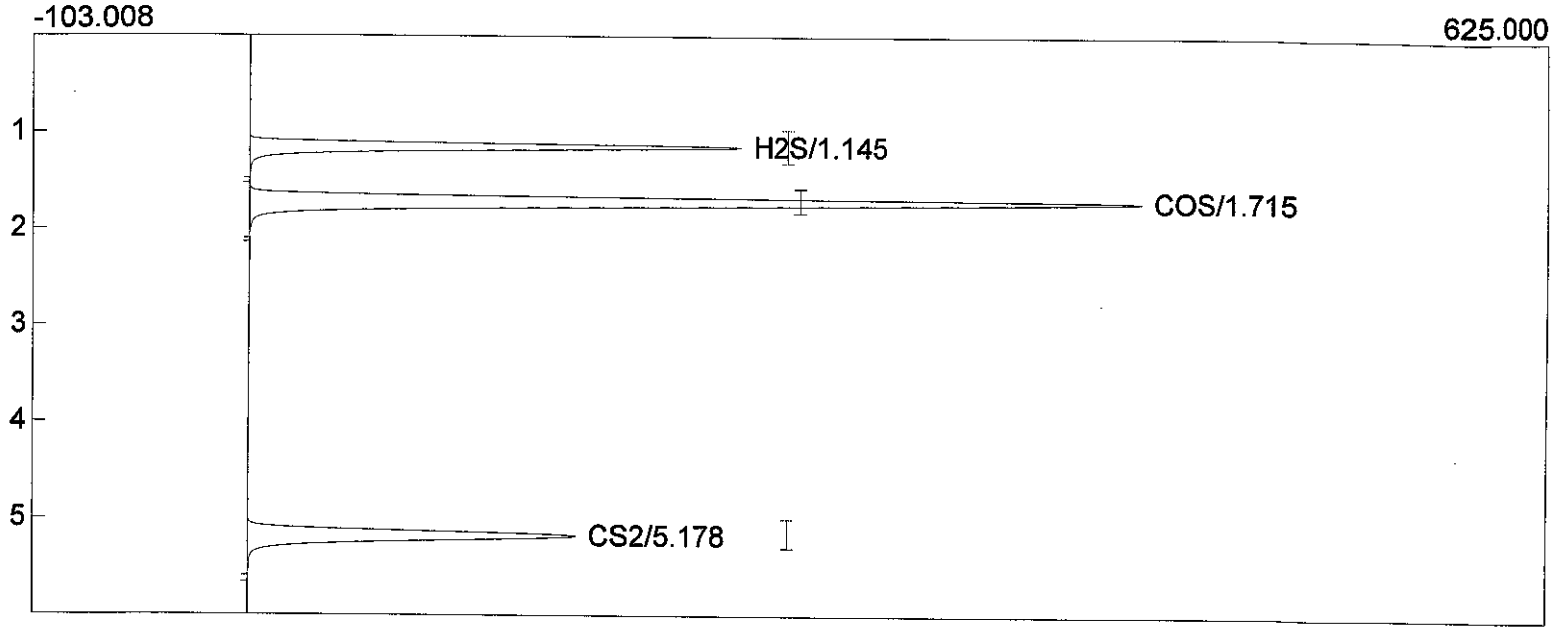
Component	Retention	Height	Area	External	Units
H2S	1.130	343.2	1674.1	16.98	ppmv
COS	1.705	428.5	2656.4	19.87	ppmv
CS2	5.181	150.3	1036.3	6.82	ppmv
			5366.8	43.67	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/16/2011 14:58:48
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 194.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



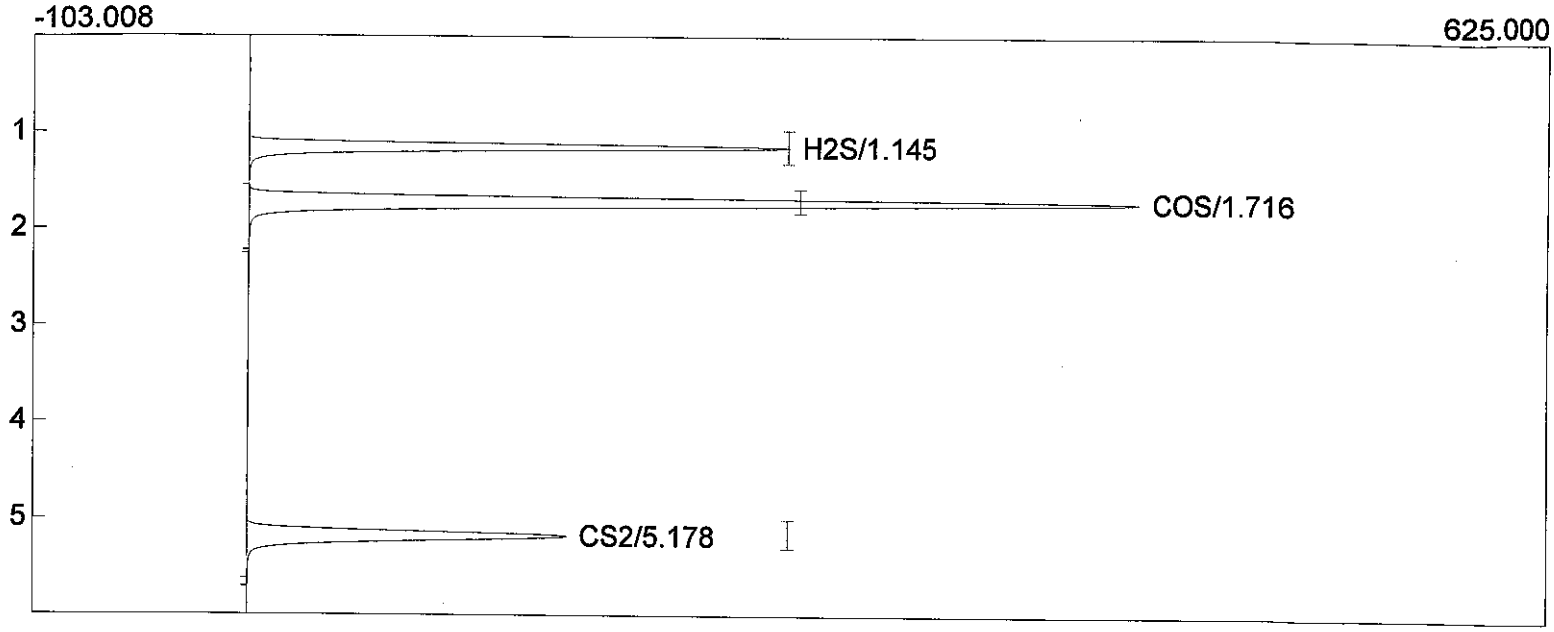
Component	Retention	Height	Area	External	Units
H2S	1.145	229.2	1098.1	14.13	ppmv
COS	1.713	433.4	2574.7	19.58	ppmv
CS2	5.175	162.8	1113.7	7.05	ppmv
			4786.5	40.75	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 04:25:11
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 195.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



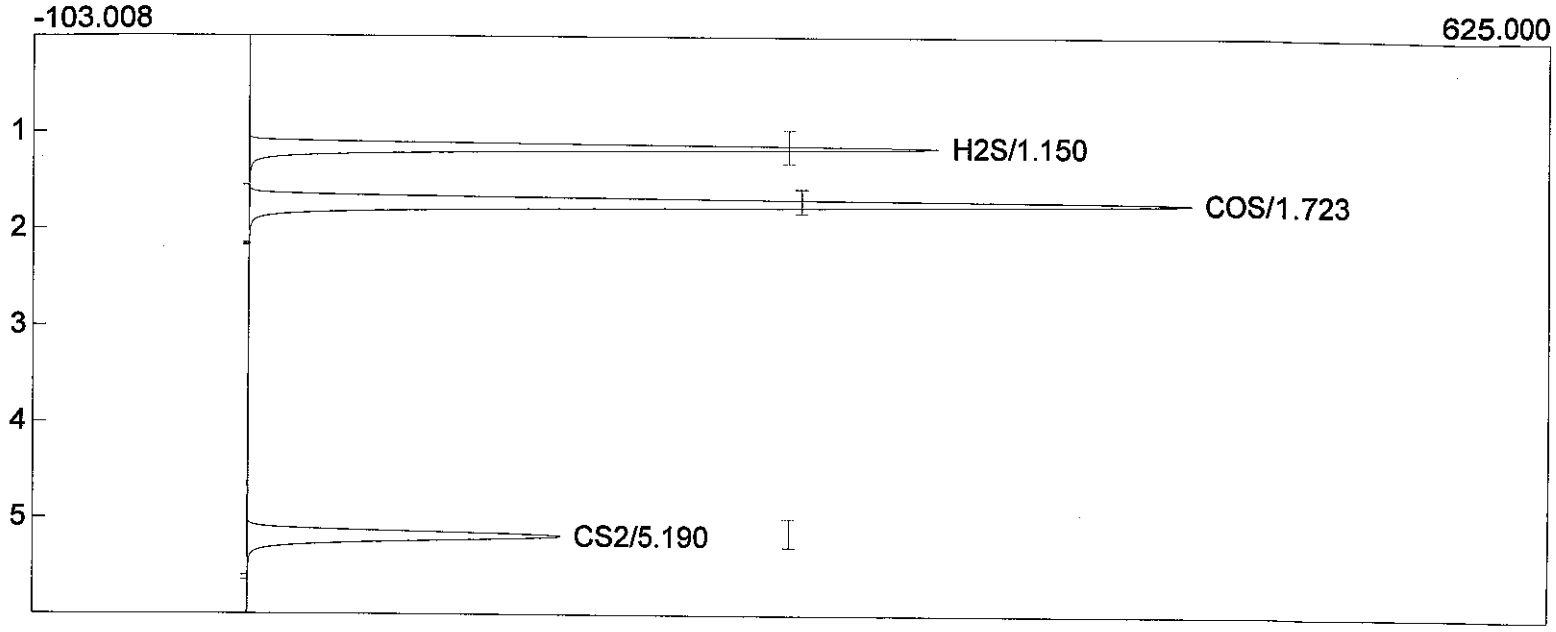
Component	Retention	Height	Area	External	Units
H2S	1.145	237.9	1126.8	14.29	ppmv
COS	1.715	431.8	2579.3	19.59	ppmv
CS2	5.178	158.3	1094.0	6.99	ppmv
			4800.1	40.87	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 05:31:41
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 196.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



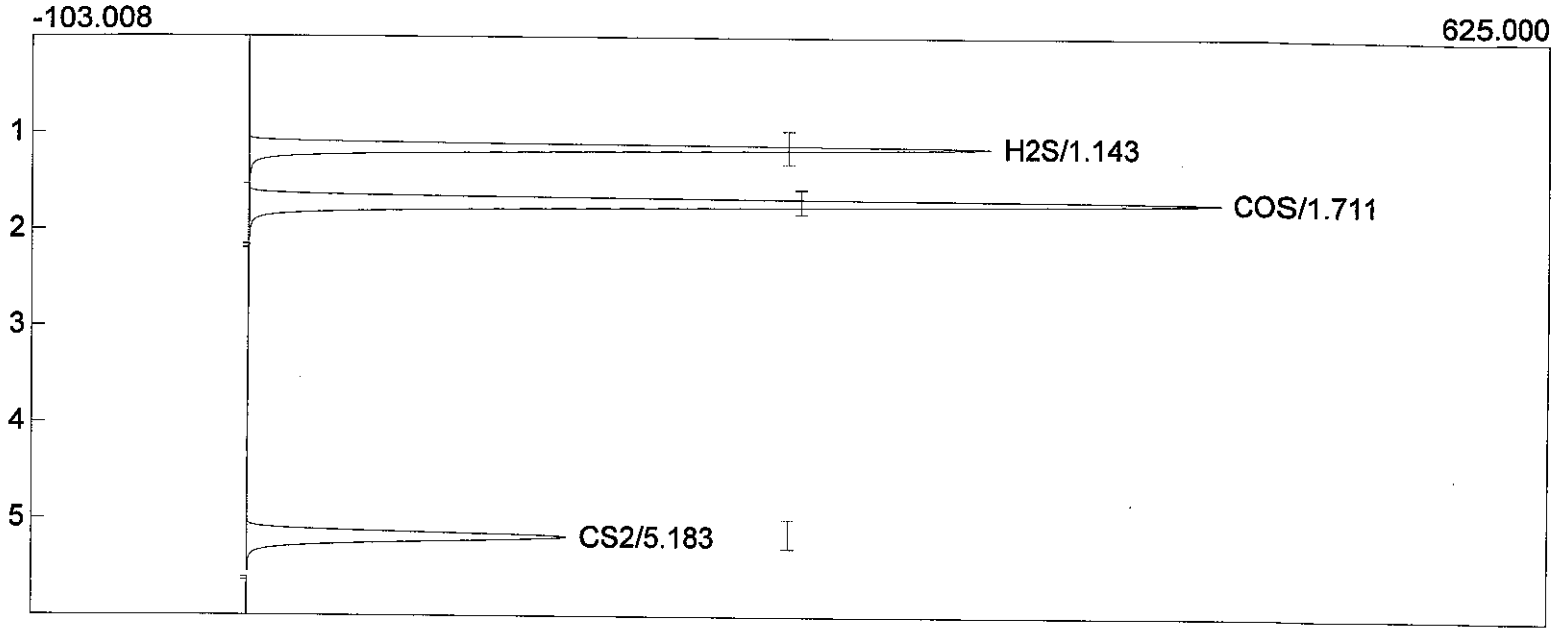
Component	Retention	Height	Area	External	Units
H2S	1.145	262.1	1250.1	14.96	ppmv
COS	1.716	430.8	2586.4	19.62	ppmv
CS2	5.178	154.0	1058.7	6.89	ppmv
			4895.2	41.46	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 05:42:24
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 197.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



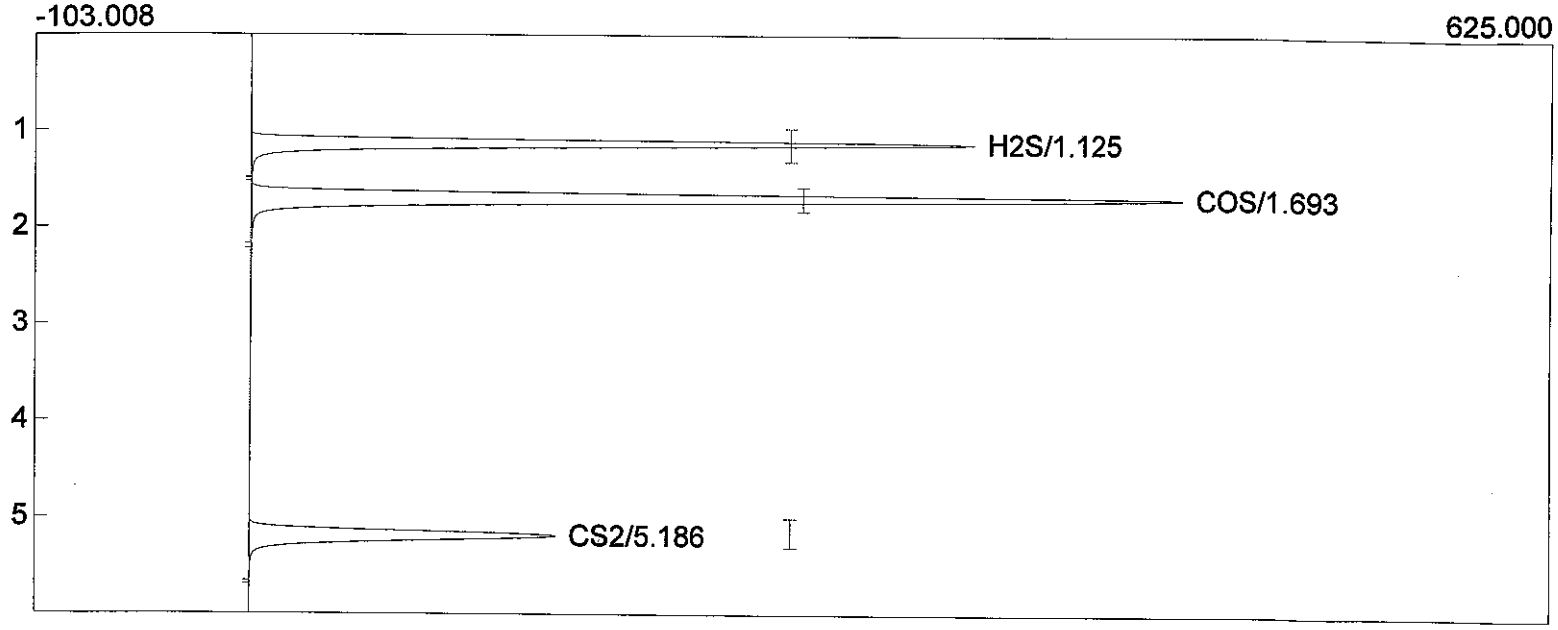
Component	Retention	Height	Area	External	Units
H2S	1.150	334.5	1618.6	16.73	ppmv
COS	1.723	456.5	2715.9	20.08	ppmv
CS2	5.190	151.3	1040.1	6.83	ppmv
			5374.6	43.64	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 05:51:16
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 198.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



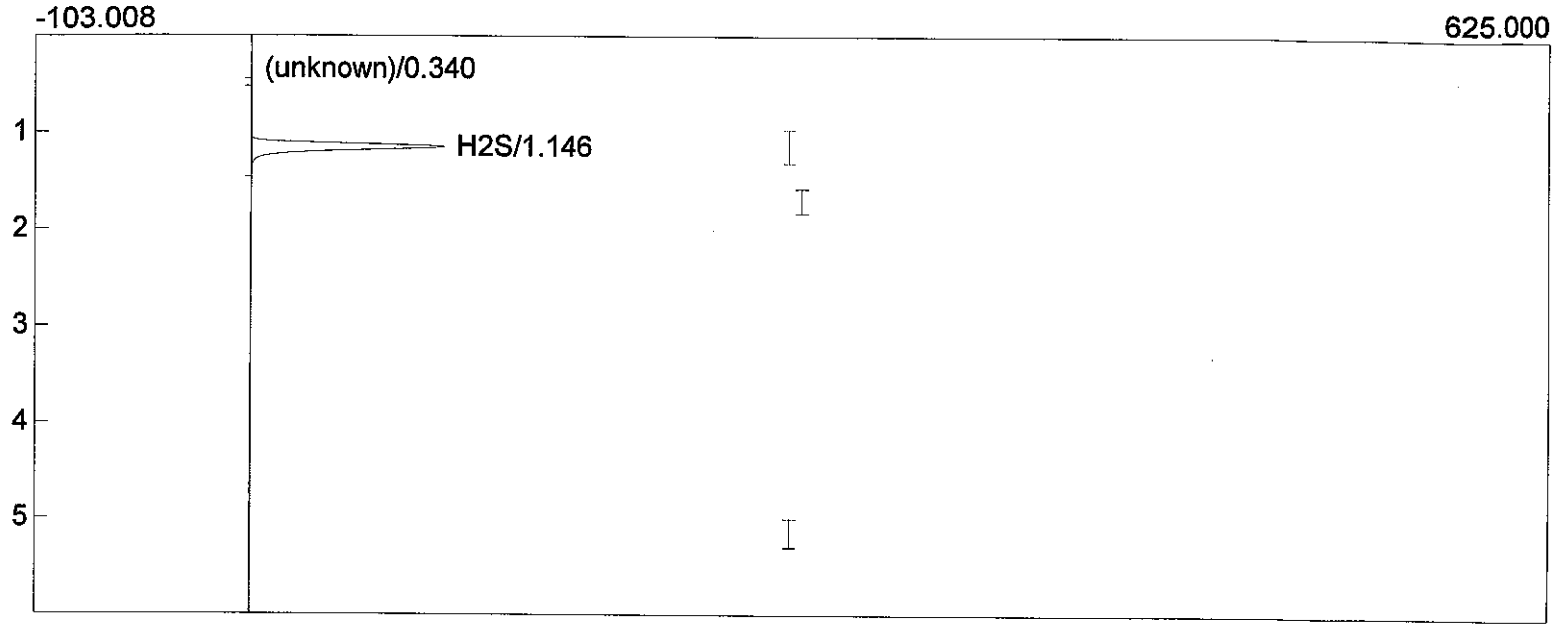
Component	Retention	Height	Area	External	Units
H2S	1.143	359.3	1726.3	17.22	ppmv
COS	1.711	470.0	2797.0	20.36	ppmv
CS2	5.183	154.2	1059.7	6.89	ppmv
			5583.0	44.47	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 05:59:32
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 199.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



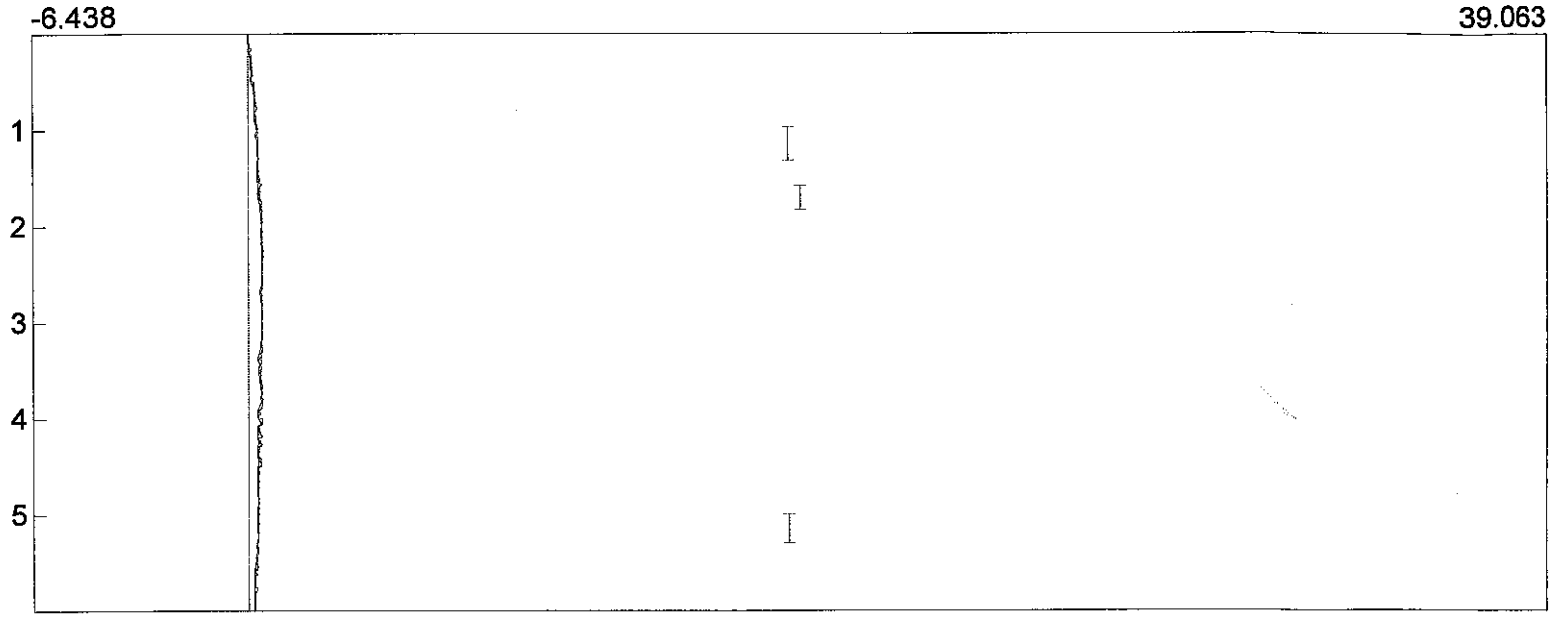
Component	Retention	Height	Area	External	Units
H2S	1.125	350.1	1697.6	17.09	ppmv
COS	1.693	450.4	2708.6	20.05	ppmv
CS2	5.186	148.1	1021.2	6.78	ppmv
			5427.4	43.91	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 06:24:03
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 200.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



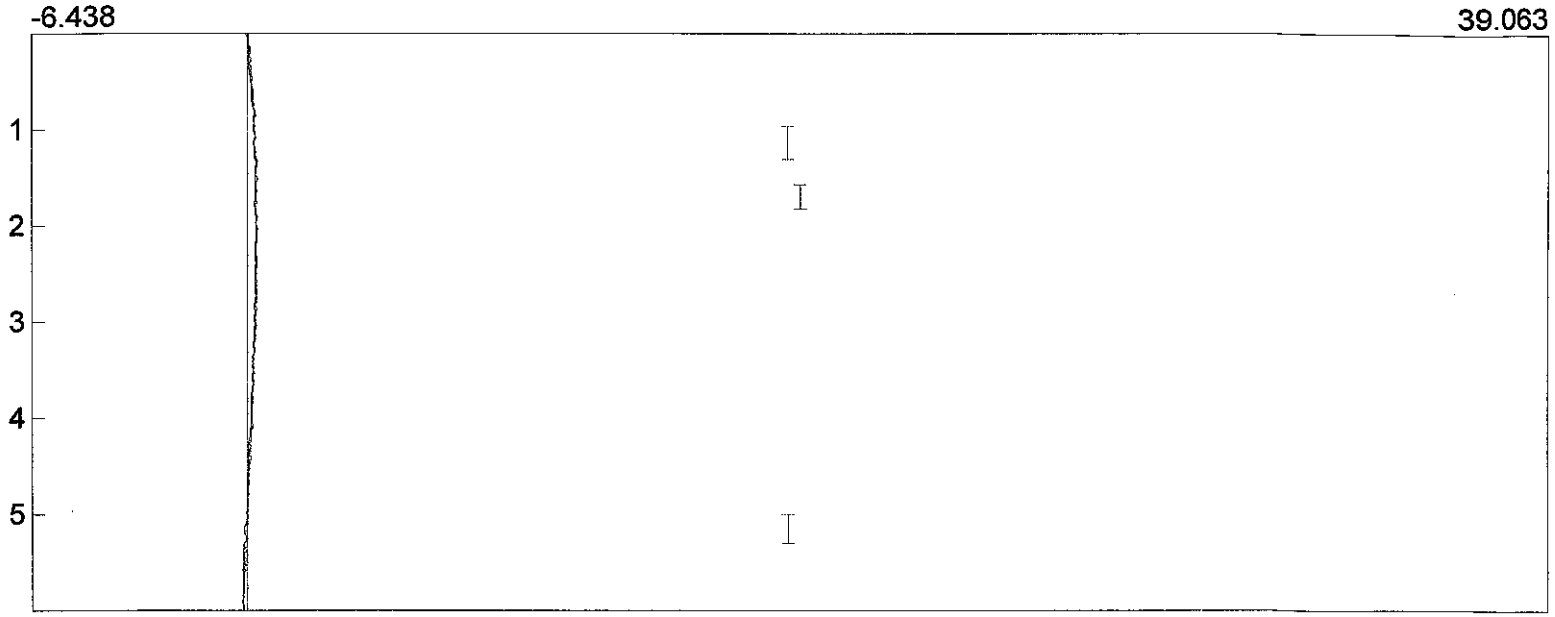
Component	Retention	Height	Area	External	Units
H2S	1.146	94.0	455.6	9.64	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			455.6	9.64	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 06:32:21
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 201.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



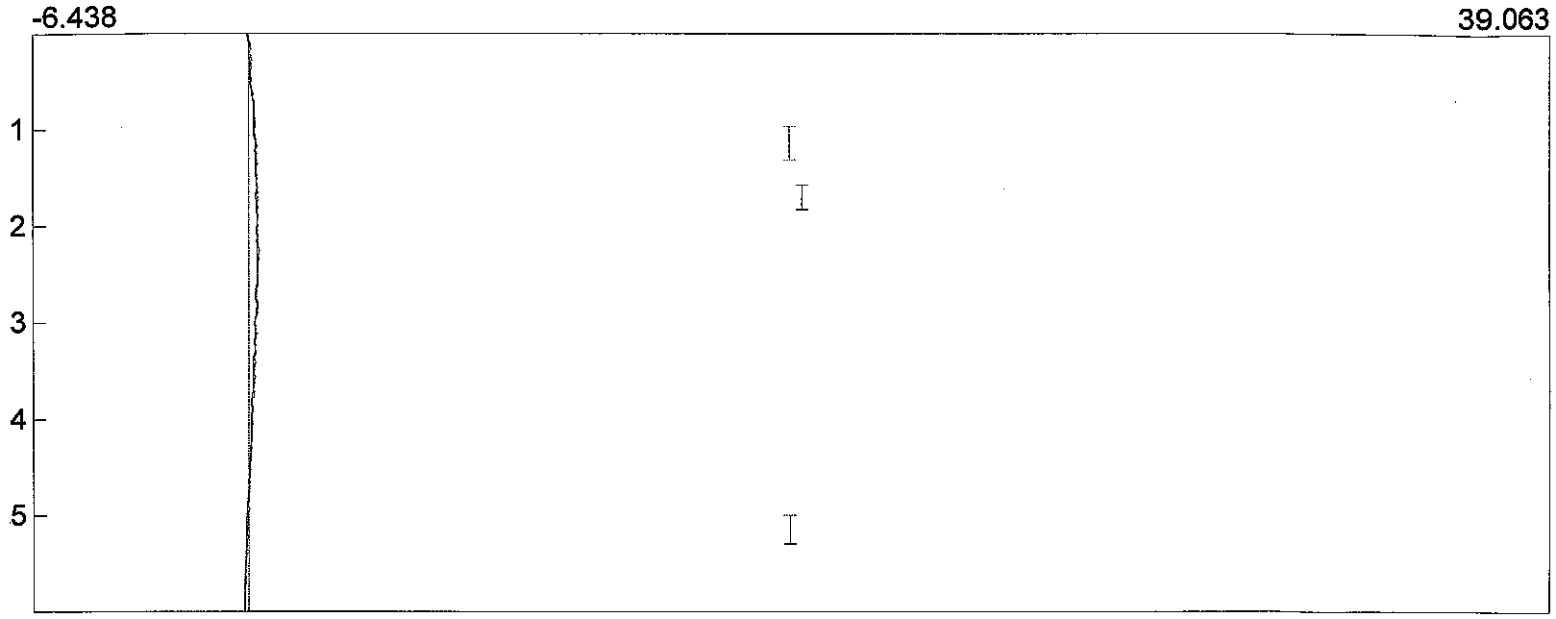
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 06:40:39
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 202.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



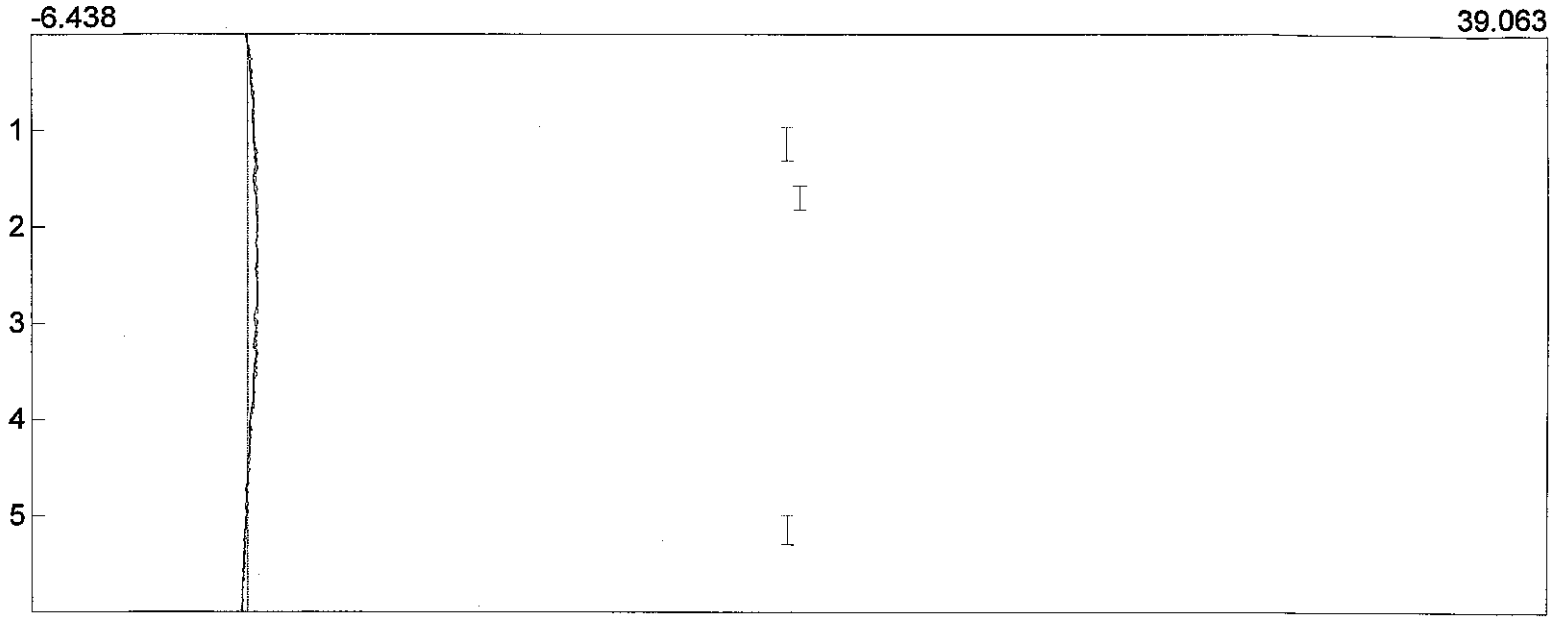
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 06:48:57
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 203.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



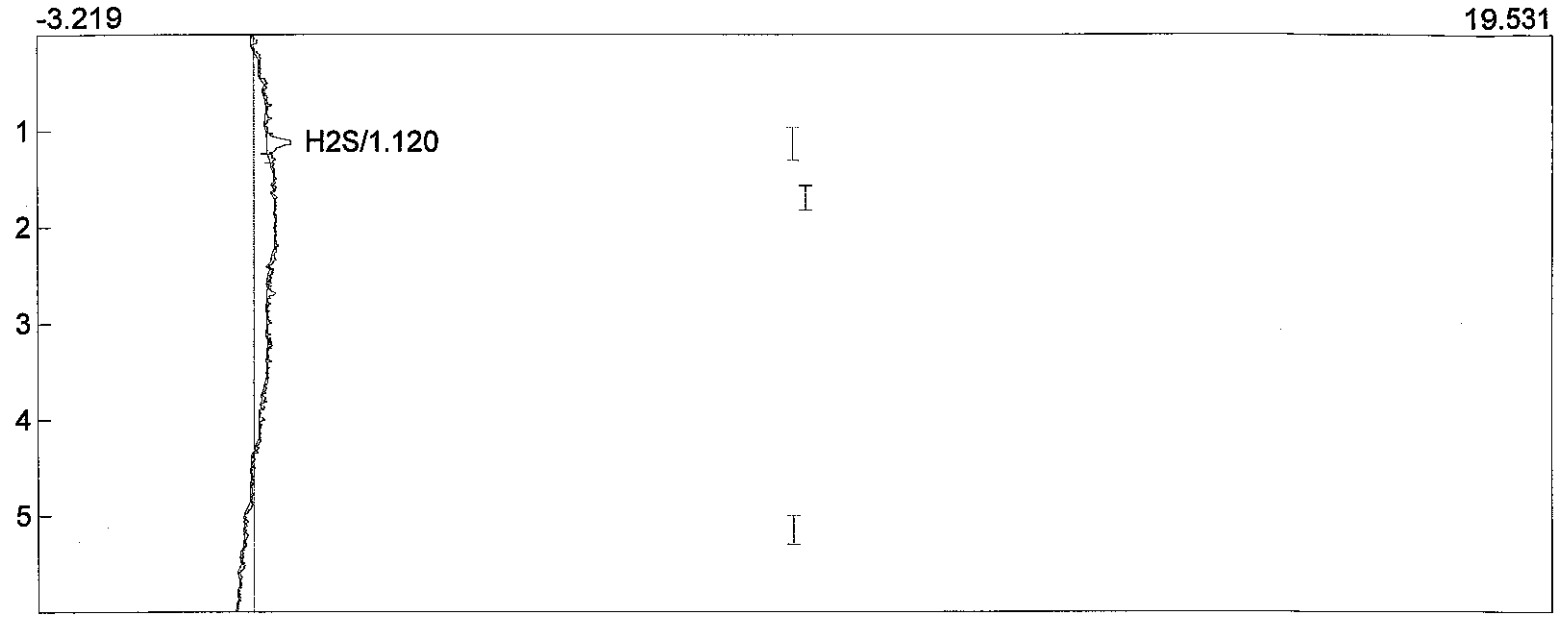
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 06:57:15
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 204.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



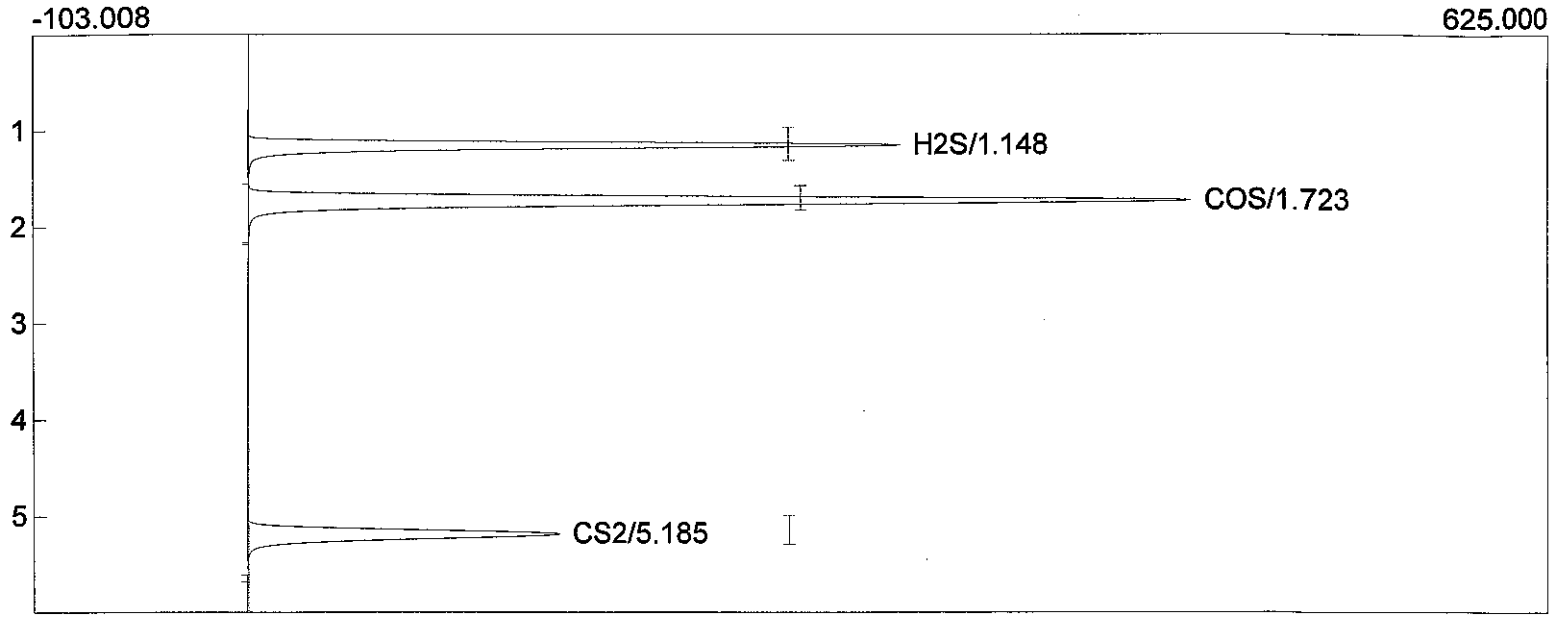
Component	Retention	Height	Area	External	Units
H2S	0.000	0.0	0.0	0.00	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			0.0	0.00	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 07:05:33
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 205.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



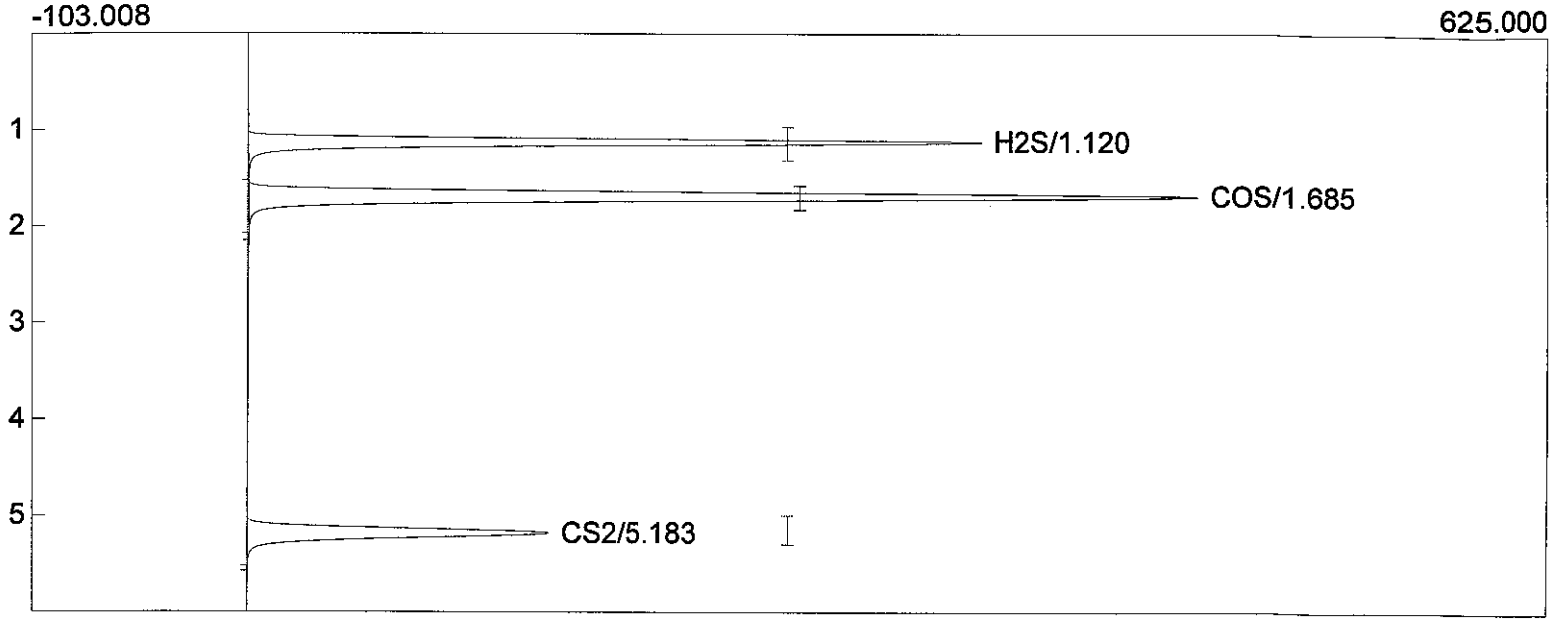
Component	Retention	Height	Area	External	Units
H2S	1.120	0.4	2.5	0.79	ppmv
COS	0.000	0.0	0.0	0.00	ppmv
CS2	0.000	0.0	0.0	0.00	ppmv
			2.5	0.79	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 07:15:39
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 207.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



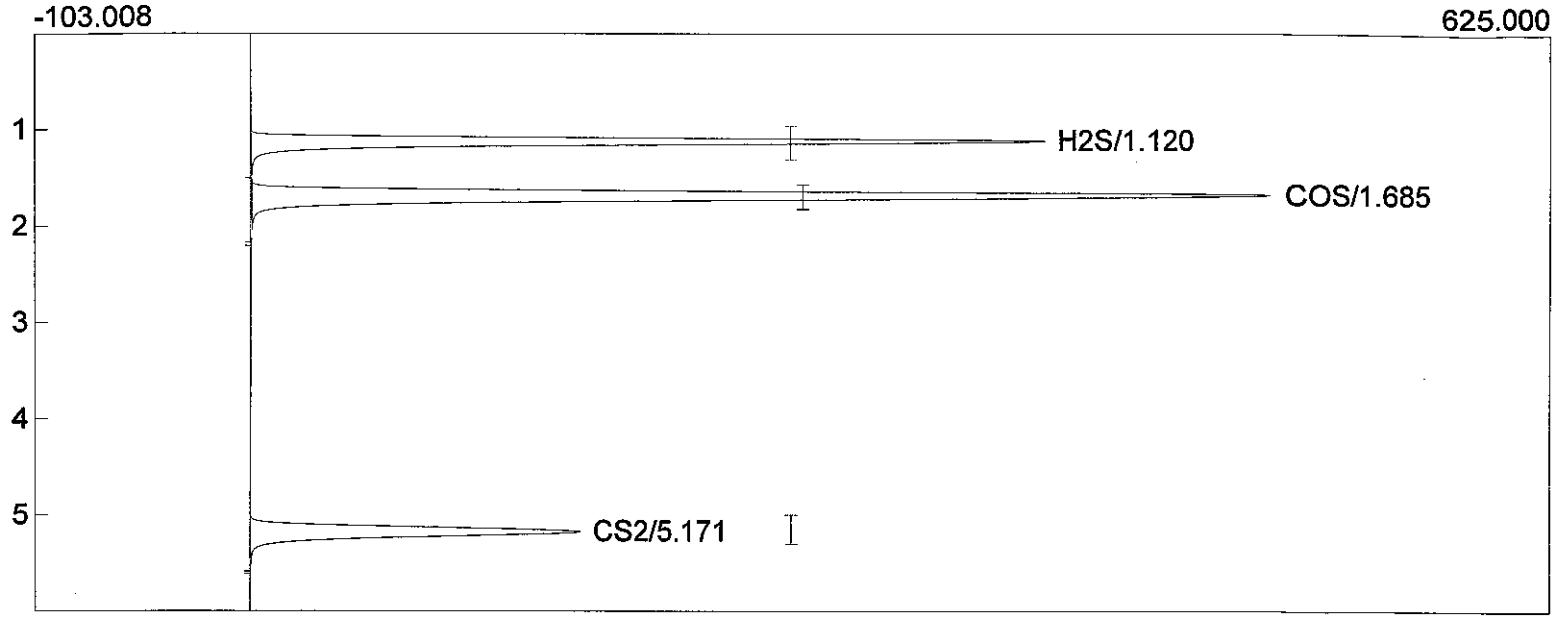
Component	Retention	Height	Area	External	Units
H2S	1.148	315.8	1515.6	15.19	ppmv
COS	1.723	456.6	2712.1	20.06	ppmv
CS2	5.185	150.6	1029.5	6.80	ppmv
			5257.2	42.05	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 07:32:05
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 208.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



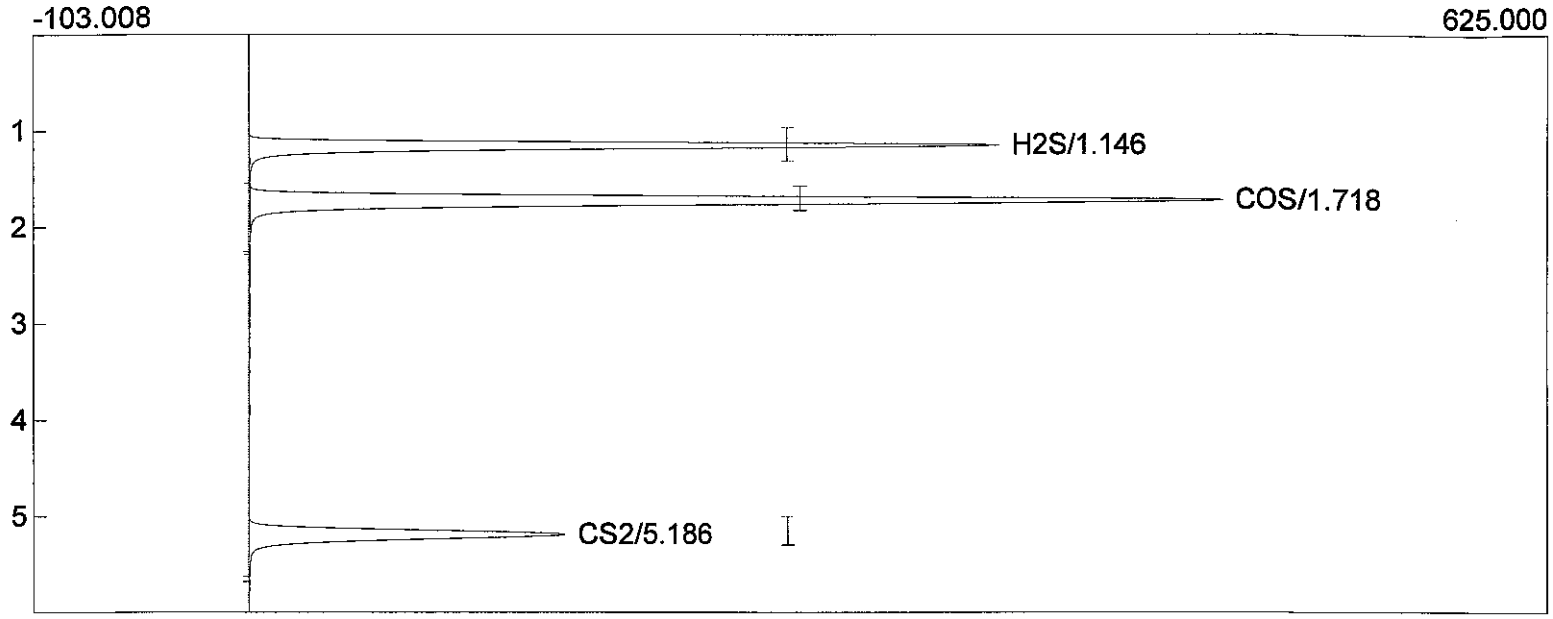
Component	Retention	Height	Area	External	Units
H2S	1.120	355.3	1701.6	15.96	ppmv
COS	1.685	459.8	2731.1	20.13	ppmv
CS2	5.183	145.2	1001.6	6.72	ppmv
			5434.3	42.81	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 07:40:24
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 209.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



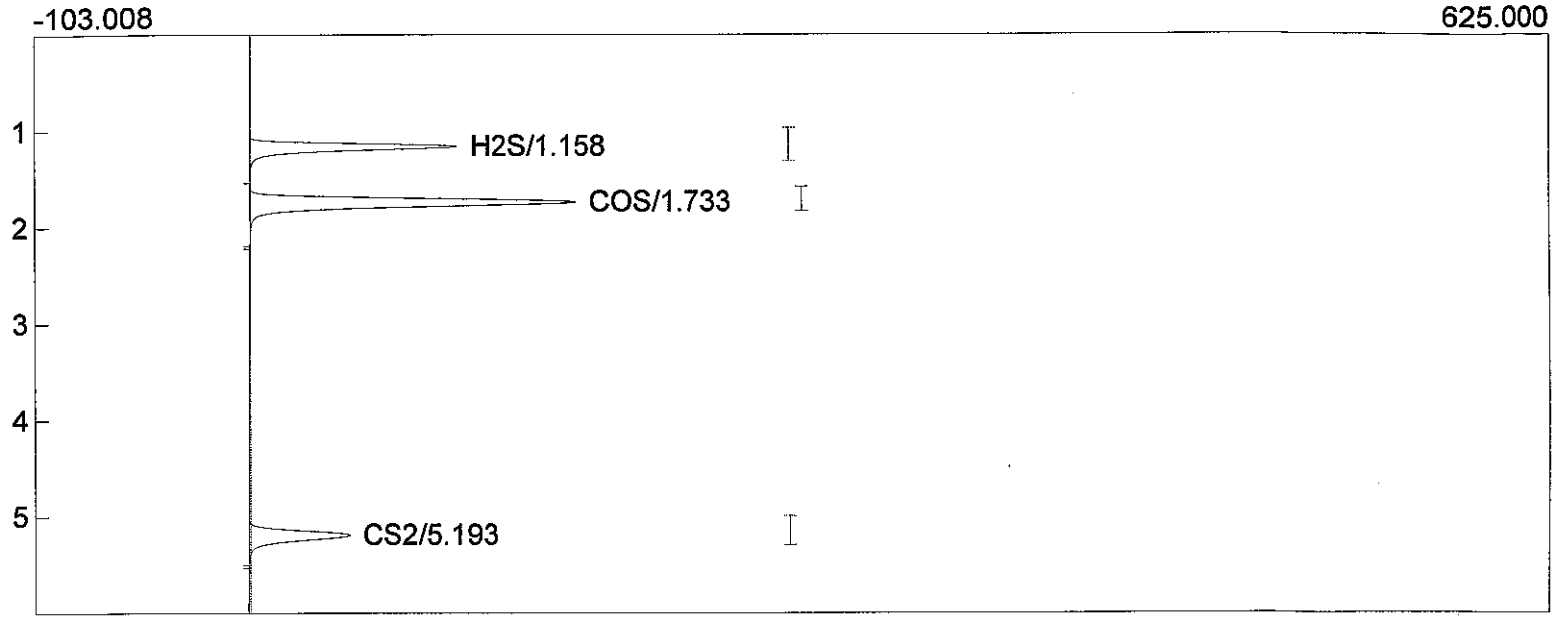
Component	Retention	Height	Area	External	Units
H2S	1.120	384.9	1860.9	16.56	ppmv
COS	1.685	494.3	2961.2	20.94	ppmv
CS2	5.171	159.1	1100.0	7.01	ppmv
			5922.2	44.51	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 08:31:57
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 210.CHR (C:\DCU ICR 7-2011)
Sample: DCU Vent
Operator: J. Glass



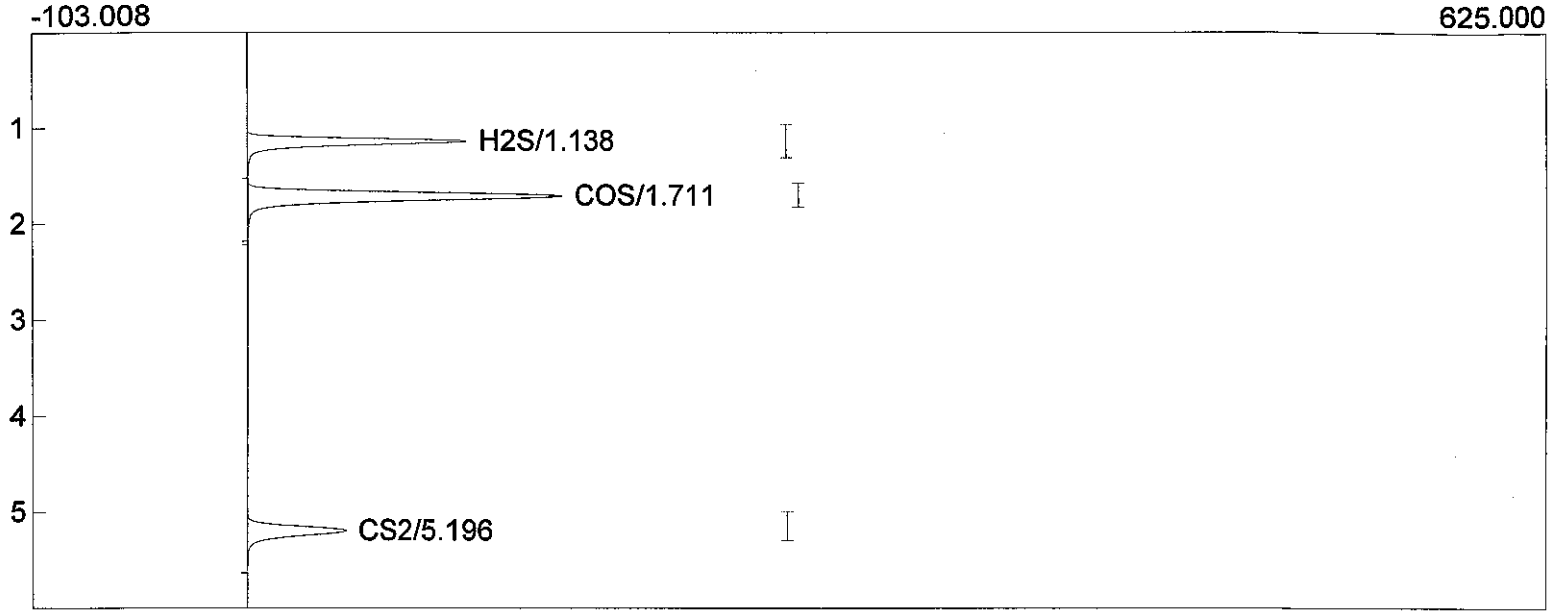
Component	Retention	Height	Area	External	Units
H2S	1.146	363.4	1745.3	16.13	ppmv
COS	1.718	471.6	2808.2	20.40	ppmv
CS2	5.186	152.9	1047.0	6.85	ppmv
			5600.5	43.38	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 08:44:24
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 211.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



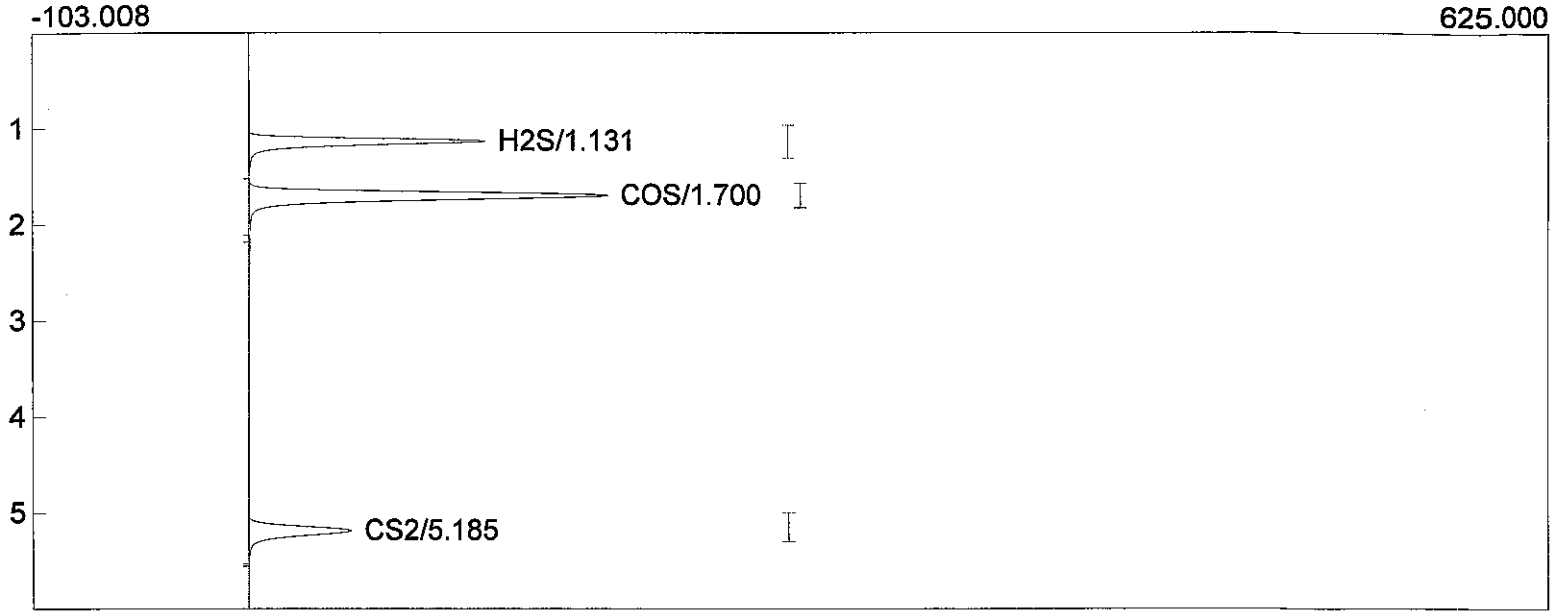
Component	Retention	Height	Area	External	Units
H2S	1.158	100.7	500.9	9.52	ppmv
COS	1.733	158.1	962.2	12.18	ppmv
CS2	5.193	49.1	341.3	4.13	ppmv
			1804.4	25.82	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 08:52:44
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 212.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



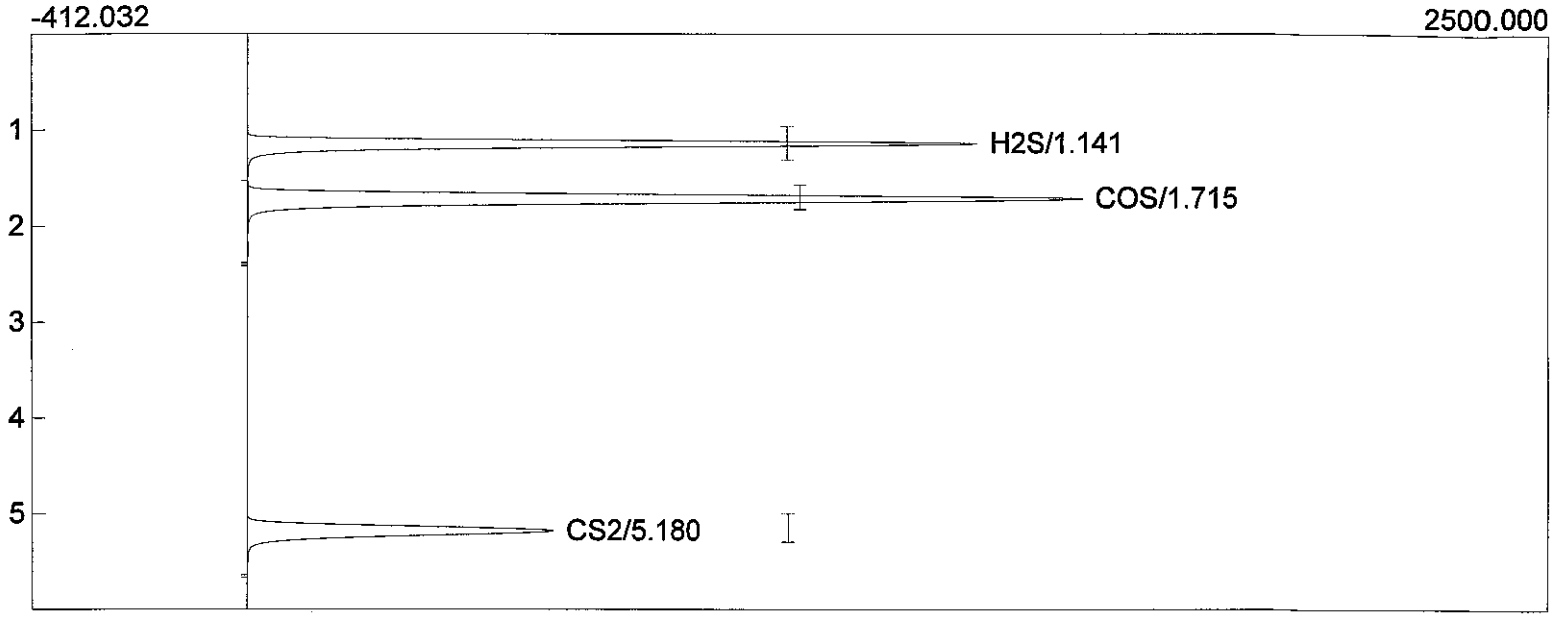
Component	Retention	Height	Area	External	Units
H2S	1.138	106.4	531.9	9.78	ppmv
COS	1.711	151.7	956.9	12.15	ppmv
CS2	5.196	47.5	336.2	4.10	ppmv
			1825.0	26.02	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 09:00:47
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 213.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



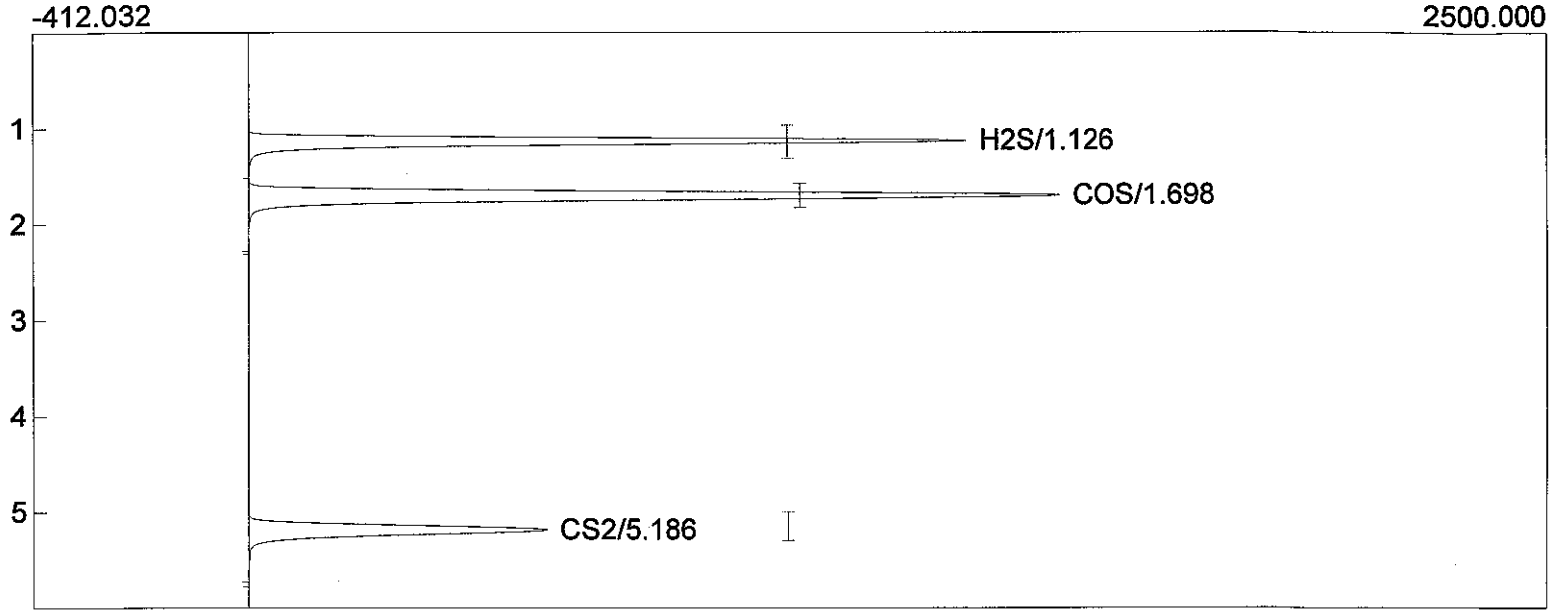
Component	Retention	Height	Area	External	Units
H2S	1.131	115.1	561.8	10.00	ppmv
COS	1.700	173.1	1038.2	12.62	ppmv
CS2	5.185	49.9	345.5	4.15	ppmv
			1945.5	26.77	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 09:10:35
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 214.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



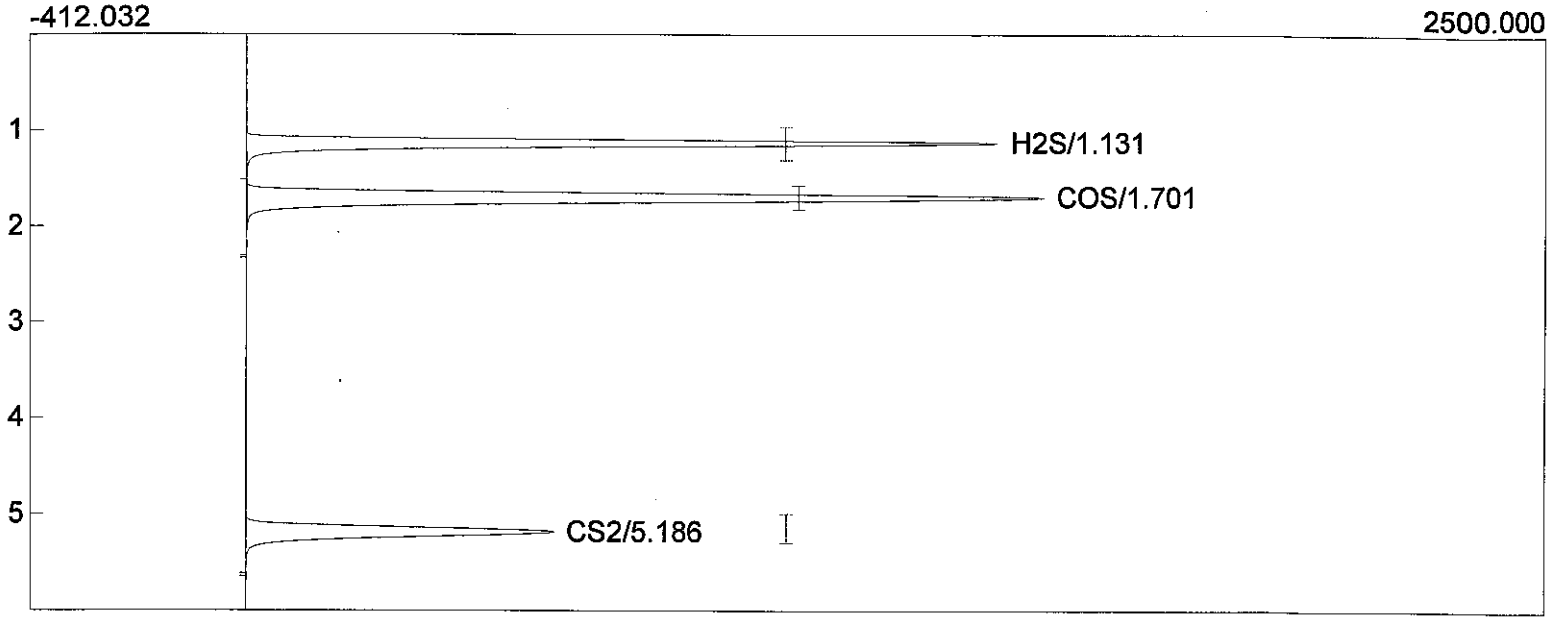
Component	Retention	Height	Area	External	Units
H2S	1.141	1412.4	6937.6	28.84	ppmv
COS	1.715	1618.5	9873.6	37.41	ppmv
CS2	5.180	591.2	4095.1	12.71	ppmv
			20906.3	78.96	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 09:18:47
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 215.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



Component	Retention	Height	Area	External	Units
H2S	1.126	1392.8	6859.7	28.70	ppmv
COS	1.698	1572.2	9636.0	36.97	ppmv
CS2	5.186	578.7	4014.3	12.59	ppmv
			20510.0	78.27	

Lab name: TRC Environmental
Client: ExxonMobil Baytown ICR
Analysis date: 07/17/2011 09:27:07
Method: 1-ml SS Loop
Description: DCU D603
Column: Rt-Sulfur Micropack 1-m
Carrier: N2@ 25 psig
Temp. prog:
Data file: DCU FPD GC-1 216.CHR (C:\DCU ICR 7-2011)
Sample: Post-test cal
Operator: J. Glass



Component	Retention	Height	Area	External	Units
H2S	1.131	1455.8	7133.0	29.18	ppmv
COS	1.701	1541.7	9831.4	37.33	ppmv
CS2	5.186	593.5	4131.4	12.76	ppmv
			21095.8	79.27	

CERTIFICATE

The permeation rate of the DYNACAL® PERMEATION DEVICE listed below is certified traceable to N.I.S.T. standards.

Serial Number: 59-38917

Certification Date: Jun 15, 2011	Certificate Expires: Jul 31, 2011
Chemical: Carbonyl Sulfide	Part Number: 187-036-7600-F59-C35
Device Type: Dynacal Tube	Length: 3.60
Permeation Rate: 22495.90 ng/min	Temperature: 35 C
True Accuracy: +/- 0.08 %	Max Allowed Accuracy: +/- 2.00 %
Certification Method: Gravimetric	Order No: 106367
Customer: TRC ENVIRONMENTAL	

Approved By: _____

VICI

VICI Metronics, Inc.
26295 Twelve Trees Lane NW
Poulsbo, WA 98370
(360) 697-9199 Fax: (360) 697-6682

CERTIFICATE

The permeation rate of the DYNACAL® PERMEATION DEVICE listed below is certified traceable to N.I.S.T. standards.

Serial Number: 89-38918

Certification Date: Jun 24, 2011
Chemical: Carbon Disulfide
Device Type: Dynacal Tube
Permeation Rate: 9770.97 ng/min
True Accuracy: +/- 0.21 %
Certification Method: Gravimetric
Customer: TRC ENVIRONMENTAL

Certificate Expires: May 6, 2012
Part Number: 107-103-6300-C35
Length: 10.30
Temperature: 35 C
Max Allowed Accuracy: +/- 2.00 %
Order No: 106367

Approved By: _____

VICI

VICI Metronics, Inc.
26295 Twelve Trees Lane NW
Poulsbo, WA 98370
(360) 697-9199 Fax: (360) 697-6682

CERTIFICATE

The permeation rate of the DYNACAL® PERMEATION DEVICE listed below is certified traceable to N.I.S.T. standards.

Chemical Fill		**: Hydrogen Sulfide**
Device Type		**: Low Emission #2**
Part Number		**: 127-200-0110-F56-C35**
Length /Geometry		**: 20.0 cm**
Method of Certification		**: Gravimetric**
Certification Number		**: 56-29654**
Rate		**: 10,452 ng/min +/- 2% at 35 degrees C**
Note		
Date	**: November 13, 2007**	**By** _____
Customer	**: TRC Environmental**	
Order No.	**: M038120**	

VICI

VICI Metronics, Inc.
26295 Twelve Trees Lane NW
Poulsbo, WA 98370
(360) 697-9199 Fax: (360) 697-6682

VICI

VICI Metronics Inc.

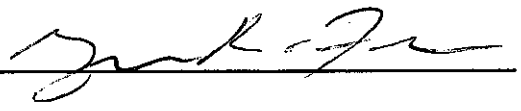
calibration gas standards

VICI METRONICS INC.

DYNACALIBRATOR TEMPERATURE CALIBRATION DATA

Certification number:	11-2086	Date:	9/1/2011
Dynacalibrator Model:	150-D	By:	RF
Serial Number:	M-1840		

Temperature Set Point	Measured Temperature °C
35.0	35.01

Signature: 

Certified by: RF

Recalibration Date: 9/2/2012

26272 Twelve Trees Lane NW ♦ Poulsbo, WA 98370, U.S.A. ♦ Phone: (360) 697 9199 Fax: (360) 697 6682

VICI

VICI Metronics Inc.

calibration gas standards

TRACEABILITY OF CALIBRATIONS

Certification Number:	11-2086	9/1/2011
Dynacalibrator Model:	150-D	
Serial Number:	M-1840	

TEMPERATURE

Isotech model 93514-77/25 ohm Standard Platinum Resistance Thermometer
Serial Number 152

SPRT 152 was calibrated on March 24th 2011 by Valco.
SPRT 152 was checked using an ITS-90 TPW fixed point cell.

Temperatures were measured at a stem depth of 21 cm using ASL F700 Precision Thermometry Bridge.

Stem depth is the distance from the lip of chamber to the end of the SPRT.

Ambient Humidity:	Ruska LEM 2456-LEM S/N 61637	Calibrated on: 1/25/11
Ambient Pressure :	Ruska LEM 2456-LEM S/N 61637	Calibrated on: 1/25/11
Ambient Temperature :	Ruska LEM 2456-LEM S/N 61637	Calibrated on: 1/25/11

CALIBRATOR RECALIBRATION DATE: 9/2/2012

Signature: _____

Certified by: RF

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VICI METRONICS INC.

DYNACALIBRATOR TEMPERATURE CALIBRATION DATA

Certification number:	10-1920	Date:	6/11/2010
Dynacalibrator Model:	150-D	By:	RF
Serial Number:	M-1840		

Temperature Set Point	Measured Temperature °C
35.0	35.00

Signature: _____

Certified by: RF

Recalibration Date: 6/12/2011

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VICI

VICI Metronics Inc.

calibration gas standards

TRACEABILITY OF CALIBRATIONS

Certification Number:	10-1920	6/11/2010
Dynacalibrator Model:	150-D	
Serial Number:	M-1840	

TEMPERATURE

Isotech model 93514-77/25 ohm Standard Platinum Resistance Thermometer
Serial Number 161

SPRT 161 was calibrated on March 15th 2010 by Valco.
SPRT 161 was checked using an ITS-90 TPW fixed point cell.

Temperatures were measured at a stem depth of 21 cm using ASL F700 Precision Thermometry Bridge.

Stem depth is the distance from the lip of chamber to the end of the SPRT.

Ambient Humidity:	Ruska LEM 2456-LEM S/N 61637	Calibrated on: 10/15/09
Ambient Pressure :	Ruska LEM 2456-LEM S/N 61637	Calibrated on: 10/15/09
Ambient Temperature :	Ruska LEM 2456-LEM S/N 61637	Calibrated on: 10/15/09

CALIBRATOR RECALIBRATION DATE: 6/12/2011

Signature:

Certified by: RF

26272 Twelve Trees Lane NW □ Poulsbo, WA 98370, U.S.A. □ Phone: (360) 697 9199 Fax: (360) 697 6682

TRC Environmental Austin
Permation Oven Rotameter Calibration
Rotameter ID= 092-04-N
Rotameter Setting 55
Barometric Pressure= 28.8 " Hg

Flow	Avg. Flow	Units			Temp.	Units	Press.	Units	Flow (lpm)	Time	Date	Base Product	Base M	Base SN	Base Rev.
2.0491	2.0491	L/min	1	10	81.5	F	730	mmHg	1.9191	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0508	2.0499	L/min	2	10	81.5	F	730	mmHg	1.9207	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0513	2.0504	L/min	3	10	81.5	F	730	mmHg	1.9212	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0515	2.0506	L/min	4	10	81.5	F	730	mmHg	1.9214	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0515	2.0508	L/min	5	10	81.5	F	730	mmHg	1.9214	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0511	2.0508	L/min	6	10	81.5	F	730	mmHg	1.9210	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0535	2.0512	L/min	7	10	81.5	F	730	mmHg	1.9233	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0525	2.0514	L/min	8	10	81.5	F	730	mmHg	1.9223	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0525	2.0515	L/min	9	10	81.5	F	730	mmHg	1.9223	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08
2.0525	2.0516	L/min	10	10	81.5	F	730	mmHg	1.9223	17:24	4/26/2011	DEFENDER 520	Base	114672	2.08

Avg= 1.922 =Average

TRC Environmental Austin
Permation Oven Rotameter Calibration
Rotameter ID= N-112-04
Rotameter Setting 150
Barometric Pressure= 28.8 " Hg

Flow	Avg. Flow	Units			Temp.	Units	Press.	Units	Flow (sccm)	Time	Date	Base Product	Base M	Base SN	Base Rev.
0.84784	0.84784	L/min	1	10	82.5	F	730	mmHg	0.7926	17:22	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84768	0.84776	L/min	2	10	82.5	F	730	mmHg	0.7925	17:22	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84551	0.84701	L/min	3	10	82.5	F	730	mmHg	0.7904	17:22	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84563	0.84666	L/min	4	10	82.5	F	730	mmHg	0.7905	17:22	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84768	0.84643	L/min	5	10	82.5	F	730	mmHg	0.7925	17:22	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84839	0.84668	L/min	6	10	82.5	F	730	mmHg	0.7931	17:22	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84963	0.847	L/min	7	10	82.5	F	730	mmHg	0.7943	17:23	4/26/2011	DEFENDER 520	Base	114672	2.08
0.85035	0.84734	L/min	8	10	82.5	F	730	mmHg	0.7950	17:23	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84768	0.84765	L/min	9	10	82.5	F	730	mmHg	0.7925	17:23	4/26/2011	DEFENDER 520	Base	114672	2.08
0.84801	0.84777	L/min	10	10	82.5	F	728	mmHg	0.7906	17:23	4/26/2011	DEFENDER 520	Base	114672	2.08
								Avg=	0.7924						

TRC Environmental Austin
Permation Oven Rotameter Calibration
Rotameter ID= N-112-04
Rotameter Setting 90
Barometric Pressure= 28.8 " Hg

Flow	Avg. Flow	Units		Temp.	Units	Press.	Units	Flow (lpm)	Time	Date	Base Product	Base M	Base SN	Base Rev.
0.51493	0.34206	L/min	3 10	83	F	730	mmHg	0.4809	17:20	4/26/2011	DEFENDER 520	Base	114672	2.08
0.52006	0.38656	L/min	4 10	83	F	730	mmHg	0.4857	17:20	4/26/2011	DEFENDER 520	Base	114672	2.08
0.52052	0.41335	L/min	5 10	83	F	728	mmHg	0.4848	17:20	4/26/2011	DEFENDER 520	Base	114672	2.08
0.52004	0.43113	L/min	6 10	83	F	730	mmHg	0.4857	17:20	4/26/2011	DEFENDER 520	Base	114672	2.08
0.52043	0.44389	L/min	7 10	83	F	730	mmHg	0.4861	17:20	4/26/2011	DEFENDER 520	Base	114672	2.08
0.51975	0.45337	L/min	8 10	83	F	728	mmHg	0.4841	17:21	4/26/2011	DEFENDER 520	Base	114672	2.08
0.51784	0.46053	L/min	9 10	82.5	F	730	mmHg	0.4841	17:21	4/26/2011	DEFENDER 520	Base	114672	2.08
0.51771	0.46625	L/min	10 10	83	F	730	mmHg	0.4835	17:21	4/26/2011	DEFENDER 520	Base	114672	2.08
0.51774	0.51774	L/min	1 10	82.5	F	730	mmHg	0.4840	17:21	4/26/2011	DEFENDER 520	Base	114672	2.08
0.51774	0.51774	L/min	2 10	83	F	730	mmHg	0.4836	17:21	4/26/2011	DEFENDER 520	Base	114672	2.08
							Avg=	0.4845						

TRC Environmental Austin
Permation Oven Rotameter Calibration
Rotameter ID= N-112-04
Rotameter Setting 50
Barometric Pressure= 28.8 " Hg

Flow	Avg. Flow	Units			Temp.	Units	Press.	Units	Flow (lpm)	Time	Date	Base Product	Base M	Base SN	Base Rev.
0.2595	0.2595	L/min	1	10	83	F	730	mmHg	0.2424	17:17	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25907	0.25928	L/min	2	10	83	F	730	mmHg	0.2420	17:17	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25801	0.25886	L/min	3	10	83	F	730	mmHg	0.2410	17:17	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25766	0.25856	L/min	4	10	83	F	730	mmHg	0.2407	17:17	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25694	0.25823	L/min	5	10	83	F	730	mmHg	0.2400	17:17	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25653	0.25795	L/min	6	10	83	F	728	mmHg	0.2389	17:17	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25517	0.25755	L/min	7	10	83	F	730	mmHg	0.2383	17:18	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25746	0.25661	L/min	8	10	83	F	730	mmHg	0.2405	17:18	4/26/2011	DEFENDER 520	Base	114672	2.08
0.25615	0.25615	L/min	9	10	83	F	730	mmHg	0.2392	17:18	4/26/2011	DEFENDER 520	Base	114672	2.08
0.2551	0.25562	L/min	10	10	83	F	728	mmHg	0.2376	17:19	4/26/2011	DEFENDER 520	Base	114672	2.08
								Avg=	0.2395						

TRC Environmental Austin
Permation Oven Rotameter Calibration
Rotameter ID= N-112-04
Rotameter Setting 35
Barometric Pressure= 28.8 " Hg

Flow	Avg. Flow	Units			Temp.	Units	Press.	Units	Flow (lpm)	Time	Date	Base Product	Base M	Base SN	Base Rev.
0.17073	0.17073	L/min	1	10	83	F	730	mmHg	0.1595	17:14	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17023	0.17048	L/min	2	10	83	F	730	mmHg	0.1590	17:14	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17011	0.17035	L/min	3	10	83	F	730	mmHg	0.1589	17:14	4/26/2011	DEFENDER 520	Base	114672	2.08
0.16941	0.17012	L/min	4	10	83	F	730	mmHg	0.1582	17:15	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17145	0.17038	L/min	5	10	83	F	730	mmHg	0.1601	17:15	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17115	0.17051	L/min	6	10	83	F	728	mmHg	0.1594	17:15	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17105	0.17059	L/min	7	10	83	F	730	mmHg	0.1598	17:15	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17084	0.17062	L/min	8	10	83	F	730	mmHg	0.1596	17:15	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17086	0.17064	L/min	9	10	83	F	730	mmHg	0.1596	17:15	4/26/2011	DEFENDER 520	Base	114672	2.08
0.17058	0.17064	L/min	10	10	83	F	730	mmHg	0.1593	17:16	4/26/2011	DEFENDER 520	Base	114672	2.08

0.1593 =Average

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JOLIET, IL

EPA PROTOCOL GAS ANALYSIS

CYL NUMBER: SX50495
LAB REFERENCE #:
LOT NUMBER: 102-06-03398

COMPONENT NAME	MEAN CONCENTRATION
Hydrogen Sulfide	24.9 PPM +/-1% rel

SIZE: 1l CGA: 330
Volume: 140 cuft
Pressure: 2000 psig @ 70F

This mixture has been analyzed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards revised September 1997

Balance Gas: Nitrogen

PROCEDURE: G1/G2 ASSAY DATE: 8/24/10
EXPIRATION DATE: 8/24/11

NOTE: this mixture should not be used when the pressure falls below 150 psig.

analyst's name

Information continued on other side of this tag

APPENDIX F: ONTARIO HYDRO—MERCURY SAMPLING DATA

Project Number	182129		
Client / Location	ExxonMobil		
Source	DCU		
Sampling Location	D603 Vent		
Sample Type / Method	Ontario Hydro Mercury		
Condition Number	Vent Cycle	Vent Cycle	Vent Cycle
Run Number	1	2	3
Method Number	Ontario Hydro	Ontario Hydro	Ontario Hydro
Date	07/14/11	07/16/11	07/17/11
Time Start (24-hr clock)	2006	0043	0626
Time Stop (24-hr clock)	2026	0143	0706
Total Collection Time (min)	20	60	40
Pitot Tube Correction Factor	0.84	0.84	0.84
Nozzle Diameter (in.)	0.121	0.121	0.121
Nozzle Area (ft^2)	0.000080	0.000080	0.000080
Equivalent Duct Diameter (in)	8.00	8.00	8.00
Equivalent Duct Diameter (ft)	0.67	0.67	0.67
Duct Cross-Sectional Area (ft^2)	0.349	0.349	0.349
Barometric Pressure (in. Hg)	29.65	29.80	29.85
Elevation of Sampling Location Relative to Barometer (ft)			
Barometric Pressure at Sampling Location (in. Hg)	29.65	29.80	29.85
Static Pressure (in. H_2O)	1.1	0.9	1.5
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96
O_2 (%)	14.0	12.8	16.5
CO_2 (%)	0.0	0.1	0.0
Dry Molecular Weight (g/g-mole)	28.56	28.53	28.66
Condensate (mL)	887.0	2466.7	2083.0
Moisture Content (%) (measured)	97.71	97.61	98.38
Moisture Content at Saturation (%)	538.07	152.34	303.94
Moisture Content (%) (used in further calculations)	97.71	97.61	98.38
Wet Molecular Weight (g/g-mole)	18.24	18.25	18.17
Initial Meter Volume (ft^3)	260.085	261.285	314.271
Final Meter Volume (ft^3)	261.091	264.173	315.906
Leak Check Volume (ft^3)	0.000	0.000	0.000
Meter Volume (ft^3)	1.006	2.888	1.635
Meter Calibration Factor, Y	1.0090	1.0090	1.0090
Average Meter Temperature (F)	82.8	78.7	77.1
Absolute Meter Temperature (F)	542.8	538.7	537.1
Average Delta H (in. H_2O)	0.0	0.0	0.0
Elevation of Meter Relative to Barometer (ft)			
Corrected Meter Volume (dscf)	0.978	2.845	1.618
Average Stack Temperature (F)	312.0	234.0	274.5
Absolute Stack Temperature (R)	772.0	694.0	734.5
Average Delta P (in. H2O)	124.00	9.42	11.73
Average Square Root of delta P	11.13	2.98	3.20
Unadjusted Gas Velocity (ft/sec)	953.35	241.72	267.13
WAF	1.00	1.00	1.00
Adjusted Gas Velocity (ft/sec)	953.35	241.72	267.13
Adjusted Gas Velocity (ft/min)	57,201	14,503	16,028
Actual Flow Rate (acfh)	1,198,011	303,749	335,682
Actual Flow Rate (acfm)	19,967	5,062	5,595
Corrected Flow Rate (wscfh)	814,186	230,678	241,617
Corrected Flow Rate (wscfm)	13,570	3,845	4,027
Corrected Flow Rate (kwscfh)	814	231	242
Corrected Flow Rate (kwscfm)	14	4	4
Corrected Flow Rate (dscfh)	18,614	5,508	3,916
Corrected Flow Rate (dscfm)	310	92	65
Corrected Flow Rate (kdscfh)	19	6	4
Corrected Flow Rate (kdscfm)	0.31	0.09	0.07
Isokinetic Sampling Rate (%)	68.94	225.78	270.91
Average Isokinetic Sampling Rate (%)		188.54	

STP is defined as 528 R and 29.92 "Hg

TRC

Source Collection Data Sheet

Contract No. 182129	Method Ontario Hydro		Page 1 of 1
Facility Exxon Mobile BTRP	Init. System Leak Rate (ft3 @ "Hg) 0.010 @ 15" Hg		Operator MJK
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.008 @ 25" Hg		Pitot No. NA
Date 7-14-2011	Start Time 2006	Meter No. 2962532-D	PTCF 0.84
Condition Normal	End Time 2026	DGMCF 1.0090	Init. Pitot Leak Check ✓
Run No. 1	Duration (min) 20	ΔH@ 1.640	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.1	Bar. Press. ("Hg) 29.65	Nozzle Diam. (") 0.121	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	Duct ΔP	Duct Ts
MID	2006	260.085	—	—	—	295	290	79	85	84	25	145	322
M	2011	260.74	—	—	—	295	290	70	83	82	25	140	315
M	2016	260.85	—	—	—	295	290	64	83	82	25	125	313
M	2021	260.87	—	—	—	295	290	59	83	82	25	120	298
STP	2026	261.091	—	—	—	295	290	57	82	82	25	110	312
												100	322
												70	325
												55	327
												35	334
												15	335

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No. 182129	Method Ontario Hydro Hg
Condition Normal Vent Cycle	Run No. 1
Date 7-14-11	Operator Lpm

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	1N HCl	100	Mod	1764.8	894.4	= 870.4
2	↓	↓	Mod	649.7	638.3	= 11.4
3	↓	↓	GIS	673.0	672.4	= 0.6
4	—	—	Mod	605.2	604.8	= 0.4
5						=
6	HNO_3/H_2O_2	100	Mod	678.3	678.8	= -0.5
7	$KMnO_4$			724.9	716.0	= 8.9
8	↓	↓	↓	722.7	731.7	= -9.0
9	Sigel	600	↓	968.7-963.9	877.3	= 4.8
10						=
					Total Net Gain (g) =	887.0

Comments:

Run 1 Velocity/Temperature

Project: 182129 ExxonMobil
Source: ICR DCU D603 Vent
Run #: 1
Parameter: Velocity/Temperature
Date: 14-Jul-11

Time hh:mm	Delta P inH2O	Sqrt Delta P	Run 1 - Stack Temp deg F	Stack Temp R	Run 1 - Velocity ft/sec	actual flow rate acf/hr	standard flow rate wscf/hr	dry flow rate dscf/hr
20:06	125	11.2	322	782	965	1,212,684	824,134	18,873
20:11	140	11.8	315	775	1017	1,277,628	868,269	19,883
20:16	125	11.2	313	773	960	1,205,686	819,378	18,764
20:21	120	11.0	298	758	931	1,169,808	794,995	18,205
20:26	110	10.5	312	772	900	1,130,302	768,147	17,591
Average	**124**	**11.1**	**312**	**772**	**954**	**1,199,221**	**814,984**	**18,663**

Run 1 Data

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	894.4	1764.8	870.4
2	638.3	649.7	11.4
3	672.4	673.0	0.6
4	604.8	605.2	0.4
5	678.8	678.3	-0.5
6	716.0	724.9	8.9
7	731.7	722.7	-9
8	963.9	968.7	4.8
		sum =	887.0

	Temperatures					
dP	Stack	Meter Inlet	Meter Outlet	dH	SQRT dP	SQRT dH
125.00	322	85	84	0.00	11.18	0.00
140.00	315	83	82	0.00	11.83	0.00
125.00	313	83	82	0.00	11.18	0.00
120.00	298	83	82	0.00	10.95	0.00
110.00	312	82	82	0.00	10.49	0.00
124.00	**312.0**	**82.8**		**0.00**	**11.13**	**0.00**

TRC

Source Collection Data Sheet

Contract No. 182129	Method ONTARIO HYDRO		Page 1 of 1
Facility ExxonMobil BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.003 @15"Hg		Operator MJK
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.004 @25"Hg		Pitot No. NA
Date 7/16/2011	Start Time 0043	Meter No. D2962532	PTCF 0.84
Condition Normal Vent Cycle	End Time 0143	DGMCF 1.009	Init. Pitot Leak Check ✓
Run No. 2	Duration (min) 60	ΔH@ 1.640	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +0.9	Bar. Press. ("Hg) 29.80	Nozzle Diam. (") 0.121	Kf —

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)	ΔP	T(F)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out			
MID	0043	261.285	—	—	—	302	300	78	79	78	25	15	217
M	0048	262.20	—	—	—	301	299	68	80	78	25	15	224
M	0053	262.32	—	—	—	300	298	65	80	78	25	15	226
M	0058	262.52	—	—	—	301	299	62	80	78	25	13	235
M	0103	262.70	—	—	—	301	299	60	79	78	25	12	243
M	0108	262.90	—	—	—	302	300	60	79	78	25	10	240
M	0113	263.08	—	—	—	300	298	60	80	78	25	8	235
M	0118	263.25	—	—	—	301	299	62	79	78	25	7	239
M	0123	263.47	—	—	—	299	297	62	79	78	25	5	239
M	0128	263.51	—	—	—	298	296	64	79	78	25	5	238
M	0133	263.59	—	—	—	299	297	65	79	78	25	4	237
M	0138	263.78	—	—	—	299	297	67	79	78	25	4	235
STOP	0143	264.173									—	4	241
												3	246
												2	242
												1.5	254
												1.0	256
												1.0	257
												1.0	258
												1.0	257
												1.0	260
												0.5	260
												0.5	260
												1.0	259
												1.0	259
												1.0	258
												1.0	258

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No. 182129	Method Ontario Hydro Hg
Condition Normal Vent Cycle	Run No. 2
Date 7/16/2011	Operator RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	Initial Wt. (g)	Net Gain (g)
1	1N HCl	100	IC	2276.5	905.6	1370.9
2	↓	↓	Mod	909.0	640.2	268.8
3	↓	↓	G/S	899.7	676.8	222.9
4	MT	—	Mod	934.8	606.9	327.9
5	HNO_3/H_2O_2	100	↓	862.1	686.6	175.5
6	$KMnO_4/H_2SO_4$	↓	↓	815.4	735.8	79.6
7	↓	—	↓	737.4	721.0	16.4
8	Sigel	500	↓	973.9	969.2	4.7
9						
10						
					Total Net Gain (g) =	2466.7

Comments:

some carry over for Imp 5 into 6

Run 2 Velocity/Temperature

Project: 182129 ExxonMobil
Source: ICR DCU D603 Vent
Run #: 2
Parameter: Velocity/Temperature
Date: 16-Jul-11

Time hh:mm	Delta P inH2O	Sqrt Delta P	Run 2 - Stack Tempdeg F	Stack Temp R	Run 2 - Velocity ft/sec	actual flow rate acf/hr	standard flow rate wscf/hr	dry flow rate dscf/hr
0:43	15.00	3.9	217	677	311	390,332	294,852	7,047
0:48	15.00	3.9	224	684	312	392,344	296,373	7,083
0:53	15.00	3.9	226	686	313	392,917	296,806	7,094
0:58	13.00	3.6	235	695	293	368,178	278,118	6,647
1:03	12.00	3.5	243	703	283	355,764	268,740	6,423
1:08	10.00	3.2	240	700	258	324,073	244,801	5,851
1:13	8.00	2.8	235	695	230	288,823	218,173	5,214
1:18	7.00	2.6	239	699	216	270,945	204,669	4,892
1:23	5.00	2.2	239	699	182	228,990	172,977	4,134
1:28	5.00	2.2	238	698	182	228,827	172,853	4,131
1:33	4.00	2.0	237	697	163	204,522	154,494	3,692
1:38	4.00	2.0	235	695	163	204,228	154,272	3,687
1:43	4.00	2.0	241	701	163	205108	154936	3703
Average	**9.00**	**2.9**	**235**	**695**	**236**	**296,542**	**224,005**	**5,354**

Run 2 Data

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	905.6	2276.5	1370.9
2	640.2	909.0	268.8
3	676.8	899.7	222.9
4	606.9	934.8	327.9
5	686.6	862.1	175.5
6	735.8	815.4	79.6
7	721	737.4	16.4
8	969.2	973.9	4.7
		sum =	2466.7

		Temperatures				
dP	Stack	Meter Inlet	Meter Outlet	dH	SQRT dP	SQRT dH
15.00	217	79	78	0.00	3.87	0.00
15.00	224	80	78	0.00	3.87	0.00
15.00	226	80	78	0.00	3.87	0.00
13.00	235	80	78	0.00	3.61	0.00
12.00	243	79	78	0.00	3.46	0.00
10.00	240	79	78	0.00	3.16	0.00
8.00	235	80	78	0.00	2.83	0.00
7.00	239	79	78	0.00	2.65	0.00
5.00	239	79	78	0.00	2.24	0.00
5.00	238	79	78	0.00	2.24	0.00
4.00	237	79	78	0.00	2.00	0.00
4.00	235	79	78	0.00	2.00	0.00
9.42	**234.0**	**78.7**		**0.00**	**2.98**	**0.00**

Source Collection Data Sheet

Contract No. 182129	Method Ontario Hydro Hg		Page 1 of 1
Facility Exxon Mobil BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.005 @ 15 "Hg		Operator RRM
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) @		Pitot No. NA
Date 7-17-11	Start Time 0626	Meter No. 2962532	PTCF 0.84
Condition Normal Ventcycle	End Time 0706	DGMCF 1.0090	Init. Pitot Leak Check ✓
Run No. 3	Duration (min) 40	ΔH@ 1.640	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.5	Bar. Press. ("Hg) 29.85	Nozzle Diam. (") 0.121	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	ΔP	Ts(F)
0	MID 0626	314.271	—	0.6	—	303	299	77	75	76	14	20	259
2	M 0628											24	263
4	M 0630											22	257
5	M 0631	314.86	—	—	—	302	298	74	76	75	26		
6 8	M 0632 0634	315"										21 18	280 249
10	M 0636	315.03	—	—	—	302	300	70	77	75	26	18	279
12 14	M 0638 0640											16 15	257 275
15	M 0641	315.28	—	—	—	303	300	67	77	76	26		
16 18	M 0642 0644											14 13	272 281
20	M 0646	315.54	—	—	—	302	301	64	78	78	26	13	282
22 24	M 0648 0650	315.72										13 13	265 287
25	M 0651	315.58	—	—	—	301	301	62	79	78	27		
26 28	M 0652 0654											11 7	291 294
30	M 0656	315.71	—	—	—	301	300	60	80	77	27	6	293
32 34	M 0658 0700											4 3	278 288
35	M 0701	315.82	—	—	—	302	301	61	80	77	27	3	293
36 38	M 0703 0704	315.82										2 1	276 272
40	STP 0706	315.906										1	287

Comments

Checked By: Ed Peterik 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	Ontario Hydro
Condition	Normal Vent Cycle	Run No.	3
Date	7-17-11	Operator	Ken

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	1N KCl	100	Mod~~KO~~	2381.6	- 904.5	= 1477.1
2	↓	100	Mod	901.1	- 644.7	= 256.4
3	↓	100	Mod	883.1	- 677.5	= 205.6
4	—	—	↓	740.2	- 607.7	= 132.5
5	10% HNO_3/2% H_2O_2	100		688.2	- 685.2	= 3.0
6	—	—		670.6	- 669.2	= 1.4
7	~~Sigel~~	~~600~~	↓		~~- 974.0~~	=
8	KMnO4/H2SO4	100		738.1	- 737.0	= 1.1
9	↓	100		726.6	- 724.9	= 1.7
10	Sigel	600		978.2	- 974.0	= 4.2
					Total Net Gain (g) =	2083.0

Comments:

Run 3 Velocity/Temperature

Project: 182129 ExxonMobil
Source: ICR DCU D603 Vent
Run #: 3
Parameter: Velocity/Temperature
Date: 17-Jul-11

Time hh:mm	Delta P inH2O	Sqrt Delta P	Run 3 - Stack Temp deg F	Stack Temp R	Run 3 - Velocity ft/sec	actual flow rate acf/hr	standard flow rate wscf/hr	dry flow rate dscf/hr
6:26	20.00	4.5	219	679	359	450,634	324,374	5,255
6:28	24.00	4.9	263	723	405	509,388	366,667	5,940
6:30	22.00	4.7	257	717	387	485,674	349,597	5,663
6:32	21.00	4.6	280	740	384	482,058	346,994	5,621
6:34	18.00	4.2	249	709	348	436,851	314,453	5,094
6:36	18.00	4.2	279	739	355	445,998	321,037	5,201
6:38	16.00	4.0	257	717	330	414,184	298,137	4,830
6:40	15.00	3.9	275	735	323	406,035	292,271	4,735
6:42	14.00	3.7	272	732	312	391,466	281,784	4,565
6:44	13.00	3.6	281	741	302	379,538	273,198	4,426
6:46	13.00	3.6	282	742	302	379,794	273,382	4,429
6:48	13.00	3.6	265	725	299	375,418	270,232	4,378
6:50	13.00	3.6	287	747	303	381,071	274,302	4,444
6:52	11.00	3.3	291	751	280	351,472	252,996	4,099
6:54	7.00	2.6	294	754	224	280,937	202,223	3,276
6:56	6.00	2.4	293	753	207	259,925	187,098	3,031
6:58	4.00	2.0	278	738	167	210,103	151,236	2,450
7:00	3.00	1.7	290	750	146	183,428	132,035	2,139
7:01	3.00	1.7	293	753	146	183,794	132,298	2,143
7:02	2.00	1.4	276	736	118	148,364	106,795	1,730
7:04	1.00	1.0	272	732	83	104,624	75,310	1,220
7:06	1.00	1.0	287	747	84	105,690	76,078	1,232
Average	**11.73**	**3.2**	**275**	**735**	**267**	**334,838**	**241,023**	**3,905**

Run 3 Data

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	904.5	2381.6	1477.1
2	644.7	901.1	256.4
3	677.5	883.1	205.6
4	607.7	740.2	132.5
5	685.2	688.2	3
6	669.2	670.6	1.4
7	737	738.1	1.1
8	724.4	730.3	5.9
		sum =	2083

	Temperatures					
dP	Stack	Meter Inlet	Meter Outlet	dH	SQRT dP	SQRT dH
20.00	219	75	76	0.00	4.47	0.00
24.00	263	76	75	0.00	4.90	0.00
22.00	257	77	75	0.00	4.69	0.00
21.00	280	77	76	0.00	4.58	0.00
18.00	249	78	78	0.00	4.24	0.00
18.00	279	79	78	0.00	4.24	0.00
16.00	257	80	77	0.00	4.00	0.00
15.00	275	80	77	0.00	3.87	0.00
14.00	272				3.74	
13.00	281				3.61	
13.00	282				3.61	
13.00	265				3.61	
13.00	287				3.61	
11.00	291				3.32	
7.00	294				2.65	
6.00	293				2.45	
4.00	278				2.00	
3.00	290				1.73	
3	293				1.73	
2	276				1.41	
1	272				1.00	
1	287				1.00	
11.73	**274.5**	**77.1**		**0.00**	**3.20**	**0.00**

Project Name: ExxonMobil ICR Test-DCU D603 Vent
Parameter: Mercury
Dates: July 14, 16, 17, 2011
Run No. 1

Barometric Pressure at Sampling Site, corrected for elevation

$$P_{bar(corr)} = P_{bar,meas} - (Elev \times 0.001)$$

$P_{bar,meas}$ = Barometric pressure as measured at ground level	=	29.65	in. Hg
Elev = elevation of sampling location relative to barometer	=	0	feet
0.001 = Conversion factor	=	0.00100	in. Hg/ft of elevation

Pbar(corr) = 29.65 - 0 X 0.001

$P_{bar(corr)}$ = 29.65 in Hg

Absolute Stack Pressure, Corrected, in. Hg, as per EPA Method 2, Section 6.5

$$P_s = P_{bar(corr)} + (Pg/13.6)$$

$P_{bar(corr)}$ = Barometric pressure at the sampling site	=	29.65	in. Hg
P_g = Stack Static Pressure	=	1.10	in. H2O
13.6 = Conversion factor	=	13.6	in. H2O/in. Hg

$$P_s = 29.65 + \left(\frac{1.10}{13.6}\right)$$

P_s = 29.73 in Hg

Absolute Stack Temperature, R

$$T_s = T + 460$$

T = Average Stack Temperatue	=	312.0	degF
460 = Conversion factor from deg F to R	=	460	

Ts = 312.0 + 460

Ts = 772.0 R

Absolute Meter Temperature, R

$$Tm = T + 460$$

T = Average Meter Temperatue	=	82.8	degF
460 = Conversion factor from deg F to R	=	460	

Tm = 82.8 + 460

Tm = 542.8 R

Volume of Water Vapor Condensed, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-2

$$V_{w(std)} = \frac{V_{1c} \times R_w \times R \times T_{std}}{M_w \times P_{std}}$$

V_{1c} = Total weight of liquid collected	=	887.0	g
R_w = Density of water	=	0.002201	lb/ml
R = Ideal Gas Constant	=	21.85	inHg - ft^3/degR - lbmole
T_{std} = Standard absolute temperature	=	528.00	degR
M_w = Molecular Weight of Water	=	18.00	lb/lbmole
P_{std} = Standard absolute pressure	=	29.92	inHg

$$V_{w(std)} = \frac{887.0 \times 0.002201 \times 21.85 \times 528}{18 \times 29.92}$$

$V_{w(std)}$ = 41.82

Example Calculations

Project Name: ExxonMobil ICR Test-DCU D603 Vent
Parameter: Mercury
Dates: July 14, 16, 17, 2011
Run No. 1

Dry Gas Volume, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-1

$$V_{m(std)} = V_m \times Y \times \frac{T_{std} \times (P_{bar} + (deltaH / 13.6))}{T_m \times P_{std}}$$

V_m = Volume of gas sample, dry	=	1.006	ft^3
Y = Dry gas meter calibration factor	=	1.009	
Tstd = Standard Temperature	=	528	R
P_{bar} = Barometric pressure at the sampling site	=	29.65	in. Hg
deltaH = Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor	=	13.6	In. H_2O/in. Hg
Tm = Absolute average DGM temperature	=	542.8	R
Pstd = Standard Pressure	=	29.92	in Hg

$$V_{m(std)} = \frac{1.01 \times 1.009 \times 528 \times (29.65 + (0.00 / 13.6))}{542.8 \times 29.92}$$

$V_{m(std)}$ = 0.978 dscf 0.02832 m3/ft3

$V_{m(std)}$ = 0.028 dscm

Moisture Content, proportion, by volume - as per US EPA Method 5, Eq. 5-3

$$\frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

$V_{w(std)}$ = Volume of water vapor condensed	=	41.821	ft^3
$V_{m(std)}$ = Dry Gas Volume	=	0.978	ft^3

$$B_{ws} = \frac{41.821}{0.978 + 41.821}$$

B_{ws} = 0.9771

Moisture content at saturation

This calculated by polynomial fit: $(86.7222826792858 + T_s*(-0.645483277572566) + T_s^2*0.00181527101645074 + T_s^3 * (-2.28823297043421E-06) + (T_s)^4*1.09201445204276E-09)*100*29.92/P_s)$

86.722282679285800			=	86.7
-0.645483277572566	X	772.0	=	-498.3
0.00181527101645074	X	595984	=	1081.9
-2.28823297043421E-06	X	460099648	=	-1052.8
1.09201445204276E-09	X	3.55197E+11	=	387.9
		sum	=	5.3467
sum x 100 x		29.92 / 29.73	=	538.07 %

for further calculations

B_{ws} = 0.9771 97.71 %

Dry Molecular Weight of Stack Gas, lb/lb-mole - as per US EPA Method 3, Eq. 3-1

$$M_d = MW_{CO}(\%CO) + MW_{CO2}(\%CO_2) + MW_{O2}(\%O_2) + MW_{H2}(\%H_2) + MW_{CH4}(\%CH_4) + MW_{N2}(\%N_2)$$

MW_{CO}= Molecular weight of CO, divided by 100	=	0.28	lb/lb-mole
%CO = Percent CO by volume, dry basis	=	0.0	%
MW_{CO2}= Molecular weight of CO_2, divided by 100	=	0.44	lb/lb-mole
$\%CO_2$ = Percent CO_2 by volume, dry basis	=	0.0	%
MW_{O2} = Molecular weight of O_2, divided by 100	=	0.32	lb/lb-mole
$\%O_2$ = Percent O_2 by volume, dry basis	=	14.0	%
MW_{H2} = Molecular weight of H_2, divided by 100	=	0.02	lb/lb-mole
$\%H_2$ = Percent H_2 by volume, dry basis	=	0.0	%
MW_{CH4} = Molecular weight of CH_4, divided by 100	=	0.16	lb/lb-mole
$\%CH_4$ = Percent CH_4 by volume, dry basis	=	0.0	%
MW_{N2} = Molecular weight of N2, divided by 100	=	0.28	lb/lb-mole
$\%N_2$ = 100% - %CO - $\%CO_2$ - $\%O_2$ - %H2 - %CH4	=	86.0	%

$$M_d = \frac{(0.28 \times 0.0) + (0.44 \times 0.0) + (0.32 \times 14.0) + (0.02 \times 0.0) + (0.16 \times 0.0) + (0.28 \times 86.0)}{}$$

M_d = 28.56 lb/lb-mole

Example Calculations

Project Name: ExxonMobil ICR Test-DCU D603 Vent
Parameter: Mercury
Dates: July 14, 16, 17, 2011
Run No. 1

Molecular Weight of stack gas, lb/lb-mole - as per US EPA Method 2, Eq. 2-6

$$M_s = M_d(1-B_{ws}) + 18.0(B_{ws})$$

M_d= Dry molecular weight of stack gas	=	28.56	lb/lb-mole
B_{ws}= Proportion of water vapor, by volume	=	0.9771	proportion
18.0 = Molecular Weight of H_2O	=	18.00	lb/lb-mole

M_s = 28.56 x (1 - 0.977) + (18.00 x 0.977)
M_s = 18.24 lb/lb-mole

Average Stack Gas Velocity, ft/sec - as per US EPA Method 2, Eq. 2-7

$$v_s = K_p \times C_p \times \text{deltaP}_{avg} \times \sqrt{T_s/(P_s \times M_s)}$$

K_p= Velocity equation constant	=	85.49	ft/sec[((lb/lb-mole)(in.Hg))/((degR)(in.H2O))]$^{1/2}$
C_p = S type pitot tube coefficient	=	0.84	
deltaP$_{avg}$=ave. sqrt. of the velocity head of stack gas	=	11.1271	in.H_2O
T_s = Absolute stack temperature	=	772.0	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
M_s = Molecular Weight of stack gas	=	18.24	lb/lb-mole

$$v_s = 85.49 \times 0.84 \times 11.13 \times \left(\frac{772.0}{29.73 \times 18.24}\right)^{0.5}$$

v_s = 953.35 ft/sec 15.8891 ft/min
WAF = 1.00
v_s(WAF Adjusted)= 953.35 ft/sec

Stack Area

$$A = 3.14 \times (\text{Stack Diameter}/2)^2$$

3.1415927 = PI	=	3.14	
Stack Diameter		0.67	ft2

$$A = 3.14 \times \left(\frac{0.67}{2}\right)^2$$

A = 0.35 ft2

Average Stack Gas Volumetric Flow Rate - Actual Conditions

Q_{actual} = v_s X A

v_s= Average stack gas velocity	=	953.35	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2

Q_{actual} = 953.35 x 0.35
Q_{actual} = 333 ft3/sec
Q_{actual} = 19,967 ft3/min
Q_{actual} = 1,198,011 ft3/hr

Average Stack Gas Dry Volumetric Flow Rate, dscf/hr - as per US EPA Method 2, Eq. 2-8

$$Q = \frac{3600 \times (1-B_{ws}) \times v_s \times A \times T_{std} \times P_s}{T_s \times P_{std}}$$

3600= Conversion factor	=	3600	sec/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9771	proportion
v_s= Average stack gas velocity	=	953.35	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2
T_{std} = Standard absolute temperature	=	528	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
T_s = Absolute stack temperature	=	772.0	degR
P_{std} = Standard absolute pressure	=	29.92	in. Hg

$$Q = \frac{3600 \times (1.00 - 0.977) \times 953.35 \times 0.349 \times 528 \times 29.73088}{772.0 \times 29.92}$$

Q = 18,614 dscfh
Q = 310.2 dscfm
Q = 18.6 kdscfh
Q = 0.31 kdscfm

Conversions
60 min/hr
1/1000 k

Example Calculations

Project Name: ExxonMobil ICR Test-DCU D603 Vent
Parameter: Mercury
Dates: July 14, 16, 17, 2011
Run No. 1

Average Stack Gas Wet Volumetric Flow Rate, wscf/hr

$$Q_w = \frac{Q}{(1-Bws)}$$

Q = Average Stack Gas Dry Volumetric Flow Rate	=	18,614	dscf/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9771	proportion

$$Q_w = \frac{18{,}614}{(\ 1.00\ -\ 0.977\ )}$$

$$Q_w = 814{,}186 \text{ wscfh}$$
$$= 13{,}570 \text{ wscfm}$$
$$= 814 \text{ kwscfh}$$
$$= 14 \text{ kwscfm}$$

Conversions
60 min/hr
$\frac{1}{1000}$ k

Nozzle Area

$$An = 3.1415927 \times (\text{Nozzle Diameter}/12/2)^2$$

3.1415927 = PI	=	3.14	
12 = Conversion Factor		12.00	in/ft
Nozzle Diameter		0.121	in

$$An = 3.14 \times \left(\frac{0.12100}{12} \times \frac{1}{2}\right)^2$$

$$An = 7.99E\text{-}05 \text{ ft2}$$

SHEET NO. 1 OF 1
PROJECT NO. 182129
DATE 10/23/2018
BY MJKroll
CHK'D

TRC

SUBJECT ExxonMobil BTRF DCU ICR Oxidized Hg Calculations

Run 1

<1.56 ug detected (First Analytical)
0.978 dscf sample volume
18,614 dscfh flow rate from Ontario Hydro train

detected ug	Conv	Conv
<1.56	ft3	liters / 1000
0.978 dscf sample volume	28.32 liters	dscm

= <56.3 ug/dscm

detected ug	drg flow dscf	Conv	duration	Conv
<1.56	18,614	lb	20 min	hr
0.978 dscf sample volume	hr	453.6x10^6 ug	Vent Cycle	60 min

= <2.18E-05 lb/Vent Cycle

A

Project Name: Exxon Mobil ICR Test--DCU
Parameter: Ontario Hydro
Date: July 14, 16-17, 2011

Run No. 1

ExxonMobil BTRF	Sample Volume (dscf)		0.978	20 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		18,614			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 1 Concentration (ug/dscm)	Run 1 Emission Rate (lb/vent cycle)
Oxidized Hg		1.56		1.56	56.3	0.0000218
Elemental Hg		3.67		3.67	133	0.0000513

Run No. 2

ExxonMobil BTRF	Sample Volume (dscf)		2.845	60 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		5,508			
	Amount Detected	Reporting Limit		Total	Run 2 Concentration	Run 2 Emission Rate
Oxidized Hg		2.6		2.6	32.3	0.0000111
Elemental Hg		5.73		5.73	71.1	0.0000245

Run No. 3

ExxonMobil BTRF	Sample Volume (dscf)		1.618	40 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		3,916			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 3 Concentration (ug/dscm)	Run 3 Emission Rate (lb/vent cycle)
Oxidized Hg		2.65		2.65	57.8	0.0000094
Elemental Hg		4.22		4.22	92.1	0.0000150

Average:

	Average Concentration (ug/dscm)	Average Concentration (ug/dscm)
Oxidized Hg	48.8	1.41E-05
Elemental Hg	86.1	2.62E-05

Meter Box: Orifice Full Calibration

Date:	9/20/2010
Prev. Calib. Date:	2/6/2009
Location:	TRC South Austin
Technician:	MRL
Meter Serial No:	2962532.00
Cubix Meter Box ID	D
Atm. Pressure (corr. In H	29.39 uncorrected: 29.56
Critical Vacuum + 2 in H	16 in. Hg. (required minimum)
Prev. Calib Factor (Y):	0.9856

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	0.2332
Model:	SX 40-73	48	0.339
Tested By:	EW	55	0.4426
		63	0.6126

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
40	0.2332	0.26	11	785.151	788.521	3.37	77	76	77	77	24	76.0	77.0
48	0.339	0.56	11	788.521	793.394	4.873	77	77	78	77	23	77.0	77.0
55	0.4426	0.94	11	793.394	799.671	6.277	78	77	78	77	21	77.0	76.0
63	0.6126	1.9	11	799.671	808.368	8.697	78	77	79	77	19	76.0	78.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y)		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
3.26	92.24	0.306	3.26	92.18	0.999	-0.010	1.604	-0.04
4.71	133.35	0.443	4.73	133.93	1.004	-0.005	1.638	0.00
6.07	171.86	0.571	6.18	174.95	1.018	0.009	1.609	-0.03
8.43	238.58	0.791	8.55	242.03	1.014	0.005	1.708	0.07

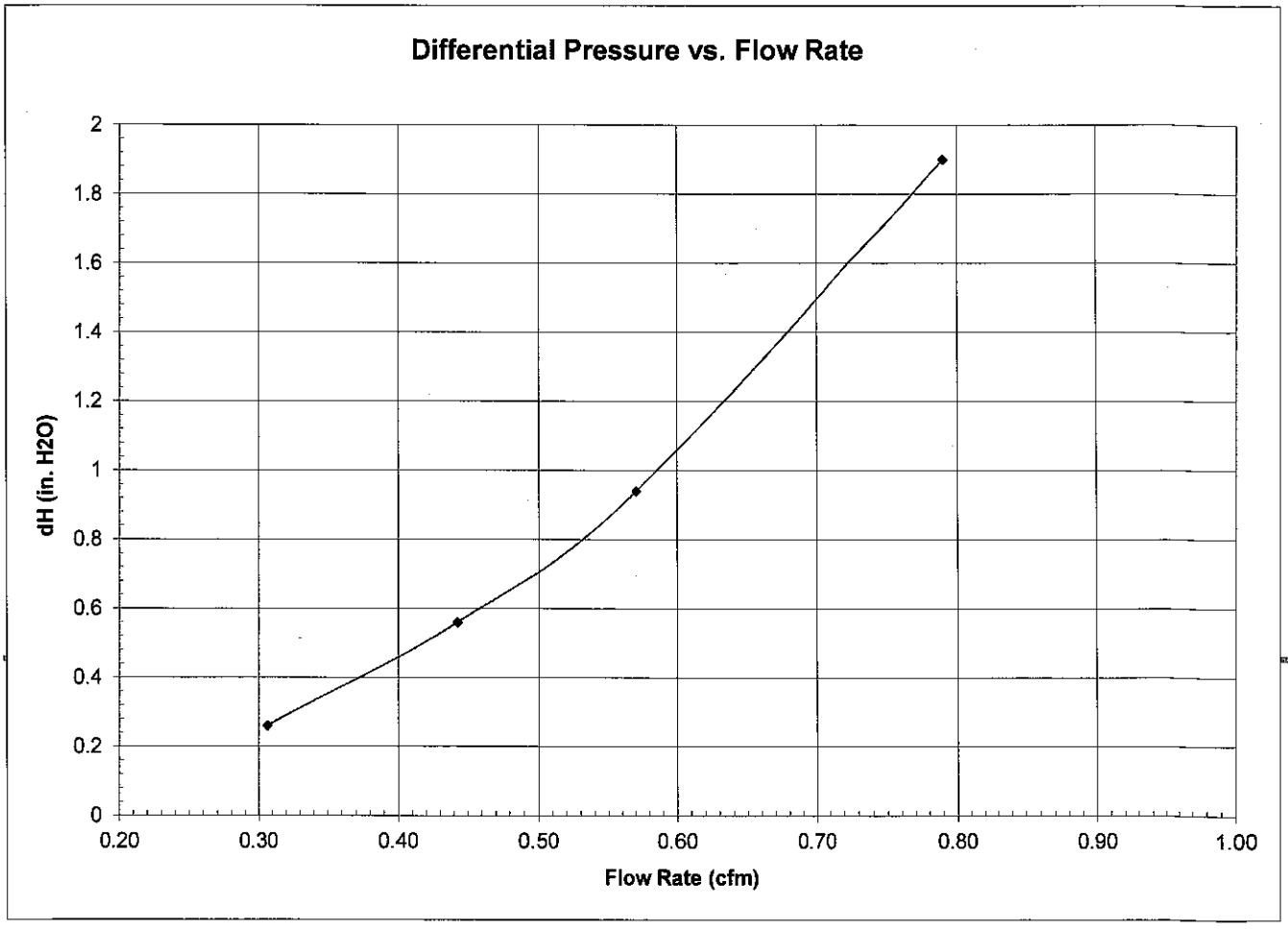
Meter Box

Calibration Test Results		**Pass/Fail**
*** Average Y:**	**1.0090**	***PASS***
Ave. Y w/in 5% of previous value:		*YES*
0.95 >= Y <= 1.05:		*PASS*
**** Average dH:**	**1.640**	***PASS***

Criteria:

* Y- ratio of the reading of the calibration meter (critical orifice) to the Meter Box DGM. Acceptable tolerance of individual values from the average is +/- 0.02.

** dH- the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air flow at 68 F and 29.92 in Hg, acceptable tolerance of individual values from the average is +/- 0.2



TRC

Console No.	D	S. O. P. Reference	AM - 103
Temperature Display Type	Total Group Corp.	Calibrator Type	Fluke 714
Temperature Display Serial No.	n/a	Calibration Serial No./Cert. Date	Serial #: 8097094 - 10/29/2009

	Reference Temperature (° F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)
1 (Stack)	32	0.0	211	0.1	499	0.1	998	0.1	1505	-0.3
2 (Probe)	33	-0.2	210	0.3	501	-0.1	998	0.1	1507	-0.4
3 (Filter)	32	0.0	212	0.0	501	-0.1	1001	-0.1	1504	-0.2
4 (Dryer)	32	0.0	214	-0.3	502	-0.2	1004	-0.3	1509	-0.5
5 (Aux)	31	0.2	215	-0.4	503	-0.3	1002	-0.1	1510	-0.5

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, R)

Operator MRL

Date 9/20/2010

TRC Nozzle Calibration and Inspection Data Sheet

Company Name: ExxonMobil BTRF Duluth
Nozzle Number: OTH - Glass - 1

Measure three diameters (in inches) as shown below. Average the diameters and calculate area according to the calculations below.

Calibration Measurement

*Diameter 1 (in): 0.119 **Date:** 7/12/2011
*Diameter 2 (in): 0.123
*Diameter 3 (in): 0.122

Average Diameter (in): 0.121 = (Sum of Diameters 1-3) / 3

Average Radius (in): 0.0605 = Average Diameter (in) / 2
Average Radius (ft): 0.00504 = Average Radius (in) / 12

Nozzle Area (ft2): 0.0000798 = π x radius (ft) ^2

*Maximum allowable difference between largest diameter and smallest diameter is 0.004 inches.

Nozzle is round, sharp-edged, free of nicks and dents

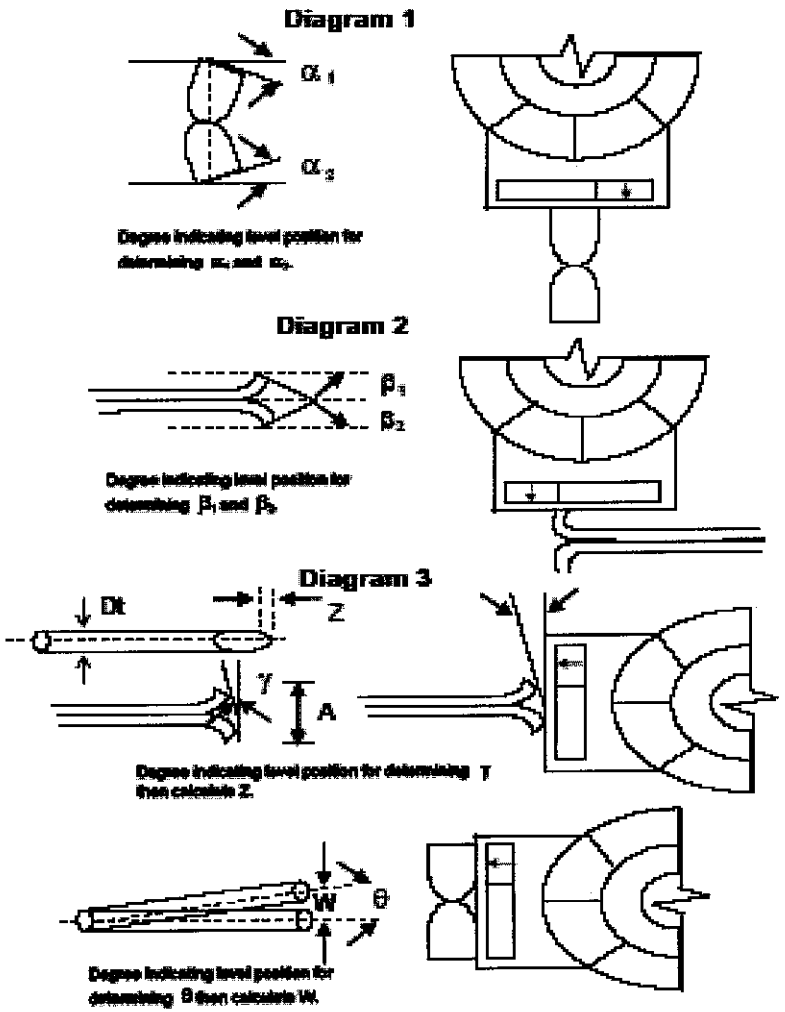
TRC

signature

Type S Pitot Tube Calibration/Inspection Form

Job Name/#: ExxonMobil DCU ICR

Pitot Tube #: 1006



Pre-Sample Date: 5/20/2011

Pre-sample Measurements

Parameter	Value	Allowable Range
Assembly Level?	yes	Yes
Ports Damaged?	no	No
α1	1 °	-10° < α1 < +10°
α2	2 °	-10° < α2 < +10°
β1	1 °	-5° < β1 < +5°
β2	1 °	-5° < β2 < +5°
γ	1 °	
θ	1 °	
Z = A tan γ	0.000	Z <= 0.125"
W = A tan θ	0.000	W <= 0.031"
Dt	0.24	0.188" to 0.375"
A	1.033	for 1/4" OD, 0.525 to 0.750" for 3/8" OD, 0.788 to 1.125"

Post-Sample Date: 7/22/2011

Post-sample Measurements

Parameter	Value	Allowable Range
Assembly Level?	yes	Yes
Ports Damaged?	no	No
α1	1 °	-10° < α1 < +10°
α2	2 °	-10° < α2 < +10°
β1	1 °	-5° < β1 < +5°
β2	1 °	-5° < β2 < +5°
γ	1 °	
θ	1 °	
Z = A tan γ	0.018	Z <= 0.125"
W = A tan θ	0.018	W <= 0.031"
Dt	0.233	0.188" to 0.375"
A	1.045	for 1/4" OD, 0.525 to 0.750" for 3/8" OD, 0.788 to 1.125"

Pitot tube correction factor of 0.84 as per 40CFR60, Appendix A, EPA Method 2.

signature

TRC

Digital Thermometer Calibration

Thermocouple for ExxonMobil DCU ICR

Date:	5/20/2011
Prev. Calib. Date:	
Location:	TRC South Austin
Technician:	MJK
Thermometer Model/Serial #:	
TRC ID:	EXM DCU - 1

Thermocouple Calibration Check

Reference Thermometer/Calibrator	
Manufacturer	Omega
Model	CL23A
Seriel #	T-265352
Certificate Date	9/16/2010
Thermocouple Type	K Type
Tested By	BG
(complies with ANSI/Z540-1-1994)	

Measurements For US EPA Method	Reference Therm/Calib (deg F)	Working Therm. (deg F)	Abs. Temp. Diff. (deg F, ABS)	Abs. Temp. Diff., deg R (%)
2 & 4	0.0	0.1	0.1	0.02
2 & 4	32.0	31.2	0.8	0.16
2 & 4	68.0	67.2	0.8	0.15
2 & 4	100.0	95.3	4.7	0.84
2	250.0	243	7.0	0.99
2	500.0	451	49.0	5.10
2	1500.0	1512	12.0	0.61

Criteria:

Thermocouple

Calibration Check Results		Pass/Fail
^^Ave. Temp. Diff. (°F, ABS):	**1.6**	***PASS***
^Ave. Temp. Diff., deg R (%):	**1.13**	***PASS***

^ Method 2 Sec 4.3 (in-stack thermometers). Agreement must be less than 1.5% absolute temperature difference between reference and working thermometer.
^^ Method 4 Sec 2.1.4 & Method 5 Sec. 2.1.6 (gas meter thermometers). Thermometers capable of measuring temperature within 3 deg C (5.4 deg F).
^^ Method 4 Sec 2.1.2 (last impinger thermometers). Thermometer capable of measuring within 1 deg C (2 deg F).

Signature:

Barometer/Altimeter Calibration Check

Date:	5/28/2011
Location:	TRC South Austin, TX
Technician:	JNT
Manufacturer:	Model BG-3B
Type:	Aneroid
Units:	in Hg and ft
TRC Lab Assign.:	ExxonMobil BTRF
Serial No.:	7802

Lab Standard Barometer

Manufacturer:	Princo
Type:	Fortin Type Mercurial
Units:	in. Hg and mm Hg
ID Number:	NOVA 453x

Laboratory Standard Barometer

Uncorrected (Observed) Lab Barometer Reading	29.17	in. Hg
Temperature of Lab Barometer	78	°F
Multiplier for Temperature Correction (+ or -)	-0.004462	unitless
Multiplier for Lattitude Correction (Austin = ~30.5°N) (+ or -)	-0.001327	unitless
Temperature Corrected Laboratory Barometer Reading	29.04	in. Hg
Temperature & Latitude Corrected Laboratory Barometer Reading	**29.00**	in. Hg
Corrected Laboratory Barometer Reading	737	mm Hg
Corrected Laboratory Barometer Reading	982	mb
Corrected Laboratory Barometer Reading	846	ft

Field Barometer/Altimeter

Field Barometer Reading (temperature compensated)	820	ft
Field Barometer Reading (temperature compensated)	**29.04**	in. Hg

Calibration Test Results

*Difference (in Hg)	**-0.03**
Pass/Fail	*PASS*

Acceptance Criteria

Agreement within 0.1 in. Hg or 2.5 mm Hg, or 100 ft

signature

FAL FIRST ANALYTICAL

ANALYSIS REPORT

Mercury by Ontario Hydro Method

Project ID: ExxonMobil DCU ICR #182129

Prepared for:

TRC Environmental Corporation
9225 Hwy 183 South
Austin, TX 78747

FALFIRST ANALYTICAL

Reviewed by:

Tara Sheehan

Tara Sheehan
Laboratory Manager

August 9, 2011

Reviewed and Approved by:

Jennifer B. Feller

Jennifer B. Feller
Quality Assurance Manager

August 9, 2011

FAL FIRST ANALYTICAL

CASE NARRATIVE

FAL Project #: 110738 Report Date: 09-Aug-11
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Samples:

Four sets of samples were submitted, including a reagent blank, for the determination of mercury by the Ontario Hydro Method. The samples were received in good condition with no apparent leakage or damage, and custody seals intact. The Container 3 (KCl) samples did not retain any of their purple color after sampling. Run 2 from Container 5 ($KMnO_4$) samples also did not retain its purple color after sampling. An aliquot of each sample for Container 3 (KCl) was submitted since 1 to 3 liters were collected for this fraction.

All of the remaining amounts of the samples and digestates will be retained by the laboratory for six months and then discarded.

Preparation:

The Ontario Hydro mercury samples were prepared according to the ASTM Standard Test Method for *Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)*. Many of the samples had a strong, fumy odor and an oily sheen.

Analysis:

Mercury was determined by Cold Vapor Atomic Absorption Spectroscopy (CVAA).

FAL FIRST ANALYTICAL

Results:

The mercury results are presented as total micrograms of mercury found for each analytical fraction listed. Mercury was not detected above the reporting limit for most of the samples.

Quality Control:

The matrix spike for a Container 3 (KCl) sample revealed a matrix interference so the spike was not within the acceptable limits. The other matrix spike for a Container 5 ($KMnO_4$) sample was within the acceptable limits of 90% to 110%. All of the samples were analyzed in triplicate. All of the replicates agreed within the normal limit of 10%. A matrix spike QC sample was analyzed after every 10 samples.

FIRST ANALYTICAL LABORATORIES
billing: PO Box 110372 - Research Triangle Park, NC 27709
shipping: 7517 Precision Drive, Suite 101 - Raleigh, NC 27617
TEL: 919 942 8607
FAX: 919 882 1603
www.firstanalyticallabs.com

ONTARIO HYDRO ANALYSIS REPORT

FAL Project #: 110738
Client: TRC Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Report Date: 09-Aug-11
Date Received: 27-Jul-11

Total Micrograms of Mercury in Analytical Fraction

Sample	Cont#1 µg	Cont#2 µg	Cont#3 µg	Cont#4 µg	Cont#5 µg
Reagent Blank	< 0.01	< 0.09	< 0.11	< 0.36	< 2.27
Run 1	< 0.01	< 0.07	< 1.56	< 0.26	< 3.33
Run 2	0.02	< 0.07	< 2.60	< 0.65	< 4.99
Run 3	< 0.01	< 0.08	< 2.65	< 0.25	< 3.88

QC SUMMARY

Spike-1, %Recovery	83%
Spike-2, %Recovery	91%

ONTARIO HYDRO MERCURY

CVAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
FAL Proj. #: 110738
Analysis Date: 08-Aug-11

MDL = 0.2 µg/L
Postdig'n spike conc. = 5.0 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRACTION 1 (Filter)									
Reagent Blank	110738.RB-1	0.15	0.15	50	1			<	0.01
Run 1	110738.R1-1	0.09	0.09	50	1			<	0.01
Run 2	110738.R2-1	0.35	0.35	50	1				0.02
Run 3	110738.R3-1	0.12	0.12	50	1			<	0.01
FRACTION 2 (FH Rinse: 0.1 N HNO_3)									
Reagent Blank	110738.RB-2	0.06	0.06	50	1	88.7	10	<	0.09
Run 1	110738.R1-2	0.06	0.06	50	1	71.7	10	<	0.07
Run 2	110738.R2-2	0.04	0.04	50	1	71.7	10	<	0.07
Run 3	110738.R3-2	0.04	0.04	50	1	75.2	10	<	0.08
FRACTION 3 (KCl)*									
Reagent Blank	110738.RB-3	0.05	0.05	50	1	105	10	<	0.11
Run 1	110738.R1-3	0.03	0.03	50	1	1560	10	<	1.56
Run 2	110738.R2-3	0.06	0.06	50	1	2600	10	<	2.60
Run 3	110738.R3-3	0.04	0.04	50	1	2650	10	<	2.65
SPIKE - 1	110738.R1-3S	4.16				% REC =	83.2% DQ1		
FRACTION 4 (HNO_3/H_2O_2)									
Reagent Blank	110738.RB-4	0.04	0.04	50	1	180	5	<	0.36
Run 1	110738.R1-4	0.07	0.07	50	1	132	5	<	0.26
Run 2	110738.R2-4	0.10	0.10	50	1	327	5	<	0.65
Run 3	110738.R3-4	0.05	0.05	50	1	123	5	<	0.25
FRACTION 5 ($KMnO_4$)^									
Reagent Blank	110738.RB-5	0.07	0.07	50	1	227	1	<	2.27
Run 1	110738.R1-5	0.08	0.08	50	1	333	1	<	3.33
Run 2	110738.R2-5	0.05	0.05	50	1	499	1	<	4.99
Run 3	110738.R3-5	0.04	0.04	50	1	388	1	<	3.88
SPIKE - 2	110738.R3-5S	4.56				% REC =	91.2%		

DQ1 - The Matrix Spike QC sample was outside limits due to matrix interference; results are still valid.

*Fraction 3 had no purple color upon receipt

^Fraction 5, Container 2 had no purple color upon receipt

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Box No.:

110738

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-OntHyd-R1-FHR		250 amber glass	Acidic	Ontario Hydro run1 FHR	Hg	Ontario Hydro
EXM-DCU-OntHyd-R1-FIL		petri dish	filter	Ontario Hydro run1 filter	Hg	
EXM-DCU-OntHyd-R1-KCl		glass	Aqueous	Ontario Hydro run1 KCl soln	Hg	
EXM-DCU-OntHyd-R1-hno3/h2o2		glass	Acidic	Ontario Hydro run1 HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-R1-KMnO4		glass	Acidic	Ontario Hydro run1 KMnO3 soln	Hg	
EXM-DCU-OntHyd-R2-FHR		250 amber glass	Acidic	Ontario Hydro run2 FHR	Hg	
EXM-DCU-OntHyd-R2-FIL		petri dish	filter	Ontario Hydro run2 filter	Hg	
EXM-DCU-OntHyd-R2-KCl		glass	Aqueous	Ontario Hydro run2 KCl soln	Hg	
EXM-DCU-OntHyd-R2-hno3/h2o2		glass	Acidic	Ontario Hydro run2 HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-R2-KMnO4		glass	Acidic	Ontario Hydro run2 KMnO3 soln	Hg	
EXM-DCU-OntHyd-R3-FHR		250 amber glass	Acidic	Ontario Hydro run3 FHR	Hg	
EXM-DCU-OntHyd-R3-FIL		petri dish	filter	Ontario Hydro run3 filter	Hg	
EXM-DCU-OntHyd-R3-KCl		glass	Aqueous	Ontario Hydro run3 KCl soln	Hg	
EXM-DCU-OntHyd-R3-hno3/h2o2		glass	Acidic	Ontario Hydro run3 HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-R3-KMnO4		glass	Acidic	Ontario Hydro run3 KMnO3 soln	Hg	
EMB[illegible]		250 amber glass				

Relinquished by: R Monson **Date/Time:** 7-26 1600 **Relinquished by:** [signature] **Date/Time:** 7/27 1300

Received by: [signature] **Date/Time:** 7/27 11-1300 **Received by:** [signature] **Date/Time:**

Remarks (*):

Page 1 of 1

TRC

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Box No.: [redacted] 0738

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-OntHyd-rgtblk-nitric	7-17-11	poly	Acidic	.1N NO3 reagent blank	Hg	Ontario Hydro
EXM-DCU-OntHyd-rgtblk-FIL	↓	petri dish	filter	reagent blank filter	Hg	↓
EXM-DCU-OntHyd-rgtblk-KCl		poly	Acidic	reagent blank 1N KCl	Hg	
EXM-DCU-OntHyd-rgtblk-HNO3		poly	Acidic	reagent blank HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-rgtblk-KMnO4		poly	Acidic	reagent blank KMnO4/H2SO4 soln	Hg	

Relinquished by: R Monson	**Date/Time:** 7-27-11 1600	**Relinquished by:** [signature]	**Date/Time:** 7/27 1300
Received by: JCF	**Date/Time:** 7/27/11 - 1300	**Received by:**	**Date/Time:**
Remarks (*):			

EMB RFD 4/4/06

TRC

110738

CHAIN OF CUSTODY RECORD

Project Name: Exxon Mobil DCU ICR
Project No.: 186129
Sampling Date(s): July 14-17, 2011
Laboratory: First Analytical
Laboratory P.O. #:
Shipping Airbill No.:
Shipping Date(s): 7-27-11
Shipper's Name: Randall Monson

Sample Code	Sampled Date	Container Size	Container G/P	MATRIX: Aqueous	Organic Solvent	Ash/Soil/Sediment	Acidic	Basic	Other	Source Description	ANALYSIS: Trace Metals*	Mercury	Hexavalent Chromium	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semi-Volatile Organics	Volatile Organics	Physical Parameters*	Mercury (Caltano Hydro)	Comments
EXM-DCU-OnHyd-R1-KCl	7-14-11	500	G	X						Refinery DCU										X	1560ml original sample
EXM-DCU-OnHyd-R2-KCl	7-16-11	↓	↓	X						↓										X	2600ml original sample
EXM-DCU-OnHyd-R3-KCl	7-17-11			X																X	2650ml original sample
EXM-DCU-OnHyd-RBlk-KCl	7-17-11			X																X		

Page 9 of 13

Relinquished by: R Monson	Date/Time: 7-27-11 1600	Relinquished by:	Date/Time:
Received by: Jennifer B. Fuller	Date/Time: 7/28/11 -1030	Received by:	Date/Time:

REMARKS (*): samples have strong odor.

EM-BTRF-000499

WHITE — LABORATORY YELLOW — LABORATORY COPY PINK — OFFICE COPY GOLD — FIELD COPY

TRC Environmental Corporation

Report Generated By CETAC QuickTrace
Analyst: Resolution
Worksheet file: C:\Jobs\110738.wsz
Date Started: 8/8/2011 10:52:28 AM
Comment: Calib Stds: JBF 8/8/11-1
ICV/CCV: JBF 8/8/11-2

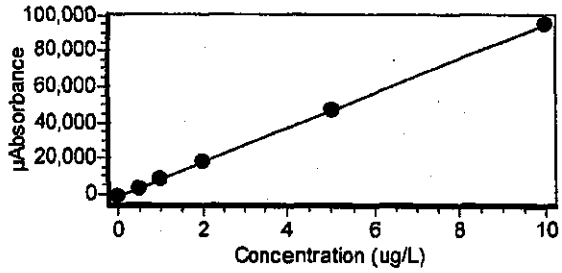
110738 Hg JBF
Instrument J

Results

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
Calibration Blank				STD	08/08/11 11:02:19 am	0.00	-894	11.41	
Replicates	-764.4	-868.9	-944.1	-1000.3					
Standard #1				STD	08/08/11 11:04:21 am	0.50	3556	1.08	
Replicates	3587.9	3580.7	3549.9	3503.5					
Standard #2				STD	08/08/11 11:06:25 am	1.00	8571	0.86	
Replicates	8468.2	8566.7	8626.0	8623.7					
Standard #3				STD	08/08/11 11:08:28 am	2.00	18337	0.48	
Replicates	18217.3	18324.9	18406.6	18398.3					
Standard #4				STD	08/08/11 11:10:33 am	5.00	47704	0.62	
Replicates	47302.3	47662.2	47889.3	47963.5					
Standard #5				STD	08/08/11 11:12:37 am	10.00	95135	0.40	
Replicates	94617.5	95087.9	95381.9	95453.8					

Calibration

Equation: A = -970.664 + 9634.196C
R2: 0.99994
SEE: 320.2383
Flags:



ICV				ICV	08/08/11 11:14:43 am	5.19	49044	0.62	
Replicates	48609.5	49052.4	49279.2	49235.5					
% Recovery	103.83								
ICB				ICB	08/08/11 11:16:49 am	-0.05	-1446	4.23	
Replicates	-1367.1	-1433.2	-1475.5	-1508.8					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
110738.RB-1				UNK	08/08/11 11:18:51 am	0.15	503	20.71	
Replicates	633.3	531.7	454.0	392.0					
110738.R1-1				UNK	08/08/11 11:20:53 am	0.09	-113	19.72	
Replicates	-83.8	-107.2	-128.3	-132.2					
110738.R2-1				UNK	08/08/11 11:24:29 am	0.35	2409	2.34	
Replicates	2485.9	2415.6	2377.6	2358.4					
110738.R3-1				UNK	08/08/11 11:26:32 am	0.12	150	20.33	
Replicates	187.0	162.1	132.7	118.7					
110738.RB-2				UNK	08/08/11 11:28:35 am	0.06	-417	7.43	
Replicates	-379.4	-407.7	-430.8	-451.5					
110738.R1-2				UNK	08/08/11 11:30:38 am	0.06	-365	6.07	
Replicates	-342.7	-353.6	-370.6	-393.6					
110738.R2-2				UNK	08/08/11 11:32:42 am	0.04	-629	1.42	
Replicates	-618.8	-624.9	-637.4	-635.9					
110738.R3-2				UNK	08/08/11 11:34:46 am	0.04	-557	3.15	
Replicates	-533.5	-553.4	-567.8	-572.6					
110738.RB-3				UNK	08/08/11 11:36:50 am	0.05	-486	3.02	
Replicates	-468.5	-481.5	-491.4	-503.0					
110738.R1-3				UNK	08/08/11 11:38:55 am	0.03	-686	0.86	
Replicates	-679.9	-683.4	-689.2	-693.2					
CCV				CCV	08/08/11 11:41:01 am	5.53	52275	1.50	Q
Replicates	51280.6	52059.3	52682.7	53075.8					
% Recovery	110.53								
CCB				CCB	08/08/11 11:43:14 am	0.00	-997	7.42	
Replicates	-906.7	-971.8	-1033.0	-1076.6					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
110738.R1-3S				MSK	08/08/11 11:45:19 am	4.16	39077	0.87	N
Replicates	38602.9	39060.0	39309.6	39335.3					
% Recovery	82.55								
110738.R2-3				UNK	08/08/11 11:47:24 am	0.06	-383	29.40	
Replicates	-236.8	-357.9	-445.3	-493.7					
110738.R3-3				UNK	08/08/11 11:49:26 am	0.04	-591	2.59	
Replicates	-570.1	-591.9	-596.4	-606.3					
110738.RB-4				UNK	08/08/11 11:51:27 am	0.04	-564	0.85	
Replicates	-557.5	-565.5	-568.8	-565.0					
110738.R1-4				UNK	08/08/11 11:53:30 am	0.07	-341	7.98	
Replicates	-308.3	-333.2	-350.7	-372.6					
110738.R2-4				UNK	08/08/11 11:55:32 am	0.10	-27	50.78	
Replicates	-9.0	-24.6	-34.0	-40.7					
110738.R3-4				UNK	08/08/11 11:57:35 am	0.05	-457	0.65	
Replicates	-453.7	-460.1	-456.3	-459.5					
110738.RB-5				UNK	08/08/11 11:59:38 am	0.07	-333	6.74	
Replicates	-306.2	-323.9	-344.7	-356.9					
110738.R1-5				UNK	08/08/11 12:01:41 pm	0.08	-170	1.81	
Replicates	-167.4	-167.8	-171.6	-173.8					
110738.R2-5				UNK	08/08/11 12:05:18 pm	0.05	-496	2.82	
Replicates	-477.1	-493.4	-503.3	-509.0					
CCV				CCV	08/08/11 12:07:24 pm	5.70	53973	0.79	Q
Replicates	53396.1	53916.1	54261.3	54320.4					
% Recovery	114.06								
CCB				CCB	08/08/11 12:09:38 pm	-0.01	-1050	4.34	
Replicates	-995.7	-1034.9	-1068.7	-1102.1					

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
110738.R3-5					UNK	08/08/11 12:11:42 pm	0.04	-587	2.92	
	Replicates	-566.9	-578.6	-595.5	-605.2					
110738.R3-5S					MSK	08/08/11 12:13:46 pm	4.56	42938	1.04	
	Replicates	42328.2	42888.3	43240.4	43294.6					
	% Recovery	90.35								
CCV					CCV	08/08/11 12:15:52 pm	5.40	51024	0.51	
	Replicates	50651.5	51059.5	51237.7	51146.1					
	% Recovery	107.94								
CCB					CCB	08/08/11 12:17:59 pm	-0.01	-1027	5.64	
	Replicates	-953.6	-1013.4	-1051.8	-1089.5					

APPENDIX G: EPA METHOD 29—METALS SAMPLING DATA

Project Number	182129		
Client / Location	ExxonMobil		
Source	DCU		
Sampling Location	D603 Vent		
Sample Type / Method	M29 Metals		
Condition Number	Vent Cycle	Vent Cycle	Vent Cycle
Run Number	1	2	3
Method Number	M29	M29	M29
Date	07/14/11	07/16/11	07/17/11
Time Start (24-hr clock)	2006	0043	0626
Time Stop (24-hr clock)	2026	0143	0706
Total Collection Time (min)	20	60	40
Pitot Tube Correction Factor	0.84	0.84	0.84
Nozzle Diameter (in.)	0.121	0.121	0.121
Nozzle Area (ft^2)	0.000080	0.000080	0.000080
Equivalent Duct Diameter (in)	8.00	8.00	8.00
Equivalent Duct Diameter (ft)	0.67	0.67	0.67
Duct Cross-Sectional Area (ft^2)	0.349	0.349	0.349
Barometric Pressure (in. Hg)	29.65	29.80	29.85
Elevation of Sampling Location Relative to Barometer (ft)			
Barometric Pressure at Sampling Location (in. Hg)	29.65	29.80	29.85
Static Pressure (in. H_2O)	1.1	0.9	1.5
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96
O_2 (%)	14.0	12.8	16.5
CO_2 (%)	0.0	0.1	0.0
Dry Molecular Weight (g/g-mole)	28.56	28.53	28.66
Condensate (mL)	841.0	2261.8	1796.7
Moisture Content (%) (measured)	96.66	98.28	99.10
Moisture Content at Saturation (%)	538.07	152.34	303.94
Moisture Content (%) (used in further calculations)	96.66	98.28	99.10
Wet Molecular Weight (g/g-mole)	18.35	18.18	18.10
Initial Meter Volume (ft^3)	694.415	695.924	733.449
Final Meter Volume (ft^3)	695.865	697.850	734.242
Leak Check Volume (ft^3)	0.000	0.000	0.000
Meter Volume (ft^3)	1.450	1.926	0.793
Meter Calibration Factor, Y	0.9784	0.9860	0.9860
Average Meter Temperature (F)	81.8	75.9	72.8
Absolute Meter Temperature (F)	541.8	535.9	532.8
Average Delta H (in. H_2O)	0.0	0.0	0.0
Elevation of Meter Relative to Barometer (ft)			
Corrected Meter Volume (dscf)	1.370	1.863	0.773
Average Stack Temperature (F)	312.0	234.0	274.5
Absolute Stack Temperature (R)	772.0	694.0	734.5
Average Delta P (in. H2O)	124.00	9.42	11.73
Average Square Root of delta P	11.13	2.98	3.20
Unadjusted Gas Velocity (ft/sec)	950.45	242.18	267.69
WAF	1.00	1.00	1.00
Adjusted Gas Velocity (ft/sec)	950.45	242.18	267.69
Adjusted Gas Velocity (ft/min)	57,027	14,531	16,061
Actual Flow Rate (acfh)	1,194,373	304,338	336,390
Actual Flow Rate (acfm)	19,906	5,072	5,606
Corrected Flow Rate (wscfh)	811,714	231,126	242,126
Corrected Flow Rate (wscfm)	13,529	3,852	4,035
Corrected Flow Rate (kwscfh)	812	231	242
Corrected Flow Rate (kwscfm)	14	4	4
Corrected Flow Rate (dscfh)	27,112	3,969	2,189
Corrected Flow Rate (dscfm)	452	66	36
Corrected Flow Rate (kdscfh)	27	4	2
Corrected Flow Rate (kdscfm)	0.45	0.07	0.04
Isokinetic Sampling Rate (%)	66.27	205.22	231.50
Average Isokinetic Sampling Rate (%)		167.66	

STP is defined as 528 R and 29.92 "Hg

TRC

Source Collection Data Sheet

Contract No. 182129	Method 29 Metals		Page 1 of 1
Facility Exxon Mobil BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.001 @ 27"Hg		Operator S. Lockwood
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.007 @ 25"Hg		Pitot No. NA
Date 7-14-2011	Start Time 2006	Meter No. 30546	PTCF 0.84
Condition Normal Ventcycle	End Time 2026	DGMCF 0.9784	Init. Pitot Leak Check ✓
Run No. 1	Duration (min) 20	ΔH@ 1.806	Final Pitot Leak Check ✓
Stat. Press. ("H2O) + 1.1	Bar. Press. ("Hg) 29.65	Nozzle Diam. (") 0.121	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)
MID	20:06	694.415	—	—	—	306	317	78	82	82	23.0
—	20:11	694.711	—	—	—	316	320	71	82	82	23.0
—	20:16	694.772	—	—	—	316	319	65	82	81	23.0
—	20:21	694.839	—	—	—	318	319	60	81	82	23.0
END	20:26	695.865									

Comments

Checked By: JR Peters 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No. 182129	Method 29
Condition Normal Vent Cycle	Run No. 1
Date 7-14-11	Operator RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	10%HNO3/2%H2O2	100	IC	1780.7	828.4	952.3
2	↓	↓	Mod	582.8	639.4	-56.6
3	↓	↓	IC/S	669.8	728.7	-58.9
4	–	–	Mod	591.1	590.0	1.1
5	–	–	Mod	629.6	629.9	-0.3
6	Sigel	~600	Sigel Mod	999.5	996.1	3.4
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	841.0

Comments:

Run 1

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	828.4	1780.7	952.3
2	639.4	582.8	-56.6
3	728.7	669.8	-58.9
4	590.0	591.1	1.1
5	629.9	629.6	-0.3
6	996.1	999.5	3.4
		sum =	841

TRC

Source Collection Data Sheet

Contract No. 182129	Method M29 Metals		Page 1 of 1
Facility Exxon Mobil BTCH	Init. System Leak Rate (ft3 @ "Hg) 0.001 @ 28"Hg		Operator S. Lukins
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.003 @ 28"Hg		Pitot No. NA
Date 7-16-201	Start Time 00:43	Meter No. 1442	PTCF 0.84
Condition Normal Vert Cyclic	End Time 01:43	DGMCF 0.9862	Init. Pitot Leak Check ✓
Run No. 2	Duration (min) 60	ΔH@ 1.698	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +0.9	Bar. Press. ("Hg) 29.80	Nozzle Diam. (") 0.121	Kf —

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)
MID	00:43	695.324	—	—	—	302	316	79	75	75	22.0
M	00:48	696.023	—	—	—	306	321	72	76	76	23.5
M	00:53	696.687	—	—	—	302	320	67	76	76	23.5
M	00:58	696.348	—	—	—	298	320	64	76	76	23.5
M	01:03	696535	—	—	—	295	319	62	76	76	23.5
M	01:08	696.708	—	—	—	302	319	61	76	76	23.5
M	01:13	696.875	—	—	—	302	319	61	76	76	23.5
M	01:18	696.987	—	—	—	297	319	60	76	76	23.5
M	01:23	697.122	—	—	—	300	319	61	76	76	23.5
M	01:28	697.337	—	—	—	302	320	63	76	76	23.0
M	01:33	697.425	—	—	—	301	318	64	76	76	23.0
M	01:38	697.535	—	—	—	299	319	66	76	76	23.0
End	01:43	697.85									

Comments

Checked By: SL Pedrick 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	29 Metals
Condition	Normal Vent Cycle	Run No.	2
Date	7/16/2011	Operator	RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	10% HNO_3/20% H_2O_2	100	IC	2569.1	830.3	1738.8
2	↓	↓	Mod	829.0	646.2	182.8
3			6/s	924.4	730.7	193.7
4	—	—	Mod	735.1	592.0	143.1
5	—	—	↓	532.4 533.1	~~630.8~~	-0.7
6	Sigel	~500	↓	1003.7	999.6	4.1
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	2261.8

Comments:

Some carryover from M

Run 2

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	830.3	2569.1	1738.8
2	646.2	829.0	182.8
3	730.7	924.4	193.7
4	592.0	735.1	143.1
5	533.1	532.4	-0.7
6	999.6	1003.7	4.1
		sum =	2261.8

TRC

Source Collection Data Sheet

Contract No. 182129	Method 29 Metals		Page 1 of 1
Facility EXXON BTRF	Init. System Leak Rate (ft3 @ "Hg) 0.007 @ 15" Hg		Operator CS
Source DC4 D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.004 @ 24" Hg		Pitot No. NA
Date 7/17/11	Start Time 0626	Meter No. 1442	PTCF 0.84
Condition Normal Ventkyd	End Time 0706	DGMCF 0.9860	Init. Pitot Leak Check ✓
Run No. 3	Duration (min) 40	ΔH@ 1.698	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.5	Bar. Press. ("Hg) 29.85	Nozzle Diam. (") 0.121	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	Time
MID		733.314	—	—	—			73				626
M	0	733.449	—	—	—	307	319	70	72	72	15	626
M	5		—								24	—
M	5	733.707	—	—	—	308	320	67	72	72	24	631
M	10	733.795	—	—	—	298	319	66	72	74	24	636
M	15	733.895	—	—	—	298	319	64	72	72	24	641
M	20	733.993	—	—	—	309	321	62	73	73	24	646
M	25	734.108	—	—	—	306	320	62	72	73	24	651
M	30	734.190	—	—	—	309	320	63	73	74	24	656
M	35	734.218	—	—	—	306	321	63	74	74	24	701
STOP	40	734.242										706

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	29 Metals
Condition	Normal Vent Cycle	Run No.	3
Date	7-17-11	Operator	pm

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	10% HNO_3/20% H_2O_2	100	IC	2402.3	- 833.5	= 1568.8
2	↓	↓	Mod	812.9	- 644.4	= 168.5
3	↓	↓	G-S	785.2	- 732.0	= 53.2
4	—	—	Mod	593.7	- 592.2	= 1.5
5	—	—	↓	534.4	- 533.5	= 0.9
6	Sigel	500	↓	1007.8	- 1004.0	= 3.8
7					-	=
8					-	=
9					-	=
10					-	=
					Total Net Gain (g) =	1796.7

Comments:

Run 3

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	833.5	2402.3	1568.8
2	644.4	812.9	168.5
3	732.0	785.2	53.2
4	592.2	593.7	1.5
5	533.5	534.4	0.9
6	1004.0	1007.8	3.8
		sum =	1796.7

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Metals
Dates: July 14, 16, 17, 2011
Run No. Run 1

Barometric Pressure at Sampling Site, corrected for elevation

$$P_{bar(corr)} = P_{bar,meas} - (Elev \times 0.001)$$

$P_{bar,meas}$ = Barometric pressure as measured at ground level	=	29.65	in. Hg
Elev = elevation of sampling location relative to barometer	=	0	feet
0.001 = Conversion factor	=	0.00100	in. Hg/ft of elevation

Pbar(corr) = 29.65 - 0 X 0.001

$P_{bar(corr)}$ = 29.65 in Hg

Absolute Stack Pressure, Corrected, in. Hg, as per EPA Method 2, Section 6.5

$$P_s = P_{bar(corr)} + (Pg/13.6)$$

$P_{bar(corr)}$ = Barometric pressure at the sampling site	=	29.65	in. Hg
P_g = Stack Static Pressure	=	1.10	in. H2O
13.6 = Conversion factor	=	13.6	in. H2O/in. Hg

$$P_s = 29.65 + \left(\frac{1.10}{13.6}\right)$$

P_s = 29.73 in Hg

Absolute Stack Temperature, R

$$T_s = T + 460$$

T = Average Stack Temperatue	=	312.0	degF
460 = Conversion factor from deg F to R	=	460	

Ts = 312.0 + 460

Ts = 772.0 R

Absolute Meter Temperature, R

$$T_m = T + 460$$

T = Average Meter Temperatue	=	81.8	degF
460 = Conversion factor from deg F to R	=	460	

Tm = 81.8 + 460

Tm = 541.8 R

Volume of Water Vapor Condensed, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-2

$$V_{w(std)} = \frac{V_{lc} \times R_w \times R \times T_{std}}{M_w \times P_{std}}$$

V_{lc} = Total weight of liquid collected	=	841.0	g
R_w = Density of water	=	0.002201	lb/ml
R = Ideal Gas Constant	=	21.85	inHg - ft^3/degR - lbmole
T_{std} = Standard absolute temperature	=	528.00	degR
M_w = Molecular Weight of Water	=	18.00	lb/lbmole
P_{std} = Standard absolute pressure	=	29.92	inHg

$$V_{w(std)} = \frac{841.0 \times 0.002201 \times 21.85 \times 528}{18 \times 29.92}$$

$V_{w(std)}$ = 39.65

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Metals
Dates: July 14, 16, 17, 2011
Run No. Run 1

Dry Gas Volume, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-1

$$V_{m(std)} = V_m \times Y \times \frac{T_{std} \times (P_{bar} + (deltaH / 13.6))}{T_m \times P_{std}}$$

V_m = Volume of gas sample, dry	=	1.450	ft^3
Y = Dry gas meter calibration factor	=	0.978	
Tstd = Standard Temperature	=	528	R
P_{bar} = Barometric pressure at the sampling site	=	29.65	in. Hg
deltaH = Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor	=	13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature	=	541.8	R
Pstd = Standard Pressure	=	29.92	In Hg

$$V_{m(std)} = \frac{1.45 \times 0.978 \times 528 \times (29.65 + (0.00 / 13.6))}{541.8 \times 29.92}$$

$V_{m(std)}$ = 1.370 dscf 0.02832 m3/ft3
$V_{m(std)}$ = 0.039 dscm

Moisture Content, proportion, by volume - as per US EPA Method 5, Eq. 5-3

$$\frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

$V_{w(std)}$ = Volume of water vapor condensed	=	39.652	ft^3
$V_{m(std)}$ = Dry Gas Volume	=	1.370	ft^3

$$B_{ws} = \frac{39.652}{1.370 + 39.652}$$

B_{ws} = 0.9666

Moisture content at saturation

This calculated by polynomial fit: $(86.7222826792858 + T_s \cdot (-0.645483277572566) + T_s^2 \cdot 0.00181527101645074 + T_s^3 \cdot (-2.28823297043421E-06) + (T_s)^4 \cdot 1.09201445204276E-09) \cdot 100 \cdot 29.92/P_s)$

86.722282679285800			=	86.7
-0.645483277572566	X	772.0	=	-498.3
0.00181527101645074	X	595984	=	1081.9
-2.28823297043421E-06	X	460099648	=	-1052.8
1.09201445204276E-09	X	3.55197E+11	=	387.9
		sum	=	5.3467
sum x 100 x		$\frac{29.92}{29.73}$	=	538.07 %

for further calculations

B_{ws} = 0.9666 96.66 %

Dry Molecular Weight of Stack Gas, lb/lb-mole - as per US EPA Method 3, Eq. 3-1

$$M_d = MW_{CO}(\%CO) + MW_{CO2}(\%CO_2) + MW_{O2}(\%O_2) + MW_{H2}(\%H_2) + MW_{CH4}(\%CH_4) + MW_{N2}(\%N_2)$$

MW_{CO}= Molecular weight of CO, divided by 100	=	0.28	lb/lb-mole
%CO = Percent CO by volume, dry basis	=	0.0	%
MW_{CO2}= Molecular weight of CO_2, divided by 100	=	0.44	lb/lb-mole
$\%CO_2$ = Percent CO_2 by volume, dry basis	=	0.0	%
MW_{O2} = Molecular weight of O_2, divided by 100	=	0.32	lb/lb-mole
$\%O_2$ = Percent O_2 by volume, dry basis	=	14.0	%
MW_{H2} = Molecular weight of H_2, divided by 100	=	0.02	lb/lb-mole
$\%H_2$ = Percent H_2 by volume, dry basis	=	0.0	%
MW_{CH4} = Molecular weight of CH_4, divided by 100	=	0.16	lb/lb-mole
$\%CH_4$ = Percent CH_4 by volume, dry basis	=	0.0	%
MW_{N2} = Molecular weight of N2, divided by 100	=	0.28	lb/lb-mole
$\%N_2$ = 100% - %CO - $\%CO_2$ - $\%O_2$ - %H2 - %CH4	=	86.0	%

$$M_d = \frac{(0.28 \times 0.0) + (0.44 \times 0.0) + (0.32 \times 14.0) +}{(0.02 \times 0.0) + (0.16 \times 0.0) + (0.28 \times 86.0)}$$

M_d = 28.56 lb/lb-mole

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Metals
Dates: July 14, 16, 17, 2011
Run No. Run 1

Molecular Weight of stack gas, lb/lb-mole - as per US EPA Method 2, Eq. 2-6

$M_s = M_d (1-B_{ws})+18.0(B_{ws})$

M_d= Dry molecular weight of stack gas	=	28.56	lb/lb-mole
B_{ws}= Proportion of water vapor, by volume	=	0.9666	proportion
18.0 = Molecular Weight of H_2O	=	18.00	lb/lb-mole

$M_s = 28.56 \times (1 - 0.967) + (18.00 \times 0.967)$

$M_s = 18.35$ lb/lb-mole

Average Stack Gas Velocity, ft/sec - as per US EPA Method 2, Eq. 2-7

$v_s = K_p \times C_p \times \text{deltaP}_{avg} \times \text{sqrt}(T_s/(P_s \times M_s))$

K_p= Velocity equation constant	=	85.49	ft/sec[((lb/lb-mole)(in.Hg))/((degR)(in.H2O))]$^{1/2}$
C_p = S type pitot tube coefficient	=	0.84	
deltaP$_{avg}$=ave. sqrt. of the velocity head of stack gas	=	11.1271	in.H_2O
T_s = Absolute stack temperature	=	772.0	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
M_s = Molecular Weight of stack gas	=	18.35	lb/lb-mole

$$v_s = 85.49 \times 0.84 \times 11.13 \times \left(\frac{772.0}{29.73 \times 18.35} \right)^{0.5}$$

$v_s = 950.45$ ft/sec 15.8409 ft/min

WAF = 1.00

v_s(WAF Adjusted)= 950.45 ft/sec

Stack Area

$A = 3.14 \times (\text{Stack Diameter}/2)^2$

3.1415927 = PI	=	3.14	
Stack Diameter		0.67	ft2

$$A = 3.14 \times \left(\frac{0.67}{2} \right)^2$$

$A = 0.35$ ft2

Average Stack Gas Volumetric Flow Rate - Actual Conditions

$Q_{actual} = v_s \times A$

v_s= Average stack gas velocity	=	950.45	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2

$Q_{actual} = 950.45 \times 0.35$

$Q_{actual} = 332$ ft3/sec
$Q_{actual} = 19,906$ ft3/min
$Q_{actual} = 1,194,373$ ft3/hr

Average Stack Gas Dry Volumetric Flow Rate, dscf/hr - as per US EPA Method 2, Eq. 2-8

$$Q = \frac{3600 \times (1-B_{ws}) \times v_s \times A \times T_{std} \times P_s}{T_s \times P_{std}}$$

3600= Conversion factor	=	3600	sec/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9666	proportion
v_s= Average stack gas velocity	=	950.45	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2
T_{std} = Standard absolute temperature	=	528	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
T_s = Absolute stack temperature	=	772.0	degR
P_{std} = Standard absolute pressure	=	29.92	in. Hg

$$Q = \frac{3600 \times (1.00 - 0.967) \times 950.45 \times 0.349 \times 528 \times 29.73088}{772.0 \times 29.92}$$

Conversions: 60 min/hr; $\frac{1}{1000}$ k

$Q = 27,112$ dscfh
$Q = 451.9$ dscfm
$Q = 27.1$ kdscfh
$Q = 0.45$ kdscfm

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Metals
Dates: July 14, 16, 17, 2011
Run No. Run 1

Average Stack Gas Wet Volumetric Flow Rate, wscf/hr

$$Q_w = \frac{Q}{(1-Bws)}$$

Q = Average Stack Gas Dry Volumetric Flow Rate	=	27,112	dscf/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9666	proportion

$$Q_w = \frac{27,112}{(\ 1.00\ -\ 0.967\ )}$$

$$Q_w = 811,714 \text{ wscfh}$$
$$= 13,529 \text{ wscfm}$$
$$= 812 \text{ kwscfh}$$
$$= 14 \text{ kwscfm}$$

Conversions
60 min/hr
1/1000 k

Nozzle Area

$$An = 3.1415927 \times (\text{Nozzle Diameter}/12/2)^2$$

3.1415927 = PI	=	3.14	
12 = Conversion Factor		12.00	in/ft
Nozzle Diameter		0.121	in

$$An = 3.14 \times \left(\frac{0.12100}{12} \times \frac{1}{2}\right)^2$$

$$An = 7.99E\text{-}05 \text{ ft2}$$

SHEET NO. 1 OF 1
PROJECT NO. 182129
DATE 11/1/2011
BY MEKrall
CHK'D

TRC

SUBJECT ExxonMobil BTRF DCU ICR Chromium Calculations

Run 1

16.4 ug detected (First Analytical)
1.370 dscf sample volume
18,614 dscfh flow rate from Ontario Hydro train

detected	Conv	Conv	Conv
16.4 ug	mg	ft3	1000 liters
1.370 dscf sample volume	1000 ug	28.32 liters	dscm

$$= 0.423 \frac{mg}{dscm}$$

detected	dry flow	Conv	duration	Conv
16.4 ug	dscf 18,614	lb	20 min	hr
1.370 dscf sample volume	hr	453.6×10^6 ug	Vent Cycle	60 min

$$= 1.64E-04 \frac{lb}{Vent\ Cycle}$$

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Acid Gases
Dates: July 14, 16, 17, 2011

Run No. : 1

Metals	Sample Volume (dscf)		1.37	20 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		18,614			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 1 Concentration (ug/dscm)	Run 1 Emission Rate (lb/vent cycle)
Antimony		2		2	52	0.00002
Arsenic		1.5		1.5	39	0.00001
Beryllium		0.1		0.1	3	0.00000
Cadmium		3.2		3.2	82	0.00003
Chromium	16.4			16.4	423	0.00016
Cobalt		26.7		26.7	688	0.00027
Lead	1.4			1.4	36	0.00001
Maganese	8.7			8.7	224	0.00009
Nickel	14.8			14.8	381	0.00015
Selenium	20.6			20.6	531	0.00021

Run No. : 2

Metals	Sample Volume (dscf)		1.863	60 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		5,508			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 2 Concentration (ug/dscm)	Run 2 Emission Rate (lb/vent cycle)
Antimony		2		2	38	0.00001
Arsenic		2		2	38	0.00001
Beryllium		0.1		0.1	2	0.00000
Cadmium	5.5			5.5	104	0.00004
Chromium	25.6			25.6	485	0.00017
Cobalt		2.3		2.3	44	0.00001
Lead	1.8			1.8	34	0.00001
Maganese	227.9			227.9	4320	0.00149
Nickel	89.8			89.8	1702	0.00059
Selenium		8.6		8.6	163	0.00006

Run No. : 3

Metals	Sample Volume (dscf)		0.773	40 minute vent cycle		
	Stack Gas Flow Rate (dscfh)		3,916			
	Amount Detected (ug)	Reporting Limit (ug)		Total (ug)	Run 3 Concentration (ug/dscm)	Run 3 Emission Rate (lb/vent cycle)
Antimony		2		2	91	0.00001
Arsenic		1		1	46	0.00001
Beryllium		0.1		0.1	5	0.00000
Cadmium	3.8			3.8	174	0.00003
Chromium	12.1			12.1	553	0.00009
Cobalt		2		2	91	0.00001
Lead	1.5			1.5	69	0.00001
Maganese	89.8			89.8	4102	0.00067
Nickel	35			35	1599	0.00026
Selenium		2		2	91	0.00001

Metals	**Average Concentration (ug/dscm)**	**Average Emission Rate (lb/vent cycle)**
Antimony	60	0.00002
Arsenic	41	0.00001
Beryllium	3	0.00000
Cadmium	120	0.00003
Chromium	487	0.00014
Cobalt	274	0.00010
Lead	46	0.00001
Maganese	2882	0.00075
Nickel	1227	0.00033
Selenium	262	0.00009

Meter Box: Orifice Full Calibration

Date:	9/14/2010		
Prev. Calib. Date:	1/26/2009		
Location:	TRC Austin, TX Lab		
Technician:	MRL		
Meter Serial No:	9543627		
Meter Box ID:	1442		
Atm. Pressure (corr. In Hg):	29.28	ncorrected: 29.52	
Critical Vacuum + 2 in Hg:	16	in. Hg. (required minimum)	
Prev. Calib Factor (Y):	0.9790		

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	0.2332
Model:	SX40-73	48	0.339
Tested By:	EW	55	0.4426
Date:	10/5/09	63	0.6126

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
40	0.2332	0.25	10	28.170	31.248	3.078	69	69	70	70	24	74.7	75.2
48	0.339	0.55	10	31.248	35.756	4.508	70	70	71	70	23	75.2	75.1
55	0.4426	0.96	10	35.756	41.591	5.835	71	70	72	70	22	75.3	75.9
63	0.6126	1.97	10	41.591	49.520	7.929	72	72	72	73	20	76.1	76.3

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y)		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
3.00	85.07	0.308	2.95	83.60	0.983	-0.003	1.599	-0.10
4.40	124.51	0.451	4.29	121.50	0.976	-0.010	1.662	-0.04
5.69	161.18	0.584	5.60	158.57	0.984	-0.002	1.705	0.01
7.73	218.96	0.793	7.75	219.35	1.002	0.016	1.826	0.13

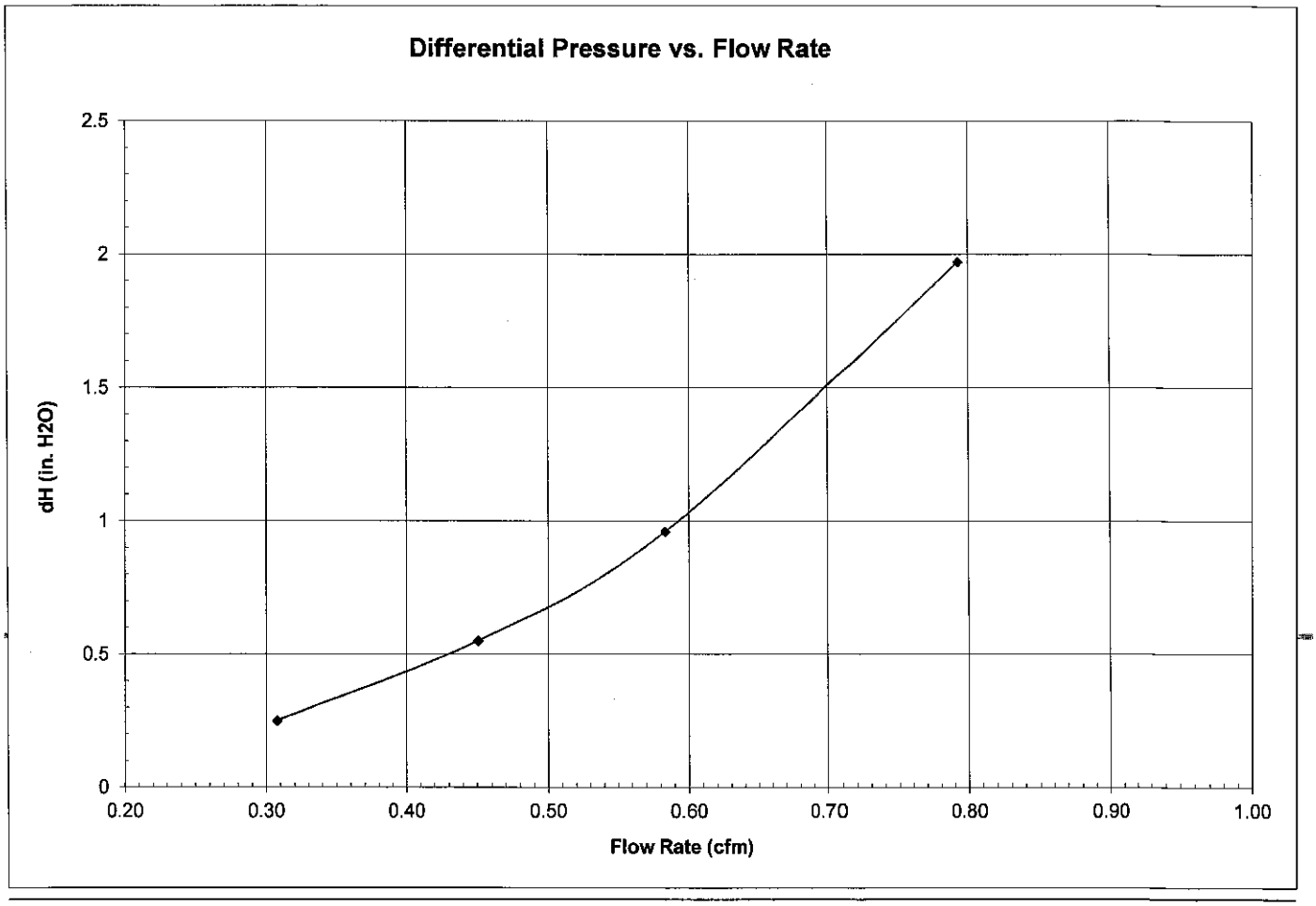
Meter Box

Calibration Test Results		**Pass/Fail**
*** Average Y:**	**0.9860**	***PASS***
Ave. Y w/in 5% of previous value:		*YES*
0.95 >= Y <= 1.05:		*PASS*
**** Average dH:**	**1.698**	***PASS***

Criteria:

* Y- ratio of the reading of the calibration meter (critical orifice) to the Meter Box DGM. Acceptable tolerance of individual values from the average is +/- 0.02.

** dH- the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air flow at 68 F and 29.92 in Hg, acceptable tolerance of individual values from the average is +/- 0.2.



Meter Box: Post-Test Calibration Check

Date:	8/9/2011		
Prev. Calib. Date:	9/14/2010		
Location:	TRC Austin Lab		
Technician:	MDC		
Meter Serial No:	9543627		
TRC Meter Box ID	1442		
Atm. Pressure (corr. In	29.29	uncorrected:	29.70
Critical Vacuum + 2 in H	16	in. Hg. (required minimum)	
Calibration Factor (Y):	0.9860		

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	
Model:	SX 40-73	48	
Tested By:	EW	55	0.4405
Date:	5/10/2011	63	
		73	

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
55	0.4405	0.98	10.0	970.693	976.572	5.879	71	72	73	72	14	75.0	75.0
55	0.4405	0.98	10.0	976.572	982.453	5.881	73	72	74	72	14	75.0	75.0
55	0.4405	0.98	10.0	982.453	988.334	5.881	74	72	75	73	14	75.0	75.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y_{check})		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
5.72	162.08	0.588	5.58	157.96	0.975	-0.001	1.738	0.01
5.72	161.90	0.588	5.58	157.96	0.976	0.000	1.731	0.00
5.71	161.68	0.588	5.58	157.96	0.977	0.001	1.724	-0.01

Meter Box

Post-Test Calibration Check	**Results**
Ave Y_{check} = 0.9757	PASS
Ave Y_{check} w/in 5% of previous value?	YES
$0.95 <= Y_{check} <= 1.05$	PASS

Post-Test Meter Factor Check

TRC

Console No.	1442	S. O. P. Reference	AM - 103
Temperature Display Type	Jenco-765	Calibrator Type	Fluke Model 714
Temperature Display Serial No.	JC 11457	Calibrator Serial No.	8097094

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)
1 (Stack)	27	1.0	207	0.7	495	0.5	999	0.1	1499	0.1
2 (Probe)	27	1.0	210	0.3	495	0.5	999	0.1	1498	0.1
3 (Filter)	27	1.0	208	0.6	494	0.6	998	0.1	1500	0.0
4 (Dryer)	26	1.2	207	0.7	493	0.7	998	0.1	1498	0.1
5 (Aux)	26	1.2	207	0.7	493	0.7	998	0.1	1497	0.2
6 (DGM Inlet)	27	1.0	208	0.6	495	0.5	999	0.1	1500	0.0
7 (DGM Outlet)	27	1.0	208	0.6	495	0.5	999	0.1	1499	0.1

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, ° R)

Operator _____ Date 10/18/2011

Note:
Display Type - type J, K, T etc...
Calibrator Type - must match display type
Display Serial Number - Located on T/C readout, not the same as meter box number
Enter data in shaded boxes

TRC

Console No.	1442	S. O. P. Reference	AM - 103
Temperature Display Type	Jenco-965	Calibrator Type	Fluke 714
Temperature Display Serial No.	JC 08171	Calibrator Serial No.	8097094- 10/29/09

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)	Measured Temperature (°F)	Relative Error (%)
1 (Stack)	28	0.8	209	0.4	495	0.5	998	0.1	1497	0.2
2 (Probe)	28	0.8	209	0.4	495	0.5	998	0.1	1497	0.2
3 (Filter)	27	1.0	209	0.4	494	0.6	998	0.1	1496	0.2
4 (Dryer)	27	1.0	208	0.6	493	0.7	996	0.3	1496	0.2
5 (Aux)	26	1.2	208	0.6	493	0.7	997	0.2	1495	0.3
6 (DGM Inlet)	28	0.8	209	0.4	495	0.5	998	0.1	1499	0.1
7 (DGM Outlet)	27	1.0	208	0.6	494	0.6	998	0.1	1497	0.2

Relative Error must meet criteria of +/- 1.5 % (absolute temperature°, R)

Operator Michael Lopez Date 9/14/2010

Note:
Display Type - type J, K, T etc...
Calibrator Type - must match display type
Display Serial Number - Located on T/C readout, not the same as meter box number
Enter data in shaded boxes

TRC Nozzle Calibration and Inspection Data Sheet

Company Name: ExxonMobil BTRF Dock ICR
Nozzle Number: M29 - Glass - 1

Measure three diameters (in inches) as shown below. Average the diameters and calculate area according to the calculations below.

Calibration Measurement

*Diameter 1 (in): 0.120 **Date:** 7/12/2011
*Diameter 2 (in): 0.123
*Diameter 3 (in): 0.121

Average Diameter (in): 0.121 = (Sum of Diameters 1-3) / 3

Average Radius (in): 0.0605 = Average Diameter (in) / 2
Average Radius (ft): 0.00504 = Average Radius (in) / 12

Nozzle Area (ft2): 0.0000798 = π x radius (ft) ^2

*Maximum allowable difference between largest diameter and smallest diameter is 0.004 inches.

Nozzle is round, sharp-edged, free of nicks and dents

TRC

signature

FAL FIRST ANALYTICAL

ANALYSIS REPORT

NELAP Cert. No. 04053

Method 29: Multi-metals

Project ID: ExxonMobil DCU ICR #182129

Prepared for:

TRC Environmental Corporation
5540 Centerview Drive Suite 100
Raleigh, NC 27606

FAL FIRST ANALYTICAL

Reviewed by:

Tara Sheehan

Tara Sheehan
Laboratory Manager

August 9, 2011

Reviewed and Approved by:

Jennifer B. Feller

Jennifer B. Feller
Quality Assurance Manager

August 9, 2011

This report meets the requirements of LAC33/NELAP.

FAL FIRST ANALYTICAL

CASE NARRATIVE

Project #: 110737 **Report Date**: 09-Aug-11
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Samples:

Three sets of samples were submitted for Method 29. The target elements were antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, and selenium. The samples were received in good condition with no apparent leakage or damage. All of the remaining amounts of the samples and digestates will be retained by the laboratory for six months and then discarded.

Preparation:

The metals samples were prepared according to EPA Method 29, *Determination of Metals Emissions from Stationary Sources*. The front and back halves were analyzed separately. The samples had a strong odor and an oily sheen to them.

Analysis:

Antimony, arsenic, lead, and selenium were determined by Graphite Furnace Atomic Absorption Spectrometry (GFAA). Beryllium, cadmium, chromium, cobalt, manganese, and nickel were determined by Inductively Coupled Plasma – Optical Emission Spectrometry (ICP-OES).

Results:

The metals results are presented as total micrograms of each element present in the whole analytical fraction indicated. Antimony, arsenic and beryllium were not detected in any of the samples. All other elements of interest were detected in most of the runs. Manganese had the highest amounts that ranged from about 1.9 µg to about 226 µg.

Quality Control:

No elements of interest were detected in the Laboratory Blank. All of the elements for the Laboratory Control Spike were within the acceptance limits of 80% to 120%. All of the Matrix Spike recoveries were within the acceptance range of 75% to 125%. Arsenic and selenium back half samples revealed a matrix interference which required dilutions to get the spikes to pass. All of the required duplicate samples had a relative percent difference of 20% or less or did not have an applicable calculation due to the result being five times less than the detection limit. All of the samples were analyzed at least in duplicate.

FIRST ANALYTICAL LABORATORIES
billing: PO Box 110372 - Research Triangle Park, NC 27709
shipping: 7517 Precision Drive, Suite 101 - Raleigh, NC 27617
TEL: 919 942 8607
FAX: 919 882 1603
www.firstanalyticallabs.com

ANALYSIS REPORT

Project #: 110737
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Report Date: 09-Aug-11
Date Received: 27-Jul-11

Total Micrograms in Sample

Sample	Sb µg	As µg	Be µg	Cd µg	Cr µg	Co µg
EXM-DCU-M29-R1 Front	< 1.0	< 0.5	< 0.05	2.9	11.3	< 1.0
EXM-DCU-M29-R1 Back	< 1.0	< 1.0	< 0.05	< 0.3	5.1	25.7
EXM-DCU-M29-R2 Front	< 1.0	< 0.5	< 0.05	2.8	3.5	< 1.0
EXM-DCU-M29-R2 Back	< 1.0	< 0.5	< 0.05	2.7	22.1	1.3
EXM-DCU-M29-R3 Front	< 1.0	< 0.5	< 0.05	2.8	2.5	< 1.0
EXM-DCU-M29-R3 Back	< 1.0	< 0.5	< 0.05	1.0	9.6	< 1.0

QC SUMMARY

Spike, %Rec. Front	104%	99%	80%	79%	83%	80%
Spike, %Rec. Back	105%	96%	86%	88%	90%	90%
Duplicate, %RPD Front	N/A	N/A	N/A	8%	N/A	N/A
Duplicate, %RPD Back	N/A	N/A	N/A	5%	2%	N/A

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ANALYSIS REPORT

Project #: 110737
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Report Date: 09-Aug-11
Date Received: 27-Jul-11

Total Micrograms in Sample

Sample	Pb µg	Mn µg	Ni µg	Se µg
EXM-DCU-M29-R1 Front	0.8	4.0	11.5	1.1
EXM-DCU-M29-R1 Back	0.6	4.7	3.3	19.5
EXM-DCU-M29-R2 Front	0.4	1.9	3.0	< 1.0
EXM-DCU-M29-R2 Back	1.4	226	86.8	7.6
EXM-DCU-M29-R3 Front	0.7	2.1	2.7	< 1.0
EXM-DCU-M29-R3 Back	0.8	87.7	32.3	< 1.0

QC SUMMARY

Spike, %Rec. Front	102%	83%	95%	111%
Spike, %Rec. Back	101%	90%	97%	112%
Duplicate, %RPD Front	N/A	2%	10%	N/A
Duplicate, %RPD Back	N/A	7%	2%	N/A

ANTIMONY

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11 & 05-Aug-11

MDL = 10 µg/L
Postdig'n spike conc. = 100 µg/L

Sample ID / Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	1.7	1.7	100	1			<	1.0
Run 2	110737.2-1	2.5	2.5	100	1			<	1.0
Run 3	110737.3-1	2.7	2.7	100	1			<	1.0
BACK HALVES									
Run 1	110737.1-2A	1.1	1.1	100	1	1044	1044	<	1.0
Run 2	110737.2-2A	2.6	2.6	100	1	2859	2859	<	1.0
Run 3	110737.3-2A	0.8	0.8	100	1	2409	2409	<	1.0
FRONT SPIKE	110737.1-1S	104.4				% REC =	104.4%		
BACK SPIKE	110737.1-2AS	105.4				% REC =	105.4%		

ARSENIC

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 03-Aug-11 & 09-Aug-11

MDL = 5 µg/L
Postdig'n spike conc. = 100 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	-0.5	-0.5	100	1			<	0.5
Run 2	110737.2-1	-1.0	-1.0	100	1			<	0.5
Run 3	110737.3-1	-1.7	-1.7	100	1			<	0.5
BACK HALVES									
Run 1	110737.1-2A	0.5	1.0	100	2	1044	1044	<	1.0
Run 2	110737.2-2A	-1.4	-1.4	100	1	2859	2859	<	0.5
Run 3	110737.3-2A	0.0	0.0	100	1	2409	2409	<	0.5
FRONT SPIKE	110737.2-1S	98.8				% REC =	98.8%		
BACK SPIKE	110737.1-2AS	96.1				% REC =	96.1%		

BERYLLIUM

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 0.50 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	0.32	0.32	100	1			<	0.05
Run 2	110737.2-1	-1.07	-1.07	100	1			<	0.05
Run 3	110737.3-1	-1.04	-1.04	100	1			<	0.05
BACK HALVES									
Run 1	110737.1-2A	-0.90	-0.90	100	1	1044	1044	<	0.05
Run 2	110737.2-2A	-0.10	-0.10	100	1	2859	2859	<	0.05
Run 3	110737.3-2A	-1.54	-1.54	100	1	2409	2409	<	0.05
FRONT SPIKE	110737.2-1S	798.57				% REC =	79.9%		
BACK SPIKE	110737.1-2AS	864.00				% REC =	86.4%		
FRONT DUP	110737.3-1D	-1.60				RPD =	N/A		
BACK DUP	110737.2-2AD	-1.74				RPD =	N/A		

CADMIUM

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 3 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	28.7	28.7	100	1				2.9
Run 2	110737.2-1	27.7	27.7	100	1				2.8
Run 3	110737.3-1	28.1	28.1	100	1				2.8
BACK HALVES									
Run 1	110737.1-2A	0.1	0.1	100	1	1044	1044	<	0.3
Run 2	110737.2-2A	27.1	27.1	100	1	2859	2859		2.7
Run 3	110737.3-2A	10.4	10.4	100	1	2409	2409		1.0
FRONT SPIKE	110737.2-1S	818.2				% REC =	79.0%		
BACK SPIKE	110737.1-2AS	882.3				% REC =	88.2%		
FRONT DUP	110737.3-1D	26.0				RPD =	7.9%		
BACK DUP	110737.2-2AD	28.4				RPD =	4.7%		

CHROMIUM

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 5 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total µg
FRONT HALVES								
Run 1	110737.1-1	113.0	113.0	100	1			11.3
Run 2	110737.2-1	34.6	34.6	100	1			3.5
Run 3	110737.3-1	24.8	24.8	100	1			2.5
BACK HALVES								
Run 1	110737.1-2A	51.2	51.2	100	1	1044	1044	5.1
Run 2	110737.2-2A	220.5	220.5	100	1	2859	2859	22.1
Run 3	110737.3-2A	96.1	96.1	100	1	2409	2409	9.6
FRONT SPIKE	110737.2-1S	865.7				% REC =	83.1%	
BACK SPIKE	110737.1-2AS	954.2				% REC =	90.3%	
FRONT DUP	110737.3-1D	24.3				RPD =	N/A	
BACK DUP	110737.2-2AD	224.2				RPD =	1.7%	

COBALT

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 10 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	-21.7	-21.7	100	1			<	1.0
Run 2	110737.2-1	-23.5	-23.5	100	1			<	1.0
Run 3	110737.3-1	-21.4	-21.4	100	1			<	1.0
BACK HALVES									
Run 1	110737.1-2A	257.3	257.3	100	1	1044	1044		25.7
Run 2	110737.2-2A	12.6	12.6	100	1	2859	2859		1.3
Run 3	110737.3-2A	6.7	6.7	100	1	2409	2409	<	1.0
FRONT SPIKE	110737.2-1S	795.5				% REC =	79.5%		
BACK SPIKE	110737.1-2AS	1154.3				% REC =	89.7%		
FRONT DUP	110737.3-1D	-22.4				RPD =	N/A		
BACK DUP	110737.2-2AD	12.4				RPD =	N/A		

LEAD

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 2 µg/L
Postdig'n spike conc. = 100 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total µg
FRONT HALVES								
Run 1	110737.1-1	8.5	8.5	100	1			0.8
Run 2	110737.2-1	4.1	4.1	100	1			0.4
Run 3	110737.3-1	7.2	7.2	100	1			0.7
BACK HALVES								
Run 1	110737.1-2A	5.5	5.5	100	1	1044	1044	0.6
Run 2	110737.2-2A	13.9	13.9	100	1	2859	2859	1.4
Run 3	110737.3-2A	7.8	7.8	100	1	2409	2409	0.8
FRONT SPIKE	110737.2-1S	105.8				% REC =	101.7%	
BACK SPIKE	110737.1-2AS	106.1				% REC =	100.5%	

MANGANESE

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 2 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total µg
FRONT HALVES								
Run 1	110737.1-1	40.5	40.5	100	1			4.0
Run 2	110737.2-1	18.7	18.7	100	1			1.9
Run 3	110737.3-1	21.4	21.4	100	1			2.1
BACK HALVES								
Run 1	110737.1-2A	46.9	46.9	100	1	1044	1044	4.7
Run 2	110737.2-2A	1131.4	2262.9	100	2	2859	2859	226.3
Run 3	110737.3-2A	877.1	877.1	100	1	2409	2409	87.7
FRONT SPIKE	110737.2-1S	847.9				% REC =	82.9%	
BACK SPIKE	110737.1-2AS	949.8				% REC =	90.3%	
FRONT DUP	110737.3-1D	20.9				RPD =	2.1%	
BACK DUP	110737.2-2AD	1209.9				RPD =	6.7%	

NICKEL

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 3 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total µg
FRONT HALVES								
Run 1	110737.1-1	115.0	115.0	100	1			11.5
Run 2	110737.2-1	30.2	30.2	100	1			3.0
Run 3	110737.3-1	27.0	27.0	100	1			2.7
BACK HALVES								
Run 1	110737.1-2A	33.2	33.2	100	1	1044	1044	3.3
Run 2	110737.2-2A	868.2	868.2	100	1	2859	2859	86.8
Run 3	110737.3-2A	323.0	323.0	100	1	2409	2409	32.3
FRONT SPIKE	110737.2-1S	979.9				% REC =	95.0%	
BACK SPIKE	110737.1-2AS	998.3				% REC =	96.5%	
FRONT DUP	110737.3-1D	29.9				RPD =	10.0%	
BACK DUP	110737.2-2AD	886.9				RPD =	2.1%	

SELENIUM

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 08-Aug-11

MDL = 10 µg/L
Postdig'n spike conc. = 100 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	10.6	10.6	100	1				1.1
Run 2	110737.2-1	2.9	2.9	100	1			<	1.0
Run 3	110737.3-1	2.1	2.1	100	1			<	1.0
BACK HALVES									
Run 1	110737.1-2A	97.7	195.5	100	2	1044	1044		19.5
Run 2	110737.2-2A	75.5	75.5	100	1	2859	2859		7.6
Run 3	110737.3-2A	9.4	9.4	100	1	2409	2409	<	1.0
FRONT SPIKE	110737.1-1S	111.0				% REC =	111.0%		
BACK SPIKE	110737.1-2AS	210.1				% REC =	112.3%		

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Box No.: 110737

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M26A-R1-H2SO4	7-14-11	poly	Acidic	run 1	Cl, F	100ml aliquot of 143ml
EXM-DCU-M26A-R1-NaOH	↓	poly	Basic	run 1	Cl2,CN	271ml
EXM-DCU-M26A-R2-H2SO4	7-16-11	poly	Acidic	run 2	Cl, F	2760ml
EXM-DCU-M26A-R2-NaOH	↓	poly	Basic	run 2	Cl2,CN	345ml Enthalpy
EXM-DCU-M26A-R3-H2SO4	7-17-11	poly	Acidic	run 3	Cl, F	2242ml
EXM-DCU-M26A-R3-NaOH	↓	poly	Basic	run 3	Cl2,CN	341ml
EXM-DCU-M26A-Rgtblk-H2SO4	↓	poly	Acidic	1N H2SO4 reagent blank	Cl, F	
EXM-DCU-M26A-Rgtblk-NaOH	↓	poly	Basic	1N NaOH reagent blank	Cl2,CN	
EXM-DCU-M29-R1-FHR	7-14-11	glass	Acidic	run 1	M29	M29: Sb, As, Be, Cd, Cr, Co, Pb, Mn, Ni, Se
EXM-DCU-M29-R1-Fil	↓	petri dish	filter	run 1	M29	
EXM-DCU-M29-R1-IMPs	↓	poly	Acidic	run 1 impingers and BHR	M29	1 container
EXM-DCU-M29-R2-FHR	7-16-11	glass	Acidic	run 2	M29	
EXM-DCU-M29-R2-Fil	↓	petri dish	filter	run 2	M29	
EXM-DCU-M29-R2-IMPs	↓	poly	Acidic	run 2 impingers and BHR	M29	3 containers
EXM-DCU-M29-R3-FHR	7-17-11	glass	Acidic	run 3	M29	
EXM-DCU-M29-R3-Fil	↓	petri dish	filter	run 3	M29	
EXM-DCU-M29-R3-IMPs	↓	poly	Acidic	run 3 impingers and BHR	M29	3 containers

Relinquished by: R Monson	**Date/Time:** 7-26-11 1600	**Relinquished by:**	**Date/Time:** 7/27 1300
Received by: Jennifer Fuller	**Date/Time:** 7/27/11 1300	**Received by**	**Date/Time:**

Remarks (*): Report & bill to TRC Austin

Mike Krall &
Randy Monson

TRC

EM-BRR-05332

Sample ID	Elem	Date	Time	Abs (Corr)	Conc (Cali	RSD (Conc	Special Sa	Special Co	Conc (Cali	Conc (Calib)2
Calib Blank	Sb	8/4/2011	12:47:38 PM	-0.0003542		0				
20 ppb Sb	Sb	8/4/2011	12:53:56 PM	0.015514		0				
50 ppb Sb	Sb	8/4/2011	1:00:14 PM	0.0372894		0				
100 ppb Sb	Sb	8/4/2011	1:06:32 PM	0.0722254		0				
200 ppb Sb	Sb	8/4/2011	1:12:48 PM	0.1405043		0				
ICV	Sb	8/4/2011	1:19:31 PM	0.0717433	99.3	0.839963			98.71549	99.89512
ICB	Sb	8/4/2011	1:25:57 PM	-0.0001145	-0.1	22.54236			-0.11773	-0.16238
110737.LB-1	Sb	8/4/2011	6:16:32 PM	-6.61E-05	-0.1	187.0792			-0.18776	0.026097
110737.LCS-1	Sb	8/4/2011	6:22:55 PM	0.0779578	108.3	2.005045			109.8569	106.7854
110737.1-1	Sb	8/4/2011	6:29:19 PM	0.0014031	1.7	0.579914			1.735215	1.721042
110737.1-1	Sb	8/4/2011	6:35:35 PM	0.0752575	104.4	2.824844	1	104.401	102.3157	106.4864
110737.2-1	Sb	8/4/2011	6:41:56 PM	0.0020168	2.5	18.8818			2.823227	2.158142
110737.3-1	Sb	8/4/2011	6:48:16 PM	0.002153	2.7	5.77897			2.551393	2.768794
110737.LB-2A	Sb	8/4/2011	6:54:37 PM	0.0005383	0.7	35.14228			0.824786	0.496464
CCV	Sb	8/4/2011	7:07:14 PM	0.0812019	113.0	0.667165			112.5037	113.5703
CCB	Sb	8/4/2011	7:13:40 PM	-0.0001381	-0.2	201.7956			0.07202	-0.40942
110737.1-2A	Sb	8/4/2011	7:19:58 PM	0.0009047	1.1	2.439656			1.131096	1.092733
110737.1-2A	Sb	8/4/2011	7:26:12 PM	0.0759323	105.4	0.065929	1	105.3796	105.4287	105.3305
110737.2-2A	Sb	8/4/2011	7:32:30 PM	0.0020655	2.6	58.32776			1.500925	3.608081
110737.3-2A	Sb	8/4/2011	7:38:48 PM	0.0006473	0.8	6.709161			0.832322	0.756926
CCV	Sb	8/4/2011	7:45:04 PM	0.0832493	116.0	5.268797			111.6965	120.3414
CCB	Sb	8/4/2011	7:51:30 PM	9.84E-05	0.1	383.4436			-0.20699	0.448889
CCV	Sb	8/5/2011	8:55:10 AM	0.0698308	96.5	3.1789			98.70707	94.36711
CCB	Sb	8/5/2011	9:01:35 AM	0.0004695	0.6	15.3637			0.638466	0.513337
110737.LCS-2A	Sb	8/5/2011	9:31:24 AM	0.0790837	110.0	1.334951			110.995	108.9191
CCV	Sb	8/5/2011	9:37:38 AM	0.0674936	93.2	2.948203			91.2146	95.09866
CCB	Sb	8/5/2011	9:44:02 AM	0.0003987	0.5	24.50581			0.573602	0.404171
Calib Blank	As	8/3/2011	5:10:39 PM	0.0030548		0				
10 ppb As	As	8/3/2011	5:16:26 PM	0.0141233		0				
50 ppb As	As	8/3/2011	5:22:12 PM	0.0758646		0				
100 ppb As	As	8/3/2011	5:27:58 PM	0.1443834		0				
200 ppb As	As	8/3/2011	5:33:41 PM	0.2634755		0				
ICV	As	8/3/2011	5:39:25 PM	0.1403833	99.1	0.803866			99.70597	98.57889
ICB	As	8/3/2011	5:45:19 PM	-0.002851	-1.9	24.493			-1.57786	-2.23888
110737.LB-1	As	8/3/2011	9:10:51 PM	-0.0030738	-2.1	18.29636			-1.79121	-2.32356
110737.LCS-1	As	8/3/2011	9:16:42 PM	0.1396674	98.6	0.342029			98.3711	98.84808
110737.1-1	As	8/3/2011	9:22:33 PM	-0.0008156	-0.5	177.5679			0.139579	-1.23176
110737.2-1	As	8/3/2011	9:28:21 PM	-0.0014426	-1.0	67.61779	1		-1.42798	-0.50416
110737.2-1S	As	8/3/2011	9:34:04 PM	0.1399836	98.8	0.703761	1	98.8	99.33686	98.35309
110737.3-1	As	8/3/2011	9:39:53 PM	-0.0025269	-1.7	20.62017			-1.93831	-1.445

Sample ID	Elem	Date	Time	Abs (Corr)	Conc (Cali	RSD (Conc	Special Sa	Special Co	Conc (Cali	Conc (Calib)2
110737.LB-2A	As	8/3/2011	9:45:41 PM	-0.0022976	-1.5	11.48211			-1.66323	-1.41343
110737.LCS-2A	As	8/3/2011	9:51:29 PM	0.167237	119.3	2.262587			117.4306	121.2492
CCV	As	8/3/2011	10:02:57 PM	0.1534511	108.9	0.980412			109.6732	108.1631
CCB	As	8/3/2011	10:08:50 PM	-0.0025452	-1.7	13.44763			-1.86597	-1.54192
110737.2-2A	As	8/3/2011	10:26:11 PM	-0.0020305	-1.4	154.7333			-2.84464	0.127865
110737.3-2A	As	8/3/2011	10:31:57 PM	2.22E-05	0.0	1267.988			-0.11881	0.148636
CCV	As	8/3/2011	10:37:40 PM	0.1424405	100.7	0.523807			101.0476	100.3018
CCB	As	8/3/2011	10:43:34 PM	-0.0022326	-1.5	32.39761			-1.15233	-1.83718
Calib Blank	As	8/9/2011	10:57:05 AM	-0.0002984		0				
10 ppb As	As	8/9/2011	11:02:51 AM	0.0136975		0				
50 ppb As	As	8/9/2011	11:08:37 AM	0.0660975		0				
100 ppb As	As	8/9/2011	11:14:24 AM	0.1284987		0				
200 ppb As	As	8/9/2011	11:20:08 AM	0.2295791		0				
ICV	As	8/9/2011	11:29:14 AM	0.0004125	0.3				0.300357	
ICV	As	8/9/2011	11:36:34 AM	0.1219083	94.9	4.008597			92.1799	97.55804
ICB	As	8/9/2011	11:42:27 AM	-5.65E-05	0.0	1223.828			-0.39653	0.314376
110737.1-2A	As	8/9/2011	11:48:12 AM	0.0006332	0.5	63.06266	2		0.255509	0.666774
110737.1-2A	As	8/9/2011	11:53:57 AM	0.1233195	96.1	1.294473	2	96.05931	96.93857	95.18005
CCV	As	8/9/2011	11:59:41 AM	0.1280115	100.1	1.719921			98.84752	101.2814
CCB	As	8/9/2011	12:05:35 PM	0.0002386	0.2	469.5181			-0.40347	0.751294
Calib Blank	Pb	8/1/2011	10:13:00 AM	-0.0001418		0				
20 ppb Pb	Pb	8/1/2011	10:18:31 AM	0.0238224		0				
50 ppb Pb	Pb	8/1/2011	10:24:03 AM	0.0574378		0				
100 ppb Pb	Pb	8/1/2011	10:30:01 AM	0.1142801		0				
200 ppb Pb	Pb	8/1/2011	10:35:31 AM	0.2041593		0				
ICV	Pb	8/4/2011	10:24:43 AM	0.1137545	101.2	0.005779			101.2019	101.1936
ICB	Pb	8/4/2011	10:30:23 AM	2.92E-05	0.0	763.8404			-0.1057	0.153733
110737.LB-1	Pb	8/4/2011	10:36:00 AM	-0.0002946	-0.2	11.02758			-0.2236	-0.26142
110737.LCS-1	Pb	8/4/2011	10:41:36 AM	0.5505265						
110737.LCS-1	Pb	8/4/2011	10:49:32 AM	0.1207861	108.1	0.260401			107.9331	108.3313
110737.1-1	Pb	8/4/2011	10:55:08 AM	0.0102622	8.5	4.727769			8.780674	8.212583
110737.2-1	Pb	8/4/2011	11:00:44 AM	0.0049384	4.1	4.418763	1		4.204365	3.949592
110737.2-1	Pb	8/4/2011	11:06:15 AM	0.1184477	105.8	1.256798	1	101.7381	106.7555	104.8747
110737.3-1	Pb	8/4/2011	11:11:49 AM	0.0086854	7.2	7.167295			7.549092	6.820819
110737.LB-2A	Pb	8/4/2011	11:17:24 AM	-6.92E-05	-0.1	462.1428			0.129192	-0.24313
110737.LCS-2A	Pb	8/4/2011	11:22:58 AM	0.1221326	109.5	0.434804			109.1361	109.8092
110737.1-2A	Pb	8/4/2011	11:28:32 AM	0.0067125	5.5	3.324517	1		5.677267	5.416477
110737.1-2A	Pb	8/4/2011	11:34:01 AM	0.1187169	106.1	0.745708	1	100.5338	106.6401	105.5213
110737.2-2A	Pb	8/4/2011	11:39:35 AM	0.0167361	13.9	0.512014			13.85621	13.95691
CCV	Pb	8/4/2011	11:45:06 AM	0.1152793	102.7	2.668237			100.7589	104.6341

Sample ID	Elem	Date	Time	Abs (Corr)	Conc (Cali	RSD (Conc	Special Sa	Special Co	Conc (Cali	Conc (Calib)2
CCB	Pb	8/4/2011	11:50:48 AM	-0.0001307	-0.1	431.1988			-0.43545	0.220361
110737.3-2A	Pb	8/4/2011	11:56:19 AM	0.0094289	7.8	1.129829			7.865408	7.740729
CCV	Pb	8/4/2011	12:01:50 PM	0.1138827	101.3	0.601182			101.7541	100.8927
CCB	Pb	8/4/2011	12:07:32 PM	-0.0008254	-0.7	9.693244			-0.63279	-0.72591
Calib Blank	Se	8/8/2011	11:44:12 AM	0.0001442		0				
20 ppb Se	Se	8/8/2011	11:51:11 AM	0.0191941		0				
50 ppb Se	Se	8/8/2011	11:58:09 AM	0.0476056		0				
100 ppb Se	Se	8/8/2011	12:05:11 PM	0.0933816		0				
200 ppb Se	Se	8/8/2011	12:12:12 PM	0.1850667		0				
ICV	Se	8/8/2011	12:19:56 PM	0.0917712	97.8	0.272517			97.63809	98.01511
ICB	Se	8/8/2011	12:27:02 PM	0.0002083	0.2	288.1096			0.65345	-0.22316
110737.LB-1	Se	8/8/2011	12:33:58 PM	-8.22E-05	-0.1	79.95554			-0.13277	-0.03686
110737.LCS-1	Se	8/8/2011	12:40:57 PM	0.1094087	117.0	0.513202			117.4727	116.6232
110737.1-1	Se	8/8/2011	12:47:51 PM	0.0102281	10.6	1.886964	1		10.75801	10.47471
110737.1-1	Se	8/8/2011	12:54:45 PM	0.1038418	111.0	1.543032	1	100.356	112.1832	109.7616
110737.2-1	Se	8/8/2011	1:01:39 PM	0.0028261	2.9	21.64077			2.475221	3.369617
110737.3-1	Se	8/8/2011	1:08:36 PM	0.0020374	2.1	1.6146			2.129852	2.081768
110737.LB-2A	Se	8/8/2011	1:15:30 PM	0.0005416	0.6	56.97508			0.784701	0.334003
110737.LCS-2A	Se	8/8/2011	1:22:24 PM	0.1111837	119.0	1.180979			119.9804	117.9931
110737.2-2A	Se	8/8/2011	1:43:16 PM	0.0711753	75.5	1.658302			74.61485	76.38548
CCV	Se	8/8/2011	1:50:12 PM	0.1002775	107.1	0.495136			106.7114	107.4613
CCB	Se	8/8/2011	1:57:18 PM	-0.0004011	-0.4	31.76901			-0.32098	-0.50698
110737.3-2A	Se	8/8/2011	2:04:14 PM	0.0090322	9.4	3.686964			9.125329	9.613875
110737.1-2A x 2	Se	8/8/2011	2:11:15 PM	0.0916892	97.7	0.475977	2		97.40846	98.06636
110737.1-2AS x 2	Se	8/8/2011	2:18:13 PM	0.1939659	210.1	1.040626	2	112.4	208.5059	211.5972
CCV	Se	8/8/2011	2:25:09 PM	0.1020907	109.1	2.461116			110.961	107.1651
CCB	Se	8/8/2011	2:32:15 PM	-0.0005693	-0.6	99.57289			-0.17384	-1.00108

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
Calib Blank 1	8/4/2011	12:48:01 PM	Be		51966.681	ug/L	0.442706	51719.9	52175.229	52004.913
Standard 1	8/4/2011	12:51:32 PM	Be		1687730.2	ug/L	1.093585	1666421.4	1698064.5	1698704.8
Standard 2	8/4/2011	12:52:22 PM	Be		3396599.4	ug/L	2.390876	3303568.3	3432930.3	3453299.7
ICV	8/4/2011	12:53:09 PM	Be	987.50	1674977.6	ug/L	0.363577	1673194	1681760.1	1669978.8
ICB	8/4/2011	12:54:08 PM	Be	0.79	1335.2134	ug/L	163.0684	3849.3237	67.042198	89.274441
ICB	8/4/2011	12:55:50 PM	Be	-0.09	-152.791	ug/L	63.44024	-58.93915	-252.5325	-146.9013
ICS	8/4/2011	12:56:46 PM	Be	-0.15	-249.7316	ug/L	27.24722	-240.5921	-321.8843	-186.7183
110737.LB-1	8/4/2011	12:57:46 PM	Be	-0.08	-134.0128	ug/L	185.6623	42.099993	-418.6532	-25.48525
110737.LCS-1	8/4/2011	12:58:30 PM	Be	1034.39	1754510	ug/L	3.587332	1723747.8	1712867.3	1826915
110737.1-1	8/4/2011	12:59:21 PM	Be	0.32	550.10751	ug/L	160.729	1571.0732	40.340558	38.90877
110737.2-1	8/4/2011	1:00:04 PM	Be	-1.07	-1812.149	ug/L	17.72998	-1443.966	-2035.744	-1956.736
110737.2-1S	8/4/2011	1:00:51 PM	Be	798.57	1354518.1	ug/L	1.288926	1338443.3	1352019.4	1373091.5
110737.3-1	8/4/2011	1:06:17 PM	Be	-1.04	-1769.072	ug/L	77.10363	-231.5506	-2241.915	-2833.752
110737.3-1D	8/4/2011	1:07:06 PM	Be	-1.60	-2721.72	ug/L	8.13137	-2511.772	-2952.872	-2700.515
CCV	8/4/2011	1:09:00 PM	Be	1049.64	1780392.8	ug/L	2.047427	1739371.2	1809069.8	1792737.5
CCB	8/4/2011	1:09:57 PM	Be	0.72	1217.1716	ug/L	178.1392	3719.3439	41.578121	-109.4073
CCB	8/4/2011	1:11:06 PM	Be	-0.22	-366.625	ug/L	44.01289	-381.4277	-198.3714	-520.0758
110737.LB-2A	8/4/2011	1:12:12 PM	Be	-0.05	-92.46439	ug/L	229.3868	73.016968	-18.84392	-331.5662
110737.LCS-2A	8/4/2011	1:12:58 PM	Be	990.65	1680320.1	ug/L	0.654084	1690216.9	1668491.6	1682251.8
110737.1-2A	8/4/2011	1:13:58 PM	Be	-0.90	-1524.575	ug/L	38.07684	-854.3381	-1868.551	-1850.837
110737.1-2AS	8/4/2011	1:14:48 PM	Be	864.00	1465496.6	ug/L	2.906921	1416430.5	1493066.2	1486993
110737.2-2A	8/4/2011	1:15:40 PM	Be	-0.10	-170.3697	ug/L	1856.55	3470.7645	-1743.614	-2238.26
110737.2-2AD	8/4/2011	1:16:24 PM	Be	-1.74	-2949.396	ug/L	10.75332	-2653.729	-3284.379	-2910.081
110737.3-2A	8/4/2011	1:17:55 PM	Be	-1.54	-2619.407	ug/L	5.006416	-2663.526	-2471.898	-2722.796
CCV	8/4/2011	1:21:59 PM	Be	1080.74	1833137.3	ug/L	0.828146	1819386.1	1830597.9	1849427.9
CCB	8/4/2011	1:23:42 PM	Be	-0.23	-391.1605	ug/L	10.07024	-426.4337	-398.3934	-348.6545
Calib Blank 1	8/4/2011	12:48:01 PM	Cd		-180.9081	ug/L	2.52221	-185.8624	-179.9838	-176.8782
Standard 1	8/4/2011	12:51:32 PM	Cd		7453.3389	ug/L	0.881992	7431.2839	7401.4645	7527.2683
Standard 2	8/4/2011	12:52:22 PM	Cd		14695.103	ug/L	0.612032	14592.004	14757.461	14735.845
ICV	8/4/2011	12:53:09 PM	Cd	991.9	7309.0156	ug/L	0.658801	7287.3027	7275.5436	7364.2005
ICB	8/4/2011	12:54:08 PM	Cd	1.0	7.1099598	ug/L	50.60891	7.636569	10.41591	3.2774
ICS	8/4/2011	12:56:46 PM	Cd	1.7	12.211878	ug/L	39.79746	12.47315	7.226495	16.935988
110737.LB-1	8/4/2011	12:57:46 PM	Cd	0.6	4.1957354	ug/L	209.1059	-5.633127	6.9841544	11.236179

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
110737.LCS-1	8/4/2011	12:58:30 PM	Cd	1057.6	7793.395	ug/L	4.085502	7515.7297	7723.5303	8140.925
110737.1-1	8/4/2011	12:59:21 PM	Cd	28.7	211.56671	ug/L	8.097944	222.20886	191.80324	220.68803
110737.2-1	8/4/2011	1:00:04 PM	Cd	27.7	204.12935	ug/L	6.136897	192.96286	217.67582	201.74935
110737.2-1S	8/4/2011	1:00:51 PM	Cd	818.2	6029.0042	ug/L	0.381534	6039.4065	6002.6378	6044.9683
110737.3-1	8/4/2011	1:06:17 PM	Cd	28.1	207.25458	ug/L	4.287489	216.43397	206.63545	198.69431
110737.3-1D	8/4/2011	1:07:06 PM	Cd	26.0	191.58629	ug/L	5.545181	181.13326	202.37301	191.2526
CCV	8/4/2011	1:09:00 PM	Cd	1063.5	7836.5654	ug/L	1.030196	7743.3985	7885.9058	7880.3918
CCB	8/4/2011	1:09:57 PM	Cd	2.4	17.864533	ug/L	47.25184	14.176255	27.522336	11.895008
110737.LB-2A	8/4/2011	1:12:12 PM	Cd	-0.9	-6.975459	ug/L	44.1872	-3.846475	-7.071134	-10.00877
110737.LCS-2A	8/4/2011	1:12:58 PM	Cd	1028.2	7576.7674	ug/L	2.774547	7468.9757	7442.3056	7819.0208
110737.1-2A	8/4/2011	1:13:58 PM	Cd	0.1	1.0951905	ug/L	1520.437	19.347478	-2.794627	-13.26728
110737.1-2AS	8/4/2011	1:14:48 PM	Cd	882.3	6501.2296	ug/L	0.715538	6448.2958	6535.6022	6519.7908
110737.2-2A	8/4/2011	1:15:40 PM	Cd	27.1	199.76317	ug/L	6.286386	210.10643	203.39285	185.79023
110737.2-2AD	8/4/2011	1:16:24 PM	Cd	28.4	209.34707	ug/L	1.359442	206.23854	209.9782	211.82448
110737.3-2A	8/4/2011	1:17:55 PM	Cd	10.4	76.391595	ug/L	11.90211	84.694869	77.804131	66.675786
CCV	8/4/2011	1:21:59 PM	Cd	1082.9	7979.2305	ug/L	0.219501	7994.1919	7983.5342	7959.9652
CCB	8/4/2011	1:23:42 PM	Cd	0.6	4.6568035	ug/L	173.3016	12.925119	4.2450352	-3.199744
Calib Blank 1	8/4/2011	12:48:01 PM	Co		-31.76526	ug/L	23.33544	-23.54743	-37.94698	-33.80137
Standard 1	8/4/2011	12:51:32 PM	Co		6115.0486	ug/L	1.016576	6079.0131	6079.3033	6186.8293
Standard 2	8/4/2011	12:52:22 PM	Co		12256.985	ug/L	2.302493	12100.11	12088.06	12582.786
ICV	8/4/2011	12:53:09 PM	Co	977.6	5988.5237	ug/L	0.680925	5976.8447	5954.8602	6033.8663
ICB	8/4/2011	12:54:08 PM	Co	2.1	12.702164	ug/L	116.2751	25.744963	-3.335052	15.69658
ICS	8/4/2011	12:56:46 PM	Co	0.9	5.6550412	ug/L	114.4737	0.2611169	12.833726	3.8702808
110737.LB-1	8/4/2011	12:57:46 PM	Co	0.3	2.122417	ug/L	458.5392	3.461432	-8.209871	11.11569
110737.LCS-1	8/4/2011	12:58:30 PM	Co	1061.5	6502.4354	ug/L	3.826312	6298.1309	6429.665	6779.5103
110737.1-1	8/4/2011	12:59:21 PM	Co	-21.7	-132.8341	ug/L	7.051845	-122.0509	-137.4923	-138.959
110737.2-1	8/4/2011	1:00:04 PM	Co	-23.5	-144.1458	ug/L	11.17176	-131.5252	-162.2827	-138.6297
110737.2-1S	8/4/2011	1:00:51 PM	Co	795.5	4872.8527	ug/L	0.565314	4868.9598	4847.4594	4902.139
110737.3-1	8/4/2011	1:06:17 PM	Co	-21.4	-131.1568	ug/L	8.991532	-119.2734	-131.3398	-142.8573
110737.3-1D	8/4/2011	1:07:06 PM	Co	-22.4	-137.0517	ug/L	10.76027	-122.3185	-151.8127	-137.0238
CCV	8/4/2011	1:09:00 PM	Co	1066.2	6531.3995	ug/L	1.300165	6438.3089	6551.2644	6604.6252
CCB	8/4/2011	1:09:57 PM	Co	-0.5	-3.316475	ug/L	297.6734	-4.609223	7.138475	-12.47868
110737.LB-2A	8/4/2011	1:12:12 PM	Co	-2.0	-11.98261	ug/L	3.068033	-11.61651	-11.97957	-12.35175

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
110737.LCS-2A	8/4/2011	1:12:58 PM	Co	1042.6	6386.9665	ug/L	3.04763	6302.7837	6248.5753	6609.5406
110737.1-2A	8/4/2011	1:13:58 PM	Co	257.3	1576.3575	ug/L	0.908762	1571.1346	1565.3765	1592.5615
110737.1-2AS	8/4/2011	1:14:48 PM	Co	1154.3	7071.2643	ug/L	0.352495	7052.3475	7099.5088	7061.9367
110737.2-2A	8/4/2011	1:15:40 PM	Co	12.6	77.019037	ug/L	7.796139	73.124	73.999094	83.934017
110737.2-2AD	8/4/2011	1:16:24 PM	Co	12.4	76.223942	ug/L	6.769913	81.788979	71.597131	75.285716
110737.3-2A	8/4/2011	1:17:55 PM	Co	6.7	41.316057	ug/L	40.87317	47.001142	54.627054	22.319975
CCV	8/4/2011	1:21:59 PM	Co	1076.9	6596.7461	ug/L	0.264674	6616.2152	6591.5465	6582.4767
CCB	8/4/2011	1:23:42 PM	Co	3.1	19.142841	ug/L	57.81557	29.276936	20.818611	7.3329762
Calib Blank 1	8/4/2011	12:48:01 PM	Cr		515.81506	ug/L	2.687138	500.5096	527.52057	519.41502
Standard 1	8/4/2011	12:51:32 PM	Cr		16732.844	ug/L	1.879914	16845.155	16377.541	16975.837
Standard 2	8/4/2011	12:52:22 PM	Cr		33500.933	ug/L	0.48543	33314.857	33615.835	33572.108
ICV	8/4/2011	12:53:09 PM	Cr	997.8	16710.461	ug/L	0.730434	16682.71	16604.666	16844.005
ICB	8/4/2011	12:54:08 PM	Cr	0.9	14.499883	ug/L	120.4277	31.730551	14.953454	-3.184355
ICS	8/4/2011	12:56:46 PM	Cr	-0.2	-2.718776	ug/L	965.989	13.026164	11.854729	-33.03722
110737.LB-1	8/4/2011	12:57:46 PM	Cr	0.4	7.5025593	ug/L	111.3191	8.5041672	15.308371	-1.30486
110737.LCS-1	8/4/2011	12:58:30 PM	Cr	1070.4	17926.111	ug/L	3.482982	17597.258	17534.911	18646.164
110737.1-1	8/4/2011	12:59:21 PM	Cr	113.0	1891.6183	ug/L	4.377494	1819.8312	1872.8153	1982.2083
110737.2-1	8/4/2011	1:00:04 PM	Cr	34.6	578.98697	ug/L	2.550185	591.75566	562.81832	582.38692
110737.2-1S	8/4/2011	1:00:51 PM	Cr	865.7	14497.457	ug/L	0.401848	14519.783	14431.338	14541.25
110737.3-1	8/4/2011	1:06:17 PM	Cr	24.8	414.67121	ug/L	1.549534	408.05191	415.0782	420.88351
110737.3-1D	8/4/2011	1:07:06 PM	Cr	24.3	407.62722	ug/L	3.315595	393.59921	408.71891	420.56352
CCV	8/4/2011	1:09:00 PM	Cr	1071.7	17947.129	ug/L	1.098326	17745.845	17955.744	18139.799
CCB	8/4/2011	1:09:57 PM	Cr	2.3	38.29265	ug/L	31.63546	50.045324	38.985663	25.846963
110737.LB-2A	8/4/2011	1:12:12 PM	Cr	2.0	34.325854	ug/L	8.867702	34.028239	37.507644	31.441679
110737.LCS-2A	8/4/2011	1:12:58 PM	Cr	1044.7	17494.764	ug/L	0.327915	17546.689	17504.424	17433.179
110737.1-2A	8/4/2011	1:13:58 PM	Cr	51.2	856.98295	ug/L	1.076913	865.93539	857.51315	847.50033
110737.1-2AS	8/4/2011	1:14:48 PM	Cr	954.2	15980.69	ug/L	2.508928	15519.045	16241.83	16181.194
110737.2-2A	8/4/2011	1:15:40 PM	Cr	220.5	3692.9977	ug/L	1.265626	3649.427	3742.3653	3687.2009
110737.2-2AD	8/4/2011	1:16:24 PM	Cr	224.2	3755.3449	ug/L	0.398753	3772.0763	3750.7584	3743.2
110737.3-2A	8/4/2011	1:17:55 PM	Cr	96.1	1609.9908	ug/L	0.60669	1614.6728	1616.5361	1598.7635
CCV	8/4/2011	1:21:59 PM	Cr	1091.4	18277.97	ug/L	0.443717	18184.477	18320.037	18329.397
CCB	8/4/2011	1:23:42 PM	Cr	1.1	18.503772	ug/L	57.68823	6.1867234	24.258982	25.065611
Calib Blank 1	8/4/2011	12:48:01 PM	Mn		105.16987	ug/L	28.97938	114.26502	130.06446	71.180123

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
Standard 1	8/4/2011	12:51:32 PM	Mn		207733.4	ug/L	1.62946	208953.89	203907.47	210338.82
Standard 2	8/4/2011	12:52:22 PM	Mn		418197.81	ug/L	0.676292	415087.91	420616.07	418889.46
ICV	8/4/2011	12:53:09 PM	Mn	990.6	206855.64	ug/L	0.658175	206001.65	206139.56	208425.72
ICB	8/4/2011	12:54:08 PM	Mn	0.5	112.46516	ug/L	106.3526	250.50445	47.359979	39.531044
ICS	8/4/2011	12:56:46 PM	Mn	0.1	19.837306	ug/L	56.29826	23.044779	7.4164717	29.050666
110737.LB-1	8/4/2011	12:57:46 PM	Mn	0.4	75.390177	ug/L	25.36891	74.817791	94.795614	56.557125
110737.LCS-1	8/4/2011	12:58:30 PM	Mn	1063.7	222133.43	ug/L	3.381724	218210.11	217395.47	230794.71
110737.1-1	8/4/2011	12:59:21 PM	Mn	40.5	8447.6912	ug/L	4.353071	8138.7074	8349.9431	8854.4231
110737.2-1	8/4/2011	1:00:04 PM	Mn	18.7	3904.0763	ug/L	1.306389	3864.6189	3885.9424	3961.6677
110737.2-1S	8/4/2011	1:00:51 PM	Mn	847.9	177066	ug/L	1.452402	174793.2	176547.26	179857.54
110737.3-1	8/4/2011	1:06:17 PM	Mn	21.4	4465.1087	ug/L	1.508939	4534.3187	4399.7308	4461.2765
110737.3-1D	8/4/2011	1:07:06 PM	Mn	20.9	4372.4498	ug/L	0.885322	4367.9272	4413.2227	4336.1994
CCV	8/4/2011	1:09:00 PM	Mn	1069.7	223371.84	ug/L	1.170707	220526.31	223919.64	225669.58
CCB	8/4/2011	1:09:57 PM	Mn	0.8	174.78172	ug/L	70.41738	316.81621	99.578194	107.95074
110737.LB-2A	8/4/2011	1:12:12 PM	Mn	2.9	606.16004	ug/L	5.335681	586.79966	588.18274	643.49771
110737.LCS-2A	8/4/2011	1:12:58 PM	Mn	1035.5	216246.96	ug/L	0.597065	217389.01	216505.89	214845.98
110737.1-2A	8/4/2011	1:13:58 PM	Mn	46.9	9786.7096	ug/L	0.98849	9677.8379	9819.4899	9862.801
110737.1-2AS	8/4/2011	1:14:48 PM	Mn	949.8	198336.03	ug/L	2.485897	192661.16	201568.42	200778.51
110737.3-2A	8/4/2011	1:17:55 PM	Mn	877.1	183159.84	ug/L	0.888866	182596.43	184994.75	181888.33
110737.2-2A x 2	8/4/2011	1:20:38 PM	Mn	1131.4	236272.71	ug/L	0.694101	236147.54	237971.68	234698.91
110737.2-2AD x 2	8/4/2011	1:21:09 PM	Mn	1209.9	252661.11	ug/L	0.400164	251792.61	252419.71	253771.02
CCV	8/4/2011	1:21:59 PM	Mn	1092.8	228198.59	ug/L	0.597509	226795.69	228281.11	229518.96
CCB	8/4/2011	1:23:42 PM	Mn	0.1	15.840176	ug/L	70.98029	28.797468	8.6575762	10.065484
Calib Blank 1	8/4/2011	12:48:01 PM	Ni		81.245937	ug/L	51.5296	127.38645	70.666752	45.684604
Standard 1	8/4/2011	12:51:32 PM	Ni		7869.7315	ug/L	1.330829	7803.5716	7815.1412	7990.4818
Standard 2	8/4/2011	12:52:22 PM	Ni		15383.288	ug/L	0.669327	15350.3	15498.703	15300.859
ICV	8/4/2011	12:53:09 PM	Ni	996.4	7699.3727	ug/L	0.886968	7628.6584	7704.5094	7764.9502
ICB	8/4/2011	12:54:08 PM	Ni	-0.5	-4.233673	ug/L	183.0467	1.2645145	-0.868541	-13.09699
ICS	8/4/2011	12:56:46 PM	Ni	-4.8	-36.98608	ug/L	56.77673	-25.74046	-61.21348	-24.00431
110737.LB-1	8/4/2011	12:57:46 PM	Ni	-3.8	-29.13832	ug/L	106.9478	-60.30548	2.0201084	-29.12958
110737.LCS-1	8/4/2011	12:58:30 PM	Ni	1104.1	8531.2975	ug/L	4.913528	8173.3564	8428.0854	8992.4506
110737.1-1	8/4/2011	12:59:21 PM	Ni	115.0	888.41862	ug/L	5.179784	835.63316	909.5252	920.09749
110737.2-1	8/4/2011	1:00:04 PM	Ni	30.2	233.14656	ug/L	3.229888	233.64091	225.38119	240.41757

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
110737.2-1S	8/4/2011	1:00:51 PM	Ni	979.9	7571.782	ug/L	0.646371	7595.7734	7515.4736	7604.0989
110737.3-1	8/4/2011	1:06:17 PM	Ni	27.0	208.88033	ug/L	5.990293	208.17831	196.73357	221.7291
110737.3-1D	8/4/2011	1:07:06 PM	Ni	29.9	230.84878	ug/L	15.41941	271.94524	210.89342	209.70768
CCV	8/4/2011	1:09:00 PM	Ni	1093.1	8446.5346	ug/L	1.069593	8342.2148	8498.6927	8498.6962
CCB	8/4/2011	1:09:57 PM	Ni	0.1	0.5041166	ug/L	1188.8	-0.38965	6.8937444	-4.991745
110737.LB-2A	8/4/2011	1:12:12 PM	Ni	0.0	0.3610469	ug/L	5500.329	-17.02814	-3.889731	22.001015
110737.LCS-2A	8/4/2011	1:12:58 PM	Ni	1119.9	8653.4716	ug/L	2.916795	8558.149	8462.6102	8939.6554
110737.1-2A	8/4/2011	1:13:58 PM	Ni	33.2	256.62808	ug/L	10.61289	267.56146	276.69815	225.62463
110737.1-2AS	8/4/2011	1:14:48 PM	Ni	998.3	7714.2509	ug/L	0.728492	7666.4265	7776.1473	7700.1789
110737.2-2A	8/4/2011	1:15:40 PM	Ni	868.2	6709.0655	ug/L	0.981633	6633.6271	6755.098	6738.4714
110737.2-2AD	8/4/2011	1:16:24 PM	Ni	886.9	6853.166	ug/L	0.085653	6858.243	6846.7385	6854.5164
110737.3-2A	8/4/2011	1:17:55 PM	Ni	323.0	2495.665	ug/L	0.946336	2501.2072	2469.7694	2516.0184
CCV	8/4/2011	1:21:59 PM	Ni	1089.7	8420.243	ug/L	0.077407	8424.761	8423.1967	8412.7711
CCB	8/4/2011	1:23:42 PM	Ni	-1.5	-11.28385	ug/L	77.10728	-16.90764	-15.68176	-1.262143

APPENDIX H: EPA METHODS 5/202—PARTICULATE MATTER SAMPLING DATA

APPENDIX H: EPA METHODS 5/202—PARTICULATE MATTER SAMPLING DATA

Project Number	182129		
Client / Location	ExxonMobil		
Source	DCU		
Sampling Location	D603 Vent		
Sample Type / Method	M5B/202 Particulate Matter		
Condition Number	Vent Cycle	Vent Cycle	Vent Cycle
Run Number	1	2	3
Method Number	M5B/202	M5B/202	M5B/202
Date	07/14/11	07/16/11	07/17/11
Time Start (24-hr clock)	2006	0043	0626
Time Stop (24-hr clock)	2026	0143	0706
Total Collection Time (min)	20	60	40
Pitot Tube Correction Factor	0.84	0.84	0.84
Nozzle Diameter (in.)	0.121	0.121	0.121
Nozzle Area (ft^2)	0.000080	0.000080	0.000080
Equivalent Duct Diameter (in)	8.00	8.00	8.00
Equivalent Duct Diameter (ft)	0.67	0.67	0.67
Duct Cross-Sectional Area (ft^2)	0.349	0.349	0.349
Barometric Pressure (in. Hg)	29.65	29.80	29.85
Elevation of Sampling Location Relative to Barometer (ft)			
Barometric Pressure at Sampling Location (in. Hg)	29.65	29.80	29.85
Static Pressure (in. H_2O)	1.1	0.9	1.5
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96
O_2 (%)	14.0	12.8	16.5
CO_2 (%)	0.0	0.1	0.0
Dry Molecular Weight (g/g-mole)	28.56	28.53	28.66
Condensate (mL)	665.5	2136.8	1668.2
Moisture Content (%) (measured)	97.92	97.59	99.07
Moisture Content at Saturation (%)	538.07	152.34	303.94
Moisture Content (%) (used in further calculations)	97.92	97.59	99.07
Wet Molecular Weight (g/g-mole)	18.22	18.25	18.10
Initial Meter Volume (ft^3)	777.738	778.944	817.845
Final Meter Volume (ft^3)	778.425	781.478	818.595
Leak Check Volume (ft^3)	0.000	0.000	0.000
Meter Volume (ft^3)	0.687	2.534	0.750
Meter Calibration Factor, Y	1.0015	1.0015	1.0015
Average Meter Temperature (F)	80.6	76.5	76.1
Absolute Meter Temperature (F)	540.6	536.5	536.1
Average Delta H (in. H_2O)	0.0	0.0	0.0
Elevation of Meter Relative to Barometer (ft)			
Corrected Meter Volume (dscf)	0.666	2.488	0.738
Average Stack Temperature (F)	312.0	234.0	274.5
Absolute Stack Temperature (R)	772.0	694.0	734.5
Average Delta P (in. H2O)	124.00	9.42	11.73
Average Square Root of delta P	11.13	2.98	3.20
Unadjusted Gas Velocity (ft/sec)	953.92	241.70	267.67
WAF	1.00	1.00	1.00
Adjusted Gas Velocity (ft/sec)	953.92	241.70	267.67
Adjusted Gas Velocity (ft/min)	57,235	14,502	16,060
Actual Flow Rate (acfh)	1,198,733	303,729	336,365
Actual Flow Rate (acfm)	19,979	5,062	5,606
Corrected Flow Rate (wscfh)	814,677	230,664	242,108
Corrected Flow Rate (wscfm)	13,578	3,844	4,035
Corrected Flow Rate (kwscfh)	815	231	242
Corrected Flow Rate (kwscfm)	14	4	4
Corrected Flow Rate (dscfh)	16,931	5,559	2,251
Corrected Flow Rate (dscfm)	282	93	38
Corrected Flow Rate (kdscfh)	16.9	5.6	2.3
Corrected Flow Rate (kdscfm)	0.28	0.09	0.04
Isokinetic Sampling Rate (%)	51.58	195.64	215.01
Average Isokinetic Sampling Rate (%)		154.08	

STP is defined as 528 R and 29.92 "Hg

TRC

Source Collection Data Sheet

Contract No. 182129	Method MSB/282 PM		Page 1 of 1
Facility Exxon Mob. BTRP	Init. System Leak Rate (ft3 @ "Hg) 0.001 @ 27"Hg		Operator S. Lakey
Source DCU D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.010 @ 15"Hg		Pitot No. NA
Date 7-14-2011	Start Time 2006	Meter No. 1459	PTCF 0.84
Condition Normal Vent Cycle	End Time 2026	DGMCF 1.005	Init. Pitot Leak Check ✓
Run No. 1	Duration (min) 20	ΔH@ 1.688	Final Pitot Leak Check ✓
Stat. Press. ("H2O) + 1.1	Bar. Press. ("Hg) 29.65	Nozzle Diam. (") 0.121	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)
MID	20:06	777.738	—	—	—	334	269	76	81	81	9.0
M	20:11	773.976	—	—	—	328	287	66	81	80	9.0
M	20:16	778.03	—	—	—	328	295	60	81	80	9.0
M	20:21	778.075	—	—	—	327	296	54	81	80	9.0
STOP	20:26	778.425	—								

Comments

Checked By: [signature] 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No. 182129	Method 5B/202 PM
Condition Normal Vent Cycle	Run No. 1
Date 7-14-11	Operator [illegible]

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	MT	—	IC	1523.1	871.0	652.1
2	MT	—	Mod	643.3	643.0	0.3
3	MT	—	Mod	627.0	627.0	0.0
4	teflon filter	—	—	—	—	
5	H2O	100	Mod	699.6	700.1	-0.5
6	Sigel	~600	↓	962.4	948.8	13.6
7						
8						
9						
10						
					Total Net Gain (g) =	665.5

Comments:

filter ID= 84551

Run 1

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	871.0	1523.1	652.1
2	643.0	643.3	0.3
3	627.0	627.0	0
4	700.1	699.6	-0.5
5	948.8	962.4	13.6
6			
		sum =	665.5

TRC

Source Collection Data Sheet

Contract No. 162129		Method 5B/202 PM			Page 1 of 1
Facility Exxon Mobil BTRF		Init. System Leak Rate (ft3 @ "Hg) 0.001 @ 28"Hg			Operator S. Lockard
Source DCU D603 Vent		Final System Leak Rate (ft3 @ "Hg) 0.002 @ 28"Hg			Pitot No. NA
Date 7-16-2014	Start Time 00:43		Meter No. 1459		PTCF 0.84
Condition Normal VentCycle	End Time 01:43		DGMCF 1.0015		Init. Pitot Leak Check ✓
Run No. 2	Duration (min) 60		ΔH@ 1.688		Final Pitot Leak Check ✓
Stat. Press. ("H2O) +0.9	Bar. Press. ("Hg) 29.80		Nozzle Diam. (") 0.121		Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F)						Vacuum ("Hg)
					Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	
MID	00:43	778.944	—	—	—	295	303	74	76	75	24.0
M	00:48	779.198	—	—	—	297	303	68	76	75	26.5
M	00:53	779.540	—	—	—	296	303	64	76	76	26.5
M	00:58	779.998	—	—	—	295	302	60	76	76	26.5
M	01:03	780166	—	—	—	294	303	58	77	76	26.5
M	01:08	780327	—	—	—	294	303	57	77	76	26.5
M	01:13	780.480	—	—	—	295	303	58	77	76	26.5
M	01:18	780.584	—	—	—	293	299	59	77	76	26.5
M	01:23	780.702	—	—	—	293	303	60	77	76	26.5
M	01:28	780.816	—	—	—	295	302	61	78	77	26.5
M	01:33	780.965	—	—	—	293	302	62	78	77	26.5
M	01:38	781.070	—	—	—	292	302	63	78	76	26.5
STOP	01:43	781.478									

Comments

Checked By: M Peabody 10/31/14 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	M5/M202 PM
Condition	Normal Vent Cycle	Run No.	2
Date	7/16/2017	Operator	RM

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	—	—	IC	2696.5	873.7	= 1822.8
2	—	—	Mod	888.4	645.1	= 243.3
3	—	—	G/S	689.0	628.7	= 60.3
4	teflon filter	—	—	—	—	=
5	DI H2O	100	Mod	715.5	714.2	= 1.3
6	Sgl	500	Mod	971.5	962.4	= 9.1
7						=
8						=
9						=
10						=
					Total Net Gain (g) =	2136.8

Comments:

Run 2

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	873.7	2696.5	1822.8
2	645.1	888.4	243.3
3	628.7	689.0	60.3
4	714.2	715.5	1.3
5	962.4	971.5	9.1
6			0
		sum =	2136.8

TRC

M5B PM

Source Collection Data Sheet

Contract No. 182129	Method ~~EPA 29 Ontario Hydro~~		Page 1 of 1
Facility EXXon BTNF	Init. System Leak Rate (ft3 @ "Hg) 0.004 @ 15" Hg		Operator CSD
Source DC4, D603 Vent	Final System Leak Rate (ft3 @ "Hg) 0.003 @ 26" Hg		Pitot No. NA
Date 7/17/11	Start Time 0626	Meter No. 1459	PTCF 0.84
Condition Normal Vent Cycle	End Time 0706	DGMCF 1.0015	Init. Pitot Leak Check ✓
Run No. 3	Duration (min) 40	ΔH@ 1.688	Final Pitot Leak Check ✓
Stat. Press. ("H2O) +1.5	Bar. Press. ("Hg) 29.85	Nozzle Diam. (") 0.121	Kf

Point	Time (24-hr)	Volume (ft3)	ΔP ("H2O)	ΔH ("H2O)	Temperatures (°F) Flue Gas	Probe	Filter	Impingers	Meter In	Meter Out	Vacuum ("Hg)	T.
M10	0	817.845	—	—	—	308	308	74	75	76	12	626
M	0	818.051	—	—	—	307	309	72	75	76	17	626
M	3										25	—
M	5	818.237	—	—	—	310	309	69	75	75	26	631
M	10	818.312	0.5	—	—	309	307	68	76	75	26	636
M	15	818.381	818.1	—	—	309	306	66	77	75	26	641
M	20	818.464	818.364	—	—	309	307	64	77	75	26	646
M	25	818.561	818.461	—	—	310	308	63	77	76	26	651
M	30	818.595	818.495	—	—	310	308	63	78	77	26	656
M	35	818.595	—	—	—	310	308	62	78	77	26	701
STOP	40	818.595										706

Comments

Checked By: JJ Peckek 10/31/11 (Project Manager or QA Manager - sign and date)

TRC

Sample Recovery Data Sheet

Contract No.	182129	Method	MSB/202 PM
Condition	Normal Vent Cycle	Run No.	3
Date	7-12-11	Operator	RW

Impinger No.	Contents	Volume (mL)	Configuration	Final Wt. (g)	- Initial Wt. (g)	= Net Gain (g)
1	~~DI~~ —	—	IC	2321.5	875.1	1446.4
2	—	—	Mod	797.3	647.1	150.2
3	—	—	GIS	705.0	629.8	75.2
4	tefln filter	—	~~Mod~~		729	=
5	Silica Gel	100	Mod	717.1	729.6	= -12.5
6	Sigel	500		967.2	958.3	= 8.9
7						=
8						=
9						=
10						=
					Total Net Gain (g) =	1668.2

Comments:

Filter 84591

Run 3

Impinger No.	Initial Wt. (g)	Final Wt. (g)	Total Gain (g)
1	875.1	2321.5	1446.4
2	647.1	797.3	150.2
3	629.8	705.0	75.2
4	729.6	717.1	-12.5
5	958.3	967.2	8.9
6			0
		sum =	1668.2

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Particulate Matter
Dates: July 14, 16, 17, 2011
Run No. 1

Barometric Pressure at Sampling Site, corrected for elevation

$$P_{bar(corr)} = P_{bar,meas} - (Elev \times 0.001)$$

$P_{bar,meas}$ = Barometric pressure as measured at ground level	=	29.65	in. Hg
Elev = elevation of sampling location relative to barometer	=	0	feet
0.001 = Conversion factor	=	0.00100	in. Hg/ft of elevation

$$Pbar(corr) = 29.65 - 0 \times 0.001$$

$$P_{bar(corr)} = 29.65 \text{ in Hg}$$

Absolute Stack Pressure, Corrected, in. Hg, as per EPA Method 2, Section 6.5

$$P_s = P_{bar(corr)} + (Pg/13.6)$$

$P_{bar(corr)}$ = Barometric pressure at the sampling site	=	29.65	in. Hg
P_g = Stack Static Pressure	=	1.10	in. H2O
13.6 = Conversion factor	=	13.6	in. H2O/in. Hg

$$P_s = 29.65 + \left(\frac{1.10}{13.6}\right)$$

$$P_s = 29.73 \text{ in Hg}$$

Absolute Stack Temperature, R

$$T_s = T + 460$$

T = Average Stack Temperatue	=	312.0	degF
460 = Conversion factor from deg F to R	=	460	

$$Ts = 312.0 + 460$$

$$Ts = 772.0 \text{ R}$$

Absolute Meter Temperature, R

$$Tm = T + 460$$

T = Average Meter Temperatue	=	80.6	degF
460 = Conversion factor from deg F to R	=	460	

$$Tm = 80.6 + 460$$

$$Tm = 540.6 \text{ R}$$

Volume of Water Vapor Condensed, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-2

$$V_{w(std)} = \frac{V_{lc} \times R_w \times R \times T_{std}}{M_w \times P_{std}}$$

V_{lc} = Total weight of liquid collected	=	665.5	g
R_w = Density of water	=	0.002201	lb/ml
R = Ideal Gas Constant	=	21.85	inHg - ft^3/degR - lbmole
T_{std} = Standard absolute temperature	=	528.00	degR
M_w = Molecular Weight of Water	=	18.00	lb/lbmole
P_{std} = Standard absolute pressure	=	29.92	inHg

$$V_{w(std)} = \frac{665.5 \times 0.002201 \times 21.85 \times 528}{18 \times 29.92}$$

$$V_{w(std)} = 31.38$$

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Particulate Matter
Dates: July 14, 16, 17, 2011
Run No. 1

Dry Gas Volume, corrected to standard conditions, ft^3 - as per US EPA Method 5, Eq. 5-1

$$V_{m(std)} = V_m \times Y \times \frac{T_{std} \times (P_{bar} + (deltaH / 13.6))}{T_m \times P_{std}}$$

V_m = Volume of gas sample, dry	=	0.687	ft^3
Y = Dry gas meter calibration factor	=	1.002	
Tstd = Standard Temperature	=	528	R
P_{bar} = Barometric pressure at the sampling site	=	29.65	in. Hg
deltaH = Average pressure differential across the orifice meter	=	0.00	in. H_2O
13.6 = Conversion factor	=	13.6	in. H_2O/in. Hg
Tm = Absolute average DGM temperature	=	540.6	R
Pstd = Standard Pressure	=	29.92	in Hg

$$V_{m(std)} = \frac{0.69 \times 1.002 \times 528 \times (29.65 + (0.00 / 13.6))}{540.6 \times 29.92}$$

$V_{m(std)}$ = 0.666 dscf 0.02832 m3/ft3
$V_{m(std)}$ = 0.019 dscm

Moisture Content, proportion, by volume - as per US EPA Method 5, Eq. 5-3

$$\frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}}$$

$V_{w(std)}$ = Volume of water vapor condensed	=	31.378	ft^3
$V_{m(std)}$ = Dry Gas Volume	=	0.666	ft^3

$$B_{ws} = \frac{31.378}{0.666 + 31.378}$$

B_{ws} = 0.9792

Moisture content at saturation

This calculated by polynomial fit: $(86.7222826792858 + T_s*(-0.645483277572566) + T_s^2*0.00181527101645074 + T_s^3 * (-2.28823297043421E-06) + (T_s)^4*1.09201445204276E-09)*100*29.92/P_s)$

86.722282679285800			=	86.7
-0.645483277572566	X	772.0	=	-498.3
0.00181527101645074	X	595984	=	1081.9
-2.28823297043421E-06	X	460099648	=	-1052.8
1.09201445204276E-09	X	3.55197E+11	=	387.9
		sum	=	5.3467
sum x 100	x	29.92 / 29.73	=	538.07 %

for further calculations

B_{ws} = 0.9792 97.92 %

Dry Molecular Weight of Stack Gas, lb/lb-mole - as per US EPA Method 3, Eq. 3-1

$$M_d = MW_{CO}(\%CO) + MW_{CO2}(\%CO_2) + MW_{O2}(\%O_2) + MW_{H2}(\%H_2) + MW_{CH4}(\%CH_4) + MW_{N2}(\%N_2)$$

MW_{CO}= Molecular weight of CO, divided by 100	=	0.28	lb/lb-mole
%CO = Percent CO by volume, dry basis	=	0.0	%
MW_{CO2}= Molecular weight of CO_2, divided by 100	=	0.44	lb/lb-mole
$\%CO_2$ = Percent CO_2 by volume, dry basis	=	0.0	%
MW_{O2} = Molecular weight of O_2, divided by 100	=	0.32	lb/lb-mole
$\%O_2$ = Percent O_2 by volume, dry basis	=	14.0	%
MW_{H2} = Molecular weight of H_2, divided by 100	=	0.02	lb/lb-mole
$\%H_2$ = Percent H_2 by volume, dry basis	=	0.0	%
MW_{CH4} = Molecular weight of CH_4, divided by 100	=	0.16	lb/lb-mole
$\%CH_4$ = Percent CH_4 by volume, dry basis	=	0.0	%
MW_{N2} = Molecular weight of N2, divided by 100	=	0.28	lb/lb-mole
$\%N_2$ = 100% - %CO - $\%CO_2$ - $\%O_2$ - %H2 - %CH4	=	86.0	%

$$M_d = \frac{(0.28 \times 0.0) + (0.44 \times 0.0) + (0.32 \times 14.0) + (0.02 \times 0.0) + (0.16 \times 0.0) + (0.28 \times 86.0)}{}$$

M_d = 28.56 lb/lb-mole

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Particulate Matter
Dates: July 14, 16, 17, 2011
Run No. 1

Molecular Weight of stack gas, lb/lb-mole - as per US EPA Method 2, Eq. 2-6

$$M_s = M_d(1-B_{ws})+18.0(B_{ws})$$

M_d= Dry molecular weight of stack gas	=	28.56	lb/lb-mole
B_{ws}= Proportion of water vapor, by volume	=	0.9792	proportion
18.0 = Molecular Weight of H_2O	=	18.00	lb/lb-mole

M_s = 28.56 x (1 - 0.979) + (18.00 x 0.979)
M_s = 18.22 lb/lb-mole

Average Stack Gas Velocity, ft/sec - as per US EPA Method 2, Eq. 2-7

$$v_s = K_p \times C_p \times \text{deltaP}_{avg} \times \sqrt{T_s/(P_s \times M_s)}$$

K_p= Velocity equation constant	=	85.49	ft/sec[(((lb/lb-mole)(in.Hg))/((degR)(in.H2O)))]$^{1/2}$
C_p = S type pitot tube coefficient	=	0.84	
deltaP$_{avg}$=ave. sqrt. of the velocity head of stack gas	=	11.1271	in.H_2O
T_s = Absolute stack temperature	=	772.0	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
M_s = Molecular Weight of stack gas	=	18.22	lb/lb-mole

$$v_s = 85.49 \times 0.84 \times 11.13 \times \left(\frac{772.0}{29.73 \times 18.22}\right)^{0.5}$$

v_s = 953.92 ft/sec 15.8987 ft/min
WAF = 1.00
v_s(WAF Adjusted)= 953.92 ft/sec

Stack Area

$$A = 3.14 \times (\text{Stack Diameter}/2)^2$$

3.1415927 = PI	=	3.14	
Stack Diameter		0.67	ft2

$$A = 3.14 \times \left(\frac{0.67}{2}\right)^2$$

A = 0.35 ft2

Average Stack Gas Volumetric Flow Rate - Actual Conditions

$$Q_{actual} = vs \times A$$

v_s= Average stack gas velocity	=	953.92	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2

Q_{actual} = 953.92 x 0.35

Q_{actual} = 333 ft3/sec
Q_{actual} = 19,979 ft3/min
Q_{actual} = 1,198,733 ft3/hr

Average Stack Gas Dry Volumetric Flow Rate, dscf/hr - as per US EPA Method 2, Eq. 2-8

$$Q = \frac{3600 \times (1-B_{ws}) \times v_s \times A \times T_{std} \times P_s}{T_s \times P_{std}}$$

3600= Conversion factor	=	3600	sec/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9792	proportion
v_s= Average stack gas velocity	=	953.92	ft/sec
A = Cross sectional area of stack	=	0.35	ft^2
T_{std} = Standard absolute temperature	=	528	degR
P_s = Absolute stack pressure	=	29.73	in. Hg
T_s = Absolute stack temperature	=	772.0	degR
P_{std} = Standard absolute pressure	=	29.92	in. Hg

$$Q = \frac{3600 \times (1.00 - 0.979) \times 953.92 \times 0.349 \times 528 \times 29.73088}{772.0 \times 29.92}$$

Q = 16,931 dscfh
Q = 282 dscfm
Q = 17 kdscfh
Q = 0 kdscfm

Conversions
60 min/hr
1/1000 k

Example Calculations

Project Name: ExxonMobil ICR Test - DCU D603 Vent
Parameter: Particulate Matter
Dates: July 14, 16, 17, 2011
Run No. 1

Average Stack Gas Wet Volumetric Flow Rate, wscf/hr

$$Q_w = \frac{Q}{(1-Bws)}$$

Q = Average Stack Gas Dry Volumetric Flow Rate	=	16,931	dscf/hr
B_{ws} = Proportion of water vapor, by volume	=	0.9792	proportion

$$Q_w = \frac{16,931}{(\ 1.00 - 0.979\ )}$$

$$Q_w = 814,677 \text{ wscfh}$$
$$= 13,578 \text{ wscfm}$$
$$= 815 \text{ kwscfh}$$
$$= 14 \text{ kwscfm}$$

Conversions
60 min/hr
1/1000 k

Nozzle Area

$$An = 3.1415927 \times (\text{Nozzle Diameter}/12/2)^2$$

3.1415927 = PI	=	3.14	
12 = Conversion Factor		12.00	in/ft
Nozzle Diameter		0.121	in

$$An = 3.14 \times \left(\frac{0.12100}{12} \times \frac{1}{2}\right)^2$$

$$An = 7.99E\text{-}05 \text{ ft2}$$

SHEET NO. 1 OF 1

PROJECT NO. 182129

DATE 11/1/2011

BY MJKrall

CHK'D

SUBJECT PM Calculations

ExxonMobil BTRF DCU ICR

Run 1 - Total PM

70.0 mg detected (TRC)
0.666 dscf sample volume
18,614 dscfh flowrate from Ontario Hydro train

$$\frac{\text{detected } 70.0\text{ mg}}{0.666\text{ dscf sample volume}} \times \frac{\text{Conv gram}}{1000\text{ mg}} \times \frac{\text{Conv } 15.43\text{ grains}}{\text{gram}} = 1.622\ \frac{\text{grains}}{\text{dscf}}$$

$$\frac{\text{detected mg } 70.0}{0.666\text{ dscf sample volume}} \times \frac{\text{dry flow dscf } 18{,}614}{\text{hr}} \times \frac{\text{Conv lb}}{453.6 \times 10^3\text{ mg}} \times \frac{\text{duration } 20\text{ min}}{\text{Vent Cycle}} \times \frac{\text{Conv hr}}{60\text{ min}}$$

$$\downarrow 11$$

$$1.438\ \frac{\text{lb}}{\text{Vent Cycle}}$$

A

Project Number	182129			
Client / Location	ExxonMobil			
Source	DCU			
Sampling Location	D603 Vent			
Sample Type / Method	M5B/202 Particulate Matter			
Condition	Vent Cycle	Vent Cycle	Vent Cycle	
Vent Cycle Time (min)	20	60	40	
Run No.	1	2	3	Average
Date	7/14/11	7/16/11	7/17/11	
Time Start	20:06	0:43	6:26	
Time Finish	20:26	1:43	7:06	
O_2 %, dry	14.00	12.80	16.50	
CO_2 %, dry	0.00	0.10	0.00	
Corrected Meter Volume (dscf)	0.666	2.488	0.738	
Corrected Meter Volume (dscm)	0.019	0.070	0.021	
Flue Gas Moisture (%)	97.92	97.59	99.07	
Gas Molecular Weight (Wet) (g/g-mole)	28.56	28.53	28.66	
Absolute Stack Pressure (in. Hg)	29.73	29.87	29.96	
Absolute Stack Temperature (R)	772.0	694.0	734.5	
Average Gas Velocity (ft/sec)	953.92	241.70	267.67	
Avg Flow Rate (acfh)	1,198,733	303,729	336,365	
Avg Flow Rate (dscfh)	16,931	5,559	2,251	
Avg Flow Rate used in emission rate cals (dscfh)	18,641	5,508	3,916	
Isokinetic Sampling Rate (%)	51.6	195.6	215.0	
Condensible Aqueous Beaker #	645	9	35	
Tare Weight (g)	112.9497	110.4756	106.3670	
Final Weight (g)	112.9778	110.5274	106.4434	
H2O Blank Weight Gain (g)	-0.0006	-0.0006	-0.0006	
Aqueous Weight Gain (g)	0.0281	0.0518	0.0764	
Condensible Organic Beaker #	d494	981	47	
Tare Weight (g)	119.3992	113.1403	114.5074	
Final Weight (g)	119.4240	113.5460	114.5272	
Organic Blank Weight Gain (g)	0.0000	0.0000	0.0000	
Organic Weight Gain (g)	0.0248	0.4057	0.0198	
Filter Number	84551	84540	54541	
Tare Weight (g)	0.4528	0.4780	0.4498	
Final Weight (g)	0.4584	0.5464	0.4533	
Filter Blank Weight Gain (g)	-0.0004	-0.0004	-0.0004	
Filter Weight Gain (g)	0.0056	0.0684	0.0035	
Total PM Front Half Beaker #	18	e3	39	
Tare Weight (g)	113.9685	101.4052	113.3484	
Final Weight (g)	113.9800	101.6500	113.4205	
Total PM Front Half Weight Gain (g)	0.0115	0.2448	0.0721	
Volume of Acetone in Front Half Rinse (ml)	65.0	170.0	50.0	
Volume of Acetone in Blank (ml)	150.0	150.0	150.0	
Acetone Blank Weight Gain (g)	-0.0002	-0.0002	-0.0002	
Acetone Blank Correction (g)	0.0000	0.0000	0.0000	
Maximum Acetone Blank Correction (g)	0.0015	0.0015	0.0015	
Total PM Front Half Weight Gain - Acetone Blank C	0.0115	0.2448	0.0721	
Inorganic Condensible PM Weight Gain (g)	0.0281	0.0518	0.0764	
Inorganic Condensible PM Weight Gain (lbs)	0.000062	0.000114	0.000168	
Organic Condensible PM Weight Gain (g)	0.0248	0.4057	0.0198	
Organic Condensible PM Weight Gain (lbs)	0.000055	0.000894	0.000044	
Filterable Particulate Weight Gain (g)	0.0171	0.313200	0.075600	
Filterable Particulate Weight Gain (lbs)	0.0000377	0.000690481	0.000166668	
Total Particulate Weight Gain (g)	0.0700	0.7707	0.1718	
Total Particulate Weight Gain (lbs)	0.000154	0.00169909	0.0003788	
Inorganic Condensible PM Concentration (lbs/dscf)	0.0000930	0.0000459	0.0002282	0.000122
Organic Condensible PM Concentration (lbs/dscf)	0.0000821	0.0003595	0.0000591	0.000167
Filterable Particulate Concentration (lbs/dscf)	0.0000566	0.0002776	0.0002258	0.000187
Total Particulate Concentration (lbs/dscf)	0.0002317	0.0006830	0.0005132	0.000476
Inorganic Condensible PM Emissions (lbs/hr)	1.734	0.253	0.894	0.960
Organic Condensible PM Emissions (lbs/hr)	1.530	1.980	0.232	1.247
Filterable Particulate Emissions (lbs/hr)	1.055	1.529	0.884	1.156
Total Particulate Emissions (lbs/hr)	4.320	3.762	2.010	3.364
Inorganic Condensible PM Emissions (lbs/VC)	0.578	0.253	0.596	0.476
Organic Condensible PM Emissions (lbs/VC)	0.510	1.98	0.154	0.882
Filterable Particulate Emissions (lbs/VC)	0.352	1.53	0.590	0.823
Total Particulate Emissions (lbs/VC)	1.44	3.76	1.340	2.18

STP is defined as 528 R and 29.92 "Hg

Meter Box: Orifice Full Calibration

Date:	2/7/2011
Prev. Calib. Date:	1/26/2010
Location:	TRC South Austin, TX
Technician:	DKA
Meter Serial No:	1459
TRC Meter Box ID	1459
Atm. Pressure (corr. In Hg):	uncorrected: 29.68 --> 29.68
Critical Vacuum + 2 in Hg:	16 in. Hg. (required minimum)
Prev. Calib Factor (Y):	0.9826

Reference Orifice Set		**Orifice (#)**	**K' Factor**
Manufacturer:	Apex Instruments	40	0.2353
Model:	LA 40-73	48	0.3451
Tested By:	EW	55	0.4549
Date:	4/12/2010	63	0.5886

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
40	0.2353	0.26	17	148.906	154.065	5.159	63	63	64	64	23	70.0	70.0
48	0.3451	0.6	21	154.065	163.397	9.332	64	64	67	67	22	70.0	71.0
55	0.4549	1	16	163.397	172.795	9.398	67	67	70	70	21	71.0	71.0
63	0.5886	1.8	14	172.795	183.460	10.665	68	69	67	67	19	71.0	69.0

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y)		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
5.16	146.21	0.303	5.16	146.04	0.999	-0.003	1.622	-0.07
9.31	263.69	0.444	9.34	264.47	1.003	0.001	1.728	0.04
9.33	264.31	0.587	9.38	265.48	1.004	0.003	1.637	-0.05
10.63	300.96	0.762	10.62	300.86	1.000	-0.002	1.764	0.08

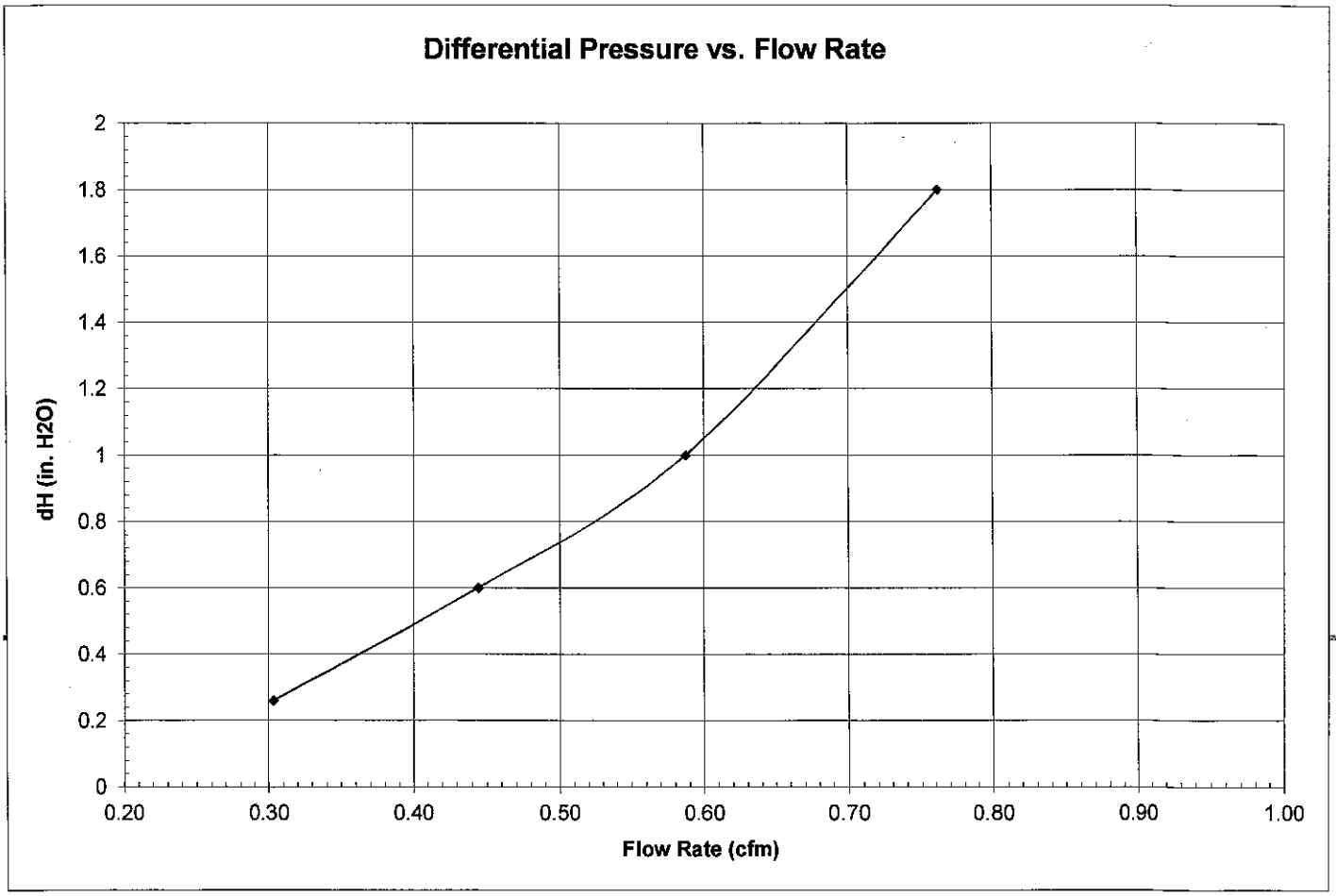
Meter Box

Calibration Test Results		**Pass/Fail**
* Average Y:	1.0015	*PASS*
Ave. Y w/in 5% of previous value:		*YES*
0.95 >= Y <= 1.05:		*PASS*
** Average dH:	1.688	*PASS*

Criteria:

* Y- ratio of the reading of the calibration meter (critical orifice) to the Meter Box DGM. Acceptable tolerance of individual values from the average is +/- 0.02.

** dH- the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air flow at 68 F and 29.92 in Hg, acceptable tolerance of individual values from the average is +/- 0.2.



Meter Box: Post-Test Calibration Check

Date:	8/18/2011		
Prev. Calib. Date:	2/7/2011		
Location:	TRC Austin Lab		
Technician:	MRL		
Meter Serial No:	9605802.00		
TRC Meter Box ID	1459		
Atm. Pressure (corr. In	29.26	uncorrected:	29.42
Critical Vacuum + 2 in H	16	in. Hg. (required minimum)	
Calibration Factor (Y):	1.0015		

Reference Orifice Set		Orifice (#)	K' Factor
Manufacturer:	Apex Instruments	40	
Model:	SX40-73	48	
Tested By:	EW	55	0.4405
		63	
		73	

							Initial Temperatures		Final Temperatures			Ambient Temperatures	
Orifice Serial #	K' coefficient (see above)	dH (in. H2O)	Time (min)	Vol (initial) (cu ft)	Vol (final) (cu ft)	Vol. Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)
55	0.4405	0.64	37.0	135.027	152.473	17.446	72	70	74	72	23	74.0	75.0
55	0.4405	0.64	15.0	152.473	159.551	7.078	74	72	74	73	23	76.0	76.0
55	0.4405	0.64	27.0	159.551	172.331	12.78	74	73	76	74	23	77.0	77.0

azzssxxx

Meter Box Dry Gas Meter			Critical Orifice		Dry Gas Meter Calibration Factor (Y_{check})		Orifice Calibration Factor (dH@)	
Volume Corrected Vm (std) (cu ft)	Volume Corrected Vm (std) (liters)	Flow Rate (CFM)	Volume Corrected Vcr (std) (cu ft)	Volume Corrected Vm (std) (liters)	Value (#)	Variation (#)	Value (in H2O)	Variation (in H2O)
16.95	479.99	0.472	20.62	584.02	1.217	0.001	1.131	0.00
6.86	194.28	0.472	8.35	236.43	1.217	0.001	1.133	0.00
12.36	350.14	0.473	15.02	425.18	1.214	-0.002	1.133	0.00

Meter Box

Post-Test Calibration Check	**Results**
Ave. Y_{check}: 1.2160	***PASS***
Ave. Y_{check} w/in 5% of previous value:	***NO***
Y values not w/in 5%...use lower Y value	
0.95 >= Y_{check} <= 1.05:	***FALSE***

Post-Test Meter Factor Check

TRC

Console No.	1459	S. O. P. Reference	AM - 103
Temperature Display Type	Jenco-765	Calibrator Type	Omega Model CL23A
Temperature Display Serial No.	JC 08356	Calibrator Serial No.	T239267

	Reference Temperature (°F)	32	Reference Temperature (° F)	212	Reference Temperature (° F)	500	Reference Temperature (° F)	1000	Reference Temperature (° F)	1500
Display Channel No.	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)	Measured Temperature (°-F)	Relative Error (%)	Measured Temperature (° F)	Relative Error (%)
1 (Stack)	30	0.4	211	0.1	497	0.3	1001	-0.1	1498	0.1
2 (Probe)	31	0.2	212	0.0	497	0.3	1000	0.0	1499	0.1
3 (Filter)	31	0.2	211	0.1	497	0.3	1000	0.0	1498	0.1
4 (Dryer)	29	0.6	210	0.3	496	0.4	1000	0.0	1498	0.1
5 (Aux)	29	0.6	210	0.3	496	0.4	999	0.1	1497	0.2
6 (DGM Inlet)	30	0.4	211	0.1	497	0.3	1000	0.0	1499	0.1
7 (DGM Outlet)	30	0.4	211	0.1	497	0.3	1000	0.0	1499	0.1

Relative Error must meet criteria of +/- 1.5 % (absolute temperature, ° R)

Operator Michael Lopez Date 8/12/2011

Note:
Display Type - type J, K, T etc…
Calibrator Type - must match display type
Display Serial Number - Located on T/C readout, not the same as meter box number
Enter data in shaded boxes

TRC Nozzle Calibration and Inspection Data Sheet

Company Name: ExxonMobil BTRF Duluth
Nozzle Number: PM-Glass-1

Measure three diameters (in inches) as shown below. Average the diameters and calculate area according to the calculations below.

Calibration Measurement

*Diameter 1 (in): 0.120 **Date:** 7/12/2011
*Diameter 2 (in): 0.121
*Diameter 3 (in): 0.121

Average Diameter (in): 0.121 = (Sum of Diameters 1-3) / 3

Average Radius (in): 0.0605 = Average Diameter (in) / 2
Average Radius (ft): 0.00504 = Average Radius (in) / 12

Nozzle Area (ft2): 0.0000798 = π x radius (ft) ^2

*Maximum allowable difference between largest diameter and smallest diameter is 0.004 inches.

Nozzle is round, sharp-edged, free of nicks and dents

TRC

signature

9225 US Highway 183 S
Austin, TX 78747

512.329.6080 PHONE
512.684.3409 FAX

www.TRCsolutions.com

Lab Analysis Report

Case Narrative

General Information

Company:	ExxonMobil-Baytown
Project #:	182129.0000.0000
Analysis Date:	Aug 5-18, 2011
Analyst:	Randall Monson

Analysis

Analytes:	Particulate Matter
Analytical Protocols:	EPA Methods 5B & 202
TRC SOP:	AM-205B & AM-880
Analytical Notes:	No problems were encountered during the analyses.
QA/QC Review:	All of the data have been reviewed for quality assurance. All of the quality control and sample specific information in this package is complete and meets or exceeds the minimum requirements for acceptability.
Comments:	If you have any questions or concerns regarding this analysis, please feel free to contact me.

Laboratory Statements: I certify that to the best of my knowledge:

- Test data and all corresponding information have been checked for accuracy and completeness.
- Analyses have been conducted in accordance with approved protocol, reference methods and the requirements of NELAC (as applicable).
- All deviations, method modifications, or analytical anomalies are summarized in the appropriate report narrative(s).
- Analysis results only represent that of the samples as received into the laboratory.
- This document contains a total of 22 pages.

This test report shall not be reproduced except in full, without the written approval of the laboratory.

Randall Morrison 9/12/11

Analyst Date

9/12/11

Quality Assurance Review Date

EXXONMOBIL BTRF
DCU ICR TESTING
Project # 182129

	RUN 1	RUN 2	RUN 3
FHR			
sample volume (ml)	65	170	50
beaker ID	18	E3	39
TARE	113.9685	101.4052	113.3484
FINAL	113.9800	101.6500	113.4205
WT GAIN (GM)	0.0115	0.2448	0.0721
FILTER			
ID	84551	84540	84541
TARE	0.4528	0.4780	0.4498
FINAL	0.4584	0.5464	0.4533
WT GAIN (GM)	0.0056	0.0684	0.0035
AQUEOUS CONDENSIBLES			
sample volume (ml)	810	2610	1750
beaker ID	645	9	35
TARE	112.9497	110.4756	106.367
FINAL	112.9778	110.5274	106.4434
WT GAIN (GM)	0.0281	0.0518	0.0764
ORGANIC CONDENSIBLES			
sample volume (ml)	330	365	645
beaker ID	D494	981	47
TARE	119.3992	113.1403	114.5074
FINAL	119.4240	113.5460	114.5272
WT GAIN (GM)	0.0248	0.4057	0.0198
Filterable PM WT GAIN (gm)	0.0171	0.3132	0.0756
TOTAL WT GAIN (gm)	0.0700	0.7707	0.1718

REAGENT BLANKS	FILTER	ACETONE	HEXANE	DDI H2O
ID	84581	D589	D453	94
sample volume (ml)		150	150	125
TARE	0.4477	112.5906	118.0586	113.9672
FINAL	0.4473	112.5904	118.0586	113.9666
WT GAIN (GM)	-0.0004	-0.0002	0.0000	-0.0006

PROOF TRAIN	HEXANE	DDI H2O
ID	554	8
sample volume (ml)	155	150
TARE	103.8701	107.9588
FINAL	103.8702	107.9594
WT GAIN (GM)	0.0001	0.0006

EXM-DCU-MSB-R1 FHR

M202-PT-AQS-081611

TRC

Project #:		Sample ID:	
Matrix [1]: glass beaker		Matrix ID: ~~ET~~ EM 18	
Pre-Test		Post-Test	
Date / Time [2,7]	7-29-11 0847	8-6-11	0842
Temp. (°F) / Humid. (%) [3]	68 44	66	48
Mass (g) [4] / Initials / Balance [8,9]	113.9685 RRM M	113.9797	RRM M
Date / Time [2,7]	7-30-11 0617	8-6-11	1542
Temp. (°F) / Humid. (%) [3]	66 46	72	48
Mass (g) [4] / Initials / Balance [8,9]	113.9685 RRM M	113.9802	RRM M
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Average Mass (g) or Continued on Page No. [5]	113.9685	113.9800	
Net Gain (g) [6]	0.0115		
Comments	65mL		
Reviewed (Signature/Date)		11-4-11	

Project #:		Sample ID:	
Matrix [1]: glass beaker		Matrix ID: ~~EZ~~ EM 8	
Pre-Test		Post-Test	
7-29-11	0848	8-17-11	1606
68	44	73	50
107.9600	RRM M	107.9596	RRM M
7-30-11	0610	8-18-11	0856
66	46	64	44
107.9570	RRM M	107.9591	RRM M
7-31-11	1119		
68	46		
107.9590	RRM M		
7-31-11	1610		
71	48		
107.9586	RRM M		
107.9588		107.9594	
0.0006			
150mL			
		11-4-11	

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

Rev. 8 11/03/09

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Austin Air Measurements
Gravimetric Laboratory
PM Weigh Log Vol 20, ID 041

EM-BTRF-000333

EXM-DCU-M5B-R2-FHR

EXM-DCU-M5B-R3-FHR

TRC

	Project #:		Sample ID:	
	Matrix [1]: glass beaker		Matrix ID: E3 RRM E3	
	Pre-Test		Post-Test	
Date / Time [2,7]	7-29-11	0849	8-6-11	0841
Temp. (°F) / Humid. (%) [3]	68	44	66	48
Mass (g) [4] / Initials / Balance [8,9]	101.4054	RRM | M	101.6498	RRM | M
Date / Time [2,7]	7-30-11	0618	8-6-11	1547
Temp. (°F) / Humid. (%) [3]	66	46	72	48
Mass (g) [4] / Initials / Balance [8,9]	101.4049	RRM | M	101.6502	RRM | M
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	101.4052		101.6500	
Net Gain (g) [6]	0.2448			
Comments	170 mL			
Reviewed (Signature/Date)			11-4-11	

	Project #:		Sample ID:	
	Matrix [1]: glass beaker		Matrix ID: E4 RRM 39	
	Pre-Test		Post-Test	
Date / Time [2,7]	7-29-11	0852	8-6-11	0837
Temp. (°F) / Humid. (%) [3]	68	44	66	48
Mass (g) [4] / Initials / Balance [8,9]	113.3481	RRM | M	113.4203	RRM | M
Date / Time [2,7]	7-30-11	0614	8-6-11	1538
Temp. (°F) / Humid. (%) [3]	66	46	6RM 72	48
Mass (g) [4] / Initials / Balance [8,9]	113.3486	RRM | M	113.4207	RRM | M
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	113.3484		113.4205	
Net Gain (g) [6]	0.0721			
Comments	50 mL			
Reviewed (Signature/Date)			11-4-11	

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000536

Rev. 8 11/03/09

TRC Environmental Corporation
Austin Air Measurements
Gravimetric Laboratory
PM Weigh Log Vol 20, ID 041

EXM-DCU-M202-R3-Cond

EXM-DCU-M202-Rg+Blk-Dup

TRC

	Project #:	Sample ID: 35	Project #:	Sample ID: 94
	Matrix [1]:	Matrix ID: 2	Matrix [1]:	Matrix ID: 2
	Pre-Test	Post-Test	Pre-Test	Post-Test
Date / Time [2,7]	7-27-11 0845	8-6-11 0840	7-27-11 0846	8-6-11 0845
Temp. (°F) / Humid. (%) [3]	66 48	66 48	66 48	66 48
Mass (g) [4] / Initials / Balance [8,9]	106.3668 RAM M	106.4425 RKM M	113.9673 RAM M	113.9664 RKM M
Date / Time [2,7]	7-28-11 0922	8-6-11 1542	7-28-11 0919	8-6-11 1549
Temp. (°F) / Humid. (%) [3]	68 48	72 48	68 48	72 48
Mass (g) [4] / Initials / Balance [8,9]	106.3672 RKM M	106.4436 RKM M	113.9672 RKM M	113.9669 RKM M
Date / Time [2,7]		8-8-11 0843		
Temp. (°F) / Humid. (%) [3]		67 47		
Mass (g) [4] / Initials / Balance [8,9]		106.4433 RKM M		
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	106.3670	106.4434	113.9672	113.9666
Net Gain (g) [6]	0.0764		-0.0006	
Comments	1750 mL		125 mls	
Reviewed (Signature/Date)	JL Peeknk 11/7/11		JL Peeknk 11/7/11	

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] *Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. [EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000837

Rev. 8 11/03/09

TRC Environmental Corporation
Austin Air Measurements
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PM Weigh Log Vol 20, ID 041

EXM-DCU-M202-R1-cond

EXM-DCU-M202-R2-cond

TRC

	Project #:		Sample ID: 645	
	Matrix [1]:		Matrix ID:	
	Pre-Test		Post-Test	
Date / Time [2,7]	7-27-11	0844	8-6-11	0839
Temp. (°F) / Humid. (%) [3]	66	48	66	48
Mass (g) [4] / Initials / Balance [8,9]	112.9495	RAM M	112.9776	RAM M
Date / Time [2,7]	7-28-11	0920	8-6-11	1540
Temp. (°F) / Humid. (%) [3]	68	48	72	48
Mass (g) [4] / Initials / Balance [8,9]	112.9499	RAM M	112.9779	RAM M
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	112.9497		112.9778	
Net Gain (g) [6]	0.0281			
Comments	810mL			
Reviewed (Signature/Date)			11-4-11	

	Project #:		Sample ID: 9	
	Matrix [1]:		Matrix ID:	
	Pre-Test		Post-Test	
Date / Time [2,7]	7-27-11	0844	8-6-11	1542
Temp. (°F) / Humid. (%) [3]	66	48	72	48
Mass (g) [4] / Initials / Balance [8,9]	110.4753	RAM M	110.5300	RAM M
Date / Time [2,7]	7-28-11	0917	8-8-11	0841
Temp. (°F) / Humid. (%) [3]	68	48	67	47
Mass (g) [4] / Initials / Balance [8,9]	110.4759	RAM M	110.5272	RAM M
Date / Time [2,7]			8-8-11	1549
Temp. (°F) / Humid. (%) [3]			72	49
Mass (g) [4] / Initials / Balance [8,9]			110.5275	RAM M
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	110.4756		110.5274	
Net Gain (g) [6]	0.0518			
Comments	2610mL			
Reviewed (Signature/Date)			11/7/11	

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. [*EPA/600/R-94/038c, 09/94, F5-1*]

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000538

Rev. 8 11/03/09

TRC Environmental Corporation
Austin Air Measurements
Gravimetric Laboratory
PM Weigh Log Vol 20, ID 041

DCU
EXM-M202 - Rgt B1C - Tex

TRC

	Project #: 184453		Sample ID: 98	
	Matrix [1]: Glass		Matrix ID: R-2410 <PM10 R2	
	Pre-Test		Post-Test	
Date / Time [2,7]	7-25-11	1657	8-4-11	0854
Temp. (°F) / Humid. (%) [3]	66	48	66	48
Mass (g) [4] / Initials / Balance [8,9]	105.0396	RAM M	105.0383	RAM M
Date / Time [2,7]	7-26-11	0928	8-5-11	0922
Temp. (°F) / Humid. (%) [3]	66	48	68	50
Mass (g) [4] / Initials / Balance [8,9]	105.0374	RAM M	105.0385	RAM M
Date / Time [2,7]	7-27-11	0842		
Temp. (°F) / Humid. (%) [3]	66	48		
Mass (g) [4] / Initials / Balance [8,9]	105.0371	RAM M		
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	105.0373		105.0384	
Net Gain (g) [6]	0.0011			
Comments	Vol.-33 ml			
Reviewed (Signature/Date)	SL Perkins	11/7/11		

	Project #:		Sample ID: D453	
	Matrix [1]:		Matrix ID:	
	Pre-Test		Post-Test	
Date / Time [2,7]	7-27-11	0843	8-6-11	0848
Temp. (°F) / Humid. (%) [3]	66	48	66	48
Mass (g) [4] / Initials / Balance [8,9]	118.0579	RAM M	118.0585	RAM M
Date / Time [2,7]	7-28-11	0923	8-6-11	1551
Temp. (°F) / Humid. (%) [3]	68	48	72	48
Mass (g) [4] / Initials / Balance [8,9]	118.0613	RAM M	118.0587	RAM M
Date / Time [2,7]	7-29-11	0850		
Temp. (°F) / Humid. (%) [3]	68	44		
Mass (g) [4] / Initials / Balance [8,9]	118.0584	RAM M		
Date / Time [2,7]	7-30-11	0620		
Temp. (°F) / Humid. (%) [3]	66	46		
Mass (g) [4] / Initials / Balance [8,9]	118.0589	RAM M		
Average Mass (g) or Continued on Page No. [5]	118.0586		118.0586	
Net Gain (g) [6]	0.0000			
Comments	150 ml			
Reviewed (Signature/Date)		11-4-11		

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. [*EPA/600/R-94/038c, 09/94, F5-1*]

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. [*EPA/600/R-94/038c, September 1994, F5-1*]

[4] Record results to nearest 0.1 mg (0.0001 g). [*EPA/600/R-94/038c, September 1994, F5-1*]

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. [*EPA/600/R-94/038c, September 1994, F5-1*]

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000339

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TRC

EXM-DCU-M5B-R1-FIC

	Project #:			Sample ID:		
	Matrix[1]: 83mm Quartz			Matrix ID: 84551		
	Pre-Test			Post-Test		
Date / Time [2,7]	6-2-11	1127		8-6-11	0857	
Temp. (°F) / Humid. (%) [3]	65	50		66	48	
Mass (g) [4] / Initials / Balance [8,9]	0.4528	RRM	m	0.4583	RRM	m
Date / Time [2,7]	6-4-11	1220		8-6-11	1530	
Temp. (°F) / Humid. (%) [3]	66	47		72	48	
Mass (g) [4] / Initials / Balance [8,9]	0.4528	RRM	m	0.4585	RRM	M
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Average Mass (g) or Continued on Page No.[5]	0.4528			0.4584		
Net Gain (g) [6]	0.0056					
Comments						
Reviewed (Signature/Date)	11-4-11					

ChV-F2201-PM10-R2

Project #: 114453			Sample ID:			
Matrix[1]: 47mm Quartz			Matrix ID: 84552			
Pre-Test			Post-Test			
6-2-11	1127		7-7-11	1857		
65	60		71	48		
0.1478	RRM	m	0.1478	JMH	M	
6-3-11	1704		7-8-11	1451		
73	49		70	47		
0.1478	RRM	m	0.1477	JMH	M	
0.1478			0.1478			
0.0000						
RMouson 8-1-11						

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[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EXM-DCU-MSB-R3-FIL

TRC

Project #:
Matrix [1]: 83 Quartz Filter
Sample ID:
Matrix ID: 84541

	Pre-Test			Post-Test		
Date / Time [2,7]	6-2-11	1109		8-6-11	0855	
Temp. (°F) / Humid. (%) [3]	65	50		66	48	
Mass (g) [4] / Initials / Balance [8,9]	0.4500	RRM	m	0.4531	RRM	m
Date / Time [2,7]	6-4-11	1229		8-6-11	1533	
Temp. (°F) / Humid. (%) [3]	66	47		~~6~~ 72	48	
Mass (g) [4] / Initials / Balance [8,9]	0.4497	RRM	m	0.4535	RRM	m
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Average Mass (g) or Continued on Page No.[5]	0.4498			0.4533		
Net Gain (g) [6]	0.0035					
Comments						
Reviewed (Signature/Date)	11-4-11					

Project #: 186258
Matrix [1]: 83 Quartz Filter
Sample ID: Run 3
Matrix ID: 84542

	Pre-Test			Post-Test		
Date / Time [2,7]	6-2-11	1111				
Temp. (°F) / Humid. (%) [3]	65	50				
Mass (g) [4] / Initials / Balance [8,9]	0.4458	RRM	m			
Date / Time [2,7]	6-4-11	1228				
Temp. (°F) / Humid. (%) [3]	66	47				
Mass (g) [4] / Initials / Balance [8,9]	0.4456	RRM	m			
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Date / Time [2,7]						
Temp. (°F) / Humid. (%) [3]						
Mass (g) [4] / Initials / Balance [8,9]						
Average Mass (g) or Continued on Page No.[5]	0.4457					
Net Gain (g) [6]						
Comments						
Reviewed (Signature/Date)						

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

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CHV-F5380B-M5-R1

	Pre-Test		Post-Test	
Project #:	18453		Sample ID:	
Matrix [1]: 83mm Quartz Filter			Matrix ID: 84538 98	
Date / Time [2,7]	6-2-11	1105	7-7-11	1709
Temp. (°F) / Humid. (%) [3]	65	50	71	48
Mass (g) [4] / Initials / Balance [8,9]	0.4482	RMM M	0.4508	JMH M
Date / Time [2,7]	6-4-11	1225	7-8-11	1502
Temp. (°F) / Humid. (%) [3]	66	47	70	48
Mass (g) [4] / Initials / Balance [8,9]	0.4482	RMM M	0.4507	JMH M
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	0.4482		0.45[M]08	
Net Gain (g) [6]	0.0026			
Comments				
Reviewed (Signature/Date)	Kristen Monroe 8-1-11			

EXM-DCU-M5B-R2-FIL

	Pre-Test		Post-Test	
Project #:			Sample ID:	
Matrix [1]:			Matrix ID: 84539 [M] 40	
Date / Time [2,7]	6-2-11	1107	8-6-11	0854
Temp. (°F) / Humid. (%) [3]	65	50	66	48
Mass (g) [4] / Initials / Balance [8,9]	0.4481	RMM M	0.5462	RMM M
Date / Time [2,7]	6-4-11	1227	8-6-11	1534
Temp. (°F) / Humid. (%) [3]	66	47	72	48
Mass (g) [4] / Initials / Balance [8,9]	0.4479	RMM M	0.5465	RMM M
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Average Mass (g) or Continued on Page No. [5]	0.4780		0.5464	
Net Gain (g) [6]	0.0684			
Comments				
Reviewed (Signature/Date)	SL Peebles 11/7/11			

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 98-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000582

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EXM-DCU-M202-B3 - 0.9 gms

Project #		Sample ID	
Matrix [1] glass beaker		Matrix ID 47	
Pre-Test		Post-Test	
Date / Time [2,7]	7-29-11 0858		8-6-11 0847
Temp. (°F) / Humid. (%) [3]	68 44		66 48
Mass (g) [4] / Initials / Balance [8,9]	114.5076 RRM M		114.5274 RRM M
Date / Time [2,7]	7-30-11 0615		8-6-11 1548
Temp. (°F) / Humid. (%) [3]	66 46		72 48
Mass (g) [4] / Initials / Balance [8,9]	114.5072 RRM M		114.5270 RRM M
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Average Mass (g) or Continued on Page No. [5]	114.5074		114.5272
Net Gain (g) [6]	0.0198		
Comments	645nl		
Reviewed (Signature/Date)			11-4-11

EXM-DCU-M202-B3 - 0.9 gms MSB Lot BIC - Acetone

Project #		Sample ID	
Matrix		Matrix ID 0589	
Pre-Test		Post-Test	
Date / Time [2,7]	7-29-11 0950		8-6-11 0843
Temp. (°F) / Humid. (%) [3]	68 44		66 48
Mass (g) [4] / Initials / Balance [8,9]	112.5905 RRM M		112.5896 RRM M
Date / Time [2,7]	7-30-11 0612		8-6-11 1543
Temp. (°F) / Humid. (%) [3]	66 46		72 48
Mass (g) [4] / Initials / Balance [8,9]	112.5906 RRM M		112.5907 RRM M
Date / Time [2,7]			8-8-11 0840
Temp. (°F) / Humid. (%) [3]			67 47
Mass (g) [4] / Initials / Balance [8,9]			112.5902 RRM M
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Date / Time [2,7]			
Temp. (°F) / Humid. (%) [3]			
Mass (g) [4] / Initials / Balance [8,9]			
Average Mass (g) or Continued on Page No. [5]	112.5906		112.5904
Net Gain (g) [6]	-0.0002		
Comments	150nl		
Reviewed (Signature/Date)			11-4-11

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13626 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000583

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EXM-DCW-M202-R1-orgrms

EXM-DCW-M202-R2-orgrms

	Project#:			Sample ID			Project#:			Sample ID		
	Matrix[1] glass beaker			Matrix ID D494			Matrix glass beaker			Matrix ID 981		
	Pre-Test			Post-Test			Pre-Test			Post-Test		
Date / Time [2,7]	7-29-11	0855		8-6-11	0847		7-29-11	0856		8-6-11	0849	
Temp. (°F) / Humid. (%) [3]	68	44		66	48		68	44		66	48	
Mass (g) [4]/ Initials / Balance [8,9]	119.3995	RRM	M	119.4238	RRM	M	113.1405	RRM	M	113.5459	RRM	m
Date / Time [2,7]	7-30-11	0624		8-6-11	1539		7-30-11	0621		8-6-11	1546	
Temp. (°F) / Humid. (%) [3]	66	46		72	48		66	46		72	48	
Mass (g) [4]/ Initials / Balance [8,9]	119.3990	rrm	m	119.4242	RRM	M	113.1401	rrm	m	113.5461	rrm	m
Date / Time [2,7]												
Temp. (°F) / Humid. (%) [3]												
Mass (g) [4]/ Initials / Balance [8,9]												
Date / Time [2,7]												
Temp. (°F) / Humid. (%) [3]												
Mass (g) [4]/ Initials / Balance [8,9]												
Date / Time [2,7]												
Temp. (°F) / Humid. (%) [3]												
Mass (g) [4]/ Initials / Balance [8,9]												
Average Mass (g) or Continued on Page No.[5]	119.3992			119.4240			113.1403			113.5460		
Net Gain (g) [6]	0.0248						0.4057					
Comments	330 ml						365 ml					
Reviewed (Signature/Date)	11-4-11						11-4-11					

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[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. *[EPA/600/R-94/038c, 09/94, F5-1]*

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. *[EPA/600/R-94/038c, September 1994, F5-1]*

[4] Record results to nearest 0.1 mg (0.0001 g). *[EPA/600/R-94/038c, September 1994, F5-1]*

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. *[EPA/600/R-94/038c, September 1994, F5-1]*

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

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M202-PT-ORG-081611

~~EXM DCO M202 RL orgms~~ M

TRC

	Project #: 186444 Luminant	Sample ID: Static Aqueous RZ	Project #:	Sample ID:
	Matrix [1]: glass beaker	Matrix ID: 88	Matrix [1]: glass beaker	Matrix ID: 554
	Pre-Test	Post-Test	Pre-Test	Post-Test
Date / Time [2,7]	7-29-11 0853	9-15-11 1205	7-29-11 0854	8-17-11 1605
Temp. (°F) / Humid. (%) [3]	68 44	68 45	68 44	73 50
Mass (g) [4] / Initials / Balance [8,9]	103.4982 RAM M	103.4997 RAM M	103.8694 RAM M	103.8704 RAM M
Date / Time [2,7]	7-30-11 0625	9-16-11 8:55	7-30-11 0619	8-18-11 0854
Temp. (°F) / Humid. (%) [3]	66 46	68 44	66 46	64 44
Mass (g) [4] / Initials / Balance [8,9]	103.5006 RAM M	103.4994 RAM M	103.8701 RAM M	103.8700 RAM M
Date / Time [2,7]	7-31-11 1121		7-31-11 1119	
Temp. (°F) / Humid. (%) [3]	68 46		68 47	
Mass (g) [4] / Initials / Balance [8,9]	103.4998 RAM M		103.8701 RAM M	
Date / Time [2,7]	7-31-11 1806			
Temp. (°F) / Humid. (%) [3]	71 48			
Mass (g) [4] / Initials / Balance [8,9]	103.5002 RAM M			
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]				
Date / Time [2,7]				
Temp. (°F) / Humid. (%) [3]				
Mass (g) [4] / Initials / Balance [8,9]	RM		RM	MM
Average Mass (g) or Continued on Page No. [5]	103.5000	103.4998	103.8701	103.8702
Net Gain (g) [6]	-0.0002		0.0001	
Comments			155 mL	
Reviewed (Signature/Date)	11/7/11		11-4-11	

[1] "Matrix" is a description of item being weighed (i.e., quartz filter, glass beaker, etc.)

[2] Desiccate filters for >24 hrs prior to initial weighing. Record additional readings at intervals of >6 hrs. [EPA/600/R-94/038c, 09/94, F5-1]

[3] Chamber temperature must be maintained at 20 +/- 5.6 °C (68 +/- 10 °F). During each weighing, sample exposure to laboratory atmosphere must be <2 minutes, with a relative humidity of <50 %. [EPA/600/R-94/038c, September 1994, F5-1]

[4] Record results to nearest 0.1 mg (0.0001 g). [EPA/600/R-94/038c, September 1994, F5-1]

[5] The average mass is achieved when two successive results are within +/- 0.5 mg (0.0005 g). Record the average of the two successive weights (if applicable) or indicate the page number where subsequent weights are recorded. [EPA/600/R-94/038c, September 1994, F5-1]

[6] The "Net Gain" is the arithmetic result of the ["Post-Test Average Mass" - "Pre-Test Average Mass"].

[7] Method 5B matrix must be heated for 6 hrs at 320 °F and then desiccated as per footnote 2.

[8] A = AND HM-120, SN: 13506460

[9] M = Mettler AE 240, SN: L81185

Weight Set = ASTM Class 1: SN: 13826 (100 g), SN: 96-J29027-17 (10 g), SN: 83558 (0.2 g)

EM-BTRF-000576

Rev. 8 11/03/09

TRC Environmental Corporation
Austin Air Measurements
Gravimetric Laboratory
PM Weigh Log Vol 20, ID 041

Balance Verification Log Mettler AE 240, s/n L81185

Date	7-28-11
Pre Measurement [1]	
Time	0904
Internal Check [2]	✓
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	0925
Internal Check [2]	—
100 g [3] (g)	100.0001
Delta [4] (g)	0.0001
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RLM

Date	7-29-11
Pre Measurement [1]	
Time	0842
Internal Check [2]	✓
100 g [3] (g)	99.9998
Delta [4] (g)	0.0002
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	0902
Internal Check [2]	—
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Initials	RLM

Date	7-30-11
Pre Measurement [1]	
Time	0607
Internal Check [2]	✓
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	0628
Internal Check [2]	—
100 g [3] (g)	100.0003
Delta [4] (g)	0.0003
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RLM

Date	7-31-11
Pre Measurement [1]	
Time	1113
Internal Check [2]	✓
100 g [3] (g)	100.0001
Delta [4] (g)	0.0001
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1125
Internal Check [2]	—
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RLM

[1] *The analytical balance is to be verified before and after each weighing session [TRC SOP AM-600]*

All calibration checks must be performed using certified ASTM Class 1 reference masses (or equivalent).

[2] Perform internal calibration as described in *"Calibrating the Balance", Operating Instructions, Mettler AE240 Dual Range Analytical Balance.*

[3] Measure responses to each of the two external calibration standard masses. Record results to the nearest 0.0001 g.

[4] Delta is the arithmetic result of the ***Measured - True Value*** [e.g., "100g Class-1 Standard Response" - 100.0000].

The result must be +/- 0.0020 g for the 100 g mass, +/- 0.0005 g for the 10 g mass and +/- 0.0002 g for the 0.2 g mass.

If the delta exceeds the tolerance, contact the Operations Manager and repair the balance before proceeding. *[TRC SOP AM-600]*

Weight Set = ASTM Class 1: s/n 13823 (100 g), s/n 96-J29027-17 (1o g), s/n 83558 (0.2 g)

Reviewed *(Signature / Date)* Jd Peabody 10/10/11

EM-BTRF-000524

TRC Environmental Corporation
Austin Air Measurements
Balance Log Mettler AE 240
Vol 2 ID 033

Balance Verification Log Mettler AE 240, s/n L81185

Date	7-31-11
Pre Measurement [1]	
Time	1800
Internal Check [2]	✓
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1813
Internal Check [2]	—
100 g [3] (g)	100.0003
Delta [4] (g)	0.0003
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Initials	RMN

Date	8-4-11
Pre Measurement [1]	
Time	0837
Internal Check [2]	✓
100 g [3] (g)	99.9996
Delta [4] (g)	0.0004
10 g [3] (g)	10.0002
Delta [4] (g)	0.0002
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	~~8-5-11~~ 11:00
Internal Check [2]	✓
100 g [3] (g)	99.9997
Delta [4] (g)	0.0003
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.1999
Delta [4] (g)	0.0001
Initials	RMN

Date	8-5-11
Pre Measurement [1]	
Time	0853
Internal Check [2]	✓
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2002
Delta [4] (g)	0.0002
Post Measurement [1]	
Time	0926
Internal Check [2]	✓
100 g [3] (g)	100.0000
Delta [4] (g)	0.0000
10 g [3] (g)	~~9.9999~~ 9.9999
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RMN

Date	8-6-11
Pre Measurement [1]	
Time	0830
Internal Check [2]	✓
100 g [3] (g)	99.9997
Delta [4] (g)	0.0003
10 g [3] (g)	9.9999
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.1999
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	0858
Internal Check [2]	—
100 g [3] (g)	99.9998
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RMN

[1] The analytical balance is to be verified before and after each weighing session *[TRC SOP AM-600]*

All calibration checks must be performed using certified ASTM Class 1 reference masses (or equivalent).

[2] Perform internal calibration as described in *"Calibrating the Balance", Operating Instructions, Mettler AE240 Dual Range Analytical Balance.*

[3] Measure responses to each of the two external calibration standard masses. Record results to the nearest 0.0001 g.

[4] Delta is the arithmetic result of the ***Measured - True Value*** [e.g., "100g Class-1 Standard Response" - 100.0000].

The result must be +/- 0.0020 g for the 100 g mass, +/- 0.0005 g for the 10 g mass and +/- 0.0002 g for the 0.2 g mass.

If the delta exceeds the tolerance, contact the Operations Manager and repair the balance before proceeding. *[TRC SOP AM-600]*

Weight Set = ASTM Class 1: s/n 13823 (100 g), s/n 96-J29027-17 (1o g), s/n 83558 (0.2 g)

Reviewed *(Signature / Date)* 10/10/11

TRC Environmental Corporation
Austin Air Measurements
Balance Log Mettler AE 240
Vol 2 ID 033

EM-BTRF-000383

Balance Verification Log Mettler AE 240, s/n L81185

Date	8-7-11
Pre Measurement [1]	
Time	~~1529~~ 1519
Internal Check [2]	✓
100 g [3] (g)	99.9998
Delta [4] (g)	0.0002
10 g [3] (g)	9.9999
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1555
Internal Check [2]	✓
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRm

Date	8-8-11
Pre Measurement [1]	
Time	0837
Internal Check [2]	✓
100 g [3] (g)	99.9997
Delta [4] (g)	0.0003
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	0843
Internal Check [2]	—
100 g [3] (g)	99.9998
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRm

Date	8-8-11
Pre Measurement [1]	
Time	1541
Internal Check [2]	✓
100 g [3] (g)	99.9998
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.1999
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	1555
Internal Check [2]	—
100 g [3] (g)	99.9997
Delta [4] (g)	0.0003
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRm

Date	8-12-11
Pre Measurement [1]	
Time	0857
Internal Check [2]	✓
100 g [3] (g)	99.9997
Delta [4] (g)	0.0003
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2002
Delta [4] (g)	0.0002
Post Measurement [1]	
Time	1015
Internal Check [2]	—
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	9.9999
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRm

[1] The analytical balance is to be verified before and after each weighing session *[TRC SOP AM-600]*

All calibration checks must be performed using certified ASTM Class 1 reference masses (or equivalent).

[2] Perform internal calibration as described in *"Calibrating the Balance", Operating Instructions, Mettler AE240 Dual Range Analytical Balance.*

[3] Measure responses to each of the two external calibration standard masses. Record results to the nearest 0.0001 g.

[4] Delta is the arithmetic result of the ***Measured - True Value*** [e.g., "100g Class-1 Standard Response" - 100.0000].

The result must be +/- 0.0020 g for the 100 g mass, +/- 0.0005 g for the 10 g mass and +/- 0.0002 g for the 0.2 g mass.

If the delta exceeds the tolerance, contact the Operations Manager and repair the balance before proceeding. *[TRC SOP AM-600]*

Weight Set = ASTM Class 1: s/n 13823 (100 g), s/n 96-J29027-17 (1o g), s/n 83558 (0.2 g)

Reviewed (Signature / Date) JL Peebles 10/10/11

TRC Environmental Corporation
Austin Air Measurements
Balance Log Mettler AE 240
Vol 2 ID 033

Balance Verification Log Mettler AE 240, s/n L81185

Date	8-13-11
Pre Measurement [1]	
Time	0653
Internal Check [2]	✓
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	0840
Internal Check [2]	—
100 g [3] (g)	100.0000
Delta [4] (g)	0.0000
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRM

Date	8-15-11
Pre Measurement [1]	
Time	1017
Internal Check [2]	✓
100 g [3] (g)	99.9999
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1135
Internal Check [2]	—
100 g [3] (g)	100.0000
Delta [4] (g)	0.0000
10 g [3] (g)	9.9999
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Initials	RRM

Date	8/16/11
Pre Measurement [1]	
Time	800
Internal Check [2]	✓
100 g [3] (g)	99.9998
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.000
Post Measurement [1]	
Time	
Internal Check [2]	
100 g [3] (g)	
Delta [4] (g)	
10 g [3] (g)	LTD
Delta [4] (g)	10/10/11
0.2 g [3] (g)	
Delta [4] (g)	
Initials	

Date	8-17-11
Pre Measurement [1]	
Time	0808
Internal Check [2]	✓
100 g [3] (g)	99.9997
Delta [4] (g)	0.0003
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1010
Internal Check [2]	✓
100 g [3] (g)	100.0000
Delta [4] (g)	0.0000
10 g [3] (g)	9.9999
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.1999
Delta [4] (g)	0.0001
Initials	RRM

[1] *The analytical balance is to be verified before and after each weighing session [TRC SOP AM-600]*

All calibration checks must be performed using certified ASTM Class 1 reference masses (or equivalent).

[2] Perform internal calibration as described in *"Calibrating the Balance", Operating Instructions, Mettler AE240 Dual Range Analytical Balance.*

[3] Measure responses to each of the two external calibration standard masses. Record results to the nearest 0.0001 g.

[4] Delta is the arithmetic result of the ***Measured - True Value*** [e.g., "100g Class-1 Standard Response" - 100.0000].

The result must be +/- 0.0020 g for the 100 g mass, +/- 0.0005 g for the 10 g mass and +/- 0.0002 g for the 0.2 g mass.

If the delta exceeds the tolerance, contact the Operations Manager and repair the balance before proceeding. *[TRC SOP AM-600]*

Weight Set = ASTM Class 1: s/n 13823 (100 g), s/n 96-J29027-17 (1o g), s/n 83558 (0.2 g)

Reviewed *(Signature / Date)* 10/10/11

TRC Environmental Corporation
Austin Air Measurements
Balance Log Mettler AE 240
Vol 2 ID 033

EM-BTRF-000529

Balance Verification Log Mettler AE 240, s/n L81185

Date	8-17-11
Pre Measurement [1]	
Time	1545
Internal Check [2]	✓
100 g [3] (g)	100.0001
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2001
Delta [4] (g)	0.0001
Post Measurement [1]	
Time	1700
Internal Check [2]	—
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.00000
Initials	RRM

Date	8-18-11
Pre Measurement [1]	
Time	0840
Internal Check [2]	✓
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1000
Internal Check [2]	—
100 g [3] (g)	100.0001
Delta [4] (g)	0.0001
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.00000
Initials	RRM

Date	8-27-11
Pre Measurement [1]	
Time	0908
Internal Check [2]	✓
100 g [3] (g)	100.0001
Delta [4] (g)	0.0001
10 g [3] (g)	10.0002
Delta [4] (g)	0.0002
0.2 g [3] (g)	0.2002
Delta [4] (g)	0.0002
Post Measurement [1]	
Time	0927
Internal Check [2]	—
100 g [3] (g)	100.0001
Delta [4] (g)	0.0001
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRM

Date	8-28-11
Pre Measurement [1]	
Time	1118
Internal Check [2]	✓
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0000
Delta [4] (g)	0.0000
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Post Measurement [1]	
Time	1132
Internal Check [2]	—
100 g [3] (g)	100.0002
Delta [4] (g)	0.0002
10 g [3] (g)	10.0001
Delta [4] (g)	0.0001
0.2 g [3] (g)	0.2000
Delta [4] (g)	0.0000
Initials	RRM

[1] The analytical balance is to be verified before and after each weighing session *[TRC SOP AM-600]*

All calibration checks must be performed using certified ASTM Class 1 reference masses (or equivalent).

[2] Perform internal calibration as described in *"Calibrating the Balance", Operating Instructions, Mettler AE240 Dual Range Analytical Balance.*

[3] Measure responses to each of the two external calibration standard masses. Record results to the nearest 0.0001 g.

[4] Delta is the arithmetic result of the ***Measured - True Value*** [e.g., "100g Class-1 Standard Response" - 100.0000].

The result must be +/- 0.0020 g for the 100 g mass, +/- 0.0005 g for the 10 g mass and +/- 0.0002 g for the 0.2 g mass.

If the delta exceeds the tolerance, contact the Operations Manager and repair the balance before proceeding. *[TRC SOP AM-600]*

Weight Set = ASTM Class 1: s/n 13823 (100 g), s/n 96-J29027-17 (1o g), s/n 83558 (0.2 g)

Reviewed *(Signature / Date)* Jd Peebles 10/10/11

TRC Environmental Corporation
Austin Air Measurements
Balance Log Mettler AE 240
Vol 2 ID 033

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 182189

Sampling Date(s): July 14-17, 2011

Laboratory: TRC-AUSTIN

Laboratory P.O.:

Shipping Date(s):

Shipper's Name:

Box No.: 1 of 2

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M5B-R1-FHR	07/14/11	250 amber glass	Organic	run 1	PM	
EXM-DCU-M5B-R1-FIL	07/14/11	petri dish	filter	run 1	PM	
EXM-DCU-M202-R1-Cond	07/14/11	4 L glass jars	Aqueous	run 1	PM	
EXM-DCU-M202-R1-OrgRns	07/14/11	250 amber glass	Organic	run 1	PM	
EXM-DCU-M202-R1-FIL	07/14/11	petri dish	CPM filter	run 1	PM	
EXM-DCU-M5B-R2-FHR	07/16/11	250 amber glass	Organic	run 2	PM	
EXM-DCU-M5B-R2-FIL	07/16/11	petri dish	Aqueous	run 2	PM	
EXM-DCU-M202-R2-Cond	07/16/11	4 L glass jars	Organic	run 2	PM	
EXM-DCU-M202-R2-OrgRns	07/16/11	250 amber glass	Organic	run 2	PM	
EXM-DCU-M202-R2-FIL	07/16/11	petri dish	CPM filter	run 2	PM	
EXM-DCU-M5B-R3-FHR	07/17/11	250 amber glass	Organic	run 3	PM	
EXM-DCU-M5B-R3-FIL	07/17/11	petri dish	filter	run 3	PM	
EXM-DCU-M202-R3-Cond	07/17/11	4 L glass jars	Aqueous	run 3	PM	
EXM-DCU-M202-R3-OrgRns	07/17/11	250 amber glass	Organic	run 3	PM	
EXM-DCU-M202-R3-FIL	07/17/11	petri dish	CPM filter	run 3	PM	

Relinquished by: Randall Monson	**Date/Time:** 7/18/11	**Relinquished by:**	**Date/Time:**
Received by: R Monson	**Date/Time:** 7/18/11	**Received by:**	**Date/Time:**

Remarks (*): samples never left possession of Randall Monson.

EM-FRM-0589

TRC

CHAIN OF CUSTODY RECORD

2 of 2

Project Name: ExxonMobil DCU ICR

Box No.:

Project No.: 182189

Sampling Date(s): 6/14/2011

Laboratory: Test America

Laboratory P.O.:

Shipping Date(s): 6/17/2011

Shipper's Name:

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M5B-Rgtblk-acetone	07/17/11	1000 ml glass amber	Organic	acetone reagent blank	PM	
EXM-DCU-M5B-Rgtblk-FIL	07/17/11	1000 ml glass amber	filter	filter reagent blank	PM	
EXM-DCU-M202-Rgtblk-H2O	07/17/11	1000 ml glass amber	Aqueous	DI water reagent blank	PM	
EXM-DCU-M202-Rgtblk-OrgRns	07/17/11	250 glass amber	Organic	Acetone/hexane reagent blank	PM	

Relinquished by: Randall Moran	**Date/Time:** 7/18/11	**Relinquished by:**	**Date/Time:**
Received by: Randall Moran	**Date/Time:** 7/18/11	**Received by:**	**Date/Time:**

Remarks (*):

EMATT0005892

TRC

Texas Commission on Environmental Quality

NELAP-Recognized Laboratory Accreditation is hereby awarded to

TRC Environmental Corporation

9225 US Highway 183 South
Austin, TX 78747-2058

in accordance with Texas Water Code Chapter 5, Subchapter R, Title 30 Texas Administrative Code Chapter 25, and the National Environmental Laboratory Accreditation Program.

The laboratory's scope of accreditation includes the fields of accreditation that accompany this certificate. Continued accreditation depends upon successful ongoing participation in the program. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current accreditation status for particular methods and analyses.

Certificate Number: T104704369-11-2
Effective Date: 7/1/2011
Expiration Date: 6/30/2012

Executive Director Texas Commission on Environmental Quality

EM-BTRF-00[illegible]

APPENDIX I: CEMS DATA—CO, THC, SO2, NOX, O2, CO2

ExxonMobil BTRF ICR Test - DCU D603 Vent
CEMS Summary of Results (dry basis)

Date	7/14/2011	7/16/2011	7/17/2011	
Time	2006-2026	0043-0143	0626-0706	
Duration (minutes)	20	60	40	
Conc. Units	Run 1 (ppmvd)	Run 2 (ppmvd)	Run 3 (ppmvd)	Average (ppmvd)
CO	4.2	15.5	1.3	7.0
THC	13370	97883	9319	40191
SO2	30.8	103	16.8	50.2
NOx	1.1	2.6	1.0	1.6
TRS	35.1	1075	205	438

ExxonMobil ICR DCU D603 Vent O2/CO2 Data
Adjusted for 51:1 dilution

		Run 1	Run 2	Run 3	Average
O2	%	14.0	12.8	16.5	14.4
CO2	%	0.0	0.1	0.0	0.0

SHEET NO. 1 OF 1
PROJECT NO. 182129
DATE 10/23/2014
BY MJK
CHK'D

SUBJECT ExxonMobil BTRF DCU ECR
THC Calculations

Run 1

Corrected Avg 6.04 ppmw (TRC)
Dilution factor 51:1 (TRC)
% moisture 97.7% Ontario Hydro train
18,614 dscfh flow rate Ontario Hydro train

$$\frac{\text{THC ppmvw} \times \text{CF}}{(1-B_w)} = \frac{6.04 \times 51}{(1-0.977)} = 13{,}400 \text{ ppmvd}$$

$$\frac{\text{ppmvd} \times \text{dry flow}}{\text{Conv}} \times \frac{\text{propane MW}}{\text{duration}} \times \frac{\text{Conv}}{}$$

$$\frac{13{,}400 \text{ ft}^3}{10^6 \text{ ft}^3} \times \frac{18{,}614 \text{ ft}^3}{\text{hr}} \times \frac{\text{lb.mole}}{385.3 \text{ ft}^3} \times \frac{44 \text{ lb}}{\text{lb.mole}} \times \frac{20 \text{ min}}{\text{Vent Cycle}} \times \frac{\text{hr}}{60 \text{ min}}$$

$$= 9.49 \text{ lb/Vent Cycle}$$

A

DCC

SHEET NO. _____ OF _____
PROJECT NO. _____
DATE _____
BY _____
CHK'D _____

SUBJECT _____

GAS	DA Pressure	Orsat VAC	Response	DR
394	32.9	16.1	12.14	30.926
394	70.6	20.0	6.86	57.43
394	37.8	18.0	11.32	34.81

F10 25A

CO 10

O2/CO2 3A

GC TRS

280 CF = 7924 L @ 10 L/m = 792 m ÷ 60 = 13.2 Hours
7.93 m³

Exp Runtime Inc CAL 2 Hr/DAY = 4 Hr/DAY / Bottle = 30 DAYS
2 Bottles 60 DAYS

EM-BTR-000386

A

Exxon Mobil
DCV
7-12-2011

SHEET NO. _____ OF _____
PROJECT NO. _____
DATE _____
BY _____
CHK'D _____

SUBJECT Dilution Pressures

DA pressure | UAE

66.3 | 18.9 | START up

~~Coastdown~~ | 325-350 T | ~~Coastdown~~ 99.5 | 50:1 = 6.99

60.0 | Dilution Ratio 51:1

63.2 | 19.9 | LATE

C_3 266.6 SD 5.23

$\pm\sigma$ Ratios 5.13

7-B-11

CAL mode

67.4 | 19.9

CALS 59.1 | 20.2

60.0 | 20.4

A

DCU Vent 603

Date	Time	
7/14/2011	8:25	Performed and passed calibration error test
	8:45	Passed NOx conv check
	17:17	Performed and passed initial system bias check
	17:30	Sample pressure 10 psi to CEM rack
	20:05-20:25	Run 1
	20:49	Performed and passed final system bias check
7/15/2011	11:24	Performed and passed calibration error test
	23:35	Performed and passed initial system bias check
	0:30	Sample pressure 10 psi to CEM rack
7/16/2011	00:42-01:42	Run 2
	2:06	Performed and passed final bias check
7/17/2011	5:01	Performed and passed initial calibration error check
	5:24	Performed and passed initial system bias check
	5:30	Sample pressure 10 psi to CEM rack
	06:24-07:13	Run 3
	8:15	Performed and passed final system bias check

Calibration Error Test, Run 2 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers			
	Zero	Low-range	Mid-range	High-range
O2	CC321614		XC031366B	CC183442
CO2	CC321614		XC031366B	CC183442
CO	CC321614		CC334116	CC40835N
SO2			CC338629	ALM139
NOx			CC334116	CC40835N
THC	CC321614	CC66218	CC116015	ALM000174

Date/Time 07-14-2011 08:25:25 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Avg	-0.0034	0.0041	-0.0695	-0.055	-0.0071	-0.09
Zero Error%	0.8%	1.0%	0.9%	0.4%	0.1%	0.0%
Low Ref Cyl						48.63
Low Avg						47.71
Low Error%						0.5%
Mid Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Mid Avg	0.2040	0.1935	3.9756	8.075	3.8659	87.19
Mid Error%	1.0%	1.7%	0.2%	0.7%	0.6%	0.1%
High Ref Cyl	0.4000	0.3900	7.9300	15.720	7.9900	167.96
High Avg	0.3935	0.3884	7.9584	15.849	7.9234	167.86
High Error%	1.6%	0.4%	0.4%	0.8%	0.8%	0.1%

Calibration Error Test End

Test Run 2 STRATA Version 3.2

NO2 Check

	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
Begin calculating run averages						
07-14-2011 08:42:07	0.3975*	-0.0362	-0.0871	-0.058	0.9309	0.37
07-14-2011 08:43:07	0.3968*	-0.0262	-0.0846	-0.060	0.9392	0.37
07-14-2011 08:44:06	0.3975*	-0.0327	-0.1054	-0.047	0.9153	0.36
Run Averages	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
07-14-2011 08:44:10	0.3973*	-0.0317	-0.0923	-0.055	0.9285	0.37

Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603
Test Run 2 End

Initial System Bias Check, Run 2 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers	
	Zero	Span
O2	CC321614	XC031366B
CO2	CC321614	XC031366B
CO	CC321614	CC334116
SO2		CC338629
NOx		CC334116
THC	CC321614	CC116015

Date/Time 07-14-2011 17:17:39 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Cal	-0.0034	0.0041	-0.0695	-0.055	-0.0071	-0.09
Zero Avg	0.0071	-0.0075	-0.1568	-0.036	-0.0269	-0.22
Zero Bias%	2.6%	3.0%	1.1%	0.1%	0.2%	0.1%
Zero Drift%						
Span Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Span Cal	0.2040	0.1935	3.9756	8.075	3.8659	87.19
Span Avg	0.1920	0.2050	3.8843	7.888	3.8184	84.48
Span Bias%	3.0%	3.0%	1.2%	1.2%	0.6%	1.4%
Span Drift%						

System Bias Check End

Test Run 2 STRATA Version 3.2

	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
Begin calculating run averages						
07-14-2011 20:05:38	0.0530	-0.0430	0.1321	0.696	0.0388	26.20*
07-14-2011 20:06:38	0.2860	-0.0444	0.1093	0.630	0.0398	0.96
07-14-2011 20:07:38	0.3585	-0.0420	-0.0373	0.535	0.0091	0.41
07-14-2011 20:08:38	0.3638	-0.0427	-0.0940	0.472	-0.0005	0.19
07-14-2011 20:09:38	0.3363	-0.0432	-0.1004	0.434	-0.0156	0.11
07-14-2011 20:10:38	0.1046	-0.0416	-0.1127	0.396	-0.0278	0.05
07-14-2011 20:11:38	0.3069*	-0.0370	-0.1162	0.367	-0.0319	0.07
07-14-2011 20:12:39	0.2285*	-0.0451	-0.1173	0.378	-0.0379	0.08
07-14-2011 20:13:39	0.3686	-0.0408	-0.1145	0.434	-0.0432	0.79
07-14-2011 20:14:39	0.3594	-0.0444	-0.1189	0.469	-0.0257	3.03
07-14-2011 20:15:39	0.3435	-0.0408	-0.1010	0.539	-0.0058	4.87
07-14-2011 20:16:39	0.3371	-0.0421	-0.0944	0.601	-0.0061	5.58
07-14-2011 20:17:39	0.3336	-0.0456	-0.0835	0.623	-0.0197	6.67
07-14-2011 20:18:39	0.3230	-0.0404	-0.0841	0.698	-0.0018	4.80
07-14-2011 20:19:39	0.1747	-0.0412	-0.1044	0.609	-0.0150	3.31
07-14-2011 20:20:39	0.3217	-0.0387	-0.0859	0.670	-0.0188	8.31
07-14-2011 20:21:39	0.2927	-0.0435	-0.0793	0.781	-0.0001	9.87
07-14-2011 20:22:39	0.2534	-0.0414	-0.0478	0.866	0.0025	12.06
07-14-2011 20:23:39	0.1927	-0.0392	-0.0135	0.963	0.0286	14.66
07-14-2011 20:24:39	0.1331	-0.0443	0.0295	1.110	0.0363	18.02
07-14-2011 20:25:39	0.1839*	-0.0386	0.0715	1.311	0.0366	5.77
Run Averages	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
07-14-2011 20:25:43	0.2696*	-0.0420	-0.0550	0.649	-0.0027	5.97*

Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603
Test Run 2 End

Final System Bias Check, Run 2 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers Zero	Span
O2	CC321614	XC031366B
CO2	CC321614	XC031366B
CO	CC321614	CC334116
SO2		CC338629
NOx		CC334116
THC	CC321614	CC116015

Date/Time 07-14-2011 20:49:34 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Cal	-0.0034	0.0041	-0.0695	-0.055	-0.0071	-0.09
Zero Avg	-0.0026	-0.0122	-0.1204	0.156	-0.0213	0.22
Zero Bias%	0.2%	4.2%	0.6%	1.3%	0.2%	0.2%
Zero Drift%	-2.4%	-1.2%	0.5%	1.2%	0.1%	0.2%
Span Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Span Cal	0.2040	0.1935	3.9756	8.075	3.8659	87.19
Span Avg	0.2030	0.1978	3.9055	7.777	3.7670	88.69
Span Bias%	0.3%	1.1%	0.9%	1.9%	1.2%	0.8%
Span Drift%	2.8%	-1.8%	0.3%	-0.7%	-0.6%	2.1%
Ini Zero Avg	0.0071	-0.0075	-0.1568	-0.036	-0.0269	-0.22
Ini Span Avg	0.1920	0.2050	3.8843	7.888	3.8184	84.48
Run Avg	0.2696	-0.0420	-0.0550	0.649	-0.0027	5.97
Co	0.0023	-0.0099	-0.1386	0.060	-0.0241	0.00
Cm	0.1975	0.2014	3.8949	7.832	3.7927	86.59
Correct Avg	0.2739	-0.0304	0.0820	0.604	0.0214	6.04

System Bias Check End

14.0 0.0 4.2 30.8 1.1 308

Calibration Error Test, Run 3 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers			
	Zero	Low-range	Mid-range	High-range
O2	CC321614		XC031366B	CC183442
CO2	CC321614		XC031366B	CC183442
CO	CC321614		CC334116	CC40835N
SO2			CC338629	ALM139
NOx			CC334116	CC40835N
THC	CC321614	CC66218	CC116015	ALM000174

Date/Time 07-15-2011 11:24:03 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Avg	-0.0075	0.0055	-0.0050	-0.048	-0.0050	0.04
Zero Error%	1.9%	1.4%	0.1%	0.3%	0.1%	0.0%
Low Ref Cyl						48.63
Low Avg						49.00
Low Error%						0.2%
Mid Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Mid Avg	0.1967	0.2066	3.9522	8.031	3.9653	87.73
Mid Error%	0.8%	1.7%	0.1%	0.4%	1.8%	0.1%
High Ref Cyl	0.4000	0.3900	7.9300	15.720	7.9900	167.96
High Avg	0.3924	0.3970	7.8995	15.914	7.9383	166.74
High Error%	1.9%	1.8%	0.4%	1.2%	0.6%	0.6%

Calibration Error Test End

Initial System Bias Check, Run 3 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers	
	Zero	Span
O2	CC321614	XC031366B
CO2	CC321614	XC031366B
CO	CC321614	CC334116
SO2		CC338629
NOx		CC334116
THC	CC321614	CC116015

Date/Time 07-15-2011 23:35:48 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Cal	-0.0075	0.0055	-0.0050	-0.048	-0.0050	0.04
Zero Avg	-0.0200	-0.0118	-0.0441	0.002	-0.0040	0.08
Zero Bias%	3.1%	4.5%	0.5%	0.3%	0.0%	0.0%
Zero Drift%						
Span Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Span Cal	0.1967	0.2066	3.9522	8.031	3.9653	87.73
Span Avg	0.1852	0.2146	3.9344	7.621	3.9224	88.14
Span Bias%	2.9%	2.0%	0.2%	2.6%	0.5%	0.2%
Span Drift%						

System Bias Check End

Test Run 3 STRATA Version 3.2

	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
Begin calculating run averages						
07-16-2011 00:42:38	0.0480	-0.0083	0.4184	0.476	0.0133	85.02*
07-16-2011 00:43:38	0.2972	-0.0031	0.5277	0.544	0.0187	2.52
07-16-2011 00:44:38	0.3636	-0.0095	0.3029	0.629	0.0300	1.28
07-16-2011 00:45:38	0.3690	-0.0063	0.2149	0.439	-0.0095	0.68
07-16-2011 00:46:38	0.3736*	-0.0102	0.1770	0.371	-0.0052	0.41
07-16-2011 00:47:38	0.3800*	-0.0043	0.1672	0.337	0.0036	0.40
07-16-2011 00:48:39	0.3808*	-0.0052	0.1465	0.282	-0.0016	0.39
07-16-2011 00:49:39	0.3839*	-0.0094	0.1584	0.280	-0.0013	0.35
07-16-2011 00:50:39	0.3874*	-0.0045	0.1536	0.234	0.0005	0.33
07-16-2011 00:51:38	0.3874*	-0.0095	0.1334	0.254	0.0014	0.33
07-16-2011 00:52:38	0.3874*	-0.0067	0.1458	0.240	0.0114	0.34
07-16-2011 00:53:39	0.3868*	-0.0011	0.1540	0.237	0.0138	0.38
07-16-2011 00:54:39	0.3895*	-0.0069	0.1482	0.271	-0.0073	0.40
07-16-2011 00:55:38	0.3870*	-0.0041	0.1336	0.239	0.0075	0.42
07-16-2011 00:56:39	0.3902*	-0.0031	0.1212	0.229	0.0099	0.35
07-16-2011 00:57:39	0.3892*	0.0021	0.1305	0.233	0.0002	0.30
07-16-2011 00:58:38	0.3891*	-0.0057	0.1341	0.223	0.0110	0.26
07-16-2011 00:59:38	0.3897*	-0.0073	0.1318	0.215	0.0031	0.24
07-16-2011 01:00:39	0.3021*	-0.0015	0.1275	0.226	-0.0009	0.21
07-16-2011 01:01:39	0.3594*	-0.0085	0.1288	0.203	-0.0081	0.21
07-16-2011 01:02:39	0.3909*	-0.0022	0.1247	0.192	-0.0108	0.22
07-16-2011 01:03:38	0.3896*	-0.0073	0.1069	0.185	-0.0090	0.19
07-16-2011 01:04:38	0.3892*	-0.0062	0.0984	0.226	0.0041	0.22
07-16-2011 01:05:39	0.3908*	0.0001	0.1065	0.185	-0.0036	0.21
07-16-2011 01:06:38	0.3903*	-0.0098	0.1102	0.210	-0.0053	0.20
07-16-2011 01:07:38	0.3909*	-0.0061	0.1259	0.219	0.0007	0.20
07-16-2011 01:08:38	0.3884*	-0.0045	0.1131	0.192	-0.0049	0.19
07-16-2011 01:09:39	0.3891*	-0.0075	0.1261	0.205	-0.0067	0.18
07-16-2011 01:10:39	0.3902*	-0.0069	0.1027	0.208	-0.0008	0.28
07-16-2011 01:11:39	0.3702*	-0.0067	0.1278	0.216	-0.0054	20.82
07-16-2011 01:12:39	0.2898	-0.0058	0.1977	0.412	0.0238	44.87
07-16-2011 01:13:39	0.2156	0.0009	0.2766	0.682	0.0651	68.96
07-16-2011 01:14:38	0.1495	-0.0030	0.3669	1.039	0.0648	89.27
07-16-2011 01:15:38	0.1071	-0.0066	0.4572	1.500	0.0709	99.45
07-16-2011 01:16:38	0.0801	-0.0035	0.5154	1.996	0.0780	100.07
07-16-2011 01:17:38	0.0679	0.0005	0.5437	2.465	0.1036	97.21
07-16-2011 01:18:38	0.0638	-0.0115	0.5477	2.882	0.1166	94.19
07-16-2011 01:19:38	0.0680	-0.0071	0.5630	3.186	0.1163	89.07
07-16-2011 01:20:39	0.0824	-0.0129	0.5415	3.467	0.1099	81.32
07-16-2011 01:21:39	0.1118	-0.0060	0.5200	3.636	0.1087	73.28
07-16-2011 01:22:39	0.1246	-0.0042	0.4976	3.737	0.1028	70.58
07-16-2011 01:23:39	0.1248	-0.0018	0.4981	3.817	0.0782	71.36
07-16-2011 01:24:39	0.1255	-0.0003	0.4892	3.855	0.0839	73.95
07-16-2011 01:25:39	0.1153	-0.0095	0.4915	3.962	0.0853	79.61
07-16-2011 01:26:39	0.1111	0.0012	0.5087	4.014	0.0797	82.84
07-16-2011 01:27:39	0.1099	-0.0025	0.5198	4.130	0.0663	85.94
07-16-2011 01:28:39	0.1053	-0.0053	0.5236	4.246	0.0719	89.05
07-16-2011 01:29:39	0.1034	-0.0031	0.5520	4.361	0.0747	90.54
07-16-2011 01:30:39	0.1034	-0.0042	0.5398	4.439	0.0818	93.68
07-16-2011 01:31:39	0.1004	-0.0046	0.5462	4.535	0.0841	94.15
07-16-2011 01:32:39	0.0969	-0.0078	0.5511	4.678	0.0750	96.58
07-16-2011 01:33:39	0.0963	-0.0015	0.5551	4.765	0.0893	98.84
07-16-2011 01:34:39	0.0948	-0.0059	0.5645	4.877	0.0840	100.52
07-16-2011 01:35:39	0.0938	-0.0042	0.5691	4.969	0.0839	103.22
07-16-2011 01:36:38	0.0906	-0.0015	0.5878	5.073	0.0833	103.93
07-16-2011 01:37:38	0.0911	-0.0013	0.5932	5.174	0.0989	106.96
07-16-2011 01:38:38	0.0923	-0.0083	0.5888	5.250	0.1128	109.72
07-16-2011 01:39:38	0.0911	-0.0039	0.6049	5.345	0.1135	111.44
07-16-2011 01:40:38	0.0871	-0.0041	0.6186	5.427	0.1020	113.86
07-16-2011 01:41:38	0.0792	-0.0030	0.6145	5.464	0.1020	91.33
Run Averages	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
07-16-2011 01:41:39	0.2381*	-0.0050	0.3409	2.028	0.0444	47.08*

Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603
Test Run 3 End

Final System Bias Check, Run 3 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers	
	Zero	Span
O2	CC321614	XC031366B
CO2	CC321614	XC031366B
CO	CC321614	CC334116
SO2		CC338629
NOx		CC334116
THC	CC321614	CC116015

Date/Time 07-16-2011 02:06:56 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Cal	-0.0075	0.0055	-0.0050	-0.048	-0.0050	0.04
Zero Avg	-0.0200	-0.0013	0.1233	0.221	-0.0095	1.45
Zero Bias%	3.1%	1.7%	1.6%	1.7%	0.1%	0.7%
Zero Drift%	0.0%	2.7%	2.1%	1.4%	-0.1%	0.7%
Span Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Span Cal	0.1967	0.2066	3.9522	8.031	3.9653	87.73
Span Avg	0.1879	0.2245	4.0168	7.679	3.8244	89.25
Span Bias%	2.2%	4.6%	0.8%	2.2%	1.8%	0.8%
Span Drift%	0.7%	2.6%	1.0%	0.4%	-1.2%	0.6%
Ini Zero Avg	-0.0200	-0.0118	-0.0441	0.002	-0.0040	0.08
Ini Span Avg	0.1852	0.2146	3.9344	7.621	3.9224	88.14
Run Avg	0.2381	-0.0050	0.3409	2.028	0.0444	47.08
Co	-0.0200	-0.0066	0.0396	0.112	-0.0068	0.76
Cm	0.1865	0.2195	3.9756	7.650	3.8734	88.70
Correct Avg	0.2500	0.0014	0.3031	2.026	0.0504	46.06

System Bias Check End

12.8 0.1 15.5 1033 2.6 2349

Calibration Error Test, Run 4 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers			
	Zero	Low-range	Mid-range	High-range
O2	CC321614		XC031366B	CC183442
CO2	CC321614		XC031366B	CC183442
CO	CC321614		CC334116	CC40835N
SO2			CC338629	ALM139
NOx			CC334116	CC40835N
THC	CC321614	CC66218	CC116015	ALM000174

Date/Time 07-17-2011 05:01:04 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Avg	0.0077	-0.0057	0.1360	-0.062	-0.0378	-0.79
Zero Error%	1.9%	1.5%	1.7%	0.4%	0.5%	0.4%
Low Ref Cyl						48.63
Low Avg						47.89
Low Error%						0.4%
Mid Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Mid Avg	0.2065	0.2044	4.0483	8.047	3.9135	87.36
Mid Error%	1.6%	1.1%	1.1%	0.5%	1.2%	0.0%
High Ref Cyl	0.4000	0.3900	7.9300	15.720	7.9900	167.96
High Avg	0.4049	0.3954	7.9373	15.661	8.0399	167.28
High Error%	1.2%	1.4%	0.1%	0.4%	0.6%	0.3%

Calibration Error Test End

Initial System Bias Check, Run 4 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers	
	Zero	Span
O2	CC321614	XC031366B
CO2	CC321614	XC031366B
CO	CC321614	CC334116
SO2		CC338629
NOx		CC334116
THC	CC321614	CC116015

Date/Time 07-17-2011 05:24:43 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Cal	0.0077	-0.0057	0.1360	-0.062	-0.0378	-0.79
Zero Avg	0.0038	-0.0180	0.1857	0.045	-0.0073	-2.14
Zero Bias%	1.0%	3.2%	0.6%	0.7%	0.4%	0.7%
Zero Drift%						
Span Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Span Cal	0.2065	0.2044	4.0483	8.047	3.9135	87.36
Span Avg	0.2092	0.1935	4.0458	7.905	3.7617	88.41
Span Bias%	0.7%	2.8%	0.0%	0.9%	1.9%	0.5%
Span Drift%						

System Bias Check End

Test Run 4 STRATA Version 3.2

	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
Begin calculating run averages						
07-17-2011 06:24:28	0.0668	-0.0392	0.2501	1.139	0.0546	27.15
07-17-2011 06:25:28	0.3501*	-0.0311	0.3045	0.698	0.0245	0.70
07-17-2011 06:26:28	0.3857*	-0.0365	0.2011	0.315	-0.0027	0.23
07-17-2011 06:27:28	0.3886*	-0.0319	0.1793	0.275	-0.0086	0.05
07-17-2011 06:28:28	0.3889*	-0.0368	0.1474	0.233	-0.0023	0.01
07-17-2011 06:29:28	0.3895*	-0.0383	0.1285	0.213	-0.0114	0.19
07-17-2011 06:30:28	0.3905*	-0.0376	0.1378	0.174	-0.0093	0.15
07-17-2011 06:31:28	0.3893*	-0.0345	0.1394	0.202	-0.0090	-0.08
07-17-2011 06:32:28	0.3924*	-0.0386	0.1438	0.186	-0.0093	-0.06
07-17-2011 06:33:29	0.3899*	-0.0348	0.1383	0.170	-0.0122	-0.06
07-17-2011 06:34:28	0.3940*	-0.0376	0.1498	0.150	-0.0264	-0.06
07-17-2011 06:35:28	0.3918*	-0.0338	0.1377	0.177	-0.0310	-0.09
07-17-2011 06:36:28	0.3921*	-0.0405	0.1495	0.191	-0.0068	-0.08
07-17-2011 06:37:28	0.3915*	-0.0331	0.1467	0.175	-0.0004	-0.05
07-17-2011 06:38:28	0.3909*	-0.0333	0.1351	0.177	0.0030	-0.07
07-17-2011 06:39:28	0.3924*	-0.0314	0.1314	0.174	-0.0030	-0.09
07-17-2011 06:40:28	0.3924*	-0.0402	0.1338	0.166	-0.0053	-0.11
07-17-2011 06:41:28	0.3938*	-0.0302	0.1362	0.195	-0.0102	-0.06
07-17-2011 06:42:28	0.3913*	-0.0349	0.1551	0.190	-0.0093	-0.03
07-17-2011 06:43:28	0.3926*	-0.0345	0.1387	0.202	-0.0155	-0.05
07-17-2011 06:44:28	0.3936*	-0.0386	0.1487	0.224	0.0081	-0.02
07-17-2011 06:45:28	0.3915*	-0.0319	0.1431	0.232	-0.0053	0.00
07-17-2011 06:46:28	0.3922*	-0.0356	0.1556	0.220	-0.0104	-0.01
07-17-2011 06:47:28	0.3922*	-0.0348	0.1321	0.214	-0.0283	0.15
07-17-2011 06:48:28	0.3907*	-0.0397	0.1576	0.212	-0.0155	0.00
07-17-2011 06:49:28	0.3915*	-0.0392	0.1450	0.212	-0.0082	0.08
07-17-2011 06:50:28	0.3937*	-0.0366	0.1484	0.225	-0.0248	0.04
07-17-2011 06:51:29	0.3930*	-0.0316	0.1521	0.215	-0.0197	0.01
07-17-2011 06:52:28	0.3922*	-0.0385	0.1427	0.244	-0.0143	0.01
07-17-2011 06:53:28	0.3951*	-0.0333	0.1457	0.226	-0.0225	-0.04
07-17-2011 06:54:29	0.3945*	-0.0351	0.1462	0.230	-0.0198	-0.03
07-17-2011 06:55:28	0.3953*	-0.0338	0.1467	0.209	-0.0244	0.02
07-17-2011 06:56:28	0.3940*	-0.0314	0.1292	0.229	-0.0257	-0.04
07-17-2011 06:57:28	0.3970*	-0.0381	0.1371	0.239	-0.0097	-0.04
07-17-2011 06:58:28	0.3958*	-0.0352	0.1402	0.214	-0.0102	-0.03
07-17-2011 06:59:28	0.3859*	-0.0332	0.1461	0.233	-0.0100	2.20
07-17-2011 07:00:28	0.3280	-0.0333	0.1669	0.439	-0.0074	4.22
07-17-2011 07:01:28	0.2881	-0.0340	0.1793	0.545	0.0079	5.00
07-17-2011 07:02:28	0.2613	-0.0357	0.2076	0.594	0.0214	5.31
07-17-2011 07:03:28	0.2400	-0.0371	0.2149	0.688	0.0163	5.51
07-17-2011 07:04:28	0.2244	-0.0349	0.2558	0.710	0.0446	5.40
07-17-2011 07:05:28	0.2117	-0.0359	0.2724	0.756	0.0417	5.06
07-17-2011 07:06:28	0.2062	-0.0383	0.2758	0.803	0.0468	4.84
07-17-2011 07:07:28	0.1973	-0.0300	0.2719	0.861	0.0467	4.59
07-17-2011 07:08:28	0.1925	-0.0362	0.2934	0.880	0.0356	4.34
07-17-2011 07:09:28	0.1889	-0.0350	0.2974	0.921	0.0384	4.24
07-17-2011 07:10:28	0.1301	-0.0331	0.3120	0.945	0.0557	5.49
07-17-2011 07:11:28	0.1961*	-0.0416	0.3254	1.019	0.0643	1.22
07-17-2011 07:12:28	0.3922*	-0.0378	0.2555	0.796	0.0336	0.09
07-17-2011 07:13:28	0.3955*	-0.0379	0.1939	0.595	0.0037	0.02
Run Averages	O2	CO2	CO	SO2	NOx	THC
	%	%	ppm	ppm	ppm	ppm
07-17-2011 07:13:36	0.3439*	-0.0355	0.1806	0.392	0.0024	1.71

Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603
Test Run 4 End

Final System Bias Check, Run 4 STRATA Version 3.2
Operator: A. Nava
Plant Name: ExxonMobil BTRF
Location: DCU Vent 603

	Reference Cylinder Numbers Zero	Span
O2	CC321614	XC031366B
CO2	CC321614	XC031366B
CO	CC321614	CC334116
SO2		CC338629
NOx		CC334116
THC	CC321614	CC116015

Date/Time 07-17-2011 08:15:16 PASSED

Analyte	O2	CO2	CO	SO2	NOx	THC
Units	%	%	ppm	ppm	ppm	ppm
Zero Ref Cyl	0.0000	0.0000	0.0000	0.000	0.0000	0.00
Zero Cal	0.0077	-0.0057	0.1360	-0.062	-0.0378	-0.79
Zero Avg	0.0017	-0.0158	0.1232	0.086	-0.0278	-0.36
Zero Bias%	1.5%	2.6%	0.2%	0.9%	0.1%	0.2%
Zero Drift%	-0.5%	0.6%	-0.8%	0.3%	-0.3%	0.9%
Span Ref Cyl	0.2000	0.2000	3.9600	7.970	3.8200	87.45
Span Cal	0.2065	0.2044	4.0483	8.047	3.9135	87.36
Span Avg	0.2180	0.2026	4.1649	8.022	3.8764	86.18
Span Bias%	2.9%	0.5%	1.5%	0.2%	0.5%	0.6%
Span Drift%	2.2%	2.4%	1.5%	0.7%	1.4%	-1.1%
Ini Zero Avg	0.0038	-0.0180	0.1857	0.045	-0.0073	-2.14
Ini Span Avg	0.2092	0.1935	4.0458	7.905	3.7617	88.41
Run Avg	0.3439	-0.0355	0.1806	0.392	0.0024	1.71
Co	0.0028	-0.0169	0.1544	0.065	-0.0176	-1.25
Cm	0.2136	0.1980	4.1053	7.963	3.8190	87.29
Correct Avg	0.3236	-0.0173	0.0262	0.329	0.0199	2.92

System Bias Check End

16.5 0.0 1.3 16.8 1.0 149

CO/NOx/C3

404.2 407.5 437.7 CC408355N
201.8 195.0 266.6 CC334116
151.5 XC028402B

O2/CO2

20.44 19.82 CC183442
10.00 10.01 XC031366B

SO2 801.5
406.4 CC338629
~~200 201.0 CC308571~~ NG

C3

~~8566 Alm000174~~ OK
~~4460 CC116015~~ NG
2480 CC66218
~~8566 Alm~~
8566 Alm000174
4460 CC116015
2480 CC66218

MATHESON TRI•GAS
ask. . .The Gas Professionals™

Certificate of Analysis

Customer Service Center
2550 KYLE CROSSING
KYLE, TX 78640
P 512-262-2129
F 512-262-4011
mtgKYLE@matheson-trigas.com

Manufacturing Location
1650 ENTERPRISE PARKWAY
TWINSBURG, OH 44087

Shipping Location
2550 KYLE CROSSING
KYLE, TX 78640

CYLINDER NUMBER(S)

CC321614

To: TRC AIR MEASUREMENTS
9225 US HWY 183 S
AUSTIN, TX 78747

Certificate No: 130051
MTG Customer No: 111933
Sales Order No: 507888
Purchase Order No: 17344

Product: NITROGEN

Grade: ACID RAIN CEM 99.9995%
MTG Part No: G1169018

Cylinder Size: 1R
Valve: CGA 580 BR

Contents:
Net: 144 ft³; 4.08 m³

Pressure: 2000 psig @ 70°F; 13891 kPa @ 21°C

	Specification	Certified Concentration	Units
Nitrogen	≥ 99.9995	≥ 99.9995	%
Carbon Dioxide	< 1	ND < 1	ppm
Carbon Monoxide	< 0.5	ND < 0.5	ppm
NOx	< 0.1	ND < 0.1	ppm
Oxygen	< 0.5	ND < 0.5	ppm
Sulfur Dioxide	< 0.1	ND < 0.1	ppm
THC	< 0.1	ND < 0.1	ppm
Water	< 1	ND < 1	ppm

COMMENTS

Lot No: 1099002063D2
Fill Date: 11/13/2009
Expiration Date: 11/13/2012

Thomas Purdon - Analyst — 11/16/2009 — Date

David Schrieber - QA Approval — 12/02/2009 — Date

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Customer:	TRC		
Part Number:	E04NI99E15A41H7	Reference Number:	83-124244061-15
Cylinder Number:	CC334116	Cylinder Volume:	144 Cu.Ft.
Laboratory:	ASG - Port Allen - LA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B42011	Valve Outlet:	660
		Analysis Date:	Dec 15, 2010

Expiration Date: Dec 15, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON MONOXIDE	200.0 PPM	201.8 PPM	G1	+/- 1% NIST Traceable
NITRIC OXIDE	200.0 PPM	195.0 PPM	G1	+/- 1% NIST Traceable
PROPANE	270.0 PPM	266.6 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
Total oxides of nitrogen		196.2 PPM		For Reference Only

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	08060333	cc255642	250.0PPM CARBON MONOXIDE/NITROGEN	Apr 15, 2012
NTRM	09060926	cc269072	95.66PPM NITRIC OXIDE/NITROGEN	May 13, 2011
NTRM	99060508	XC014343B	248.9PPM PROPANE/AIR	Oct 02, 2011

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AHR0801556 M1CO	FTIR	Dec 14, 2010
Nicolet 6700 AHR0801556 M1NO	FTIR	Dec 14, 2010
Nicolet 6700 AHR0801556 M1C3H8	FTIR	Nov 01, 2010

Triad Data Available Upon Request

Notes:PO 29114
STOCK BY CONCENTRATION

Signature on file

Approved for Release

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Customer:	TRC		
Part Number:	E04NI99E15A41D4	Reference Number:	83-124266936-8
Cylinder Number:	CC40835N	Cylinder Volume:	144 Cu.Ft.
Laboratory:	ASG - Port Allen - LA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B42011	Valve Outlet:	660
		Analysis Date:	May 31, 2011

Expiration Date: May 31, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON MONOXIDE	400.0 PPM	404.2 PPM	G1	+/- 1% NIST Traceable
NITRIC OXIDE	400.0 PPM	407.5 PPM	G1	+/- 1% NIST Traceable
PROPANE	450.0 PPM	437.7 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
Total oxides of nitrogen		407.7 PPM		For Reference Only

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	05120505	CC180350	495.8PPM CARBON MONOXIDE/NITROGEN	Feb 02, 2013
NTRM	10060416	CC268092	495.6PPM NITRIC OXIDE/NITROGEN	Jan 01, 2016
NTRM	10060531	cc281492	495.3PPM PROPANE/AIR	Feb 19, 2016
NTRM	11060111	CC330541	248.4PPM NITRIC OXIDE/NITROGEN	Jan 11, 2017

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AHR0801556 M1CO	FTIR	May 04, 2011
Nicolet 6700 AHR0801556 M2NO	FTIR	May 04, 2011
Nicolet 6700 AHR0801556 M2C3H8	FTIR	Apr 27, 2011

Triad Data Available Upon Request

Notes:Sequence 2
PO 33568
Stock by concentration

Signature on file

AIR LIQUIDE Air Liquide America Specialty Gases LLC Scott™

RATA CLASS

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET, TROY, MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

P.O. No.: 57836-71-65000
AIR LIQUIDE AMERICA SPECIALTY GASES LLC Project No.: 05-82988-011
1290 COMBERMERE STREET
TROY, MI 48083

Customer

CLEAN AIR ENGINEERING
DON ALLEN
500 W. WOOD STREET
PALATINE IL 60067

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: CC116015 **Certification Date:** 21Dec2009 **Exp. Date:** 20Dec2012
Cylinder Pressure*:** 1950 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
PROPANE	4,460	PPM	+/- 1%	Direct NIST and VSL
AIR		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1200	02Feb2010	K019476	1186. PPM	PROPANE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN/3400/7506	17Dec2009	TCD/FID

ANALYZER READINGS

(Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

First Triad Analysis

PROPANE

Date: 21Dec2009	Response Unit:AREA	
Z1=0.00000	R1=97096.00	T1=366443.0
R2=97032.00	Z2=0.00000	T2=366115.0
Z3=0.00000	T3=365844.0	R3=97162.00
Avg. Concentration:	4458.	PPM

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx2+Dx3+Ex4	
r=0.9999	
Constants:	A=-1.15920979
B=0.01215152	C=0
D=0	E=0

APPROVED BY: _____
HILARY THATCHER

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Customer:	TRC P.O. 29304		
Part Number:	E02NI99E15A0046	Reference Number:	82-124245825-1
Cylinder Number:	CC338629	Cylinder Volume:	144 Cu.Ft.
Laboratory:	ASG - Riverton - NJ	Cylinder Pressure:	2015 PSIG
PGVP Number:	B52011	Valve Outlet:	660
		Analysis Date:	Dec 22, 2010

Expiration Date: Dec 22, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
SULFUR DIOXIDE	400.0 PPM	406.4 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	09061016	CC300808	479.5PPM SULFUR DIOXIDE/NITROGEN	May 15, 2015

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 470 AEP0000416 SO2	FTIR	Dec 08, 2010

Triad Data Available Upon Request

Notes:"STOCK BY CONCENTRATION"

Signature on file

Approved for Release

Airgas

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Airgas Specialty Gases
600 Union Landing Road
Riverton, NJ 08077
(856) 829-7878
Fax (856) 829-0571
www.airgas.com

Customer:	TRC P.O. 29304		
Part Number:	E02NI99E15A0164	Reference Number:	82-124245827-1
Cylinder Number:	CC338428	Cylinder Volume:	144 Cu.Ft.
Laboratory:	ASG - Riverton - NJ	Cylinder Pressure:	2015 PSIG
Analysis Date:	Dec 21, 2010	Valve Outlet:	660

Expiration Date: Dec 21, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
SULFUR DIOXIDE	800.0 PPM	802.0 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	09061516	CC306922	996.9PPM SULFUR DIOXIDE/NITROGEN	Sep 18, 2015
NTRM	04060303	XC017560B	98.0PPM SULFUR DIOXIDE/NITROGEN	May 15, 2012

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 470 AEP0000416 SO2	FTIR	Dec 08, 2010

Triad Data Available Upon Request

Notes:"STOCK BY CONCENTRATION"

Approved for Release

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Customer:	TRC		
Part Number:	E03NI80E15AC2K9	Reference Number:	83-124220057-1
Cylinder Number:	XC031366B	Cylinder Volume:	151 Cu.Ft.
Laboratory:	ASG - Port Allen - LA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B42011	Valve Outlet:	590
		Analysis Date:	May 20, 2010
Customer PO Number:	22932		

Expiration Date: May 20, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	10.00 %	10.01 %	G1	+/- 1% NIST Traceable
OXYGEN	10.00 %	10.00 %	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	00040210	CC108973	10.00% OXYGEN/NITROGEN	Oct 02, 2011
NTRM	97051008	SG9199013BAL	10.818% CARBON DIOXIDE/NITROGEN	May 15, 2012

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
SCO2GM	NonDispersive Infrared	Apr 29, 2010
HO2GH	PMO2	Apr 29, 2010

Triad Data Available Upon Request

Permanent Notes:STOCK BY CONCENTRATION

Notes:"STOCK BY CONCENTRATION"

Signature on file

Approved for Release

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Customer:	TRC		
Part Number:	E03NI60E15AC2Z9	Reference Number:	83-124245870-1
Cylinder Number:	CC183442	Cylinder Volume:	160 Cu.Ft.
Laboratory:	ASG - Port Allen - LA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B42011	Valve Outlet:	590
		Analysis Date:	Dec 22, 2010
Customer PO Number:	29431		

Expiration Date: Dec 22, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	20.00 %	19.82 %	G1	+/- 1% NIST Traceable
OXYGEN	20.00 %	20.44 %	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	08061330	cc255640	20.09% CARBON DIOXIDE/NITROGEN	Jul 15, 2012
NTRM	09061403	cc267736	22.53% OXYGEN/NITROGEN	Aug 01, 2013

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
SCO2GM	NonDispersive Infrared	Nov 23, 2010
HO2GH	PMO2	Dec 09, 2010

Triad Data Available Upon Request

Permanent Notes:STOCK BY CONCENTRATION

Notes:STOCK BY CONCENTRATION

Signature on file

Approved for Release

APPENDIX J: PRELIMINARY TEST DATA

ExxonMobil Delayed Coker Vent – Port location recommendations

Based on groups listed in Table 1.1 of the EPA's letter to ExxonMobil, TRC's estimate of number of ports needed to perform a single group (a,b,c, or d) test is:

1 – VOST/30B port (one horizontal port)

1 – CEMS / GC port (one horizontal port)

3 – Isokinetic Ports (two ports 90 deg apart – one horizontal and one vertical)

1 – extra Isokinetic Ports (two ports 90 deg apart – one horizontal and one vertical)

1 – Velocity Ports (two ports 90 deg apart – one horizontal and one vertical)

Ports should be horizontal (for locations with one port) / horizontal and vertical (for locations with two port– 90 deg apart)

Port – 3"I.D. Flanged with gate valve (TRC will install packing glands to valves to seal sampling probes)

Drawing below is based on a 15 ft straight run of pipe

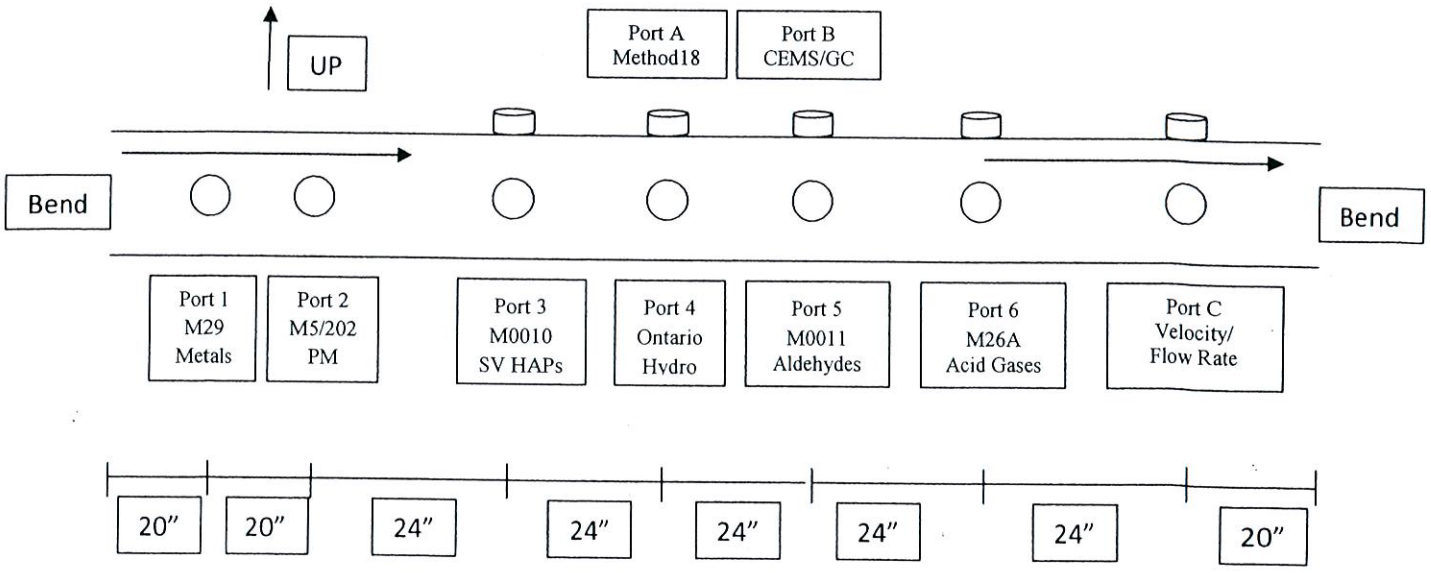
Drawing below is based on an 8"I.D. pipe

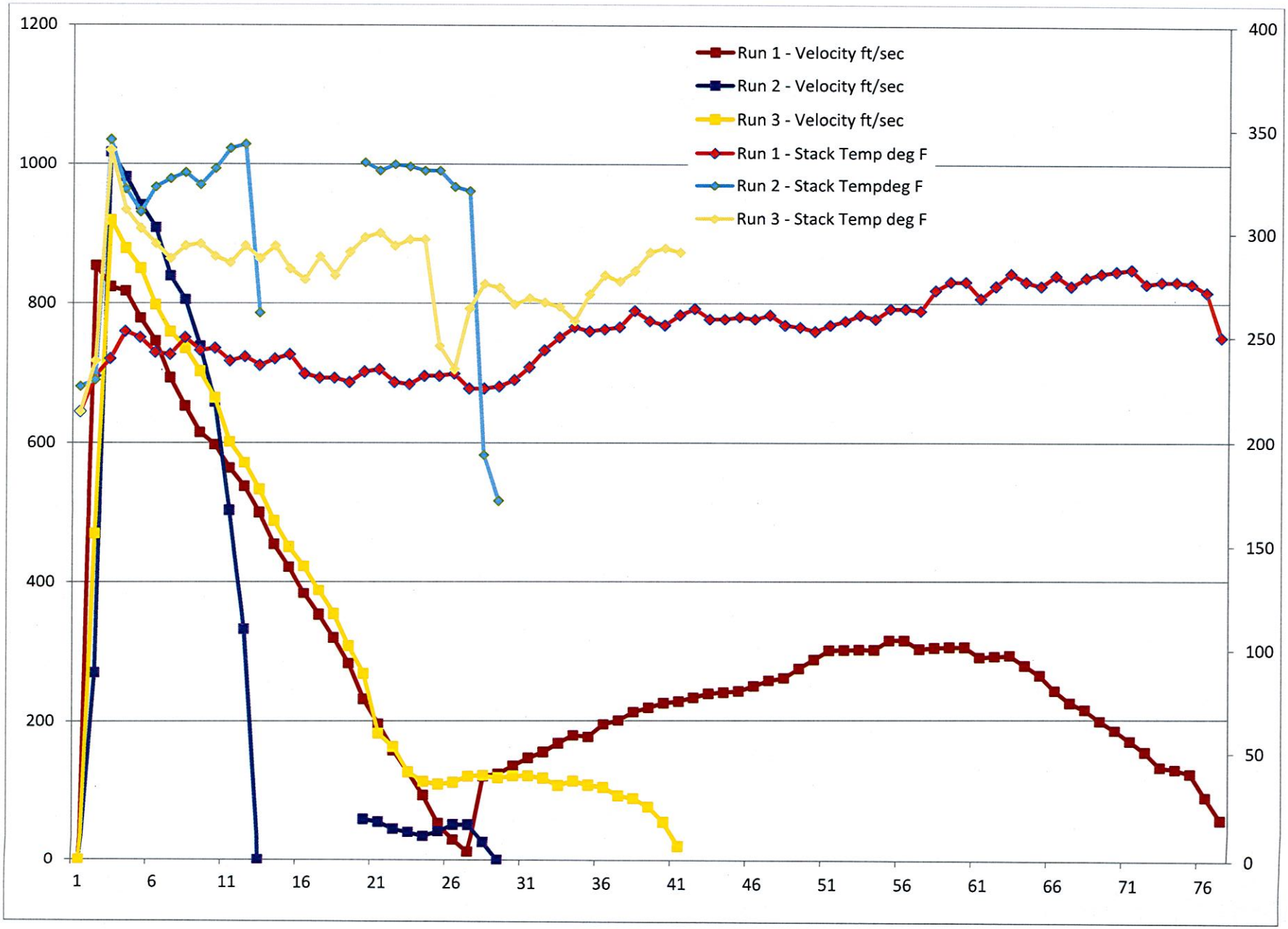
Need at least 16"(2 pipe diameters) upstream of each port to the nearest port or flow disturbance.

Need at least 4" (0.5 pipe diameters) downstream of each port to the nearest port or flow disturbance.

Velocity port should be the furthest downstream port on the straight run.

VOST port should be the furthest upstream port on the straight run.




Run 1 - Velocity ft/sec
Run 2 - Velocity ft/sec
Run 3 - Velocity ft/sec
Run 1 - Stack Temp deg F
Run 2 - Stack Tempdeg F
Run 3 - Stack Temp deg F
1200
1000
800
600
400
200
0
400
350
300
250
200
150
100
50
0
1
6
11
16
21
26
31
36
41
46
51
56
61
66
71
76

Time	Delta P	sqrt delta P	Run 1 - Stack	Stack Temp	Run 1 - Velocity	actual flow rate	standard flow rate	dry flow rate
hh:mm	inH2O		Temp deg F	R	ft/sec	acf/hr	wscf/hr	dscf/hr
21:59	0	0.0	215	675	0	0	0	0
22:00	100	10.0	232	692	854	1,358,503	903,240	16,258
22:01	92	9.6	240	700	824	1,310,541	871,350	15,684
22:02	89	9.4	253	713	818	1,300,910	864,947	15,569
22:03	81	9.0	250	710	778	1,238,452	823,420	14,822
22:04	75	8.7	243	703	745	1,185,812	788,421	14,192
22:05	65	8.1	242	702	693	1,103,145	733,458	13,202
22:06	57	7.5	250	710	653	1,038,901	690,743	12,433
22:07	51	7.1	244	704	615	978,541	650,611	11,711
22:08	48	6.9	245	705	597	949,998	631,633	11,369
22:09	43	6.6	239	699	563	895,324	595,282	10,715
22:10	39	6.2	241	701	537	853,884	567,729	10,219
22:11	34	5.8	237	697	500	794,993	528,574	9,514
22:12	28	5.3	240	700	454	722,995	480,704	8,653
22:13	24	4.9	242	702	421	670,319	445,681	8,022
22:14	20	4.5	233	693	382	607,980	404,233	7,276
22:15	17	4.1	231	691	352	559,720	372,146	6,699
22:16	14	3.7	231	691	319	507,938	337,717	6,079
22:17	11	3.3	229	689	283	449,587	298,921	5,381
22:18	7.3	2.7	234	694	231	367,577	244,394	4,399
22:19	5.2	2.3	235	695	195	310,457	206,416	3,715
22:20	3.4	1.8	229	689	157	249,952	166,188	2,991
22:21	2.2	1.5	228	688	126	200,915	133,584	2,405
22:22	1.2	1.1	232	692	94	148,817	98,945	1,781
22:23	0.38	0.6	232	692	53	83,744	55,679	1,002
22:24	0.12	0.3	233	693	30	47,094	31,312	564
22:25	0.02	0.1	226	686	12	19,129	12,718	229
22:26	2	1.4	226	686	120	191,287	127,182	2,289
22:27	2.1	1.4	227	687	123	196,153	130,418	2,348
22:28	2.5	1.6	230	690	135	214,488	142,608	2,567
22:29	2.9	1.7	236	696	146	232,012	154,260	2,777
22:30	3.2	1.8	244	704	154	245,114	162,971	2,933
22:31	3.7	1.9	250	710	166	264,690	175,987	3,168
22:32	4.2	2.0	255	715	178	282,999	188,160	3,387
22:33	4.1	2.0	253	713	175	279,219	185,646	3,342
22:34	5	2.2	254	714	194	308,561	205,156	3,693
22:35	5.3	2.3	255	715	200	317,906	211,369	3,805
22:36	5.9	2.4	263	723	212	337,289	224,257	4,037
22:37	6.3	2.5	258	718	218	347,328	230,931	4,157
22:38	6.7	2.6	256	716	225	357,686	237,818	4,281
22:39	6.8	2.6	261	721	227	361,601	240,421	4,328
22:40	7.1	2.7	264	724	233	370,259	246,178	4,431
22:41	7.5	2.7	259	719	238	379,230	252,142	4,539
22:42	7.6	2.8	259	719	240	381,750	253,817	4,569
22:43	7.7	2.8	260	720	242	384,520	255,659	4,602
22:44	8.2	2.9	259	719	249	396,533	263,646	4,746
22:45	8.7	2.9	261	721	257	409,011	271,943	4,895

Abs Stack Temperature (R)	713.9737
Abs Stack Pressure (inHg)	26.9
Moisture (%)	98.2
Wet Mol Weight (g/g-mole)	18.2
Vent Cross-Sectional Area (ft2)	0.442

Time	Delta P	sqrt delta P	Run 1 - Stack	Stack Temp		Run 1 - Velocity	actual flow rate	standard flow rate	dry flow rate
hh:mm	inH2O		Temp deg F	R		ft/sec	acf/hr	wscf/hr	dscf/hr
22:46	9	3.0	256	716		261	414,558	275,631	4,961
22:47	10	3.2	255	715		274	436,677	290,337	5,226
22:48	11	3.3	253	713		287	457,350	304,082	5,473
22:49	12	3.5	256	716		301	478,690	318,271	5,729
22:50	12	3.5	258	718		301	479,358	318,715	5,737
22:51	12	3.5	261	721		302	480,359	319,380	5,749
22:52	12	3.5	259	719		301	479,692	318,937	5,741
22:53	13	3.6	264	724		315	501,012	333,112	5,996
22:54	13	3.6	264	724		315	501,012	333,112	5,996
22:55	12	3.5	263	723		302	481,025	319,823	5,757
22:56	12	3.5	273	733		304	484,340	322,027	5,796
22:57	12	3.5	277	737		305	485,660	322,905	5,812
22:58	12	3.5	277	737		305	485,660	322,905	5,812
22:59	11	3.3	269	729		291	462,453	307,475	5,535
23:00	11	3.3	275	735		292	464,352	308,738	5,557
23:01	11	3.3	281	741		293	466,244	309,996	5,580
23:02	10	3.2	277	737		279	443,344	294,770	5,306
23:03	9	3.0	275	735		264	420,022	279,264	5,027
23:04	7.5	2.7	280	740		242	384,728	255,798	4,604
23:05	6.5	2.5	275	735		224	356,950	237,329	4,272
23:06	5.9	2.4	279	739		214	341,001	226,724	4,081
23:07	5	2.2	281	741		198	314,341	208,999	3,762
23:08	4.3	2.1	282	742		183	291,705	193,948	3,491
23:09	3.6	1.9	283	743		168	267,087	177,581	3,196
23:10	3	1.7	276	736		153	242,665	161,343	2,904
23:11	2.2	1.5	277	737		131	207,947	138,260	2,489
23:12	2.1	1.4	277	737		128	203,166	135,081	2,431
23:13	1.9	1.4	276	736		121	193,118	128,400	2,311
23:14	1	1.0	272	732		88	139,721	92,898	1,672
23:15	0.4	0.6	250	710		55	87,030	57,864	1,042
23:16	-2	-1.4	170	630		-115	-183,313	-121,881	-2,194
23:17						0	0	0	0
23:18	-3.1	-1.8	140	600		-140	-222,722	-148,083	-2,666
23:19	-3.7	-1.9	130	590		-152	-241,287	-160,427	-2,888
23:20	-4.2	-2.0	126	586		-161	-256,201	-170,343	-3,066
23:21	-4.5	-2.1	121	581		-166	-264,060	-175,568	-3,160
23:22	-4.7	-2.2	118	578		-169	-269,166	-178,963	-3,221
23:23	-4.9	-2.2	117	577		-173	-274,596	-182,573	-3,286
	16.61473684	3.405578367	253.9736842	713.9736842	##	294.9125967			

Time	Delta P	sqrt delta P	Run 2 - Stack	Stack Temp	Run 2 - Velocity	actual flow rate	standard flow rate	dry flow rate
hh:mm	inH2O		Tempdeg F	R	ft/sec	acf/hr	wscf/hr	dscf/hr
22:35	0	0.0	227	687	0	0	0	0
22:36	10	3.2	230	690	270	428,975	265,090	2,121
22:37	122	11.0	345	805	1017	1,618,398	1,000,106	8,001
22:38	117	10.8	321	781	981	1,561,083	964,687	7,717
22:39	109	10.4	310	770	940	1,496,119	924,542	7,396
22:40	100	10.0	322	782	908	1,444,145	892,425	7,139
22:41	85	9.2	326	786	839	1,334,837	824,876	6,599
22:42	78	8.8	329	789	805	1,281,130	791,688	6,334
22:43	66	8.1	323	783	738	1,173,979	725,473	5,804
22:44	52	7.2	331	791	658	1,047,364	647,229	5,178
22:45	30	5.5	341	801	503	800,543	494,704	3,958
22:46	13	3.6	343	803	332	527,639	326,060	2,608
22:47	0	0.0	262	722	0	0	0	0
22:48								
22:49								
22:50								
22:51								
22:52								
22:53								
22:54	0.42	0.6	334	794	59	94,307	58,278	466
22:55	0.37	0.6	330	790	55	88,292	54,561	436
22:56	0.25	0.5	333	793	46	72,713	44,934	359
22:57	0.2	0.4	332	792	41	64,996	40,165	321
22:58	0.15	0.4	330	790	35	56,217	34,740	278
22:59	0.21	0.5	330	790	42	66,517	41,105	329
23:00	0.32	0.6	322	782	51	81,693	50,483	404
23:01	0.32	0.6	320	780	51	81,589	50,419	403
23:02	0.1	0.3	194	654	26	41,763	25,808	206
23:03	0	0.0	172	632	0	0	0	0
	35.65181818	4.201388208	308.1818182	768.1818182	#	381.7101864		

Abs Stack Temperature (R)	768.1818
Abs Stack Pressure (inHg)	26.9
Moisture (%)	99.2
Wet Mol Weight (g/g-mole)	18.2
Vent Cross-Sectional Area (ft2)	0.442

Time	Delta P	sqrt delta P	Run 3 - Stack	Stack Temp		Run 3 - Velocity	actual flow rate	standard flow rate	dry flow rate
hh:mm	inH2O		Temp deg F	R		ft/sec	acf/hr	wscf/hr	dscf/hr
7:48	0	0.0	215	675		0	0	0	0
7:49	30	5.5	239	699		470	747,837	476,957	3,816
7:50	100	10.0	340	800		918	1,460,671	931,590	7,453
7:51	95	9.7	311	771		878	1,397,644	891,392	7,131
7:52	90	9.5	302	762		850	1,352,403	862,538	6,900
7:53	80	8.9	295	755		798	1,269,188	809,465	6,476
7:54	73	8.5	288	748		758	1,206,757	769,648	6,157
7:55	68	8.2	294	754		735	1,169,358	745,796	5,966
7:56	62	7.9	295	755		702	1,117,318	712,605	5,701
7:57	56	7.5	289	749		665	1,057,651	674,551	5,396
7:58	46	6.8	286	746		601	956,656	610,138	4,881
7:59	41	6.4	294	754		571	907,999	579,105	4,633
8:00	36	6.0	288	748		533	847,441	540,483	4,324
8:01	30	5.5	294	754		488	776,701	495,366	3,963
8:02	26	5.1	283	743		451	717,775	457,784	3,662
8:03	23	4.8	278	738		423	672,821	429,113	3,433
8:04	19	4.4	289	749		387	616,063	392,914	3,143
8:05	16	4.0	280	740		353	561,932	358,390	2,867
8:06	12	3.5	291	751		308	490,251	312,673	2,501
8:07	9	3.0	298	758		268	426,544	272,042	2,176
8:08	4.1	2.0	300	760		181	288,275	183,856	1,471
8:09	3.3	1.8	294	754		162	257,603	164,294	1,314
8:10	2	1.4	297	757		126	200,942	128,157	1,025
8:11	1.6	1.3	297	757		113	179,728	114,627	917
8:12	1.6	1.3	246	706		109	173,568	110,699	886
8:13	1.7	1.3	235	695		112	177,511	113,213	906
8:14	1.9	1.4	264	724		120	191,537	122,159	977
8:15	1.9	1.4	276	736		121	193,118	123,167	985
8:16	1.8	1.3	274	734		118	187,712	119,719	958
8:17	1.9	1.4	266	726		121	191,802	122,328	979
8:18	1.9	1.4	269	729		121	192,198	122,580	981
8:19	1.8	1.3	267	727		117	186,815	119,147	953
8:20	1.5	1.2	265	725		107	170,303	108,616	869
8:21	1.7	1.3	258	718		113	180,424	115,071	921
8:22	1.5	1.2	271	731		107	171,006	109,065	873
8:23	1.4	1.2	280	740		104	166,222	106,013	848
8:24	1.1	1.0	277	737		92	147,041	93,780	750
8:25	1	1.0	282	742		88	140,673	89,718	718
8:26	0.73	0.9	291	751		76	120,917	77,119	617
8:27	0.37	0.6	293	753		54	86,200	54,977	440
8:28	0.05	0.2	291	751		20	31,646	20,183	161
	23.50897436	3.73496974	284.3076923	744.3076923	###	332.6051609	529241.332	337540.477	2700.323816

Abs Stack Temperature (R)	744.3077
Abs Stack Pressure (inHg)	26.9
Moisture (%)	99.2
Wet Mol Weight (g/g-mole)	18.2
Vent Cross-Sectional Area (ft2)	0.442

APPENDIX K: PROCESS DATA

SEE ADDENDUM

(CONFIDENTIAL BUSINESS INFORMATION)

APPENDIX L: VOLATILE ORGANICS HAP LAB REPORT

TRC Environmental Corporation

9225 US Hwy 183 S
Austin, TX 78747

ExxonMobil - DCU, D603 Vent

Project # 182129.0000.0000

Analytical Report
(0711-64)

EPA Method 18 (Bags and Condensates)

1,3-Butadiene, Acetonitrile, Acrolein, Acetone, Acrylonitrile, Pentane, Methylene chloride, Hexane, Benzene, Trichloroethene, Toluene, 1,2-Dibromoethane, Tetrachloroethene, Carbon disulfide, Methane and Ethane

EPA Method 18 (Adsorbents)

Acetonitrile, Acrylonitrile, Methyl t-butyl ether (MTBE), 2-Nitropropane, Isooctane, Methyl isobutyl ketone (MIBK), Chlorobenzene, Ethylbenzene, m/p-Xylene, Styrene, o-Xylene, Cumene, and Nitrobenzene,

EPA Method 308

Methanol

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 1102 pages.

Report Issued: 09/22/2011

Summary of Results

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

Compound	Sample ID / Adjusted Concentration (ppm)		
	EM-R2-Bag-DCU	***EM-R3-Bag-DCU***	***EM-R1-Bag-DCU***
1-3 Butadiene	0.282 ND	0.282 ND	0.282 ND
Acetonitrile	44.3	27.8	26.9
Acrolein	0.283 ND	0.283 ND	0.283 ND
Acetone	0.415 ND	0.415 ND	0.415 ND
Acrylonitrile	132	74.1	67.1
Pentane	472	204	245
Methylene chloride	0.958 ND	0.958 ND	0.958 ND
Hexane	162	48.0	92.6
Benzene	387	481	264
Trichloroethene	0.401 ND	21.7	0.401 ND
Toluene	1,252	1,456	902
1,2 Dibromoethane	246	74.0	242
Tetrachloroethene	0.291 ND	0.291 ND	0.291 ND

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 16 - Type

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

Compound	Sample ID / Sample Concentration (ppm)		
	EM-R1-Bag-DCU	***EM-R2-Bag-DCU***	***EM-R3-Bag-CDU***
Carbon disulfide	1.42	6.61	9.19

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R

Compound	Sample ID / Adjusted Concentration (ppm)		
	EM-R2-Bag-DCU	***EM-R3-Bag-DCU***	***EM-R1-Bag-DCU***
Methane	484,034	483,837	241,708
Ethane	76,346	61,316	39,250

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

Compound	Sample ID / Catch Weight (ug)		
	R1 Bag COND	***R2 Bag COND***	***R3 Bag COND***
1,3-Butadiene	12.9 ND	12.9 ND	12.9 ND
Pentane	20.2 ND	59.5	20.2 ND
Acrolein	12.8 ND	12.8 ND	12.8 ND
Acetone	20.8 J	41.7 J	8.09 J
Dichloromethane	22.3 ND	22.3 ND	22.3 ND
Hexane	9.22 ND	9.22 ND	9.22 ND
Benzene	11.0 ND	59.1 J	15.6 J
Trichloroethylene	12.5 ND	19.2 J	12.5 ND
Toluene	21.5 ND	116	24.9 J
Tetrachloroethylene	169	195	69.7 J
1,2-Dibromoethane	95.2 J	128 J	91.9 J
	Bag COND FB		
1,3-Butadiene	12.9 ND		
Pentane	20.2 ND		
Acrolein	12.8 ND		
Acetone	7.60 ND		
Dichloromethane	22.3 ND		
Hexane	9.22 ND		
Benzene	11.0 ND		
Trichloroethylene	12.5 ND		
Toluene	21.5 ND		
Tetrachloroethylene	59.2 ND		
1,2-Dibromoethane	28.6 ND		

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

Compound	Sample ID / Catch Weight (ug)		
	R1 Bag COND	***R2 Bag COND***	***R3 Bag COND***
Carbon disulfide	4.27 ND	4.27 ND	4.27 ND
	Bag COND FB		
Carbon disulfide	4.27 ND		

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18 Adsorbents

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Compound	Sample ID / Adjusted Catch Weight (ug)		
	M18 R1A	***M18 R2A***	***M18 R3A***
Acetonitrile	292	760	19.3 ND
Acrylonitrile	88.7	19.4 ND	19.4 ND
MTBE	675	16.0	19.6
2-Nitropropane	439	1,680	23.9 ND
Isooctane	17.0 ND	17.0 ND	17.0 ND
MIBK	19.6 ND	19.6 ND	19.6 ND
Chlorobenzene	27.3 ND	27.3 ND	27.3 ND
Ethylbenzene	2,942	8,530	885
m/p-Xylene	18,460 E	51,349 E	9,575
Styrene	224	22.3 ND	22.3 ND
o-Xylene	4,738	12,244	2,071
Cumene	100	376	21.4 ND
Nitrobenzene	833	1,454	2,695

	M18 H2O Cond FB-A	***M18 H2O XAD FB-A***
Acetonitrile	19.3 ND	15.7 ND
Acrylonitrile	19.4 ND	15.7 ND
MTBE	18.2 ND	14.7 ND
2-Nitropropane	23.9 ND	19.3 ND
Isooctane	17.0 ND	13.7 ND
MIBK	19.6 ND	15.9 ND
Chlorobenzene	27.3 ND	22.1 ND
Ethylbenzene	21.3 ND	17.3 ND
m/p-Xylene	21.2 ND	17.2 ND
Styrene	22.3 ND	18.1 ND
o-Xylene	21.7 ND	17.5 ND
Cumene	21.4 ND	17.3 ND
Nitrobenzene	29.6 ND	23.9 ND

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

Compound	Sample ID / Adjusted Catch Weight (ug)	
	M18 R1A Cond Raff	***M18 R1B Spkd Cond Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	24.4 J	21.2 J
2-Nitropropane	10.16 ND	10.16 ND
	M18 R2A Cond Raff	***M18 R2B Spkd Cond Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	137	122
2-Nitropropane	10.16 ND	10.16 ND
	M18 R3A Cond Raff	***M18 R3B Spkd Cond Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	40.7 J	34.5 J
2-Nitropropane	10.16 ND	10.16 ND
	M18 H2O Cond FB-A Raff	***M18 H2O Cond RB Raff***
Acrylonitrile	8.44 ND	8.44 ND
Acetonitrile	9.99 ND	9.99 ND
2-Nitropropane	10.16 ND	10.16 ND

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

Compound	Sample ID / Catch Weight (ug)		
	M308-Run 1	***M308-Run 2***	***M308-Run 3***
Methanol	12.6 J	30.3 J	6.75 ND
	M308-H2O-FB	***M308-SG-FB***	
Methanol	6.75 ND	0.790 ND	

Results

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.282 (ppm)
LOQ 2.57 (ppm)
Compound 1-3 Butadiene

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.282	0.282	0.282	0.0	0.282	1	100	0.282	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	2.63	2.63	2.63	0.0	93.2	93.2	93.0	0.1	93.1	1	100	93.1	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	90.6%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 1.12 (ppm)
LOQ 4.85 (ppm)
Compound Acetonitrile

Lower Curve Limit 4.85 (ppm)
Upper Curve Limit 250 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	3.47	3.47	3.47	0.0	43.7	43.4	45.9	3.6	44.3	1	100	44.3	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	3.45	3.45	3.45	0.1	27.9	28.1	27.5	1.1	27.8	1	100	27.8	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	3.48	3.48	3.48	0.0	26.3	27.1	27.2	2.1	26.9	1	100	26.9	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	1.12	1.12	1.12	0.0	1.12	1	100	1.12	ND
EM-R3-Bag-DCU Baseline	018B0201.D	018B0202.D	018B0203.D	GC114P176R_ICR.M	3.46	3.47	3.47	0.1	21.1	20.7	20.9	1.0	20.9	1	100	20.9	
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	3.46	3.46	3.46	0.1	21.4	22.0	20.7	3.1	21.4	1	100	21.4	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	NA	NA	NA	NA	1.12	1.12	1.12	0.0	1.12	1	100	1.12	ND
															Spike Amount (ppm)	NA	
															Spike Recovery (%)	NA	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.283 (ppm)
LOQ 2.57 (ppm)
Compound Acrolein

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.283	0.283	0.283	0.0	0.283	1	100	0.283	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	3.60	3.60	3.60	0.0	75.0	74.6	74.0	0.7	74.6	1	100	74.6	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	72.5%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.415 (ppm)
LOQ 4.99 (ppm)
Compound Acetone

Lower Curve Limit 4.99 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.415	0.415	0.415	0.0	0.415	1	100	0.415	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	3.70	3.70	3.71	0.0	84.1	83.7	83.2	0.6	83.6	1	100	83.6	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	81.4%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.319 (ppm)
LOQ 4.97 (ppm)
Compound Acrylonitrile

Lower Curve Limit 4.97 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.1	131	132	132	0.5	132	1	100	132	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.0	74.5	74.2	73.7	0.6	74.1	1	100	74.1	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	4.11	4.11	4.11	0.0	68.2	66.7	66.3	1.7	67.1	1	100	67.1	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.319	0.319	0.319	0.0	0.319	1	100	0.319	ND
EM-R3-Bag-DCU Baseline	018B0201.D	018B0202.D	018B0203.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.1	80.2	78.6	78.7	1.4	79.2	1	100	79.2	
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	4.10	4.10	4.10	0.0	94.9	91.6	94.1	2.1	93.5	1	100	93.5	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	4.11	4.11	4.11	0.0	60.8	60.9	60.6	0.3	60.7	1	100	60.7	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	59.3%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.257 (ppm)
LOQ 2.57 (ppm)
Compound Pentane

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P176R_ICR.M	4.19	4.19	4.20	0.1	15.3	15.3	15.1	0.9	15.2	31	100	472	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	4.19	4.19	4.19	0.0	205	203	203	0.6	204	1	100	204	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	4.19	4.19	4.19	0.0	244	245	245	0.3	245	1	100	245	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	100	0.257	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	4.20	4.20	4.20	0.0	94.4	94.4	94.2	0.1	94.3	1	100	94.3	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	91.8%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.958 (ppm)
LOQ 2.57 (ppm)
Compound Methylene chloride

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.958	0.958	0.958	0.0	0.958	1	100	0.958	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	4.53	4.53	4.53	0.2	361	360	352	1.5	358	1	100	358	E
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	4.53	4.53	4.53	0.0	708	697	693	1.2	699	1	100	699	E
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	4.51	4.51	4.51	0.0	85.8	86.3	86.4	0.4	86.2	1	100	86.2	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	83.8%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.259 (ppm)
LOQ 2.57 (ppm)
Compound Hexane

Lower Curve Limit 2.57 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	5.78	5.78	5.78	0.0	197	187	202	4.3	195	1	121	162	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	5.78	5.78	5.78	0.0	58.6	57.3	58.0	1.2	57.9	1	121	48.0	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	5.78	5.78	5.78	0.0	111	111	113	1.2	112	1	121	92.6	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.259	0.259	0.259	0.0	0.259	1	100	0.259	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	5.77	5.78	5.78	0.1	176	177	170	2.7	175	1	100	175	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	5.79	5.79	5.79	0.0	93.4	93.5	93.1	0.2	93.3	1	100	93.3	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	90.8%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.256 (ppm)
LOQ 2.56 (ppm)
Compound Benzene

Lower Curve Limit 2.56 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	12.9	12.7	12.6	1.3	12.7	31	102	387	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	16.1	16.1	15.1	4.1	15.8	31	102	481	
EM-R1-Bag-DCU	020B0901.D	020B0902.D	020B0903.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	8.76	8.63	8.62	1.0	8.67	31	102	264	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.256	0.256	0.256	0.0	0.256	1	100	0.256	ND
EM-R1-Bag-DCU S&R	019B0201.D	019B0202.D	019B0203.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	13.4	13.2	13.1	1.7	13.2	31	100	410	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	6.50	6.50	6.50	0.0	88.5	88.5	88.1	0.3	88.4	1	100	88.4	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	86.3%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.401 (ppm)
LOQ 4.97 (ppm)
Compound Trichloroethene

Lower Curve Limit 4.97 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.401	0.401	0.401	0.0	0.401	1	100	0.401	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	6.89	6.89	6.89	0.1	22.6	21.7	20.8	4.1	21.7	1	100	21.7	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.401	0.401	0.401	0.0	0.401	1	100	0.401	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.401	0.401	0.401	0.0	0.401	1	100	0.401	ND
EM-R1-Bag-DCU S&R	018B0101.D	018B0102.D	018B0103.D	GC114P176R_ICR.M	6.89	6.89	6.89	0.1	48.1	51.7	48.8	4.4	49.5	1	100	49.5	
EM-R2-Bag-DCU S&R	018B1201.D	018B1202.D	018B1203.D	GC114P176R_ICR.M	6.89	6.89	6.89	0.1	117	118	119	0.8	118	1	100	118	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	6.90	6.90	6.90	0.0	84.6	84.5	84.1	0.3	84.4	1	100	84.4	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	82.4%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.256 (ppm)
LOQ 4.97 (ppm)
Compound Toluene

Lower Curve Limit 4.97 (ppm)
Upper Curve Limit 256 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P176R_ICR.M	7.56	7.57	7.57	0.0	34.1	32.9	32.2	3.1	33.1	31	82.0	1,252	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P176R_ICR.M	7.57	7.57	7.57	0.0	38.7	38.6	38.3	0.6	38.5	31	82.0	1,456	
EM-R1-Bag-DCU	020B0901.D	020B0902.D	020B0903.D	GC114P176R_ICR.M	7.57	7.57	7.57	0.0	23.8	23.8	23.9	0.2	23.8	31	82.0	902	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.256	0.256	0.256	0.0	0.256	1	100	0.256	ND
EM-R1-Bag-DCU S&R	019B0201.D	019B0202.D	019B0203.D	GC114P176R_ICR.M	7.56	7.56	7.56	0.0	36.3	35.5	35.2	1.7	35.7	31	100	1,106	
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	7.57	7.57	7.57	0.0	80.6	80.5	80.1	0.4	80.4	1	100	80.4	
															Spike Amount (ppm)	102	
															Spike Recovery (%)	78.5%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.257 (ppm)
LOQ 4.99 (ppm)
Compound 1,2 Dibromoethane

Lower Curve Limit 4.99 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	250	242	246	1.7	246	1	100	246	
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	74.3	74.1	73.6	0.6	74.0	1	100	74.0	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	237	244	244	1.9	242	1	100	242	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	100	0.257	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	7.84	7.84	7.84	0.0	71.9	71.9	71.5	0.4	71.8	1	100	71.8	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	69.8%	

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R bag

MDL 0.291 (ppm)
LOQ 4.99 (ppm)
Compound Tetrachloroethene

Lower Curve Limit 4.99 (ppm)
Upper Curve Limit 257 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0301.D	018B0302.D	018B0303.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
EM-R3-Bag-DCU	019B0401.D	019B0402.D	019B0403.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P176R_ICR.M	NA	NA	NA	NA	0.291	0.291	0.291	0.0	0.291	1	100	0.291	ND
gc119p176 #I4 LCS	026B1301.D	026B1302.D	026B1303.D	GC114P176R_ICR.M	7.98	7.98	7.98	0.0	82.3	82.3	81.8	0.4	82.1	1	100	82.1	
															Spike Amount (ppm)	103	
															Spike Recovery (%)	79.9%	

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp	Client #	182129.0000.0000
Analyst	MGM	Job #	0711-64
Parameters	Bag Spike & Recovery	Unspiked Sample ID	EM-R1-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	1-3 Butadiene MW 54.090			Acrolein MW 56.063			Acetone MW 58.079		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Avg ppm	0.00		Avg ppm	0.00		Avg ppm	0.00	
What was added to the bag?									
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	10.00			10.0			10.0		
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	25.00			25.0			25.0		
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	0.00			0.00			0.00		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	508	29.73	69.0	501	29.73	69.0	495	29.73	69.0
Volume Added (mL)	60.0	Total ug	67.9	60.0	Total ug	69.5	60.0	Total ug	71.1
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
Total Vol (mL) vaporized	11.8			11.8			11.8		
Total Vol (mL) added as gas	60.0			60.0			60.0		
Other volume (mL) Added	0.00			0.00			0.00		

What volume was in the bag before spiking?

Wedge Volume	4.882	(L)	Sampled	7/14/11 12:01 AM	Hours	
					Delta	157:21:15
			Analyzed	7/20/11 1:22 PM		
			Spiked	7/21/11 11:00 AM	Hours	
					Delta	166:05:00
			Spike Analyzed	7/28/11 9:05 AM		
Total Vol. After Spiking	4,954	(mL)	Spike hold equal to or greater than original hold			YES

Ending Volume in Bag (mL)		4,954		
Original volume in the bag (mL)		4,882	4,882	4,882
Total volume added (mL)		71.8	71.8	71.8
Dilution Factor caused by addition		1.01	1.01	1.01
Dilution Adjusted Base Conc (ppm)	"U"	0.00	0.00	0.00
Theoretical Spike Conc (ppm)	"S"	**6.10**	**6.02**	**5.94**

	1-3 Butadiene			Acrolein			Acetone		
What was the conc of the bag after spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Concentration (ppm) "T"	Avg ppm	0.00		Avg ppm	0.00		Avg ppm	0.00	
RECOVERY %		0.0	%		0.0	%		0.0	%

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp	Client #	182129.0000.0000
Analyst	MGM	Job #	0711-64
Parameters	Bag Spike & Recovery	Unspiked Sample ID	EM-R1-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	Methylene chloride MW 84.933			Hexane MW 84.160			Benzene MW 78.113		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	0.00	0.00	0.00	111	111	113	272	268	267
	Avg ppm	0.00		Avg ppm	112		Avg ppm	269	
What was added to the bag?									
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	10.00			10.0			10.0		
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0.00	0.00		32,785	820		87,856	2,196	
uL Added	25.00			25.0			25.0		
	ug/mL	Total ug		ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0.00	0.00		0.00	0.00		0.00	0.00	
uL Added	0.00			0.00			0.00		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	500	29.73	69.0	501	29.73	69.0	505	29.73	69.0
Volume Added (mL)	60.0	Total ug	105	60.0	Total ug	104	60.0	Total ug	97.5
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0.00	29.73	69.0	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00	0.00	Total ug	0.00
Total Vol (mL) vaporized	11.8			11.8			11.8		
Total Vol (mL) added as gas	60.0			60.0			60.0		
Other volume (mL) Added	0.00			0.00			0.00		

What volume was in the bag before spiking?

Wedge Volume	4.882	(L)	Sampled	6/9/11 1:12 PM		Hours
					Delta	157:21:15
			Analyzed	6/13/11 1:42 PM		
			Spiked	6/15/11 1:30 PM		Hours
					Delta	166:05:00
			Spike Analyzed	7/28/11 9:05 AM		
Total Vol. After Spiking	4,954	(mL)	Spike hold equal to or greater than original hold			YES

		Methylene chloride	Hexane	Benzene
Ending Volume in Bag (mL)				
Original volume in the bag (mL)		4,882	4,882	4,882
Total volume added (mL)		71.8	71.8	71.8
Dilution Factor caused by addition		1.01	1.01	1.01
Dilution Adjusted Base Conc (ppm)	"U"	0.00	110	265
Theoretical Spike Conc (ppm)	"S"	**6.00**	**53.3**	**143**

	Methylene chloride			Hexane			Benzene		
What was the conc of the bag after spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	361	360	352	176	177	170	417	408	405
Final Concentration (ppm) "T"	Avg ppm	358		Avg ppm	175		Avg ppm	410	
RECOVERY %		5958 %			121 %			102 %	

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R1-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	Trichloroethene MW 131.388			Toluene MW 92.140		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	0.00	0.00	0.00	738	738	741
	Avg ppm	0.00		Avg ppm	739	
What was added to the bag?						
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0.00	0.00		863,270	8,633	
uL Added	10.0			10.0		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0.00	0.00		0.00	0.00	
uL Added	25.0			25.0		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0.00	0.00		0.000	0.000	
uL Added	0.00			0.000		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	507	29.73	69.0	508	29.73	69.0
Volume Added (mL)	60.0	Total ug	164.71	60.0	Total ug	116
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0.00	29.73	69.0	0.00	29.73	69.0
Volume Added (mL)	0.00	Total ug	0.00	0.00	Total ug	0.00
Total Vol (mL) vaporized	11.8			11.8		
Total Vol (mL) added as gas	60.0			60.0		
Other volume (mL) Added	0.00			0.00		

What volume was in the bag before spiking?

Wedge Volume	4.882	(L)	Sampled	7/14/11 12:01 AM	Hours
				Delta	157:21:15
			Analyzed	7/20/11 1:22 PM	
			Spiked	7/21/11 11:00 AM	Hours
				Delta	166:05:00
			Spike Analyzed	7/28/11 9:57 AM	
Total Vol. After Spiking	4,954	(mL)	Spike hold equal to or greater than original hold		YES

Ending Volume in Bag (mL)		4,954	
Original volume in the bag (mL)		4,882	4,882
Total volume added (mL)		71.8	71.8
Dilution Factor caused by addition		1.01	1.01
Dilution Adjusted Base Conc (ppm)	"U"	0.00	728
Theoretical Spike Conc (ppm)	"S"	**6.09**	**461**

What was the conc of the bag after spiking?	Trichloroethene Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Toluene Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	48.1	51.7	48.8	1,125	1,102	1,091
Final Concentration (ppm) "T"	Avg ppm	49.5		Avg ppm	1,106	
RECOVERY %		814 %			82.0 %	

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R1-Bag-DCU

Logbook Reference
Neat Toluene

Liquid Spike #1

		Solvent									
		Neat									Toluene
Total ug		0									8632.7
Specific Gravity		0									0.865
MW		0									92.1402
Vol of cmpd (uL)		0.02									9.980
Total Volume added (uL)	10										
Weight Fraction		0.00									1.0000
SG Contribution		0.00									0.8650
Average SG	0.87										
MW Contribution		0.00	-	-	-	-	-	-	-	-	- 92.140
Average MW	92.14										
Vaporized Volume (mL)	2.3										

Logbook Reference
gc126 pg 21

Liquid Spike #2

		Solvent									
		CS2								Hexane	Benzene
Total ug		26784								819.63125	2196.4013
Specific Gravity		1.26								0.659	0.879
MW		76.14								84.16	78.1134
Vol of cmpd (uL)		21.3								1.244	2.499
Total Volume added (uL)	25										
Weight Fraction		0.90								0.0275	0.0737
SG Contribution		1.13								0.0181	0.0648
Average SG	1.22										
MW Contribution		68.43	-	-	-	-	-	-	2.315	5.757	
Average MW	76.51										
Vaporized Volume (mL)	9.6										

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R3-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

	Acetonitrile			Acrylonitrile		
	MW 41.05			MW 53.06		
What was the conc of the bag before spiking?	Inj 1 (ppm)	Inj 2 (ppm)		Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
U' (before spiking)	21.1	20.7	20.9	80.2	78.6	78.7
	Avg ppm	20.9		Avg ppm	79.2	
What was added to the bag?						
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #1	0	0		16,104	322	
uL Added	20			20		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #2	0	0		0	0	
uL Added	0			0		
	ug/mL	Total ug		ug/mL	Total ug	
Liquid Spike #3	0	0		0	0	
uL Added	0			0		
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1		29.73	70.0	0	29.73	70.0
Volume Added (mL)	120	Total ug	0.0	120	Total ug	0.0
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	249	29.73	70.0	0	29.73	70.0
Volume Added (mL)	140	Total ug	58.9	140	Total ug	0.0
	Conc. ppm	Pbar (inHg)	T (F)	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0	29.73	70.0		29.73	70.0
Volume Added (mL)		Total ug	0.0	0	Total ug	0.0
Total Vol (mL) vaporized	8.0			8.0		
Total Vol (mL) added as gas	260			260		
Other volume (mL) Added	0			0		

What volume was in the bag before spiking?

Wedge Volume	2.980	(L)	Sampled	4/5/06 8:00 AM	Hours
				Delta	26:00:00
			Analyzed	4/6/06 10:00 AM	
			Spiked	4/6/06 11:00 AM	Hours
				Delta	689:00:00
			Spike Analyzed	5/5/06 4:00 AM	
Total Vol. After Spiking	3,248	(mL)	Spike hold equal to or greater than original hold		YES

Ending Volume in Bag (mL)		3,248	
Original volume in the bag (mL)		2,980	2,980
Total volume added (mL)		268	268
Dilution Factor caused by addition		1.09	1.09
Dilution Adjusted Base Conc (ppm)	"U"	19.20	72.64
Theoretical Spike Conc (ppm)	"S"	**10.62**	**44.96**

What was the conc of the bag after spiking?	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)	Inj 1 (ppm)	Inj 2 (ppm)	Inj 3 (ppm)
	21.4	22.0	20.7	94.9	91.6	94.1
Final Concentration (ppm) "T"	Avg ppm	21.4		Avg ppm	93.5	
RECOVERY %		20.3 %			46.4 %	

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R3-Bag-DCU

Logbook Reference
gc126 pg 32

Liquid Spike #1

		Solvent CS2	Acetonitrile	Methane	Acrylonitrile
Total ug		24697	0	0	322.08
Specific Gravity		1.26	0.882	0.829	0.806
MW		76.14	41.0519	16.04	53.06
Vol of cmpd (uL)		19.60	0.000	0.000	0.400
Total Volume added (uL)	20				
Weight Fraction		0.99	0.0000	0.0000	0.0129
SG Contribution		1.24	0.0000	0.0000	0.0104
Average SG	1.25				
MW Contribution		75.16	-	-	0.683
Average MW	75.84				
Vaporized Volume (mL)	8.0				

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 16 - Type

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

MDL 0.0454 (ppm)
LOQ 0.626 (ppm)
Compound Carbon disulfide

Lower Curve Limit 0.626 (ppm)
Upper Curve Limit 7.90 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
EM-R1-Bag-DCU	007B0401.D	007B0402.D	007B0403.D	GC125P025_POST_CS2.M	5.51	5.51	5.51	0.0	1.44	1.40	1.41	1.8	1.42	1	1.42	
EM-R2-Bag-DCU	007B0901.D	007B0902.D	007B0903.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.06	1.11	1.13	3.5	1.10	6	6.61	
EM-R3-Bag-CDU	006B0401.D	006B0402.D	006B0403.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.46	1.51	1.63	6.3	1.53	6	9.19	
Blank	007B0803.D	007B0804.D	007B0805.D	GC125P031_POST_CS2.M	NA	NA	NA	NA	0.0454	0.0454	0.0454	0.0	0.0454	1	0.0454	ND

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

MDL 0.0450 (ppm)
LOQ 0.626 (ppm)
Compound Carbon disulfide

Lower Curve Limit 0.626 (ppm)
Upper Curve Limit 7.90 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
EM-R1-Bag-DCU	007B0401.D	007B0402.D	007B0403.D	GC125P025_POST_CS2.M	5.51	5.51	5.51	0.0	1.44	1.40	1.41	1.8	1.42	1	1.42	
EM-R3-Bag-CDU	007B0901.D	007B0902.D	007B0903.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.06	1.11	1.13	3.5	1.10	6	6.61	
EM-R3-Bag-CDU	006B0401.D	006B0402.D	006B0403.D	GC125P031_POST_CS2.M	5.51	5.51	5.51	0.0	1.46	1.51	1.63	6.3	1.53	6	9.19	
Blank	007B0803.D	007B0804.D	007B0805.D	GC125P031_POST_CS2.M	NA	NA	NA	NA	0.0450	0.0450	0.0450	0.0	0.0450	1	0.0450	ND

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R

MDL 0.284 (ppm)
LOQ 2.00 (ppm)
Compound Methane

Lower Curve Limit 2.00 (ppm)
Upper Curve Limit 80,000 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P172R_0711-64.M	1.40	1.40	1.40	0.1	15,575	15,717	15,550	0.7	15,614	31	100	484,034	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P172R_0711-64.M	1.40	1.40	1.40	0.0	15,716	15,645	15,462	0.9	15,608	31	100	483,837	
EM-R1-Bag-DCU	020B0901.D	020B0902.D	020B0903.D	GC114P172R_0711-64.M	1.40	1.40	1.40	0.0	7,825	7,768	7,798	0.4	7,797	31	100	241,708	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P172R_0711-64.M	NA	NA	NA	NA	0.284	0.284	0.284	0.0	0.284	1	100	0.284	ND
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P172R_0711-64.M	1.38	1.38	1.38	0.1	619,377	611,745	613,504	0.7	614,875	1	100	614,875	E

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 1 S/R

MDL 0.284 (ppm)
LOQ 2.00 (ppm)
Compound Ethane

Lower Curve Limit 2.00 (ppm)
Upper Curve Limit 49,660 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Rec Eff (%)	Adj Conc (ppm)	Qual
EM-R2-Bag-DCU	018B0701.D	018B0702.D	018B0703.D	GC114P172R_0711-64.M	1.53	1.53	1.53	0.1	2,463	2,476	2,450	0.5	2,463	31	100	76,346	
EM-R3-Bag-DCU	019B0801.D	019B0802.D	019B0803.D	GC114P172R_0711-64.M	1.53	1.53	1.53	0.0	1,986	1,984	1,964	0.7	1,978	31	100	61,316	
EM-R1-Bag-DCU	020B0501.D	020B0502.D	020B0503.D	GC114P172R_0711-64.M	1.53	1.53	1.53	0.0	39,106	39,339	39,306	0.4	39,250	1	100	39,250	
N2 Blank	017B1101.D	017B1102.D	017B1103.D	GC114P172R_0711-64.M	NA	NA	NA	NA	0.284	0.284	0.284	0.0	0.284	1	100	0.284	ND
EM-R3-Bag-DCU S&R	018B0301.D	018B0302.D	018B0303.D	GC114P172R_0711-64.M	1.51	1.52	1.52	0.1	75,462	66,969	74,748	7.5	72,393	1	100	72,393	E

v 2.13 Validated by MSS 4/14/11

Company	TRC Environmental Corp
Analyst	MGM
Parameters	Bag Spike & Recovery

Client #	182129.0000.0000
Job #	0711-64
Unspiked Sample ID	EM-R3-Bag-DCU

% Recovery = (T - U) / S x 100

T = after spike concentration U = before spike concentration S = theoretical spike concentration

		Methane	
	MW	16.04	
What was the conc of the bag before spiking?	Inj 1	Inj 2	Inj 3
	(ppm)	(ppm)	(ppm)
U' (before spiking)	75,346	74,871	74,668
	Avg ppm	74,962	
What was added to the bag?			
	ug/mL	Total ug	
Liquid Spike #1	0	0	
uL Added	20		
	ug/mL	Total ug	
Liquid Spike #2	0	0	
uL Added	0		
	ug/mL	Total ug	
Liquid Spike #3	0	0	
uL Added	0		
	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #1	990,000	29.73	70.0
Volume Added (mL)	120	Total ug	78381.8
	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #2	0	29.73	70.0
Volume Added (mL)	140	Total ug	0.0
	Conc. ppm	Pbar (inHg)	T (F)
Gas Spike #3	0	29.73	70.0
Volume Added (mL)	0	Total ug	0.0
Total Vol (mL) vaporized	8.0		
Total Vol (mL) added as gas	260		
Other volume (mL) Added	0		
	0		

What volume was in the bag before spiking?

			Sampled	4/5/06 8:00 AM		Hours
Wedge Volume	2.980	(L)			Delta	26:00:00
			Analyzed	4/6/06 10:00 AM		
			Spiked	4/6/06 11:00 AM		Hours
					Delta	689:00:00
			Spike Analyzed	5/5/06 4:00 AM		
Total Vol. After Spiking	3,248	(mL)	Spike hold equal to or greater than original hold			YES

Ending Volume in Bag (mL)			2,980
Original volume in the bag (mL)			268
Total volume added (mL)			1.09
Dilution Factor caused by addition			68777.34
Dilution Adjusted Base Conc (ppm) "U"			
Theoretical Spike Conc (ppm) "S"			**36192.95**
What was the conc of the bag after spiking?	Inj 1	Inj 2	Inj 3
	(ppm)	(ppm)	(ppm)
	75,461	66,969	74,748
Final Concentration (ppm) "T"	Avg ppm	72,393	
RECOVERY %		10.0 %	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.301 (ug/mL)
LOQ 2.19 (ug/mL)
Compound 1,3-Butadiene

Lower Curve Limit 2.19 (ug/mL)
Upper Curve Limit 183 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	42.7	12.9	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	4.46	4.46	4.46	0.1	11.5	11.8	11.5	1.9	11.6	1	2.14	24.8	
																Spike Amount (ug)	22.0
																Native Amount (ug)	0.00
																Spike Recovery (%)	113%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.301	0.301	0.301	0.0	0.301	1	1.00	0.301	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	4.41	4.41	4.41	0.0	11.3	11.2	11.2	0.5	11.2	1	1.00	11.2	
																Spike Amount (ug)	11.1
																Spike Recovery (%)	101%

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.473 (ug/mL)
LOQ 1.25 (ug/mL)
Compound Pentane

Lower Curve Limit 1.25 (ug/mL)
Upper Curve Limit 104 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	42.7	20.2	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	5.53	5.54	5.54	0.3	1.41	1.38	1.39	1.0	1.39	1	42.7	59.5	
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	42.7	20.2	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	42.7	20.2	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	5.47	5.47	5.47	0.1	6.71	6.64	6.69	0.6	6.68	1	2.14	14.3	
															Spike Amount (ug)	12.5	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	115%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.473	0.473	0.473	0.0	0.473	1	1.00	0.473	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	5.36	5.36	5.36	0.0	12.1	12.1	12.2	0.7	12.1	1	1.00	12.1	
															Spike Amount (ug)	12.4	
															Spike Recovery (%)	98.0%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.300 (ug/mL)
LOQ 1.65 (ug/mL)
Compound Acrolein

Lower Curve Limit 1.65 (ug/mL)
Upper Curve Limit 39.4 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	42.7	12.8	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.00	6.00	6.00	0.1	9.33	8.89	8.51	4.7	8.91	1	2.14	19.1	
																Spike Amount (ug)	16.5
																Native Amount (ug)	0.00
																Spike Recovery (%)	115%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.300	0.300	0.300	0.0	0.300	1	1.00	0.300	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	5.94	5.94	5.94	0.0	14.8	14.7	14.8	0.6	14.7	1	1.00	14.7	
																Spike Amount (ug)	16.4
																Spike Recovery (%)	89.7%

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.178 (ug/mL)
LOQ 1.58 (ug/mL)
Compound Acetone

Lower Curve Limit 1.58 (ug/mL)
Upper Curve Limit 132 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	6.16	6.16	6.16	0.0	0.498	0.479	0.481	2.5	0.486	1	42.7	20.8	J
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	6.16	6.17	6.16	0.0	1.00	0.972	0.966	1.8	0.978	1	42.7	41.7	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	6.16	6.16	6.16	0.0	0.191	0.192	0.186	2.0	0.190	1	42.7	8.09	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.178	0.178	0.178	0.0	0.178	1	42.7	7.60	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.15	6.16	6.15	0.1	7.54	7.67	7.48	1.4	7.57	1	2.14	16.2	
															Spike Amount (ug)	15.8	
															Native Amount (ug)	1.04	
															Spike Recovery (%)	95.9%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.178	0.178	0.178	0.0	0.178	1	1.00	0.178	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	6.10	6.10	6.10	0.0	16.7	16.5	16.6	0.8	16.6	1	1.00	16.6	
															Spike Amount (ug)	15.6	
															Spike Recovery (%)	106%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.522 (ug/mL)
LOQ 2.64 (ug/mL)
Compound Dichloromethane

Lower Curve Limit 2.64 (ug/mL)
Upper Curve Limit 221 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	42.7	22.3	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.58	6.59	6.58	0.1	9.75	10.2	10.6	4.3	10.2	1	2.14	21.8	
																Spike Amount (ug)	26.5
																Native Amount (ug)	0.00
																Spike Recovery (%)	82.3%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.522	0.522	0.522	0.0	0.522	1	1.00	0.522	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	6.52	6.52	6.52	0.0	26.8	26.6	25.3	3.6	26.2	1	1.00	26.2	
																Spike Amount (ug)	26.2
																Spike Recovery (%)	100.0%

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.216 (ug/mL)
LOQ 1.31 (ug/mL)
Compound Hexane

Lower Curve Limit 1.31 (ug/mL)
Upper Curve Limit 109 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	42.7	9.22	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	6.95	6.95	6.95	0.0	5.14	4.99	4.77	4.0	4.97	1	2.14	10.6	
																Spike Amount (ug)	13.1
																Native Amount (ug)	0.00
																Spike Recovery (%)	81.1%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.216	0.216	0.216	0.0	0.216	1	1.00	0.216	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	6.88	6.88	6.88	0.0	13.2	12.8	12.9	1.9	13.0	1	1.00	13.0	
																Spike Amount (ug)	12.9
																Spike Recovery (%)	100.3%

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.257 (ug/mL)
LOQ 1.74 (ug/mL)
Compound Benzene

Lower Curve Limit 1.74 (ug/mL)
Upper Curve Limit 146 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	42.7	11.0	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	8.42	8.42	8.42	0.0	1.40	1.38	1.37	1.2	1.38	1	42.7	59.1	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	8.42	8.42	8.42	0.0	0.363	0.368	0.364	0.8	0.365	1	42.7	15.6	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	42.7	11.0	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	8.41	8.41	8.41	0.1	8.23	8.70	8.50	2.9	8.48	1	2.14	18.1	
															Spike Amount (ug)	17.5	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	104%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.257	0.257	0.257	0.0	0.257	1	1.00	0.257	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	8.37	8.37	8.37	0.0	17.3	17.1	17.0	0.8	17.1	1	1.00	17.1	
															Spike Amount (ug)	17.4	
															Spike Recovery (%)	98.6%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.292 (ug/mL)
LOQ 2.92 (ug/mL)
Compound Trichloroethylene

Lower Curve Limit 2.92 (ug/mL)
Upper Curve Limit 244 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	42.7	12.5	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	8.89	8.89	8.89	0.0	0.385	0.441	0.525	16.6	0.450	1	42.7	19.2	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	42.7	12.5	ND
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	42.7	12.5	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	8.88	8.88	8.88	0.1	13.4	13.6	13.2	1.5	13.4	1	2.14	28.6	
																Spike Amount (ug)	29.3
																Native Amount (ug)	0.00
																Spike Recovery (%)	97.9%
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.292	0.292	0.292	0.0	0.292	1	1.00	0.292	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	8.84	8.84	8.84	0.0	28.8	28.6	28.5	0.5	28.6	1	1.00	28.6	
																Spike Amount (ug)	27.9
																Spike Recovery (%)	103%

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.504 (ug/mL)
LOQ 1.72 (ug/mL)
Compound Toluene

Lower Curve Limit 1.72 (ug/mL)
Upper Curve Limit 144 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	NA	NA	NA	NA	0.504	0.504	0.504	0.0	0.504	1	42.7	21.5	ND
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	9.86	9.86	9.86	0.0	2.61	2.88	2.70	5.5	2.73	1	42.7	116	
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	9.86	9.86	9.86	0.0	0.595	0.576	0.579	2.0	0.583	1	42.7	24.9	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.504	0.504	0.504	0.0	0.504	1	42.7	21.5	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	9.85	9.86	9.86	0.0	7.57	7.89	7.95	3.0	7.80	1	2.14	16.7	
															Spike Amount (ug)	17.3	
															Native Amount (ug)	0.00	
															Spike Recovery (%)	96.7%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.504	0.504	0.504	0.0	0.504	1	1.00	0.504	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	9.83	9.83	9.83	0.0	17.5	17.3	17.2	1.0	17.3	1	1.00	17.3	
															Spike Amount (ug)	17.1	
															Spike Recovery (%)	101%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 1.39 (ug/mL)
LOQ 3.22 (ug/mL)
Compound Tetrachloroethylene

Lower Curve Limit 3.22 (ug/mL)
Upper Curve Limit 269 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	10.29	10.29	10.29	0.0	4.01	3.92	3.93	1.4	3.95	1	42.7	169	
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	10.29	10.29	10.29	0.0	4.50	4.47	4.75	3.8	4.57	1	42.7	195	
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	10.29	10.29	10.29	0.0	1.69	1.63	1.57	3.8	1.63	1	42.7	69.7	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	1.387	1.387	1.387	0.0	1.387	1	42.7	59.2	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	10.28	10.28	10.28	0.0	14.8	27.8	29.4	38.3	24.0	1	2.14	51.4	
															Spike Amount (ug)	32.3	
															Native Amount (ug)	8.46	
															Spike Recovery (%)	133%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	1.387	1.387	1.387	0.0	1.387	1	1.00	1.387	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	10.26	10.26	10.26	0.0	34.2	32.0	32.0	4.4	32.7	1	1.00	32.7	
															Spike Amount (ug)	32.0	
															Spike Recovery (%)	102%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.669 (ug/mL)
LOQ 4.31 (ug/mL)
Compound 1,2-Dibromoethane

Lower Curve Limit 4.31 (ug/mL)
Upper Curve Limit 360 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	036F5003.D	036F5004.D	036F5005.D	GC118P140.M	10.65	10.65	10.66	0.1	2.17	2.29	2.23	2.6	2.23	1	42.7	95.2	J
R2 Bag COND	037F5103.D	037F5104.D	037F5105.D	GC118P140.M	10.65	10.65	10.65	0.0	3.06	2.92	3.00	2.5	2.99	1	42.7	128	J
R3 Bag COND	038F5203.D	038F5204.D	038F5205.D	GC118P140.M	10.65	10.65	10.65	0.0	2.07	2.15	2.24	3.9	2.15	1	42.7	91.9	J
Bag COND FB	035F4901.D	035F4902.D	035F4903.D	GC118P140.M	NA	NA	NA	NA	0.669	0.669	0.669	0.0	0.669	1	42.7	28.6	ND
R1 Bag COND #MS	007F2001.D	007F2002.D	007F2003.D	GC118P140.M	10.70	10.70	10.70	0.0	17.9	18.2	18.2	1.1	18.1	1	2.14	38.7	
															Spike Amount (ug)	43.2	
															Native Amount (ug)	4.77	
															Spike Recovery (%)	78.6%	
RB H2O	033F4703.D	033F4704.D	033F4705.D	GC118P140.M	NA	NA	NA	NA	0.669	0.669	0.669	0.0	0.669	1	1.00	0.669	ND
gc118p137 #3ss	006F0501.D	006F0502.D	006F0503.D	GC118P140.M	10.68	10.68	10.68	0.0	43.8	43.4	43.3	0.6	43.5	1	1.00	43.5	
															Spike Amount (ug)	42.7	
															Spike Recovery (%)	102%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bag Cond, 1 blk, 1 spk

MDL 0.100 (ug/mL)
LOQ 0.503 (ug/mL)
Compound Carbon disulfide

Lower Curve Limit 0.503 (ug/mL)
Upper Curve Limit 9.88 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 Bag COND	054B5401.D	054B5402.D	054B5403.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
R2 Bag COND	055B5501.D	055B5502.D	055B5503.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
R3 Bag COND	056B5601.D	056B5602.D	056B5603.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
Bag COND FB	053B5301.D	053B5302.D	053B5303.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	42.7	4.27	ND
RB H2O	052B5201.D	052B5202.D	052B5203.D	GC116P46B.M	NA	NA	NA	NA	0.100	0.100	0.100	0.0	0.100	1	1.00	0.100	ND
R1 Bag COND #MS	057B5702.D	057B5703.D	057B5704.D	GC116P46B.M	1.69	1.69	1.70	0.3	2.56	2.52	2.46	2.3	2.51	1	2.14	5.38	
																Spike Amount (ug)	5.04
																Spike Recovery (%)	107%

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.13 (ug/mL)
LOQ 3.13 (ug/mL)
Compound Acetonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 261 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.1	3.31	3.28	3.36	1.4	3.31	1.000	5.00	16.6	100.0	16.6	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	51.1	52.4	49.0	3.6	50.9	1.000	5.00	254	100.0	254	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	2.69	2.69	2.69	0.0	4.20	4.17	4.12	1.0	4.17	1.000	5.00	20.8	100.0	20.8	
																		292	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.2	3.25	3.17	3.20	1.3	3.21	1.000	5.00	16.0	100.0	16.0	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	2.68	2.67	2.68	0.1	3.73	3.43	3.57	4.3	3.58	1.000	5.00	17.9	100.0	17.9	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	2.68	NA	2.68	NA	24.3	3.13	24.1	81.8	17.2	1.000	5.00	86.0	100.0	86.0	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	2.69	NA	NA	3.13	3.89	3.13	14.9	3.38	1.000	5.00	16.9	100.0	16.9	J
																		137	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	97.6	95.8	96.9	1.0	96.8	1.000	5.00	484	100.0	484	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.1	57.2	54.0	54.5	3.6	55.3	1.000	5.00	276	100.0	276	
																		760	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.1	114	108	110	2.7	111	1.000	5.00	553	100.0	553	
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	24.3	22.8	22.4	4.9	23.2	1.000	5.00	116	100.0	116	
																		669	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
																		19.3	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	2.69	2.69	2.69	0.0	3.44	3.31	3.48	2.9	3.41	1.000	5.00	17.1	100.0	17.1	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND
																		17.1	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	1.00	3.13	100.0	3.13	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.000	5.00	15.7	100.0	15.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.13 (ug/mL)
LOQ 3.13 (ug/mL)
Compound Acetonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 261 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.13	3.13	3.13	0.0	3.13	1.235	5.00	19.3	100.0	19.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	2.68	2.68	NA	NA	3.21	4.32	3.13	21.6	3.55	1.000	5.00	17.8	100.0	17.8	
																	difference	10.8%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	2.68	2.68	2.68	0.0	23.4	22.7	22.7	2.2	22.9	1.000	5.00	115	100.0	115	
																	difference	33.3%	

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

MDL 0.238 (ug/mL)
LOQ 1.96 (ug/mL)
Compound Acetonitrile

Lower Curve Limit 1.96 (ug/mL)
Upper Curve Limit 1,965 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Raff	056B6301.D	056B6302.D	056B6303.D	GC122P038.M	3.91	3.90	3.90	0.1	0.612	0.541	0.593	7.1	0.582	1.235	34.0	24.4	100	24.4	J
M18 R1B Spkd Cond Raff	057B6401.D	057B6402.D	057B6403.D	GC122P038.M	3.91	3.90	3.91	0.1	0.485	0.500	0.528	4.7	0.504	1.235	34.0	21.2	100	21.2	J
M18 R1B Spkd Cond Raff-LD	058B6501.D	058B6502.D	058B6503.D	GC122P038.M	3.90	3.90	3.90	0.1	0.499	0.483	0.459	4.4	0.481	1.235	34.0	20.2	100	20.2	J
																	difference	4.7%	
M18 R2A Cond Raff	059B6601.D	059B6602.D	059B6603.D	GC122P038.M	3.90	3.90	3.90	0.0	3.26	3.21	3.32	1.7	3.26	1.235	34.0	137	100	137	
M18 R2B Spkd Cond Raff	060B6901.D	060B6902.D	060B6903.D	GC122P038.M	3.90	3.90	3.90	0.1	2.86	2.94	2.92	1.6	2.90	1.235	34.0	122	100	122	
M18 R3A Cond Raff	061B7001.D	061B7002.D	061B7003.D	GC122P038.M	3.90	3.90	3.90	0.0	0.952	0.959	1.00	3.0	0.970	1.235	34.0	40.7	100	40.7	J
M18 R3B Spkd Cond Raff	062B7101.D	062B7102.D	062B7103.D	GC122P038.M	3.90	3.90	3.90	0.0	0.829	0.852	0.784	4.6	0.822	1.235	34.0	34.5	100	34.5	J
M18 H2O Cond FB-A Raff	063B7201.D	063B7202.D	063B7203.D	GC122P038.M	NA	NA	NA	NA	0.238	0.238	0.238	0.0	0.238	1.235	34.0	9.99	100	9.99	ND
M18 H2O Cond RB Raff	064B7301.D	064B7302.D	064B7303.D	GC122P038.M	NA	NA	NA	NA	0.238	0.238	0.238	0.0	0.238	1.235	34.0	9.99	100	9.99	ND
AQ LCS 1 Raff	065B7401.D	065B7402.D	065B7403.D	GC122P038.M	3.90	3.90	3.90	0.0	20.9	20.7	20.8	0.4	20.8	1.235	10.0	257	100	257	
																	Spike Amount (ug)	235	
																	Spike Recovery (%)	109%	
AQ LCS 2 Raff	066B7501.D	066B7502.D	066B7503.D	GC122P038.M	3.90	3.90	3.90	0.0	20.9	20.3	21.2	2.6	20.8	1.235	10.0	257	100	257	
																	Spike Amount (ug)	235	
																	Spike Recovery (%)	109%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.14 (ug/mL)
LOQ 3.14 (ug/mL)
Compound Acrylonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 1,571 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	3.17	3.17	3.14	0.9	7.39	7.31	6.25	10.5	6.98	1.000	5.00	34.9	100.0	34.9	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	3.16	3.17	3.14	0.8	11.4	10.8	10.0	6.8	10.7	1.000	5.00	53.7	100.0	53.7	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		88.7	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																		19.4	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	1.00	3.14	100.0	3.14	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.14 (ug/mL)
LOQ 3.14 (ug/mL)
Compound Acrylonitrile

Lower Curve Limit 1.57 (ug/mL)
Upper Curve Limit 1,571 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.235	5.00	19.4	100.0	19.4	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.14	3.14	3.14	0.0	3.14	1.000	5.00	15.7	100.0	15.7	ND
																	difference	0.0%	

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

MDL 0.201 (ug/mL)
LOQ 2.01 (ug/mL)
Compound Acrylonitrile

Lower Curve Limit 2.01 (ug/mL)
Upper Curve Limit 2,013 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Raff	056B6301.D	056B6302.D	056B6303.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R1B Spkd Cond Raff	057B6401.D	057B6402.D	057B6403.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R1B Spkd Cond Raff-LD	058B6501.D	058B6502.D	058B6503.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
																	difference	0.0%	
M18 R2A Cond Raff	059B6601.D	059B6602.D	059B6603.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R2B Spkd Cond Raff	060B6901.D	060B6902.D	060B6903.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R3A Cond Raff	061B7001.D	061B7002.D	061B7003.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 R3B Spkd Cond Raff	062B7101.D	062B7102.D	062B7103.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 H2O Cond FB-A Raff	063B7201.D	063B7202.D	063B7203.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
M18 H2O Cond RB Raff	064B7301.D	064B7302.D	064B7303.D	GC122P038.M	NA	NA	NA	NA	0.201	0.201	0.201	0.0	0.201	1.235	34.0	8.44	100	8.44	ND
AQ LCS 1 Raff	065B7401.D	065B7402.D	065B7403.D	GC122P038.M	3.77	3.77	3.77	0.0	17.8	17.5	17.5	1.2	17.6	1.235	10.0	217	100	217	
																	Spike Amount (ug)	236	
																	Spike Recovery (%)	92.2%	
AQ LCS 2 Raff	066B7501.D	066B7502.D	066B7503.D	GC122P038.M	3.77	3.77	3.77	0.0	18.0	17.4	18.6	3.3	18.0	1.235	10.0	222	100	222	
																	Spike Amount (ug)	236	
																	Spike Recovery (%)	94.2%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.95 (ug/mL)
LOQ 2.95 (ug/mL)
Compound MTBE

Lower Curve Limit 1.48 (ug/mL)
Upper Curve Limit 1,476 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	20.5	20.3	20.1	1.0	20.3	1.000	5.00	102	100	102	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.1	25.1	24.0	24.2	2.9	24.4	1.000	5.00	122	100	122	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	88.0	88.9	84.8	2.8	87.2	1.000	5.00	436	100	436	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	3.956	3.954	NA	NA	3.12	2.96	2.95	3.7	3.01	1.000	5.00	15.0	100	15.0	
																		675	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		18.2	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	3.16	3.20	3.21	0.9	3.19	1.000	5.00	16.0	100	16.0	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		16.0	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.1	11.7	11.3	11.2	2.7	11.4	1.000	5.00	57.2	100	57.2	
																		57.2	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	3.96	3.90	3.88	1.2	3.91	1.000	5.00	19.6	100	19.6	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		19.6	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	3.96	3.96	3.96	0.0	5.38	5.25	5.32	1.2	5.32	1.000	5.00	26.6	100	26.6	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																		26.6	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	1.00	2.95	100	2.95	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.95 (ug/mL)
LOQ 2.95 (ug/mL)
Compound MTBE

Lower Curve Limit 1.48 (ug/mL)
Upper Curve Limit 1,476 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	4.05	4.05	4.05	0.0	4.35	4.31	4.37	0.7	4.34	1.000	5.00	21.7	100	21.7	
																	Spike Amount (ug)	22.1	
																	Spike Recovery (%)	98.1%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	4.05	4.05	4.05	0.0	4.31	4.15	4.09	3.0	4.18	1.000	5.00	20.9	100	20.9	
																	Spike Amount (ug)	22.1	
																	Spike Recovery (%)	94.5%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	4.05	4.05	4.05	0.1	16.2	16.3	15.4	3.6	15.9	1.000	5.00	79.7	100	79.7	
																	Spike Amount (ug)	88.6	
																	Spike Recovery (%)	89.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.235	5.00	18.2	100	18.2	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.95	2.95	2.95	0.0	2.95	1.000	5.00	14.7	100	14.7	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	4.05	4.05	4.05	0.0	30.0	30.2	29.4	1.6	29.8	1.000	1.00	29.8	100	29.8	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	0.896	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.87 (ug/mL)
LOQ 3.87 (ug/mL)
Compound 2-Nitropropane

Lower Curve Limit 3.87 (ug/mL)
Upper Curve Limit 1,936 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	5.33	5.33	5.33	0.0	87.6	86.9	88.8	1.2	87.8	1.000	5.00	439	100	439	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		439	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	5.33	5.33	5.33	0.0	340	332	336	1.2	336	1.000	5.00	1,680	100	1,680	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		1,680	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																		23.9	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	1.00	3.87	100	3.87	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.87 (ug/mL)
LOQ 3.87 (ug/mL)
Compound 2-Nitropropane

Lower Curve Limit 3.87 (ug/mL)
Upper Curve Limit 1,936 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	5.28	5.28	5.28	0.0	5.44	5.54	5.50	1.0	5.49	1.000	5.00	27.5	100	27.5	
																	Spike Amount (ug)	29.0	
																	Spike Recovery (%)	94.6%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	5.28	5.28	5.28	0.0	5.51	5.25	5.24	3.4	5.33	1.000	5.00	26.7	100	26.7	
																	Spike Amount (ug)	29.0	
																	Spike Recovery (%)	91.8%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	5.28	5.28	5.28	0.0	20.7	20.4	19.4	3.8	20.2	1.000	5.00	101	100	101	
																	Spike Amount (ug)	116	
																	Spike Recovery (%)	86.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.235	5.00	23.9	100	23.9	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.87	3.87	3.87	0.0	3.87	1.000	5.00	19.3	100	19.3	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	5.28	5.28	5.28	0.0	38.9	39.4	38.2	1.6	38.8	1.000	1.00	38.8	100	38.8	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.17	

Company	TRC Environmental Corp
Analyst	KMT
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 1 blank

MDL 0.242 (ug/mL)
LOQ 2.42 (ug/mL)
Compound 2-Nitropropane

Lower Curve Limit 2.42 (ug/mL)
Upper Curve Limit 2,420 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Raff	056B6301.D	056B6302.D	056B6303.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R1B Spkd Cond Raff	057B6401.D	057B6402.D	057B6403.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R1B Spkd Cond Raff-LD	058B6501.D	058B6502.D	058B6503.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
																	difference	0.0%	
M18 R2A Cond Raff	059B6601.D	059B6602.D	059B6603.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R2B Spkd Cond Raff	060B6901.D	060B6902.D	060B6903.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R3A Cond Raff	061B7001.D	061B7002.D	061B7003.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 R3B Spkd Cond Raff	062B7101.D	062B7102.D	062B7103.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 H2O Cond FB-A Raff	063B7201.D	063B7202.D	063B7203.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
M18 H2O Cond RB Raff	064B7301.D	064B7302.D	064B7303.D	GC122P038.M	NA	NA	NA	NA	0.242	0.242	0.242	0.0	0.242	1.235	34.0	10.2	100	10.2	ND
gc122p038 #3ss	007B0801.D	007B0802.D	007B0803.D	GC122P038.M	4.78	4.78	4.78	0.0	49.7	49.8	49.4	0.6	49.7	1.000	1.00	49.7	100	49.7	
																	Spike Amount (ug)	48.2	
																	Spike Recovery (%)	103%	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.75 (ug/mL)
LOQ 2.75 (ug/mL)
Compound Isooctane

Lower Curve Limit 2.75 (ug/mL)
Upper Curve Limit 1,377 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																		17.0	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	1.00	2.75	100	2.75	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 2.75 (ug/mL)
LOQ 2.75 (ug/mL)
Compound Isooctane

Lower Curve Limit 2.75 (ug/mL)
Upper Curve Limit 1,377 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	5.49	5.49	5.49	0.0	5.07	5.02	5.05	0.5	5.05	1.000	5.00	25.2	100	25.2	
																	Spike Amount (ug)	24.1	
																	Spike Recovery (%)	105%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	5.49	5.49	5.49	0.0	4.93	4.69	4.73	3.0	4.78	1.000	5.00	23.9	100	23.9	
																	Spike Amount (ug)	24.1	
																	Spike Recovery (%)	99.2%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	5.49	5.49	5.49	0.0	18.9	18.6	17.7	3.7	18.4	1.000	5.00	92.1	100	92.1	
																	Spike Amount (ug)	96.4	
																	Spike Recovery (%)	95.5%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.235	5.00	17.0	100	17.0	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	2.75	2.75	2.75	0.0	2.75	1.000	5.00	13.7	100	13.7	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	5.49	5.49	5.49	0.0	27.6	28.0	27.2	1.5	27.6	1.000	1.00	27.6	100	27.6	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	0.829	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.18 (ug/mL)
LOQ 3.18 (ug/mL)
Compound MIBK

Lower Curve Limit 3.18 (ug/mL)
Upper Curve Limit 1,595 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																		19.6	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	1.00	3.18	100	3.18	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.18 (ug/mL)
LOQ 3.18 (ug/mL)
Compound MIBK

Lower Curve Limit 3.18 (ug/mL)
Upper Curve Limit 1,595 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	5.79	5.79	5.79	0.0	4.83	4.79	4.82	0.4	4.82	1.000	5.00	24.1	100	24.1	
																	Spike Amount (ug)	23.9	
																	Spike Recovery (%)	101%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	5.79	5.79	5.79	0.0	4.69	4.50	4.54	2.4	4.58	1.000	5.00	22.9	100	22.9	
																	Spike Amount (ug)	23.9	
																	Spike Recovery (%)	95.8%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	5.79	5.79	5.79	0.0	18.7	18.3	17.5	3.7	18.2	1.000	5.00	90.9	100	90.9	
																	Spike Amount (ug)	95.5	
																	Spike Recovery (%)	95.2%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.235	5.00	19.6	100	19.6	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.18	3.18	3.18	0.0	3.18	1.000	5.00	15.9	100	15.9	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	5.79	5.79	5.79	0.0	31.9	32.3	31.4	1.5	31.9	1.000	1.00	31.9	100	31.9	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	0.957	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.42 (ug/mL)
LOQ 4.42 (ug/mL)
Compound Chlorobenzene

Lower Curve Limit 4.42 (ug/mL)
Upper Curve Limit 2,212 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	6.91	6.91	6.91	0.1	14.2	13.4	14.1	3.4	13.9	1.000	5.00	69.5	100	69.5	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		69.5	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																		27.3	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	1.00	4.42	100	4.42	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.42 (ug/mL)
LOQ 4.42 (ug/mL)
Compound Chlorobenzene

Lower Curve Limit 4.42 (ug/mL)
Upper Curve Limit 2,212 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	6.92	6.92	6.92	0.0	7.08	7.08	7.06	0.2	7.07	1.000	5.00	35.4	100	35.4	
																	Spike Amount (ug)	33.2	
																	Spike Recovery (%)	107%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	6.92	6.92	6.92	0.0	6.81	6.38	6.39	4.3	6.53	1.000	5.00	32.6	100	32.6	
																	Spike Amount (ug)	33.2	
																	Spike Recovery (%)	98.4%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	6.92	6.92	6.92	0.0	27.4	26.7	25.5	3.8	26.5	1.000	5.00	133	100	133	
																	Spike Amount (ug)	133	
																	Spike Recovery (%)	99.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.235	5.00	27.3	100	27.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	6.91	6.91	6.91	0.0	14.0	15.1	14.1	4.7	14.4	1.000	5.00	71.9	100	71.9	
																	difference	3.4%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.42	4.42	4.42	0.0	4.42	1.000	5.00	22.1	100	22.1	ND
																	difference	0.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	6.92	6.92	6.92	0.0	44.3	45.2	44.0	1.6	44.5	1.000	1.00	44.5	100	44.5	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.34	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Ethylbenzene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 1,731 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	380	379	370	1.6	376	1.000	5.00	1,882	100	1,882	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	79.8	75.6	75.8	3.5	77.1	1.000	5.00	385	100	385	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	138	135	132	2.3	135	1.000	5.00	675	100	675	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		2,942	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	131	141	143	5.0	138	1.000	5.00	692	100	692	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	54.7	53.3	52.7	2.1	53.6	1.000	5.00	268	100	268	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	413	409	399	2.0	407	1.000	5.00	2,034	100	2,034	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		2,994	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	831	862	842	2.0	845	1.000	5.00	4,225	100	4,225	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	7.05	7.04	7.05	0.0	529	537	535	0.9	534	1.000	5.00	2,668	100	2,668	
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	7.04	7.05	7.04	0.0	332	322	328	1.5	327	1.000	5.00	1,637	100	1,637	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		8,530	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	7.05	7.04	7.04	0.0	26.5	24.7	27.2	5.4	26.1	1.235	5.00	161	100	161	
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	882	822	862	3.9	855	1.000	5.00	4,277	100	4,277	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	196	198	191	2.2	195	1.000	5.00	975	100	975	
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		5,413	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	147	146	146	0.6	146	1.000	5.00	732	100	732	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	30.5	30.7	30.8	0.5	30.7	1.000	5.00	153	100	153	
																		885	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	32.2	31.1	31.4	1.9	31.6	1.000	5.00	158	100	158	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	20.9	23.8	22.5	6.8	22.4	1.000	5.00	112	100	112	
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	226	220	227	1.8	224	1.000	5.00	1,122	100	1,122	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	7.05	7.05	7.05	0.0	33.0	32.6	32.4	1.1	32.7	1.000	5.00	163	100	163	
																		1,555	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	1.00	3.46	100	3.46	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Ethylbenzene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 1,731 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.05	7.05	7.05	0.0	5.66	5.62	5.66	0.5	5.65	1.000	5.00	28.2	100	28.2	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	109%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.05	7.05	7.05	0.0	5.38	5.05	5.07	4.1	5.17	1.000	5.00	25.8	100	25.8	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	99.5%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.05	7.05	7.05	0.0	21.3	20.7	19.8	3.7	20.6	1.000	5.00	103	100	103	
																	Spike Amount (ug)	104	
																	Spike Recovery (%)	99.1%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.3	100	21.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.04	7.04	7.05	0.0	140	145	141	2.1	142	1.000	5.00	710	100	710	
																	difference	2.5%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.04	7.04	7.04	0.0	423	403	412	2.5	413	1.000	5.00	2,064	100	2,064	
																	difference	1.4%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.04	7.04	7.04	0.0	35.0	35.8	34.7	1.7	35.2	1.000	1.00	35.2	100	35.2	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.06	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.43 (ug/mL)
LOQ 3.43 (ug/mL)
Compound m/p-Xylene

Lower Curve Limit 3.43 (ug/mL)
Upper Curve Limit 1,719 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	2,423	2,409	2,357	1.6	2,396	1.000	5.00	11,982	100	11,982	E
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	519	489	491	3.8	499	1.000	5.00	2,497	100	2,497	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	810	799	779	2.1	796	1.000	5.00	3,980	100	3,980	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		18,460	E
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	829	889	906	5.3	875	1.000	5.00	4,374	100	4,374	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	367	359	357	1.7	361	1.000	5.00	1,806	100	1,806	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	2,455	2,488	2,423	1.3	2,455	1.000	5.00	12,277	100	12,277	E
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		18,457	E
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	59.9	64.1	62.5	3.6	62.2	1.235	5.00	384	100	384	
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	5,544	5,706	5,610	1.5	5,620	1.000	5.00	28,100	100	28,100	E
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	3,251	3,306	3,293	1.0	3,284	1.000	5.00	16,418	100	16,418	E
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	1,309	1,269	1,290	1.6	1,289	1.000	5.00	6,446	100	6,446	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		51,349	E
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	183	170	183	4.9	179	1.235	5.00	1,104	100	1,104	
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	5,447	5,088	5,329	3.8	5,288	1.000	5.00	26,441	100	26,441	E
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	901	910	875	2.3	895	1.000	5.00	4,477	100	4,477	
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND
																		32,022	E
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	48.8	49.1	47.5	2.0	48.5	1.235	5.00	299	100	299	
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	181	171	175	3.0	176	1.000	5.00	880	100	880	
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	106	102	100	3.1	102	1.000	5.00	512	100	512	
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	1,341	1,326	1,322	0.9	1,329	1.000	5.00	6,647	100	6,647	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	246	248	248	0.5	247	1.000	5.00	1,237	100	1,237	
																		9,575	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	29.7	29.5	28.3	3.1	29.2	1.235	5.00	180	100	180	
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	256	254	257	0.6	256	1.000	5.00	1,280	100	1,280	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	175	187	180	3.5	180	1.000	5.00	902	100	902	
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	1,903	1,854	1,904	1.8	1,887	1.000	5.00	9,437	100	9,437	E
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	195	193	192	1.0	193	1.000	5.00	967	100	967	
																		12,766	E
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	1.00	3.43	100	3.43	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17.2	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.43 (ug/mL)
LOQ 3.43 (ug/mL)
Compound m/p-Xylene

Lower Curve Limit 3.43 (ug/mL)
Upper Curve Limit 1,719 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.12	7.12	7.12	0.0	9.47	9.42	9.46	0.3	9.45	1.000	5.00	47.2	100	47.2	
																	Spike Amount (ug)	43.0	
																	Spike Recovery (%)	110%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.12	7.12	7.12	0.0	8.94	8.45	8.46	3.7	8.62	1.000	5.00	43.1	100	43.1	
																	Spike Amount (ug)	43.0	
																	Spike Recovery (%)	100.3%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.000	5.00	17.2	100	17	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.12	7.12	7.12	0.0	35.4	34.4	33.0	3.8	34.3	1.000	5.00	171	100	171	
																	Spike Amount (ug)	172	
																	Spike Recovery (%)	99.7%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.43	3.43	3.43	0.0	3.43	1.235	5.00	21.2	100	21.2	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	889	913	894	1.6	899	1.000	5.00	4,493	100	4,493	
																	difference	2.7%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.11	7.11	7.11	0.0	2,575	2,451	2,462	3.2	2,496	1.000	5.00	12,479	100	12,479	E
																	difference	1.6%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.12	7.12	7.12	0.0	34.7	35.4	34.4	1.7	34.9	1.000	1.00	34.9	100	34.9	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.05	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.61 (ug/mL)
LOQ 3.61 (ug/mL)
Compound Styrene

Lower Curve Limit 3.61 (ug/mL)
Upper Curve Limit 1,810 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.24	7.24	7.24	0.0	45.7	45.0	43.8	2.3	44.8	1.000	5.00	224	100	224	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		224	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	6.31	6.92	6.70	5.0	6.64	1.000	5.00	33.2	100	33.2	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	9.58	9.96	9.29	3.6	9.61	1.000	5.00	48.0	100	48.0	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		81.3	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND
																		22.3	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	1.00	3.61	100	3.61	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18.1	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.61 (ug/mL)
LOQ 3.61 (ug/mL)
Compound Styrene

Lower Curve Limit 3.61 (ug/mL)
Upper Curve Limit 1,810 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.27	7.27	7.27	0.0	5.93	5.89	5.89	0.4	5.90	1.000	5.00	29.5	100	29.5	
																	Spike Amount (ug)	27.2	
																	Spike Recovery (%)	109%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.27	7.27	7.27	0.0	5.56	5.25	5.25	3.8	5.35	1.000	5.00	26.8	100	26.8	
																	Spike Amount (ug)	27.2	
																	Spike Recovery (%)	99%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.000	5.00	18.1	100	18	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.27	7.27	7.27	0.0	22.3	21.7	20.8	3.7	21.6	1.000	5.00	108	100	108	
																	Spike Amount (ug)	109	
																	Spike Recovery (%)	99.4%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.61	3.61	3.61	0.0	3.61	1.235	5.00	22.3	100	22.3	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	6.08	7.02	6.83	8.5	6.65	1.000	5.00	33.2	100	33.2	
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.27	7.27	7.27	0.0	10.5	9.60	9.58	6.2	9.90	1.000	5.00	49.5	100	49.5	
																	difference	3.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.27	7.27	7.27	0.0	36.4	37.2	36.1	1.7	36.6	1.000	1.00	36.6	100	36.6	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.10	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.51 (ug/mL)
LOQ 3.51 (ug/mL)
Compound o-Xylene

Lower Curve Limit 3.51 (ug/mL)
Upper Curve Limit 1,756 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	647	642	628	1.7	639	1.000	5.00	3,197	100	3,197	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	121	115	116	2.9	117	1.000	5.00	587	100	587	
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	194	191	187	2.2	191	1.000	5.00	954	100	954	
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		4,738	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	247	265	270	5.2	261	1.000	5.00	1,304	100	1,304	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	86.6	86.8	86.3	0.3	86.6	1.000	5.00	433	100	433	
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	624	637	619	1.6	627	1.000	5.00	3,133	100	3,133	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		4,870	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	1,620	1,639	1,636	0.7	1,632	1.000	5.00	8,159	100	8,159	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	649	661	659	1.1	656	1.000	5.00	3,282	100	3,282	
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	163	158	161	1.6	161	1.000	5.00	803	100	803	
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		12,244	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	54.4	49.3	53.5	6.0	52.4	1.235	5.00	324	100	324	
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	1,411	1,337	1,379	2.8	1,376	1.000	5.00	6,879	100	6,879	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	139	140	135	2.2	138	1.000	5.00	688	100	688	
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND
																		7,891	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	40.5	37.7	38.0	4.6	38.7	1.000	5.00	194	100	194	
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	22.2	23.8	23.0	3.4	23.0	1.000	5.00	115	100	115	
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	303	300	299	0.9	301	1.000	5.00	1,503	100	1,503	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	51.7	52.0	52.1	0.5	51.9	1.000	5.00	260	100	260	
																		2,071	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	53.4	50.2	51.9	3.1	51.8	1.000	5.00	259	100	259	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	33.6	38.2	36.6	7.0	36.1	1.000	5.00	181	100	181	
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	378	367	377	1.8	374	1.000	5.00	1,871	100	1,871	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	32.1	31.8	31.5	1.0	31.8	1.000	5.00	159	100	159	
																		2,469	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	1.00	3.51	100	3.51	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	17.5	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.51 (ug/mL)
LOQ 3.51 (ug/mL)
Compound o-Xylene

Lower Curve Limit 3.51 (ug/mL)
Upper Curve Limit 1,756 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.32	7.32	7.32	0.0	5.82	5.79	5.79	0.4	5.80	1.000	5.00	29.0	100	29.0	
																	Spike Amount (ug)	26.3	
																	Spike Recovery (%)	110%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.32	7.32	7.32	0.0	5.46	5.15	5.15	3.9	5.25	1.000	5.00	26.3	100	26.3	
																	Spike Amount (ug)	26.3	
																	Spike Recovery (%)	100%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.000	5.00	17.5	100	18	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.32	7.32	7.32	0.0	21.7	21.1	20.2	3.8	21.0	1.000	5.00	105	100	105	
																	Spike Amount (ug)	172	
																	Spike Recovery (%)	61.1%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.51	3.51	3.51	0.0	3.51	1.235	5.00	21.7	100	21.7	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	264	271	266	1.6	267	1.000	5.00	1,336	100	1,336	
																	difference	2.5%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.32	7.32	7.32	0.0	660	628	628	3.3	638	1.000	5.00	3,192	100	3,192	
																	difference	1.9%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.32	7.32	7.32	0.0	35.2	35.9	34.8	1.7	35.3	1.000	1.00	35.3	100	35.3	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.06	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Cumene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 7.33.4 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	20.6	20.0	19.7	2.3	20.1	1.000	5.00	100	100	100	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		100	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		21.4	ND
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	74.6	75.5	75.3	0.8	75.2	1.000	5.00	376	100	376	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		376	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	61.6	57.7	59.8	3.3	59.7	1.000	5.00	298	100	298	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		298	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		21.4	ND
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																		21.4	ND
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	1.00	3.46	100	3.46	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 3.46 (ug/mL)
LOQ 3.46 (ug/mL)
Compound Cumene

Lower Curve Limit 3.46 (ug/mL)
Upper Curve Limit 7.33.4 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	7.56	7.56	7.56	0.0	5.84	5.84	5.88	0.4	5.85	1.000	5.00	29.3	100	29.3	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	113%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	7.56	7.56	7.56	0.0	5.46	5.17	5.18	3.6	5.27	1.000	5.00	26.3	100	26.3	
																	Spike Amount (ug)	26.0	
																	Spike Recovery (%)	101%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	7.56	7.56	7.56	0.0	21.4	20.7	19.9	3.7	20.7	1.000	5.00	103	100	103	
																	Spike Amount (ug)	104	
																	Spike Recovery (%)	99.5%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.235	5.00	21.4	100	21.4	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	NA	NA	NA	NA	3.46	3.46	3.46	0.0	3.46	1.000	5.00	17.3	100	17.3	ND
																	difference	0.0%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	7.56	7.56	7.56	0.0	16.5	16.8	15.9	3.0	16.4	1.000	5.00	82.1	100	82.1	
																	difference	374.6%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	7.56	7.56	7.56	0.0	34.9	35.7	34.6	1.8	35.0	1.000	1.00	35.0	100	35.0	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.05	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.79 (ug/mL)
LOQ 4.79 (ug/mL)
Compound Nitrobenzene

Lower Curve Limit 4.79 (ug/mL)
Upper Curve Limit 2,404 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
M18 R1A Cond Ext	053F0301.D	053F0302.D	053F0303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R1A XAD FH	054F0401.D	054F0402.D	054F0403.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	158	175	167	5.1	167	1.000	5.00	833	100	833	
M18 R1A XAD BH	001F0501.D	001F0502.D	001F0503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R1A CT FH	002F0601.D	002F0602.D	002F0603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R1A CT BH	003F0701.D	003F0702.D	003F0703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		833	
M18 R1B Spk Cond Ext	004F0801.D	004F0802.D	004F0803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R1B Spk XAD FH	008F1201.D	008F1202.D	008F1203.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	107	154	155	22.7	139	1.000	5.00	693	100	693	
M18 R1B Spk XAD BH	010F1401.D	010F1402.D	010F1403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R1B Spk CT FH	011F1501.D	011F1502.D	011F1503.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	75.3	76.5	74.8	1.3	75.5	1.000	5.00	378	100	378	
M18 R1B Spk CT BH	013F1701.D	013F1702.D	013F1703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		1,071	
M18 R2A Cond Ext	014F1801.D	014F1802.D	014F1803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R2A XAD FH	015F1901.D	015F1902.D	015F1903.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	264	269	339	16.6	291	1.000	5.00	1,454	100	1,454	
M18 R2A XAD BH	016F2001.D	016F2002.D	016F2003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2A CT FH	017F2101.D	017F2102.D	017F2103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2A CT BH	020F2401.D	020F2402.D	020F2403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		1,454	
M18 R2B Spk Cond Ext	021F2501.D	021F2502.D	021F2503.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R2B Spk XAD FH	022F2601.D	022F2602.D	022F2603.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	200	178	182	7.3	187	1.000	5.00	934	100	934	
M18 R2B Spk XAD BH	023F2701.D	023F2702.D	023F2703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2B Spk CT FH	024F2801.D	024F2802.D	024F2803.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R2B Spk CT BH	025F2901.D	025F2902.D	025F2903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		934	
M18 R3A Cond Ext	026F3001.D	026F3002.D	026F3003.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R3A XAD FH	027F3101.D	027F3102.D	027F3103.D	GC121P080_HIGH.M	8.74	8.69	8.70	0.6	164	279	277	31.7	240	1.000	5.00	1,200	100	1,200	
M18 R3A XAD BH	028F3201.D	028F3202.D	028F3203.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	237	44.6	45.5	117.3	109	1.000	5.00	544	100	544	
M18 R3A CT FH	029F3301.D	029F3302.D	029F3303.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	196	186	188	3.0	190	1.000	5.00	950	100	950	
M18 R3A CT BH	032F3601.D	032F3602.D	032F3603.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		2,695	
M18 R3B Spk Cond Ext	033F3701.D	033F3702.D	033F3703.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 R3B Spk XAD FH	034F3801.D	034F3802.D	034F3803.D	GC121P080_HIGH.M	NA	8.69	8.69	NA	4.79	132	146	94.9	94.2	1.000	5.00	471	100	471	
M18 R3B Spk XAD BH	035F3901.D	035F3902.D	035F3903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
M18 R3B Spk CT FH	036F4001.D	036F4002.D	036F4003.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	81.2	78.7	81.8	2.3	80.6	1.000	5.00	403	100	403	
M18 R3B Spk CT BH	037F4101.D	037F4102.D	037F4103.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND
																		874	
M18 H2O Cond FB-A	038F4201.D	038F4202.D	038F4203.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
M18 H2O Cond RB	039F4301.D	039F4302.D	039F4303.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	1.00	4.79	100	4.79	ND
M18 H2O XAD FB-A	040F4401.D	040F4402.D	040F4403.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	23.9	ND

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

MDL 4.79 (ug/mL)
LOQ 4.79 (ug/mL)
Compound Nitrobenzene

Lower Curve Limit 4.79 (ug/mL)
Upper Curve Limit 2,404 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	Conc # 3 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Rec Eff (%)	Adj Catch Wt (ug)	Qual
XAD LCS 1	041F4501.D	041F4502.D	041F4503.D	GC121P080.M	8.71	8.71	8.71	0.0	7.73	7.57	7.67	1.1	7.66	1.000	5.00	38.3	100	38.3	
																	Spike Amount (ug)	36.1	
																	Spike Recovery (%)	106%	
XAD LCS 2	044F4801.D	044F4802.D	044F4803.D	GC121P080.M	8.71	8.71	8.71	0.0	7.22	6.82	6.78	4.0	6.94	1.000	5.00	34.7	100	34.7	
																	Spike Amount (ug)	36.1	
																	Spike Recovery (%)	96%	
XAD MB	045F4901.D	045F4902.D	045F4903.D	GC121P080.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.000	5.00	23.9	100	24	ND
AQ LCS 3	046F5001.D	046F5002.D	046F5003.D	GC121P080.M	8.71	8.71	8.71	0.0	29.3	28.5	27.7	2.8	28.5	1.000	5.00	143	100	143	
																	Spike Amount (ug)	144	
																	Spike Recovery (%)	98.9%	
M18 R1B Spk Cond ext-LD	005F0901.D	005F0902.D	005F0903.D	GC121P080_HIGH.M	NA	NA	NA	NA	4.79	4.79	4.79	0.0	4.79	1.235	5.00	29.6	100	29.6	ND
																	difference	0.0%	
M18 R1B Spk XAD FH-LD	009F1301.D	009F1302.D	009F1303.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	159	164	164	2.1	163	1.000	5.00	813	100	813	
																	difference	17.3%	
M18 R1B Spk CT FH-LD	012F1601.D	012F1602.D	012F1603.D	GC121P080_HIGH.M	8.69	8.69	8.69	0.0	80.0	75.7	75.6	3.8	77.1	1.000	5.00	385	100	385	
																	difference	2.0%	
gc121p67 #3ss	043F6401.D	043F6402.D	043F6403.D	GC121P080.M	8.71	8.71	8.71	0.0	48.8	49.7	48.3	1.6	48.9	1.000	1.00	48.9	100	48.9	
																	Spike Amount (ug)	33.3	
																	Spike Recovery (%)	1.47	

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **MTBE**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	675	22.1	24.0	-3048.0
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	16.0	22.1	24.0	186.1
M18 R2B Spk	Spike	57.2		24.0	
M18 R3A	Sample	19.6	22.1	24.0	31.7
M18 R3B Spk	Spike	26.6		24.0	
				Avg Recovery:	-943.4

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **2-Nitropropane**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	439	29.0	24.0	-1510.9
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	1,680	29.0	24.0	-5784.7
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	29.0	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	
				Avg Recovery:	-2431.9

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Isooctane**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	0.00	24.1	24.0	0.0
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	0.00	24.1	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	24.1	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	

Avg Recovery: 0.0

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **MIBK**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	0.00	23.9	24.0	0.0
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	0.00	23.9	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	23.9	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	

Avg Recovery: 0.0

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Chlorobenzene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	0.00	33.2	24.0	209.6
M18 R1B Spk	Spike	69.5		24.0	
M18 R2A	Sample	0.00	33.2	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	33.2	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	
				Avg Recovery:	69.9

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Ethylbenzene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	2,942	26.0	24.0	201.9
M18 R1B Spk	Spike	2,994		24.0	
M18 R2A	Sample	8,530	26.0	24.0	-12001.5
M18 R2B Spk	Spike	5,413		24.0	
M18 R3A	Sample	885	26.0	24.0	2579.4
M18 R3B Spk	Spike	1,555		24.0	
				Avg Recovery:	-3073.4

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **p-Xylene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	18,460	43.0	24.0	-5.8
M18 R1B Spk	Spike	18,457		24.0	
M18 R2A	Sample	51,349	43.0	24.0	-44983.7
M18 R2B Spk	Spike	32,022		24.0	
M18 R3A	Sample	9,575	43.0	24.0	7426.7
M18 R3B Spk	Spike	12,766		24.0	

Avg Recovery: -12520.9

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Styrene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	224	27.2	24.0	-526.5
M18 R1B Spk	Spike	81.3		24.0	
M18 R2A	Sample	0.00	27.2	24.0	0.0
M18 R2B Spk	Spike	0.00		24.0	
M18 R3A	Sample	0.00	27.2	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	
				Avg Recovery:	-175.5

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **o-Xylene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	4,738	26.3	24.0	500.3
M18 R1B Spk	Spike	4,870		24.0	
M18 R2A	Sample	12,244	26.3	24.0	-16524.8
M18 R2B Spk	Spike	7,891		24.0	
M18 R3A	Sample	2,071	26.3	24.0	1511.1
M18 R3B Spk	Spike	2,469		24.0	
				Avg Recovery:	-4837.8

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Cumene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	100	26.0	24.0	-386.4
M18 R1B Spk	Spike	0.00		24.0	
M18 R2A	Sample	376	26.0	24.0	-297.5
M18 R2B Spk	Spike	298		24.0	
M18 R3A	Sample	0.00	26.0	24.0	0.0
M18 R3B Spk	Spike	0.00		24.0	
				Avg Recovery:	-228.0

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	6 Runs & 2 blanks

Spike ID **Nitrobenzene**

Sample ID	Type	Catch Weight (ug)	Spike AMT (ug)	Sample Vol (L)	Rec. (%)
M18 R1A	Sample	833	36.1	24.0	659.5
M18 R1B Spk	Spike	1,071		24.0	
M18 R2A	Sample	1,454	36.1	24.0	-1444.6
M18 R2B Spk	Spike	934		24.0	
M18 R3A	Sample	2,695	36.1	24.0	-5050.0
M18 R3B Spk	Spike	874		24.0	
				Avg Recovery:	-1945.0

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

MDL 0.158 (ug/mL)
LOQ 1.58 (ug/mL)
Compound Methanol

Lower Curve Limit 1.58 (ug/mL)
Upper Curve Limit 3,161 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
M308-Run 1 Cond	023F2501.D	023F2502.D	GC120P139.M	3.27	3.26	0.2	0.279	0.311	5.5	0.295	1	42.7	12.6	J
M308-Run 1 SG FH	067B2001.D	067B2002.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
M308-Run 1 SG BH	069B2201.D	069B2202.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
													12.6	J
M308-Run 2 Cond	025F2701.D	025F2702.D	GC120P139.M	3.26	3.27	0.2	0.620	0.633	1.0	0.627	1	42.7	26.8	J
M308-Run 2 SG FH	070B2301.D	070B2302.D	GC120P150.M	3.90	3.90	0.0	0.675	0.735	4.3	0.705	1	5.00	3.53	J
M308-Run 2 SG BH	071B2401.D	071B2402.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
													30.3	J
M308-Run 3 Cond	026F2801.D	026F2802.D	GC120P139.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	42.7	6.75	ND
M308-Run 3 SG FH	072B2501.D	072B2502.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
M308-Run 3 SG BH	073B2601.D	073B2602.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
													6.75	ND
M308-H2O-FB	027F2901.D	027F2902.D	GC120P139.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	42.7	6.75	ND
M308-SG-FB	074B2701.D	074B2702.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
m308-H2O-rb	028F3201.D	028F3202.D	GC120P139.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	1.00	0.158	ND
m308-sg-mb	075B2801.D	075B2802.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
LB 3%p	056B0701.D	056B0702.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	1.00	0.158	ND
m308-sg-lcs	076B3101.D	076B3102.D	GC120P150.M	3.92	3.92	0.1	31.8	33.2	2.1	32.5	1	5.00	163	
													Spike Amount (ug)	198
													Spike Recovery (%)	82.2%

Company	TRC Environmental Corp
Analyst	CLD
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Runs & 2 blanks

MDL 0.158 (ug/mL)
LOQ 1.58 (ug/mL)
Compound Methanol

Lower Curve Limit 1.58 (ug/mL)
Upper Curve Limit 3,161 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1-Cond-LD-m308	024F2601.D	024F2602.D	GC120P139.M	3.25	3.26	0.2	0.187	0.245	13.5	0.216	1	42.7	9.22	J
												difference	26.8%	
m308-r1-sg-fh-ld	068B2101.D	068B2102.D	GC120P150.M	NA	NA	NA	0.158	0.158	0.0	0.158	1	5.00	0.790	ND
												difference	0.0%	

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	MGM
Parameters	EPA Method 18 Bags

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags & 2 S/R

Custody	Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at ambient temperature after being relinquished by TRC Environmental Corporation of Austin, TX. The bag samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The bag samples were analyzed for 1,3-butadiene, pentane, acrolein, acetonitrile, acetone, dichloromethane (methylene chloride), hexane, benzene, trichloroethene, toluene, tetrachloroethene, and 1,2-dibromoethane using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A). All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. All target analytes were referenced to certified gas phase standards. The Agilent Technologies Model 6890, Gas Chromatograph "Gummo" (S/N US00028451) was equipped with front and rear Flame Ionization Detectors, along with Restek Rtx-624 30m x 0.32mm (S/N 926828) and Rtx-1 30m x 0.32mm x 4.0um (S/N 869999) capillary columns, for these analyses.
Calibration	The calibration curves are included in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition method, GC114P165.M, is included in the Calibration Curve Chromatograms section of this report.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes	As required by the method, a recovery study was performed on a bag sample. The bag sample ***EM-R1-Bag-DCU*** was spiked with 1, 3 butadiene, acrolein, acetone, methylene chloride, hexane, benzene, trichloroethene, and toluene on 7/21/11 at 11:00 AM. The recovery efficiency values met the method-required limits of 70 to 130% for hexane, benzene, and toluene, only. The recovery efficiency values were used to adjust the results for hexane, benzene and toluene, only. Due to high concentations of, or interference from, target and non-target compounds, recoveries of the remaining compounds could not be determined. Bag sample ***EM-R2-Bag-DCU*** was also spiked and similar results were attained. Because the collocated tube train was not spiked with acetonitrile and acryloniltrile, a baseline analyses was preformed on bag ***EM-R3-Bag-DC*** and it was subsequently spiked with methane, acetonitrile, acrylonitrile. The methane spike was not appropriate for the concentration of that compounds in the sample. The recovery efficiency values did not met recovery criteria for these compounds.
Reporting Notes	Included in the report are the analyses of all three spiked bags. The spike recovery values are presented in the Results section of the report for bags ***EM-R1-Bag-DCU*** and ***EM-R3-Bag-DC***. The results for the applicable spiked bag are presented on the individual compound results pages. These analytical results are reported on a wet basis. The user of this report should determine the percent moisture in the sample and correct the reported value to ppmvd as appropriate. The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	STG
Parameters	EPA Method 16 - Type

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags

Custody	Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/2011 at ambient temperature after being relinquished by TRC Environmental Corporation of Austin, TX. The bag samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The bag samples were analyzed for carbon disulfide using the Hewlett Packard Model 5890, Series II Gas Chromatograph "Zeppo" (S/N 3235A4448X) was equipped with a Flame Photometric Detector and a Restek Rtx-1 60m x 0.53mm x 5.0um (S/N 663119) capillary column. All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. Carbon disulfide was referenced to gas phase standards prepared by certified permeation devices.
Calibration	The calibration curves are located in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition method, FPDTEST2.M, is included in the Calibration Curve Chromatograms section of this report.
QC Notes	None.

Enthalpy Analytical Narrative Summary
(continued)

Reporting Notes	These analytical results are reported on a wet basis. The user of this report should determine the percent moisture in the sample and correct the reported value to ppmvd as appropriate. The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp
Analyst	JBB
Parameters	EPA Method 18

Client #	182129.0000.0000
Job #	0711-64
# Samples	3 Bags Condensates

Custody

Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at 5.8 °C after being relinquished by TRC Environmental Corporation of Austin, TX. The bag condensate samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for 1,3-butadiene, pentane, acrolein, acetone, dichloromethane, hexane, benzene, trichloroethene, toluene, tetrachloroethene, 1,2-dibromoethane, and carbon disulfide using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. All target analytes were referenced to certified standards.

Analyses for all compounds except carbon disulfide, were preformed using the Agilent Technologies Model 6890N, Gas Chromatograph "Veronica" (S/N US10645052) was equipped with a Flame Ionization Detector and a Restek Rtx-624 105m x 0.53mm x 3.0um (S/N 1032767) capillary column.

The carbon disulfide analysis was performed using a Hewlett Packard Model 5890, Series II Gas Chromatograph "Oscar" (S/N 2938A2) equipped with a Flame Photometric Detector and a Restek Stabilwax 30m x 0.53mm x 1.5um (S/N 1033248) capillary column.

Calibration

The calibration curves are included in the Calibration Curve Chromatograms sections of this report and referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Enthalpy Analytical Narrative Summary
(continued)

Chromatographic Conditions	The acquisition methods GC118P140.M and GC118P46.M are included in the Calibration Curve Chromatograms sections of this report.
QC Notes	The analyses of the field blank contained no target compounds at concentrations greater than the detection limit.
	The analyses of the matrix spike prepared using aliquots for sample ***R1 Bag Cond*** exhibited recovery values ranging from 78.6 to 133%.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp	**Client #**	182129.0000.0000
Analyst	KAM	**Job #**	0711-64
Parameters	EPA Method 18 Adsorbents	**# Samples**	6 Runs & 2 blanks

Custody	Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at 5.8 °C after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received in good condition with the following exceptions. The XAD A and B tubes for ***R1*** and ***R3*** were received wet. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The samples were analyzed for acetonitrile, acrylonitrile, methyl t-butyl ether (MTBE), 2-nitropropane, isooctane, methyl isobutyl ketone (MIBK), chlorobenzene, ethylbenzene, m/p-xylene, styrene, o-xylene, cumene, and nitrobenzene using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A). Each sample train consisted of a knockout impinger, a SKC Xad-4 (Cat# 226-93), and a SKC Charcoal (Cat# 226-16) sample tube. All sample tubes were divided into front half (FH) and back half (BH) fractions. Each fraction was desorbed using 5 mL of carbon disulfide. The volume of one zero headspace vial was measured and recorded for the condensates. An 8 mL aliquot of each sample was removed and archived. The remaining sample was extracted with 5 mL of carbon disulfide. The carbon disulfide and aqueous layers were seperated and analyzed seperately. The aqueous fraction is termed the raffinate. The analyst noted that the carbon disulfide extracts were yellow and that their color increased in intensity from ***R1*** to ***R3***. The Hewlett Packard Model 6890, Gas Chromatograph "Lucy" (S/N US00039147) was equipped with a Flame Ionization Detector and a Restek Rtx-1 30m x 0.32mm x 4.0um (S/N 450928) capillary column, for the analyses of the extract fractions.
Analysis (continued)	The Hewlett Packard Model 5890, Series II Gas Chromatograph "Teller" (S/N 3033A3174) was equipped with a Flame Ionization Detector and a Restek Stabilwax 30m x 0.53mm x 2.0um (S/N 808560) capillary column, for the analyses of the raffinate fractions.

Enthalpy Analytical Narrative Summary
(continued)

Calibration	The calibration curves are included in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition methods GC121P078.M and GC121P078B.M are included in the Calibration Curve Chromatograms section of this report.
QC Notes	The m/p-xylene results for samples ***R1A*** and ***R2A*** were flagged with "E", because the concentrations in the XAD FH fractions exceded the instrument's calibration range. The large amount of unknown compound peaks caused an increase in the baseline which caused the precision between some triplicate injections of the samples to be greater than the method required 5% difference. The precision values are presented in the Results section of this report. In order to achieve the best integration of these samples, the slope sensitivity was increased causing an increase in the detection limit for this analysis. A spike recovery study was performed for the compounds of interest during the field test. The laboratory provided aqueous spikes for acetonitrile and acrylonitrile, at 235 µg and 236 µg, respectively. The lab provided XAD-2 tubes spiked with the remaining compounds of interest. Each tube was spiked with 22.1 µg of MTBE, 29.1 µg of 2-nitropropane, 24.1 µg of isooctane, 23.9 µg of MIBK, 33.2 µg of chlorobenzene, 26.0 µg of ethylbenzene, 43.0 µg of p-xylene, 27.2 µg of styrene, 26.4 µg of o-xylene, 26.0 µg of cumene, and 36.1 µg of nitrobenzene. Because of the low ratio of spike level to sample loading the recovery study was not useable. Spike recovery values for the laboratory control samples prepared from the retained spikes are presented in the Results section of this report.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	The m- and p- xylene isomers are inseparable and indistinguishable with the equipment and conditions used for this analyis. These two isomers have virtually identical responses. Therefore the instrument was calibrated using p-xylene. Any results shown are accurate representatations of the total of m-xylene and p-xylene present in the sample. The asociated results have been labeled as both isomers.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp	**Client #**	182129.0000.0000
Analyst	CLD	**Job #**	0711-64
Parameters	EPA Method 308	**# Samples**	3 Runs & 2 blanks

Custody	Lindsey Chatterton of Enthalpy Analytical, Inc. received the samples on 7/20/11 at 5.8 °C after being relinquished by TRC Environmental Corporation of Austin, TX. The silica gel tubes for samples ***R1*** and ***R3*** were received wet. The silica gel tube for ***R2*** was received broken. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The samples were analyzed for methanol using the analytical procedures in EPA Method 308, Procedure for Determination of Methanol Emission from Stationary Sources (40 CFR Part 63, Appendix A). Although the silica gel tube for ***R2*** was broken it was also wet so most of the media remained adhered to the tube and to the outside of the condensate container. The analyst noted that more than 95% of the media contents were recovered and desorbed. All silica gel tubes were desorbed using 5.00 mL of a 3% n-propanol in deionized water solution. The Hewlett Packard Model 5890, Series II Gas Chromatograph "Penn" (S/N 2750A17269) was equipped with front and rear Flame Ionization Detectors and two Restek Stabilwax 30m x 0.53mm x 2.0 um (S/N 810087 and S/N 808560) capillary columns, for these analyses.
Calibration	The calibration curves are included in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition methods GC120P139.M and GC120P150.M are included in the Calibration Curve Chromatograms section of this report.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes	Methanol was not detected at concentrations above the detection limit in the analyses of the field and laboratory blanks. The analysis of the laboratory control sample desorbed with these samples exhibited a spike recovery of 82.2%.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU TCR Test
Project No.: 182129.0000.0000
Sampling Date(s): 7/14, 16, 17/2011
Laboratory: Enthalpy Analytical
Laboratory P.O. #:
Shipping Airbill No.:
Shipping Date(s): 7/19/2011
Shipper's Name: M. Kovall

Premium TAT Request

Sample Code	Sampled Date	Container Size	Container G/P	Matrix: Aqueous	Organic Solvent	Ash/Soil/Sediment	Acidic	Basic	Other	Source Description	Analysis: Trace Metals*	Mercury	Hexavalent Chromium	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semi-Volatile Organics	Volatile Organics	Physical Parameters*	TCE HAS	Methane/Ethane	Comments
EM-R1-BAG-DCU	7/14/11	10L	BAG						X	DCU D603 Vent								X				X	fedlar bags
EM-R2-BAG-DCU	7/16/11	↓	↓						X									X				X	
EM-R3-BAG-DCU	7/17/11								X									X				X	
EM-R1-SG-DCU	7/14/11	NA	NA	X																			Condensate/SG Tube
* EM-R2-SG-DCU	7/16/11	↓	↓	X						* R2 SilGel received broken LMC 7/20/11													
* EM-R3-SG-DCU	7/17/11			X						* R1, R3 SilGels received wet LMC 7/20/11													
EM-BLANK-SG-DCU	7/17/11			X																			
EM-R1A-XAD-DCU	7/14/11	NA	NA	X						* R1A, R1B, R3A, R3B tubes received wet LMC 7/20/11													Cond/XAD/Carbon Tube
EM-R1B-XAD-DCU	7/14/11			X																			
EM-R2A-XAD-DCU	7/16/11			X																			
EM-R2B-XAD-DCU	7/16/11			X																			
EM-R3A-XAD-DCU	7/17/11			X																			
EM-R3B-XAD-DCU	7/17/11			X																			
EM-BLANKA-XAD-DCU	7/17/11			X																			
EM-BLANKB-XAD-DCU	7/17/11	↓	↓	X																			Spiked XAD tube

Relinquished by: M. Kovall	Date/Time: 7/19/2011 1600	Relinquished by:	Date/Time:		
Received by: [illegible] M. [illegible]	Date/Time: 7/20/11 9:36 am	Received by:	Date/Time:		

REMARKS (*): Temp = 5.8° Raytek Gun #2

EM-BT-[illegible]

WHITE — LABORATORY YELLOW — LABORATORY COPY PINK — OFFICE COPY GOLD — FIELD COPY

TRC Environmental Corporation

CHAIN OF STODY RECORD

Project Name: ExxonMobil DCU ICR Test
Project No.: 18219.0000.0000
Sampling Date(s): 7/14, 16, 17/2011
Laboratory: Enthalpy Analytical
Laboratory P.O. #:
Shipping Airbill No.:
Shipping Date(s): 7/19/2011
Shipper's Name: MJ Krall

Premium TAT Request

Sample Code	Sampled Date	Container Size	Container G/P	MATRIX: Aqueous	Organic Solvent	Ash/Soil/Sediment	Acidic	Basic	Other	Source Description	ANALYSIS: Trace Metals*	Mercury	Hexavalent Chromium	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semi-Volatile Organics	Volatile Organics BAG TO-15 HAPS	Physical Parameters*	Comments
EM-R1-BAGCOND-DCU	7/14/11	40ml	VOA G	X						DCU D603 Vent								X			Bag Condensate
EM-R2-BAGCOND-DCU	7/16/11	↓	↓	X						↓								X			↓
EM-R3-BAGCOND-DCU	7/17/11			X														X			
EM-BLANK-BAGCOND-DCU	7/17/11			X														X			

Relinquished by: MJ Krall	Date/Time: 7/19/2011 1600	Relinquished by:	Date/Time:
Received by: Liz M Ott	Date/Time: 7/20/11 9:36am	Received by:	Date/Time:

REMARKS (*): Temp = 5.9° Raytek Gun # 2

EM-B[illegible]F-[illegible]

WHITE — LABORATORY YELLOW — LABORATORY COPY PINK — OFFICE COPY GOLD — FIELD COPY

TRC Environmental Corporation

Sample Chromatograms

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\018B0301.D
Sample Name: EM-R2-Bag-DCU 0711-64

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Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 11:44:29                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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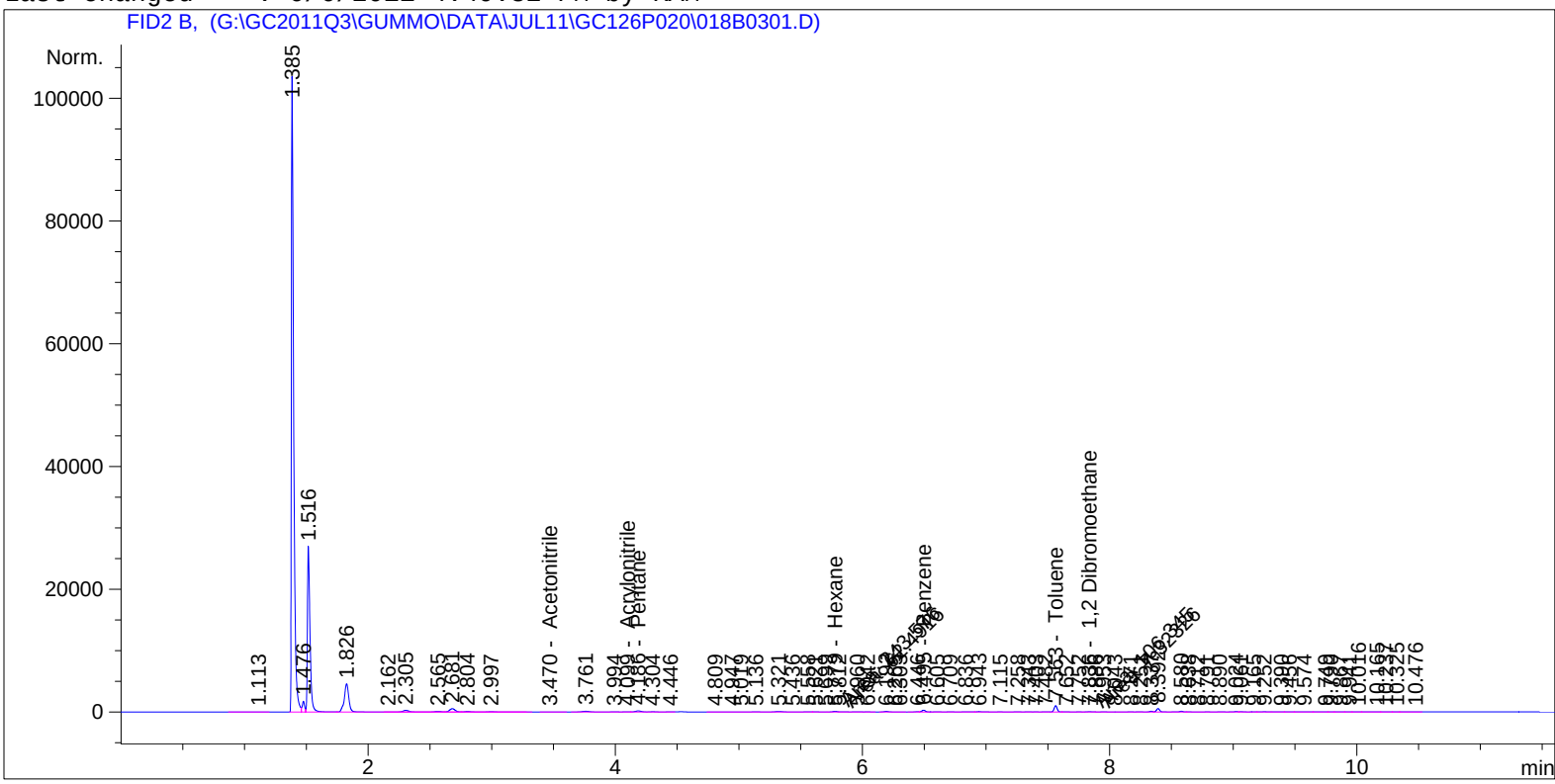


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==================================================================

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Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
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RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.470	BB	12.20005	3.58147	43.69413		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.099	VV	64.58461	2.02672	130.89510		Acrylonitrile
4.186	VV	566.97595	9.53919e-1	540.84937		Pentane
4.508		-	-	-		Methylene chloride
5.779	MF	243.57591	8.08187e-1	196.85479		Hexane **Manual Int. "II" (MGM)**
6.495	VV	569.33173	8.08728e-1	460.43432		Benzene
6.890		-	-	-		Trichloroethene
7.563	VV	1734.98706	6.80882e-1	1181.32109		Toluene
7.836	MF	106.34497	2.35176	250.09773		1,2 Dibromoethane **Manual Int. "II" (MGM)**
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000738

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\018B0302.D
Sample Name: EM-R2-Bag-DCU 0711-64

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Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 12:00:52                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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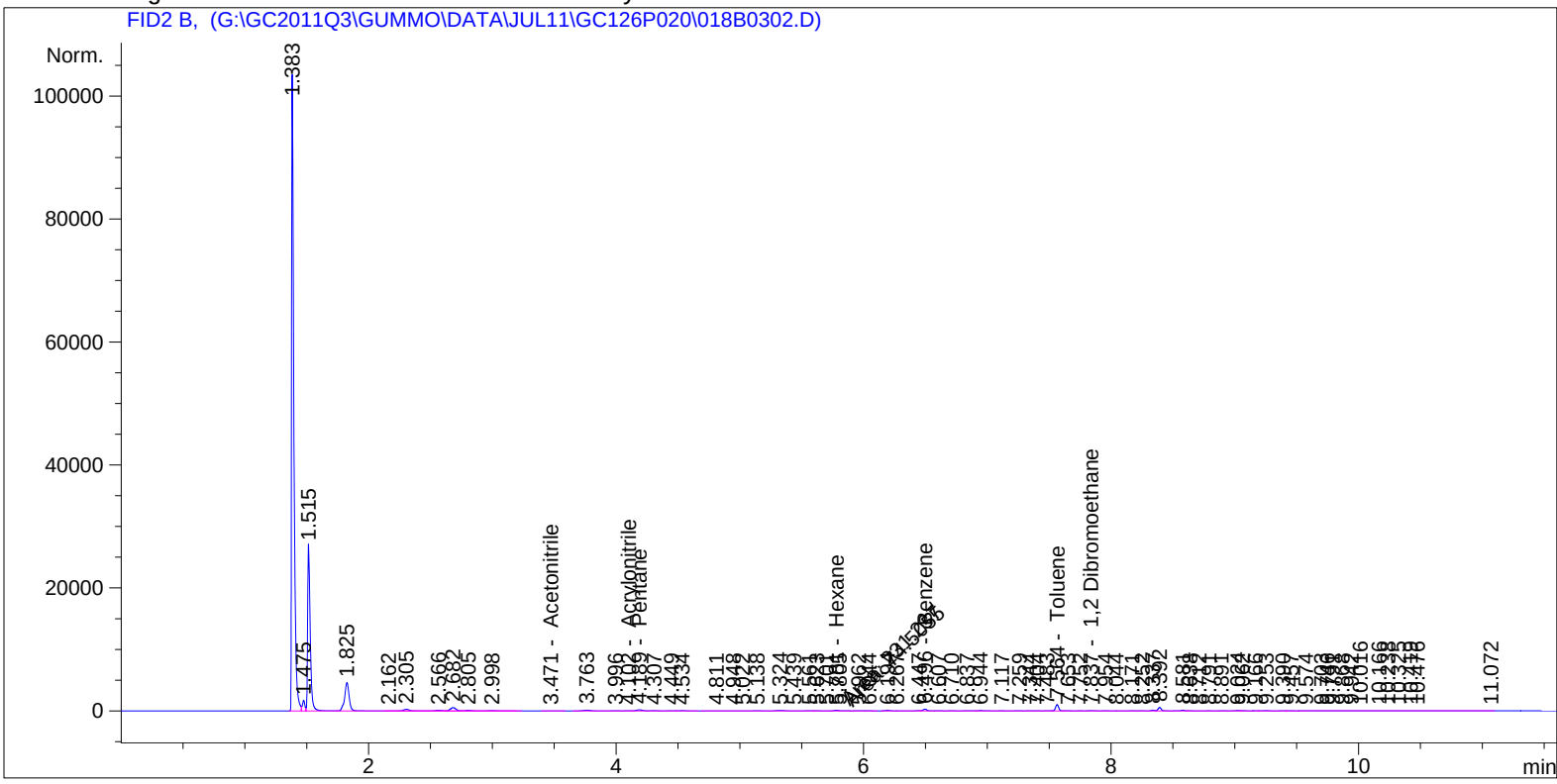


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==================================================================
                    External Standard Report
==================================================================

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Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.471	BB	12.11030	3.58191	43.37805		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.102	VV	64.98058	2.02661	131.69052		Acrylonitrile
4.189	VV	569.53442	9.53917e-1	543.28833		Pentane
4.508		-	-	-		Methylene chloride
5.781	MF	231.23682	8.08291e-1	186.90663		Hexane **Manual Int. "II" (MGM)**
6.496	VV	569.61383	8.08727e-1	460.66222		Benzene
6.890		-	-	-		Trichloroethene
7.564	VV	1739.60168	6.80880e-1	1184.45950		Toluene
7.837	VV	102.91339	2.35205	242.05729		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\018B0303.D
Sample Name: EM-R2-Bag-DCU 0711-64

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 12:17:03                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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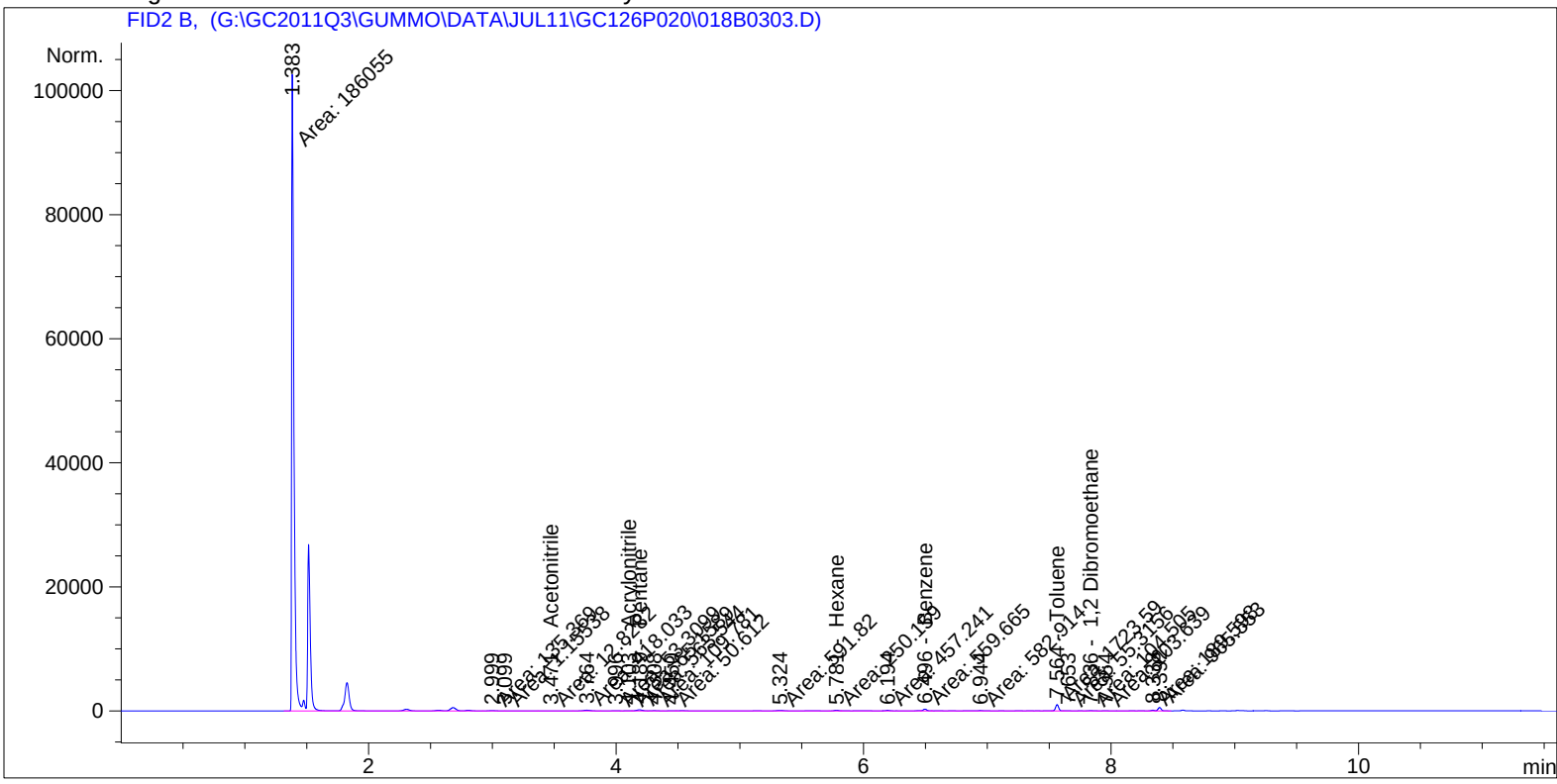


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.471	FM	12.82821	3.57855	45.90638		Acetonitrile Manual Int. "II" (MGM)
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.103	MF	65.15891	2.02656	132.04874		Acrylonitrile Manual Int. "II" (MGM)
4.189	MF	563.54401	9.53923e-1	537.57773		Pentane Manual Int. "II" (MGM)
4.508		-	-	-		Methylene chloride
5.781	FM	250.15947	8.08135e-1	202.16266		Hexane Manual Int. "II" (MGM)
6.496	MF	559.66510	8.08742e-1	452.62479		Benzene Manual Int. "II" (MGM)
6.890		-	-	-		Trichloroethene
7.564	MF	1723.59436	6.80887e-1	1173.57291		Toluene Manual Int. "II" (MGM)
7.836	FM	104.50546	2.35191	245.78763		1,2 Dibromoethane Manual Int. "II" (MGM)
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000740

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\018B0701.D
Sample Name: EM-R2-Bag-DCU *31 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 14:31:56                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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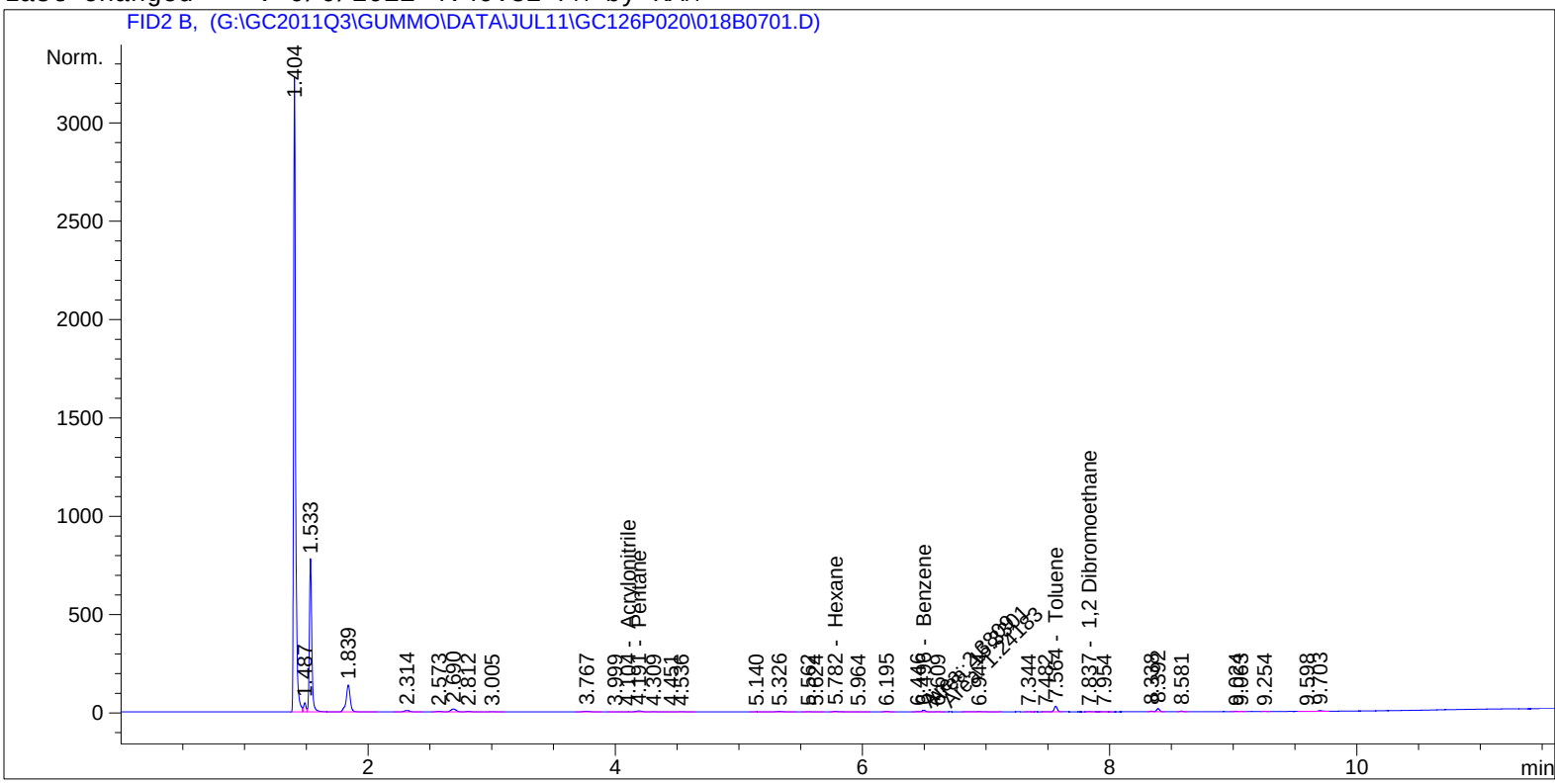


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.104	VV	1.78750	2.62011	4.68345		Acrylonitrile
4.191	VV	15.67988	9.76078e-1	15.30478		Pentane
4.508		-	-	-		Methylene chloride
5.782	BV	8.17082	8.64521e-1	7.06385		Hexane
6.496	FM	15.33011	8.39158e-1	12.86438		Benzene
6.890		-	-	-		Trichloroethene
7.564	VB	48.18690	7.08242e-1	34.12801		Toluene
7.837	BB	2.45257	2.71982	6.67055		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\018B0702.D
Sample Name: EM-R2-Bag-DCU *31 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 14:48:16                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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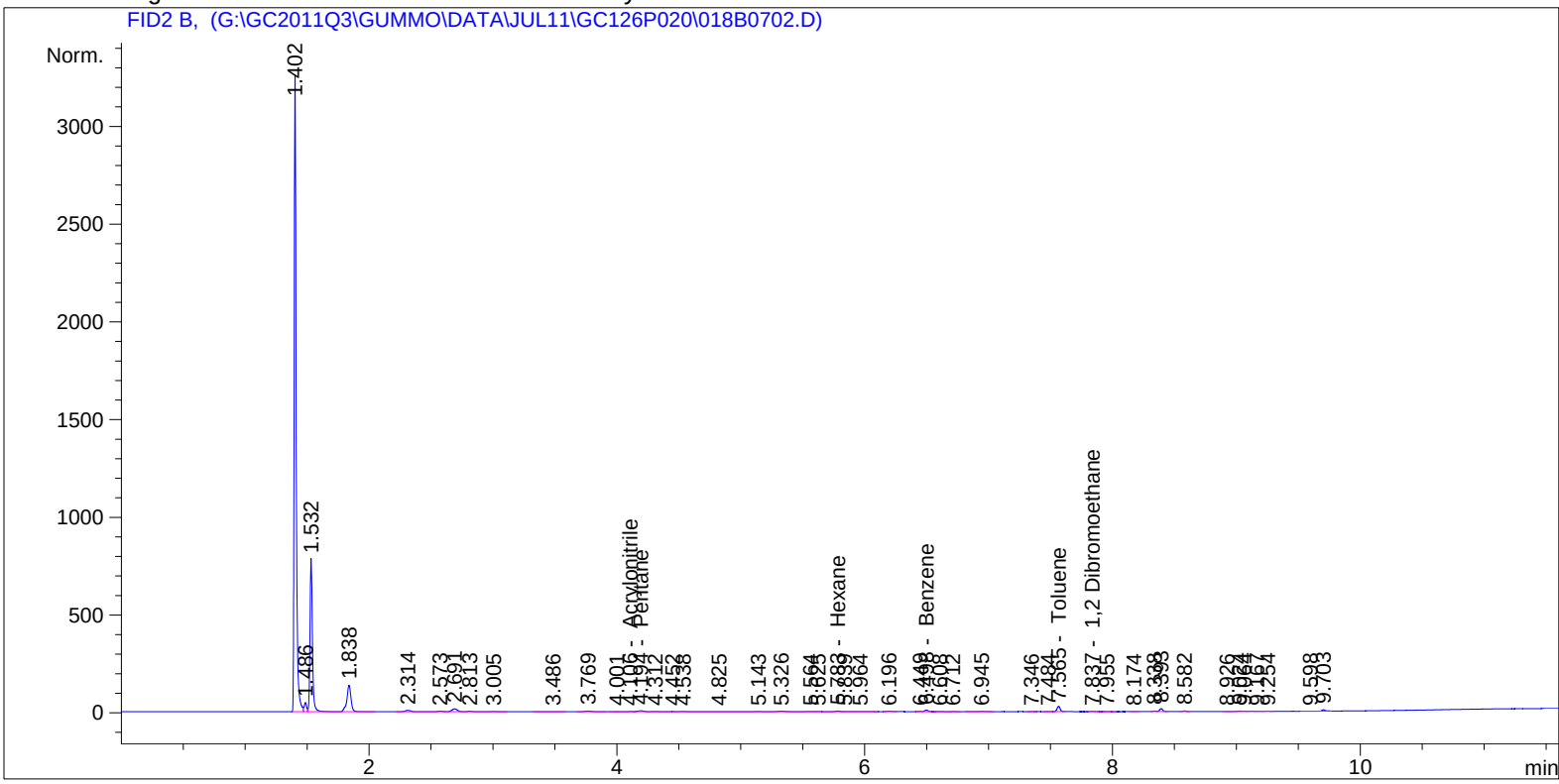


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

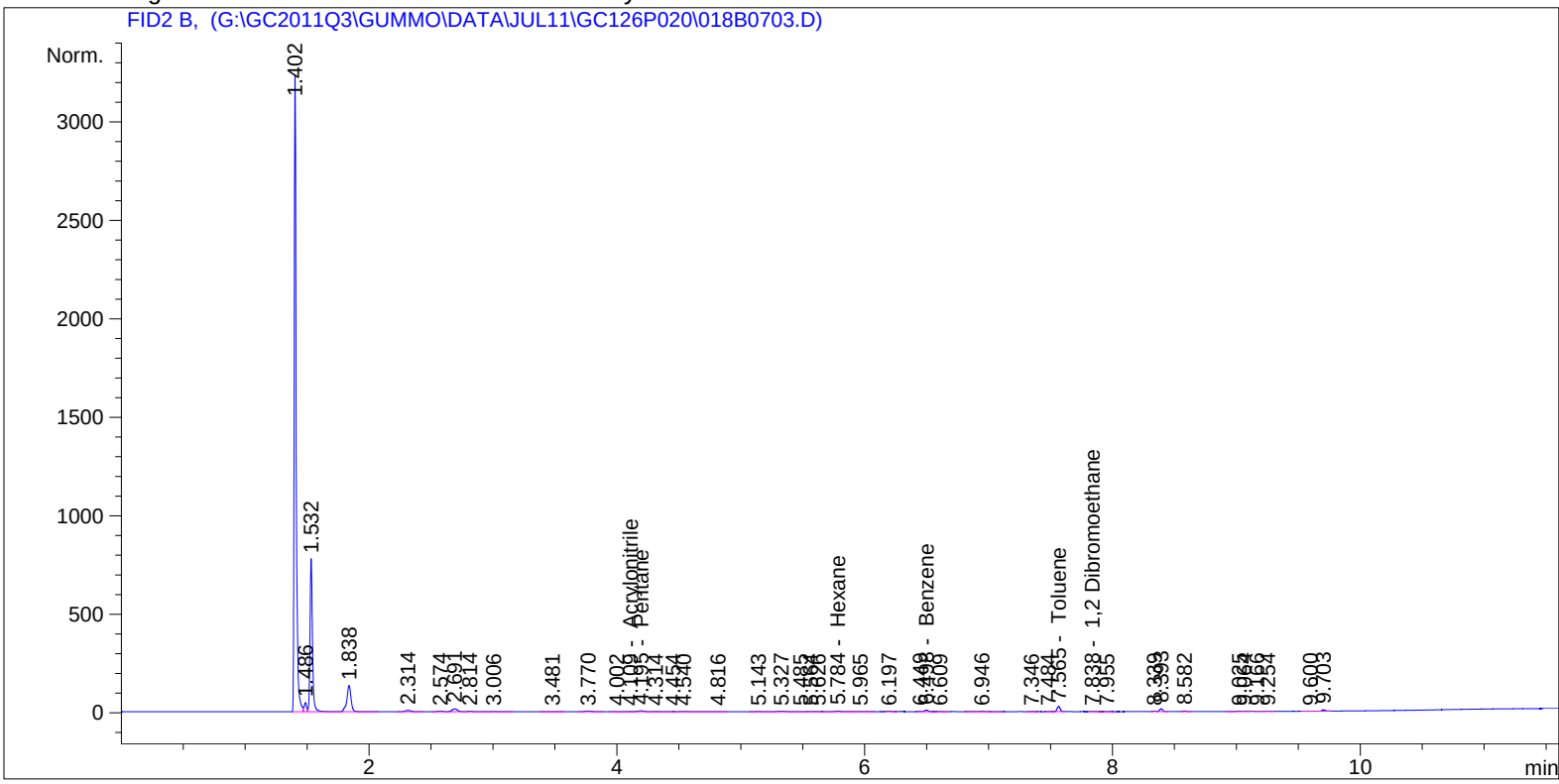
Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.620            -          -          -         1-3 Butadiene
  3.453            -          -          -         Acetonitrile
  3.591            -          -          -         Acrolein
  3.700            -          -          -         Acetone
  4.106 VV       1.85494    2.62011    4.86014    Acrylonitrile
  4.194 VV      15.65851 9.76109e-1   15.28441    Pentane
  4.508            -          -          -         Methylene chloride
  5.783 VV       7.52895 8.69491e-1    6.54635    Hexane
  6.498 VB      15.12407 8.39584e-1   12.69792    Benzene
  6.890            -          -          -         Trichloroethene
  7.565 VB      46.43742 7.09303e-1   32.93819    Toluene
  7.837 BB       2.38768    2.73006    6.51851    1,2 Dibromoethane
  7.981            -          -          -         Tetrachloroethene
```

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\018B0703.D
Sample Name: EM-R2-Bag-DCU *31 0711-64

==========

Acq. Operator : mgm Seq. Line : 7
Acq. Instrument : Gummo online Location : Vial 18
Injection Date : 20-Jul-11, 15:04:46 Inj : 3
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.109	VV	1.79281	2.62011	4.69736		Acrylonitrile
4.195	VV	15.46399	9.76396e-1	15.09898		Pentane
4.508		-	-	-		Methylene chloride
5.784	VV	9.05592	8.58824e-1	7.77744		Hexane
6.498	VB	14.94169	8.39971e-1	12.55058		Benzene
6.890		-	-	-		Trichloroethene
7.565	VB	45.39531	7.09973e-1	32.22945		Toluene
7.838	BB	2.35887	2.73479	6.45101		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000743

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\019B0401.D
Sample Name: EM-R3-Bag-DCU 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 12:33:19                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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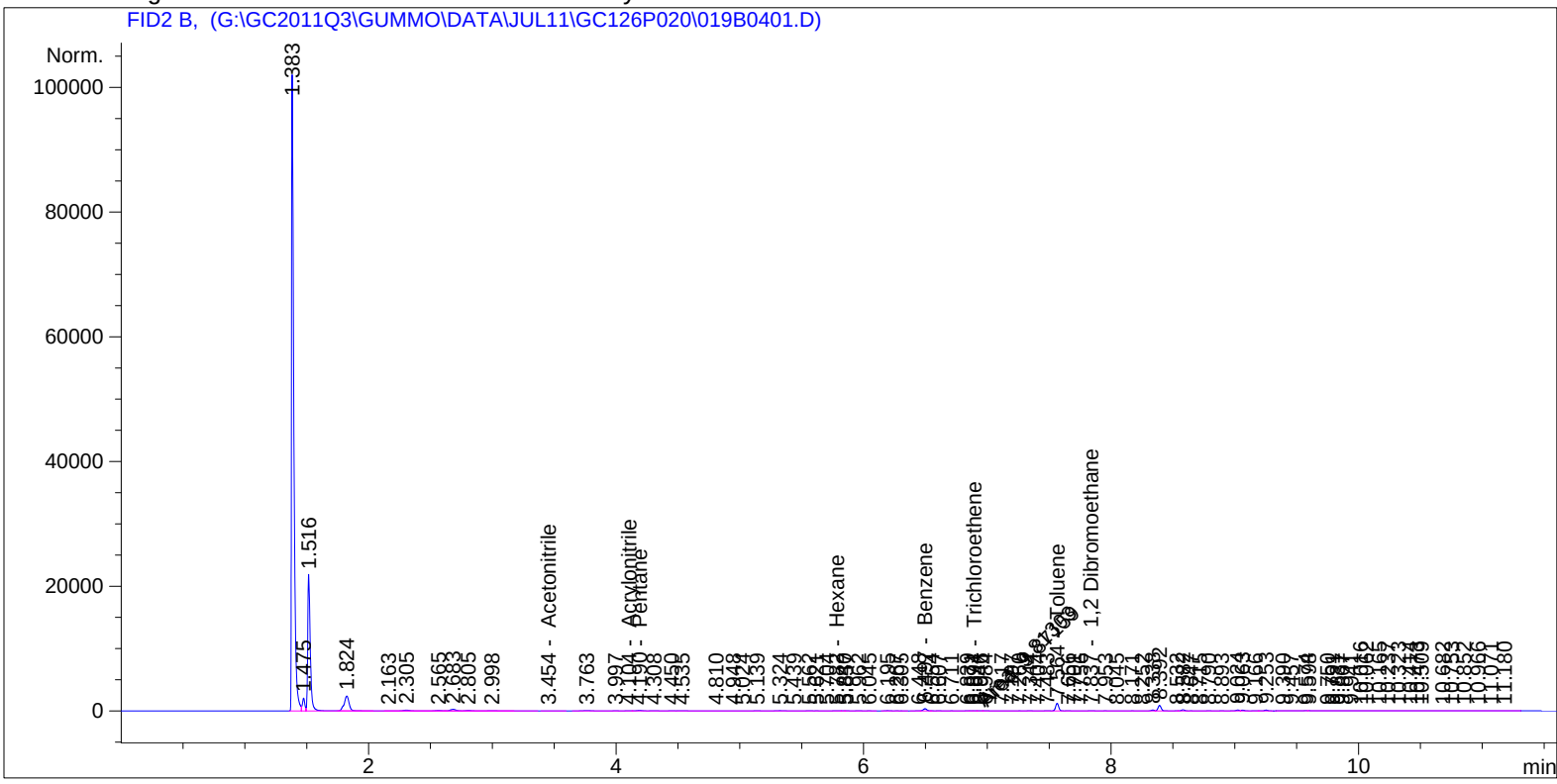


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.454	BB	7.70240	3.61632	27.85433		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.104	VV	36.50300	2.04054	74.48578		Acrylonitrile
4.190	VV	214.59120	9.54954e-1	204.92480		Pentane
4.508		-	-	-		Methylene chloride
5.782	VV	72.04122	8.12842e-1	58.55816		Hexane
6.497	VV	687.66547	8.08583e-1	556.03444		Benzene
6.894	FM	9.87159	2.28535	22.56008		Trichloroethene
7.564	VV	2076.86255	6.80753e-1	1413.83067		Toluene
7.837	VV	31.31424	2.37258	74.29547		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)

EM-BTRF-000744

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\019B0402.D
Sample Name: EM-R3-Bag-DCU 0711-64

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 12:49:34                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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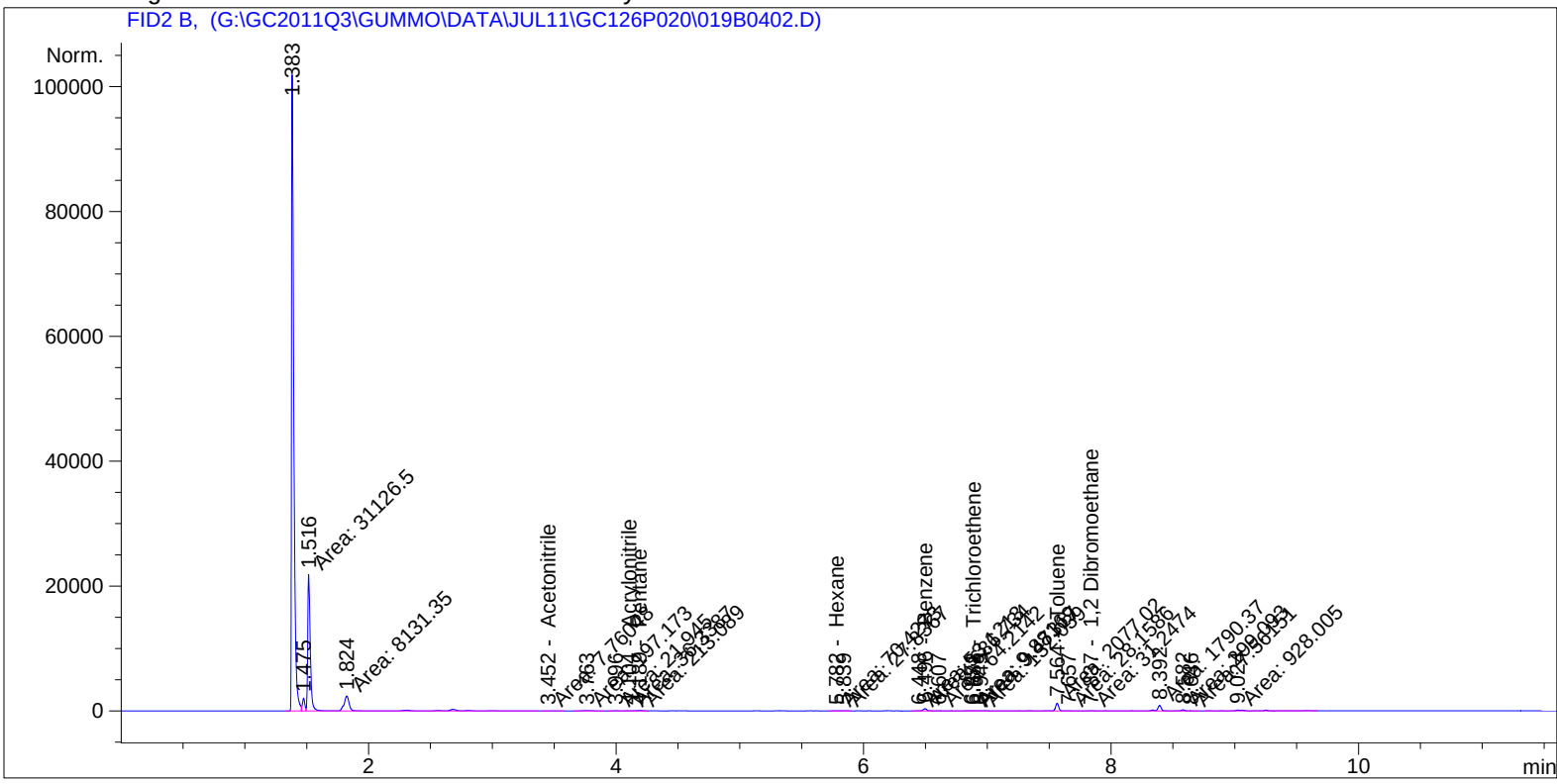


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
2.620		-	-	-		1-3 Butadiene	
3.452	MM	7.76048	3.61561	28.05885		Acetonitrile	Manual Int. "II" (MGM)
3.591		-	-	-		Acrolein	
3.700		-	-	-		Acetone	
4.104	FM	36.33871	2.04068	74.15576		Acrylonitrile	Manual Int. "II" (MGM)
4.189	FM	213.08858	9.54966e-1	203.49236		Pentane	Manual Int. "II" (MGM)
4.508		-	-	-		Methylene chloride	
5.782	MF	70.42731	8.12994e-1	57.25697		Hexane	Manual Int. "II" (MGM)
6.496	FM	686.73376	8.08584e-1	555.28173		Benzene	Manual Int. "II" (MGM)
6.888	FM	9.47317	2.29124	21.70530		Trichloroethene	Manual Int. "II" (MGM)
7.564	FM	2077.02368	6.80753e-1	1413.94026		Toluene	Manual Int. "II" (MGM)
7.837	MF	31.24738	2.37264	74.13881		1,2 Dibromoethane	Manual Int. "II" (MGM)
7.981		-	-	-		Tetrachloroethene	

EM-BTRF-000745

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\019B0403.D
Sample Name: EM-R3-Bag-DCU 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 13:05:49                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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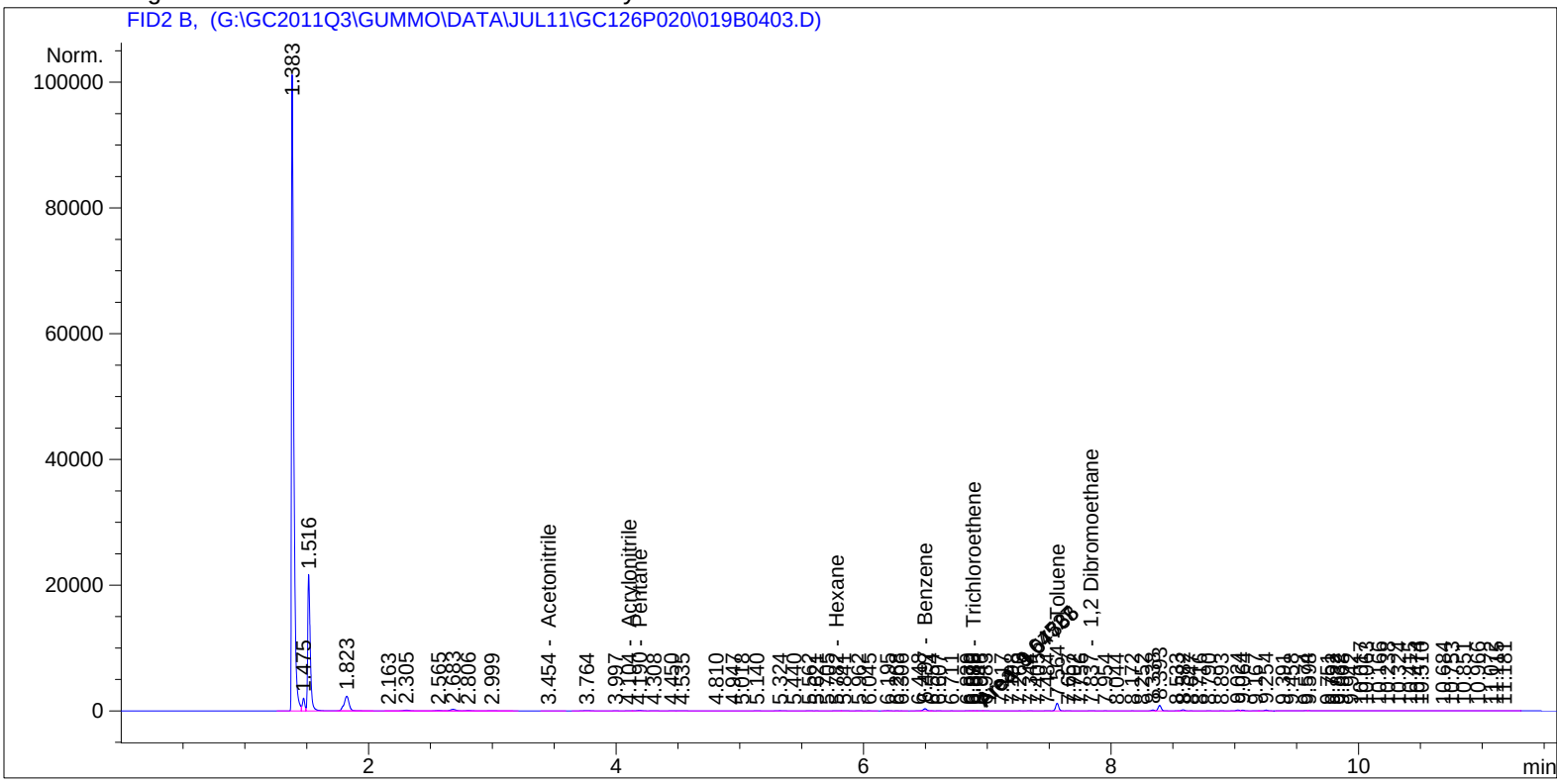


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.454	BB	7.59883	3.61760	27.48955		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.104	VV	36.09618	2.04090	73.66857		Acrylonitrile
4.190	VV	212.55563	9.54970e-1	202.98431		Pentane
4.508		-	-	-		Methylene chloride
5.782	VV	71.37892	8.12904e-1	58.02419		Hexane
6.497	VV	681.49213	8.08589e-1	551.04709		Benzene
6.888	FM	9.04865	2.29808	20.79454		Trichloroethene
7.564	VV	2060.01294	6.80758e-1	1402.37125		Toluene
7.837	VV	31.01535	2.37286	73.59514		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\019B0801.D
Sample Name: EM-R3-Bag-DCU *31 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 15:21:18                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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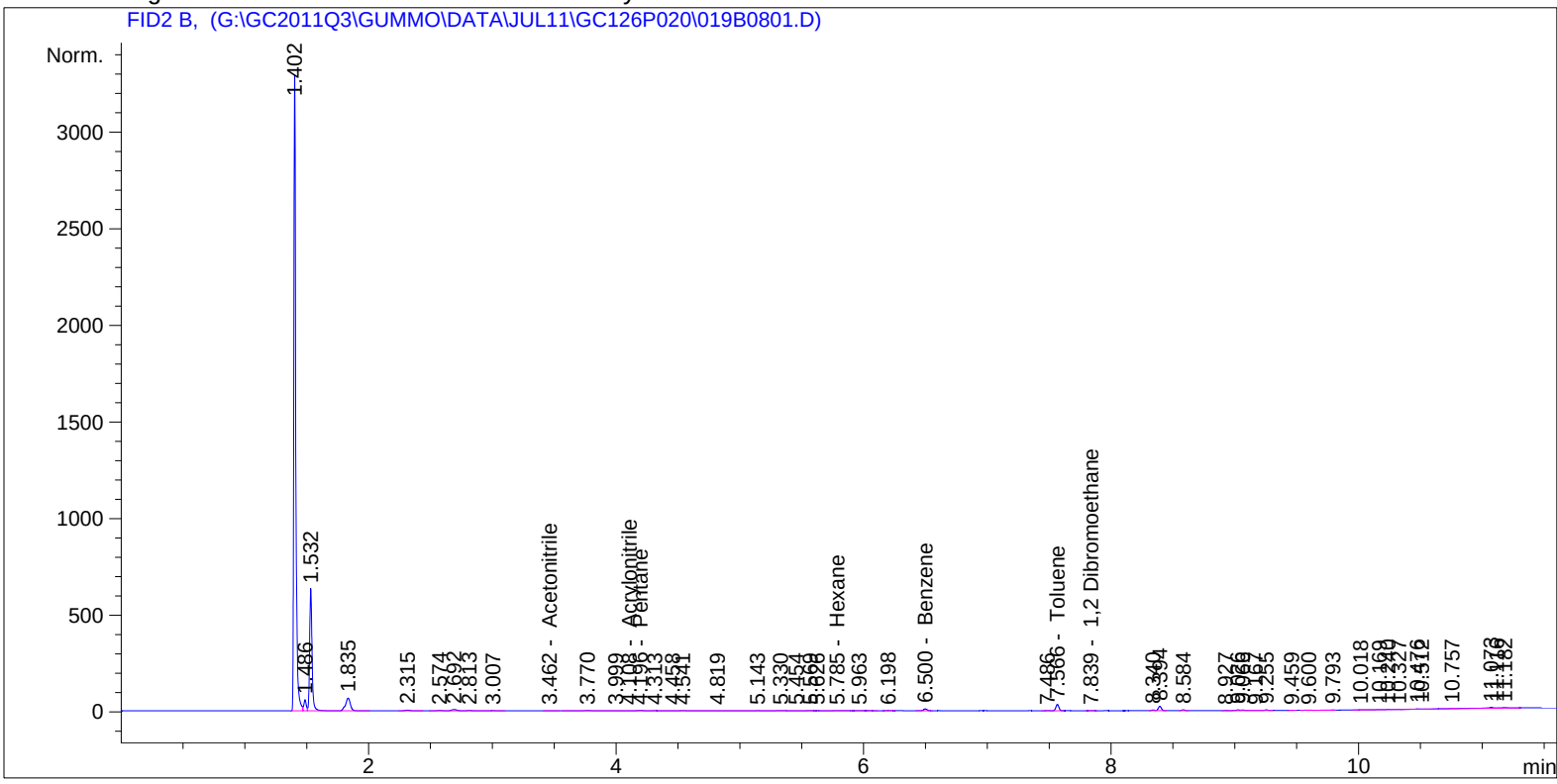


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.462	BB	4.65047e-1	4.14319	1.92678		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.108	VV	1.07133	2.62011	2.80699		Acrylonitrile
4.196	VV	6.01087	1.01274	6.08742		Pentane
4.508		-	-	-		Methylene chloride
5.785	VV	3.60501	9.38346e-1	3.38275		Hexane
6.500	BB	19.32829	8.32689e-1	16.09446		Benzene
6.890		-	-	-		Trichloroethene
7.566	VB	54.85147	7.04823e-1	38.66058		Toluene
7.839	BB	7.63020e-1	2.87554	2.19410		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\019B0802.D
Sample Name: EM-R3-Bag-DCU *31 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 15:37:51                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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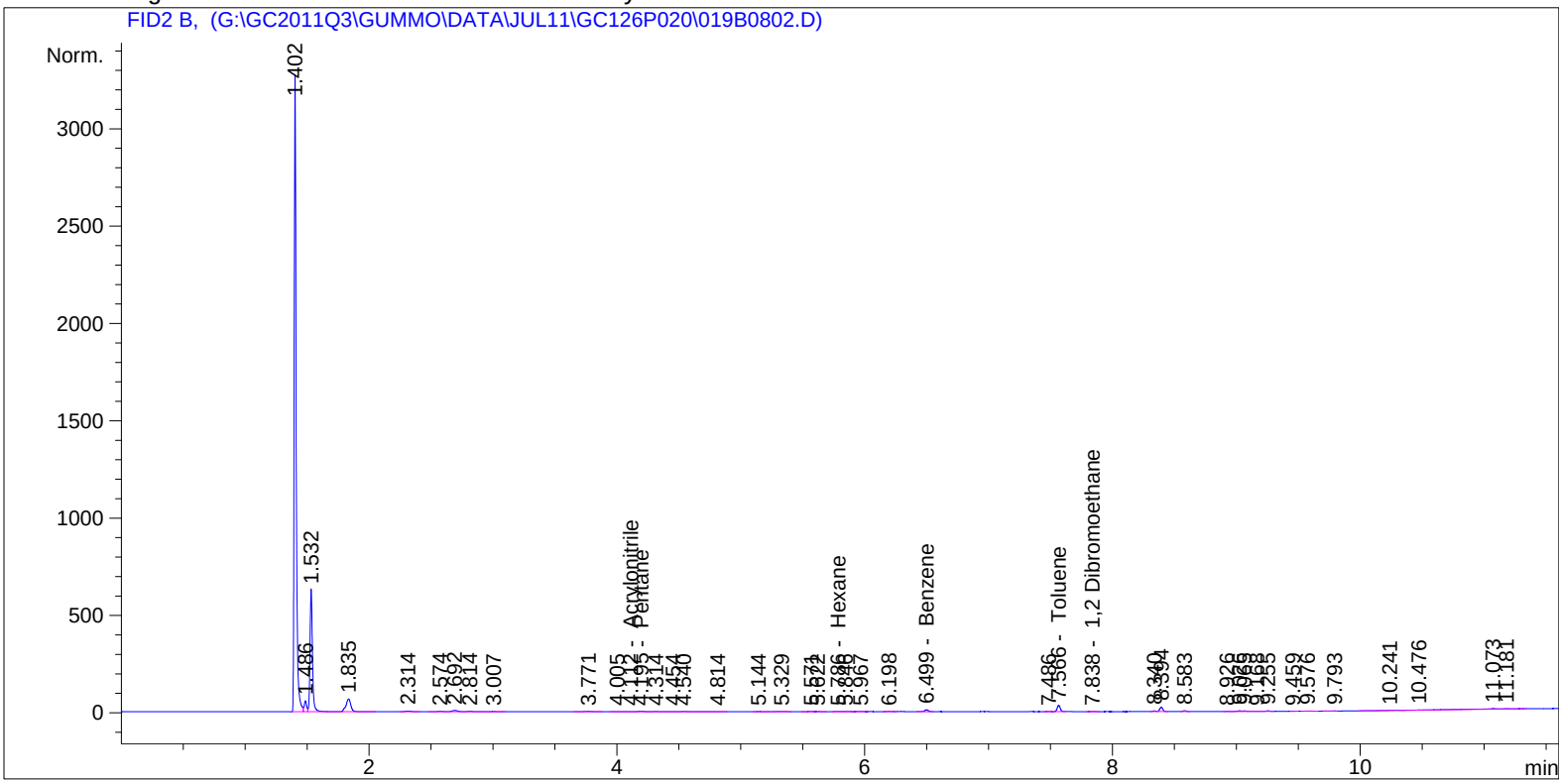


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

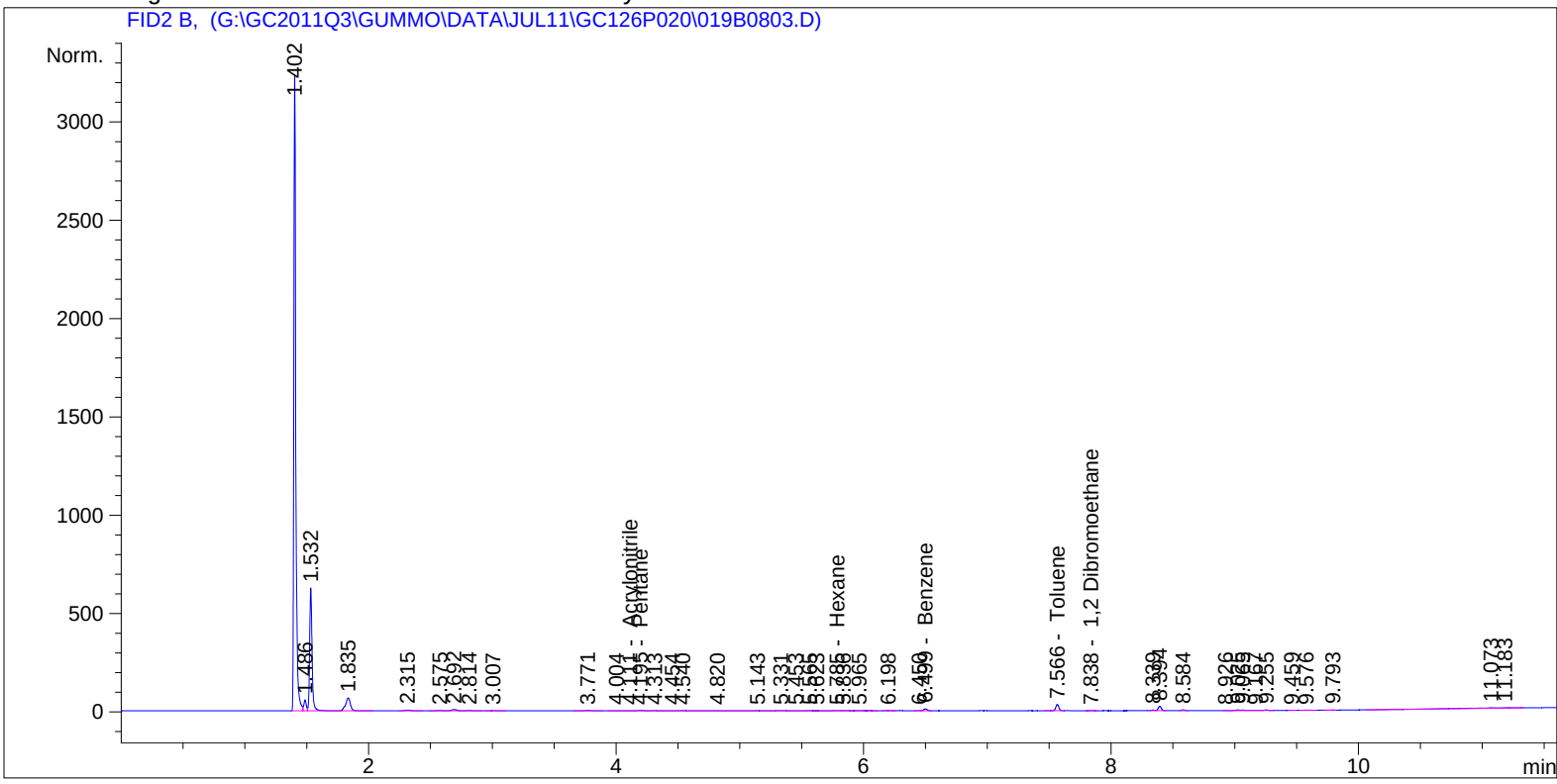
Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.112	VV	1.04652	2.62011	2.74200		Acrylonitrile
4.195	VV	5.99612	1.01288	6.07335		Pentane
4.508		-	-	-		Methylene chloride
5.786	BV	1.96353	9.89631e-1	1.94317		Hexane
6.499	BB	19.33967	8.32674e-1	16.10365		Benzene
6.890		-	-	-		Trichloroethene
7.566	VB	54.71486	7.04885e-1	38.56767		Toluene
7.838	BB	7.39596e-1	2.87554	2.12674		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\019B0803.D
Sample Name: EM-R3-Bag-DCU *31 0711-64

==========

Acq. Operator : mgm Seq. Line : 8
Acq. Instrument : Gummo online Location : Vial 19
Injection Date : 20-Jul-11, 15:54:26 Inj : 3
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

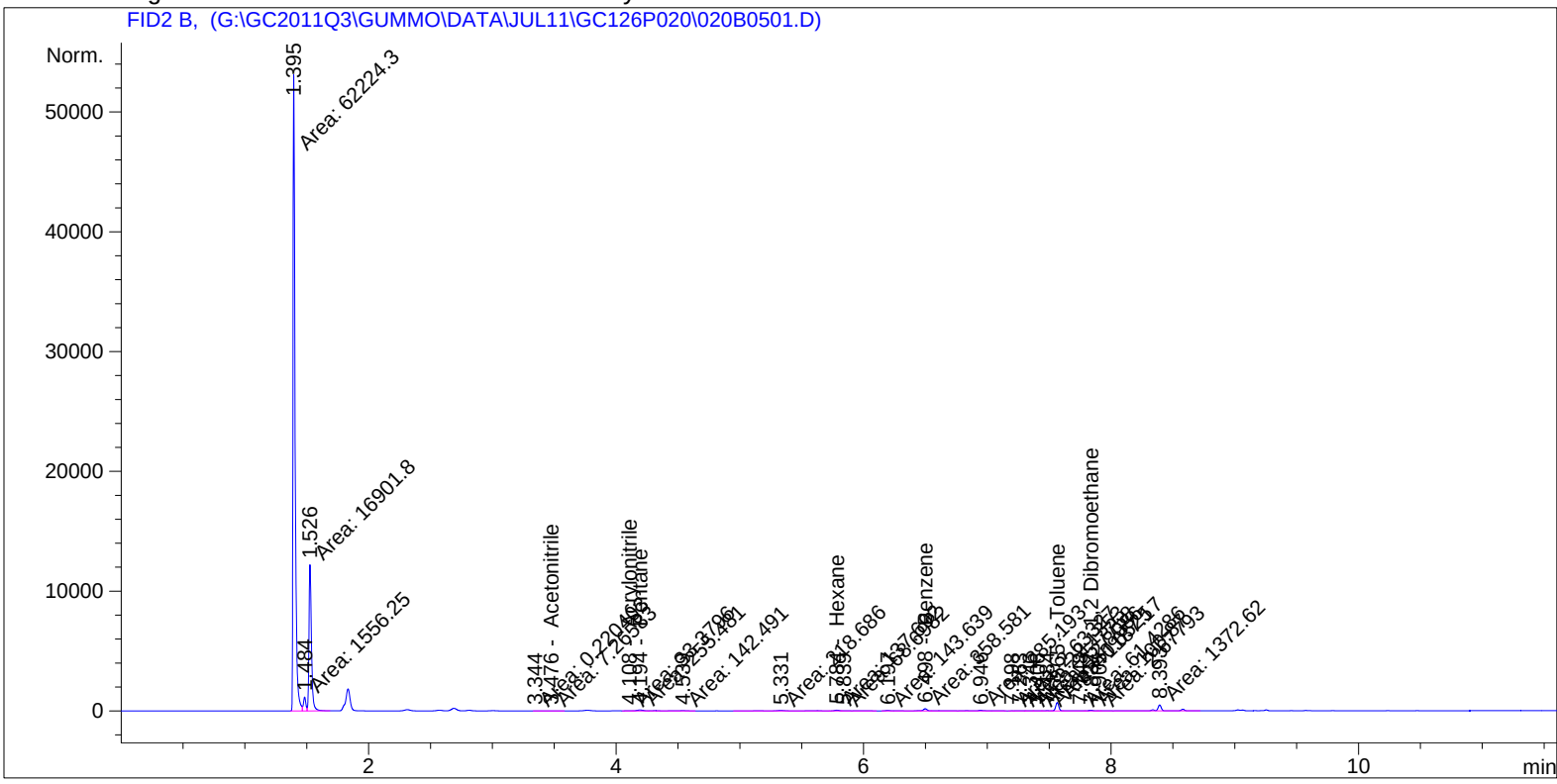
Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.111	VV	9.25807e-1	2.62011	2.42571		Acrylonitrile
4.195	VV	5.91551	1.01369	5.99651		Pentane
4.508		-	-	-		Methylene chloride
5.785	VV	2.78023	9.77539e-1	2.71778		Hexane
6.499	VB	18.13573	8.34320e-1	15.13100		Benzene
6.890		-	-	-		Trichloroethene
7.566	BB	54.29533	7.05076e-1	38.28235		Toluene
7.838	BB	7.04047e-1	2.87554	2.02452		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000749

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\020B0501.D
Sample Name: EM-R1-Bag-DCU 0711-64

Acq. Operator	: mgm	Seq. Line	: 5
Acq. Instrument	: Gummo online	Location	: Vial 20
Injection Date	: 20-Jul-11, 13:22:15	Inj	: 1
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By	: Signal
Calib. Data Modified	: 6/6/2011 4:49:09 PM
Multiplier:	: 1.0000
Dilution:	: 1.0000

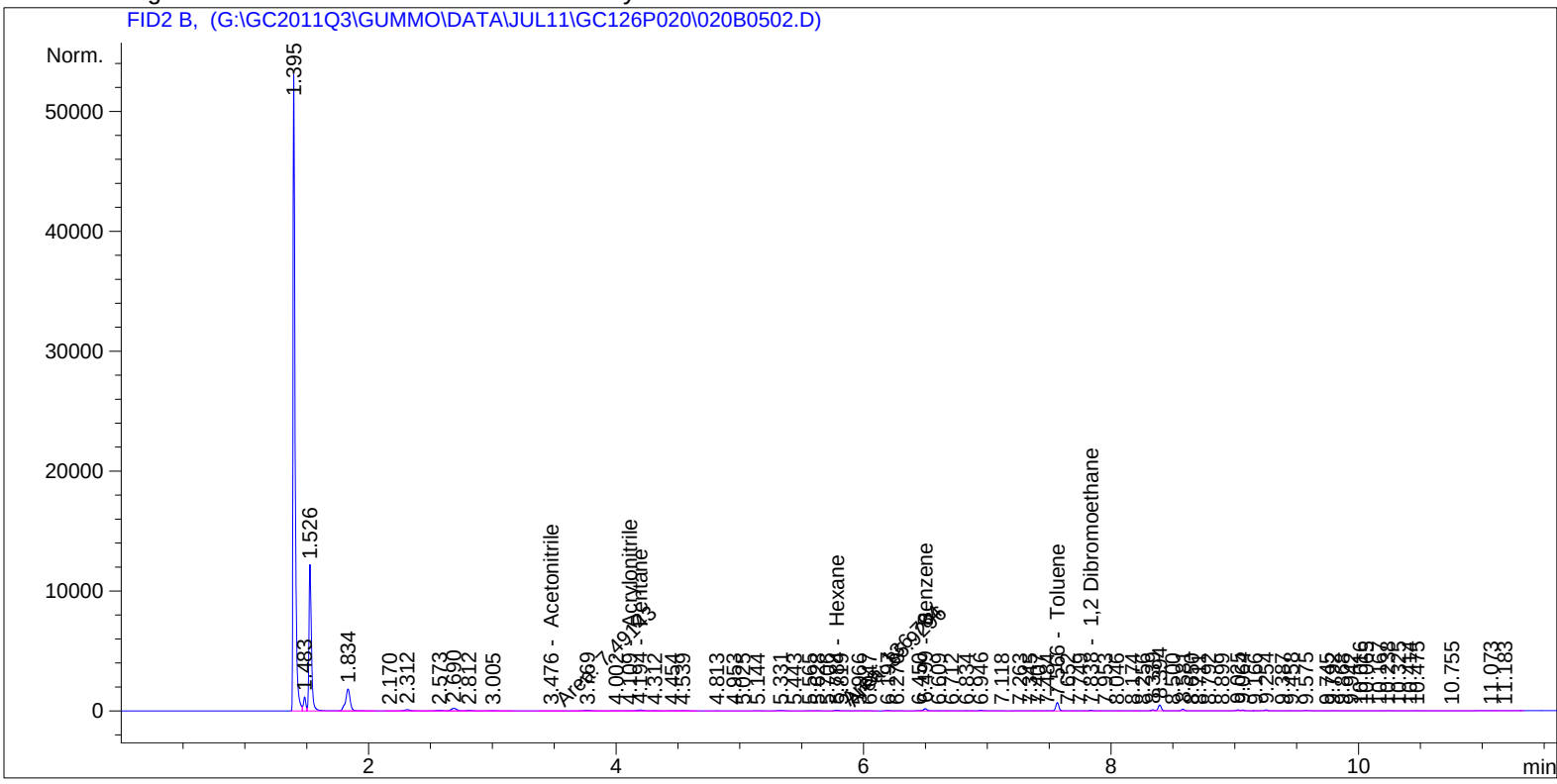
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.476	MM	7.26583	3.62200	26.31679		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.108	MF	33.37962	2.04351	68.21165		Acrylonitrile
4.194	MF	255.48145	9.54688e-1	243.90502		Pentane
4.508		-	-	-		Methylene chloride
5.784	MF	137.69212	8.09690e-1	111.48797		Hexane
6.498	MF	358.58075	8.09223e-1	290.17163		Benzene
6.890		-	-	-		Trichloroethene
7.565	MF	1187.17322	6.81242e-1	808.75280		Toluene
7.837	FM	100.87036	2.35223	237.27033		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\020B0502.D
Sample Name: EM-R1-Bag-DCU 0711-64

Acq. Operator	: mgm	Seq. Line	: 5
Acq. Instrument	: Gummo online	Location	: Vial 20
Injection Date	: 20-Jul-11, 13:38:40	Inj	: 2
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By	: Signal
Calib. Data Modified	: 6/6/2011 4:49:09 PM
Multiplier:	: 1.0000
Dilution:	: 1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.476	MM	7.49143	3.61898	27.11131		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.109	VV T	32.64285	2.04430	66.73165		Acrylonitrile
4.194	VV T	256.19711	9.54684e-1	244.58726		Pentane
4.508		-	-	-		Methylene chloride
5.784	MF	136.78419	8.09713e-1	110.75597		Hexane
6.499	VV	357.23587	8.09228e-1	289.08512		Benzene
6.890		-	-	-		Trichloroethene
7.566	VV	1188.63110	6.81241e-1	809.74431		Toluene
7.838	VV	103.83348	2.35197	244.21313		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000751

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\020B0503.D
Sample Name: EM-R1-Bag-DCU 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   5
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 13:55:10                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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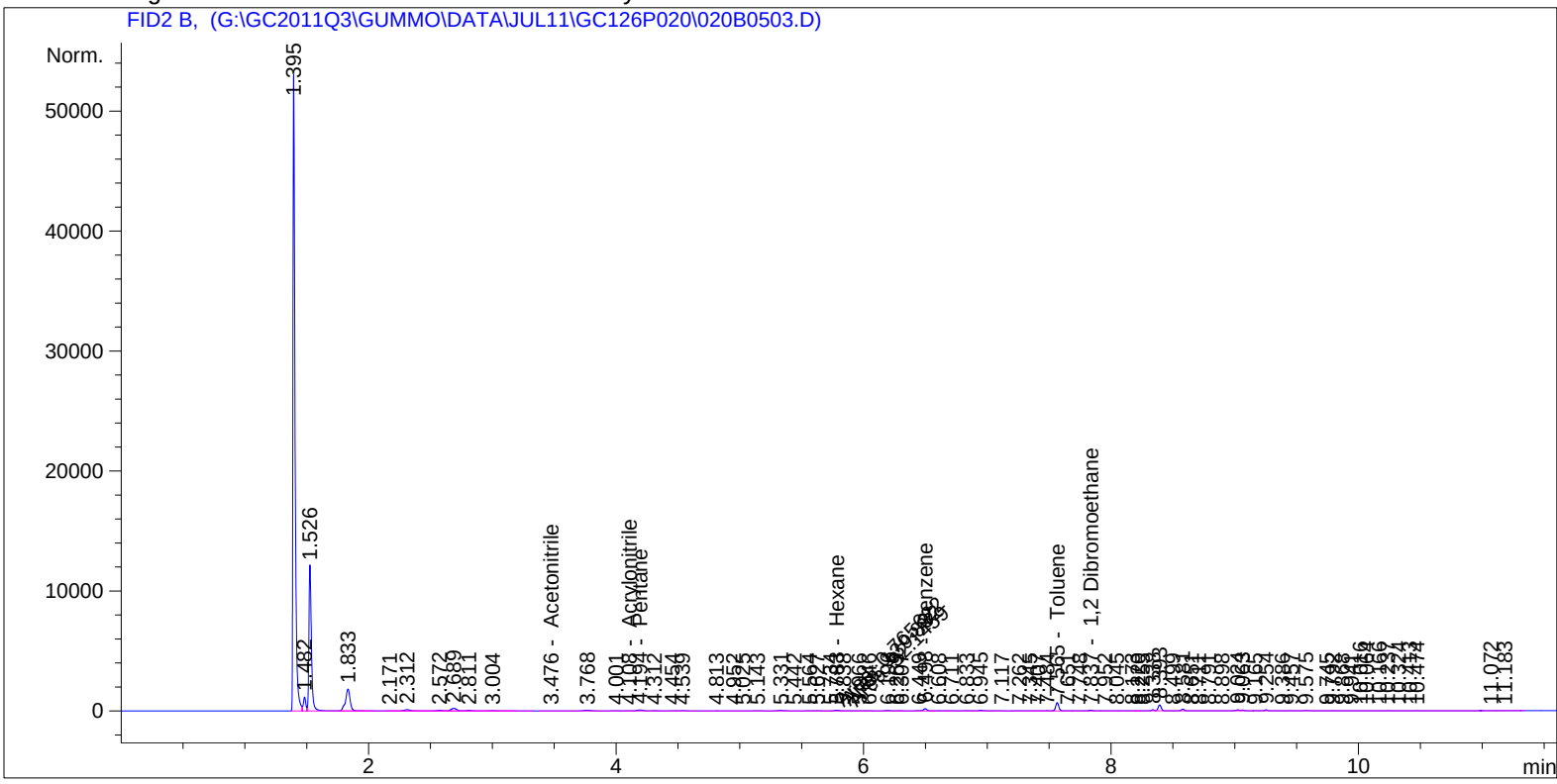


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

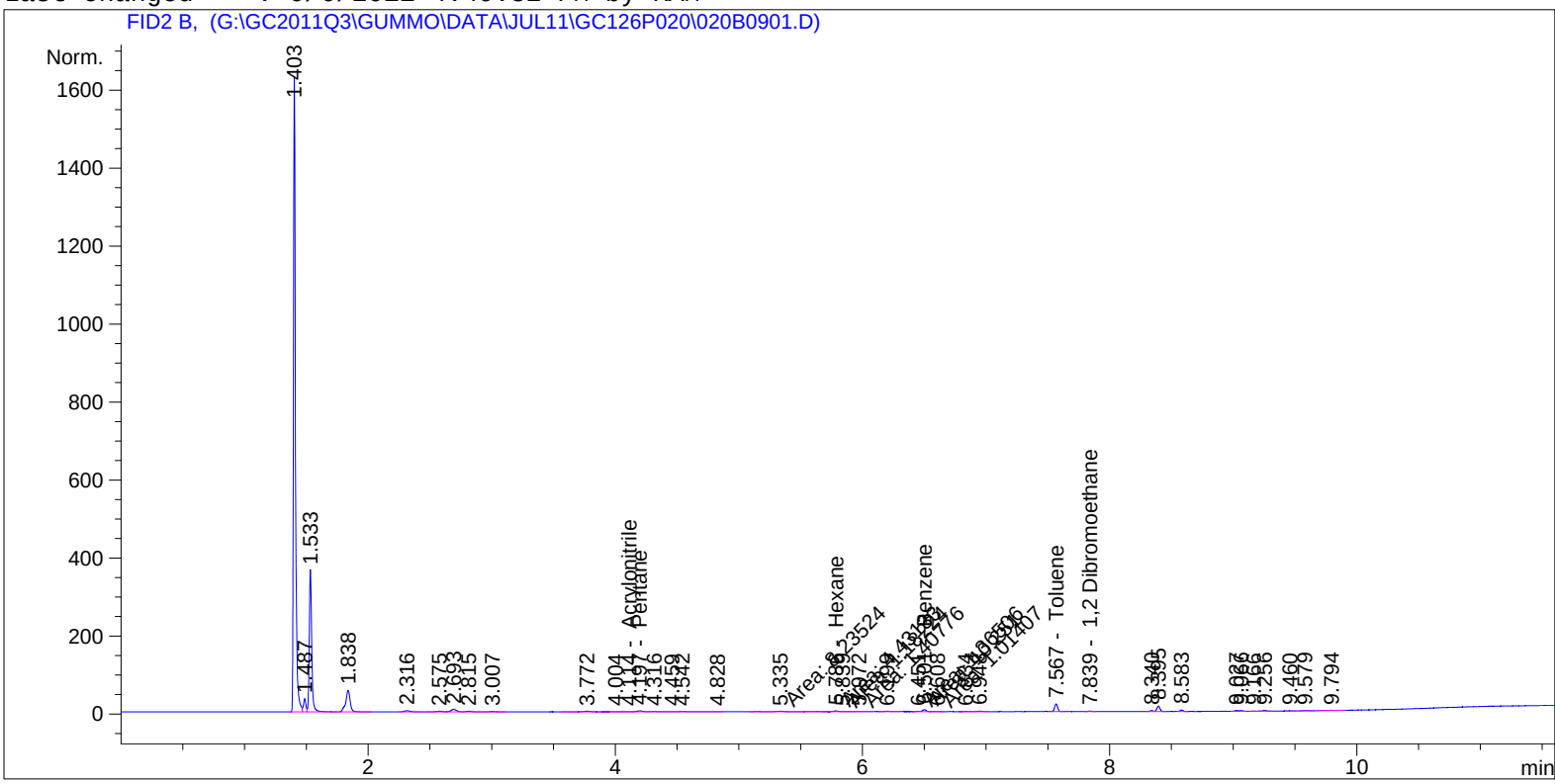
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.476	BV	7.51693	3.61865	27.20111		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.108	VV	32.43752	2.04452	66.31919		Acrylonitrile
4.194	VV	256.83096	9.54680e-1	245.19150		Pentane
4.508		-	-	-		Methylene chloride
5.783	FM	139.83185	8.09637e-1	113.21308		Hexane
6.498	VV	356.73526	8.09229e-1	288.68069		Benzene
6.890		-	-	-		Trichloroethene
7.565	VV	1187.12695	6.81243e-1	808.72134		Toluene
7.837	VV	103.82919	2.35197	244.20308		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)

EM-BTRF-000752

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\020B0901.D
Sample Name: EM-R1-Bag-DCU *31 0711-64

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   9
Acq. Instrument : Gummo online                      Location : Vial 20
Injection Date  : 20-Jul-11, 16:11:03                    Inj :   1
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.114	VV	1.09213	2.62011	2.86149		Acrylonitrile
4.197	VV	7.81509	9.99011e-1	7.80736		Pentane
4.508		-	-	-		Methylene chloride
5.786	FM	4.43133	9.13710e-1	4.04895		Hexane
6.501	MF	10.25101	8.54652e-1	8.76105		Benzene
6.890		-	-	-		Trichloroethene
7.567	BB	33.00903	7.21183e-1	23.80553		Toluene
7.839	BB	2.56404	2.70344	6.93174		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)
Manual Int. "II" (MGM)

EM-BTRF-000753

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\020B0902.D
Sample Name: EM-R1-Bag-DCU *31 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   9
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 16:27:41                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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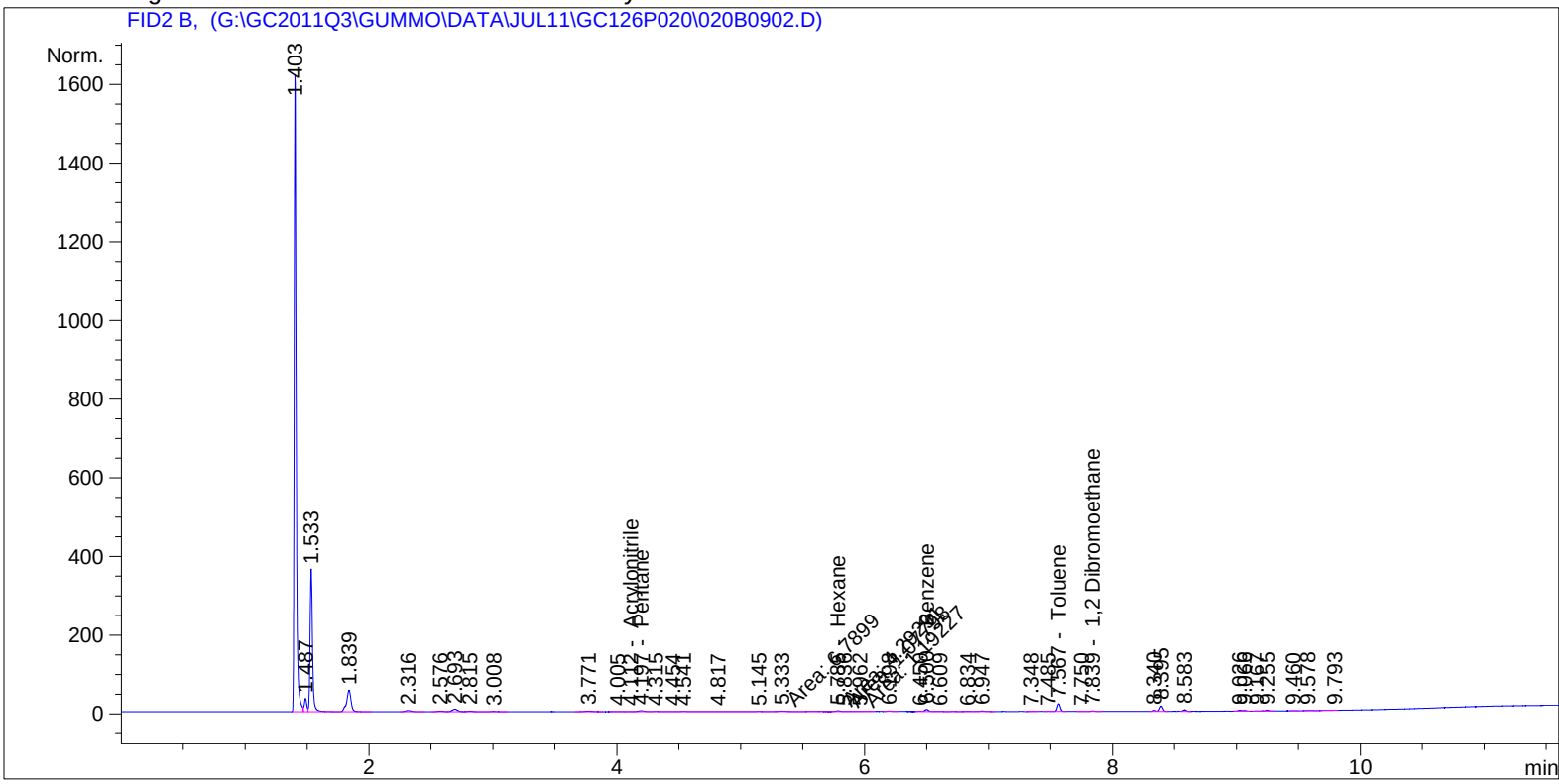


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.112	VV	1.00038	2.62011	2.62110		Acrylonitrile
4.197	VV	7.73236	9.99500e-1	7.72849		Pentane
4.508		-	-	-		Methylene chloride
5.785	FM	4.29291	9.17176e-1	3.93735		Hexane
6.500	VB	10.09203	8.55389e-1	8.63261		Benzene
6.890		-	-	-		Trichloroethene
7.567	VB	33.02879	7.21158e-1	23.81897		Toluene
7.839	BB	2.57684	2.70165	6.96174		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)

EM-BTRF-000754

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\020B0903.D
Sample Name: EM-R1-Bag-DCU *31 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   9
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 16:44:22                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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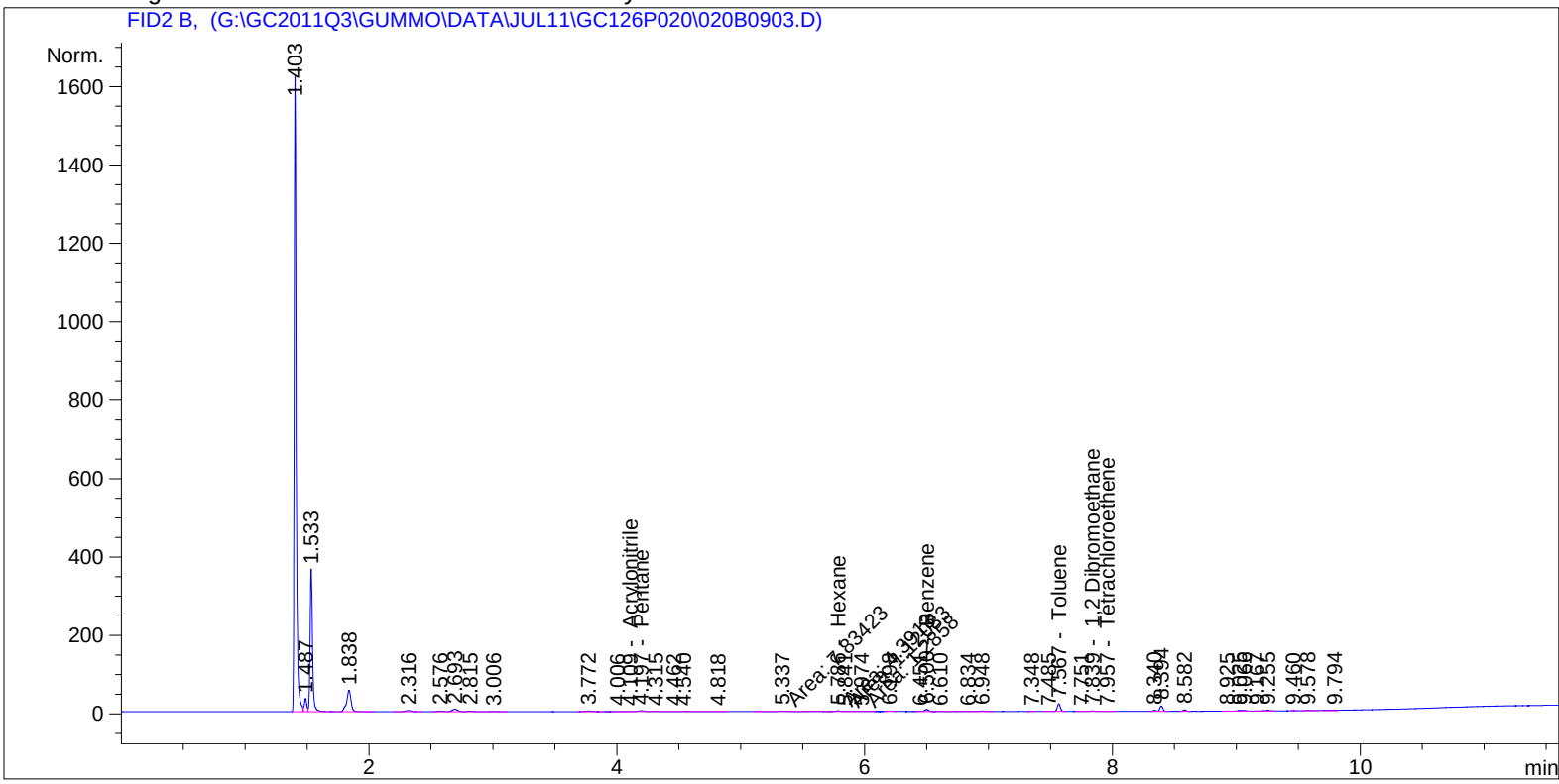


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.109	VV	9.18561e-1	2.62011	2.40673		Acrylonitrile
4.197	VV	7.58884	1.00037	7.59168		Pentane
4.508		-	-	-		Methylene chloride
5.786	FM	4.39130	9.14690e-1	4.01668		Hexane
6.500	VB	10.08116	8.55440e-1	8.62383		Benzene
6.890		-	-	-		Trichloroethene
7.567	VB	33.13685	7.21024e-1	23.89246		Toluene
7.839	VB	2.75841	2.67805	7.38717		1,2 Dibromoethane
7.957	BB	6.56692e-1	2.48385	1.63113		Tetrachloroethene

Manual Int. "II" (MGM)

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\017B1101.D
Sample Name: N2 Blank

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 17
Injection Date  : 20-Jul-11, 17:54:42                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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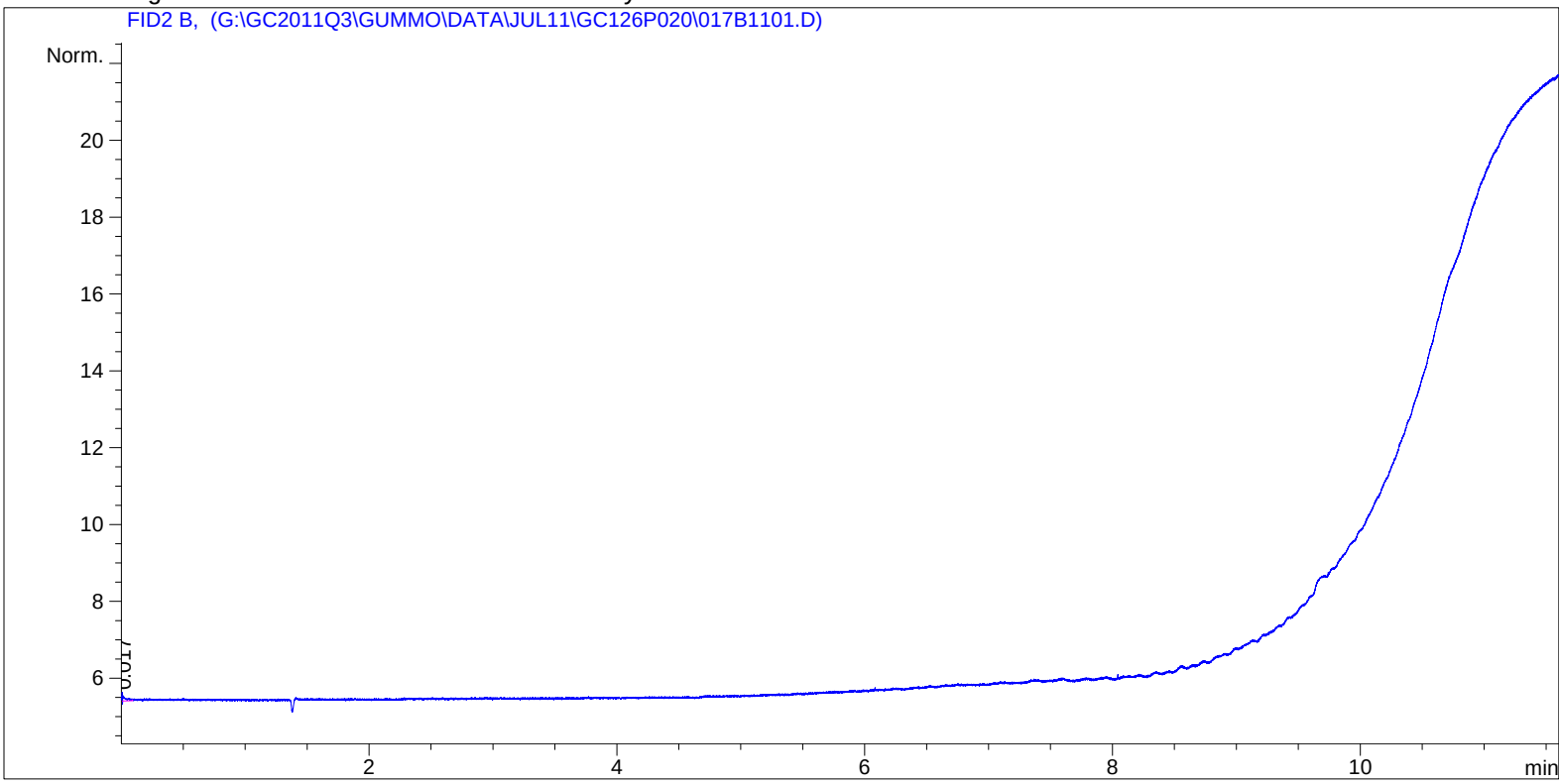


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.620            -          -          -         1-3 Butadiene
  3.453            -          -          -         Acetonitrile
  3.591            -          -          -         Acrolein
  3.700            -          -          -         Acetone
  4.107            -          -          -         Acrylonitrile
  4.191            -          -          -         Pentane
  4.508            -          -          -         Methylene chloride
  5.781            -          -          -         Hexane
  6.497            -          -          -         Benzene
  6.890            -          -          -         Trichloroethene
  7.565            -          -          -         Toluene
  7.836            -          -          -         1,2 Dibromoethane
  7.981            -          -          -         Tetrachloroethene
```

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\017B1102.D
Sample Name: N2 Blank

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 17
Injection Date  : 20-Jul-11, 18:10:39                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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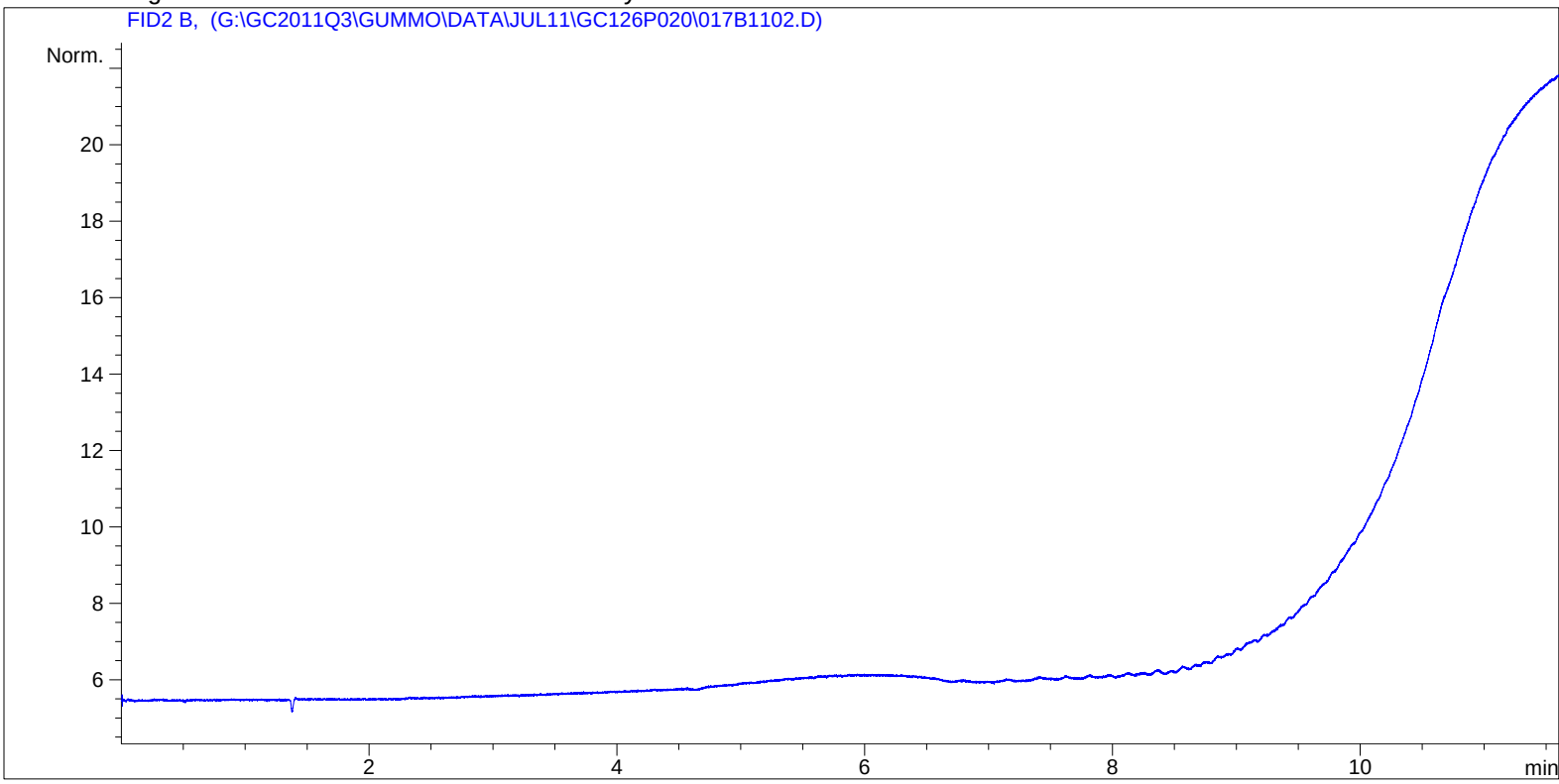


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.620            -          -          -         1-3 Butadiene
  3.453            -          -          -         Acetonitrile
  3.591            -          -          -         Acrolein
  3.700            -          -          -         Acetone
  4.107            -          -          -         Acrylonitrile
  4.191            -          -          -         Pentane
  4.508            -          -          -         Methylene chloride
  5.781            -          -          -         Hexane
  6.497            -          -          -         Benzene
  6.890            -          -          -         Trichloroethene
  7.565            -          -          -         Toluene
  7.836            -          -          -         1,2 Dibromoethane
  7.981            -          -          -         Tetrachloroethene
```

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\017B1103.D
Sample Name: N2 Blank

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 17
Injection Date  : 20-Jul-11, 18:26:46                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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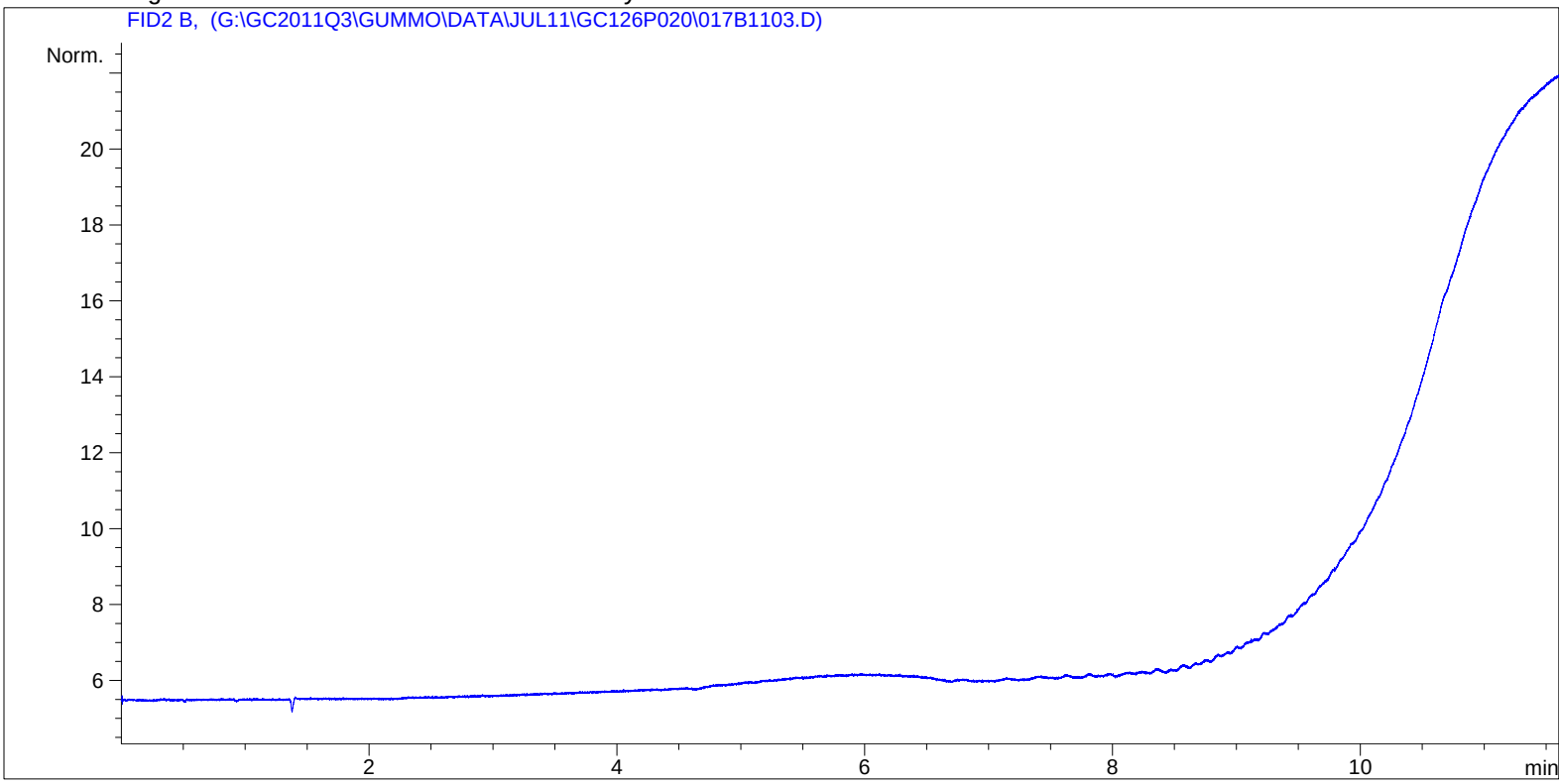


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.620            -          -          -         1-3 Butadiene
  3.453            -          -          -         Acetonitrile
  3.591            -          -          -         Acrolein
  3.700            -          -          -         Acetone
  4.107            -          -          -         Acrylonitrile
  4.191            -          -          -         Pentane
  4.508            -          -          -         Methylene chloride
  5.781            -          -          -         Hexane
  6.497            -          -          -         Benzene
  6.890            -          -          -         Trichloroethene
  7.565            -          -          -         Toluene
  7.836            -          -          -         1,2 Dibromoethane
  7.981            -          -          -         Tetrachloroethene
```

EM-BTRF-000758

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\018B0101.D
Sample Name: EM-R1-Bag-DCU S&R 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 28-Jul-11, 09:57:06                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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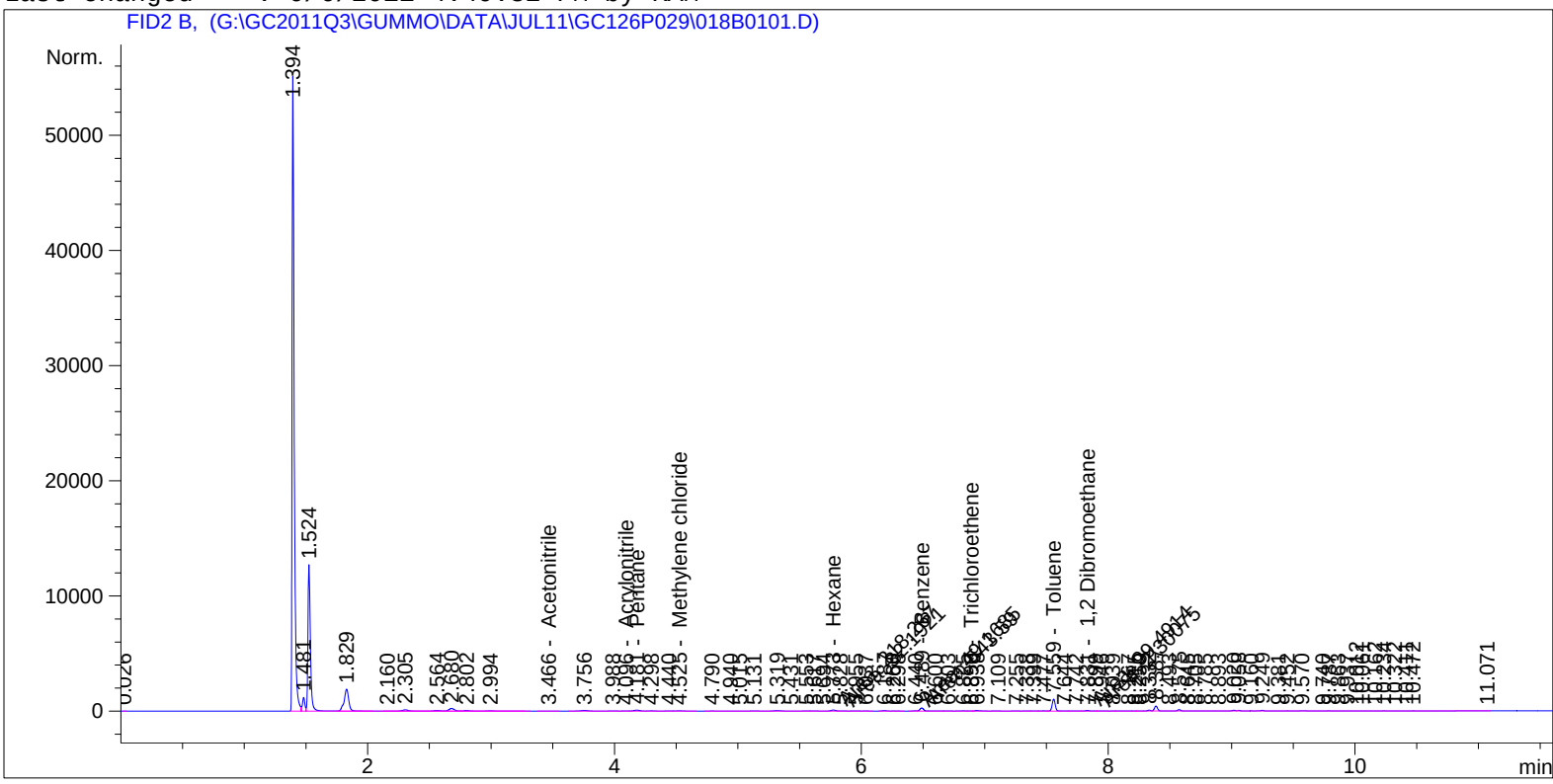


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==================================================================
                    External Standard Report
==================================================================

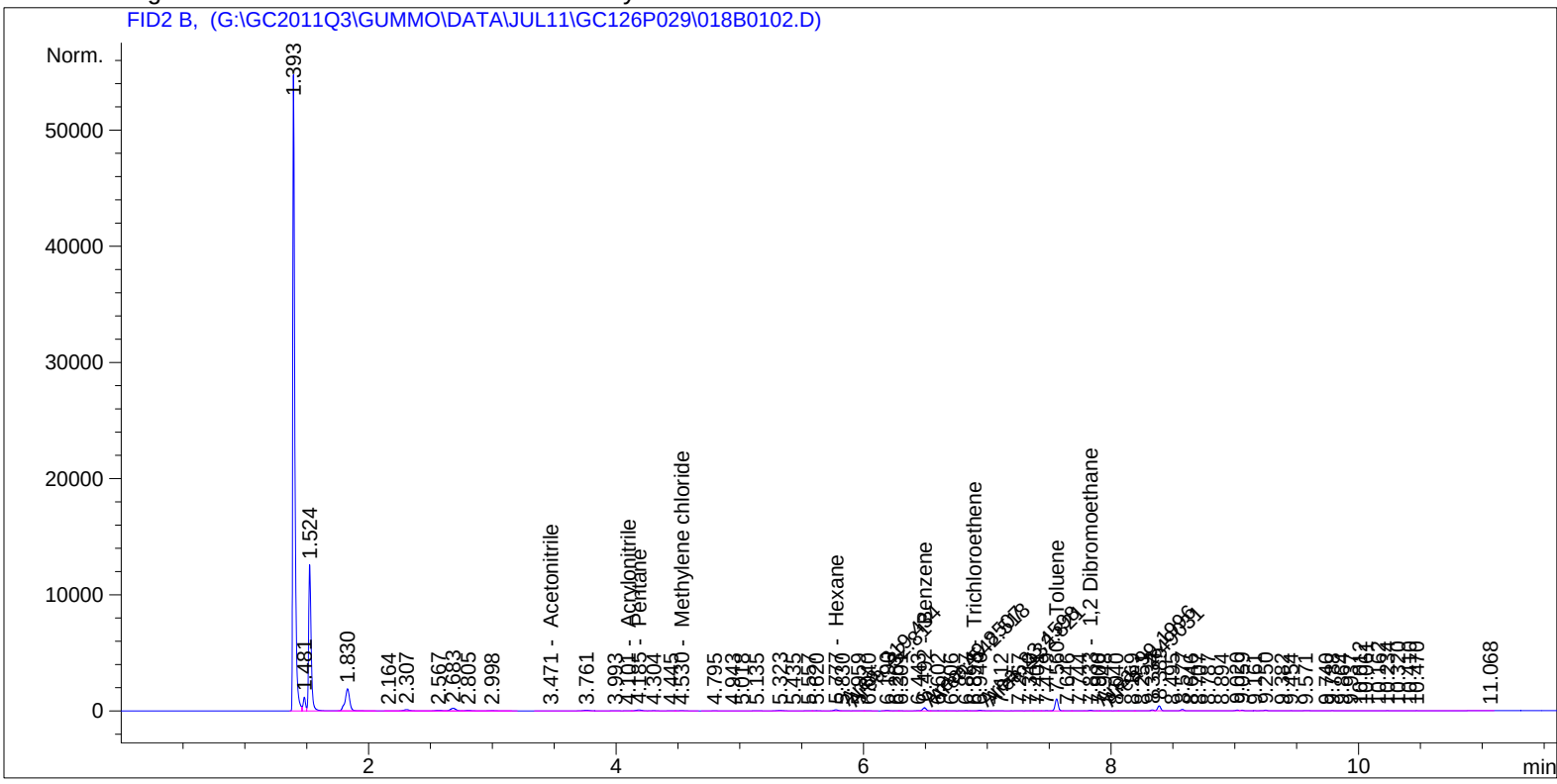
Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.466	BV	7.28665	3.62171	26.39014		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.096	VV	33.44360	2.04345	68.34017		Acrylonitrile
4.181	VV	267.24921	9.54626e-1	255.12310		Pentane
4.525	VB	70.84073	5.09306	360.79587		Methylene chloride
5.773	MF	218.26683	8.08413e-1	176.44982		Hexane
6.489	FM	543.59021	8.08768e-1	439.63811		Benzene
6.890	VV	21.79693	2.20879	48.14482		Trichloroethene
7.559	VV	1770.96484	6.80866e-1	1205.78959		Toluene
7.831	MF	99.49139	2.35236	234.03930		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\018B0102.D
Sample Name: EM-R1-Bag-DCU S&R 0711-64

Acq. Operator : MGM Seq. Line : 1
Acq. Instrument : Gummo online Location : Vial 18
Injection Date : 28-Jul-11, 10:13:18 Inj : 2
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.471	VV	7.30880	3.62141	26.46814		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.101	VV	33.32092	2.04357	68.09373		Acrylonitrile
4.185	VV	266.01050	9.54632e-1	253.94225		Pentane
4.530	VB	70.77246	5.09306	360.44866		Methylene chloride
5.777	MF	219.43353	8.08402e-1	177.39045		Hexane
6.492	FM	542.51794	8.08769e-1	438.77185		Benzene
6.893	MF	23.45981	2.20430	51.71237		Trichloroethene
7.560	VV	1761.53003	6.80870e-1	1199.37297		Toluene
7.833	MF	99.19960	2.35238	233.35562		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\018B0103.D
Sample Name: EM-R1-Bag-DCU S&R 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 28-Jul-11, 10:29:35                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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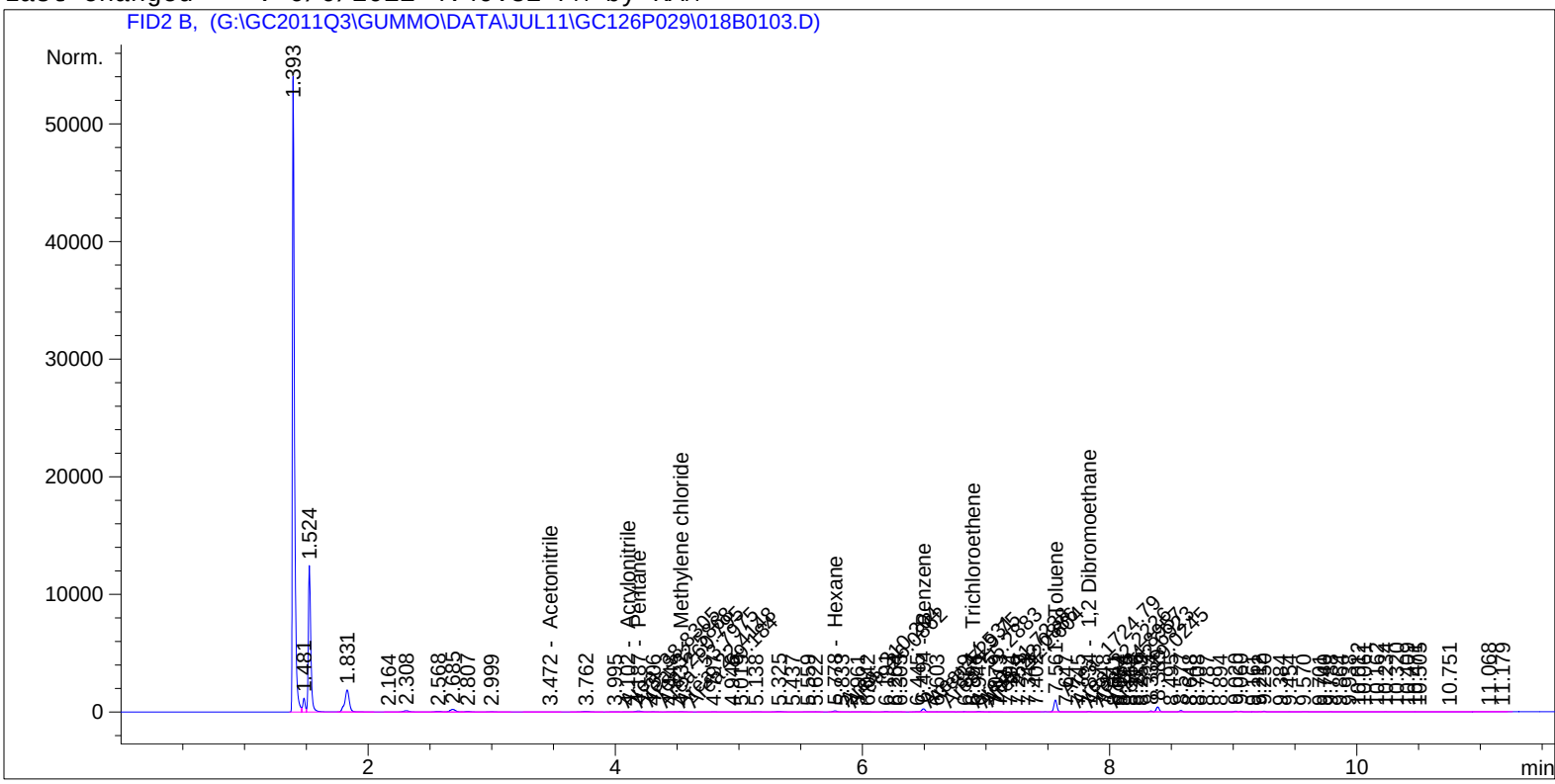


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==================================================================
                    External Standard Report
==================================================================

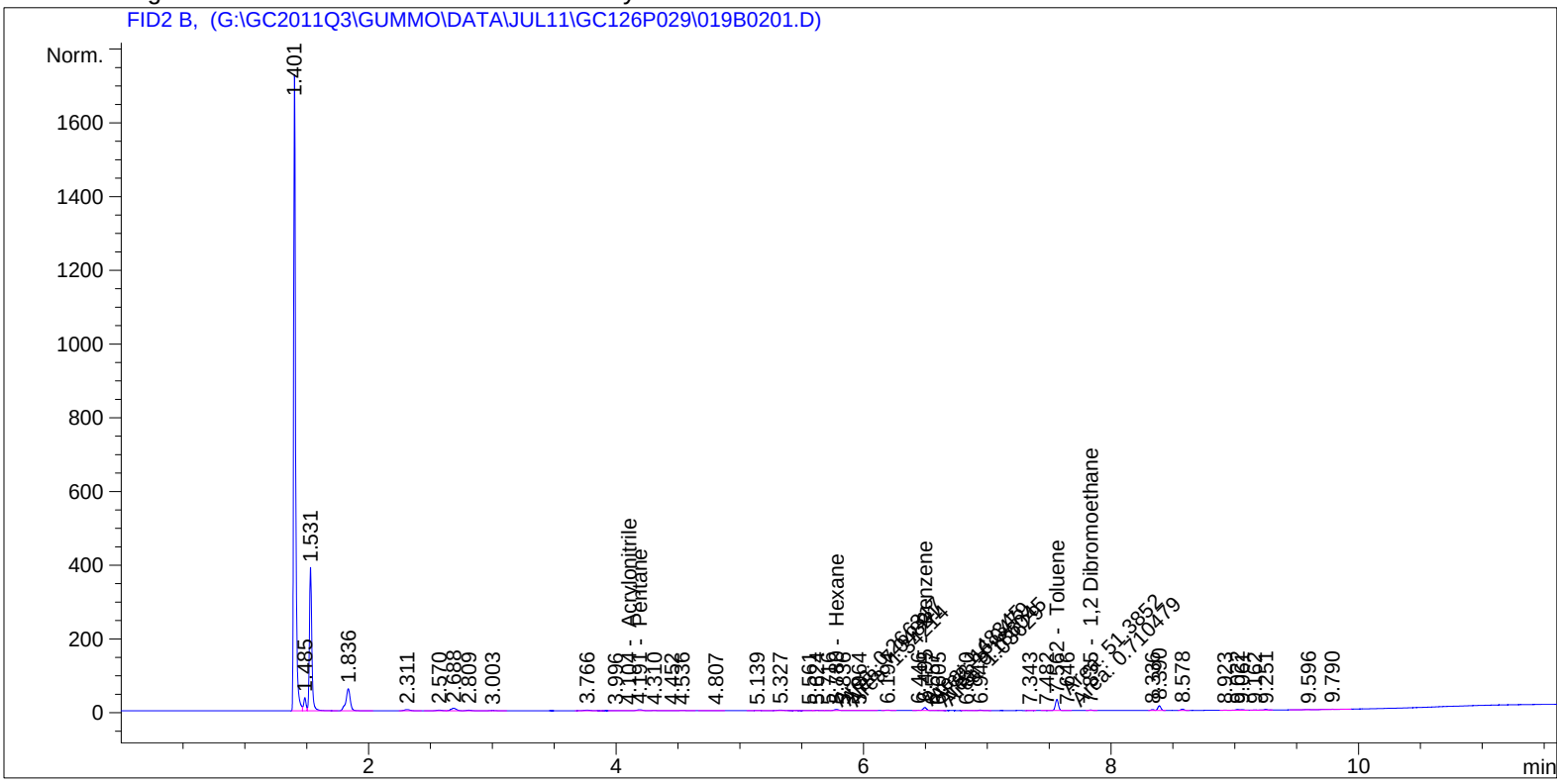
Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.472	VV T	7.00261	3.62576	25.38979		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.102	MF	32.58681	2.04436	66.61908		Acrylonitrile
4.187	MF	260.79547	9.54659e-1	248.97083		Pentane
4.532	FM	69.18400	5.09323	352.36982		Methylene chloride
5.778	MF	210.20415	8.08497e-1	169.94943		Hexane
6.494	FM	529.75031	8.08791e-1	428.45705		Benzene
6.894	MF	22.08861	2.20795	48.77059		Trichloroethene
7.561	MF	1724.78809	6.80886e-1	1174.38477		Toluene
7.834	MF	92.69226	2.35304	218.10847		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\019B0201.D
Sample Name: EM-R1-Bag-DCU S&R * 31 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 28-Jul-11, 10:45:54                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
```

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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.104	VV	1.04269	2.62011	2.73197		Acrylonitrile
4.191	VV	8.01831	9.97852e-1	8.00109		Pentane
4.508		-	-	-		Methylene chloride
5.780	FM	7.04821	8.73805e-1	6.15876		Hexane
6.495	MF	16.04792	8.37759e-1	13.44429		Benzene
6.890		-	-	-		Trichloroethene
7.562	MF	51.38522	7.06491e-1	36.30319		Toluene
7.835	BB	2.58722	2.70021	6.98605		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)
Manual Int. "II" (MGM)
Manual Int. "II" (MGM)
Manual Int. "II" (MGM)

EM-BTRF-000762

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\019B0202.D
Sample Name: EM-R1-Bag-DCU S&R * 31 0711-64

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 28-Jul-11, 11:02:11                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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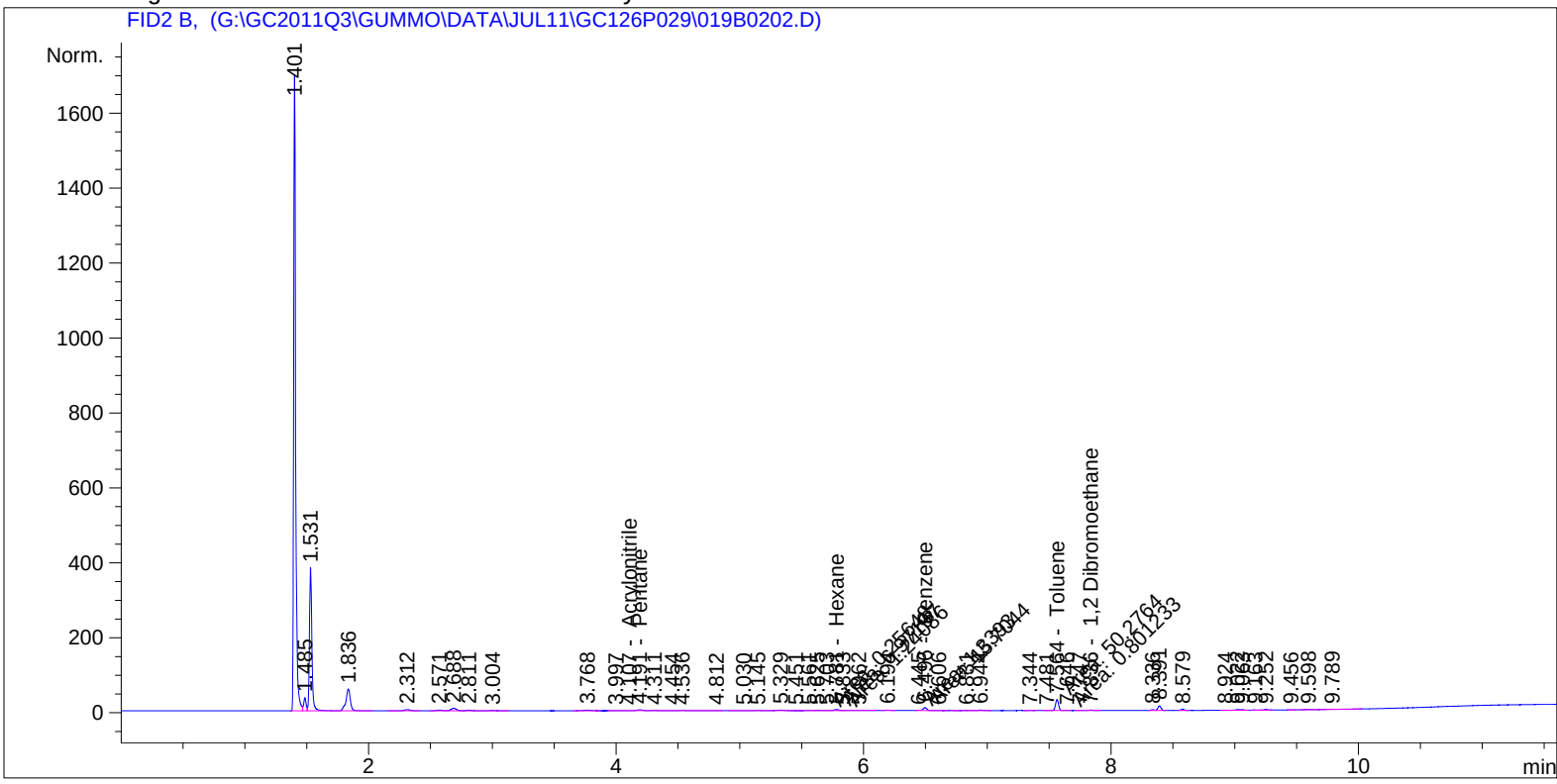


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107	VV	1.03090	2.62011	2.70107		Acrylonitrile
4.191	VV	7.93892	9.98298e-1	7.92540		Pentane
4.508		-	-	-		Methylene chloride
5.781	FM	6.97197	8.74544e-1	6.09730		Hexane
6.496	FM	15.70436	8.38412e-1	13.16673		Benzene
6.890		-	-	-		Trichloroethene
7.564	MF	50.27643	7.07073e-1	35.54910		Toluene
7.836	VB	2.65019	2.69173	7.13360		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)
Manual Int. "II" (MGM)
Manual Int. "II" (MGM)

EM-BTRF-000763

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\019B0203.D
Sample Name: EM-R1-Bag-DCU S&R * 31 0711-64

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 28-Jul-11, 11:18:20                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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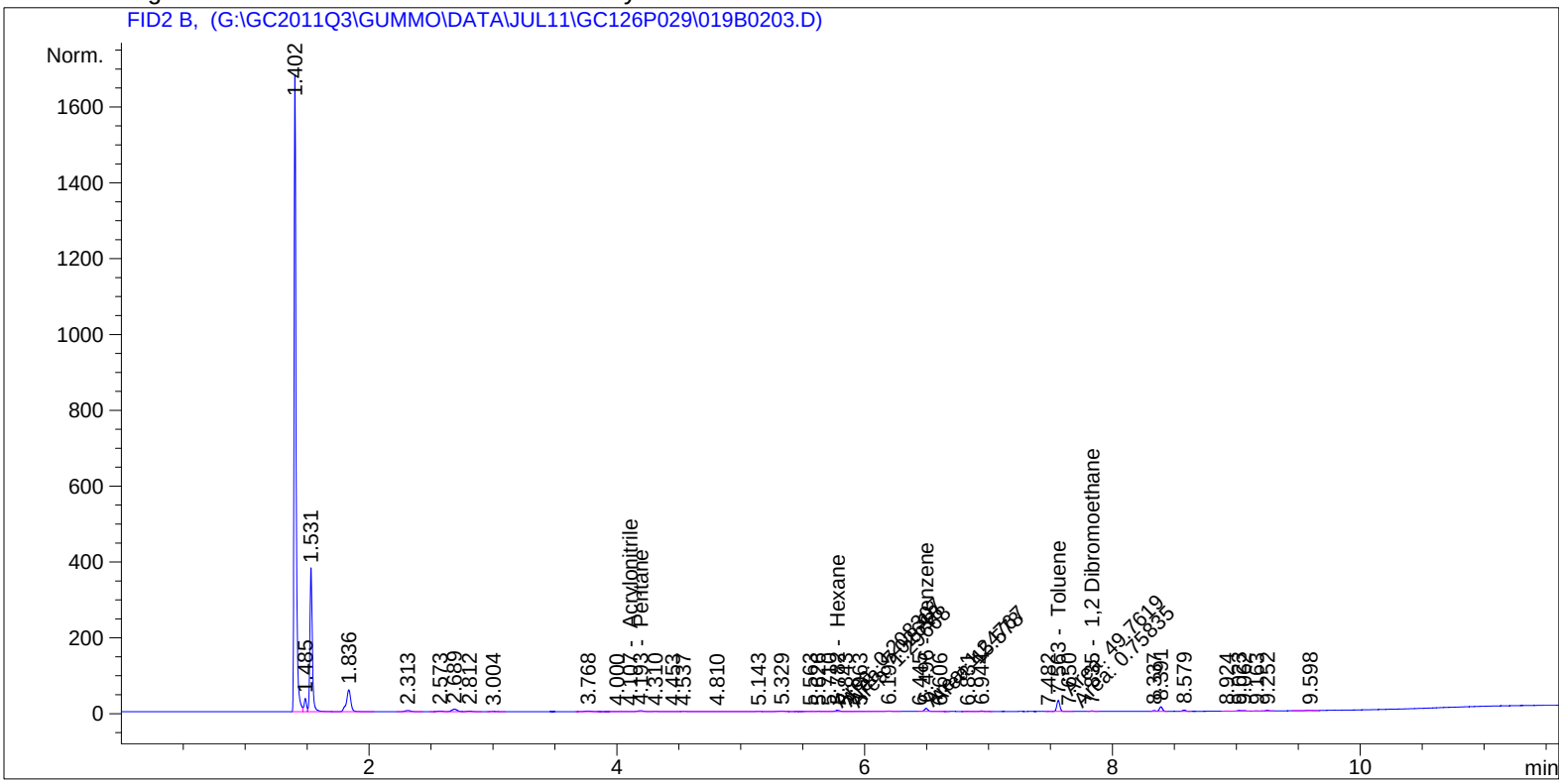


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.620            -          -          -         1-3 Butadiene
  3.453            -          -          -         Acetonitrile
  3.591            -          -          -         Acrolein
  3.700            -          -          -         Acetone
  4.107 VV       1.00349    2.62011    2.62925     Acrylonitrile
  4.193 VV       7.92834 9.98358e-1    7.91532     Pentane
  4.508            -          -          -         Methylene chloride
  5.782 FM       7.02618 8.74017e-1    6.14100     Hexane
  6.496 FM      15.57804 8.38660e-1   13.06468     Benzene
  6.890            -          -          -         Trichloroethene
  7.563 MF      49.76191 7.07352e-1   35.19917     Toluene
  7.835 BB       2.53832    2.70710    6.87146     1,2 Dibromoethane
  7.981            -          -          -         Tetrachloroethene
```

Manual Int. "II" (MGM)
Manual Int. "II" (MGM)
Manual Int. "II" (MGM)
Manual Int. "II" (MGM)

EM-BTRF-000764

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\018B1201.D
Sample Name: EM-R2-Bag-DCU S&R 0711-64

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :  12
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 04-Aug-11, 07:58:33                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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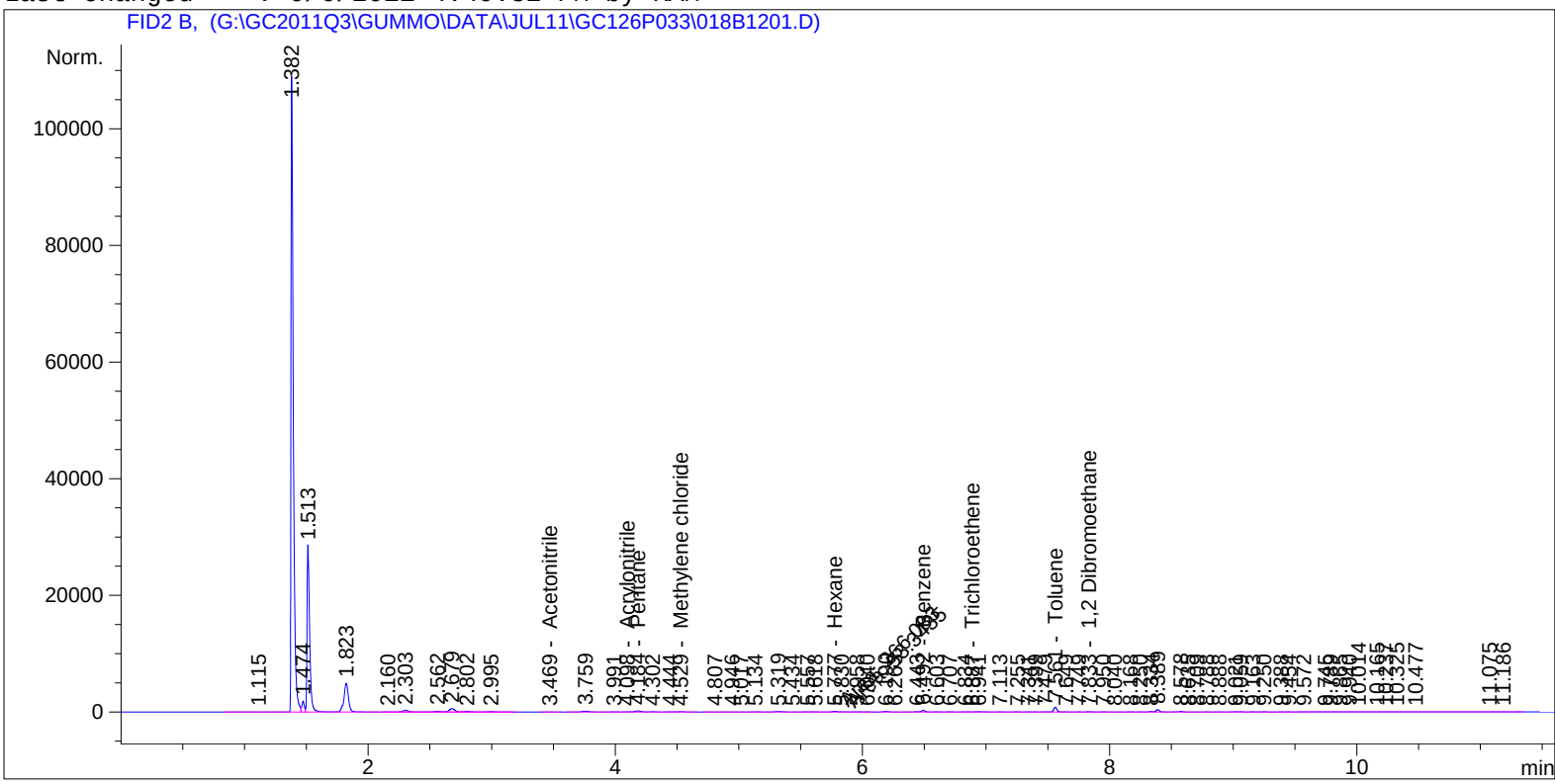



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.469	BV	12.30884	3.58095	44.07730		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.098	VV	65.89339	2.02637	133.52412		Acrylonitrile
4.184	VV	598.19452	9.53887e-1	570.60969		Pentane
4.529	VB	139.08591	5.08957	707.88733		Methylene chloride
5.777	MF	266.08322	8.08021e-1	215.00089		Hexane
6.492	VV	527.31824	8.08795e-1	426.49222		Benzene
6.887	VV	54.09792	2.17095	117.44367		Trichloroethene
7.561	VV	1415.20447	6.81058e-1	963.83689		Toluene
7.833	VV	92.48021	2.35306	217.61162		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

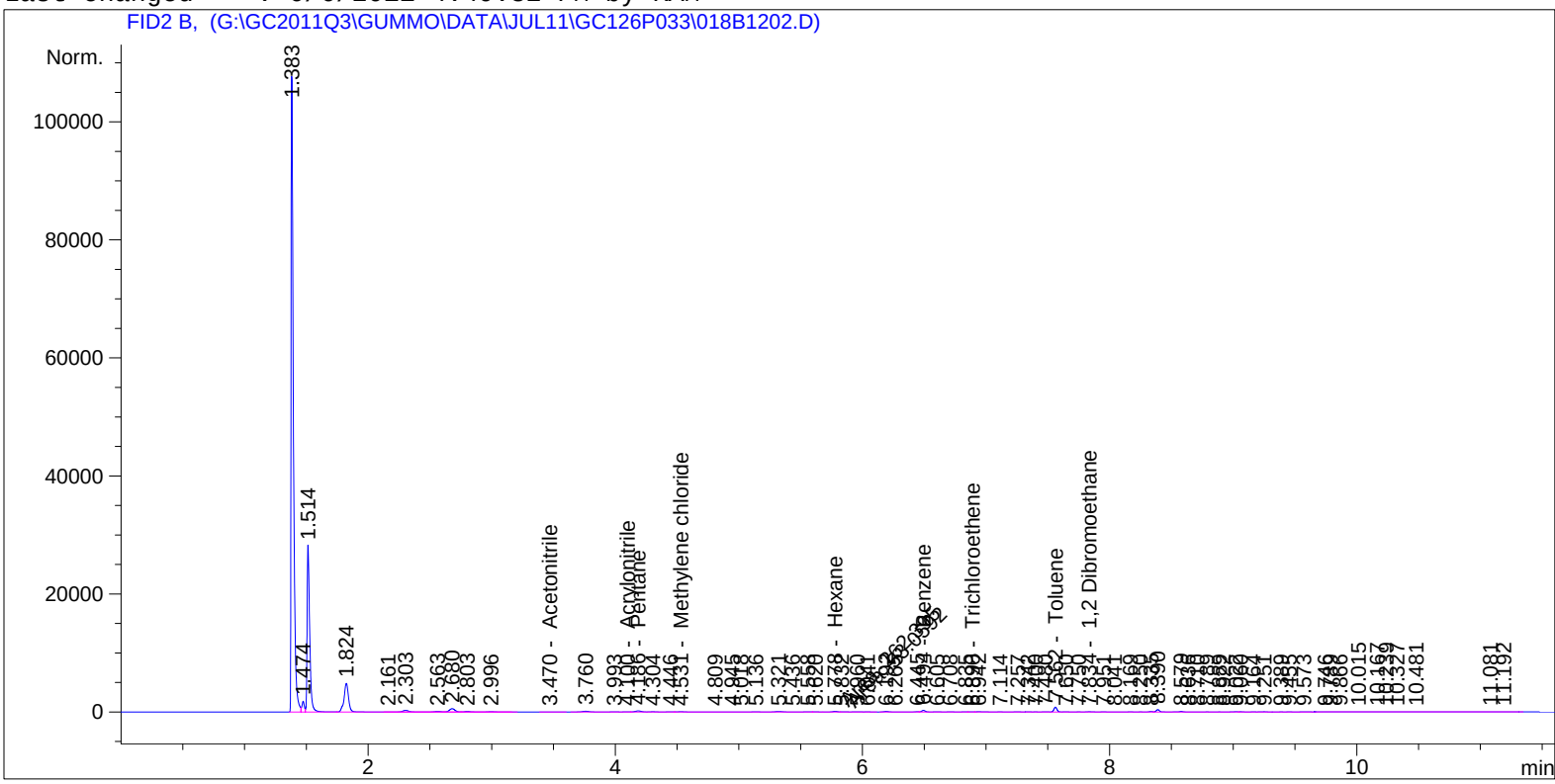
Manual Int. "II" (MGM)

EM-BTRF-000765

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\018B1202.D
Sample Name: EM-R2-Bag-DCU S&R 0711-64

==========

Acq. Operator : MGM Seq. Line : 12
Acq. Instrument : Gummo online Location : Vial 18
Injection Date : 04-Aug-11, 08:14:48 Inj : 2
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.470	BB	12.06033	3.58216	43.20209		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.100	VV	64.99438	2.02661	131.71823		Acrylonitrile
4.186	VV	588.60297	9.53896e-1	561.46617		Pentane
4.531	VV	137.02567	5.08962	697.40905		Methylene chloride
5.778	MF	262.39490	8.08046e-1	212.02725		Hexane
6.494	VV	519.39124	8.08809e-1	420.08811		Benzene
6.890	VV	54.35238	2.17083	117.98958		Trichloroethene
7.562	VV	1392.52429	6.81074e-1	948.41210		Toluene
7.834	VV	90.94085	2.35323	214.00479		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)

EM-BTRF-000766

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\018B1203.D
Sample Name: EM-R2-Bag-DCU S&R 0711-64

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :  12
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 04-Aug-11, 08:31:00                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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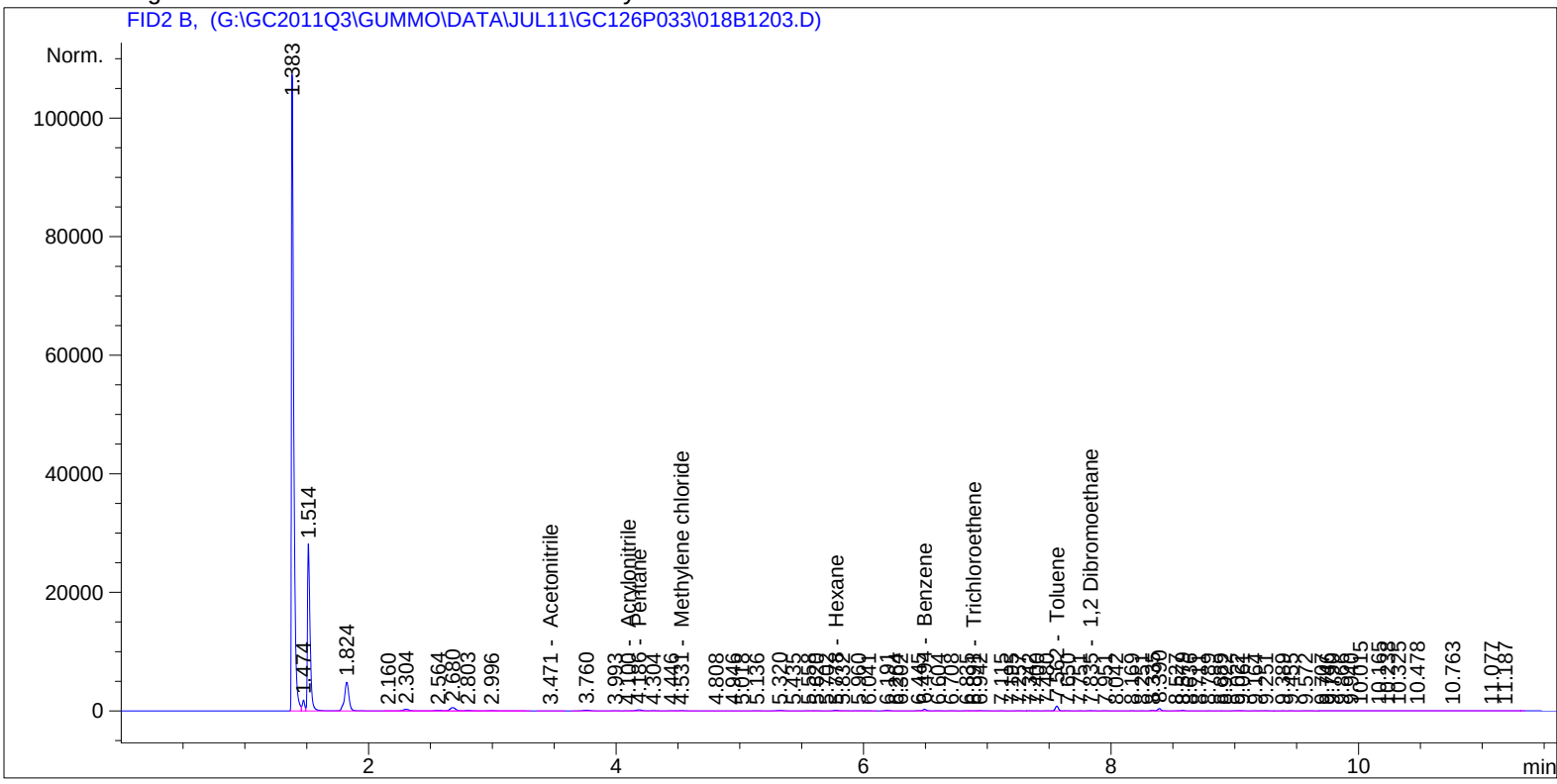


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```
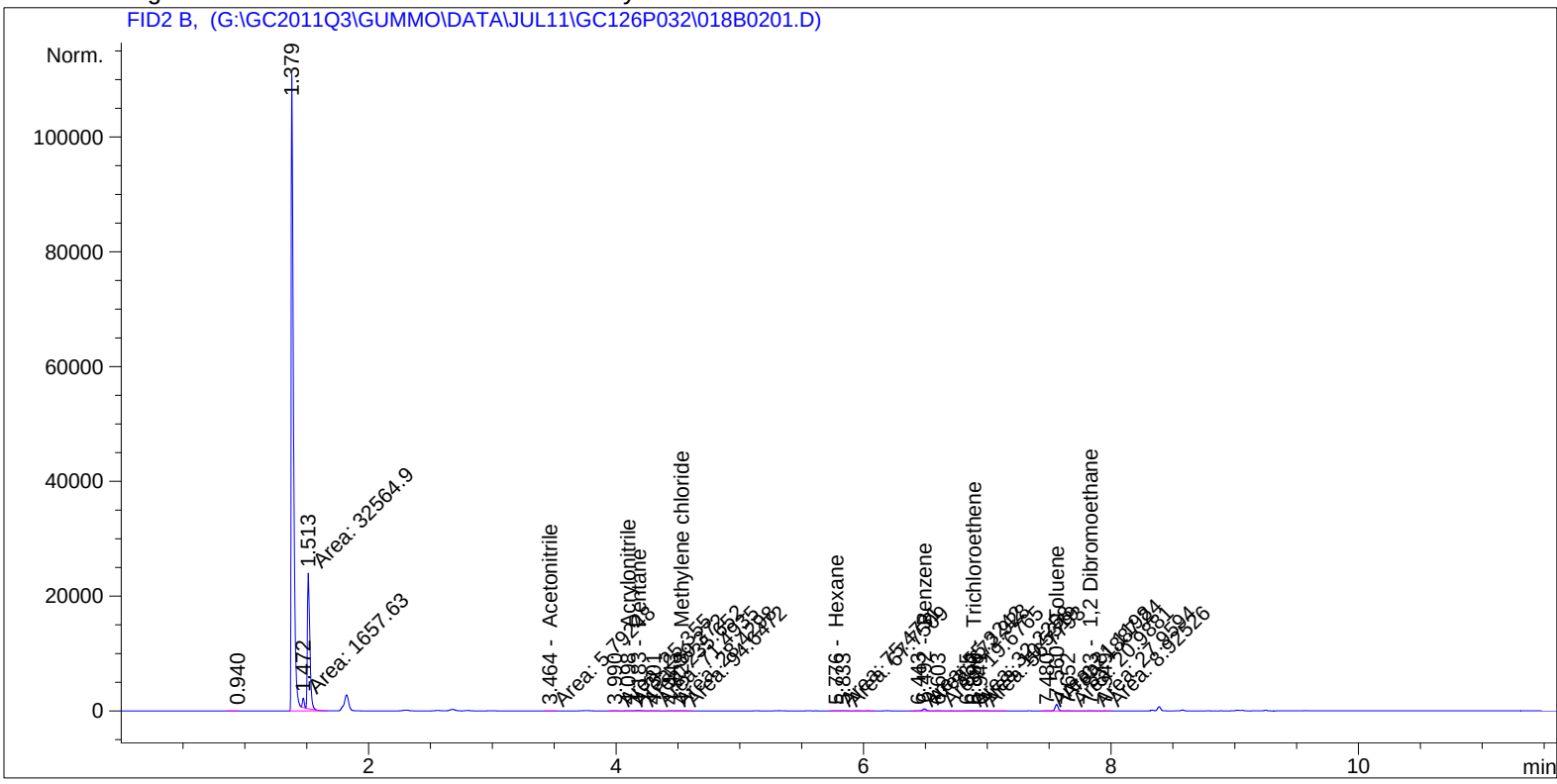

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.471	BB	11.98652	3.58254	42.94214		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.100	VV	65.37721	2.02651	132.48725		Acrylonitrile
4.186	VV	585.00342	9.53900e-1	558.03476		Pentane
4.531	VB	136.13454	5.08965	692.87681		Methylene chloride
5.778	VV	261.85666	8.08050e-1	211.59330		Hexane
6.494	VV	514.82617	8.08817e-1	416.40006		Benzene
6.891	VV	54.90505	2.17057	119.17529		Trichloroethene
7.562	VV	1385.60339	6.81079e-1	943.70520		Toluene
7.835	VV	90.58612	2.35327	213.17364		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\018B0201.D
Sample Name: EM-R3-Bag-DCU Baseline 0711-64

==========

Acq. Operator : MGM Seq. Line : 2
Acq. Instrument : Gummo online Location : Vial 18
Injection Date : 01-Aug-11, 14:49:27 Inj : 1
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.464	MM	5.79248	3.64748	21.12796		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.098	MF	39.37200	2.03822	80.24892		Acrylonitrile
4.183	MF	235.65195	9.54806e-1	225.00178		Pentane
4.528	FM	94.64720	5.09127	481.87436		Methylene chloride
5.776	MF	75.47313	8.12542e-1	61.32507		Hexane
6.492	MF	672.92780	8.08598e-1	544.12809		Benzene
6.890	FM	10.53186	2.27658	23.97663		Trichloroethene
7.560	MF	1887.23804	6.80819e-1	1284.86701		Toluene
7.833	MF	27.95937	2.37612	66.43478		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000768

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\018B0202.D
Sample Name: EM-R3-Bag-DCU Baseline 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 01-Aug-11, 15:05:31                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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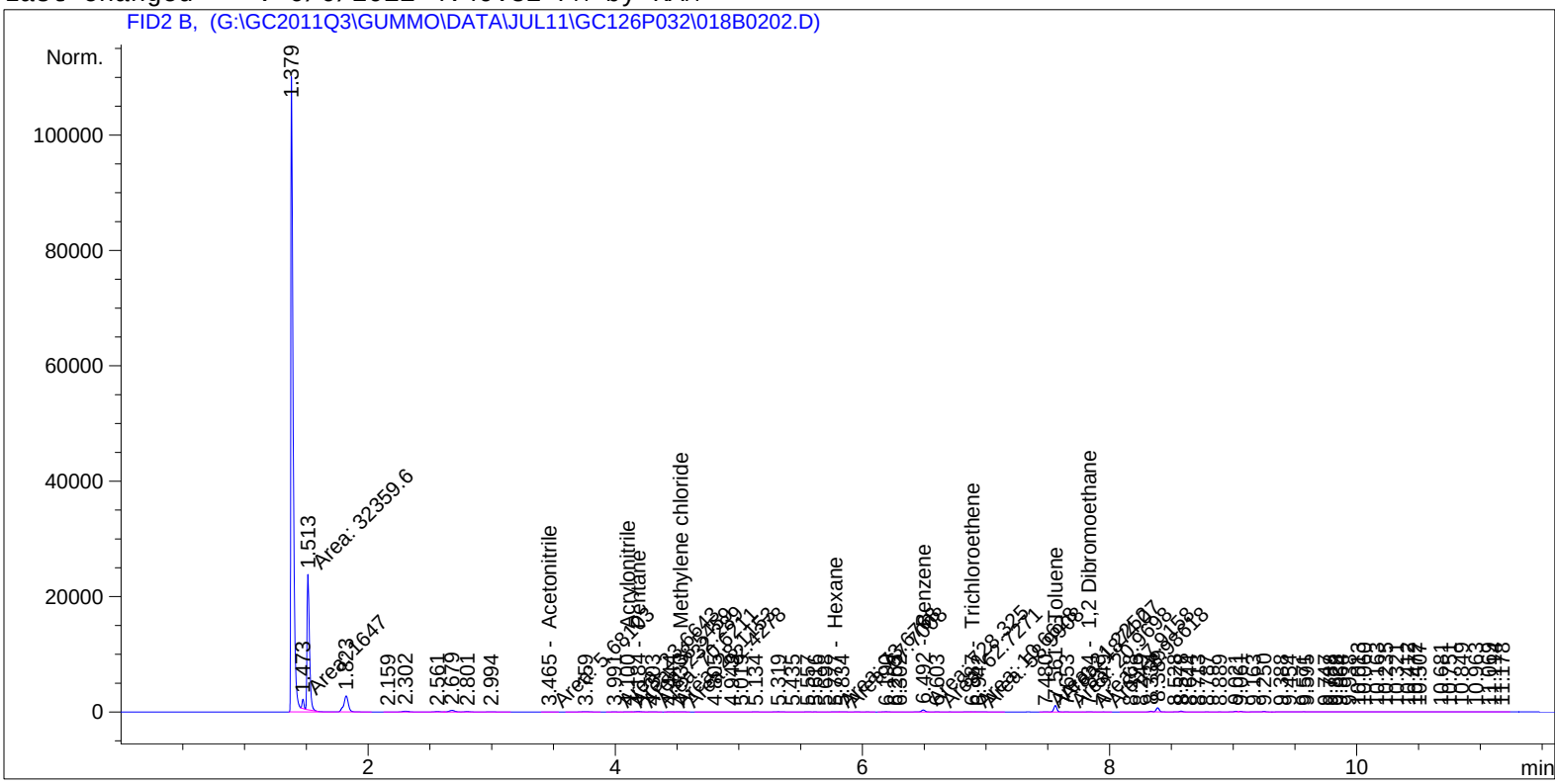


```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.465	MM	5.68103	3.64995	20.73545		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.100	FM	38.54592	2.03885	78.58953		Acrylonitrile
4.184	MF	232.28870	9.54827e-1	221.79563		Pentane
4.530	FM	92.42777	5.09140	470.58646		Methylene chloride
5.777	MF	73.67681	8.12696e-1	59.87682		Hexane
6.492	MF	728.32501	8.08544e-1	588.88270		Benzene
6.887	FM	10.66279	2.27497	24.25754		Trichloroethene
7.561	FM	1874.06921	6.80824e-1	1275.91089		Toluene
7.834	MF	27.91577	2.37617	66.33261		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

EM-BTRF-000769

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\018B0203.D
Sample Name: EM-R3-Bag-DCU Baseline 0711-64

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 01-Aug-11, 15:21:43                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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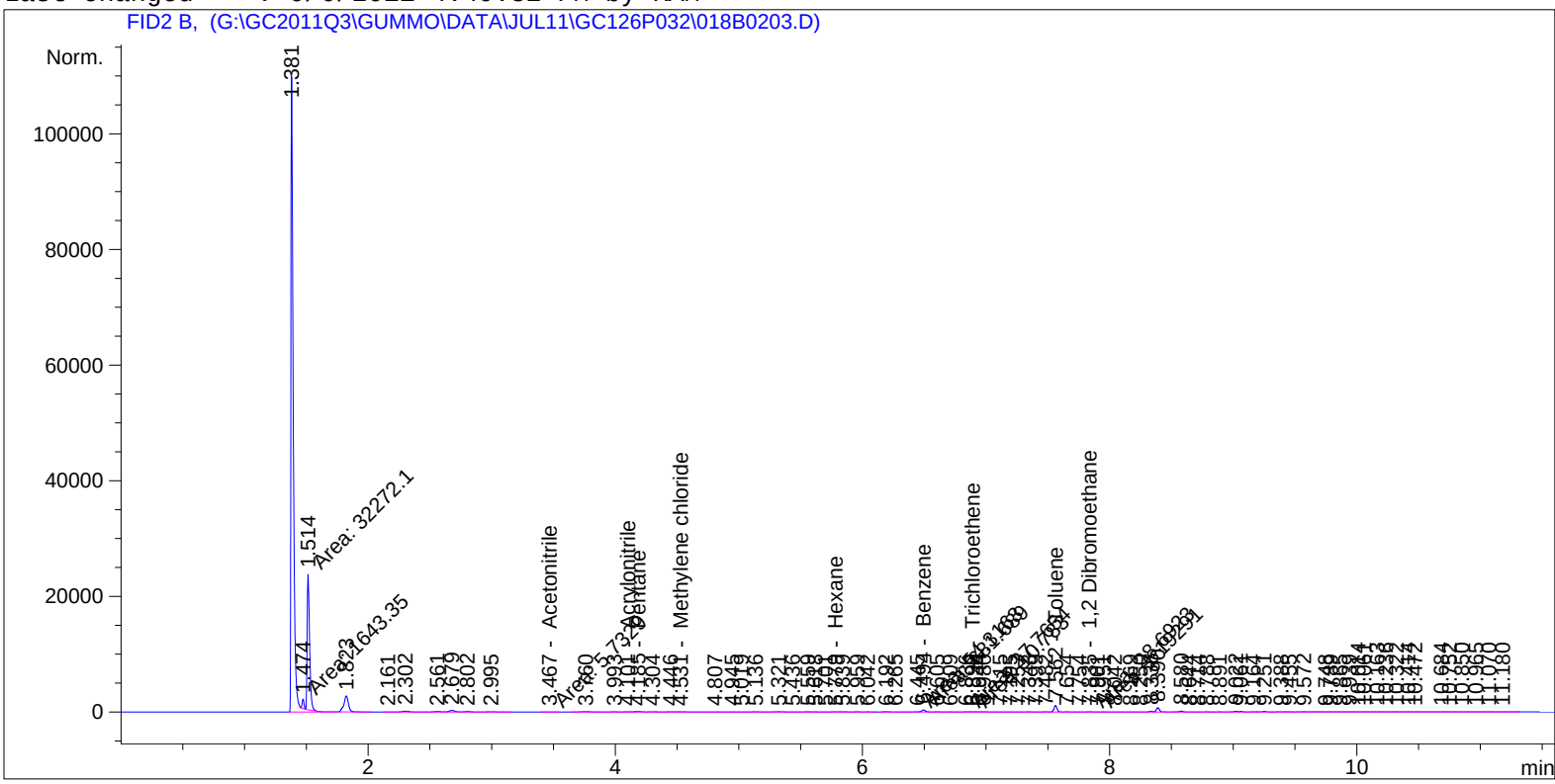


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.467	MM	5.73290	3.64879	20.91811		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.101	VV	38.59591	2.03882	78.68993		Acrylonitrile
4.185	VV	234.84088	9.54811e-1	224.22860		Pentane
4.531	VB	95.26012	5.09123	484.99162		Methylene chloride
5.779	VV	77.53011	8.12374e-1	62.98348		Hexane
6.494	FM	681.68915	8.08589e-1	551.20626		Benzene
6.890	FM	10.78302	2.27353	24.51547		Trichloroethene
7.562	VV	1875.67004	6.80823e-1	1276.99961		Toluene
7.835	MF	28.69233	2.37527	68.15215		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\019B0301.D
Sample Name: EM-R3-Bag-DCU * 31 Baseline 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 01-Aug-11, 15:37:54                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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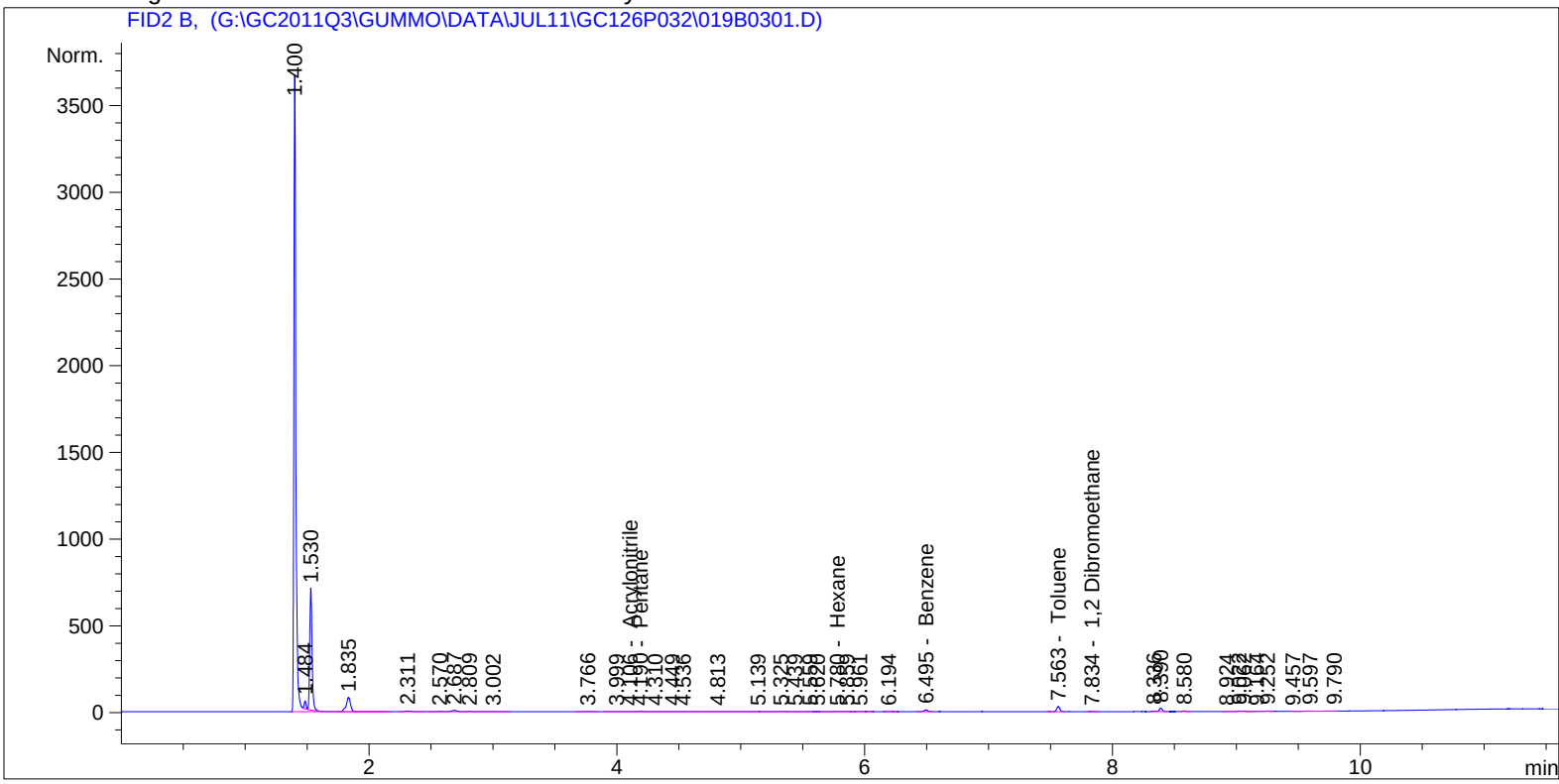


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.106	VV	1.17774	2.62011	3.08580		Acrylonitrile
4.190	VV	6.76329	1.00612	6.80469		Pentane
4.508		-	-	-		Methylene chloride
5.780	VV	2.97298	9.66432e-1	2.87319		Hexane
6.495	BB	19.69838	8.32223e-1	16.39344		Benzene
6.890		-	-	-		Trichloroethene
7.563	BB	50.92217	7.06731e-1	35.98827		Toluene
7.834	BB	7.02516e-1	2.87554	2.02011		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\019B0302.D
Sample Name: EM-R3-Bag-DCU * 31 Baseline 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 01-Aug-11, 15:54:06                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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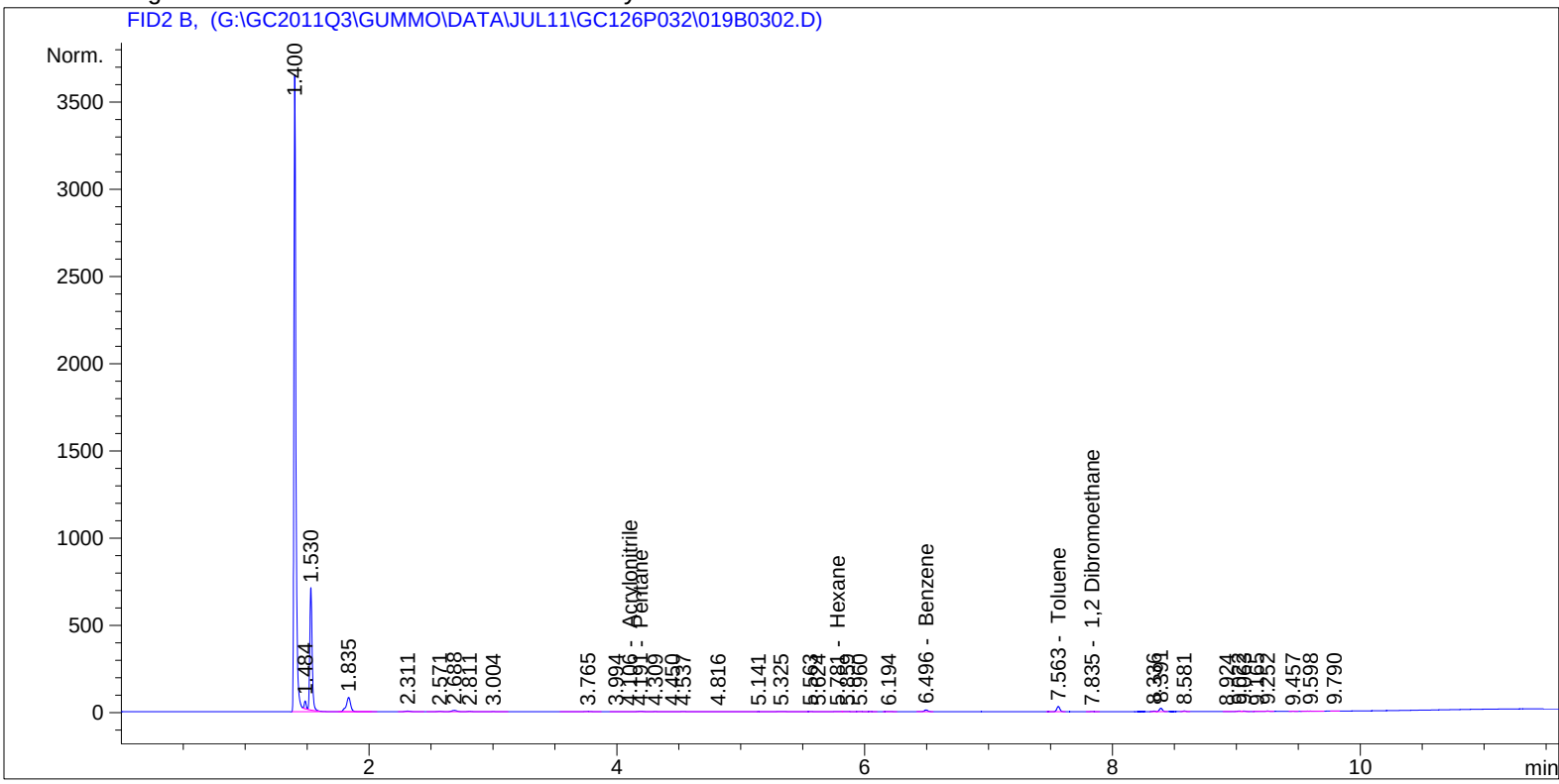


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.106	VV	1.22042	2.62011	3.19764		Acrylonitrile
4.191	VV	6.67951	1.00678	6.72482		Pentane
4.508		-	-	-		Methylene chloride
5.781	VV	2.75395	9.79174e-1	2.69660		Hexane
6.496	BB	19.61601	8.32325e-1	16.32690		Benzene
6.890		-	-	-		Trichloroethene
7.563	BB	50.48174	7.06963e-1	35.68873		Toluene
7.835	BB	7.93428e-1	2.87554	2.28153		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\019B0303.D
Sample Name: EM-R3-Bag-DCU * 31 Baseline 0711-64

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 01-Aug-11, 16:10:18                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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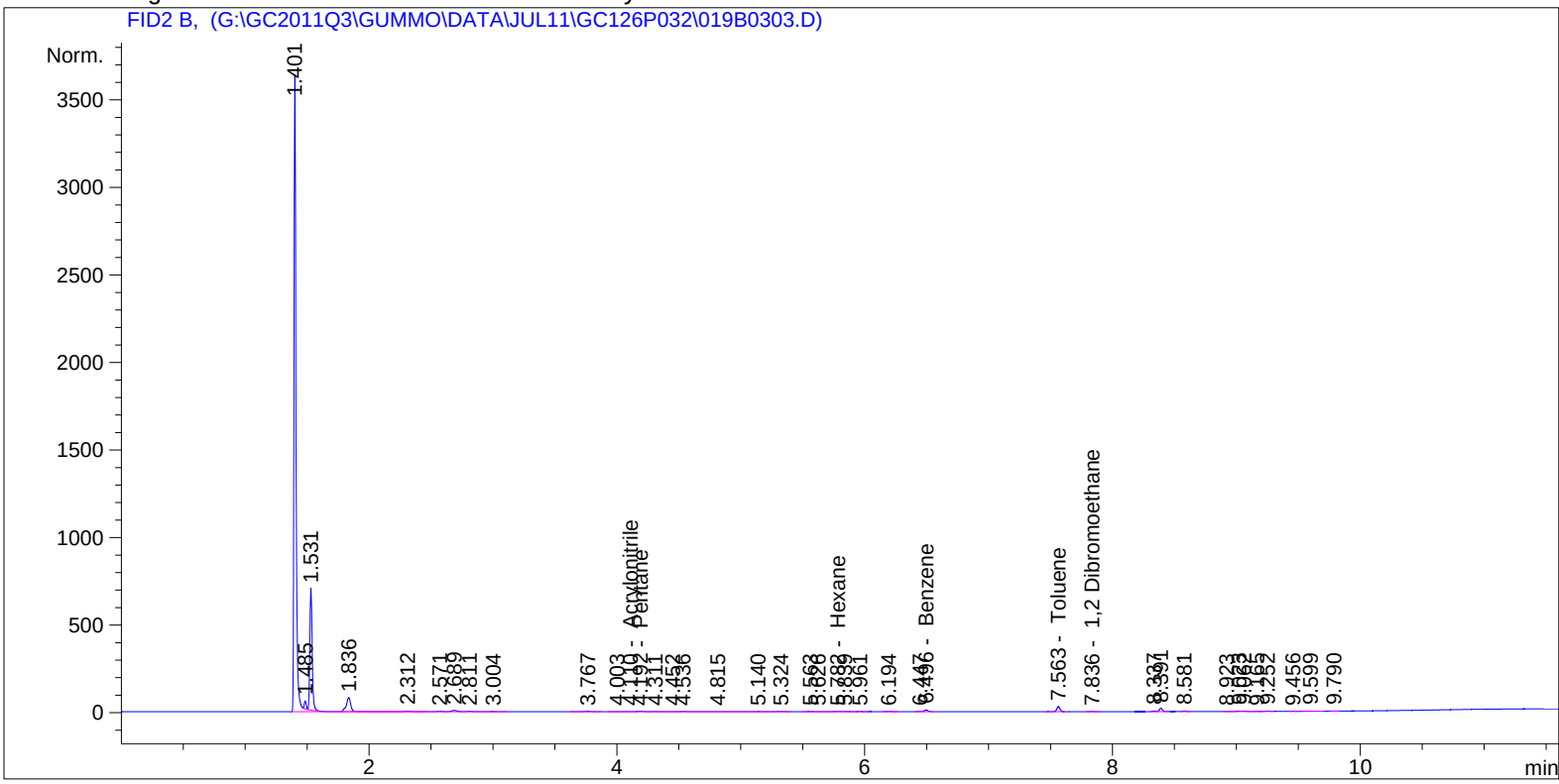


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

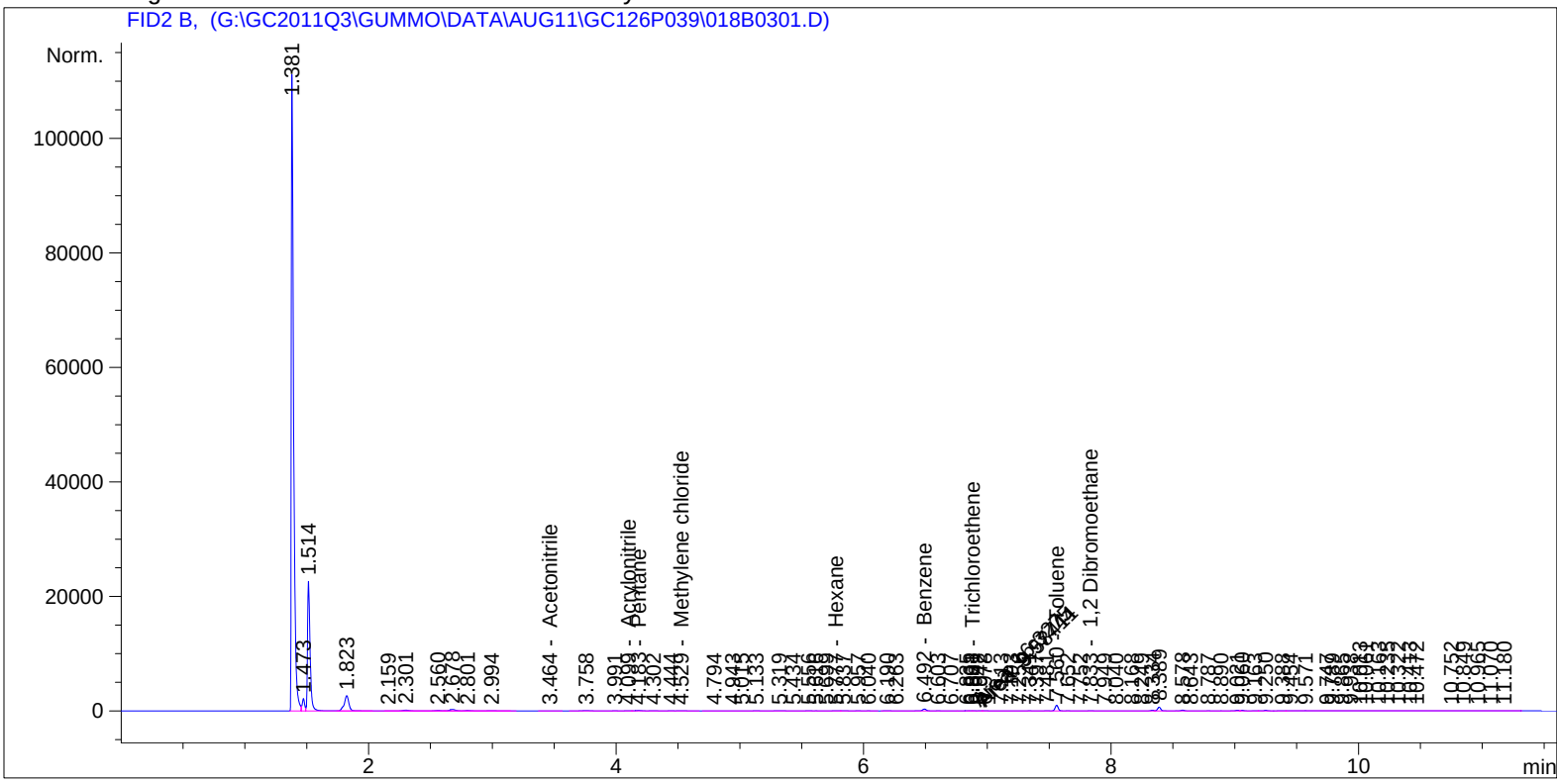
Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.110	VV	1.07213	2.62011	2.80910		Acrylonitrile
4.192	VV	6.62488	1.00723	6.67275		Pentane
4.508		-	-	-		Methylene chloride
5.782	VV	2.22388	9.89631e-1	2.20082		Hexane
6.496	VB	18.26986	8.34126e-1	15.23936		Benzene
6.890		-	-	-		Trichloroethene
7.563	BB	50.07752	7.07180e-1	35.41382		Toluene
7.836	BB	7.30338e-1	2.87554	2.10012		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\018B0301.D
Sample Name: EM-R3-Bag-DCU S&R 0711-64

==========

Acq. Operator : mgm Seq. Line : 3
Acq. Instrument : Gummo Location : Vial 18
Injection Date : 09-Aug-11, 13:42:29 Inj : 1
Inj Volume : External
Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.464	BV	5.86310	3.64597	21.37666		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.099	VV	46.64833	2.03363	94.86536		Acrylonitrile
4.183	VV	221.97101	9.54899e-1	211.95989		Pentane
4.529	VB	89.90952	5.09155	457.77877		Methylene chloride
5.777	VV	72.45388	8.12805e-1	58.89086		Hexane
6.492	VV	672.03632	8.08599e-1	543.40788		Benzene
6.881	FM	9.58411	2.28955	21.94333		Trichloroethene
7.560	VV	1674.29016	6.80910e-1	1140.04112		Toluene
7.833	VV	27.00175	2.37729	64.19099		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

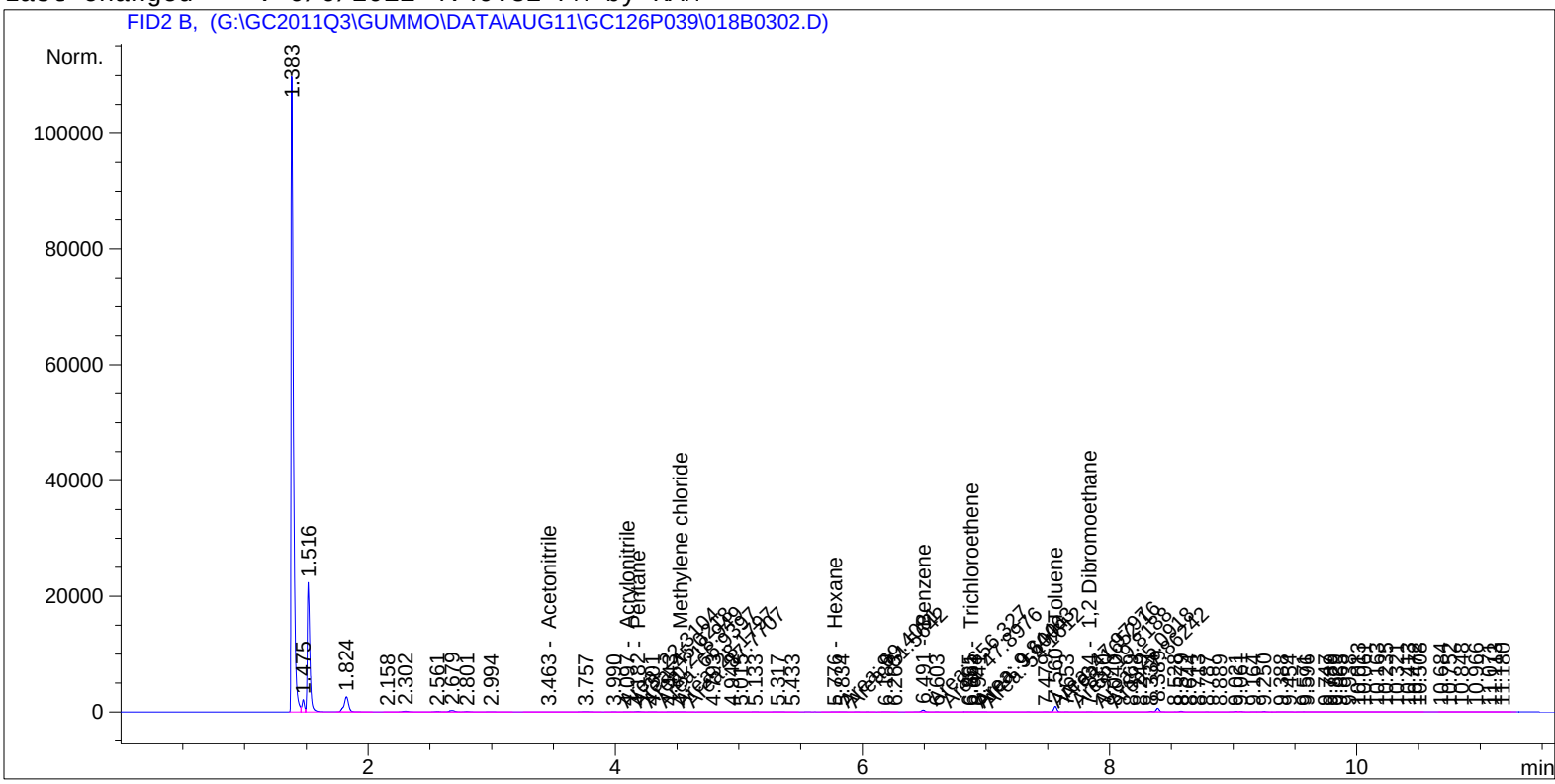
Manual Int. "II" (MGM)

EM-BTRF-000774

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\018B0302.D
Sample Name: EM-R3-Bag-DCU S&R 0711-64

==========

Acq. Operator : mgm Seq. Line : 3
Acq. Instrument : Gummo Location : Vial 18
Injection Date : 09-Aug-11, 14:02:50 Inj : 2
Inj Volume : External
Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.463	PV T	6.03572	3.64241	21.98461		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.097	MF	45.02179	2.03453	91.59802		Acrylonitrile
4.182	MF	218.94852	9.54921e-1	209.07858		Pentane
4.527	FM	87.77071	5.09169	446.90090		Methylene chloride
5.776	MF	69.40809	8.13093e-1	56.43525		Hexane
6.491	MF	656.32697	8.08616e-1	530.71652		Benzene
6.881	FM	9.60040	2.28931	21.97826		Trichloroethene
7.560	MF	1652.15527	6.80921e-1	1124.98718		Toluene
7.834	MF	25.09175	2.37990	59.71574		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

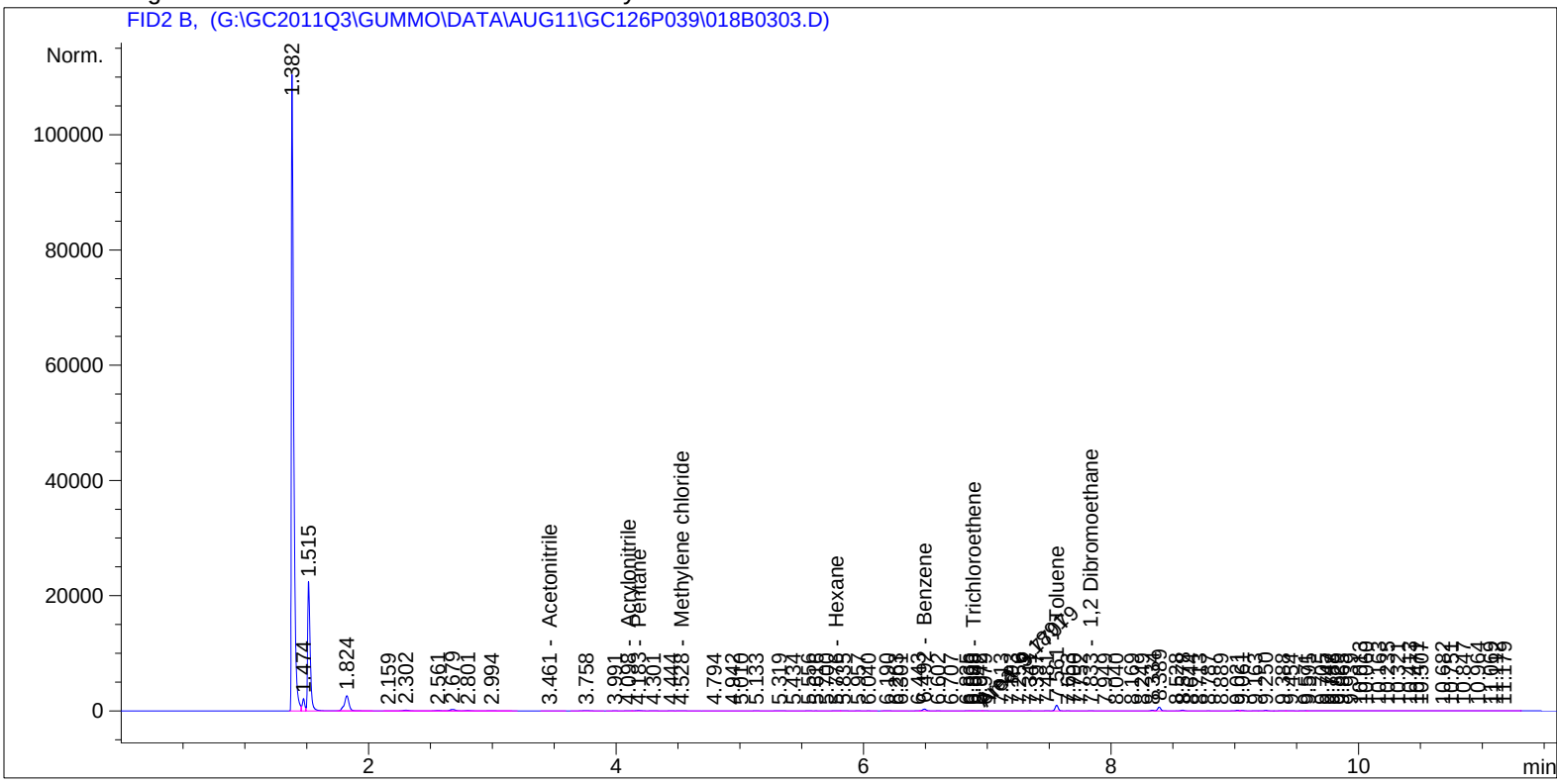
Manual Int. "II" (MGM)

EM-BTRF-000775

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\018B0303.D
Sample Name: EM-R3-Bag-DCU S&R 0711-64

==========

Acq. Operator : mgm Seq. Line : 3
Acq. Instrument : Gummo Location : Vial 18
Injection Date : 09-Aug-11, 14:19:55 Inj : 3
Inj Volume : External
Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.461	BB	5.66990	3.65020	20.69624		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.098	VV	46.25894	2.03384	94.08316		Acrylonitrile
4.183	VV	219.05081	9.54920e-1	209.17609		Pentane
4.528	VB	88.65501	5.09163	451.39837		Methylene chloride
5.776	VV	71.50752	8.12892e-1	58.12788		Hexane
6.492	VV	617.47253	8.08662e-1	499.32658		Benzene
6.888	FM	9.77079	2.28680	22.34382		Trichloroethene
7.561	VV	1657.97852	6.80918e-1	1128.94757		Toluene
7.833	VV	26.58187	2.37783	63.20720		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Manual Int. "II" (MGM)

EM-BTRF-000776

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\026B1301.D
Sample Name: gc119p176 #I4 LCS

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  13
Acq. Instrument : Gummo online                  Location : Vial 26
Injection Date  : 20-Jul-11, 19:33:52                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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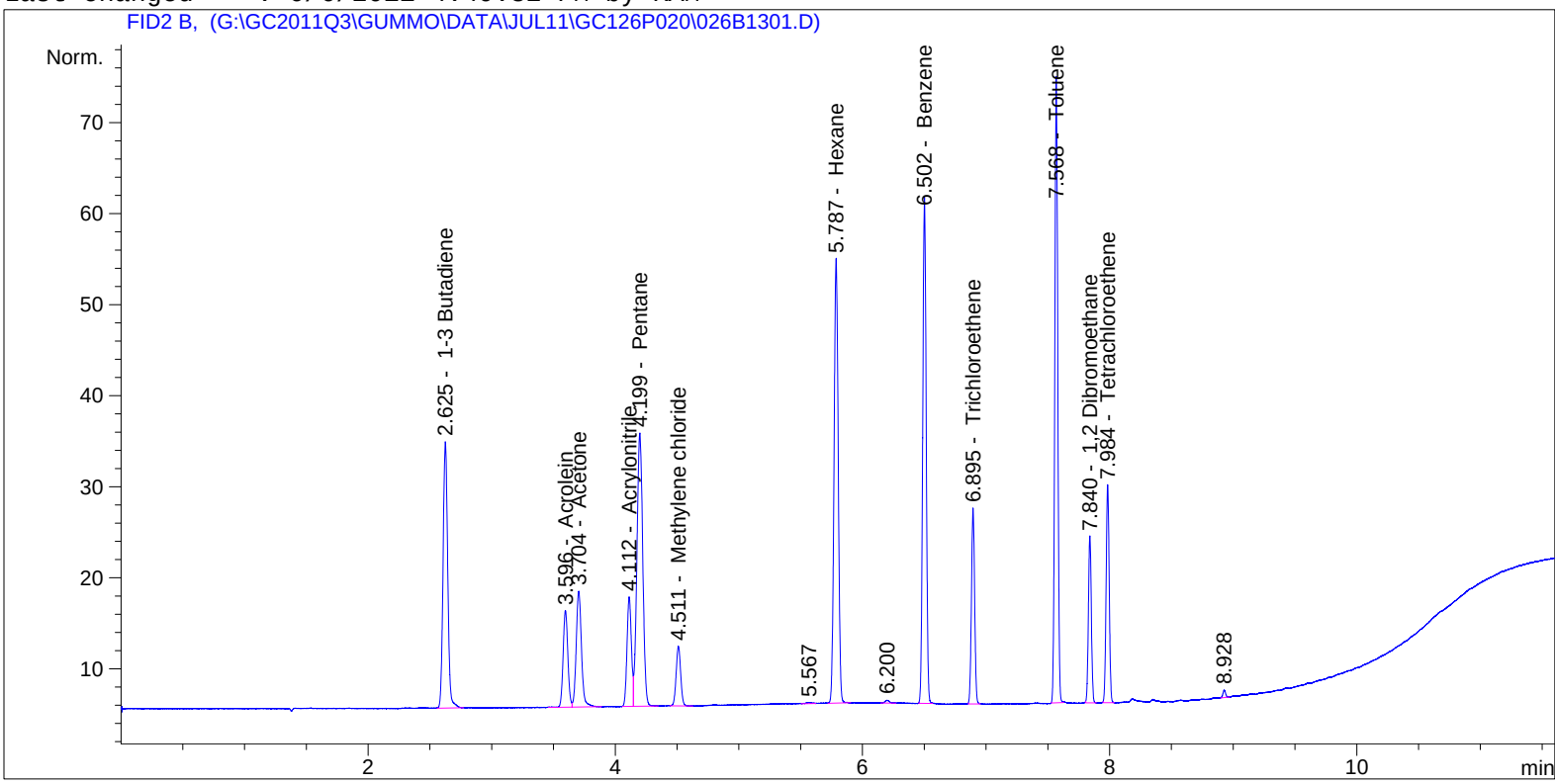


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.625	BB	76.81355	1.21270	93.15177		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.596	BV	28.04445	2.67573	75.03934		Acrolein
3.704	VB	37.74548	2.22803	84.09816		Acetone
4.112	BV	29.68835	2.04783	60.79675		Acrylonitrile
4.199	VB	98.65896	9.56911e-1	94.40784		Pentane
4.511	BB	16.77655	5.11596	85.82822		Methylene chloride
5.787	VB	115.25713	8.10364e-1	93.40018		Hexane
6.502	BB	108.96138	8.12285e-1	88.50774		Benzene
6.895	BB	38.77214	2.18104	84.56360		Trichloroethene
7.568	BB	116.51263	6.91739e-1	80.59635		Toluene
7.840	BB	30.30162	2.37356	71.92283		1,2 Dibromoethane
7.984	BB	41.51471	1.98186	82.27633		Tetrachloroethene

EM-BTRF-000777

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\026B1302.D
Sample Name: gc119p176 #I4 LCS

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :  13
Acq. Instrument : Gummo online                      Location : Vial 26
Injection Date  : 20-Jul-11, 19:50:42                    Inj :   2
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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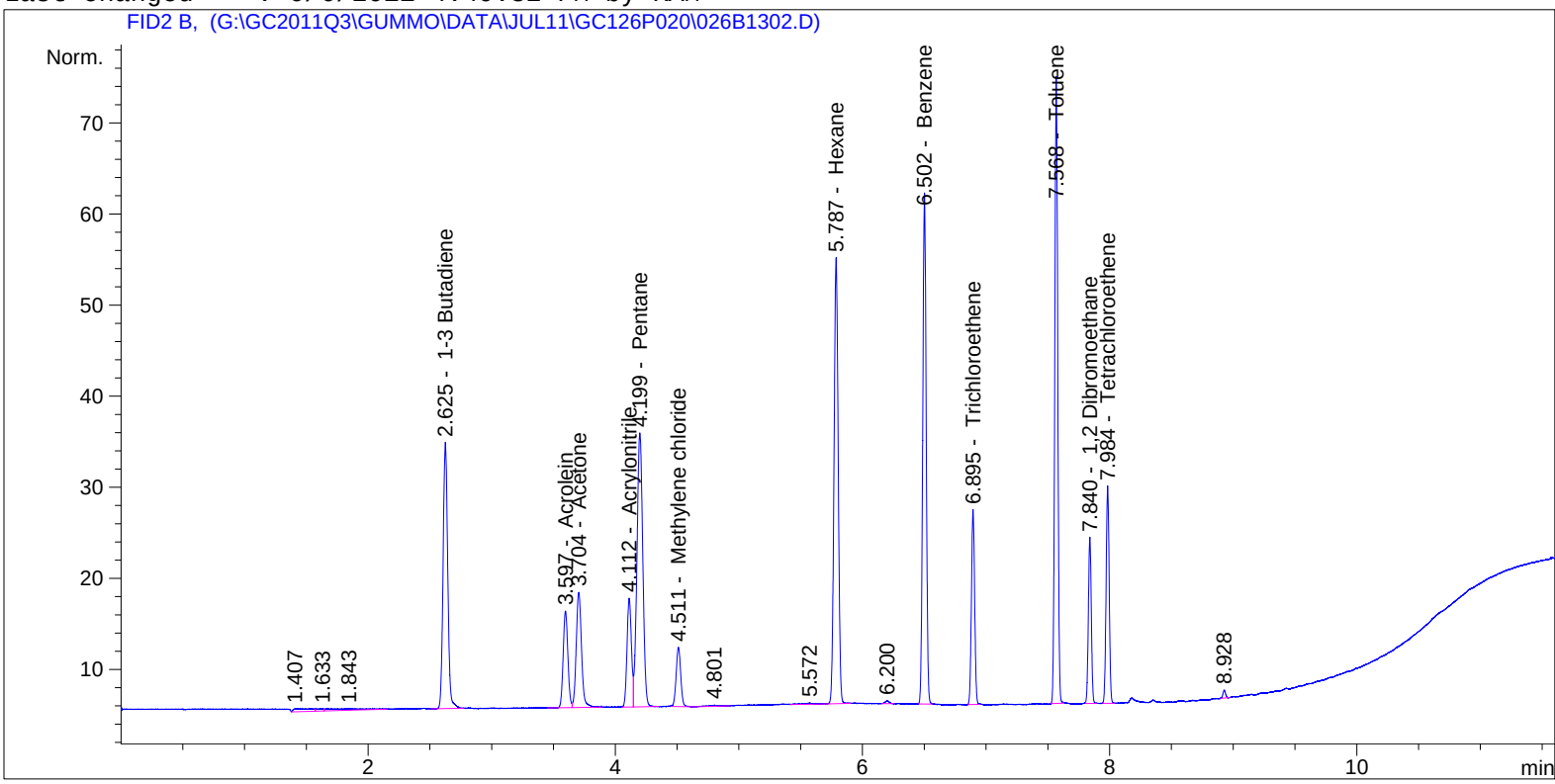


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.625	VB	76.82953	1.21270	93.17105		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.597	BV	27.88629	2.67583	74.61910		Acrolein
3.704	VB	37.54268	2.22818	83.65201		Acetone
4.112	BV	29.73509	2.04777	60.89065		Acrylonitrile
4.199	VB	98.63058	9.56912e-1	94.38079		Pentane
4.511	BV	16.86362	5.11581	86.27107		Methylene chloride
5.787	VB	115.35021	8.10360e-1	93.47522		Hexane
6.502	BB	108.98323	8.12284e-1	88.52539		Benzene
6.895	BB	38.74734	2.18106	84.51038		Trichloroethene
7.568	BB	116.43577	6.91747e-1	80.54407		Toluene
7.840	BB	30.30176	2.37356	71.92315		1,2 Dibromoethane
7.984	BB	41.53368	1.98185	82.31345		Tetrachloroethene

EM-BTRF-000778

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\026B1303.D
Sample Name: gc119p176 #I4 LCS

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :  13
Acq. Instrument : Gummo online                      Location : Vial 26
Injection Date  : 20-Jul-11, 20:07:27                    Inj :   3
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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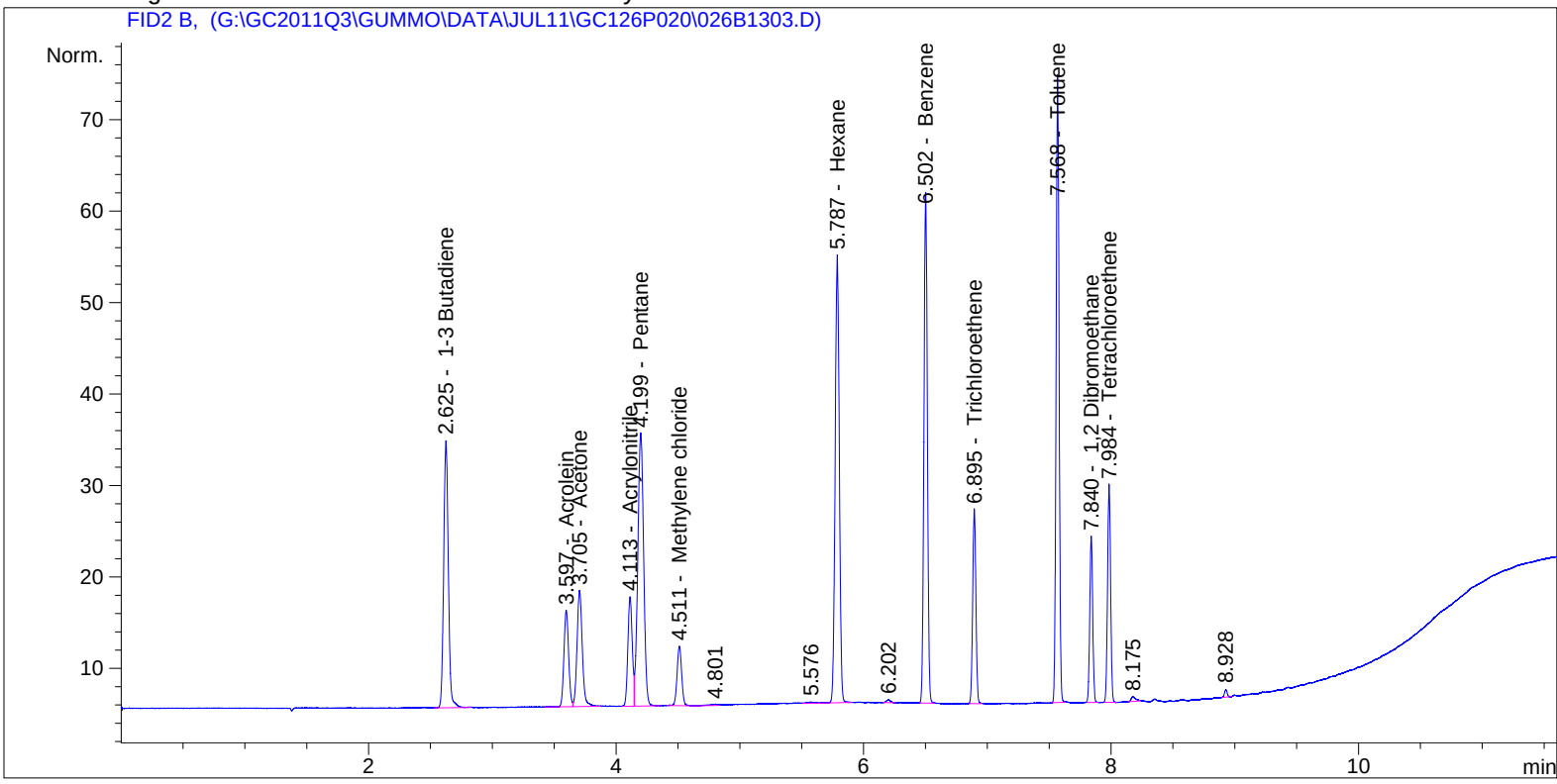


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.625	VB	76.65778	1.21271	92.96391		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.597	BV	27.66981	2.67598	74.04388		Acrolein
3.705	VB	37.32437	2.22835	83.17177		Acetone
4.113	BV	29.56612	2.04799	60.55123		Acrylonitrile
4.199	VB	98.42410	9.56920e-1	94.18395		Pentane
4.511	BB	16.88828	5.11577	86.39648		Methylene chloride
5.787	VB	114.89607	8.10377e-1	93.10908		Hexane
6.502	BB	108.43850	8.12307e-1	88.08531		Benzene
6.895	BB	38.57730	2.18122	84.14558		Trichloroethene
7.568	BB	115.82569	6.91808e-1	80.12916		Toluene
7.840	BB	30.11633	2.37375	71.48867		1,2 Dibromoethane
7.984	BB	41.29670	1.98199	81.84983		Tetrachloroethene

EM-BTRF-000779

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 6/6/2011 4:49:09 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
2.620	2	80	2.57000	1.73700	1.47957			1-3 Butadiene
		81	4.99000	3.59493	1.38807			
		82	10.28000	8.13800	1.26321			
		83	25.70000	20.34834	1.26300			
		84	102.80000	83.80799	1.22661			
		85	257.00000	222.15141	1.15687			
3.453	2	41	4.85400	1.15460	4.20405			Acetonitrile
		42	10.00000	2.72201	3.67376			
		43	25.00000	6.79330	3.68009			
		44	100.00000	28.03901	3.56646			
		45	250.00000	70.78018	3.53206			
3.591	2	80	2.57000	8.03270e-1	3.19942			Acrolein
		81	4.99000	1.55505	3.20891			
		82	10.28000	3.71165	2.76966			
		83	25.70000	9.27803	2.76999			
		84	102.80000	38.36533	2.67950			
		85	257.00000	101.07550	2.54265			
3.700	2	81	4.99000	1.75846	2.83771			Acetone
		82	10.28000	4.33995	2.36869			
		83	25.70000	10.99442	2.33755			
		84	102.80000	45.20877	2.27389			
		85	257.00000	118.56614	2.16757			
4.107	2	81	4.97100	1.87515	2.65098			Acrylonitrile
		82	10.24000	4.66113	2.19689			
		83	25.60000	11.90857	2.14971			
		84	102.40000	49.37942	2.07374			
		85	256.00000	129.61155	1.97513			

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref Grp	Name
4.191	2	80	2.57000	2.39945	1.07108		Pentane
		81	4.99000	4.59405	1.08619		
		82	10.28000	10.34747	9.93480e-1		
		83	25.70000	26.06314	9.86067e-1		
		84	102.80000	107.20813	9.58883e-1		
		85	257.00000	282.44813	9.09902e-1		
4.508	2	80	2.57000	4.20799e-1	6.10743		Methylene chloride
		81	4.99000	8.06924e-1	6.18398		
		82	10.28000	2.02343	5.08048		
		83	25.70000	4.87173	5.27534		
		84	102.80000	19.78841	5.19496		
		85	257.00000	51.96278	4.94585		
5.781	2	80	2.57000	2.69331	9.54216e-1		Hexane
		81	4.99000	5.19826	9.59936e-1		
		82	10.28000	12.42061	8.27656e-1		
		83	25.70000	30.55459	8.41117e-1		
		84	102.80000	125.95523	8.16163e-1		
		85	257.00000	332.35309	7.73274e-1		
6.497	2	80	2.56000	2.72188	9.40527e-1		Benzene
		81	4.97100	5.02133	9.89976e-1		
		82	10.24000	12.06254	8.48909e-1		
		83	25.60000	30.63082	8.35760e-1		
		84	102.40000	126.87513	8.07093e-1		
		85	256.00000	332.67322	7.69524e-1		
6.890	2	81	4.97100	1.64281	3.02591		Trichloroethene
		82	10.24000	4.29742	2.38283		
		83	25.60000	11.08450	2.30953		
		84	102.40000	46.05923	2.22322		
		85	256.00000	120.63905	2.12203		
7.565	2	81	4.97100	5.24351	9.48028e-1		Toluene
		82	10.24000	13.47014	7.60200e-1		
		83	25.60000	35.11275	7.29080e-1		
		84	102.40000	145.96796	7.01524e-1		
		85	256.00000	379.78746	6.74061e-1		
7.836	2	81	4.99000	1.70474	2.92714		1,2 Dibromoethane
		82	10.28000	4.13848	2.48401		
		83	25.70000	10.51291	2.44461		
		84	102.80000	42.89871	2.39634		
		85	257.00000	109.29550	2.35142		
7.981	2	81	4.99000	1.97946	2.52088		Tetrachloroethene
		82	10.28000	4.87139	2.11028		
		83	25.70000	12.42854	2.06782		
		84	102.80000	51.13319	2.01044		
		85	257.00000	132.23401	1.94352		

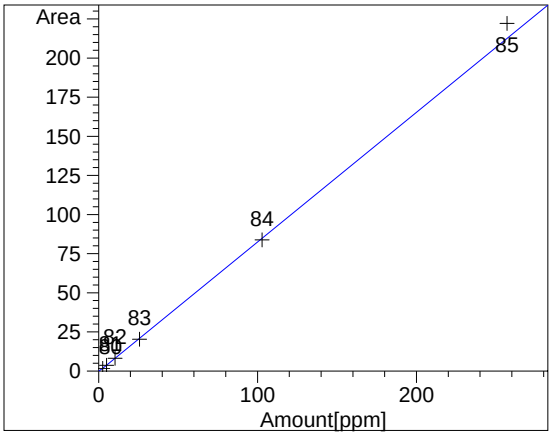
1 Warnings or Errors :

Warning : Cal. table open and changed while report was generated.

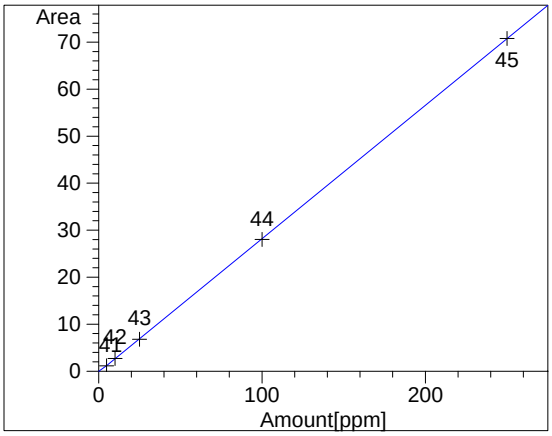
Peak Sum Table

No Entries in table

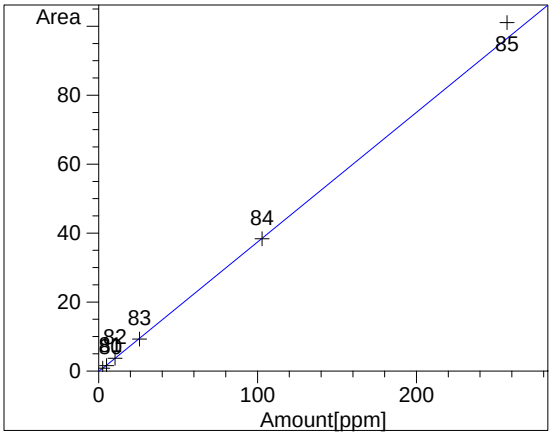
Calibration Curves



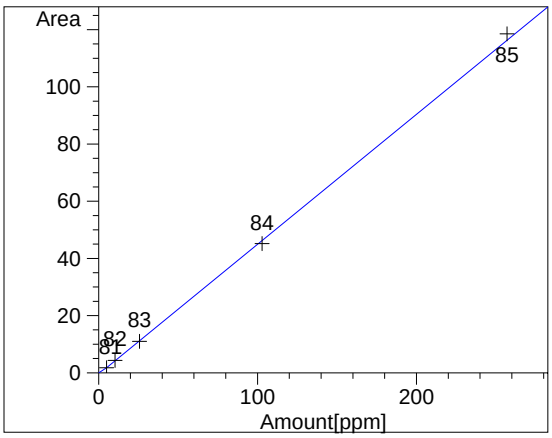
1-3 Butadiene at exp. RT: 2.620
FID2 B,
Correlation: 0.99943
Residual Std. Dev.: 4.77265
Formula: y = mx + b
m: 8.29192e-1
b: -4.27151e-1
x: Amount
y: Area
Calibration Level Weights:
Level 80 : 1
Level 81 : 0.265256
Level 82 : 0.0625
Level 83 : 0.01
Level 84 : 0.000625
Level 85 : 0.0001



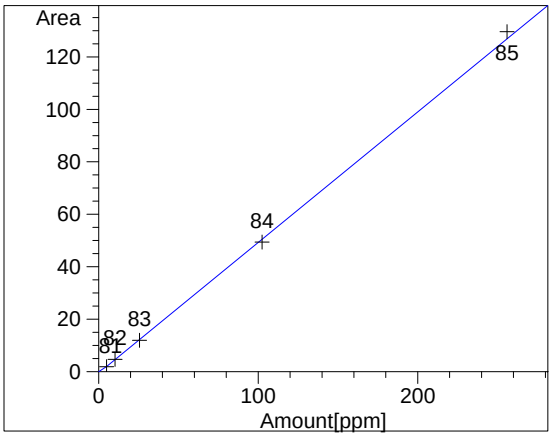
Acetonitrile at exp. RT: 3.453
FID2 B,
Correlation: 0.99974
Residual Std. Dev.: 0.11567
Formula: y = mx + b
m: 2.83946e-1
b: -2.06709e-1
x: Amount
y: Area
Calibration Level Weights:
Level 41 : 1
Level 42 : 0.235613
Level 43 : 0.037698
Level 44 : 0.002356
Level 45 : 0.000377



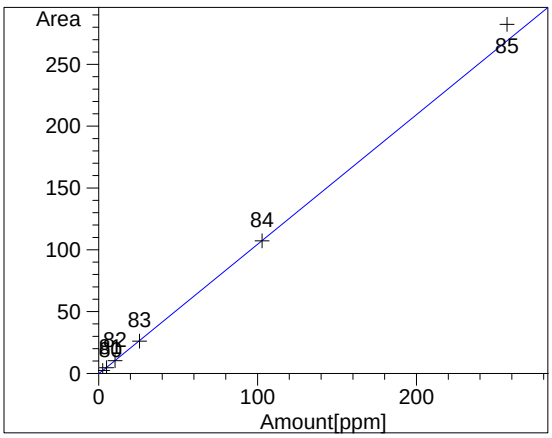
Acrolein at exp. RT: 3.591
FID2 B,
Correlation: 0.99873
Residual Std. Dev.: 2.27913
Formula: y = mx + b
m: 3.76350e-1
b: -1.96601e-1
x: Amount
y: Area
Calibration Level Weights:
Level 80 : 1
Level 81 : 0.265256
Level 82 : 0.0625
Level 83 : 0.01
Level 84 : 0.000625
Level 85 : 0.0001



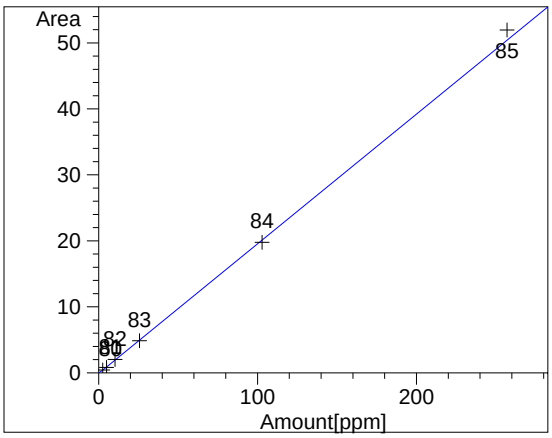
Acetone at exp. RT: 3.700
FID2 B,
Correlation: 0.99955
Residual Std. Dev.: 1.42427
Formula: y = mx + b
m: 4.54578e-1
b: -4.83722e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.235621
Level 83 : 0.037699
Level 84 : 0.002356
Level 85 : 0.000377



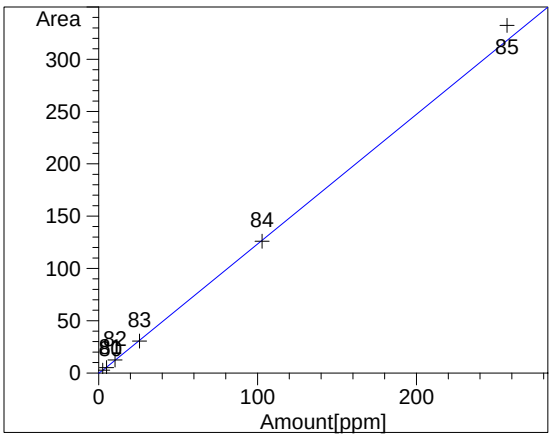
Acrylonitrile at exp. RT: 4.107
FID2 B,
Correlation: 0.99959
Residual Std. Dev.: 1.70050
Formula: y = mx + b
m: 4.97819e-1
b: -5.77407e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.235661
Level 83 : 0.037706
Level 84 : 0.002357
Level 85 : 0.000377



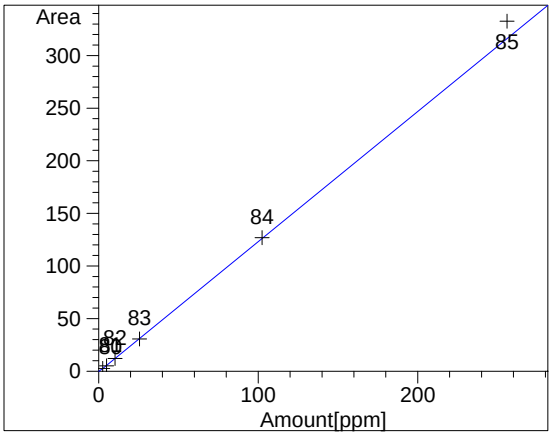
Pentane at exp. RT: 4.191
FID2 B,
Correlation: 0.99906
Residual Std. Dev.: 6.62290
Formula: y = mx + b
m: 1.04900
b: -3.74831e-1
x: Amount
y: Area
Calibration Level Weights:
Level 80 : 1
Level 81 : 0.265256
Level 82 : 0.0625
Level 83 : 0.01
Level 84 : 0.000625
Level 85 : 0.0001



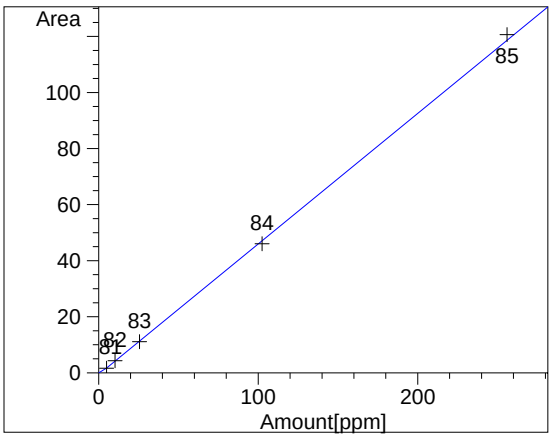
Methylene chloride at exp. RT: 4.508
FID2 B,
Correlation: 0.99839
Residual Std. Dev.: 0.78593
Formula: y = mx + b
m: 1.96620e-1
b: -9.90117e-2
x: Amount
y: Area
Calibration Level Weights:
Level 80 : 1
Level 81 : 0.265256
Level 82 : 0.0625
Level 83 : 0.01
Level 84 : 0.000625
Level 85 : 0.0001



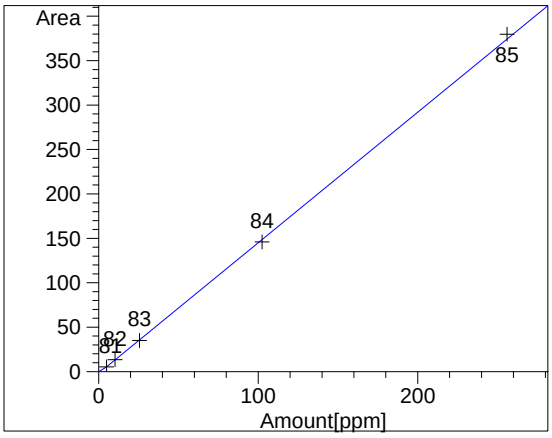
Hexane at exp. RT: 5.781
FID2 B,
Correlation: 0.99878
Residual Std. Dev.: 7.11821
Formula: y = mx + b
m: 1.24034
b: -5.90743e-1
x: Amount
y: Area
Calibration Level Weights:
Level 80 : 1
Level 81 : 0.265256
Level 82 : 0.0625
Level 83 : 0.01
Level 84 : 0.000625
Level 85 : 0.0001



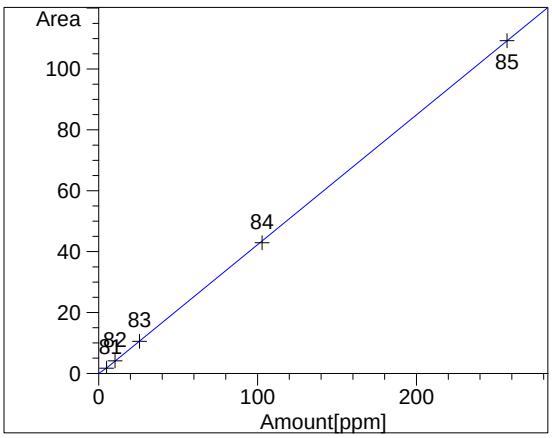
Benzene at exp. RT: 6.497
FID2 B,
Correlation: 0.99808
Residual Std. Dev.: 8.21092
Formula: y = mx + b
m: 1.23780
b: -5.93406e-1
x: Amount
y: Area
Calibration Level Weights:
Level 80 : 1
Level 81 : 0.265212
Level 82 : 0.0625
Level 83 : 0.01
Level 84 : 0.000625
Level 85 : 0.0001



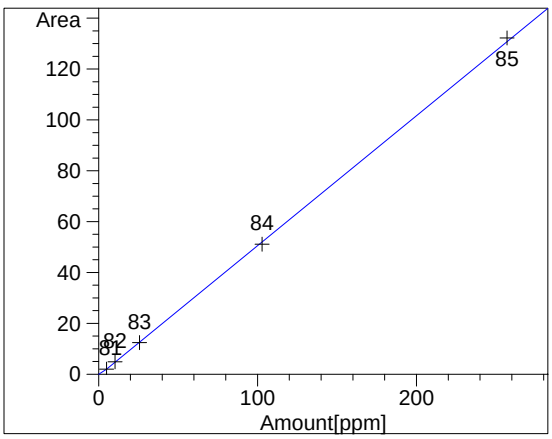
Trichloroethene at exp. RT: 6.890
FID2 B,
Correlation: 0.99953
Residual Std. Dev.: 1.28587
Formula: y = mx + b
m: 4.66112e-1
b: -6.43926e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.235661
Level 83 : 0.037706
Level 84 : 0.002357
Level 85 : 0.000377



Toluene at exp. RT: 7.565
FID2 B,
Correlation: 0.99971
Residual Std. Dev.: 3.46582
Formula: y = mx + b
m: 1.47037
b: -1.99395
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.235661
Level 83 : 0.037706
Level 84 : 0.002357
Level 85 : 0.000377



1,2 Dibromoethane at exp. RT: 7.836
FID2 B,
Correlation: 0.99971
Residual Std. Dev.: 0.34805
Formula: y = mx + b
m: 4.26790e-1
b: -3.94359e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.235621
Level 83 : 0.037699
Level 84 : 0.002356
Level 85 : 0.000377



Tetrachloroethene at exp. RT: 7.981
FID2 B,
Correlation: 0.99969
Residual Std. Dev.: 0.96534
Formula: y = mx + b
m: 5.11161e-1
b: -5.41717e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.235621
Level 83 : 0.037699
Level 84 : 0.002356

Level 85 : 0.000377

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0102.D
Sample Name: gc119p176 #I5 ENV(1=0,4=350)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   1
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 24-May-11, 20:17:52                    Inj :   2
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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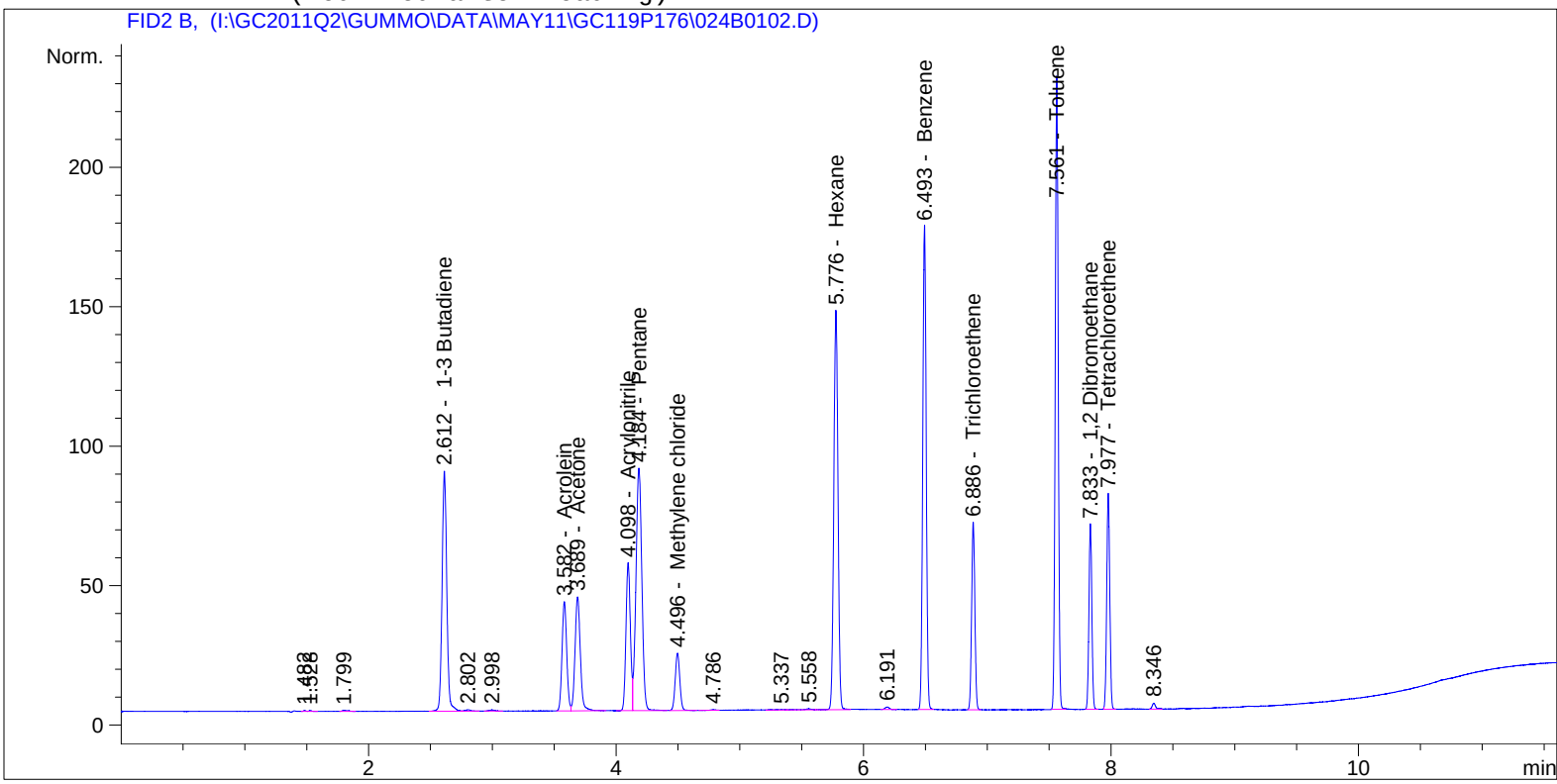


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.612 BV      227.49275    1.20826  274.86990    1-3 Butadiene
  3.453           -            -         -         Acetonitrile
  3.582 BV      103.01763    2.66217  274.25071    Acrolein
  3.689 VB      120.90163    2.20864  267.02843    Acetone
  4.098 BV      131.69485    2.01757  265.70373    Acrylonitrile
  4.184 VB      287.39124 9.54533e-1  274.32428    Pentane
  4.496 BB       52.92663    5.09546  269.68567    Methylene chloride
  5.776 VV      338.63821 8.07638e-1  273.49699    Hexane
  6.493 BB      337.74820 8.09305e-1  273.34132    Benzene
  6.886 BB      122.42929    2.15669  264.04243    Trichloroethene
  7.561 BB      384.49036 6.83627e-1  262.84805    Toluene
  7.833 BB      109.98495    2.35147  258.62646    1,2 Dibromoethane
```

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0102.D
Sample Name: gc119p176 #I5 ENV(1=0,4=350)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.977	BB	133.55983	1.96427	262.34713		Tetrachloroethene

Totals : 3220.56510

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0103.D
Sample Name: gc119p176 #I5 ENV(1=0,4=350)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   1
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 24-May-11, 20:36:55                    Inj :   3
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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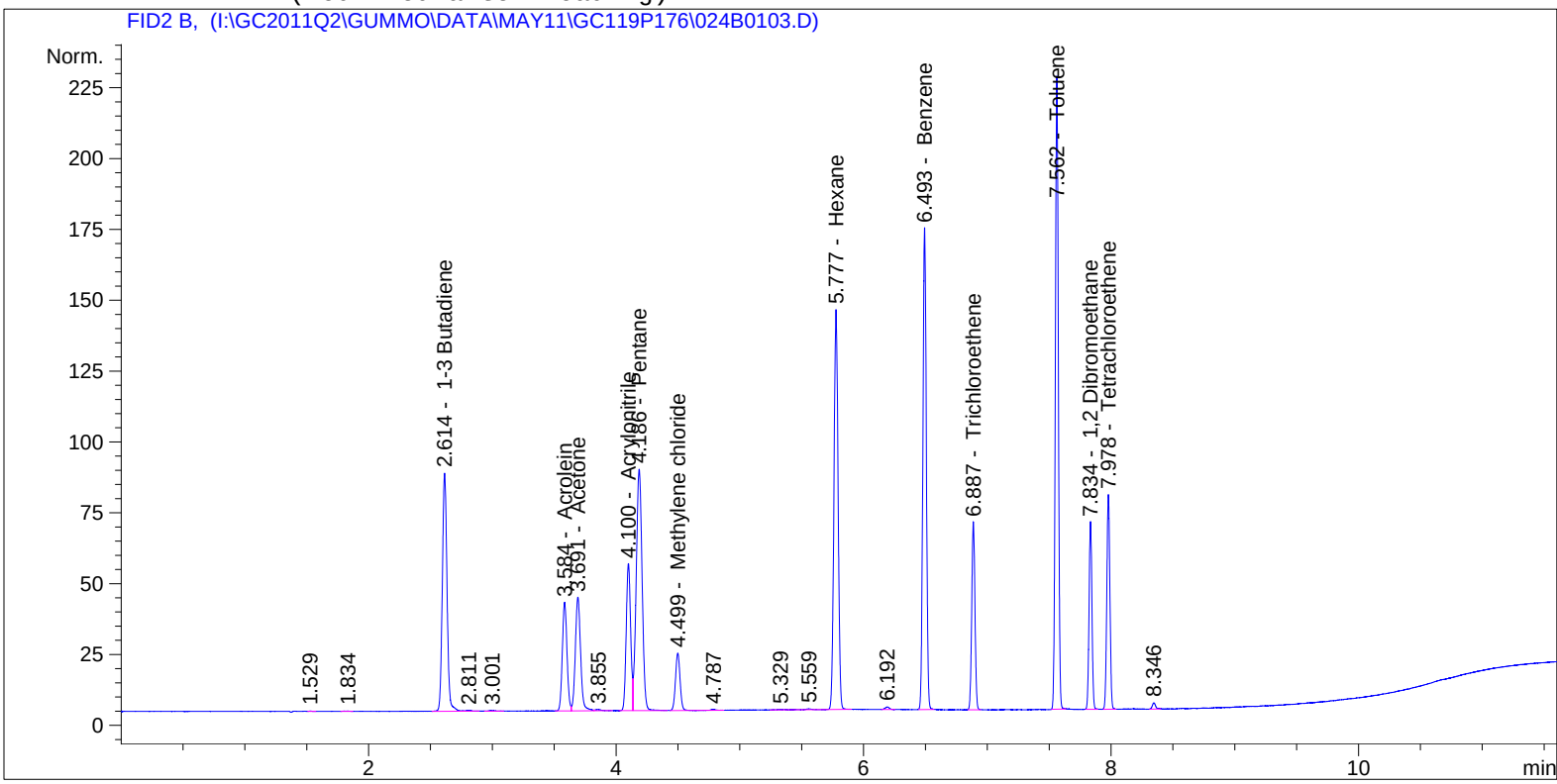


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.614 VV      220.73529    1.20833  266.72045    1-3 Butadiene
  3.453           -            -          -        Acetonitrile
  3.584 BV      100.61214    2.66229  267.85907    Acrolein
  3.691 VV      118.07658    2.20885  260.81375    Acetone
  4.100 BV      129.14693    2.01774  260.58554    Acrylonitrile
  4.186 VB      281.57263 9.54558e-1  268.77747    Pentane
  4.499 BB       51.84889    5.09566  264.20435    Methylene chloride
  5.777 VB      330.75290 8.07671e-1  267.13961    Hexane
  6.493 BB      331.53180 8.09332e-1  268.31918    Benzene
  6.887 BB      120.18494    2.15690  259.22737    Trichloroethene
  7.562 BB      378.41660 6.83684e-1  258.71728    Toluene
  7.834 BB      108.91993    2.35155  256.13103    1,2 Dibromoethane
```

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0103.D
Sample Name: gc119p176 #I5 ENV(1=0,4=350)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.978	BB	131.82426	1.96437	258.95179		Tetrachloroethene

Totals : 3157.44688

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0104.D
Sample Name: gc119p176 #I5 ENV(1=0,4=350)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 20:56:10                Inj :   4
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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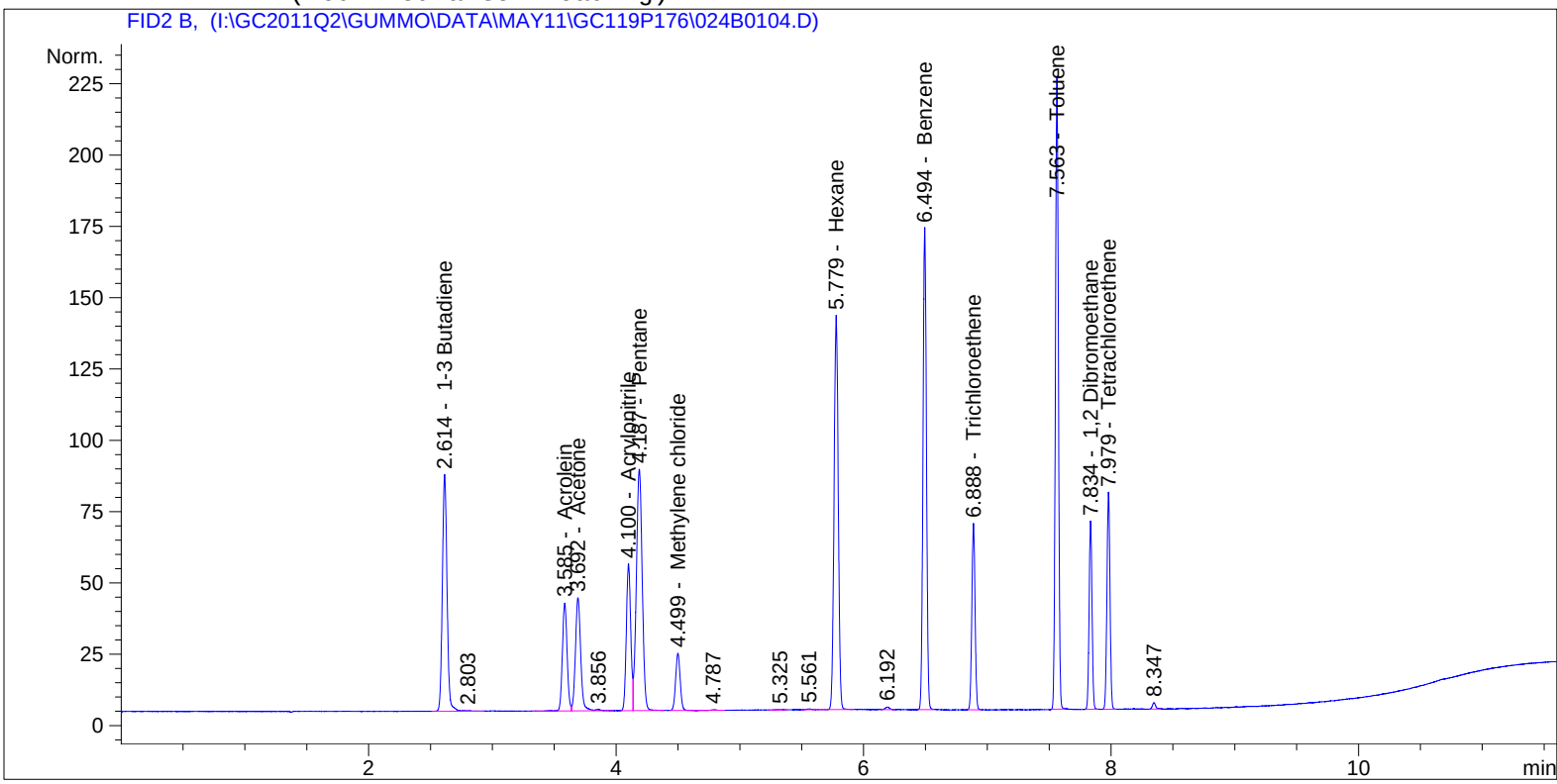


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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.614 VV      218.22620    1.20835  263.69450    1-3 Butadiene
  3.453            -            -          -       Acetonitrile
  3.585 VV       99.59673    2.66235  265.16104    Acrolein
  3.692 VV      116.72022    2.20896  257.82999    Acetone
  4.100 BV      127.99286    2.01783  258.26729    Acrylonitrile
  4.187 VB      278.38052 9.54573e-1  265.73447    Pentane
  4.499 BV       51.11282    5.09580  260.46072    Methylene chloride
  5.779 VB      327.66815 8.07685e-1  264.65259    Hexane
  6.494 BB      328.73965 8.09344e-1  266.06344    Benzene
  6.888 BB      119.30291    2.15699  257.33506    Trichloroethene
  7.563 BB      376.45541 6.83702e-1  257.38348    Toluene
  7.834 BB      108.98161    2.35155  256.27555    1,2 Dibromoethane
```

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0104.D
Sample Name: gc119p176 #I5 ENV(1=0,4=350)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.979	BB	131.31793	1.96440	257.96124		Tetrachloroethene

Totals : 3130.81935

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0201.D
Sample Name: gc119p176 #I4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 21:15:26                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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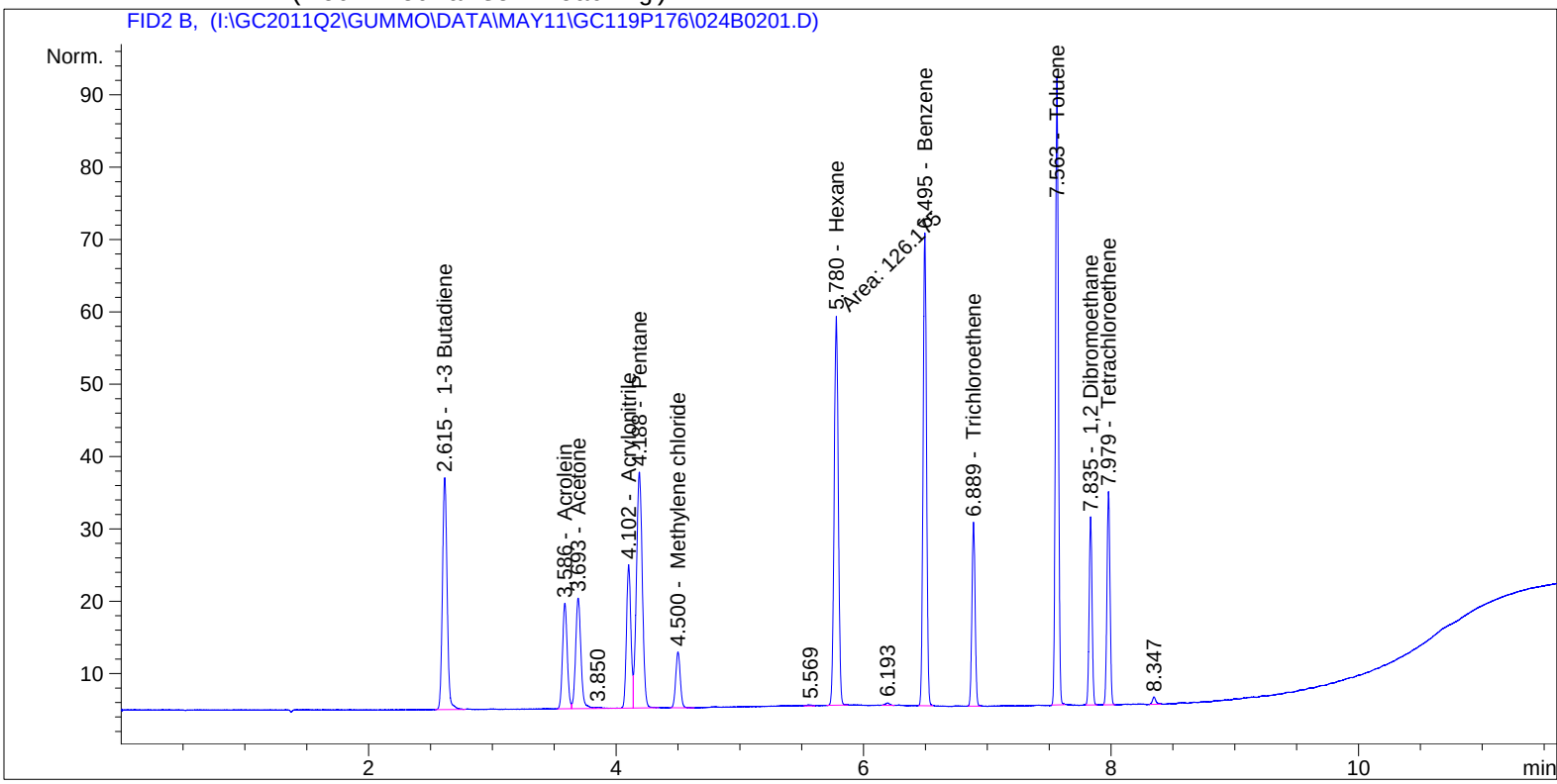


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.615	BB	84.04774	1.21212	101.87617		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.586	BV	38.49335	2.67067	102.80313		Acrolein
3.693	VV	45.40085	2.22328	100.93874		Acetone
4.102	VV	49.55680	2.03217	100.70778		Acrylonitrile
4.188	VB	107.48136	9.56614e-1	102.81814		Pentane
4.500	BB	19.76759	5.11142	101.04051		Methylene chloride
5.780	MM	126.17490	8.10006e-1	102.20242		Hexane
6.495	BB	127.17520	8.11655e-1	103.22242		Benzene
6.889	BB	46.17884	2.17533	100.45400		Trichloroethene
7.563	BB	146.17778	6.89377e-1	100.77162		Toluene
7.835	BB	42.82140	2.36465	101.25755		1,2 Dibromoethane

Manual Int. "II" (KAM)

EM-BTRF-000794

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0201.D
Sample Name: gc119p176 #I4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.979	BB	51.18778	1.97704	101.20007		Tetrachloroethene

Totals : 1219.29255

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0202.D
Sample Name: gc119p176 #I4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 21:34:35                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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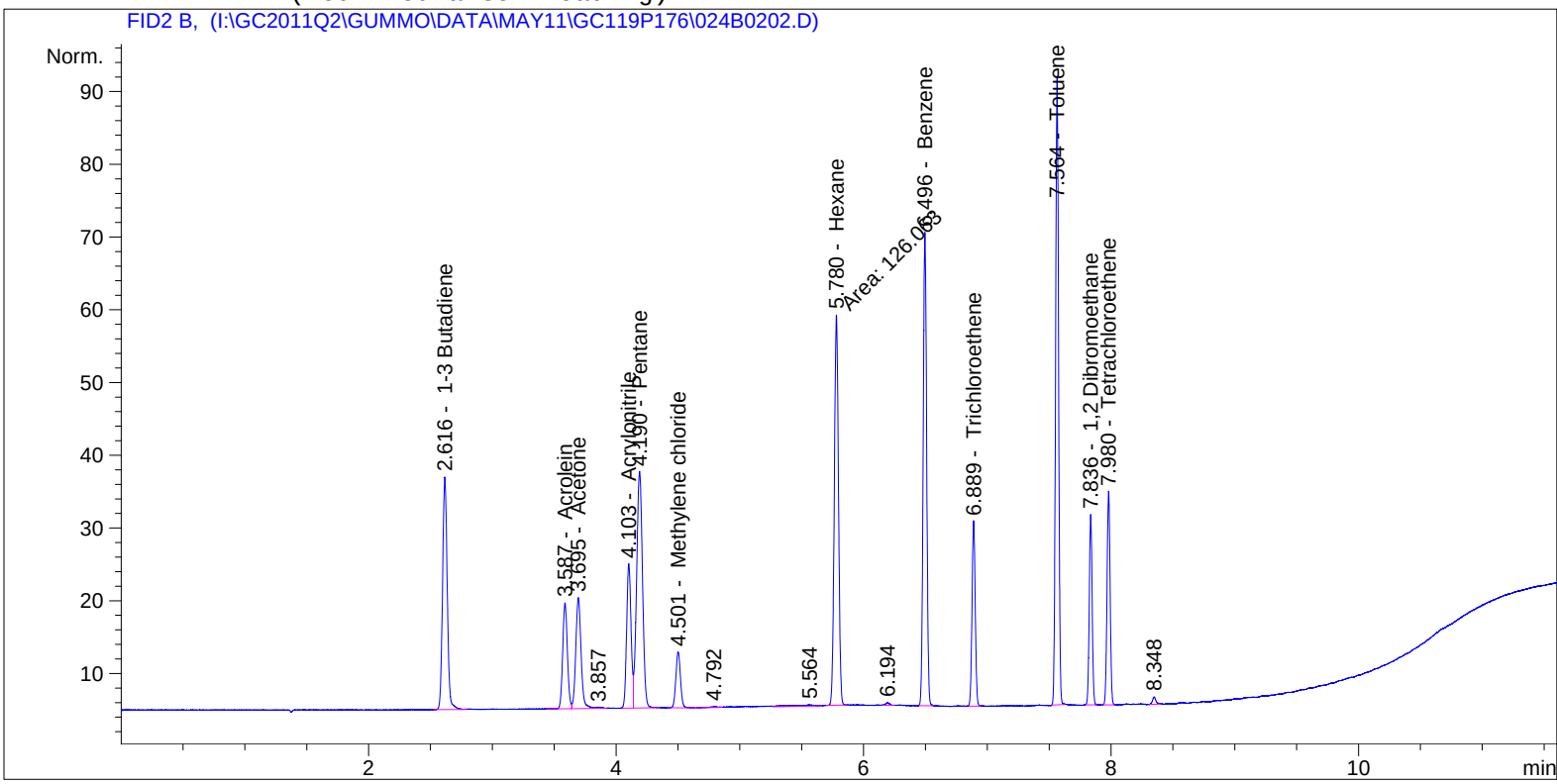


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.616 BV       83.91992    1.21213  101.72201    1-3 Butadiene
  3.453            -           -          -        Acetonitrile
  3.587 BV       38.33099    2.67073  102.37174    Acrolein
  3.695 VV       45.20304    2.22338  100.50358    Acetone
  4.103 BV       49.38340    2.03225  100.35945    Acrylonitrile
  4.190 VB      107.37476 9.56617e-1  102.71652    Pentane
  4.501 BB       19.81387    5.11136  101.27590    Methylene chloride
  5.780 MM      126.06277 8.10009e-1  102.11202    Hexane
  6.496 BB      126.96530 8.11661e-1  103.05284    Benzene
  6.889 BB       46.08913    2.17538  100.26154    Trichloroethene
  7.564 BB      146.07574 6.89384e-1  100.70223    Toluene
  7.836 BB       42.94029    2.36459  101.53612    1,2 Dibromoethane
```

Manual Int. "II" (KAM)

EM-BTRF-000796

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0202.D
Sample Name: gc119p176 #I4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	51.15772	1.97705	101.14125		Tetrachloroethene

Totals : 1217.75521

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0203.D
Sample Name: gc119p176 #I4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 21:54:35                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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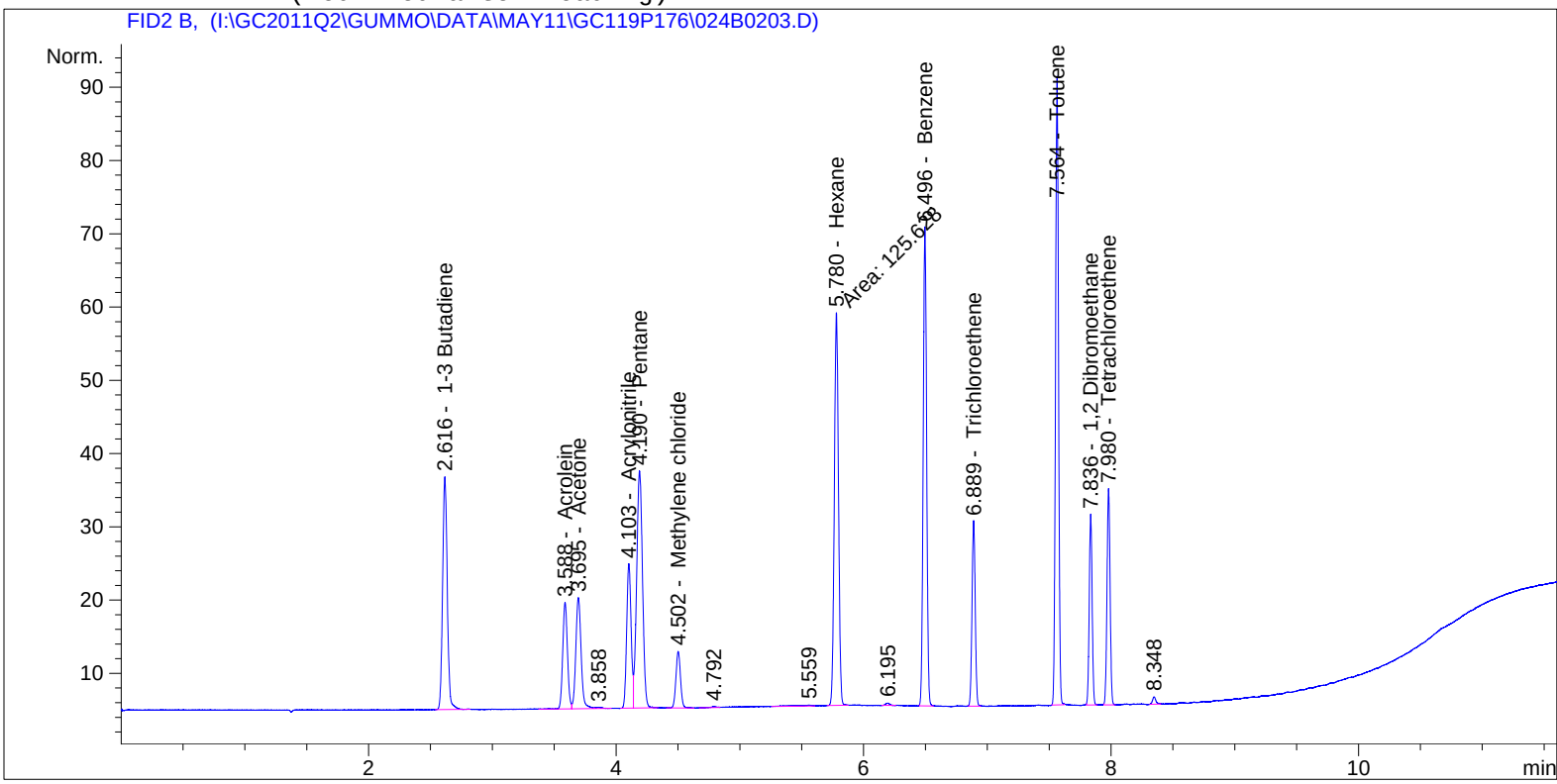


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.616	BB	83.45629	1.21217	101.16288		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.588	BV	38.27164	2.67075	102.21402		Acrolein
3.695	VV	45.02244	2.22348	100.10630		Acetone
4.103	BV	49.19806	2.03234	99.98715		Acrylonitrile
4.190	VB	106.76827	9.56636e-1	102.13836		Pentane
4.502	BB	19.78378	5.11140	101.12287		Methylene chloride
5.780	MM	125.62802	8.10022e-1	101.76151		Hexane
6.496	BB	126.48488	8.11676e-1	102.66472		Benzene
6.889	BB	45.90971	2.17550	99.87660		Trichloroethene
7.564	BB	145.65034	6.89411e-1	100.41291		Toluene
7.836	BB	42.93444	2.36459	101.52240		1,2 Dibromoethane

Manual Int. "II" (KAM)

EM-BTRF-000798

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0203.D
Sample Name: gc119p176 #I4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	51.05406	1.97709	100.93846		Tetrachloroethene

Totals : 1213.90818

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

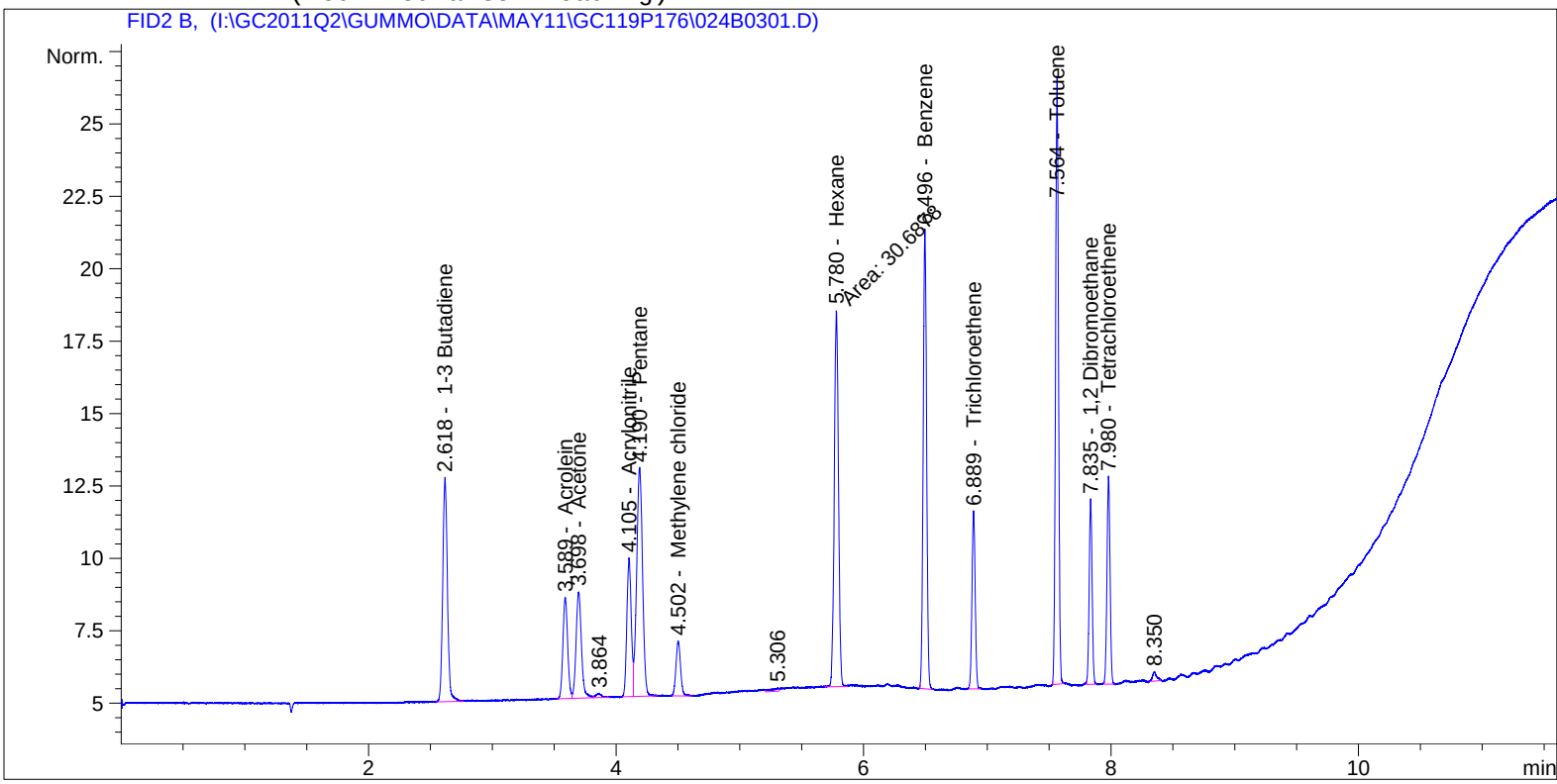
==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0301.D
Sample Name: gc119p176 #I3 ENV(1=900,4=100)

Acq. Operator	: stg	Seq. Line	: 3
Acq. Instrument	: Gummo online	Location	: Vial 24
Injection Date	: 24-May-11, 22:15:33	Inj	: 1
		Inj Volume	: External

Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:20:51 PM by KAM
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Monday, June 06, 2011 10:20:51 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.618	BB	20.39541	1.23125	25.11188		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.589	BV	9.31069	2.71321	25.26183		Acrolein
3.698	VV	11.05628	2.29609	25.38617		Acetone
4.105	BV	11.94638	2.10585	25.15734		Acrylonitrile
4.190	VB	26.11541	9.66972e-1	25.25286		Pentane
4.502	BB	4.90854	5.18854	25.46815		Methylene chloride
5.780	MM	30.68785	8.21751e-1	25.21778		Hexane
6.496	BB	30.70170	8.23501e-1	25.28287		Benzene
6.889	BB	11.10415	2.26982	25.20442		Trichloroethene
7.564	BB	35.18100	7.18646e-1	25.28269		Toluene
7.835	BB	10.57866	2.43042	25.71054		1,2 Dibromoethane

Manual Int. "II" (KAM)

EM-BTRF-000800

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0301.D
Sample Name: gc119p176 #I3 ENV(1=900,4=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	12.47315	2.04130	25.46140		Tetrachloroethene

Totals : 303.79793

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0302.D
Sample Name: gc119p176 #I3 ENV(1=900,4=100)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 22:36:34                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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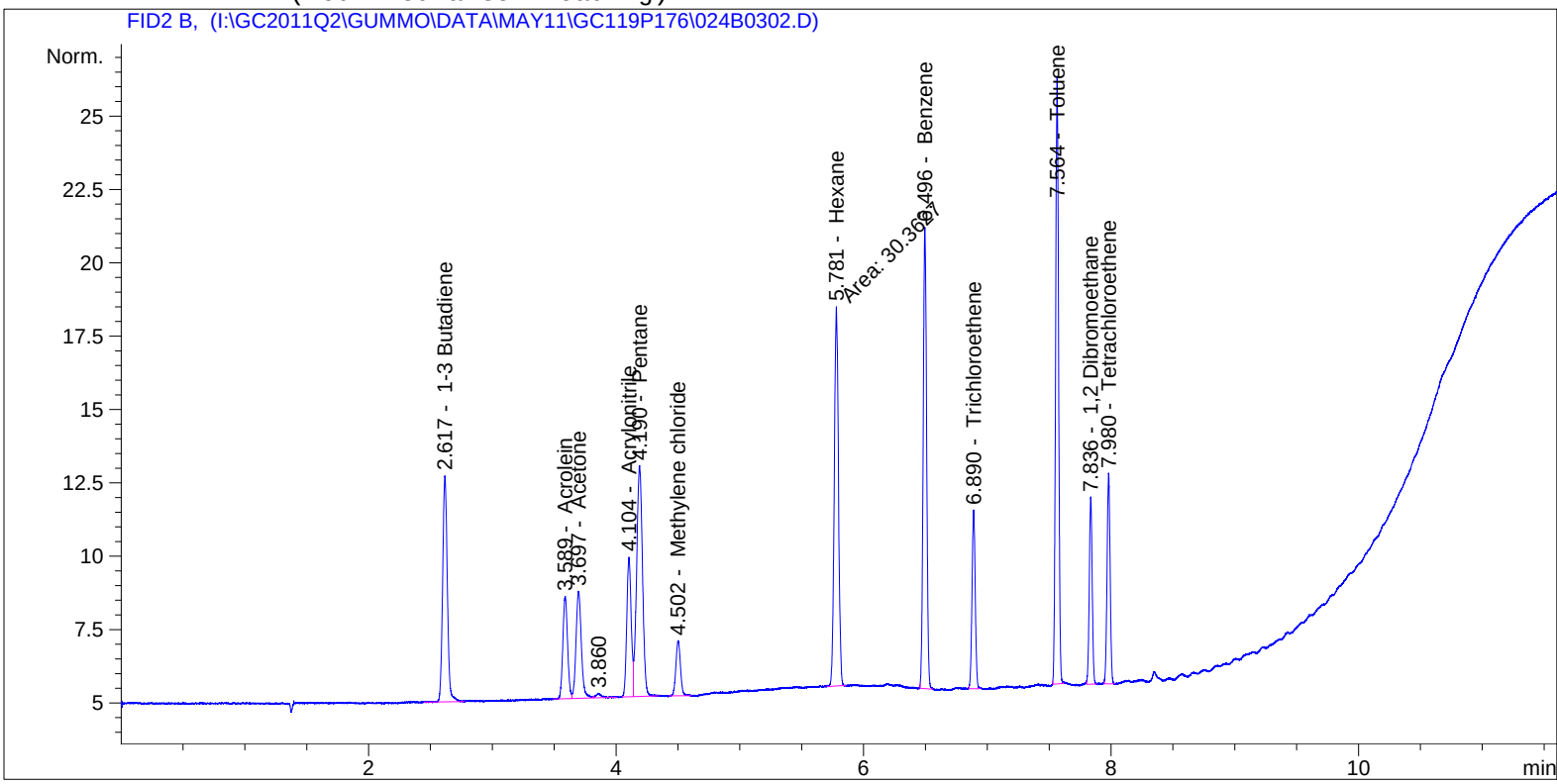


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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.617 BB       20.29779    1.23137   24.99414    1-3 Butadiene
  3.453            -           -         -         Acetonitrile
  3.589 BV        9.25119    2.71357   25.10375    Acrolein
  3.697 VB       10.96829    2.29686   25.19259    Acetone
  4.104 BV       11.87855    2.10641   25.02108    Acrylonitrile
  4.190 VB       26.05370 9.67004e-1   25.19403    Pentane
  4.502 BB        4.84770    5.18983   25.15870    Methylene chloride
  5.781 MM       30.36272 8.21917e-1   24.95565    Hexane
  6.496 BB       30.55249 8.23577e-1   25.16232    Benzene
  6.890 BB       11.06860    2.27022   25.12816    Trichloroethene
  7.564 BB       35.03233 7.18810e-1   25.18158    Toluene
  7.836 BB       10.48280    2.43122   25.48594    1,2 Dibromoethane
```

Manual Int. "II" (KAM)

EM-BTRF-000802

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0302.D
Sample Name: gc119p176 #I3 ENV(1=900,4=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	12.41059	2.04172	25.33901		Tetrachloroethene

Totals : 301.91697

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0303.D
Sample Name: gc119p176 #I3 ENV(1=900,4=100)

```
================================================================
Acq. Operator   : stg                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 22:57:22                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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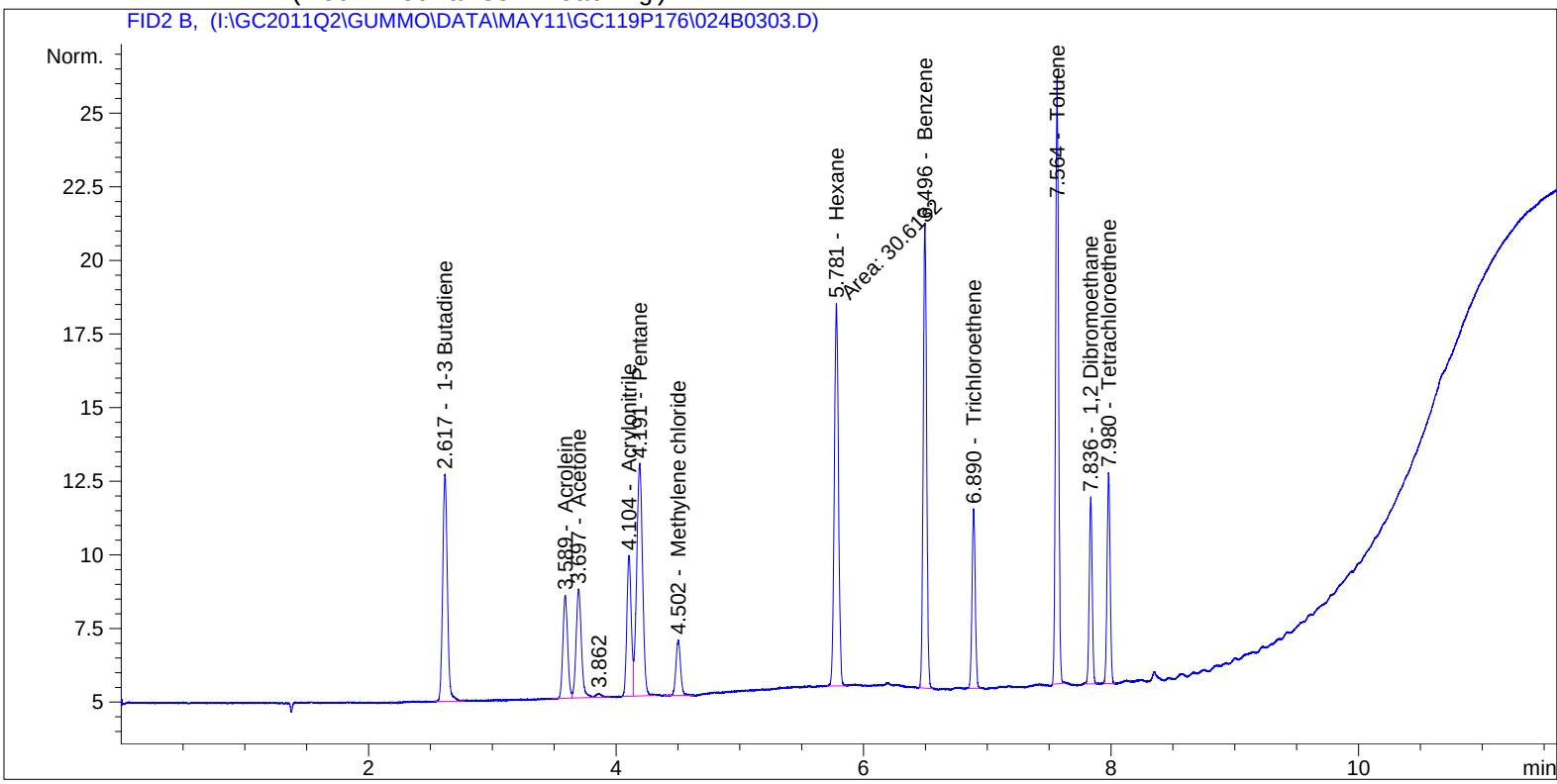


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================================================================
                    External Standard Report
================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.617 BB       20.35183    1.23131   25.05932    1-3 Butadiene
  3.453            -           -         -         Acetonitrile
  3.589 BV        9.27220    2.71344   25.15956    Acrolein
  3.697 VV       10.95870    2.29694   25.17151    Acetone
  4.104 BV       11.90077    2.10623   25.06571    Acrylonitrile
  4.191 VB       26.02032 9.67022e-1   25.16221    Pentane
  4.502 BB        4.85894    5.18959   25.21590    Methylene chloride
  5.781 MM       30.61320 8.21789e-1   25.15759    Hexane
  6.496 BB       30.63826 8.23533e-1   25.23161    Benzene
  6.890 BB       11.08076    2.27008   25.15426    Trichloroethene
  7.564 BB       35.12492 7.18708e-1   25.24456    Toluene
  7.836 BB       10.47728    2.43126   25.47302    1,2 Dibromoethane
```

Manual Int. "II" (KAM)

EM-BTRF-000804

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0303.D
Sample Name: gc119p176 #I3 ENV(1=900,4=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	12.40187	2.04178	25.32196		Tetrachloroethene

Totals : 302.41720

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0401.D
Sample Name: gc119p176 #I2 ENV(1=960,4=40)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 23:18:14                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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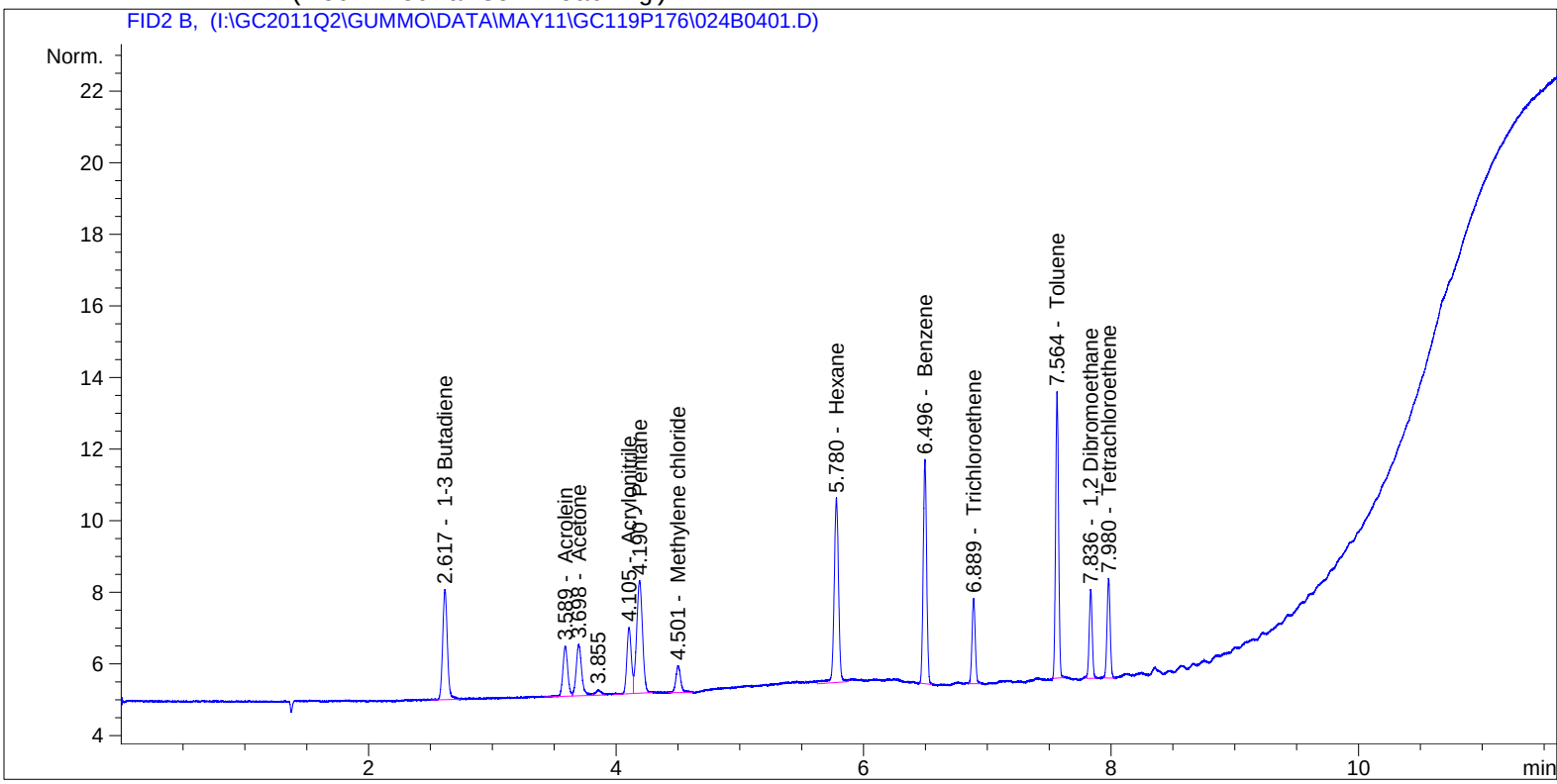


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.617	BV	8.11377	1.26948	10.30029		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.589	BV	3.79931	2.79460	10.61754		Acrolein
3.698	VB	4.41069	2.44110	10.76692		Acetone
4.105	VV	4.71410	2.25481	10.62938		Acrylonitrile
4.190	VB	10.34579	9.87827e-1	10.21985		Pentane
4.501	BB	2.01055	5.33641	10.72910		Methylene chloride
5.780	VV	12.92357	8.43085e-1	10.89566		Hexane
6.496	BB	12.05374	8.47658e-1	10.21745		Benzene
6.889	BB	4.32283	2.46499	10.65573		Trichloroethene
7.564	BB	13.51208	7.80461e-1	10.54566		Toluene
7.836	BB	4.14835	2.56581	10.64388		1,2 Dibromoethane

EM-BTRF-000806

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0401.D
Sample Name: gc119p176 #I2 ENV(1=960,4=40)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	4.91049	2.17215	10.66632		Tetrachloroethene

Totals : 126.88780

1 Warnings or Errors :

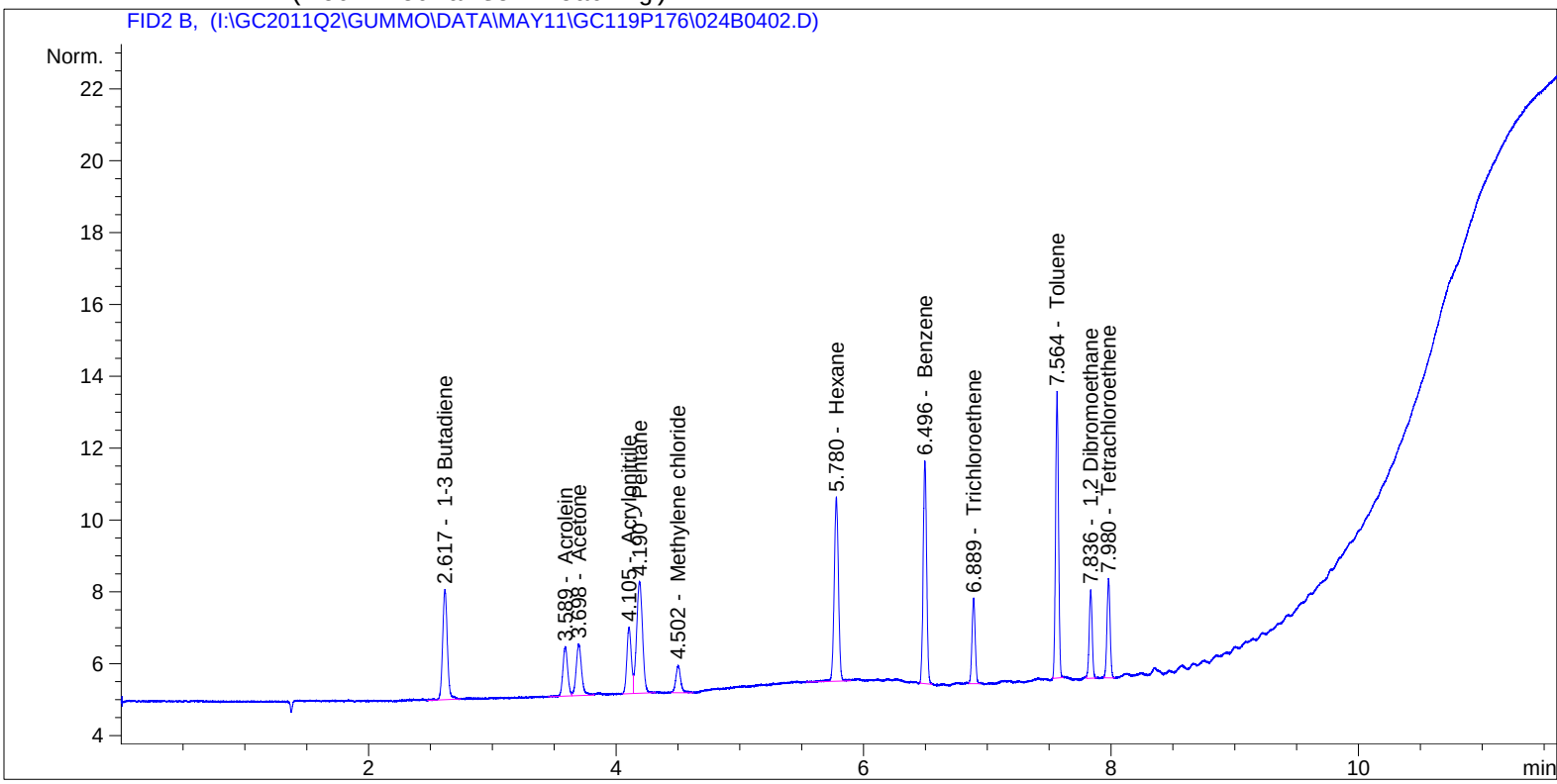
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0402.D
Sample Name: gc119p176 #I2 ENV(1=960,4=40)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 23:39:05                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```

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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.617	VB	8.14729	1.26922	10.34072		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.589	BV	3.72422	2.79737	10.41801		Acrolein
3.698	VB	4.38102	2.44273	10.70166		Acetone
4.105	BV	4.64849	2.25828	10.49760		Acrylonitrile
4.190	VB	10.35551	9.87795e-1	10.22911		Pentane
4.502	BV	2.07233	5.32894	11.04334		Methylene chloride
5.780	BB	12.34091	8.44825e-1	10.42590		Hexane
6.496	BB	12.03899	8.47707e-1	10.20553		Benzene
6.889	BB	4.28205	2.46803	10.56824		Trichloroethene
7.564	BB	13.38906	7.81383e-1	10.46199		Toluene
7.836	BB	4.13674	2.56644	10.61669		1,2 Dibromoethane

EM-BTRF-000808

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0402.D
Sample Name: gc119p176 #I2 ENV(1=960,4=40)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	4.83662	2.17545	10.52181		Tetrachloroethene

Totals : 126.03060

1 Warnings or Errors :

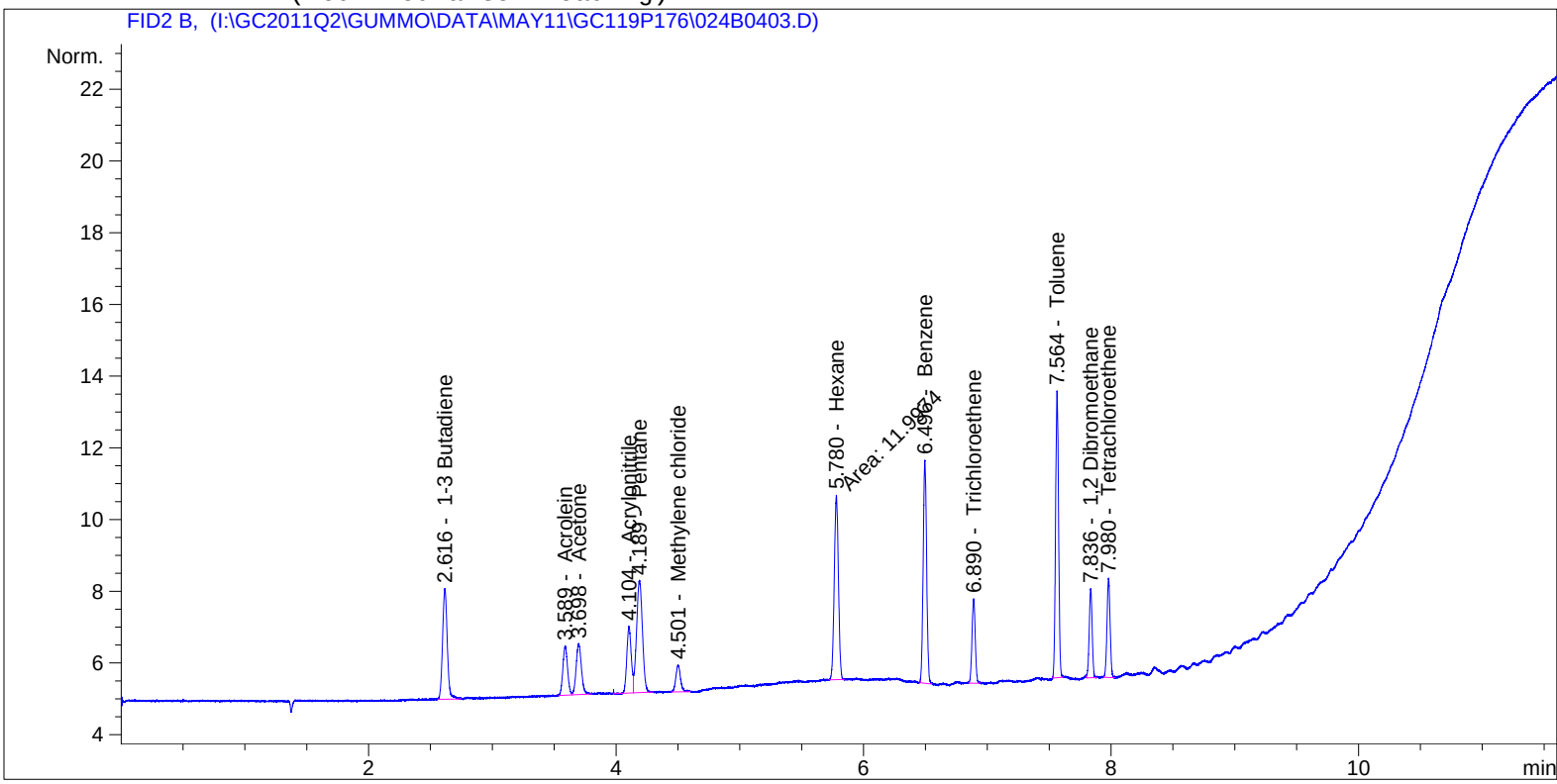
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0403.D
Sample Name: gc119p176 #I2 ENV(1=960,4=40)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 23:59:54                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```

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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.616 BB        8.15296    1.26918   10.34755    1-3 Butadiene
  3.453            -          -         -         Acetonitrile
  3.589 BV        3.61142    2.80175   10.11830    Acrolein
  3.698 VB        4.22813    2.45151   10.36533    Acetone
  4.104 BV        4.62080    2.25978   10.44197    Acrylonitrile
  4.189 VB       10.34111 9.87843e-1   10.21539    Pentane
  4.501 BB        1.98741    5.33933   10.61145    Methylene chloride
  5.780 MM       11.99737 8.45930e-1   10.14893    Hexane
  6.496 BB       12.09490 8.47523e-1   10.25070    Benzene
  6.890 BB        4.28737    2.46763   10.57964    Trichloroethene
  7.564 BB       13.50928 7.80482e-1   10.54375    Toluene
  7.836 BB        4.13033    2.56678   10.60167    1,2 Dibromoethane
```

Manual Int. "II" (KAM)

EM-BTRF-000810

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0403.D
Sample Name: gc119p176 #I2 ENV(1=960,4=40)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	4.86705	2.17408	10.58135		Tetrachloroethene

Totals : 124.80603

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0501.D
Sample Name: gc119p176 #I1 ENV(1=1010,4=20)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   5
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 25-May-11, 00:20:39                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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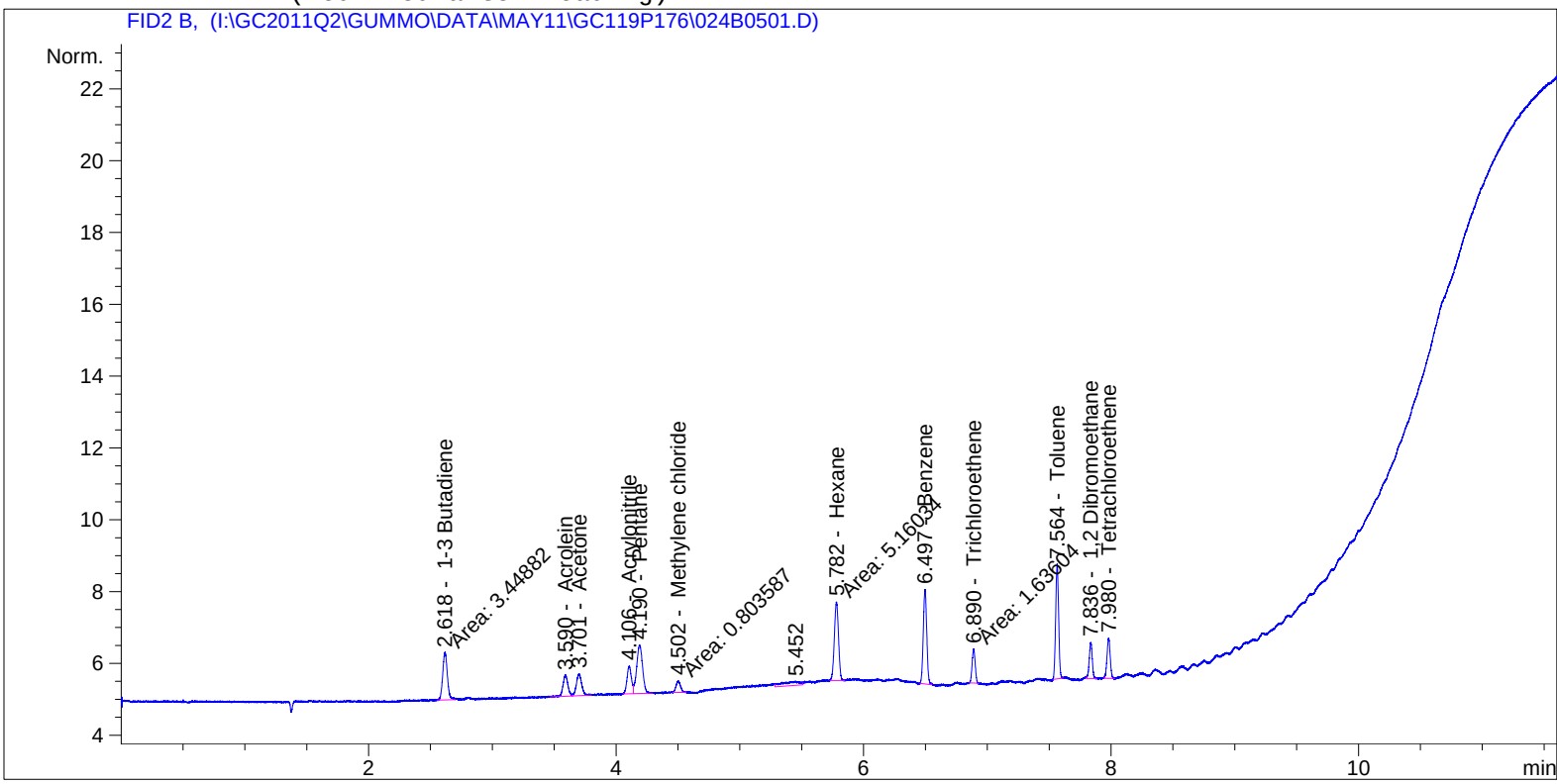


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.618 MM        3.44882    1.35536    4.67440    1-3 Butadiene
  3.453             -          -          -        Acetonitrile
  3.590 BV        1.61224    2.98112    4.80626    Acrolein
  3.701 VB        1.79594    2.79235    5.01489    Acetone
  4.106 BV        1.91363    2.61488    5.00391    Acrylonitrile
  4.190 VB        4.45763    1.03345    4.60674    Pentane
  4.502 MM     8.03587e-1    5.71260    4.59057    Methylene chloride
  5.782 MM        5.16034 8.98527e-1    4.63670    Hexane
  6.497 BB        5.10556 9.01784e-1    4.60411    Benzene
  6.890 MM        1.63604    2.97111    4.86086    Trichloroethene
  7.564 BB        5.34037 9.34031e-1    4.98808    Toluene
  7.836 BB        1.73366    2.87554    4.98521    1,2 Dibromoethane
```

Manual Int. "II" (KAM)

EM-BTRF-000812

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0501.D
Sample Name: gc119p176 #I1 ENV(1=1010,4=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	2.00471	2.48385	4.97940		Tetrachloroethene

Totals : 57.75113

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0502.D
Sample Name: gc119p176 #I1 ENV(1=1010,4=20)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   5
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 25-May-11, 00:41:28                   Inj :   2
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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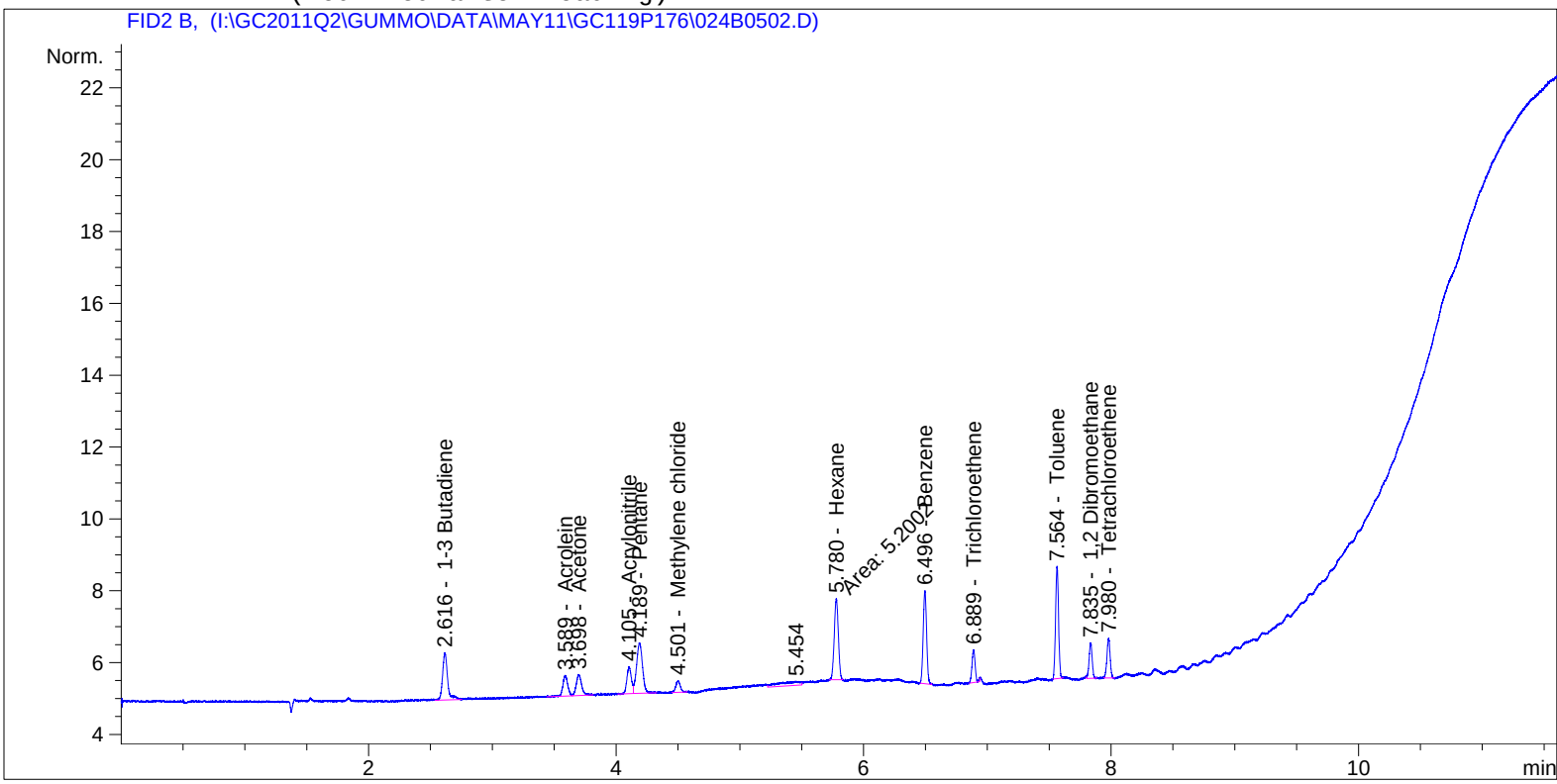


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.616 VB        3.74505    1.34355    5.03165    1-3 Butadiene
  3.453            -          -          -         Acetonitrile
  3.589 BV        1.55819    2.99235    4.66266    Acrolein
  3.698 VB        1.76517    2.79611    4.93560    Acetone
  4.105 BV        1.87865    2.62011    4.92227    Acrylonitrile
  4.189 VB        4.69095    1.02946    4.82915    Pentane
  4.501 BB     8.07582e-1    5.70950    4.61089    Methylene chloride
  5.780 MM        5.20020 8.97819e-1    4.66884    Hexane
  6.496 BB        4.98430 9.04069e-1    4.50615    Benzene
  6.889 BB        1.64132    2.97111    4.87654    Trichloroethene
  7.564 BB        5.21998 9.35231e-1    4.88188    Toluene
  7.835 BB        1.69868    2.87554    4.88461    1,2 Dibromoethane
```

Manual Int. "II" (KAM)

EM-BTRF-000814

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0502.D
Sample Name: gc119p176 #I1 ENV(1=1010,4=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.980	BB	1.96073	2.48385	4.87016		Tetrachloroethene

Totals : 57.68040

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0503.D
Sample Name: gc119p176 #I1 ENV(1=1010,4=20)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   5
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 25-May-11, 01:02:21                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
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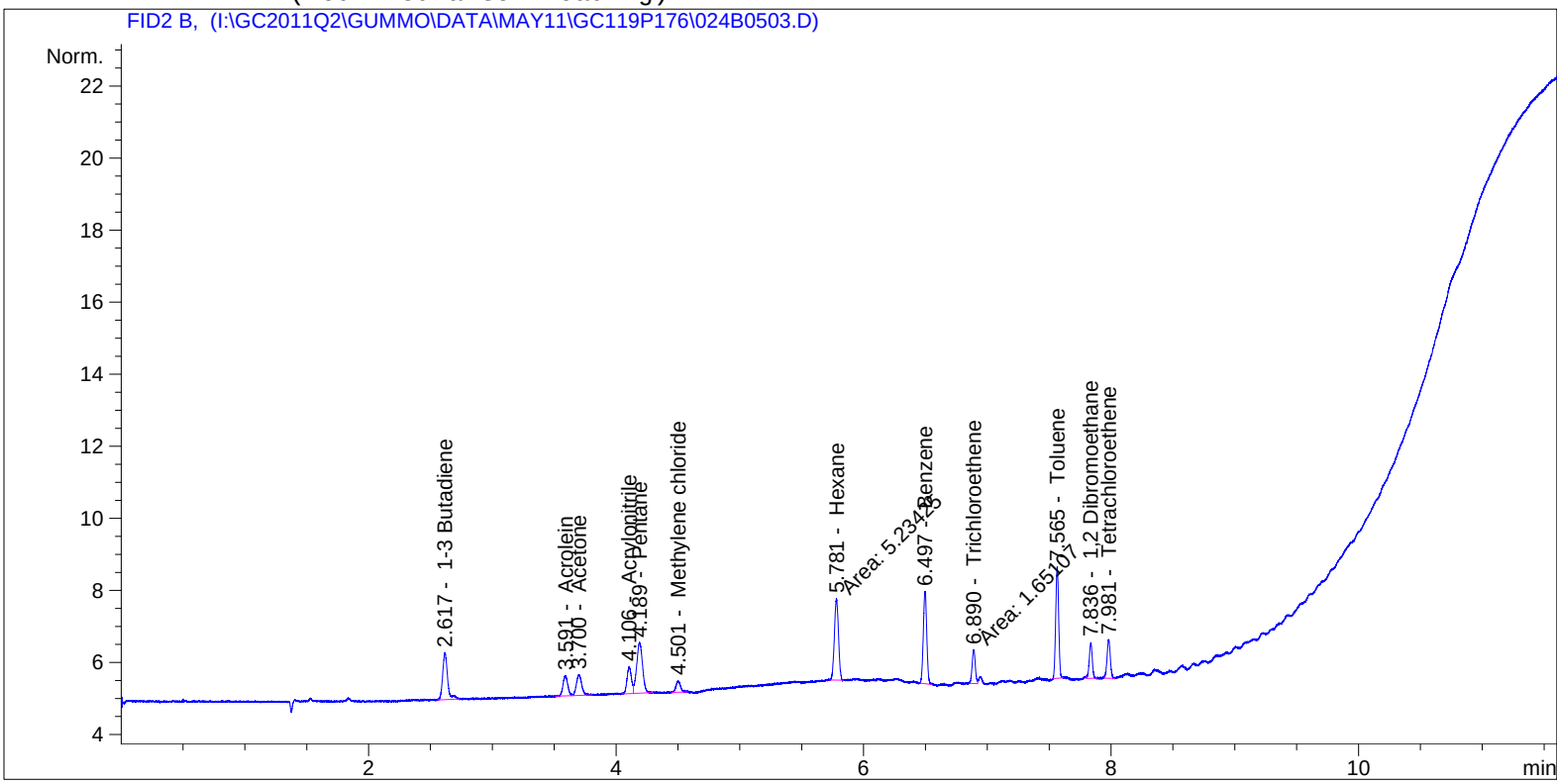


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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.617	BB	3.59091	1.34945	4.84575		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591	BV	1.49471	3.00659	4.49398		Acrolein
3.700	VB	1.71426	2.79611	4.79327		Acetone
4.106	BV	1.83318	2.62011	4.80312		Acrylonitrile
4.189	VB	4.63356	1.03041	4.77445		Pentane
4.501	BB	8.09604e-1	5.70794	4.62117		Methylene chloride
5.781	MM	5.23425	8.97223e-1	4.69629		Hexane
6.497	BB	4.97415	9.04265e-1	4.49795		Benzene
6.890	MM	1.65107	2.97111	4.90551		Trichloroethene
7.565	BB	5.17019	9.35231e-1	4.83532		Toluene
7.836	BB	1.68187	2.87554	4.83629		1,2 Dibromoethane

Manual Int. "II" (KAM)

EM-BTRF-000816

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0503.D
Sample Name: gc119p176 #I1 ENV(1=1010,4=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981	BB	1.97296	2.48385	4.90054		Tetrachloroethene

Totals : 57.00364

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0604.D
Sample Name: gc119p176 #I0 ENV(1=1980,4=20)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 25-May-11, 02:25:59                Inj :   4
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 9:40:26 AM by KAM
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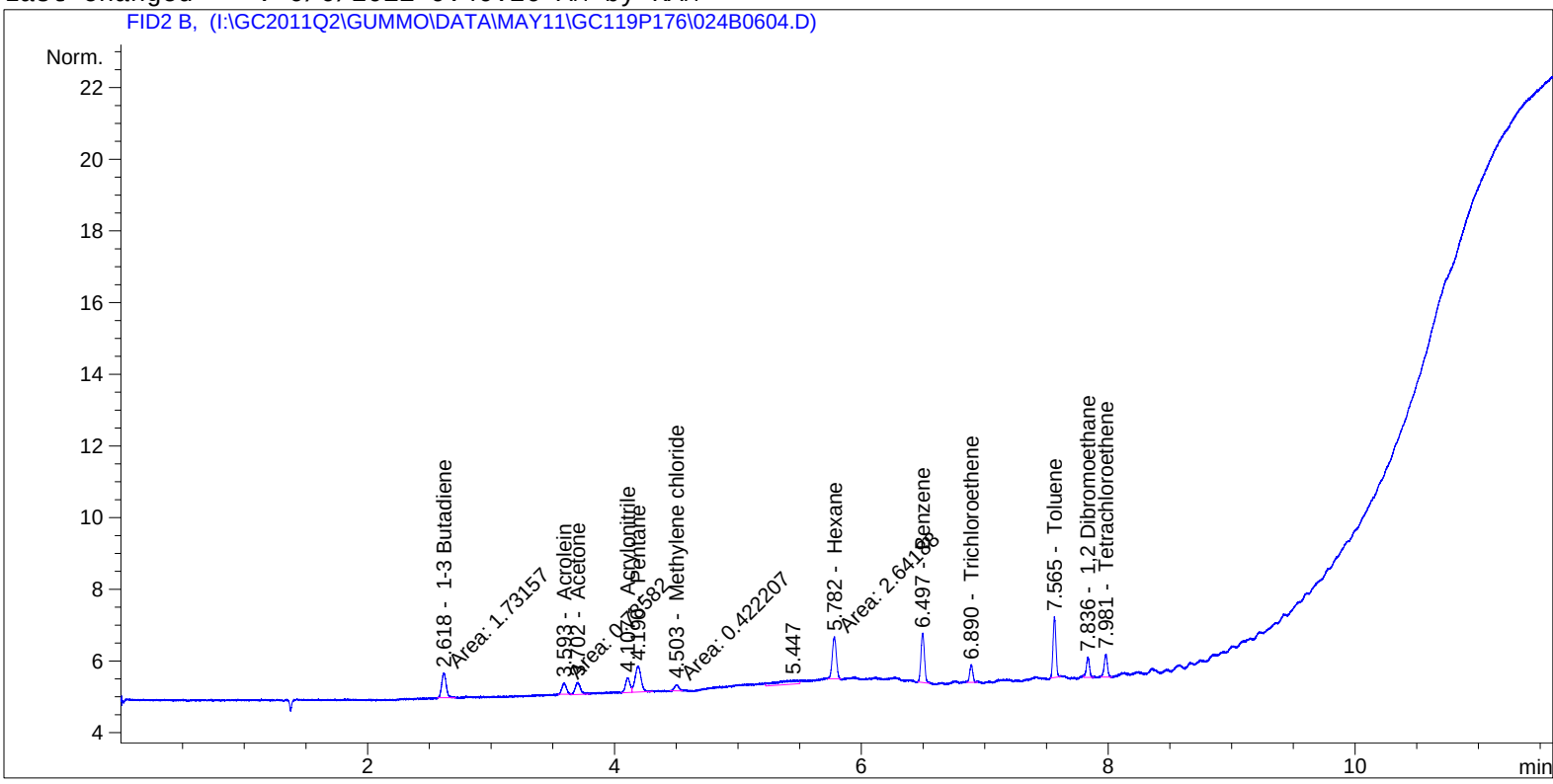


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 9:38:24 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.618	MM	1.73157	1.43703	2.48831		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.593	MM	7.85820e-1	3.32187	2.61039		Acrolein
3.702	VB	1.00714	2.79611	2.81608		Acetone
4.107	BV	1.03781	2.62011	2.71917		Acrylonitrile
4.190	VB	2.40363	1.10195	2.64868		Pentane
4.503	MM	4.22207e-1	6.27865	2.65089		Methylene chloride
5.782	MM	2.64188	9.85801e-1	2.60437		Hexane
6.497	BB	2.70077	9.85393e-1	2.66131		Benzene
6.890	BB	8.60321e-1	2.97111	2.55611		Trichloroethene
7.565	BB	2.80850	9.35231e-1	2.62660		Toluene
7.836	BB	1.00491	2.87554	2.88967		1,2 Dibromoethane
7.981	BB	1.16463	2.48385	2.89276		Tetrachloroethene

Manual Int. “II” (KAM)

EM-BTRF-000818

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0604.D
Sample Name: gc119p176 #I0 ENV(1=1980,4=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				32.16434		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0605.D
Sample Name: gc119p176 #I0 ENV(1=1980,4=20)

```
==================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 25-May-11, 02:46:50                Inj :   5
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 9:40:26 AM by KAM
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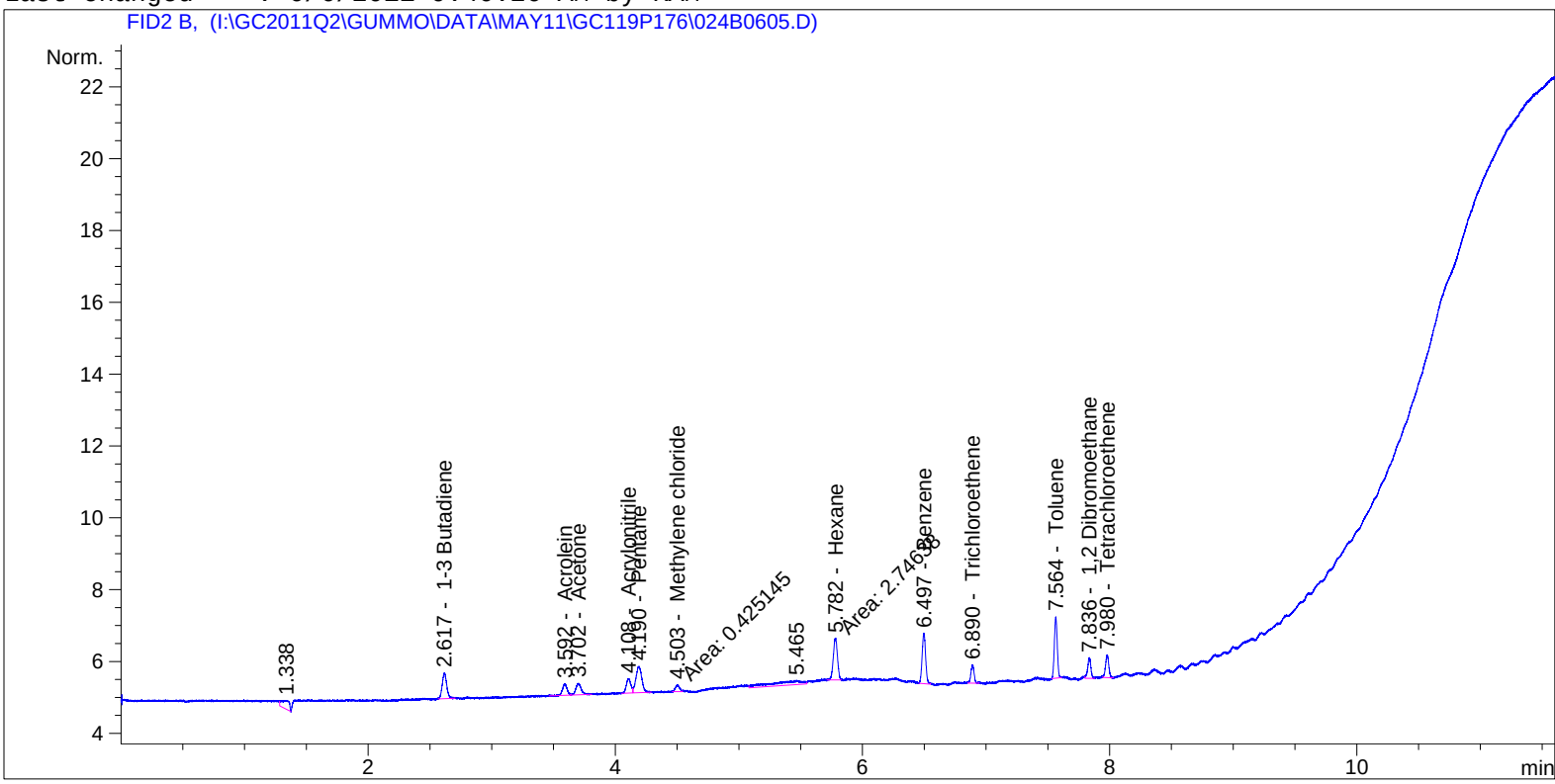


```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 9:38:24 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.617	BB	1.78973	1.43687	2.57160		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.592	BV	8.07510e-1	3.30401	2.66802		Acrolein
3.702	VB	9.48440e-1	2.79611	2.65194		Acetone
4.108	BV	1.02979	2.62011	2.69817		Acrylonitrile
4.190	VB	2.41214	1.10142	2.65679		Pentane
4.503	MM	4.25145e-1	6.27041	2.66584		Methylene chloride
5.782	MM	2.74638	9.78729e-1	2.68796		Hexane
6.497	BB	2.76970	9.80975e-1	2.71701		Benzene
6.890	BB	9.06135e-1	2.97111	2.69222		Trichloroethene
7.564	BB	2.80065	9.35231e-1	2.61925		Toluene
7.836	BB	1.02783	2.87554	2.95558		1,2 Dibromoethane
7.980	BB	1.13788	2.48385	2.82632		Tetrachloroethene

Manual Int. "II" (KAM)

EM-BTRF-000820

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0605.D
Sample Name: gc119p176 #I0 ENV(1=1980,4=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				32.41069		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0606.D
Sample Name: gc119p176 #I0 ENV(1=1980,4=20)

```
================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 25-May-11, 03:07:44                Inj :   6
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 9:40:26 AM by KAM
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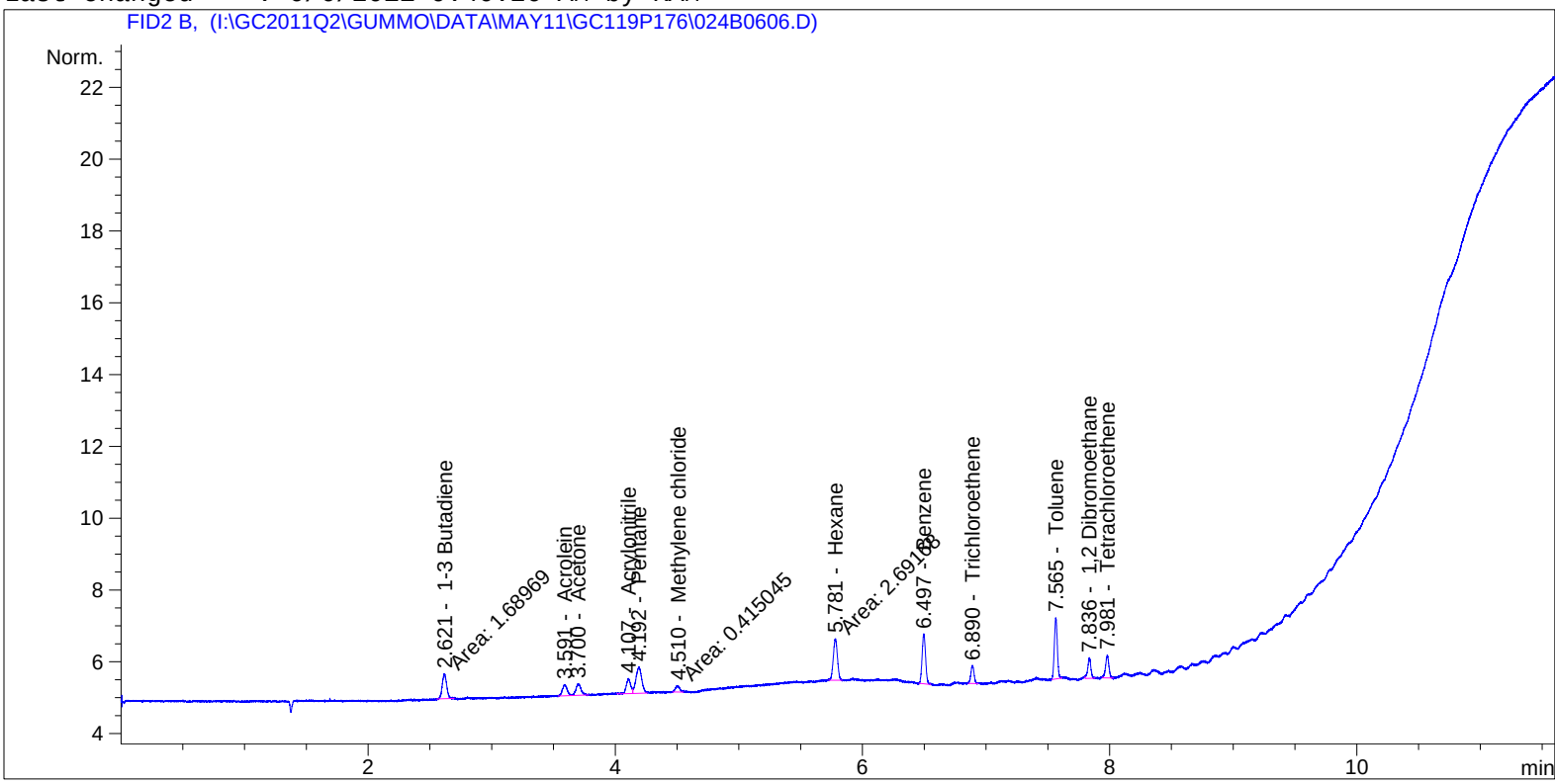



```
================================================================
                    External Standard Report
================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 9:38:24 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.621	MM	1.68969	1.43703	2.42814		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591	BV	8.16480e-1	3.29691	2.69186		Acrolein
3.700	VB	9.36161e-1	2.79611	2.61761		Acetone
4.107	BV	1.03000	2.62011	2.69872		Acrylonitrile
4.192	VV	2.38257	1.10326	2.62860		Pentane
4.510	MM	4.15045e-1	6.29924	2.61446		Methylene chloride
5.781	MM	2.69168	9.82363e-1	2.64420		Hexane
6.497	BB	2.69517	9.85761e-1	2.65679		Benzene
6.890	BB	8.82700e-1	2.97111	2.62259		Trichloroethene
7.565	BB	2.85081	9.35231e-1	2.66617		Toluene
7.836	BB	9.93097e-1	2.87554	2.85569		1,2 Dibromoethane
7.981	BB	1.15238	2.48385	2.86235		Tetrachloroethene

Manual Int. “II” (KAM)

EM-BTRF-000822

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P176\024B0606.D
Sample Name: gc119p176 #I0 ENV(1=1980,4=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				31.98717		

1 Warnings or Errors :

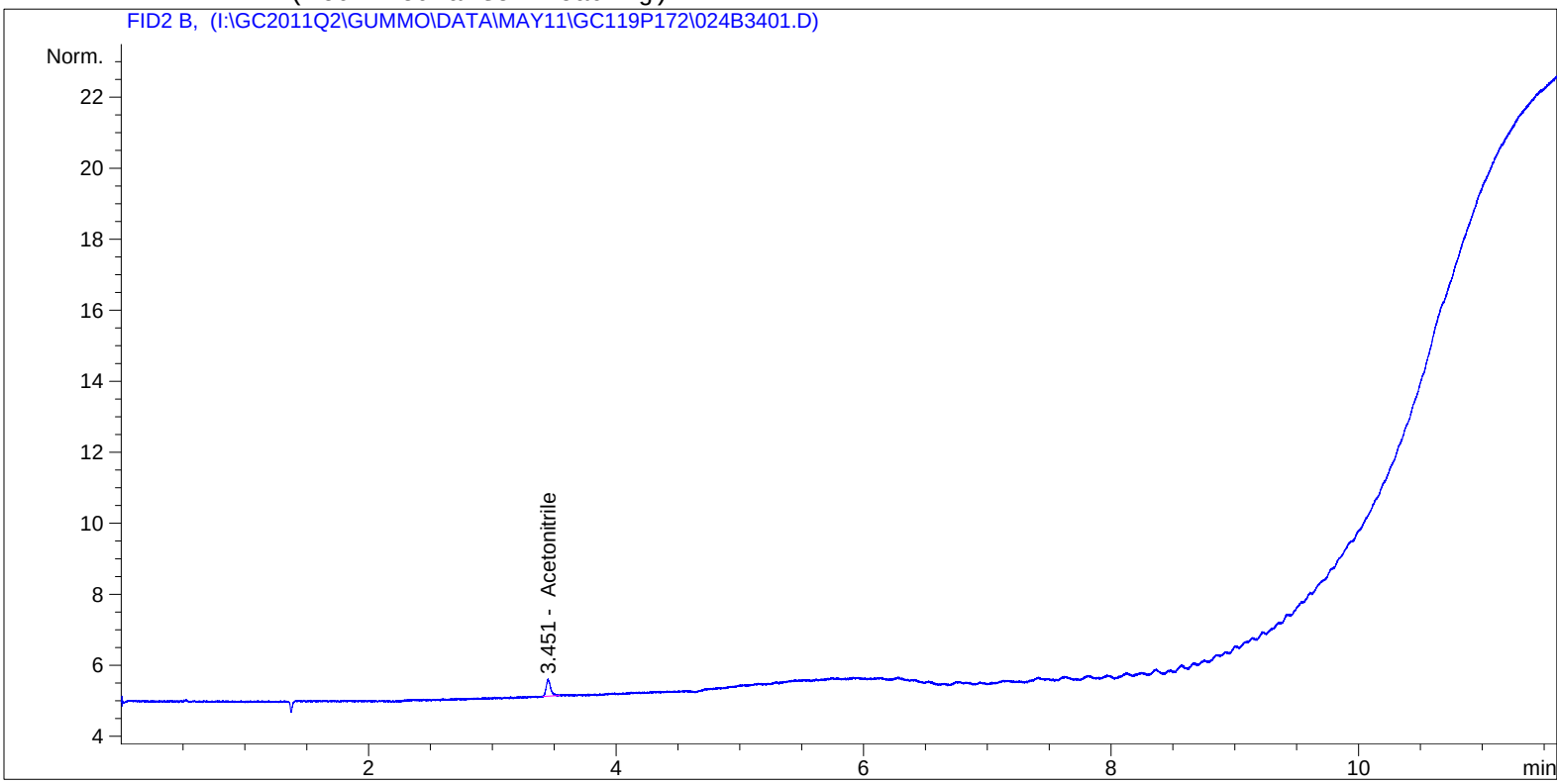
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3401.D
Sample Name: gc119p172 #AN1 ENV(1=1010,2=20)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  34
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 22-May-11, 18:29:21                  Inj :   1
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.451	BB	1.15513	4.15030	4.79413		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3401.D
Sample Name: gc119p172 #AN1 ENV(1=1010,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 4.79413

1 Warnings or Errors :

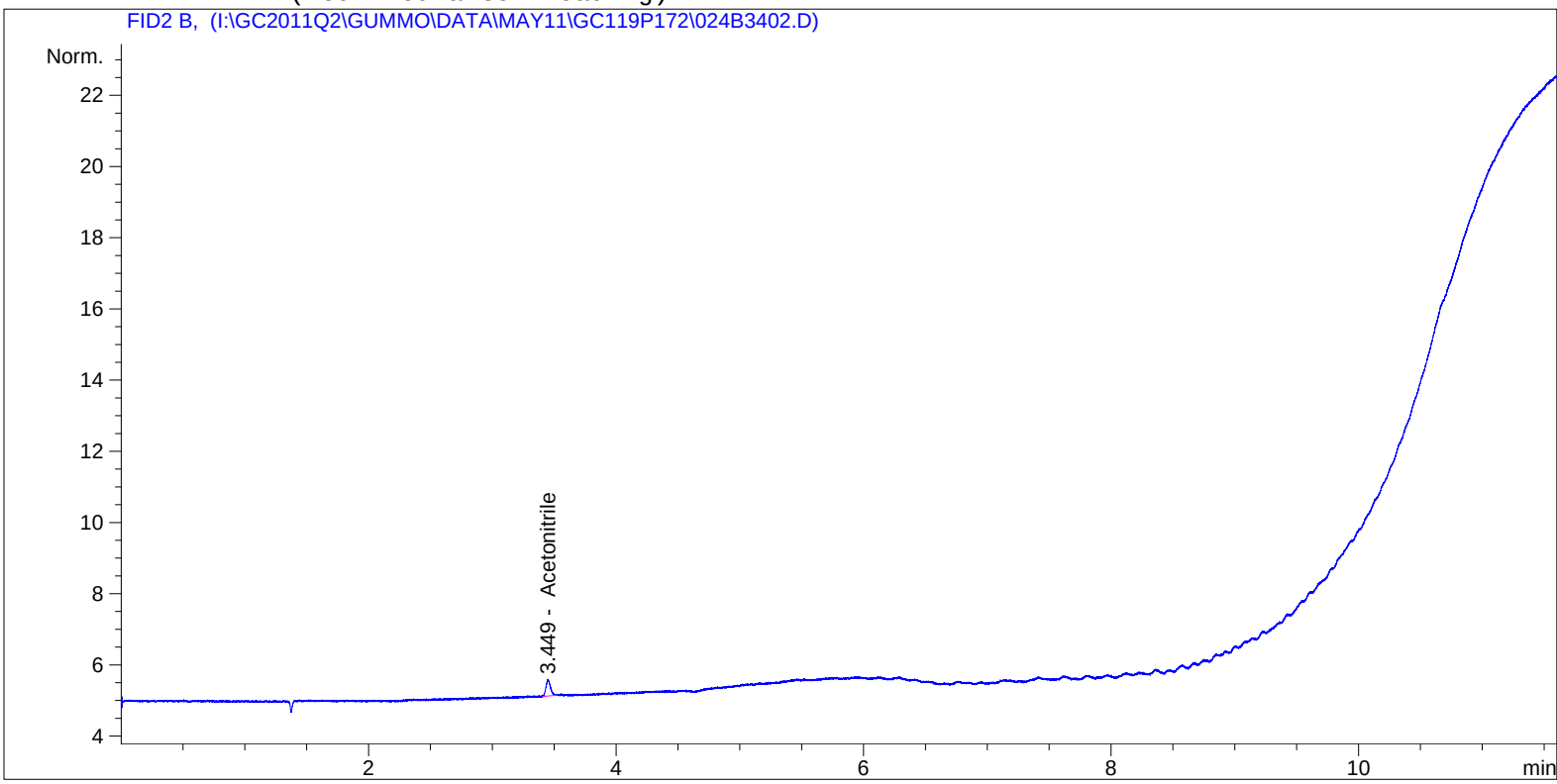
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3402.D
Sample Name: gc119p172 #AN1 ENV(1=1010,2=20)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  34
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 22-May-11, 18:48:32                Inj :   2
                                               Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, June 06, 2011 10:20:51 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.449	BB	1.14551	4.15030	4.75423		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

EM-BTRF-000826

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3402.D
Sample Name: gc119p172 #AN1 ENV(1=1010,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 4.75423

1 Warnings or Errors :

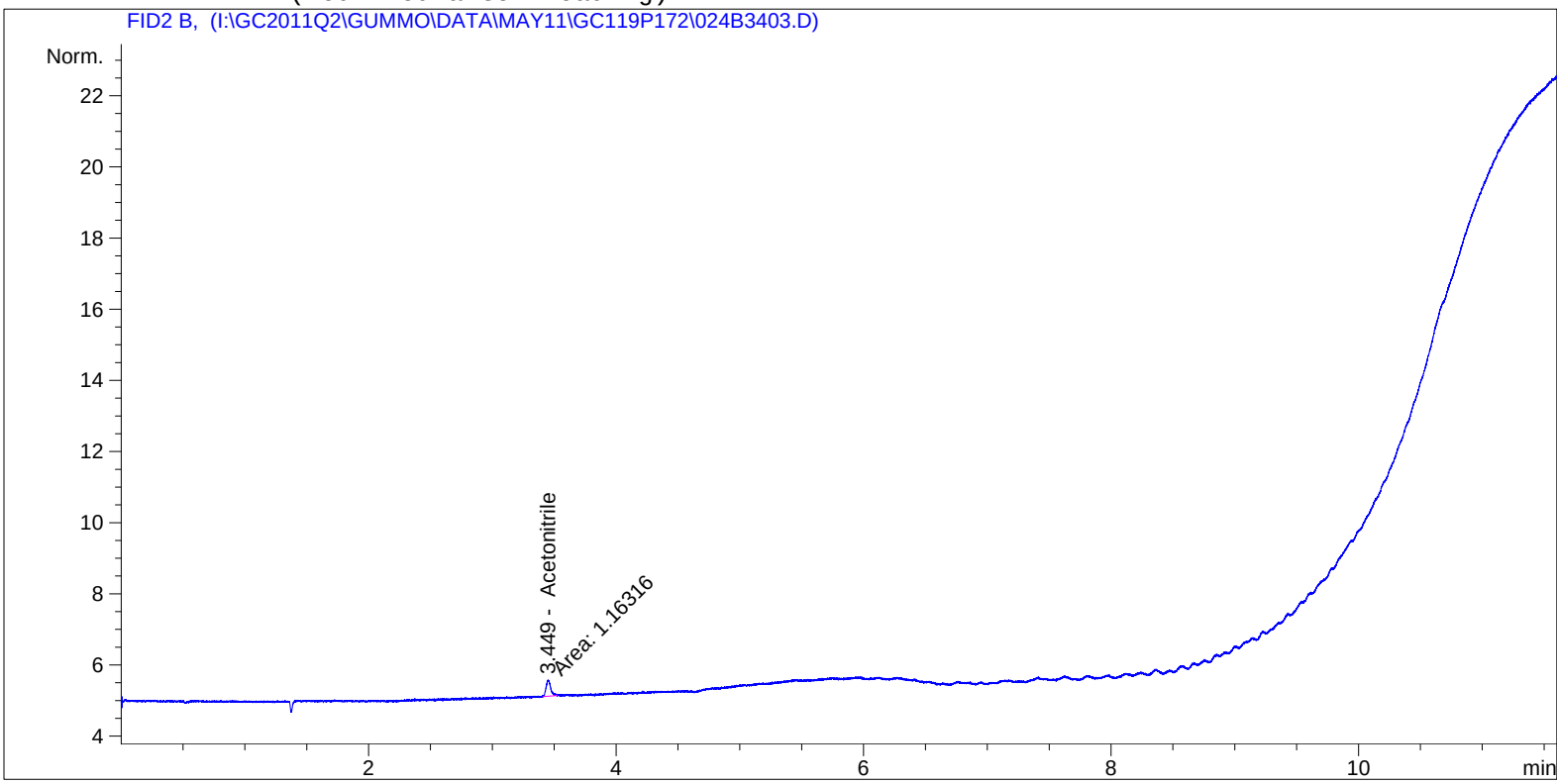
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3403.D
Sample Name: gc119p172 #AN1 ENV(1=1010,2=20)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  34
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 22-May-11, 19:07:50                  Inj :   3
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.449	MM	1.16316	4.15030	4.82747		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Manual Int. “II” (KAM)

EM-BTRF-000828

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3403.D
Sample Name: gc119p172 #AN1 ENV(1=1010,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 4.82747

1 Warnings or Errors :

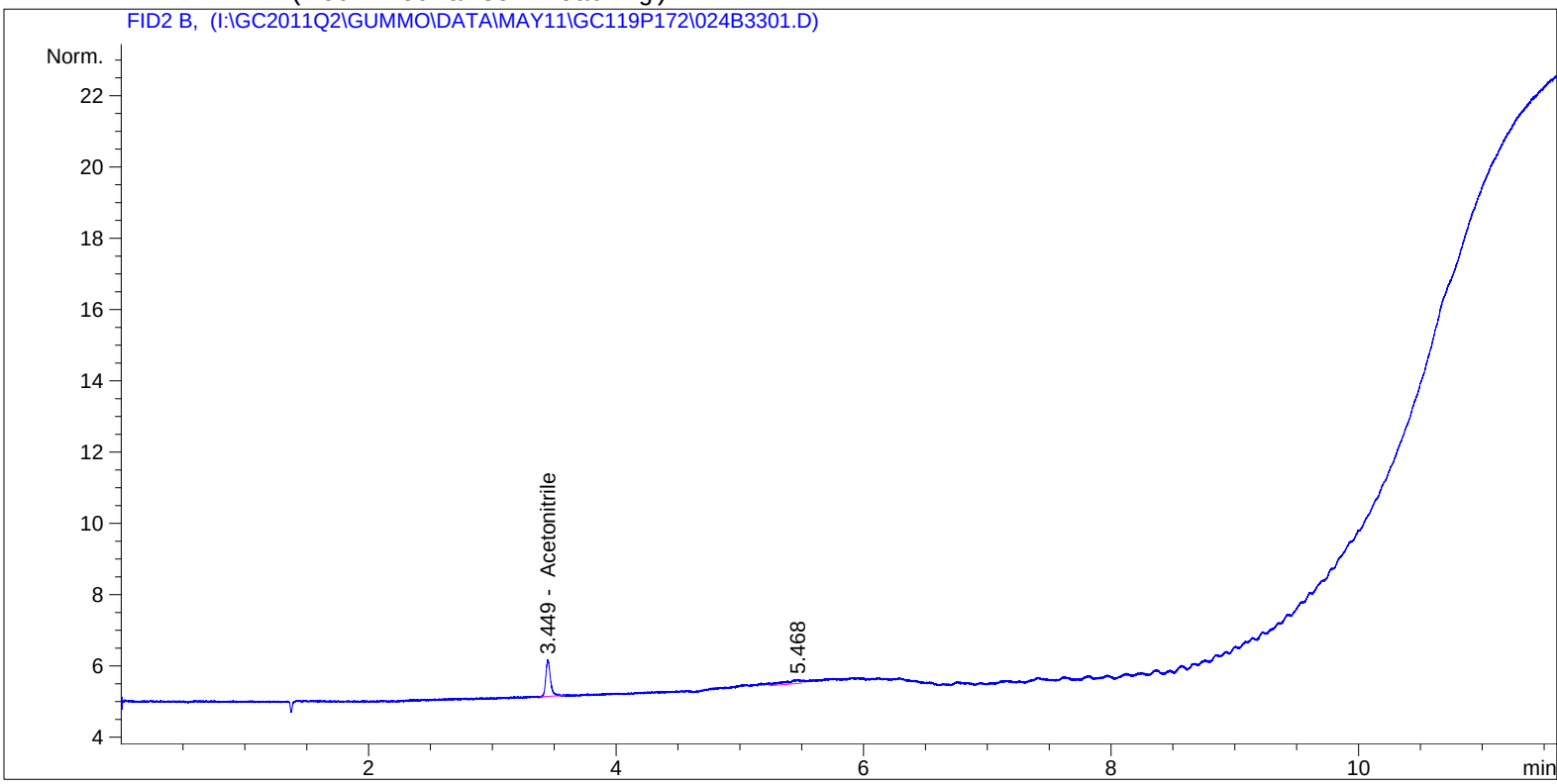
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3301.D
Sample Name: gc119p172 #AN2 ENV(1=960,2=40)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  33
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 22-May-11, 17:31:32                    Inj :   1
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.449	BB	2.68690	3.79240	10.18977		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3301.D
Sample Name: gc119p172 #AN2 ENV(1=960,2=40)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 10.18977

1 Warnings or Errors :

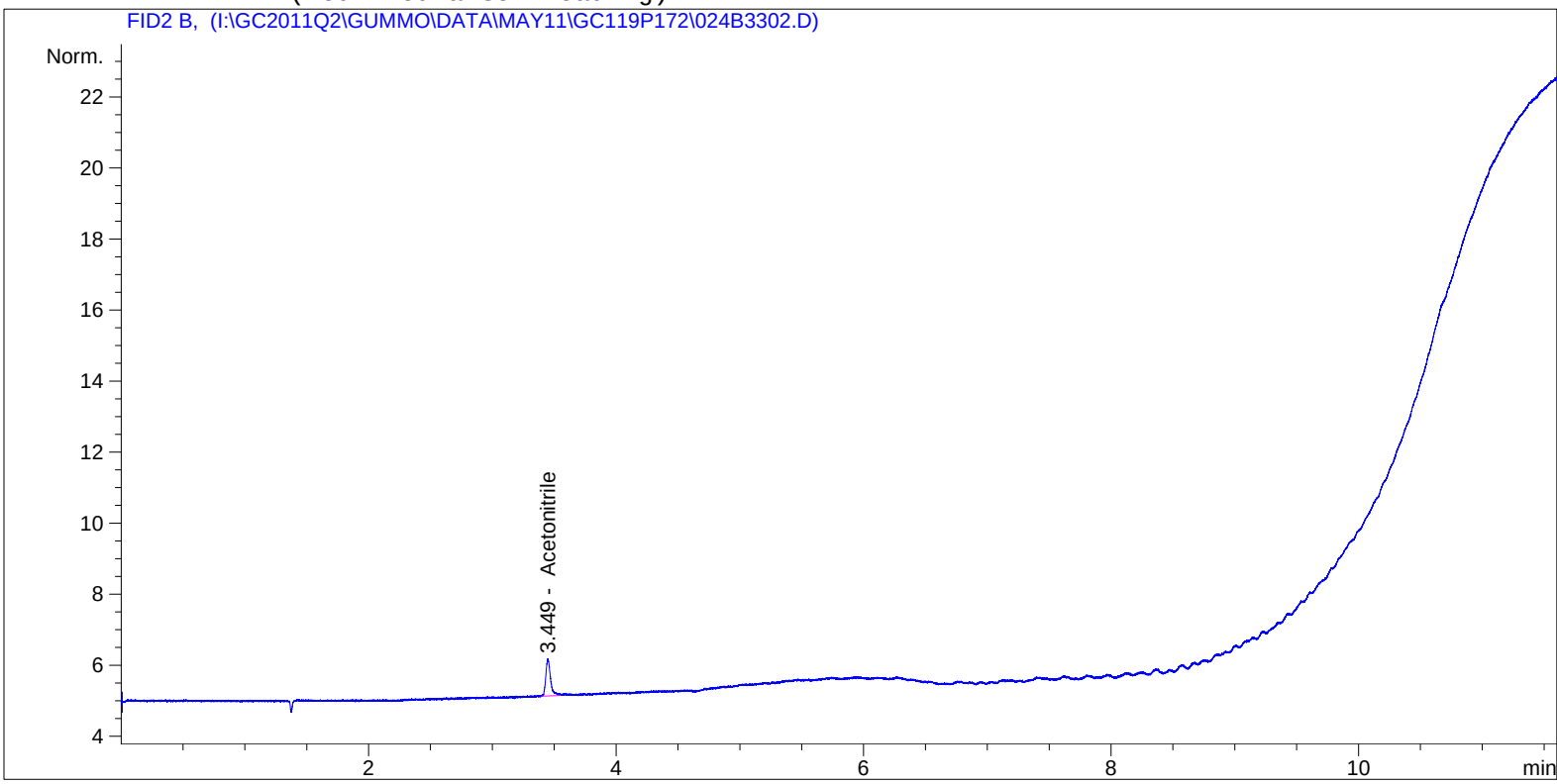
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3302.D
Sample Name: gc119p172 #AN2 ENV(1=960,2=40)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  33
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 22-May-11, 17:50:53                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.449	BV	2.73580	3.78747	10.36173		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3302.D
Sample Name: gc119p172 #AN2 ENV(1=960,2=40)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 10.36173

1 Warnings or Errors :

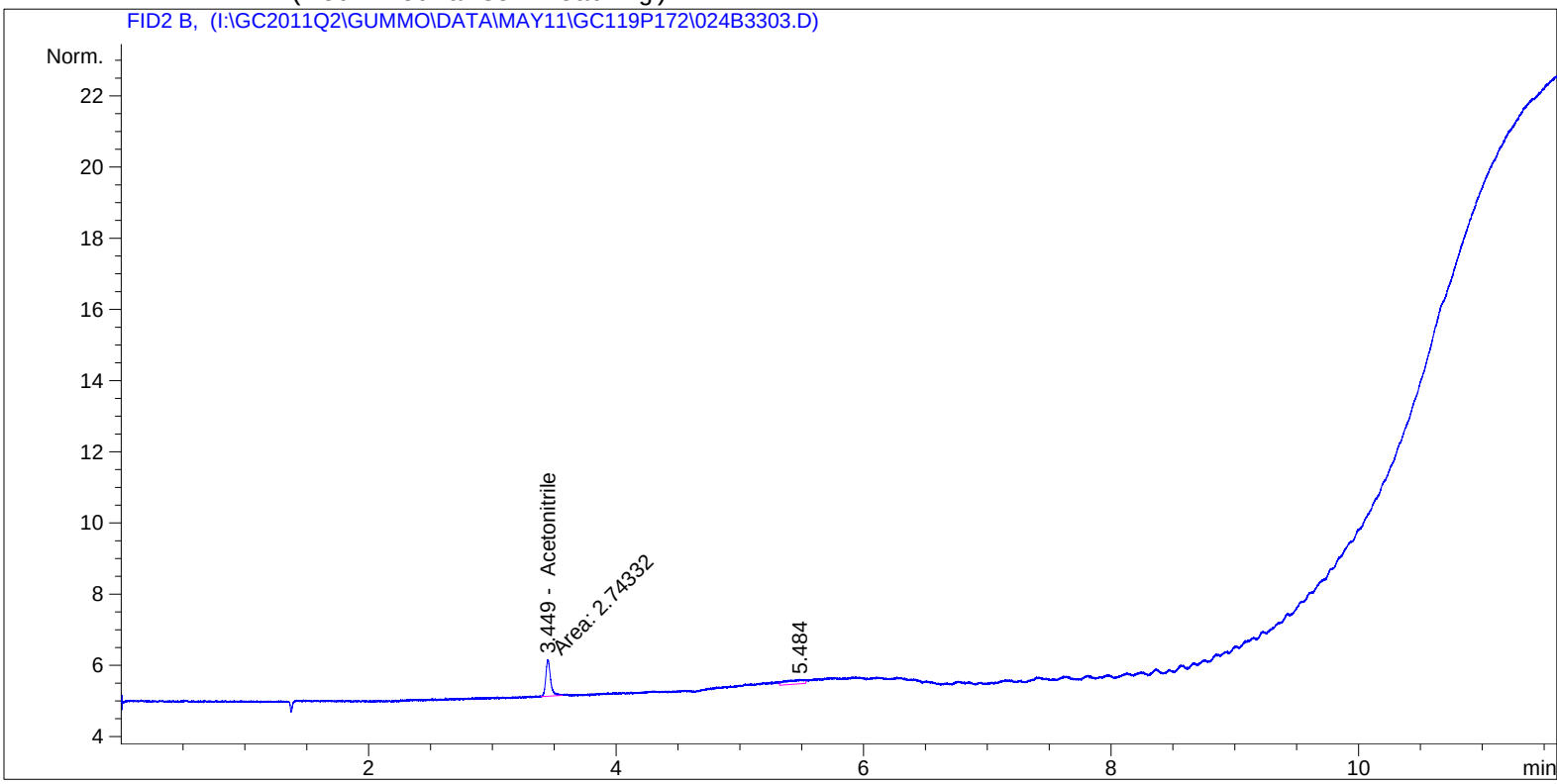
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3303.D
Sample Name: gc119p172 #AN2 ENV(1=960,2=40)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  33
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 22-May-11, 18:10:06                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.449	MM	2.74332	3.78672	10.38820		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Manual Int. "II" (KAM)

EM-BTRF-000834

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3303.D
Sample Name: gc119p172 #AN2 ENV(1=960,2=40)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 10.38820

1 Warnings or Errors :

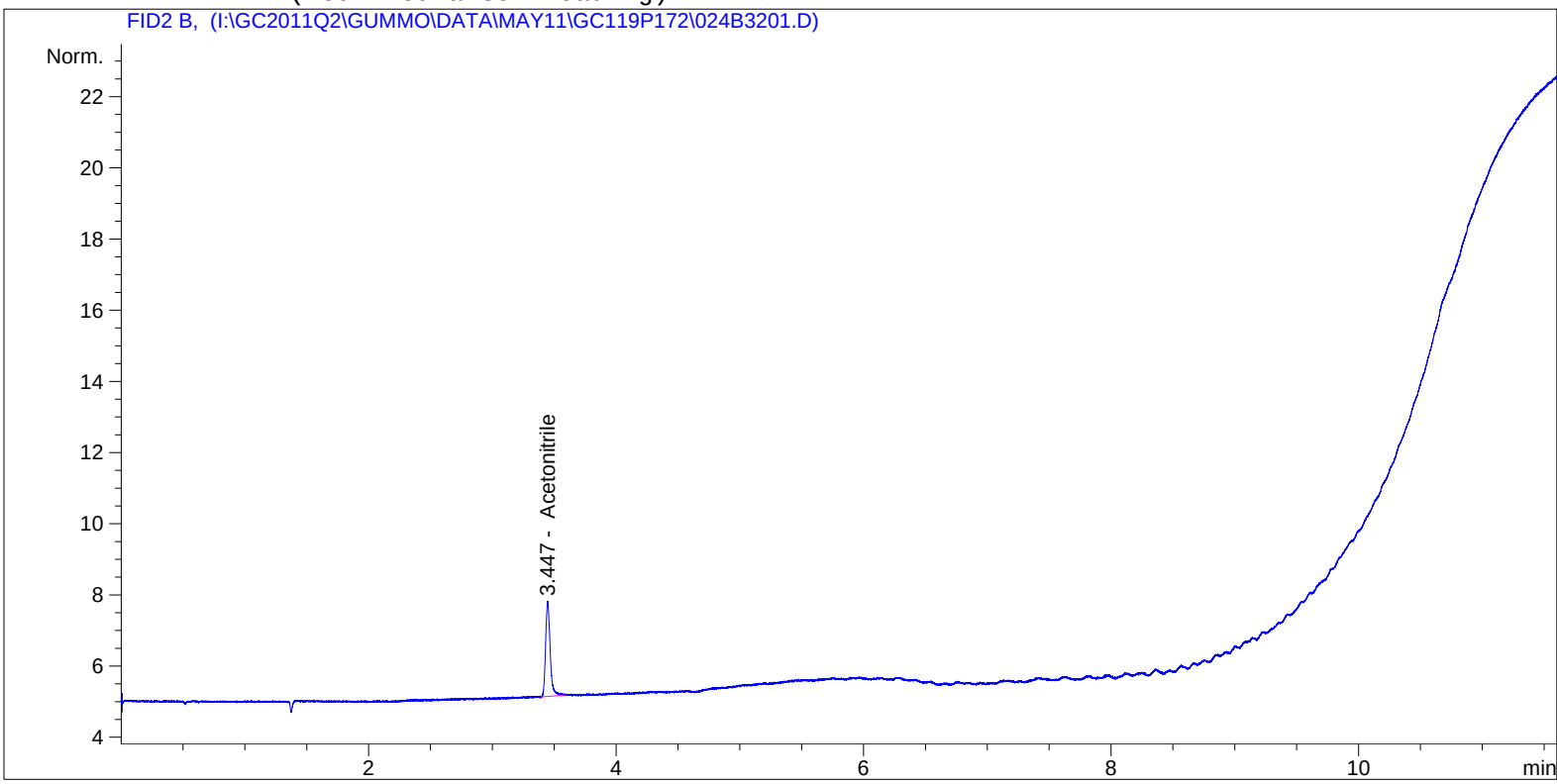
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3201.D
Sample Name: gc119p172 #AN3 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  32
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 22-May-11, 16:33:54                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.447	BB	6.87636	3.62432	24.92212		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3201.D
Sample Name: gc119p172 #AN3 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 24.92212

1 Warnings or Errors :

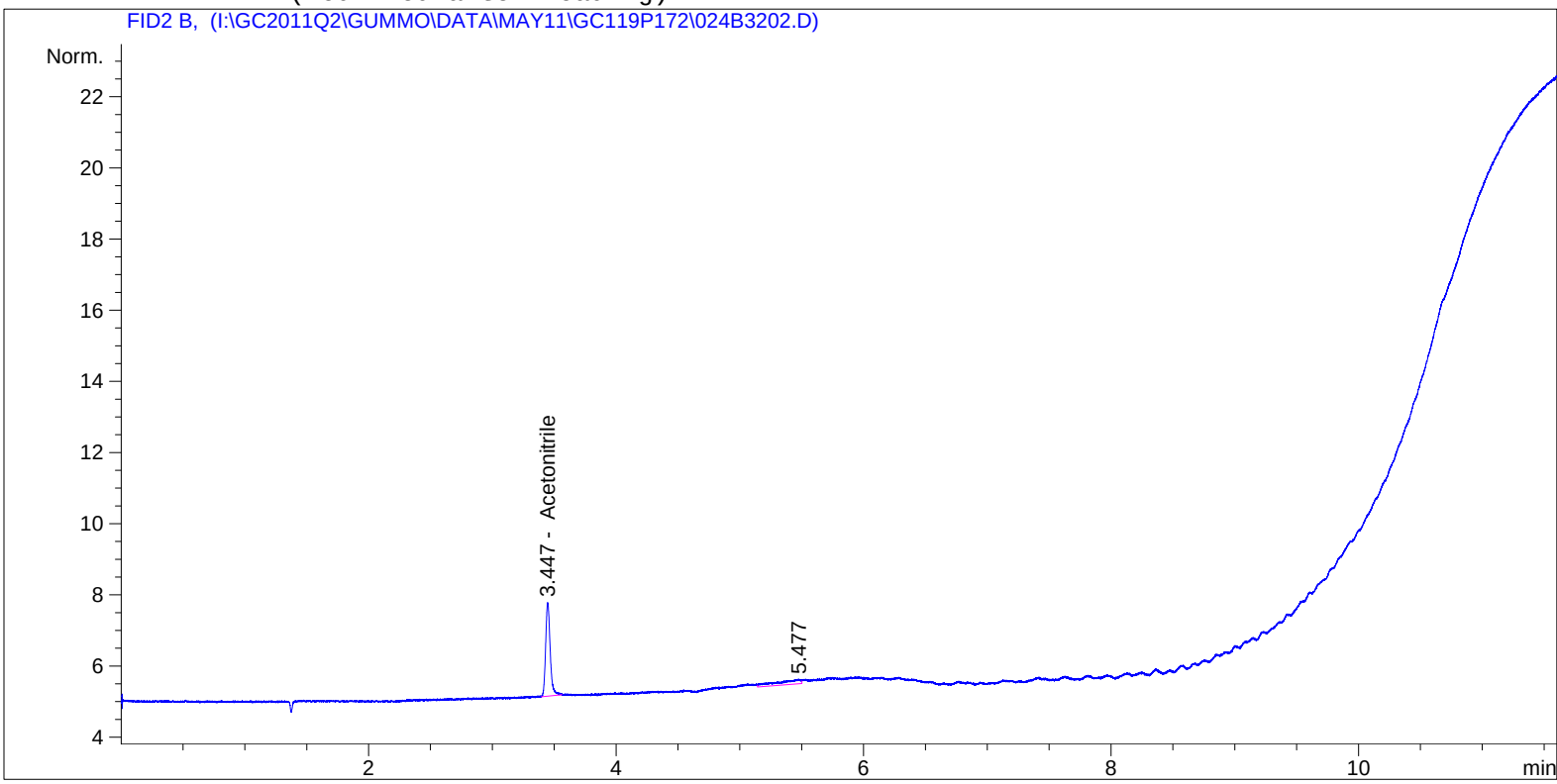
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3202.D
Sample Name: gc119p172 #AN3 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  32
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 22-May-11, 16:53:03                   Inj :   2
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.447	BB	6.70172	3.62713	24.30800		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3202.D
Sample Name: gc119p172 #AN3 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 24.30800

1 Warnings or Errors :

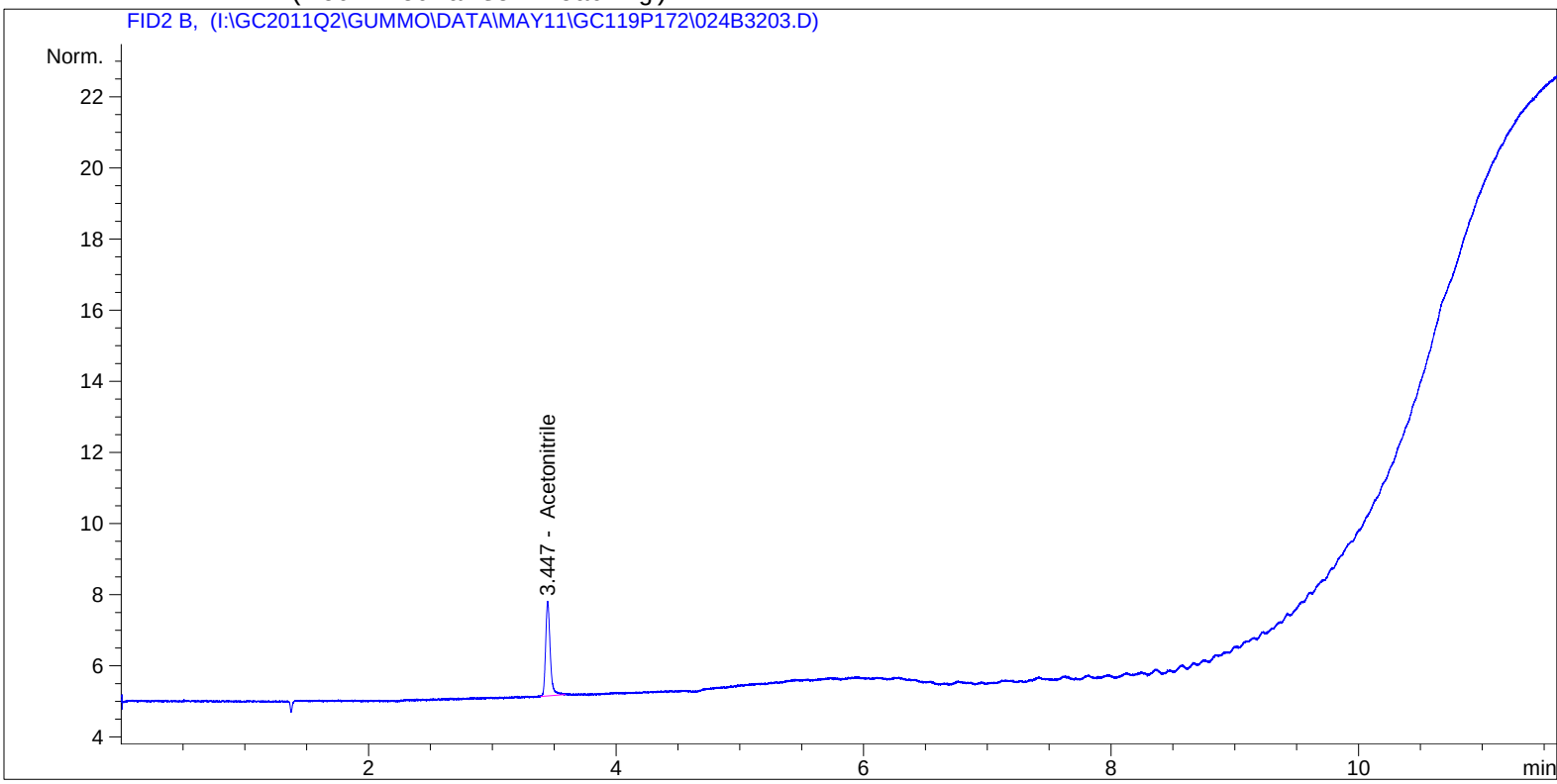
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3203.D
Sample Name: gc119p172 #AN3 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  32
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 22-May-11, 17:12:17                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.447	BB	6.80183	3.62550	24.66004		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3203.D
Sample Name: gc119p172 #AN3 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 24.66004

1 Warnings or Errors :

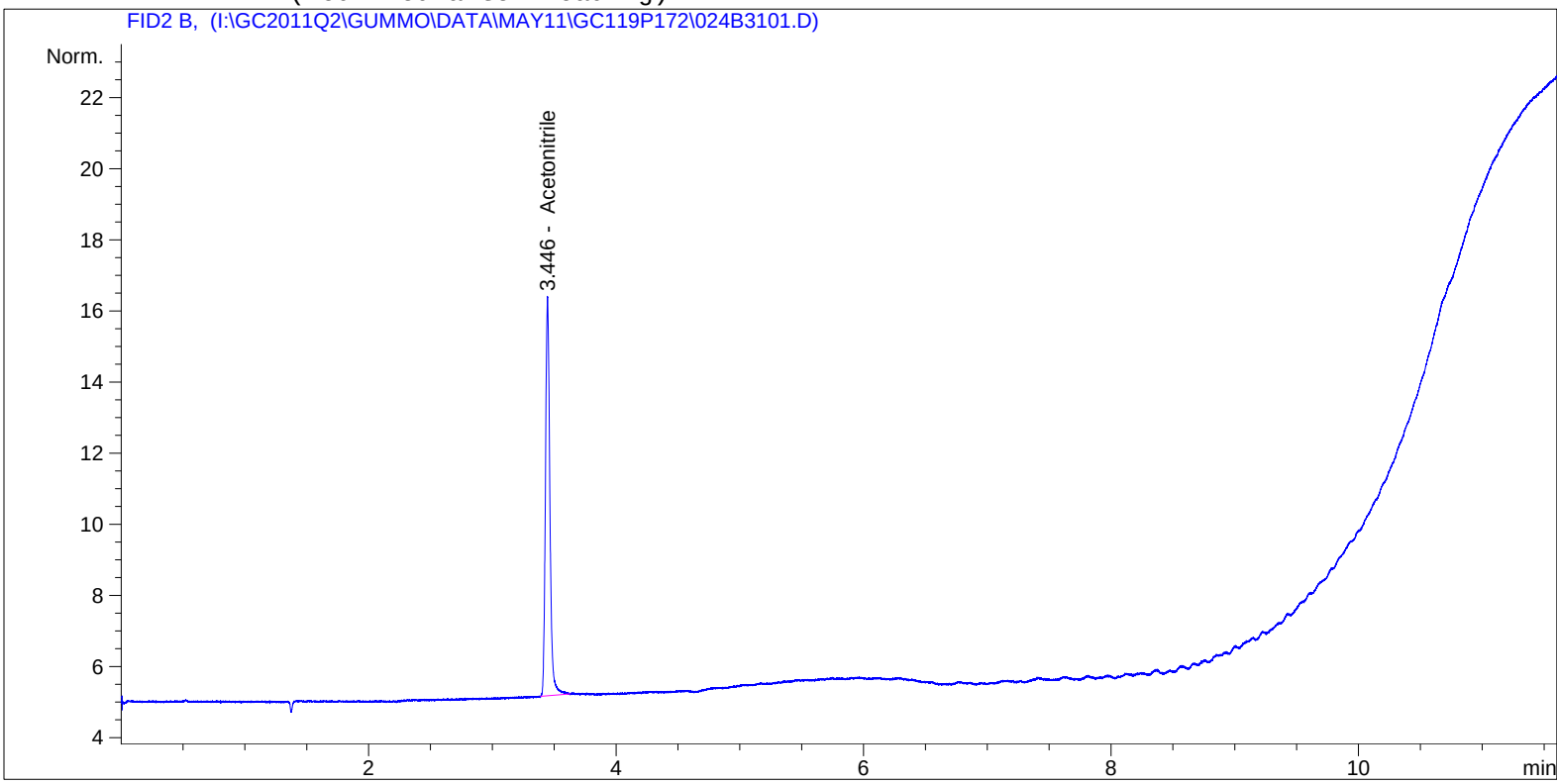
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3101.D
Sample Name: gc119p172 #AN4 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  31
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 22-May-11, 15:35:53                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.446	BB	28.03072	3.54297	99.31195		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3101.D
Sample Name: gc119p172 #AN4 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 99.31195

1 Warnings or Errors :

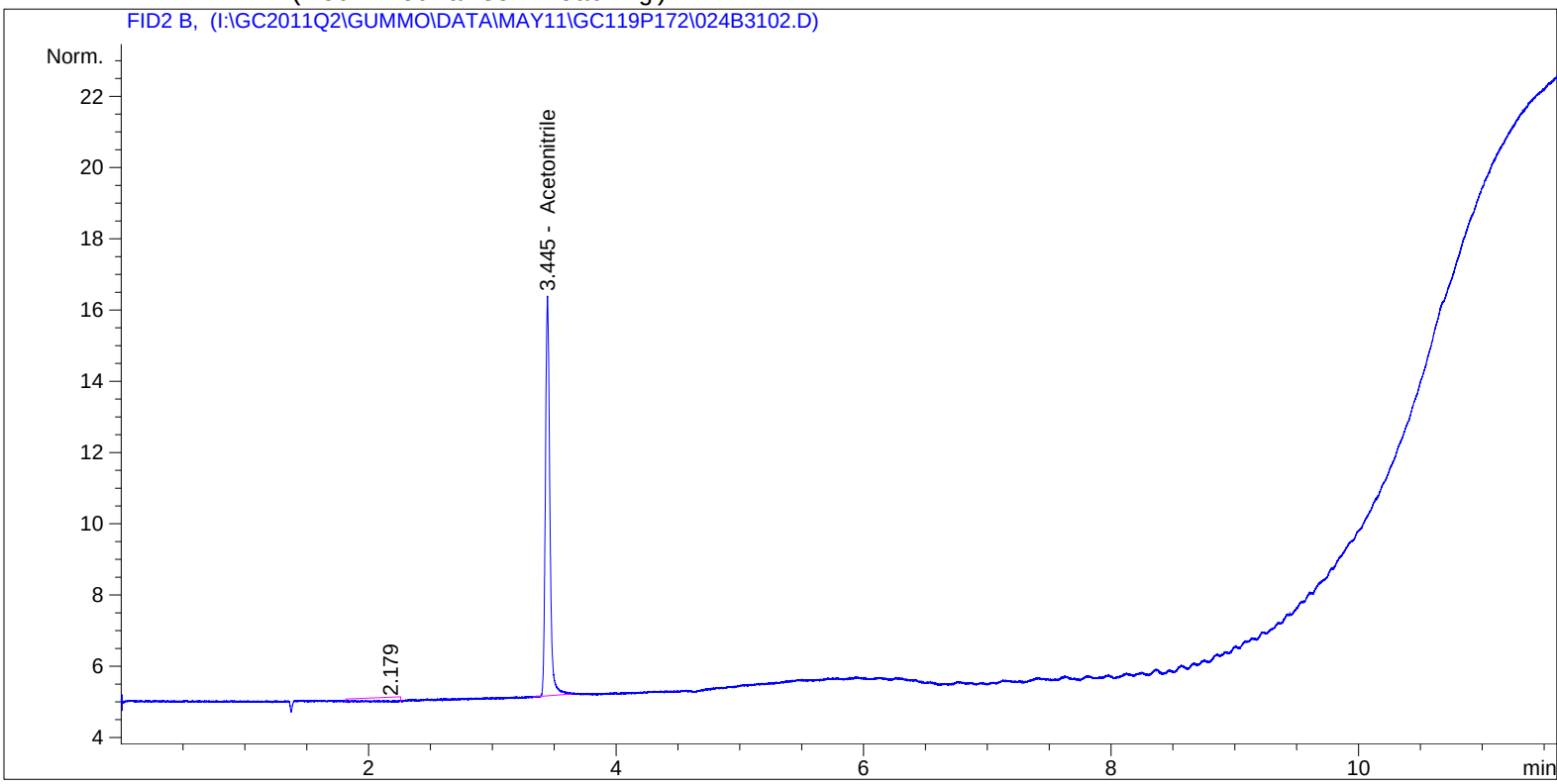
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3102.D
Sample Name: gc119p172 #AN4 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  31
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 22-May-11, 15:55:10                  Inj :   2
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.445	BB	28.15088	3.54285	99.73448		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3102.D
Sample Name: gc119p172 #AN4 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 99.73448

1 Warnings or Errors :

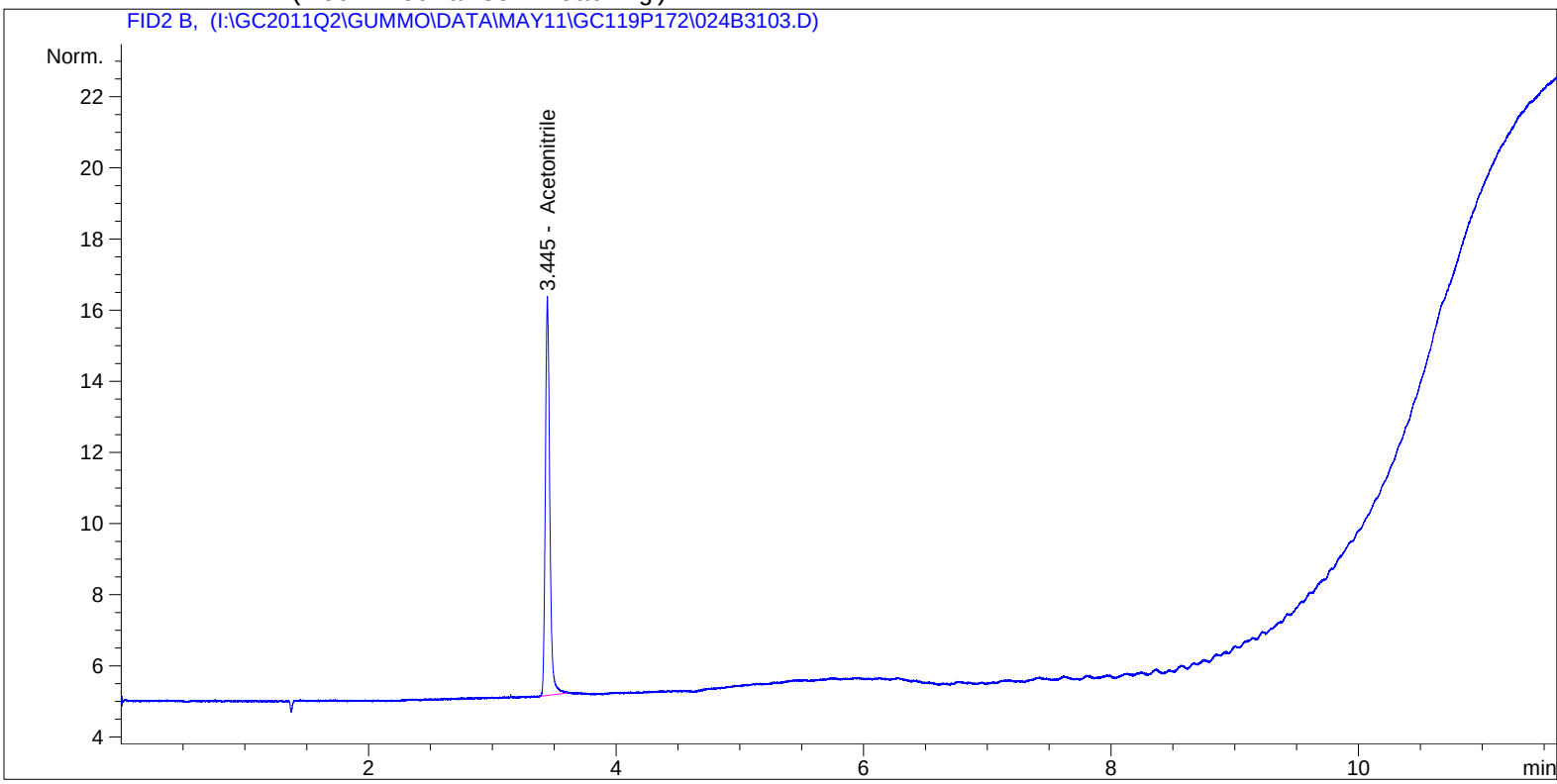
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3103.D
Sample Name: gc119p172 #AN4 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  31
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 22-May-11, 16:14:34                  Inj :   3
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.445	BB	27.93542	3.54306	98.97681		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3103.D
Sample Name: gc119p172 #AN4 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 98.97681

1 Warnings or Errors :

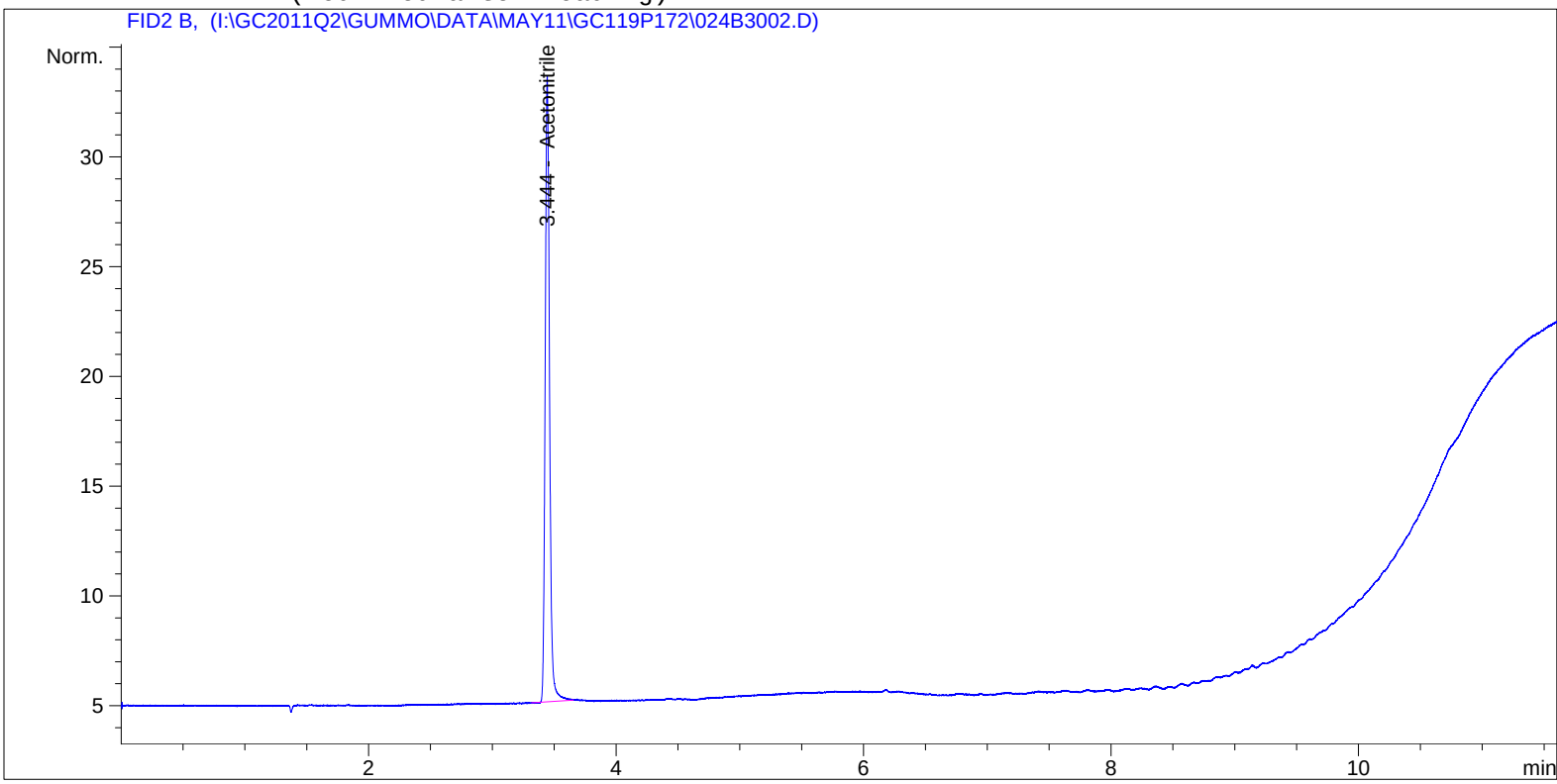
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3002.D
Sample Name: gc119p172 #AN5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  30
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 22-May-11, 14:38:03                   Inj :   2
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.444	BB	70.12820	3.52709	247.34874		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3002.D
Sample Name: gc119p172 #AN5 ENV(1=0,2=350)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 247.34874

1 Warnings or Errors :

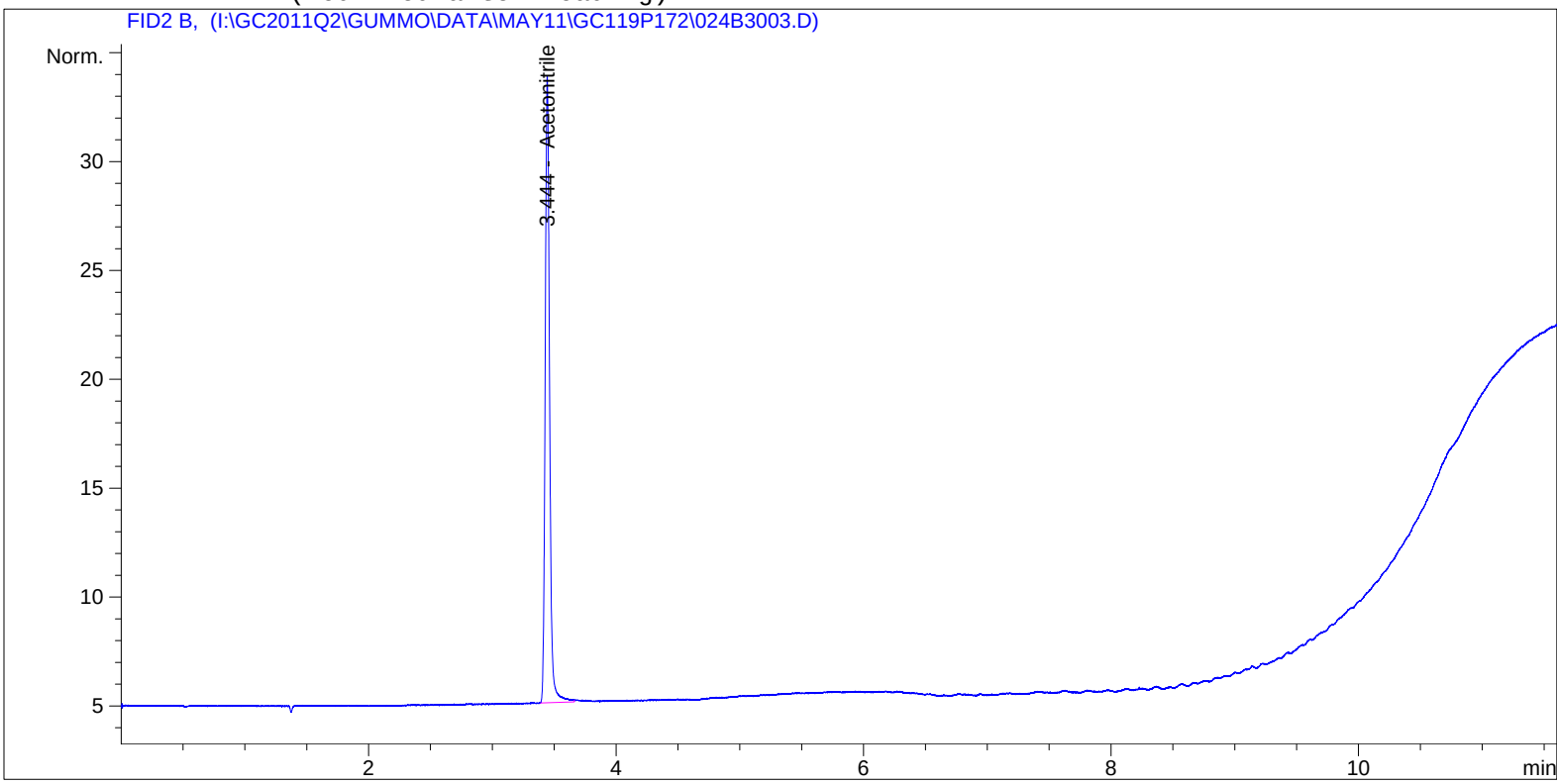
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3003.D
Sample Name: gc119p172 #AN5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  30
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 22-May-11, 14:57:28                   Inj :   3
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.444	BB	71.40660	3.52690	251.84425		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3003.D
Sample Name: gc119p172 #AN5 ENV(1=0,2=350)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 251.84425

1 Warnings or Errors :

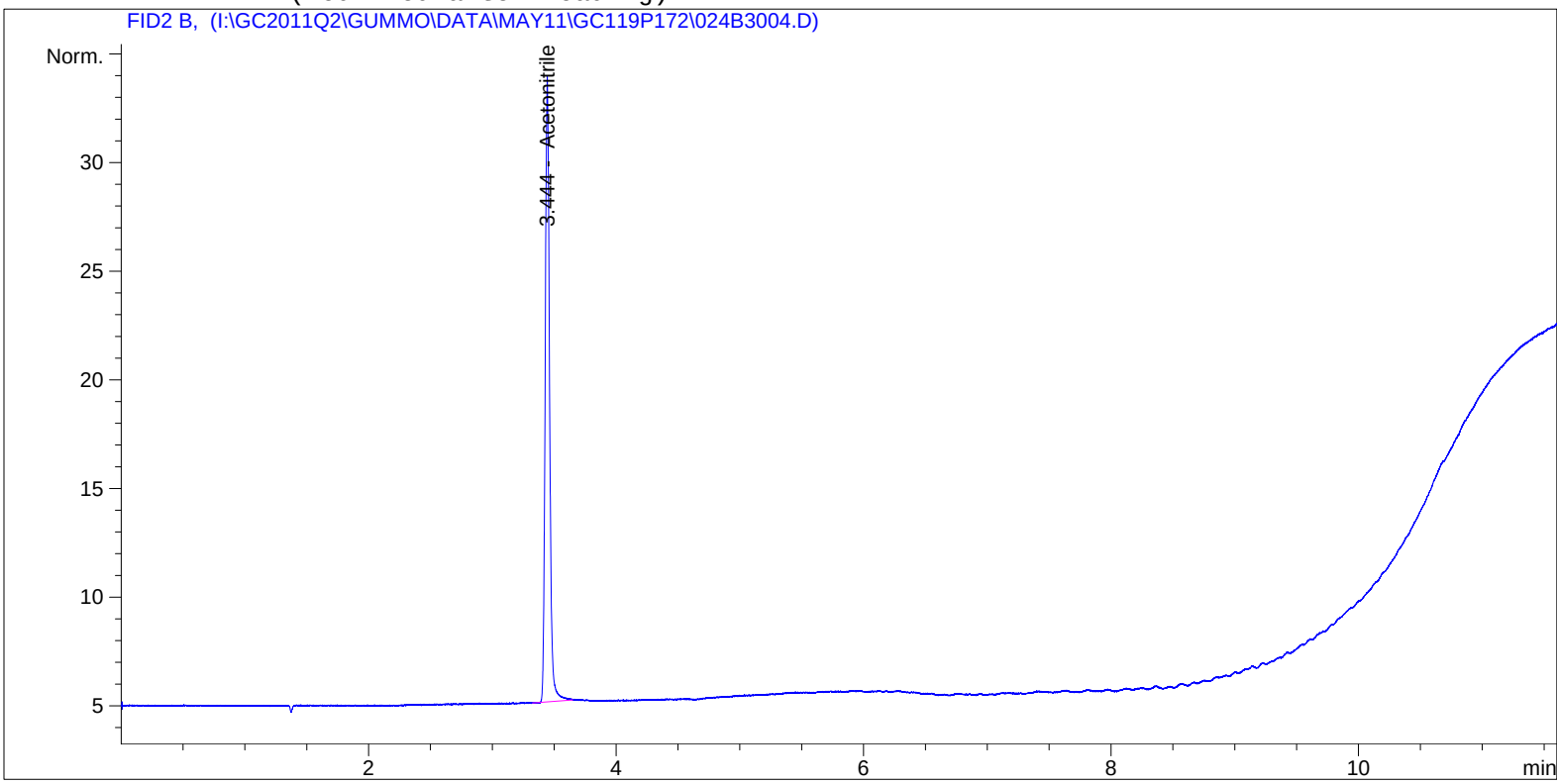
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3004.D
Sample Name: gc119p172 #AN5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  30
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 22-May-11, 15:16:40                   Inj :   4
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : I:\GC2011Q2\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:20:51 PM by KAM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:37:06 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.444	BB	70.80573	3.52699	249.73128		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane

Data File I:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B3004.D
Sample Name: gc119p172 #AN5 ENV(1=0,2=350)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
7.981		-	-	-		Tetrachloroethene

Totals : 249.73128

1 Warnings or Errors :

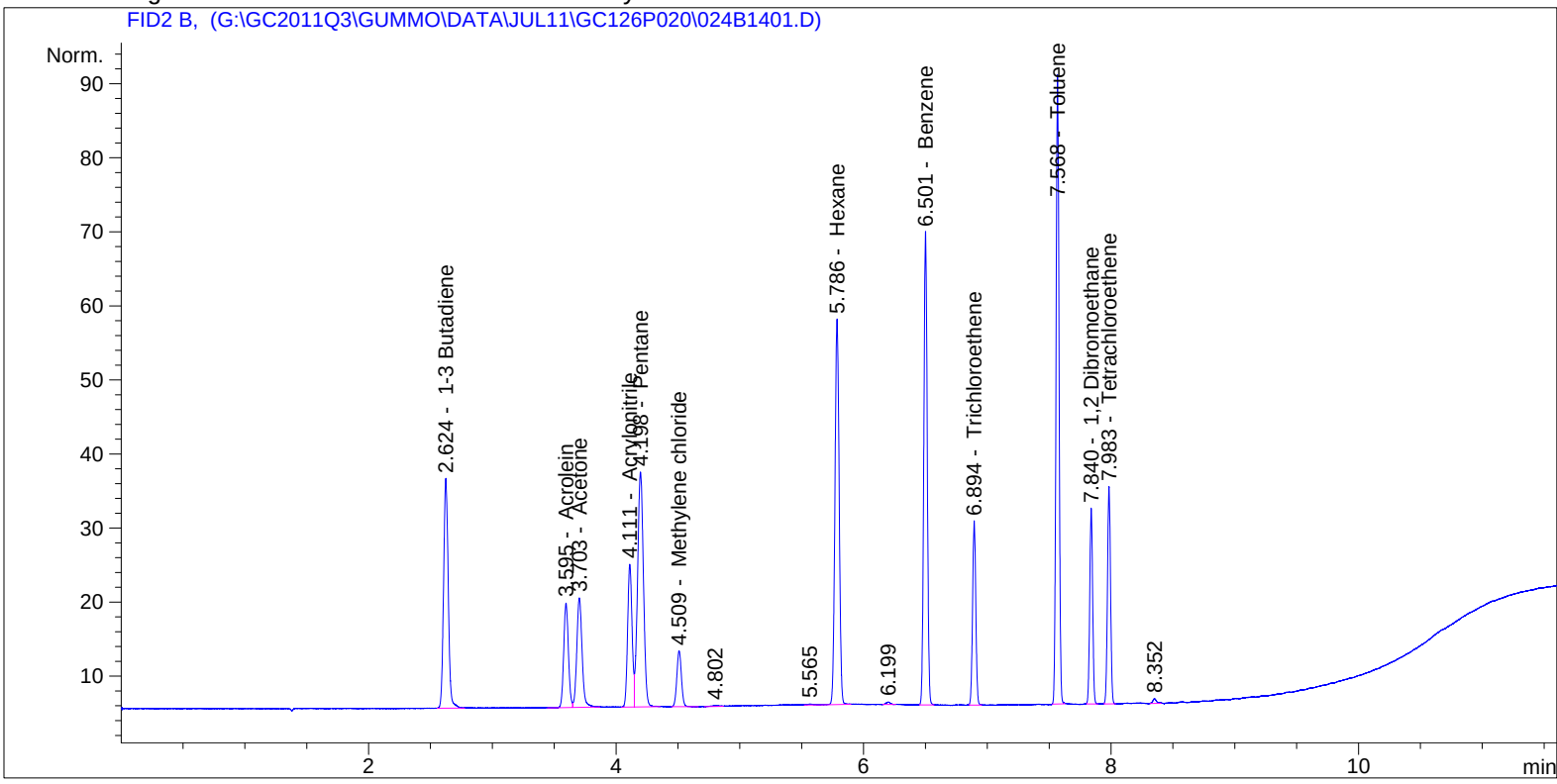
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B1401.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  14
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 20:27:04                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.624	BV	81.50093	1.21231	98.80473		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.595	VV	37.21981	2.67114	99.41920		Acrolein
3.703	VB	43.86346	2.22410	97.55674		Acetone
4.111	BV	48.04256	2.03291	97.66604		Acrylonitrile
4.198	VB	104.47917	9.56709e-1	99.95619		Pentane
4.509	BB	19.24643	5.11211	98.38994		Methylene chloride
5.786	VB	123.03056	8.10102e-1	99.66736		Hexane
6.501	BB	124.15598	8.11747e-1	100.78323		Benzene
6.894	BB	45.24349	2.17594	98.44729		Trichloroethene
7.568	BB	144.38852	6.89492e-1	99.55475		Toluene
7.840	BB	43.69242	2.36422	103.29840		1,2 Dibromoethane
7.983	BB	50.79200	1.97720	100.42578		Tetrachloroethene

EM-BTRF-000854

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B1401.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1193.96963		

2 Warnings or Errors :

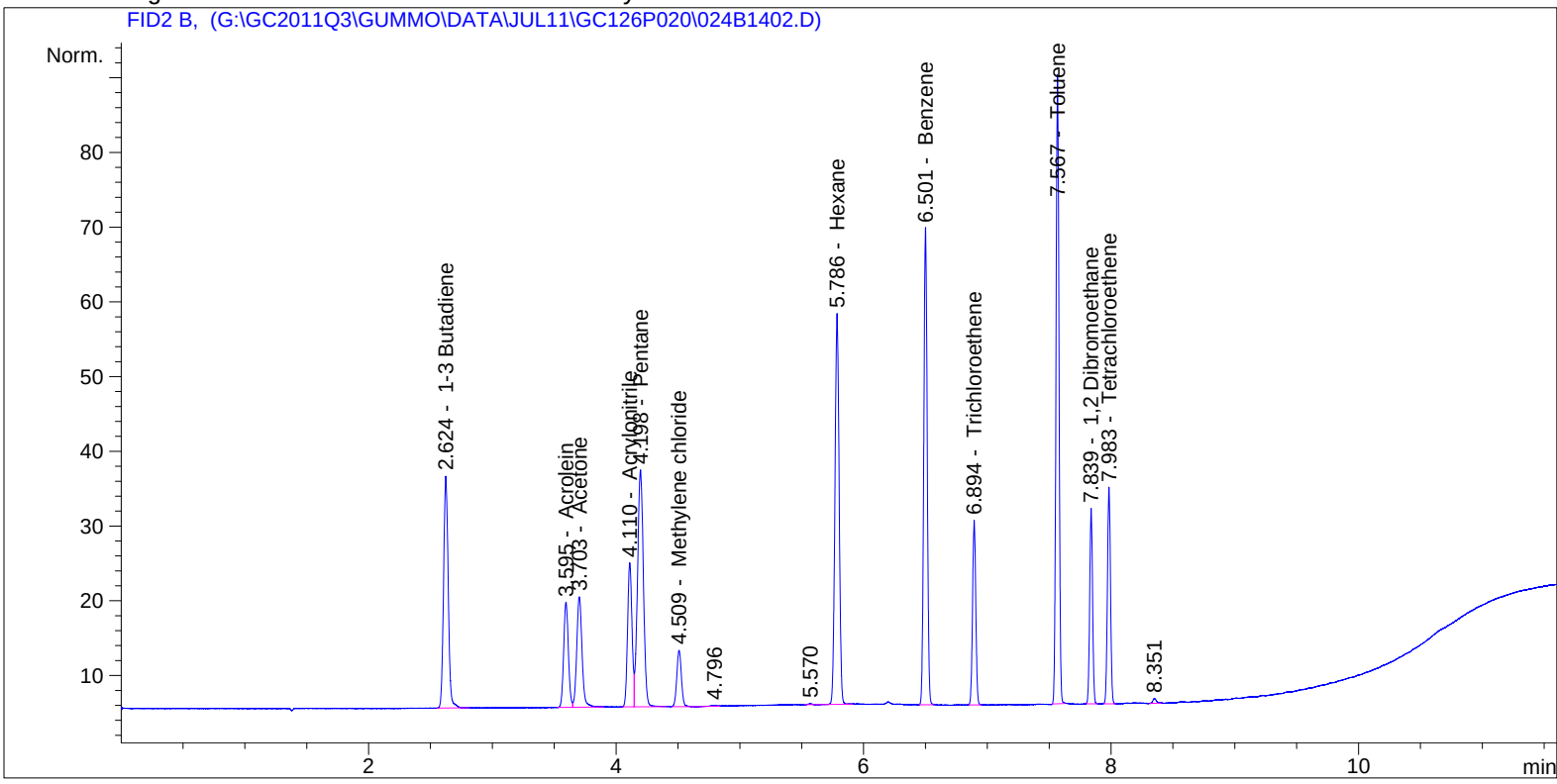
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B1402.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  14
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 20:46:35                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.624	BB	81.30498	1.21233	98.56841		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.595	BV	37.10857	2.67118	99.12362		Acrolein
3.703	VB	43.94541	2.22405	97.73701		Acetone
4.110	BV	48.01247	2.03292	97.60559		Acrylonitrile
4.198	VB	104.86971	9.56696e-1	100.32848		Pentane
4.509	VB	19.46799	5.11182	99.51674		Methylene chloride
5.786	VB	122.82032	8.10109e-1	99.49786		Hexane
6.501	BB	123.78478	8.11759e-1	100.48335		Benzene
6.894	BB	45.02174	2.17609	97.97155		Trichloroethene
7.567	BB	143.10712	6.89576e-1	98.68326		Toluene
7.839	BB	42.78798	2.36467	101.17924		1,2 Dibromoethane
7.983	BB	50.33060	1.97739	99.52315		Tetrachloroethene

EM-BTRF-000856

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B1402.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1190.21825		

2 Warnings or Errors :

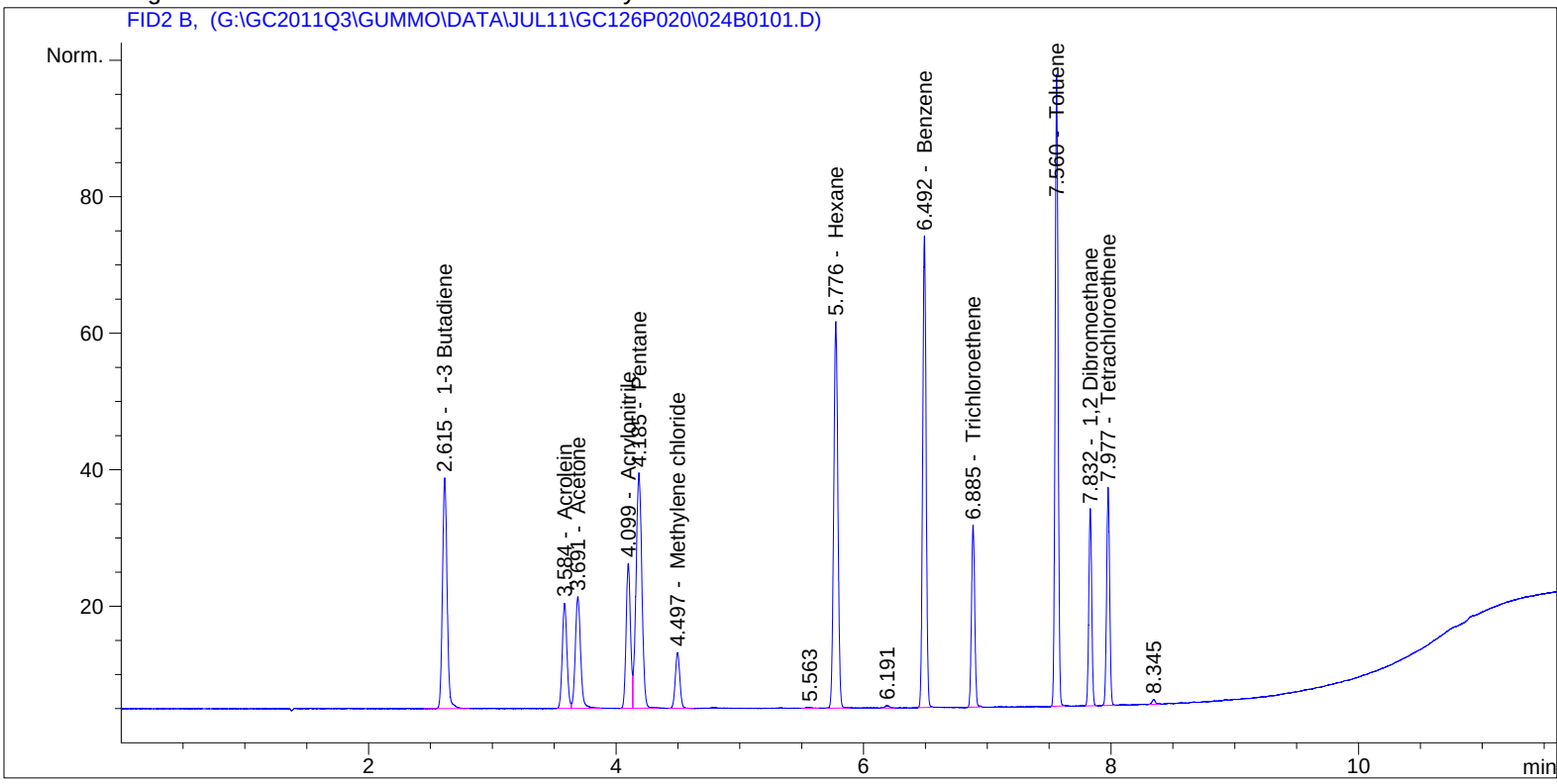
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B0101.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator	: mgm	Seq. Line	: 1
Acq. Instrument	: Gummo online	Location	: Vial 24
Injection Date	: 20-Jul-11, 10:41:11	Inj	: 1
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.615	BB	88.27330	1.21183	106.97216		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.584	BV	40.59972	2.66997	108.39998		Acrolein
3.691	VB	48.50747	2.22178	107.77282		Acetone
4.099	BV	52.87381	2.03070	107.37087		Acrylonitrile
4.185	VB	113.02399	9.56451e-1	108.10187		Pentane
4.497	BB	20.83812	5.11011	106.48517		Methylene chloride
5.776	BB	133.03114	8.09811e-1	107.73014		Hexane
6.492	BB	134.30775	8.11455e-1	108.98471		Benzene
6.885	BB	48.88233	2.17367	106.25410		Trichloroethene
7.560	BB	157.22447	6.88725e-1	108.28448		Toluene
7.832	BB	47.44954	2.36254	112.10159		1,2 Dibromoethane
7.977	BB	54.80891	1.97567	108.28421		Tetrachloroethene

EM-BTRF-000858

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B0101.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1296.74209		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B0102.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
Acq. Operator   : mgm                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 11:02:01                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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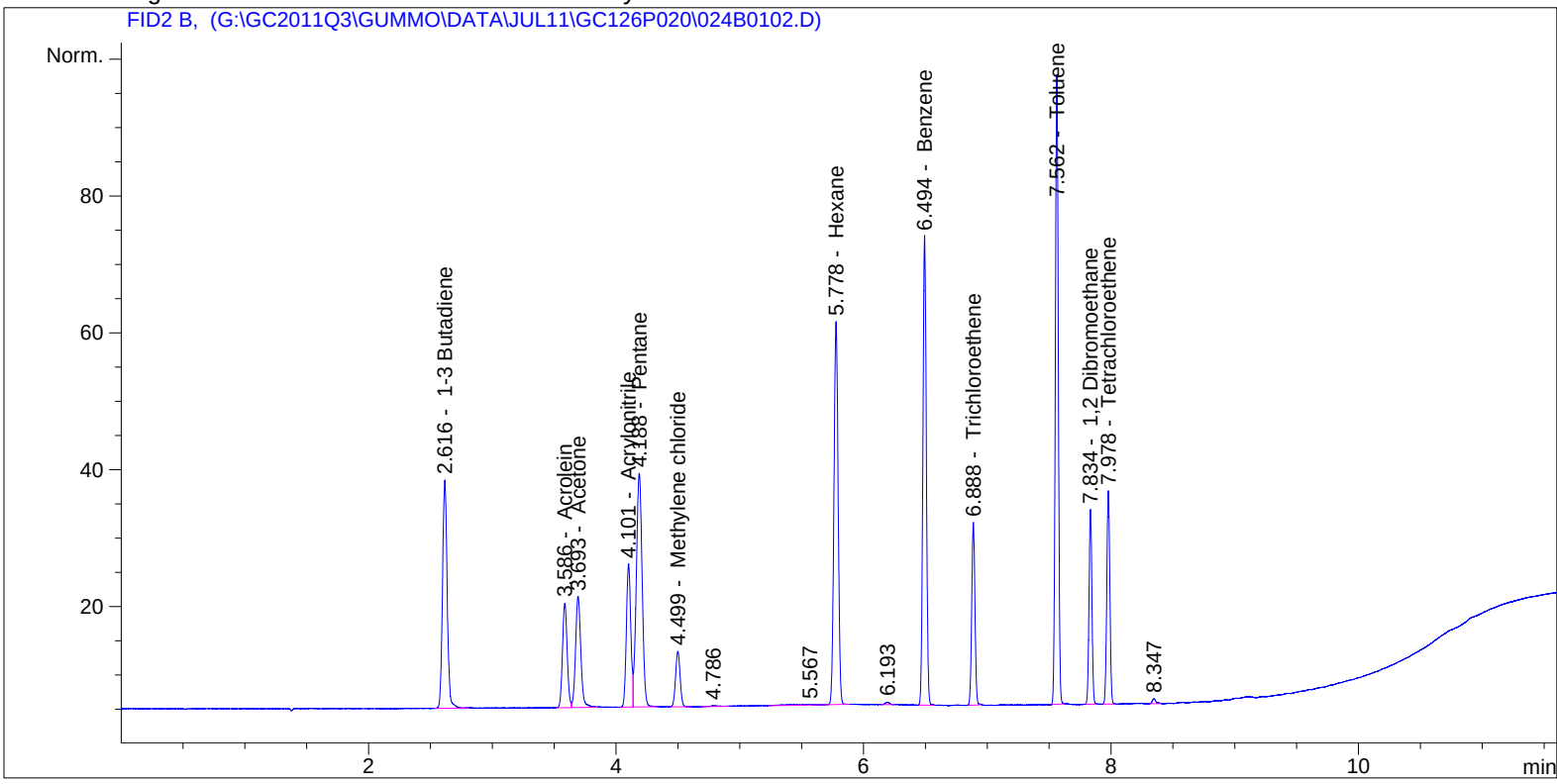

External Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.616	VB	87.52841	1.21188	106.07383		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.586	BV	40.23213	2.67009	107.42324		Acrolein
3.693	VV	48.02488	2.22200	106.71118		Acetone
4.101	BV	52.23523	2.03097	106.08810		Acrylonitrile
4.188	VB	112.27982	9.56472e-1	107.39246		Pentane
4.499	BB	20.70161	5.11027	105.79088		Methylene chloride
5.778	VB	132.08716	8.09837e-1	106.96907		Hexane
6.494	BB	133.26231	8.11483e-1	108.14011		Benzene
6.888	BB	48.45514	2.17392	105.33760		Trichloroethene
7.562	BB	155.39388	6.88827e-1	107.03949		Toluene
7.834	BB	46.75269	2.36283	110.46884		1,2 Dibromoethane
7.978	BB	54.38194	1.97582	107.44889		Tetrachloroethene

EM-BTRF-000860

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B0102.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1284.88370		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B0103.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   1
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 20-Jul-11, 11:21:18                  Inj :   3
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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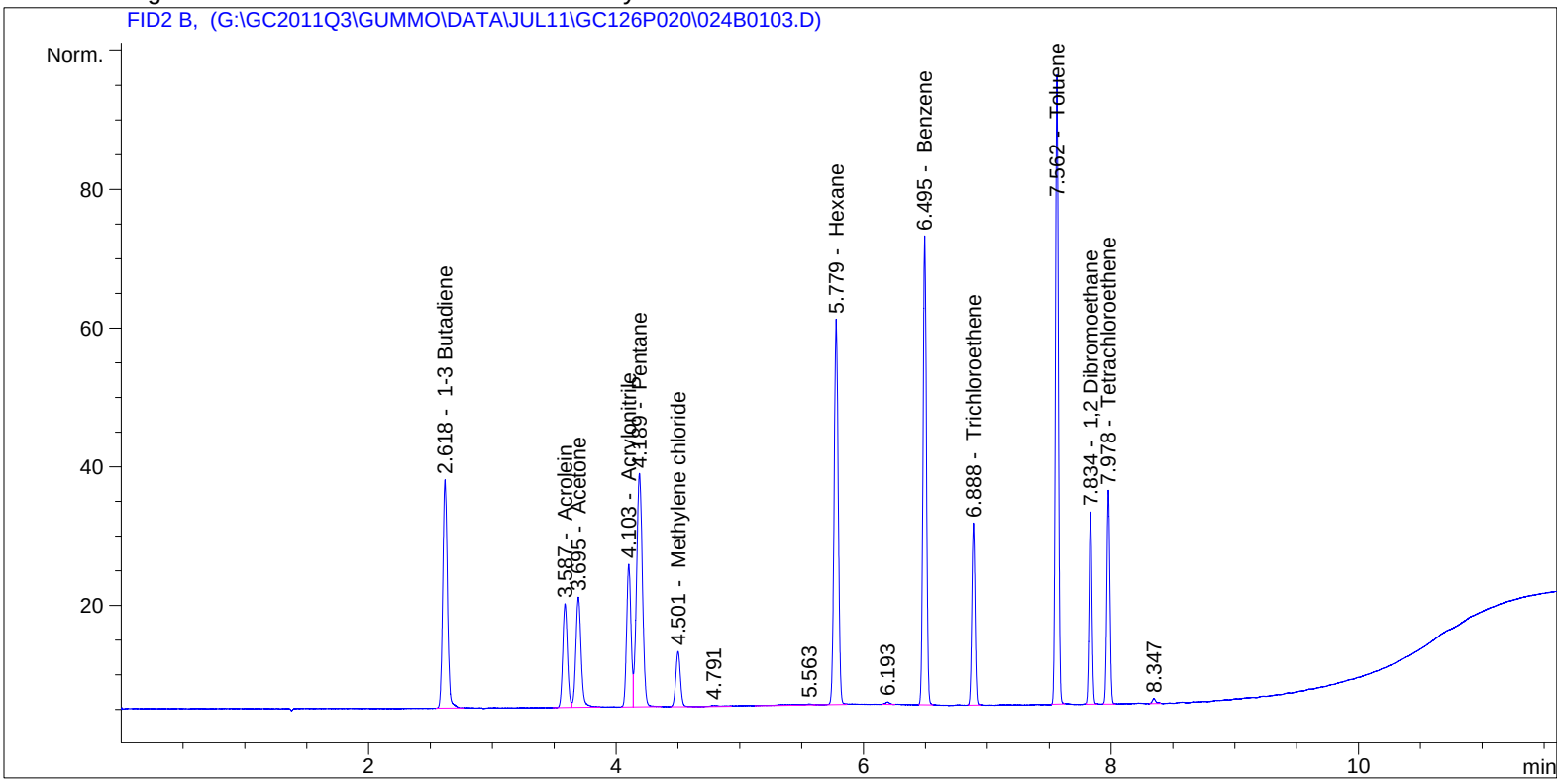


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.618	BV	85.96267	1.21199	104.18555		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.587	BV	39.45975	2.67034	105.37096		Acrolein
3.695	VB	46.85563	2.22255	104.13903		Acetone
4.103	BV	51.29559	2.03138	104.20060		Acrylonitrile
4.189	VB	110.91010	9.56511e-1	106.08672		Pentane
4.501	BB	20.57349	5.11043	105.13926		Methylene chloride
5.779	VV	130.46725	8.09882e-1	105.66306		Hexane
6.495	BB	131.32050	8.11536e-1	106.57134		Benzene
6.888	BB	47.77698	2.17432	103.88267		Trichloroethene
7.562	BB	152.52553	6.88991e-1	105.08873		Toluene
7.834	BB	45.70261	2.36329	108.00842		1,2 Dibromoethane
7.978	BB	53.48962	1.97614	105.70322		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B0103.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1264.03956		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B1403.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  14
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 21:06:01                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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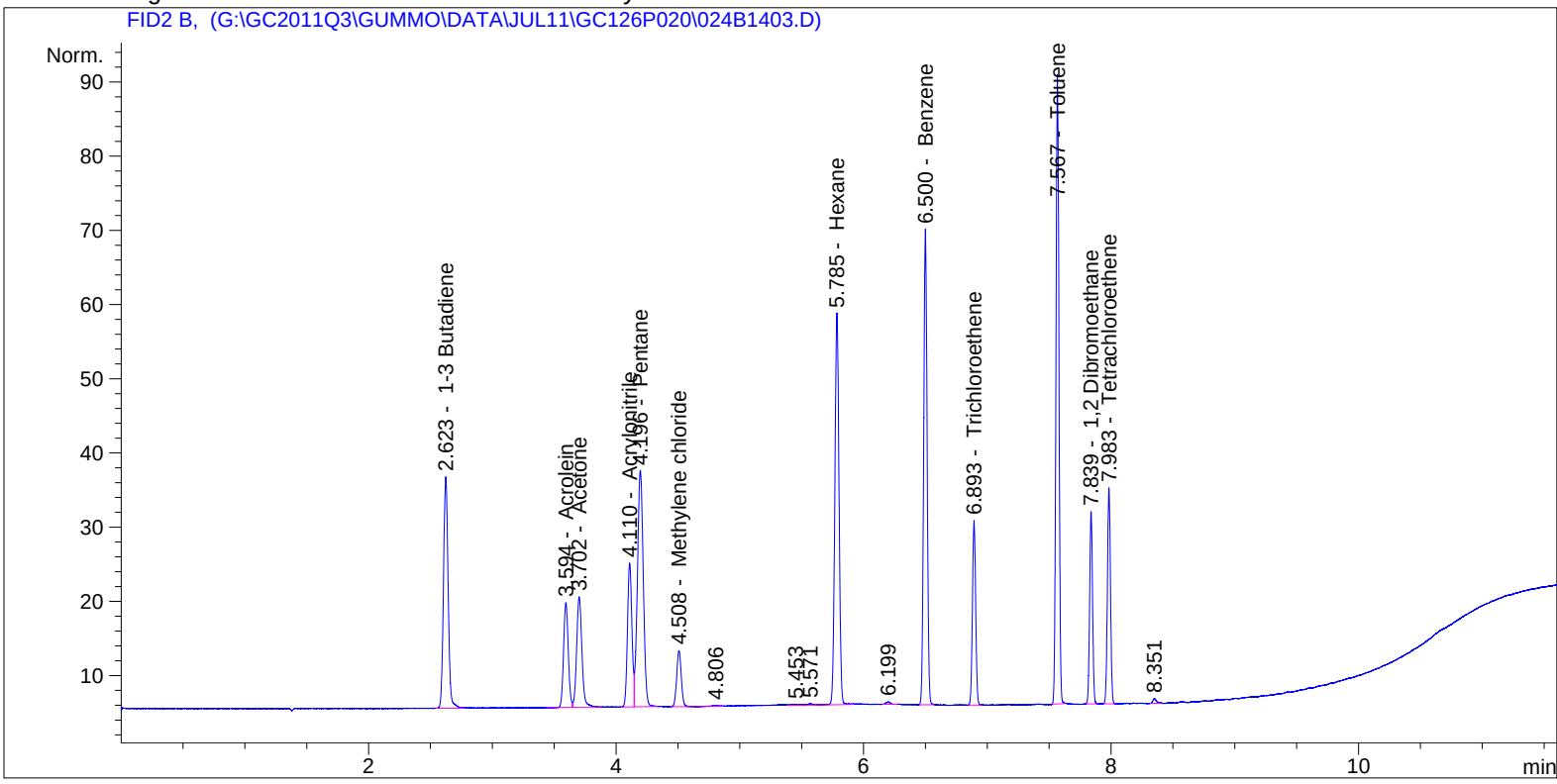


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.623	BV	81.92670	1.21228	99.31821		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.594	BV	37.14691	2.67116	99.22551		Acrolein
3.702	VB	44.02571	2.22401	97.91366		Acetone
4.110	VV	48.24555	2.03280	98.07378		Acrylonitrile
4.196	VB	104.80231	9.56699e-1	100.26424		Pentane
4.508	BB	19.50062	5.11177	99.68274		Methylene chloride
5.785	VB	124.16015	8.10067e-1	100.57807		Hexane
6.500	BB	124.19874	8.11746e-1	100.81778		Benzene
6.893	BB	45.20274	2.17597	98.35986		Trichloroethene
7.567	BB	143.41750	6.89556e-1	98.89435		Toluene
7.839	BB	42.69363	2.36471	100.95819		1,2 Dibromoethane
7.983	BB	50.39720	1.97736	99.65342		Tetrachloroethene

EM-BTRF-000864

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P020\024B1403.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1193.73981		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P027\024B1501.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :  15
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 27-Jul-11, 16:09:55                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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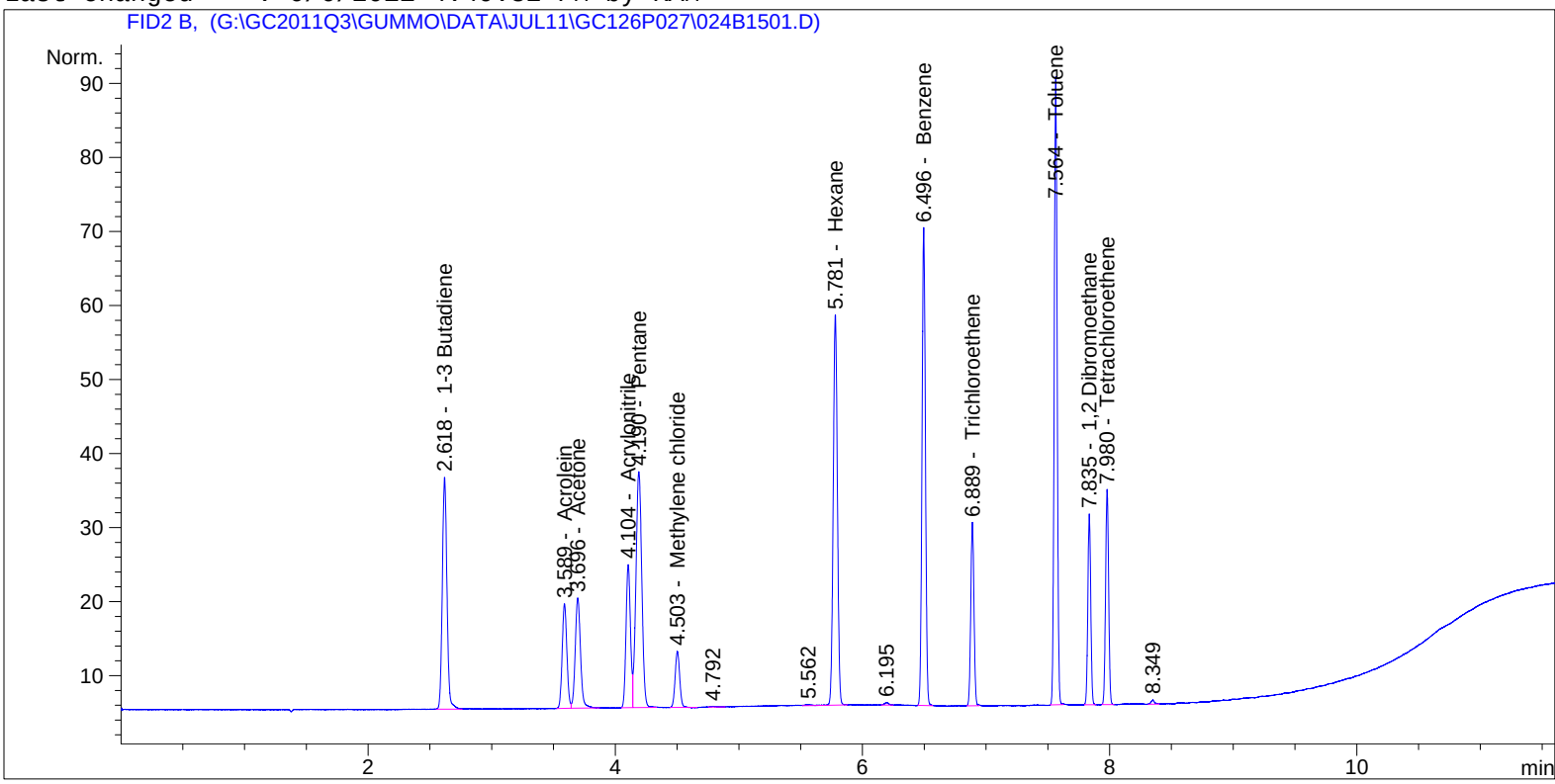


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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.618	BV	82.02731	1.21227	99.43954		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.589	BV	37.24823	2.67113	99.49471		Acrolein
3.696	VB	44.13411	2.22395	98.15211		Acetone
4.104	BV	48.25595	2.03280	98.09469		Acrylonitrile
4.190	VB	104.92998	9.56695e-1	100.38594		Pentane
4.503	BB	19.39044	5.11192	99.12233		Methylene chloride
5.781	VV	123.88919	8.10076e-1	100.35962		Hexane
6.496	BB	124.42673	8.11739e-1	101.00197		Benzene
6.889	BB	45.14462	2.17601	98.23517		Trichloroethene
7.564	BB	143.47809	6.89552e-1	98.93556		Toluene
7.835	BB	42.61301	2.36475	100.76929		1,2 Dibromoethane
7.980	BB	50.22935	1.97743	99.32505		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P027\024B1501.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1193.31597		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P027\024B1502.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :  15
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 27-Jul-11, 16:29:22                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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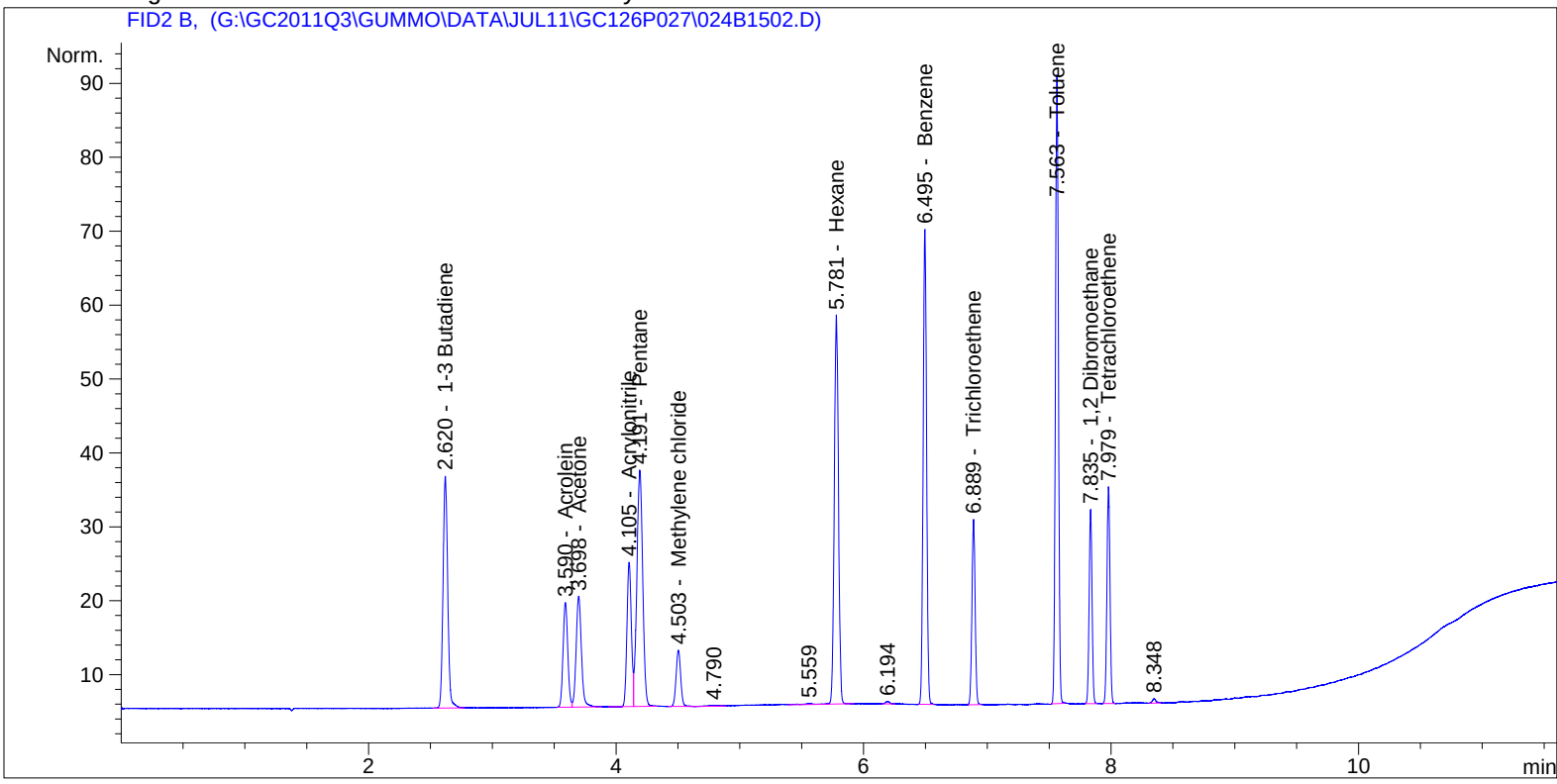


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620	BV	82.18315	1.21226	99.62748		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.590	BV	37.42603	2.67106	99.96714		Acrolein
3.698	VB	44.38123	2.22382	98.69574		Acetone
4.105	BV	48.34988	2.03275	98.28336		Acrylonitrile
4.191	VB	105.09795	9.56689e-1	100.54607		Pentane
4.503	BB	19.56859	5.11168	100.02843		Methylene chloride
5.781	VB	124.07172	8.10070e-1	100.50678		Hexane
6.495	BB	124.90414	8.11724e-1	101.38767		Benzene
6.889	BB	45.44513	2.17581	98.87990		Trichloroethene
7.563	BB	144.64363	6.89476e-1	99.72825		Toluene
7.835	BB	43.26060	2.36443	102.28663		1,2 Dibromoethane
7.979	BB	50.78024	1.97720	100.40277		Tetrachloroethene

EM-BTRF-000868

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P027\024B1502.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1200.34021		

2 Warnings or Errors :

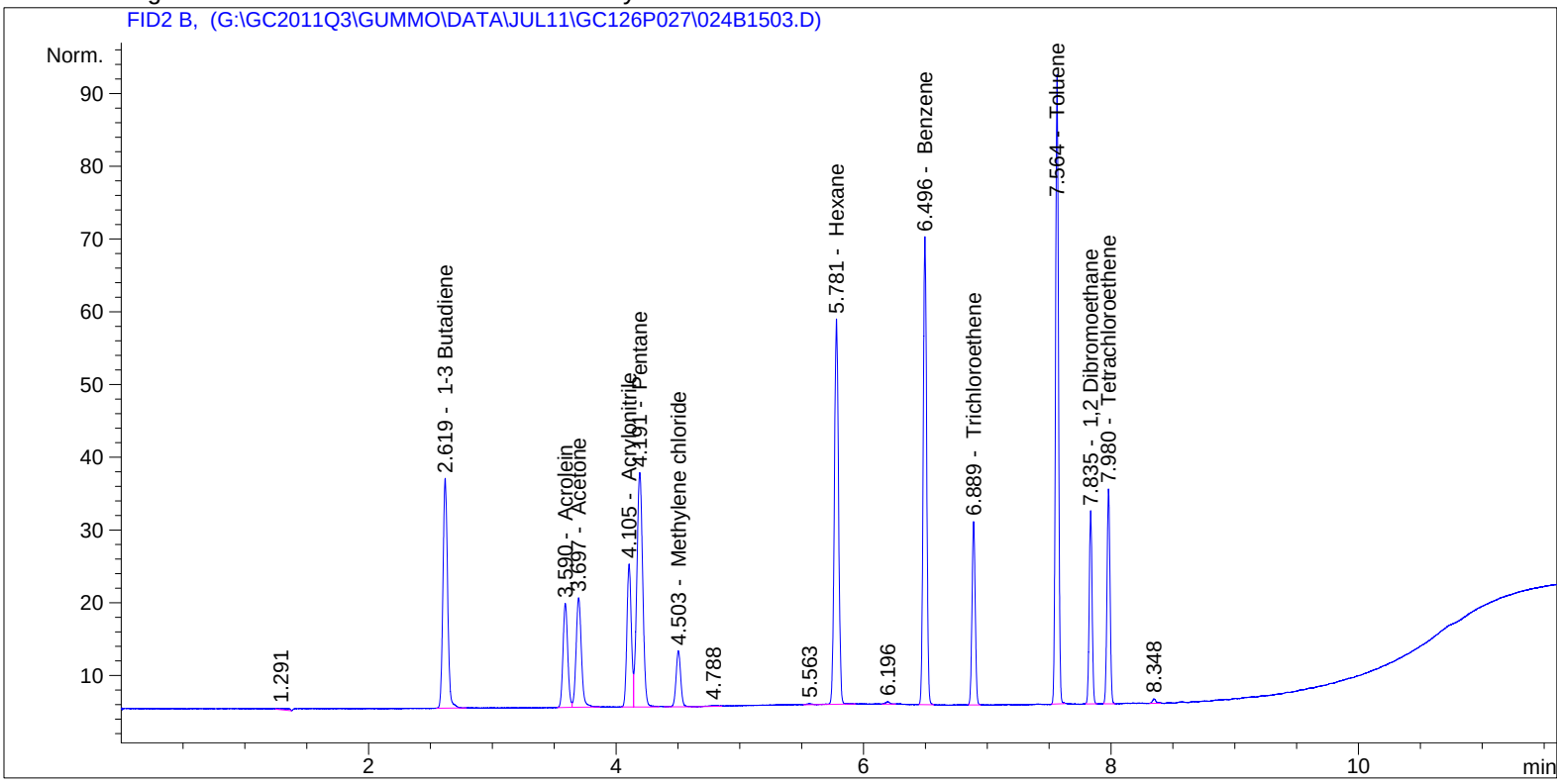
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P027\024B1503.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :  15
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 27-Jul-11, 16:48:39               Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.619	BB	82.51555	1.21224	100.02835		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.590	BV	37.72263	2.67095	100.75525		Acrolein
3.697	VB	44.66832	2.22366	99.32730		Acetone
4.105	BV	49.04356	2.03241	99.67681		Acrylonitrile
4.191	VB	106.52906	9.56643e-1	101.91032		Pentane
4.503	VV	20.08564	5.11102	102.65809		Methylene chloride
5.781	VB	125.08025	8.10039e-1	101.31989		Hexane
6.496	BB	125.92252	8.11693e-1	102.21039		Benzene
6.889	BB	45.76207	2.17560	99.55986		Trichloroethene
7.564	BB	145.82030	6.89400e-1	100.52850		Toluene
7.835	BB	43.68041	2.36422	103.27028		1,2 Dibromoethane
7.980	BB	51.15298	1.97705	101.13198		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P027\024B1503.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1212.37701		

2 Warnings or Errors :

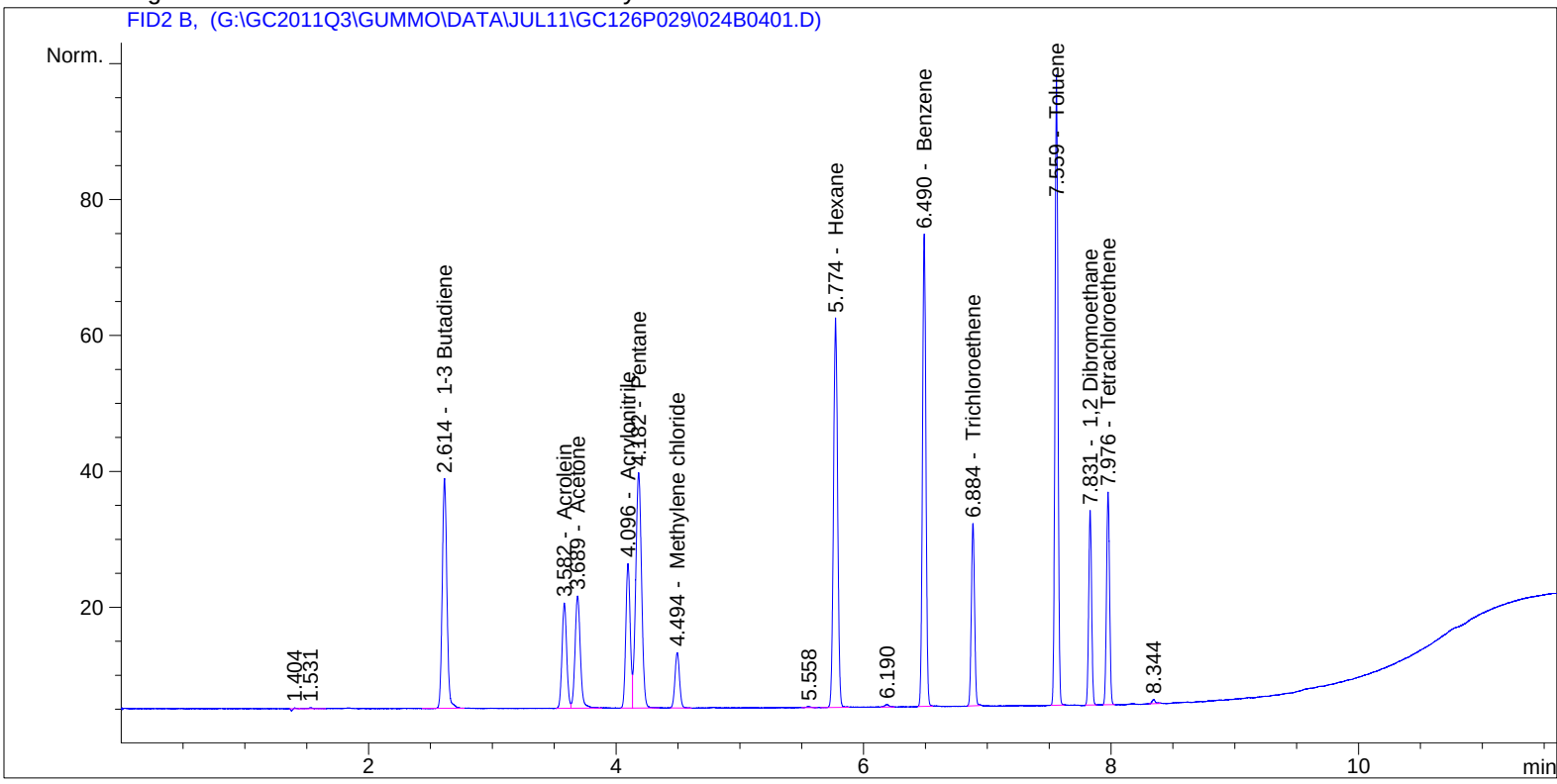
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\024B0401.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==================================================================
Acq. Operator   : MGM                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 28-Jul-11, 13:49:54                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.614	BB	88.39252	1.21182	107.11593		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.582	BV	40.75640	2.66992	108.81629		Acrolein
3.689	VB	48.91795	2.22159	108.67580		Acetone
4.096	BV	53.09446	2.03061	107.81411		Acrylonitrile
4.182	VB	113.64808	9.56433e-1	108.69681		Pentane
4.494	BB	20.88239	5.11006	106.71033		Methylene chloride
5.774	VV	133.93175	8.09787e-1	108.45624		Hexane
6.490	BB	134.73018	8.11444e-1	109.32598		Benzene
6.884	BB	48.78989	2.17372	106.05576		Trichloroethene
7.559	BB	157.39005	6.88716e-1	108.39709		Toluene
7.831	BB	47.07786	2.36270	111.23073		1,2 Dibromoethane
7.976	BB	54.37093	1.97582	107.42737		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\024B0401.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1298.72244		

2 Warnings or Errors :

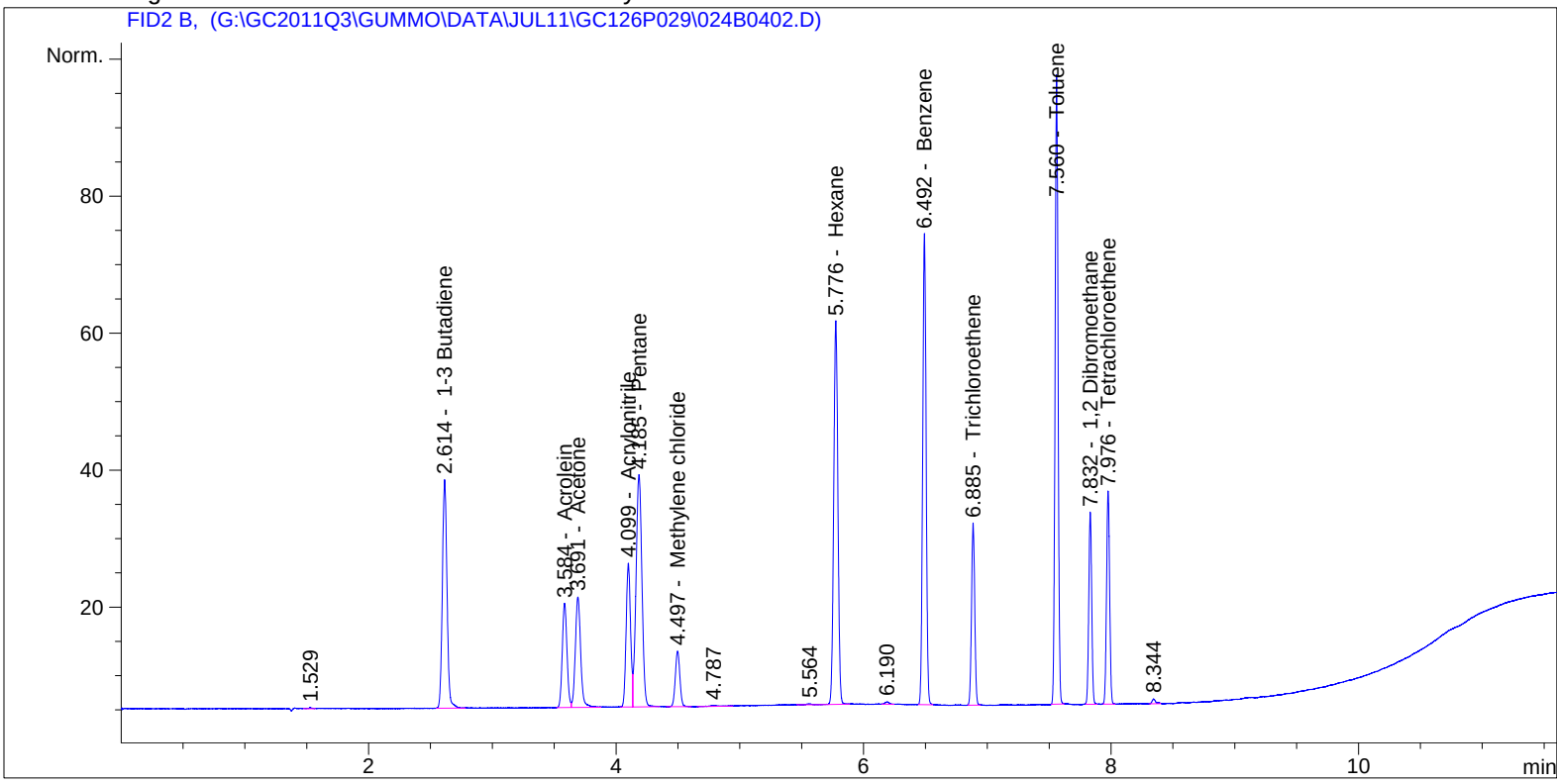
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\024B0402.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator : MGM Seq. Line : 4
Acq. Instrument : Gummo online Location : Vial 24
Injection Date : 28-Jul-11, 14:09:01 Inj : 2
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.614	BB	87.37091	1.21189	105.88388		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.584	BV	40.17060	2.67011	107.25976		Acrolein
3.691	VB	48.19888	2.22192	107.09395		Acetone
4.099	BV	52.30508	2.03094	106.22842		Acrylonitrile
4.185	VB	112.21631	9.56473e-1	107.33192		Pentane
4.497	BB	20.75686	5.11021	106.07187		Methylene chloride
5.776	VB	131.84215	8.09844e-1	106.77154		Hexane
6.492	BB	133.05559	8.11489e-1	107.97310		Benzene
6.885	BB	48.31350	2.17400	105.03371		Trichloroethene
7.560	BB	155.01173	6.88848e-1	106.77960		Toluene
7.832	BB	46.53968	2.36292	109.96974		1,2 Dibromoethane
7.976	BB	54.02309	1.97595	106.74687		Tetrachloroethene

EM-BTRF-000874

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\024B0402.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1283.14436		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\024B0403.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 28-Jul-11, 14:28:06              Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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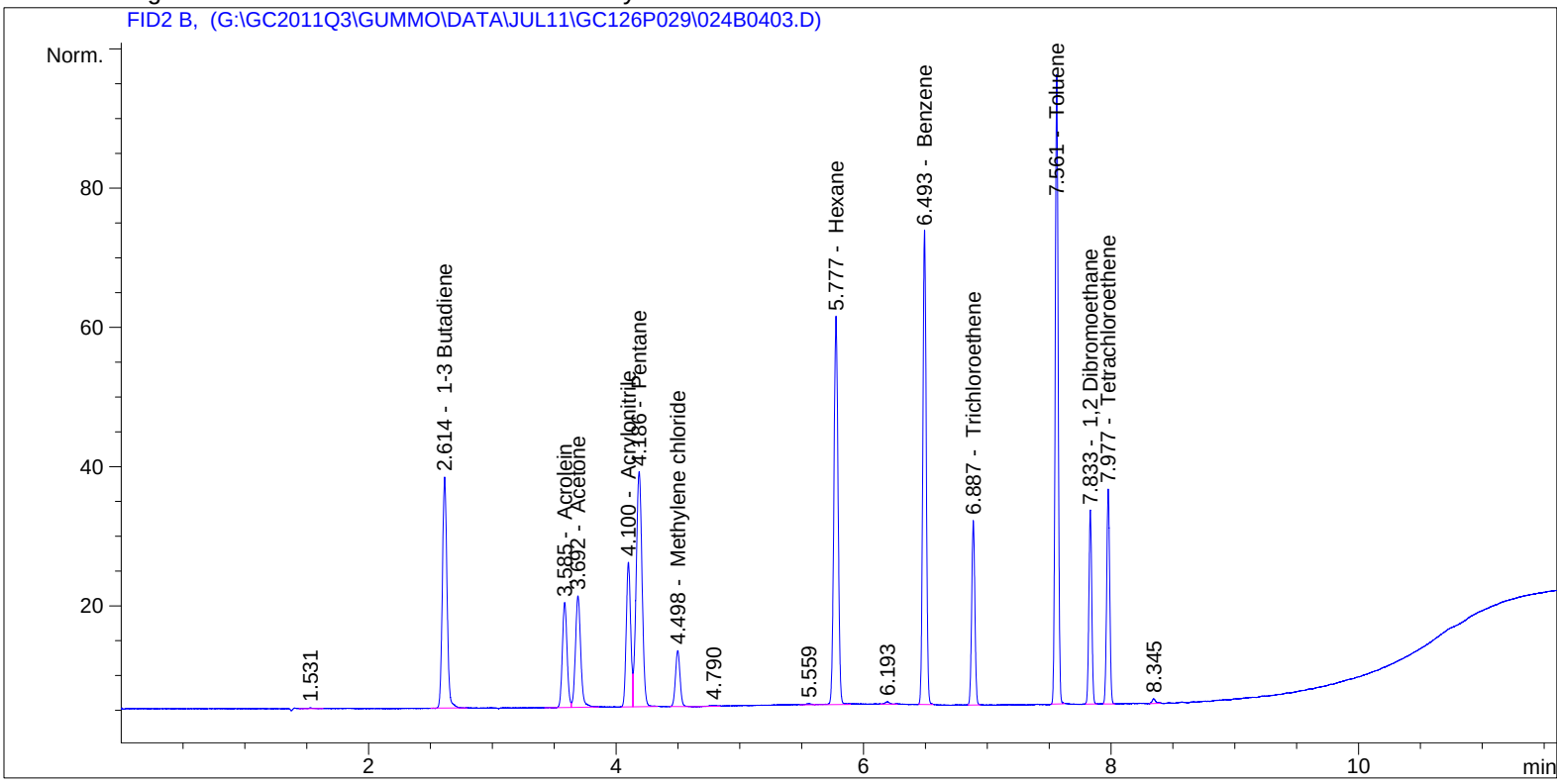


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.614	BB	86.32924	1.21196	104.62763		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.585	VV	39.85668	2.67021	106.42563		Acrolein
3.692	VB	47.33000	2.22232	105.18257		Acetone
4.100	BV	51.73359	2.03118	105.08044		Acrylonitrile
4.186	VB	111.37997	9.56497e-1	106.53464		Pentane
4.498	BB	20.63362	5.11035	105.44511		Methylene chloride
5.777	VB	131.75250	8.09846e-1	106.69926		Hexane
6.493	BB	132.09245	8.11515e-1	107.19500		Benzene
6.887	BB	47.94648	2.17422	104.24631		Trichloroethene
7.561	BB	153.06082	6.88960e-1	105.45278		Toluene
7.833	BB	45.64159	2.36331	107.86544		1,2 Dibromoethane
7.977	BB	53.43216	1.97617	105.59081		Tetrachloroethene

EM-BTRF-000876

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P029\024B0403.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1270.34564		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

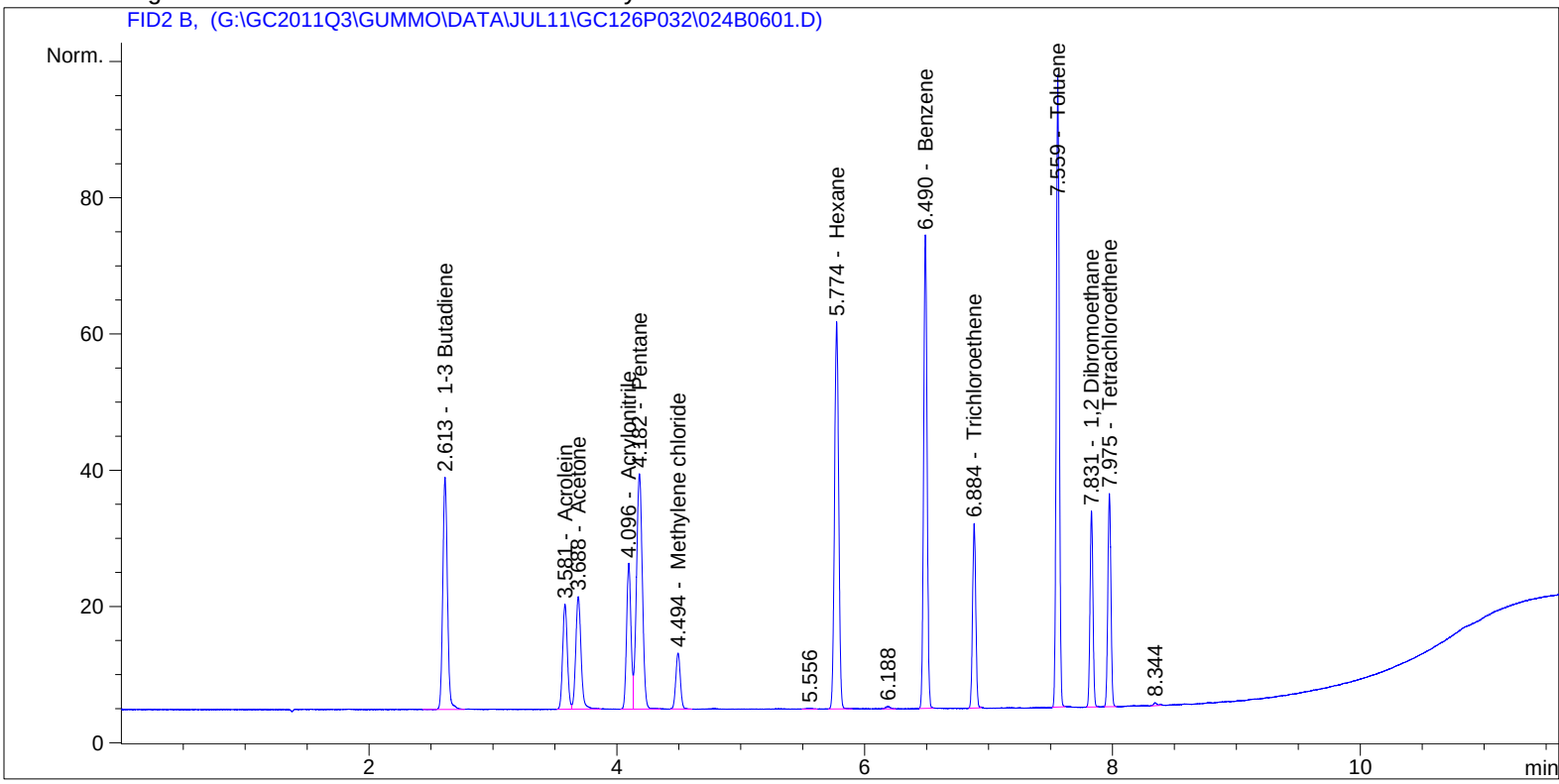
==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\024B0601.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

==========

Acq. Operator : MGM Seq. Line : 6
Acq. Instrument : Gummo online Location : Vial 24
Injection Date : 02-Aug-11, 09:14:31 Inj : 1
Inj Volume : External
Acq. Method : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.613	BV	89.10640	1.21177	107.97687		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.581	BV	40.75883	2.66992	108.82274		Acrolein
3.688	VB	48.94635	2.22158	108.73828		Acetone
4.096	BV	53.21949	2.03056	108.06527		Acrylonitrile
4.182	VB	113.95367	9.56425e-1	108.98812		Pentane
4.494	BB	20.96233	5.10997	107.11691		Methylene chloride
5.774	BB	133.93492	8.09787e-1	108.45880		Hexane
6.490	BB	135.13086	8.11433e-1	109.64968		Benzene
6.884	BB	49.04643	2.17358	106.60616		Trichloroethene
7.559	BB	157.67392	6.88701e-1	108.59015		Toluene
7.831	BB	47.47041	2.36254	112.15050		1,2 Dibromoethane
7.975	BB	54.93617	1.97562	108.53316		Tetrachloroethene

EM-BTRF-000878

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\024B0601.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1303.69664		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\024B0602.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                              Seq. Line :   6
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 02-Aug-11, 09:33:38                  Inj :   2
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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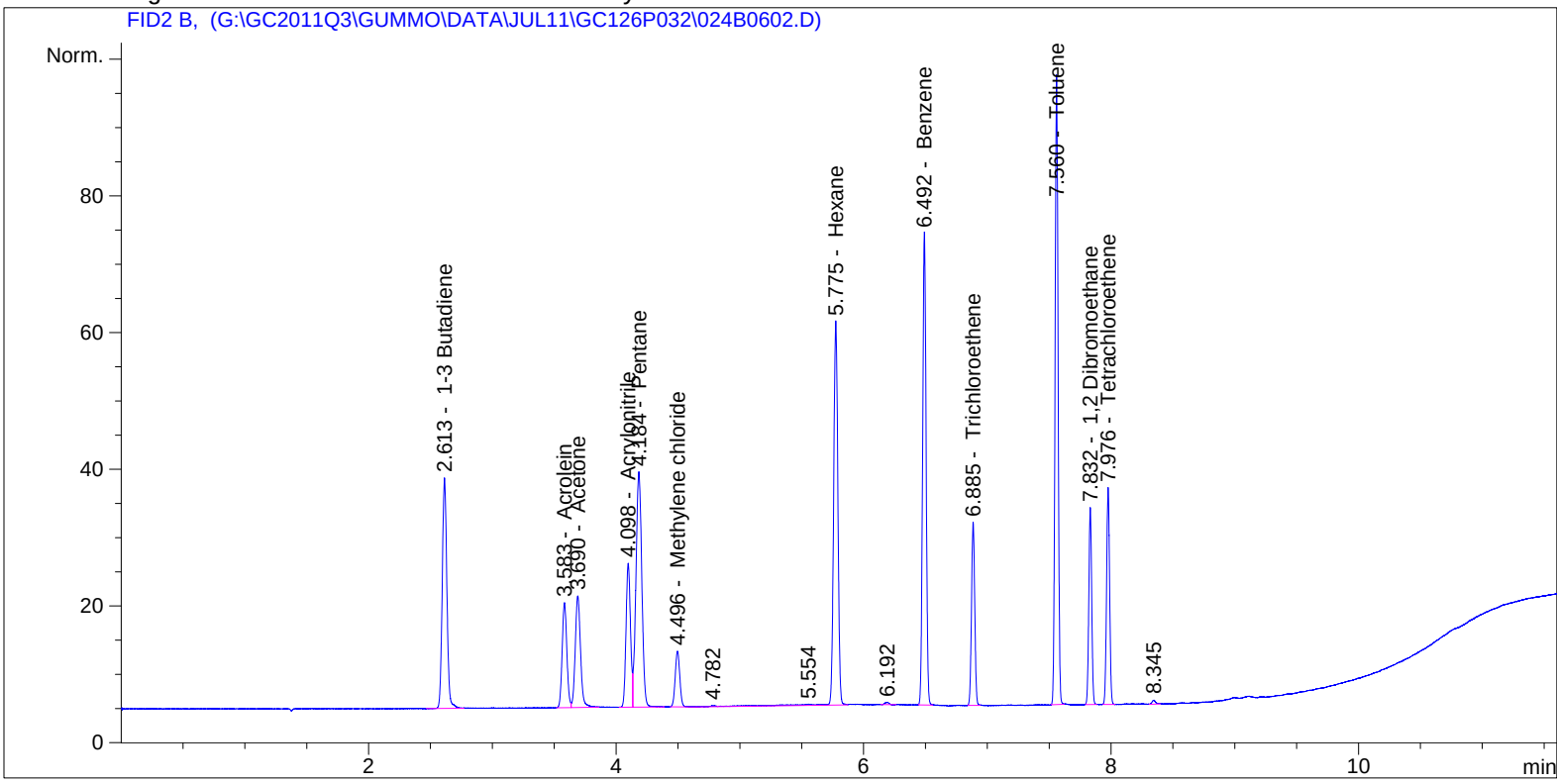


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.613	BB	88.03734	1.21184	106.68759		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.583	BV	40.44266	2.67002	107.98265		Acrolein
3.690	VB	48.24118	2.22190	107.18702		Acetone
4.098	BV	52.71306	2.03077	107.04796		Acrylonitrile
4.184	VB	113.54928	9.56436e-1	108.60262		Pentane
4.496	BB	20.96494	5.10997	107.13015		Methylene chloride
5.775	VV	133.76692	8.09792e-1	108.32335		Hexane
6.492	BB	134.40494	8.11452e-1	109.06322		Benzene
6.885	BB	48.82244	2.17371	106.12560		Trichloroethene
7.560	BB	156.54591	6.88763e-1	107.82299		Toluene
7.832	BB	46.99306	2.36273	111.03203		1,2 Dibromoethane
7.976	BB	54.66583	1.97572	108.00428		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\024B0602.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1295.00948		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\024B0603.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
Acq. Operator   : MGM                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 02-Aug-11, 09:52:52                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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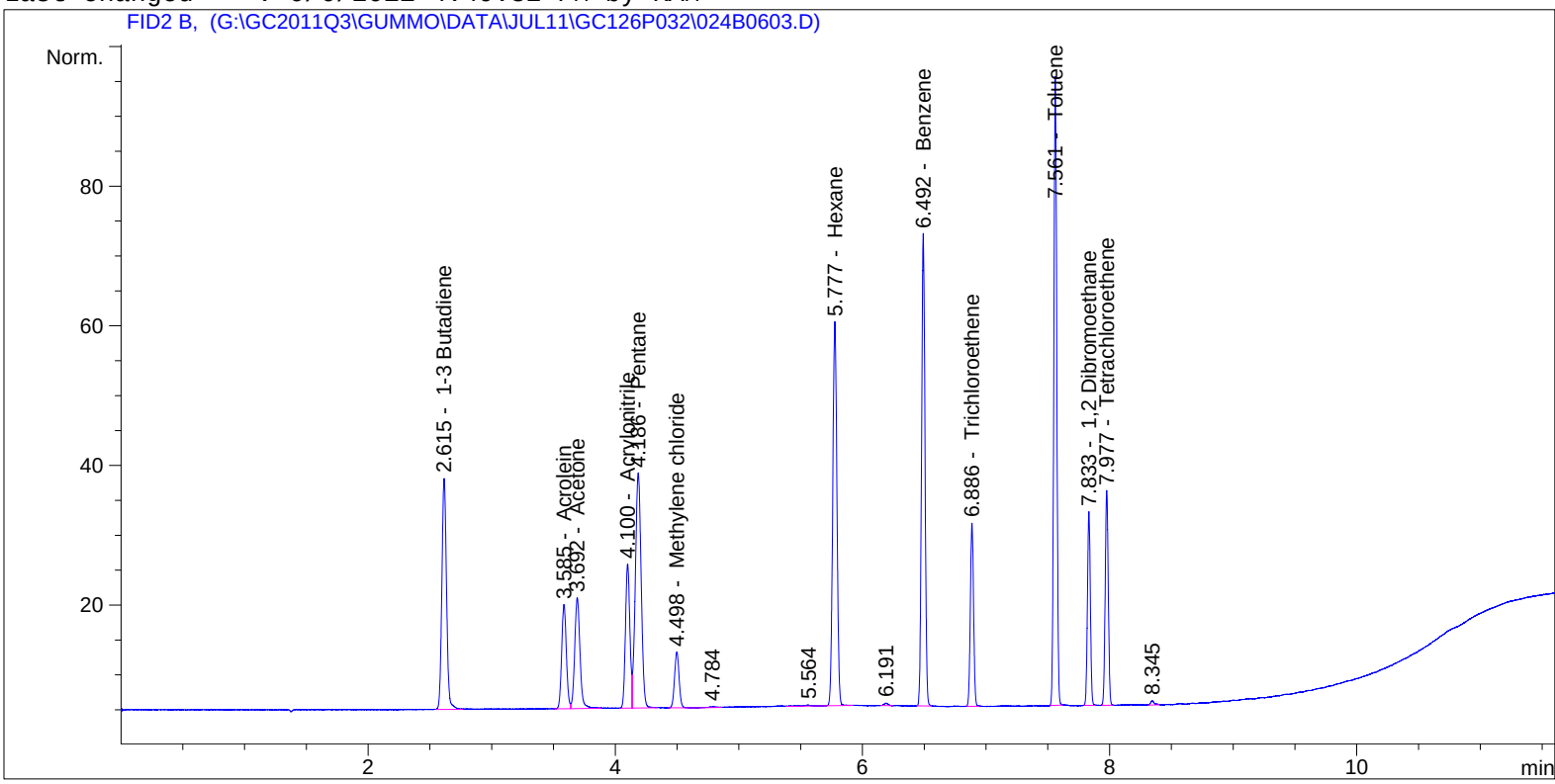

External Standard Report

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Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.615	BV	86.10154	1.21198	104.35303		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.585	VV	39.52795	2.67032	105.55216		Acrolein
3.692	VB	47.09824	2.22243	104.67274		Acetone
4.100	BV	51.26949	2.03139	104.14818		Acrylonitrile
4.186	VB	110.47648	9.56524e-1	105.67335		Pentane
4.498	BV	20.46530	5.11055	104.58905		Methylene chloride
5.777	VB	130.06898	8.09893e-1	105.34196		Hexane
6.492	BB	131.21292	8.11539e-1	106.48444		Benzene
6.886	BB	47.71764	2.17436	103.75536		Trichloroethene
7.561	BB	152.36671	6.89000e-1	104.98072		Toluene
7.833	BB	45.66715	2.36330	107.92534		1,2 Dibromoethane
7.977	BB	53.34021	1.97620	105.41093		Tetrachloroethene

EM-BTRF-000882

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P032\024B0603.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1262.88725		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\024B1101.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 04-Aug-11, 07:04:18               Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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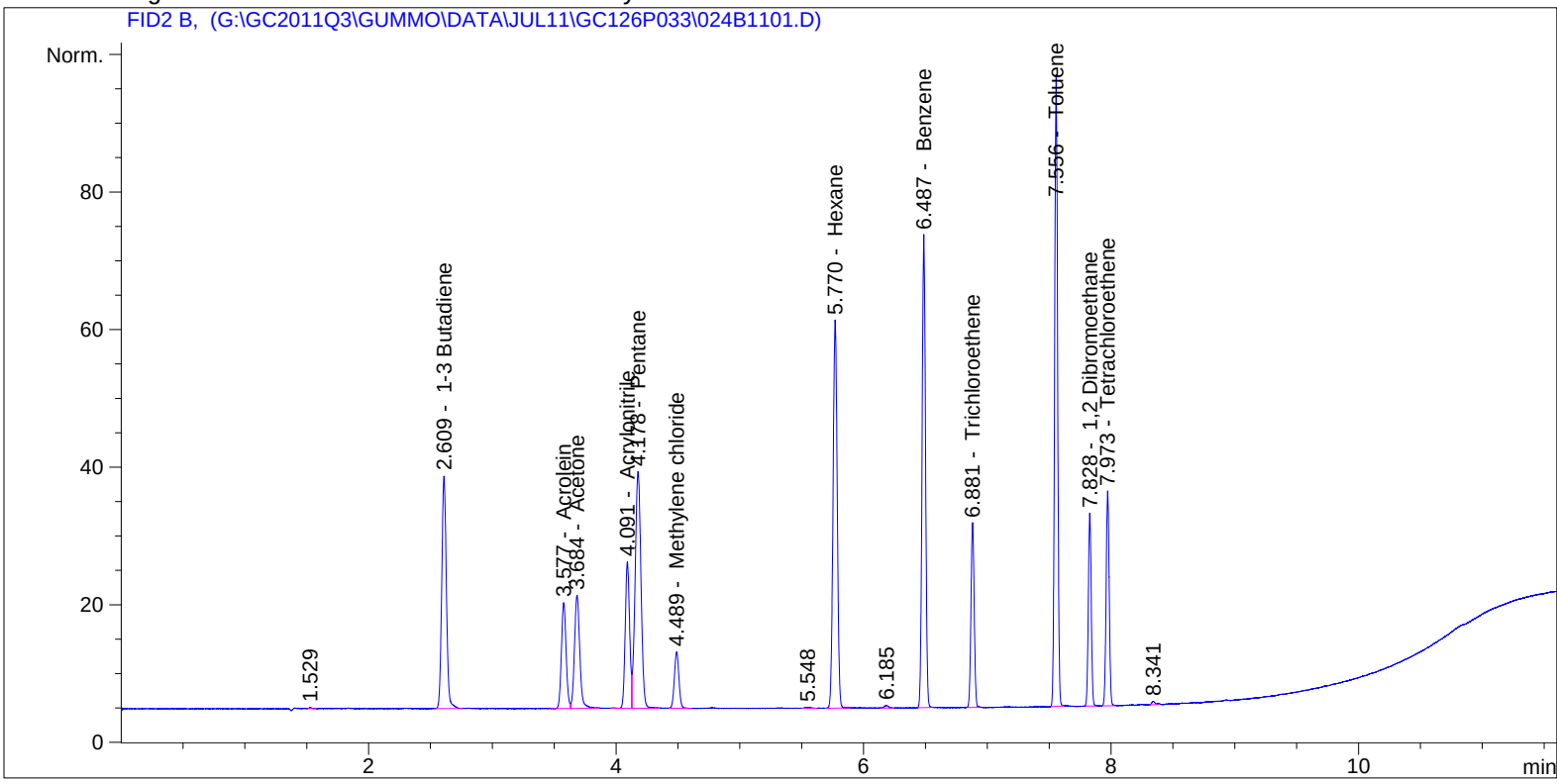


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.609 BV       88.10688    1.21184  106.77146    1-3 Butadiene
  3.453            -           -         -         Acetonitrile
  3.577 BV       40.49123    2.67000  108.11169    Acrolein
  3.684 VB       48.75470    2.22167  108.31668    Acetone
  4.091 BV       52.72598    2.03076  107.07392    Acrylonitrile
  4.178 VB      113.12984 9.56448e-1  108.20277    Pentane
  4.489 BB       20.83898    5.11011  106.48953    Methylene chloride
  5.770 VB      132.83318 8.09817e-1  107.57054    Hexane
  6.487 BB      133.92122 8.11465e-1  108.67243    Benzene
  6.881 BB       48.66756    2.17380  105.79332    Trichloroethene
  7.556 BB      155.44699 6.88824e-1  107.07561    Toluene
  7.828 BB       46.25476    2.36305  109.30215    1,2 Dibromoethane
  7.973 BB       54.21110    1.97588  107.11469    Tetrachloroethene
```

EM-BTRF-000884

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\024B1101.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1290.49478		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\024B1102.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                              Seq. Line :  11
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 04-Aug-11, 07:23:23                  Inj :   2
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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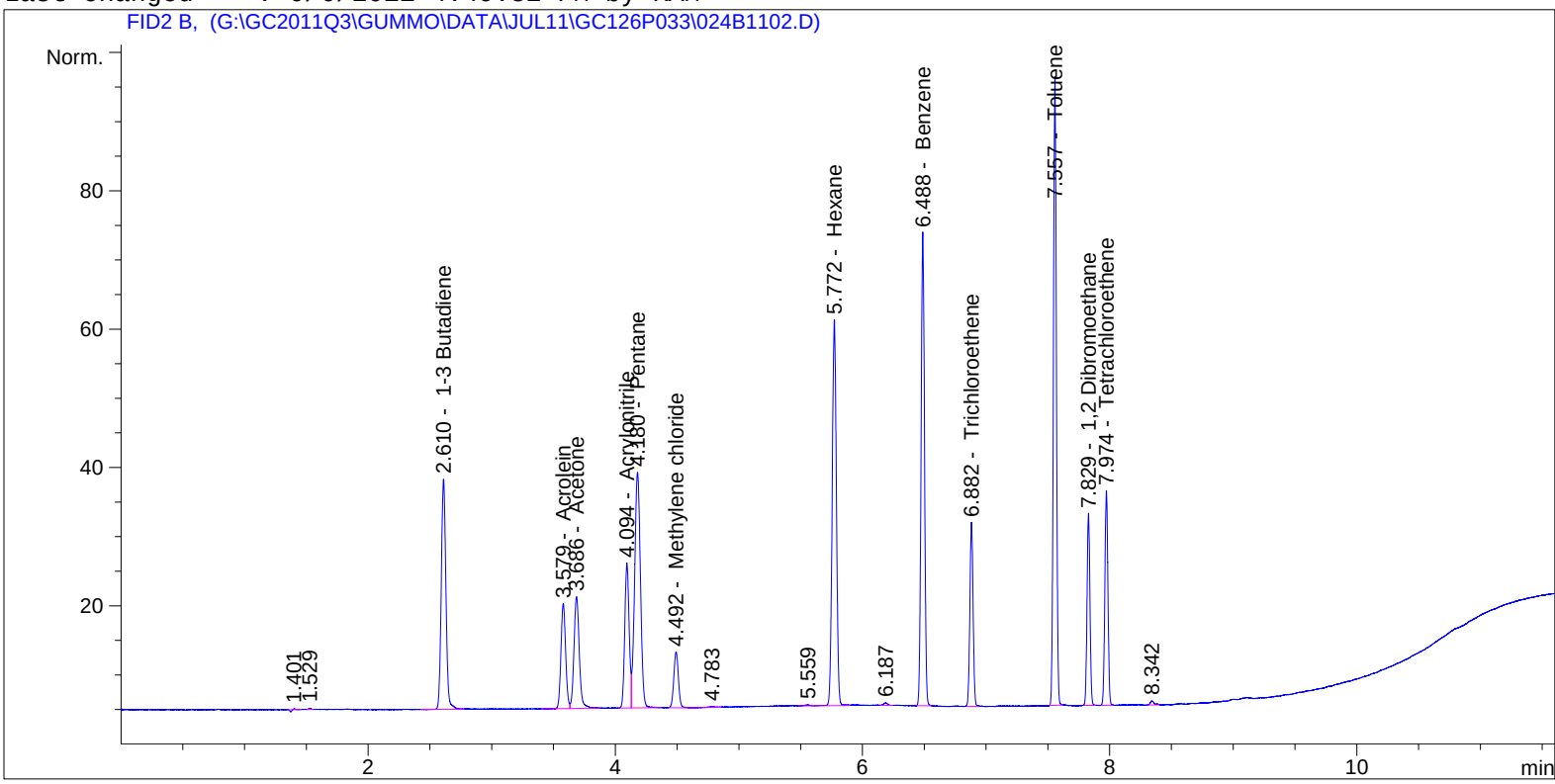


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.610	BB	86.93369	1.21192	105.35660		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.579	BV	39.98601	2.67017	106.76928		Acrolein
3.686	VB	47.99660	2.22201	106.64898		Acetone
4.094	VV	52.09623	2.03103	105.80890		Acrylonitrile
4.180	VB	112.13798	9.56476e-1	107.25724		Pentane
4.492	BV	20.85343	5.11010	106.56303		Methylene chloride
5.772	VB	132.33313	8.09830e-1	107.16738		Hexane
6.488	BB	132.69057	8.11499e-1	107.67820		Benzene
6.882	BB	48.27923	2.17402	104.96019		Trichloroethene
7.557	BB	154.27826	6.88890e-1	106.28076		Toluene
7.829	BB	46.01674	2.36315	108.74446		1,2 Dibromoethane
7.974	BB	53.95939	1.97597	106.62226		Tetrachloroethene

EM-BTRF-000886

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\024B1102.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1279.85729		

2 Warnings or Errors :

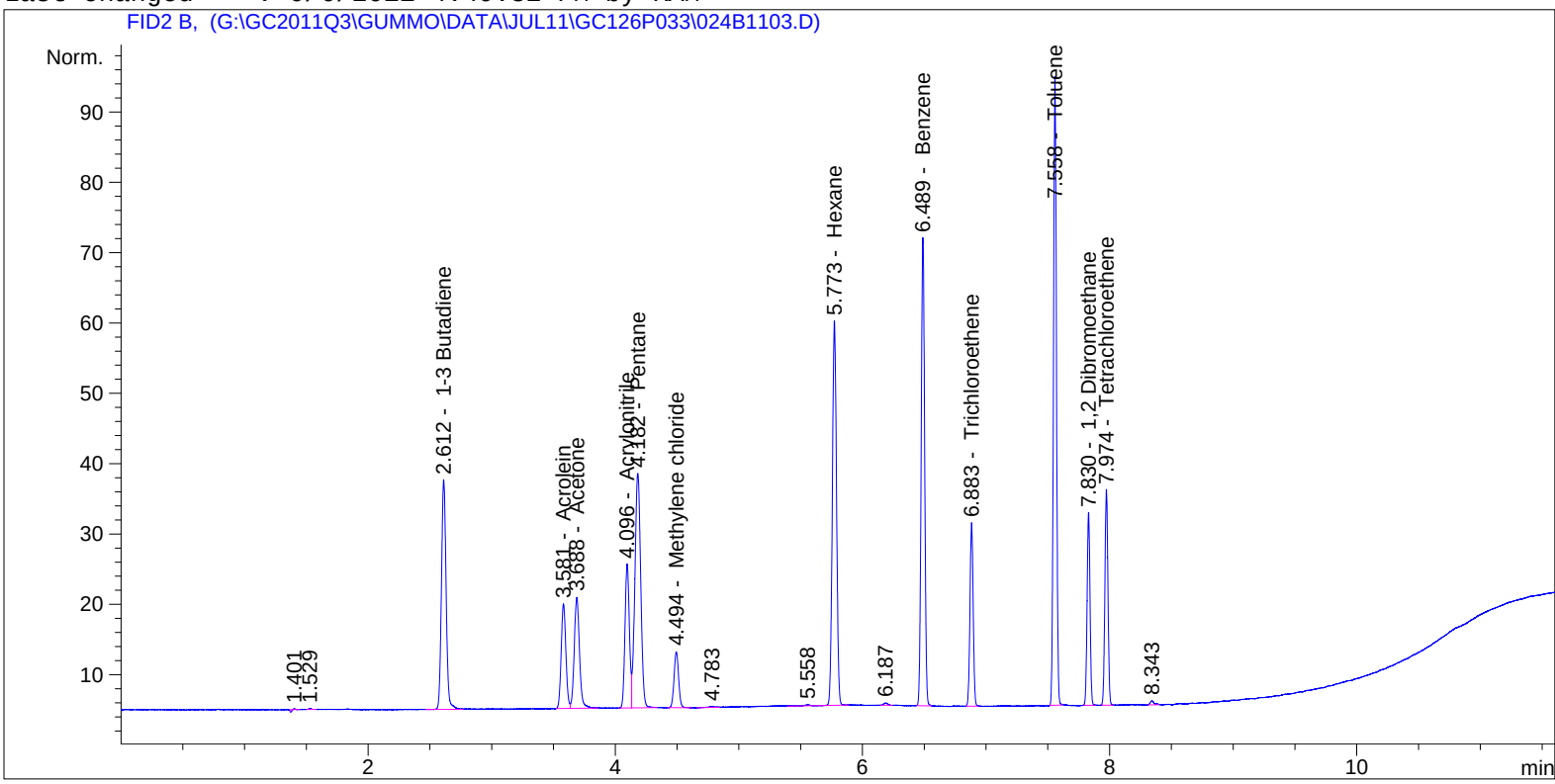
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\024B1103.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator	: MGM	Seq. Line	: 11
Acq. Instrument	: Gummo online	Location	: Vial 24
Injection Date	: 04-Aug-11, 07:42:30	Inj	: 3
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.612	VV	85.66107	1.21201	103.82183		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.581	BV	39.02867	2.67049	104.22553		Acrolein
3.688	VB	46.59158	2.22268	103.55815		Acetone
4.096	BV	50.83797	2.03158	103.28135		Acrylonitrile
4.182	VB	109.63269	9.56548e-1	104.86898		Pentane
4.494	BB	20.34096	5.11070	103.95663		Methylene chloride
5.773	VB	128.83632	8.09928e-1	104.34814		Hexane
6.489	BB	130.06137	8.11572e-1	105.55411		Benzene
6.883	BB	47.33256	2.17460	102.92920		Trichloroethene
7.558	BB	150.99387	6.89081e-1	104.04704		Toluene
7.830	BB	45.11514	2.36355	106.63195		1,2 Dibromoethane
7.974	BB	52.95828	1.97634	104.66376		Tetrachloroethene

EM-BTRF-000888

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P033\024B1103.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1251.88667		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P034B\024B0601.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 04-Aug-11, 21:35:15               Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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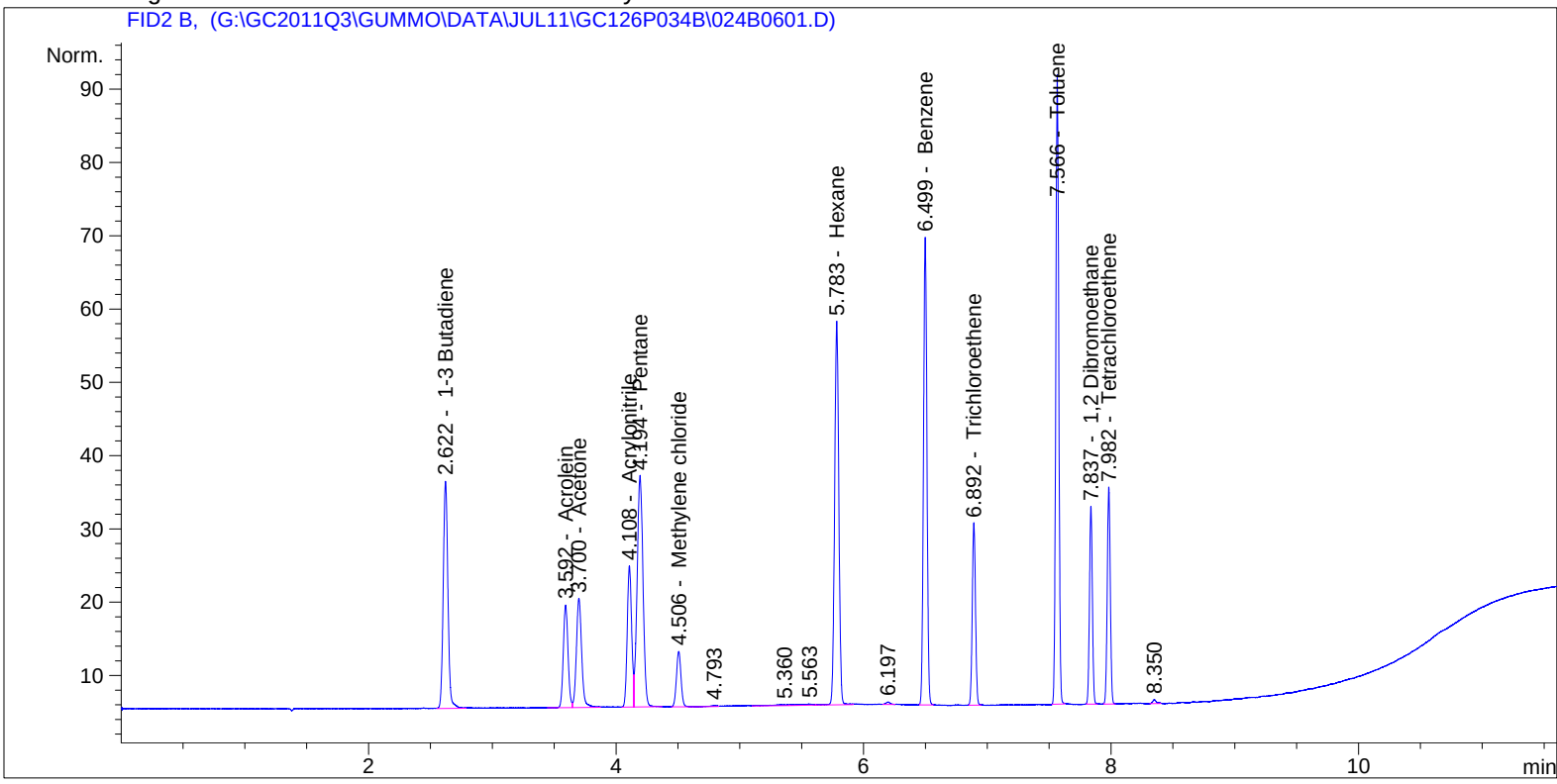


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.622	BV	81.61128	1.21231	98.93781		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.592	BV	37.07246	2.67119	99.02767		Acrolein
3.700	VB	44.08585	2.22398	98.04594		Acetone
4.108	BV	48.04543	2.03290	97.67178		Acrylonitrile
4.194	VB	104.37444	9.56713e-1	99.85635		Pentane
4.506	BB	19.34668	5.11198	98.89977		Methylene chloride
5.783	VB	123.73009	8.10081e-1	100.23135		Hexane
6.499	BB	124.06955	8.11750e-1	100.71341		Benzene
6.892	BB	45.19263	2.17598	98.33817		Trichloroethene
7.566	BB	144.88232	6.89460e-1	99.89058		Toluene
7.837	BB	44.21844	2.36397	104.53091		1,2 Dibromoethane
7.982	BB	50.90335	1.97715	100.64362		Tetrachloroethene

EM-BTRF-000890

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P034B\024B0601.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1196.78736		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P034B\024B0602.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
=====================================================================
Acq. Operator   : MGM                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 04-Aug-11, 21:54:45               Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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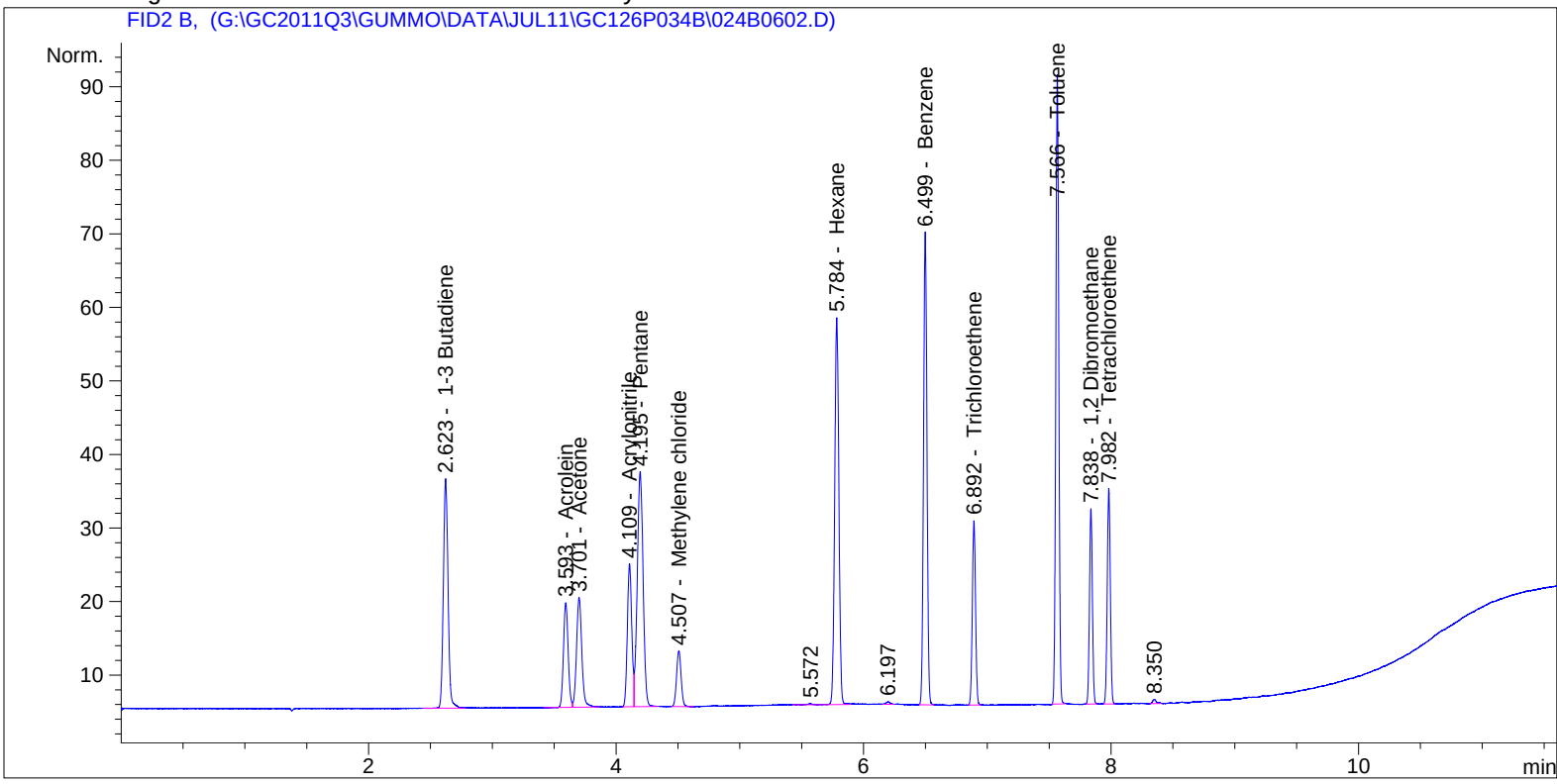


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=====================================================================
                      External Standard Report
=====================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.623	BV	81.94577	1.21228	99.34120		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.593	BV	37.27454	2.67112	99.56463		Acrolein
3.701	VB	44.11060	2.22396	98.10040		Acetone
4.109	BV	48.31663	2.03277	98.21657		Acrylonitrile
4.195	VB	104.92043	9.56695e-1	100.37683		Pentane
4.507	BB	19.45707	5.11183	99.46124		Methylene chloride
5.784	VB	124.06905	8.10070e-1	100.50462		Hexane
6.499	BB	124.71661	8.11730e-1	101.23616		Benzene
6.892	BB	45.33737	2.17588	98.64870		Trichloroethene
7.566	BB	144.66515	6.89474e-1	99.74288		Toluene
7.838	BB	43.63854	2.36424	103.17217		1,2 Dibromoethane
7.982	BB	50.84161	1.97718	100.52285		Tetrachloroethene

EM-BTRF-000892

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P034B\024B0602.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1198.88825		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P034B\024B0603.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

```
==========================================================================
Acq. Operator   : MGM                              Seq. Line :   6
Acq. Instrument : Gummo online                    Location : Vial 24
Injection Date  : 04-Aug-11, 22:14:13                  Inj :   3
                                                 Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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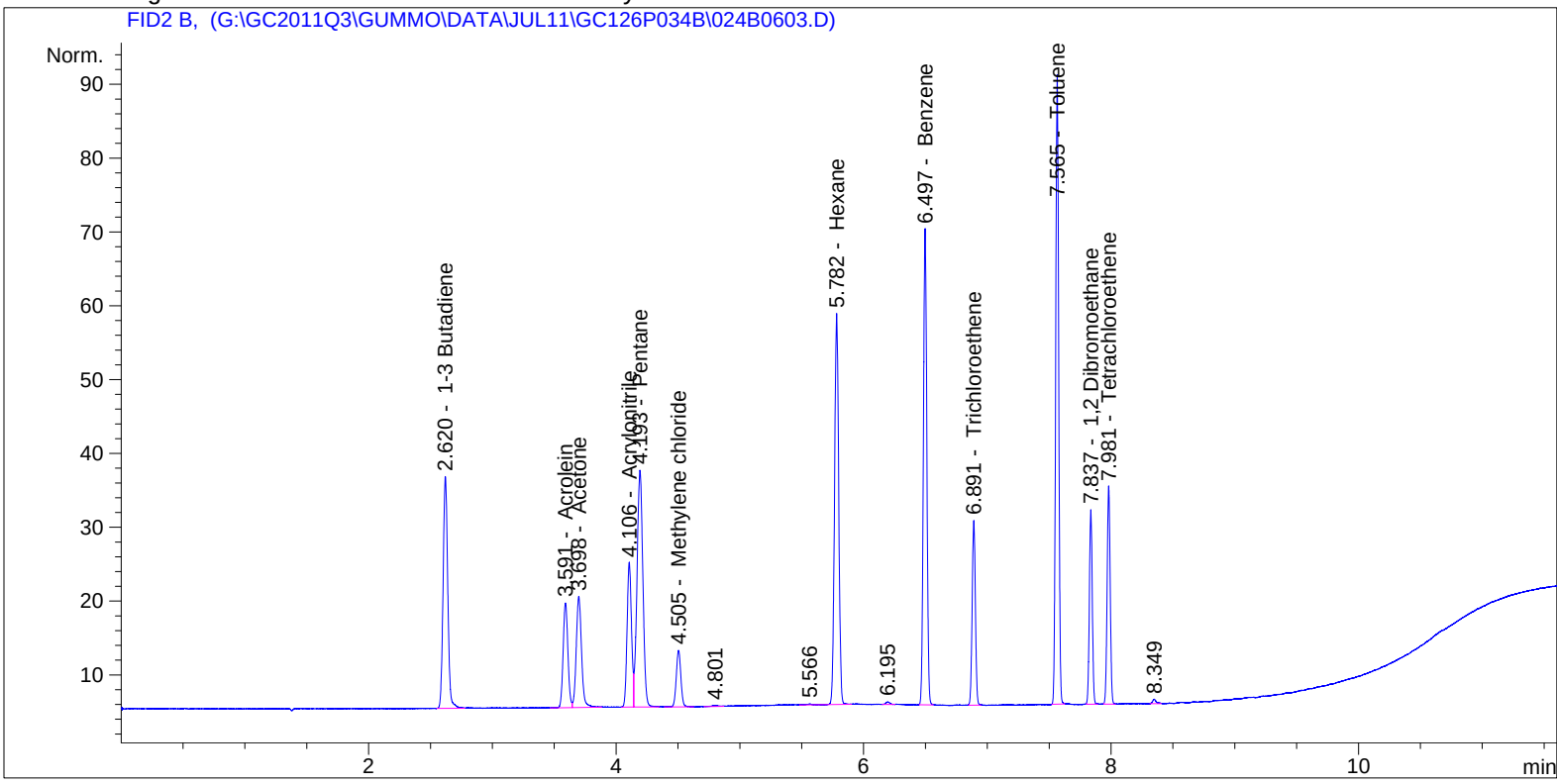


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620	BB	82.29057	1.21225	99.75702		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.591	VV	37.66016	2.67097	100.58925		Acrolein
3.698	VB	44.45256	2.22378	98.85266		Acetone
4.106	BV	48.61549	2.03262	98.81690		Acrylonitrile
4.193	VB	105.81268	9.56666e-1	101.22740		Pentane
4.505	VB	19.67469	5.11154	100.56801		Methylene chloride
5.782	VB	124.16341	8.10067e-1	100.58070		Hexane
6.497	BB	125.13225	8.11717e-1	101.57195		Benzene
6.891	BB	45.51118	2.17576	99.02161		Trichloroethene
7.565	BB	144.92464	6.89457e-1	99.91936		Toluene
7.837	BB	43.45274	2.36433	102.73682		1,2 Dibromoethane
7.981	BB	50.90006	1.97715	100.63719		Tetrachloroethene

EM-BTRF-000894

Data File G:\GC2011Q3\GUMMO\DATA\JUL11\GC126P034B\024B0603.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1204.27888		

2 Warnings or Errors :

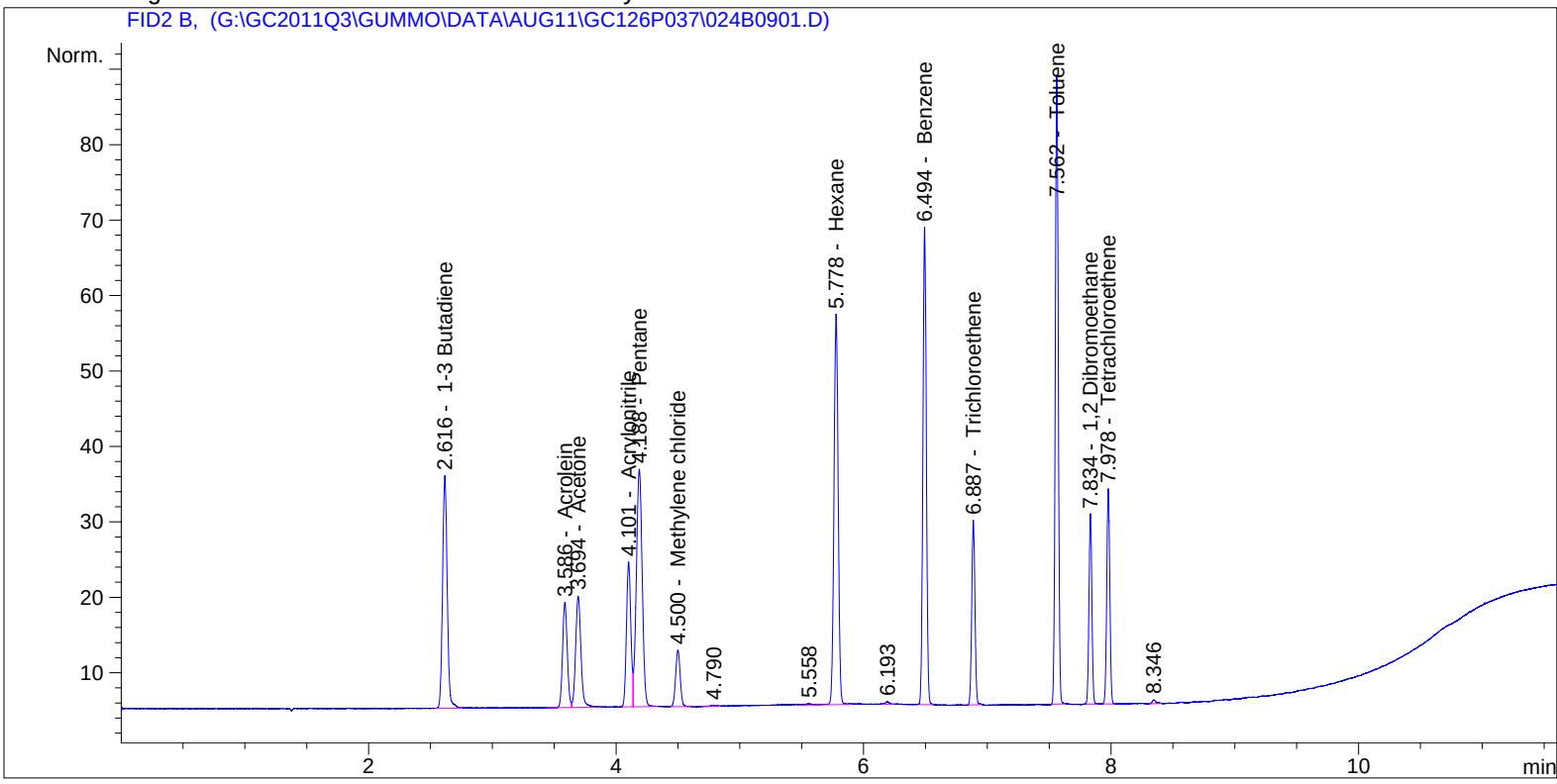
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P037\024B0901.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator	: mgm	Seq. Line	: 9
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 01:57:01	Inj	: 1
		Inj Volume	: External
Acq. Method	: C:\GC2011Q3\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.616	BV	80.86462	1.21236	98.03734		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.586	BV	36.78746	2.67130	98.27041		Acrolein
3.694	VB	43.62964	2.22423	97.04236		Acetone
4.101	BV	47.66207	2.03310	96.90172		Acrylonitrile
4.188	VB	103.59351	9.56738e-1	99.11189		Pentane
4.500	BB	19.23500	5.11213	98.33177		Methylene chloride
5.778	VB	122.88078	8.10107e-1	99.54661		Hexane
6.494	BB	122.53956	8.11798e-1	99.47735		Benzene
6.887	BB	44.48666	2.17646	96.82358		Trichloroethene
7.562	BB	140.86243	6.89727e-1	97.15665		Toluene
7.834	BB	41.55281	2.36531	98.28516		1,2 Dibromoethane
7.978	BB	49.38315	1.97779	97.66961		Tetrachloroethene

EM-BTRF-000896

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P037\024B0901.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1176.65443		

2 Warnings or Errors :

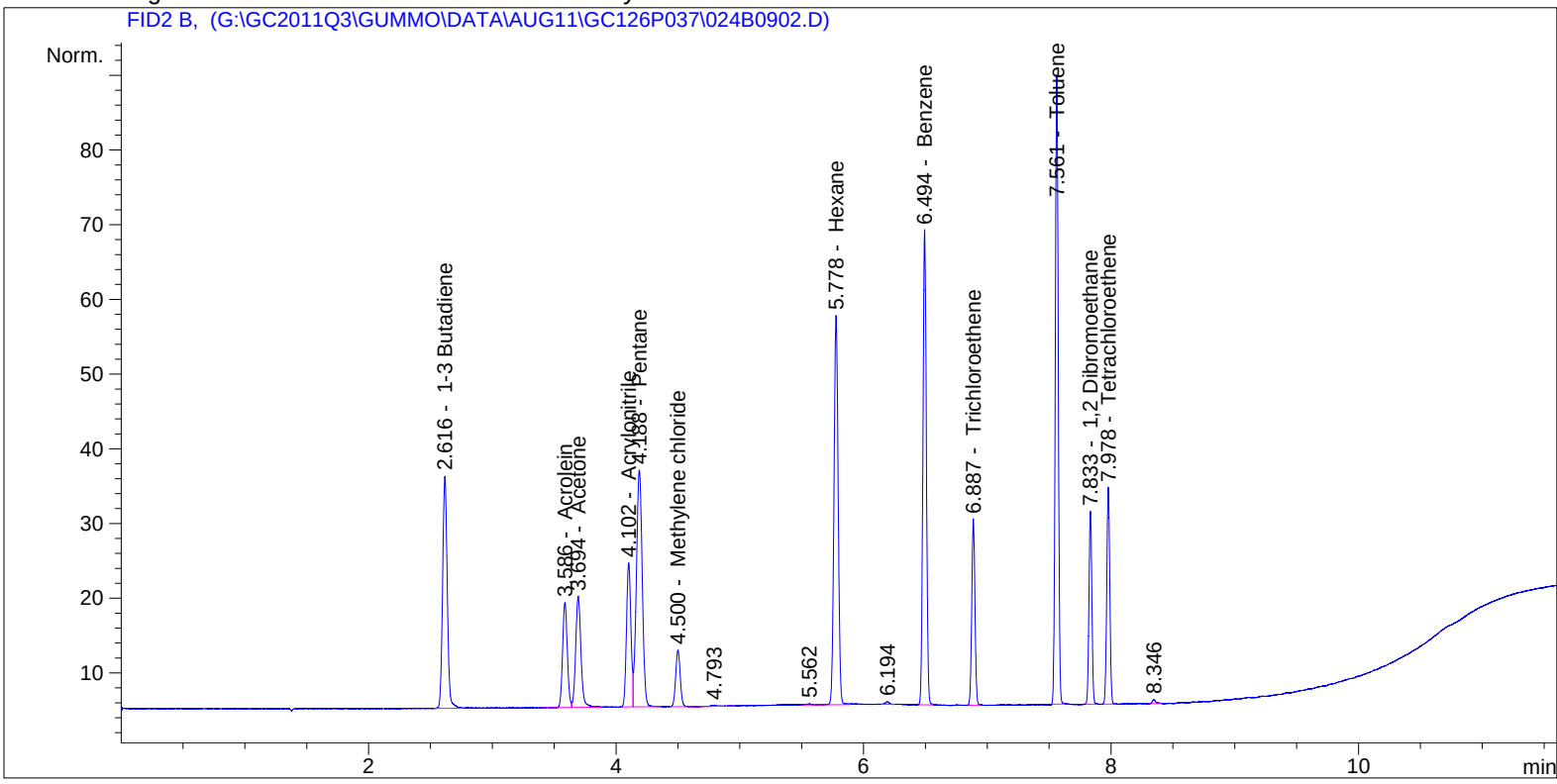
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P037\024B0902.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator	: mgm	Seq. Line	: 9
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 02:16:16	Inj	: 2
		Inj Volume	: External
Acq. Method	: C:\GC2011Q3\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	6/6/2011 4:49:09 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.616	BV	81.26758	1.21233	98.52331		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.586	BV	37.06115	2.67120	98.99764		Acrolein
3.694	VB	44.02832	2.22401	97.91939		Acetone
4.102	BV	48.11310	2.03287	97.80772		Acrylonitrile
4.188	VB	104.28828	9.56715e-1	99.77421		Pentane
4.500	BB	19.43381	5.11186	99.34293		Methylene chloride
5.778	VB	123.30483	8.10094e-1	99.88849		Hexane
6.494	BB	123.56068	8.11766e-1	100.30230		Benzene
6.887	BB	44.95870	2.17614	97.83630		Trichloroethene
7.561	BB	142.67035	6.89605e-1	98.38622		Toluene
7.833	BB	42.38246	2.36487	100.22908		1,2 Dibromoethane
7.978	BB	50.20126	1.97744	99.27010		Tetrachloroethene

EM-BTRF-000898

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P037\024B0902.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1188.27768		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

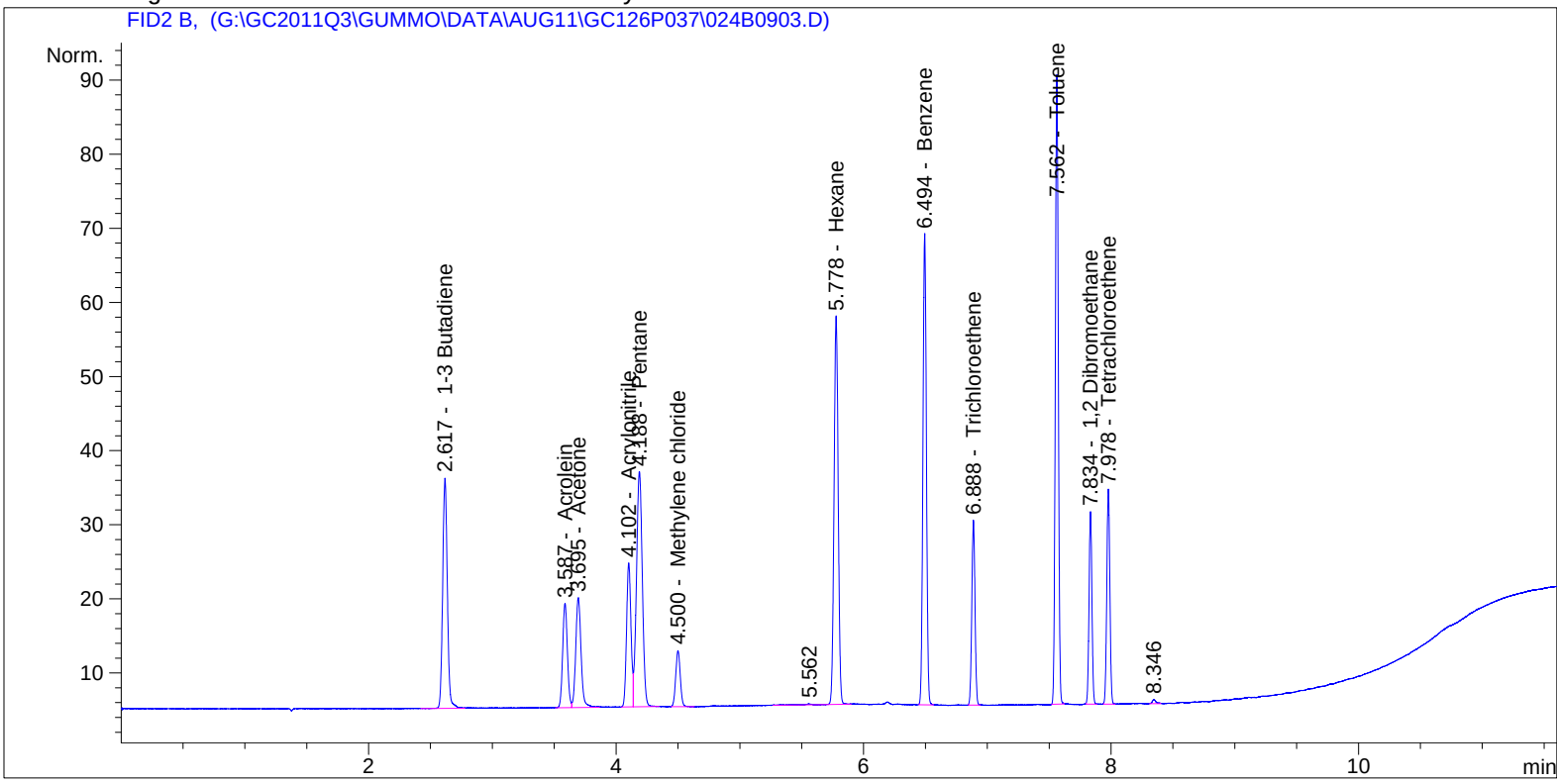
==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P037\024B0903.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

==========

Acq. Operator : mgm Seq. Line : 9
Acq. Instrument : Gummo Location : Vial 24
Injection Date : 09-Aug-11, 02:35:31 Inj : 3
Inj Volume : External
Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.617	BB	81.76981	1.21229	99.12899		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.587	BV	37.27090	2.67112	99.55495		Acrolein
3.695	VB	44.28912	2.22387	98.49311		Acetone
4.102	BV	48.24321	2.03281	98.06909		Acrylonitrile
4.188	VB	104.36816	9.56713e-1	99.85036		Pentane
4.500	BB	19.36284	5.11196	98.98200		Methylene chloride
5.778	VB	122.88960	8.10107e-1	99.55372		Hexane
6.494	BB	123.90859	8.11755e-1	100.58337		Benzene
6.888	BB	45.06676	2.17606	98.06814		Trichloroethene
7.562	BB	143.20758	6.89570e-1	98.75159		Toluene
7.834	BB	42.67256	2.36472	100.90880		1,2 Dibromoethane
7.978	BB	50.43683	1.97734	99.73096		Tetrachloroethene

EM-BTRF-000900

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P037\024B0903.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1191.67508		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

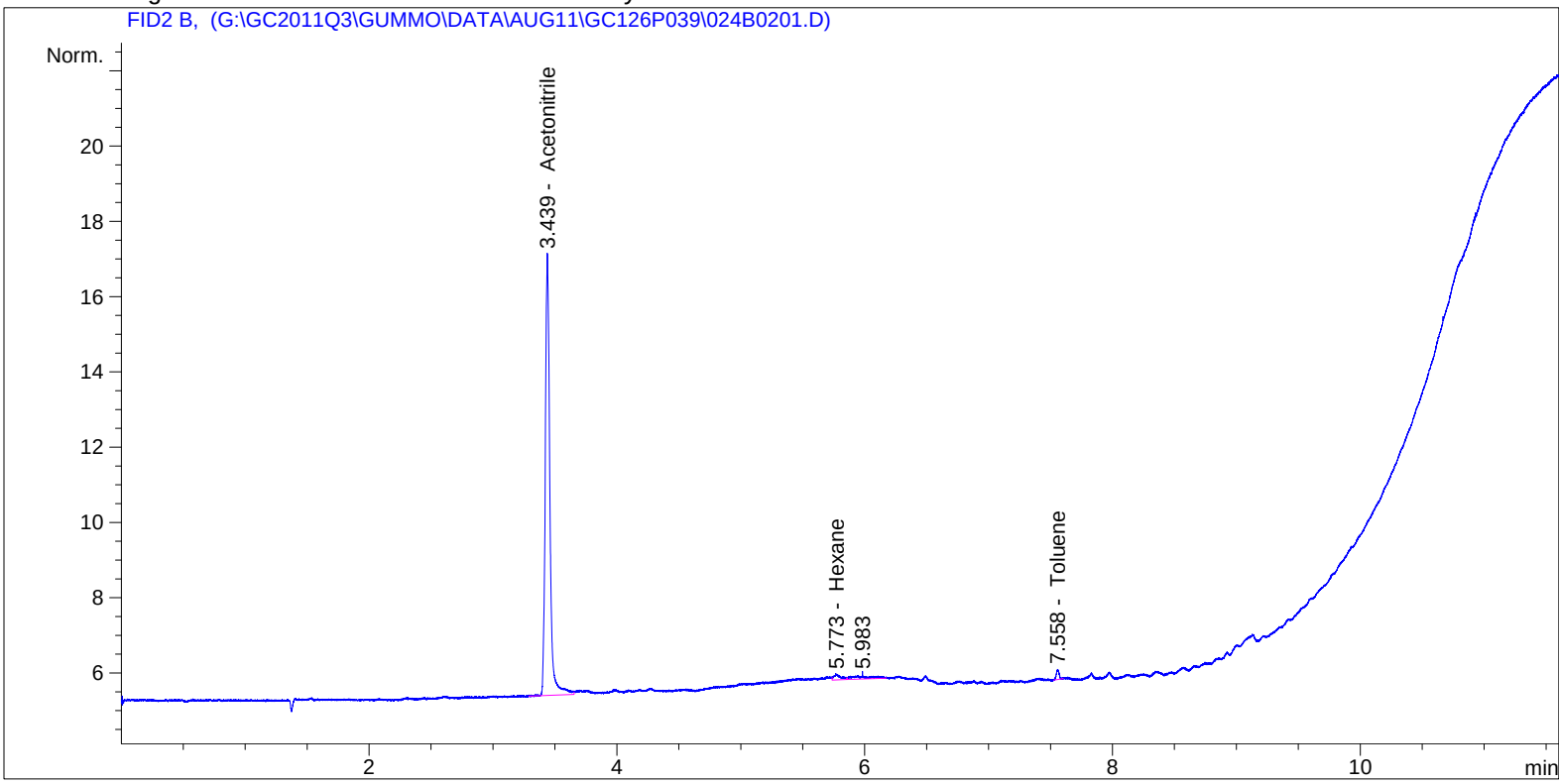
==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0201.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

==========

Acq. Operator : mgm Seq. Line : 2
Acq. Instrument : Gummo Location : Vial 24
Injection Date : 09-Aug-11, 12:47:37 Inj : 1
Inj Volume : External
Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.439	BB	30.31654	3.54581	107.49682		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.773	BV	5.79908e-1	9.89631e-1	5.73895e-1		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.558	BB	4.20546e-1	9.35231e-1	3.93308e-1		Toluene
7.836		-	-	-		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0201.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				108.46403		

2 Warnings or Errors :

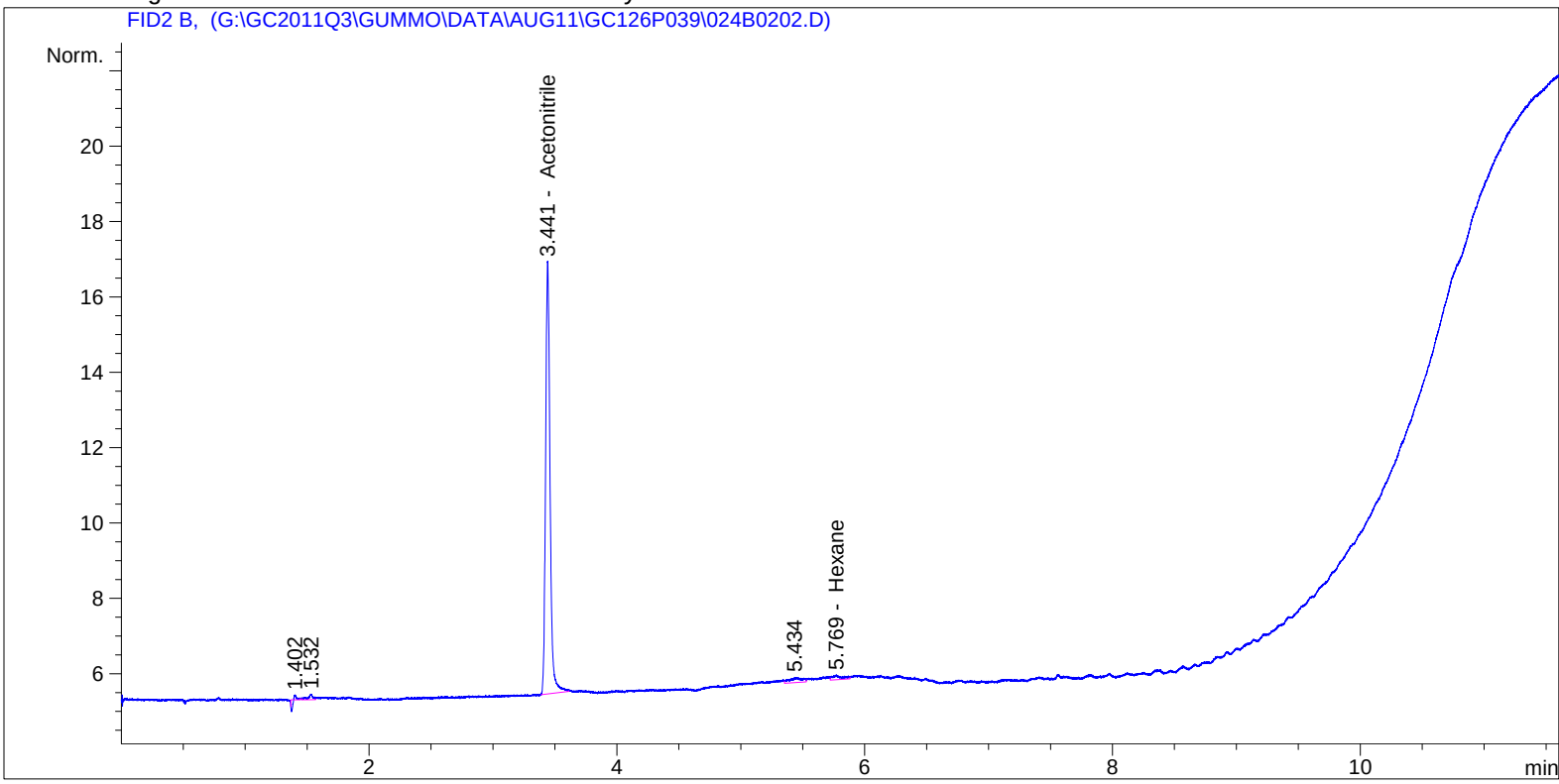
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0202.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

Acq. Operator	: mgm	Seq. Line	: 2
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 13:06:55	Inj	: 2
		Inj Volume	: External
Acq. Method	: C:\GC2011Q3\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.441	BB	28.85279	3.54703	102.34178		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.769	BB	6.38827e-1	9.89631e-1	6.32203e-1		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0202.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				102.97399		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

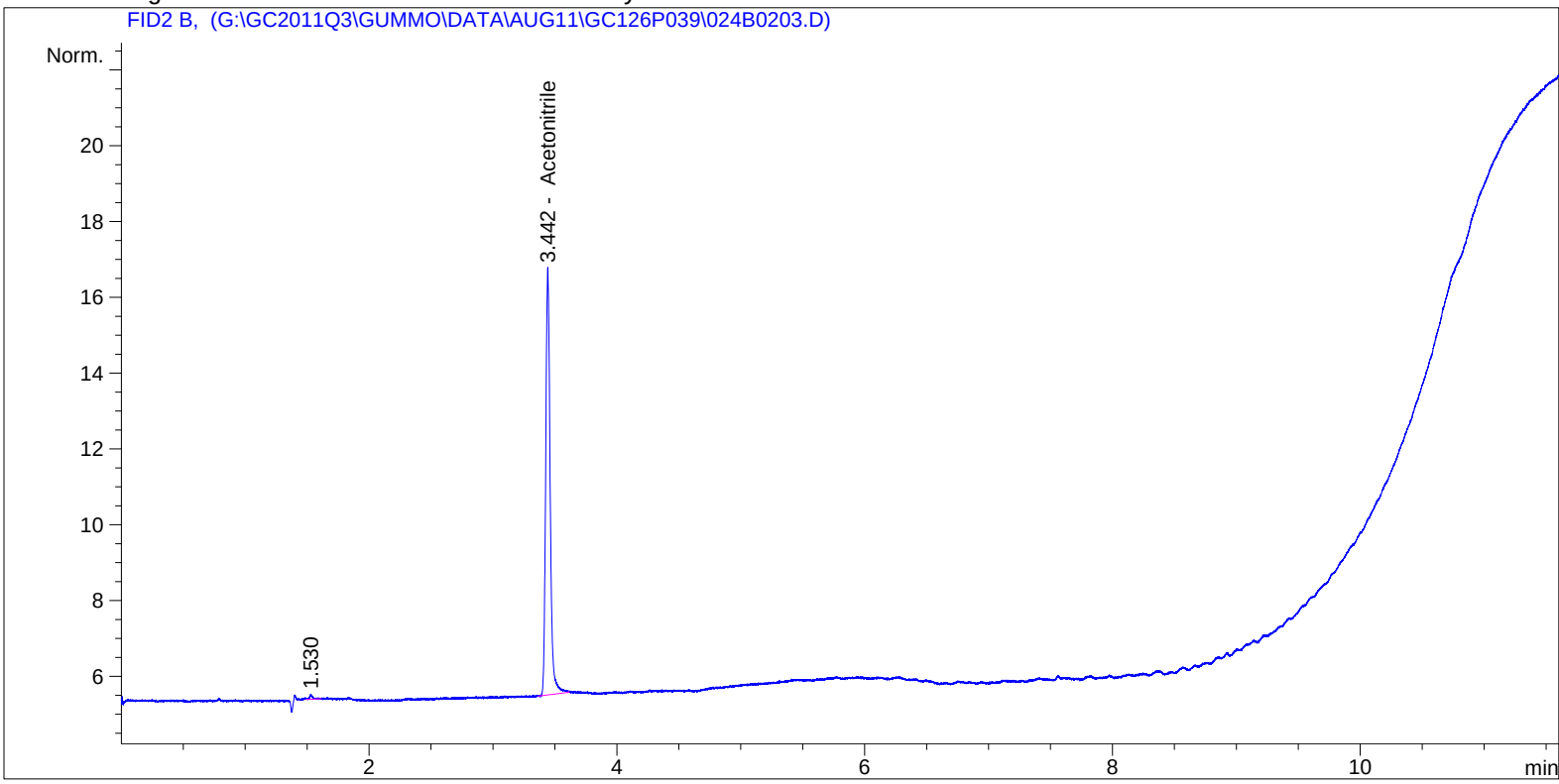
*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0203.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

==========

Acq. Operator	: mgm	Seq. Line	: 2
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 13:26:15	Inj	: 3
		Inj Volume	: External

Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.442	BB	28.33295	3.54750	100.51102		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0203.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				100.51102		

2 Warnings or Errors :

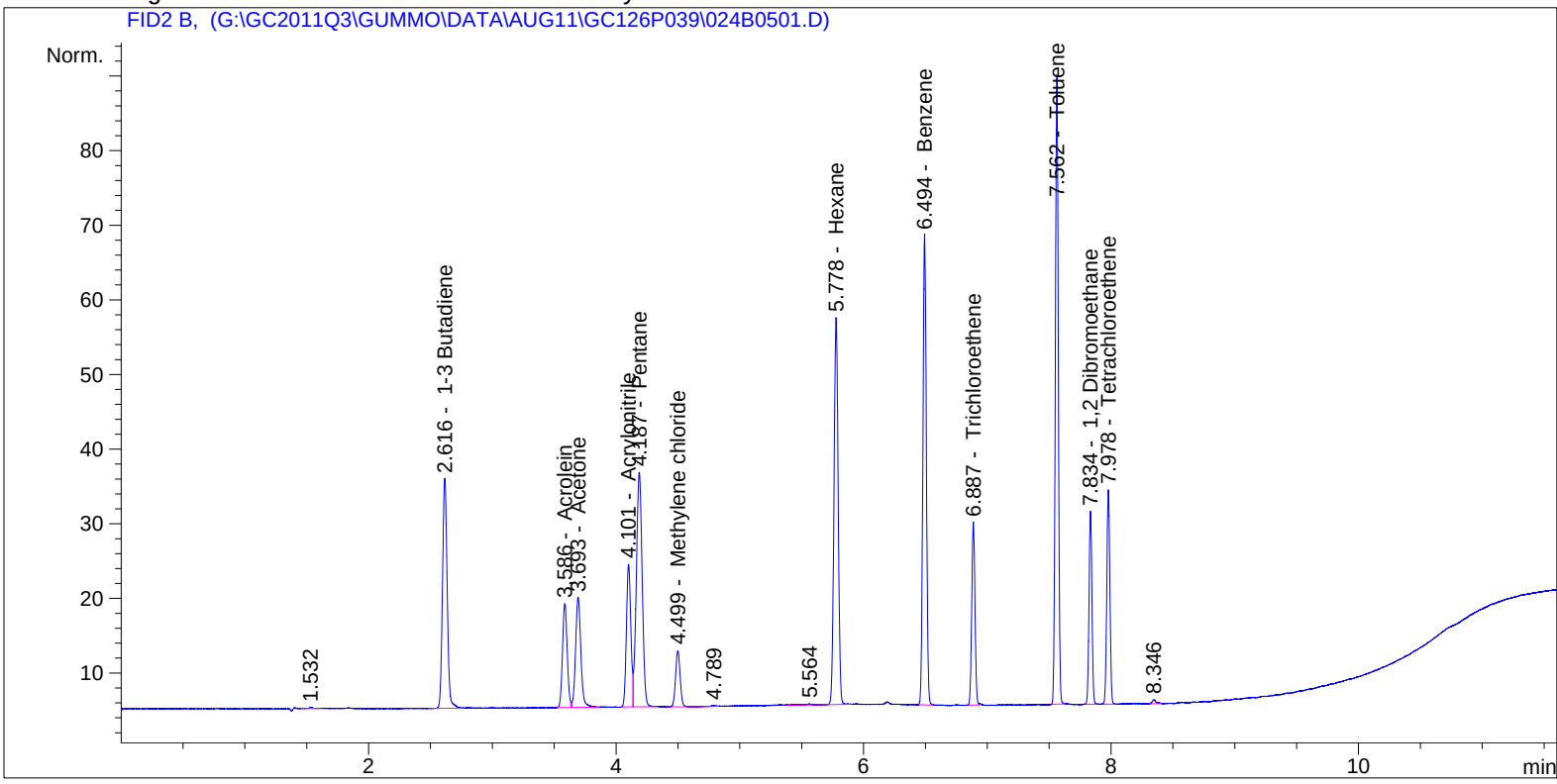
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0501.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator	: mgm	Seq. Line	: 5
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 15:37:15	Inj	: 1
		Inj Volume	: External
Acq. Method	: C:\GC2011Q3\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.616	BV	80.67107	1.21238	97.80392		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.586	BV	36.75127	2.67132	98.17425		Acrolein
3.693	VB	43.57951	2.22426	96.93207		Acetone
4.101	BV	47.58894	2.03314	96.75481		Acrylonitrile
4.187	VB	103.30104	9.56748e-1	98.83309		Pentane
4.499	BB	19.33031	5.11200	98.81655		Methylene chloride
5.778	VB	121.81763	8.10141e-1	98.68946		Hexane
6.494	BB	122.77436	8.11790e-1	99.66704		Benzene
6.887	BB	44.59135	2.17639	97.04819		Trichloroethene
7.562	BB	142.04141	6.89647e-1	97.95848		Toluene
7.834	BB	42.52354	2.36480	100.55964		1,2 Dibromoethane
7.978	BB	49.94038	1.97755	98.75973		Tetrachloroethene

EM-BTRF-000908

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0501.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1179.99725		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

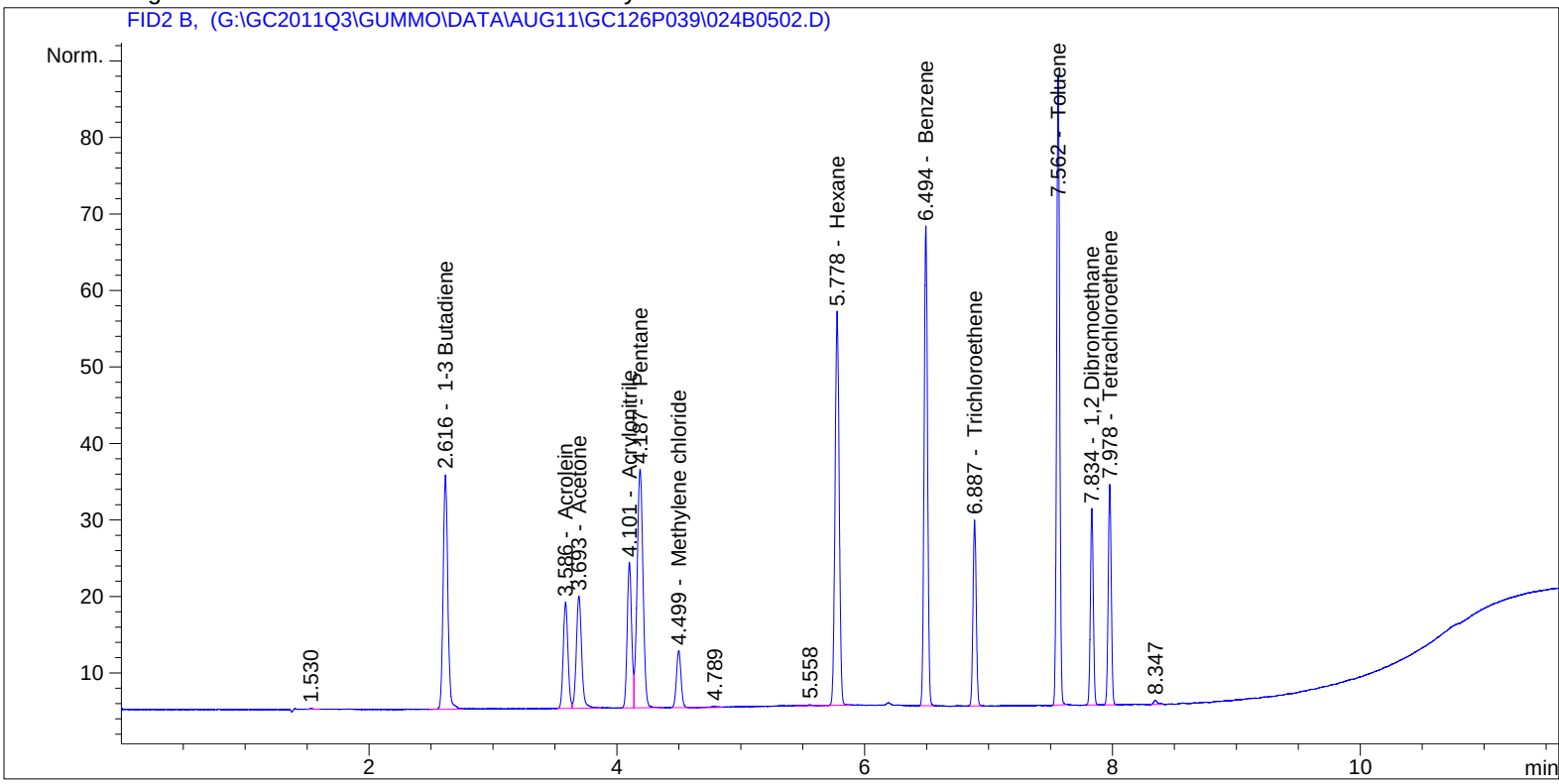
==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0502.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

==========

Acq. Operator : mgm Seq. Line : 5
Acq. Instrument : Gummo Location : Vial 24
Injection Date : 09-Aug-11, 15:57:19 Inj : 2
Inj Volume : External
Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.616	BV	80.34766	1.21240	97.41389		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.586	BV	36.66263	2.67135	97.93873		Acrolein
3.693	VV	43.63301	2.22423	97.04977		Acetone
4.101	BV	47.52542	2.03317	96.62723		Acrylonitrile
4.187	VB	102.99263	9.56759e-1	98.53908		Pentane
4.499	BB	19.20594	5.11217	98.18398		Methylene chloride
5.778	VB	120.97082	8.10168e-1	98.00673		Hexane
6.494	BB	122.00897	8.11815e-1	99.04870		Benzene
6.887	BB	44.41148	2.17652	96.66230		Trichloroethene
7.562	BB	141.11653	6.89710e-1	97.32947		Toluene
7.834	BB	42.12995	2.36500	99.63744		1,2 Dibromoethane
7.978	BB	49.69103	1.97766	98.27192		Tetrachloroethene

EM-BTRF-000910

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0502.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1174.70923		

2 Warnings or Errors :

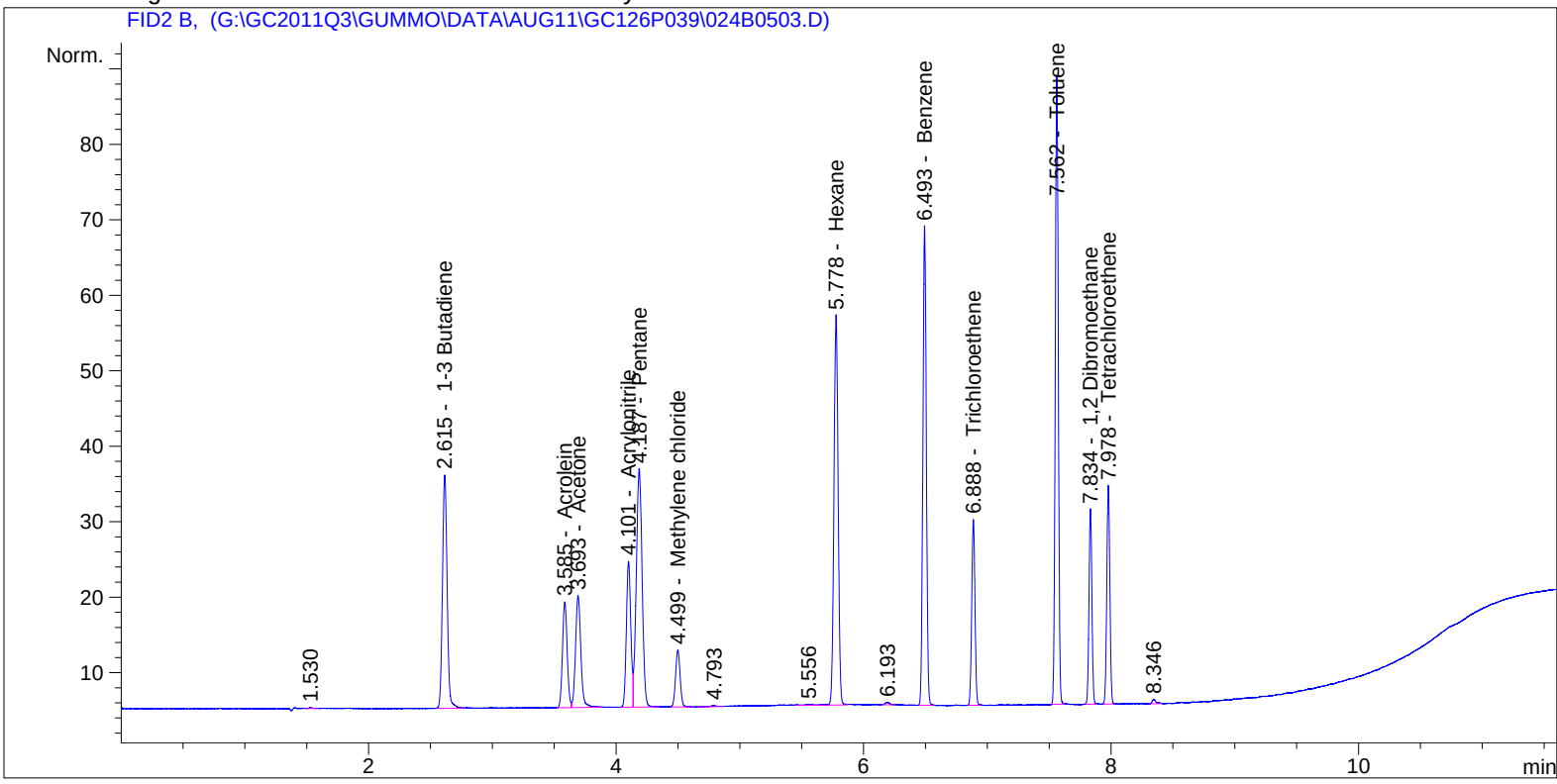
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0503.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

Acq. Operator	: mgm	Seq. Line	: 5
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 16:17:46	Inj	: 3
		Inj Volume	: External
Acq. Method	: C:\GC2011Q3\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.615	BV	80.96720	1.21236	98.16105		1-3 Butadiene
3.453		-	-	-		Acetonitrile
3.585	BV	36.96770	2.67123	98.74932		Acrolein
3.693	VB	43.94403	2.22406	97.73398		Acetone
4.101	BV	47.92339	2.03297	97.42664		Acrylonitrile
4.187	VB	103.80766	9.56731e-1	99.31604		Pentane
4.499	BB	19.38864	5.11192	99.11318		Methylene chloride
5.778	VV	122.44310	8.10121e-1	99.19373		Hexane
6.493	BB	123.05178	8.11782e-1	99.89117		Benzene
6.888	BB	44.75893	2.17627	97.40771		Trichloroethene
7.562	BB	142.39723	6.89623e-1	98.20047		Toluene
7.834	BB	42.38729	2.36487	100.24041		1,2 Dibromoethane
7.978	BB	50.09109	1.97749	99.05457		Tetrachloroethene

EM-BTRF-000912

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0503.D
Sample Name: gc119p176 #I4 ENV(1=600,3=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				1184.48828		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0601.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   6
Acq. Instrument : Gummo                         Location : Vial 24
Injection Date  : 09-Aug-11, 16:39:03                Inj :   1
                                               Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed    : 6/6/2011 4:49:32 PM by KAM
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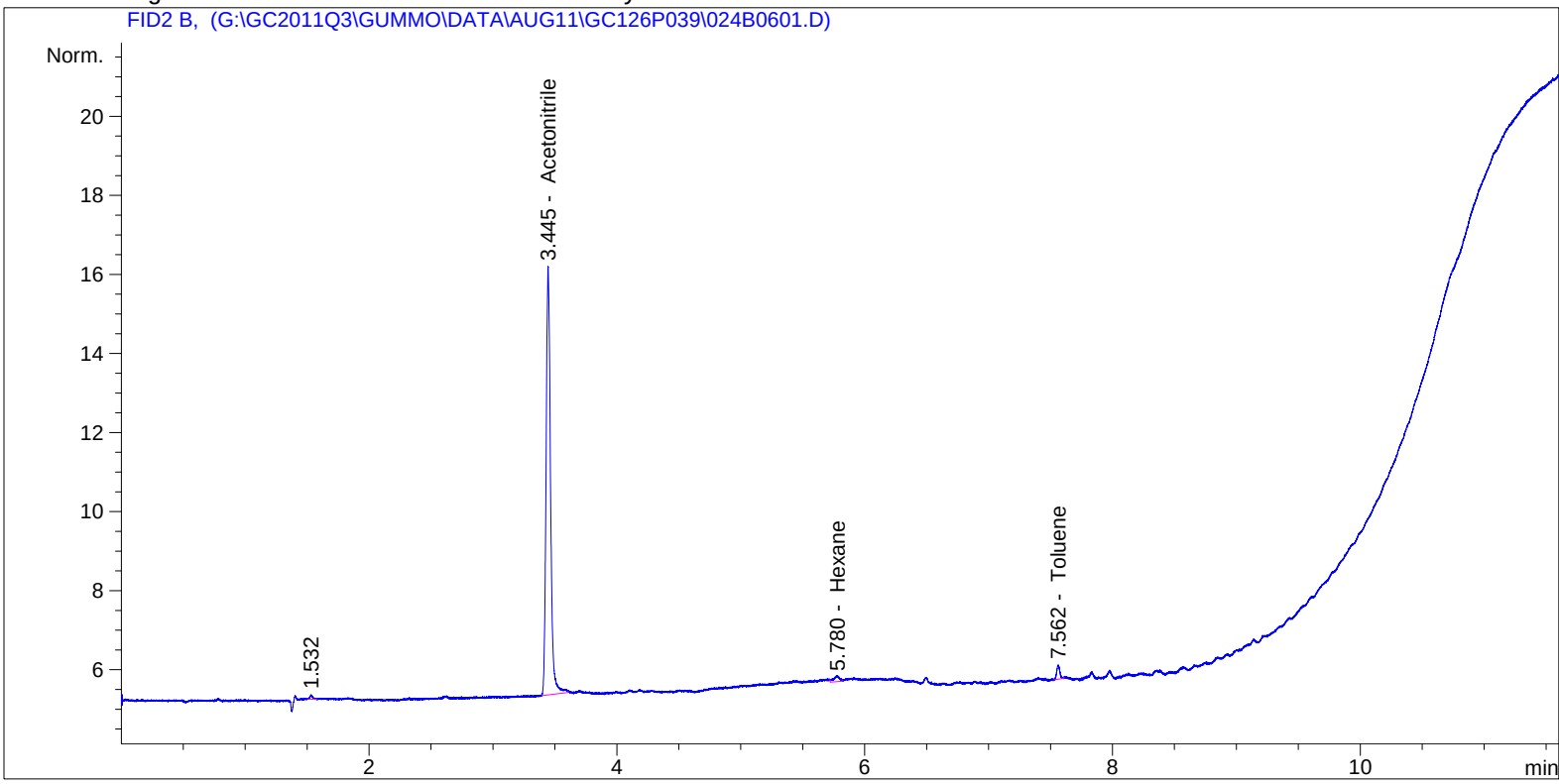



```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/6/2011 4:49:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.445	BB	27.22414	3.54854	96.60601		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.780	BV	4.74827e-1	9.89631e-1	4.69904e-1		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.562	BB	6.16281e-1	9.35231e-1	5.76365e-1		Toluene
7.836		-	-	-		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0601.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				97.65228		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

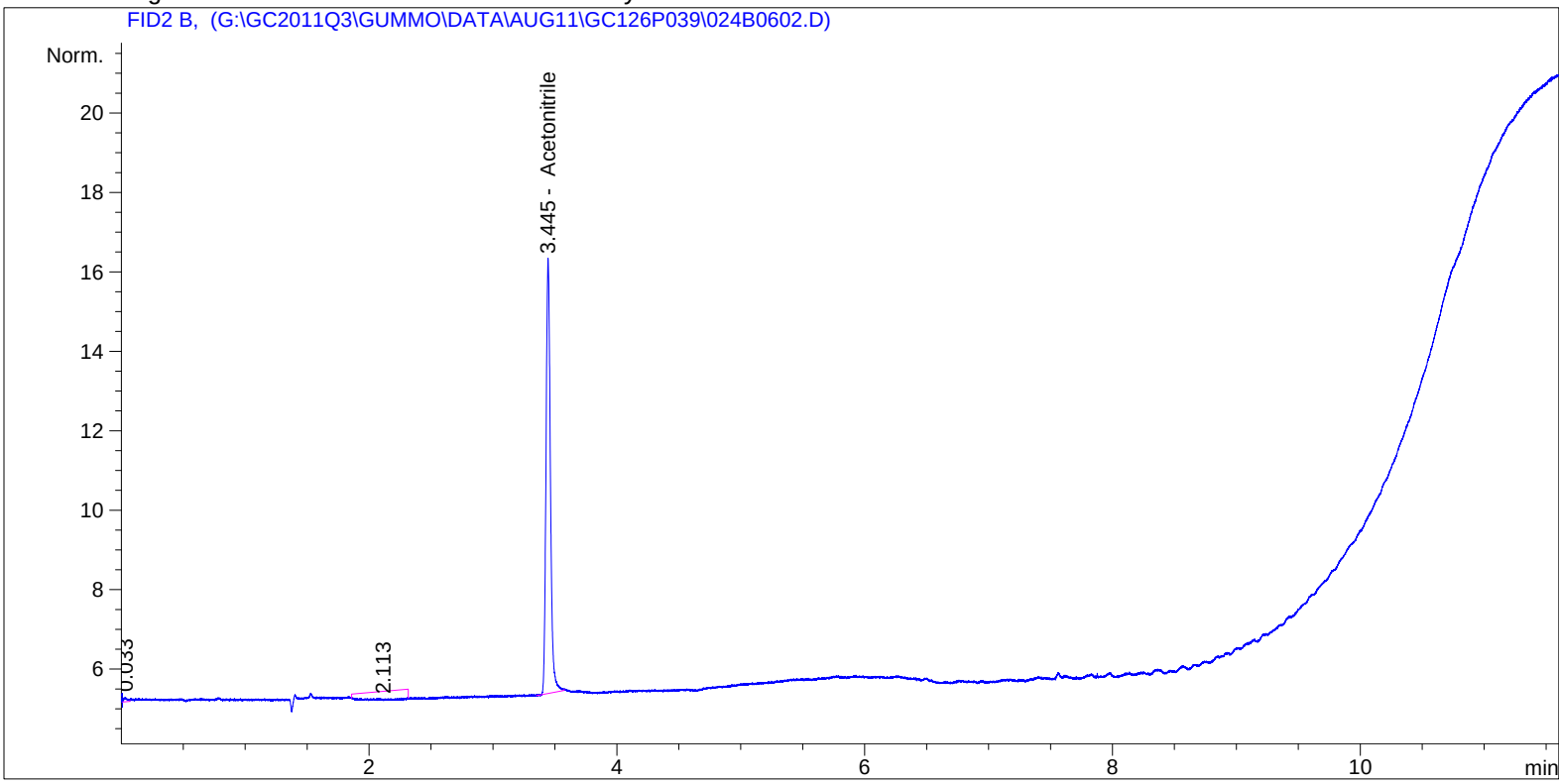
*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0602.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

==========

Acq. Operator	: mgm	Seq. Line	: 6
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 16:58:27	Inj	: 2
		Inj Volume	: External

Acq. Method : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M
Last changed : 6/6/2011 4:49:32 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.445	BB	27.10643	3.54866	96.19146		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0602.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				96.19146		

2 Warnings or Errors :

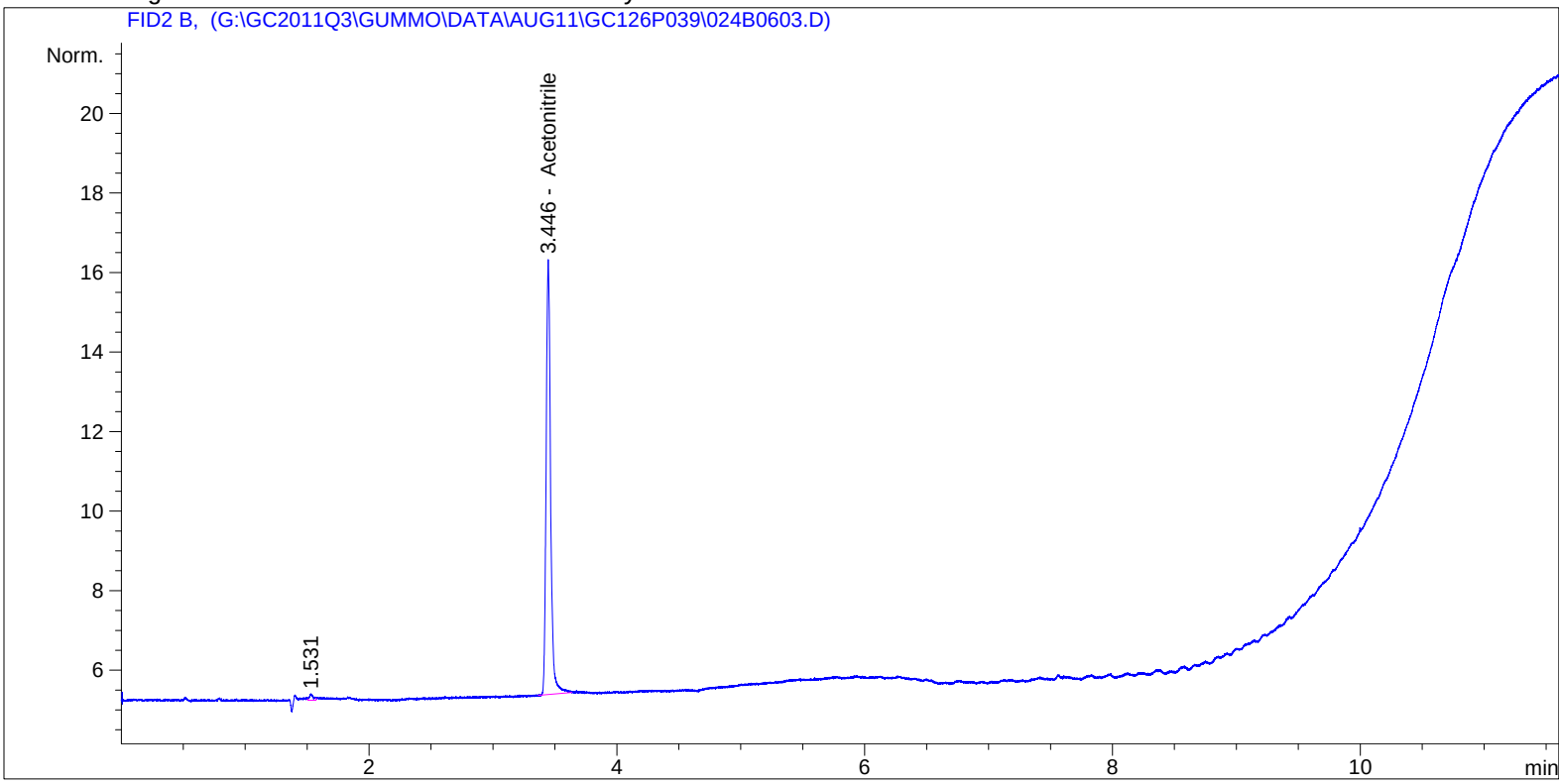
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0603.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

Acq. Operator	: mgm	Seq. Line	: 6
Acq. Instrument	: Gummo	Location	: Vial 24
Injection Date	: 09-Aug-11, 17:17:42	Inj	: 3
		Inj Volume	: External
Acq. Method	: C:\GC2011Q3\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q3\GUMMO\METHODS\GC114P176R_ICR.M		
Last changed	: 6/6/2011 4:49:32 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/6/2011 4:49:09 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.620		-	-	-		1-3 Butadiene
3.446	BB	27.52428	3.54825	97.66305		Acetonitrile
3.591		-	-	-		Acrolein
3.700		-	-	-		Acetone
4.107		-	-	-		Acrylonitrile
4.191		-	-	-		Pentane
4.508		-	-	-		Methylene chloride
5.781		-	-	-		Hexane
6.497		-	-	-		Benzene
6.890		-	-	-		Trichloroethene
7.565		-	-	-		Toluene
7.836		-	-	-		1,2 Dibromoethane
7.981		-	-	-		Tetrachloroethene

Data File G:\GC2011Q3\GUMMO\DATA\AUG11\GC126P039\024B0603.D
Sample Name: gc119p173 #AN4 ENV(1=600,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				97.66305		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

method: G:\GC2010Q3\GUMMO\METHODS\GC114P165.M
Modified on: 7/14/2010 at 3:13:47 PM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 35 'C (On)
- Initial time: 2.20 min
- Maximum temp: 250 'C
- Equilibration time: 0.20 min
- Ramps:

#	Rate	Final temp	Final time
1	15.00	70	0.07
2	30.00	250	1.00
3	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 11.60 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 160 'C (On)
- Pressure: 5.00 psi (On)
- Split ratio: 5:1
- Split flow: 10.6 mL/min
- Total flow: 18.9 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 160 'C (On)
- Pressure: 5.12 psi (On)
- Split ratio: 5:1
- Split flow: 10.3 mL/min
- Total flow: 18.7 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 10970
- Rtx-624 30m x 0.32mm x 1.8um SN 92682
- Max temperature: 240 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 1.80 um
- Mode: constant flow
- Initial flow: 2.1 mL/min
- Nominal init pressure: 5.00 psi
- Average velocity: 40 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: Restek 10198
- Rtx-1 30m x 0.32mm x 4.0um
- Max temperature: 280 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.1 mL/min
- Nominal init pressure: 5.12 psi
- Average velocity: 39 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 50 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 50 Hz
- Type: back detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

method: G:\GC2010Q3\GUMMO\METHODS\GC114P165.M
Modified on: 7/14/2010 at 3:13:47 PM

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

THERMAL AUX 1
Use: Valve Box Heater
Description:
Initial temp: 50 'C (Off)
Initial time: 0.00 min

#	Rate	Final temp	Final time
1	0.0	(Off)	

VALVES
Valve 1 Gas Sampling
Description:
Loop Volume: 0.250 mL
Load Time: 0.50 min
Inject Time: 0.50 min
Inlet: Front Inlet
Valve 2 Gas Sampling
Description:
Loop Volume: 0.250 mL
Load Time: 0.50 min
Inject Time: 0.50 min
Inlet: Back Inlet
Valve 7 Multiposition 1
Description:
BCD input: inverted
Switch Time: 1.0 sec

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint	
0.10		Multi-Valve Position:	1

EM-BTRF-000921

THE LINDE GROUP

Linde

SHIPPED TO: Enthalpy Analytical, Inc
2202 Ellis Road
Durham, NC 27703-5521

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	108129258	**Cylinder Size:**	2 (9" X 51")
Production#:	1178674	**Cylinder # :**	9166803
Certification Date:	May-20-2011	**Cylinder Pressure:**	500 psig
P.O.# :	C05031101GAT	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	44 Liter
Material#:	24090232	**Cylinder Material:**	Steel
Traceability:	NIST by weight	**Gas Volume:**	1500 Liter
Expiration Date:	May-20-2012	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
1,3-Butadiene	106-99-0	250 ppm	257 ppm
Acrolein	107-02-8	250 ppm	257 ppm
Acetone	67-64-1	250 ppm	257 ppm
Pentane	109-66-0	250 ppm	257 ppm
Acrylonitrile	107-13-1	250 ppm	256 ppm
Carbon Disulfide	75-15-0	250 ppm	258 ppm
Methylene Chloride	75-09-2	250 ppm	257 ppm
Hexane	110-54-3	250 ppm	257 ppm
Benzene	71-43-2	250 ppm	256 ppm
Trichloroethene	79-01-6	250 ppm	256 ppm
Toluene	108-88-3	250 ppm	256 ppm
1,2-Dibromoethane	106-93-4	250 ppm	257 ppm
Tetrachloroethene	127-18-4	250 ppm	257 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: May-20-2011

MATHESON TRI•GAS
ask. . .The Gas Professionals™

Certified Mixture Grade

Matheson Tri-Gas Inc.
6874 S. Main Street
Morrow GA 30260
Phone: 770-961 4606
Fax: 770-968 1268

TO: Enthalpy Analytical
2202 Ellis Rd Suite A
Durham, NC 27703

PHONE:
FAX:

TO AVOID BACKFILL, CYLINDER PRESSURE MUST BE GREATER THAN PROCESS PRESSURE

SALES ORDER NUMBER: 566239
P.O. NUMBER: CO4281105GAT
LOT NUMBER: 1051619101

PRODUCT:

CYLINDER NUMBER: SX48676
SIZE: 1R
CGA/DISS OUTLET: 350
CONTENT: 138.6 cu. ft.
PRESSURE: 2000 psig

FILL DATE: May 2, 2011
CERTIFICATION DATE: May 2, 2011
EXPIRATION DATE: May 2, 2012

COMPONENT	REQUESTED CONCENTRATION	BLEND TOLERANCE (+/-)	CERTIFIED CONCENTRATION	CERTIFICATION ACCURACY
Acetonitrile	250 ppm	10 %	249.4 ppm	+/- 2%
Nitrogen, Balance				

TRACEABLE TO REFERENCE STANDARD SOURCE/NUMBER:
TRACEABLE TO NIST TRACEABLE WEIGHT CERTIFICATE: 513987

SPECIAL INFORMATION / ADDITIONAL COMMENTS

The product listed above and furnished under the referenced purchase order has been tested and found to contain the component concentration listed above. All values in mole/mole basis gas phase unless otherwise indicated. Matheson Tri-Gas Inc. warrants that the above product(s) conform at the time of shipment to the above description. Matheson Tri-Gas Inc. liability does not exceed the value of the product purchased.

Derek Stuck
ANALYST

SIGNATURE

May 2, 2011
DATE SIGNED

EM-BTRF-000923

Sample Chromatograms

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\007B0401.D
Sample Name: EM-R1-Bag-DCU 0711-64

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   4
Acq. Instrument : Zeppo online                      Location : Vial 7
Injection Date  : 7/20/2011 11:39:48 AM                  Inj :   1
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/20/2011 11:48:00 AM by stg
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 8/1/2011 12:59:03 PM by stg
                  (modified after loading)
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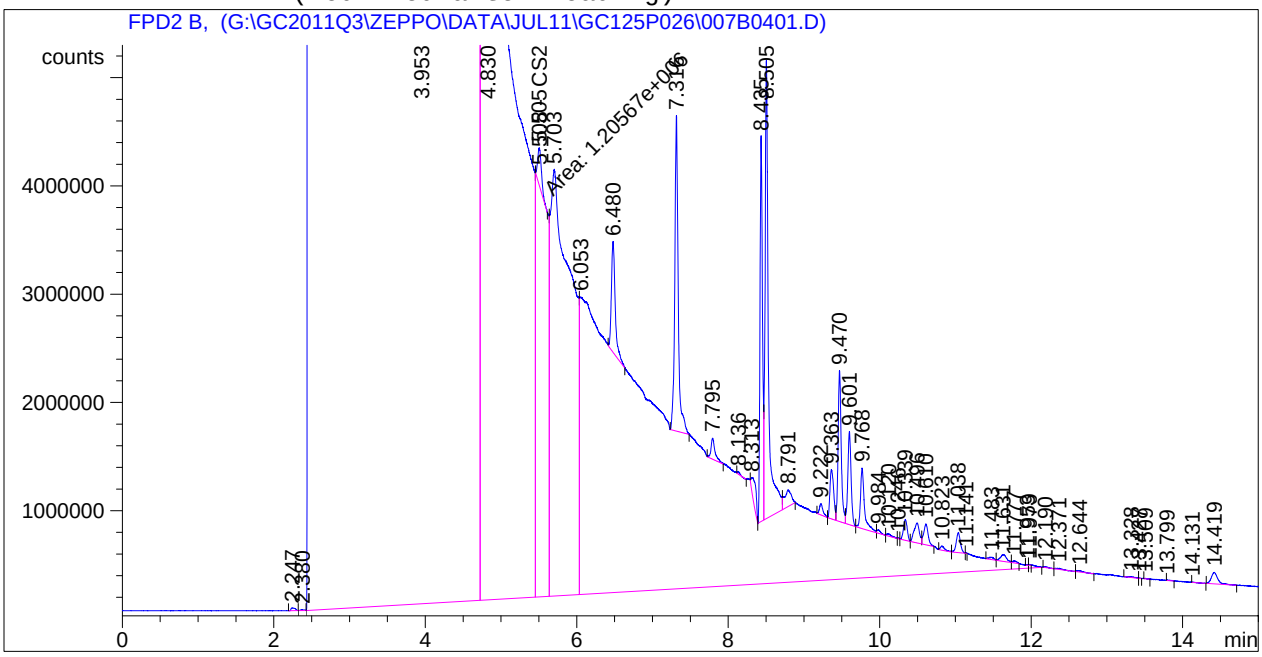


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/1/2011 12:59:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Manual Integration
"II" (STG)

```
Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.508 MM     1.20567e6  1.19699e-6    1.44317    CS2

Totals :                                1.44317


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\007B0402.D
Sample Name: EM-R1-Bag-DCU 0711-64

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   4
Acq. Instrument : Zeppo online                      Location : Vial 7
Injection Date  : 7/20/2011 12:00:22 PM                  Inj :   2
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 8/1/2011 12:59:03 PM by stg
                  (modified after loading)
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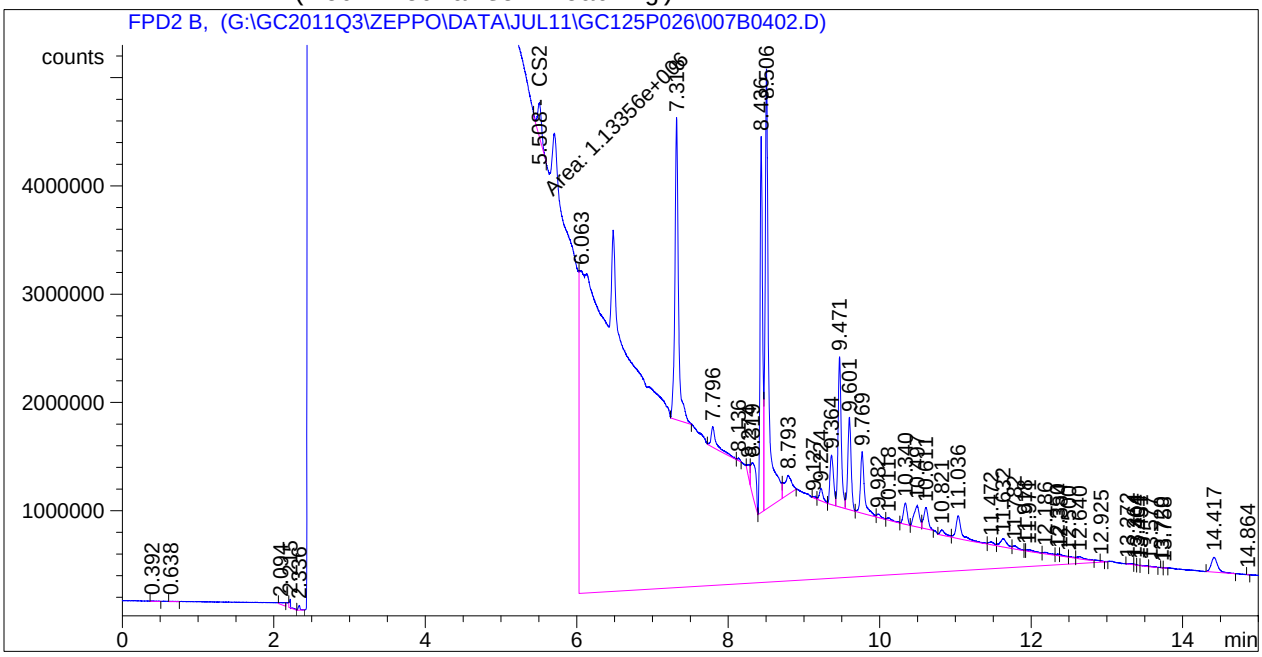


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/1/2011 12:59:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.508 MM     1.13356e6  1.23463e-6    1.39953    CS2

Totals :                                 1.39953


==========================================================================
                          *** End of Report ***
```

Manual Integration
"II" (STG)

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\007B0403.D
Sample Name: EM-R1-Bag-DCU 0711-64

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   4
Acq. Instrument : Zeppo online                      Location : Vial 7
Injection Date  : 7/20/2011 12:20:56 PM                  Inj :   3
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 8/1/2011 12:59:54 PM by stg
                  (modified after loading)
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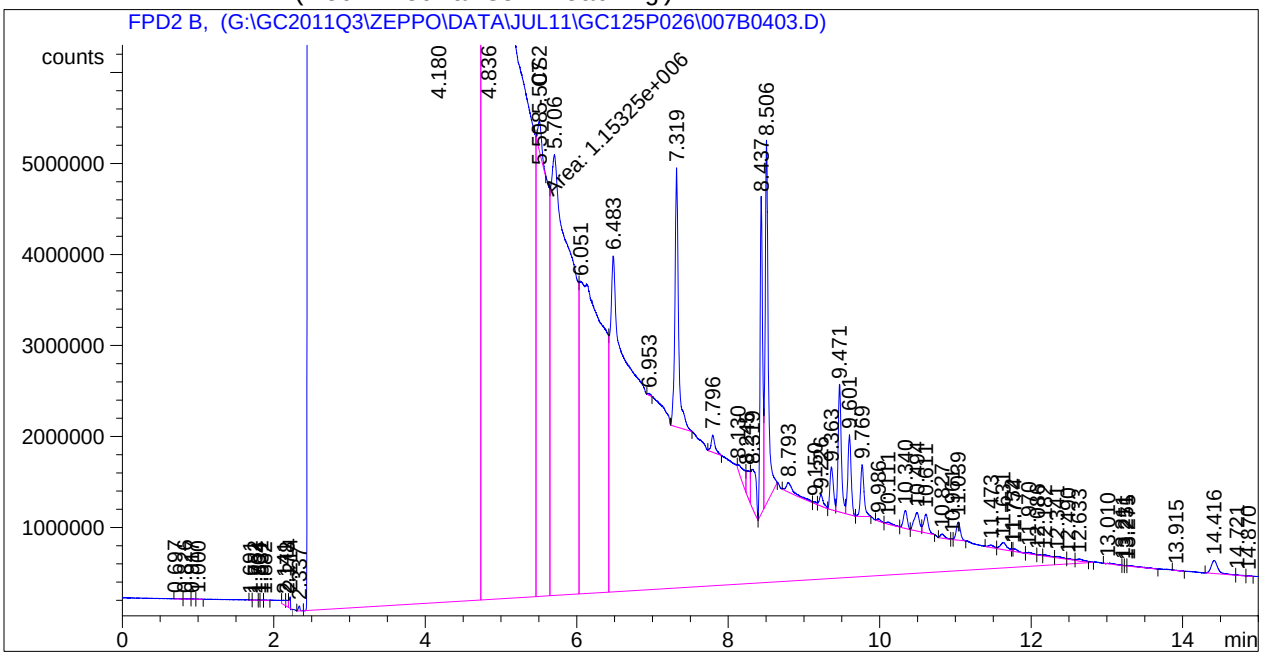



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/1/2011 12:59:09 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.508 MM     1.15325e6  1.22400e-6    1.41158    CS2

Totals :                                 1.41158


==========================================================================
                          *** End of Report ***
```

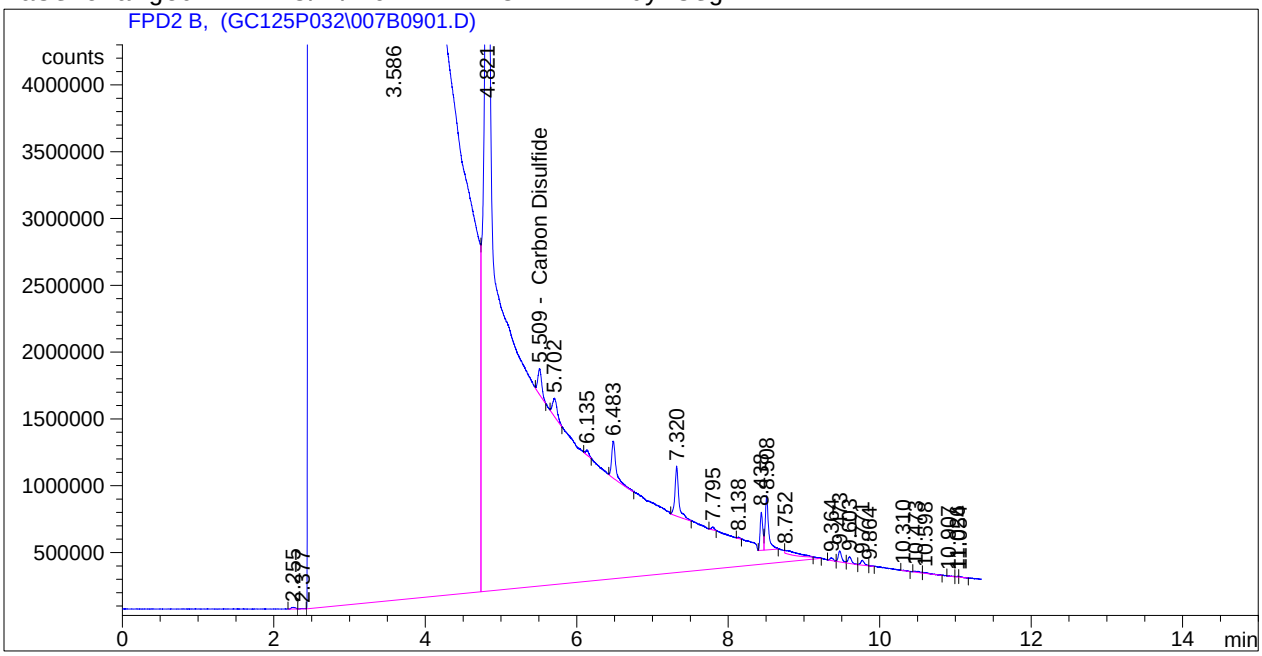
Manual Integration
"II" (STG)

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\007B0901.D
Sample Name: EM-~~R3~~-Bag-~~CDU~~ *6 0711-64

R2 DCU

==========

Acq. Operator : stg Seq. Line : 9
Acq. Instrument : Zeppo online Location : Vial 7
Injection Date : 7/27/2011 5:46:56 PM Inj : 1
Inj Volume : External
Sequence File : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST_CS2.M
Last changed : 8/1/2011 12:43:44 PM by stg



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 8/1/2011 12:43:10 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ppmv]	Grp	Name
5.509	BB X	6.89029e5	1.54261e-6	1.06291		Carbon Disulfide

Totals : 1.06291

==========

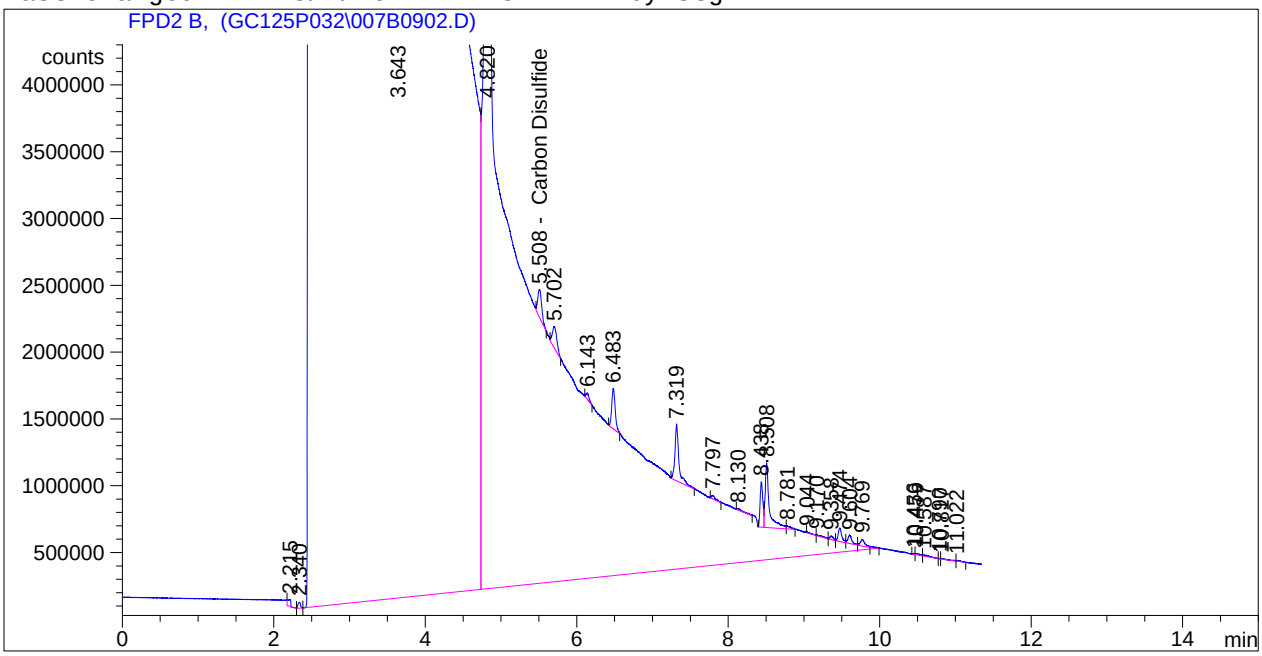
*** End of Report ***

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\007B0902.D
Sample Name: EM-~~R3~~ Bag-~~CDU~~ *6 0711-64

R2 DCU

==========

Acq. Operator : stg Seq. Line : 9
Acq. Instrument : Zeppo online Location : Vial 7
Injection Date : 7/27/2011 6:02:54 PM Inj : 2
Inj Volume : External
Sequence File : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST_CS2.M
Last changed : 8/1/2011 12:43:44 PM by stg



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 8/1/2011 12:43:10 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ppmv]	Grp	Name
5.508	BB X	7.49189e5	1.47967e-6	1.10855		Carbon Disulfide

Totals : 1.10855

==========

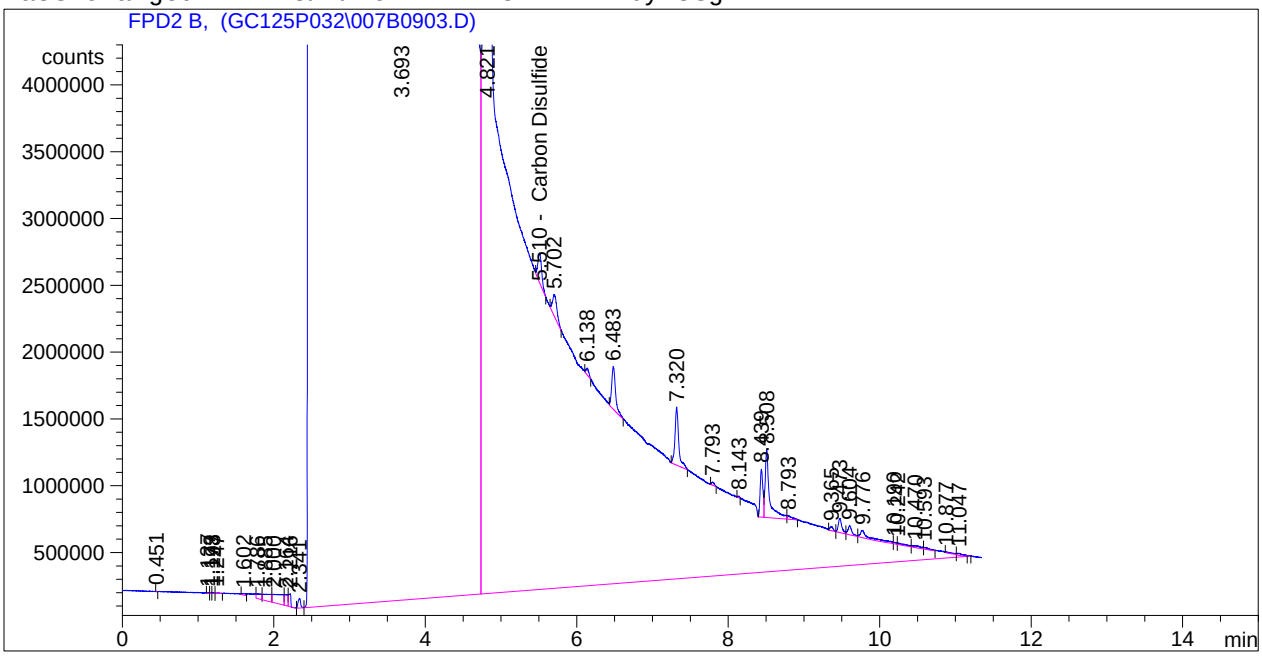
*** End of Report ***

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\007B0903.D
Sample Name: EM-~~R3~~Bag-~~CDU~~ *6 0711-64

R2 DCU

==========

Acq. Operator : stg Seq. Line : 9
Acq. Instrument : Zeppo online Location : Vial 7
Injection Date : 7/27/2011 6:18:53 PM Inj : 3
Inj Volume : External
Sequence File : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST_CS2.M
Last changed : 8/1/2011 12:43:44 PM by stg



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/1/2011 12:43:10 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ppmv]	Grp	Name
5.510	BB X	7.80590e5	1.44974e-6	1.13166		Carbon Disulfide

Totals : 1.13166

==========

*** End of Report ***

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\006B0401.D
Sample Name: EM-R3-Bag-CDU *6 0711-64

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/27/2011 1:18:59 PM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST_CS2.M
Last changed    : 8/1/2011 12:43:44 PM by stg
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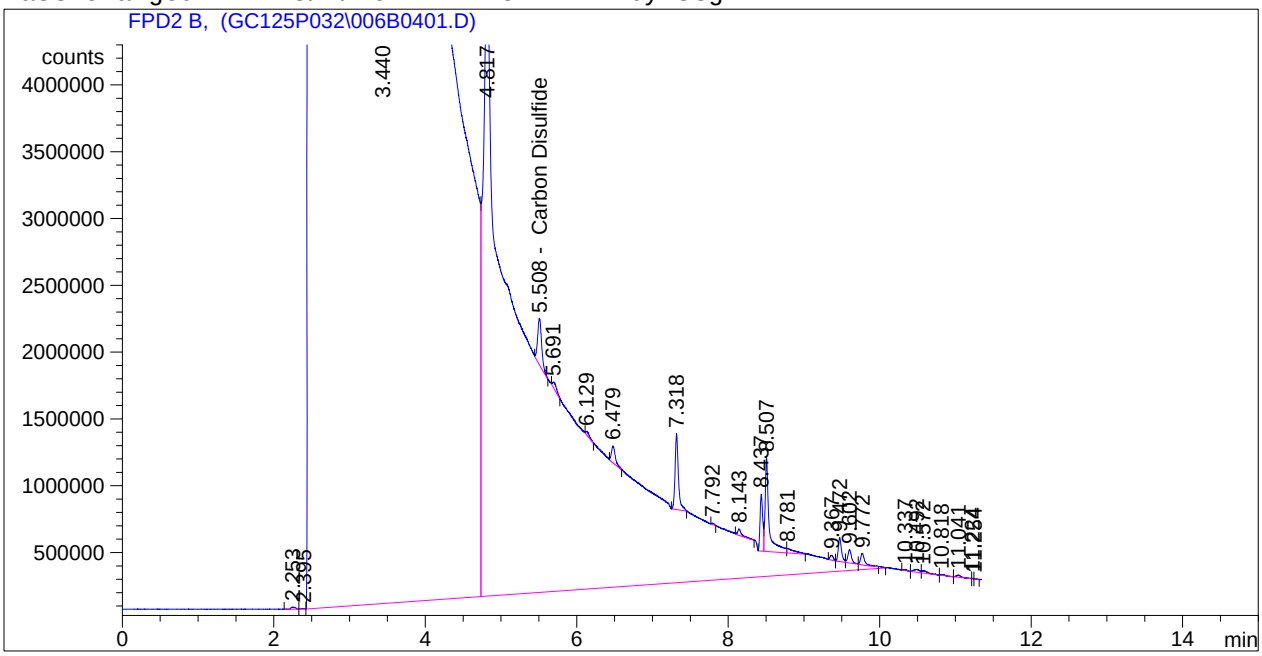
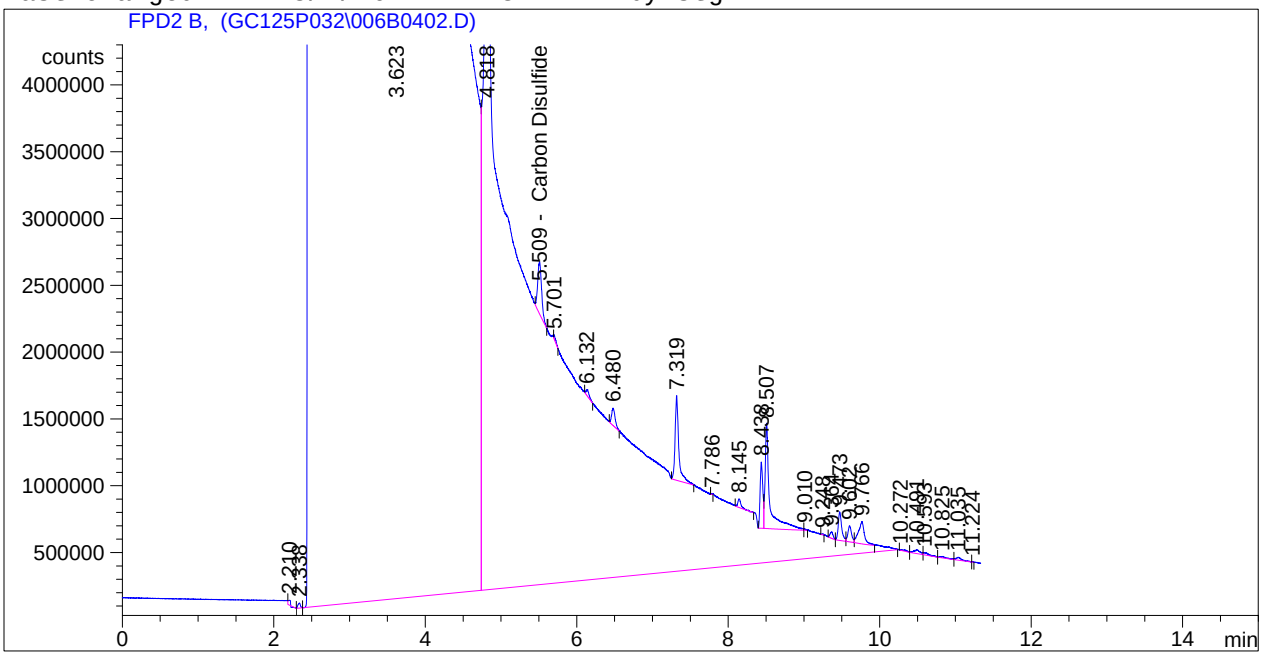



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/1/2011 12:43:10 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.508 BB X   1.28963e6  1.12922e-6    1.45628    Carbon Disulfide

Totals :                                1.45628


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\006B0402.D
Sample Name: EM-R3-Bag-CDU *6 0711-64

```
====================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/27/2011 1:34:55 PM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST_CS2.M
Last changed    : 8/1/2011 12:43:44 PM by stg
```




```
====================================================================
                      External Standard Report
====================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/1/2011 12:43:10 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.509 BB X   1.38571e6  1.08955e-6    1.50981    Carbon Disulfide

Totals :                                1.50981


====================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\006B0403.D
Sample Name: EM-R3-Bag-CDU *6 0711-64

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/27/2011 1:50:51 PM               Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST_CS2.M
Last changed    : 8/1/2011 12:43:44 PM by stg
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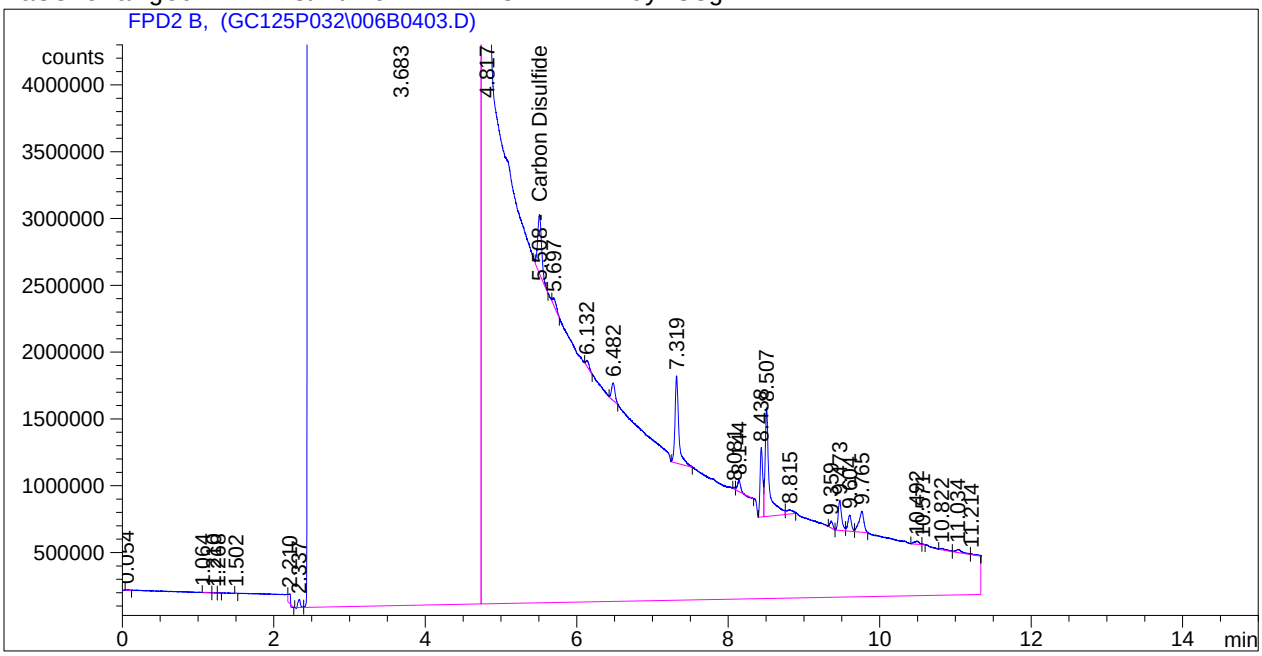



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/1/2011 12:43:10 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

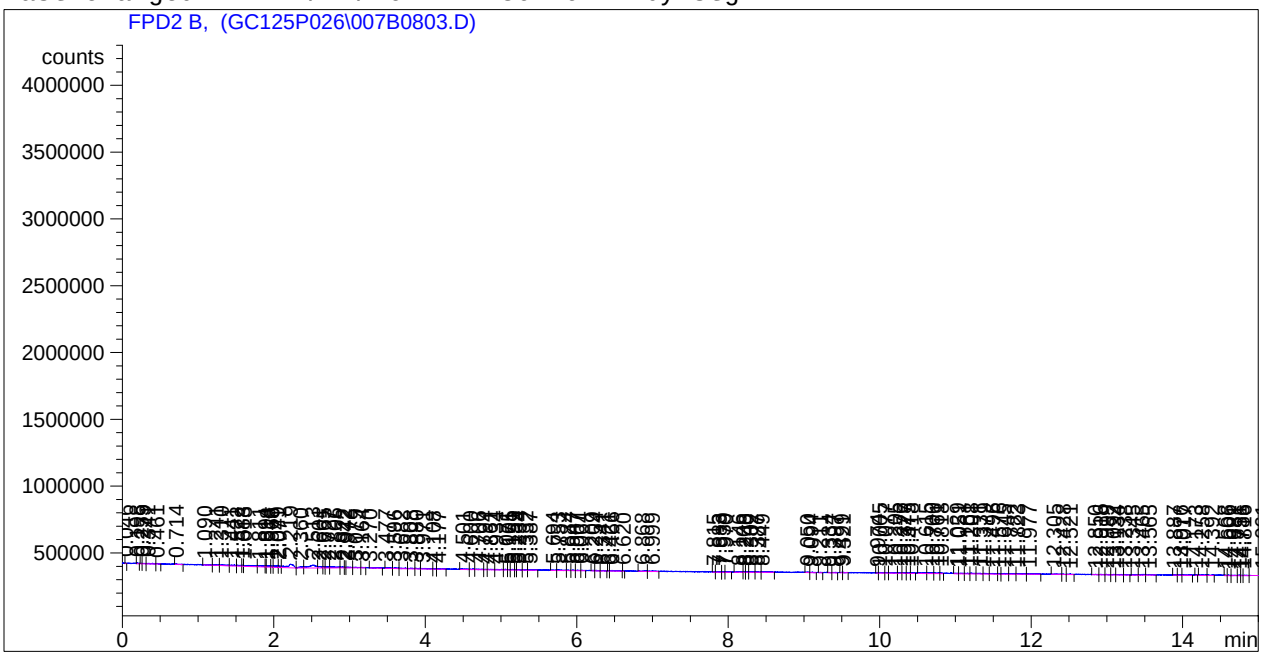
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.508 BB X   1.61138e6  1.01074e-6    1.62868    Carbon Disulfide

Totals :                                 1.62868


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\007B0803.D
Sample Name: Blank

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   8
Acq. Instrument : Zeppo online                  Location : Vial 7
Injection Date  : 7/20/2011 4:43:42 PM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/20/2011 4:59:17 PM by stg
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.539            -          -          -         CS2

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\007B0804.D
Sample Name: Blank

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   8
Acq. Instrument : Zeppo online                      Location : Vial 7
Injection Date  : 7/20/2011 5:04:17 PM                   Inj :   4
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
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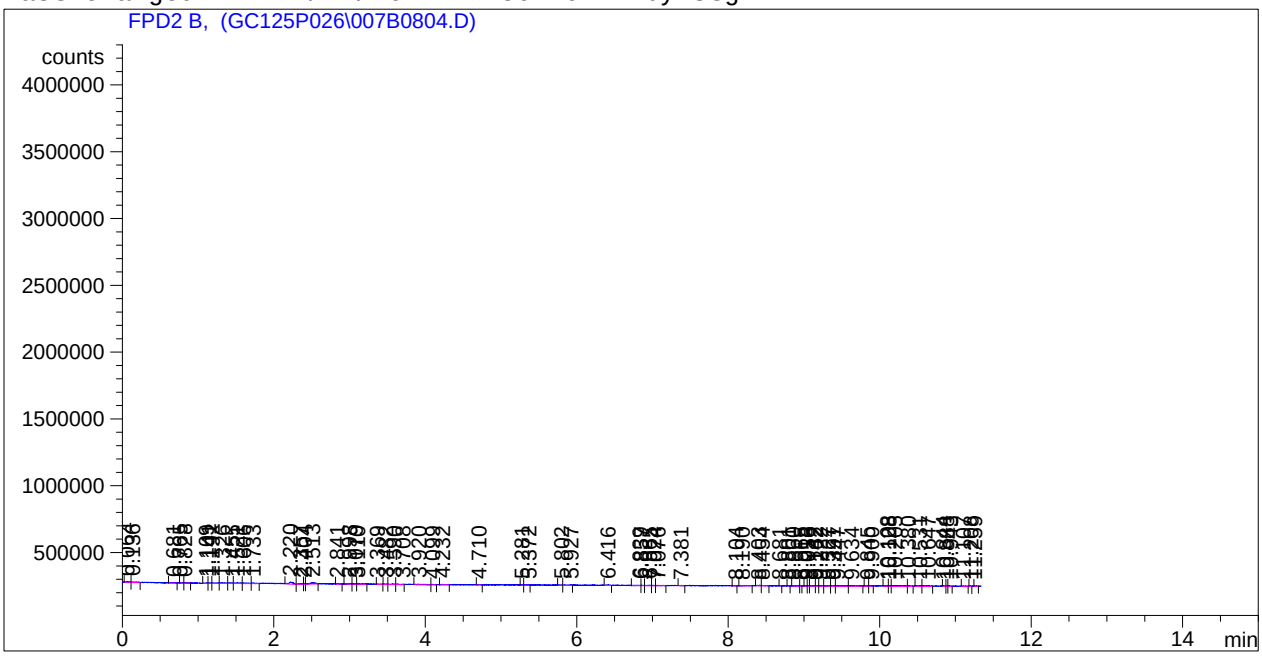
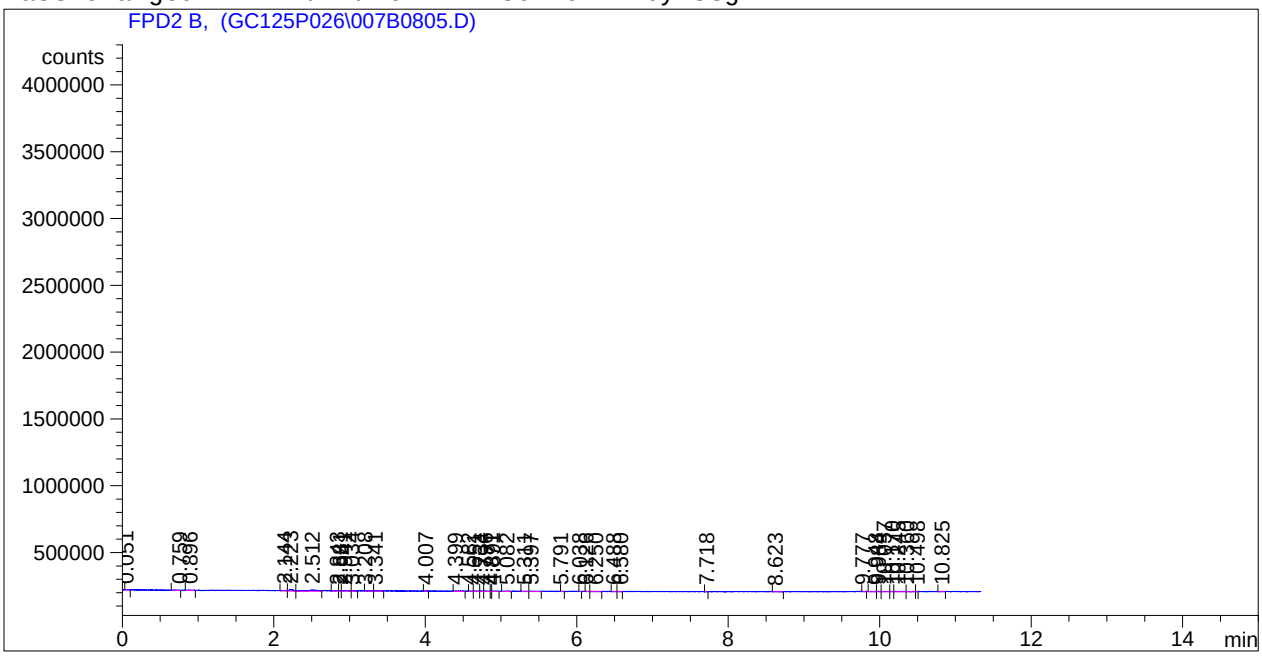



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.539            -          -          -         CS2

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\007B0805.D
Sample Name: Blank

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   8
Acq. Instrument : Zeppo online                      Location : Vial 7
Injection Date  : 7/20/2011 5:19:55 PM                   Inj :   5
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.539            -          -          -         CS2

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 7/27/2011 11:35:05 AM

Rel. Reference Window : 1.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 1.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Power
Origin : Ignored
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FPD2 B,

RetTime [min]	Sig	Lvl	Amount [ppmv]	Area	Amt/Area	Ref	Grp	Name
5.539	2	1	6.26000e-1	2.21718e5	2.82341e-6			CS2
		3	1.30000	9.79108e5	1.32774e-6			
		4	2.36000	3.32904e6	7.08913e-7			
		5	4.80000	1.35793e7	3.53479e-7			
		6	7.80000	3.49468e7	2.23196e-7			

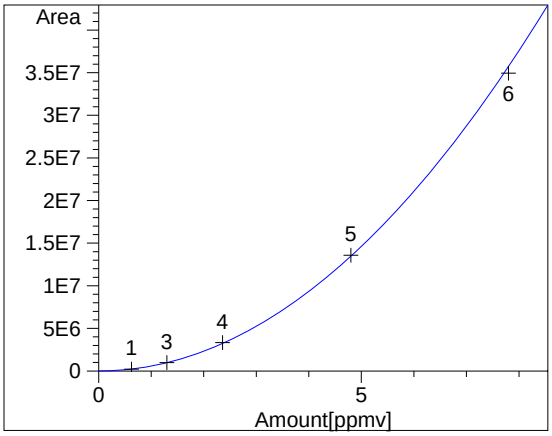
Peak Sum Table

No Entries in table

==========

Calibration Curves

==========

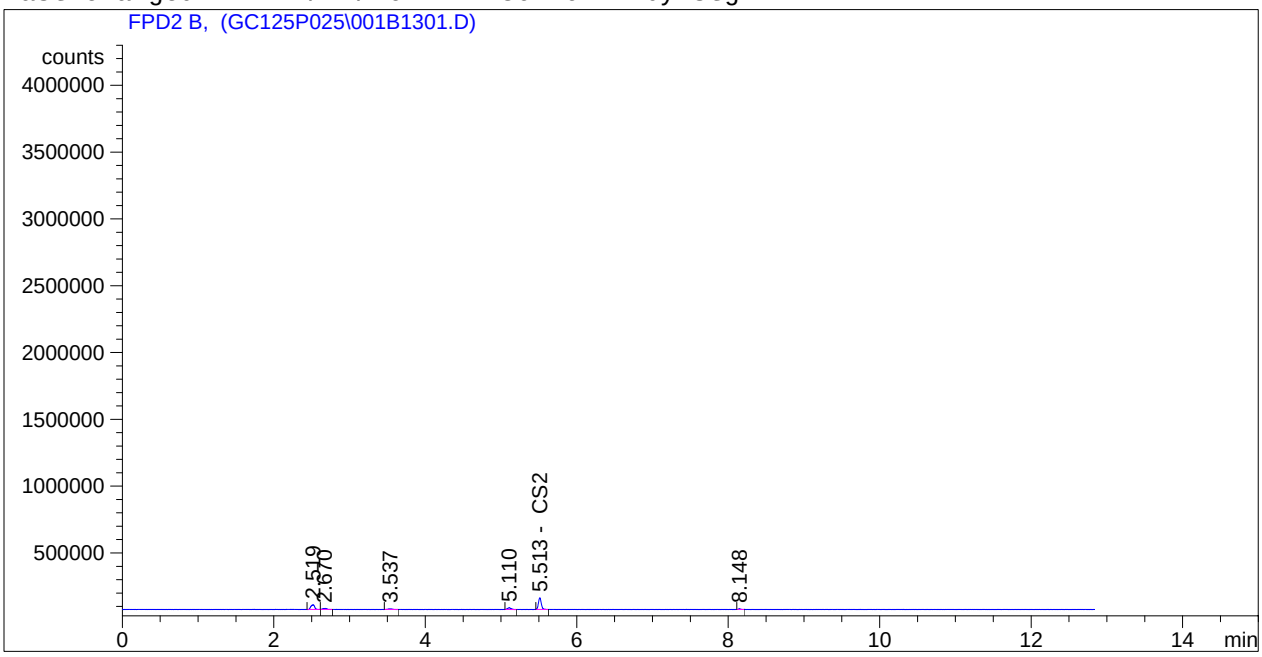


CS2 at exp. RT: 5.539
FPD2 B,
Correlation: 0.99993
Residual Std. Dev.: 450063.73597
Formula: y = b * x^m
m: 2.00826
b: 577131.69069
x: Amount
y: Area

==========

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\001B1301.D
Sample Name: gc125p013 #1

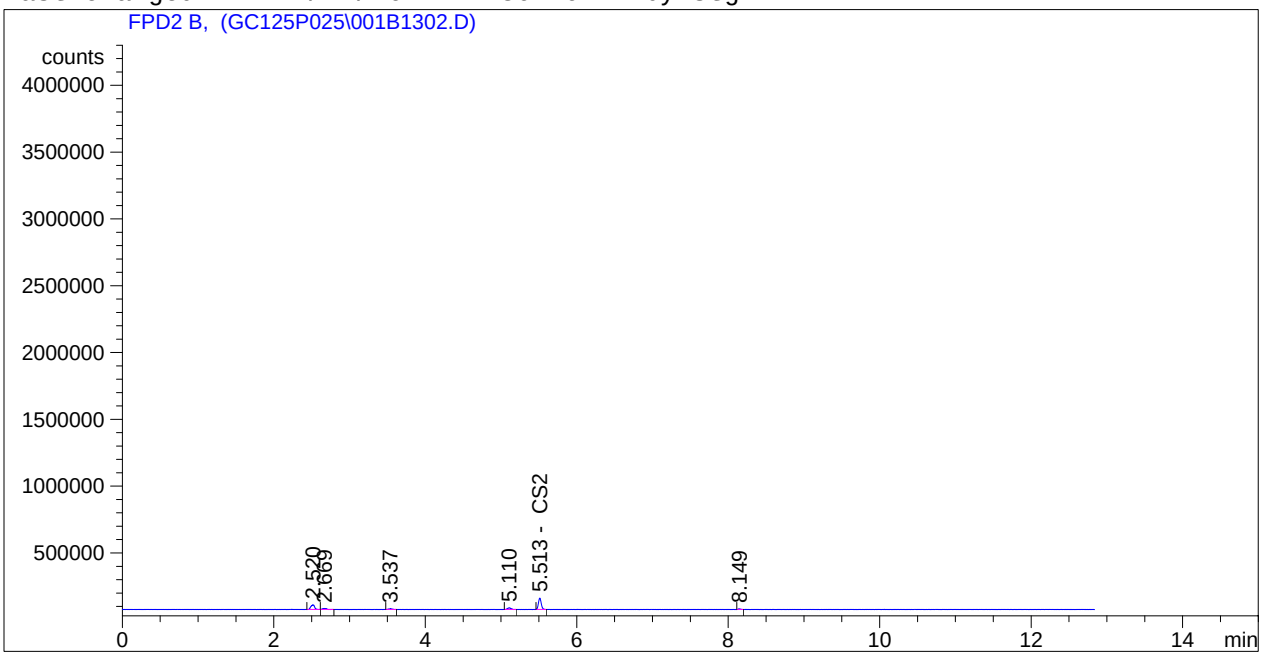
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  13
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/20/2011 2:59:10 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     2.25400e5  2.77795e-6 6.26151e-1    CS2

Totals :                              6.26151e-1


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\001B1302.D
Sample Name: gc125p013 #1

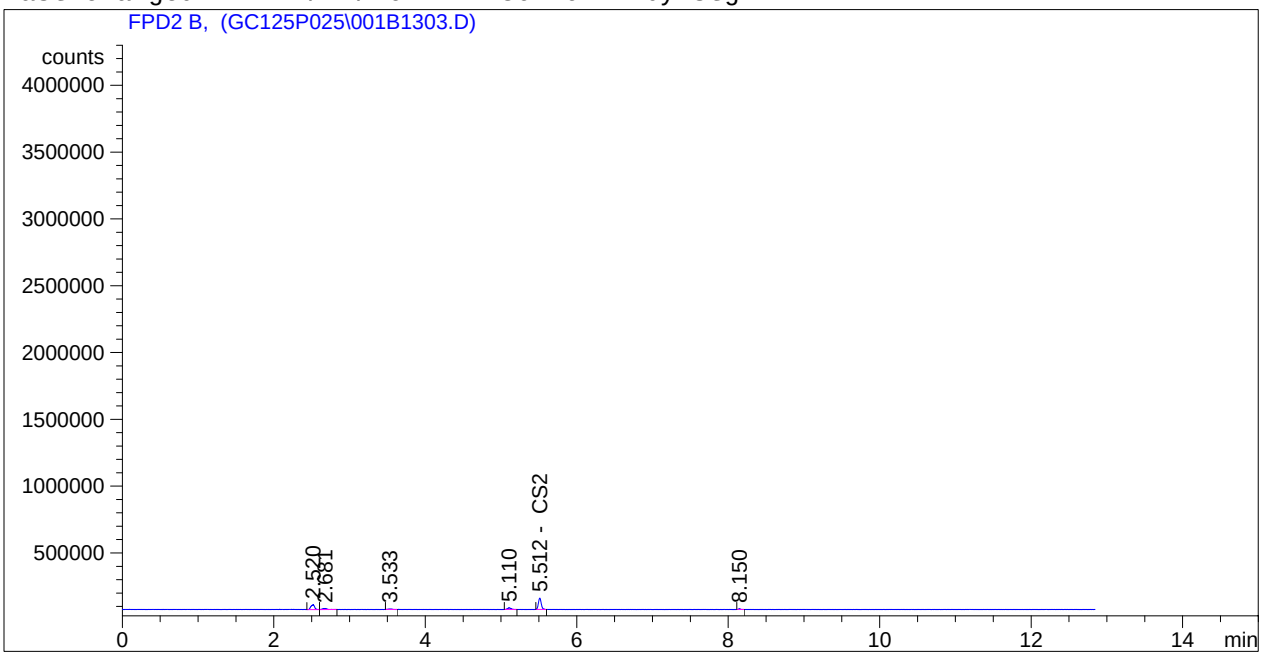
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  13
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/20/2011 3:16:11 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     2.19692e5  2.81396e-6 6.18204e-1    CS2

Totals :                              6.18204e-1


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\001B1303.D
Sample Name: gc125p013 #1

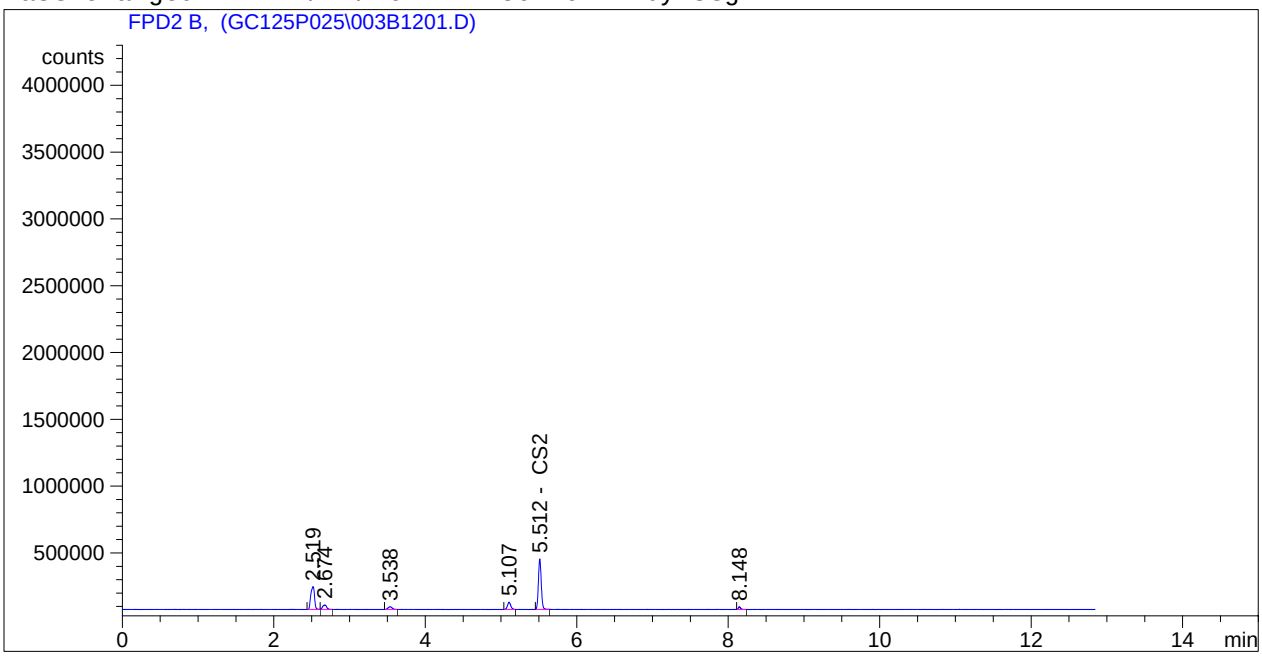
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  13
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/20/2011 3:33:12 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     2.20060e5  2.81159e-6 6.18720e-1    CS2

Totals :                              6.18720e-1


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\003B1201.D
Sample Name: gc125p013 #3

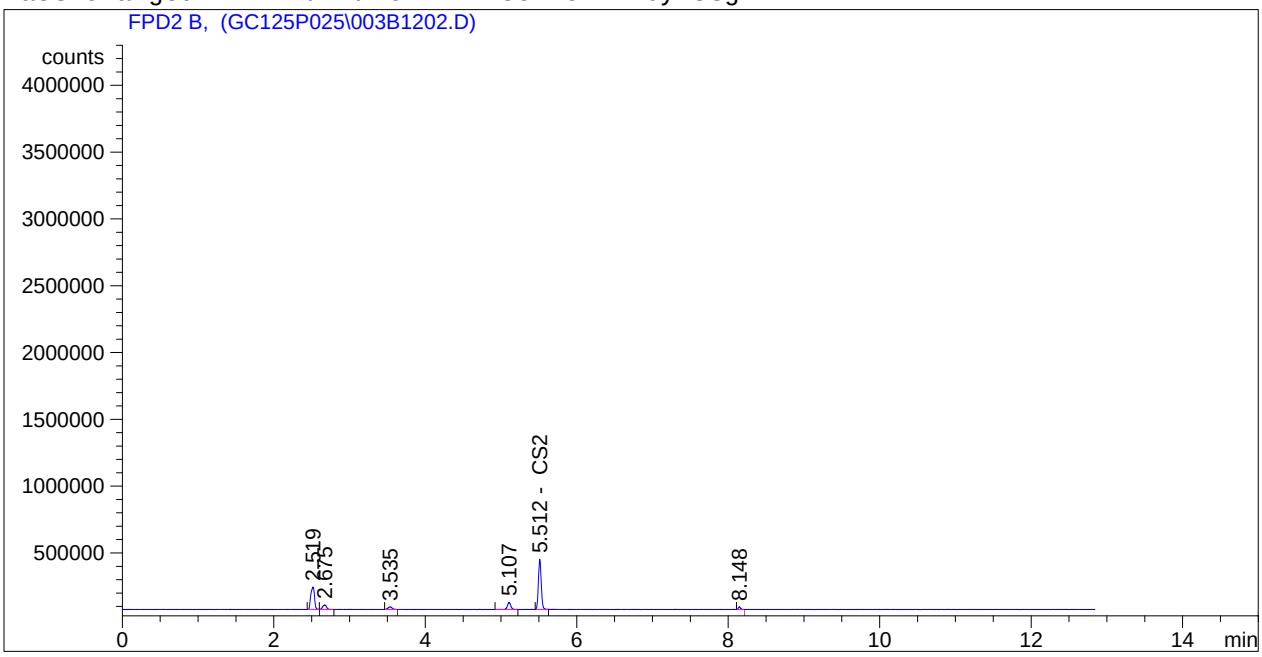
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  12
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/20/2011 2:08:08 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     9.86109e5  1.32410e-6    1.30571    CS2

Totals :                                 1.30571


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\003B1202.D
Sample Name: gc125p013 #3

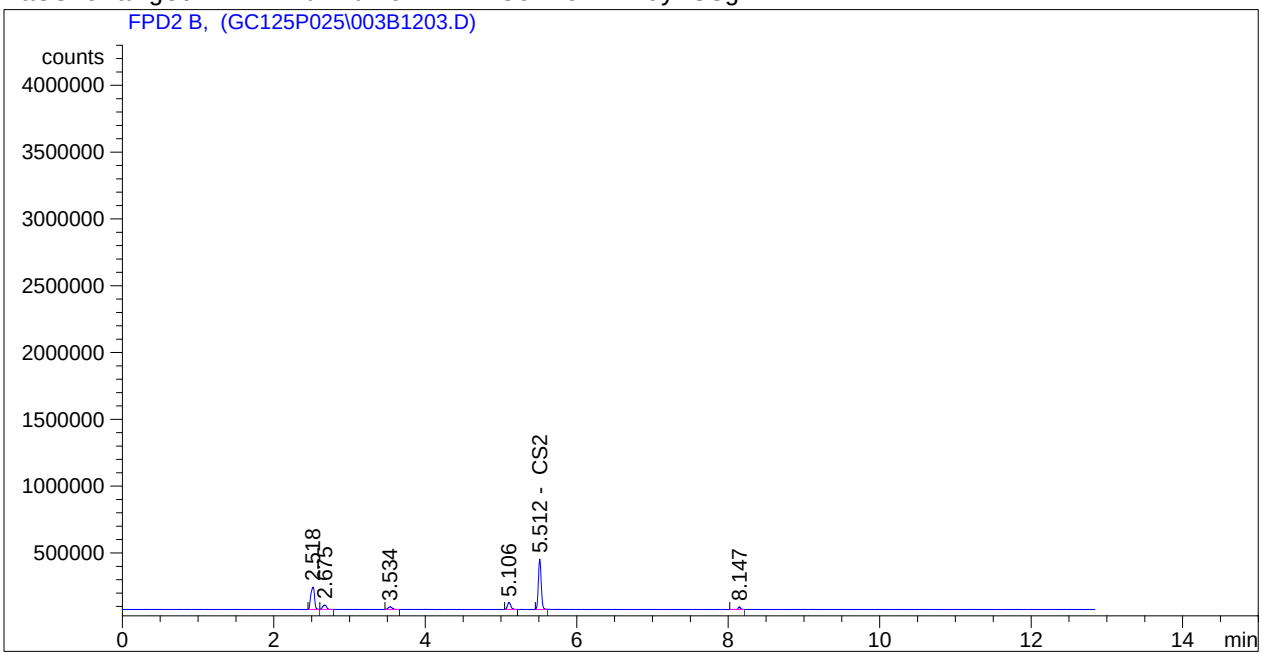
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  12
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/20/2011 2:25:08 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     9.75039e5  1.33163e-6    1.29839    CS2

Totals :                                 1.29839


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\003B1203.D
Sample Name: gc125p013 #3

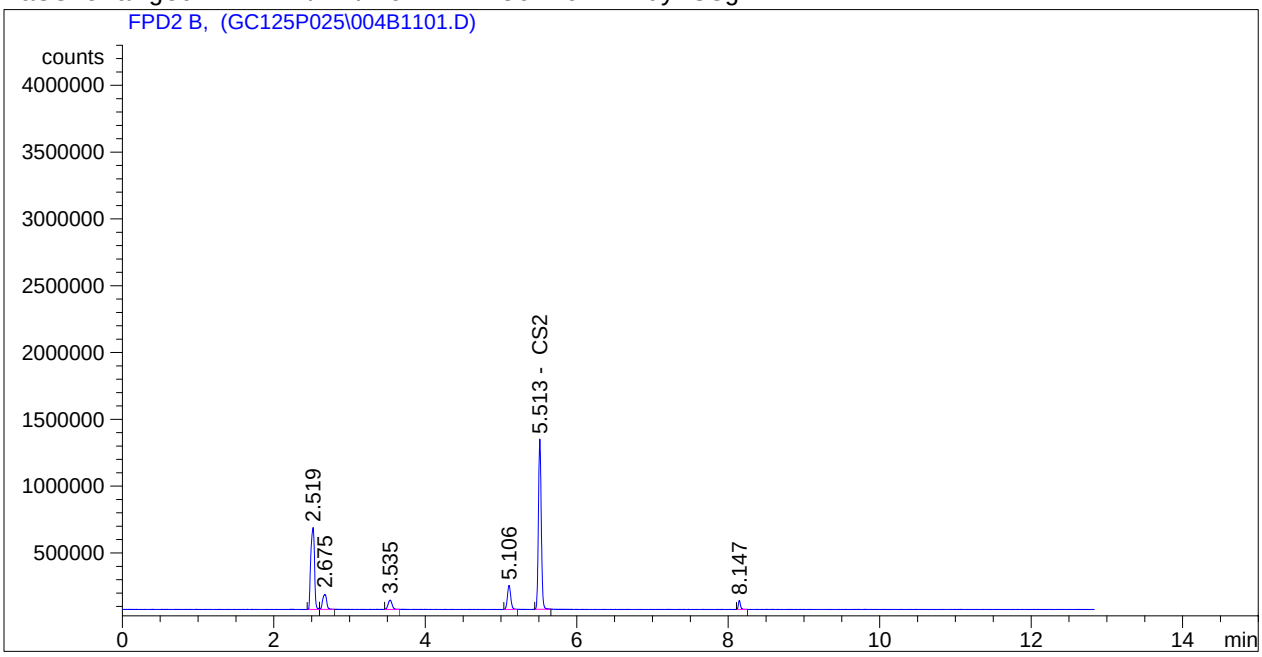
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  12
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/20/2011 2:42:09 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     9.76177e5  1.33085e-6    1.29915    CS2

Totals :                                 1.29915


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\004B1101.D
Sample Name: gc125p013 #4

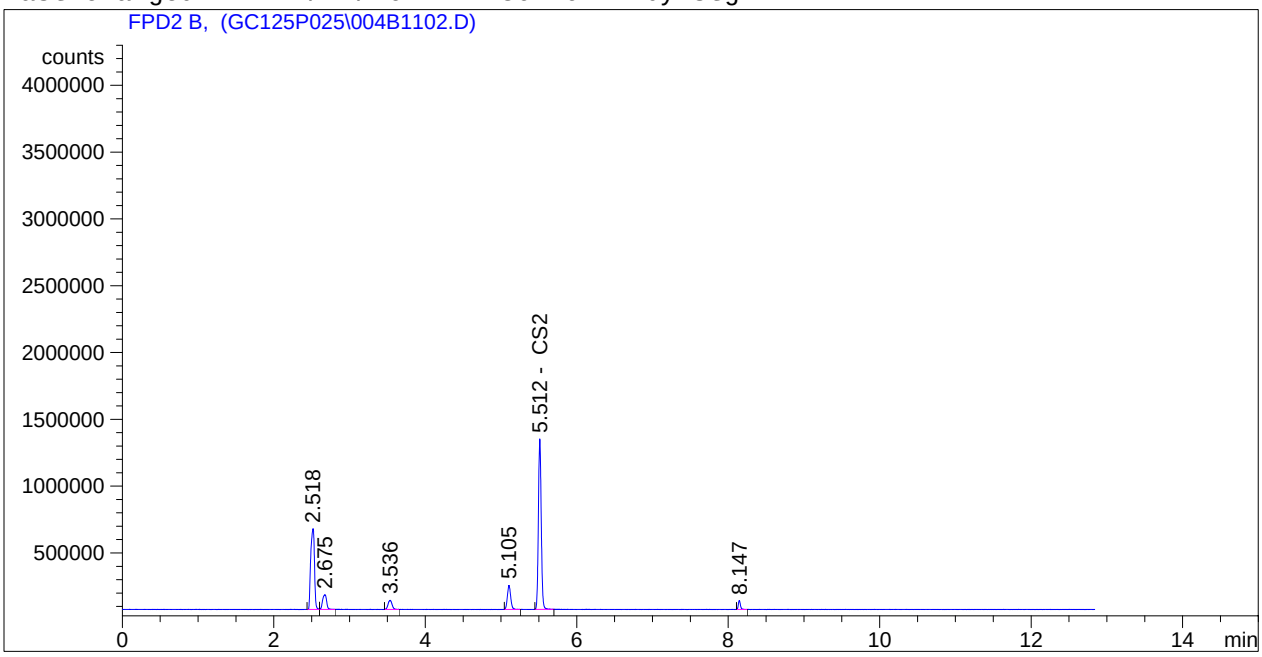
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  11
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/20/2011 1:17:06 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     3.33657e6  7.18035e-7    2.39578    CS2

Totals :                                2.39578


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\004B1102.D
Sample Name: gc125p013 #4

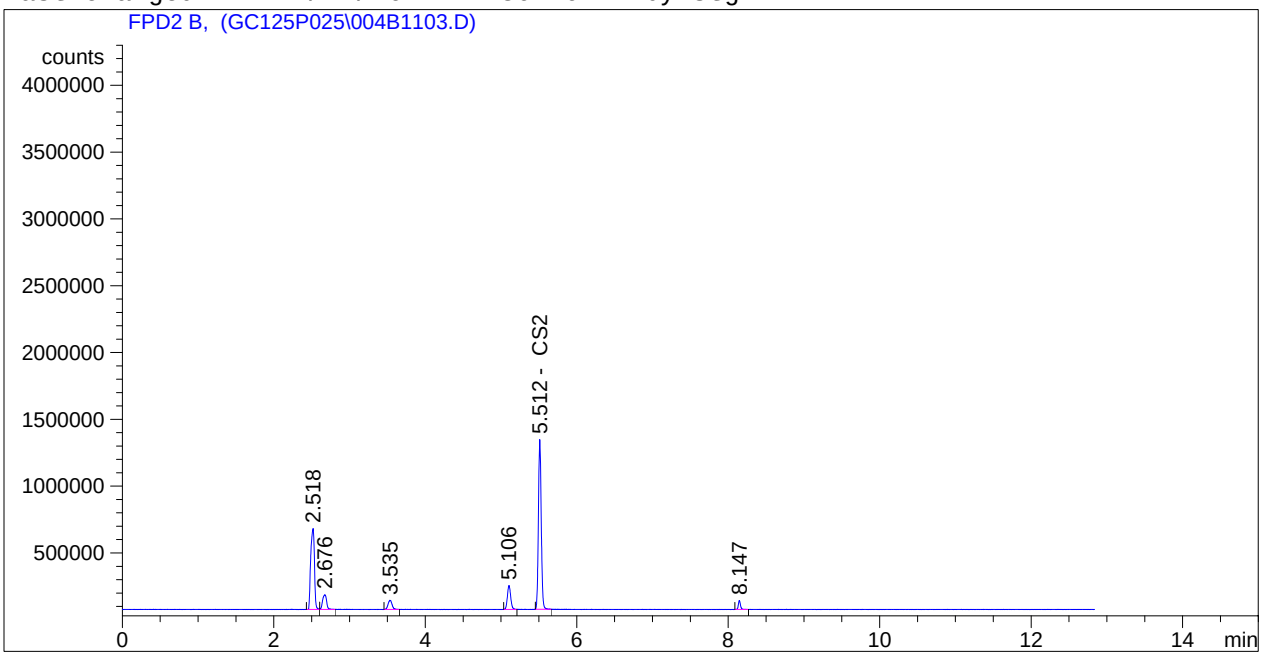
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  11
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/20/2011 1:34:06 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     3.34022e6  7.17642e-7    2.39708    CS2

Totals :                                 2.39708


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\004B1103.D
Sample Name: gc125p013 #4

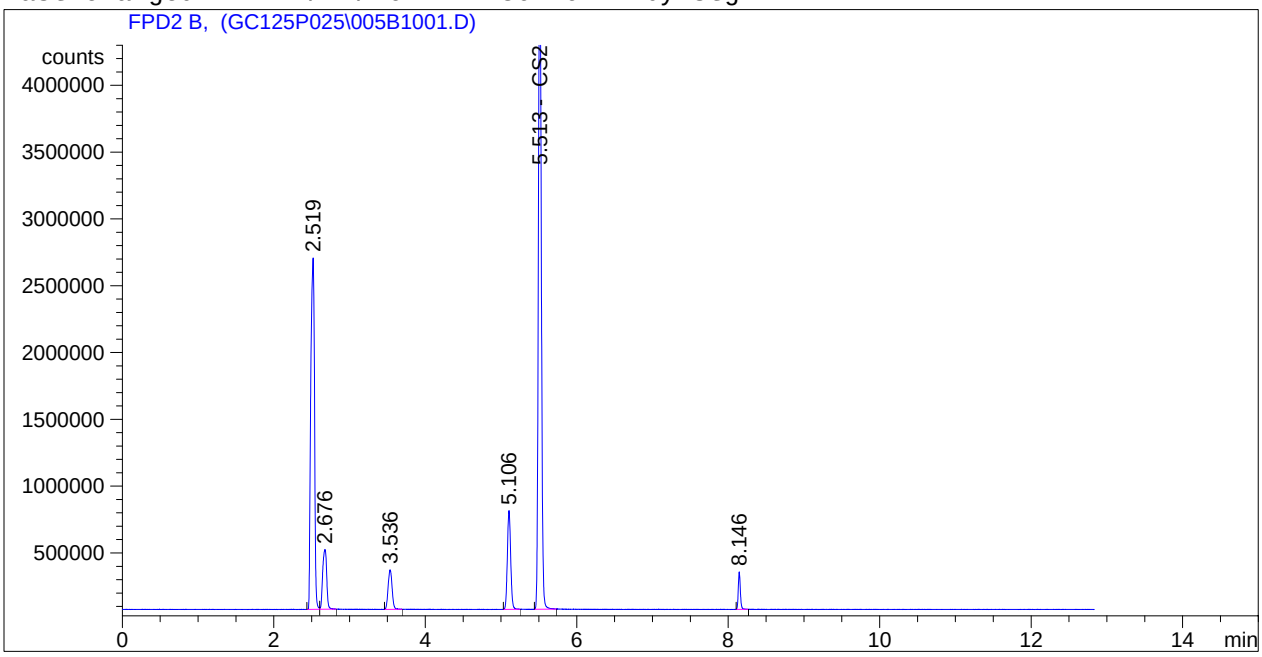
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  11
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/20/2011 1:51:07 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     3.31032e6  7.20888e-7    2.38637    CS2

Totals :                                 2.38637


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\005B1001.D
Sample Name: gc125p013 #5

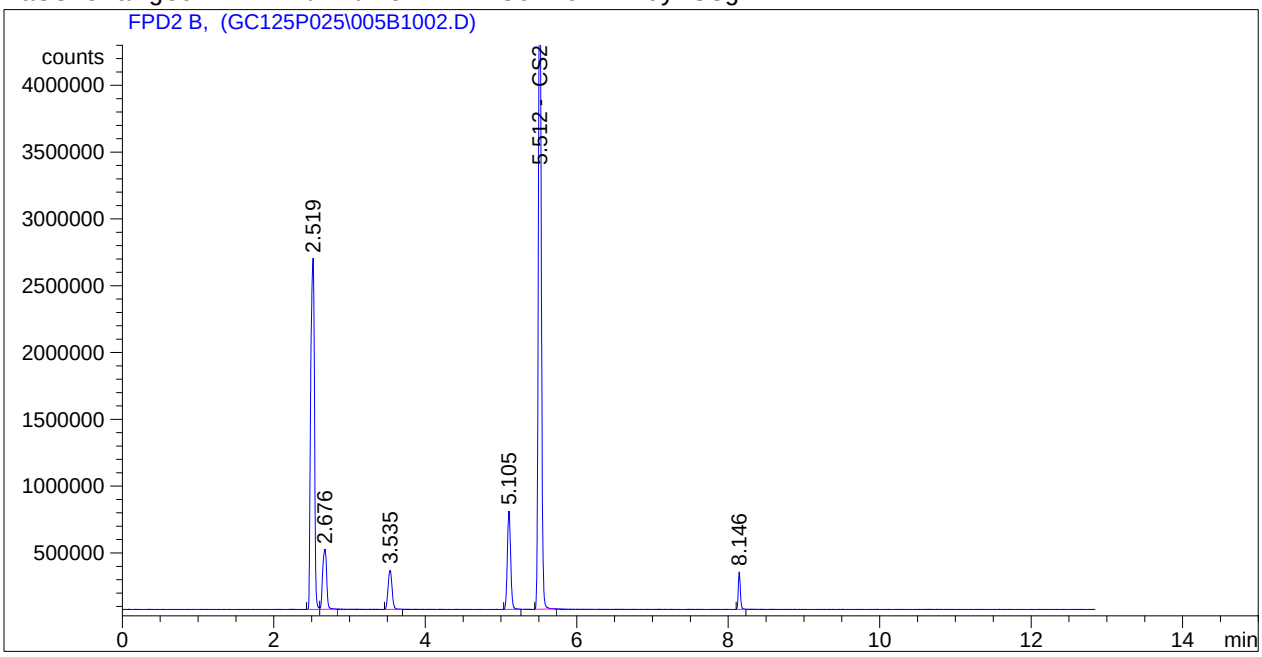
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  10
Acq. Instrument : Zeppo online                  Location : Vial 5
Injection Date  : 7/20/2011 12:26:03 AM              Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     1.35981e7  3.54652e-7    4.82260    CS2

Totals :                                 4.82260


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\005B1002.D
Sample Name: gc125p013 #5

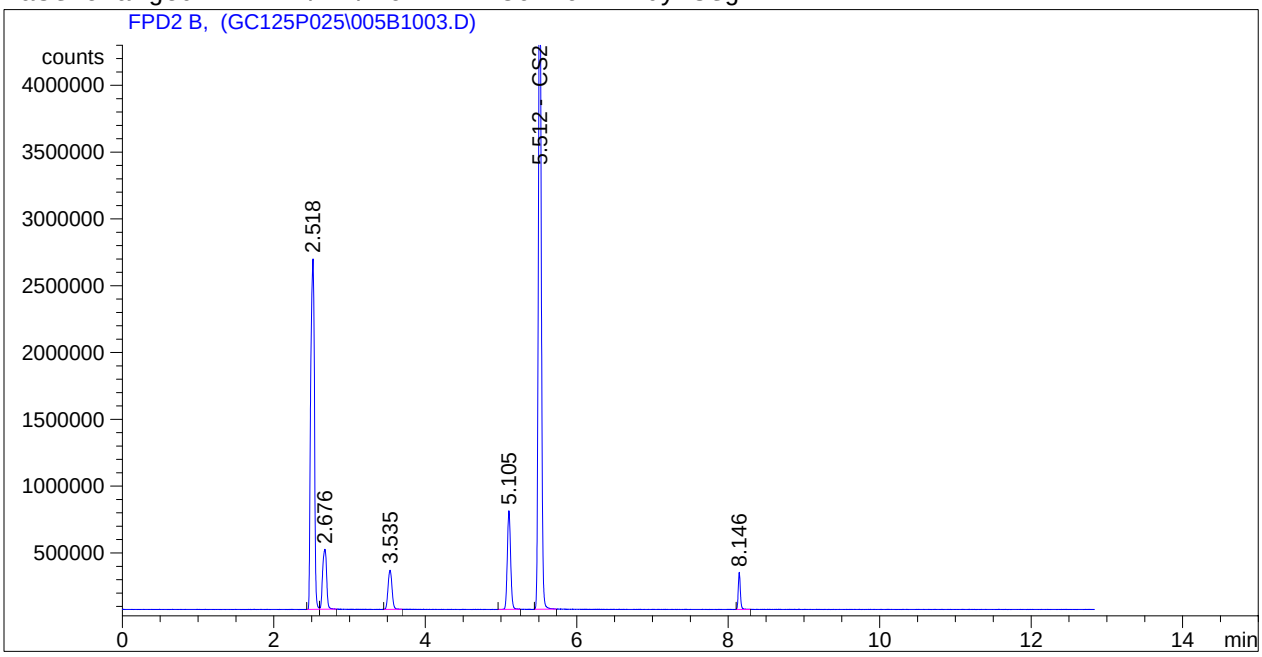
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  10
Acq. Instrument : Zeppo online                  Location : Vial 5
Injection Date  : 7/20/2011 12:43:04 AM              Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     1.35669e7  3.55062e-7    4.81708    CS2

Totals :                                 4.81708


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\005B1003.D
Sample Name: gc125p013 #5

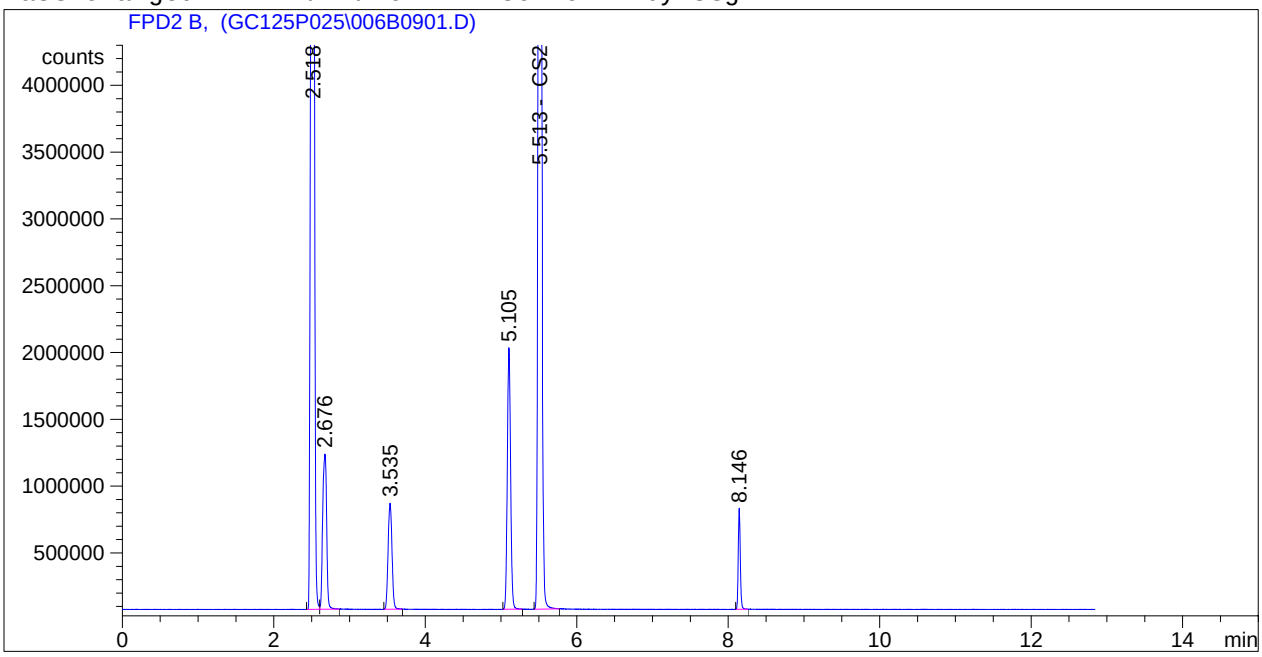
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  10
Acq. Instrument : Zeppo online                  Location : Vial 5
Injection Date  : 7/20/2011 1:00:05 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 BB     1.35730e7  3.54982e-7    4.81816    CS2

Totals :                                 4.81816


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\006B0901.D
Sample Name: gc125p013 #6

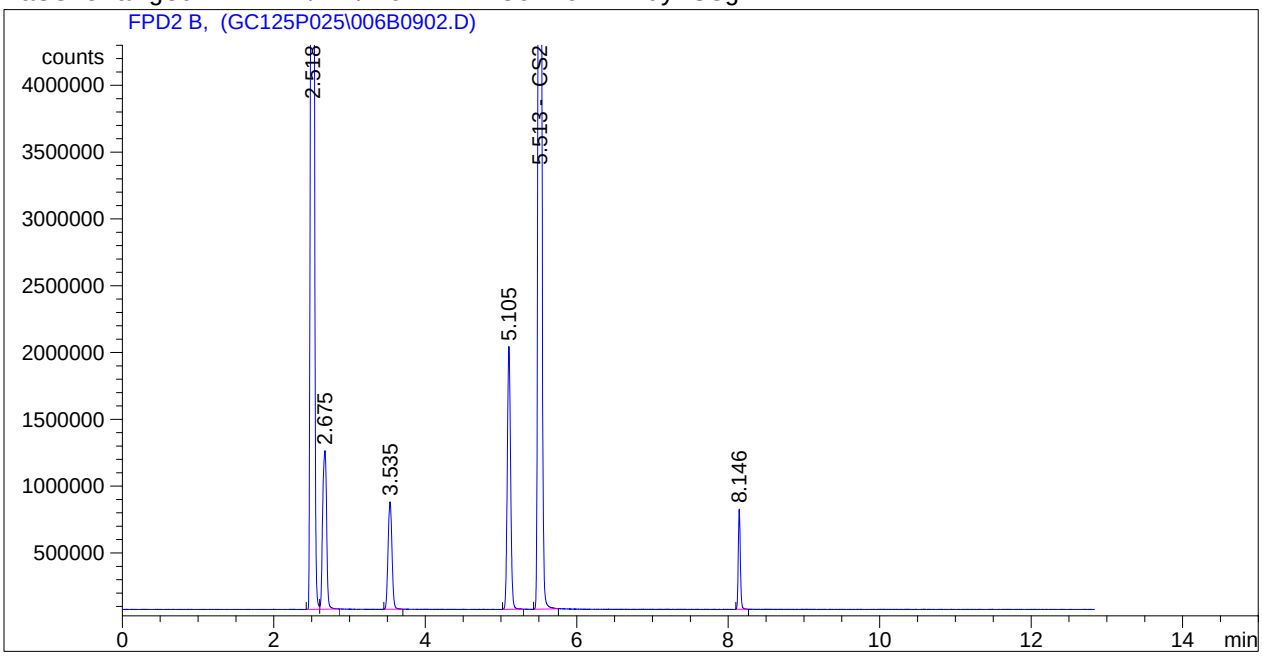
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   9
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/19/2011 11:35:00 PM              Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     3.47670e7  2.21371e-7    7.69640    CS2

Totals :                                 7.69640


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\006B0902.D
Sample Name: gc125p013 #6

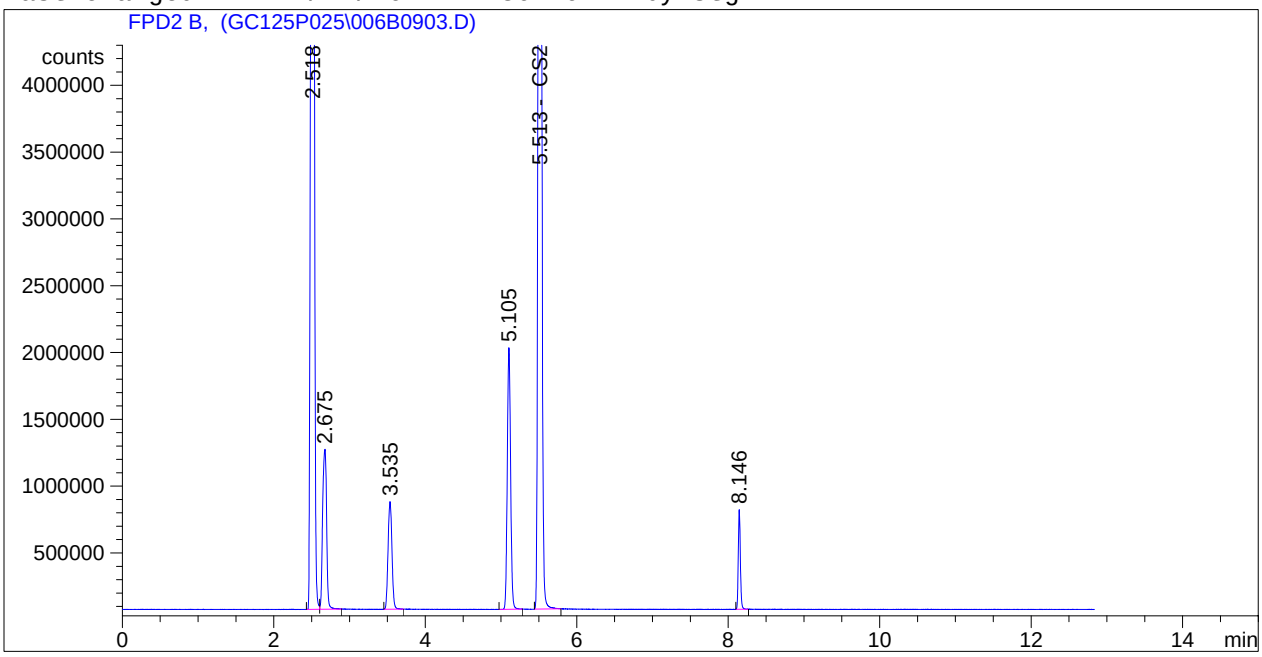
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   9
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/19/2011 11:52:01 PM              Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     3.49876e7  2.20669e-7    7.72068    CS2

Totals :                                 7.72068


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P025\006B0903.D
Sample Name: gc125p013 #6

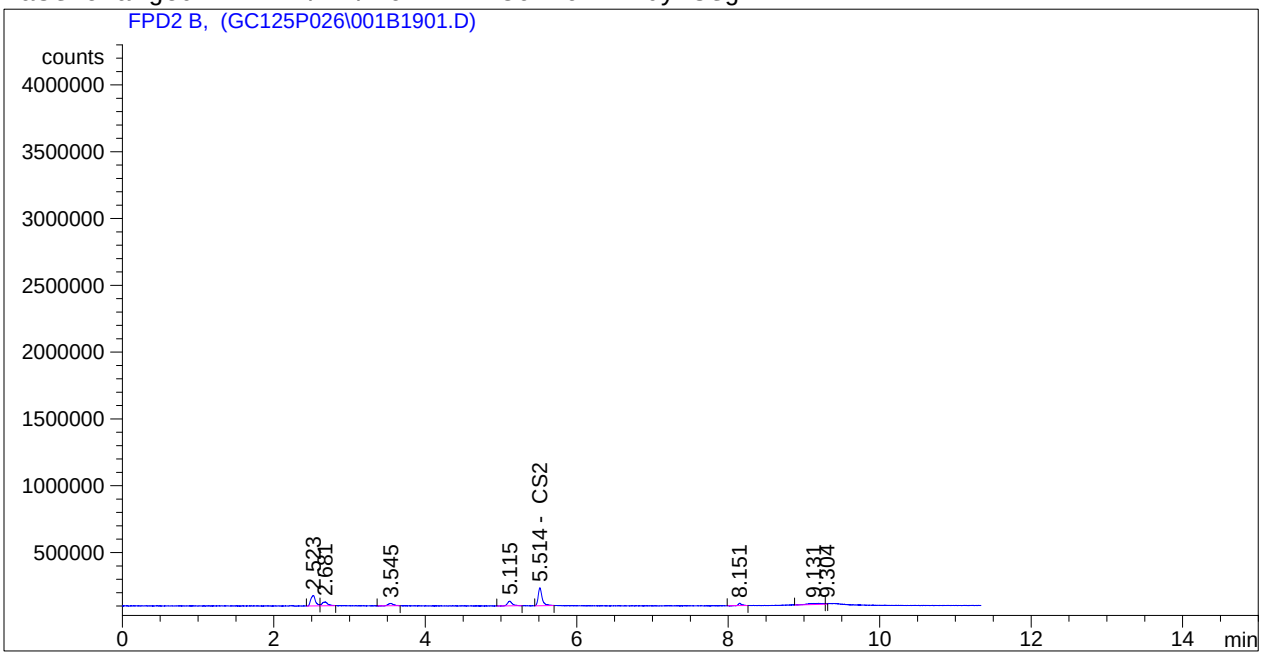
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   9
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/20/2011 12:09:02 AM              Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P025.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
                  (modified after loading)
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     3.50859e7  2.20358e-7    7.73147    CS2

Totals :                                 7.73147


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\001B1901.D
Sample Name: GC125p013 #1

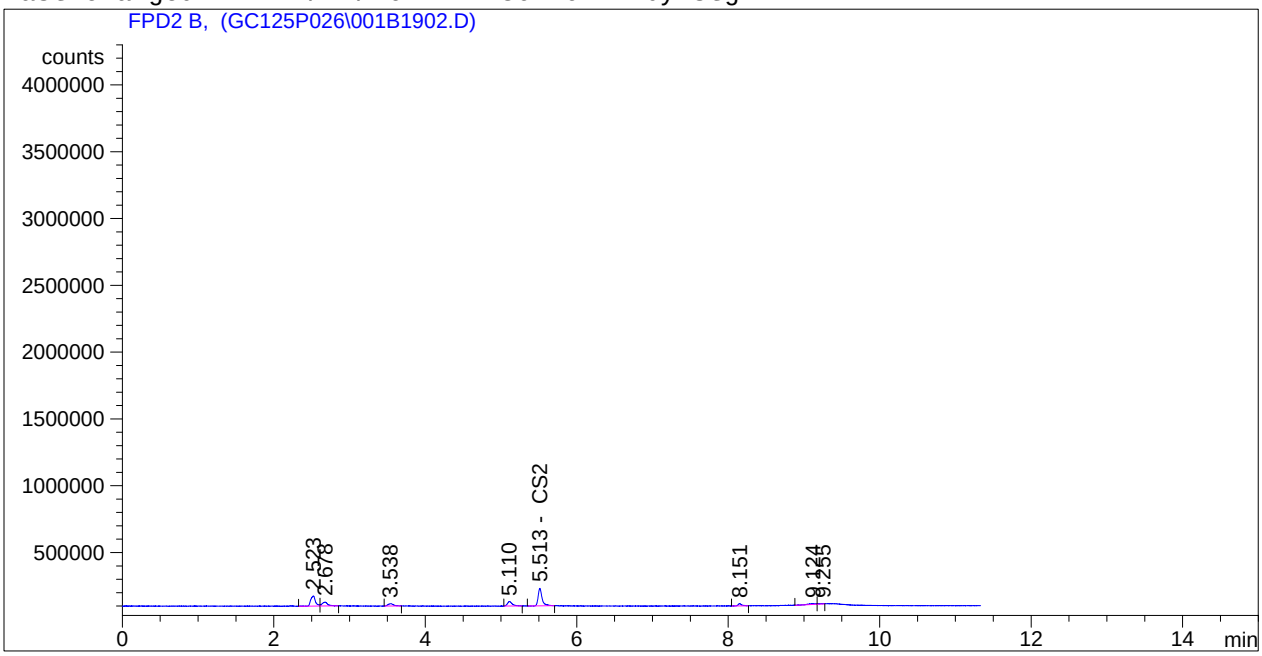
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  19
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/21/2011 1:21:37 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.514 BB     4.82868e5  1.89499e-6 9.15032e-1    CS2

Totals :                              9.15032e-1


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\001B1902.D
Sample Name: GC125p013 #1

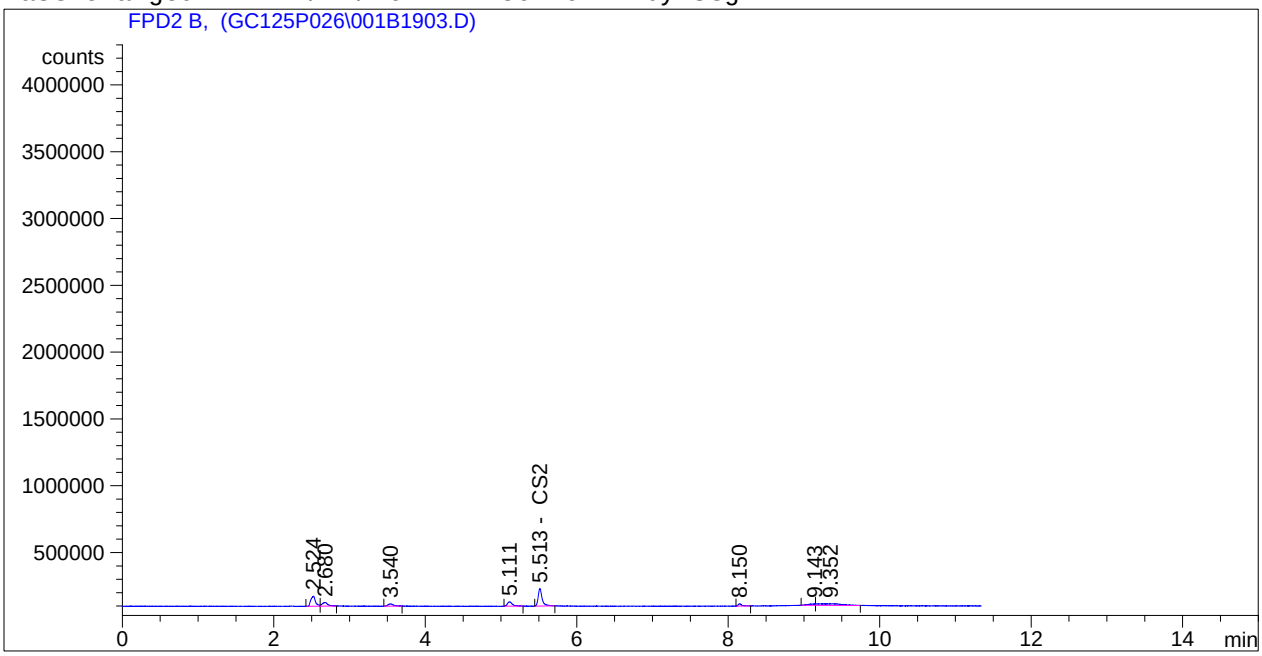
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  19
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/21/2011 1:37:07 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     4.67285e5  1.92646e-6 9.00206e-1    CS2

Totals :                              9.00206e-1


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\001B1903.D
Sample Name: GC125p013 #1

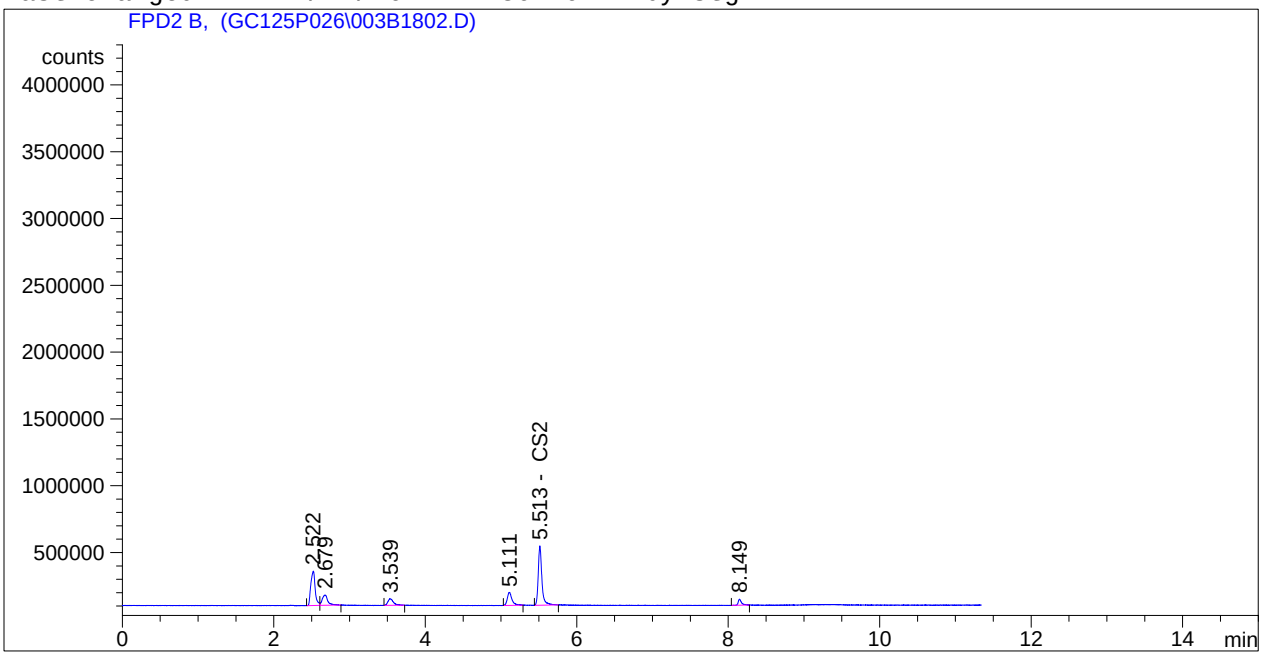
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  19
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/21/2011 1:52:37 AM               Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     4.69911e5  1.92105e-6 9.02722e-1    CS2

Totals :                              9.02722e-1


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\003B1802.D
Sample Name: GC125p013 #3

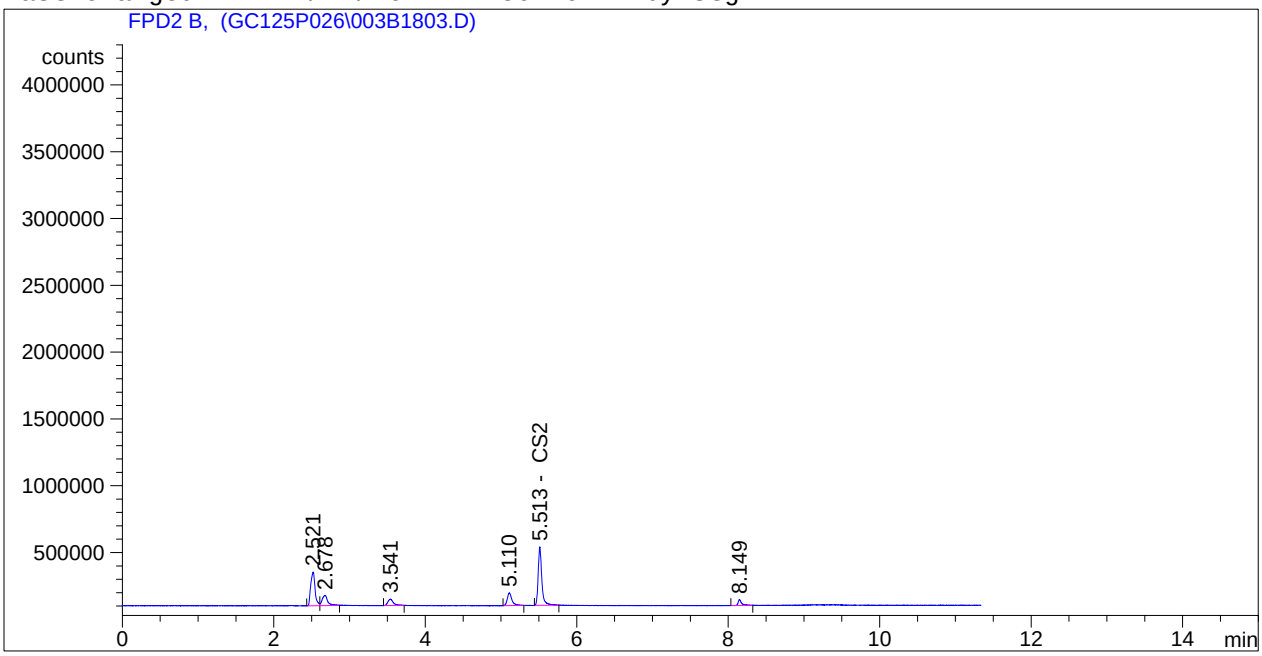
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  18
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/21/2011 12:50:38 AM              Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     1.47886e6  1.08034e-6    1.59767    CS2

Totals :                                 1.59767


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\003B1803.D
Sample Name: GC125p013 #3

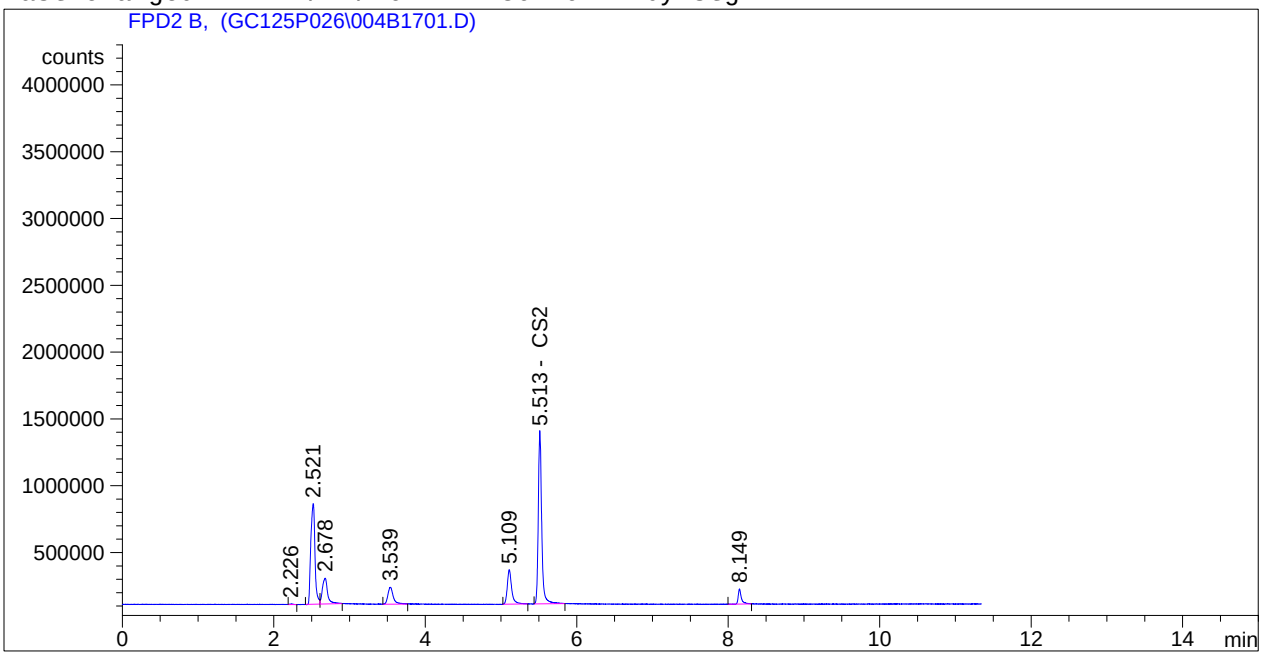
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  18
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/21/2011 1:06:07 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     1.45011e6  1.09104e-6    1.58212    CS2

Totals :                                 1.58212


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\004B1701.D
Sample Name: GC125p013 #4

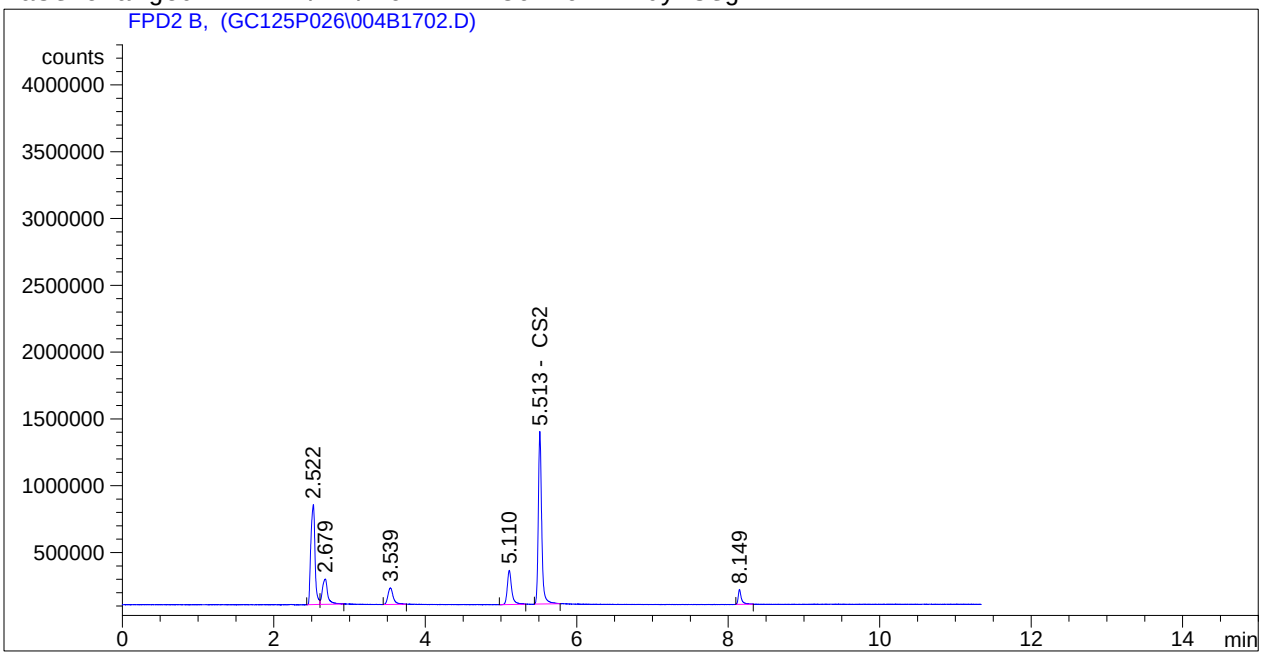
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  17
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/20/2011 11:48:31 PM              Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     4.05487e6  6.51079e-7    2.64004    CS2

Totals :                                 2.64004


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\004B1702.D
Sample Name: GC125p013 #4

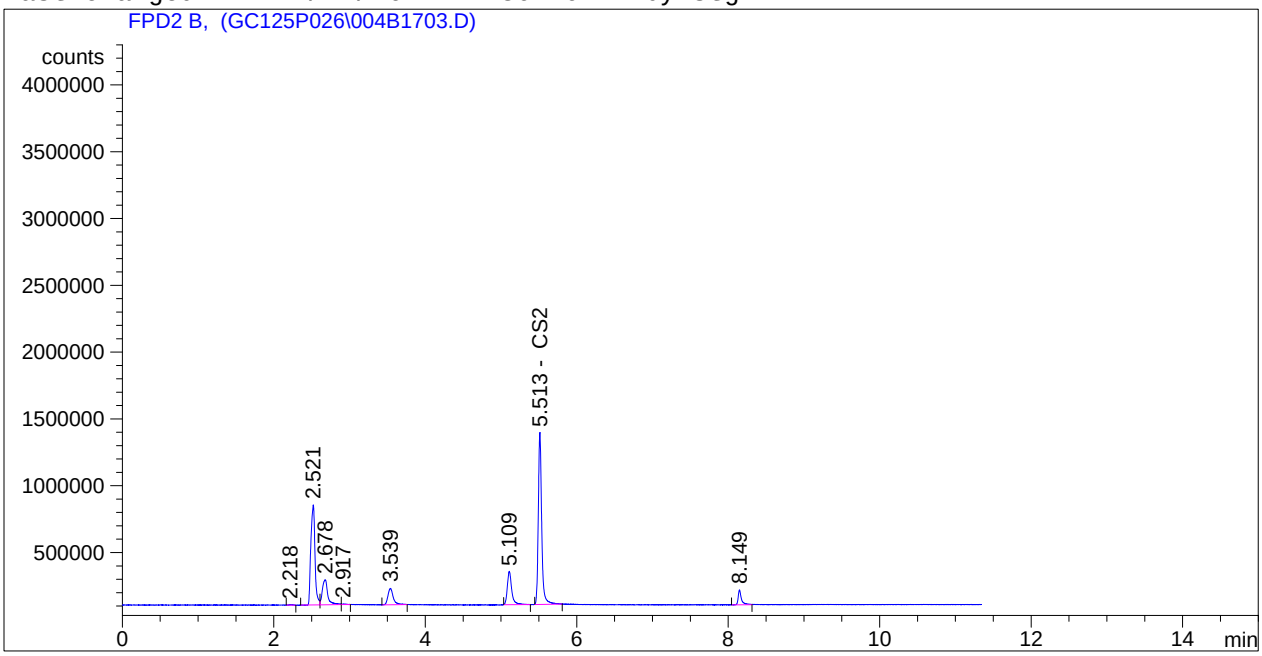
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  17
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/21/2011 12:04:01 AM              Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     4.01531e6  6.54292e-7    2.62718    CS2

Totals :                                 2.62718


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\004B1703.D
Sample Name: GC125p013 #4

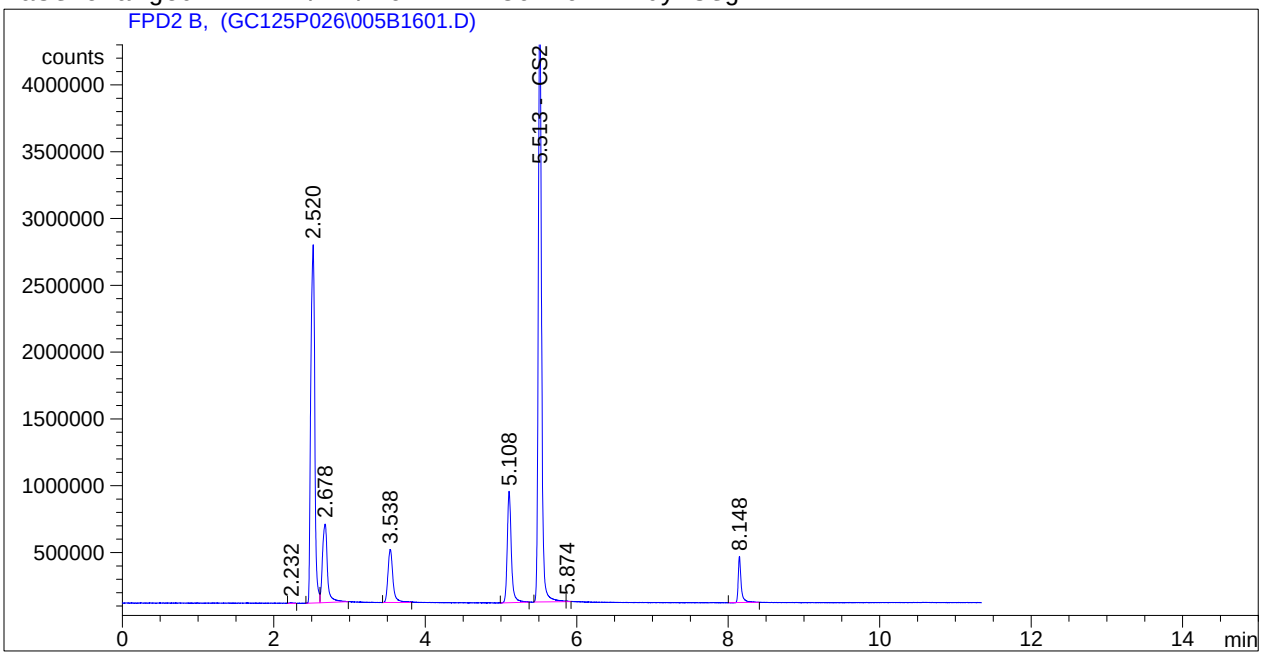
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  17
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/21/2011 12:19:30 AM              Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     4.00843e6  6.54855e-7    2.62494    CS2

Totals :                                 2.62494


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\005B1601.D
Sample Name: GC125p013 #5

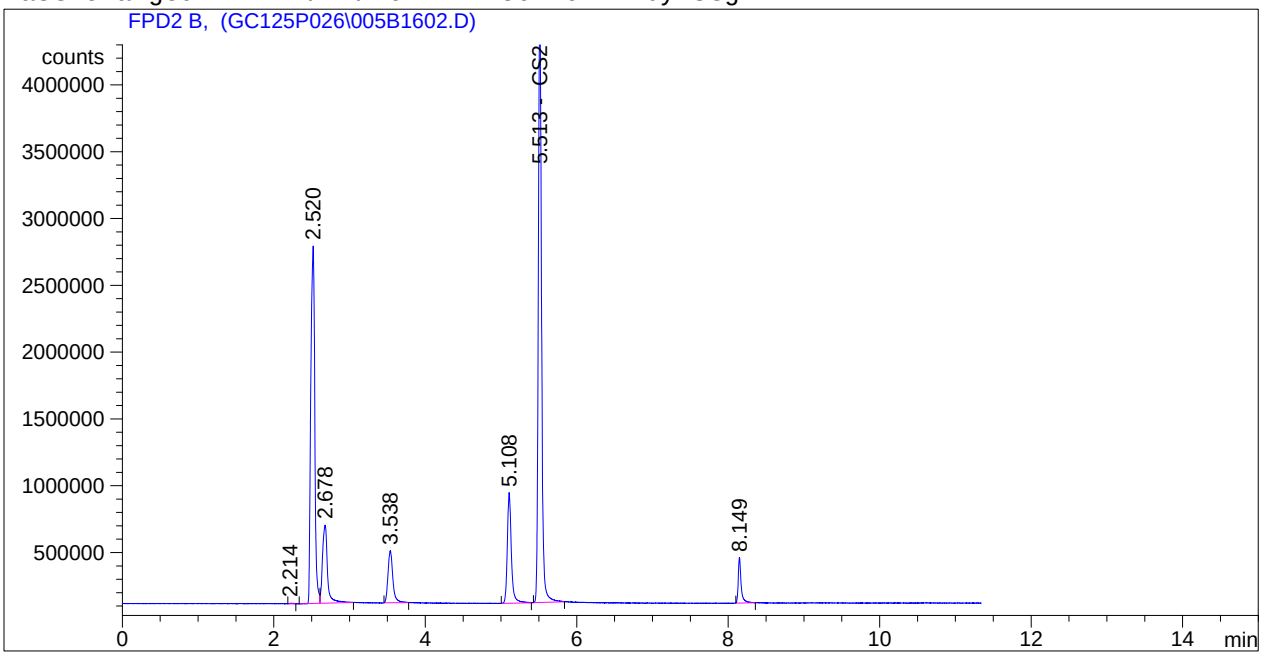
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  16
Acq. Instrument : Zeppo online                  Location : Vial 5
Injection Date  : 7/20/2011 11:02:02 PM              Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BV     1.33757e7  3.57600e-7    4.78316    CS2

Totals :                                 4.78316


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\005B1602.D
Sample Name: GC125p013 #5

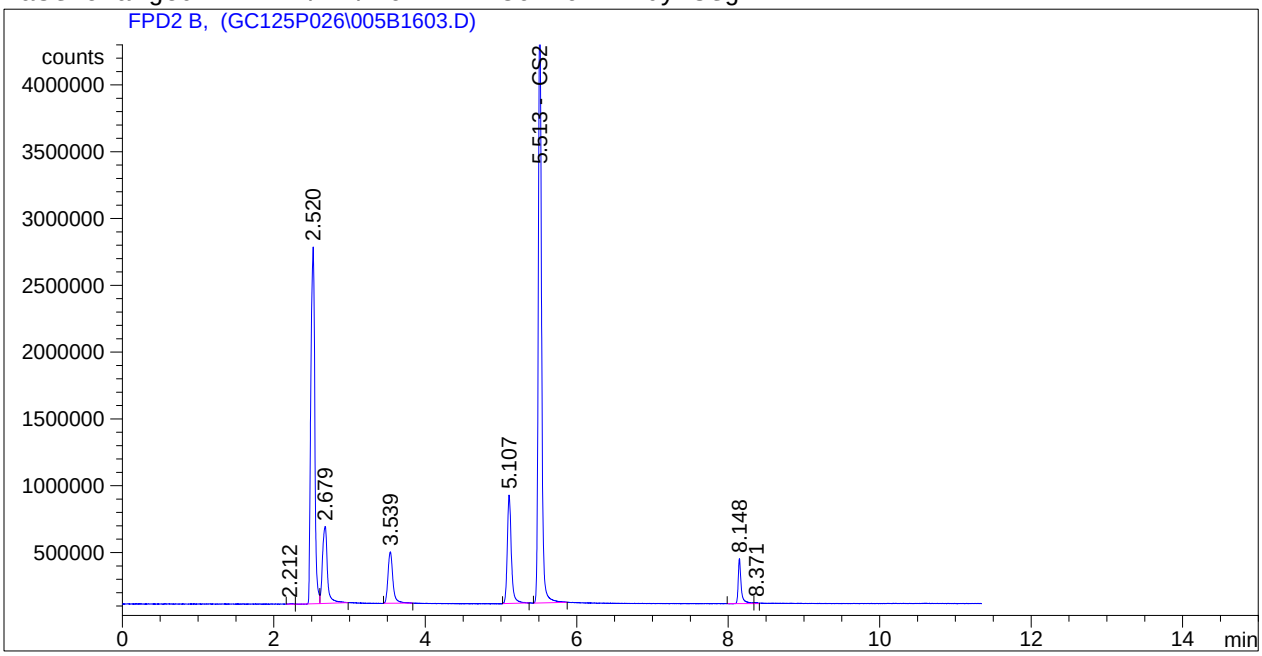
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  16
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/20/2011 11:17:32 PM                  Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     1.32542e7  3.59243e-7    4.76147    CS2

Totals :                                 4.76147


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\005B1603.D
Sample Name: GC125p013 #5

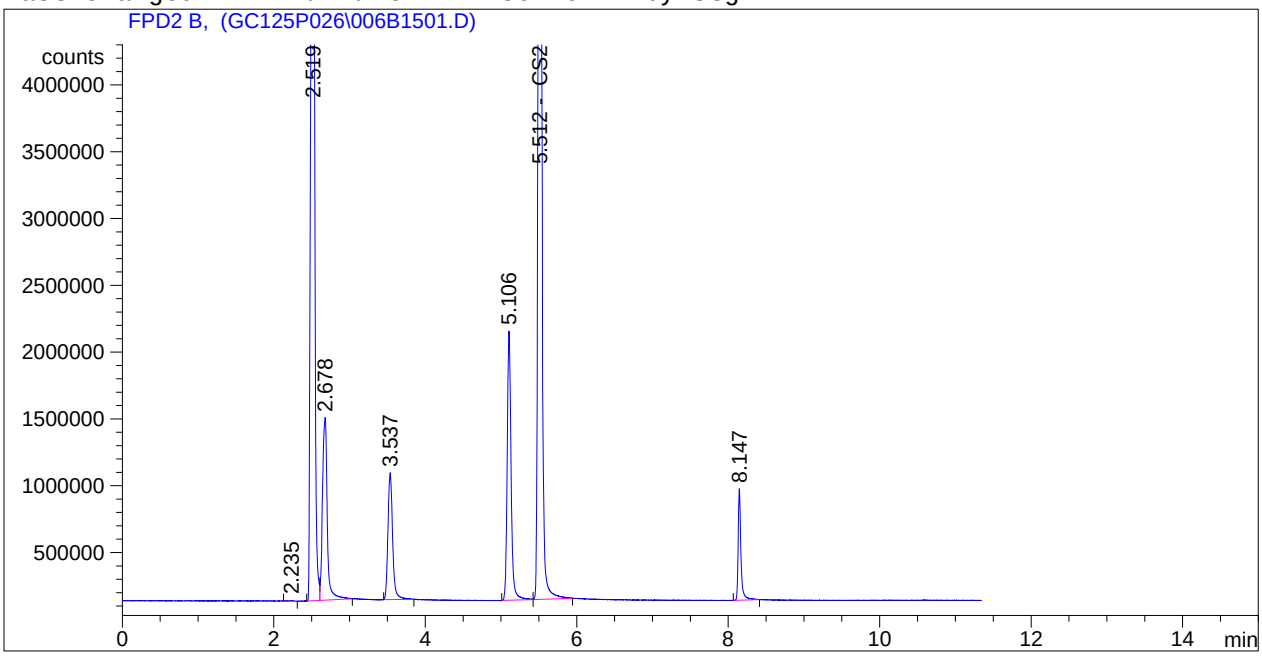
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  16
Acq. Instrument : Zeppo online                  Location : Vial 5
Injection Date  : 7/20/2011 11:33:02 PM              Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.513 BB     1.32460e7  3.59355e-7    4.76001    CS2

Totals :                                 4.76001


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\006B1501.D
Sample Name: GC125p013 #6

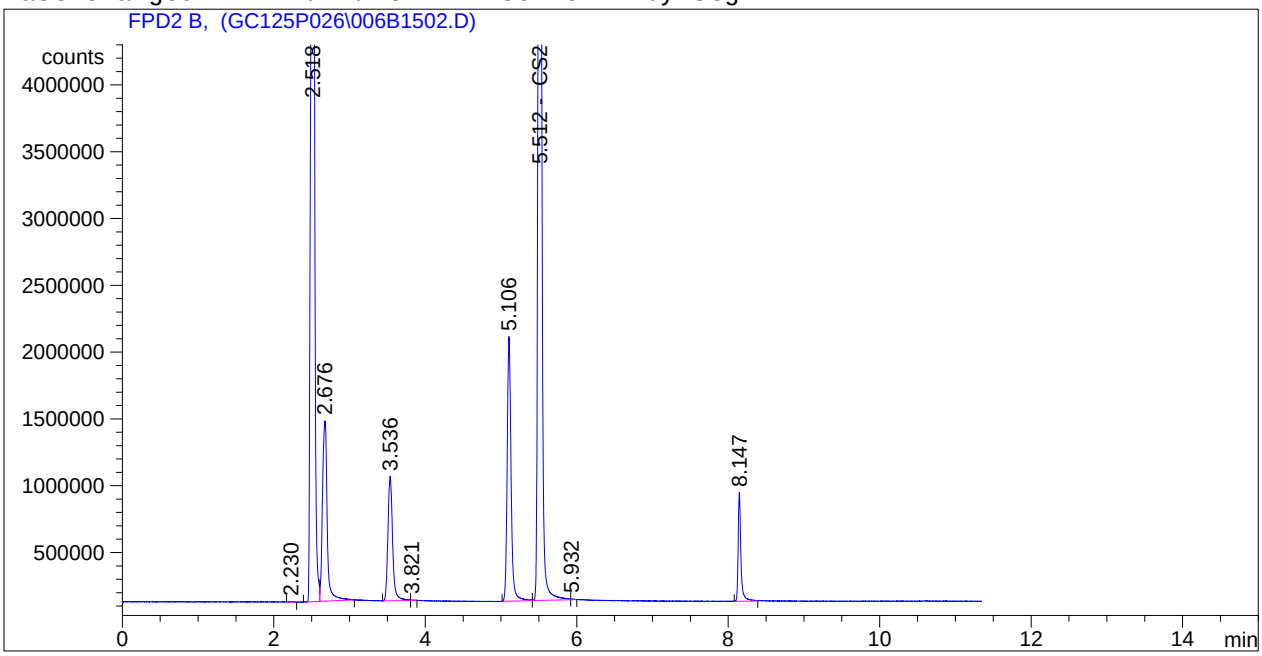
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/20/2011 10:15:32 PM              Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 VB     3.13541e7  2.33157e-7    7.31044    CS2

Totals :                                7.31044


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\006B1502.D
Sample Name: GC125p013 #6

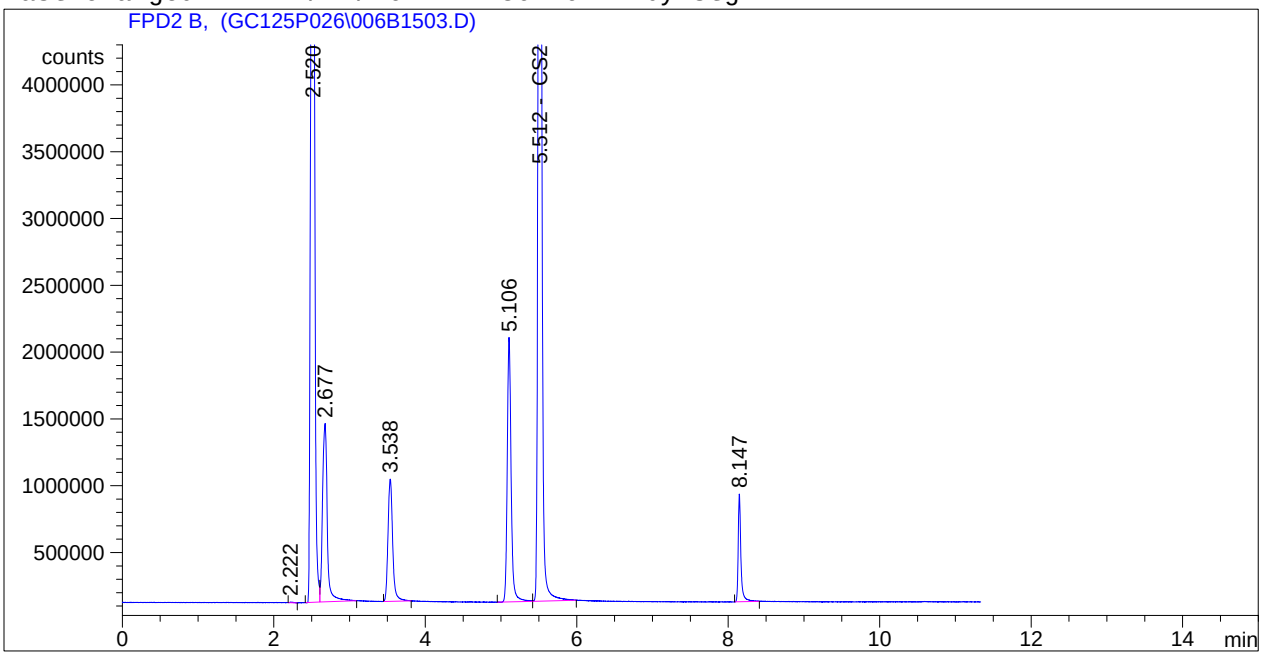
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/20/2011 10:31:02 PM              Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 VV     3.11735e7  2.33834e-7    7.28944    CS2

Totals :                                 7.28944


==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P026\006B1503.D
Sample Name: GC125p013 #6

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/20/2011 10:46:32 PM              Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P026.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P025_POST_CS2.M
Last changed    : 7/27/2011 11:36:16 AM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/27/2011 11:35:05 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  5.512 VB     3.13470e7  2.33184e-7    7.30961    CS2

Totals :                                 7.30961


==========================================================================
                          *** End of Report ***
```

Calibration Table

Calib. Data Modified : 7/29/2011 11:54:30 AM

Rel. Reference Window : 1.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 1.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : Separately calculated (see below)
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Power
Origin : Ignored
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Uncalibrated Peaks : not reported
Signal 2: FPD2 B,
Uncalibrated Peaks : using compound Methyl Mercaptan

RetTime [min]	Sig	Lvl	Amount [ppmv]	Area	Amt/Area	Ref	Grp	Name
2.500	2	1	1.19800	1.39438e5	8.59166e-6			Hydrogen Sulfide
		3	2.48000	6.27535e5	3.95197e-6			
		4	4.52000	2.22456e6	2.03187e-6			
		5	9.18000	9.57316e6	9.58931e-7			
		6	14.92000	2.49730e7	5.97446e-7			
2.677	2	1	5.08000e-1	3.80814e4	1.33398e-5			Carbonyl Sulfide
		3	1.05000	1.39068e5	7.55026e-6			
		4	1.92000	4.45762e5	4.30723e-6			
		5	3.89000	1.78171e6	2.18329e-6			
		6	6.32000	4.48617e6	1.40878e-6			
		7	18.87820	3.94168e7	4.78938e-7			
3.536	2	1	4.21000e-1	2.17626e4	1.93451e-5			Methyl Mercaptan
		3	8.71000e-1	8.33179e4	1.04539e-5			
		4	1.59000	2.74818e5	5.78564e-6			
		5	3.22000	1.14851e6	2.80363e-6			
		6	5.24000	3.00769e6	1.74220e-6			
		7	15.56000	2.74474e7	5.66902e-7			
5.105	2	1	5.18000e-1	4.53165e4	1.14307e-5			Dimethyl Sulfide
		3	1.07000	1.74925e5	6.11692e-6			
		4	1.96000	5.71859e5	3.42742e-6			
		5	3.97000	2.34457e6	1.69328e-6			
		6	6.45000	6.05308e6	1.06557e-6			
		7	19.27000	5.24373e7	3.67487e-7			
5.543	2	1	6.26000e-1	2.39266e5	2.61633e-6			Carbon Disulfide
		3	1.30000	1.01824e6	1.27671e-6			

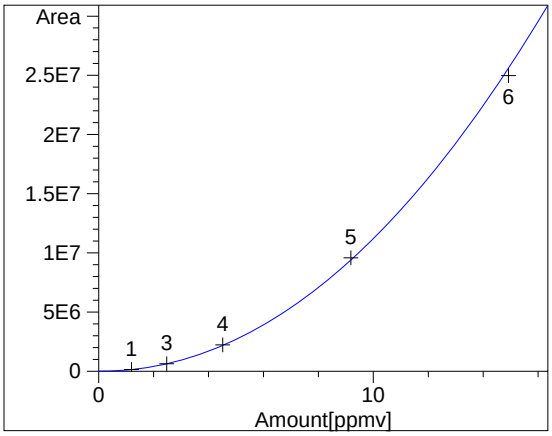
Method G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M

RetTime [min]	Sig	Lvl	Amount [ppmv]	Area	Amt/Area	Ref Grp	Name
		4	2.36000	3.42578e6	6.88893e-7		
		5	4.80000	1.41161e7	3.40037e-7		
		6	7.80000	3.56889e7	2.18555e-7		
8.147	2	1	1.11000e-1	1.24452e4	8.91909e-6		Dimethyl Disulfide
		3	2.30000e-1	4.34136e4	5.29788e-6		
		4	4.19000e-1	1.39750e5	2.99821e-6		
		5	8.50000e-1	5.63580e5	1.50822e-6		
		6	1.38000	1.44628e6	9.54171e-7		
		7	4.13000	1.26971e7	3.25270e-7		

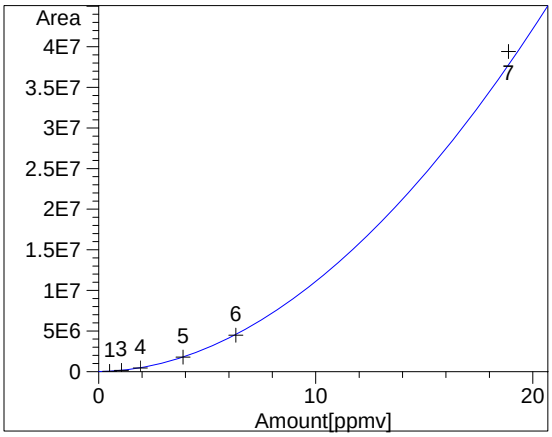
Peak Sum Table

No Entries in table

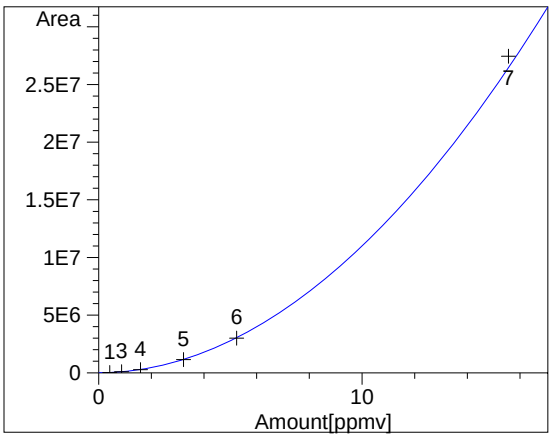
Calibration Curves



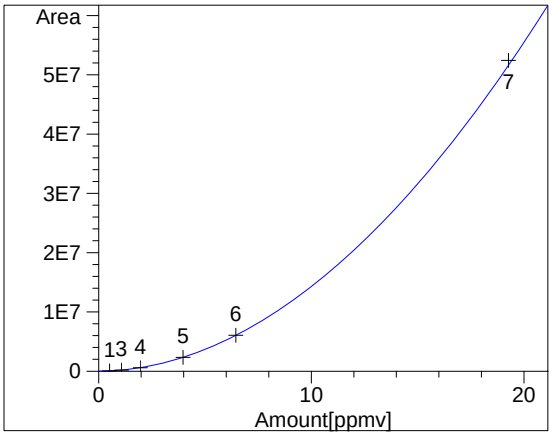
Hydrogen Sulfide at exp. RT: 2.500
FPD2 B,
Correlation: 0.99986
Residual Std. Dev.: 371915.16957
Formula: y = b * x^m
m: 2.06306
b: 96943.23143
x: Amount
y: Area



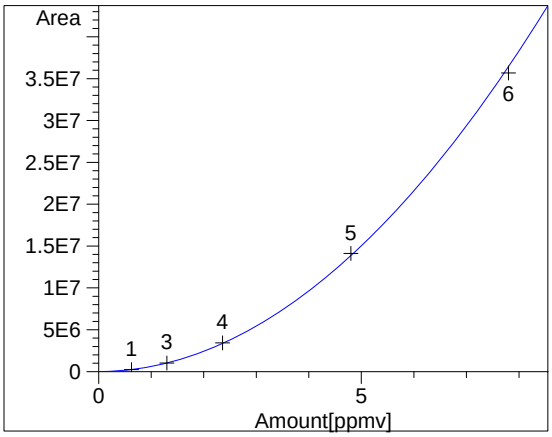
Carbonyl Sulfide at exp. RT: 2.677
FPD2 B,
Correlation: 0.99997
Residual Std. Dev.: 826590.42343
Formula: y = b * x^m
m: 1.92642
b: 131544.87336
x: Amount
y: Area



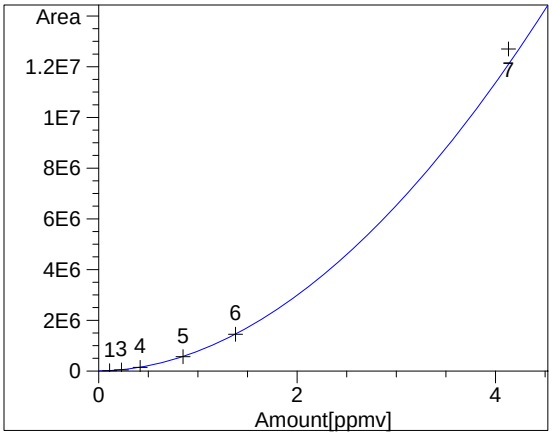
Methyl Mercaptan at exp. RT: 3.536
FPD2 B,
Correlation: 0.99999
Residual Std. Dev.: 497711.30324
Formula: y = b * x^m
m: 1.98513
b: 113808.90015
x: Amount
y: Area



Dimethyl Sulfide at exp. RT: 5.105
FPD2 B,
Correlation: 1.00000
Residual Std. Dev.: 422469.08144
Formula: y = b * x^m
m: 1.95728
b: 157655.47278
x: Amount
y: Area



Carbon Disulfide at exp. RT: 5.543
FPD2 B,
Correlation: 0.99988
Residual Std. Dev.: 451432.16769
Formula: y = b * x^m
m: 1.99070
b: 610230.65315
x: Amount
y: Area

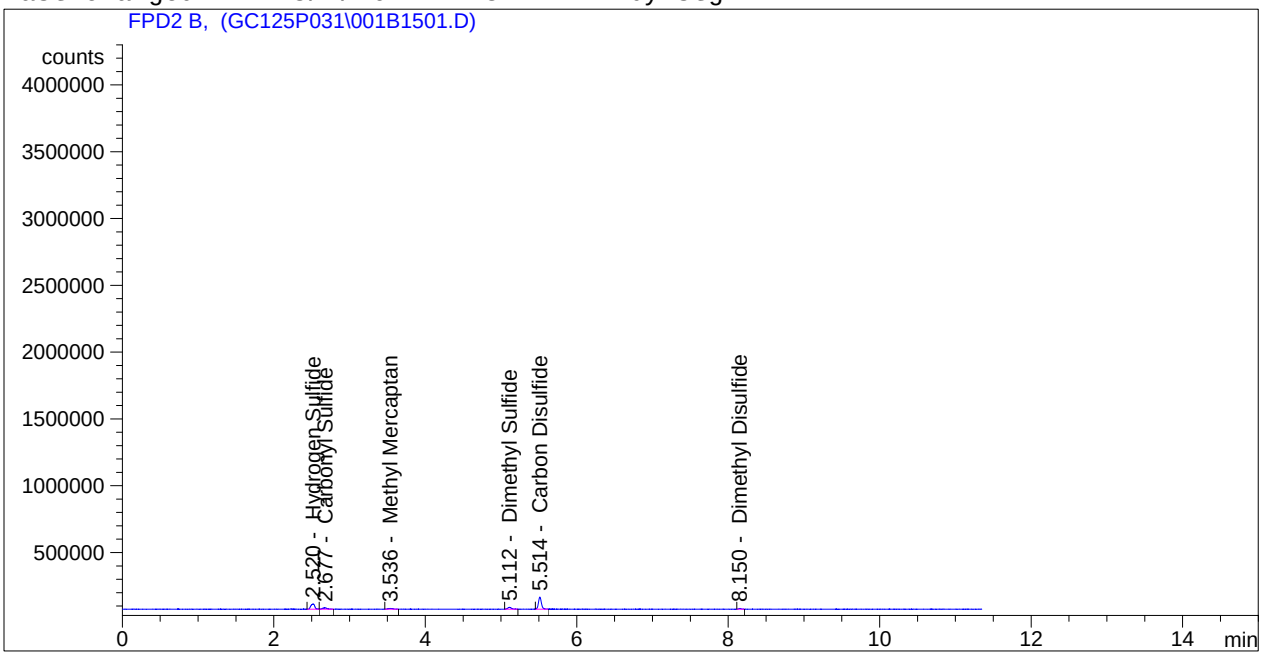


Dimethyl Disulfide at exp. RT: 8.147
FPD2 B,
Correlation: 0.99998
Residual Std. Dev.: 301789.38496
Formula: y = b * x^m
m: 1.92775
b: 785536.46041
x: Amount
y: Area

==========

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\001B1501.D
Sample Name: gc125p013 #1

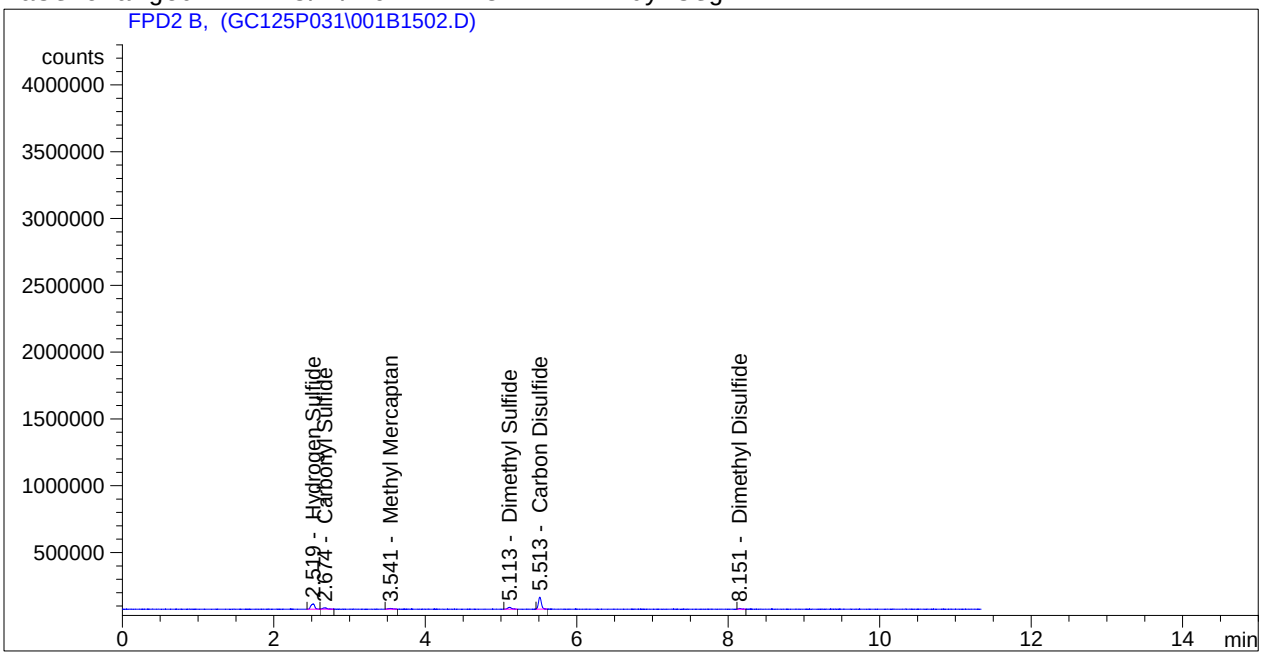
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/27/2011 4:46:44 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     1.40500e5  8.52000e-6    1.19706    Hydrogen Sulfide
  2.677 VB     4.05279e4  1.33913e-5 5.42719e-1    Carbonyl Sulfide
  3.536 BB     2.31297e4  1.93747e-5 4.48132e-1    Methyl Mercaptan
  5.112 BB     4.77198e4  1.13797e-5 5.43040e-1    Dimethyl Sulfide
  5.514 BB     2.41625e5  2.59862e-6 6.27891e-1    Carbon Disulfide
  8.150 BB     1.27149e4  9.26195e-6 1.17765e-1    Dimethyl Disulfide

Totals :                                3.47661

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\001B1502.D
Sample Name: gc125p013 #1

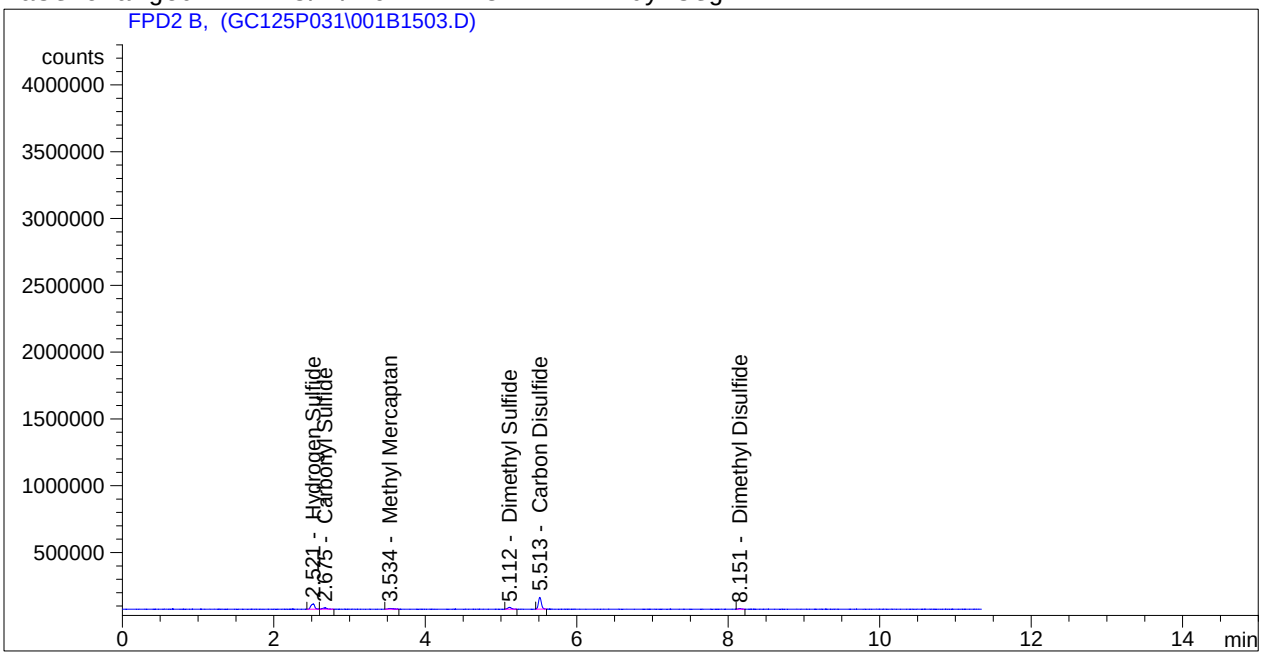
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  15
Acq. Instrument : Zeppo online                      Location : Vial 1
Injection Date  : 7/27/2011 5:02:39 AM                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.519 BV     1.40894e5  8.50772e-6    1.19869    Hydrogen Sulfide
  2.674 VB     3.69508e4  1.39997e-5 5.17301e-1    Carbonyl Sulfide
  3.541 BB     1.98376e4  2.09087e-5 4.14778e-1    Methyl Mercaptan
  5.113 BB     4.41852e4  1.18162e-5 5.22102e-1    Dimethyl Sulfide
  5.513 BB     2.39333e5  2.61097e-6 6.24892e-1    Carbon Disulfide
  8.151 BB     1.28827e4  9.20371e-6 1.18568e-1    Dimethyl Disulfide

Totals :                                3.39633

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\001B1503.D
Sample Name: gc125p013 #1

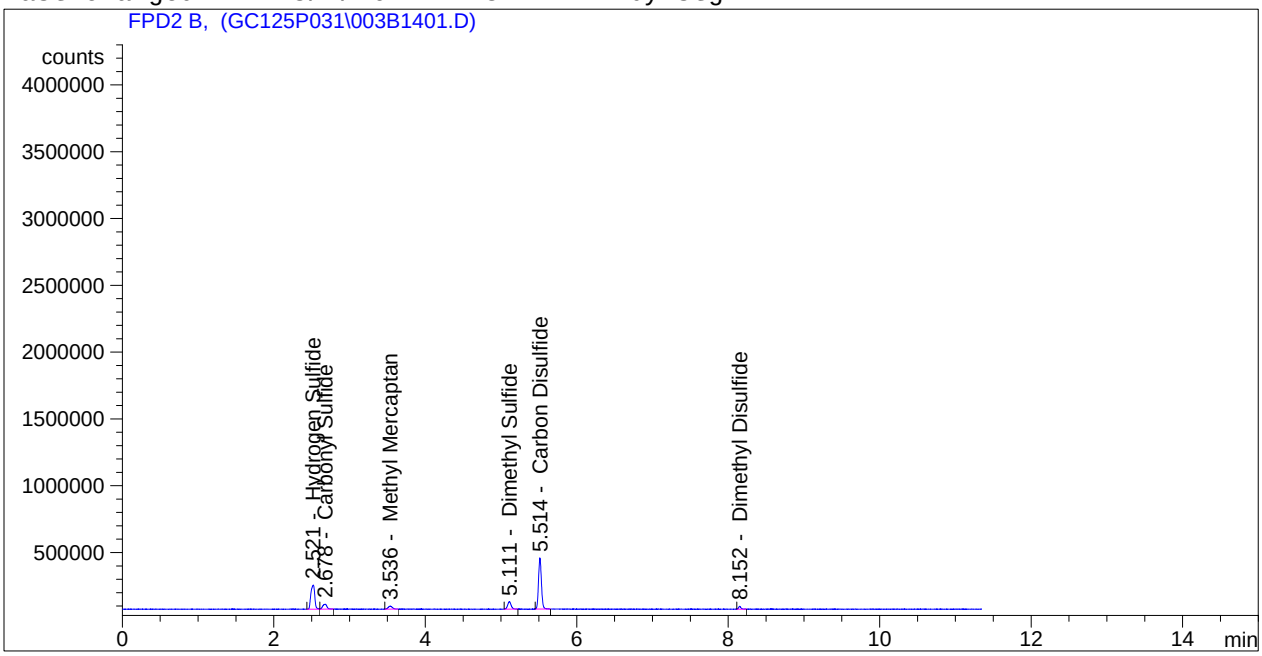
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/27/2011 5:18:31 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     1.36918e5  8.63413e-6    1.18217    Hydrogen Sulfide
  2.675 VB     3.67657e4  1.40336e-5 5.15955e-1    Carbonyl Sulfide
  3.534 BB     2.23205e4  1.97202e-5 4.40164e-1    Methyl Mercaptan
  5.112 BB     4.40446e4  1.18347e-5 5.21253e-1    Dimethyl Sulfide
  5.513 BB     2.36840e5  2.62461e-6 6.21615e-1    Carbon Disulfide
  8.151 BB     1.17381e4  9.62521e-6 1.12981e-1    Dimethyl Disulfide

Totals :                                3.39414

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\003B1401.D
Sample Name: gc125p013 #3

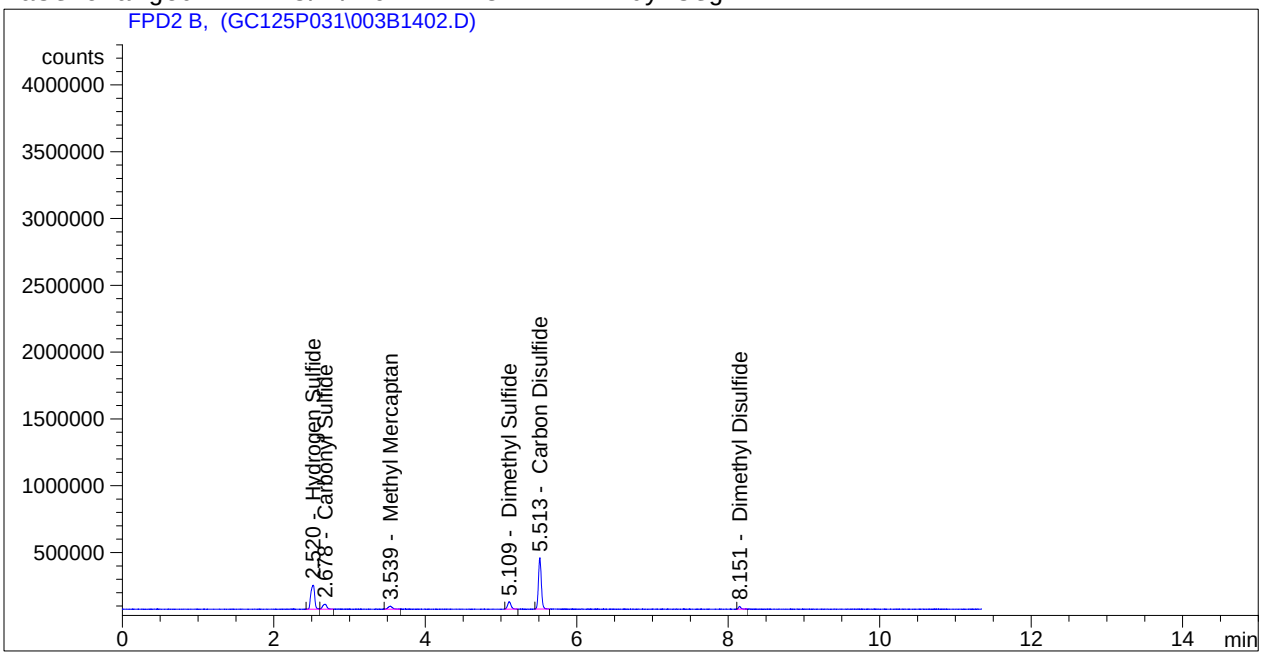
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  14
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/27/2011 3:59:09 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     6.32839e5  3.92321e-6    2.48276    Hydrogen Sulfide
  2.678 VB     1.39836e5  7.38176e-6    1.03224    Carbonyl Sulfide
  3.536 BB     8.27800e4  1.02904e-5 8.51838e-1    Methyl Mercaptan
  5.111 BB     1.76967e5  5.99441e-6    1.06081    Dimethyl Sulfide
  5.514 BB     1.02352e6  1.26686e-6    1.29666    Carbon Disulfide
  8.152 BB     4.42826e4  5.08039e-6 2.24973e-1    Dimethyl Disulfide

Totals :                                6.94928

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\003B1402.D
Sample Name: gc125p013 #3

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  14
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/27/2011 4:15:01 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,
```

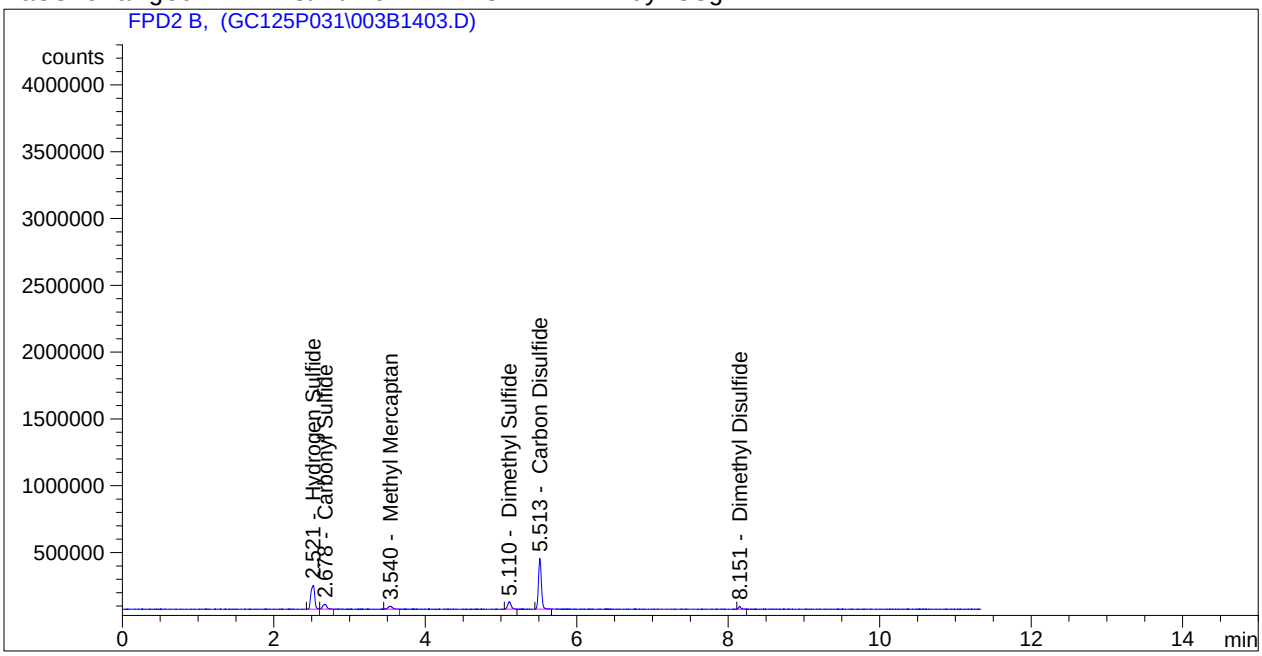
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ppmv]	Grp	Name
2.520	BV	6.27690e5	3.93976e-6	2.47295		Hydrogen Sulfide
2.678	VB	1.39975e5	7.37825e-6	1.03277		Carbonyl Sulfide
3.539	BB	8.46456e4	1.01772e-5	8.61455e-1		Methyl Mercaptan
5.109	BB	1.73766e5	6.04816e-6	1.05097		Dimethyl Sulfide
5.513	BB	1.01612e6	1.27145e-6	1.29194		Carbon Disulfide
8.151	BB	4.31779e4	5.14254e-6	2.22044e-1		Dimethyl Disulfide

```
Totals :                                6.93212

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

EM-BTRF-000976

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\003B1403.D
Sample Name: gc125p013 #3

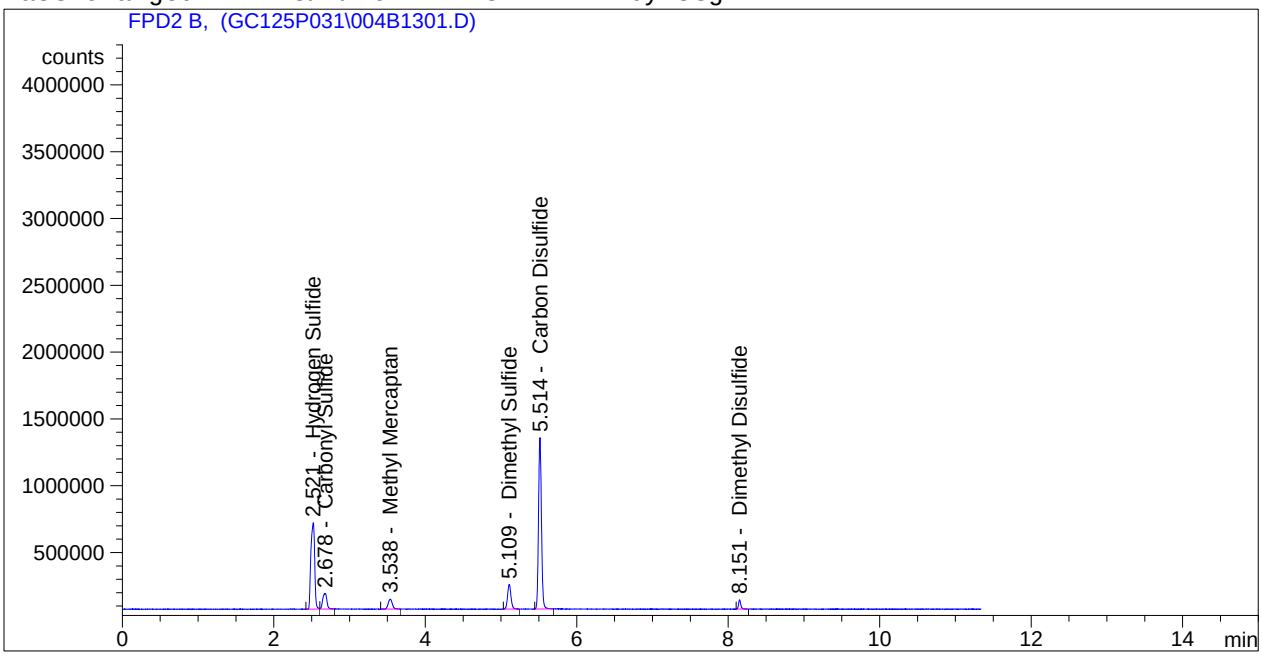
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  14
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/27/2011 4:30:52 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     6.22077e5  3.95804e-6    2.46220    Hydrogen Sulfide
  2.678 VB     1.37393e5  7.44460e-6    1.02284    Carbonyl Sulfide
  3.540 BB     8.25280e4  1.03060e-5 8.50531e-1    Methyl Mercaptan
  5.110 BB     1.74040e5  6.04352e-6    1.05181    Dimethyl Sulfide
  5.513 BB     1.01510e6  1.27208e-6    1.29129    Carbon Disulfide
  8.151 BB     4.27803e4  5.16548e-6 2.20981e-1    Dimethyl Disulfide

Totals :                                6.89965

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\004B1301.D
Sample Name: gc125p013 #4

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  13
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/27/2011 3:11:26 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```

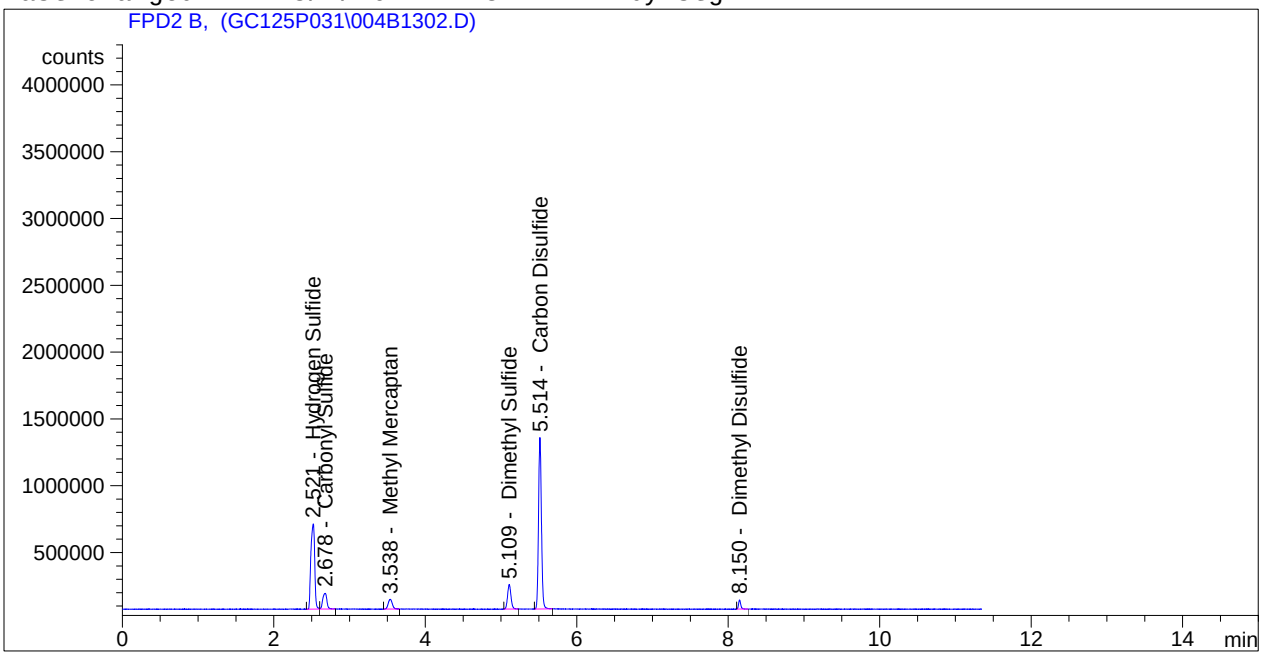



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.23849e6  2.04609e-6    4.58016    Hydrogen Sulfide
  2.678 VB     4.46166e5  4.22517e-6    1.88513    Carbonyl Sulfide
  3.538 BB     2.76983e5  5.65109e-6    1.56525    Methyl Mercaptan
  5.109 BB     5.74361e5  3.37039e-6    1.93582    Dimethyl Sulfide
  5.514 BB     3.42765e6  6.94232e-7    2.37958    Carbon Disulfide
  8.151 BB     1.41930e5  2.90038e-6 4.11651e-1    Dimethyl Disulfide

Totals :                                12.75759

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

EM-BTRF-000978

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\004B1302.D
Sample Name: gc125p013 #4

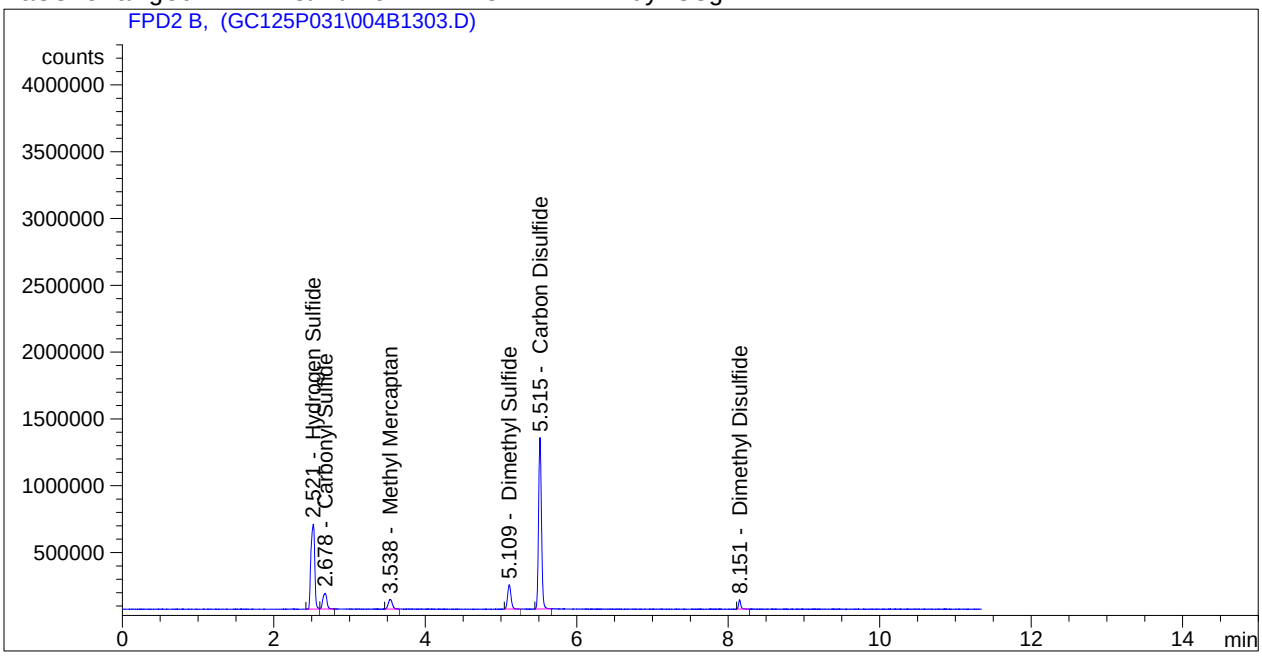
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  13
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/27/2011 3:27:22 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.22464e6  2.05264e-6    4.56640    Hydrogen Sulfide
  2.678 VB     4.49075e5  4.21199e-6    1.89150    Carbonyl Sulfide
  3.538 BB     2.74725e5  5.67408e-6    1.55881    Methyl Mercaptan
  5.109 BB     5.72245e5  3.37648e-6    1.93217    Dimethyl Sulfide
  5.514 BB     3.43034e6  6.93961e-7    2.38052    Carbon Disulfide
  8.150 BB     1.37722e5  2.94270e-6 4.05274e-1    Dimethyl Disulfide

Totals :                                12.73468

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\004B1303.D
Sample Name: gc125p013 #4

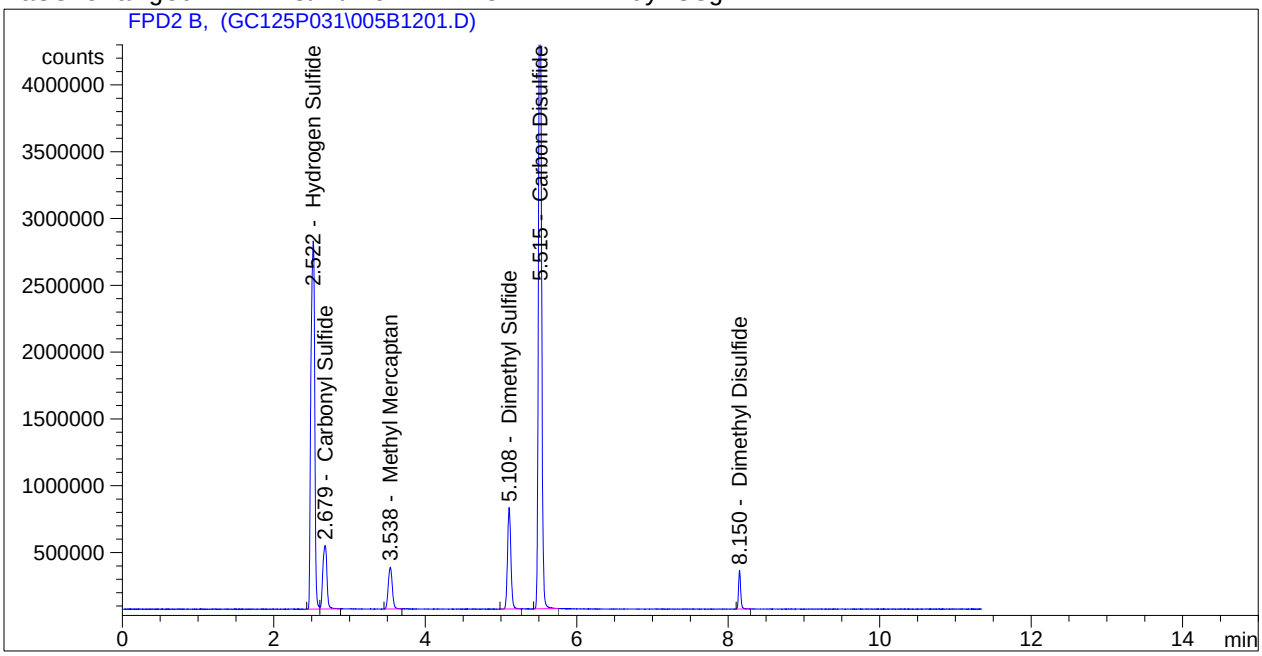
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  13
Acq. Instrument : Zeppo online                  Location : Vial 4
Injection Date  : 7/27/2011 3:43:14 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.21053e6  2.05938e-6    4.55234    Hydrogen Sulfide
  2.678 VB     4.42044e5  4.24407e-6    1.87607    Carbonyl Sulfide
  3.538 BB     2.72747e5  5.69447e-6    1.55315    Methyl Mercaptan
  5.109 BB     5.68972e5  3.38596e-6    1.92652    Dimethyl Sulfide
  5.515 BB     3.41936e6  6.95069e-7    2.37669    Carbon Disulfide
  8.151 BB     1.39599e5  2.92360e-6 4.08130e-1    Dimethyl Disulfide

Totals :                                12.69289

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\005B1201.D
Sample Name: gc125p013 #5

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  12
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/27/2011 2:23:49 AM                   Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```

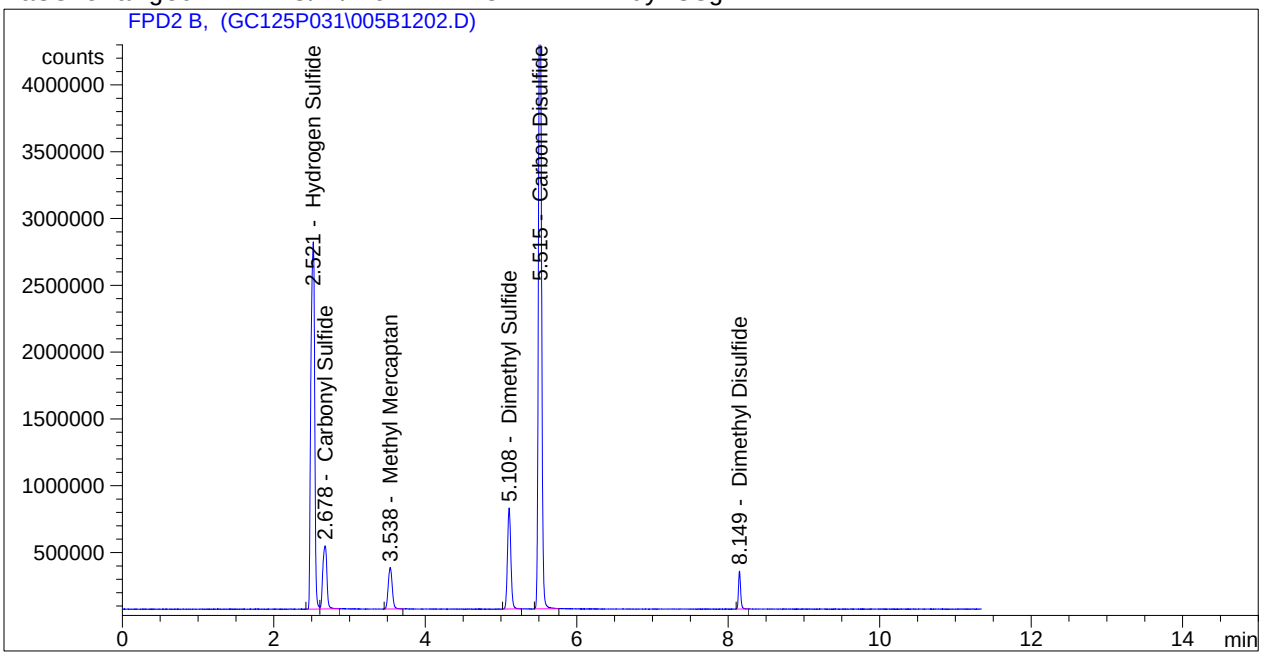



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.522 BV     9.58850e6  9.66876e-7    9.27089    Hydrogen Sulfide
  2.679 VB     1.78960e6  2.16639e-6    3.87695    Carbonyl Sulfide
  3.538 BB     1.15349e6  2.78401e-6    3.21133    Methyl Mercaptan
  5.108 BB     2.33977e6  1.69567e-6    3.96748    Dimethyl Sulfide
  5.515 BB     1.40783e7  3.43685e-7    4.83849    Carbon Disulfide
  8.150 BB     5.65911e5  1.49065e-6 8.43572e-1    Dimethyl Disulfide

Totals :                                26.00872

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

EM-BTRF-000981

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\005B1202.D
Sample Name: gc125p013 #5

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  12
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/27/2011 2:39:44 AM                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```

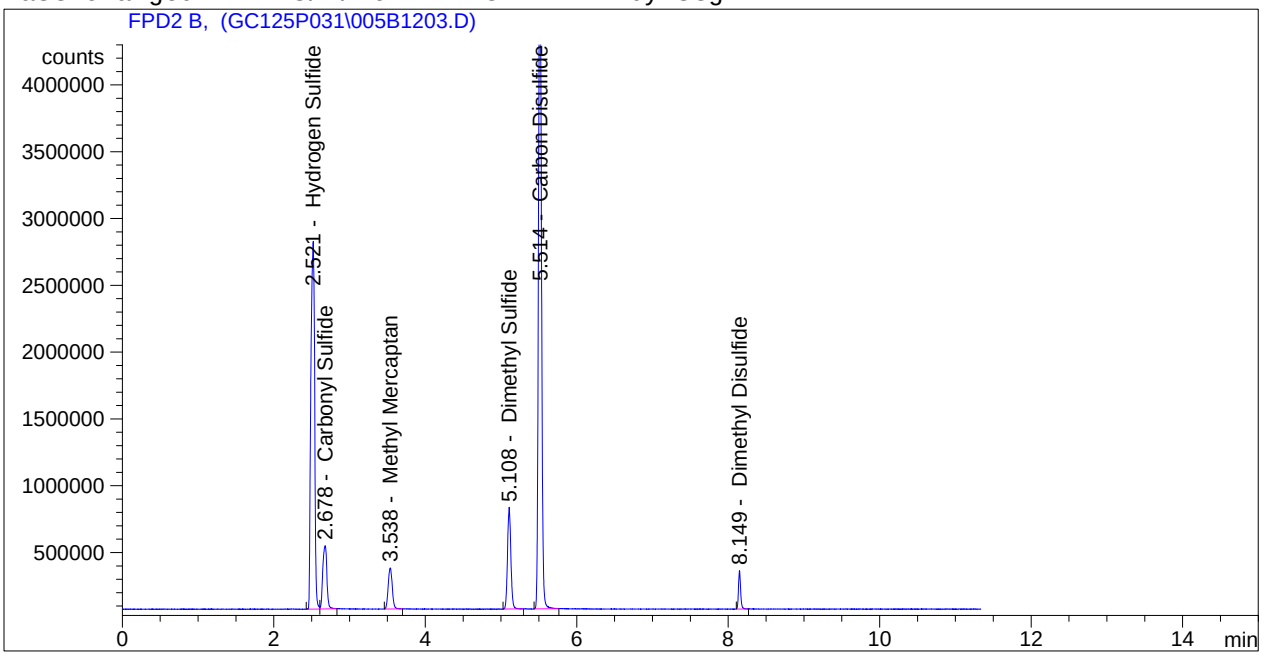



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     9.55828e6  9.68450e-7    9.25671    Hydrogen Sulfide
  2.678 VB     1.78124e6  2.17127e-6    3.86754    Carbonyl Sulfide
  3.538 BB     1.14517e6  2.79403e-6    3.19965    Methyl Mercaptan
  5.108 BB     2.34418e6  1.69411e-6    3.97130    Dimethyl Sulfide
  5.515 BB     1.40988e7  3.43436e-7    4.84204    Carbon Disulfide
  8.149 BB     5.63108e5  1.49421e-6 8.41402e-1    Dimethyl Disulfide

Totals :                                25.97865

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

EM-BTRF-000982

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\005B1203.D
Sample Name: gc125p013 #5

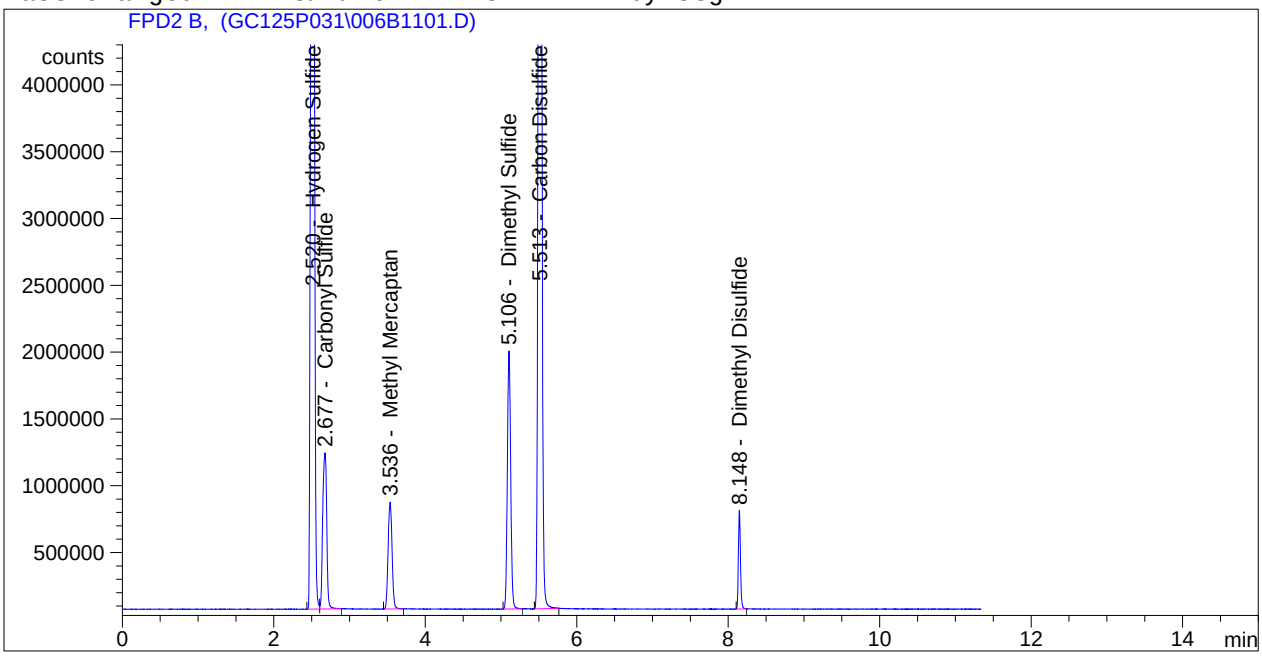
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  12
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/27/2011 2:55:35 AM                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     9.57269e6  9.67698e-7    9.26348    Hydrogen Sulfide
  2.678 VB     1.77431e6  2.17534e-6    3.85973    Carbonyl Sulfide
  3.538 BB     1.14687e6  2.79198e-6    3.20203    Methyl Mercaptan
  5.108 BB     2.34975e6  1.69215e-6    3.97612    Dimethyl Sulfide
  5.514 BB     1.41713e7  3.42561e-7    4.85453    Carbon Disulfide
  8.149 BB     5.61721e5  1.49599e-6 8.40326e-1    Dimethyl Disulfide

Totals :                                25.99621

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\006B1101.D
Sample Name: gc125p013 #6

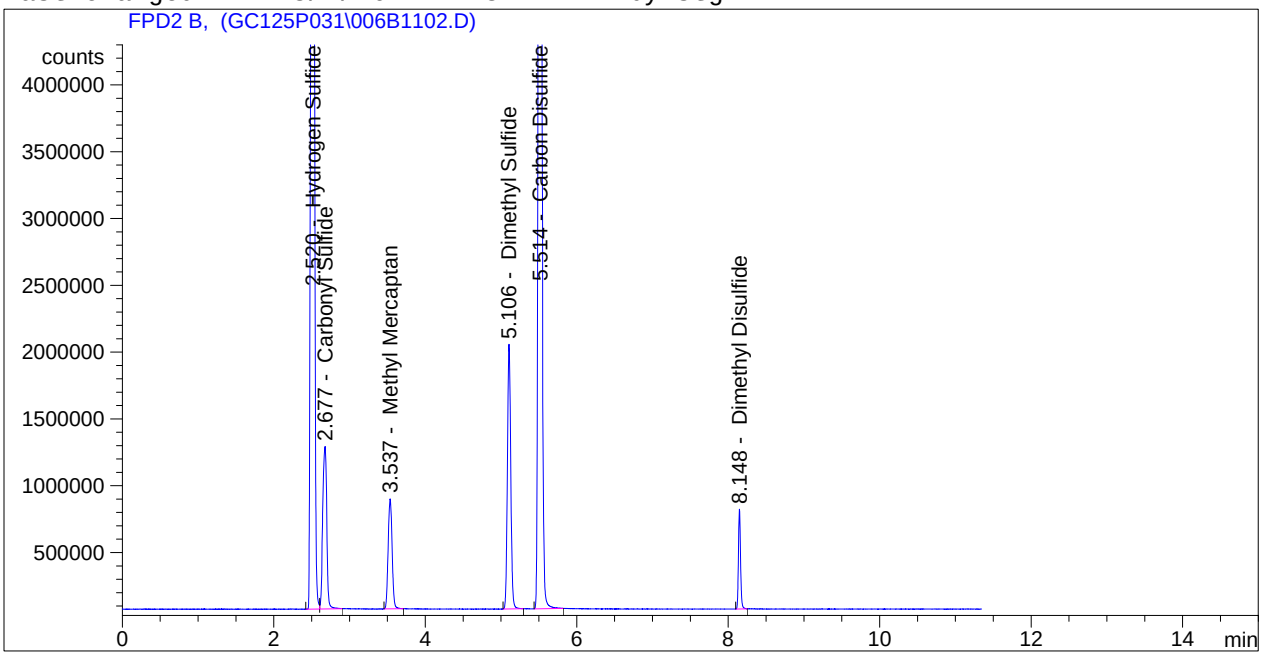
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  11
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/27/2011 1:36:10 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     2.42169e7  5.99842e-7   14.52632    Hydrogen Sulfide
  2.677 VB     4.29169e6  1.42250e-6    6.10495    Carbonyl Sulfide
  3.536 BB     2.91662e6  1.75690e-6    5.12421    Methyl Mercaptan
  5.106 BB     5.90062e6  1.07861e-6    6.36446    Dimethyl Sulfide
  5.513 BB     3.49502e7  2.18591e-7    7.63981    Carbon Disulfide
  8.148 BB     1.40742e6  9.61504e-7    1.35324    Dimethyl Disulfide

Totals :                                41.11298

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\006B1102.D
Sample Name: gc125p013 #6

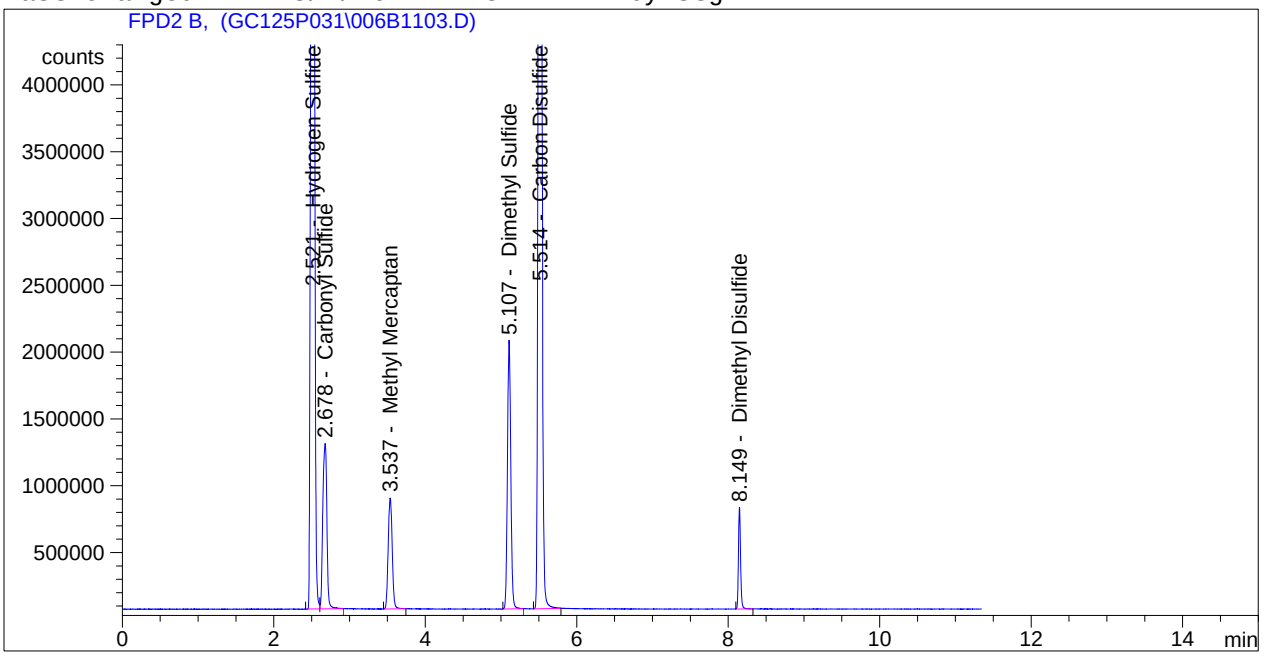
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  11
Acq. Instrument : Zeppo online                      Location : Vial 6
Injection Date  : 7/27/2011 1:52:01 AM                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     2.50997e7  5.88877e-7   14.78062    Hydrogen Sulfide
  2.677 VB     4.51763e6  1.38784e-6    6.26973    Carbonyl Sulfide
  3.537 BB     3.01634e6  1.72783e-6    5.21172    Methyl Mercaptan
  5.106 BB     6.06223e6  1.06445e-6    6.45293    Dimethyl Sulfide
  5.514 BB     3.56650e7  2.16400e-7    7.71790    Carbon Disulfide
  8.148 BB     1.44512e6  9.49347e-7    1.37192    Dimethyl Disulfide

Totals :                                41.80482

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\006B1103.D
Sample Name: gc125p013 #6

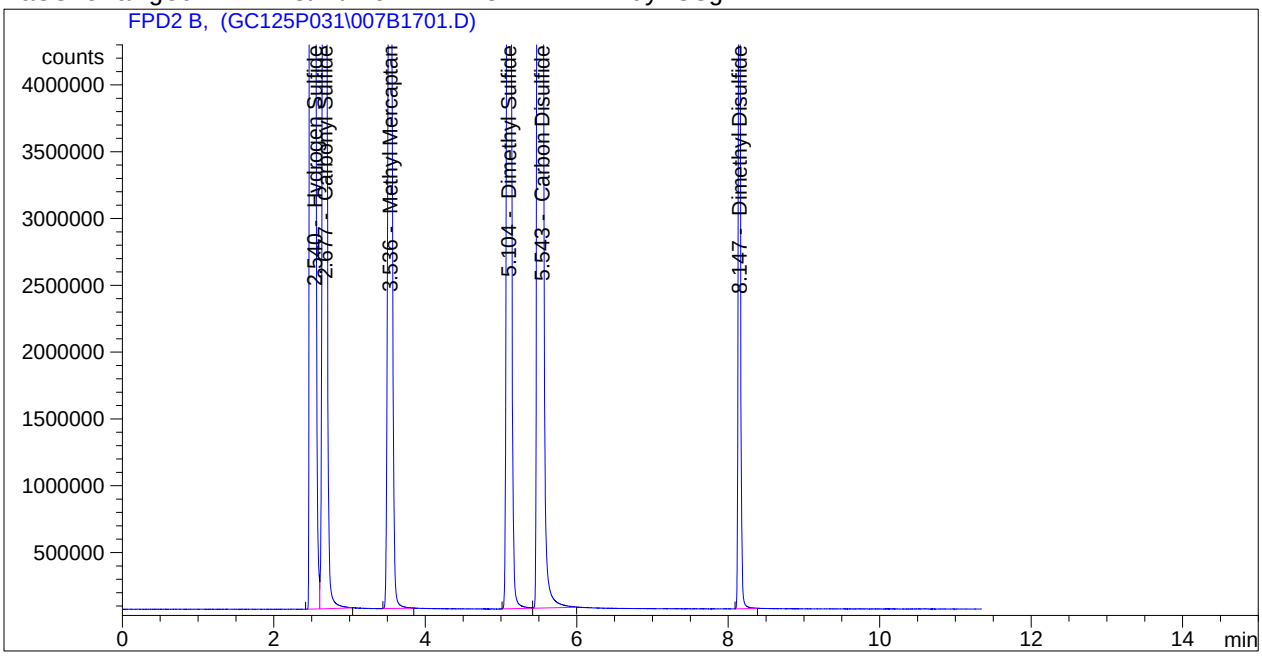
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  11
Acq. Instrument : Zeppo online                      Location : Vial 6
Injection Date  : 7/27/2011 2:07:57 AM                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.56023e7  5.82891e-7   14.92335    Hydrogen Sulfide
  2.678 VB     4.64918e6  1.36881e-6    6.36384    Carbonyl Sulfide
  3.537 BB     3.09011e6  1.70724e-6    5.27554    Methyl Mercaptan
  5.107 BB     6.19640e6  1.05311e-6    6.52550    Dimethyl Sulfide
  5.514 BB     3.64514e7  2.14064e-7    7.80292    Carbon Disulfide
  8.149 BB     1.48630e6  9.36596e-7    1.39207    Dimethyl Disulfide

Totals :                                42.28322

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\007B1701.D
Sample Name: gc125p013 #7

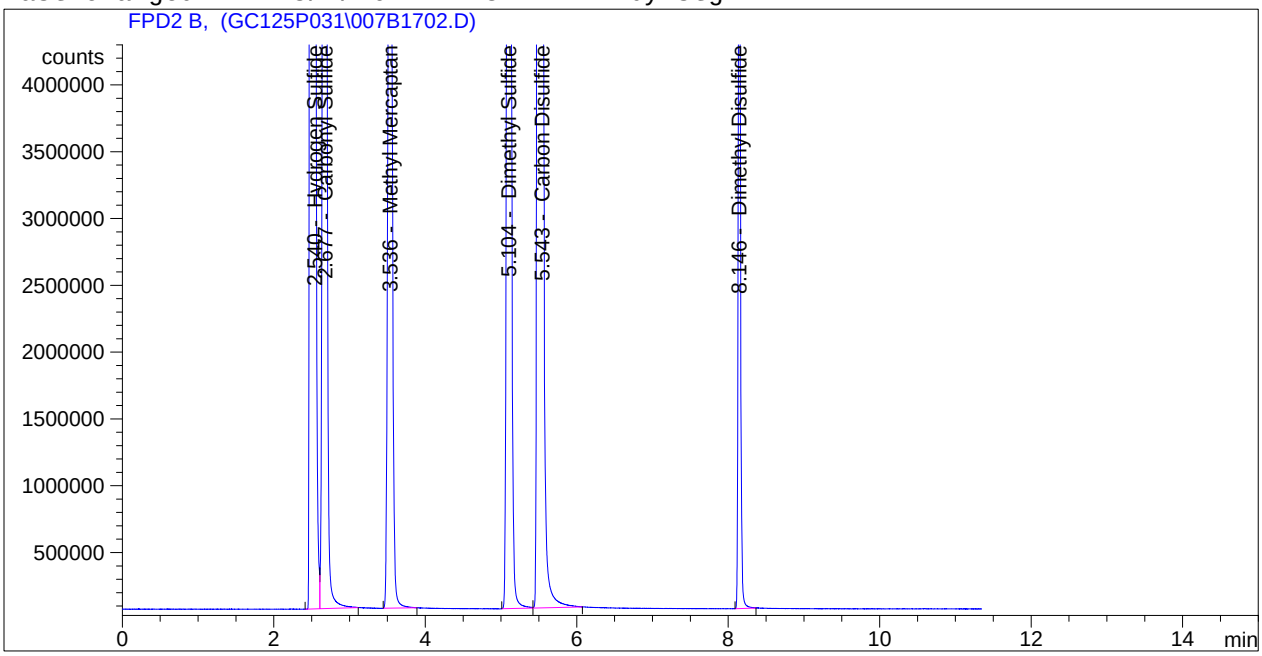
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  17
Acq. Instrument : Zeppo online                  Location : Vial 7
Injection Date  : 7/27/2011 9:38:17 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.540 BV     8.76153e7  3.09222e-7   27.09260    Hydrogen Sulfide
  2.677 VB     3.75765e7  5.01077e-7   18.82872    Carbonyl Sulfide
  3.536 BB     2.65269e7  5.87400e-7   15.58188    Methyl Mercaptan
  5.104 BV     5.12128e7  3.74855e-7   19.19741    Dimethyl Sulfide
  5.543 VB     8.87702e7  1.37458e-7   12.20214    Carbon Disulfide
  8.147 BB     1.24159e7  3.37203e-7    4.18668    Dimethyl Disulfide

Totals :                               97.08943

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\007B1702.D
Sample Name: gc125p013 #7

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  17
Acq. Instrument : Zeppo online                  Location : Vial 7
Injection Date  : 7/27/2011 9:54:17 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```

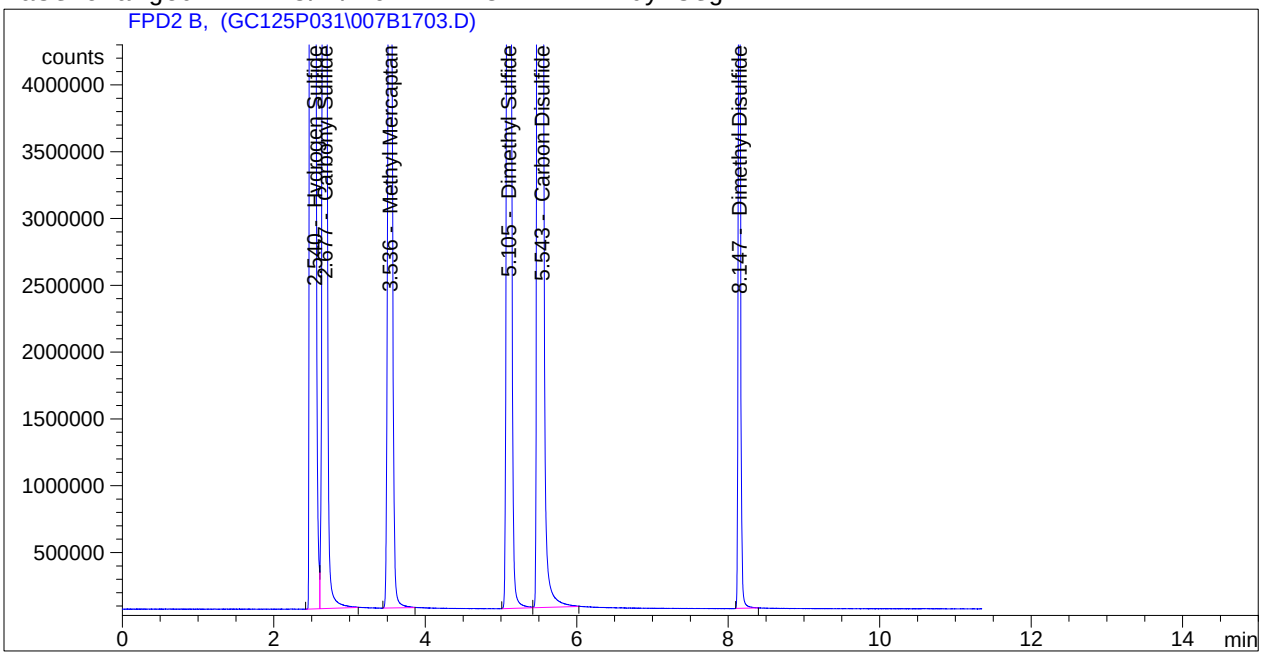



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.540 BV     8.90020e7  3.06730e-7   27.29960    Hydrogen Sulfide
  2.677 VB     4.01057e7  4.85624e-7   19.47629    Carbonyl Sulfide
  3.536 BB     2.77575e7  5.74328e-7   15.94192    Methyl Mercaptan
  5.104 BV     5.28561e7  3.69110e-7   19.50970    Dimethyl Sulfide
  5.543 VB     9.00573e7  1.36476e-7   12.29070    Carbon Disulfide
  8.146 BB     1.27869e7  3.32458e-7    4.25112    Dimethyl Disulfide

Totals :                               98.76932

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

EM-BTRF-000988

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P031\007B1703.D
Sample Name: gc125p013 #7

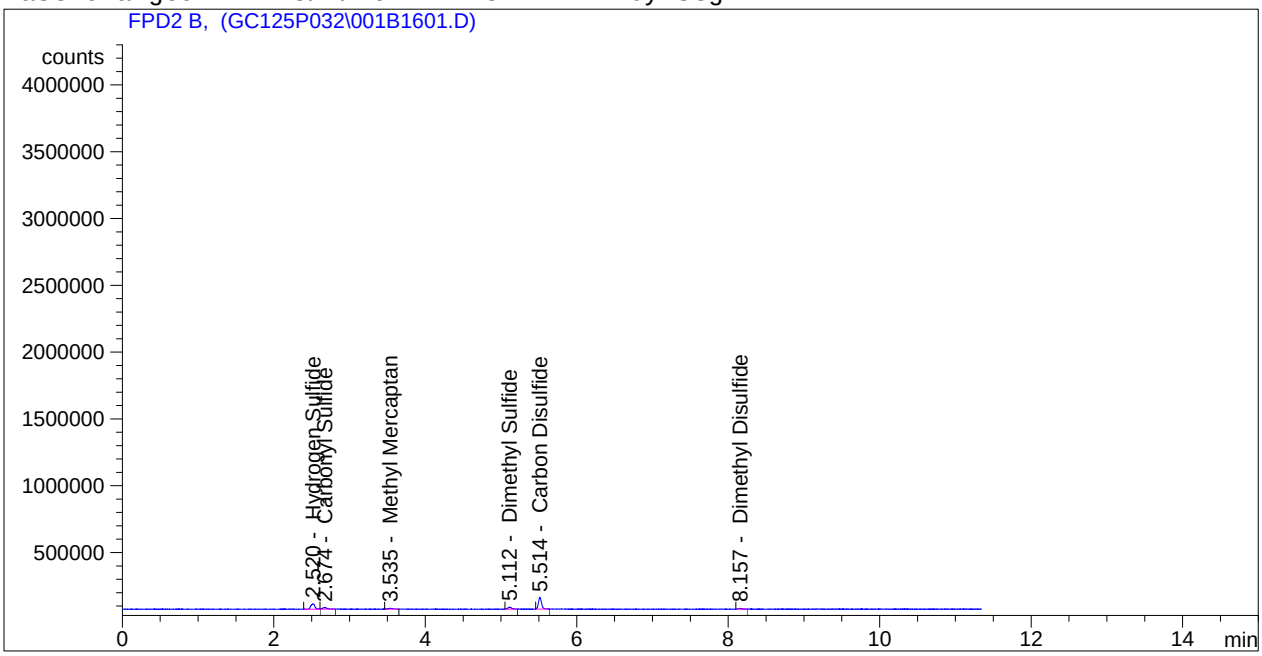
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  17
Acq. Instrument : Zeppo online                  Location : Vial 7
Injection Date  : 7/27/2011 10:10:12 AM              Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P031.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.540 BV     8.91806e7  3.06413e-7   27.32615    Hydrogen Sulfide
  2.677 VB     4.05682e7  4.82953e-7   19.59255    Carbonyl Sulfide
  3.536 BB     2.80579e7  5.71268e-7   16.02861    Methyl Mercaptan
  5.105 BV     5.32429e7  3.67796e-7   19.58251    Dimethyl Sulfide
  5.543 VB     9.03542e7  1.36253e-7   12.31104    Carbon Disulfide
  8.147 BB     1.28886e7  3.31193e-7    4.26863    Dimethyl Disulfide

Totals :                               99.10948

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\001B1601.D
Sample Name: gc125p013 #1

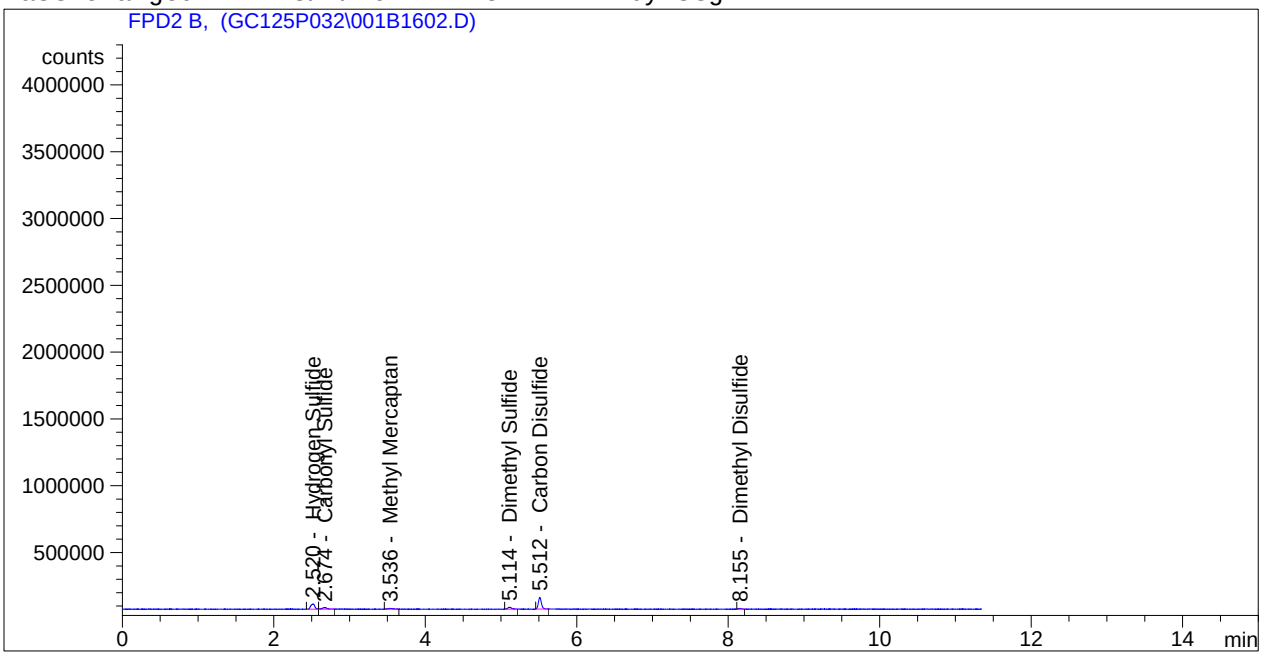
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  16
Acq. Instrument : Zeppo online                  Location : Vial 1
Injection Date  : 7/28/2011 2:02:52 AM               Inj :   1
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     1.46287e5  8.34463e-6    1.22071    Hydrogen Sulfide
  2.674 VB     4.64852e4  1.25366e-5 5.82765e-1    Carbonyl Sulfide
  3.535 BB     2.61641e4  1.82250e-5 4.76842e-1    Methyl Mercaptan
  5.112 BB     4.88909e4  1.12456e-5 5.49808e-1    Dimethyl Sulfide
  5.514 BB     2.45879e5  2.57615e-6 6.33420e-1    Carbon Disulfide
  8.157 BB     1.40912e4  8.81499e-6 1.24214e-1    Dimethyl Disulfide

Totals :                                3.58776

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\001B1602.D
Sample Name: gc125p013 #1

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  16
Acq. Instrument : Zeppo online                      Location : Vial 1
Injection Date  : 7/28/2011 2:18:48 AM                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```

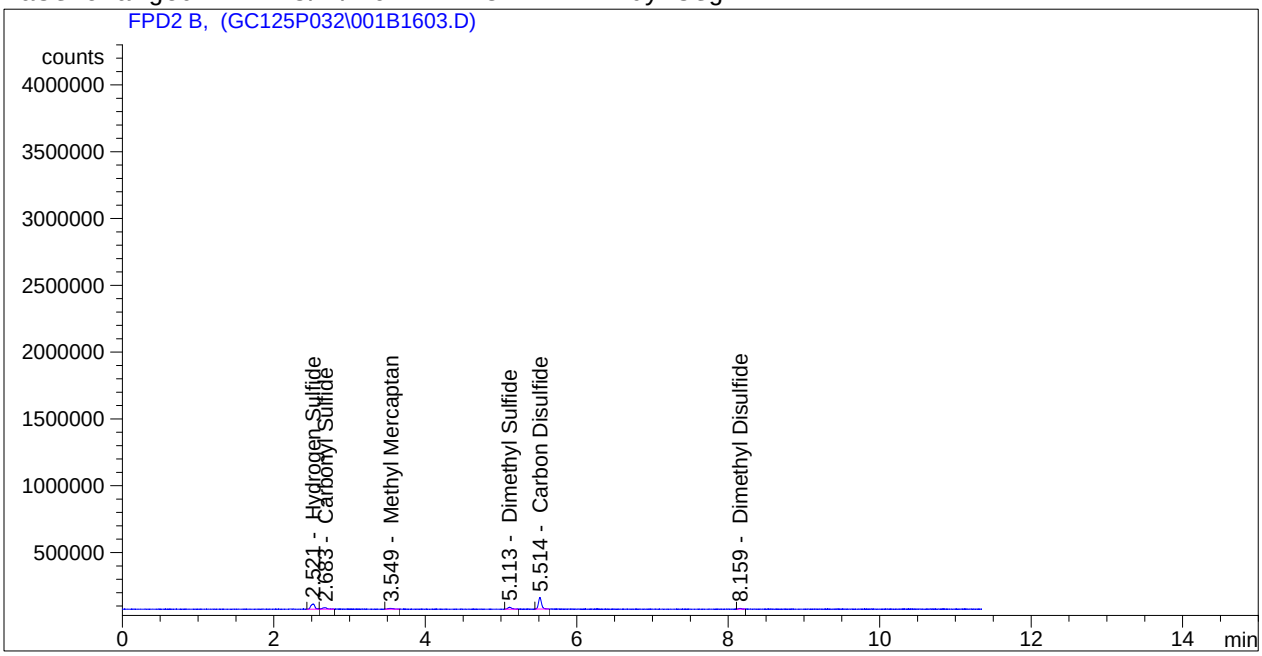



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     1.43040e5  8.44172e-6    1.20750    Hydrogen Sulfide
  2.674 VB     4.83411e4  1.23027e-5 5.94728e-1    Carbonyl Sulfide
  3.536 BB     2.60212e4  1.82746e-5 4.75528e-1    Methyl Mercaptan
  5.114 BB     4.75571e4  1.13988e-5 5.42093e-1    Dimethyl Sulfide
  5.512 BB     2.44119e5  2.58537e-6 6.31138e-1    Carbon Disulfide
  8.155 BB     1.35324e4  8.98833e-6 1.21634e-1    Dimethyl Disulfide

Totals :                                3.57262

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

EM-BTRF-000991

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\001B1603.D
Sample Name: gc125p013 #1

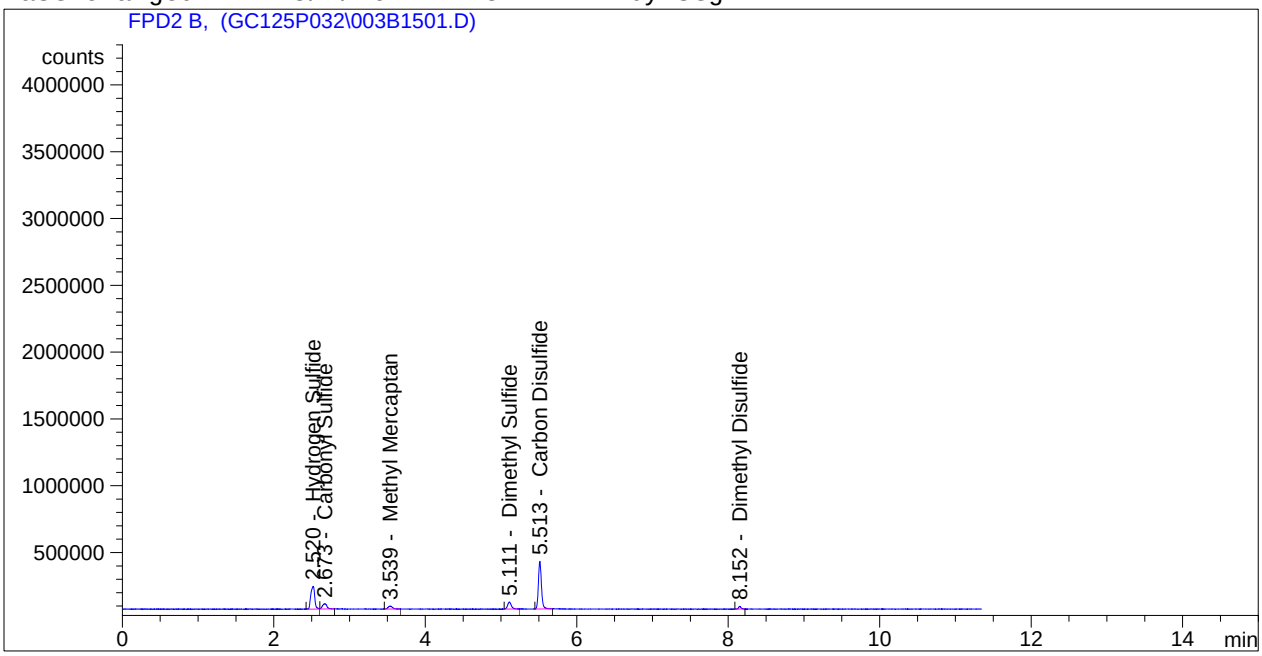
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  16
Acq. Instrument : Zeppo online                      Location : Vial 1
Injection Date  : 7/28/2011 2:34:44 AM                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     1.41492e5  8.48917e-6    1.20115    Hydrogen Sulfide
  2.683 VB     4.95952e4  1.21521e-5 6.02688e-1    Carbonyl Sulfide
  3.549 BB     2.42391e4  1.89295e-5 4.58833e-1    Methyl Mercaptan
  5.113 BB     4.93459e4  1.11948e-5 5.52416e-1    Dimethyl Sulfide
  5.514 BB     2.41071e5  2.60159e-6 6.27168e-1    Carbon Disulfide
  8.159 BB     1.25573e4  9.31771e-6 1.17006e-1    Dimethyl Disulfide

Totals :                                3.55926

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\003B1501.D
Sample Name: gc125p013 #3

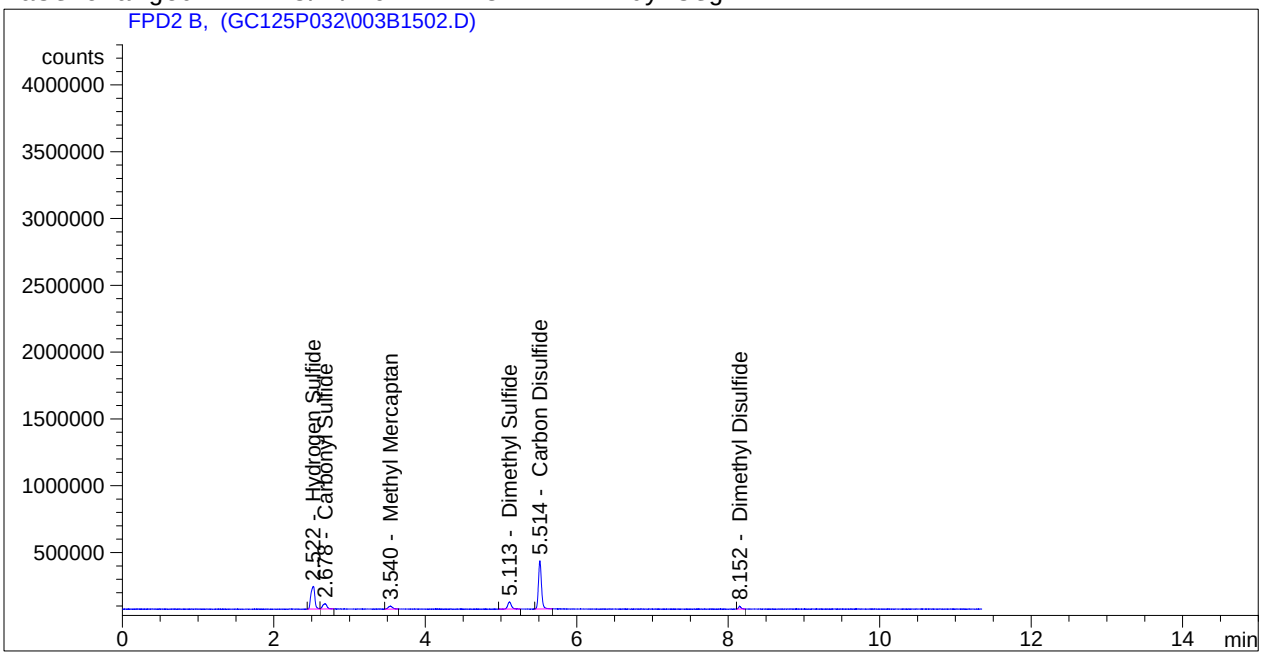
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  15
Acq. Instrument : Zeppo online                      Location : Vial 3
Injection Date  : 7/28/2011 1:15:06 AM                   Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     6.11920e5  3.99176e-6    2.44264    Hydrogen Sulfide
  2.673 VB     1.64464e5  6.82778e-6    1.12293    Carbonyl Sulfide
  3.539 BB     9.13376e4  9.80008e-6 8.95115e-1    Methyl Mercaptan
  5.111 BB     1.79102e5  5.95935e-6    1.06733    Dimethyl Sulfide
  5.513 BB     9.90953e5  1.28741e-6    1.27577    Carbon Disulfide
  8.152 BB     4.42427e4  5.08260e-6 2.24868e-1    Dimethyl Disulfide

Totals :                                7.02865

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\003B1502.D
Sample Name: gc125p013 #3

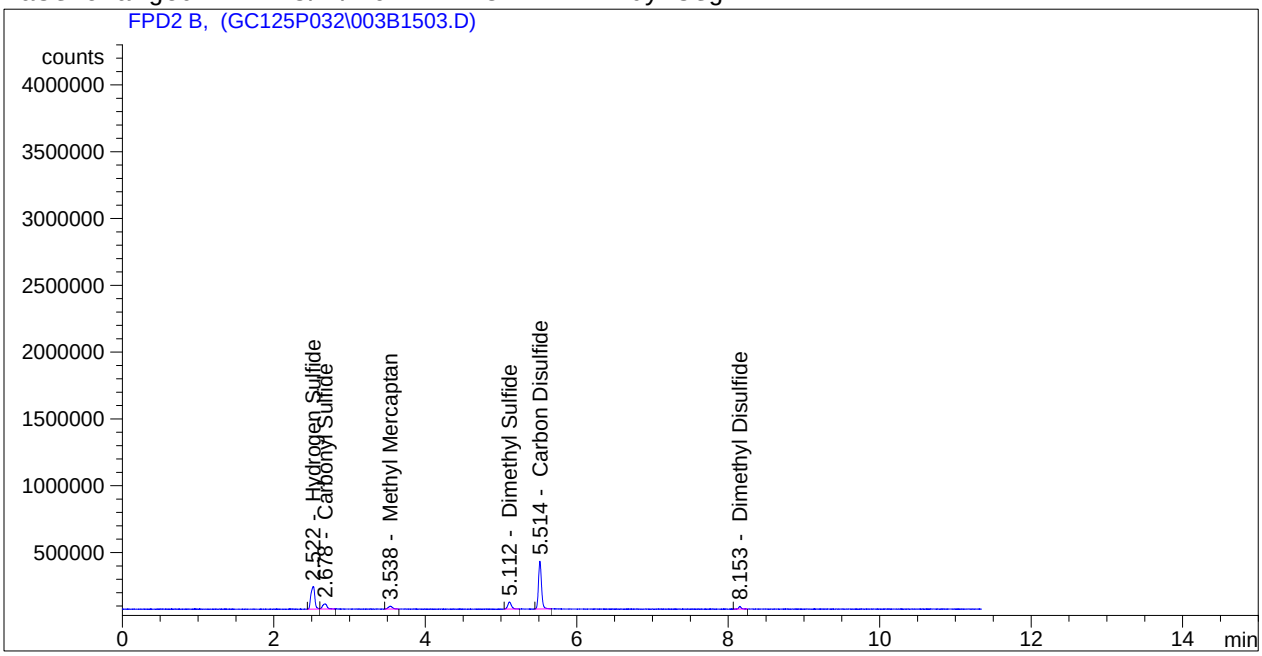
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/28/2011 1:31:01 AM               Inj :   2
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.522 BV     6.09739e5  3.99911e-6    2.43841    Hydrogen Sulfide
  2.678 VB     1.59545e5  6.92822e-6    1.10536    Carbonyl Sulfide
  3.540 BB     8.72065e4  1.00278e-5 8.74487e-1    Methyl Mercaptan
  5.113 BB     1.82709e5  5.90152e-6    1.07826    Dimethyl Sulfide
  5.514 BB     1.00134e6  1.28075e-6    1.28247    Carbon Disulfide
  8.152 BB     4.53405e4  5.02300e-6 2.27745e-1    Dimethyl Disulfide

Totals :                                7.00674

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\003B1503.D
Sample Name: gc125p013 #3

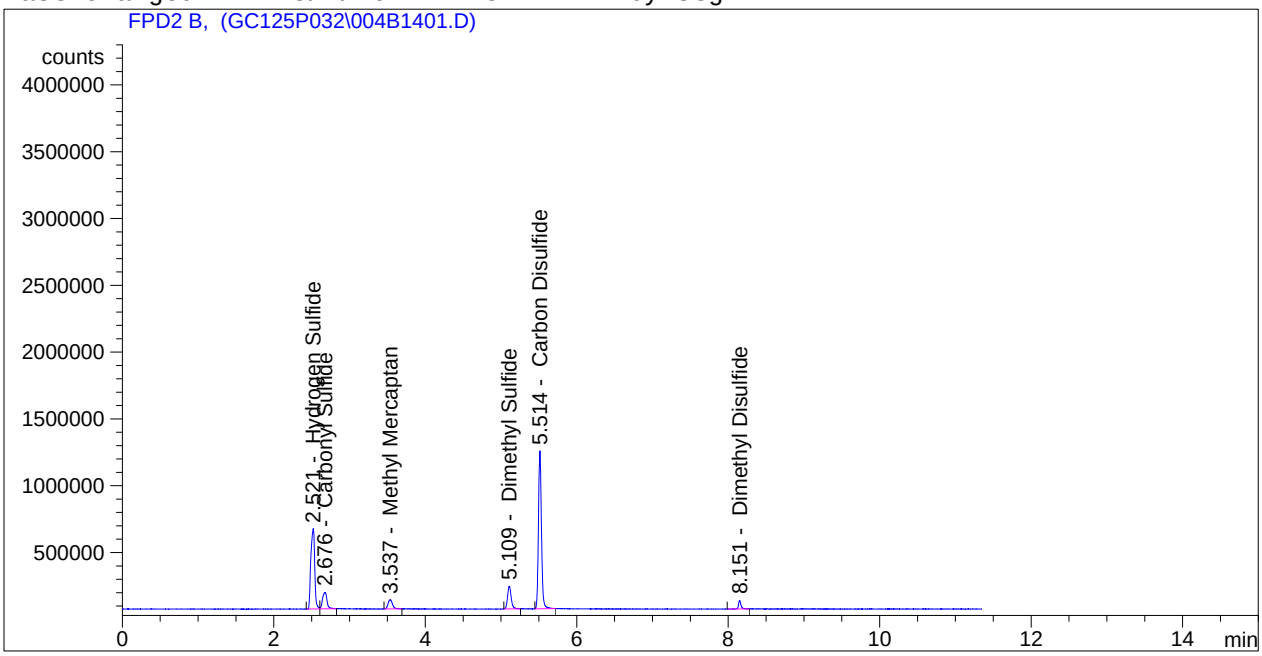
```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  15
Acq. Instrument : Zeppo online                  Location : Vial 3
Injection Date  : 7/28/2011 1:46:57 AM               Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.522 BV     6.05062e5  4.01500e-6    2.42933    Hydrogen Sulfide
  2.678 VB     1.59728e5  6.92440e-6    1.10602    Carbonyl Sulfide
  3.538 BB     8.24250e4  1.03124e-5 8.49996e-1    Methyl Mercaptan
  5.112 BB     1.76823e5  5.99680e-6    1.06037    Dimethyl Sulfide
  5.514 BB     9.90428e5  1.28775e-6    1.27543    Carbon Disulfide
  8.153 BB     4.58221e4  4.99752e-6 2.28997e-1    Dimethyl Disulfide

Totals :                                6.95014

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\004B1401.D
Sample Name: gc125p013 #4

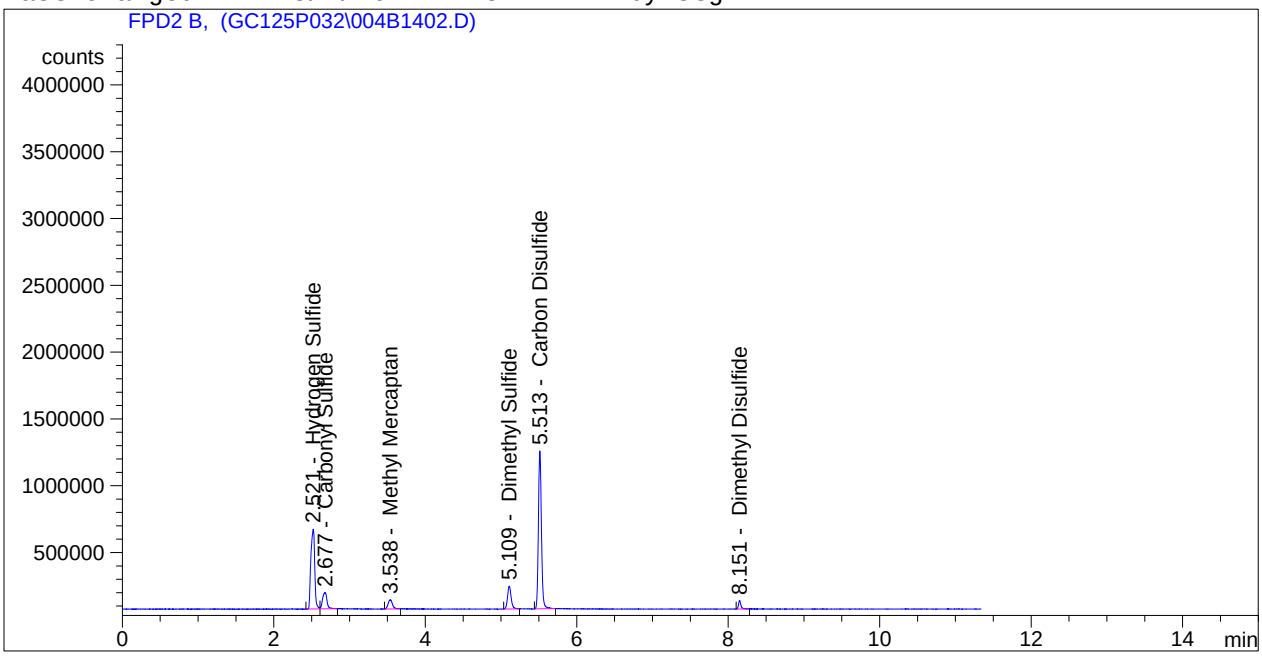
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  14
Acq. Instrument : Zeppo online                      Location : Vial 4
Injection Date  : 7/28/2011 12:27:19 AM                  Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.11746e6  2.10554e-6    4.45840    Hydrogen Sulfide
  2.676 VB     5.02428e5  3.99062e-6    2.00500    Carbonyl Sulfide
  3.537 BB     2.78239e5  5.63841e-6    1.56883    Methyl Mercaptan
  5.109 BB     5.64900e5  3.39788e-6    1.91946    Dimethyl Sulfide
  5.514 BB     3.27388e6  7.10273e-7    2.32535    Carbon Disulfide
  8.151 BB     1.42858e5  2.89131e-6 4.13045e-1    Dimethyl Disulfide

Totals :                                12.69008

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\004B1402.D
Sample Name: gc125p013 #4

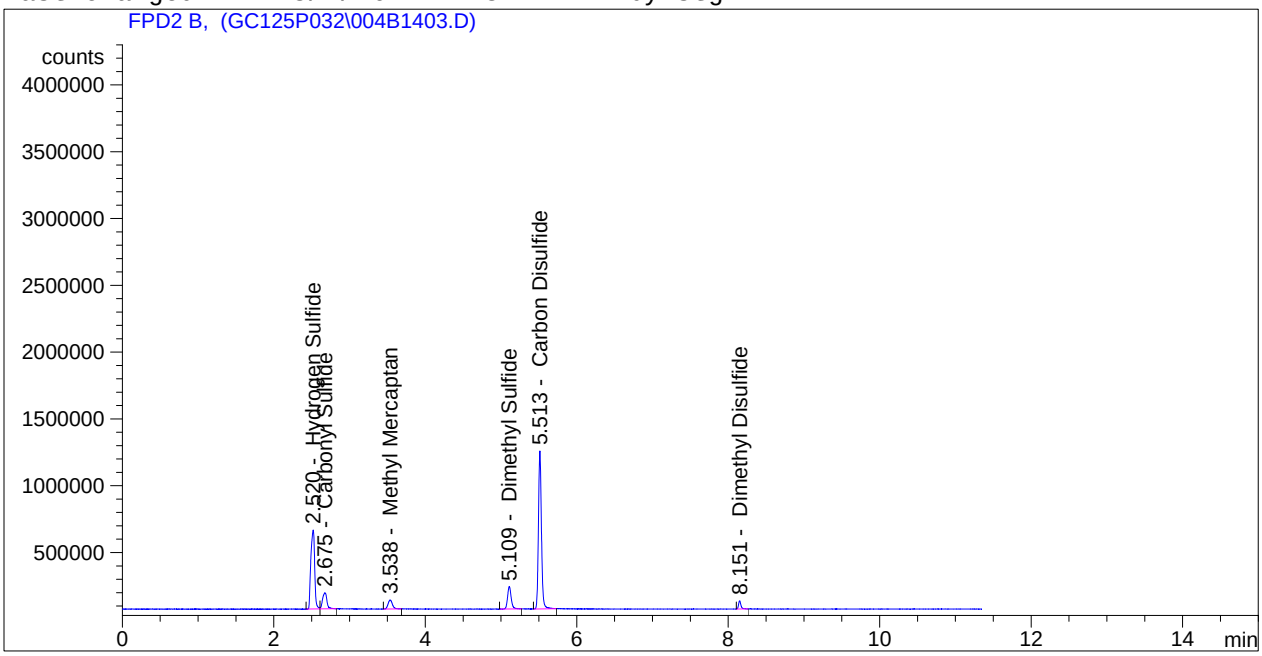
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  14
Acq. Instrument : Zeppo online                      Location : Vial 4
Injection Date  : 7/28/2011 12:43:15 AM                  Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.11241e6  2.10813e-6    4.45324    Hydrogen Sulfide
  2.677 VB     4.96879e5  4.01199e-6    1.99348    Carbonyl Sulfide
  3.538 BB     2.74221e5  5.67926e-6    1.55737    Methyl Mercaptan
  5.109 BB     5.64941e5  3.39776e-6    1.91953    Dimethyl Sulfide
  5.513 BB     3.28223e6  7.09372e-7    2.32833    Carbon Disulfide
  8.151 BB     1.40394e5  2.91562e-6 4.09334e-1    Dimethyl Disulfide

Totals :                                12.66128

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\004B1403.D
Sample Name: gc125p013 #4

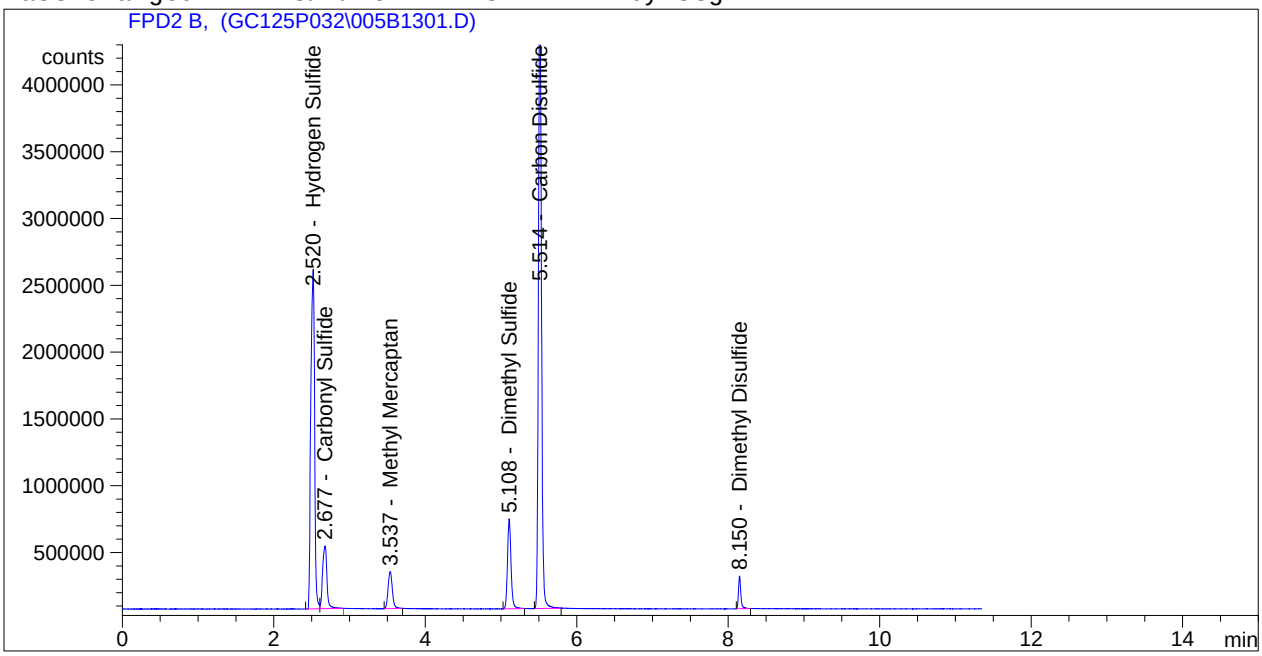
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  14
Acq. Instrument : Zeppo online                      Location : Vial 4
Injection Date  : 7/28/2011 12:59:11 AM                  Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     2.07323e6  2.12857e-6    4.41301    Hydrogen Sulfide
  2.675 VB     4.81097e5  4.07475e-6    1.96035    Carbonyl Sulfide
  3.538 BB     2.66492e5  5.76041e-6    1.53510    Methyl Mercaptan
  5.109 BB     5.58540e5  3.41675e-6    1.90839    Dimethyl Sulfide
  5.513 BB     3.24461e6  7.13454e-7    2.31488    Carbon Disulfide
  8.151 BB     1.34093e5  2.98076e-6 3.99699e-1    Dimethyl Disulfide

Totals :                                12.53144

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\005B1301.D
Sample Name: gc125p013 #5

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  13
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/27/2011 11:39:32 PM                  Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```

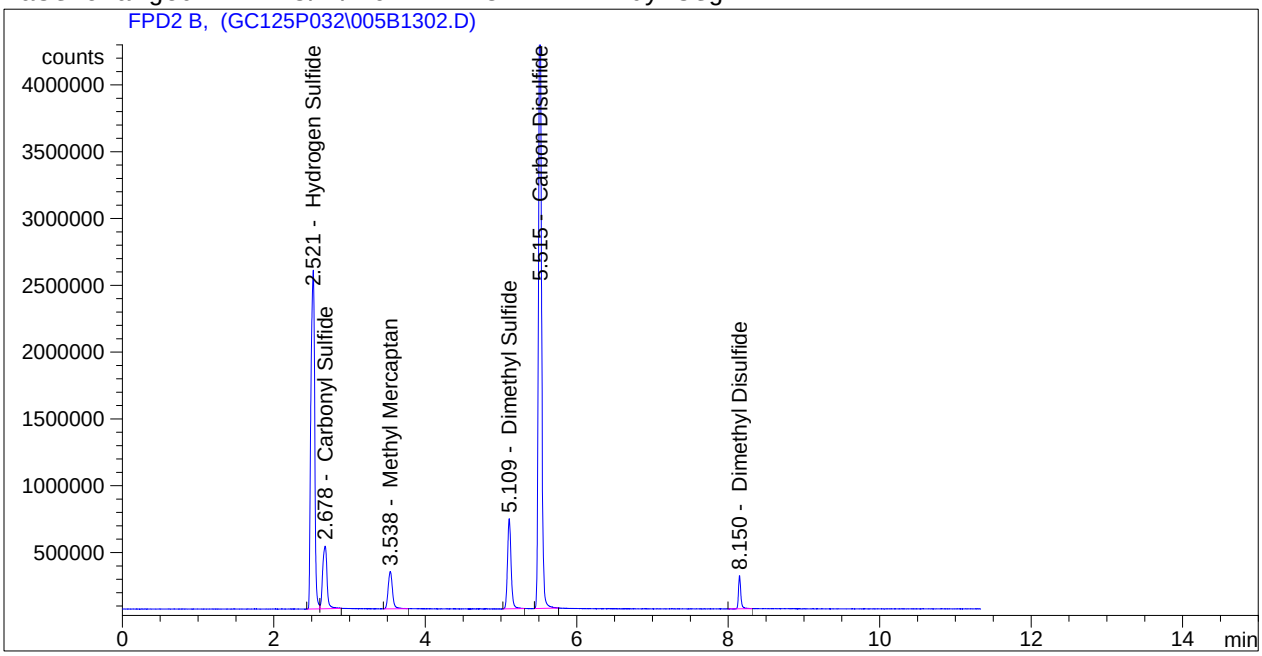



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     8.79314e6  1.01099e-6    8.88982    Hydrogen Sulfide
  2.677 VB     1.87238e6  2.11978e-6    3.96903    Carbonyl Sulfide
  3.537 BB     1.07744e6  2.87986e-6    3.10287    Methyl Mercaptan
  5.108 BB     2.18687e6  1.75266e-6    3.83284    Dimethyl Sulfide
  5.514 BB     1.28457e7  3.59719e-7    4.62085    Carbon Disulfide
  8.150 BB     5.24747e5  1.54582e-6 8.11163e-1    Dimethyl Disulfide

Totals :                                25.22657

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

EM-BTRF-000999

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\005B1302.D
Sample Name: gc125p013 #5

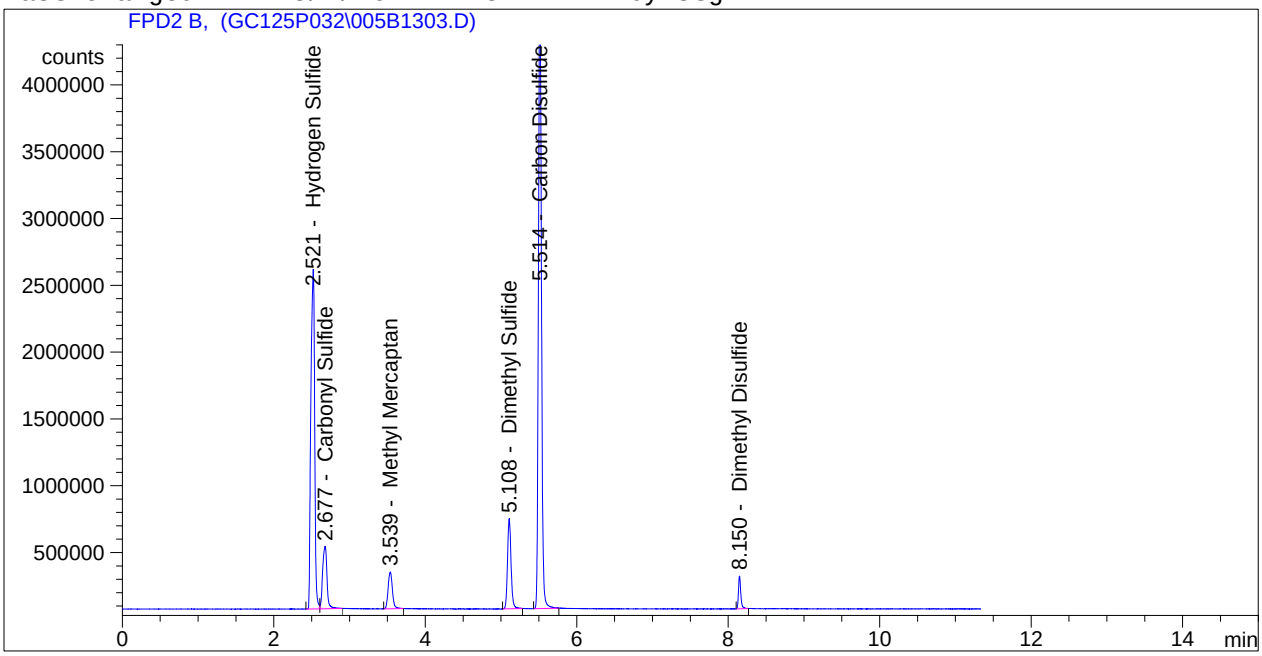
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  13
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/27/2011 11:55:28 PM                  Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     8.85959e6  1.00708e-6    8.92232    Hydrogen Sulfide
  2.678 VB     1.87651e6  2.11754e-6    3.97358    Carbonyl Sulfide
  3.538 BB     1.10047e6  2.84978e-6    3.13611    Methyl Mercaptan
  5.109 BB     2.20543e6  1.74543e-6    3.84942    Dimethyl Sulfide
  5.515 BB     1.30221e7  3.57286e-7    4.65261    Carbon Disulfide
  8.150 BB     5.27061e5  1.54255e-6 8.13017e-1    Dimethyl Disulfide

Totals :                                25.34706

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\005B1303.D
Sample Name: gc125p013 #5

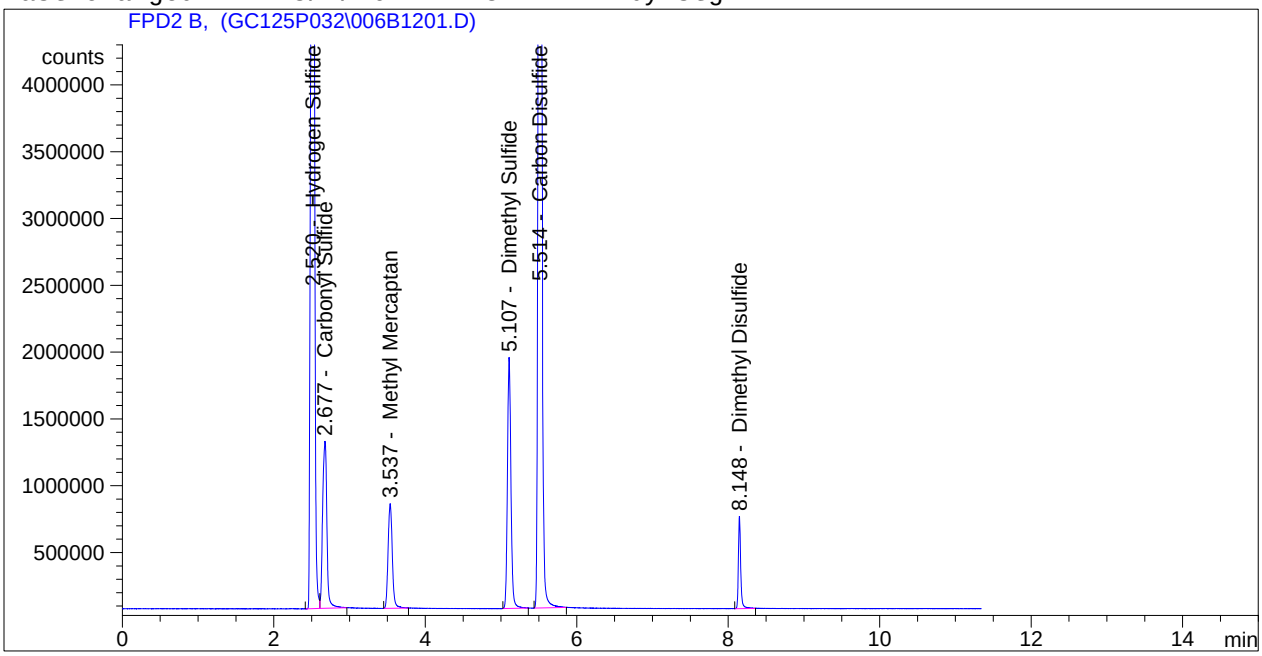
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  13
Acq. Instrument : Zeppo online                      Location : Vial 5
Injection Date  : 7/28/2011 12:11:23 AM                  Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                 [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     8.82963e6  1.00884e-6    8.90768    Hydrogen Sulfide
  2.677 VB     1.86223e6  2.12533e-6    3.95786    Carbonyl Sulfide
  3.539 BB     1.07830e6  2.87872e-6    3.10411    Methyl Mercaptan
  5.108 BB     2.19488e6  1.74953e-6    3.84000    Dimethyl Sulfide
  5.514 BB     1.30073e7  3.57489e-7    4.64995    Carbon Disulfide
  8.150 BB     5.20670e5  1.55163e-6 8.07888e-1    Dimethyl Disulfide

Totals :                                25.26749

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\006B1201.D
Sample Name: gc125p013 #6

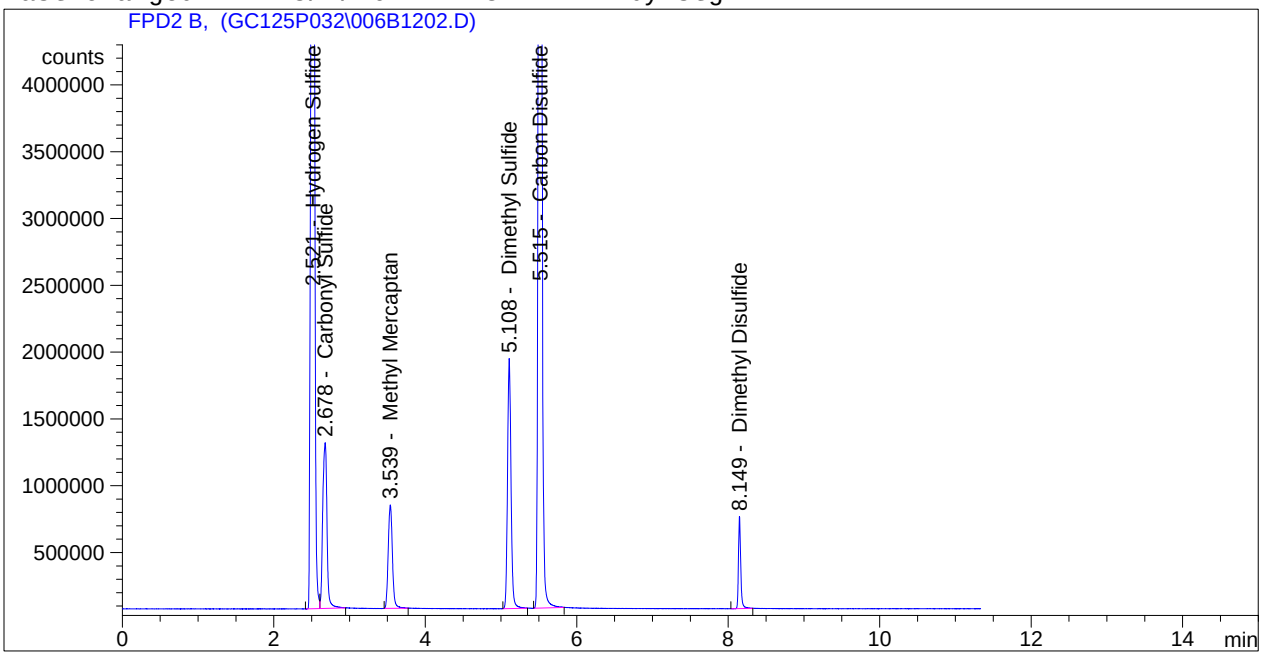
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  12
Acq. Instrument : Zeppo online                      Location : Vial 6
Injection Date  : 7/27/2011 10:51:48 PM                  Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     2.42432e7  5.99507e-7   14.53395    Hydrogen Sulfide
  2.677 VB     4.91933e6  1.33213e-6    6.55319    Carbonyl Sulfide
  3.537 BB     3.03978e6  1.72120e-6    5.23209    Methyl Mercaptan
  5.107 BB     6.03828e6  1.06651e-6    6.43989    Dimethyl Sulfide
  5.514 BB     3.44846e7  2.20055e-7    7.58850    Carbon Disulfide
  8.148 VB     1.46674e6  9.42588e-7    1.38253    Dimethyl Disulfide

Totals :                                41.73014

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\006B1202.D
Sample Name: gc125p013 #6

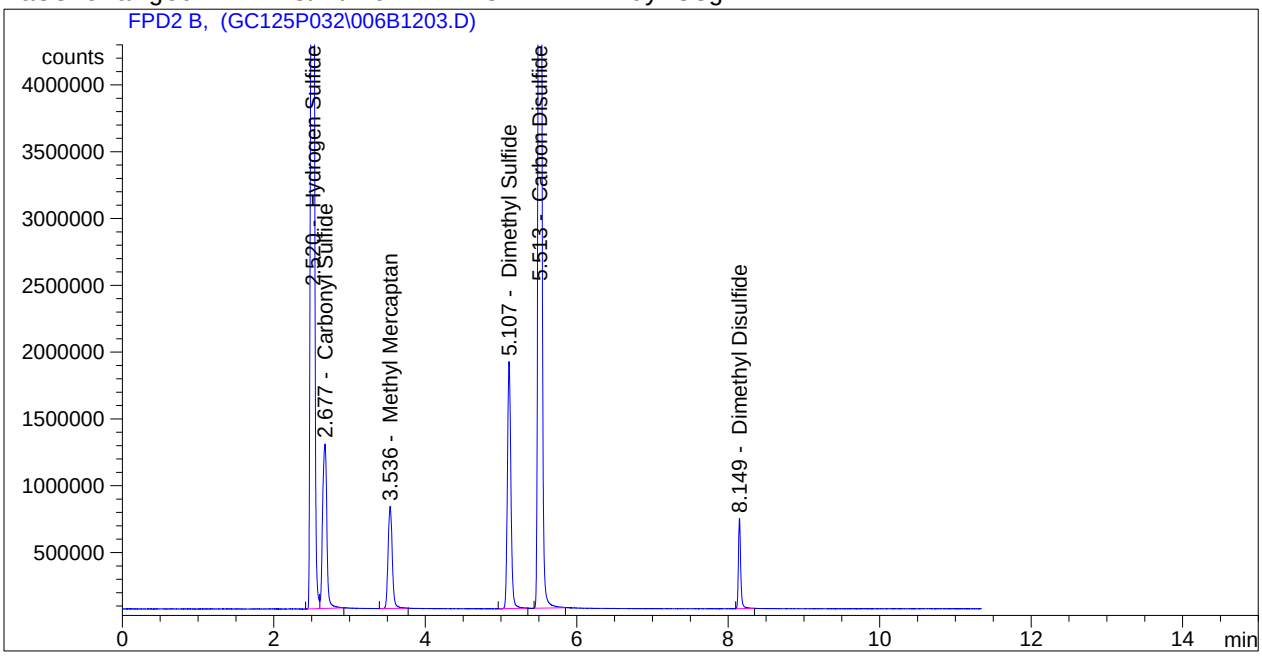
```
==========================================================================
Acq. Operator   : stg                              Seq. Line :  12
Acq. Instrument : Zeppo online                      Location : Vial 6
Injection Date  : 7/27/2011 11:07:44 PM                  Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.521 BV     2.41429e7  6.00789e-7   14.50477    Hydrogen Sulfide
  2.678 VB     4.87100e6  1.33847e-6    6.51969    Carbonyl Sulfide
  3.539 BB     2.98821e6  1.73588e-6    5.18719    Methyl Mercaptan
  5.108 BB     6.01234e6  1.06876e-6    6.42574    Dimethyl Sulfide
  5.515 BB     3.46607e7  2.19498e-7    7.60795    Carbon Disulfide
  8.149 BB     1.43395e6  9.52900e-7    1.36641    Dimethyl Disulfide

Totals :                                41.61175

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                         *** End of Report ***
```

Data File G:\GC2011Q3\ZEPPO\DATA\JUL11\GC125P032\006B1203.D
Sample Name: gc125p013 #6

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :  12
Acq. Instrument : Zeppo online                  Location : Vial 6
Injection Date  : 7/27/2011 11:23:36 PM              Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q3\ZEPPO\SEQUENCE\GC124P032.S
Acq. Method     : G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Last changed    : 7/8/2011 9:09:17 AM by kmt
Analysis Method : G:\GC2011Q3\ZEPPO\METHODS\GC125P031_POST.M
Last changed    : 8/1/2011 12:32:11 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/29/2011 11:54:30 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ppmv]
-------|------|----------|----------|----------|--|------------------
  2.520 BV     2.39452e7  6.03340e-7   14.44709    Hydrogen Sulfide
  2.677 VB     4.80990e6  1.34662e-6    6.47711    Carbonyl Sulfide
  3.536 BB     2.94886e6  1.74734e-6    5.15266    Methyl Mercaptan
  5.107 BB     5.94397e6  1.07475e-6    6.38830    Dimethyl Sulfide
  5.513 BB     3.44066e7  2.20303e-7    7.57988    Carbon Disulfide
  8.149 BB     1.42028e6  9.57303e-7    1.35964    Dimethyl Disulfide

Totals :                                41.40467

Uncalibrated Peaks    :      using compound Methyl Mercaptan

==========================================================================
                          *** End of Report ***
```

method: G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Modified on: 7/8/2011 at 9:09:17 AM

Injection Source and Location

Injection Source: Valve

Injection Location: Dual

OVEN\DET

Runtime (min): 16.3

Zone Temperatures:

	State	Setpoint
Inl. A	ON	175 C.
Inl. B	ON	175 C.
Det. A	ON	250 C.
Det. B	ON	250 C.
Aux.	OFF	120 C.

Oven Zone:

Oven max	260 C.
Equib Time	0.30 Min.
Oven State	ON
Cryo State	OFF
Ambient	25 C.
Cryo Blast	OFF

Oven Program:

	Setpoint
Initial Temp.:	50 C.
Initial Time:	4.00 Min.

Level	Rate (C/min.)	Final Temp.(C)	Final Time (min)
1	30.0	180	8.00

InletA Pressure Program Information

Constant Flow:	On
Pressure:	0.0 psi
Temperature:	50 C

Pressure Program:

	Setpoint
Initial Pres.:	0.0 psi
Initial Time:	650.00 min.

Level	Rate (psi/min.)	Final Pres.(psi)	Final Time (min)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00

Total Program Time: 650.00

GC Pressure Units:psi

Entered Values:

Column Length: 30.00 m.

method: G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Modified on: 7/8/2011 at 9:09:17 AM

Column Diameter:	0.320	mm.
Gas:	H2	
Vacuum Comp:	Off	

InletB Pressure Program Information

Constant Flow:	On
Pressure:	4.0 psi
Temperature:	40 C.

Pressure Program:

	Setpoint
Initial Pres.:	0.0 psi
Initial Time:	650.00 min.

Level	Rate (psi/min.)	Final Pres.(psi)	Final Time (min)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00

Total Program Time: 650.00

GC Pressure Units:psi

Entered Values:

Column Length:	60.00	m.
Column Diameter:	0.530	mm.
Gas:	H2	
Vacuum Comp:	Off	

Inlet A Packed Column Information

Equation:---

Pressure-Flow Relationship:

	Pres.	Flow(psi) (ml/min)
1	---	0.0
2	---	0.0
3	---	0.0

Last pressure calibration:---

Packed Column Flow Setting (ml/min):0.0

Inlet B Packed Column Information

Equation:---

Pressure-Flow Relationship:

	Pres.	Flow(psi) (ml/min)
1	---	0.0
2	---	0.0
3	---	0.0

Last pressure calibration:---

Packed Column Flow Setting (ml/min):0.0

Purge Valve Settings

Purge A/B

	Init Value	On Time (Min.)	Off Time (Min.)
A (Valve 3)	On	0.00	0.00
B (Valve 4)	On	0.00	0.00

A - Splitless Injection: No
B - Splitless Injection: No

EM-BTRF-001006

method: G:\GC2011Q3\ZEPPO\METHODS\FPDTEST2.M
Modified on: 7/8/2011 at 9:09:17 AM

Valves/Relays Information

Initial Setpoints:
5890 Valves:

Valve 1:	Off
Valve 2:	Off
Valve 3 (Purge A):	On
Valve 4 (Purge B):	On

Valve/Relay Time Table:

Time	Name	State	Comment
0.01	Valve1	On	
0.10	Valve1	Off	
1.00	Valve2	On	
1.10	Valve2	Off	

Detector Information

Detector A:

Type	FID
State	ON

Detector B:

Type	FPD
State	ON

Signal Information

Save Data:	Both

Signal 1:

Signal	Det. A
Data rate	20.000 Hz.
Peakwidth	0.013 min.
Start Time	0.00 min.
Stop Time	650.00 min.

Signal 2:

Signal	Det. B
Data rate	20.000 Hz.
Peakwidth	0.013 min.
Start Time	0.00 min.
Stop Time	650.00 min.

Sequence: G:\gc2011q3\zeppo\sequence\gc125p025.txt
Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 1	Pause	PAUSE	1	Sample
2	Vial 16	Vessel 1677 0711-01	FPDTEST2	3	Sample
3	Vial 14	Vessel 1691 0711-01	FPDTEST2	3	Sample
4	Vial 12	Vessel 1699 0711-01	FPDTEST2	3	Sample
5	Vial 10	Vessel 1698 0711-01	FPDTEST2	3	Sample
6	Vial 8	Vessel 1690 0711-01	FPDTEST2	3	Sample
7	Vial 6	Vessel 1678 0711-01	FPDTEST2	3	Sample
8	Vial 4	Vessel 1676 0711-01	FPDTEST2	3	Sample
9	Vial 2	gc125p013 #6	FPDTEST2	3	Sample
10	Vial 2	gc125p013 #5	FPDTEST2	3	Sample
11	Vial 2	gc125p013 #4	FPDTEST2	3	Sample
12	Vial 2	gc125p013 #3	FPDTEST2	3	Sample
13	Vial 2	gc125p013 #1	FPDTEST2	3	Sample
14	Vial 1	Pause	PAUSE	1	Sample
15	Vial 2	gc125p013 #7	FPDTEST2	3	Sample
16	Vial 1	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q3\zeppo\sequence\gc125p025.txt
Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 7	Pause	PAUSE	1	Sample
2	Vial 7	Vessel 1677 0711-01	GC125P021B_POST	3	Sample
3	Vial 7	Vessel 1691 0711-01	GC125P021B_POST	3	Sample
4	Vial 7	Vessel 1699 0711-01	GC125P021B_POST	3	Sample
5	Vial 7	Vessel 1698 0711-01	GC125P021B_POST	3	Sample
6	Vial 7	Vessel 1690 0711-01	GC125P021B_POST	3	Sample
7	Vial 7	Vessel 1678 0711-01	GC125P021B_POST	3	Sample
8	Vial 7	Vessel 1676 0711-01	GC125P021B_POST	3	Sample
9	Vial 6	gc125p013 #6	GC125P021B_POST	3	Sample
10	Vial 5	gc125p013 #5	GC125P021B_POST	3	Sample
11	Vial 4	gc125p013 #4	GC125P021B_POST	3	Sample
12	Vial 3	gc125p013 #3	GC125P021B_POST	3	Sample
13	Vial 1	gc125p013 #1	GC125P021B_POST	3	Sample
14	Vial 7	Pause	PAUSE	1	Sample
15	Vial 7	gc125p013 #7	GC125P021B_POST	3	Sample
16	Vial 7	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q3\zeppo\sequence\gc125p026.txt
Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 3	ICR Run 1 0611-49	FPDTEST2	3	Sample
2	Vial 5	Catalytic Reformer R2 0711-28	FPDTEST2	3	Sample
3	Vial 7	Catalytic Reformer R1 0711-28	FPDTEST2	3	Sample
4	Vial 5	EM-R1-Bag-DCU 0711-64	FPDTEST2	3	Sample
5	Vial 1	Blank	FPDTEST2	5	Sample
6	Vial 5	EM-R2-Bag-DCU 0711-64	FPDTEST2	3	Sample
7	Vial 7	EM-R3-Bag-DCU 0711-64	FPDTEST2	3	Sample
8	Vial 1	Blank	FPDTEST2	5	Sample
9	Vial 5	EM-R2-Bag-DCU *11 0711-64	FPDTEST2	3	Sample
10	Vial 7	EM-R3-Bag-DCU *11 0711-64	FPDTEST2	3	Sample
11	Vial 9	Catalytic Reformer R3 0711-28	FPDTEST2	3	Sample
12	Vial 15	ICR Run 2 0611-49	FPDTEST2	3	Sample
13	Vial 3	ICR Run 3 0611-49	FPDTEST2	3	Sample
14	Vial 2	GC125p013 #7	FPDTEST2	3	Sample
15	Vial 2	GC125p013 #6	FPDTEST2	3	Sample
16	Vial 2	GC125p013 #5	FPDTEST2	3	Sample
17	Vial 2	GC125p013 #4	FPDTEST2	3	Sample
18	Vial 2	GC125p013 #3	FPDTEST2	3	Sample
19	Vial 2	GC125p013 #1	FPDTEST2	3	Sample
20	Vial 1	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q3\zeppo\sequence\gc125p026.txt
Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 7	ICR Run 1 0611-49	GC125P021B_POST	3	Sample
2	Vial 7	Catalytic Reformer R1 0711-28	GC125P021B_POST	3	Sample
3	Vial 6	Catalytic Reformer R1 0711-28	GC125P021B_POST	3	Sample
4	Vial 7	EM-R1-Bag-DCU 0711-64	GC125P021B_POST	3	Sample
5	Vial 7	Blank	GC125P021B_POST	5	Sample
6	Vial 7	EM-R2-Bag-DCU 0711-64	GC125P021B_POST	3	Sample
7	Vial 6	EM-R3-Bag-DCU 0711-64	GC125P021B_POST	3	Sample
8	Vial 7	Blank	GC125P021B_POST	5	Sample
9	Vial 7	EM-R2-Bag-DCU *11 0711-64	GC125P021B_POST	3	Sample
10	Vial 6	EM-R3-Bag-DCU *11 0711-64	GC125P021B_POST	3	Sample
11	Vial 7	Catalytic Reformer R3 0711-28	GC125P021B_POST	3	Sample
12	Vial 7	ICR Run 2 0611-49	GC125P021B_POST	3	Sample
13	Vial 7	ICR Run 3 0611-49	GC125P021B_POST	3	Sample
14	Vial 7	GC125p013 #7	GC125P021B_POST	3	Sample
15	Vial 6	GC125p013 #6	GC125P021B_POST	3	Sample
16	Vial 5	GC125p013 #5	GC125P021B_POST	3	Sample
17	Vial 4	GC125p013 #4	GC125P021B_POST	3	Sample
18	Vial 3	GC125p013 #3	GC125P021B_POST	3	Sample
19	Vial 1	GC125p013 #1	GC125P021B_POST	3	Sample
20	Vial 7	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q3\Zeppo\sequence\gc125p031.txt
Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 7	TGTU-2 M15 Bag 2 baseline 0711-102	FPDTEST2	3	Sample
2	Vial 15	BPV-A3-M18-Bag 0711-08	FPDTEST2	3	Sample
3	Vial 8	Vessel 1686 0711-93	FPDTEST2	3	Sample
4	Vial 6	Vessel 1687 0711-93	FPDTEST2	3	Sample
5	Vial 4	Vessel 1679 0711-93	FPDTEST2	3	Sample
6	Vial 10	Vessel 1680 0711-97	FPDTEST2	3	Sample
7	Vial 12	Vessel 1684 0711-97	FPDTEST2	3	Sample
8	Vial 16	Vessel 1683 0711-97	FPDTEST2	3	Sample
9	Vial 14	FS Vessel 1694 0711-93	FPDTEST2	3	Sample
10	Vial 1	Blank	FPDTEST2	3	Sample
11	Vial 2	gc125p013 #6	FPDTEST2	3	Sample
12	Vial 2	gc125p013 #5	FPDTEST2	3	Sample
13	Vial 2	gc125p013 #4	FPDTEST2	3	Sample
14	Vial 2	gc125p013 #3	FPDTEST2	3	Sample
15	Vial 2	gc125p013 #1	FPDTEST2	3	Sample
16	Vial 1	Pause	PAUSE	1	Sample
17	Vial 2	gc125p013 #7	FPDTEST2	3	Sample

Sequence: G:\gc2011q3\Zeppo\sequence\gc125p031.txt
Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 6	TGTU-2 M15 Bag 2 baseline 0711-102	25P029_POST	3	Sample
2	Vial 7	BPV-A3-M18-Bag 0711-08	25P029_POST	3	Sample
3	Vial 7	Vessel 1686 0711-93	25P029_POST	3	Sample
4	Vial 7	Vessel 1687 0711-93	25P029_POST	3	Sample
5	Vial 7	Vessel 1679 0711-93	25P029_POST	3	Sample
6	Vial 7	Vessel 1680 0711-97	25P029_POST	3	Sample
7	Vial 7	Vessel 1684 0711-97	25P029_POST	3	Sample
8	Vial 7	Vessel 1683 0711-97	25P029_POST	3	Sample
9	Vial 7	FS Vessel 1694 0711-93	25P029_POST	3	Sample
10	Vial 7	Blank	25P028_POST	3	Sample
11	Vial 6	gc125p013 #6	25P029_POST	3	Sample
12	Vial 5	gc125p013 #5	25P029_POST	3	Sample
13	Vial 4	gc125p013 #4	25P029_POST	3	Sample
14	Vial 3	gc125p013 #3	25P029_POST	3	Sample
15	Vial 1	gc125p013 #1	25P029_POST	3	Sample
16	Vial 7	Pause	PAUSE	1	Sample
17	Vial 7	gc125p013 #7	25P029_POST	3	Sample

Sequence: G:\gc2011q3\Zeppo\sequence\gc125p032.txt
Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 15	BPV-A4-M18-Bag 0711-08	FPDTEST2	3	Sample
2	Vial 1	Blank	FPDTEST2	3	Sample
3	Vial 1	Pause	PAUSE	1	Sample
4	Vial 7	EM-R3-Bag-CDU *6 0711-64	FPDTEST2	3	Sample
5	Vial 1	Pause	PAUSE	1	Sample
6	Vial 15	FHR_FCC_ICR Run1 0711-81	FPDTEST2	3	Sample
7	Vial 15	FHR_FCC_ICR Run2 0711-81	FPDTEST2	3	Sample
8	Vial 7	FHR_FCC_ICR Run3 0711-81	FPDTEST2	3	Sample
9	Vial 3	EM-R2-Bag-CDU *6 0711-64	FPDTEST2	3	Sample
10	Vial 1	Pause	PAUSE	1	Sample
11	Vial 2	gc125p013 #7	FPDTEST2	3	Sample
12	Vial 2	gc125p013 #6	FPDTEST2	3	Sample
13	Vial 2	gc125p013 #5	FPDTEST2	3	Sample
14	Vial 2	gc125p013 #4	FPDTEST2	3	Sample
15	Vial 2	gc125p013 #3	FPDTEST2	3	Sample
16	Vial 2	gc125p013 #1	FPDTEST2	3	Sample
17	Vial 1	Pause	PAUSE	1	Sample
18	Vial 2	gc125p013 #7	FPDTEST2	3	Sample
19	Vial 2	gc125p013 #6	FPDTEST2	3	Sample
20	Vial 2	gc125p013 #5	FPDTEST2	3	Sample
21	Vial 2	gc125p013 #4	FPDTEST2	3	Sample
22	Vial 2	gc125p013 #3	FPDTEST2	3	Sample
23	Vial 2	gc125p013 #1	FPDTEST2	3	Sample
24	Vial 1	Pause	PAUSE	1	Sample

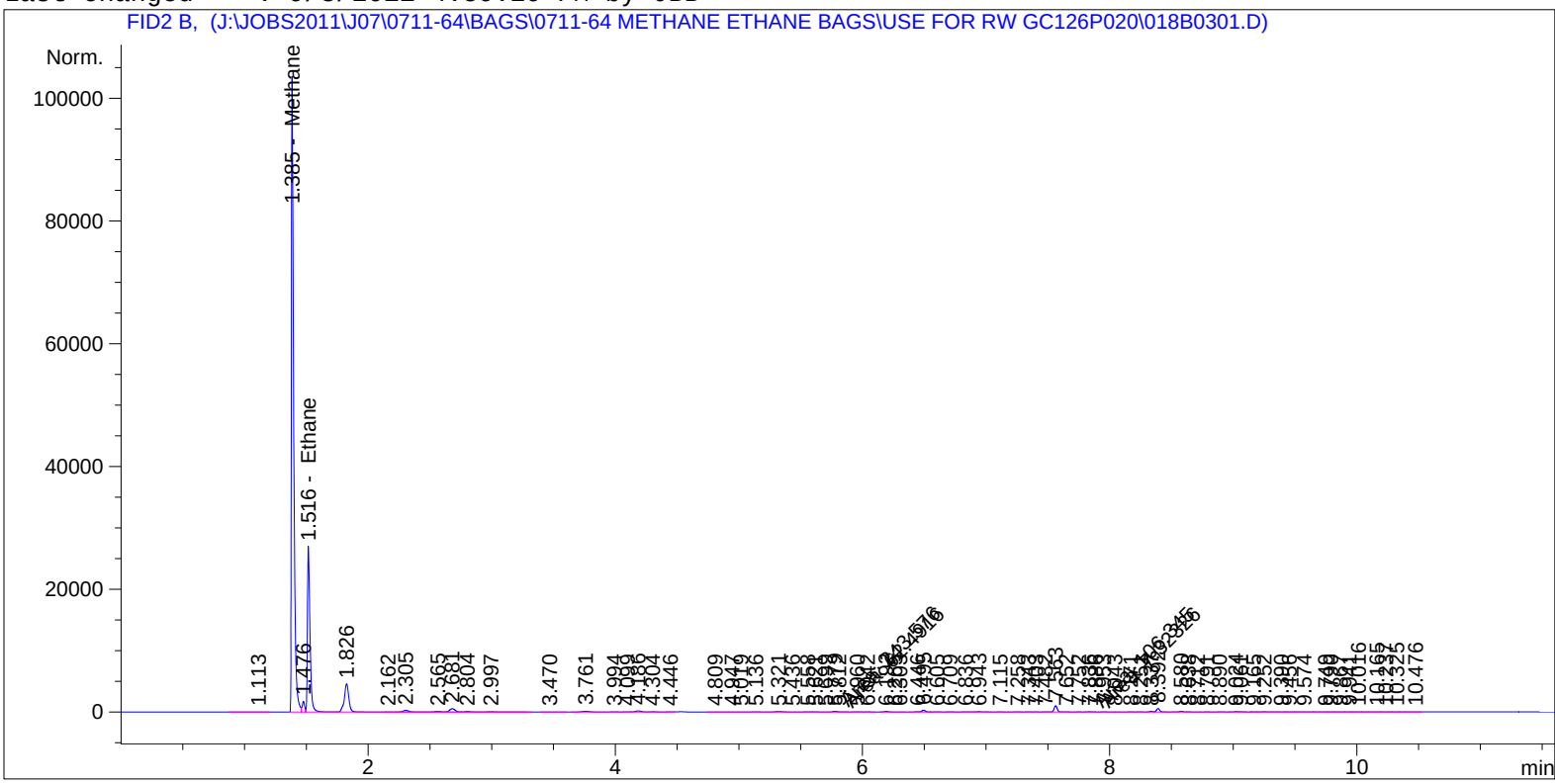
Sequence: G:\gc2011q3\Zeppo\sequence\gc125p032.txt
Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 7	BPV-A3-M18-Bag 0711-08	25P029_POST	3	Sample
2	Vial 7	Blank	25P028_POST	3	Sample
3	Vial 7	Pause	PAUSE	1	Sample
4	Vial 6	EM-R3-Bag-CDU *6 0711-64	25P028_POST	3	Sample
5	Vial 7	Pause	PAUSE	1	Sample
6	Vial 7	FHR_FCC_ICR Run1 0711-81	25P029_POST	3	Sample
7	Vial 7	FHR_FCC_ICR Run2 0711-81	25P029_POST	3	Sample
8	Vial 6	FHR_FCC_ICR Run3 0711-81	25P029_POST	3	Sample
9	Vial 7	EM-R3-Bag-CDU *6 0711-64	25P028_POST	3	Sample
10	Vial 7	Pause	PAUSE	1	Sample
11	Vial 7	gc125p013 #7	25P029_POST	3	Sample
12	Vial 6	gc125p013 #6	25P029_POST	3	Sample
13	Vial 5	gc125p013 #5	25P029_POST	3	Sample
14	Vial 4	gc125p013 #4	25P029_POST	3	Sample
15	Vial 3	gc125p013 #3	25P029_POST	3	Sample
16	Vial 1	gc125p013 #1	25P029_POST	3	Sample
17	Vial 7	Pause	PAUSE	1	Sample
18	Vial 7	gc125p013 #7	25P029_POST	3	Sample
19	Vial 6	gc125p013 #6	25P029_POST	3	Sample
20	Vial 5	gc125p013 #5	25P029_POST	3	Sample
21	Vial 4	gc125p013 #4	25P029_POST	3	Sample
22	Vial 3	gc125p013 #3	25P029_POST	3	Sample
23	Vial 1	gc125p013 #1	25P029_POST	3	Sample
24	Vial 7	Pause	PAUSE	1	Sample

Sample Chromatograms

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\018B0301.D
Sample Name: EM-R2-Bag-DCU 0711-64

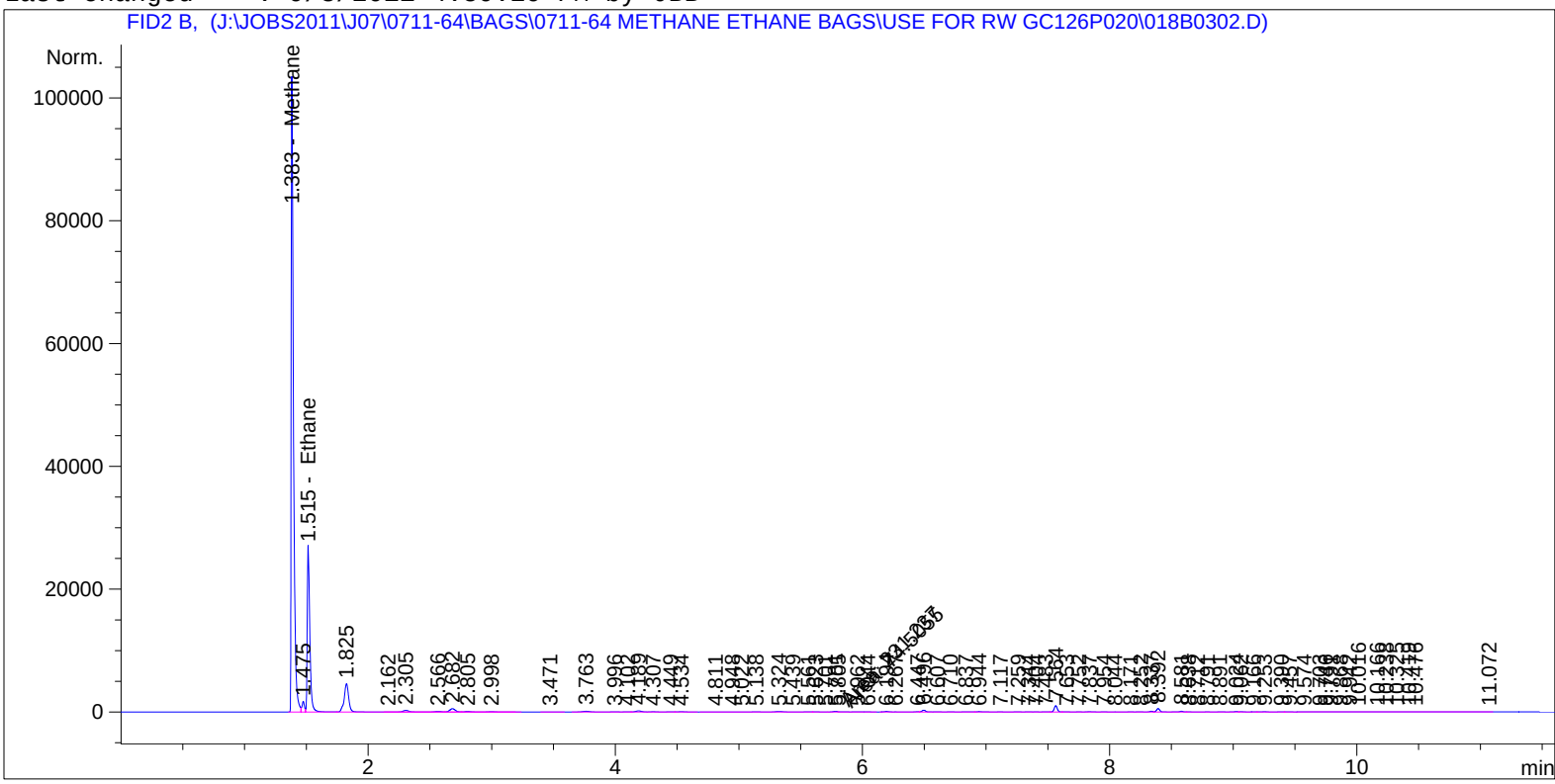
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 11:44:29                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.385 BV S   1.32175e5     4.26662 5.63942e5     Methane
  1.516 VV S   3.89716e4     2.31371 9.01690e4     Ethane

Totals :                             6.54111e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\018B0302.D
Sample Name: EM-R2-Bag-DCU 0711-64

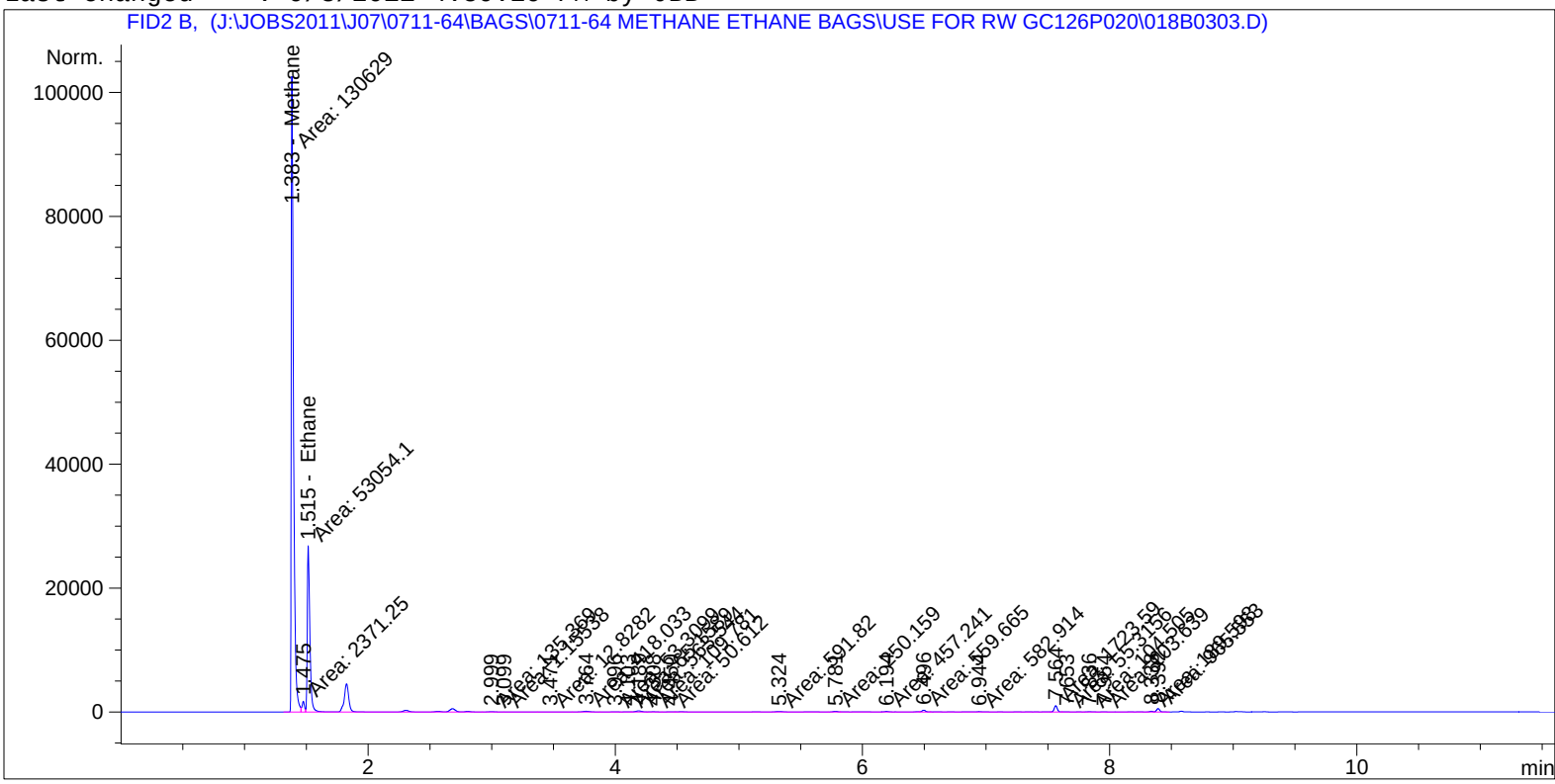
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 12:00:52                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.383 BV S   1.32119e5     4.26662 5.63701e5     Methane
  1.515 VV S   3.90391e4     2.31371 9.03251e4     Ethane

Totals :                             6.54026e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\018B0303.D
Sample Name: EM-R2-Bag-DCU 0711-64

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   3
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 12:17:03                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```

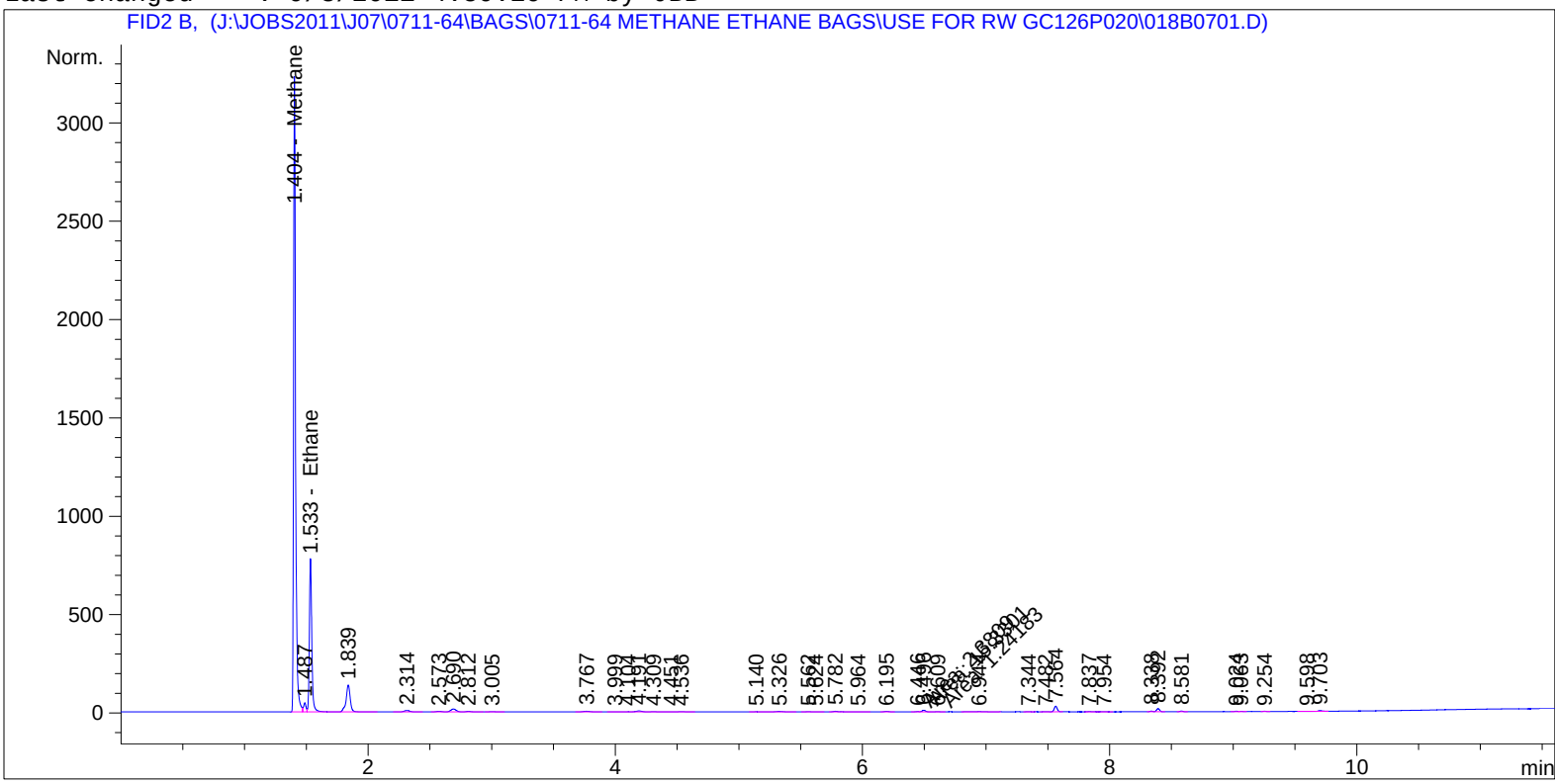



```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.383 MF     1.30629e5     4.26662 5.57346e5     Methane
  1.515 FM     5.30541e4     2.31371 1.22751e5     Ethane

Totals :                             6.80098e5


==================================================================
                        *** End of Report ***
```

Manual Int. "II" (MGM)

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\018B0701.D
Sample Name: EM-R2-Bag-DCU *31 0711-64

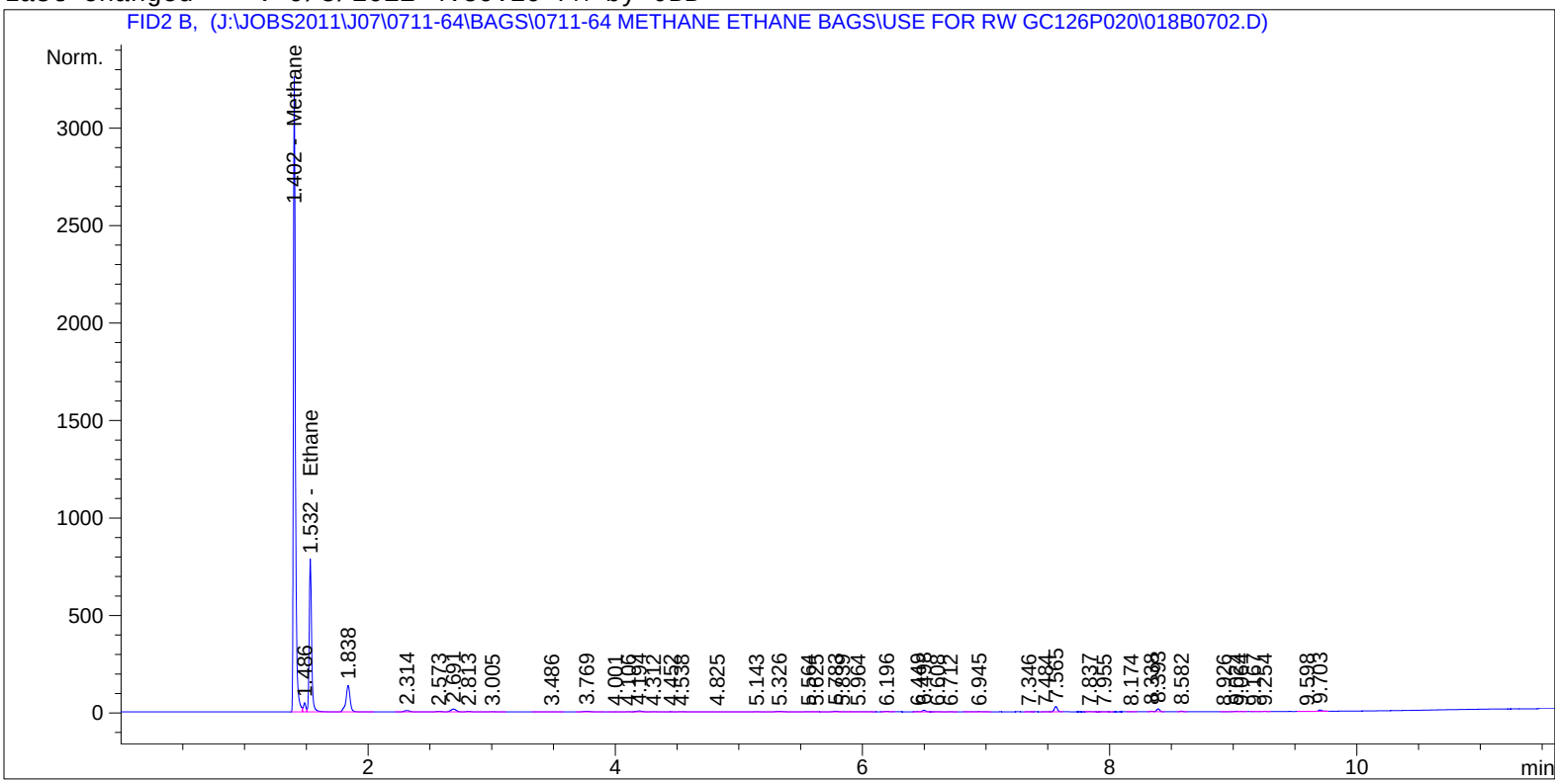
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 14:31:56                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.404 BV     3650.31958    4.26672 1.55749e4     Methane
  1.533 VV     1064.19458    2.31402 2462.56829    Ethane

Totals :                              1.80375e4


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\018B0702.D
Sample Name: EM-R2-Bag-DCU *31 0711-64

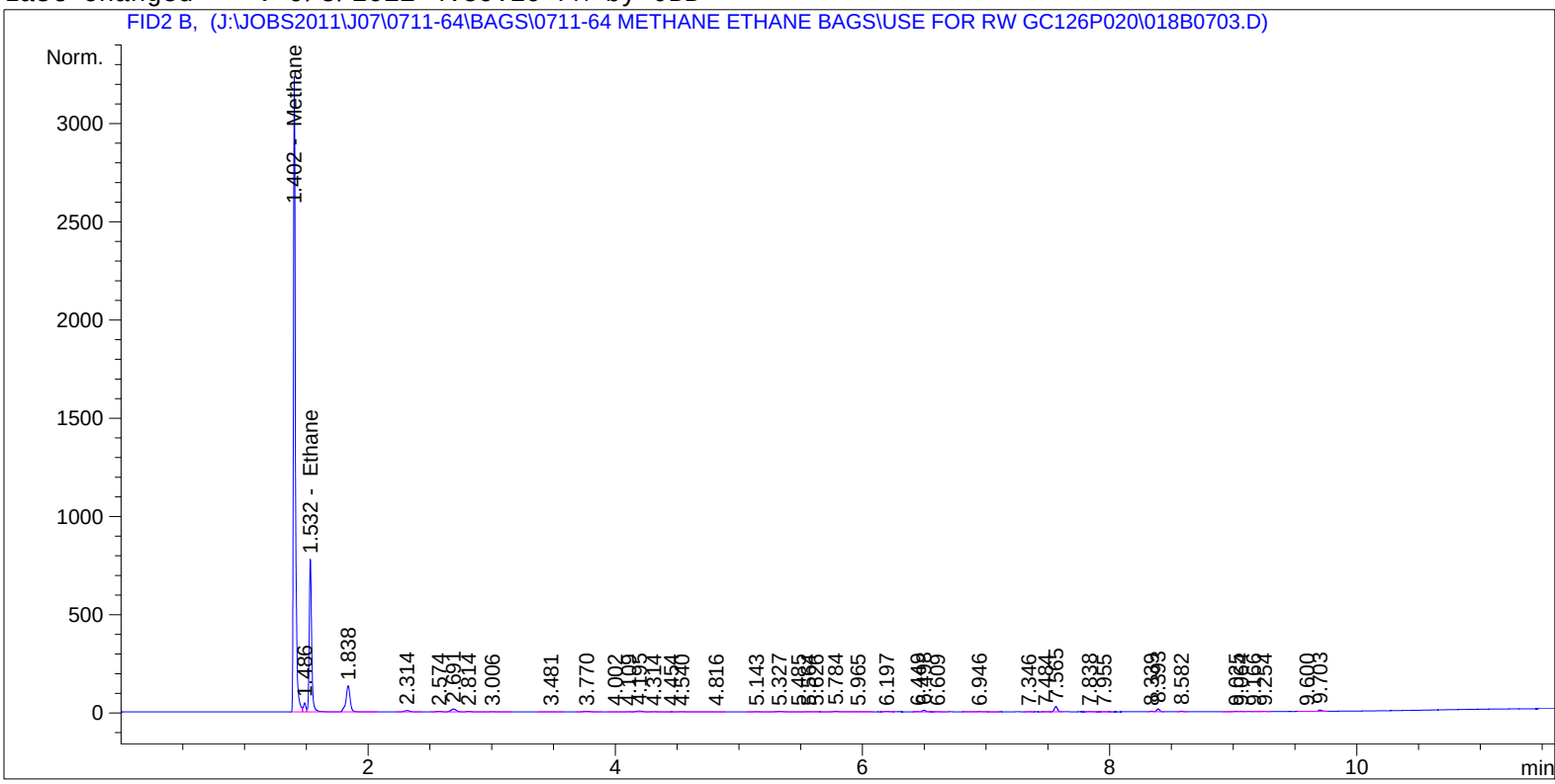
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 14:48:16                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.402 BV     3683.72974    4.26672 1.57174e4     Methane
  1.532 VV     1070.12708    2.31402 2476.29430    Ethane

Totals :                             1.81937e4


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\018B0703.D
Sample Name: EM-R2-Bag-DCU *31 0711-64

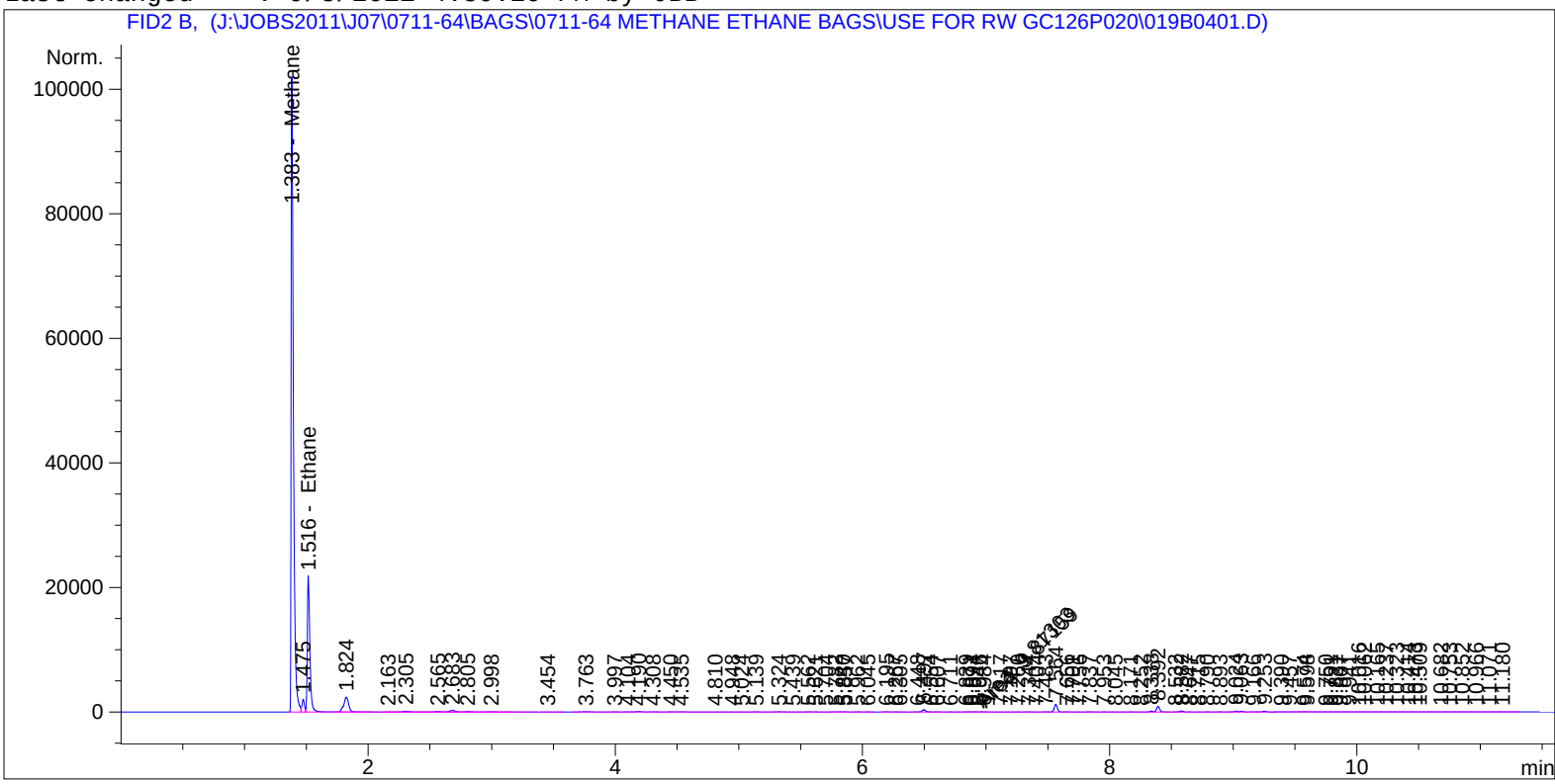
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 18
Injection Date  : 20-Jul-11, 15:04:46                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.402 BV     3644.41992    4.26672 1.55497e4     Methane
  1.532 VV     1058.54883    2.31402 2449.50571    Ethane

Totals :                             1.79992e4


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\019B0401.D
Sample Name: EM-R3-Bag-DCU 0711-64

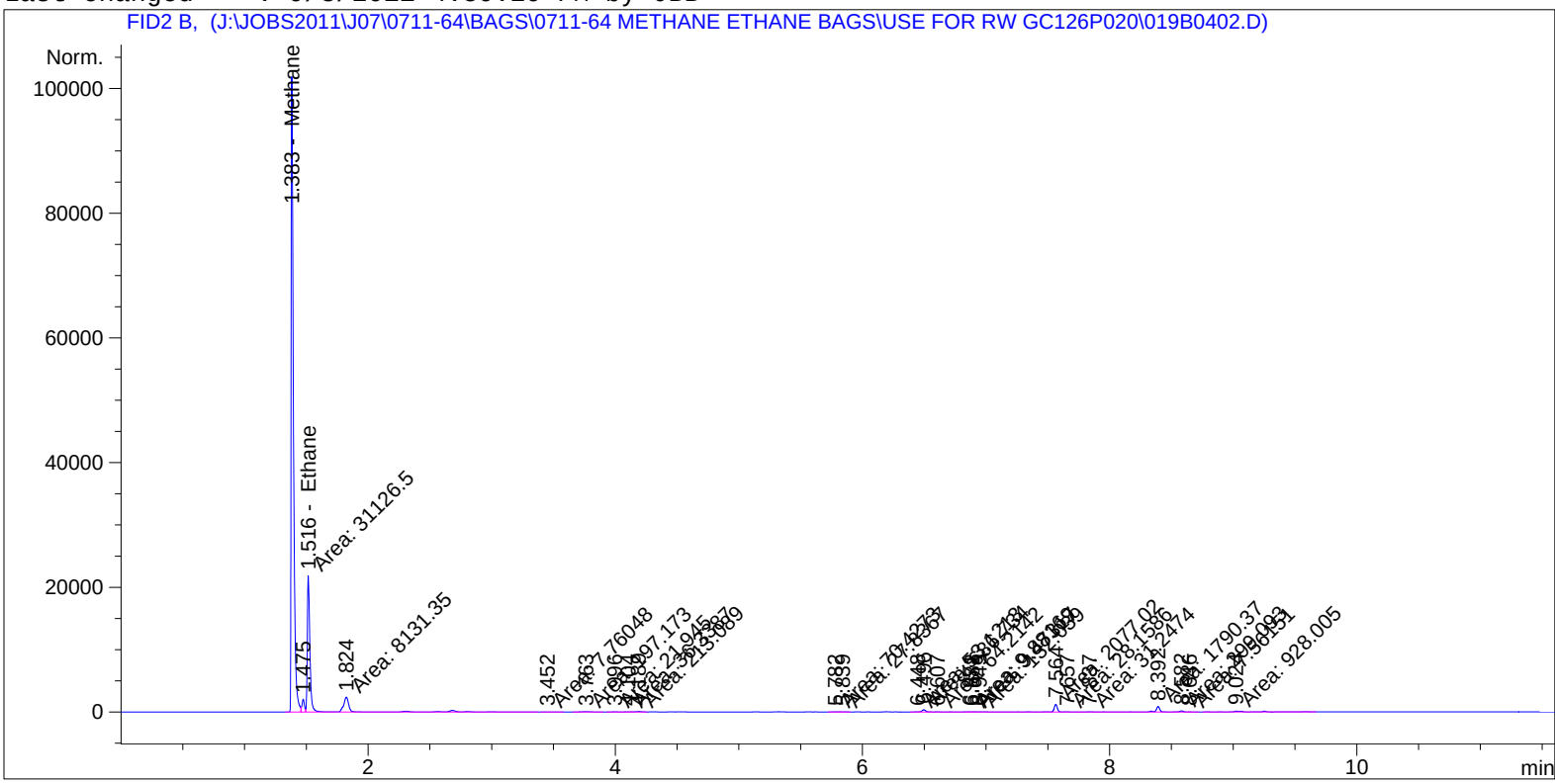
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 12:33:19                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.383 BV S   1.30819e5     4.26662 5.58154e5     Methane
  1.516 VB S   3.12449e4     2.31371 7.22917e4     Ethane

Totals :                              6.30445e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\019B0402.D
Sample Name: EM-R3-Bag-DCU 0711-64

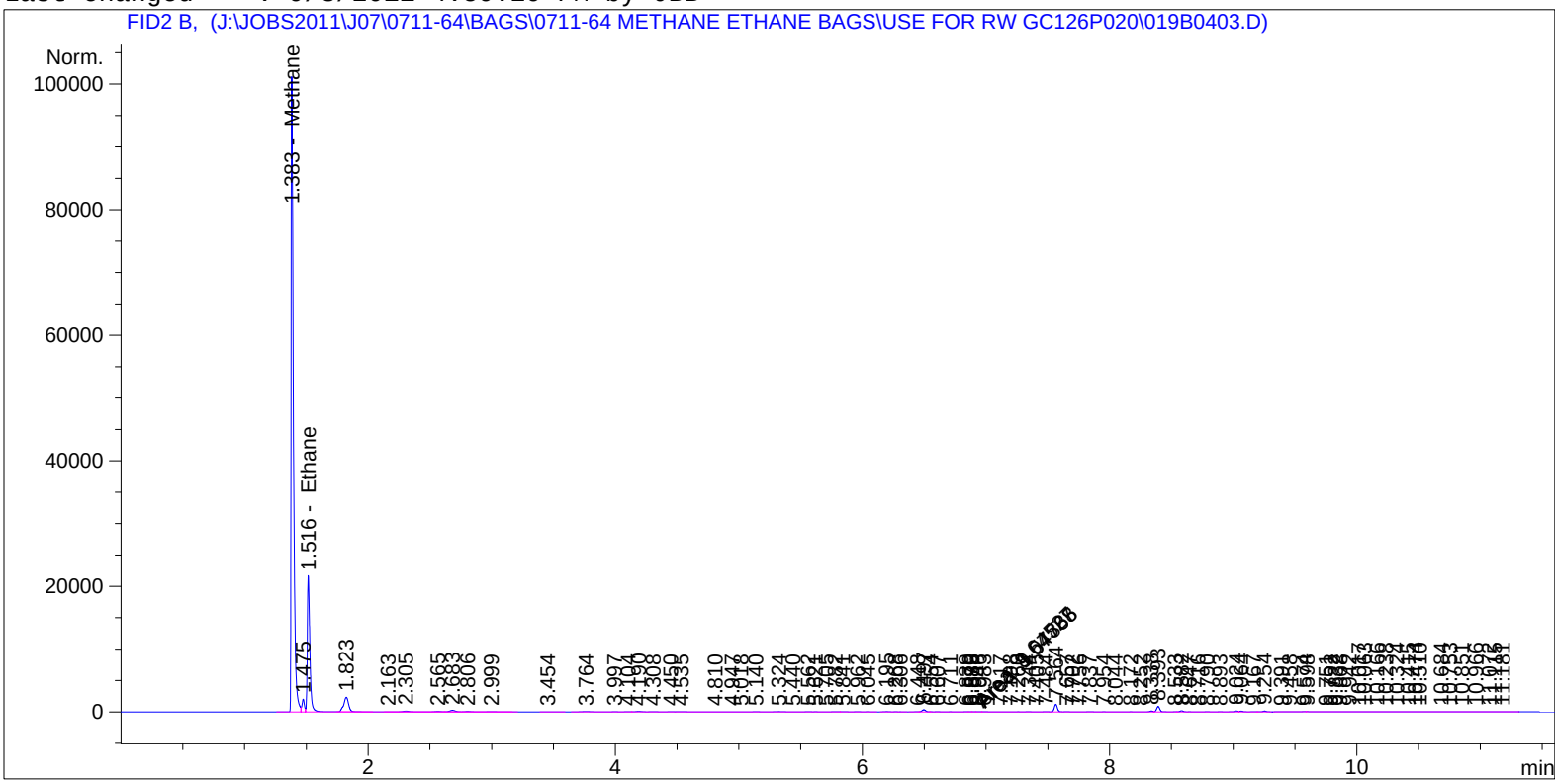
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 12:49:34                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.383 VV S   1.30536e5     4.26662 5.56950e5     Methane
  1.516 MM     3.11265e4     2.31371 7.20176e4     Ethane

Totals :                             6.28968e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\019B0403.D
Sample Name: EM-R3-Bag-DCU 0711-64

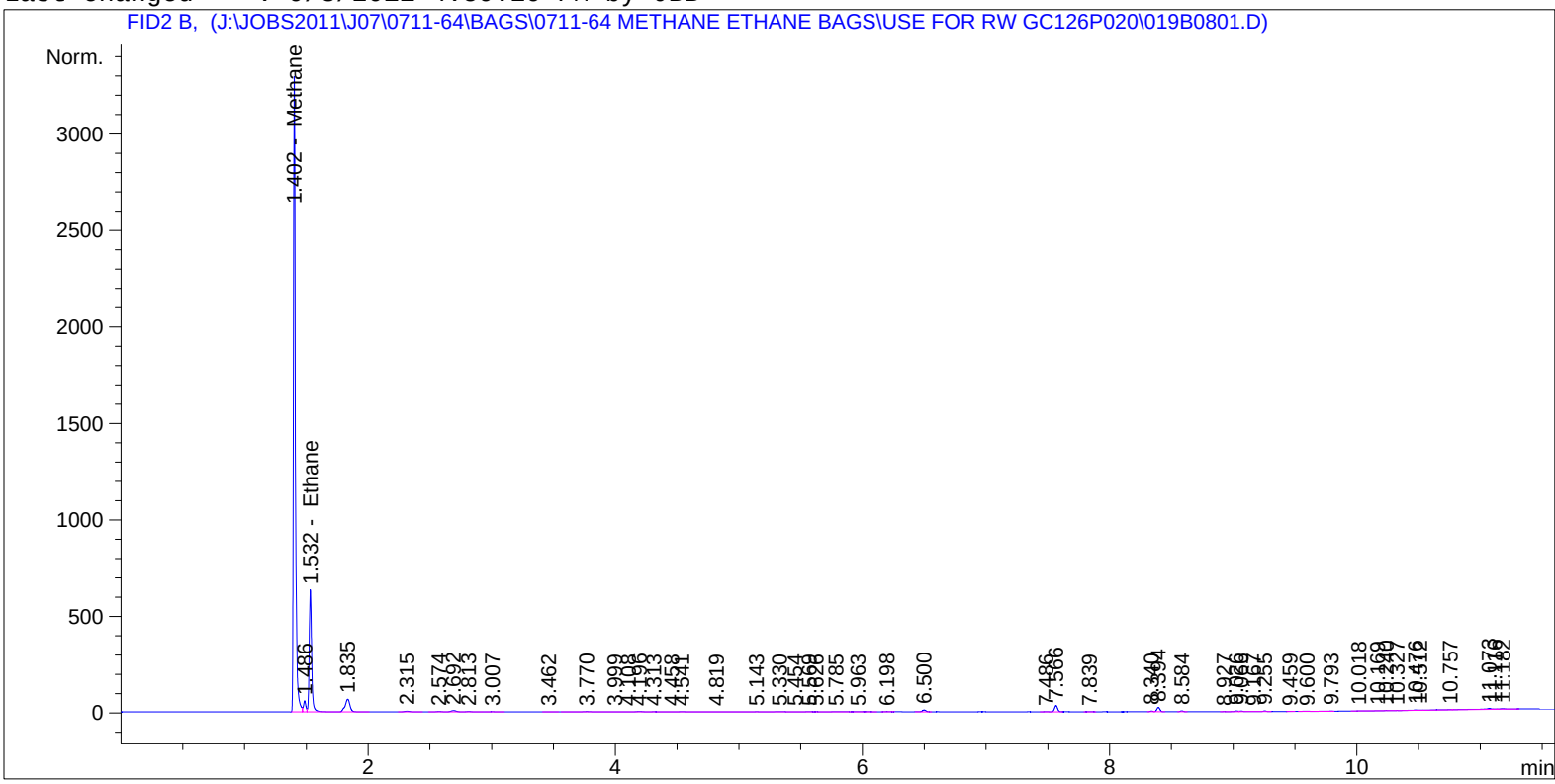
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 13:05:49                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.383 BV S   1.29482e5     4.26662 5.52452e5     Methane
  1.516 VB S   3.09386e4     2.31371 7.15830e4     Ethane

Totals :                              6.24035e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\019B0801.D
Sample Name: EM-R3-Bag-DCU *31 0711-64

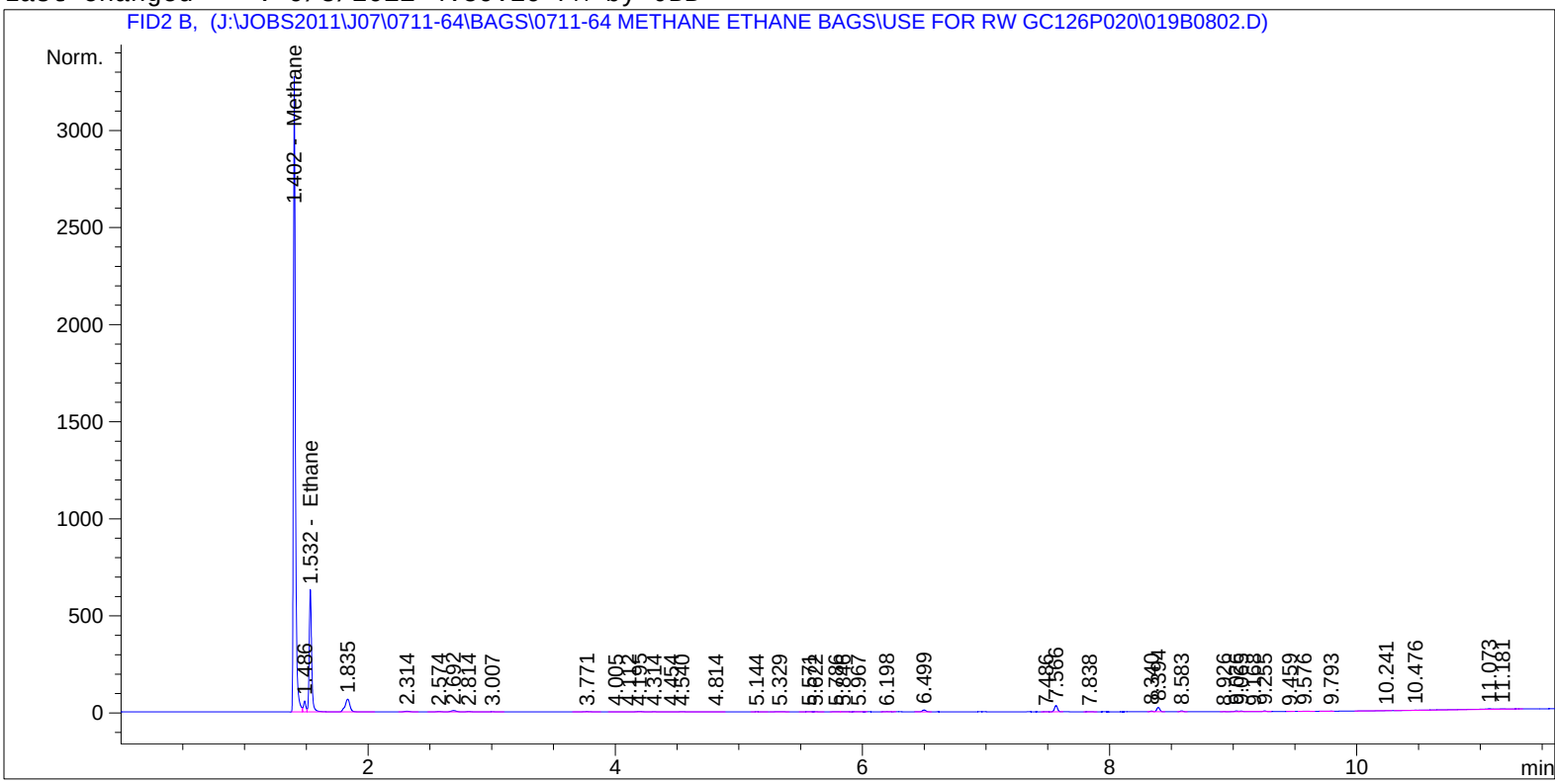
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 15:21:18                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.402 BV     3683.31982    4.26672 1.57157e4     Methane
  1.532 VV      858.28638    2.31410 1986.15854    Ethane

Totals :                              1.77019e4


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\019B0802.D
Sample Name: EM-R3-Bag-DCU *31 0711-64

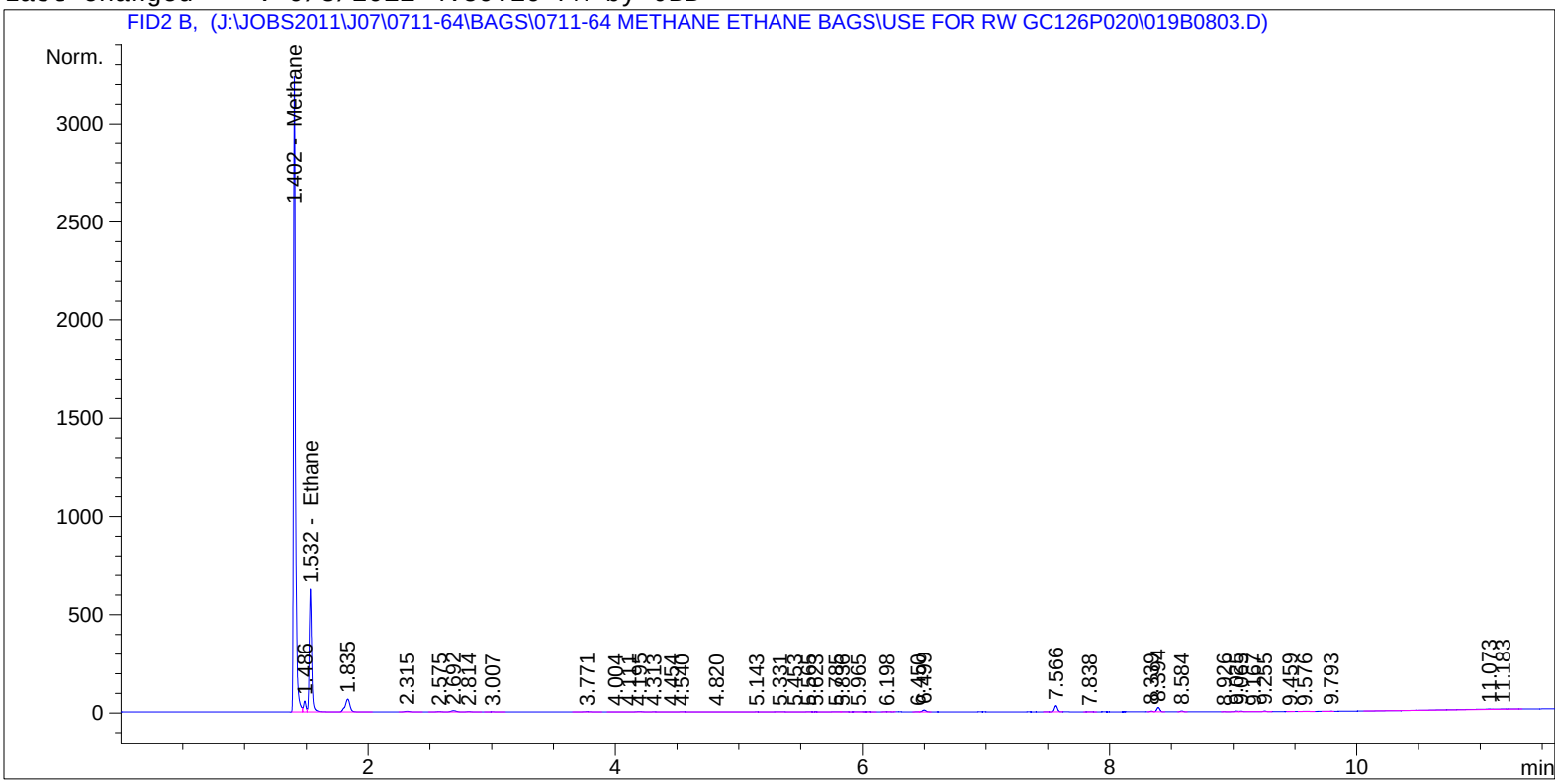
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 15:37:51                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.402 BV     3666.76172    4.26672 1.56450e4     Methane
  1.532 VV      857.21509    2.31410 1983.67989    Ethane

Totals :                              1.76287e4


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\019B0803.D
Sample Name: EM-R3-Bag-DCU *31 0711-64

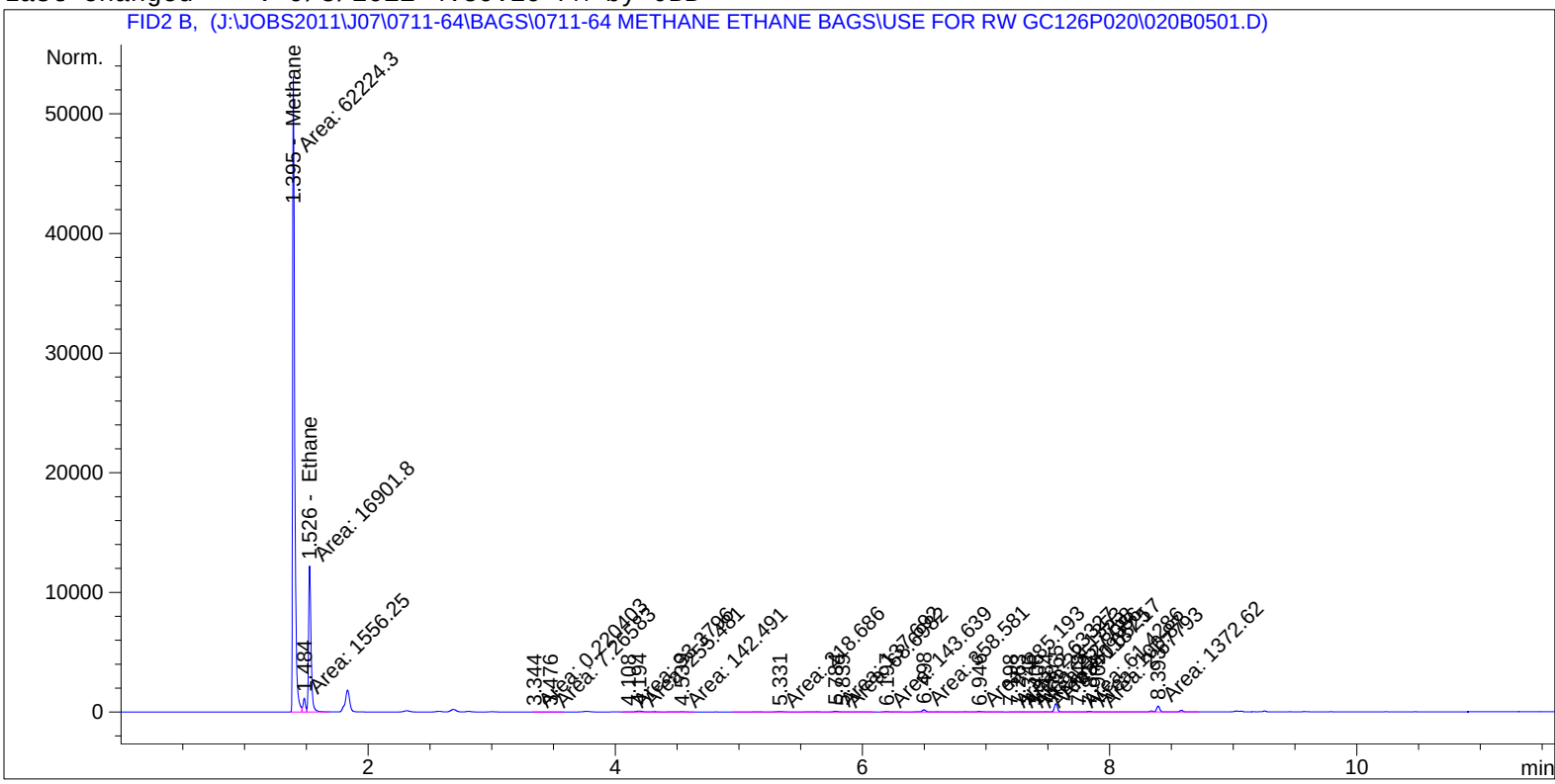
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 19
Injection Date  : 20-Jul-11, 15:54:26                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.402 BV     3623.89941    4.26672 1.54622e4     Methane
  1.532 VV      848.71332    2.31410 1964.00935    Ethane

Totals :                              1.74262e4


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\020B0501.D
Sample Name: EM-R1-Bag-DCU 0711-64

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   5
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 13:22:15                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```

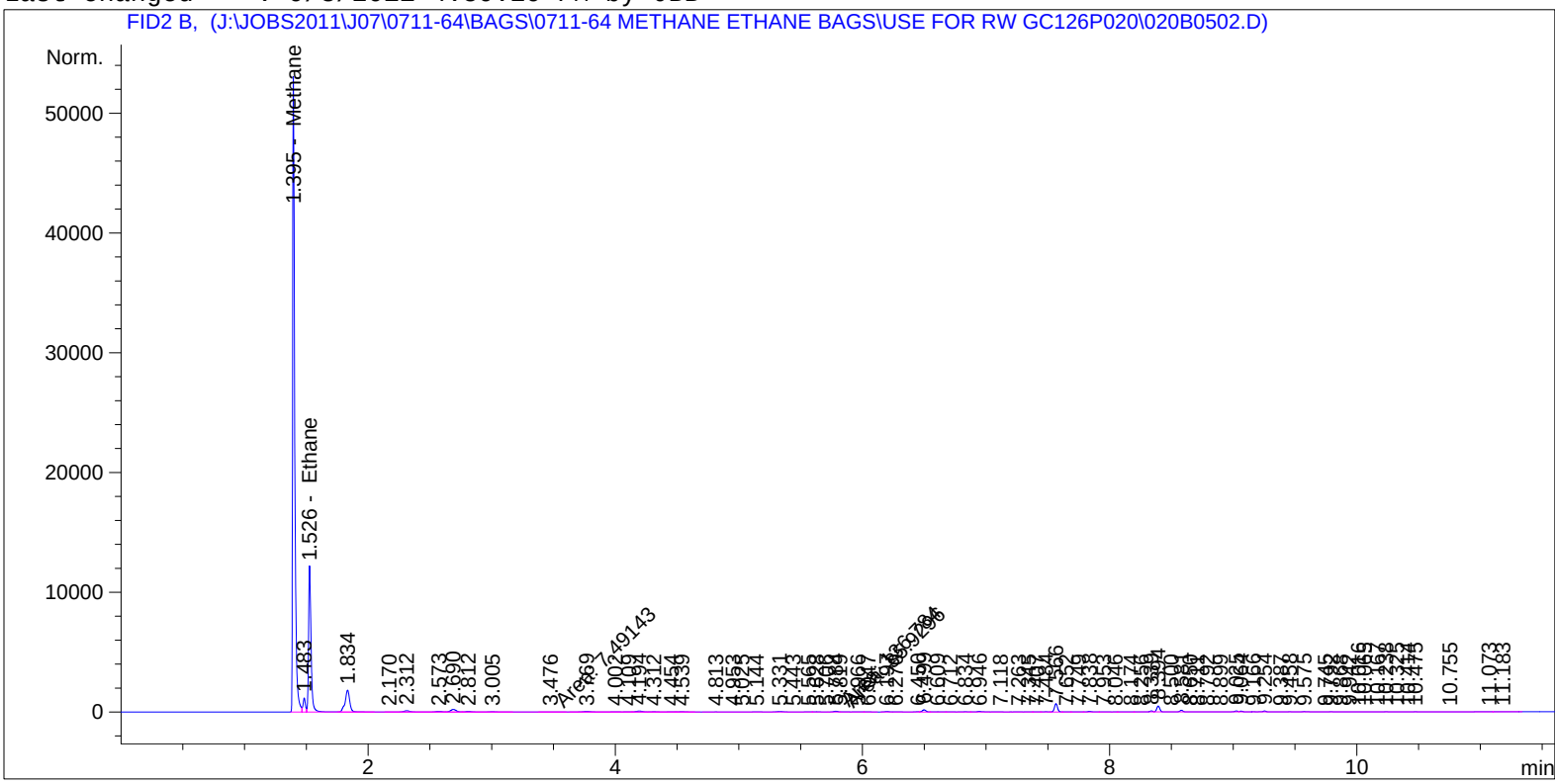



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.395 MF     6.22243e4     4.26663 2.65488e5     Methane
  1.526 FM     1.69018e4     2.31372 3.91061e4     Ethane

Totals :                            3.04594e5


==========================================================================
                         *** End of Report ***
```

Manual Int. "II" (MGM)

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\020B0502.D
Sample Name: EM-R1-Bag-DCU 0711-64

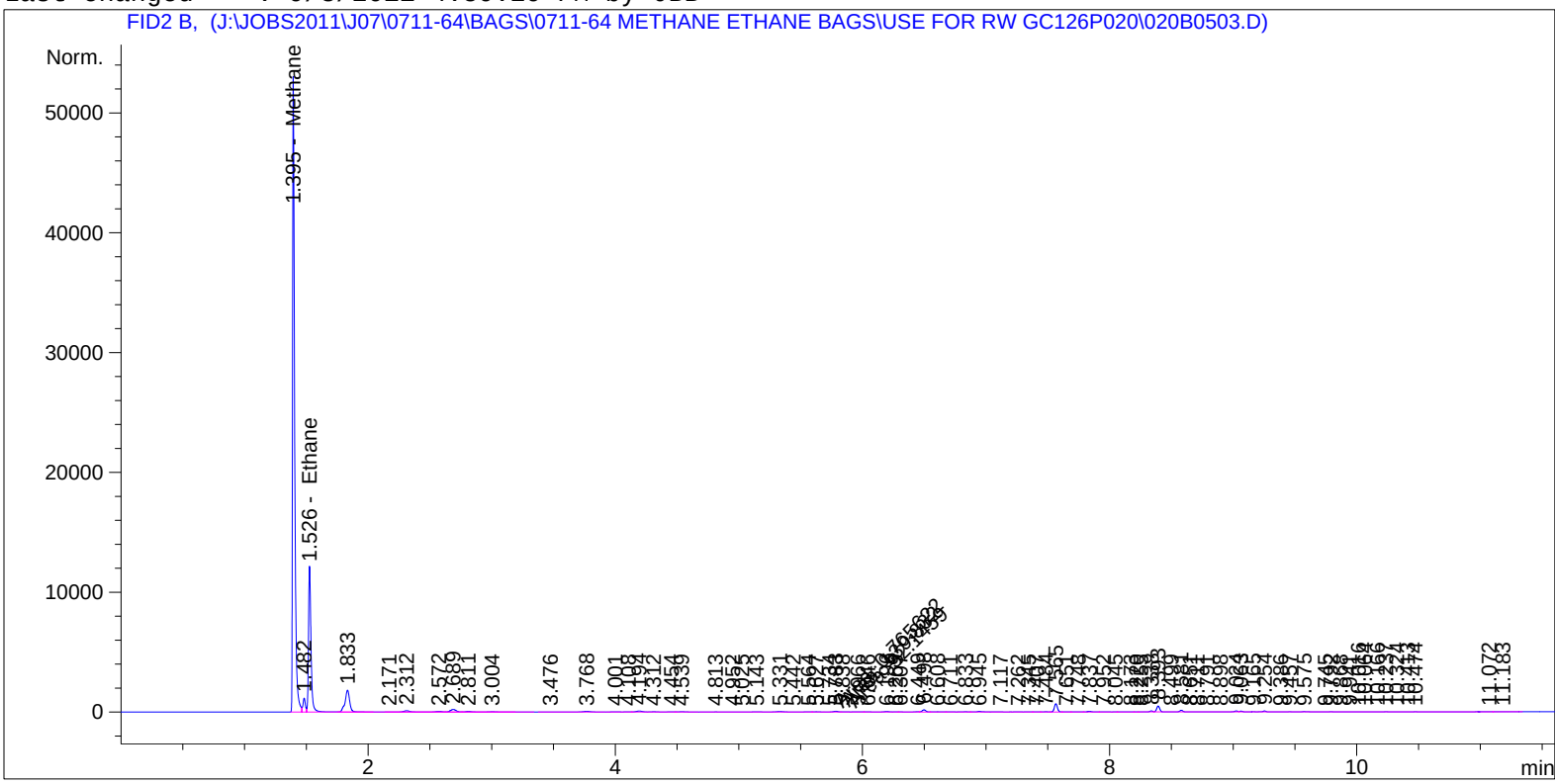
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   5
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 13:38:40                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.395 BV S   6.20809e4     4.26663 2.64876e5     Methane
  1.526 VB S   1.70023e4     2.31372 3.93385e4     Ethane

Totals :                              3.04215e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\020B0503.D
Sample Name: EM-R1-Bag-DCU 0711-64

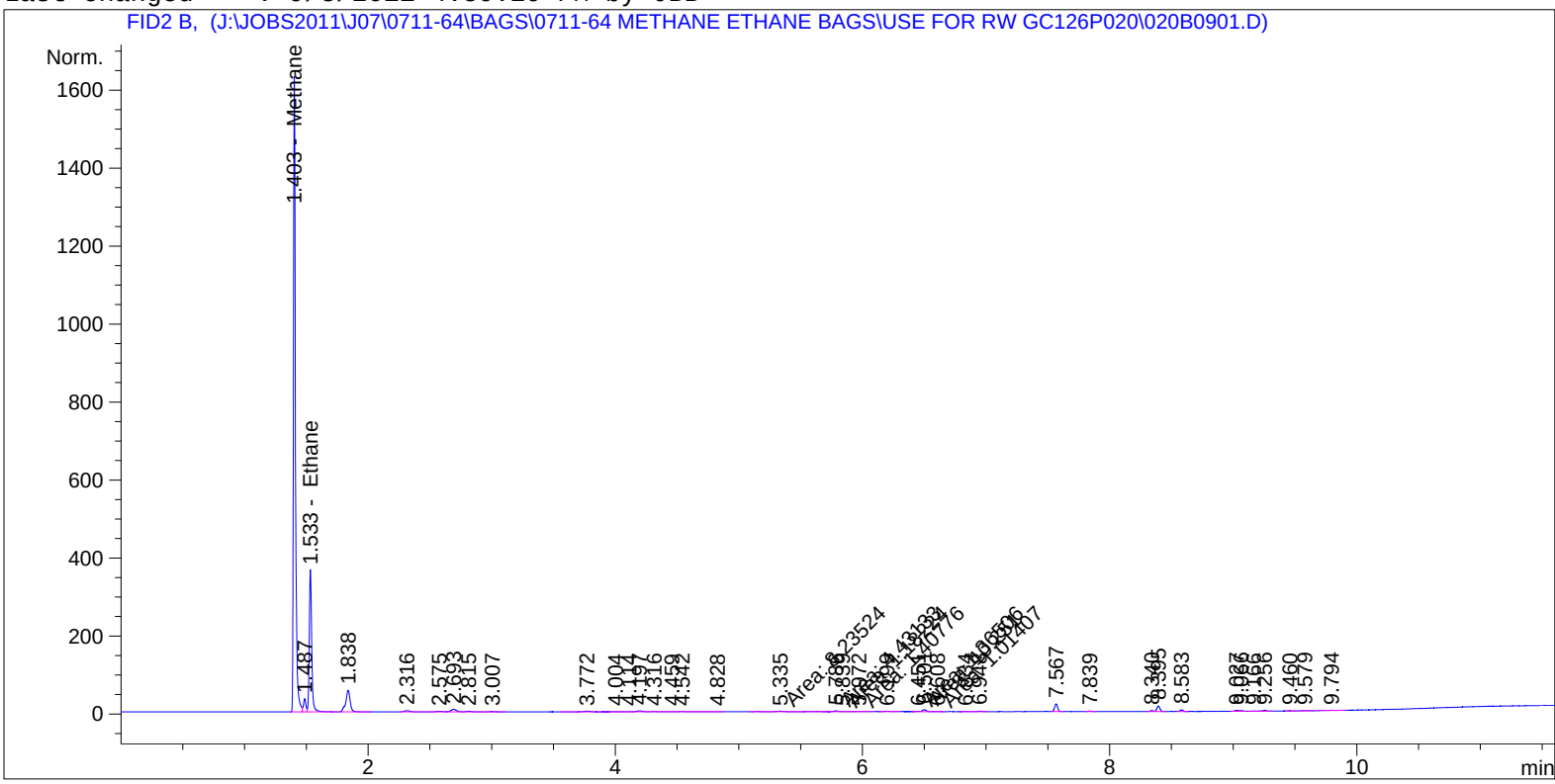
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   5
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 13:55:10                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.395 BV S   6.20035e4     4.26663 2.64546e5     Methane
  1.526 VB S   1.69884e4     2.31372 3.93064e4     Ethane

Totals :                              3.03852e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\020B0901.D
Sample Name: EM-R1-Bag-DCU *31 0711-64

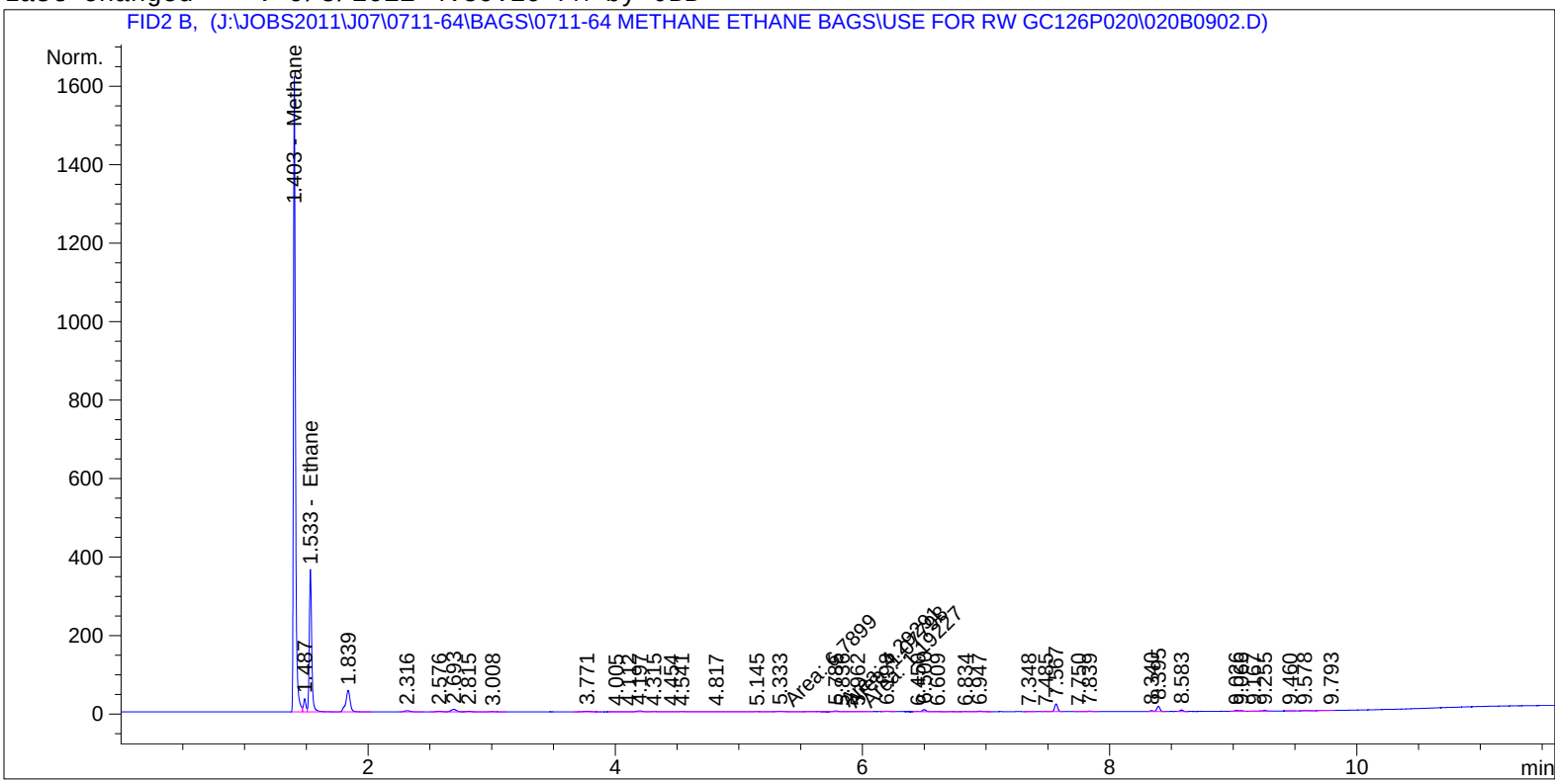
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   9
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 16:11:03                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.403 VV     1833.97437    4.26682 7825.24033    Methane
  1.533 VB      497.95187    2.31439 1152.45270    Ethane

Totals :                              8977.69302


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\020B0902.D
Sample Name: EM-R1-Bag-DCU *31 0711-64

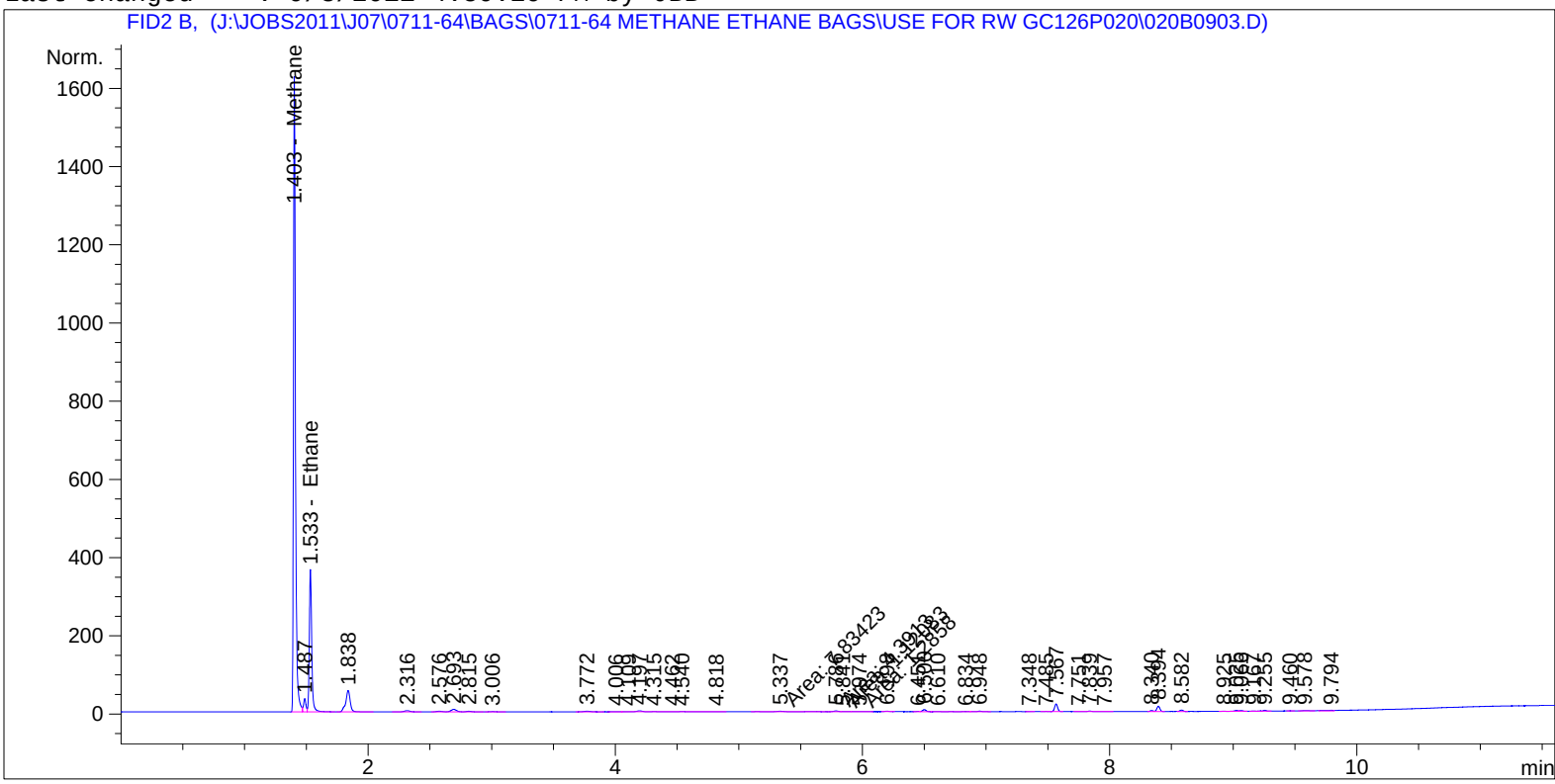
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   9
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 16:27:41                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.403 BV     1820.56982    4.26682 7768.04825    Methane
  1.533 VV      494.30536    2.31439 1144.01576    Ethane

Totals :                              8912.06400


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\020B0903.D
Sample Name: EM-R1-Bag-DCU *31 0711-64

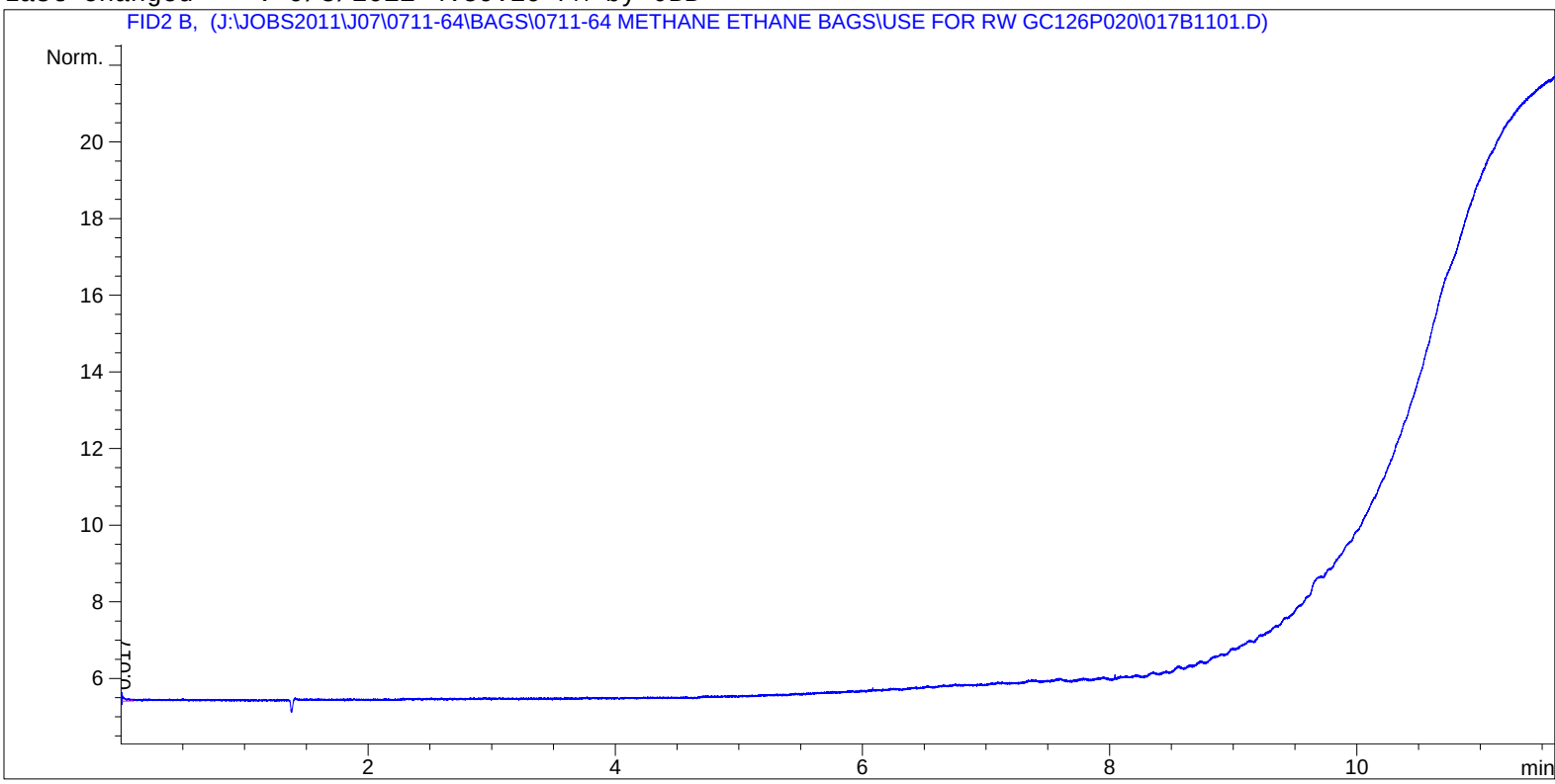
```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :   9
Acq. Instrument : Gummo online                  Location : Vial 20
Injection Date  : 20-Jul-11, 16:44:22                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.403 BV     1827.54028    4.26682 7797.78854    Methane
  1.533 VB      495.99716    2.31439 1147.93008    Ethane

Totals :                              8945.71863


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\017B1101.D
Sample Name: N2 Blank

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 17
Injection Date  : 20-Jul-11, 17:54:42                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```

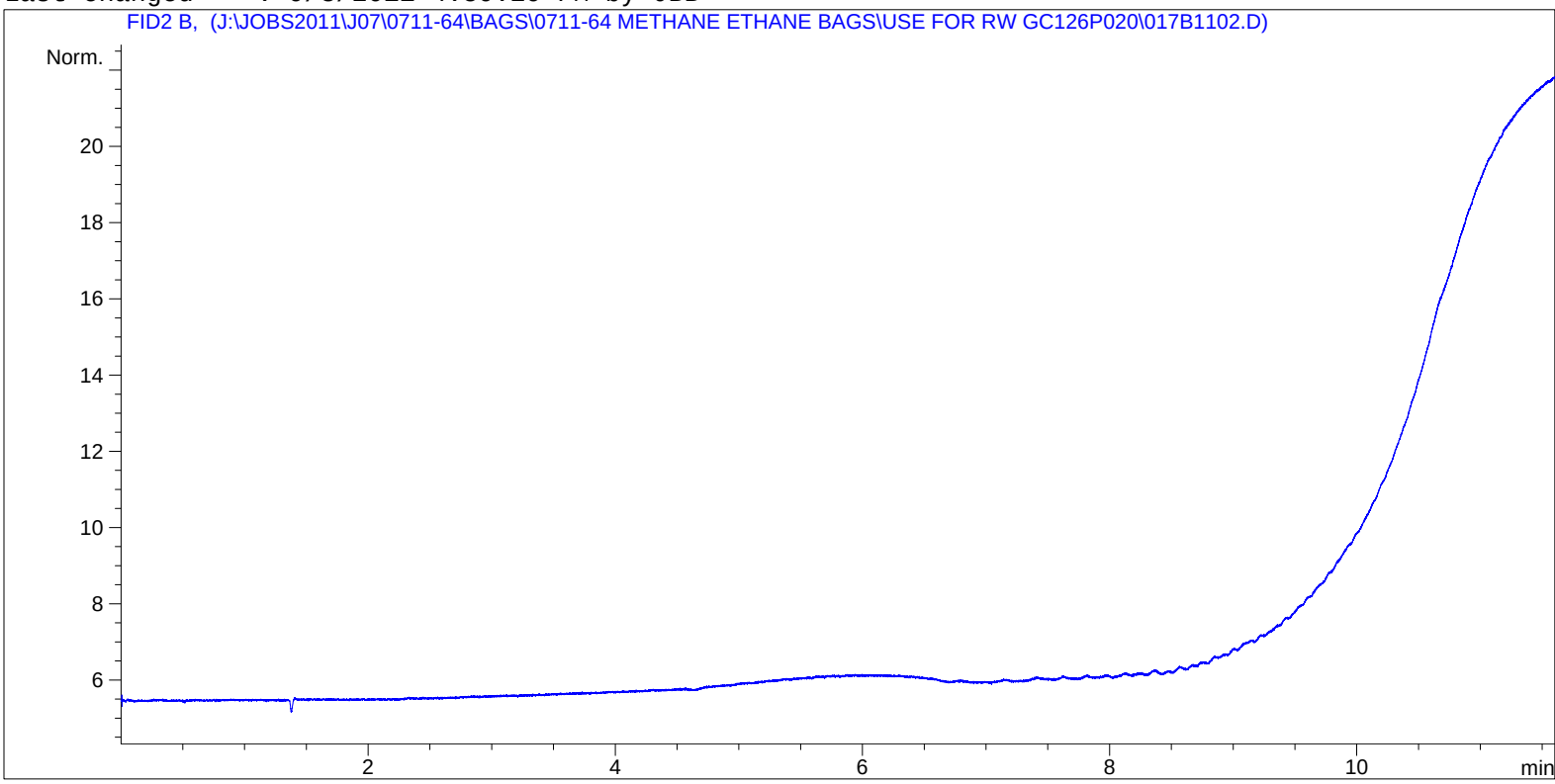



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400            -          -          -         Methane
  1.529            -          -          -         Ethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

EM-BTRF-001031

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\017B1102.D
Sample Name: N2 Blank

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 17
Injection Date  : 20-Jul-11, 18:10:39                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```

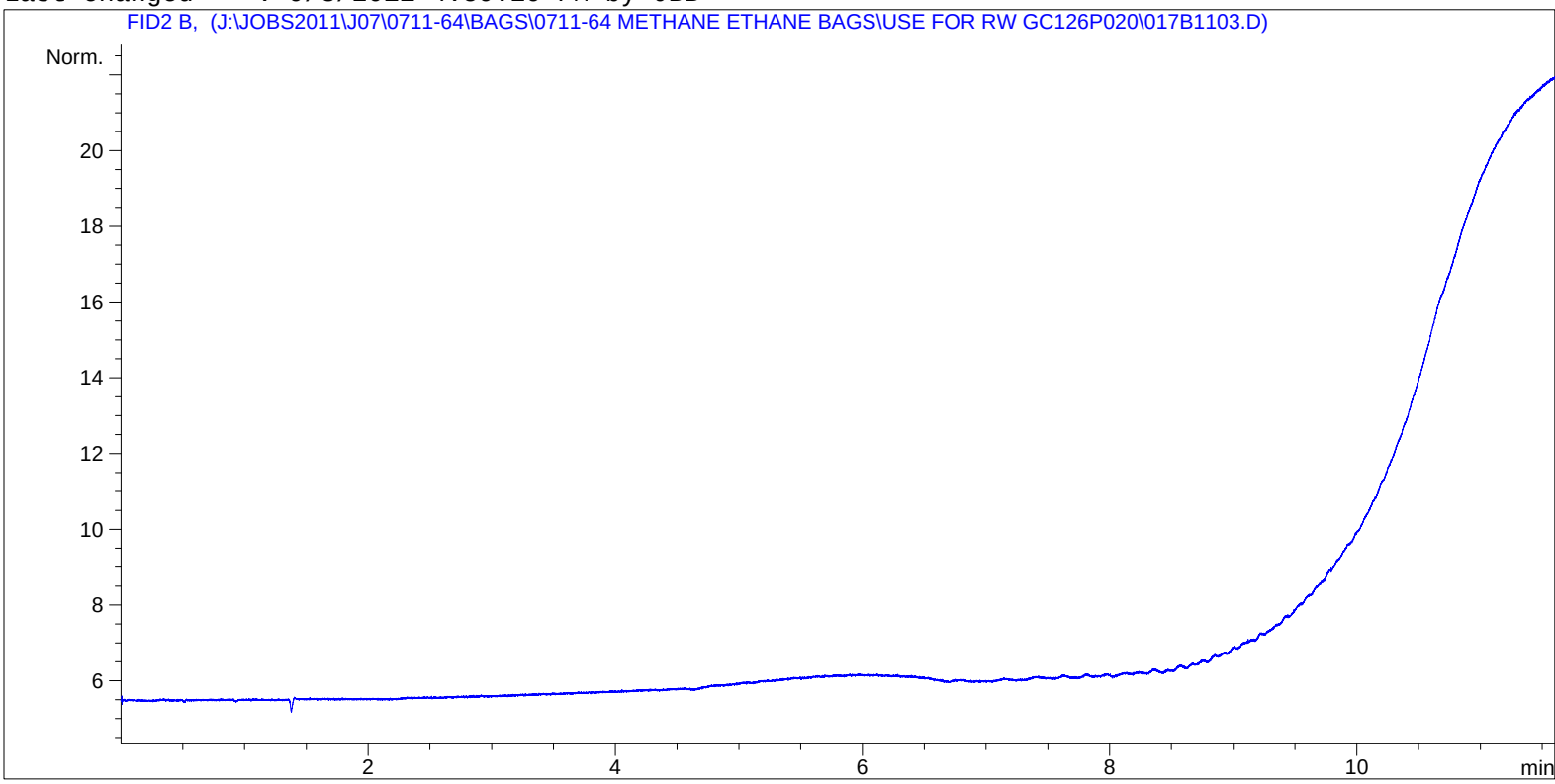



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400            -          -          -         Methane
  1.529            -          -          -         Ethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

EM-BTRF-001032

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\017B1103.D
Sample Name: N2 Blank

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  11
Acq. Instrument : Gummo online                  Location : Vial 17
Injection Date  : 20-Jul-11, 18:26:46                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```

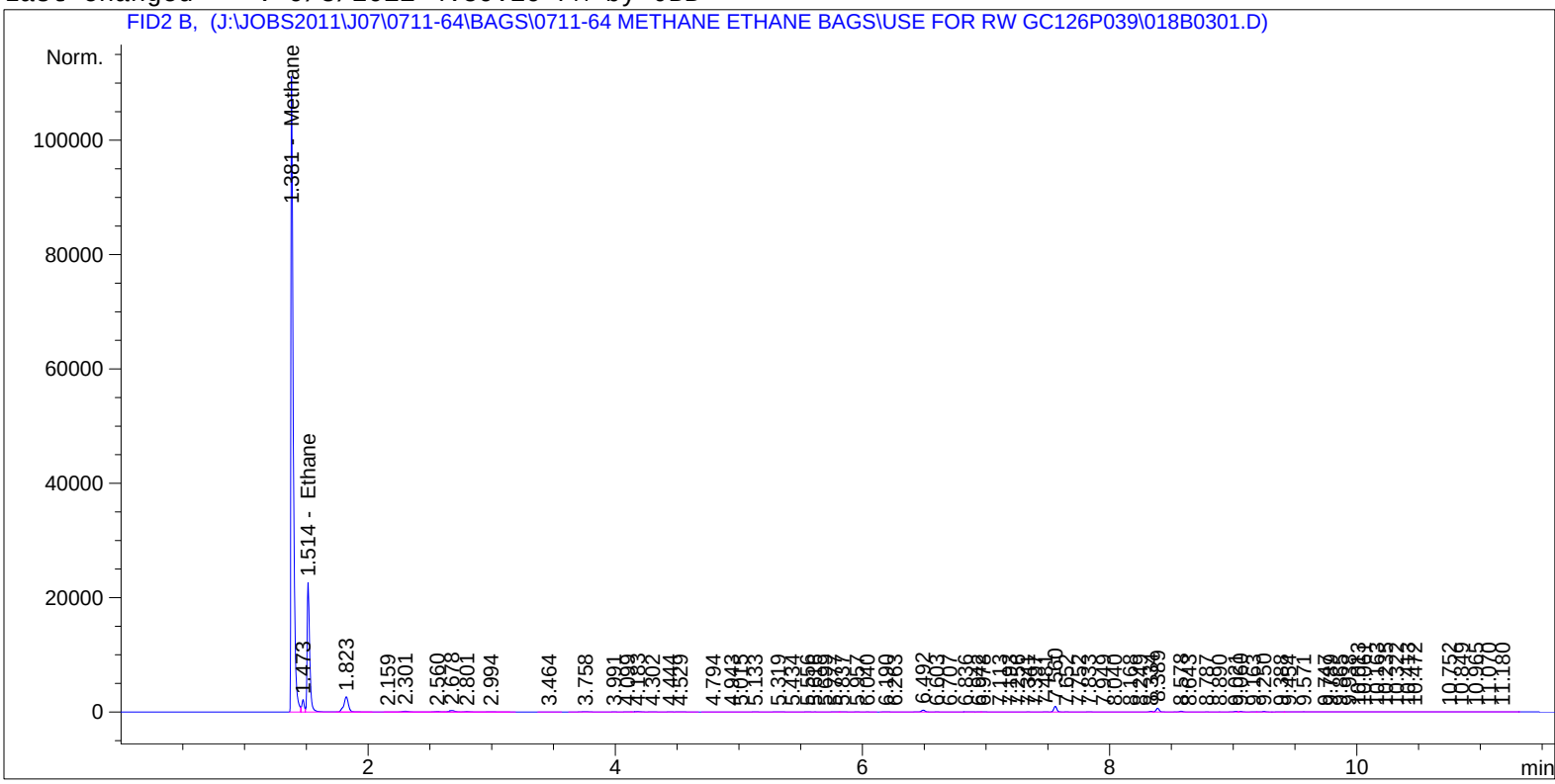



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400            -          -          -         Methane
  1.529            -          -          -         Ethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

EM-BTRF-001033

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P039\018B0301.D
Sample Name: EM-R3-Bag-DCU S&R 0711-64

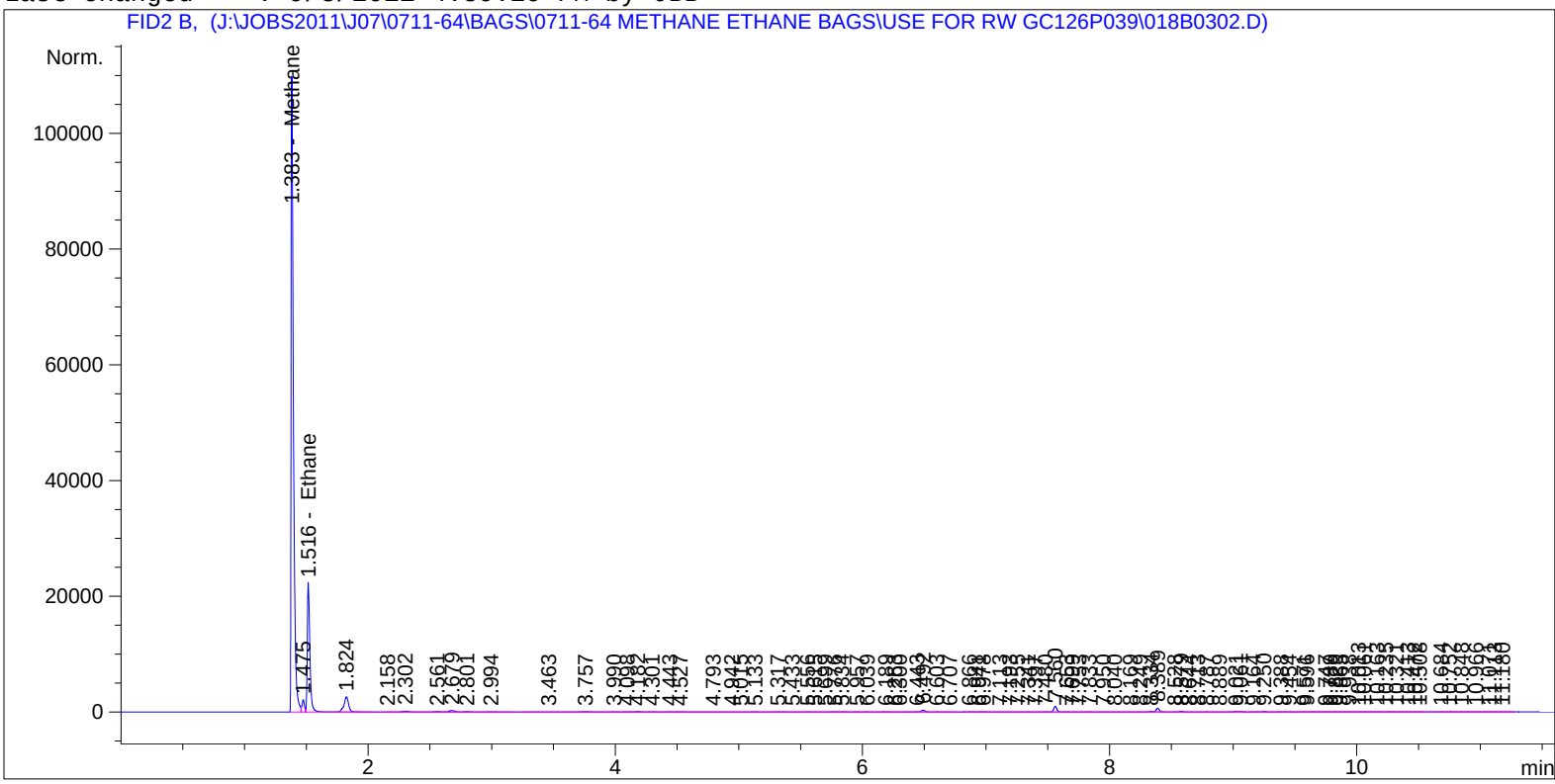
```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   3
Acq. Instrument : Gummo                             Location : Vial 18
Injection Date  : 09-Aug-11, 13:42:29                    Inj :   1
                                                  Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.381 BV S   1.45168e5     4.26662 6.19377e5     Methane
  1.514 VB S   3.26149e4     2.31371 7.54615e4     Ethane

Totals :                              6.94838e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P039\018B0302.D
Sample Name: EM-R3-Bag-DCU S&R 0711-64

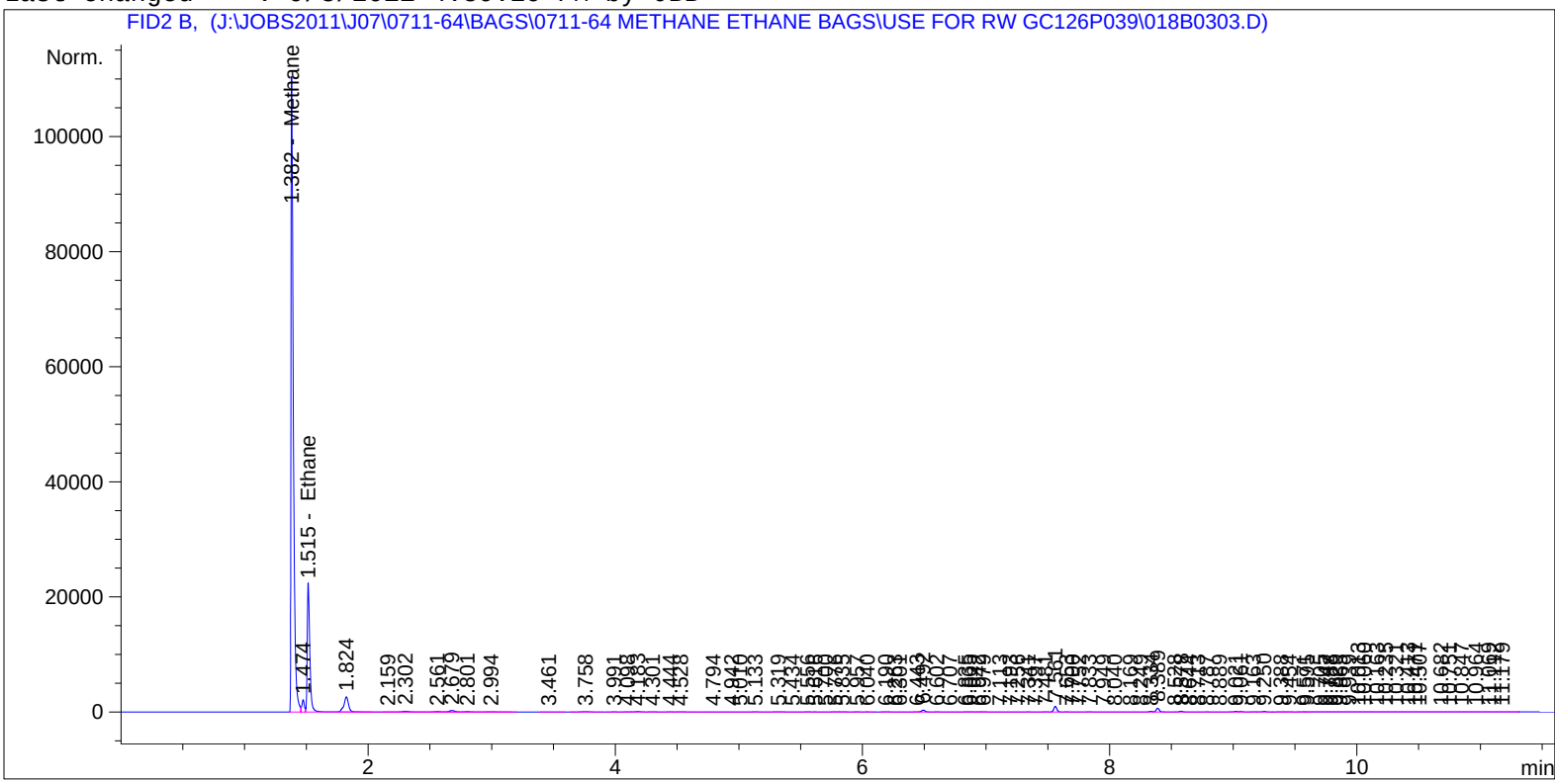
```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   3
Acq. Instrument : Gummo                             Location : Vial 18
Injection Date  : 09-Aug-11, 14:02:50                    Inj :   2
                                                  Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.383 BV S   1.43379e5     4.26662 6.11745e5     Methane
  1.516 VB S   2.89444e4     2.31371 6.69690e4     Ethane

Totals :                             6.78714e5


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P039\018B0303.D
Sample Name: EM-R3-Bag-DCU S&R 0711-64

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   3
Acq. Instrument : Gummo                             Location : Vial 18
Injection Date  : 09-Aug-11, 14:19:55                    Inj :   3
                                                  Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.382 BV S   1.43792e5     4.26662 6.13504e5     Methane
  1.515 VB S   3.23067e4     2.31371 7.47483e4     Ethane

Totals :                             6.88252e5


==========================================================================
                         *** End of Report ***
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 9/3/2011 3:23:47 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
1.400	2	21	2.00000	3.98962e-1	5.01300			Methane
		22	5.00000	1.02978	4.85540			
		23	10.00000	2.09188	4.78038			
		24	40.00000	8.87118	4.50898			
		25	100.00000	22.83160	4.37989			
		26	200.40000	46.39222	4.31969			
		27	1002.00000	237.63341	4.21658			
		28	4008.00000	983.14557	4.07671			
		29	1.00200e4	2558.34985	3.91659			
		30	3.45934e4	7887.14111	4.38606			
		31	8.00000e4	1.94662e4	4.10968			
1.529	2	21	2.00000	7.21778e-1	2.77094			Ethane
		22	5.00000	2.03240	2.46015			
		23	10.00000	4.02350	2.48540			
		24	40.00000	16.53412	2.41924			
		25	100.00000	42.40899	2.35799			
		26	199.80000	83.88464	2.38184			
		27	999.00000	430.43059	2.32093			
		28	3996.00000	1780.16764	2.24473			
		29	9990.00000	4596.90381	2.17320			
		32	1.18159e4	4903.06315	2.40990			
		33	2.15459e4	9210.62337	2.33924			
		34	4.96600e4	2.26605e4	2.19148			

Peak Sum Table

No Entries in table

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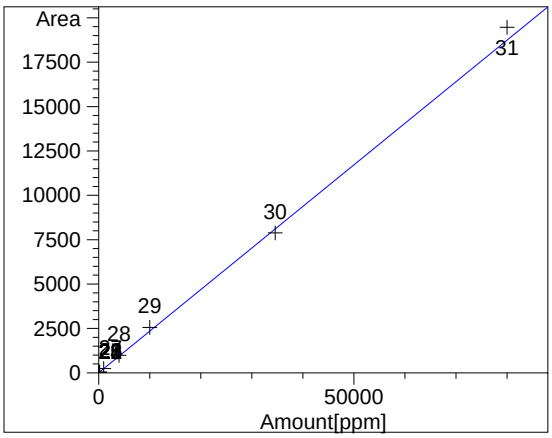
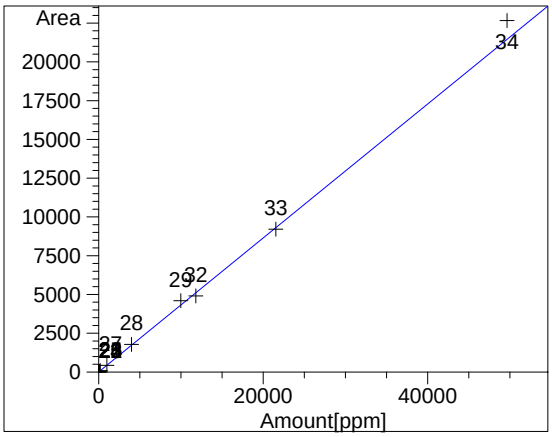
Calibration Curves

==========



Methane at exp. RT: 1.400
FID2 B,
Correlation: 0.99864
Residual Std. Dev.: 259.81107
Formula: y = mx + b
m: 2.34378e-1
b: -8.65628e-2
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 26 : 0.0001
Level 27 : 3.98405e-006
Level 28 : 2.49003e-007
Level 29 : 3.98405e-008
Level 30 : 3.34251e-009
Level 31 : 6.25e-010



Ethane at exp. RT: 1.529
FID2 B,
Correlation: 0.99930
Residual Std. Dev.: 395.71342
Formula: y = mx + b
m: 4.32208e-1
b: -1.47637e-1
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 26 : 0.0001
Level 27 : 4.00801e-006
Level 28 : 2.50501e-007
Level 29 : 4.00801e-008
Level 32 : 2.86501e-008
Level 33 : 8.61652e-009
Level 34 : 1.62198e-009

==========

Calibration Table

Calib. Data Modified : Tuesday, May 24, 2011 11:53:12 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
1.400	2	21	2.00000	3.98962e-1	5.01300			Methane
		22	5.00000	1.02978	4.85540			
		23	10.00000	2.09188	4.78038			
		24	40.00000	8.87118	4.50898			
		25	100.00000	22.83160	4.37989			
		26	200.40000	46.39222	4.31969			
		27	1002.00000	237.63341	4.21658			
		28	4008.00000	983.14557	4.07671			
		29	1.00200e4	2558.34985	3.91659			
		30	3.45934e4	7887.14111	4.38606			
		31	8.00000e4	1.94662e4	4.10968			
1.529	2	21	2.00000	7.21778e-1	2.77094			Ethane
		22	5.00000	2.03240	2.46015			
		23	10.00000	4.02350	2.48540			
		24	40.00000	16.53412	2.41924			
		25	100.00000	42.40899	2.35799			
		26	199.80000	83.88464	2.38184			
		27	999.00000	430.43059	2.32093			
		28	3996.00000	1780.16764	2.24473			
		29	9990.00000	4596.90381	2.17320			
		32	1.18159e4	4903.06315	2.40990			
		33	2.15459e4	9210.62337	2.33924			
		34	4.96600e4	2.26605e4	2.19148			
1.833	2	21	2.00000	1.13678	1.75936			Propane
		22	5.00000	3.01925	1.65604			
		23	10.00000	5.95178	1.68017			
		24	40.00000	24.73322	1.61726			

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref Grp	Name
		25	100.00000	63.56438	1.57321		
		26	200.40000	118.17853	1.69574		
		27	1002.00000	606.75444	1.65141		
		28	4008.00000	2511.35425	1.59595		
		29	1.00200e4	6501.52653	1.54118		
		32	1.18801e4	7429.15137	1.59912		
		33	2.16630e4	1.39583e4	1.55198		
		34	4.99300e4	3.43705e4	1.45270		
2.682	2	21	2.00000	1.62928	1.22754		Butane
		22	5.00000	4.10554	1.21787		
		23	10.00000	8.06021	1.24066		
		24	40.00000	32.81990	1.21877		
		25	100.00000	83.96061	1.19103		
		26	199.80000	160.45456	1.24521		
		27	999.00000	823.95734	1.21244		
		32	2336.53020	1942.42952	1.20289		
		28	3996.00000	3407.82340	1.17260		
		33	4260.58130	3652.07829	1.16662		
		34	9820.00000	9010.52995	1.08984		
		29	9990.00000	8816.17448	1.13314		
3.453	2	41	4.85400	1.14848	4.22646		Acetonitrile
		42	10.00000	2.74124	3.64798		
		43	25.00000	6.79330	3.68009		
		44	100.00000	28.03901	3.56646		
		45	250.00000	70.78018	3.53206		
3.590	2	51	2.53200	9.54595e-1	2.65243		Acrolein
		52	7.23400	2.54470	2.84277		
		53	25.32000	9.76465	2.59303		
		54	75.96000	30.16396	2.51824		
		55	253.20000	103.62418	2.44345		
3.699	2	1	2.02000	7.99075e-1	2.52792		Acetone
		2	10.10000	4.21137	2.39827		
		3	40.40000	17.21960	2.34616		
		4	101.00000	43.71104	2.31063		
4.106	2	81	4.89100	2.22230	2.20087		Acrylonitrile
		82	10.59411	4.93039	2.14874		
		83	37.49980	16.72011	2.24280		
		84	110.82000	52.89465	2.09511		
4.187	2	21	2.00000	1.98208	1.00904		Pentane
		22	5.00000	5.02836	9.94360e-1		
		23	10.00000	10.14911	9.85308e-1		
		24	40.00000	41.02728	9.74961e-1		
		25	100.00000	104.69009	9.55200e-1		
		32	476.35640	490.65569	9.70857e-1		
		33	868.61930	922.99506	9.41088e-1		
		34	2002.03700	2279.28931	8.78360e-1		
4.500	2	61	4.89300	9.99882e-1	4.89358		Methylene chloride
		62	10.08000	2.06168	4.88923		
		63	25.60000	5.01929	5.10032		
		64	100.80000	20.24871	4.97809		
		65	252.00000	51.75076	4.86949		
5.777	2	21	2.00000	2.44569	8.17765e-1		Hexane
		22	5.00000	6.37609	7.84180e-1		
		23	10.00000	12.69511	7.87705e-1		
		24	40.00000	49.81599	8.02955e-1		
		25	100.00000	126.02988	7.93463e-1		
		32	238.56280	291.92026	8.17219e-1		
		33	435.01100	548.82699	7.92620e-1		
		34	1002.63500	1355.70825	7.39565e-1		
6.494	2	71	5.00000	4.11262	1.21577		Benzene
		2	10.20000	12.44976	8.19293e-1		
		72	10.40000	12.48419	8.33053e-1		

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref Grp	Name
		73	26.00000	31.31090	8.30382e-1		
		3	40.80000	51.23030	7.96404e-1		
		4	102.00000	129.74548	7.86155e-1		
		74	104.00000	128.96110	8.06445e-1		
		75	260.00000	329.25161	7.89670e-1		
6.888	2	71	4.96150	1.88232	2.63585		Trichloroethene
		72	10.32000	4.41588	2.33702		
		73	25.80000	11.28674	2.28587		
		74	103.20000	46.81319	2.20451		
		75	258.00000	119.30682	2.16249		
6.940	2	21	2.00000	2.63961	7.57687e-1		Heptane
		22	5.00000	6.80529	7.34722e-1		
		23	10.00000	13.76124	7.26679e-1		
		24	40.00000	56.47528	7.08274e-1		
		25	100.00000	144.50900	6.91998e-1		
		32	117.55270	166.41250	7.06393e-1		
		33	214.35320	313.39470	6.83972e-1		
		34	494.05200	774.33451	6.38034e-1		
7.562	2	1	2.00000	2.51971	7.93743e-1		Toluene
		2	10.00000	14.23549	7.02470e-1		
		3	40.00000	58.91923	6.78896e-1		
		4	100.00000	148.28142	6.74393e-1		
7.835	2	81	4.81800	1.94391	2.47851		1,2 Dibromoethane
		82	10.43600	4.10404	2.54286		
		83	36.93900	13.42478	2.75155		
		84	110.82000	44.30151	2.50149		
7.978	2	71	4.94000	2.16272	2.28416		Tetrachloroethene
		72	10.28000	4.93587	2.08271		
		73	25.70000	12.60912	2.03821		
		74	102.80000	51.84781	1.98273		
		75	257.00000	131.18059	1.95913		

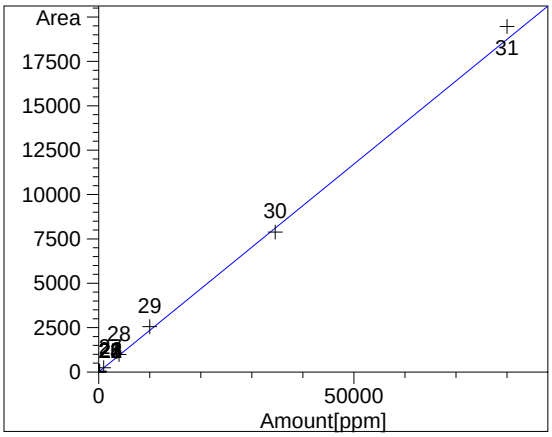
1 Warnings or Errors :

Warning : Cal. table open and changed while report was generated.

Peak Sum Table

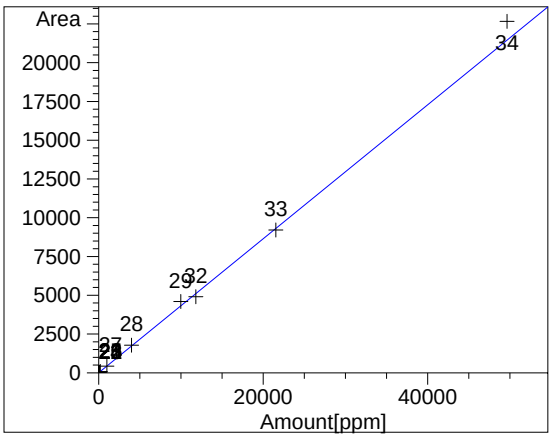
No Entries in table

Calibration Curves

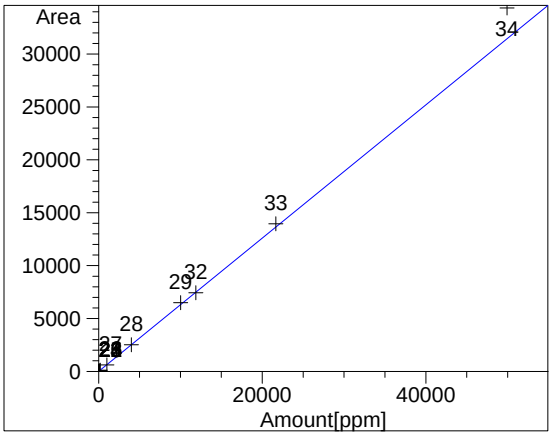


Methane at exp. RT: 1.400
FID2 B,
Correlation: 0.99864
Residual Std. Dev.: 259.81107
Formula: y = mx + b
m: 2.34378e-1
b: -8.65628e-2
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 26 : 0.0001
Level 27 : 3.98405e-006

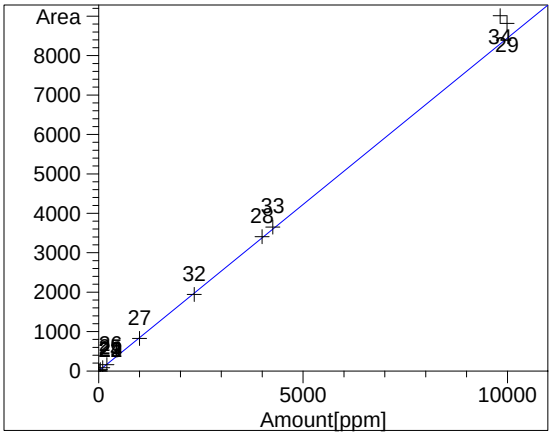
Level 28 : 2.49003e-007
Level 29 : 3.98405e-008
Level 30 : 3.34251e-009
Level 31 : 6.25e-010



Ethane at exp. RT: 1.529
FID2 B,
Correlation: 0.99930
Residual Std. Dev.: 395.71342
Formula: y = mx + b
m: 4.32208e-1
b: -1.47637e-1
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 26 : 0.0001
Level 27 : 4.00801e-006
Level 28 : 2.50501e-007
Level 29 : 4.00801e-008
Level 32 : 2.86501e-008
Level 33 : 8.61652e-009
Level 34 : 1.62198e-009

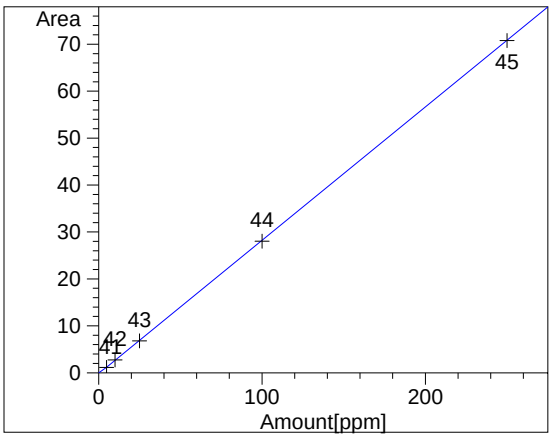


Propane at exp. RT: 1.833
FID2 B,
Correlation: 0.99912
Residual Std. Dev.: 925.65701
Formula: y = mx + b
m: 6.30207e-1
b: -1.33498e-1
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 26 : 0.0001
Level 27 : 3.98405e-006
Level 28 : 2.49003e-007
Level 29 : 3.98405e-008
Level 32 : 2.83411e-008
Level 33 : 8.52358e-009
Level 34 : 1.60449e-009

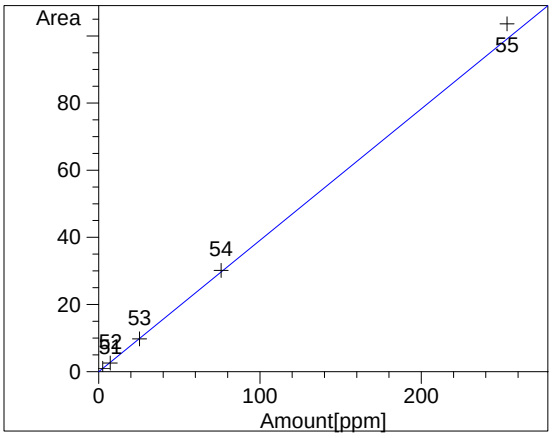


Butane at exp. RT: 2.682
FID2 B,
Correlation: 0.99921
Residual Std. Dev.: 255.46467
Formula: y = mx + b
m: 8.45041e-1
b: -8.23901e-2
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 26 : 0.0001
Level 27 : 4.00801e-006

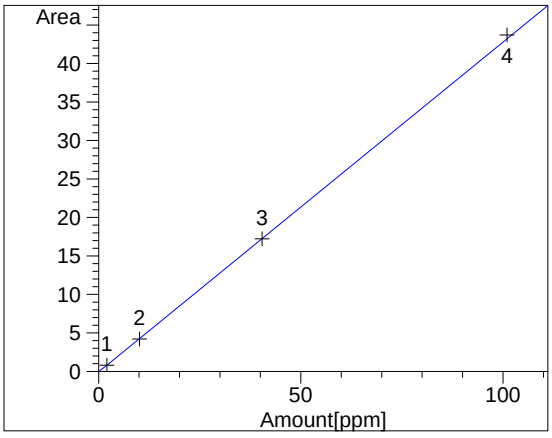
Level 32 : 7.32685e-007
Level 28 : 2.50501e-007
Level 33 : 2.20355e-007
Level 34 : 4.14798e-008
Level 29 : 4.00801e-008



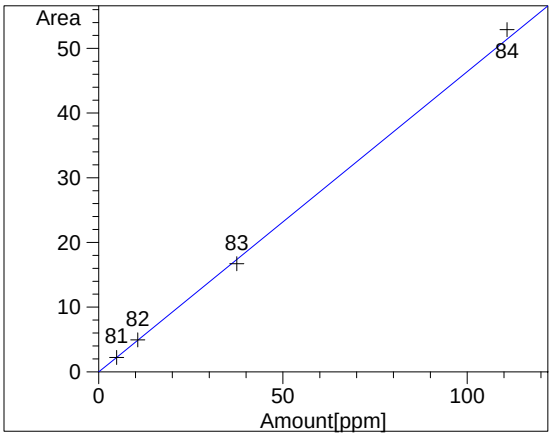
Acetonitrile at exp. RT: 3.453
FID2 B,
Correlation: 0.99963
Residual Std. Dev.: 0.15139
Formula: y = mx + b
m: 2.84372e-1
b: -2.10788e-1
x: Amount
y: Area
Calibration Level Weights:
Level 41 : 1
Level 42 : 0.235613
Level 43 : 0.037698
Level 44 : 0.002356
Level 45 : 0.000377



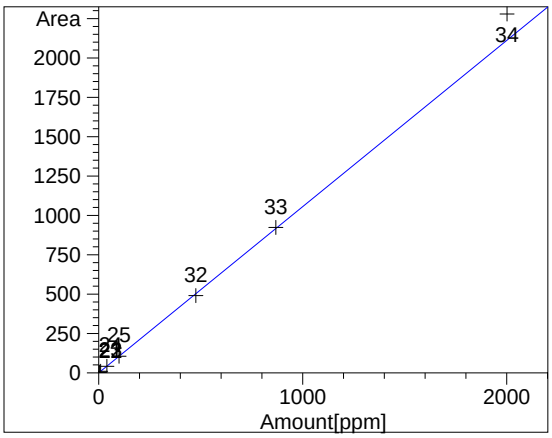
Acrolein at exp. RT: 3.590
FID2 B,
Correlation: 0.99845
Residual Std. Dev.: 2.60385
Formula: y = mx + b
m: 3.91825e-1
b: -6.49889e-2
x: Amount
y: Area
Calibration Level Weights:
Level 51 : 1
Level 52 : 0.12251
Level 53 : 0.01
Level 54 : 0.001111
Level 55 : 0.0001



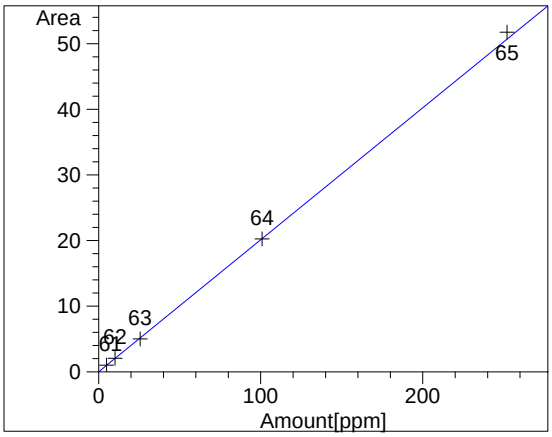
Acetone at exp. RT: 3.699
FID2 B,
Correlation: 0.99995
Residual Std. Dev.: 0.34276
Formula: y = mx + b
m: 4.28699e-1
b: -6.87717e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.04
Level 3 : 0.0025
Level 4 : 0.0004



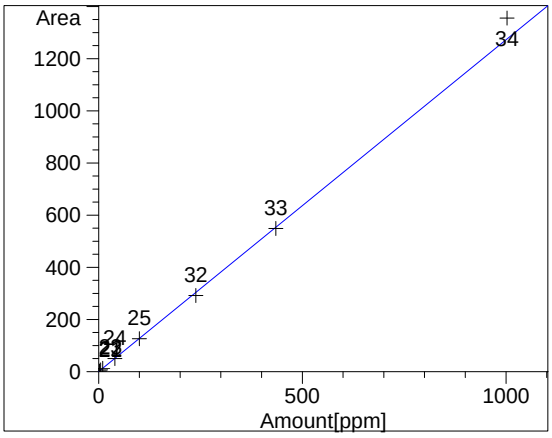
Acrylonitrile at exp. RT: 4.106
FID2 B,
Correlation: 0.99936
Residual Std. Dev.: 1.12437
Formula: y = mx + b
m: 4.64675e-1
b: -4.71326e-2
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.213141
Level 83 : 0.017011
Level 84 : 0.001948



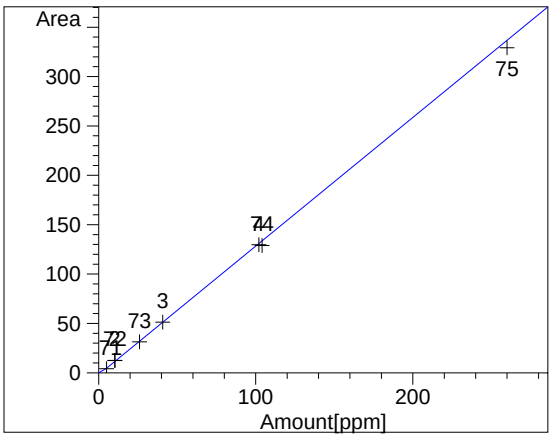
Pentane at exp. RT: 4.187
FID2 B,
Correlation: 0.99925
Residual Std. Dev.: 67.73745
Formula: y = mx + b
m: 1.05597
b: -1.57890e-1
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 32 : 0.000018
Level 33 : 5.30153e-006
Level 34 : 9.97966e-007



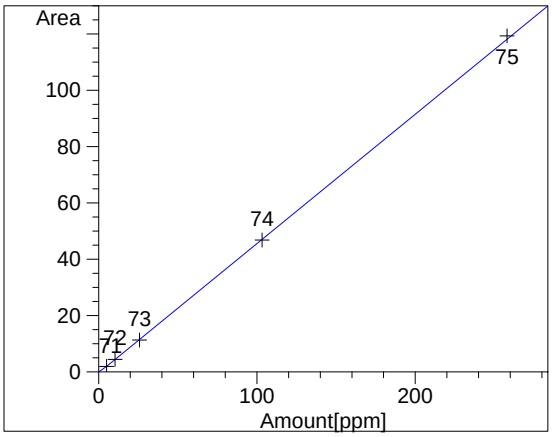
Methylene chloride at exp. RT: 4.500
FID2 B,
Correlation: 0.99975
Residual Std. Dev.: 0.60766
Formula: y = mx + b
m: 2.01169e-1
b: 1.49879e-2
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.235629
Level 63 : 0.036532
Level 64 : 0.002356
Level 65 : 0.000377



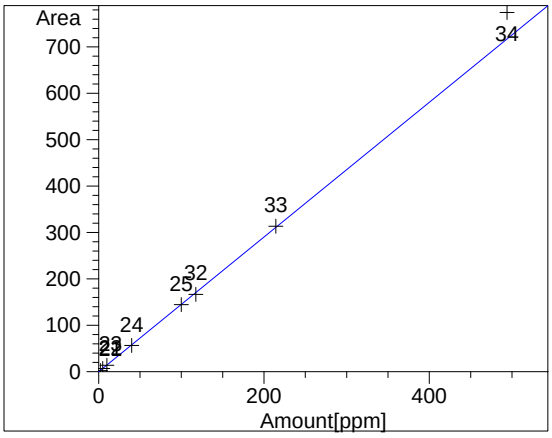
Hexane at exp. RT: 5.777
FID2 B,
Correlation: 0.99945
Residual Std. Dev.: 32.88497
Formula: y = mx + b
m: 1.27290
b: -8.60110e-2
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 32 : 0.00007
Level 33 : 0.000021
Level 34 : 3.979e-006



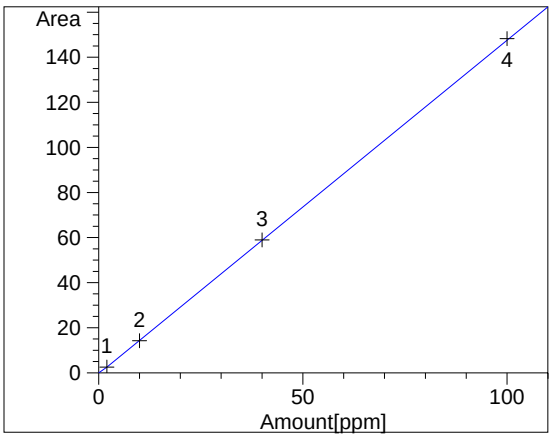
Benzene at exp. RT: 6.494
FID2 B,
Correlation: 0.99787
Residual Std. Dev.: 3.73339
Formula: y = mx + b
m: 1.30326
b: -1.96559
x: Amount
y: Area
Calibration Level Weights:
Level 71 : 1
Level 2 : 0.240292
Level 72 : 0.231139
Level 73 : 0.036982
Level 3 : 0.015018
Level 4 : 0.002403
Level 74 : 0.002311
Level 75 : 0.00037



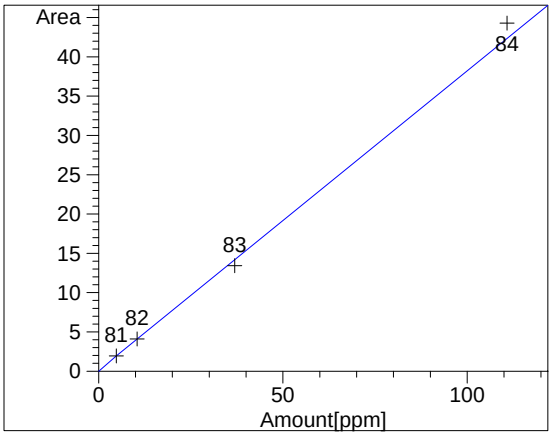
Trichloroethene at exp. RT: 6.888
FID2 B,
Correlation: 0.99990
Residual Std. Dev.: 0.68509
Formula: y = mx + b
m: 4.59476e-1
b: -3.89374e-1
x: Amount
y: Area
Calibration Level Weights:
Level 71 : 1
Level 72 : 0.231135
Level 73 : 0.036982
Level 74 : 0.002311
Level 75 : 0.00037



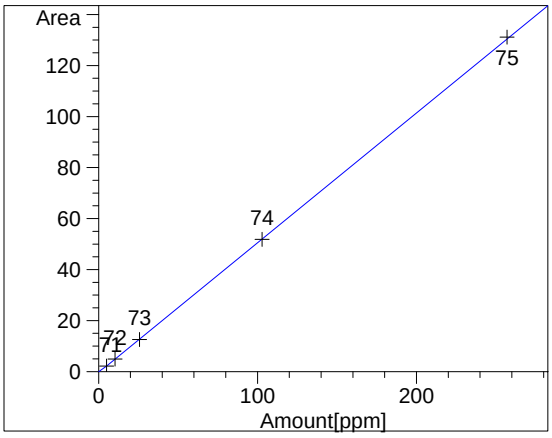
Heptane at exp. RT: 6.940
FID2 B,
Correlation: 0.99919
Residual Std. Dev.: 23.26515
Formula: y = mx + b
m: 1.45302
b: -3.11958e-1
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.16
Level 23 : 0.04
Level 24 : 0.0025
Level 25 : 0.0004
Level 32 : 0.000289
Level 33 : 0.000087
Level 34 : 0.000016



Toluene at exp. RT: 7.562
FID2 B,
Correlation: 0.99998
Residual Std. Dev.: 0.49264
Formula: y = mx + b
m: 1.48057
b: -4.45778e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.04
Level 3 : 0.0025
Level 4 : 0.0004



1,2 Dibromoethane at exp. RT: 7.835
FID2 B,
Correlation: 0.99861
Residual Std. Dev.: 1.47669
Formula: y = mx + b
m: 3.81294e-1
b: 1.02346e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.21314
Level 83 : 0.017012
Level 84 : 0.00189

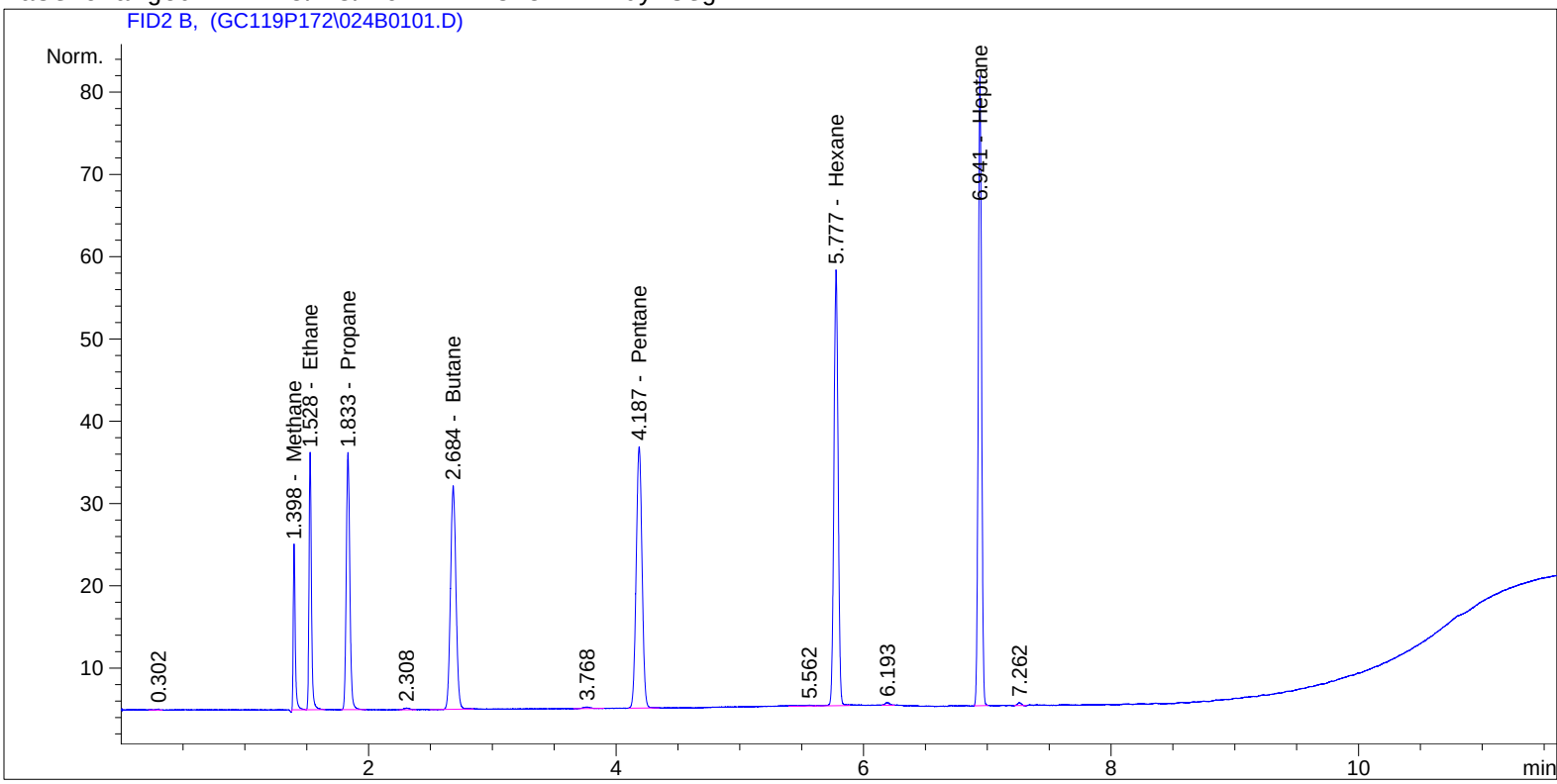


Tetrachloroethene at exp. RT: 7.978
FID2 B,
Correlation: 0.99996
Residual Std. Dev.: 0.42770
Formula: y = mx + b
m: 5.08986e-1
b: -3.45152e-1
x: Amount
y: Area
Calibration Level Weights:
Level 71 : 1
Level 72 : 0.230923
Level 73 : 0.036948
Level 74 : 0.002309
Level 75 : 0.000369

==========

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0101.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 09:56:18               Inj :   1
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.398	BV	22.59706	4.26682	96.41751		Methane
1.528	VB	41.98631	2.33326	97.96495		Ethane
1.833	BB	63.04581	1.59872	100.79231		Propane
2.684	VB	83.78437	1.19090	99.77854		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.187	BB	104.10626	9.62037e-1	100.15408		Pentane
4.500		-	-	-		Methylene chloride
5.777	VB	125.70641	7.97258e-1	100.22040		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001050

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0101.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.941	BB	143.57845	6.99635e-1	100.45249		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 695.78028

1 Warnings or Errors :

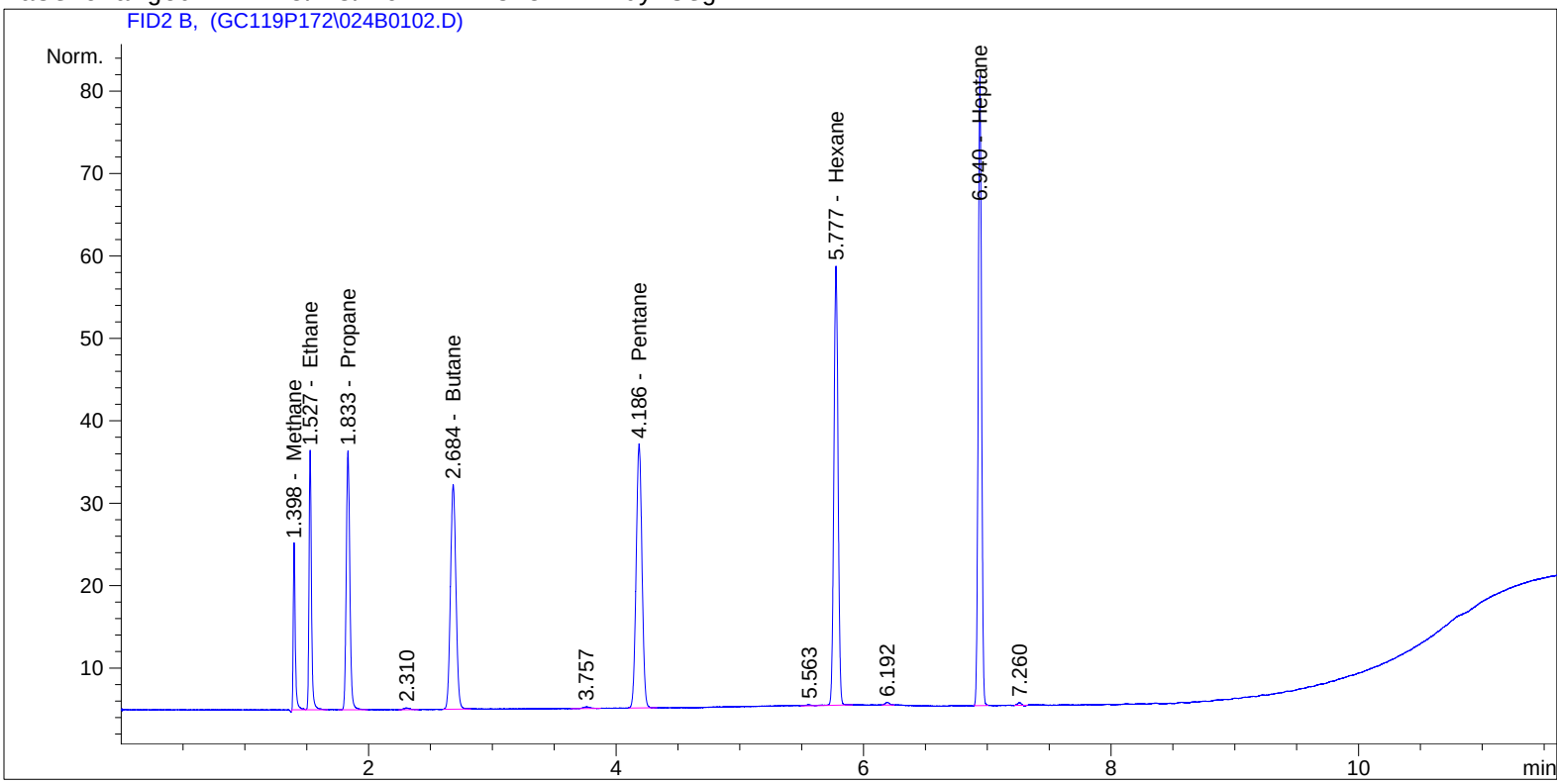
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0102.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 10:17:02                Inj :   2
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.398	BV	22.89229	4.26660	97.67224		Methane
1.527	VB	42.51875	2.33316	99.20311		Ethane
1.833	PB	63.63161	1.59869	101.72700		Propane
2.684	BB	83.89172	1.19090	99.90628		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186	BB	104.52962	9.62033e-1	100.56092		Pentane
4.500		-	-	-		Methylene chloride
5.777	VB	125.91967	7.97257e-1	100.39038		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001052

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0102.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	144.36974	6.99628e-1	101.00512		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 700.46506

1 Warnings or Errors :

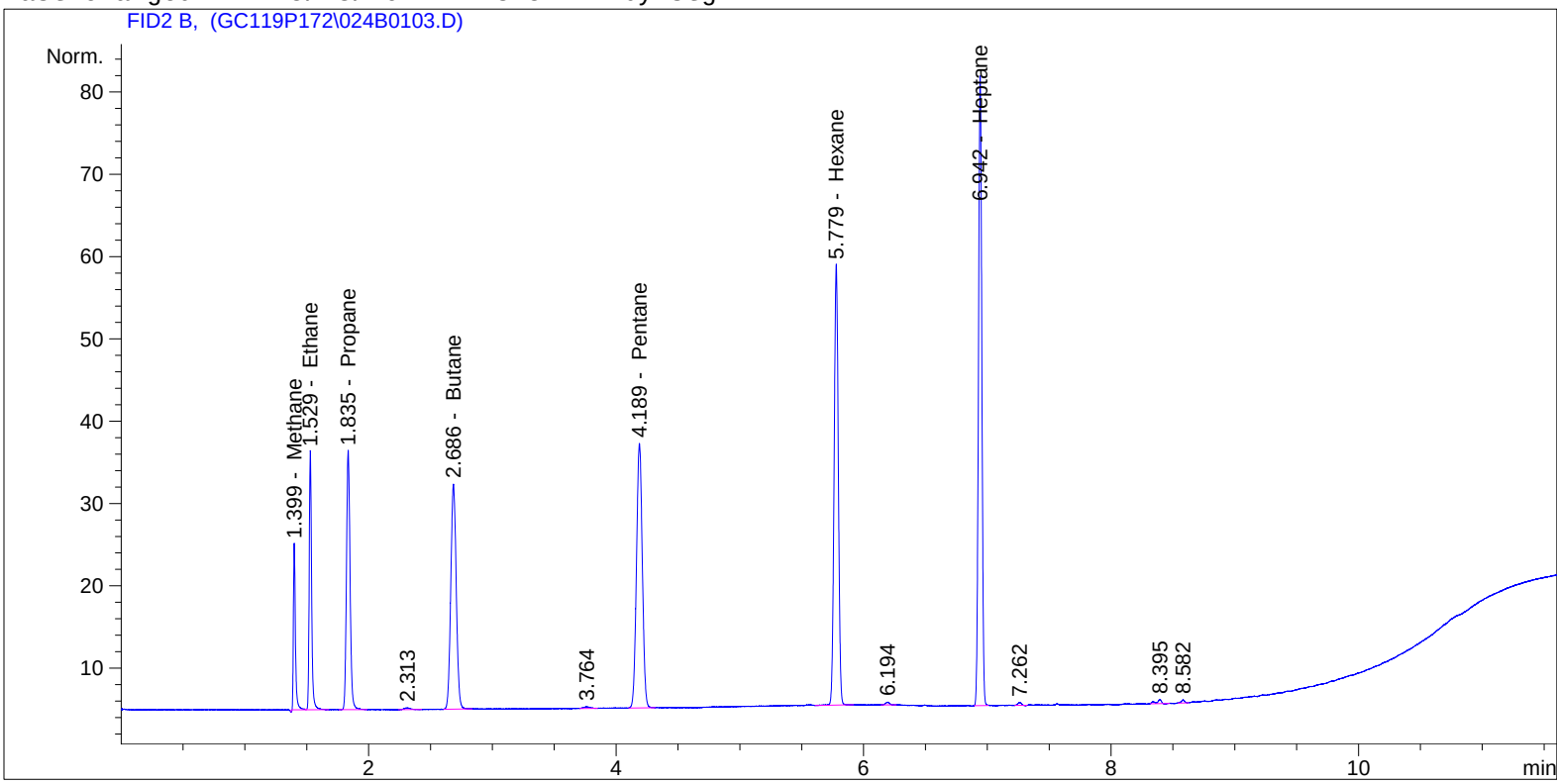
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0103.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   1
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 10:37:37                Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.399 VV       22.80276    4.26666   97.29172    Methane
  1.529 VB       42.44446    2.33317   99.03035    Ethane
  1.835 VB       63.64005    1.59869  101.74045    Propane
  2.686 BB       84.12889    1.19089  100.18849    Butane
  3.453             -           -         -        Acetonitrile
  3.590             -           -         -        Acrolein
  3.699             -           -         -        Acetone
  4.106             -           -         -        Acrylonitrile
  4.189 BB      104.92593 9.62029e-1  100.94176    Pentane
  4.500             -           -         -        Methylene chloride
  5.779 VB      126.24009 7.97257e-1  100.64577    Hexane
  6.496             -           -         -        Benzene
```

EM-BTRF-001054

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0103.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	144.78664	6.99625e-1	101.29629		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 701.13482

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

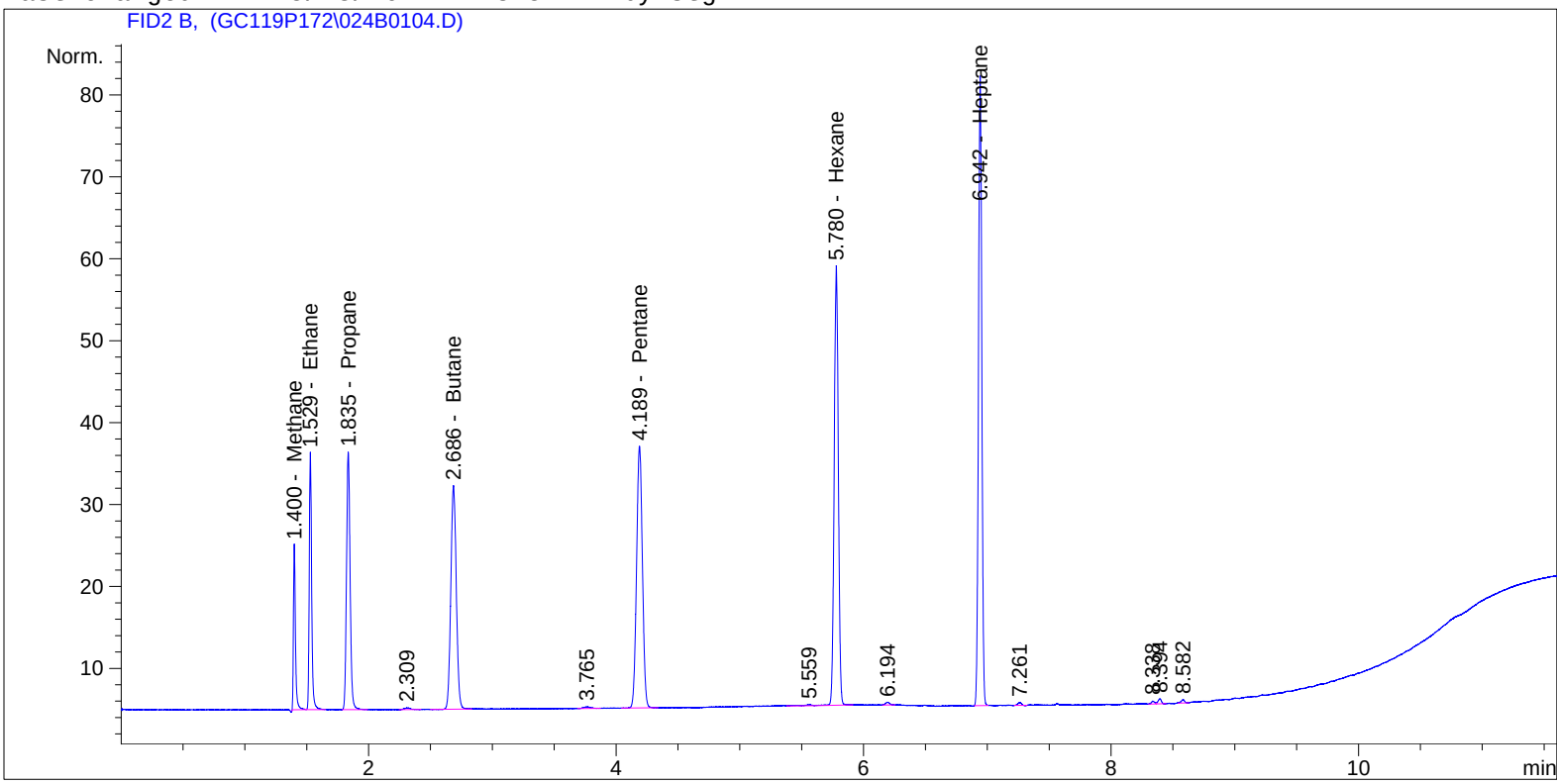
==========

*** End of Report ***

EM-BTRF-001055

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0104.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

```
================================================================================
Acq. Operator   : stg                              Seq. Line :   1
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 10:58:17                    Inj :   4
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
================================================================================
                        External Standard Report
================================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.400	BV	22.79976	4.26667	97.27898		Methane
1.529	VB	42.26377	2.33321	98.61017		Ethane
1.835	PP	63.42147	1.59870	101.39170		Propane
2.686	BB	83.86121	1.19090	99.86997		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.189	BB	104.61473	9.62032e-1	100.64271		Pentane
4.500		-	-	-		Methylene chloride
5.780	VB	125.92989	7.97257e-1	100.39853		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001056

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0104.D
Sample Name: gc119p172 #C5 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	144.37062	6.99628e-1	101.00574		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 699.19779

1 Warnings or Errors :

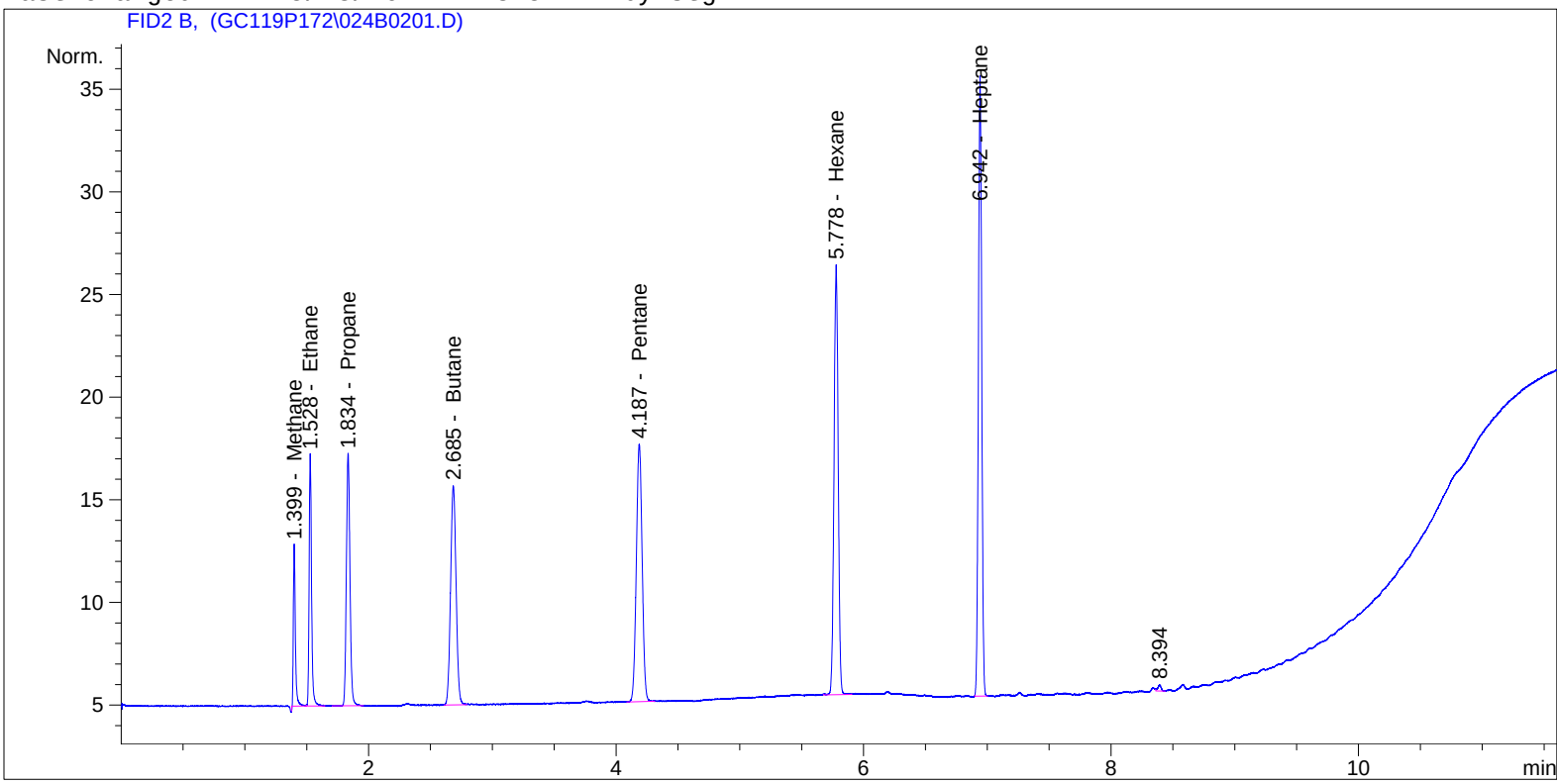
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0201.D
Sample Name: gc119p172 #C4 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 11:18:42                Inj :   1
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV	8.89300	4.29264	38.17450		Methane
1.528	VB	16.62342	2.34522	38.98558		Ethane
1.834	VB	24.77215	1.60356	39.72350		Propane
2.685	BV	32.86285	1.19242	39.18648		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.187	BB	40.99690	9.63677e-1	39.50775		Pentane
4.500		-	-	-		Methylene chloride
5.778	BB	49.51658	7.97605e-1	39.49469		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001058

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0201.D
Sample Name: gc119p172 #C4 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	56.51416	7.01537e-1	39.64678		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 274.71928

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

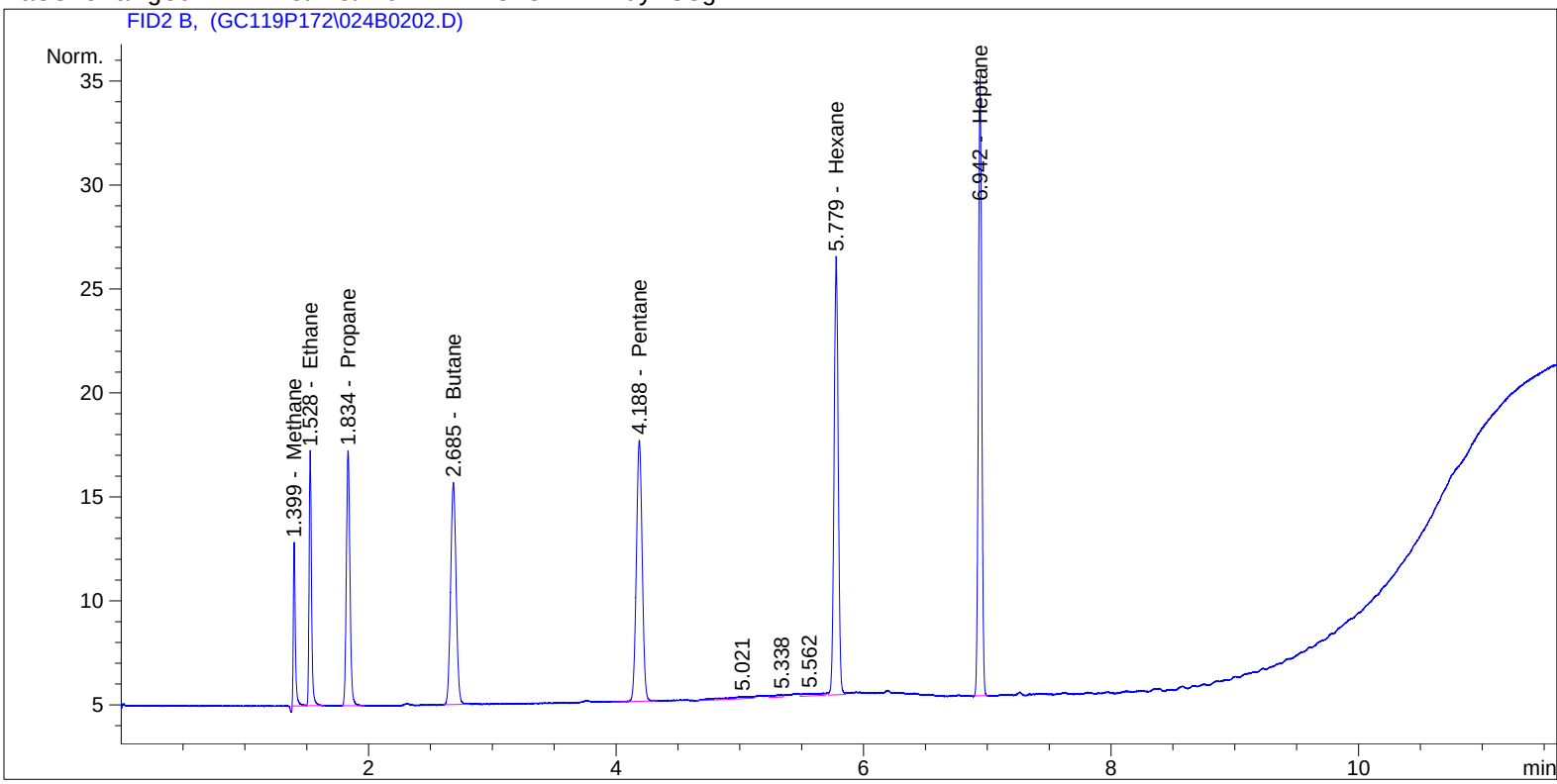
==========

*** End of Report ***

EM-BTRF-001059

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0202.D
Sample Name: gc119p172 #C4 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 11:37:41                Inj :   2
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BB	8.85325	4.29284	38.00556		Methane
1.528	PB	16.48388	2.34539	38.66110		Ethane
1.834	BB	24.78247	1.60355	39.73997		Propane
2.685	BB	32.77050	1.19243	39.07659		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.188	VB	41.15207	9.63666e-1	39.65686		Pentane
4.500		-	-	-		Methylene chloride
5.779	BV	49.72079	7.97603e-1	39.65745		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001060

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0202.D
Sample Name: gc119p172 #C4 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	56.39732	7.01544e-1	39.56518		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 274.36272

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

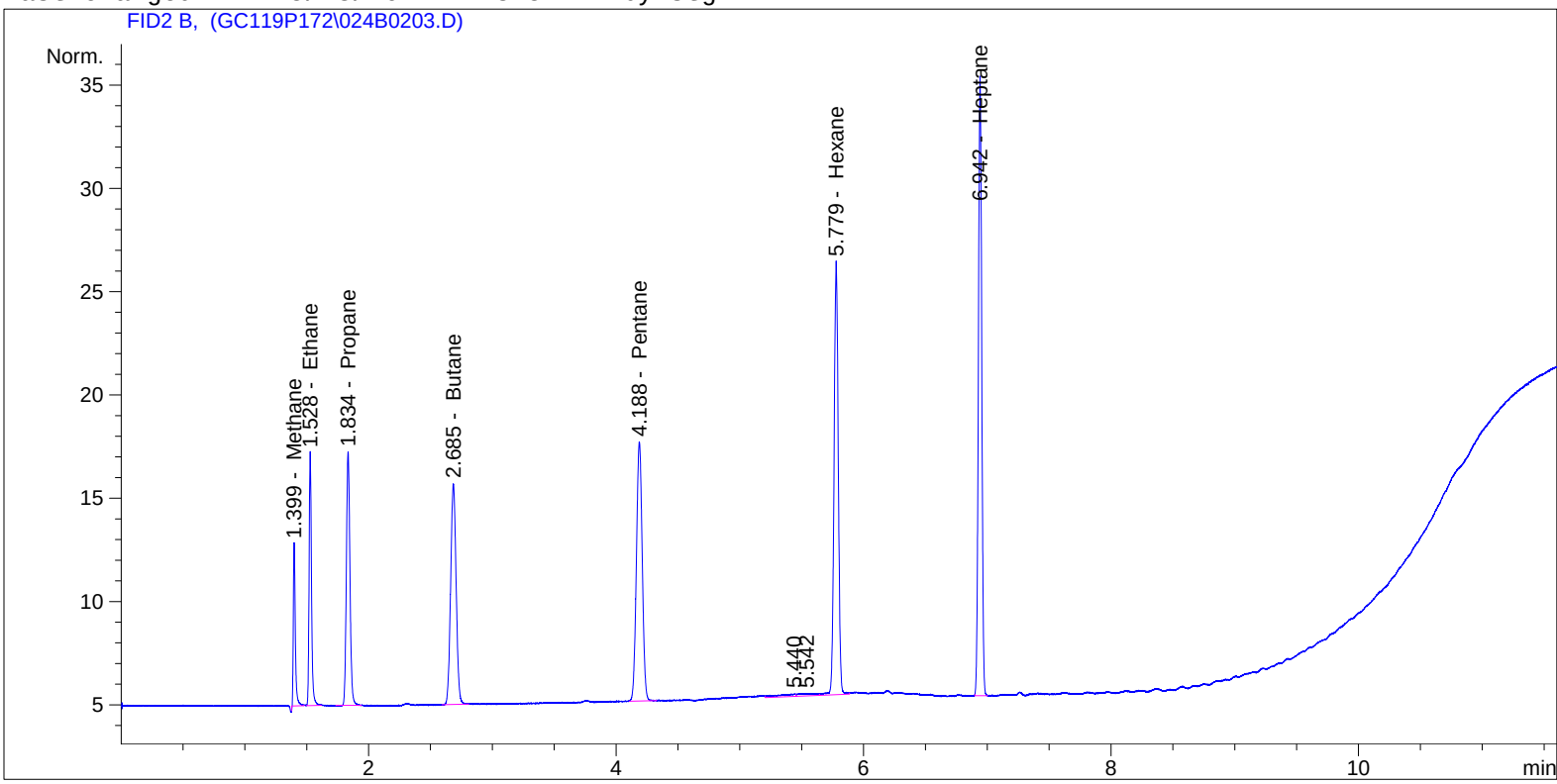
==========

*** End of Report ***

EM-BTRF-001061

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0203.D
Sample Name: gc119p172 #C4 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   2
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 11:56:45                Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BB	8.86728	4.29277	38.06518		Methane
1.528	BB	16.49505	2.34537	38.68707		Ethane
1.834	BP	24.64503	1.60360	39.52068		Propane
2.685	BB	32.82633	1.19243	39.14302		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.188	BB	40.93287	9.63681e-1	39.44622		Pentane
4.500		-	-	-		Methylene chloride
5.779	VB	50.21059	7.97597e-1	40.04784		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001062

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0203.D
Sample Name: gc119p172 #C4 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	56.51437	7.01537e-1	39.64693		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 274.55694

1 Warnings or Errors :

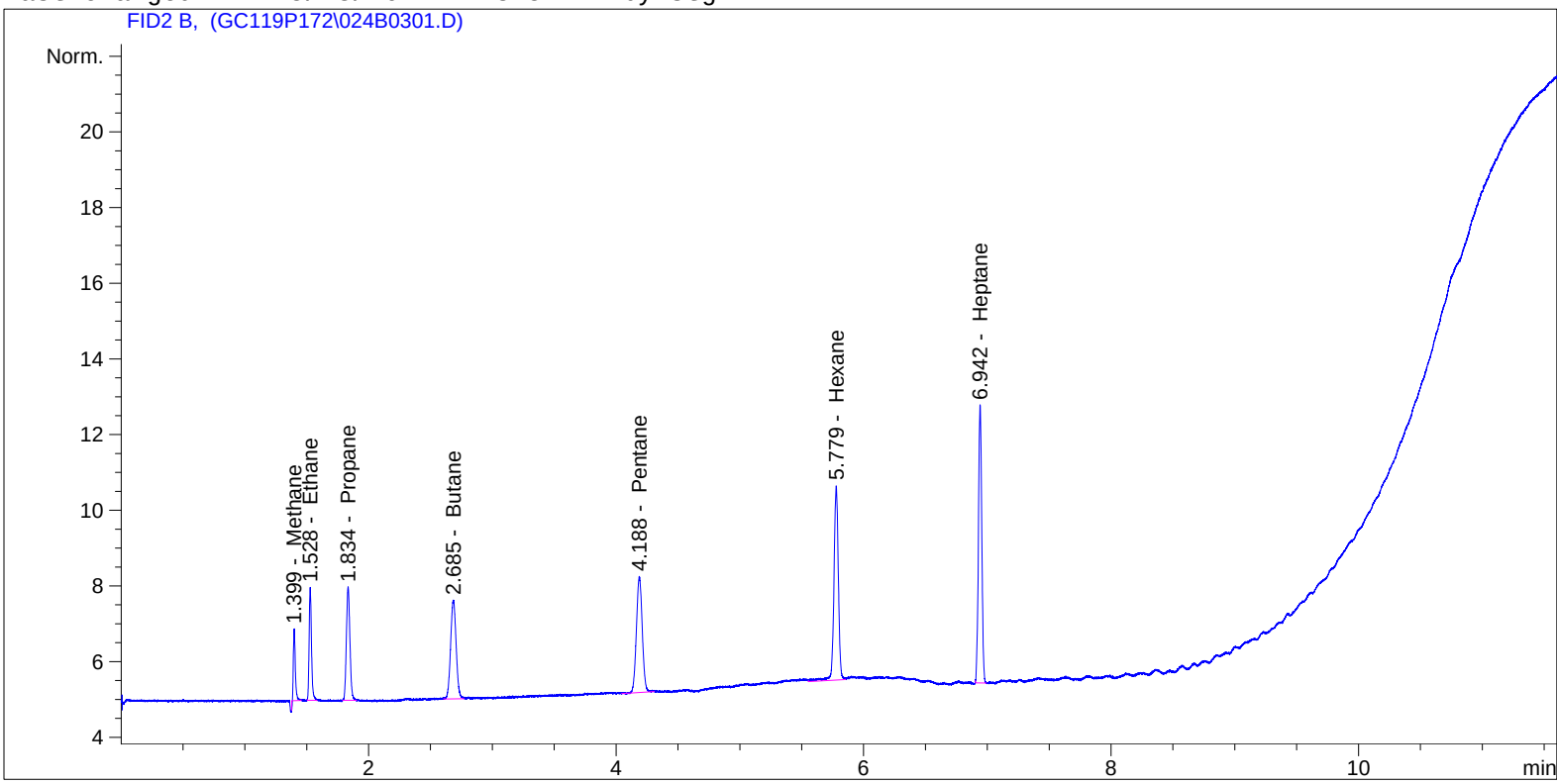
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0301.D
Sample Name: gc119p172 #C3 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   3
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 12:16:00                    Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.399 BB        2.04584    4.43519    9.07368    Methane
  1.528 BP        3.96721    2.40839    9.55457    Ethane
  1.834 PP        5.95966    1.62872    9.70663    Propane
  2.685 BV        8.09250    1.20012    9.71198    Butane
  3.453             -          -          -        Acetonitrile
  3.590             -          -          -        Acrolein
  3.699             -          -          -        Acetone
  4.106             -          -          -        Acrylonitrile
  4.188 VB       10.09599 9.71954e-1    9.81284    Pentane
  4.500             -          -          -        Methylene chloride
  5.779 VV       12.81262 7.99249e-1   10.24047    Hexane
  6.496             -          -          -        Benzene
```

EM-BTRF-001064

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0301.D
Sample Name: gc119p172 #C3 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	13.74751	7.11296e-1	9.77855		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 67.87871

1 Warnings or Errors :

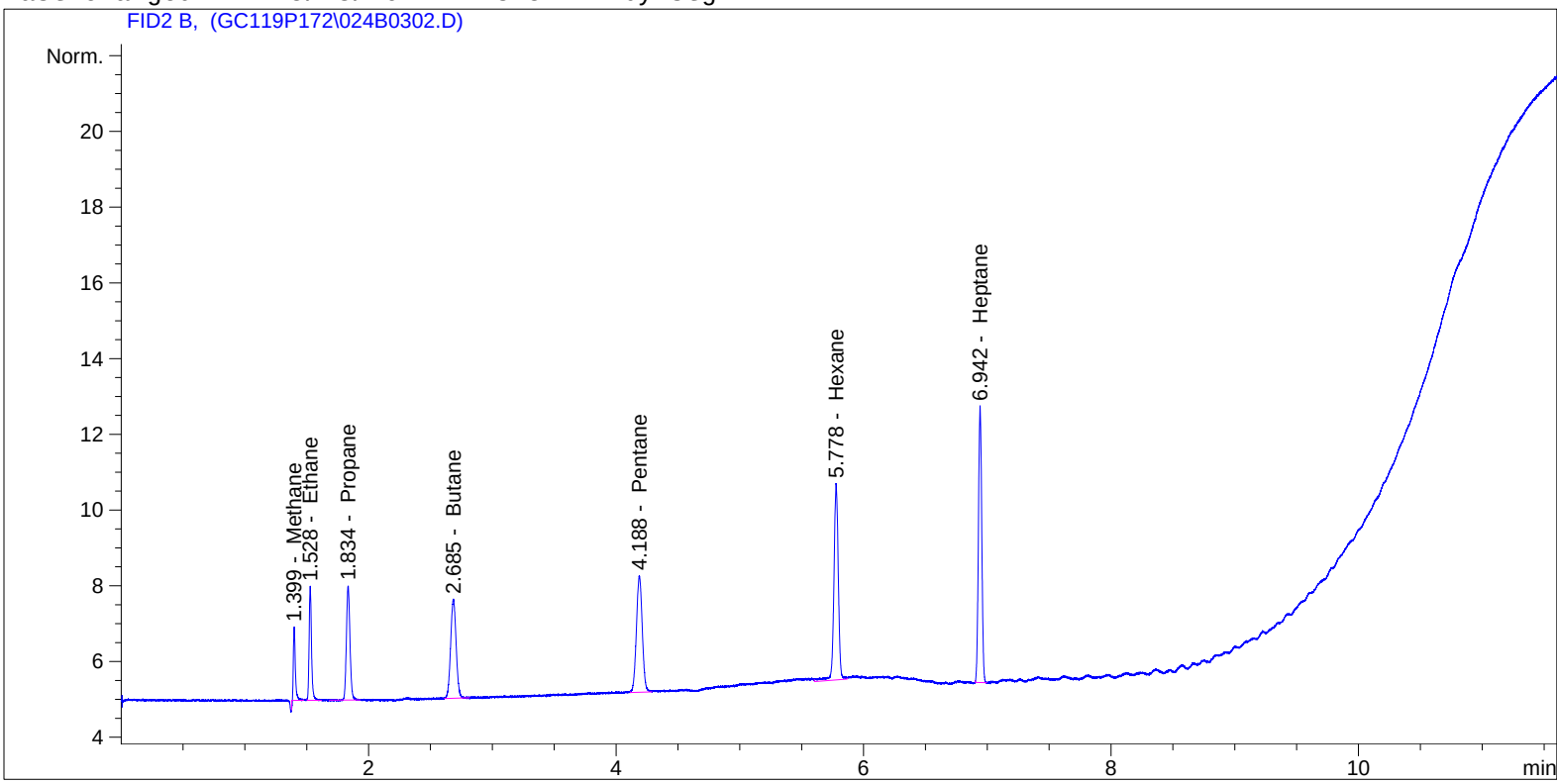
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0302.D
Sample Name: gc119p172 #C3 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   3
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 12:35:14                    Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BB	2.11292	4.42931	9.35879		Methane
1.528	BB	4.06539	2.40638	9.78289		Ethane
1.834	BB	6.02056	1.62839	9.80379		Propane
2.685	BB	8.07624	1.20014	9.69262		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.188	BV	10.13383	9.71913e-1	9.84920		Pentane
4.500		-	-	-		Methylene chloride
5.778	VV	12.93680	7.99227e-1	10.33945		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001066

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0302.D
Sample Name: gc119p172 #C3 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	13.77572	7.11270e-1	9.79825		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 68.62499

1 Warnings or Errors :

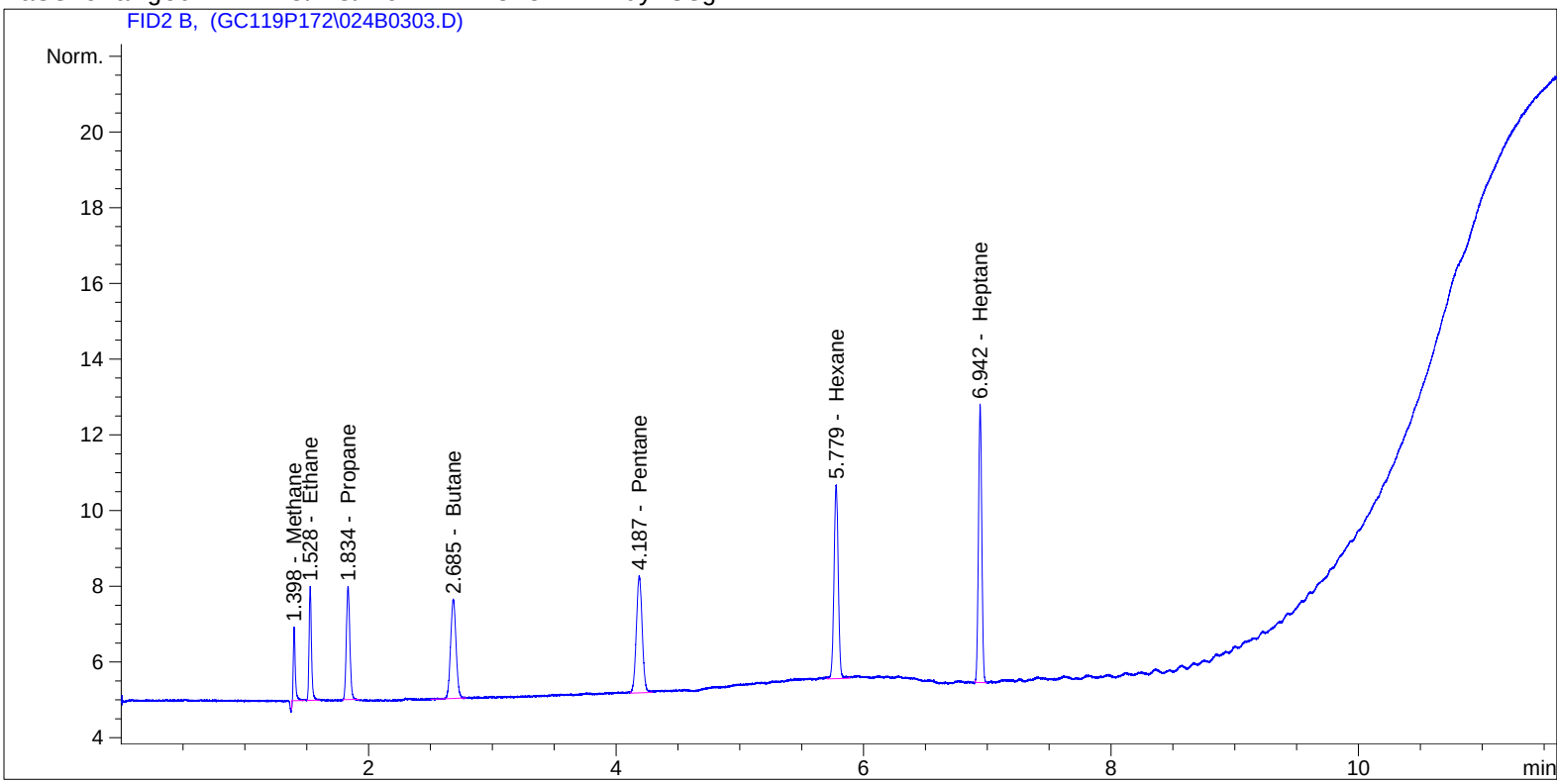
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0303.D
Sample Name: gc119p172 #C3 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   3
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 12:54:21                    Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.398	BB	2.11688	4.42897	9.37562		Methane
1.528	BB	4.03791	2.40693	9.71899		Ethane
1.834	PP	5.87511	1.62920	9.57171		Propane
2.685	BB	8.01190	1.20022	9.61607		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.187	BV	10.21751	9.71824e-1	9.92962		Pentane
4.500		-	-	-		Methylene chloride
5.779	VB	12.33590	7.99334e-1	9.86051		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0303.D
Sample Name: gc119p172 #C3 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	13.76049	7.11284e-1	9.78761		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 67.86012

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0401.D
Sample Name: gc119p172 #C2 ENV(1=950,2=50)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   4
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 13:13:35                Inj :   1
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
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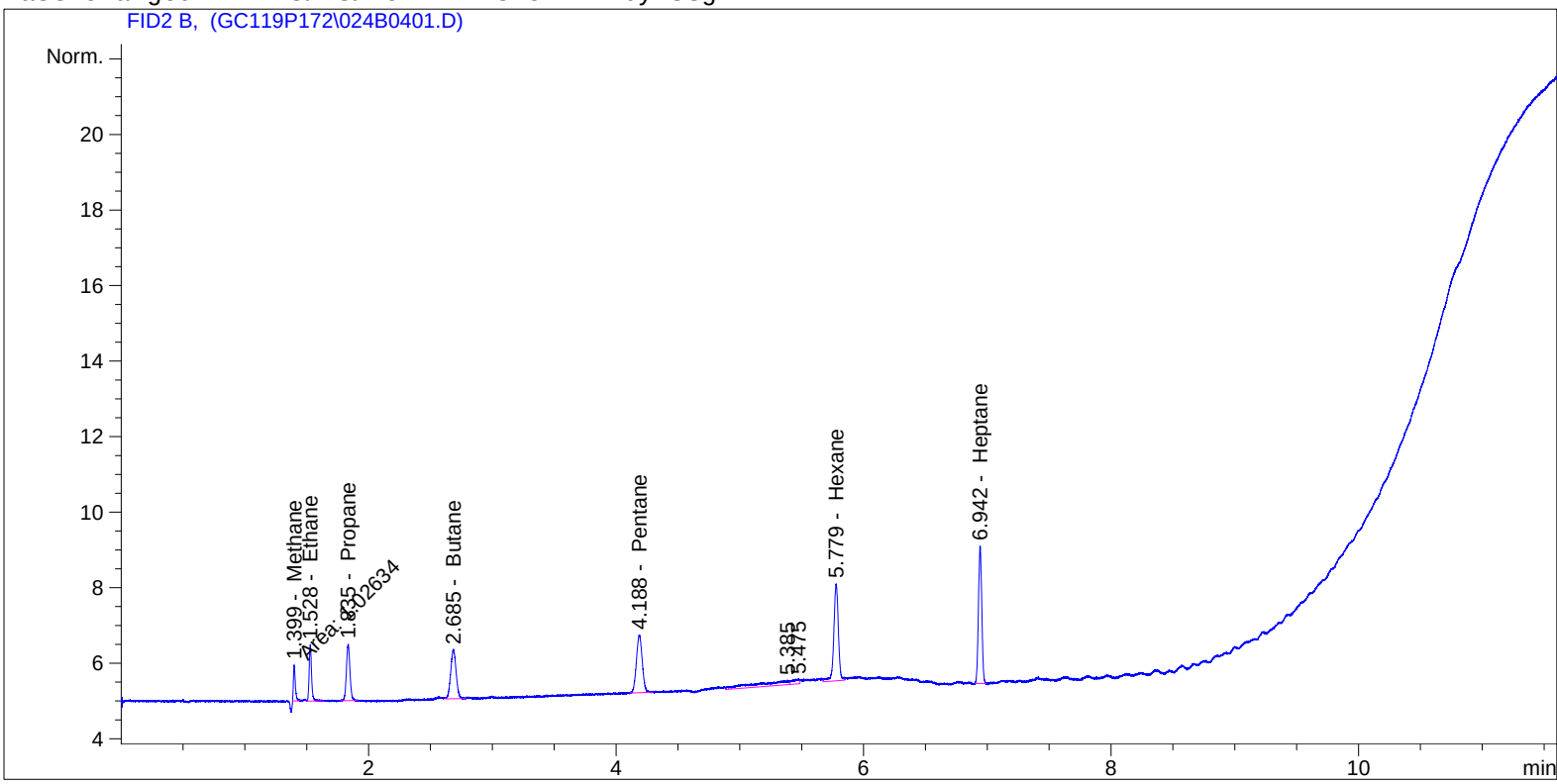



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	MM	1.02634	4.61908	4.74074		Methane
1.528	VB	2.01522	2.48875	5.01537		Ethane
1.835	BP	2.96863	1.66211	4.93419		Propane
2.685	BV	3.93302	1.21092	4.76256		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.188	BB	4.97230	9.83271e-1	4.88912		Pentane
4.500		-	-	-		Methylene chloride
5.779	VV	6.58049	8.01348e-1	5.27327		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001070

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0401.D
Sample Name: gc119p172 #C2 ENV(1=950,2=50)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	6.82341	7.24382e-1	4.94276		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 34.55801

1 Warnings or Errors :

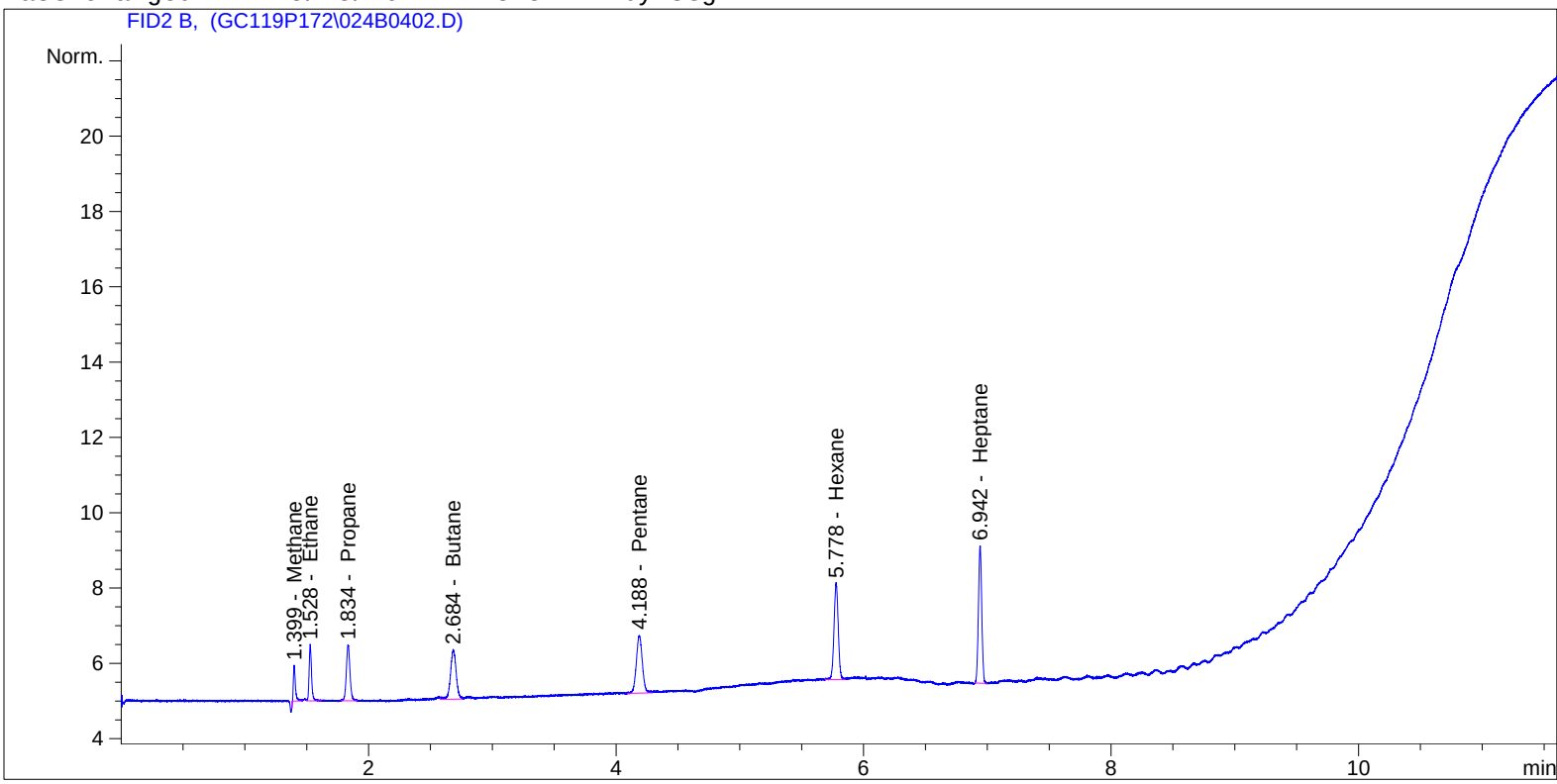
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0402.D
Sample Name: gc119p172 #C2 ENV(1=950,2=50)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   4
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 13:32:56                    Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV	1.06016	4.60731	4.88449		Methane
1.528	VB	2.02926	2.48762	5.04802		Ethane
1.834	BP	3.04442	1.66045	5.05512		Propane
2.684	VV	4.18689	1.20964	5.06465		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.188	BV	5.15168	9.82494e-1	5.06149		Pentane
4.500		-	-	-		Methylene chloride
5.778	BV	6.11964	8.01673e-1	4.90596		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001072

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0402.D
Sample Name: gc119p172 #C2 ENV(1=950,2=50)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	6.80400	7.24456e-1	4.92920		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene
Totals :				34.94892		

1 Warnings or Errors :

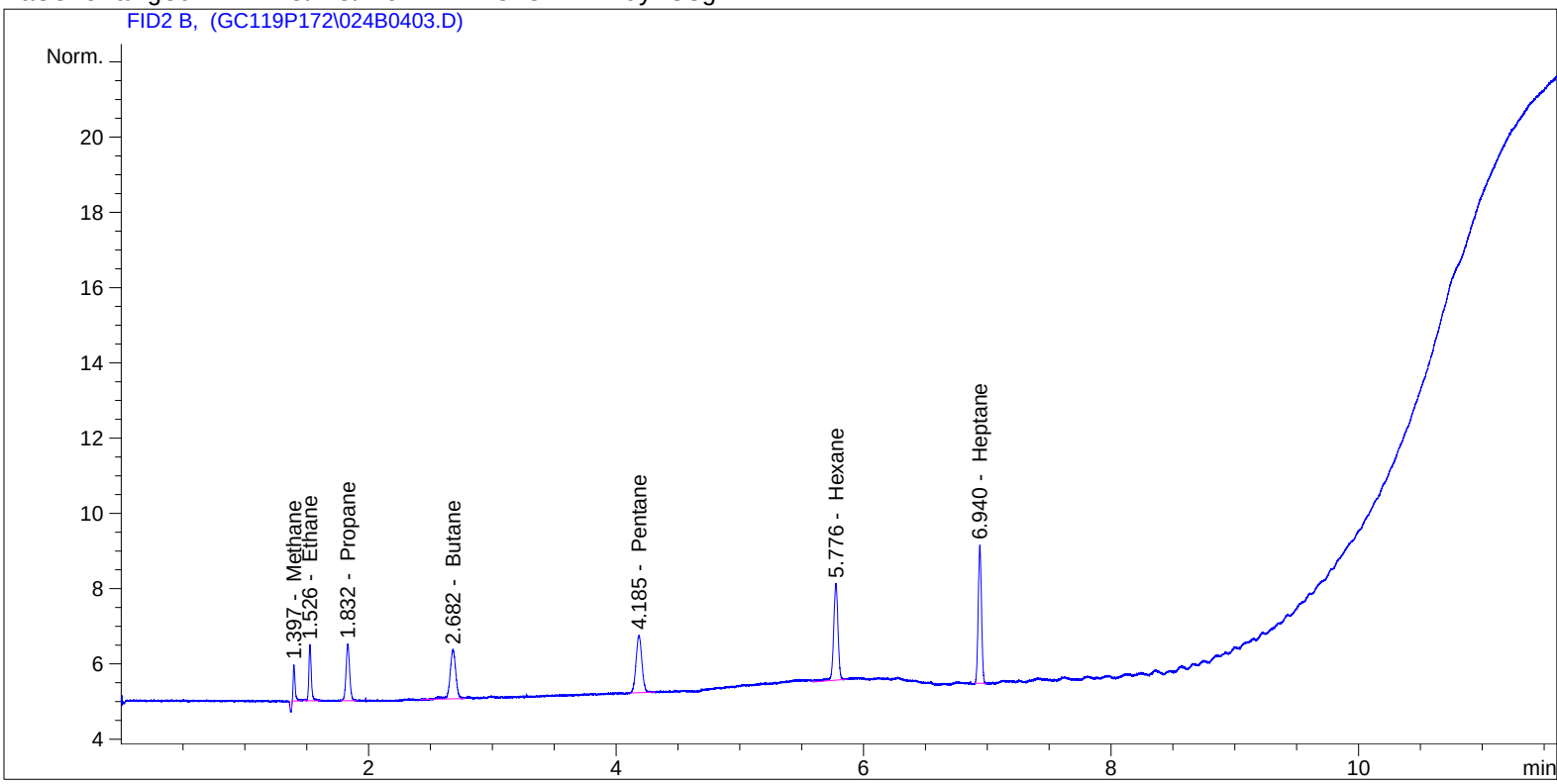
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0403.D
Sample Name: gc119p172 #C2 ENV(1=950,2=50)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   4
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 13:52:12                    Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397	BB	1.00284	4.62773	4.64089		Methane
1.526	PB	2.05272	2.48577	5.10258		Ethane
1.832	BP	3.04470	1.66045	5.05557		Propane
2.682	BB	4.19670	1.20960	5.07632		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.185	BB	4.96111	9.83321e-1	4.87836		Pentane
4.500		-	-	-		Methylene chloride
5.776	VB	6.42812	8.01451e-1	5.15182		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001074

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0403.D
Sample Name: gc119p172 #C2 ENV(1=950,2=50)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	6.78847	7.24516e-1	4.91836		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 34.82389

1 Warnings or Errors :

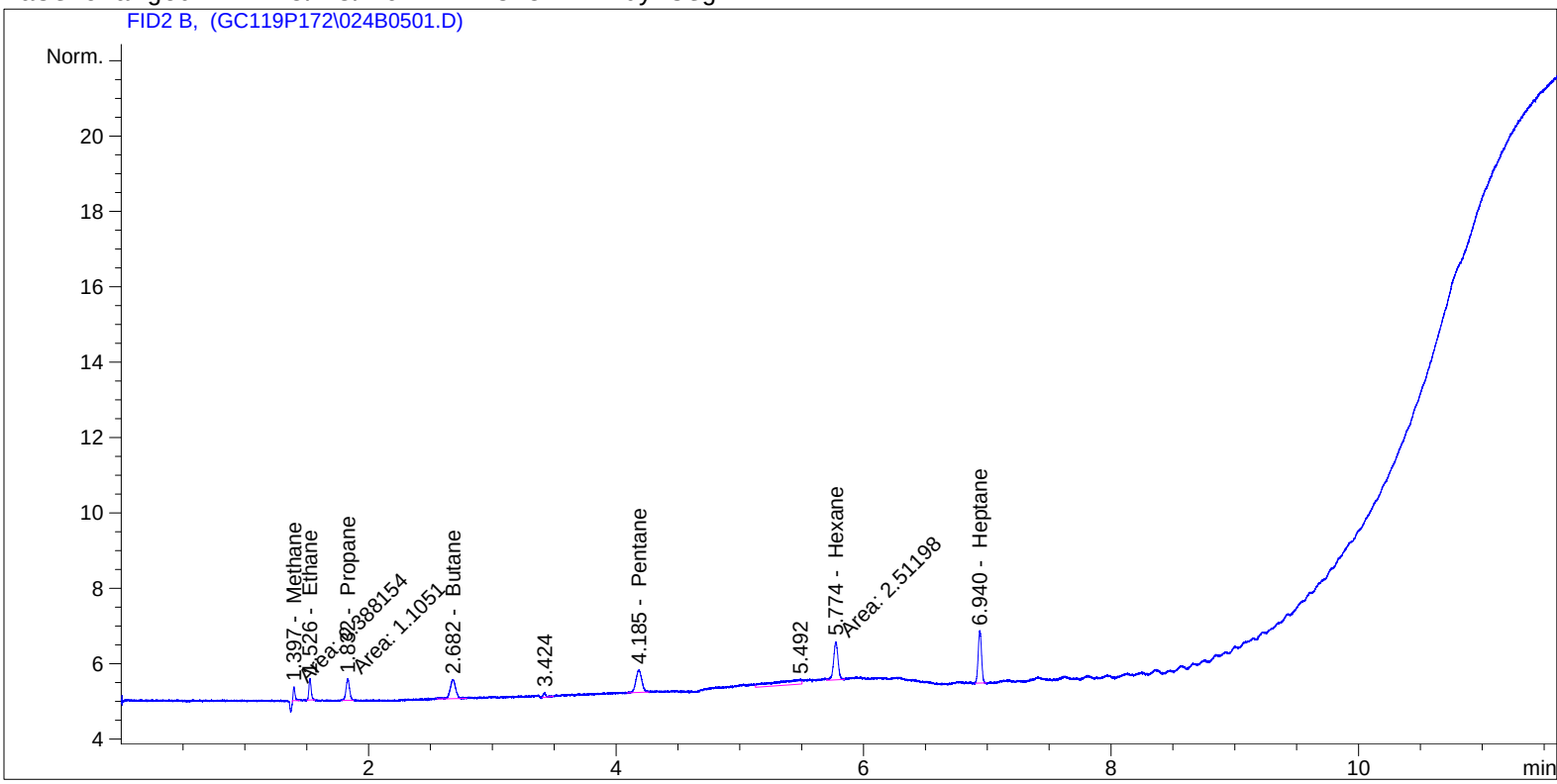
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0501.D
Sample Name: gc119p172 #C1 ENV(1=980,2=20)

Acq. Operator	: stg	Seq. Line	: 5
Acq. Instrument	: Gummo online	Location	: Vial 24
Injection Date	: 18-May-11, 14:11:28	Inj	: 1
		Inj Volume	: External
Sequence File	: G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S		
Acq. Method	: G:\GC2011Q2\GUMMO\METHODS\GC114P165.M		
Last changed	: 11/15/2010 3:12:59 PM by tbo		
Analysis Method	: G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M		
Last changed	: 5/23/2011 4:18:52 PM by stg		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 5/23/2011 4:18:45 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397	MM	3.88154e-1	5.22582	2.02842		Methane
1.526	BP	7.05152e-1	2.78351	1.96280		Ethane
1.832	MM	1.10510	1.77040	1.95646		Propane
2.682	BB	1.62779	1.24067	2.01954		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.185	BV	1.95510	1.01737	1.98907		Pentane
4.500		-	-	-		Methylene chloride
5.774	MM	2.51198	8.08340e-1	2.03053		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001076

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0501.D
Sample Name: gc119p172 #C1 ENV(1=980,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	2.60049	7.66330e-1	1.99283		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 13.97966

1 Warnings or Errors :

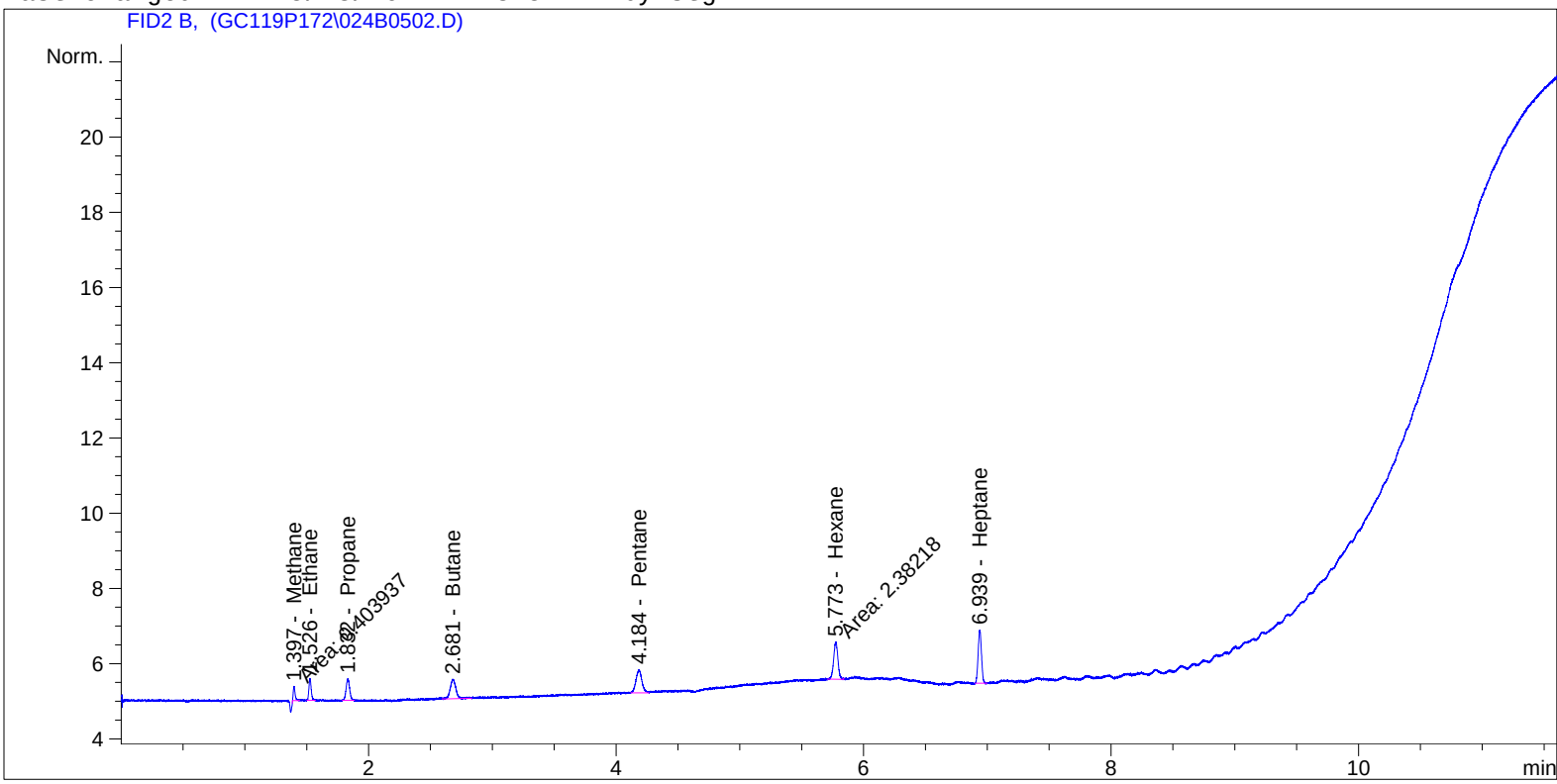
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0502.D
Sample Name: gc119p172 #C1 ENV(1=980,2=20)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   5
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 14:30:47                    Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397	MM	4.03937e-1	5.18769	2.09550		Methane
1.526	BP	7.45411e-1	2.76698	2.06254		Ethane
1.832	PP	1.12962	1.77040	1.99988		Propane
2.681	VB	1.65971	1.23969	2.05753		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.184	BV	2.03826	1.01537	2.06959		Pentane
4.500		-	-	-		Methylene chloride
5.773	MM	2.38218	8.08515e-1	1.92603		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0502.D
Sample Name: gc119p172 #C1 ENV(1=980,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.939	BB	2.63577	7.65662e-1	2.01811		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 14.22917

1 Warnings or Errors :

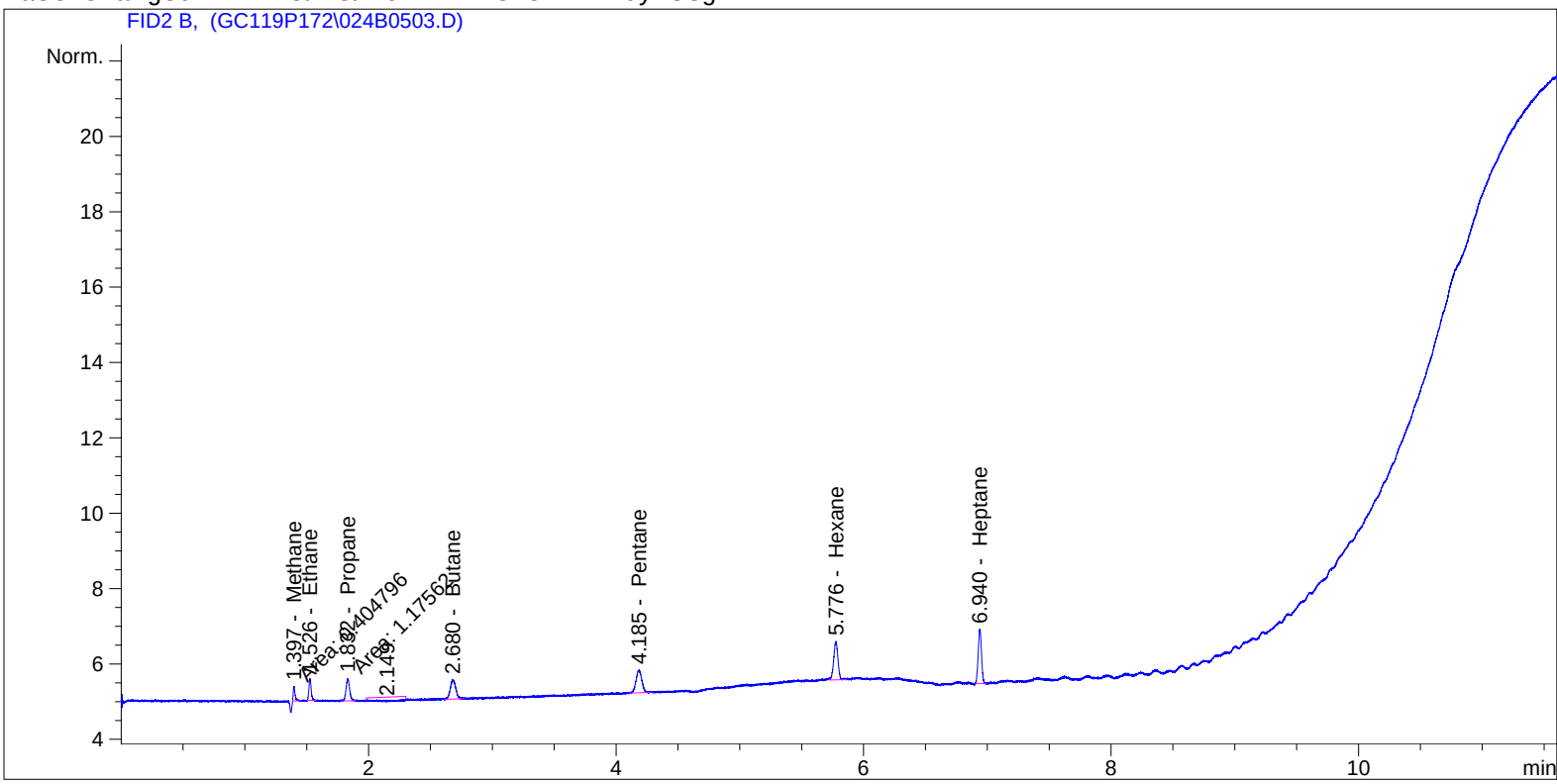
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0503.D
Sample Name: gc119p172 #C1 ENV(1=980,2=20)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   5
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 18-May-11, 14:50:09                    Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.397 MM     4.04796e-1    5.18570    2.09915    Methane
  1.526 BP     7.14770e-1    2.78351    1.98957    Ethane
  1.832 MM        1.17562    1.76357    2.07328    Propane
  2.680 BB        1.60033    1.24118    1.98630    Butane
  3.453              -          -          -       Acetonitrile
  3.590              -          -          -       Acrolein
  3.699              -          -          -       Acetone
  4.106              -          -          -       Acrylonitrile
  4.185 BB        1.95287    1.01737    1.98679    Pentane
  4.500              -          -          -       Methylene chloride
  5.776 BB        2.44291 8.08515e-1    1.97513    Hexane
  6.496              -          -          -       Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0503.D
Sample Name: gc119p172 #C1 ENV(1=980,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	2.68259	7.64488e-1	2.05080		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 14.16104

1 Warnings or Errors :

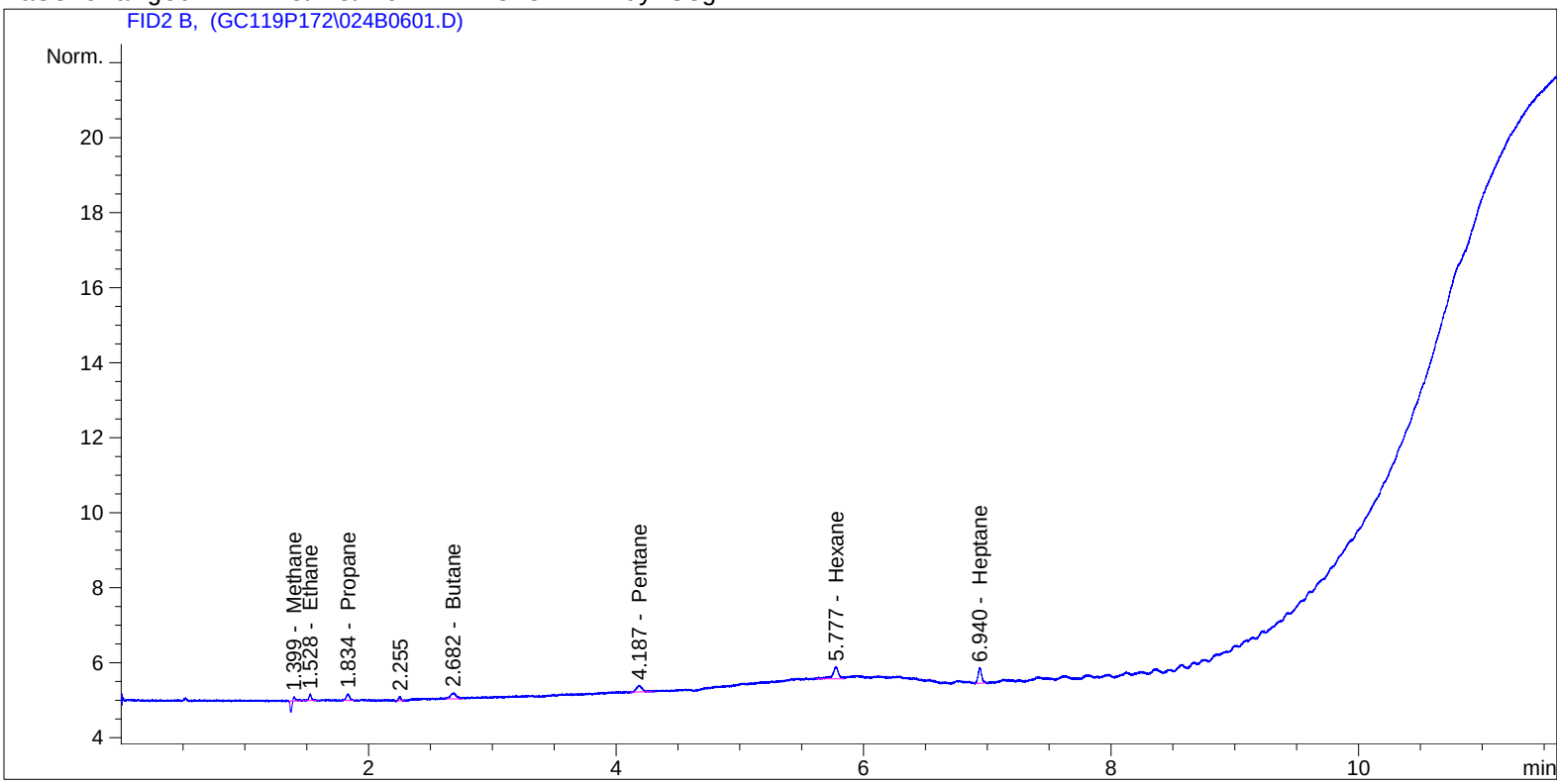
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0601.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 15:47:32                Inj :   1
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BB	1.36222e-1	5.24293	7.14203e-1		Methane
1.528	BB	2.58490e-1	2.78351	7.19509e-1		Ethane
1.834	PP	3.25200e-1	1.77040	5.75735e-1		Propane
2.682	BV	5.17335e-1	1.24118	6.42108e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.187	BB	5.54707e-1	1.01737	5.64344e-1		Pentane
4.500		-	-	-		Methylene chloride
5.777	BV	1.09008	8.08515e-1	8.81349e-1		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0601.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	8.15188e-1	7.66330e-1	6.24704e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.72195

1 Warnings or Errors :

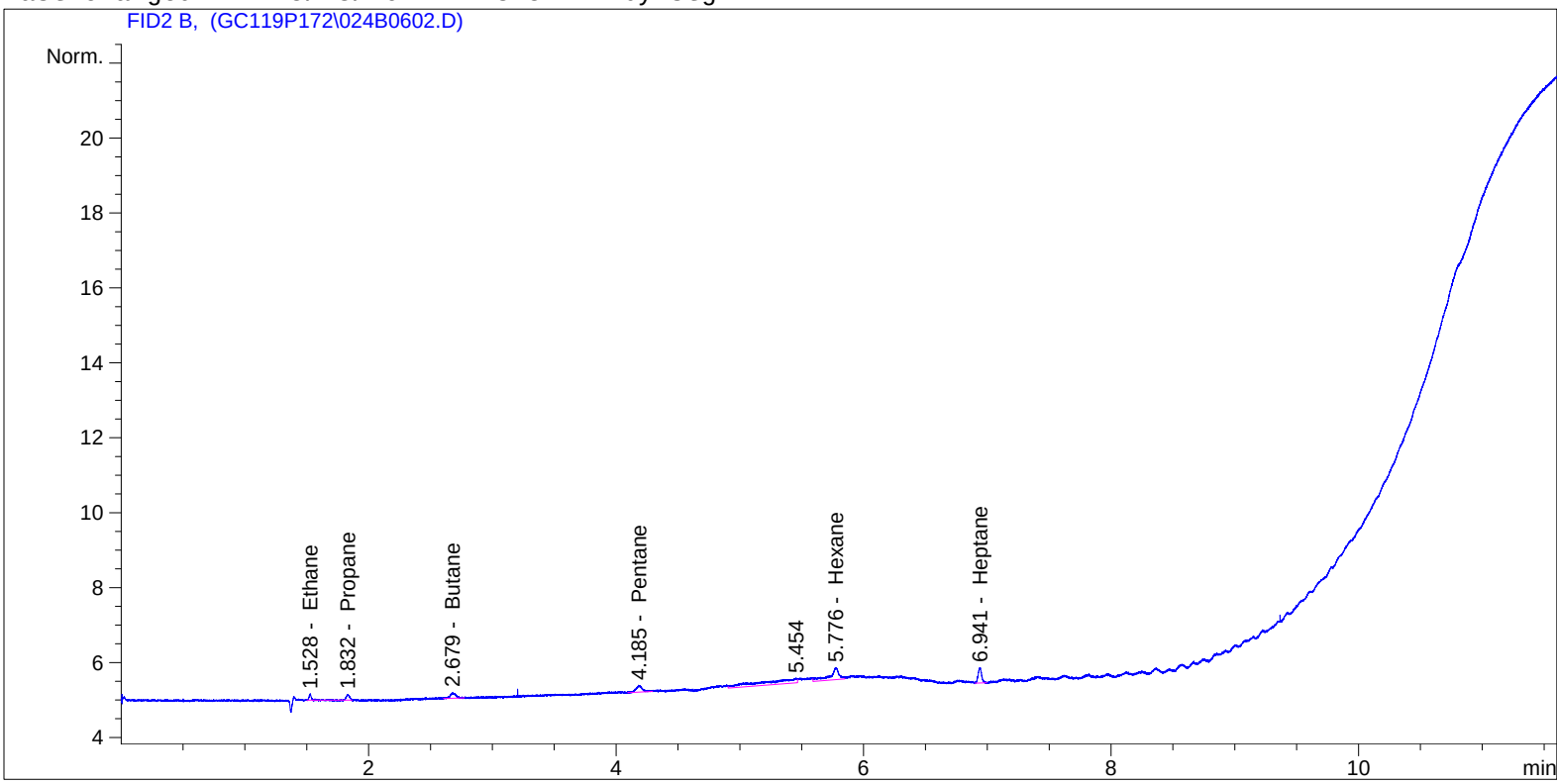
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0602.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 16:06:32                Inj :   2
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.528	BP	1.91762e-1	2.78351	5.33771e-1		Ethane
1.832	VP	2.23405e-1	1.77040	3.95517e-1		Propane
2.679	BB	4.53250e-1	1.24118	5.62567e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.185	BB	5.93672e-1	1.01737	6.03987e-1		Pentane
4.500		-	-	-		Methylene chloride
5.776	VV	1.65902	8.08515e-1	1.34134		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001084

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0602.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.941	BB	7.94192e-1	7.66330e-1	6.08613e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.04580

1 Warnings or Errors :

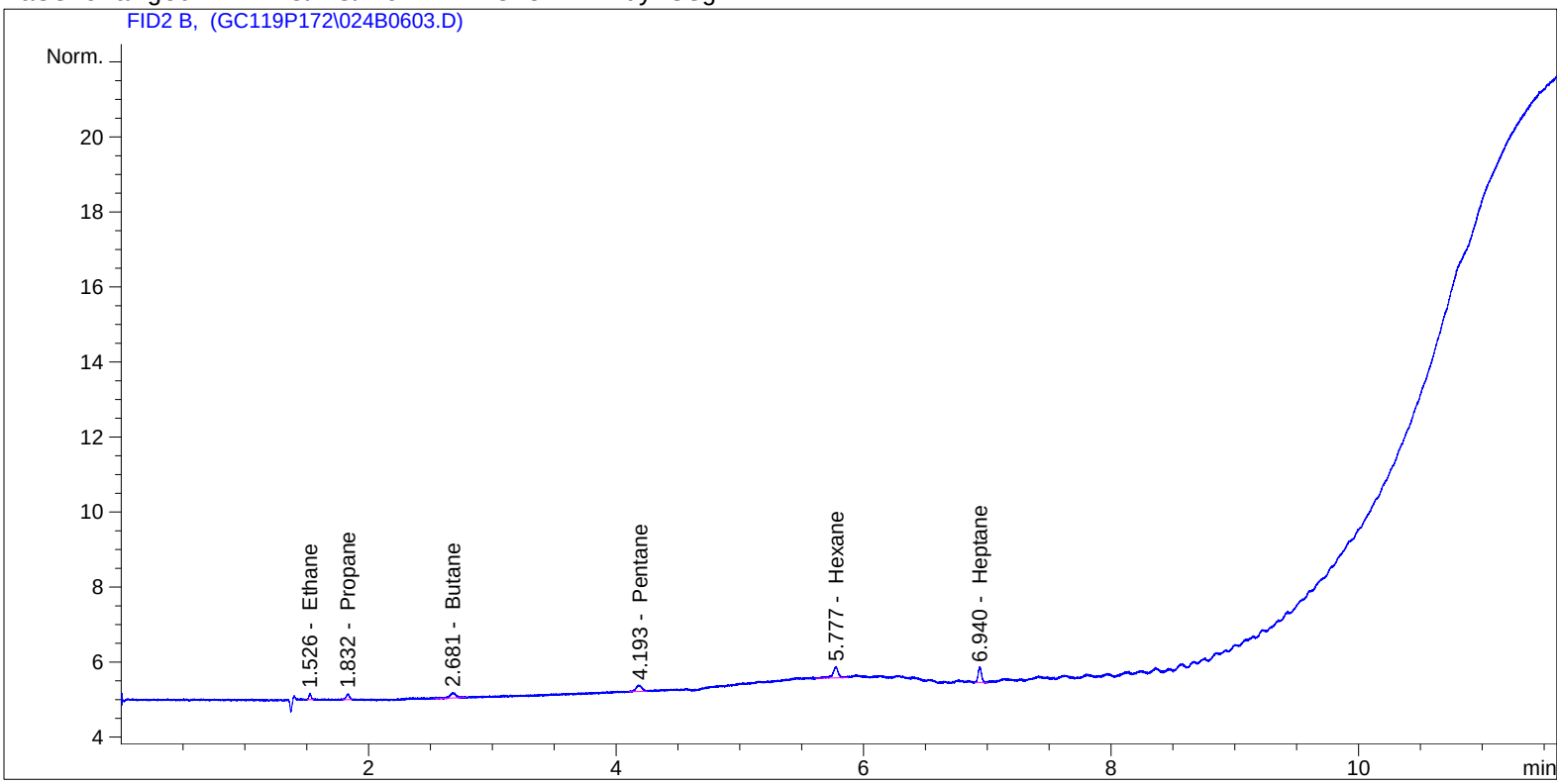
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0603.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 16:25:33                Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.526	BP	1.92456e-1	2.78351	5.35703e-1		Ethane
1.832	PP	2.79119e-1	1.77040	4.94152e-1		Propane
2.681	VB	4.77403e-1	1.24118	5.92546e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.193	BV	5.50427e-1	1.01737	5.59990e-1		Pentane
4.500		-	-	-		Methylene chloride
5.777	BB	9.29981e-1	8.08515e-1	7.51903e-1		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001086

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0603.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	7.75485e-1	7.66330e-1	5.94278e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.52857

1 Warnings or Errors :

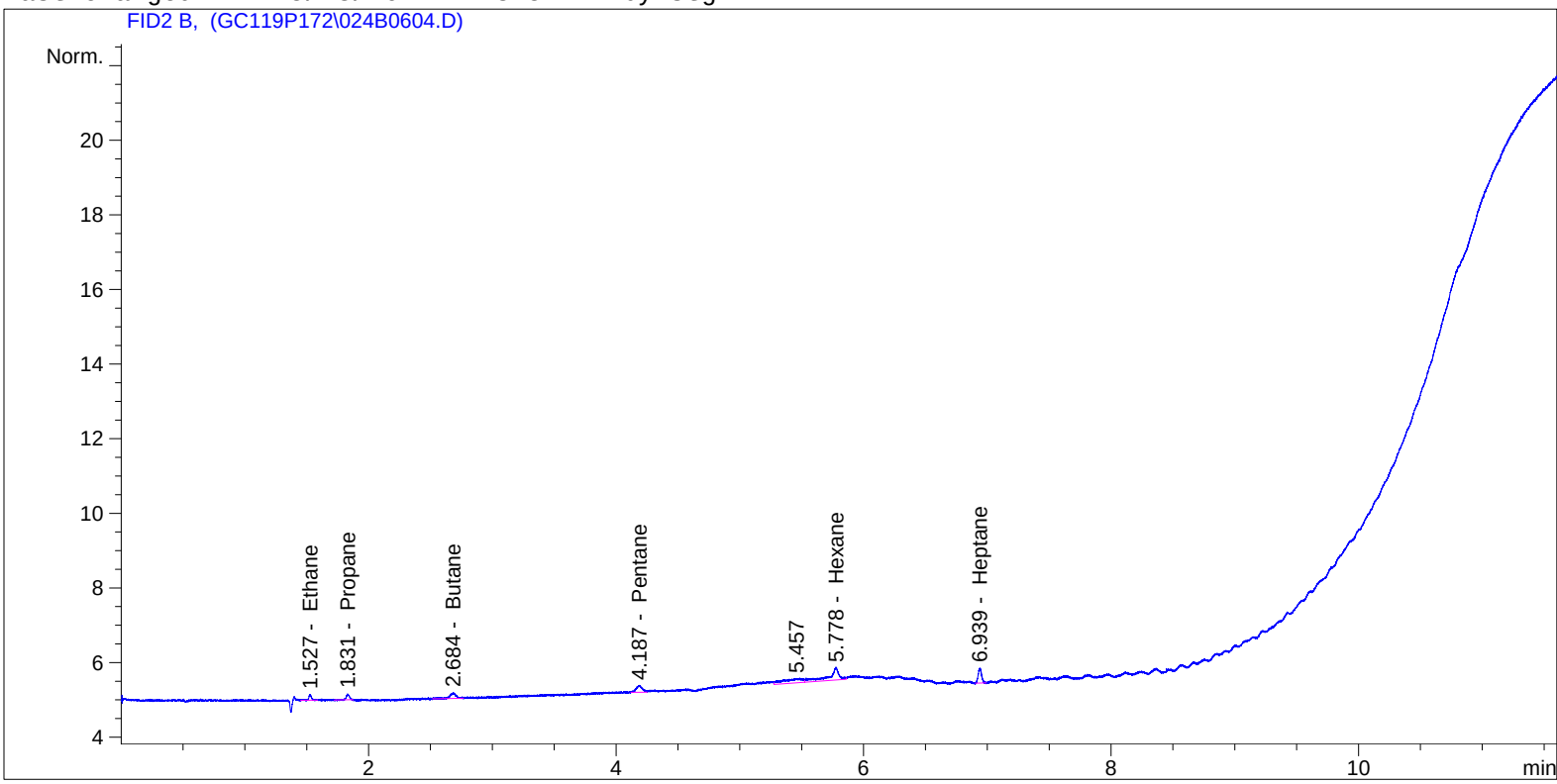
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0604.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 16:44:39                Inj :   4
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.527	VB	2.38749e-1	2.78351	6.64560e-1		Ethane
1.831	VP	2.24907e-1	1.77040	3.98176e-1		Propane
2.684	BB	4.78365e-1	1.24118	5.93739e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.187	BV	6.25699e-1	1.01737	6.36570e-1		Pentane
4.500		-	-	-		Methylene chloride
5.778	VV	1.92497	8.08515e-1	1.55637		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001088

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0604.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.939	BB	7.51977e-1	7.66330e-1	5.76262e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.42567

1 Warnings or Errors :

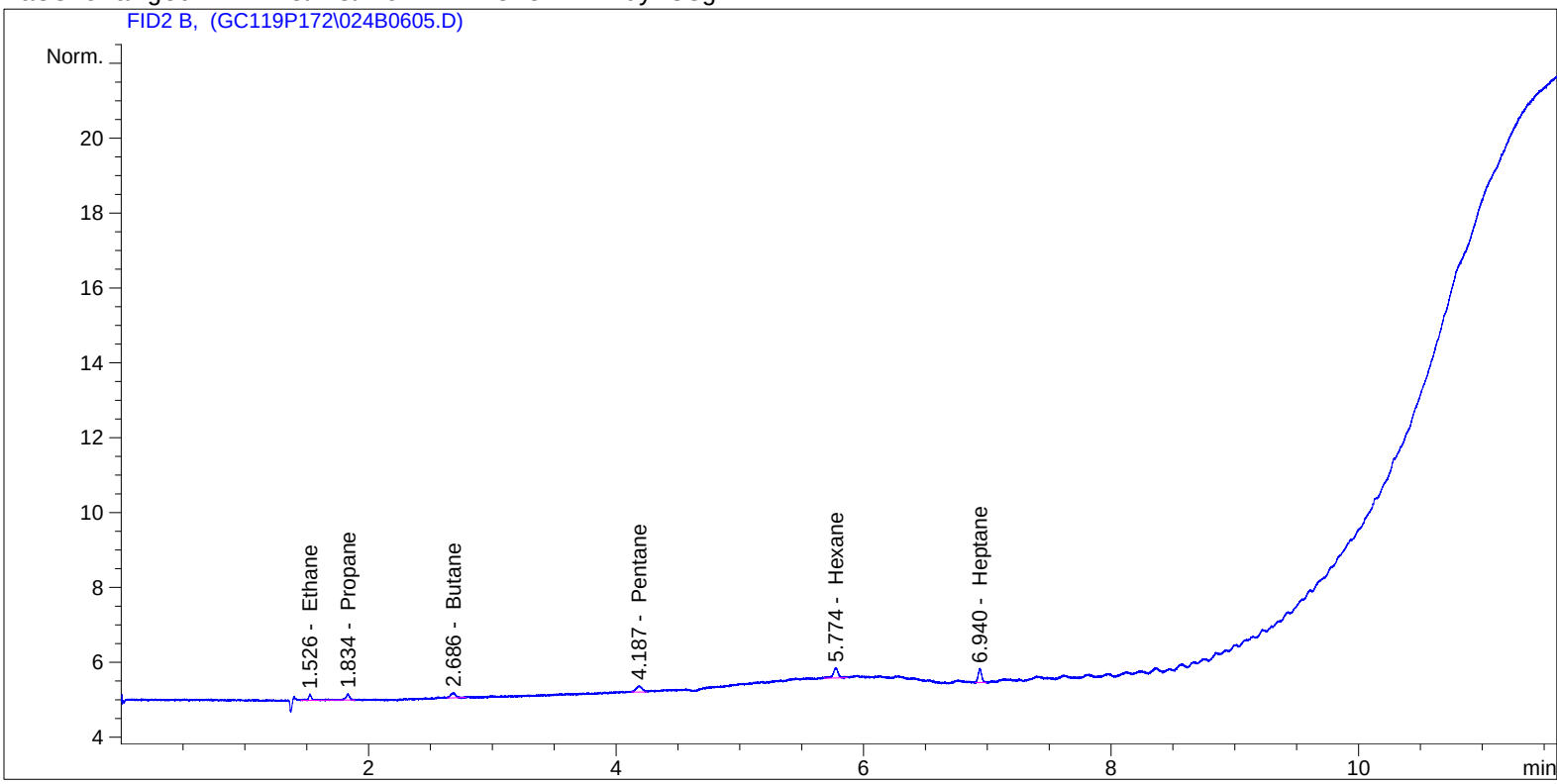
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0605.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 17:03:44                Inj :   5
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.526	BV	2.81359e-1	2.78351	7.83165e-1		Ethane
1.834	VV	4.47213e-1	1.77040	7.91747e-1		Propane
2.686	BB	3.50328e-1	1.24118	4.34822e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.187	BV	5.44227e-1	1.01737	5.53682e-1		Pentane
4.500		-	-	-		Methylene chloride
5.774	BB	7.69487e-1	8.08515e-1	6.22142e-1		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001090

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0605.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	7.08411e-1	7.66330e-1	5.42877e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.72843

1 Warnings or Errors :

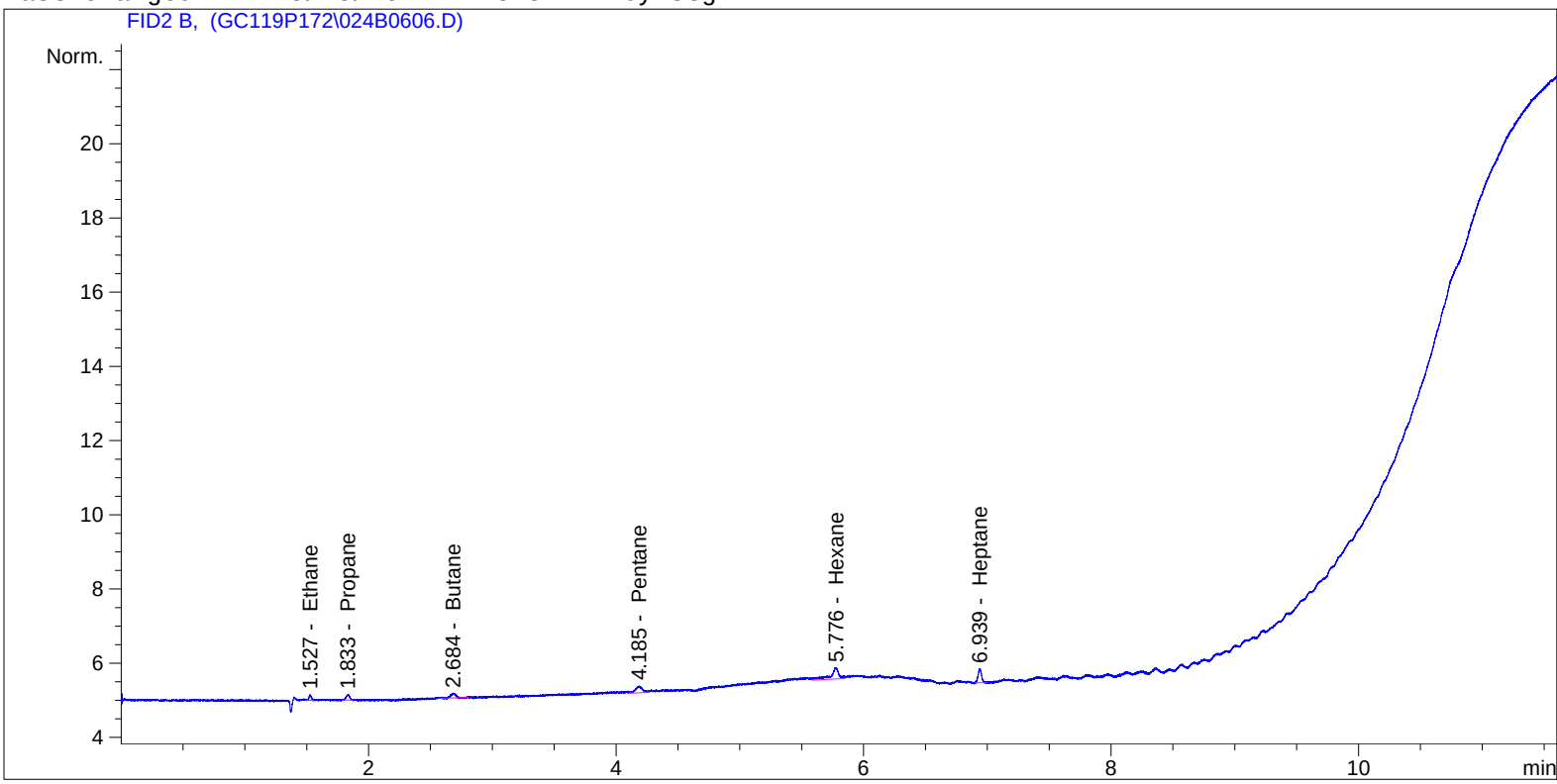
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0606.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 17:22:46                Inj :   6
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.527	VP	1.97841e-1	2.78351	5.50691e-1		Ethane
1.833	BP	2.96831e-1	1.77040	5.25510e-1		Propane
2.684	BB	3.29314e-1	1.24118	4.08739e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.185	BB	7.26967e-1	1.01737	7.39597e-1		Pentane
4.500		-	-	-		Methylene chloride
5.776	VV	1.41908	8.08515e-1	1.14734		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001092

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0606.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.939	BB	6.98277e-1	7.66330e-1	5.35111e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.90699

1 Warnings or Errors :

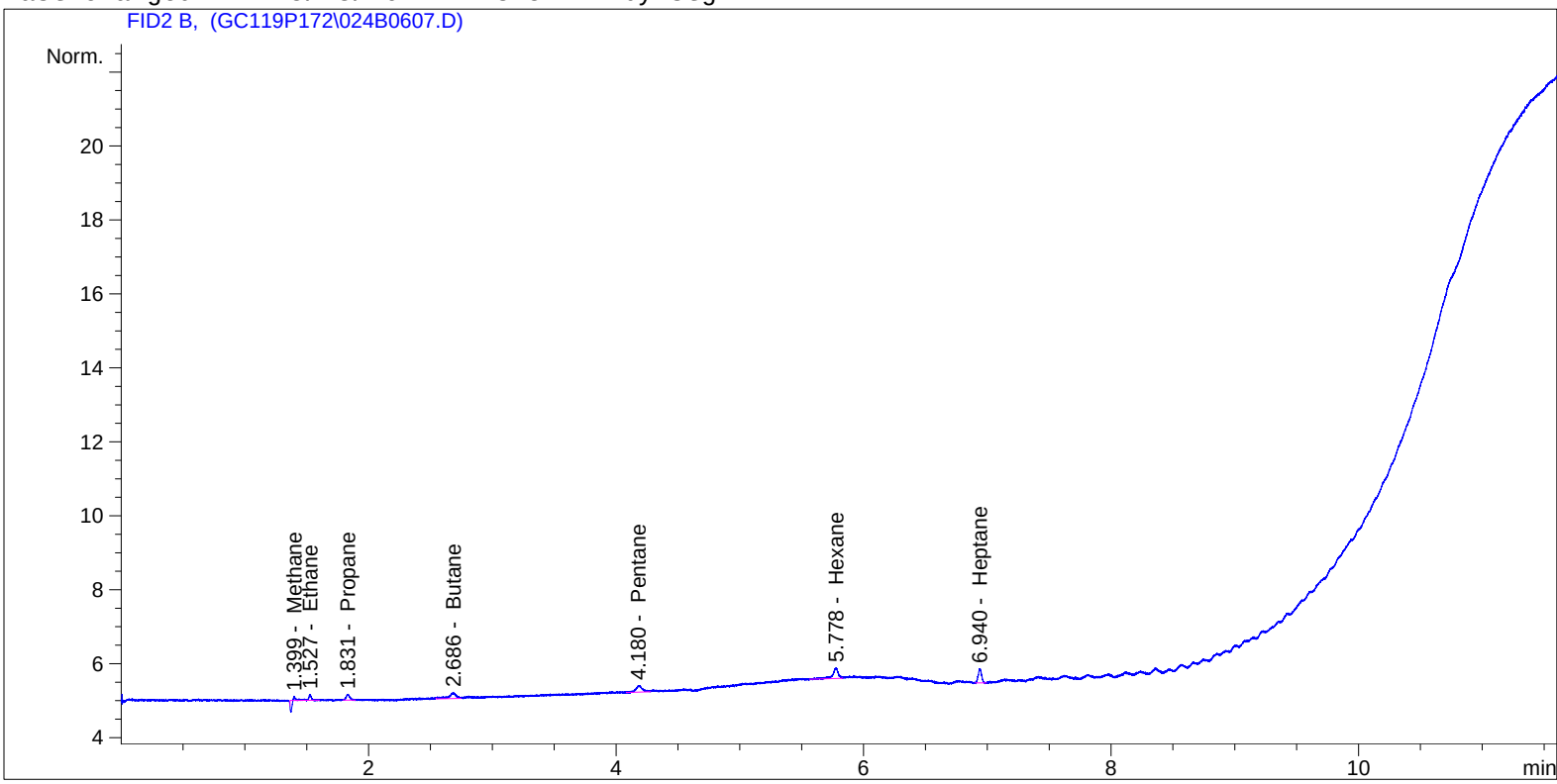
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0607.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                              Seq. Line :   6
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 18-May-11, 17:41:51                   Inj :   7
                                                 Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV	1.85641e-1	5.24293	9.73304e-1		Methane
1.527	VB	2.78179e-1	2.78351	7.74314e-1		Ethane
1.831	BP	3.23109e-1	1.77040	5.72033e-1		Propane
2.686	BV	6.15690e-1	1.24118	7.64185e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.180	BV	6.29697e-1	1.01737	6.40637e-1		Pentane
4.500		-	-	-		Methylene chloride
5.778	BV	8.75458e-1	8.08515e-1	7.07821e-1		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0607.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940	BB	7.21279e-1	7.66330e-1	5.52738e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.98503

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

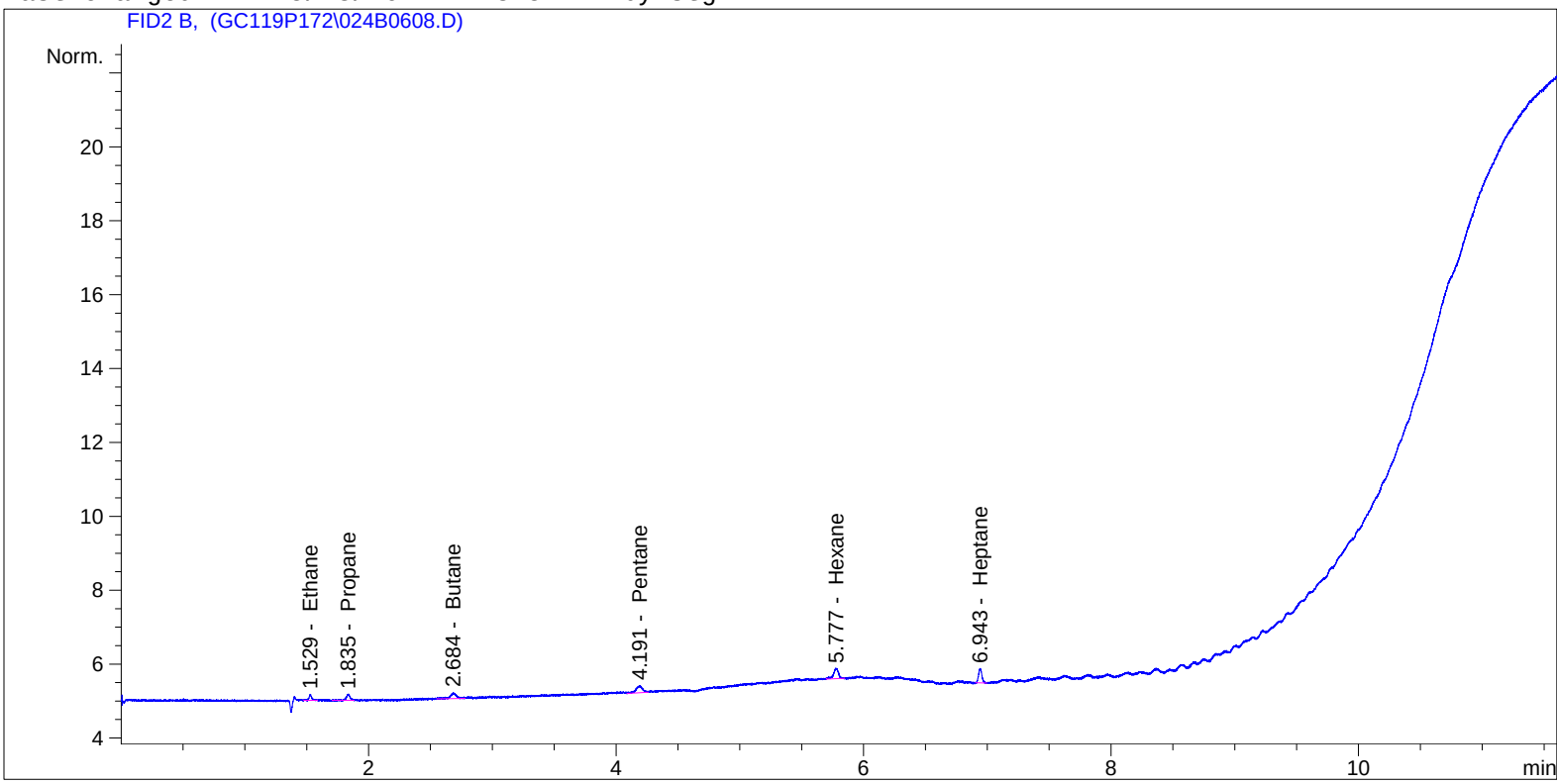
==========

*** End of Report ***

EM-BTRF-001095

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0608.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   6
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 18-May-11, 18:00:59                Inj :   8
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.529	BB	2.42761e-1	2.78351	6.75728e-1		Ethane
1.835	BP	3.16519e-1	1.77040	5.60365e-1		Propane
2.684	BB	5.36545e-1	1.24118	6.65951e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.191	VV	6.89255e-1	1.01737	7.01229e-1		Pentane
4.500		-	-	-		Methylene chloride
5.777	BB	7.81150e-1	8.08515e-1	6.31571e-1		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001096

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0608.D
Sample Name: gc119p172 #C0 ENV(1=3990,2=20)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.943	BB	7.01983e-1	7.66330e-1	5.37951e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.77280

1 Warnings or Errors :

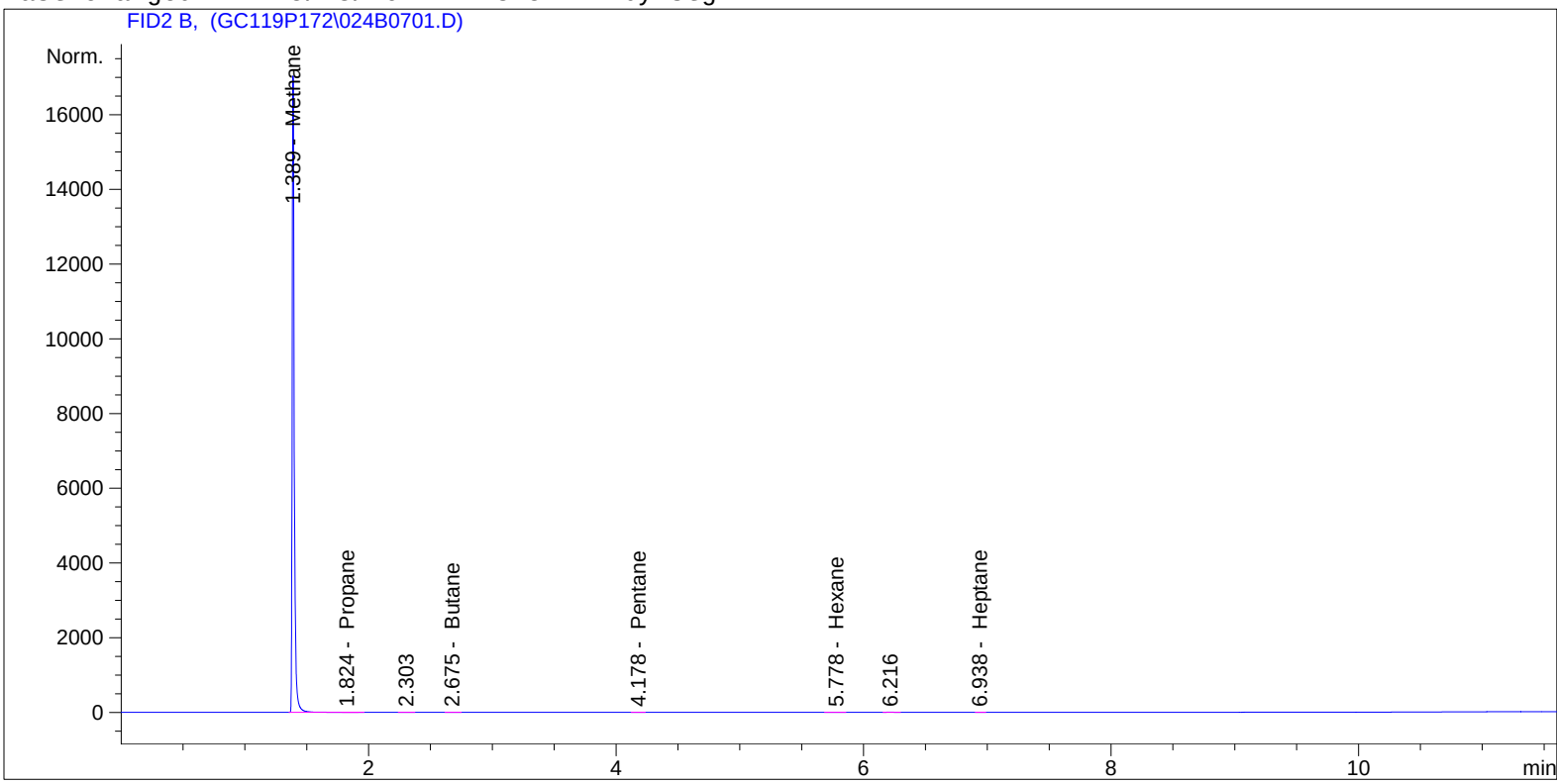
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0701.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :   7
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 21-May-11, 09:38:15                    Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.389 VB S   1.96370e4     4.25007 8.34588e4     Methane
  1.527            -           -          -        Ethane
  1.824 BB T   8.17721e-1    1.77040    1.44769    Propane
  2.675 BV     8.66328e-1    1.24118    1.07527    Butane
  3.453            -           -          -        Acetonitrile
  3.590            -           -          -        Acrolein
  3.699            -           -          -        Acetone
  4.106            -           -          -        Acrylonitrile
  4.178 BV     4.02803e-1    1.01737 4.09801e-1    Pentane
  4.500            -           -          -        Methylene chloride
  5.778 BB     5.01734e-1 8.08515e-1 4.05660e-1    Hexane
  6.496            -           -          -        Benzene
```

EM-BTRF-001098

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0701.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.938	BB	6.59947e-1	7.66330e-1	5.05737e-1		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 8.34627e4

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

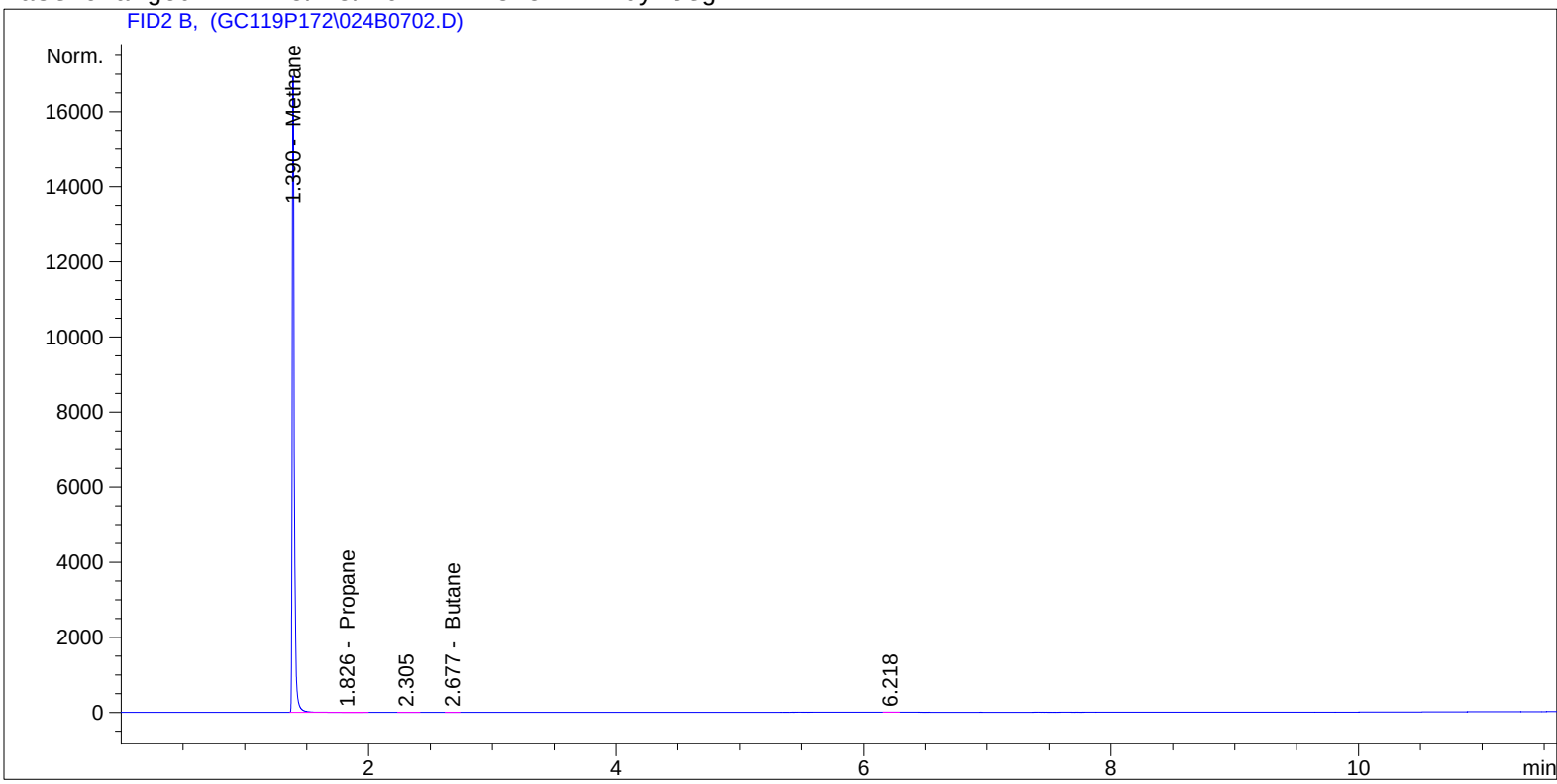
==========

*** End of Report ***

EM-BTRF-001099

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0702.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 21-May-11, 09:57:23                Inj :   2
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.390 BB S   1.95464e4     4.25007 8.30737e4     Methane
  1.527            -           -          -        Ethane
  1.826 BB T   4.80487e-1    1.77040 8.50655e-1    Propane
  2.677 BV     8.43400e-1    1.24118    1.04681    Butane
  3.453            -           -          -        Acetonitrile
  3.590            -           -          -        Acrolein
  3.699            -           -          -        Acetone
  4.106            -           -          -        Acrylonitrile
  4.186            -           -          -        Pentane
  4.500            -           -          -        Methylene chloride
  5.777            -           -          -        Hexane
  6.496            -           -          -        Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0702.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 8.30756e4

1 Warnings or Errors :

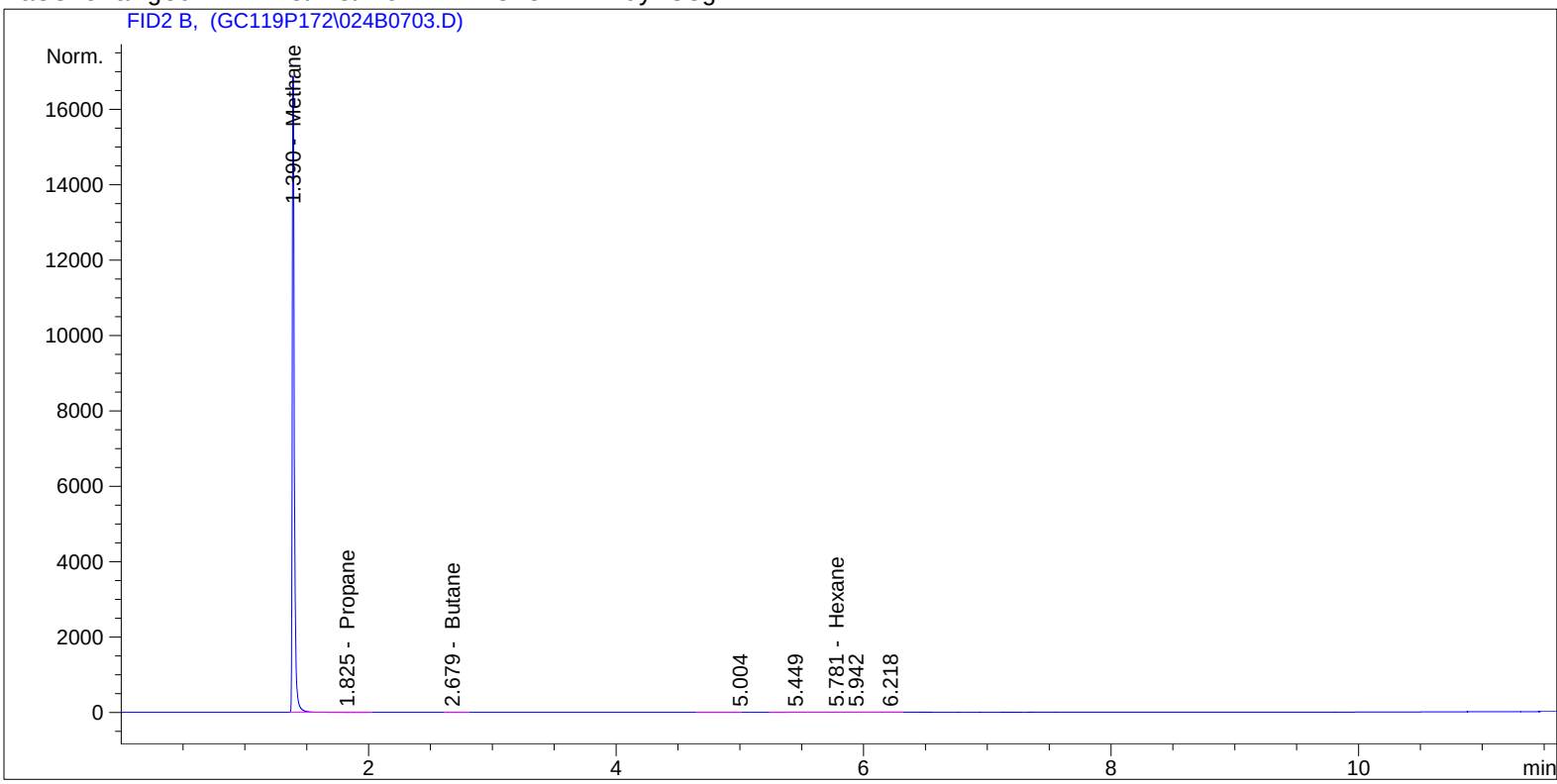
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0703.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 21-May-11, 10:16:39                Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.390 BB S   1.94575e4     4.25007 8.26958e4     Methane
  1.527            -           -          -        Ethane
  1.825 BB T   3.04371e-1    1.77040 5.38858e-1    Propane
  2.679 BB     6.40571e-1    1.24118 7.95067e-1    Butane
  3.453            -           -          -        Acetonitrile
  3.590            -           -          -        Acrolein
  3.699            -           -          -        Acetone
  4.106            -           -          -        Acrylonitrile
  4.186            -           -          -        Pentane
  4.500            -           -          -        Methylene chloride
  5.781 VV       2.24667 8.08515e-1    1.81647    Hexane
  6.496            -           -          -        Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0703.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 8.26990e4

1 Warnings or Errors :

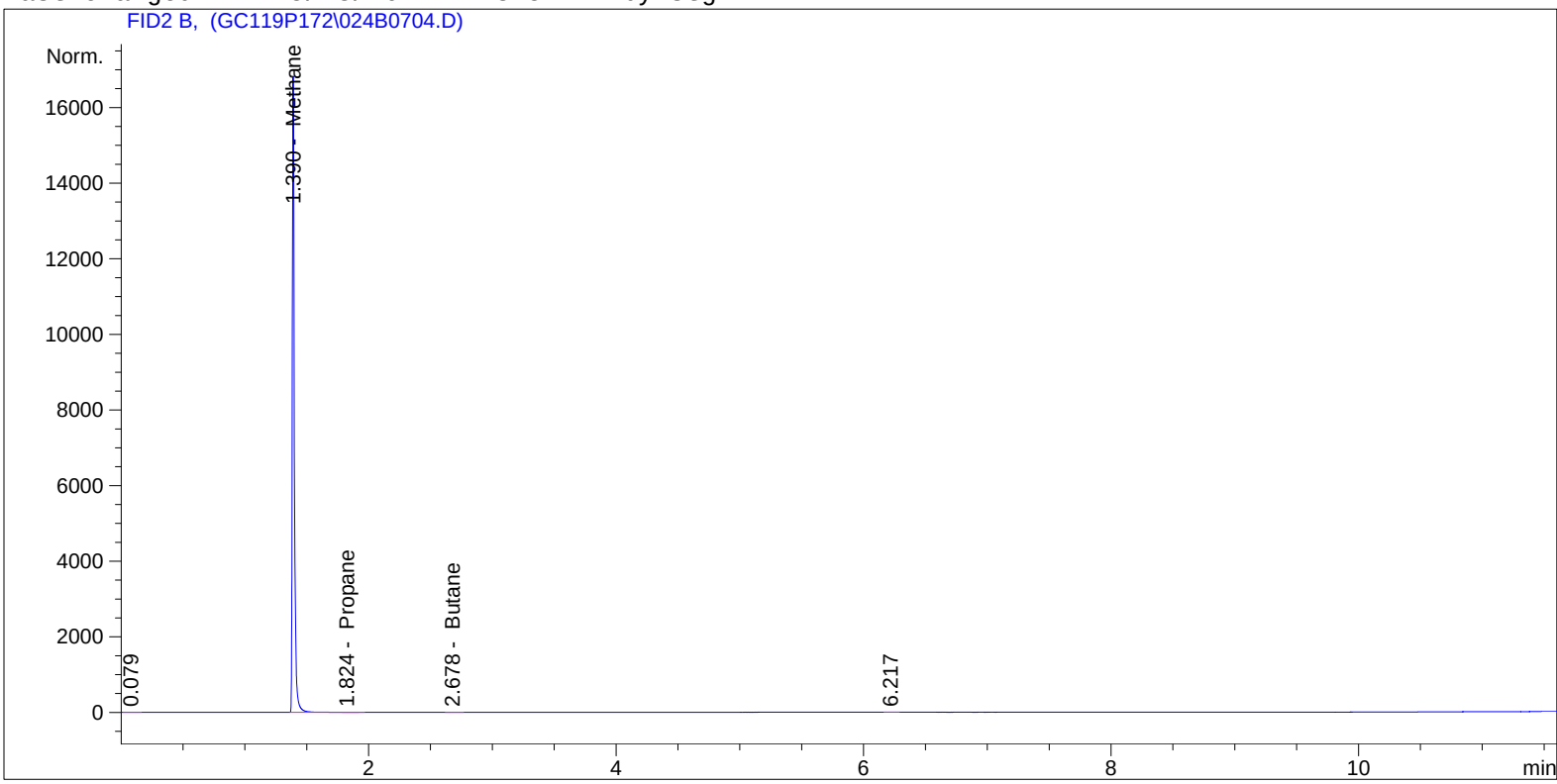
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0704.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 21-May-11, 10:35:57                Inj :   4
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.390 BB S   1.93947e4     4.25007 8.24290e4     Methane
  1.527            -           -          -        Ethane
  1.824 BB T   5.47751e-1    1.77040 9.69738e-1    Propane
  2.678 BB     5.49167e-1    1.24118 6.81617e-1    Butane
  3.453            -           -          -        Acetonitrile
  3.590            -           -          -        Acrolein
  3.699            -           -          -        Acetone
  4.106            -           -          -        Acrylonitrile
  4.186            -           -          -        Pentane
  4.500            -           -          -        Methylene chloride
  5.777            -           -          -        Hexane
  6.496            -           -          -        Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0704.D
Sample Name: gc114p102 #C11 ENV(1=0,3=377)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 8.24307e4

1 Warnings or Errors :

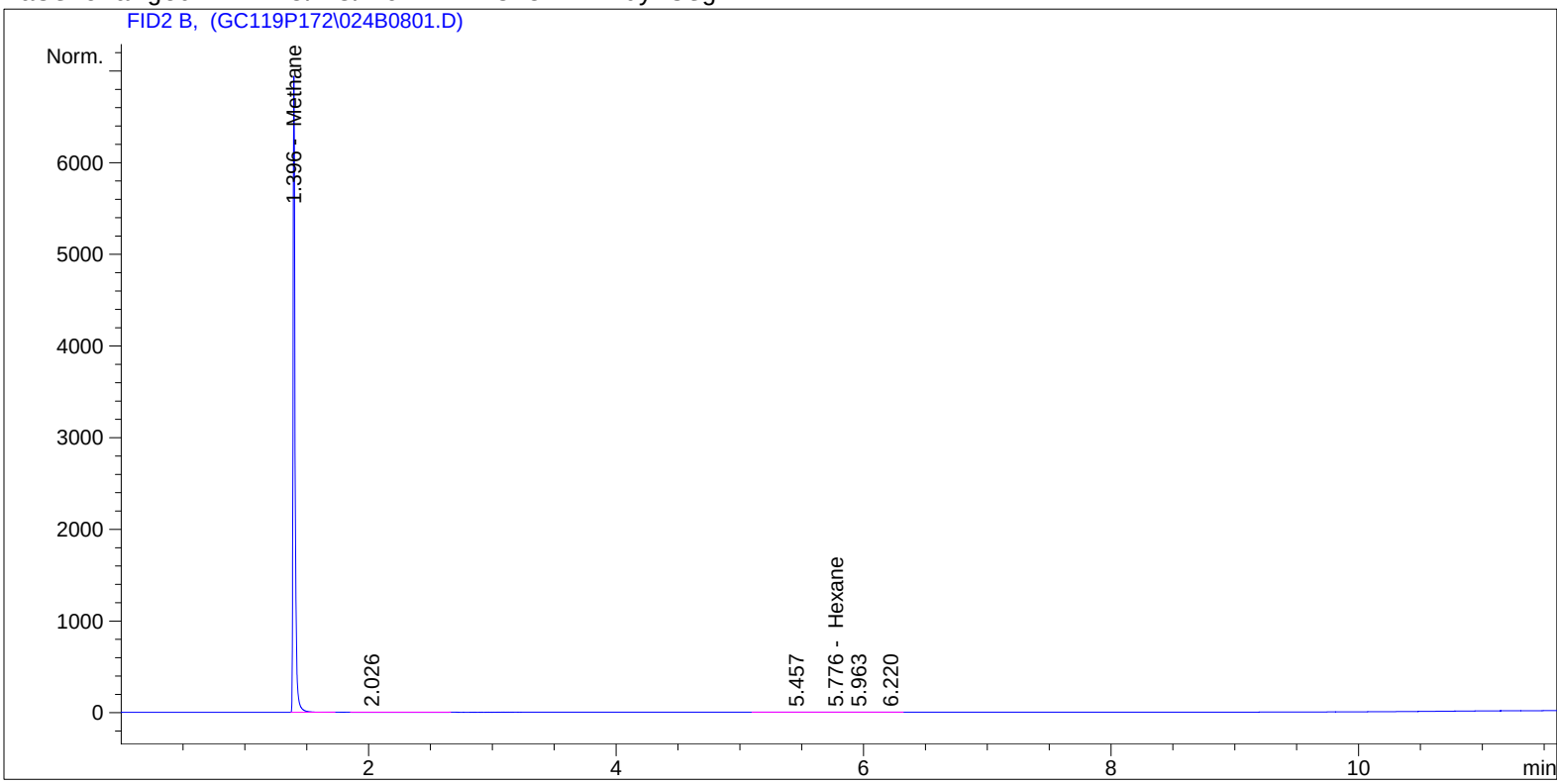
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0801.D
Sample Name: gc114p102 #C10 ENV(1=500,3=318.69)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 21-May-11, 10:55:19                Inj :   1
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.396	BB S	7892.46631	4.25010	3.35438e4		Methane
1.527		-	-	-		Ethane
1.833		-	-	-		Propane
2.683		-	-	-		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.776	VV	2.92272	8.06751e-1	2.35790		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0801.D
Sample Name: gc114p102 #C10 ENV(1=500,3=318.69)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.35462e4

1 Warnings or Errors :

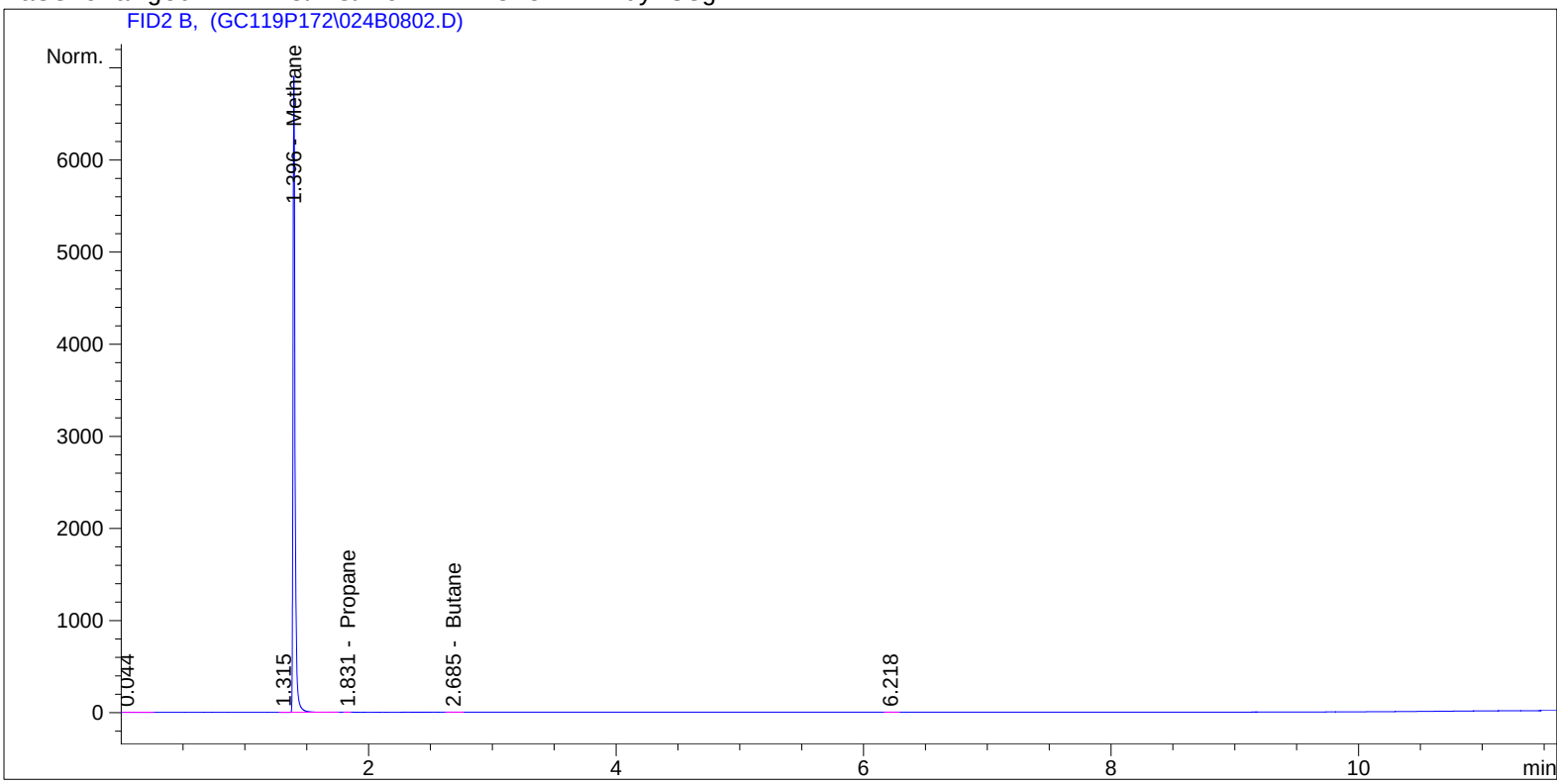
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0802.D
Sample Name: gc114p102 #C10 ENV(1=500,3=318.69)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :   8
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 11:15:09                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.396	VB S	7868.42627	4.25010	3.34416e4		Methane
1.527		-	-	-		Ethane
1.831	BP	1.75737e-1	1.77040	3.11125e-1		Propane
2.685	BV	4.77324e-1	1.24118	5.92447e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0802.D
Sample Name: gc114p102 #C10 ENV(1=500,3=318.69)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.34425e4

1 Warnings or Errors :

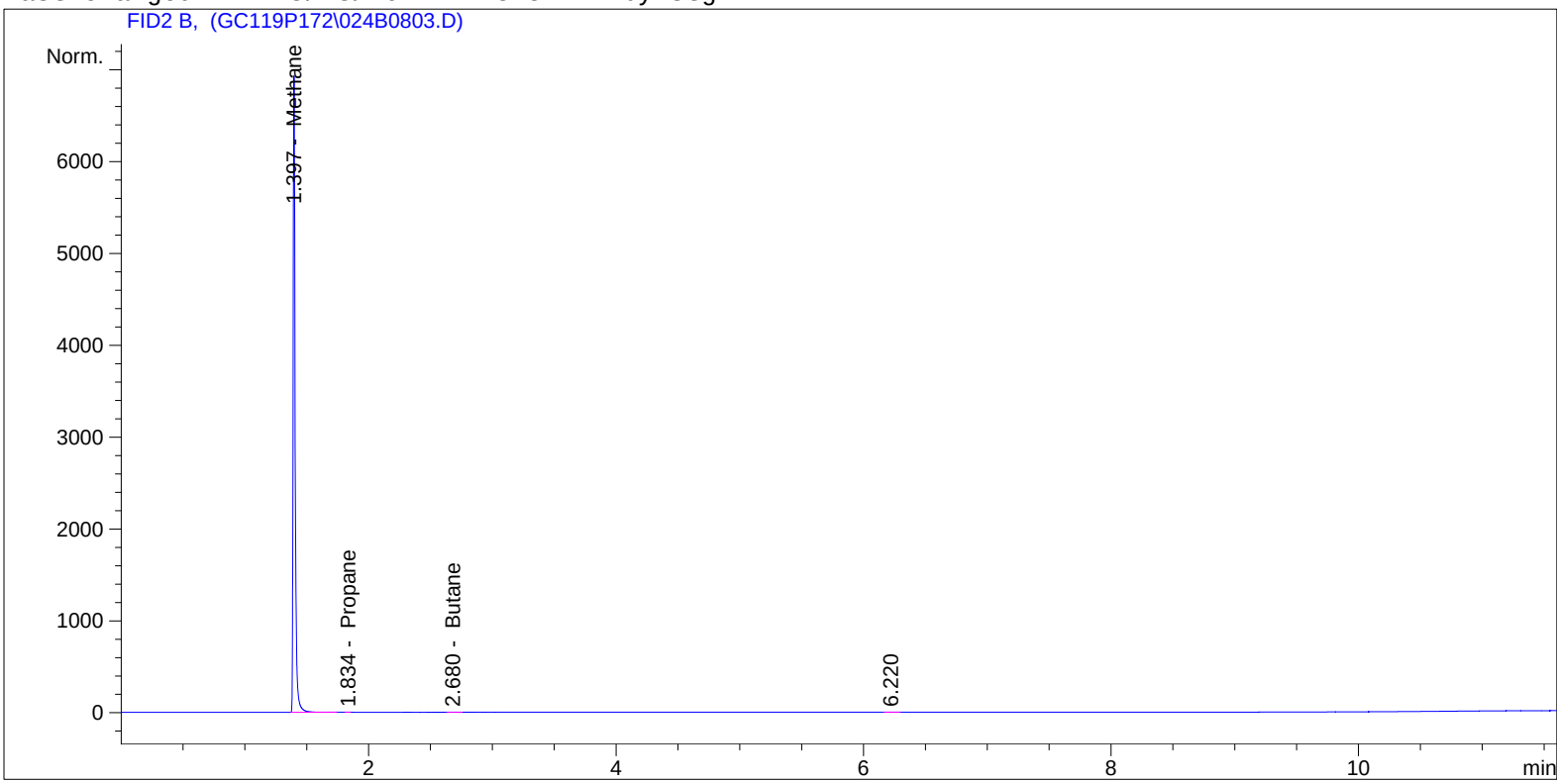
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0803.D
Sample Name: gc114p102 #C10 ENV(1=500,3=318.69)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :   8
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 21-May-11, 11:36:02                Inj :   3
                                               Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397	BB S	7900.53076	4.25010	3.35781e4		Methane
1.527		-	-	-		Ethane
1.834	PP	2.00036e-1	1.77040	3.54144e-1		Propane
2.680	BV	4.10894e-1	1.24118	5.09996e-1		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001110

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B0803.D
Sample Name: gc114p102 #C10 ENV(1=500,3=318.69)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3.35789e4

1 Warnings or Errors :

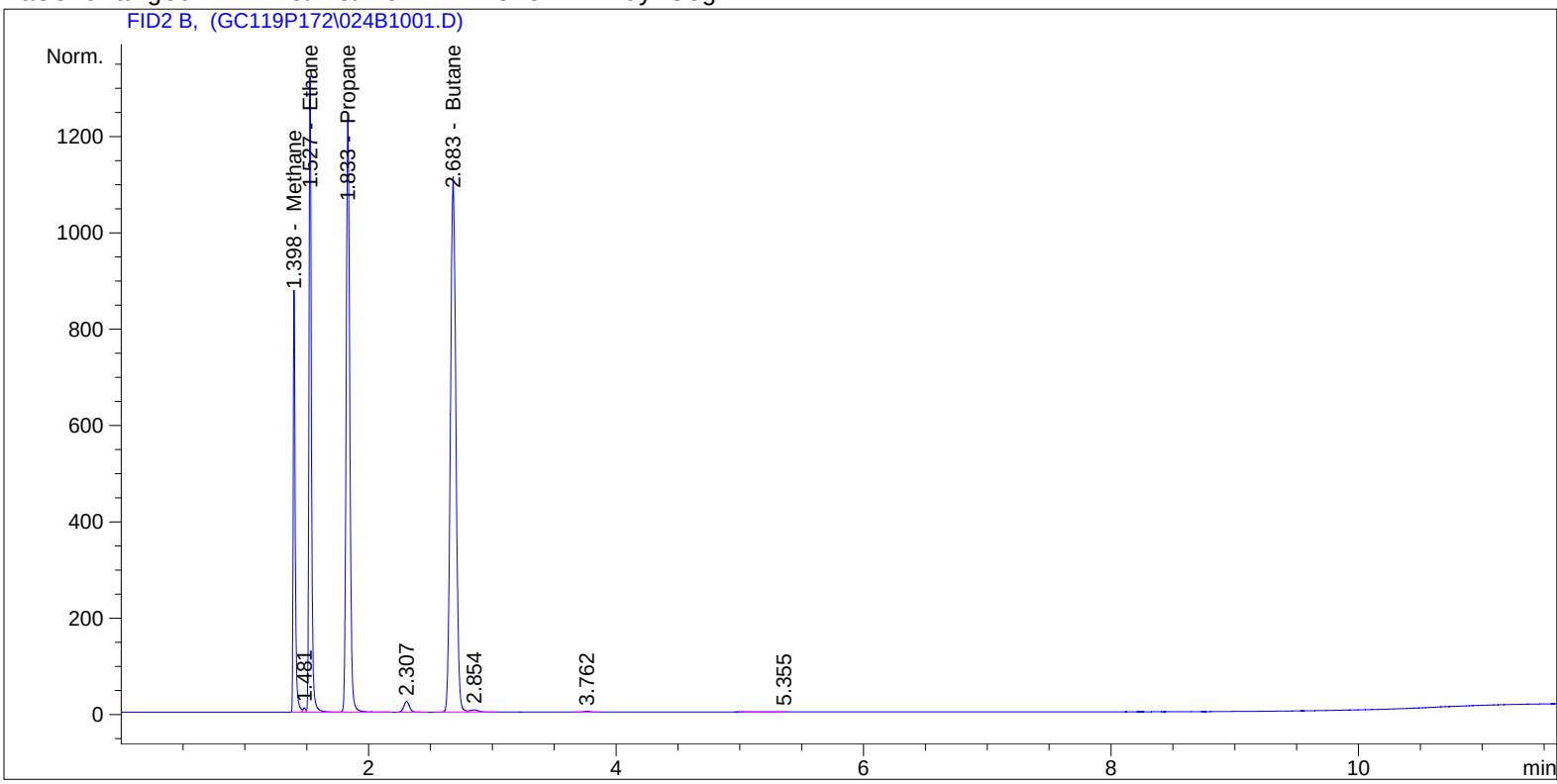
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1001.D
Sample Name: gc114p102 #C8 ENV(1=600,3=422.16)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  10
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 16:29:34                   Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.398	BV	987.90875	4.25044	4199.04517		Methane
1.527	VV	1788.95032	2.32560	4160.39043		Ethane
1.833	VB	2524.58008	1.59566	4028.37415		Propane
2.683	BV	3425.31079	1.18993	4075.89659		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001112

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1001.D
Sample Name: gc114p102 #C8 ENV(1=600,3=422.16)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.64637e4

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

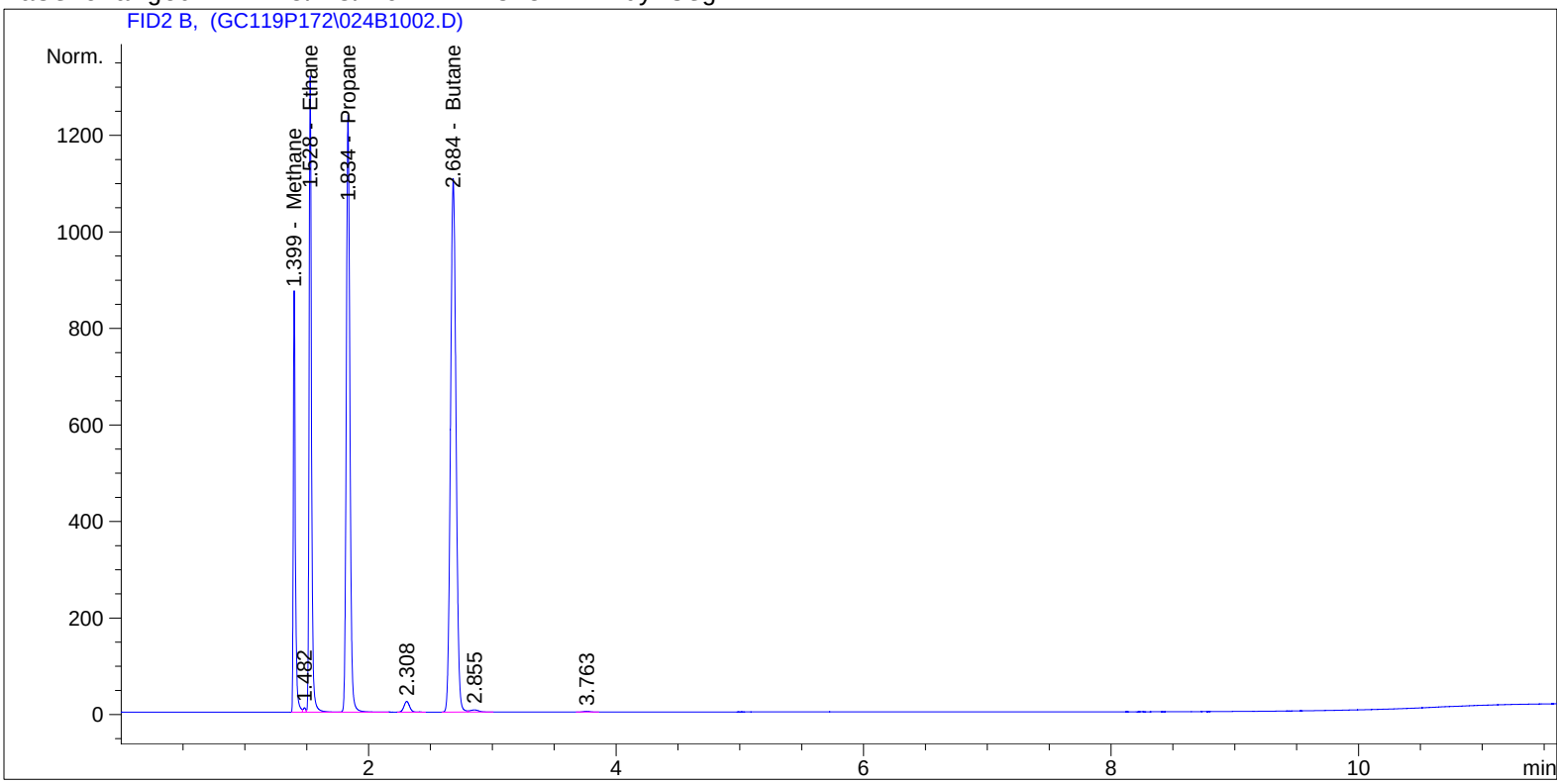
==========

*** End of Report ***

EM-BTRF-001113

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1002.D
Sample Name: gc114p102 #C8 ENV(1=600,3=422.16)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  10
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 16:48:52                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.399 BV      984.84955    4.25044 4186.04338    Methane
  1.528 VV     1782.99243    2.32560 4146.53584    Ethane
  1.834 VB     2514.83960    1.59566 4012.83241    Propane
  2.684 BV     3413.45923    1.18993 4061.79429    Butane
  3.453            -             -          -     Acetonitrile
  3.590            -             -          -     Acrolein
  3.699            -             -          -     Acetone
  4.106            -             -          -     Acrylonitrile
  4.186            -             -          -     Pentane
  4.500            -             -          -     Methylene chloride
  5.777            -             -          -     Hexane
  6.496            -             -          -     Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1002.D
Sample Name: gc114p102 #C8 ENV(1=600,3=422.16)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.64072e4

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

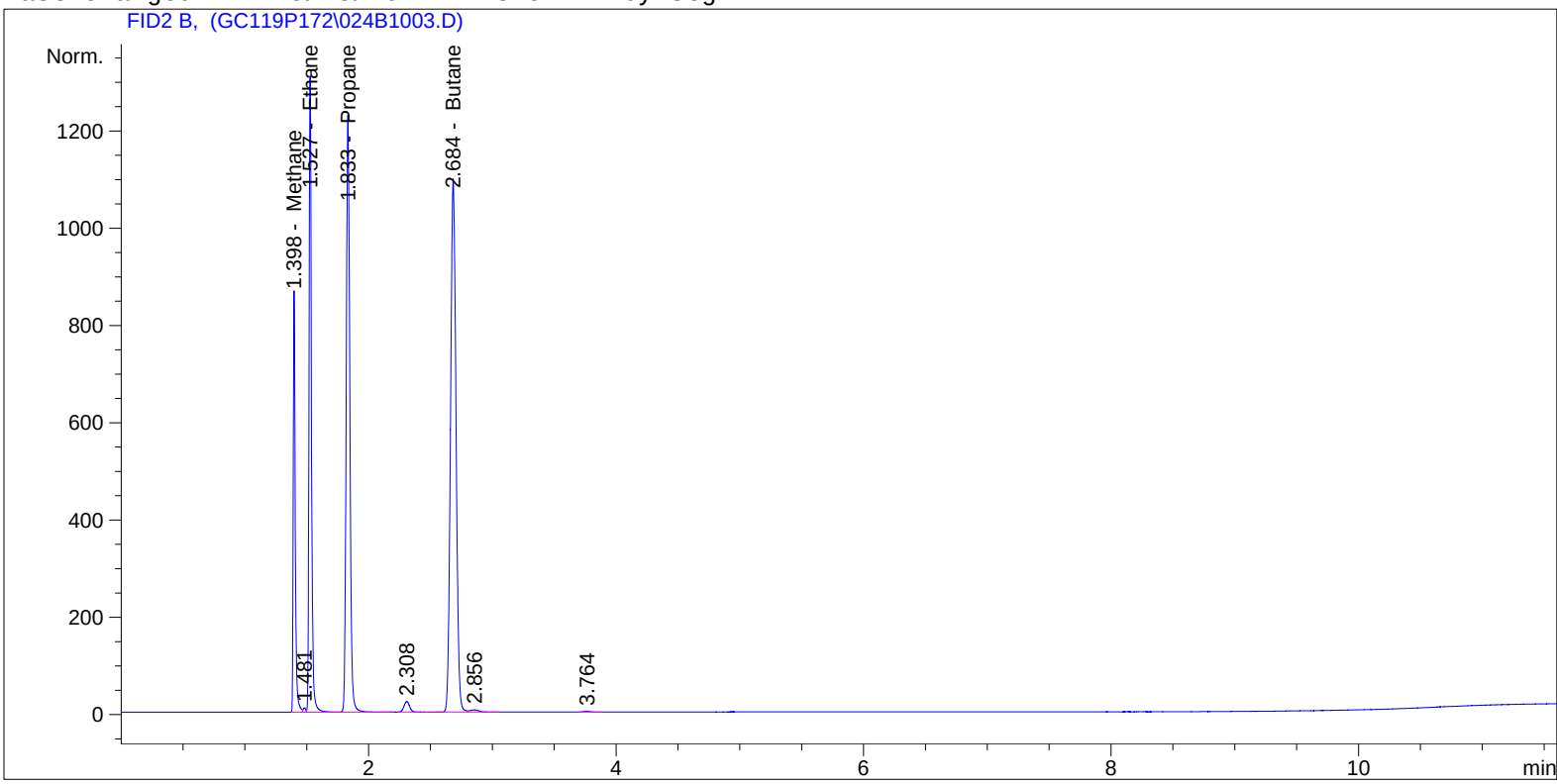
==========

*** End of Report ***

EM-BTRF-001115

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1003.D
Sample Name: gc114p102 #C8 ENV(1=600,3=422.16)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  10
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 17:08:04                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.398 BV      976.67841    4.25044 4151.31558    Methane
  1.527 VV     1768.56018    2.32561 4112.97480    Ethane
  1.833 VB     2494.64307    1.59566 3980.60717    Propane
  2.684 VV     3384.70020    1.18994 4027.57361    Butane
  3.453            -            -          -      Acetonitrile
  3.590            -            -          -      Acrolein
  3.699            -            -          -      Acetone
  4.106            -            -          -      Acrylonitrile
  4.186            -            -          -      Pentane
  4.500            -            -          -      Methylene chloride
  5.777            -            -          -      Hexane
  6.496            -            -          -      Benzene
```

EM-BTRF-001116

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1003.D
Sample Name: gc114p102 #C8 ENV(1=600,3=422.16)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.62725e4

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

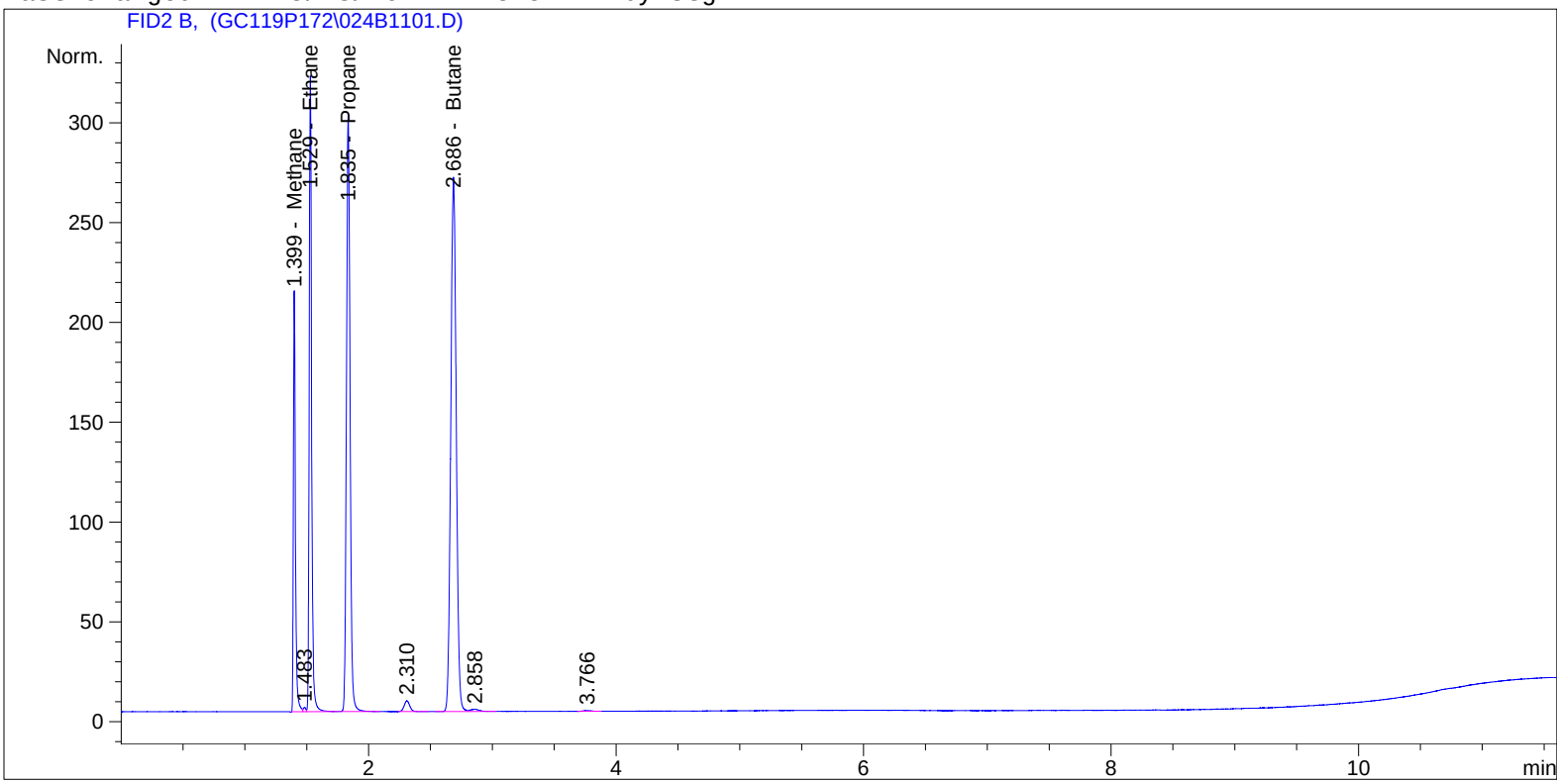
==========

*** End of Report ***

EM-BTRF-001117

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1101.D
Sample Name: gc114p102 #C7 ENV(1=900,3=105.54)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  11
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 17:27:10                   Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV	238.03296	4.25165	1012.03189		Methane
1.529	VB	431.22543	2.32618	1003.10950		Ethane
1.835	BB	607.94836	1.59591	970.22947		Propane
2.686	BV	825.76697	1.19001	982.67157		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001118

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1101.D
Sample Name: gc114p102 #C7 ENV(1=900,3=105.54)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3968.04243

1 Warnings or Errors :

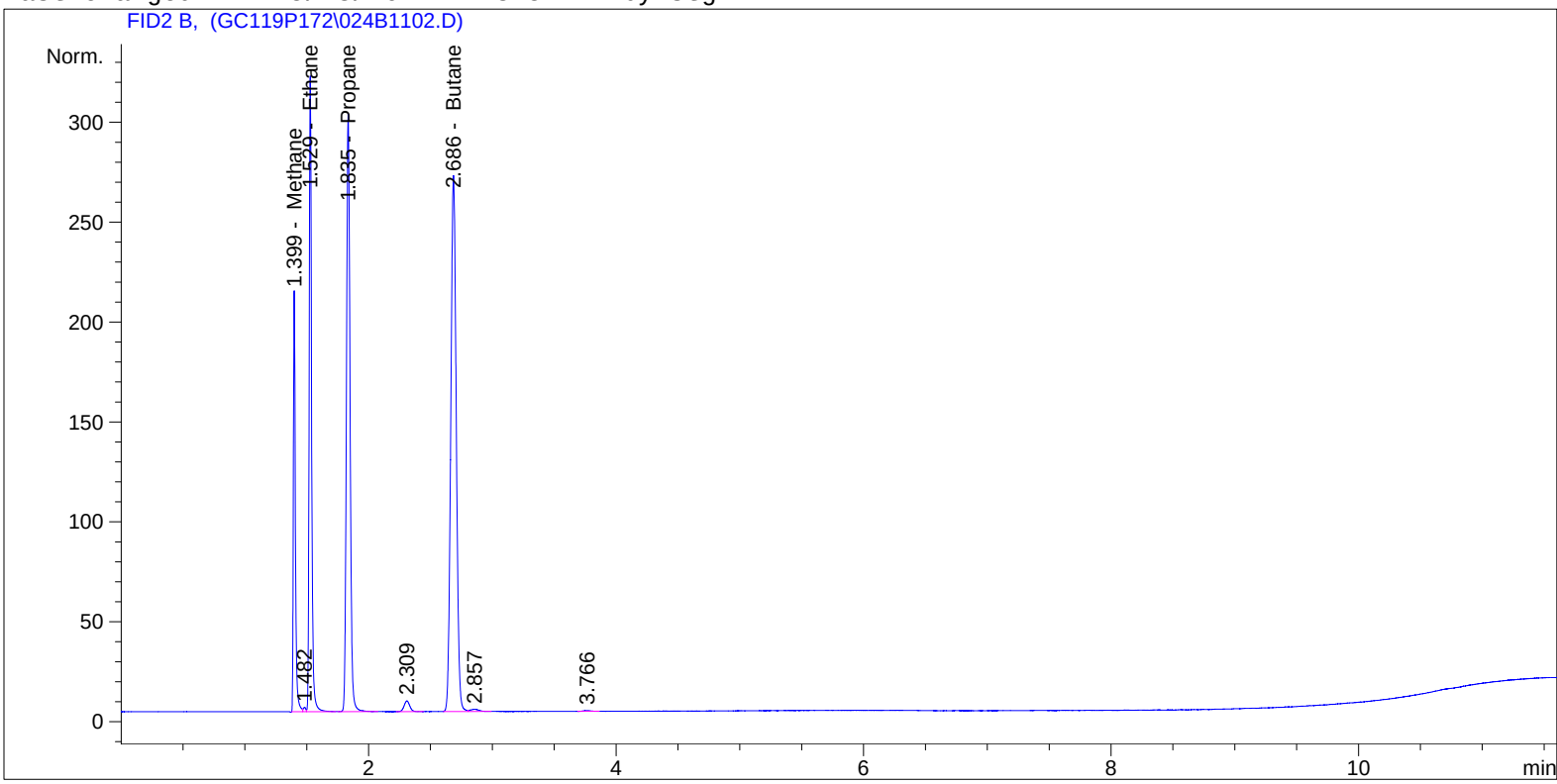
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1102.D
Sample Name: gc114p102 #C7 ENV(1=900,3=105.54)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  11
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 17:46:20                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV	238.04259	4.25165	1012.07281		Methane
1.529	VB	431.10846	2.32618	1002.83749		Ethane
1.835	PB	607.76740	1.59591	969.94072		Propane
2.686	BV	825.29401	1.19001	982.10879		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001120

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1102.D
Sample Name: gc114p102 #C7 ENV(1=900,3=105.54)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3966.95980

1 Warnings or Errors :

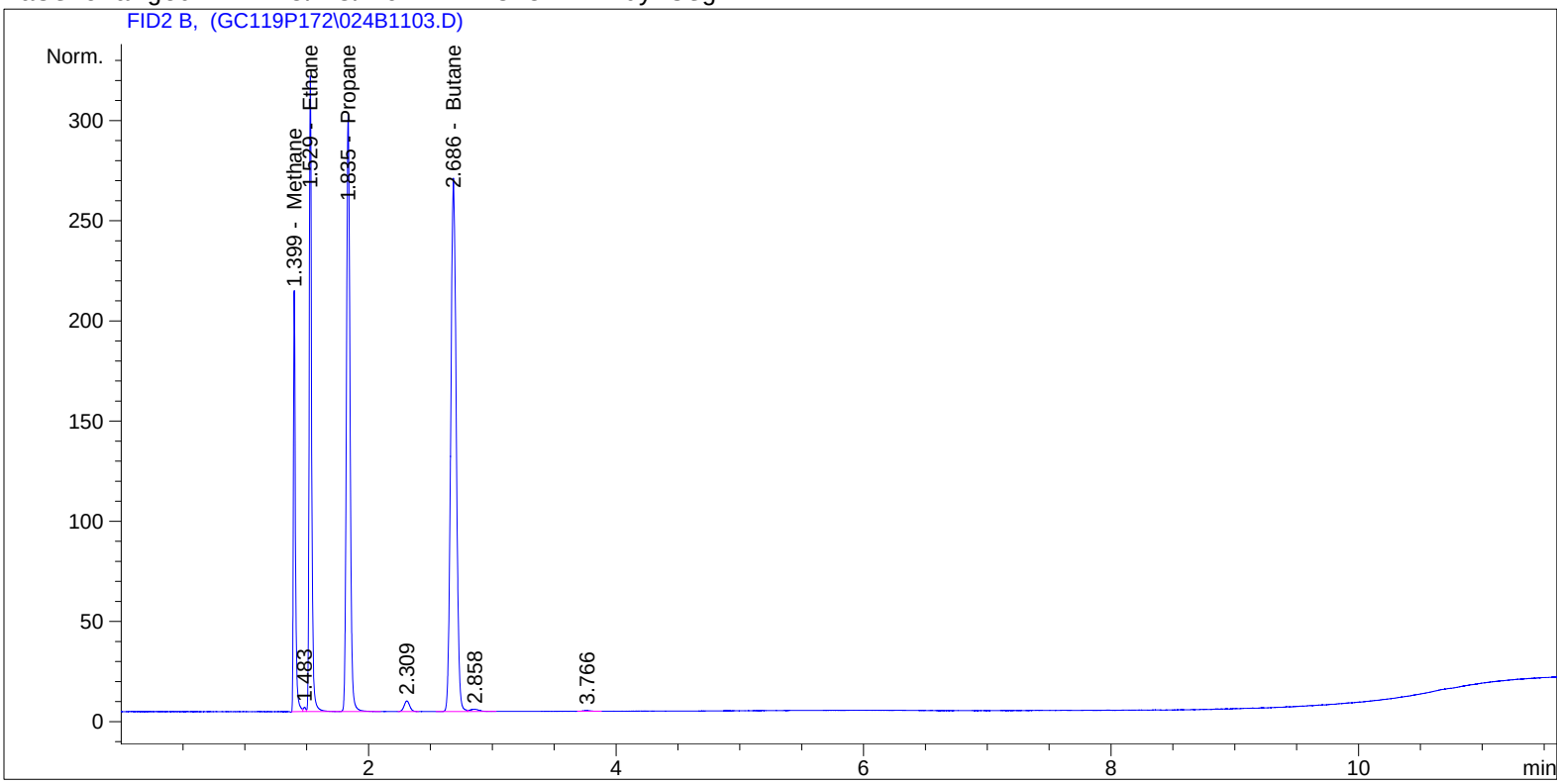
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1103.D
Sample Name: gc114p102 #C7 ENV(1=900,3=105.54)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  11
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 18:05:33                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV	236.82468	4.25165	1006.89662		Methane
1.529	VV	428.95789	2.32619	997.83650		Ethane
1.835	VB	604.54755	1.59591	964.80318		Propane
2.686	BV	820.81104	1.19001	976.77446		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1103.D
Sample Name: gc114p102 #C7 ENV(1=900,3=105.54)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 3946.31076

1 Warnings or Errors :

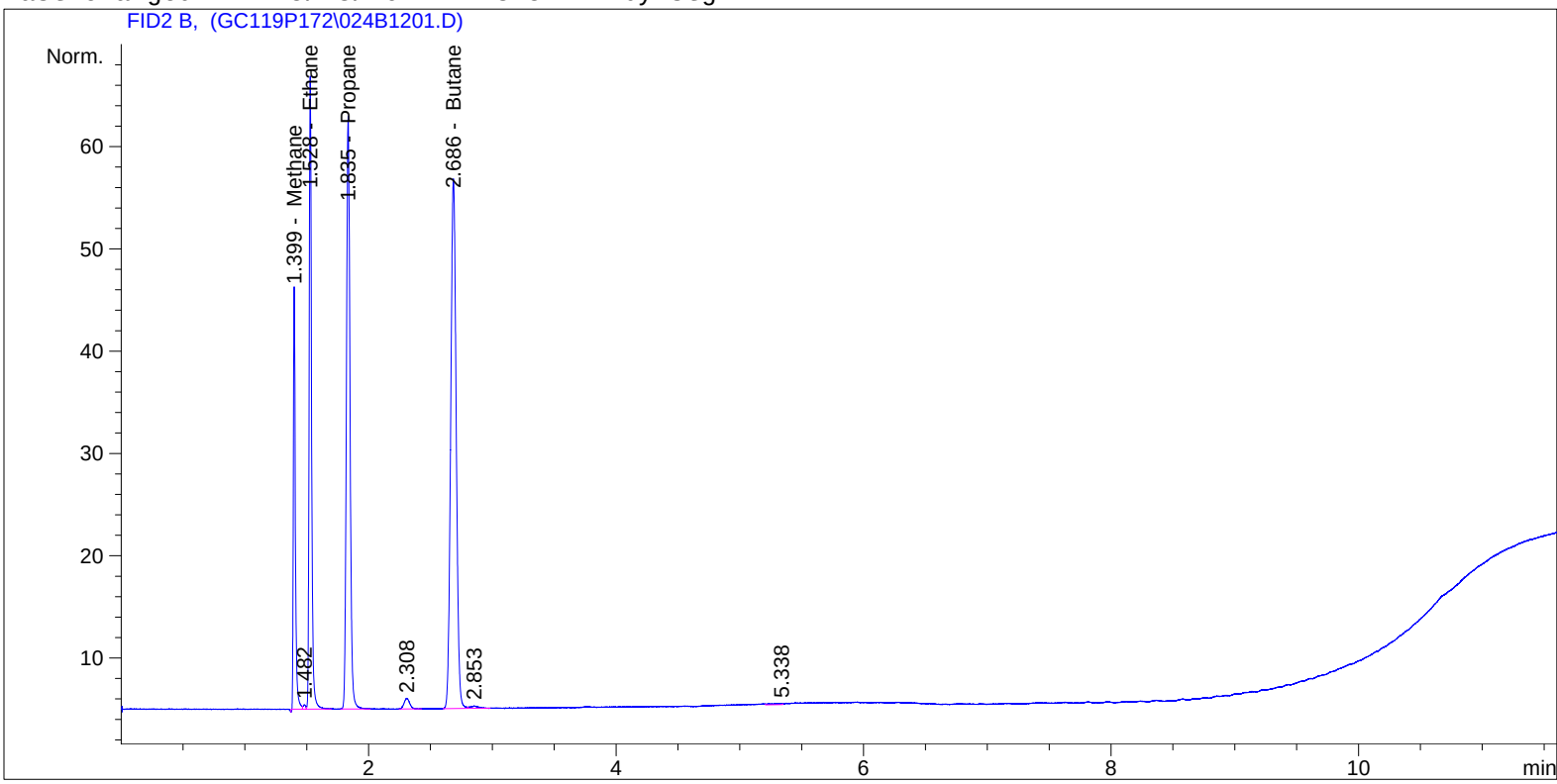
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1201.D
Sample Name: gc114p102 #C6 ENV(1=980,3=21.11)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  12
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 21-May-11, 18:24:45                    Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	VV	46.43449	4.25821	197.72790		Methane
1.528	VB	83.63244	2.32936	194.80971		Ethane
1.835	BB	117.63439	1.59726	187.89291		Propane
2.686	BV	159.45380	1.19043	189.81840		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001124

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1201.D
Sample Name: gc114p102 #C6 ENV(1=980,3=21.11)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 770.24891

1 Warnings or Errors :

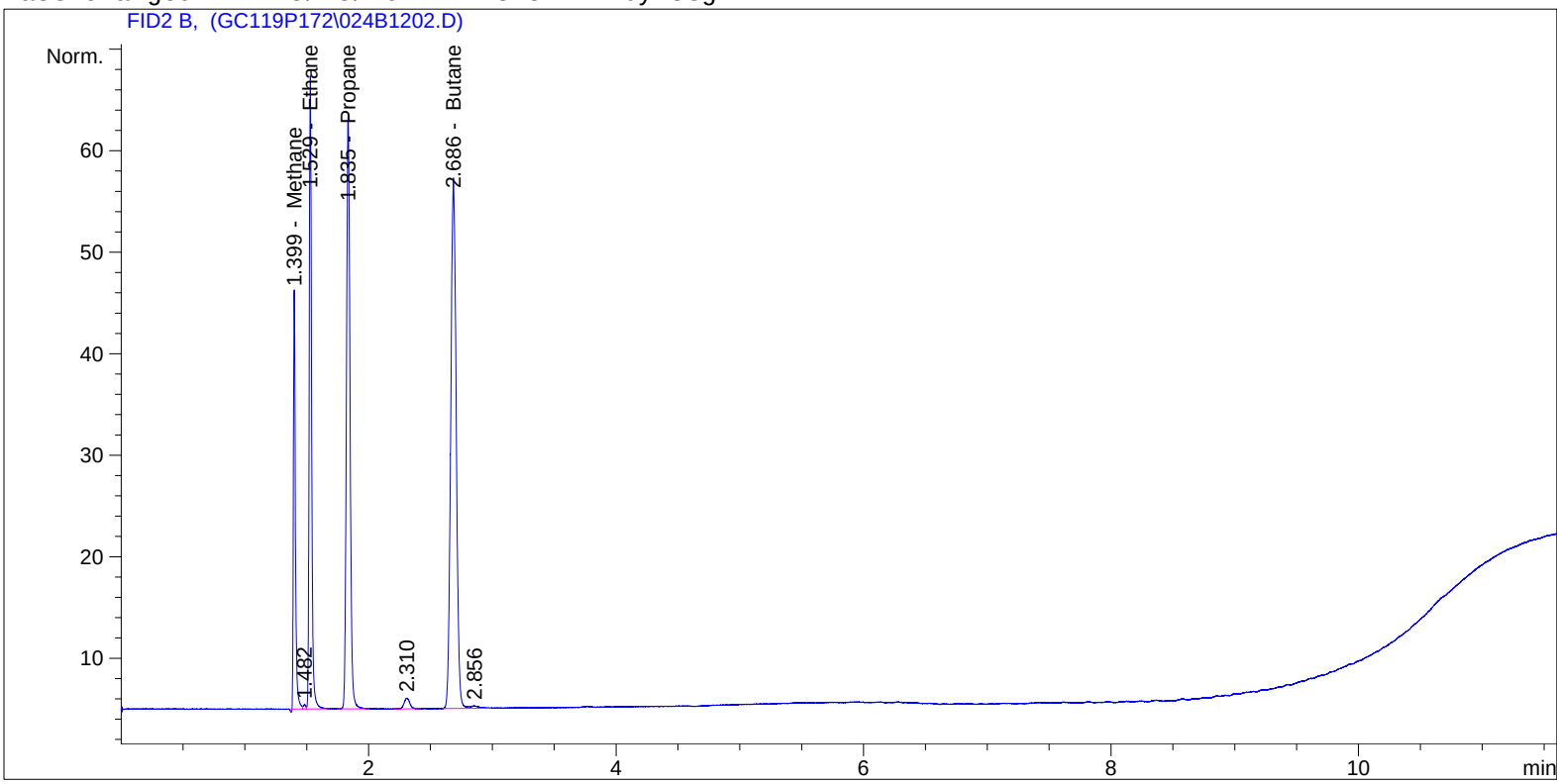
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1202.D
Sample Name: gc114p102 #C6 ENV(1=980,3=21.11)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  12
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 21-May-11, 18:43:58                    Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	VV	46.42485	4.25821	197.68693		Methane
1.529	VB	84.10495	2.32933	195.90850		Ethane
1.835	BB	118.61958	1.59725	189.46485		Propane
2.686	BV	161.21057	1.19042	191.90881		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.186		-	-	-		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001126

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1202.D
Sample Name: gc114p102 #C6 ENV(1=980,3=21.11)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 774.96908

1 Warnings or Errors :

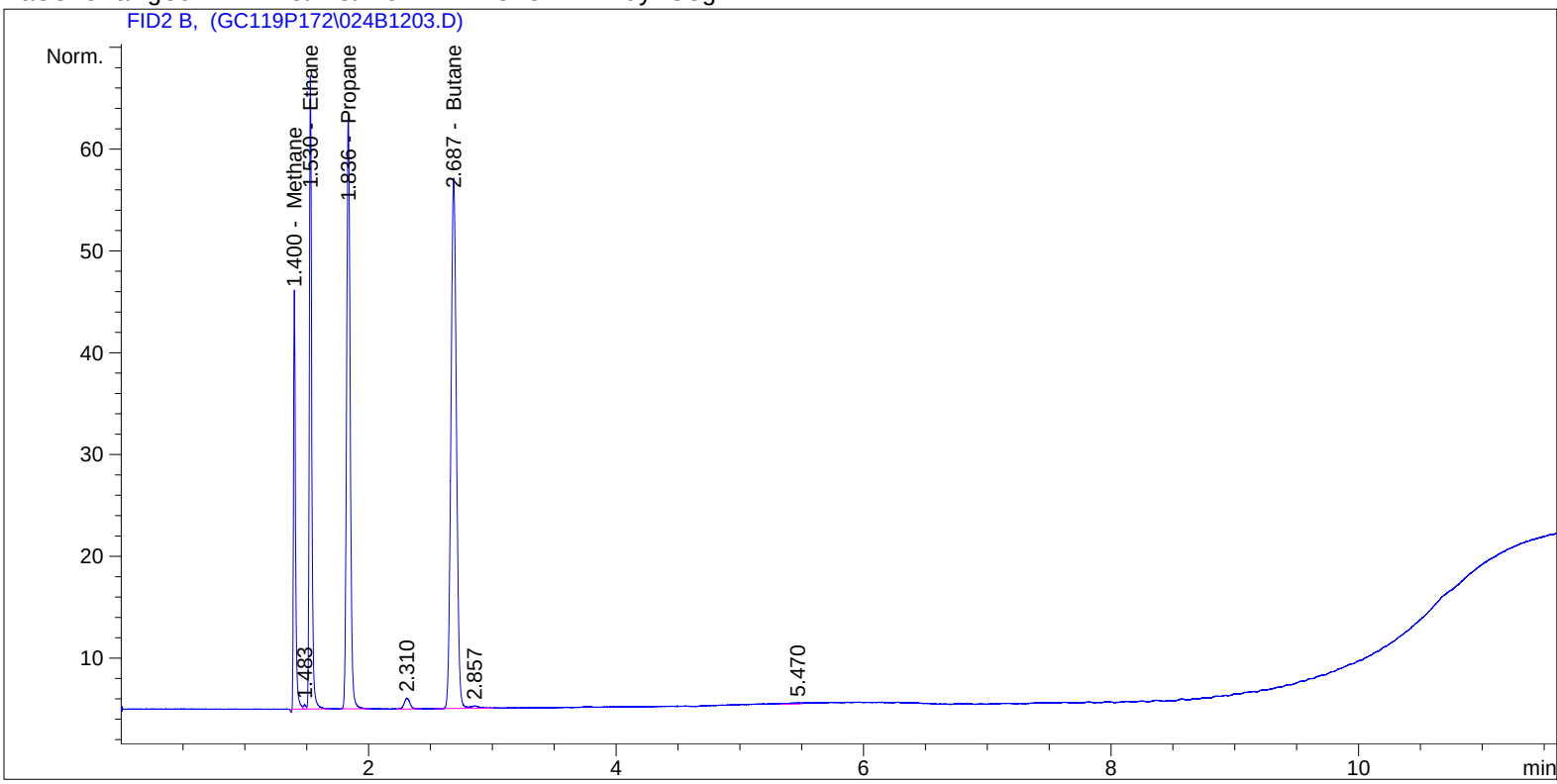
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1203.D
Sample Name: gc114p102 #C6 ENV(1=980,3=21.11)

```
==========================================================================
Acq. Operator   : tbo                          Seq. Line :  12
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 21-May-11, 19:03:07                Inj :   3
                                              Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400 VV       46.31731    4.25823  197.22984    Methane
  1.530 VB       83.91653    2.32934  195.47034    Ethane
  1.836 BB      118.28161    1.59725  188.92560    Propane
  2.687 BV      160.69933    1.19042  191.30047    Butane
  3.453             -           -          -       Acetonitrile
  3.590             -           -          -       Acrolein
  3.699             -           -          -       Acetone
  4.106             -           -          -       Acrylonitrile
  4.186             -           -          -       Pentane
  4.500             -           -          -       Methylene chloride
  5.777             -           -          -       Hexane
  6.496             -           -          -       Benzene
```

EM-BTRF-001128

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1203.D
Sample Name: gc114p102 #C6 ENV(1=980,3=21.11)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 772.92624

1 Warnings or Errors :

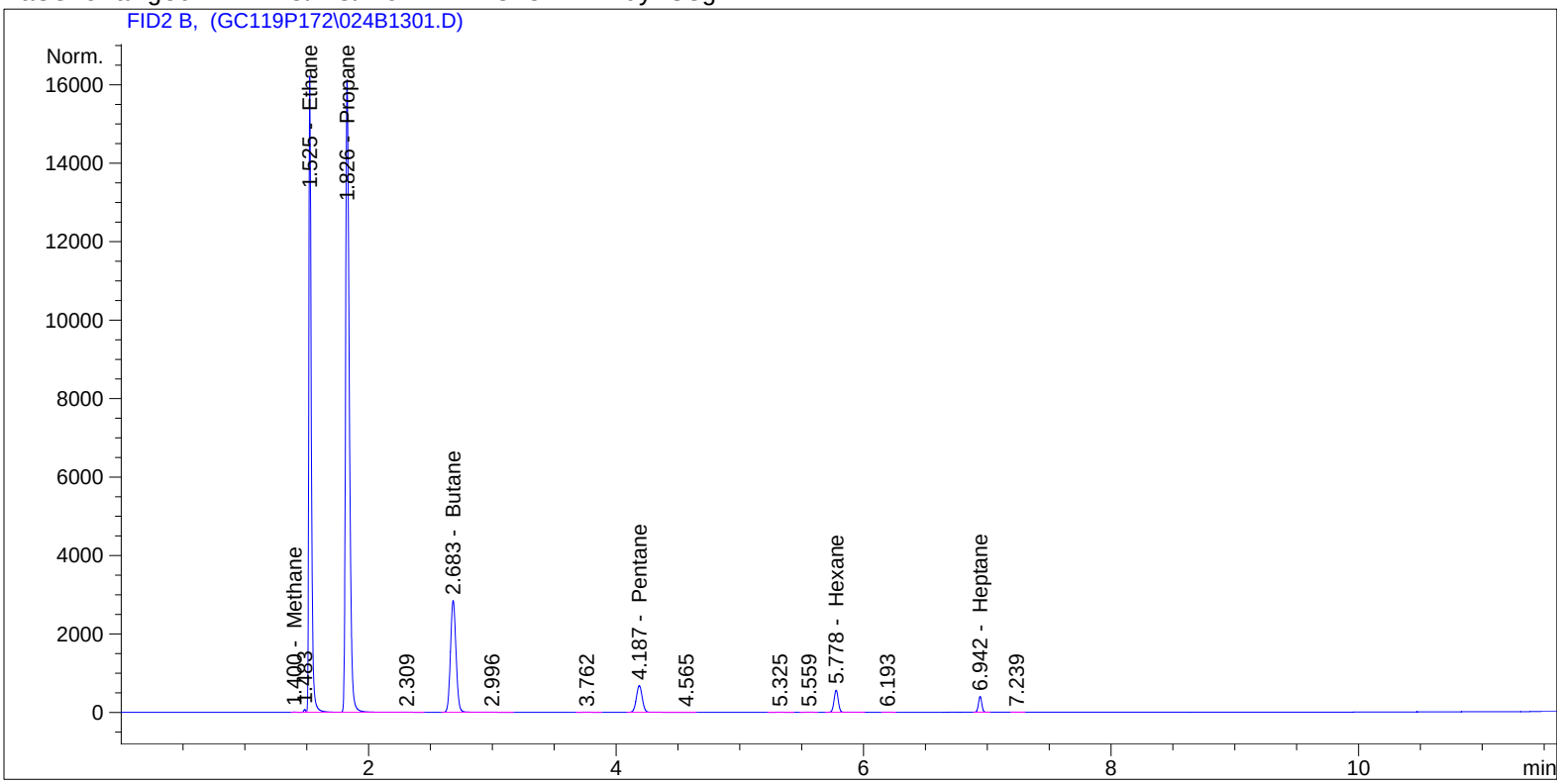
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1301.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  13
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 19:34:35                   Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400 VV        7.24547    4.30233   31.17239    Methane
  1.525 VV     2.22010e4     2.32544 5.16271e4     Ethane
  1.826 VV     3.36738e4     1.59559 5.37295e4     Propane
  2.683 BV     8836.84180    1.18992 1.05151e4     Butane
  3.453             -          -          -        Acetonitrile
  3.590             -          -          -        Acrolein
  3.699             -          -          -        Acetone
  4.106             -          -          -        Acrylonitrile
  4.187 BB     2230.41968 9.61022e-1 2143.48183    Pentane
  4.500             -          -          -        Methylene chloride
  5.778 VB     1325.43579 7.97053e-1 1056.44282    Hexane
  6.496             -          -          -        Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1301.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	755.43555	6.98635e-1	527.77354		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.19631e5

1 Warnings or Errors :

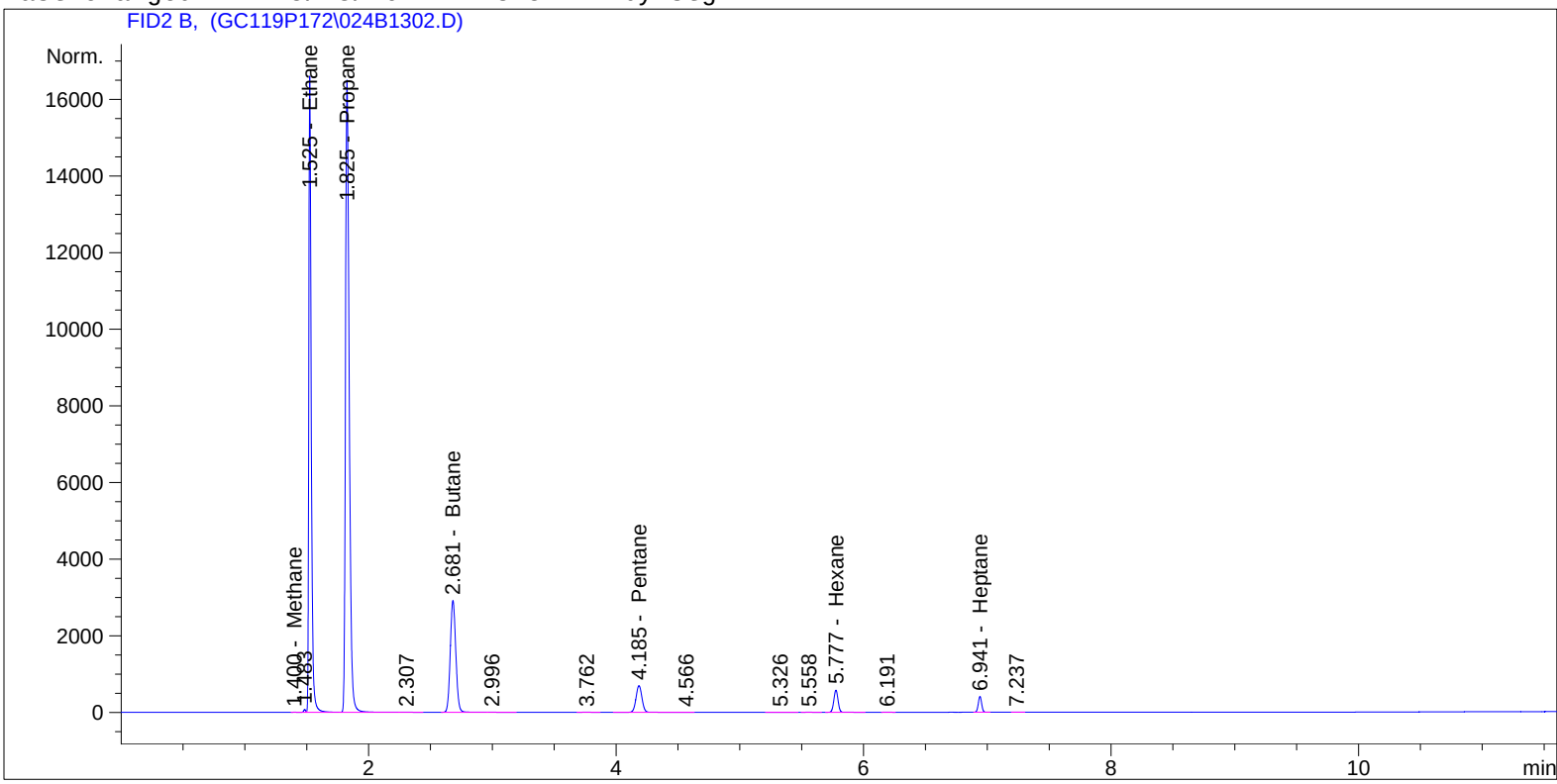
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1302.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  13
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 20:24:21                   Inj :   2
                                                 Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400 VV        2.52278    4.40019   11.10068    Methane
  1.525 VV     2.27367e4     2.32543 5.28727e4     Ethane
  1.825 VV     3.44883e4     1.59559 5.50291e4     Propane
  2.681 BV     9042.70020    1.18992 1.07601e4     Butane
  3.453             -          -          -        Acetonitrile
  3.590             -          -          -        Acrolein
  3.699             -          -          -        Acetone
  4.106             -          -          -        Acrylonitrile
  4.185 BB     2285.83862 9.61021e-1 2196.73789    Pentane
  4.500             -          -          -        Methylene chloride
  5.777 BB     1359.10449 7.97053e-1 1083.27784    Hexane
  6.496             -          -          -        Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1302.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.941	BB	776.59595	6.98628e-1	542.55196		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.22496e5

1 Warnings or Errors :

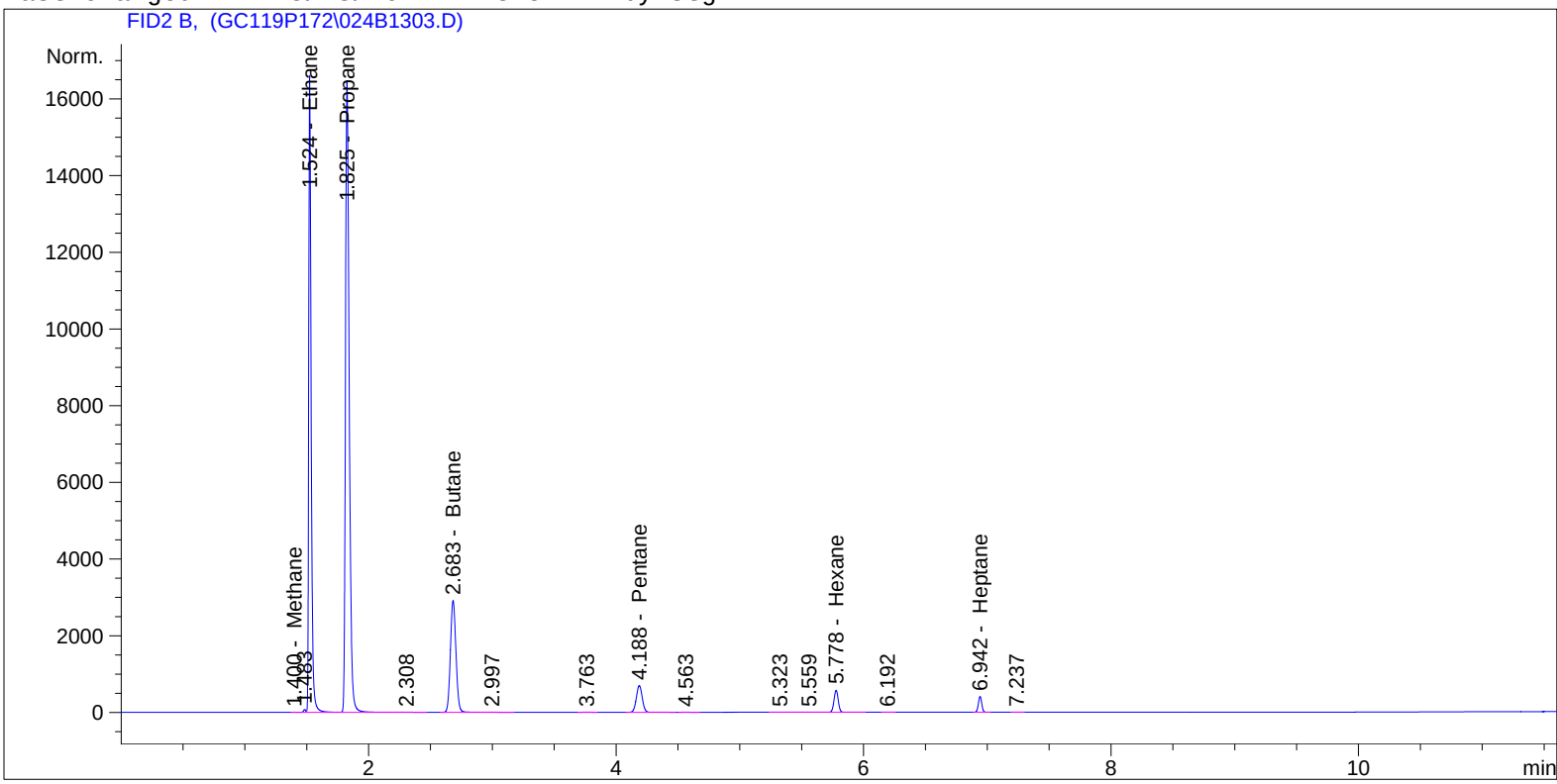
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1303.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  13
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 20:43:22                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.400	VB	6.53025e-1	4.83004	3.15414		Methane
1.524	VV	2.27181e4	2.32543	5.28294e4		Ethane
1.825	VV	3.44581e4	1.59559	5.49810e4		Propane
2.683	VV	9033.43945	1.18992	1.07491e4		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.188	BB	2285.54565	9.61021e-1	2196.45635		Pentane
4.500		-	-	-		Methylene chloride
5.778	VB	1359.86572	7.97053e-1	1083.88457		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1303.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	776.70984	6.98628e-1	542.63150		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.22386e5

1 Warnings or Errors :

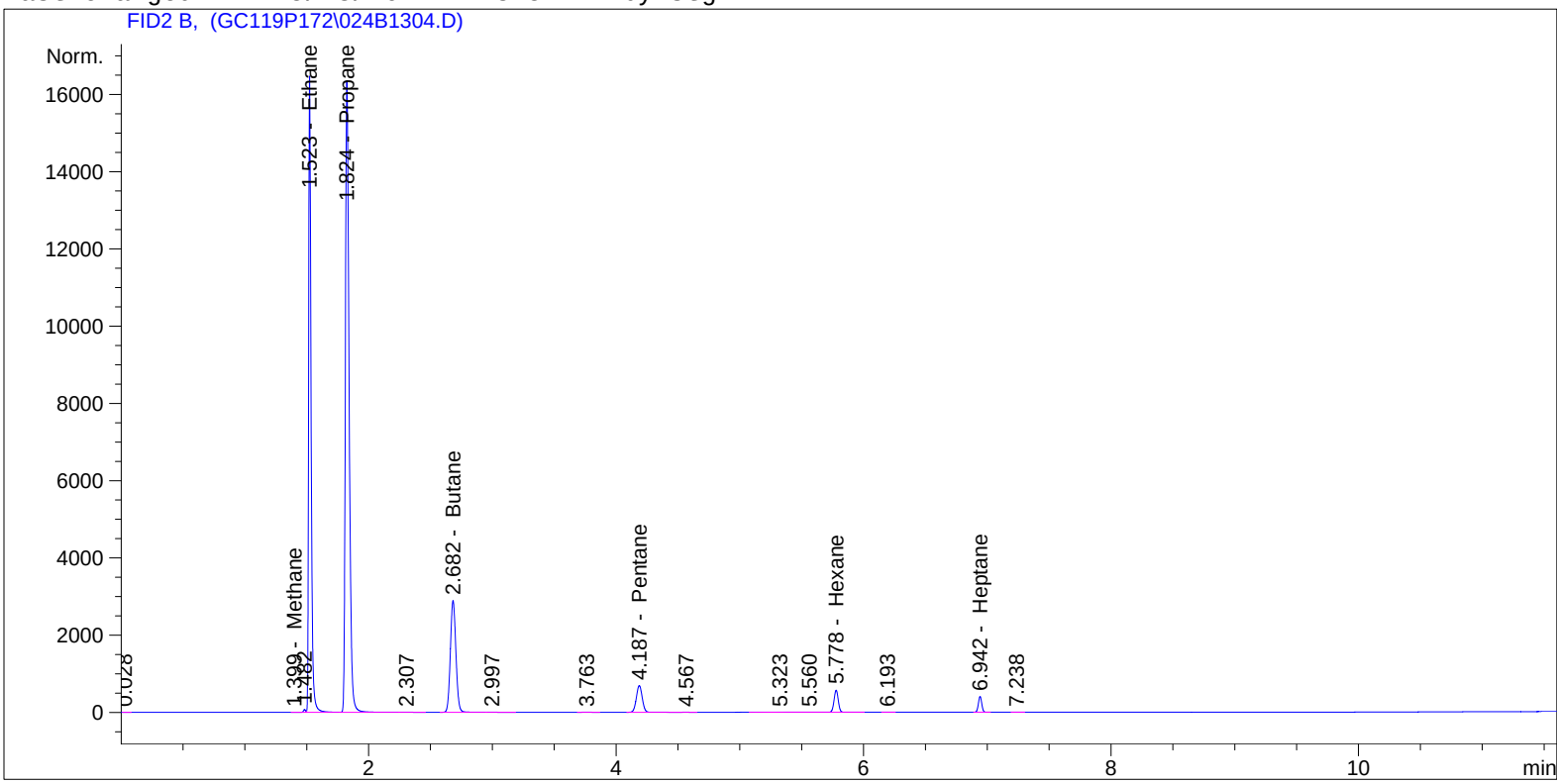
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1304.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  13
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 21:02:30                   Inj :   4
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.399 VV     2.46258e-1    5.24293    1.29111    Methane
  1.523 VV     2.25267e4     2.32543 5.23844e4     Ethane
  1.824 VV     3.41650e4     1.59559 5.45133e4     Propane
  2.682 VV     8955.45020    1.18992 1.06563e4     Butane
  3.453            -          -          -         Acetonitrile
  3.590            -          -          -         Acrolein
  3.699            -          -          -         Acetone
  4.106            -          -          -         Acrylonitrile
  4.187 BV     2266.48364 9.61021e-1 2178.13829    Pentane
  4.500            -          -          -         Methylene chloride
  5.778 VB     1348.15454 7.97053e-1 1074.55038    Hexane
  6.496            -          -          -         Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1304.D
Sample Name: gc119p172 #C14 ENV(1=0,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	769.69775	6.98630e-1	537.73426		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 1.21346e5

1 Warnings or Errors :

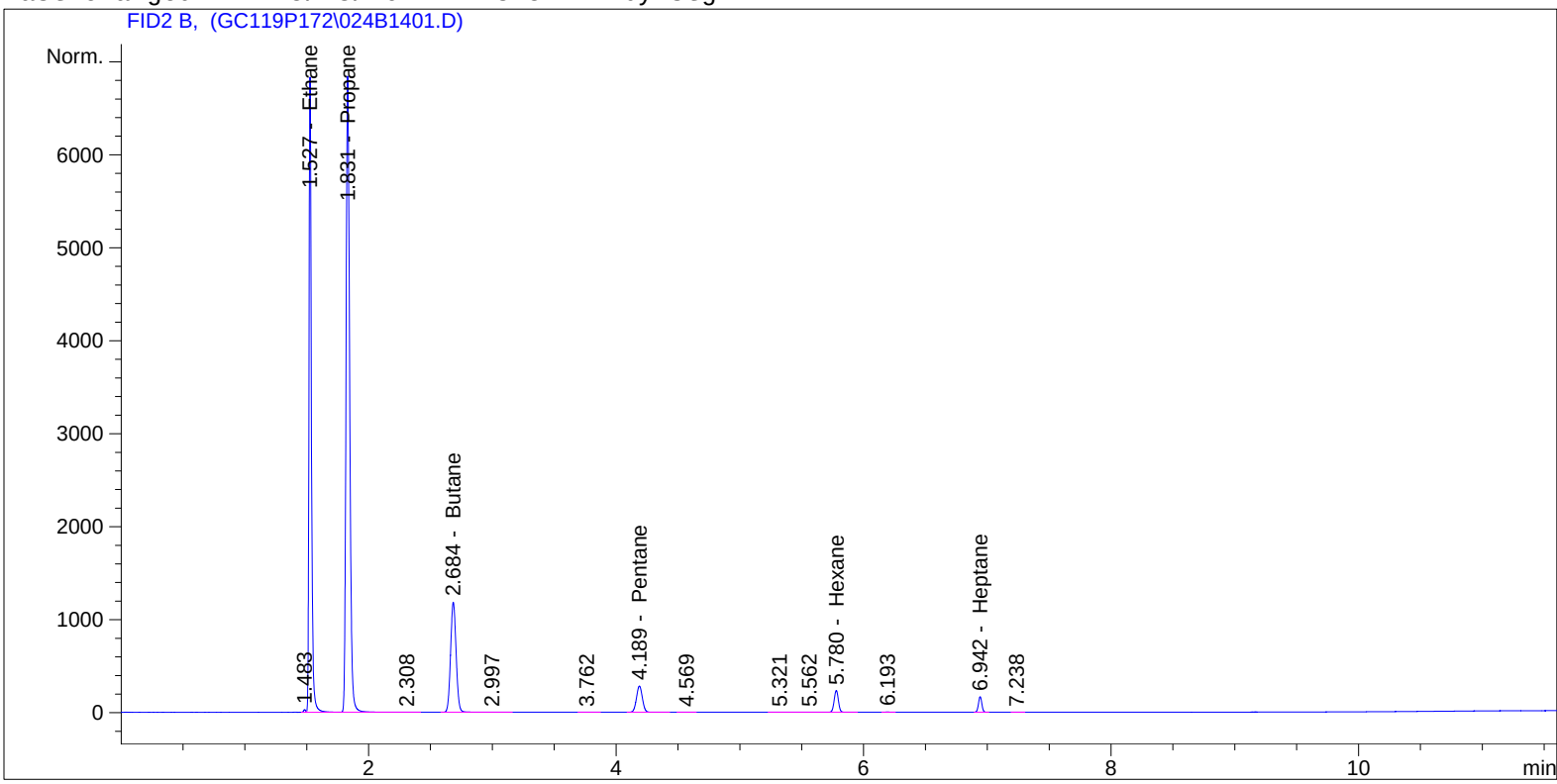
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1401.D
Sample Name: gc119p172 #C13 ENV(1=550,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  14
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 21:21:41                   Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.527	VV	9242.90918	2.32546	2.14940e4		Ethane
1.831	VV	1.40078e4	1.59560	2.23509e4		Propane
2.684	VV	3665.69214	1.18993	4361.92893		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.189	BB	926.63586	9.61092e-1	890.58204		Pentane
4.500		-	-	-		Methylene chloride
5.780	VB	551.12903	7.97083e-1	439.29574		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001138

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1401.D
Sample Name: gc119p172 #C13 ENV(1=550,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	314.59702	6.98964e-1	219.89187		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.97566e4

1 Warnings or Errors :

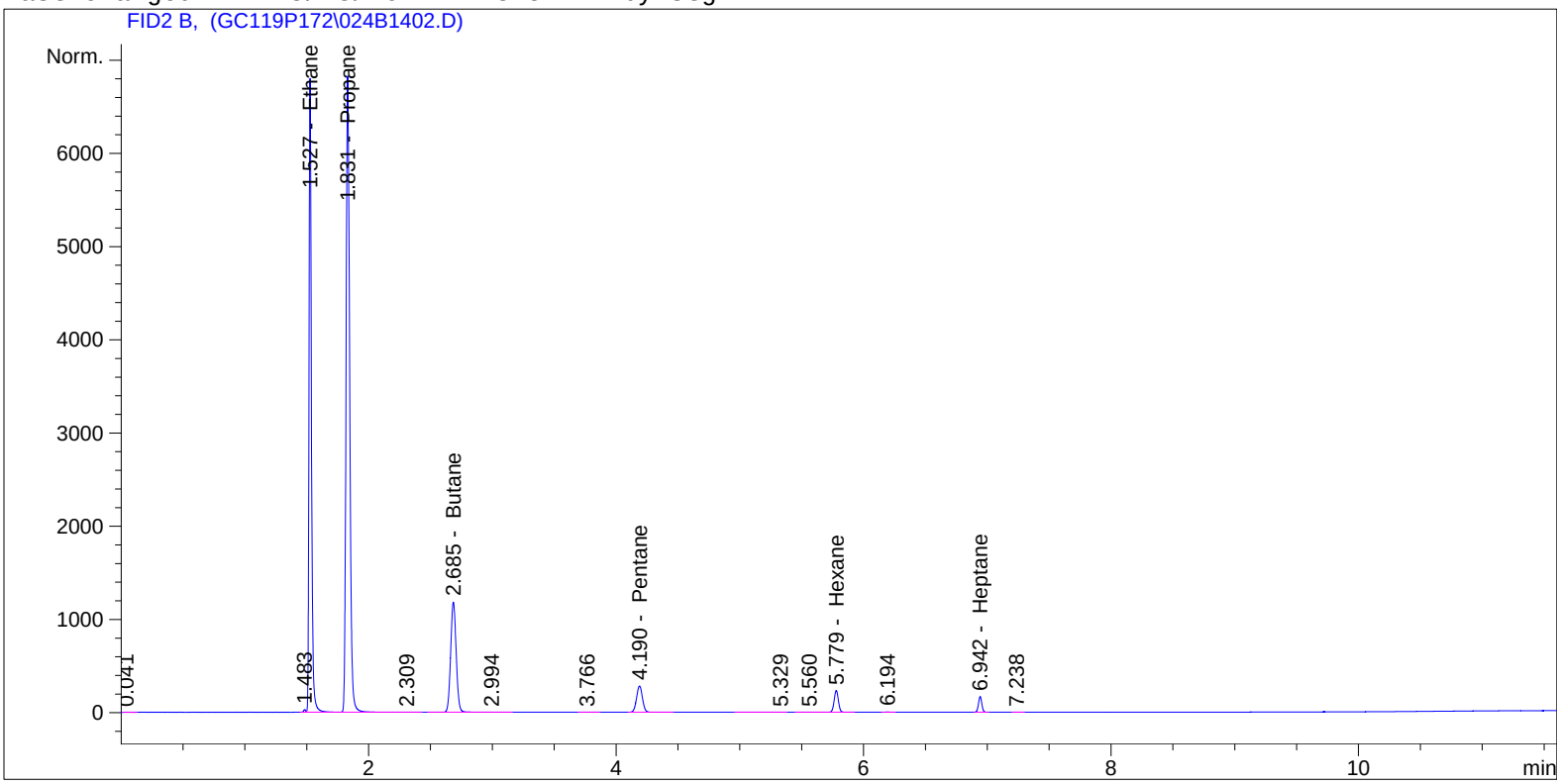
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1402.D
Sample Name: gc119p172 #C13 ENV(1=550,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  14
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 21:40:53                   Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.397           -          -          -          Methane
  1.527 VV     9201.11914    2.32546 2.13968e4     Ethane
  1.831 VV     1.39447e4     1.59560 2.22502e4     Propane
  2.685 BV     3648.11890    1.18993 4341.01834    Butane
  3.453           -          -          -          Acetonitrile
  3.590           -          -          -          Acrolein
  3.699           -          -          -          Acetone
  4.106           -          -          -          Acrylonitrile
  4.190 BB      922.21515 9.61092e-1  886.33385    Pentane
  4.500           -          -          -          Methylene chloride
  5.779 VB      548.08905 7.97084e-1  436.87278    Hexane
  6.496           -          -          -          Benzene
```

EM-BTRF-001140

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1402.D
Sample Name: gc119p172 #C13 ENV(1=550,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	313.01480	6.98966e-1	218.78685		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.95300e4

1 Warnings or Errors :

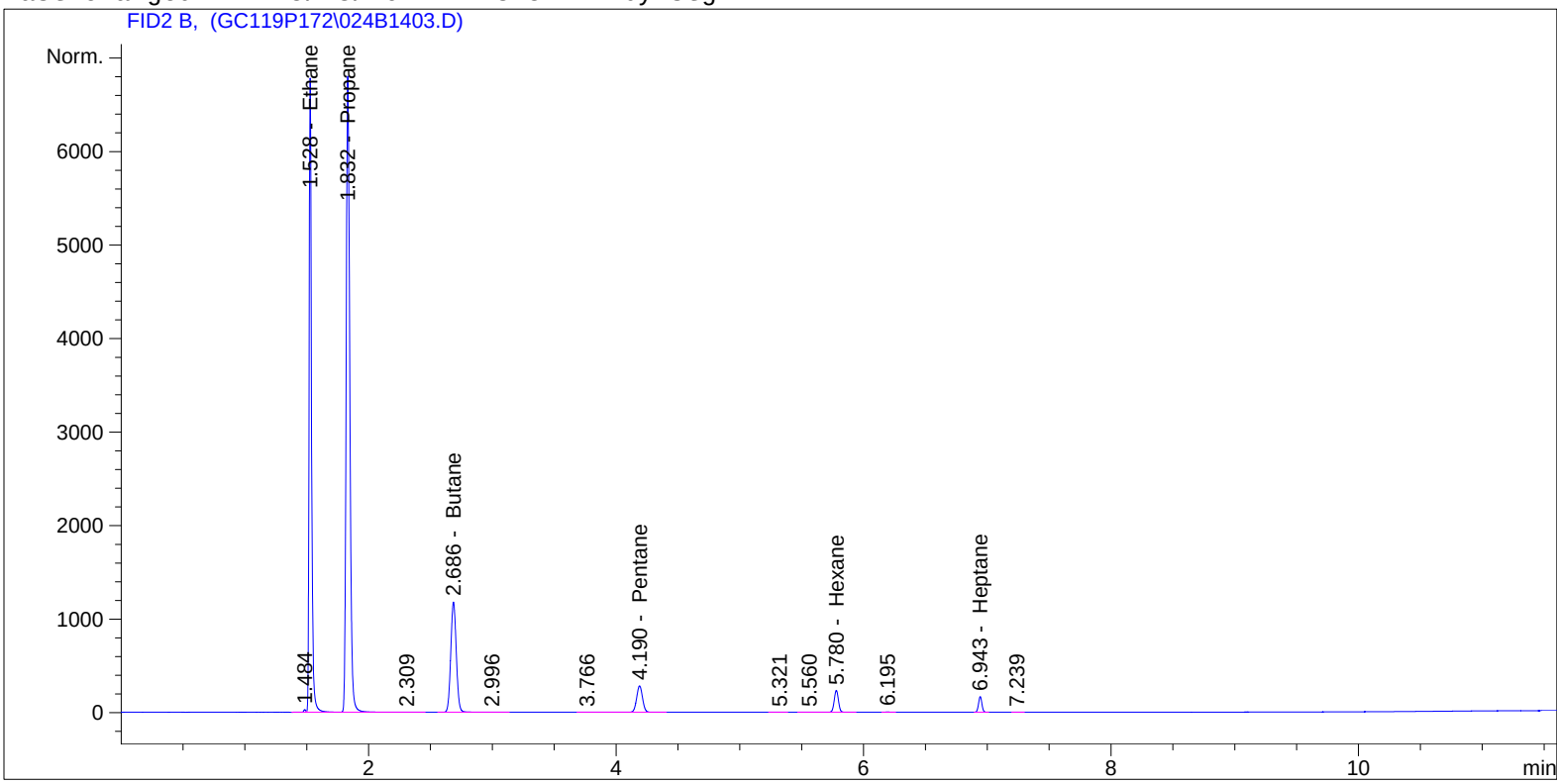
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1403.D
Sample Name: gc119p172 #C13 ENV(1=550,4=492.93)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  14
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 22:00:08                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.528	VV	9187.84180	2.32546	2.13659e4		Ethane
1.832	VV	1.39223e4	1.59560	2.22144e4		Propane
2.686	BV	3642.42383	1.18993	4334.24172		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.190	VB	920.13416	9.61093e-1	884.33408		Pentane
4.500		-	-	-		Methylene chloride
5.780	VB	547.26288	7.97084e-1	436.21430		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001142

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1403.D
Sample Name: gc119p172 #C13 ENV(1=550,4=492.93)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.943	BB	312.57230	6.98967e-1	218.47781		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 4.94536e4

1 Warnings or Errors :

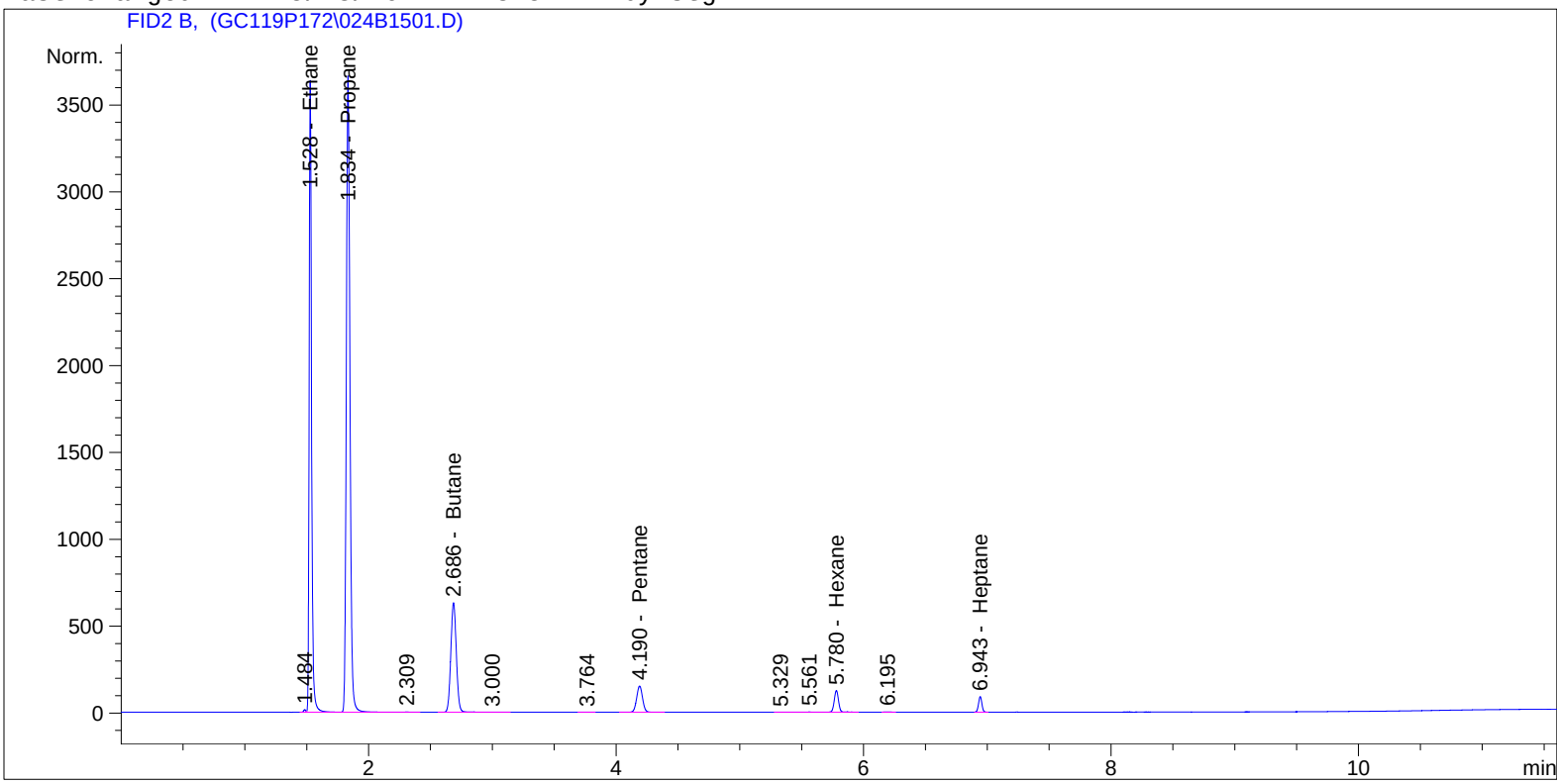
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1501.D
Sample Name: gc119p172 #C12 ENV(1=750,4=273.85)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  15
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 21-May-11, 22:19:23                    Inj :   1
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.528	VV	4916.81934	2.32549	1.14340e4		Ethane
1.834	VV	7449.14063	1.59561	1.18859e4		Propane
2.686	BV	1947.93921	1.18995	2317.95633		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.190	BB	491.81509	9.61197e-1	472.73143		Pentane
4.500		-	-	-		Methylene chloride
5.780	VB	292.88913	7.97129e-1	233.47034		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001144

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1501.D
Sample Name: gc119p172 #C12 ENV(1=750,4=273.85)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.943	BB	166.92860	6.99462e-1	116.76024		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 2.64608e4

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

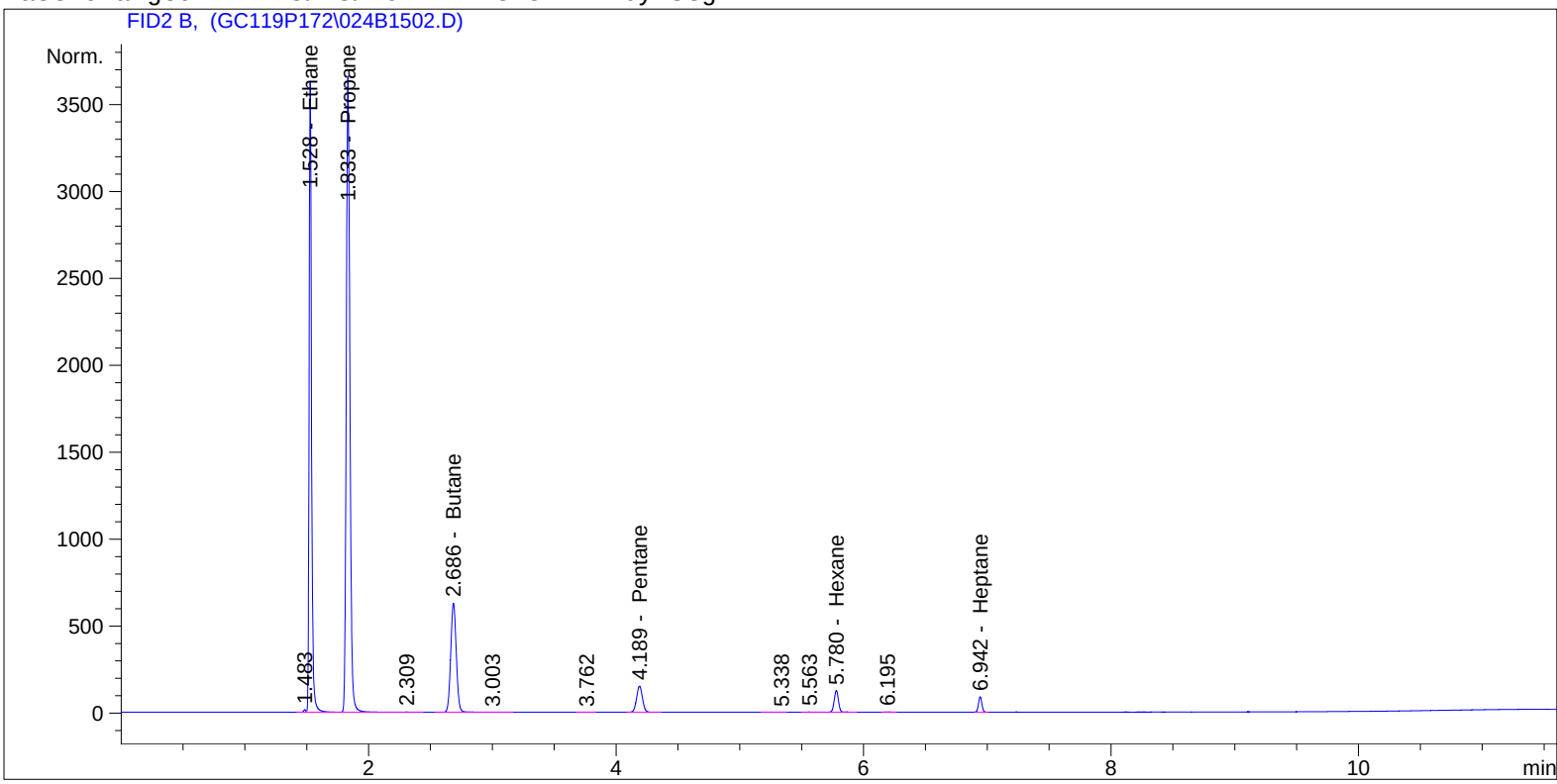
==========

*** End of Report ***

EM-BTRF-001145

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1502.D
Sample Name: gc119p172 #C12 ENV(1=750,4=273.85)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  15
Acq. Instrument : Gummo online                      Location : Vial 24
Injection Date  : 21-May-11, 22:38:41                    Inj :   2
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.528	VV	4909.96973	2.32549	1.14181e4		Ethane
1.833	VB	7439.20166	1.59561	1.18701e4		Propane
2.686	BV	1944.76111	1.18995	2314.17468		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.189	BB	490.84140	9.61198e-1	471.79574		Pentane
4.500		-	-	-		Methylene chloride
5.780	VB	292.27631	7.97129e-1	232.98190		Hexane
6.496		-	-	-		Benzene

EM-BTRF-001146

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1502.D
Sample Name: gc119p172 #C12 ENV(1=750,4=273.85)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	166.59731	6.99464e-1	116.52886		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 2.64236e4

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

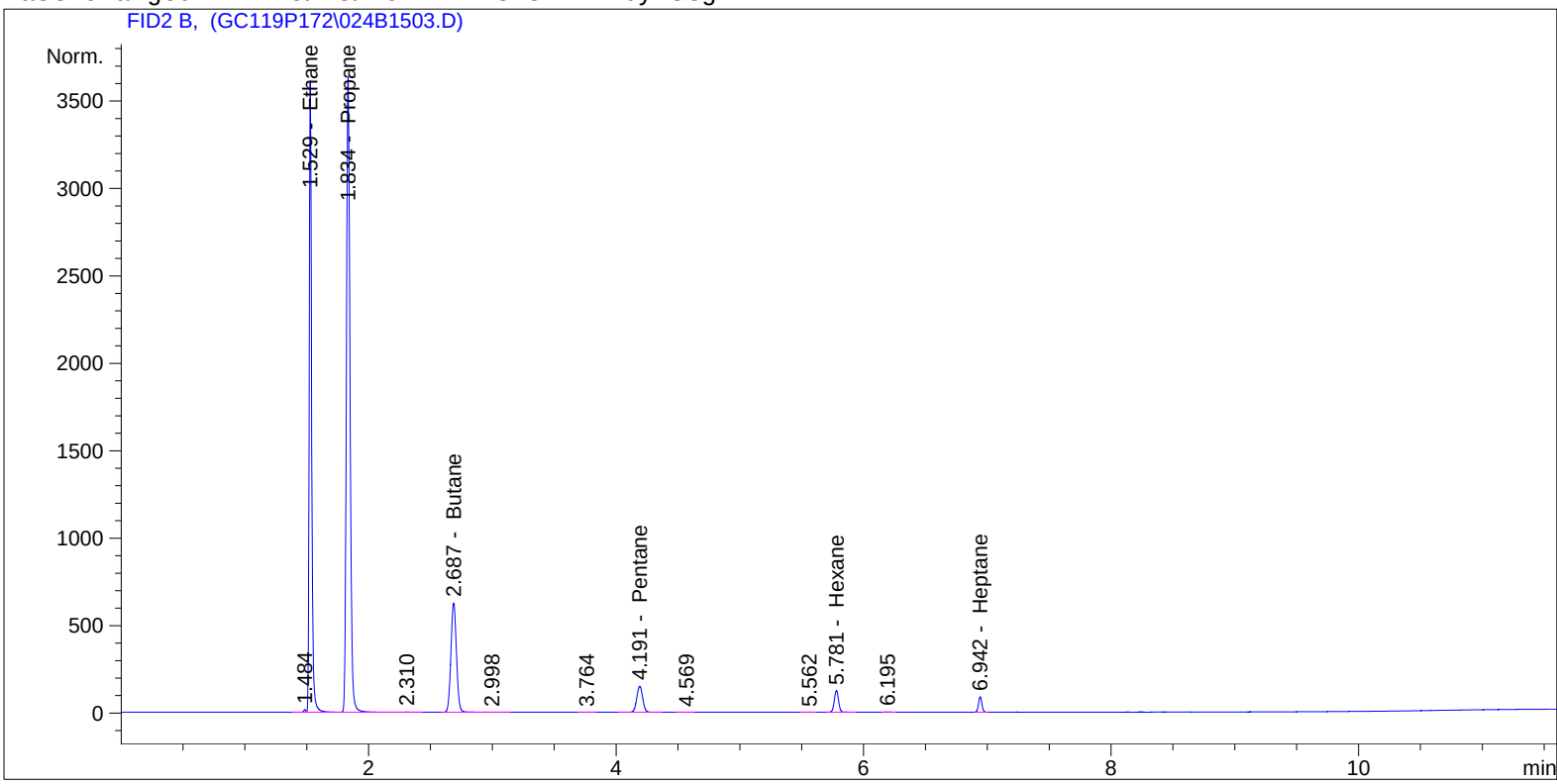
==========

*** End of Report ***

EM-BTRF-001147

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1503.D
Sample Name: gc119p172 #C12 ENV(1=750,4=273.85)

```
==========================================================================
Acq. Operator   : tbo                              Seq. Line :  15
Acq. Instrument : Gummo online                     Location : Vial 24
Injection Date  : 21-May-11, 22:58:01                   Inj :   3
                                                  Inj Volume : External
Sequence File   : G:\GC2011Q2\GUMMO\SEQUENCE\GC119P172.S
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/23/2011 4:18:52 PM by stg
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      5/23/2011 4:18:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.397		-	-	-		Methane
1.529	VV	4882.40039	2.32549	1.13540e4		Ethane
1.834	VV	7399.11182	1.59561	1.18061e4		Propane
2.687	BV	1934.58826	1.18995	2302.06989		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.191	VB	489.31058	9.61199e-1	470.32466		Pentane
4.500		-	-	-		Methylene chloride
5.781	BB	290.59534	7.97130e-1	231.64212		Hexane
6.496		-	-	-		Benzene

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P172\024B1503.D
Sample Name: gc119p172 #C12 ENV(1=750,4=273.85)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.889		-	-	-		Trichloroethene
6.942	BB	165.71158	6.99470e-1	115.91027		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.980		-	-	-		Tetrachloroethene

Totals : 2.62800e4

1 Warnings or Errors :

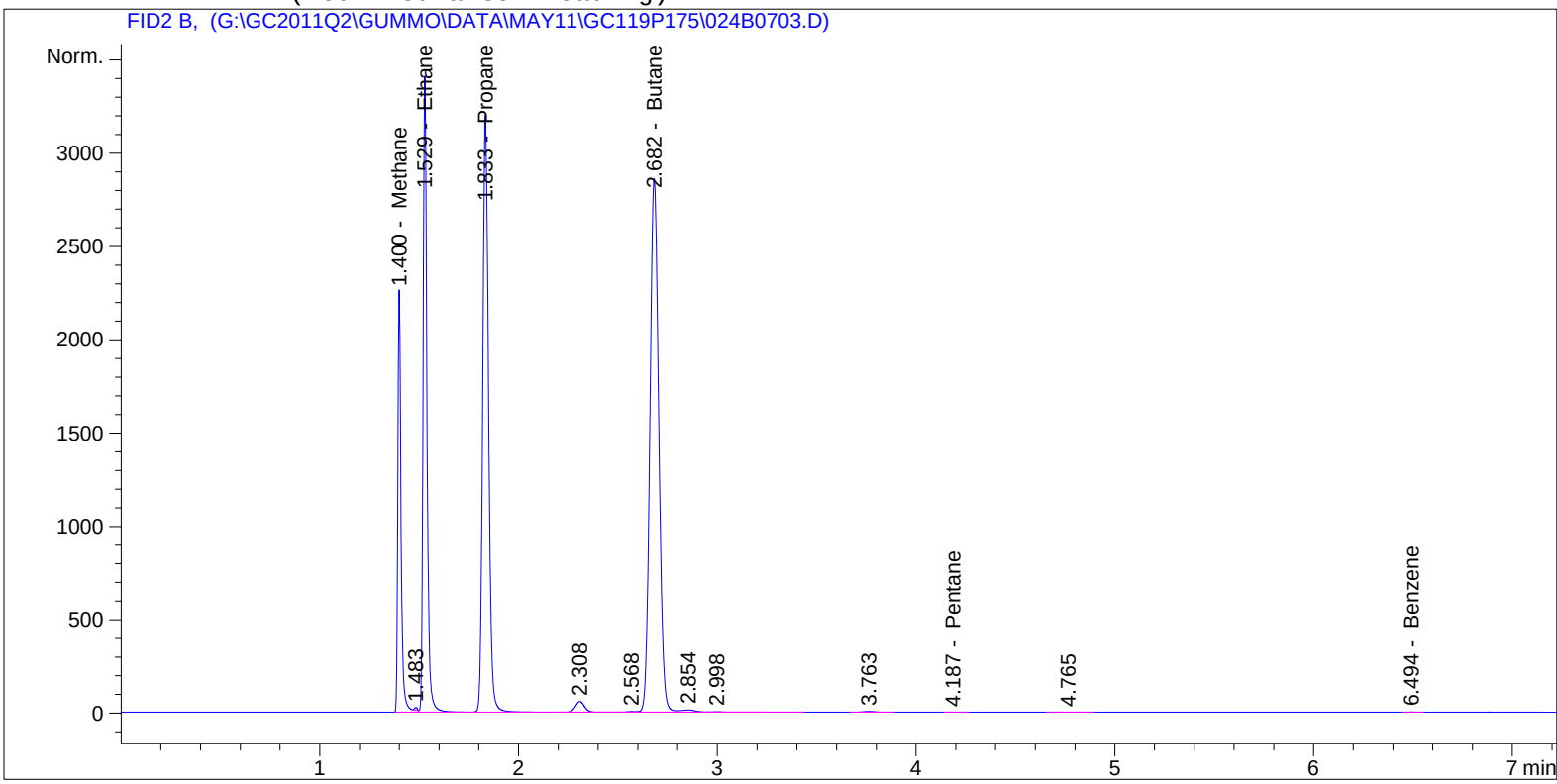
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P175\024B0703.D
Sample Name: gc119p172 #C9 ENV(1=0,4=300)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 11:45:30                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/24/2011 11:53:13 AM by stg
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 24, 2011 11:53:12 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400 BV S   2562.38721    4.26676 1.09331e4     Methane
  1.529 VV S   4604.22656    2.33340 1.07435e4     Ethane
  1.833 VB S   6506.82910    1.60073 1.04157e4     Propane
  2.682 VV T   8825.34277    1.19368 1.05346e4     Butane
  3.453            -            -          -      Acetonitrile
  3.590            -            -          -      Acrolein
  3.699            -            -          -      Acetone
  4.106            -            -          -      Acrylonitrile
  4.187 BB     4.19414e-1    1.01737 4.26701e-1    Pentane
  4.500            -            -          -      Methylene chloride
  5.777            -            -          -      Hexane
  6.494 BB     6.53700e-1    1.09131 7.13391e-1    Benzene
```

EM-BTRF-001150

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P175\024B0703.D
Sample Name: gc119p172 #C9 ENV(1=0,4=300)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.888		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.978		-	-	-		Tetrachloroethene

Totals : 4.26280e4

1 Warnings or Errors :

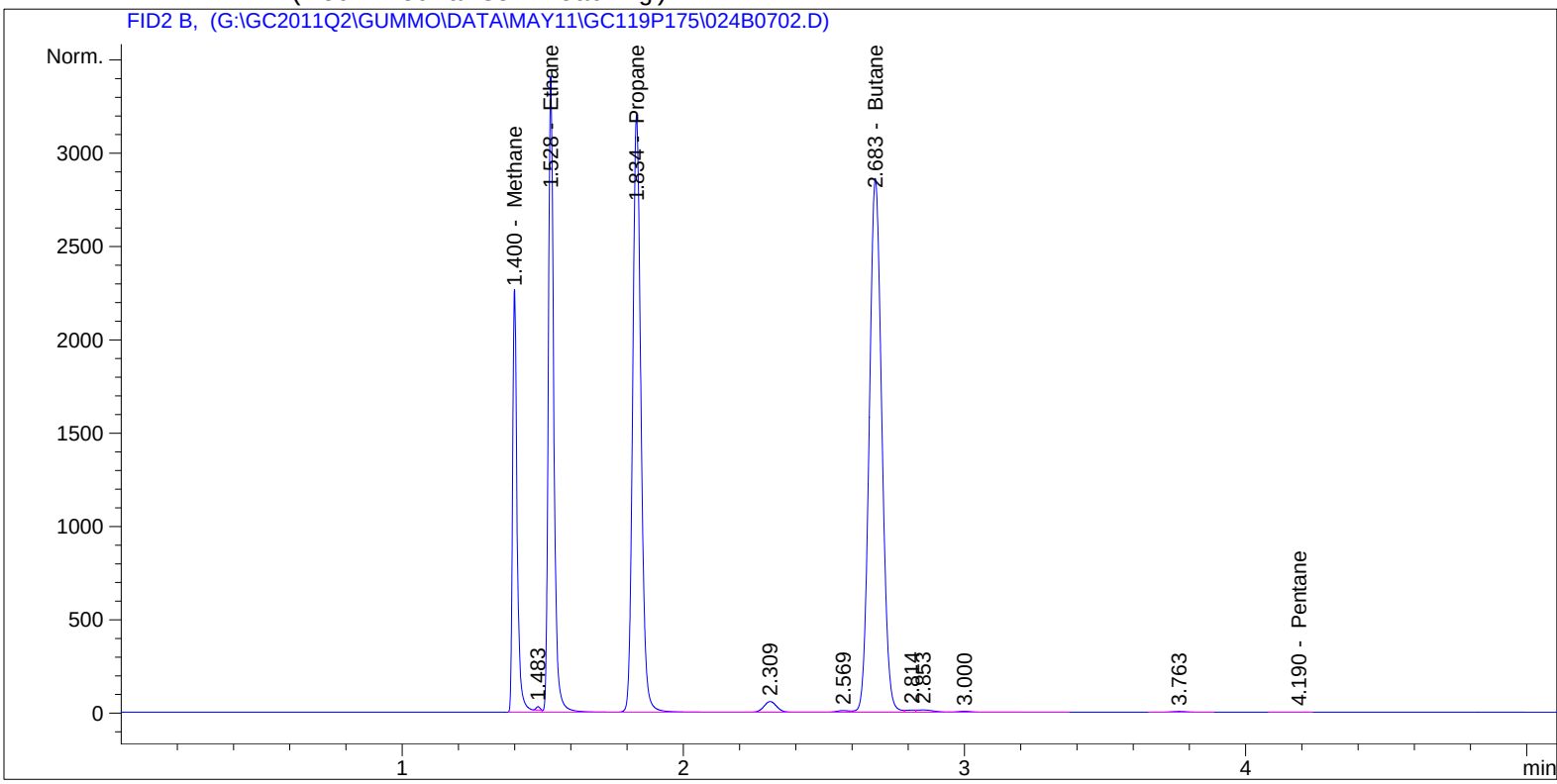
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P175\024B0702.D
Sample Name: gc119p172 #C9 ENV(1=0,4=300)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 11:34:59                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/24/2011 11:53:13 AM by stg
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 24, 2011 11:53:12 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.400 BV S   2566.23633    4.26676 1.09495e4     Methane
  1.528 VV S   4610.41064    2.33340 1.07579e4     Ethane
  1.834 VB S   6521.16504    1.60073 1.04386e4     Propane
  2.683 VV T   8847.00586    1.19368 1.05605e4     Butane
  3.453            -           -          -        Acetonitrile
  3.590            -           -          -        Acrolein
  3.699            -           -          -        Acetone
  4.106            -           -          -        Acrylonitrile
  4.190 BV     5.57877e-1    1.01737 5.67569e-1    Pentane
  4.500            -           -          -        Methylene chloride
  5.777            -           -          -        Hexane
  6.494            -           -          -        Benzene
```

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P175\024B0702.D
Sample Name: gc119p172 #C9 ENV(1=0,4=300)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.888		-	-	-		Trichloroethene
6.940		-	-	-		Heptane
7.562		-	-	-		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.978		-	-	-		Tetrachloroethene

Totals : 4.27071e4

1 Warnings or Errors :

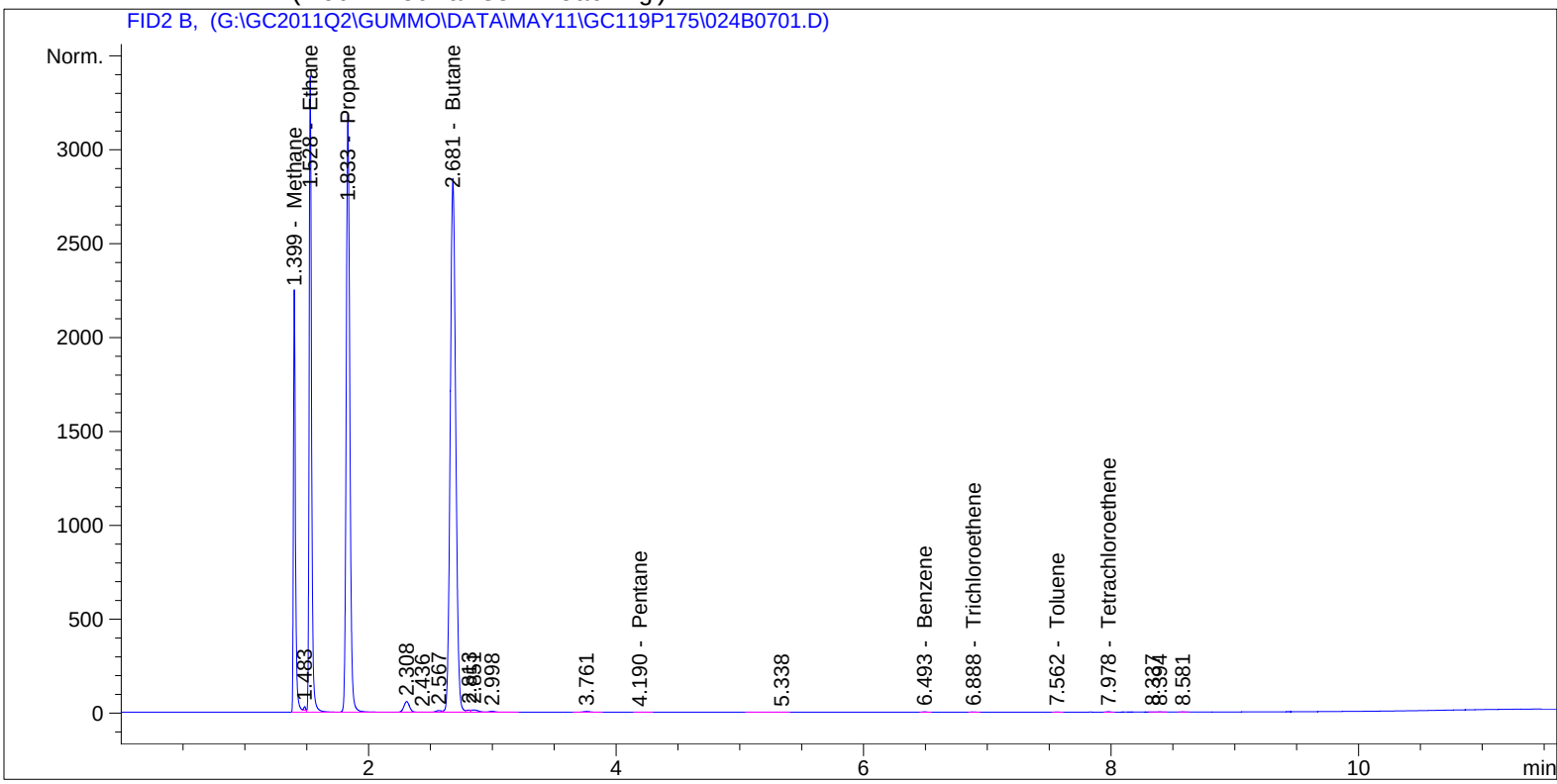
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P175\024B0701.D
Sample Name: gc119p172 #C9 ENV(1=0,4=300)

```
==========================================================================
Acq. Operator   : stg                          Seq. Line :   7
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 24-May-11, 11:13:36                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q2\GUMMO\METHODS\GC114P172R.M
Last changed    : 5/24/2011 11:53:13 AM by stg
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 24, 2011 11:53:12 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.399	BV S	2546.42603	4.26676	1.08650e4		Methane
1.528	VV S	4576.07422	2.33340	1.06778e4		Ethane
1.833	VB S	6476.58545	1.60073	1.03672e4		Propane
2.681	VV T	8776.17480	1.19368	1.04759e4		Butane
3.453		-	-	-		Acetonitrile
3.590		-	-	-		Acrolein
3.699		-	-	-		Acetone
4.106		-	-	-		Acrylonitrile
4.190	VB	4.09691e-1	1.01737	4.16808e-1		Pentane
4.500		-	-	-		Methylene chloride
5.777		-	-	-		Hexane
6.493	BB	3.47145	1.09131	3.78844		Benzene

EM-BTRF-001154

Data File G:\GC2011Q2\GUMMO\DATA\MAY11\GC119P175\024B0701.D
Sample Name: gc119p172 #C9 ENV(1=0,4=300)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
6.888	BB	1.66802	2.62469	4.37805		Trichloroethene
6.940		-	-	-		Heptane
7.562	BB	6.39504e-1	7.95116e-1	5.08480e-1		Toluene
7.835		-	-	-		1,2 Dibromoethane
7.978	BB	3.85971	2.14038	8.26126		Tetrachloroethene

Totals : 4.24033e4

1 Warnings or Errors :

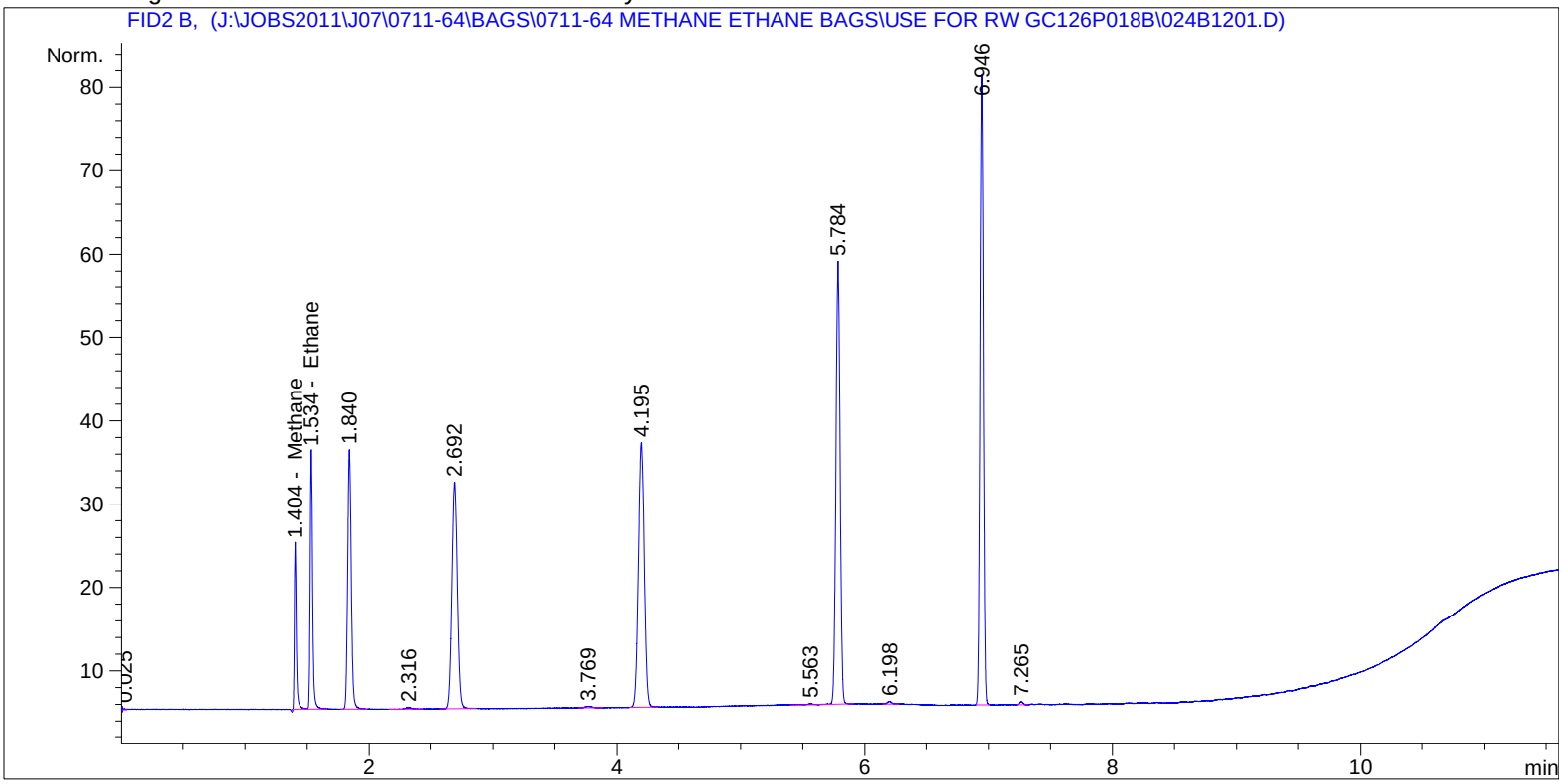
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File J:\JOBS201...4\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P018B\024B1201.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  12
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 19-Jul-11, 23:27:28                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

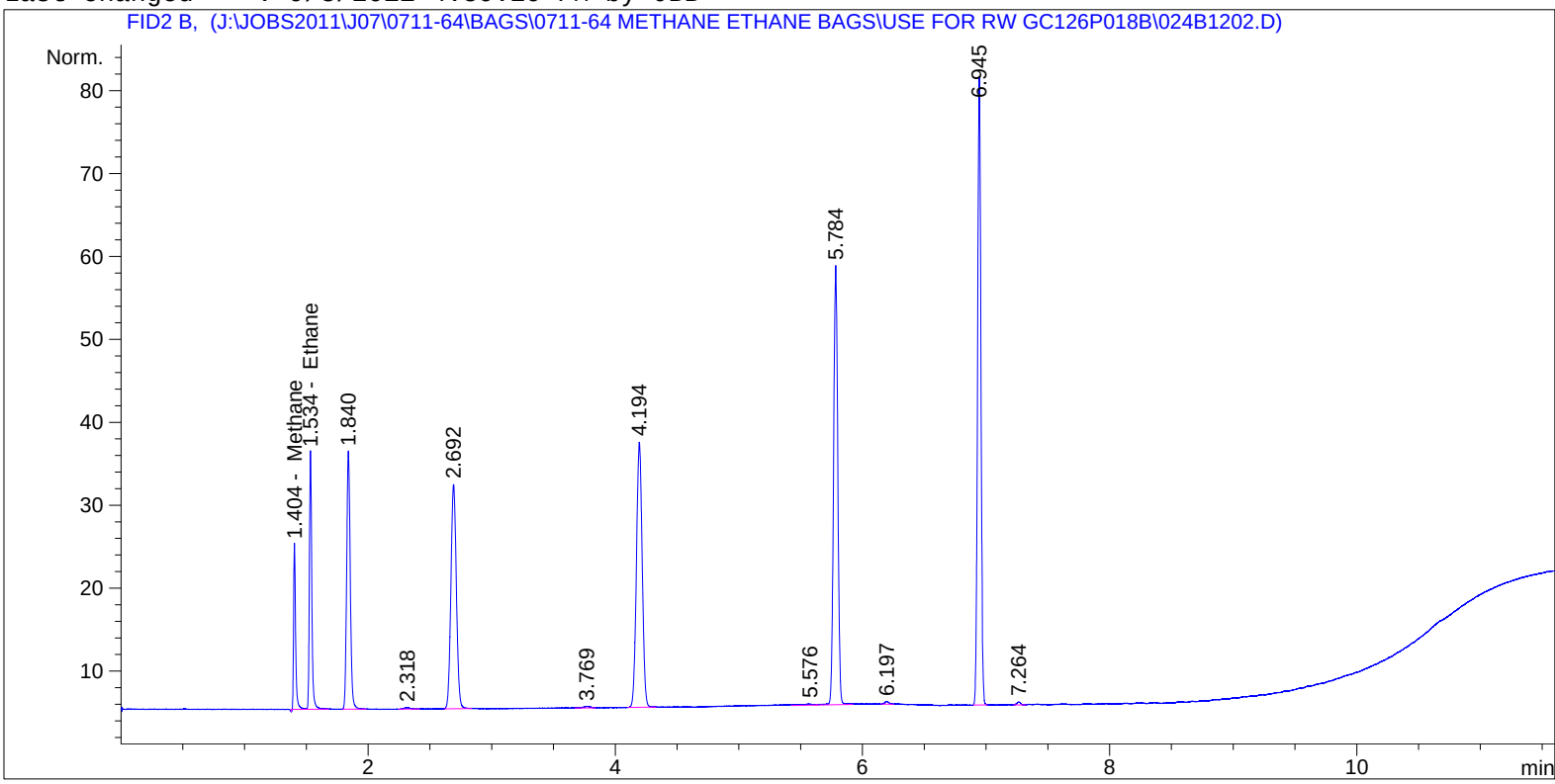
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.404 VV       22.50256    4.28303   96.37918    Methane
  1.534 VB       41.90125    2.32185   97.28849    Ethane

Totals :                               193.66767


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...4\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P018B\024B1202.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  12
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 19-Jul-11, 23:46:37                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

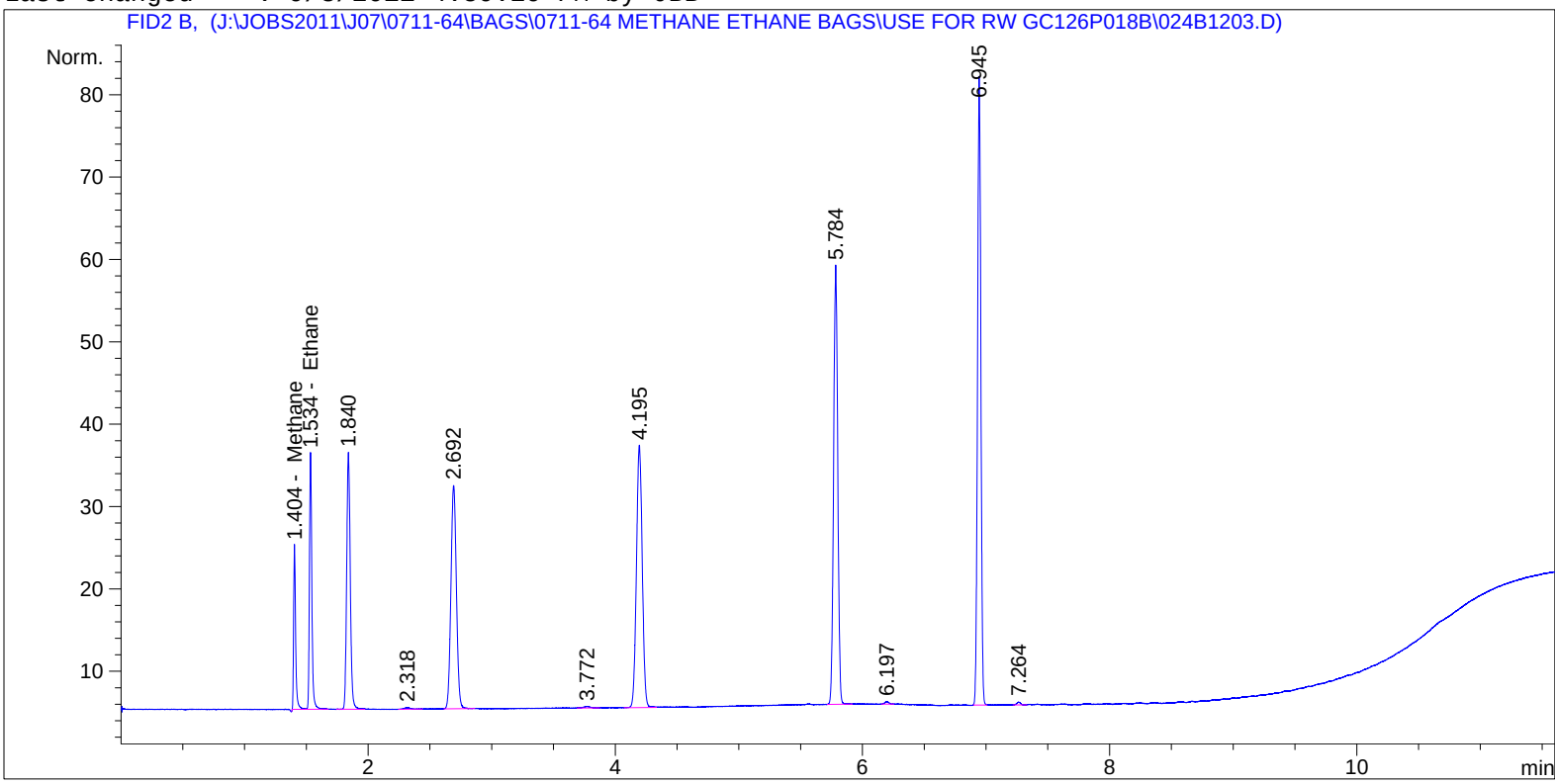
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.404 VV       22.57588    4.28298   96.69202    Methane
  1.534 VB       42.01477    2.32183   97.55114    Ethane

Totals :                              194.24317


==========================================================================
                        *** End of Report ***
```

Data File J:\JOBS201...4\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P018B\024B1203.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  12
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 00:05:44                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

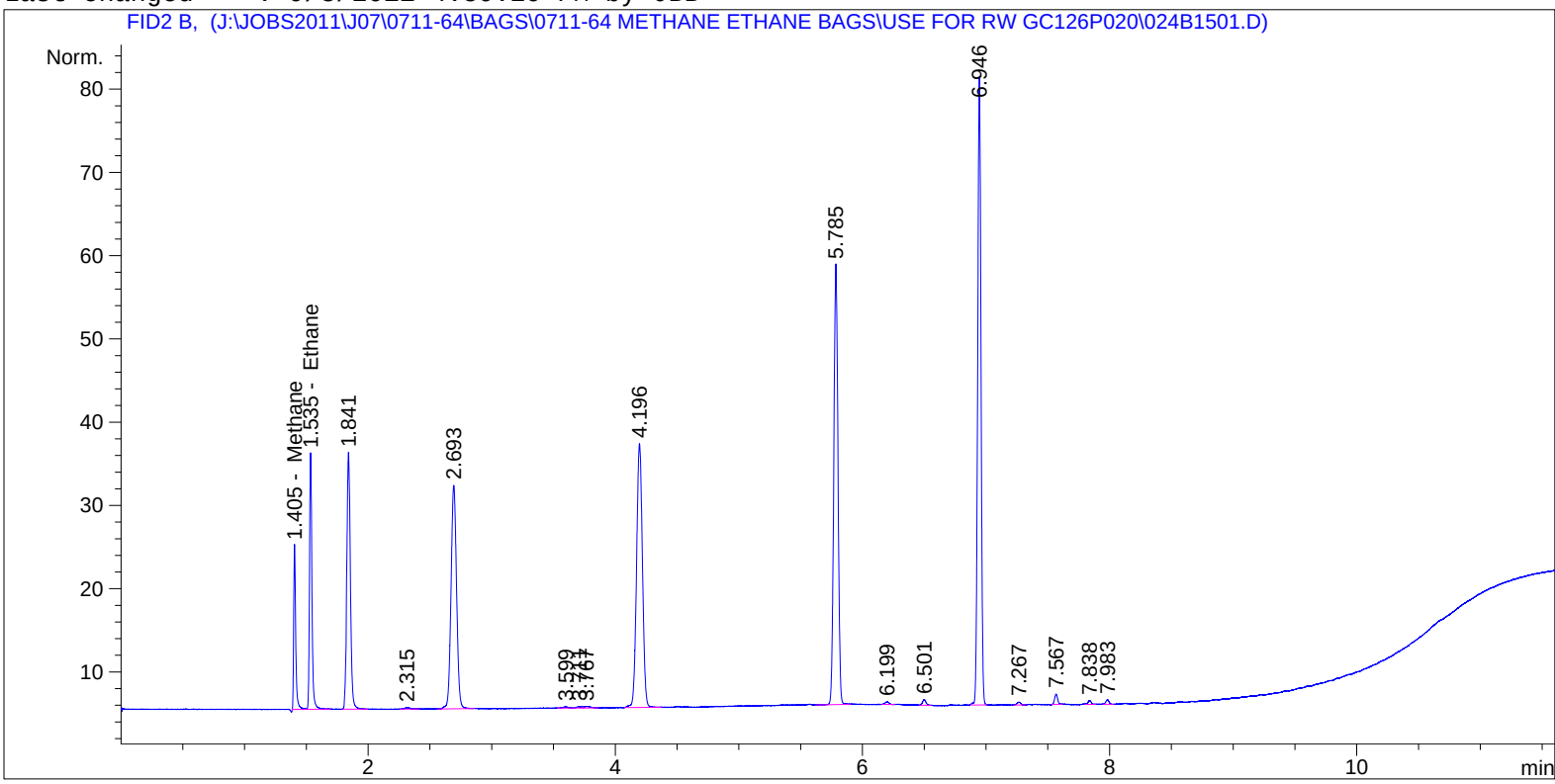
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.404 BV       22.64426    4.28293   96.98378    Methane
  1.534 VB       42.04616    2.32182   97.62378    Ethane

Totals :                                194.60756


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\024B1501.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  15
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 21:25:22                Inj :   1
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

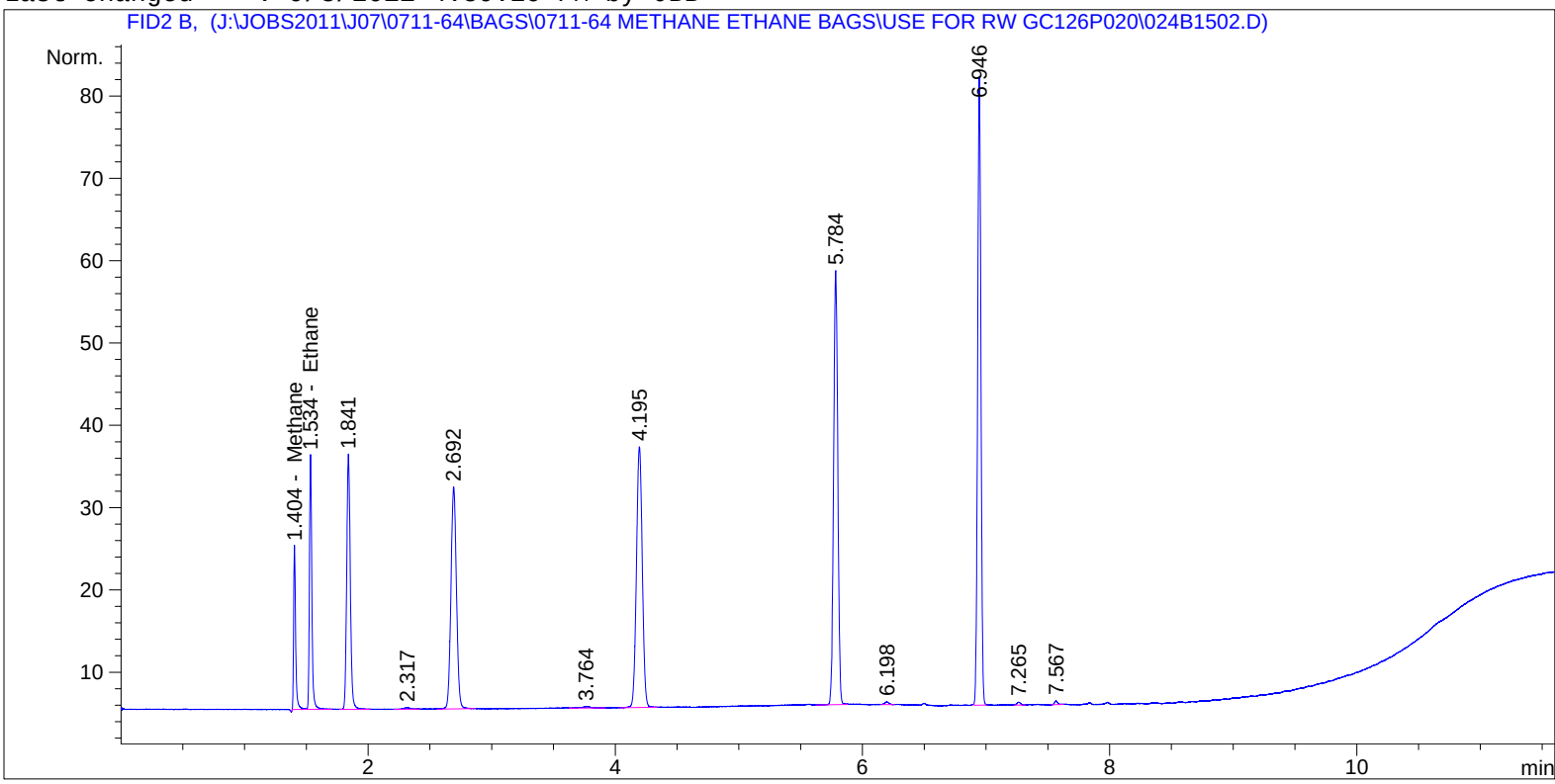
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.405 BV       22.45127    4.28307   96.16038    Methane
  1.535 VB       41.62267    2.32191   96.64395    Ethane

Totals :                               192.80433


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\024B1502.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  15
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 21:44:39                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

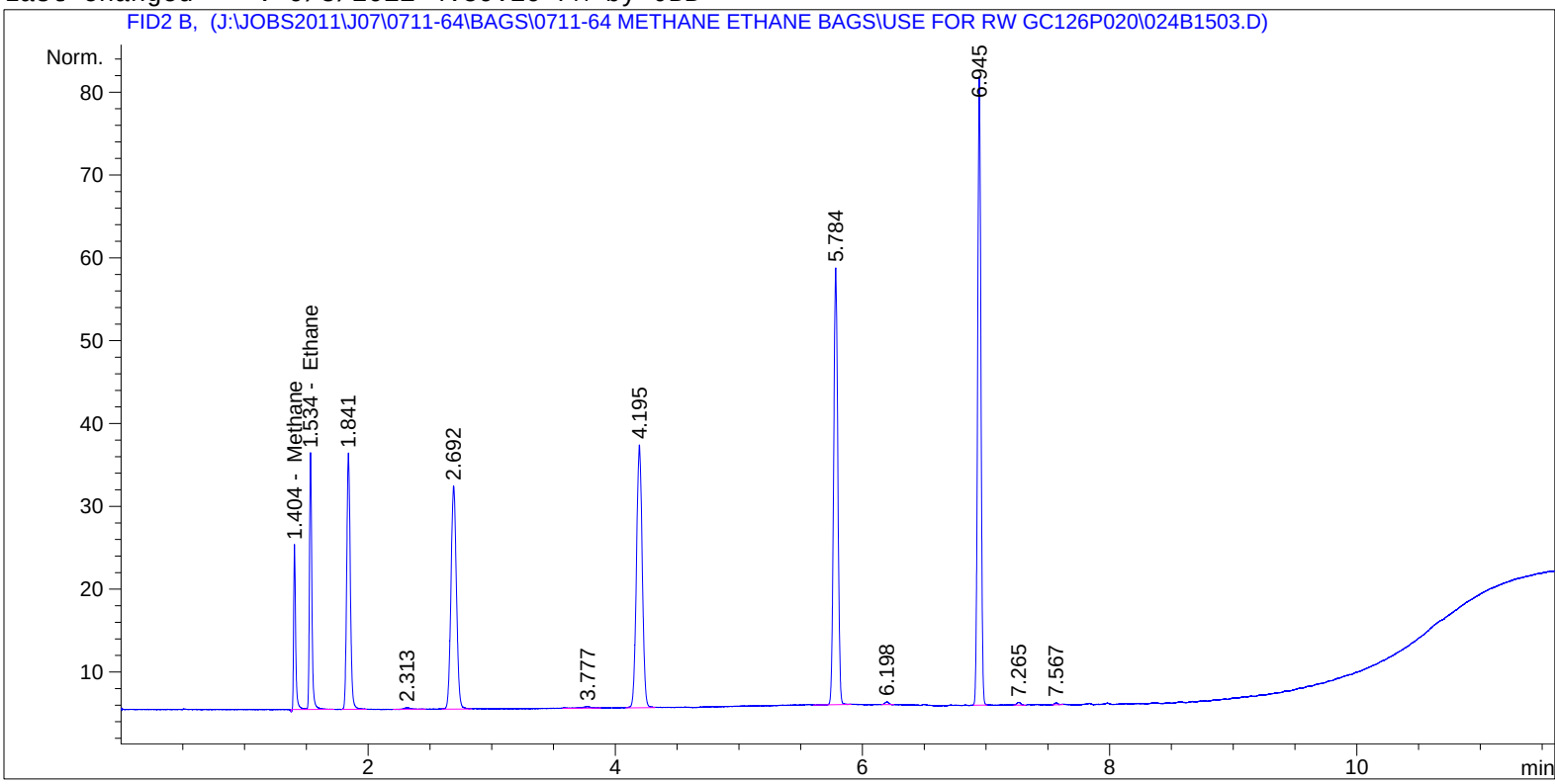
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.404	BV	22.61243	4.28295	96.84795		Methane
1.534	VB	41.99887	2.32183	97.51437		Ethane

Totals : 194.36233

```
==========================================================================
                        *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P020\024B1503.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                          Seq. Line :  15
Acq. Instrument : Gummo online                  Location : Vial 24
Injection Date  : 20-Jul-11, 22:04:01                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q2\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

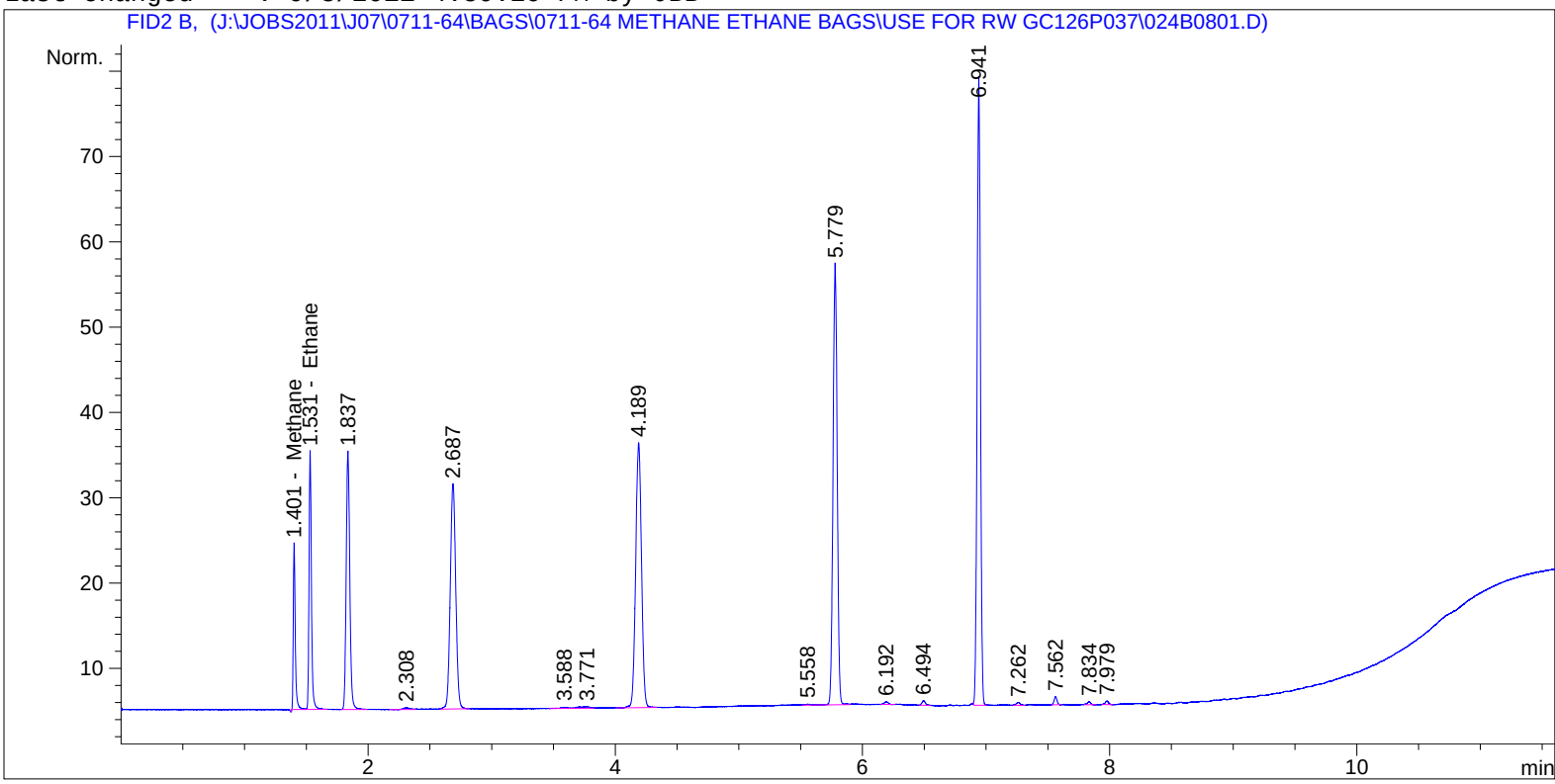
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.404 VV       22.40613    4.28310   95.96777    Methane
  1.534 VB       41.86605    2.32186   97.20707    Ethane

Totals :                               193.17484


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P037\024B0801.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   8
Acq. Instrument : Gummo                           Location : Vial 24
Injection Date  : 09-Aug-11, 00:59:30                  Inj :   1
                                                 Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

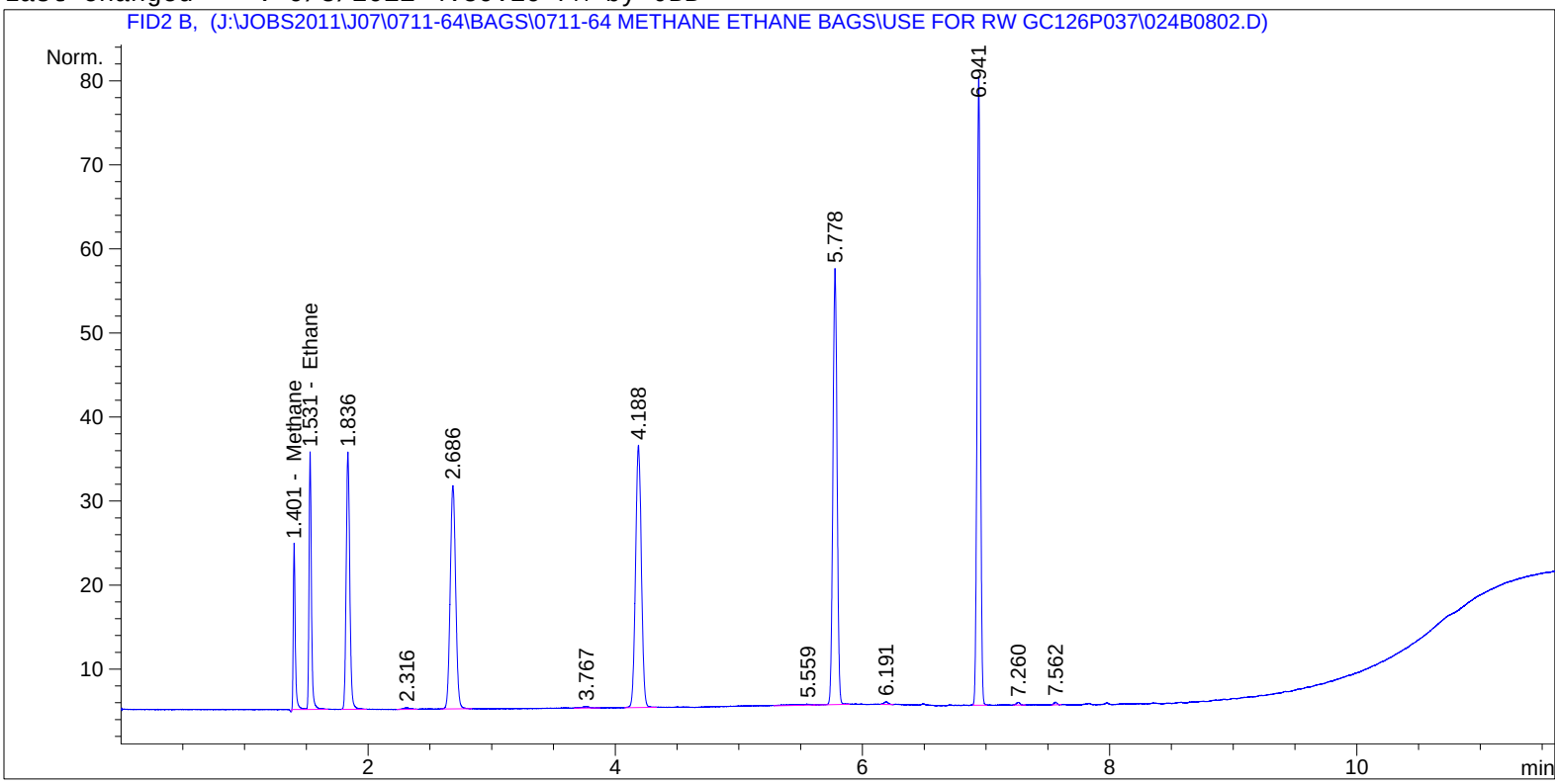
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.401 VV       21.92110    4.28347   93.89834    Methane
  1.531 VB       40.75077    2.32208   94.62663    Ethane

Totals :                               188.52496


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P037\024B0802.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   8
Acq. Instrument : Gummo                           Location : Vial 24
Injection Date  : 09-Aug-11, 01:18:39                  Inj :   2
                                                 Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

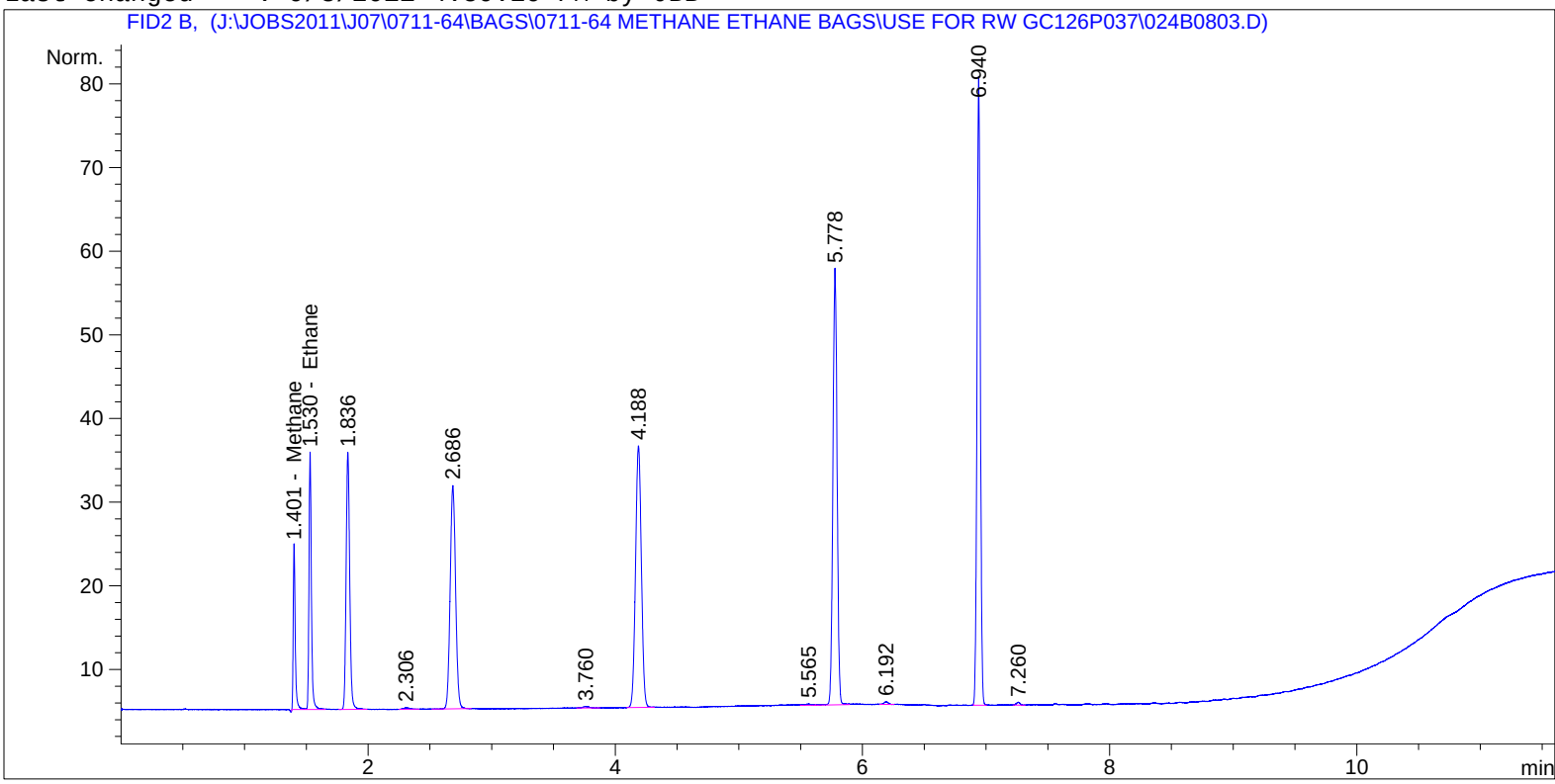
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.401 BV       22.24845    4.28322   95.29499    Methane
  1.531 VB       41.19232    2.32199   95.64824    Ethane

Totals :                              190.94324


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P037\024B0803.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==================================================================
Acq. Operator   : mgm                          Seq. Line :   8
Acq. Instrument : Gummo                         Location : Vial 24
Injection Date  : 09-Aug-11, 01:37:48               Inj :   3
                                              Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

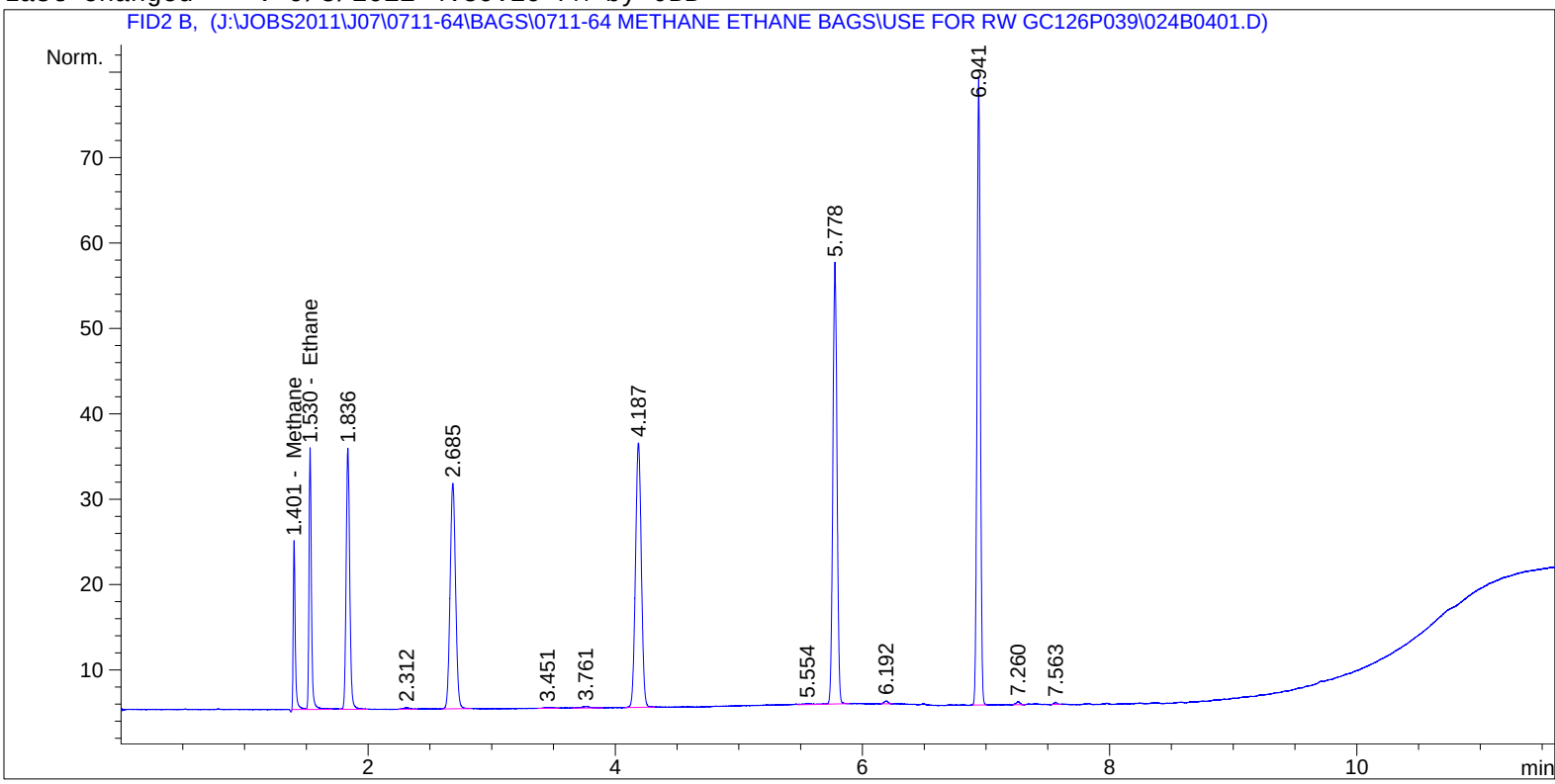
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.401 BV       22.35338    4.28314   95.74270    Methane
  1.530 VB       41.44802    2.32194   96.23986    Ethane

Totals :                              191.98256


==================================================================
                        *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P039\024B0401.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   4
Acq. Instrument : Gummo                           Location : Vial 24
Injection Date  : 09-Aug-11, 14:39:16                  Inj :   1
                                                 Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

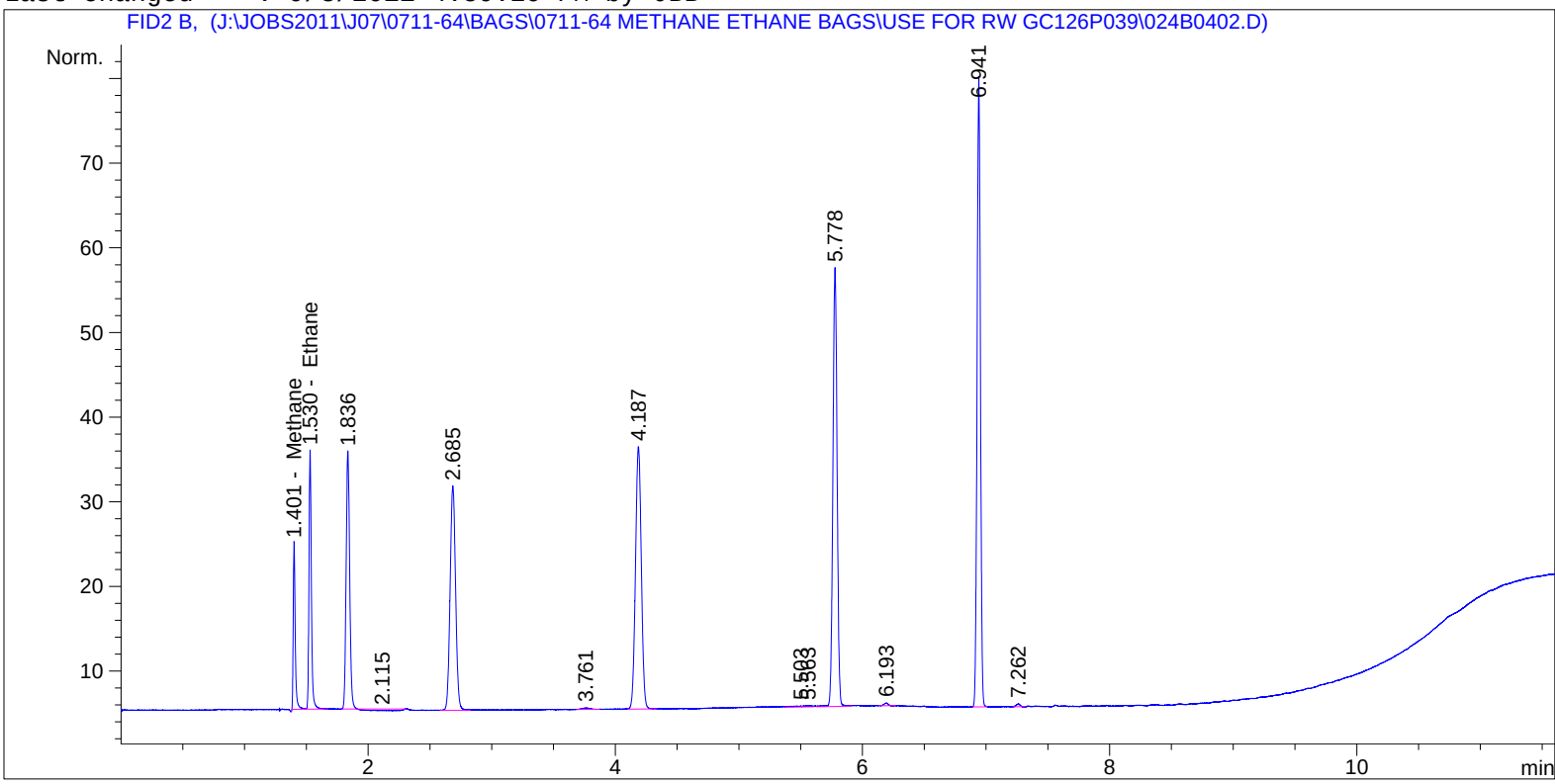
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.401 BV       22.45727    4.28307   96.18596    Methane
  1.530 VB       41.77948    2.32188   97.00676    Ethane

Totals :                               193.19272


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P039\024B0402.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   4
Acq. Instrument : Gummo                           Location : Vial 24
Injection Date  : 09-Aug-11, 14:58:33                  Inj :   2
                                                 Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

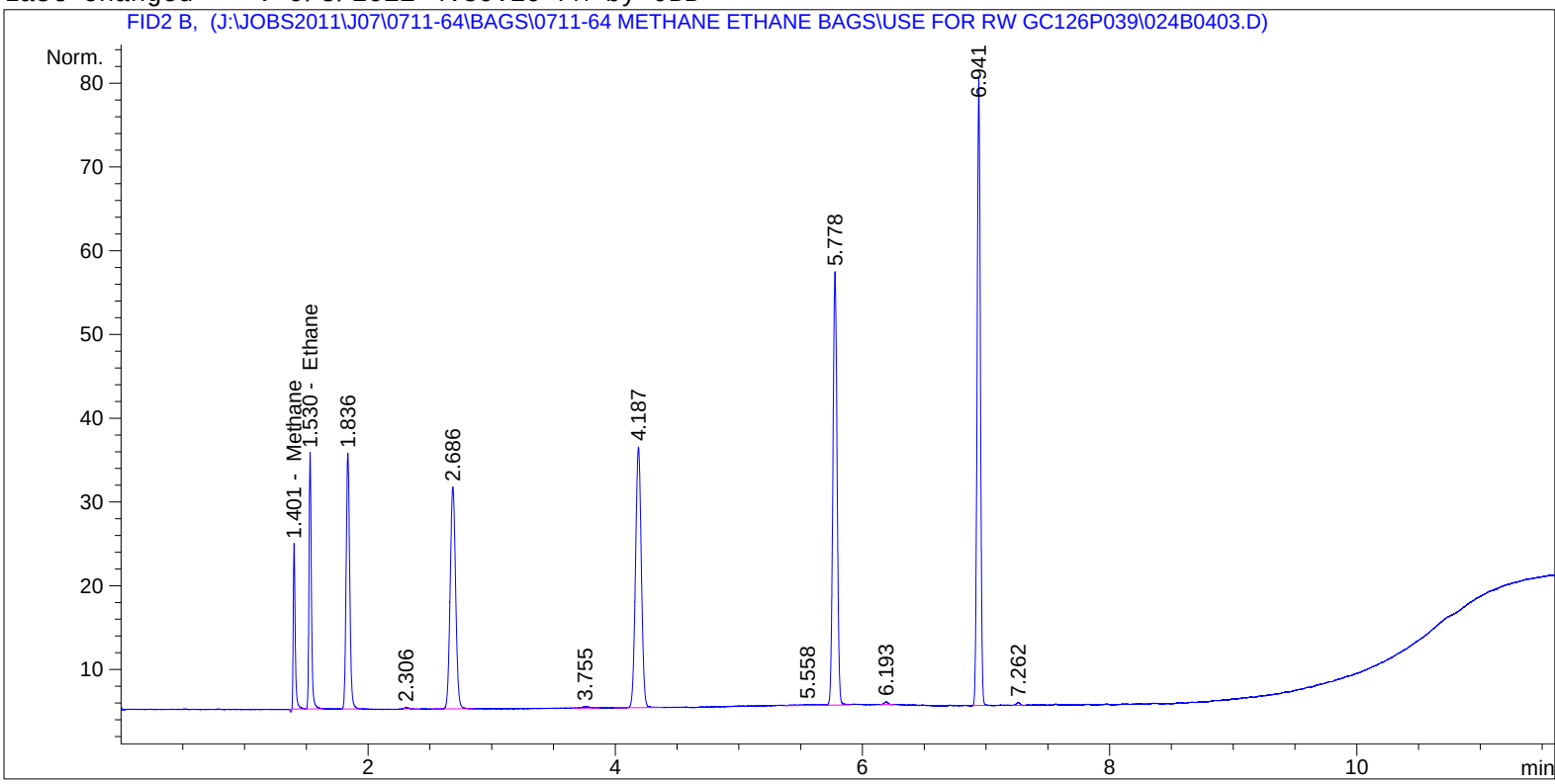
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.401 BV       22.23739    4.28323   95.24780    Methane
  1.530 VB       41.22458    2.32199   95.72288    Ethane

Totals :                                190.97068


==========================================================================
                         *** End of Report ***
```

Data File J:\JOBS201...64\BAGS\0711-64 METHANE ETHANE BAGS\USE FOR RW GC126P039\024B0403.D
Sample Name: gc119p172 #C5 ENV(1=0,2=350)

```
==========================================================================
Acq. Operator   : mgm                              Seq. Line :   4
Acq. Instrument : Gummo                           Location : Vial 24
Injection Date  : 09-Aug-11, 15:17:54                  Inj :   3
                                                 Inj Volume : External
Acq. Method     : C:\GC2011Q3\GUMMO\METHODS\GC114P165.M
Last changed    : 11/15/2010 3:12:59 PM by tbo
Analysis Method : G:\GC2011Q3\GUMMO\METHODS\GC114P172R_0711-64.M
Last changed    : 9/3/2011 4:59:29 PM by JBB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2011 3:23:47 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.401 VV       22.04156    4.28338   94.41230    Methane
  1.530 VB       41.10620    2.32201   95.44900    Ethane

Totals :                               189.86130


==========================================================================
                         *** End of Report ***
```

method: G:\GC2010Q3\GUMMO\METHODS\GC114P165.M
Modified on: 7/14/2010 at 3:13:47 PM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 35 'C (On)
- Initial time: 2.20 min
- Maximum temp: 250 'C
- Equilibration time: 0.20 min
- Ramps:

#	Rate	Final temp	Final time
1	15.00	70	0.07
2	30.00	250	1.00
3	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 11.60 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 160 'C (On)
- Pressure: 5.00 psi (On)
- Split ratio: 5:1
- Split flow: 10.6 mL/min
- Total flow: 18.9 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 160 'C (On)
- Pressure: 5.12 psi (On)
- Split ratio: 5:1
- Split flow: 10.3 mL/min
- Total flow: 18.7 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 10970
- Rtx-624 30m x 0.32mm x 1.8um SN 92682
- Max temperature: 240 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 1.80 um
- Mode: constant flow
- Initial flow: 2.1 mL/min
- Nominal init pressure: 5.00 psi
- Average velocity: 40 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: Restek 10198
- Rtx-1 30m x 0.32mm x 4.0um
- Max temperature: 280 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.1 mL/min
- Nominal init pressure: 5.12 psi
- Average velocity: 39 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 50 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 50 Hz
- Type: back detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

method: G:\GC2010Q3\GUMMO\METHODS\GC114P165.M
Modified on: 7/14/2010 at 3:13:47 PM

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

THERMAL AUX 1
Use: Valve Box Heater
Description:
Initial temp: 50 'C (Off)
Initial time: 0.00 min

#	Rate	Final temp	Final time
1	0.0	(Off)	

VALVES
Valve 1 Gas Sampling
Description:
Loop Volume: 0.250 mL
Load Time: 0.50 min
Inject Time: 0.50 min
Inlet: Front Inlet
Valve 2 Gas Sampling
Description:
Loop Volume: 0.250 mL
Load Time: 0.50 min
Inject Time: 0.50 min
Inlet: Back Inlet
Valve 7 Multiposition 1
Description:
BCD input: inverted
Switch Time: 1.0 sec

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint	
0.10		Multi-Valve Position:	1

EM-BTRF-001169

method: G:\GC2010Q2\GUMMO\METHODS\GC114P103.M
Modified on: 5/4/2010 at 6:35:32 PM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 35 'C (On)
- Initial time: 2.20 min
- Maximum temp: 250 'C
- Equilibration time: 0.20 min
- Ramps:

#	Rate	Final temp	Final time
1	15.00	70	0.07
2	30.00	250	1.00
3	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 11.60 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 160 'C (On)
- Pressure: 4.99 psi (On)
- Split ratio: 5:1
- Split flow: 10.6 mL/min
- Total flow: 18.9 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 160 'C (On)
- Pressure: 5.14 psi (On)
- Split ratio: 5:1
- Split flow: 10.4 mL/min
- Total flow: 18.7 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 10970
- Rtx-624 30m x 0.32mm x 1.8um SN 92682
- Max temperature: 240 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 1.80 um
- Mode: constant flow
- Initial flow: 2.1 mL/min
- Nominal init pressure: 5.00 psi
- Average velocity: 39 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: Restek 10198
- Rtx-1 30m x 0.32mm x 4.0um
- Max temperature: 280 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.1 mL/min
- Nominal init pressure: 5.14 psi
- Average velocity: 40 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

method: G:\GC2010Q2\GUMMO\METHODS\GC114P103.M
Modified on: 5/4/2010 at 6:35:32 PM

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

THERMAL AUX 1
Use: Unspecified
Description:
Initial temp: 50 'C (Off)
Initial time: 0.00 min

#	Rate	Final temp	Final time
1	0.0	(Off)	

VALVES
Valve 1 Gas Sampling
Description:
Loop Volume: 0.250 mL
Load Time: 1.50 min
Inject Time: 0.50 min
Inlet: Front Inlet
Valve 2 Gas Sampling
Description:
Loop Volume: 0.250 mL
Load Time: 1.50 min
Inject Time: 0.50 min
Inlet: Back Inlet
Valve 7 Multiposition 1
Description:
BCD input: inverted
Switch Time: 1.0 sec

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint	
0.10		Multi-Valve Position:	1

EM-BTRF-001171

Air Liquide America
Specialty Gases LLC

Scott

6141 EASTON ROAD, BLDG 1, PLUMSTEADVILLE, PA 18949-0310 Phone: 800-331-4953 Fax: 215-766-7226

CERTIFIED MASTER CLASS

Single-Certified Calibration Standard

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Project No.: 01-19380-001
Item No.: 0102N802890PA
P.O. No.: CMD1204STGJCB

Cylinder Number: A019379
Cylinder Size: A
Certification Date: 15Dec2009
Expiration Date: 15Dec2011

Customer

ENTHALPY ANALYTICAL, INC.
2202 ELLIS ROAD
DURHAM, NC 27703-5518

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
N-BUTANE	100.	PPM	2
ETHANE	99.9	PPM	2
N-HEPTANE	97.0	PPM	2
N-HEXANE	103.	PPM	2
METHANE	99.8	PPM	2
N-PENTANE	98.9	PPM	2
PROPANE	99.8	PPM	2
NITROGEN		BALANCE	

TRACEABILITY

Traceable To

Scott Reference Standard

APPROVED BY: _____ GENYA KOGUT

DATE: 12/15/09

SPECIFICATIONS

Component Name	Requested Concentration (Moles)		Certified Concentration (Moles)		Blend Tolerance Result (+/- %)	Certified Accuracy Result (+/- %)
N-BUTANE	100.	PPM	100.	PPM	.0	2.00
ETHANE	100.	PPM	99.9	PPM	.1	2.00
N-HEPTANE	100.	PPM	97.0	PPM	3.0	2.00
N-HEXANE	100.	PPM	103.	PPM	3.0	2.00
METHANE	100.	PPM	99.8	PPM	.2	2.00
N-PENTANE	100.	PPM	98.9	PPM	1.1	2.00
PROPANE	100.	PPM	99.8	PPM	.2	2.00
NITROGEN		BAL		BAL		

TRACEABILITY

Traceable To
Scott Reference Standard

PHYSICAL PROPERTIES

Cylinder Size: A

Pressure: 2000 PSIG
Expiration Date: 15Dec2011

SPECIAL HANDLING INSTRUCTIONS

Do not use or store cylinder at or below the stated dew point temperature. Possible condensation of heavier components could result. In the event the cylinder has been exposed to temperatures at or below the dew point, place cylinder in heated area for 24 hours and then roll cylinder for 15 minutes to re-mix.

Use of calibration standards at or below dew point temperature may result in calibration error.

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
2202 Ellis Road, Suite A
Durham, NC 27703-5518

Tel: (919) 850-4392

Cylinder Number SG9127449BAL
Cylinder Size/CGA: AL150/350
Fill Pressure: 1400 PSIA
Gas Volume: 2634 liters
Date of Mfg: 3/26/09
Expiration Date: 3/26/12

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	032609-001	CMD030909CJCB	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Methane	1 %	1.002 % +/- 0.02 %	Gravimetric Master Gas
Ethane	1 %	0.999 % +/- 0.02 %	
Propane	1 %	1.002 % +/- 0.02 %	
n-Butane	1 %	0.999 % +/- 0.02 %	
Nitrogen	balance	balance	

NOTES:

Blend Tolerance:	+/-2%
Analytical Tolerance:	+/-2%
Traceability:	NIST by weight set / Internal Standards by analysis
Reactive Mixtures:	Analyzed twice with required agreement between analyses of 2%. Required wait time between analyses of >7 days.
Caution:	Do not use below 150 PSIG.

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

CUSTOMGAS SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc. .
2202 Ellis Road, Suite A
Durham, NC 27703-5518

Tel: (919) 850-4392

Cylinder Number 2777164Y
Cylinder Size/CGA: ST300/350
Fill Pressure: 450 PSIA
Gas Volume: 1500 liters
Date of Mfg: 2/10/09
Expiration Date: 2/10/11

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	021009-010	CMD012709DMB JCB	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
n-Heptane	500 ppm	500.4 ppm +/- 10 ppm	Gravimetric Master Gas
n-Hexane	1000 ppm	998 ppm +/- 20 ppm	
n-Pentane	2000 ppm	2004 ppm +/- 40 ppm	
n-Butane	1%	1.02% +/- 0.02%	
Propane	5%	5.00% +/- 0.10%	
Ethane	5%	5.02% +/- 0.10%	
Nitrogen	Balance	Balance	

NOTES: **Blend Tolerance:** +/-2%
Analytical Tolerance: +/-2%

Authorized Signature: Stephen Vaughan (electronic)

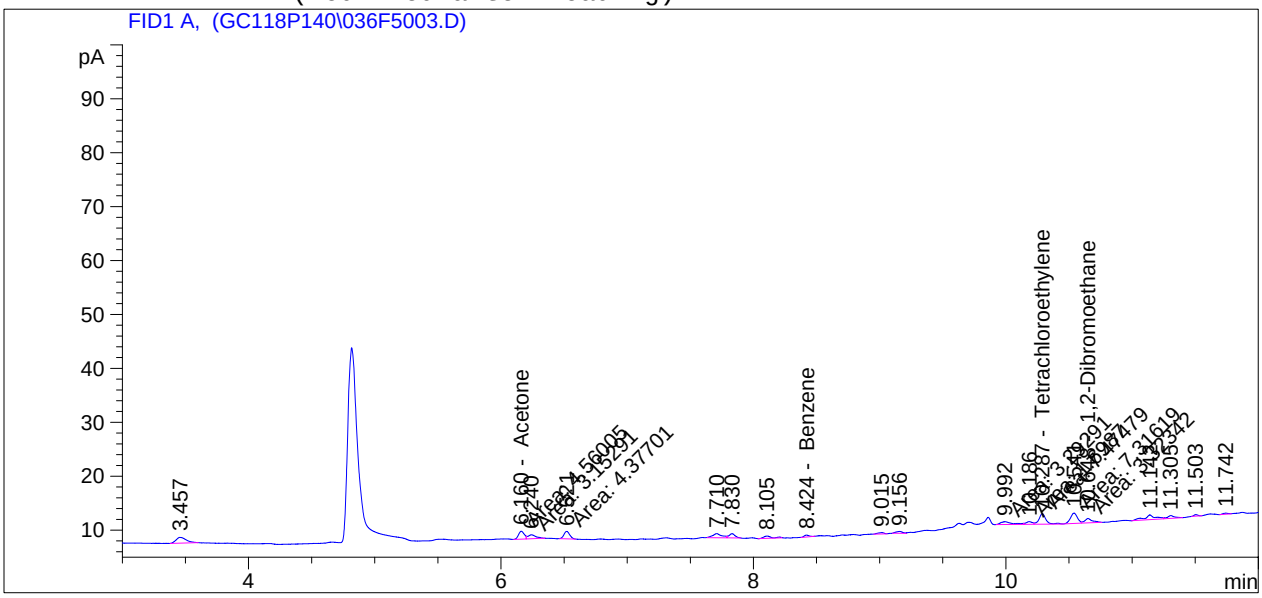
Stephen Vaughan, PhD

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

Sample Chromatograms

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\036F5003.D
Sample Name: 0711-64 R1 Bag COND

Acq. Operator	: JBB	Seq. Line	: 50
Acq. Instrument	: Veronica	Location	: Vial 36
Injection Date	: 07-Aug-11, 11:59:06	Inj	: 3
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:49:21 PM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/8/2011 6:39:43 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.500		-	-	-		Pentane
5.987		-	-	-		Acrolein
6.160	MF	4.56005	1.09262e-1	4.98240e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.424	BB	9.31530e-1	9.79439e-2	9.12377e-2		Benzene
8.870		-	-	-		Trichloroethylene
9.851		-	-	-		Toluene
10.287	FM	7.47479	5.36152e-1	4.00763		Tetrachloroethylene
10.648	FM	3.32342	6.54224e-1	2.17426		1,2-Dibromoethane
Totals :				6.77137		

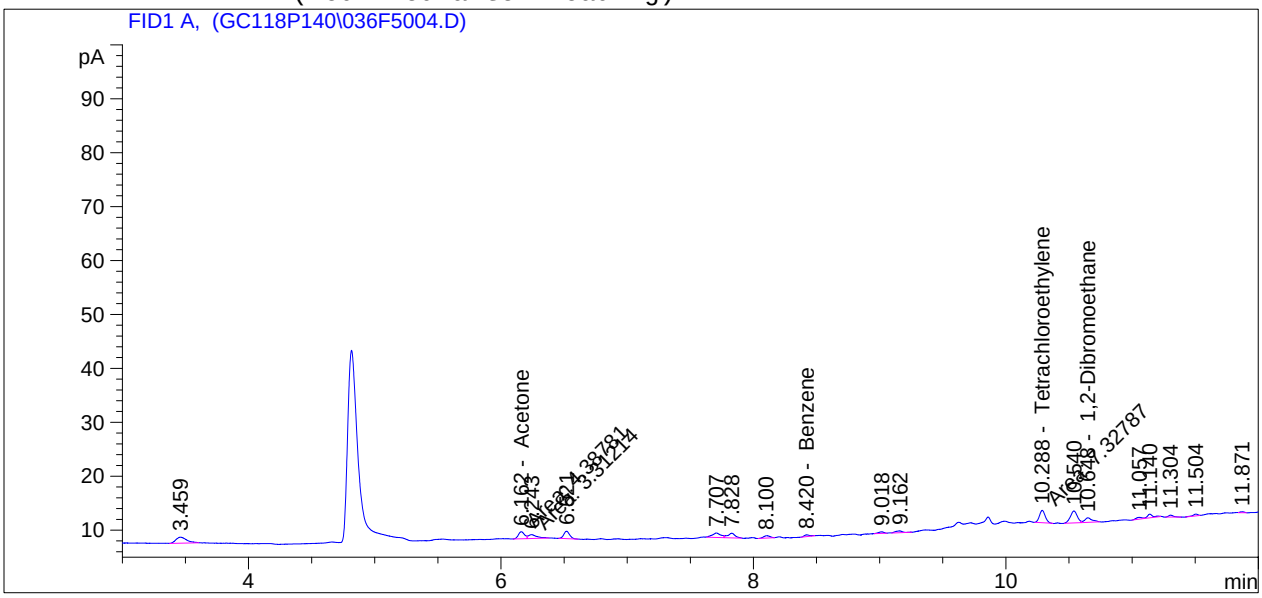
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001177

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\036F5004.D
Sample Name: 0711-64 R1 Bag COND

Acq. Operator	: JBB	Seq. Line	: 50
Acq. Instrument	: Veronica	Location	: Vial 36
Injection Date	: 07-Aug-11, 12:16:57	Inj	: 4
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:49:21 PM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/8/2011 6:39:43 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.500		-	-	-		Pentane
5.987		-	-	-		Acrolein
6.162	MF	4.38781	1.09262e-1	4.79421e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.420	BB	9.21767e-1	9.79439e-2	9.02814e-2		Benzene
8.870		-	-	-		Trichloroethylene
9.851		-	-	-		Toluene
10.288	MM	7.32787	5.35439e-1	3.92363		Tetrachloroethylene
10.648	VB	3.49738	6.54224e-1	2.28807		1,2-Dibromoethane

Totals : 6.78140

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001178

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\036F5005.D
Sample Name: 0711-64 R1 Bag COND

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  50
Acq. Instrument : Veronica                          Location : Vial 36
Injection Date  : 07-Aug-11, 12:34:50                    Inj :   5
                                                  Inj Volume : 0.2 µl
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 6:49:21 PM
                  (modified after loading)
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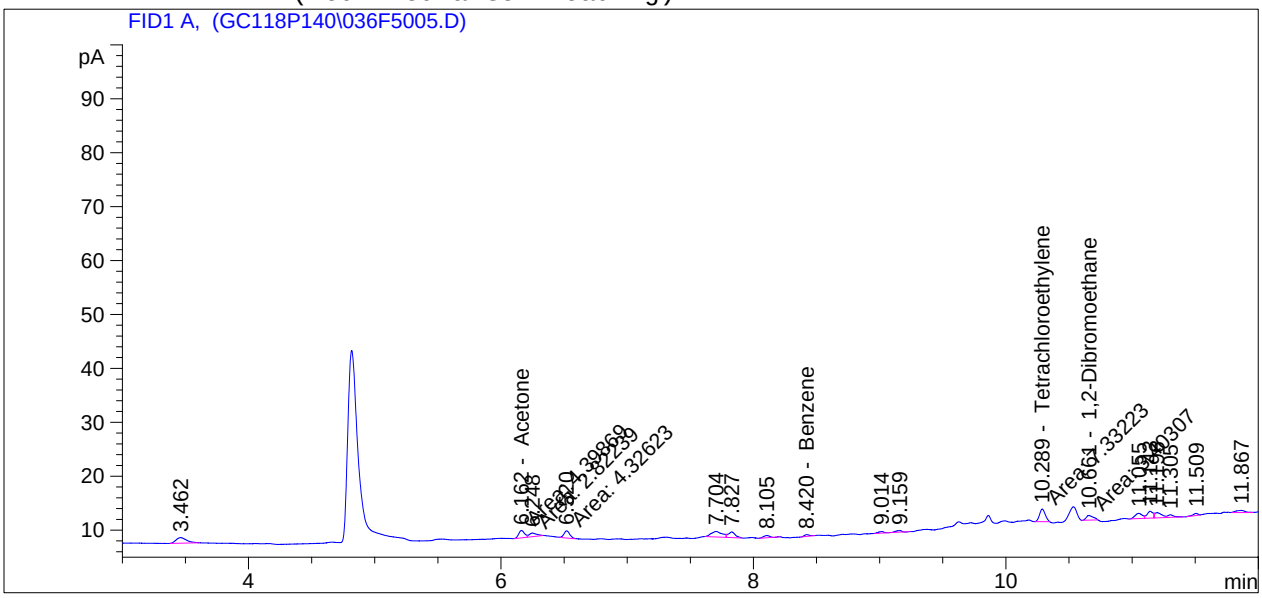
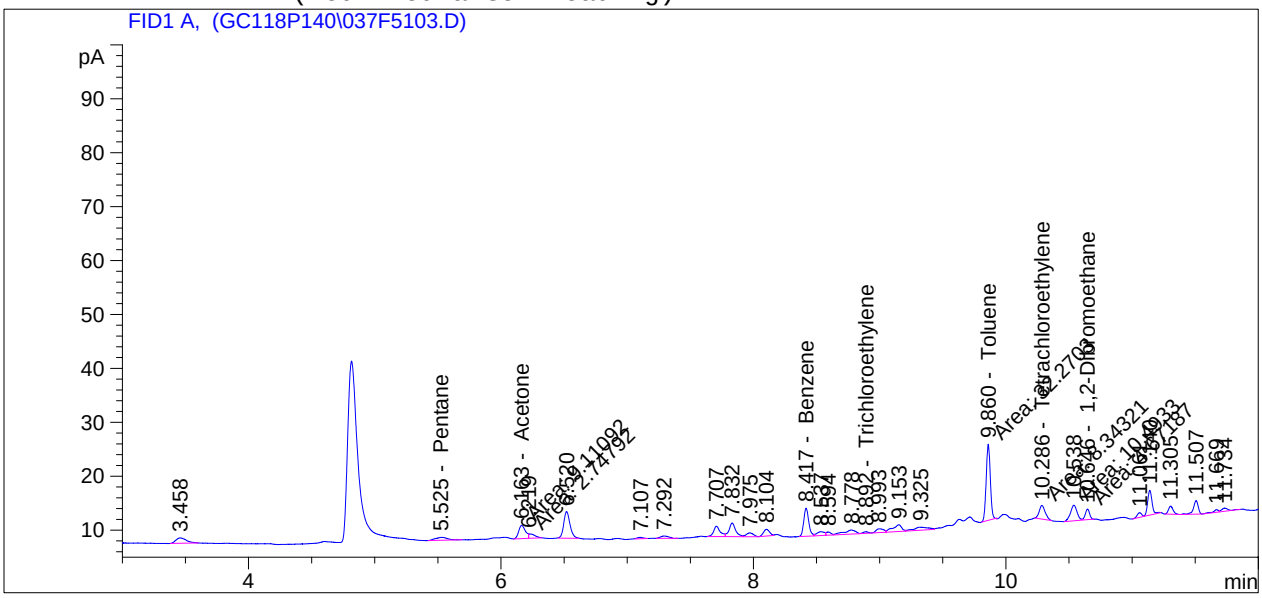



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 6:39:43 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449            -          -          -          1,3-Butadiene
  5.500            -          -          -          Pentane
  5.987            -          -          -          Acrolein
  6.162 MF       4.39869 1.09262e-1 4.80609e-1    Acetone
  6.572            -          -          -          Dichloromethane
  6.932            -          -          -          Hexane
  8.420 BB     8.87542e-1 9.79439e-2 8.69293e-2    Benzene
  8.870            -          -          -          Trichloroethylene
  9.851            -          -          -          Toluene
 10.289 MM       7.33223 5.35460e-1    3.92612    Tetrachloroethylene
 10.661 MM       3.40307 6.54224e-1    2.22637    1,2-Dibromoethane

Totals :                               6.72003


1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\037F5103.D
Sample Name: 0711-64 R2 Bag COND

Acq. Operator	: JBB	Seq. Line	: 51
Acq. Instrument	: Veronica	Location	: Vial 37
Injection Date	: 07-Aug-11, 13:28:29	Inj	: 3
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:38:08 PM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/8/2011 6:39:43 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.525	BB	3.60100	3.90525e-1	1.40628		Pentane
5.987		-	-	-		Acrolein
6.163	MF	9.11092	1.09262e-1	9.95476e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.417	BV	14.29657	9.79439e-2	1.40026		Benzene
8.892	VV	8.01954e-1	4.80042e-1	3.84972e-1		Trichloroethylene
9.860	MM	32.27028	8.08376e-2	2.60865		Toluene
10.286	MM	8.34321	5.39855e-1	4.50413		Tetrachloroethylene
10.646	FM	4.67187	6.54224e-1	3.05645		1,2-Dibromoethane

Totals : 14.35623

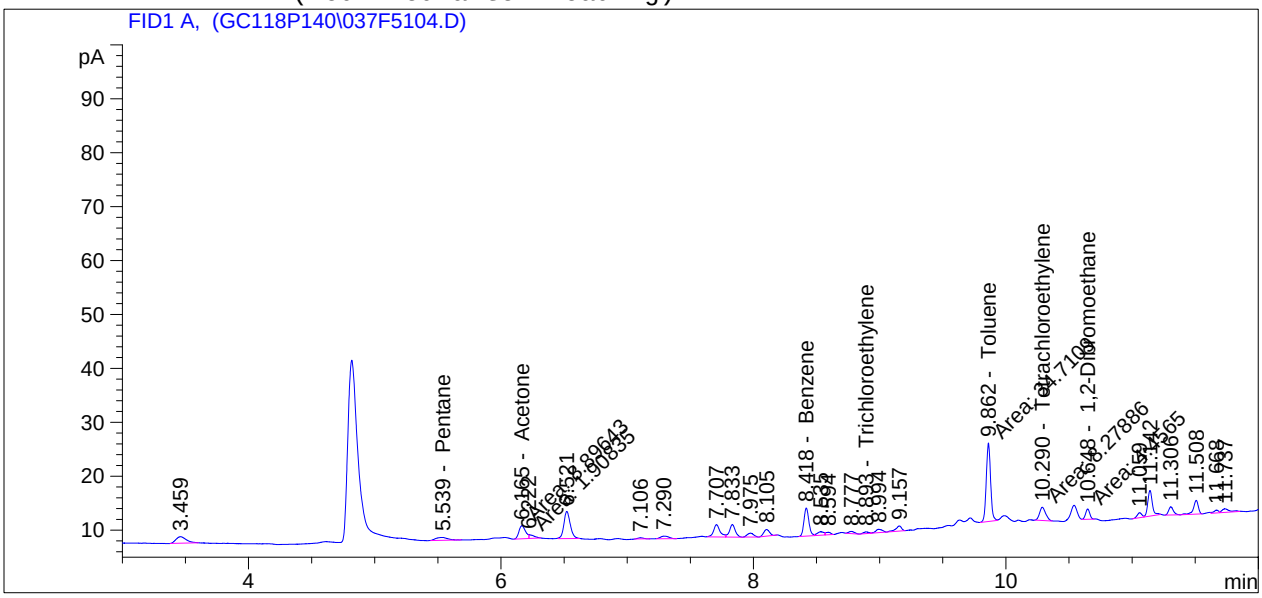
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001180

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\037F5104.D
Sample Name: 0711-64 R2 Bag COND

Acq. Operator	: JBB	Seq. Line	: 51
Acq. Instrument	: Veronica	Location	: Vial 37
Injection Date	: 07-Aug-11, 13:46:24	Inj	: 4
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:38:08 PM (modified after loading)		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 6:39:43 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.539	BB	3.44469	4.00780e-1	1.38056		Pentane
5.987		-	-	-		Acrolein
6.165	MF	8.89643	1.09262e-1	9.72041e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.418	BV	14.10715	9.79439e-2	1.38171		Benzene
8.893	VV	9.17816e-1	4.80042e-1	4.40590e-1		Trichloroethylene
9.862	MM	34.71093	8.28684e-2	2.87644		Toluene
10.290	MM	8.27886	5.39608e-1	4.46734		Tetrachloroethylene
10.648	MM	4.45650	6.54224e-1	2.91555		1,2-Dibromoethane

Totals : 14.43423

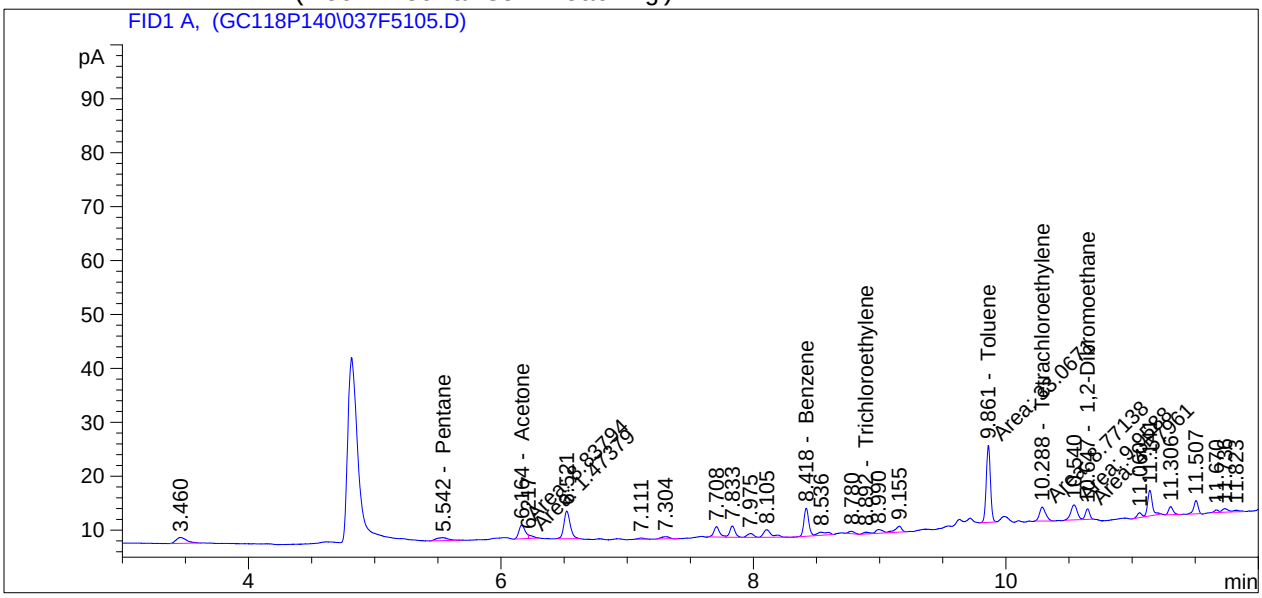
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001181

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\037F5105.D
Sample Name: 0711-64 R2 Bag COND

Acq. Operator	: JBB	Seq. Line	: 51
Acq. Instrument	: Veronica	Location	: Vial 37
Injection Date	: 07-Aug-11, 14:04:17	Inj	: 5
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:38:08 PM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/8/2011 6:39:43 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.542	BB	3.53163	3.94964e-1	1.39487		Pentane
5.987		-	-	-		Acrolein
6.164	MF	8.83794	1.09262e-1	9.65650e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.418	BV	13.98224	9.79439e-2	1.36948		Benzene
8.892	VV	1.09372	4.80042e-1	5.25032e-1		Trichloroethylene
9.861	MM	33.06709	8.15336e-2	2.69608		Toluene
10.288	MM	8.77138	5.41411e-1	4.74893		Tetrachloroethylene
10.647	FM	4.57961	6.54224e-1	2.99609		1,2-Dibromoethane

Totals : 14.69612

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001182

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\038F5203.D
Sample Name: 0711-64 R3 Bag COND

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  52
Acq. Instrument : Veronica                          Location : Vial 38
Injection Date  : 07-Aug-11, 14:58:02                    Inj :   3
                                                  Inj Volume : 0.2 µl
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 6:38:08 PM
                  (modified after loading)
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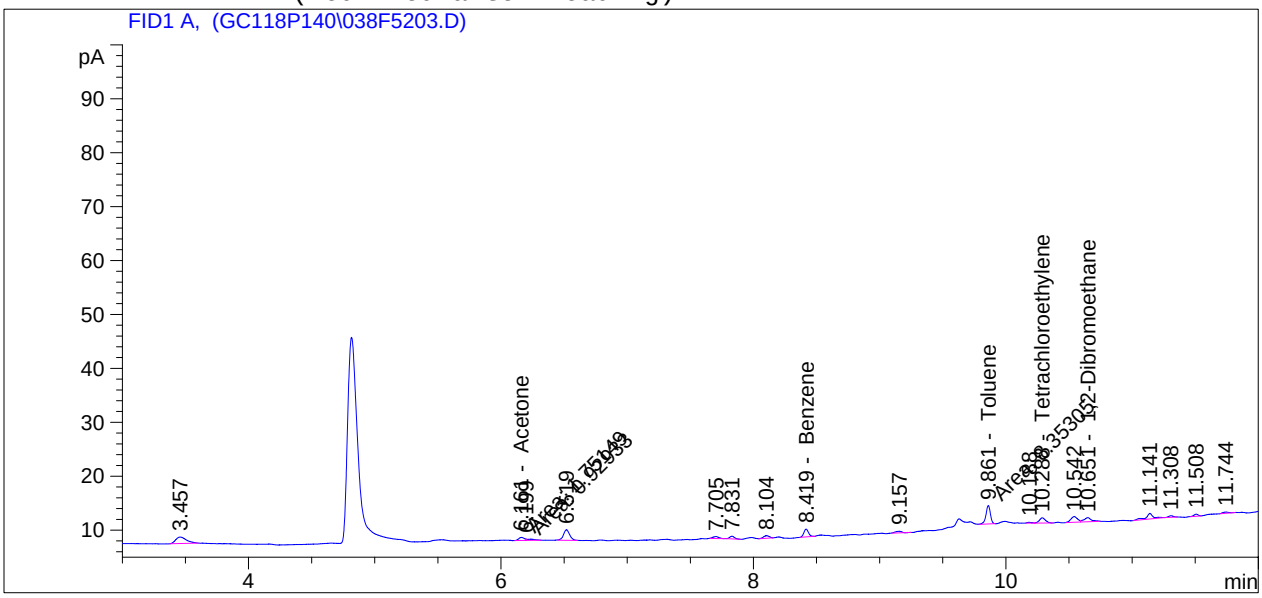



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 6:39:43 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449            -          -          -          1,3-Butadiene
  5.500            -          -          -          Pentane
  5.987            -          -          -          Acrolein
  6.161 MF       1.75149 1.09262e-1 1.91371e-1    Acetone
  6.572            -          -          -          Dichloromethane
  6.932            -          -          -          Hexane
  8.419 BB       3.70176 9.79439e-2 3.62565e-1    Benzene
  8.870            -          -          -          Trichloroethylene
  9.861 MM       8.35305 7.12031e-2 5.94763e-1    Toluene
 10.288 VB       3.20737 5.28151e-1    1.69397    Tetrachloroethylene
 10.651 VB       3.17062 6.54224e-1    2.07430    1,2-Dibromoethane

Totals :                               4.91697

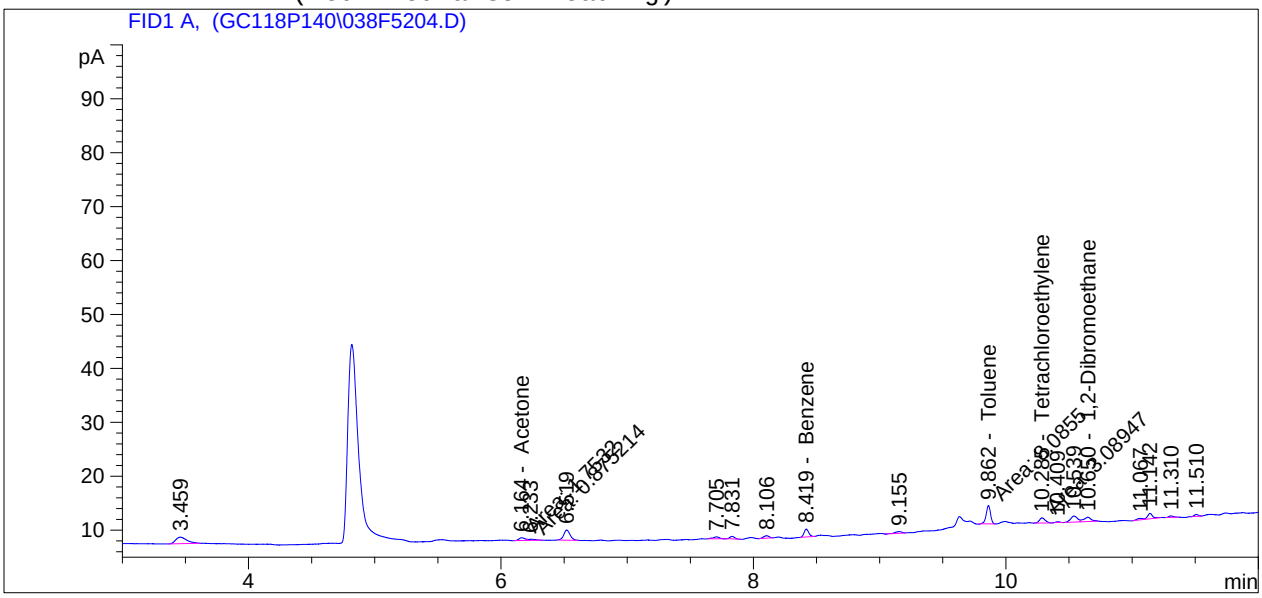

1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

EM-BTRF-001183

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\038F5204.D
Sample Name: 0711-64 R3 Bag COND

Acq. Operator	: JBB	Seq. Line	: 52
Acq. Instrument	: Veronica	Location	: Vial 38
Injection Date	: 07-Aug-11, 15:15:57	Inj	: 4
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:38:08 PM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/8/2011 6:39:43 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.500		-	-	-		Pentane
5.987		-	-	-		Acrolein
6.164	MF	1.75320	1.09262e-1	1.91557e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.419	BB	3.75422	9.79439e-2	3.67703e-1		Benzene
8.870		-	-	-		Trichloroethylene
9.862	MM	8.08550	7.12031e-2	5.75713e-1		Toluene
10.285	MM	3.08947	5.28151e-1	1.63171		Tetrachloroethylene
10.650	VB	3.28184	6.54224e-1	2.14706		1,2-Dibromoethane
Totals :				4.91374		

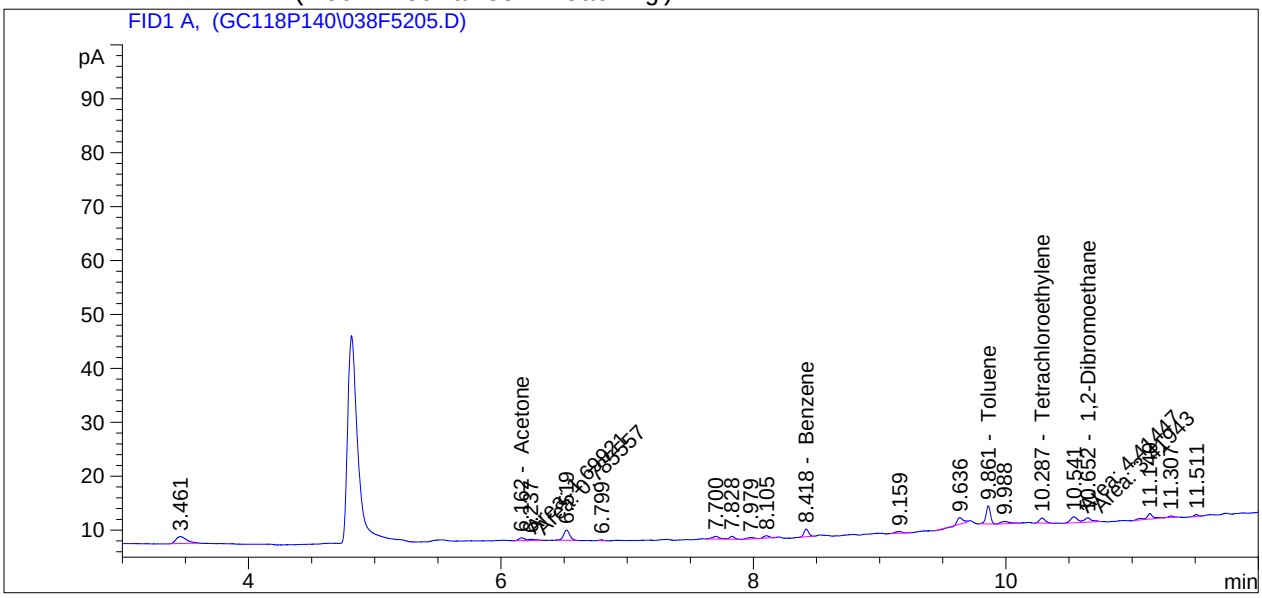
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001184

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\038F5205.D
Sample Name: 0711-64 R3 Bag COND

Acq. Operator	: JBB	Seq. Line	: 52
Acq. Instrument	: Veronica	Location	: Vial 38
Injection Date	: 07-Aug-11, 15:33:54	Inj	: 5
		Inj Volume	: 0.2 µl
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 6:44:41 PM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/8/2011 6:39:43 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.449		-	-	-		1,3-Butadiene
5.500		-	-	-		Pentane
5.987		-	-	-		Acrolein
6.162	MF	1.69921	1.09262e-1	1.85658e-1		Acetone
6.572		-	-	-		Dichloromethane
6.932		-	-	-		Hexane
8.418	BB	3.71971	9.79439e-2	3.64323e-1		Benzene
8.870		-	-	-		Trichloroethylene
9.861	BV	8.12503	7.12031e-2	5.78527e-1		Toluene
10.287	BB	2.97295	5.28151e-1	1.57017		Tetrachloroethylene
10.652	FM	3.41943	6.54224e-1	2.23707		1,2-Dibromoethane
Totals :				4.93575		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

EM-BTRF-001185

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\035F4901.D
Sample Name: 0711-64 Bag COND FB

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Veronica                      Location : Vial 35
Injection Date  : 07-Aug-11, 09:54:13                Inj :   1
                                              Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
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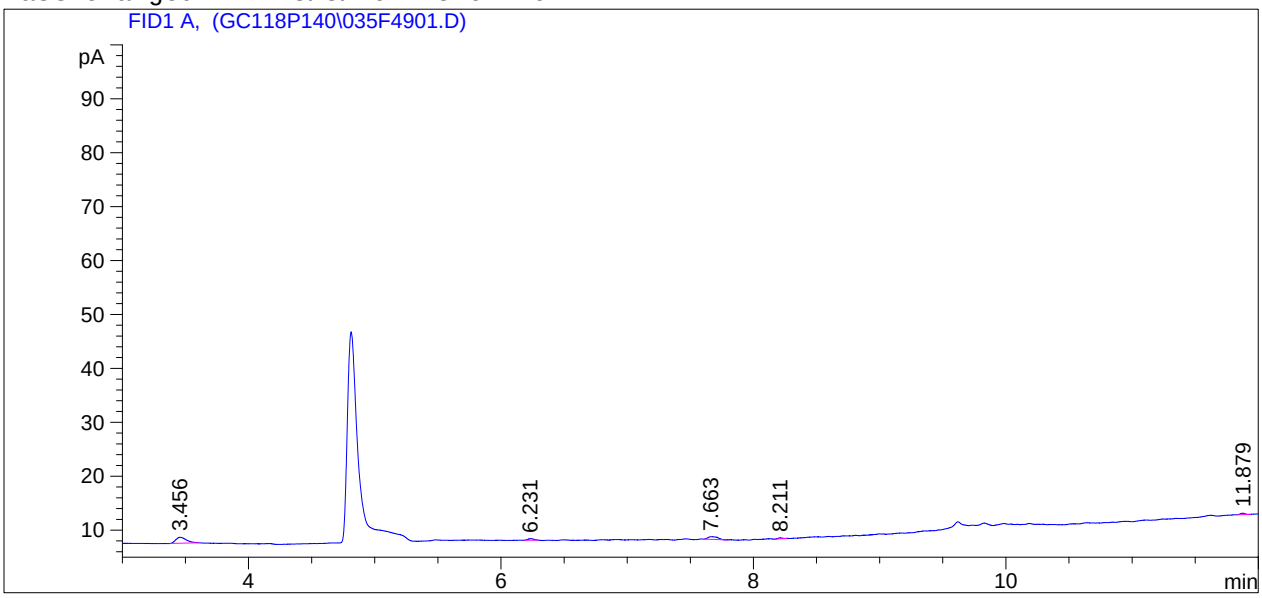


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449           -          -          -         1,3-Butadiene
  5.476           -          -          -         Pentane
  5.987           -          -          -         Acrolein
  6.142           -          -          -         Acetone
  6.572           -          -          -         Dichloromethane
  6.932           -          -          -         Hexane
  8.405           -          -          -         Benzene
  8.870           -          -          -         Trichloroethylene
  9.851           -          -          -         Toluene
 10.276           -          -          -         Tetrachloroethylene
 10.696           -          -          -         1,2-Dibromoethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

EM-BTRF-001186

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\035F4902.D
Sample Name: 0711-64 Bag COND FB

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Veronica                      Location : Vial 35
Injection Date  : 07-Aug-11, 10:12:00               Inj :   2
                                               Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
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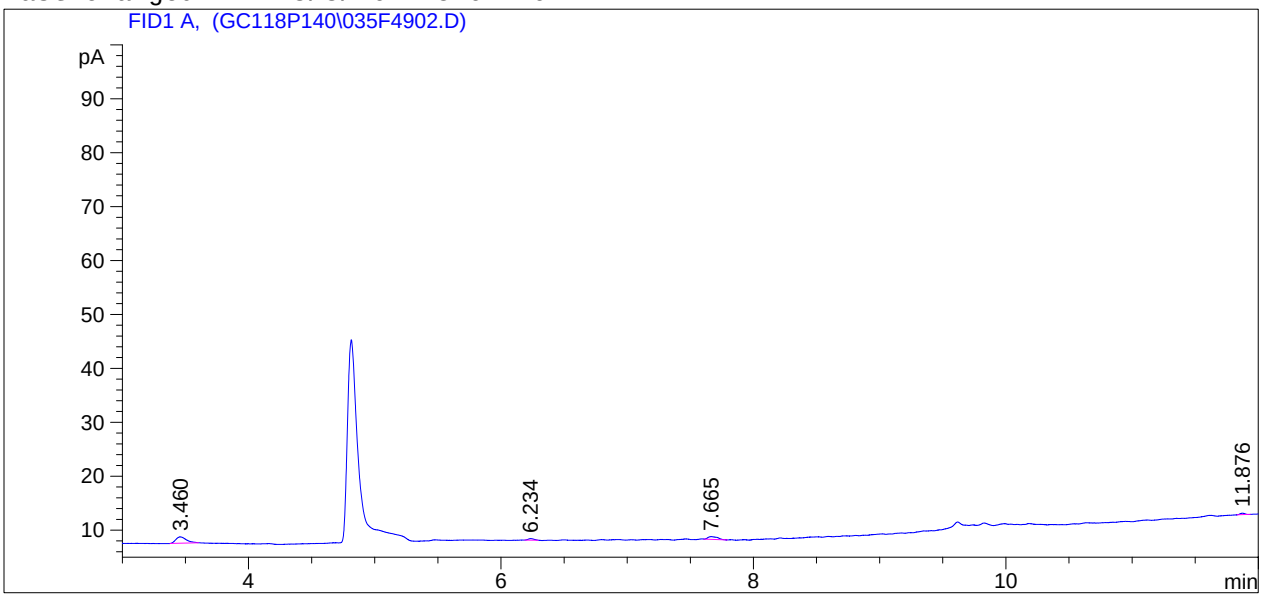



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449           -          -          -         1,3-Butadiene
  5.476           -          -          -         Pentane
  5.987           -          -          -         Acrolein
  6.142           -          -          -         Acetone
  6.572           -          -          -         Dichloromethane
  6.932           -          -          -         Hexane
  8.405           -          -          -         Benzene
  8.870           -          -          -         Trichloroethylene
  9.851           -          -          -         Toluene
 10.276           -          -          -         Tetrachloroethylene
 10.696           -          -          -         1,2-Dibromoethane

Totals :                                0.00000

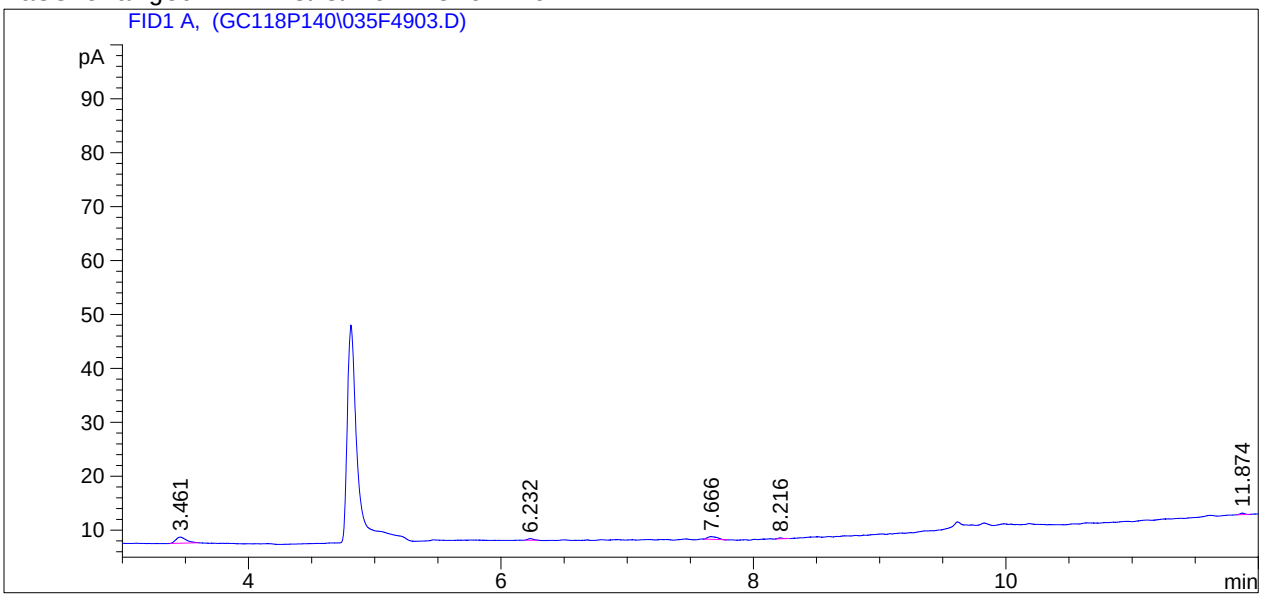

1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

EM-BTRF-001187

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\035F4903.D
Sample Name: 0711-64 Bag COND FB

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Veronica                      Location : Vial 35
Injection Date  : 07-Aug-11, 10:29:50                Inj :   3
                                              Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449           -          -          -         1,3-Butadiene
  5.476           -          -          -         Pentane
  5.987           -          -          -         Acrolein
  6.142           -          -          -         Acetone
  6.572           -          -          -         Dichloromethane
  6.932           -          -          -         Hexane
  8.405           -          -          -         Benzene
  8.870           -          -          -         Trichloroethylene
  9.851           -          -          -         Toluene
 10.276           -          -          -         Tetrachloroethylene
 10.696           -          -          -         1,2-Dibromoethane

Totals :                              0.00000

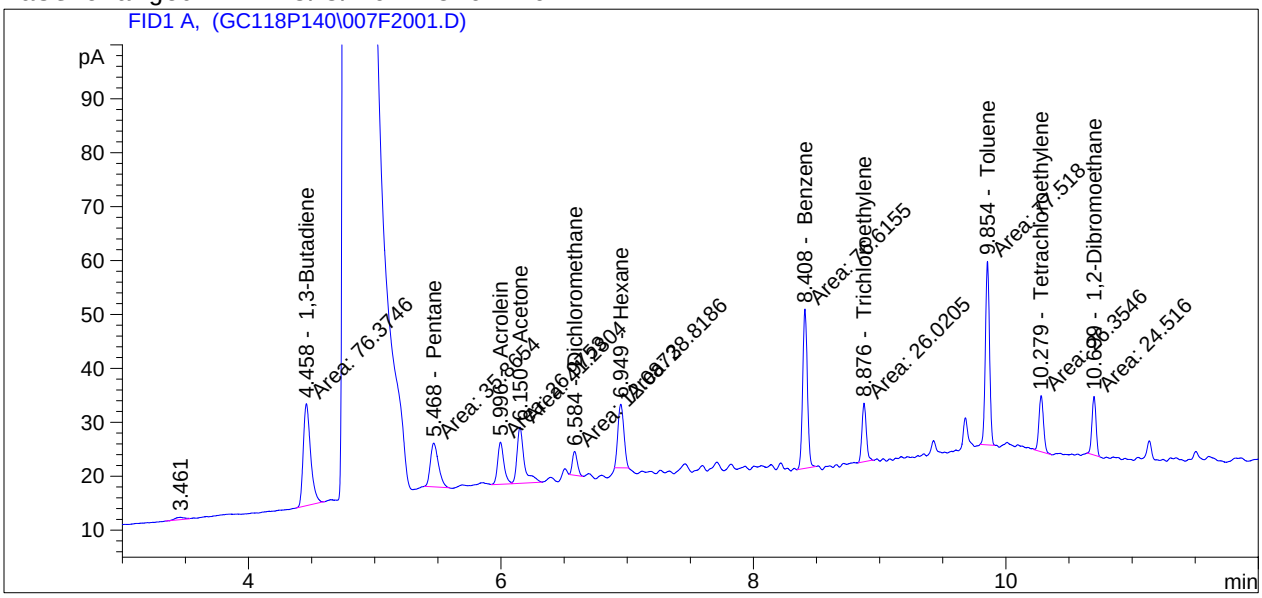

1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

EM-BTRF-001188

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\007F2001.D
Sample Name: 0711-64 R1 Bag COND #MS

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  20
Acq. Instrument : Veronica                          Location : Vial 7
Injection Date  : 05-Aug-11, 15:26:34                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/5/2011 2:13:15 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.458 MM       76.37462 1.50127e-1   11.46591    1,3-Butadiene
  5.468 MM       35.86538 1.87226e-1    6.71492    Pentane
  5.996 MF       26.97530 3.45889e-1    9.33045    Acrolein
  6.150 FM       41.28038 1.82669e-1    7.54064    Acetone
  6.584 MM       12.08720 8.06859e-1    9.75267    Dichloromethane
  6.949 MM       38.81865 1.32445e-1    5.14132    Hexane
  8.408 MM       76.61548 1.07414e-1    8.22954    Benzene
  8.876 MM       26.02048 5.13145e-1   13.35228    Trichloroethylene
  9.854 MM       77.51799 9.76967e-2    7.57325    Toluene
 10.279 MM       26.35464 5.61640e-1   14.80182    Tetrachloroethylene
 10.699 MM       24.51601 7.29907e-1   17.89441    1,2-Dibromoethane

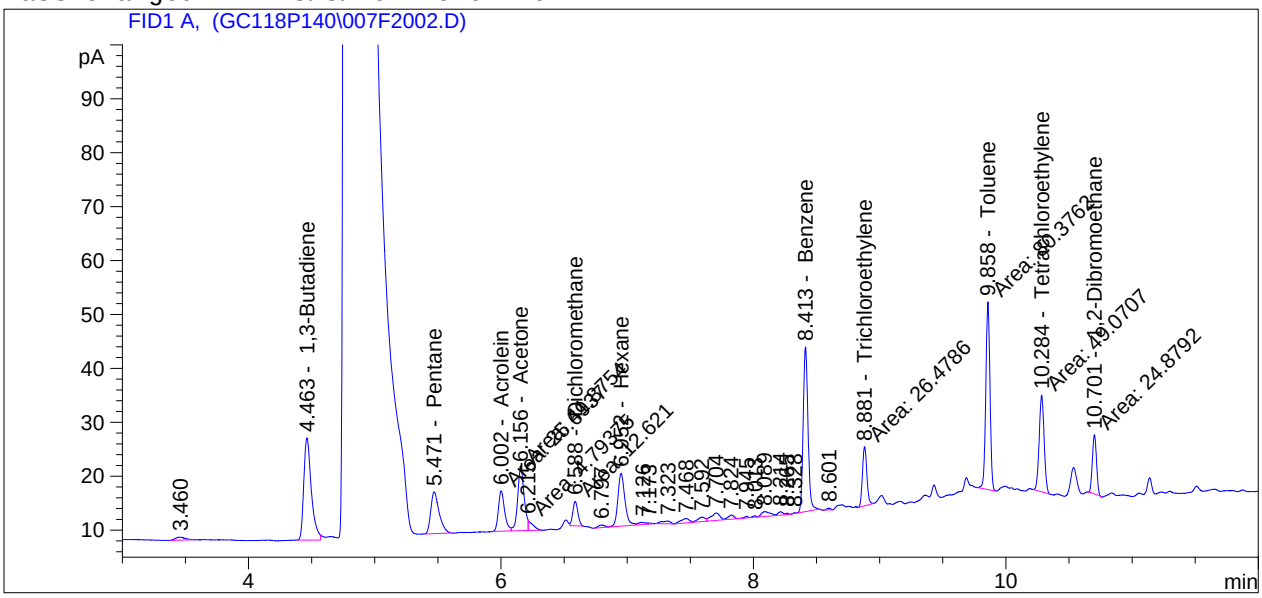
Totals :                               111.79721


==========================================================================
                         *** End of Report ***
```

EM-BTRF-001189

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\007F2002.D
Sample Name: 0711-64 R1 Bag COND #MS

Acq. Operator	: JBB	Seq. Line	: 20
Acq. Instrument	: Veronica	Location	: Vial 7
Injection Date	: 05-Aug-11, 15:44:29	Inj	: 2
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/5/2011 2:13:15 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 5:07:20 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Monday, August 08, 2011 5:07:13 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

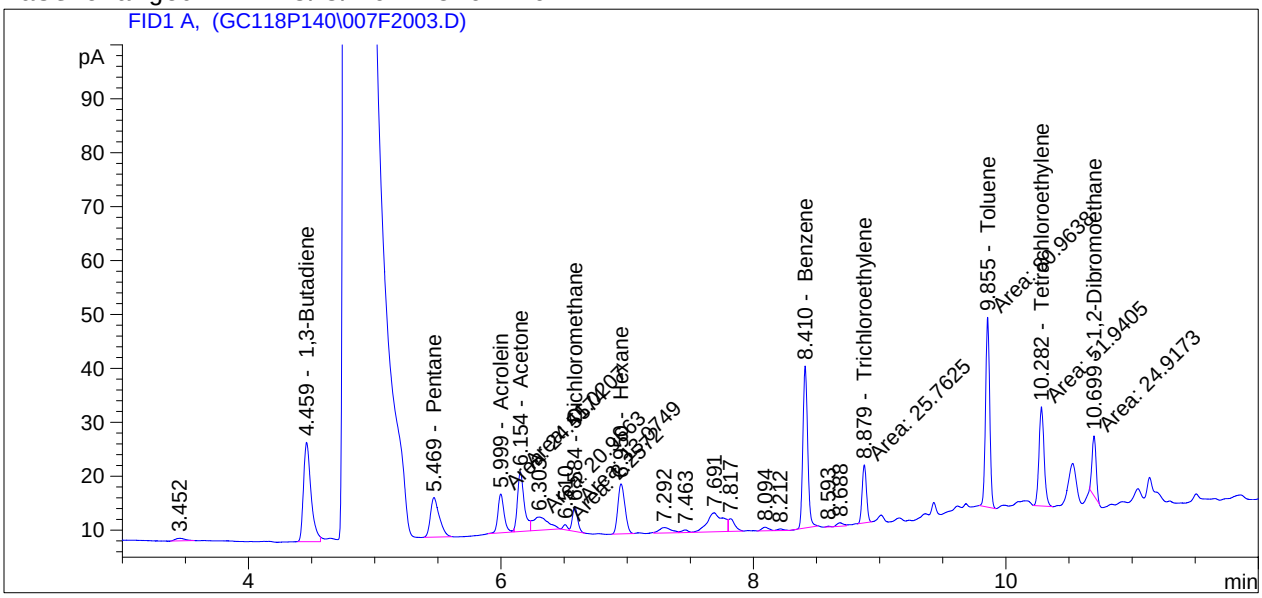
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.463	BBA	78.61655	1.50129e-1	11.80265		1,3-Butadiene
5.471	BB	35.42855	1.87505e-1	6.64305		Pentane
6.002	MF	25.69374	3.46191e-1	8.89493		Acrolein
6.156	MF	41.87540	1.83230e-1	7.67282		Acetone
6.588	MM	12.62100	8.09256e-1	10.21362		Dichloromethane
6.952	VV	37.69189	1.32483e-1	4.99355		Hexane
8.413	VB	80.91125	1.07566e-1	8.70328		Benzene
8.881	MM	26.47857	5.13320e-1	13.59197		Trichloroethylene
9.858	MM	80.37615	9.81242e-2	7.88685		Toluene
10.284	MM	49.07069	5.66311e-1	27.78929		Tetrachloroethylene
10.701	MM	24.87923	7.30313e-1	18.16962		1,2-Dibromoethane
Totals :				126.36163		

*** End of Report ***

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\007F2003.D
Sample Name: 0711-64 R1 Bag COND #MS

Acq. Operator	: JBB	Seq. Line	: 20
Acq. Instrument	: Veronica	Location	: Vial 7
Injection Date	: 05-Aug-11, 16:02:27	Inj	: 3
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/5/2011 2:13:15 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 5:07:20 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Monday, August 08, 2011 5:07:13 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.459	BBA	76.49979	1.50127e-1	11.48471		1,3-Butadiene
5.469	BB	35.72498	1.87315e-1	6.69182		Pentane
5.999	MF	24.55739	3.46485e-1	8.50876		Acrolein
6.154	MF	41.02074	1.82419e-1	7.48297		Acetone
6.584	FM	13.07488	8.11140e-1	10.60556		Dichloromethane
6.950	BB	36.00980	1.32546e-1	4.77295		Hexane
8.410	VB	79.07819	1.07503e-1	8.50113		Benzene
8.879	MM	25.76247	5.13044e-1	13.21728		Trichloroethylene
9.855	MM	80.96376	9.82084e-2	7.95132		Toluene
10.282	MM	51.94049	5.66611e-1	29.43004		Tetrachloroethylene
10.699	MM	24.91728	7.30355e-1	18.19846		1,2-Dibromoethane

Totals : 126.84500

*** End of Report ***

EM-BTRF-001191

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\033F4703.D
Sample Name: RB H2O

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  47
Acq. Instrument : Veronica                          Location : Vial 33
Injection Date  : 07-Aug-11, 07:32:02                    Inj :   3
                                                  Inj Volume : 0.2 µl
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
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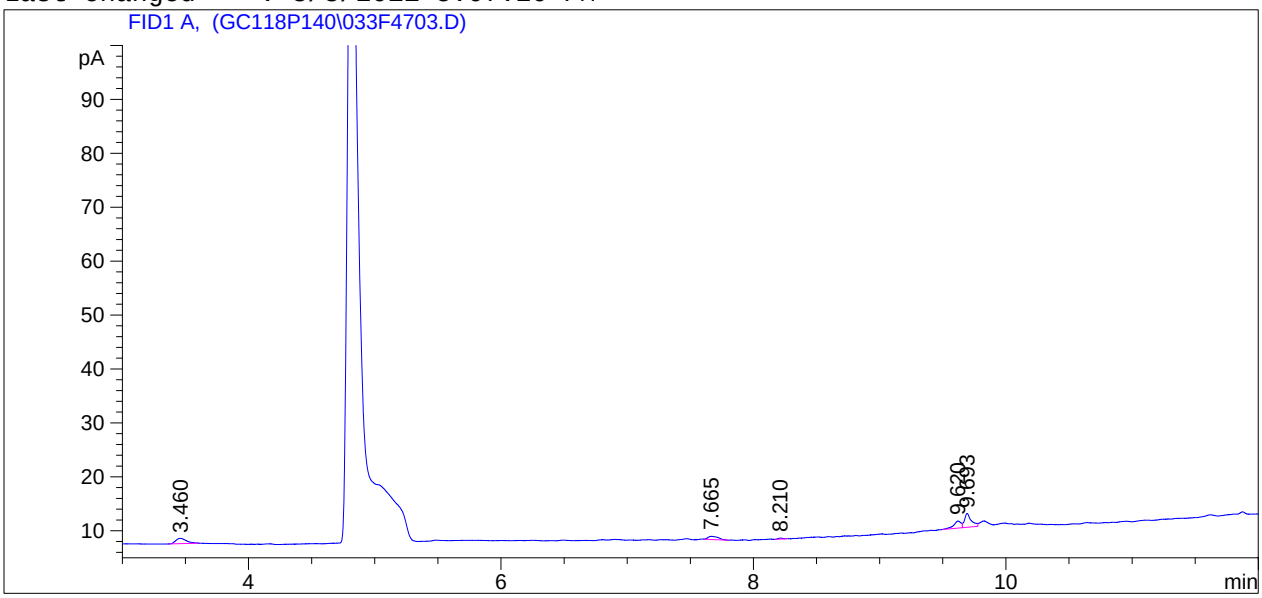
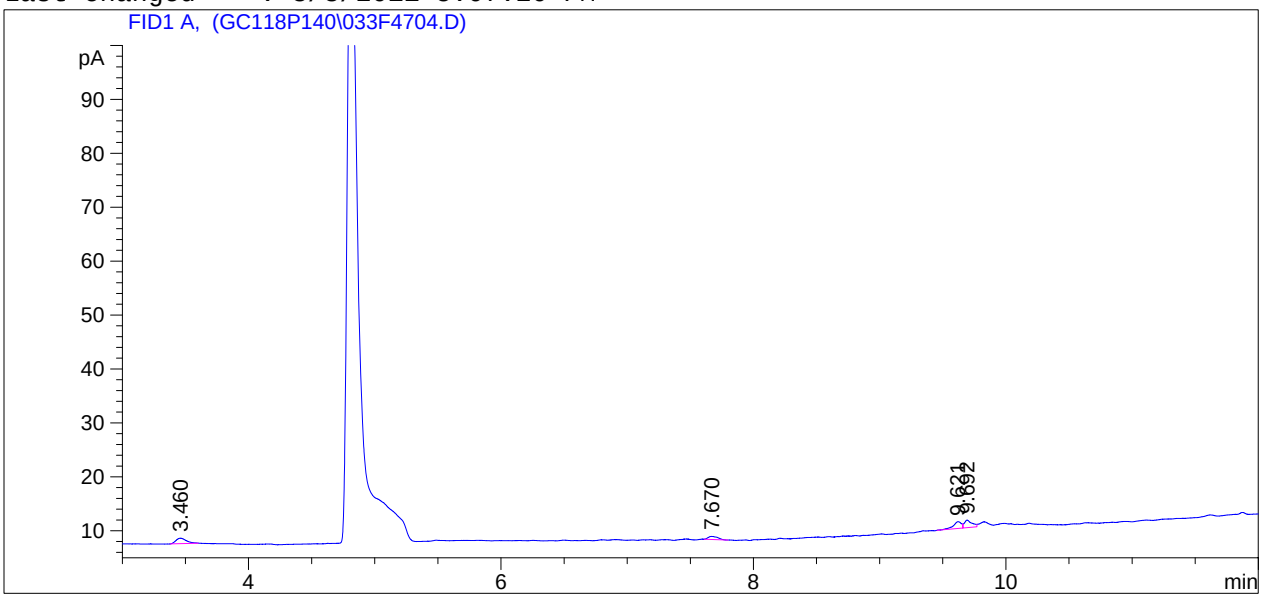



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449            -          -          -         1,3-Butadiene
  5.476            -          -          -         Pentane
  5.987            -          -          -         Acrolein
  6.142            -          -          -         Acetone
  6.572            -          -          -         Dichloromethane
  6.932            -          -          -         Hexane
  8.405            -          -          -         Benzene
  8.870            -          -          -         Trichloroethylene
  9.851            -          -          -         Toluene
 10.276            -          -          -         Tetrachloroethylene
 10.696            -          -          -         1,2-Dibromoethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\033F4704.D
Sample Name: RB H2O

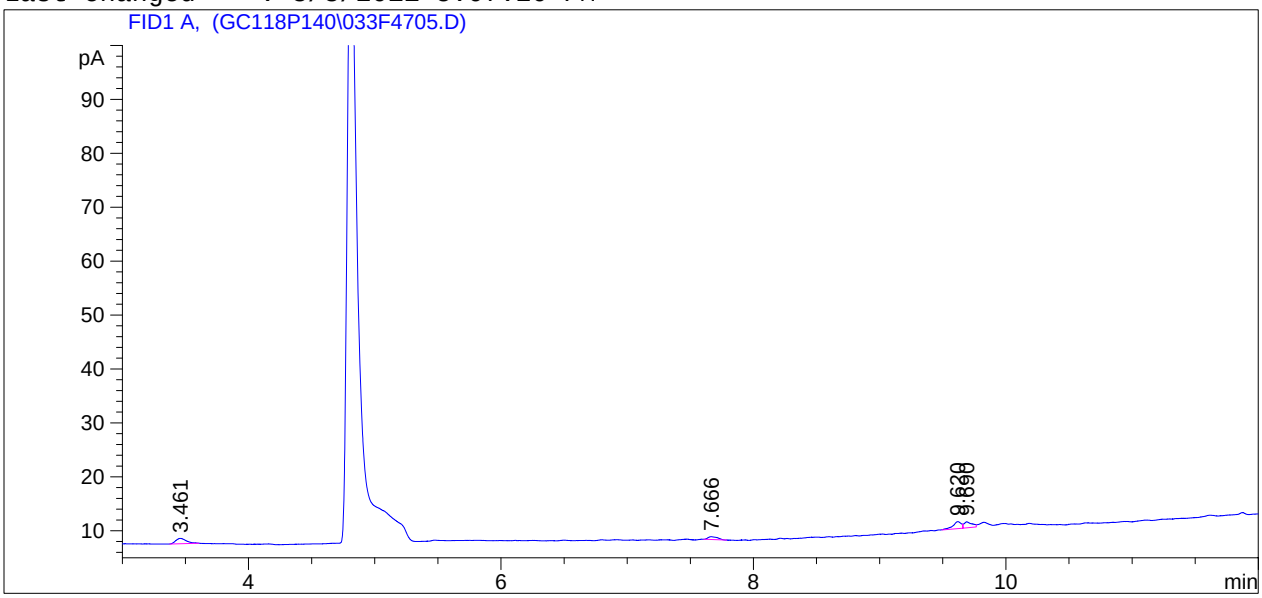
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  47
Acq. Instrument : Veronica                          Location : Vial 33
Injection Date  : 07-Aug-11, 07:49:46                    Inj :   4
                                                  Inj Volume : 0.2 µl
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449           -           -          -         1,3-Butadiene
  5.476           -           -          -         Pentane
  5.987           -           -          -         Acrolein
  6.142           -           -          -         Acetone
  6.572           -           -          -         Dichloromethane
  6.932           -           -          -         Hexane
  8.405           -           -          -         Benzene
  8.870           -           -          -         Trichloroethylene
  9.851           -           -          -         Toluene
 10.276           -           -          -         Tetrachloroethylene
 10.696           -           -          -         1,2-Dibromoethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\033F4705.D
Sample Name: RB H2O

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  47
Acq. Instrument : Veronica                          Location : Vial 33
Injection Date  : 07-Aug-11, 08:07:32                    Inj :   5
                                                  Inj Volume : 0.2 µl
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 5:07:20 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 08, 2011 5:07:13 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.449           -           -          -         1,3-Butadiene
  5.476           -           -          -         Pentane
  5.987           -           -          -         Acrolein
  6.142           -           -          -         Acetone
  6.572           -           -          -         Dichloromethane
  6.932           -           -          -         Hexane
  8.405           -           -          -         Benzene
  8.870           -           -          -         Trichloroethylene
  9.851           -           -          -         Toluene
 10.276           -           -          -         Tetrachloroethylene
 10.696           -           -          -         1,2-Dibromoethane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 8/8/2011 3:48:45 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FPD2 B,

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
4.410	1	1	2.19600	14.61563	1.50250e-1			1,3-Butadiene
		2	4.38300	29.15581	1.50330e-1			
		3	10.89100	74.59686	1.45998e-1			
		4	52.38300	331.99671	1.57782e-1			
		5	183.34000	1251.10034	1.46543e-1			
5.362	1	1	1.24700	2.83166	4.40377e-1			Pentane
		2	2.48900	9.41870	2.64261e-1			
		3	6.18600	32.53915	1.90109e-1			
		4	29.75000	171.71405	1.73253e-1			
		5	104.12500	659.62087	1.57856e-1			
5.944	1	1	1.65000	4.29279	3.84366e-1			Acrolein
		2	3.29300	9.25395	3.55848e-1			
		3	8.18400	25.61892	3.19451e-1			
		4	39.36000	109.80720	3.58446e-1			
		5	137.76000	395.29392	3.48500e-1			
6.101	1	1	1.57700	14.33864	1.09983e-1			Acetone
		2	3.14700	22.16728	1.41966e-1			
		3	7.82000	40.44277	1.93360e-1			
		4	37.61200	184.85108	2.03472e-1			
		5	131.64000	586.56504	2.24425e-1			
6.527	1	1	2.64400	3.82086	6.91990e-1			Dichloromethane
		2	5.27800	7.07045	7.46487e-1			
		3	13.11800	15.86576	8.26812e-1			
		4	63.08900	72.18132	8.74035e-1			
		5	220.81100	260.29853	8.48299e-1			
6.885	1	1	1.30900	9.58982	1.36499e-1			Hexane
		2	2.61200	19.54366	1.33649e-1			

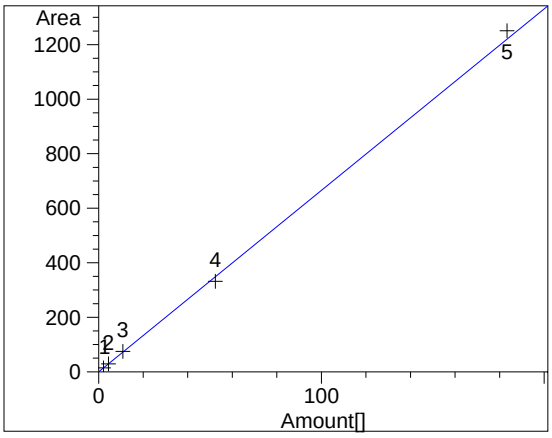
Method C:\GC2011Q3\VERONICA\METHODS\GC118P140.M

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref Grp	Name
		3	6.49200	49.34675	1.31559e-1		
		4	31.22400	233.96188	1.33458e-1		
		5	109.28400	842.25958	1.29751e-1		
8.380	1	1	1.74400	17.72487	9.83928e-2		Benzene
		2	3.48000	33.87357	1.02735e-1		
		3	8.64900	80.48781	1.07457e-1		
		4	41.59800	377.41448	1.10218e-1		
		5	145.59400	1320.42155	1.10263e-1		
8.837	1	1	2.92000	6.05215	4.82473e-1		Trichloroethylene
		2	5.82900	11.80121	4.93932e-1		
		3	14.48500	27.97445	5.17794e-1		
		4	69.66700	133.19106	5.23061e-1		
		5	243.83300	467.56150	5.21499e-1		
9.828	1	1	1.72300	24.16054	7.13146e-2		Toluene
		2	3.43900	39.84534	8.63087e-2		
		3	8.54700	87.35443	9.78428e-2		
		4	41.10800	382.25313	1.07541e-1		
		5	143.87800	1309.64054	1.09861e-1		
10.254	1	1	3.22300	6.05874	5.31959e-1		Tetrachloroethylene
		2	6.43400	11.78002	5.46179e-1		
		3	15.98900	29.20872	5.47405e-1		
		4	76.89900	133.70871	5.75123e-1		
		5	269.14800	463.62268	5.80532e-1		
10.676	1	1	4.30900	6.54973	6.57890e-1		1,2-Dibromoethane
		2	8.60000	12.18008	7.06071e-1		
		3	21.37300	30.56478	6.99269e-1		
		4	102.79400	134.60925	7.63647e-1		
		5	359.77900	463.99523	7.75394e-1		

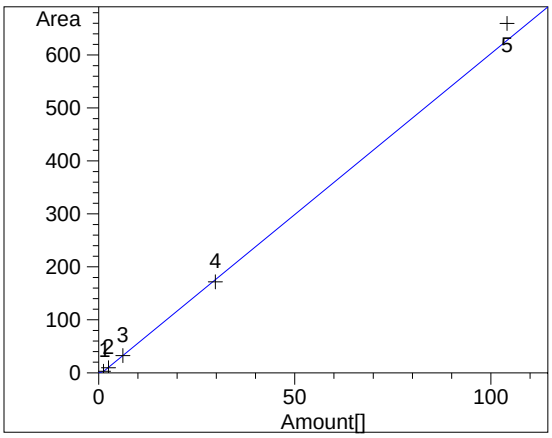
Peak Sum Table

No Entries in table

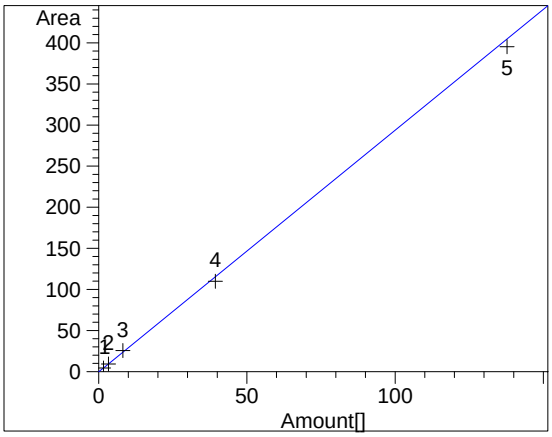
Calibration Curves



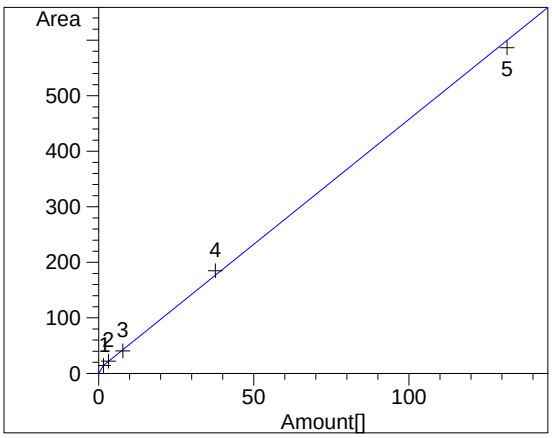
1,3-Butadiene at exp. RT: 4.410
FID1 A,
Correlation: 0.99928
Residual Std. Dev.: 20.10377
Formula: y = mx + b
m: 6.65773
b: 3.77100e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251028
Level 3 : 0.040656
Level 4 : 0.001757
Level 5 : 0.000143



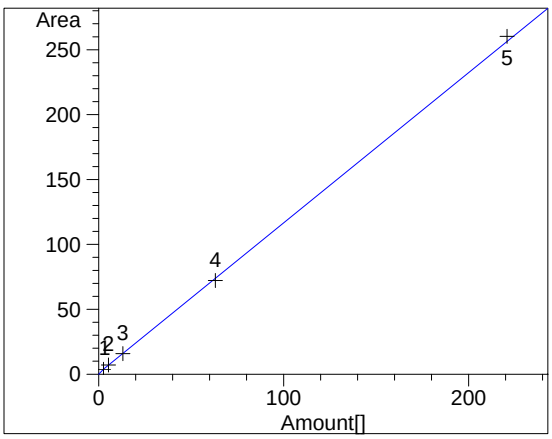
Pentane at exp. RT: 5.362
FID1 A,
Correlation: 0.99880
Residual Std. Dev.: 18.47830
Formula: y = mx + b
m: 6.07771
b: -4.94598
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251005
Level 3 : 0.040636
Level 4 : 0.001757
Level 5 : 0.000143



Acrolein at exp. RT: 5.944
FID1 A,
Correlation: 0.99806
Residual Std. Dev.: 6.50146
Formula: y = mx + b
m: 2.94260
b: -4.80451e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251064
Level 3 : 0.040648
Level 4 : 0.001757
Level 5 : 0.000143

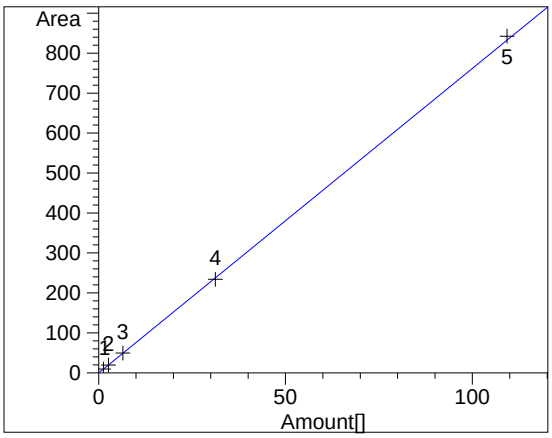


Acetone at exp. RT: 6.101
FID1 A,
Correlation: 0.99832
Residual Std. Dev.: 9.15066
Formula: y = mx + b
m: 4.50181
b: 7.33387
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251113
Level 3 : 0.040668
Level 4 : 0.001758
Level 5 : 0.000144

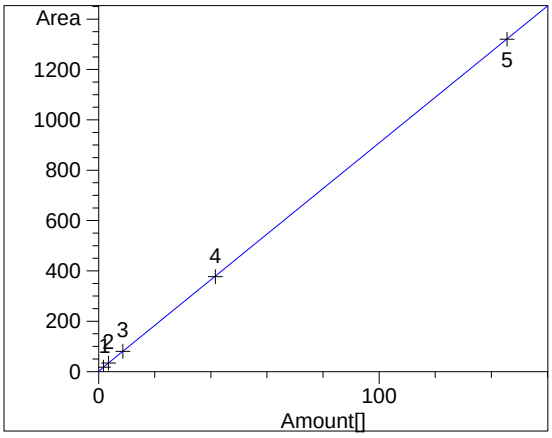


Dichloromethane at exp. RT: 6.527
FID1 A,
Correlation: 0.99968
Residual Std. Dev.: 2.39848
Formula: y = mx + b
m: 1.15804
b: 7.93230e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.250948
Level 3 : 0.040624
Level 4 : 0.001756

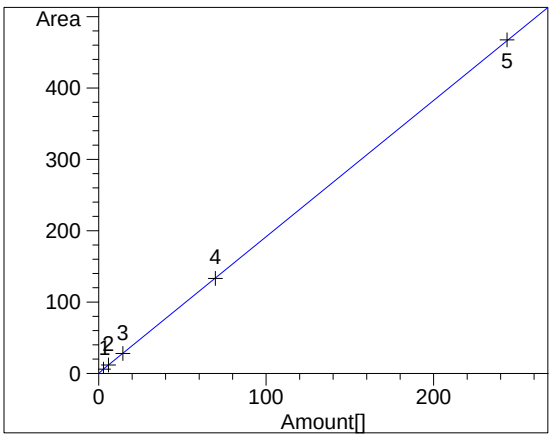
Level 5 : 0.000143



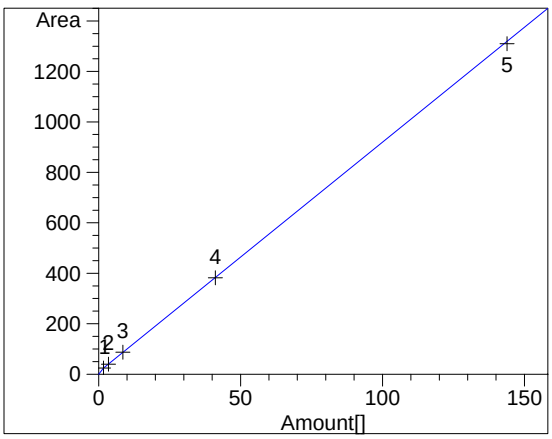
Hexane at exp. RT: 6.885
FID1 A,
Correlation: 0.99992
Residual Std. Dev.: 5.81030
Formula: y = mx + b
m: 7.62512
b: -3.84539e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25115
Level 3 : 0.040656
Level 4 : 0.001758
Level 5 : 0.000143



Benzene at exp. RT: 8.380
FID1 A,
Correlation: 0.99997
Residual Std. Dev.: 1.46711
Formula: y = mx + b
m: 9.06776
b: 1.99193
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251151
Level 3 : 0.040659
Level 4 : 0.001758
Level 5 : 0.000143

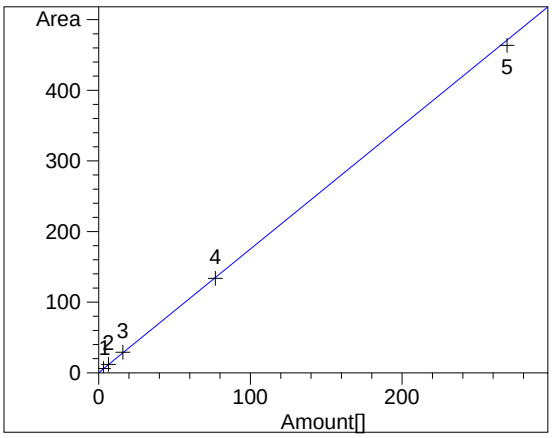


Trichloroethylene at exp. RT: 8.837
FID1 A,
Correlation: 0.99994
Residual Std. Dev.: 0.68204
Formula: y = mx + b
m: 1.91115
b: 5.02233e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.250944
Level 3 : 0.040638
Level 4 : 0.001757
Level 5 : 0.000143

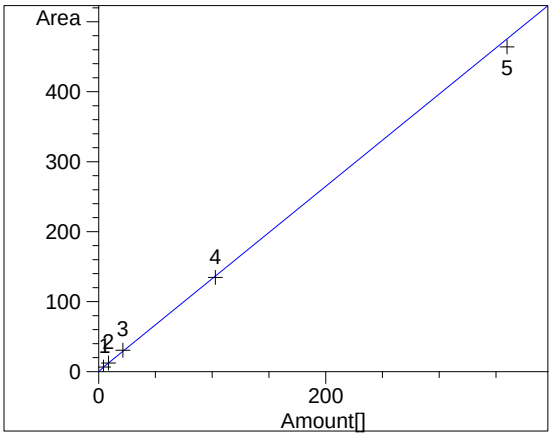


Toluene at exp. RT: 9.828
FID1 A,
Correlation: 0.99996
Residual Std. Dev.: 5.92010
Formula: y = mx + b
m: 9.11407
b: 8.49484
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251019
Level 3 : 0.040639
Level 4 : 0.001757

Level 5 : 0.000143



Tetrachloroethylene at exp. RT: 10.254
FID1 A,
Correlation: 0.99977
Residual Std. Dev.: 4.47172
Formula: y = mx + b
m: 1.74907
b: 4.65158e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.250933
Level 3 : 0.040633
Level 4 : 0.001757
Level 5 : 0.000143

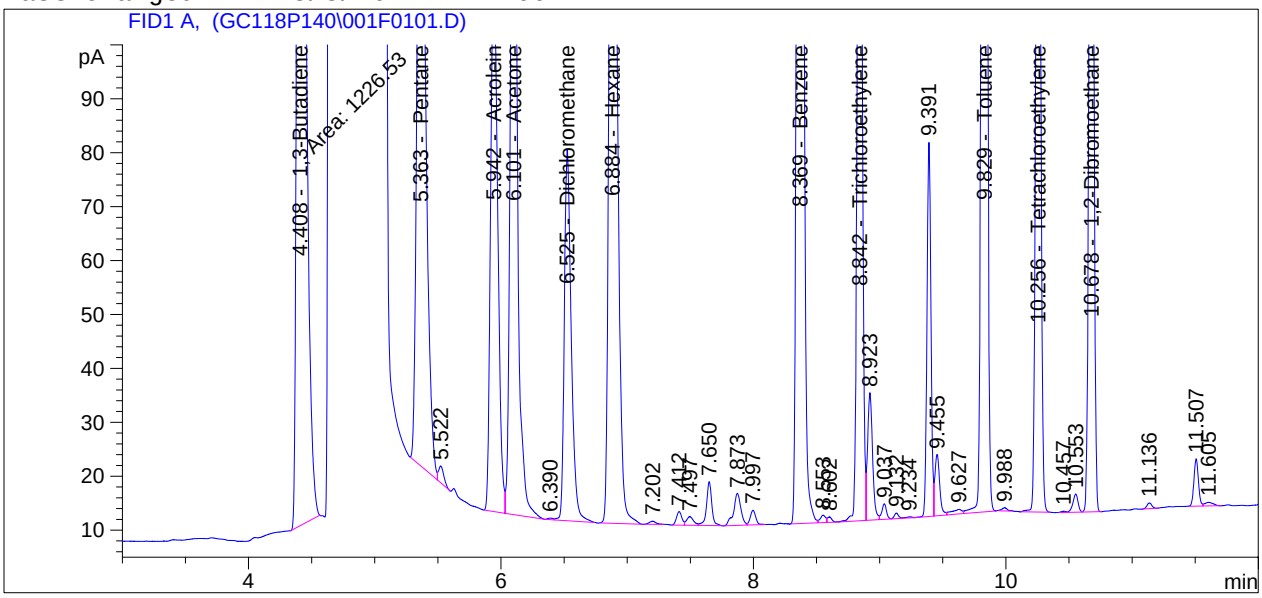


1,2-Dibromoethane at exp. RT: 10.676
FID1 A,
Correlation: 0.99932
Residual Std. Dev.: 6.91674
Formula: y = mx + b
m: 1.31977
b: 8.99545e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.251048
Level 3 : 0.040646
Level 4 : 0.001757
Level 5 : 0.000143

==========

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\001F0101.D
Sample Name: gc118p137 #5

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   1
Acq. Instrument : Veronica                          Location : Vial 1
Injection Date  : 03-Aug-11, 20:12:25                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:11:04 PM by JBB
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	1226.52844	1.50197e-1	184.22063		1,3-Butadiene
5.363	BV	659.69550	1.65769e-1	109.35715		Pentane
5.942	VV	396.10916	3.40248e-1	134.77540		Acrolein
6.101	VB	589.05688	2.19368e-1	129.21994		Acetone
6.525	VB	261.99146	8.60915e-1	225.55225		Dichloromethane
6.884	BB	842.12280	1.31205e-1	110.49096		Hexane
8.369	BV	1321.65991	1.10115e-1	145.53399		Benzene
8.842	VV	470.15738	5.22685e-1	245.74440		Trichloroethylene
9.829	VB	1312.40234	1.09010e-1	143.06532		Toluene
10.256	BB	465.51535	5.71160e-1	265.88364		Tetrachloroethylene
10.678	VB	464.56262	7.56242e-1	351.32166		1,2-Dibromoethane

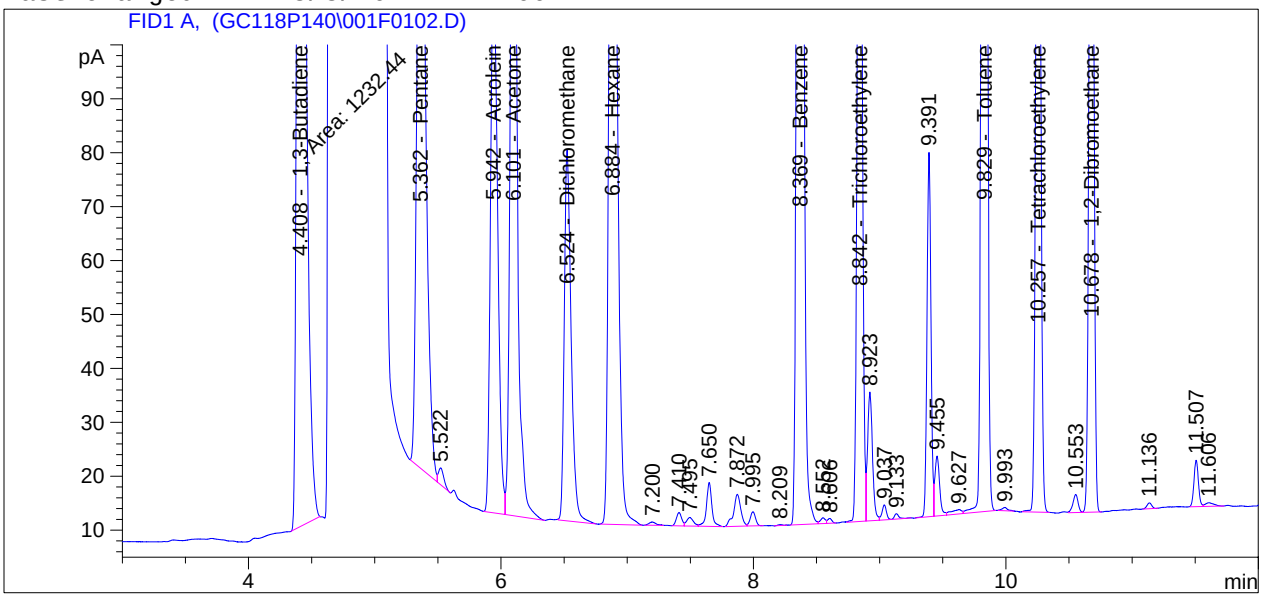
Totals : 2045.16534

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001203

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\001F0102.D
Sample Name: gc118p137 #5

```
Acq. Operator   : JBB                              Seq. Line :   1
Acq. Instrument : Veronica                        Location : Vial 1
Injection Date  : 03-Aug-11, 20:30:16                  Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
```




```
                        External Standard Report
```

```
Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

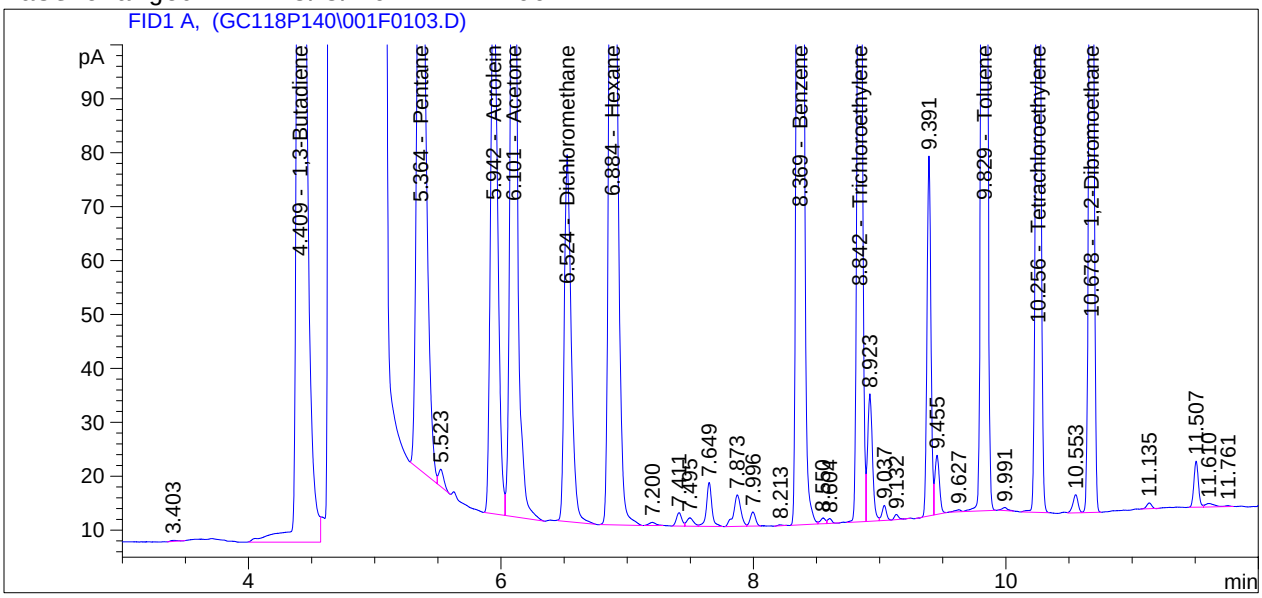
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	1232.44055	1.50197e-1	185.10863		1,3-Butadiene
5.362	BV	661.77423	1.65765e-1	109.69918		Pentane
5.942	VV	395.07928	3.40249e-1	134.42541		Acrolein
6.101	VB	585.15521	2.19349e-1	128.35325		Acetone
6.524	BB	259.97644	8.60894e-1	223.81223		Dichloromethane
6.884	BB	844.06824	1.31205e-1	110.74609		Hexane
8.369	BB	1320.14880	1.10114e-1	145.36734		Benzene
8.842	BV	465.96396	5.22680e-1	243.55022		Trichloroethylene
9.829	VB	1307.94299	1.09008e-1	142.57604		Toluene
10.257	BB	462.08960	5.71156e-1	263.92503		Tetrachloroethylene
10.678	VB	462.43723	7.56235e-1	349.71123		1,2-Dibromoethane
Totals :				2037.27466		

```
                          *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\001F0103.D
Sample Name: gc118p137 #5

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   1
Acq. Instrument : Veronica                          Location : Vial 1
Injection Date  : 03-Aug-11, 20:48:01                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

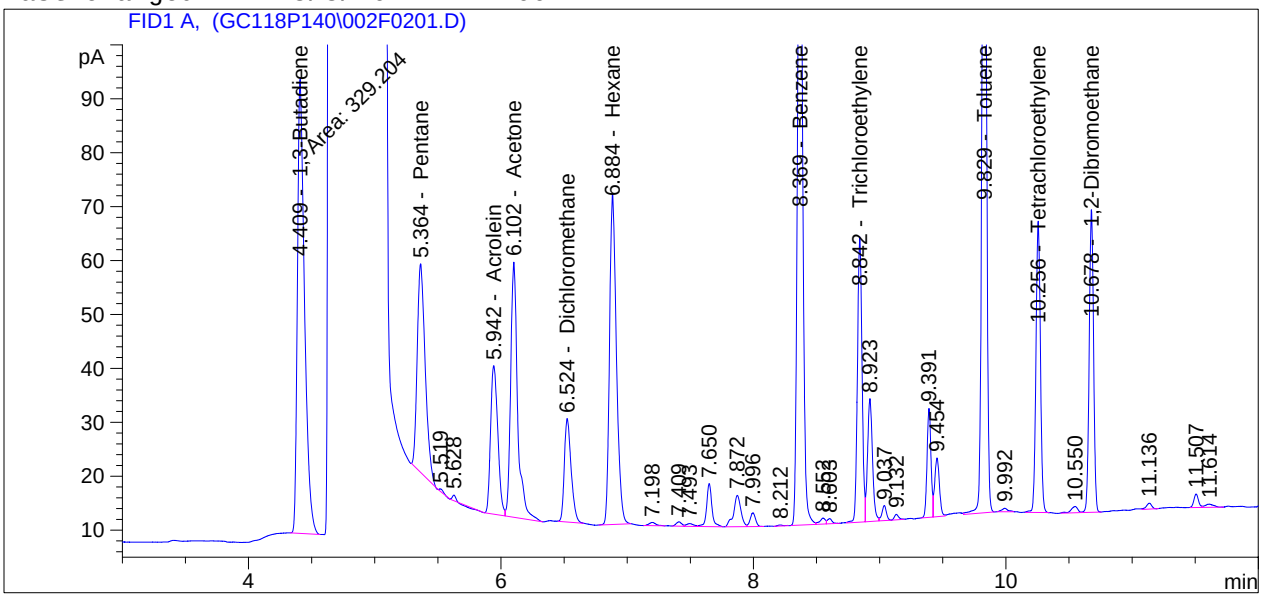
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	BBA	1294.33203	1.50197e-1	194.40482		1,3-Butadiene
5.364	BV	657.39288	1.65773e-1	108.97829		Pentane
5.942	VV	394.69333	3.40250e-1	134.29425		Acrolein
6.101	VB	585.48303	2.19351e-1	128.42607		Acetone
6.524	BB	258.92770	8.60884e-1	222.90661		Dichloromethane
6.884	BB	840.58771	1.31205e-1	110.28963		Hexane
8.369	BB	1319.45593	1.10114e-1	145.29093		Benzene
8.842	BV	466.56317	5.22681e-1	243.86375		Trichloroethylene
9.829	VB	1308.57629	1.09008e-1	142.64552		Toluene
10.256	BB	463.26309	5.71157e-1	264.59595		Tetrachloroethylene
10.678	VB	464.98584	7.56243e-1	351.64234		1,2-Dibromoethane
Totals :				2047.33818		

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001205

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\002F0201.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   2
Acq. Instrument : Veronica                          Location : Vial 2
Injection Date  : 03-Aug-11, 21:05:47                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	329.20374	1.50184e-1	49.44120		1,3-Butadiene
5.364	BV	169.86671	1.69326e-1	28.76290		Pentane
5.942	VV	109.56181	3.41326e-1	37.39631		Acrolein
6.102	VB	182.51233	2.13207e-1	38.91294		Acetone
6.524	BB	71.88898	8.54001e-1	61.39325		Dichloromethane
6.884	BB	232.96626	1.31362e-1	30.60288		Hexane
8.369	BB	377.39935	1.09699e-1	41.40022		Benzene
8.842	BV	133.90565	5.21282e-1	69.80259		Trichloroethylene
9.829	BB	383.58774	1.07291e-1	41.15536		Toluene
10.256	BB	133.85051	5.69744e-1	76.26055		Tetrachloroethylene
10.678	VB	134.94307	7.52658e-1	101.56598		1,2-Dibromoethane

Totals : 576.69417

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001206

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\002F0202.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   2
Acq. Instrument : Veronica                          Location : Vial 2
Injection Date  : 03-Aug-11, 21:23:35                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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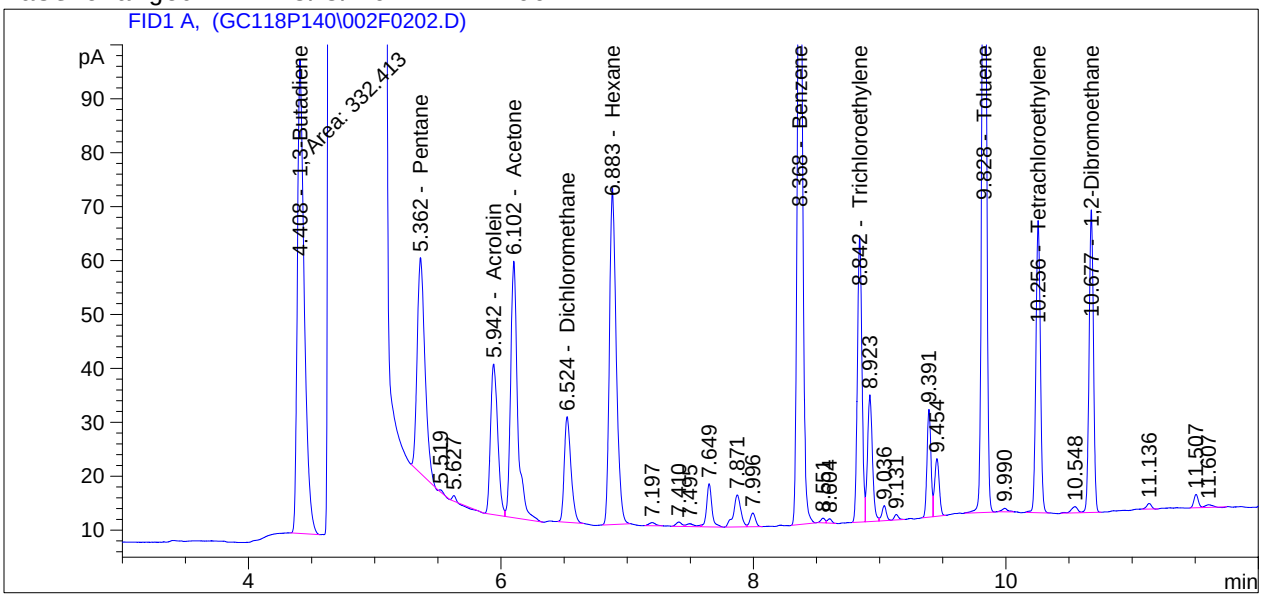


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	332.41293	1.50184e-1	49.92322		1,3-Butadiene
5.362	BB	171.98607	1.69267e-1	29.11161		Pentane
5.942	VV	110.16351	3.41318e-1	37.60079		Acrolein
6.102	VB	184.36771	2.13297e-1	39.32508		Acetone
6.524	BB	72.35897	8.54063e-1	61.79909		Dichloromethane
6.883	BB	233.88538	1.31361e-1	30.72342		Hexane
8.368	BB	376.74200	1.09698e-1	41.32772		Benzene
8.842	BV	132.95238	5.21268e-1	69.30379		Trichloroethylene
9.828	BB	381.85071	1.07280e-1	40.96477		Toluene
10.256	BB	133.92207	5.69745e-1	76.30146		Tetrachloroethylene
10.677	VB	134.79082	7.52652e-1	101.45062		1,2-Dibromoethane

Totals : 577.83159

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001207

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\002F0203.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   2
Acq. Instrument : Veronica                          Location : Vial 2
Injection Date  : 03-Aug-11, 21:41:26                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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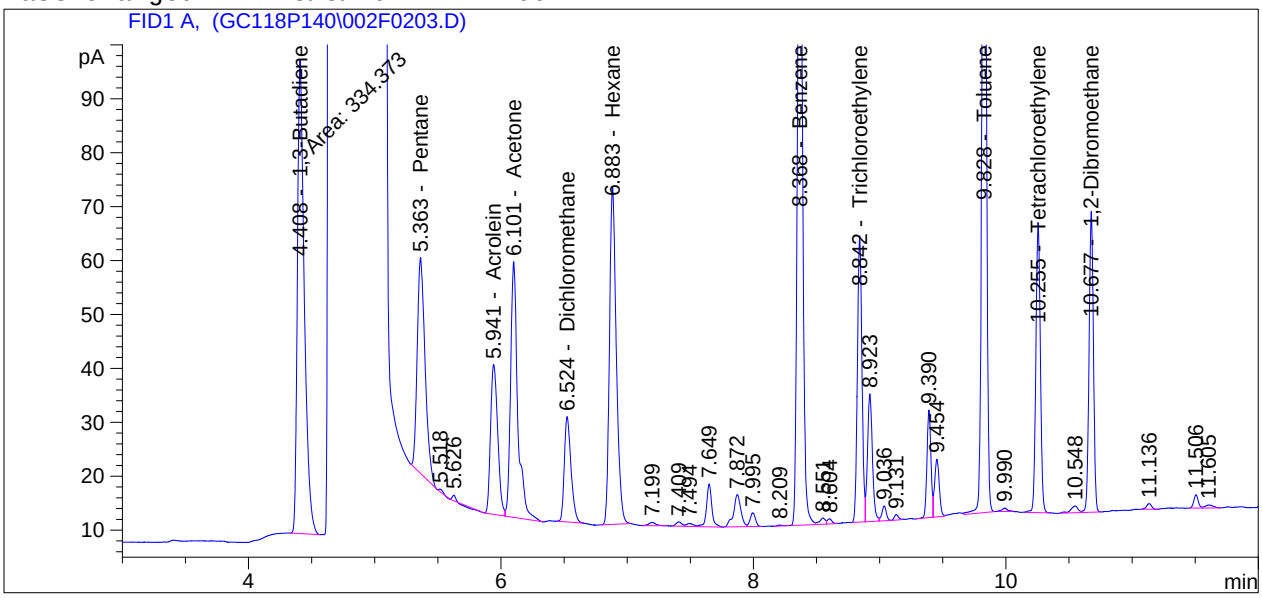



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	334.37347	1.50184e-1	50.21770		1,3-Butadiene
5.363	BV	173.28935	1.69232e-1	29.32605		Pentane
5.941	VV	109.69628	3.41324e-1	37.44201		Acrolein
6.101	VB	187.67322	2.13453e-1	40.05934		Acetone
6.524	BB	72.29599	8.54054e-1	61.74471		Dichloromethane
6.883	BB	235.03400	1.31360e-1	30.87406		Hexane
8.368	BB	378.10208	1.09700e-1	41.47771		Benzene
8.842	BV	132.71515	5.21264e-1	69.17966		Trichloroethylene
9.828	BB	381.32095	1.07276e-1	40.90665		Toluene
10.255	BB	133.35356	5.69737e-1	75.97643		Tetrachloroethylene
10.677	VB	134.09386	7.52626e-1	100.92252		1,2-Dibromoethane

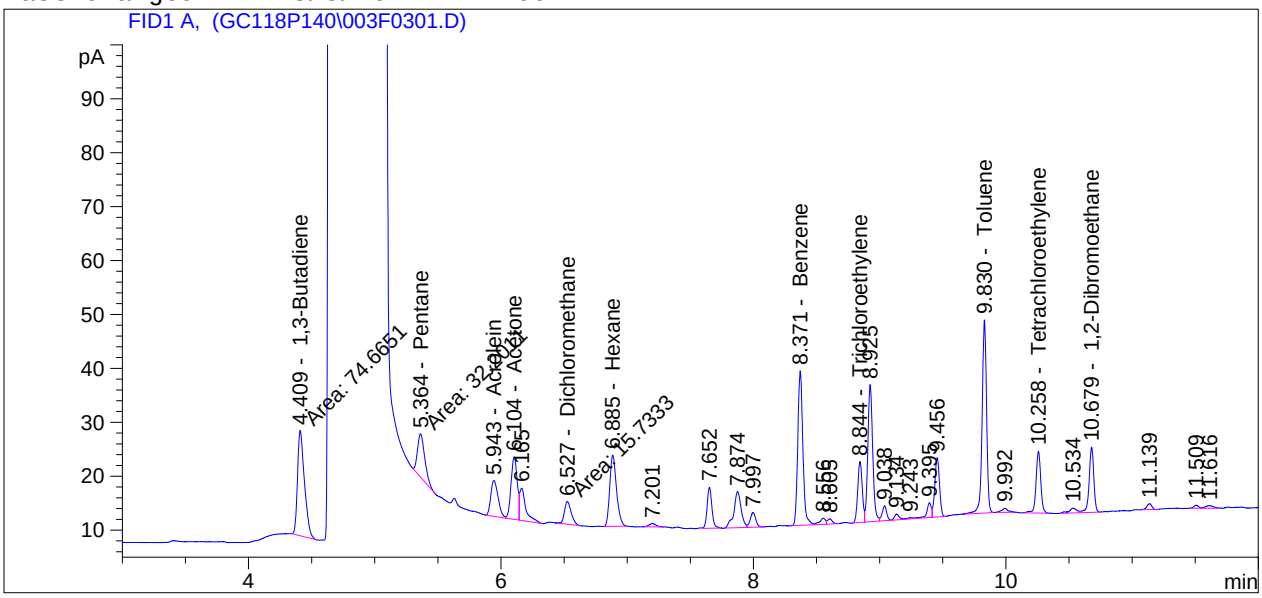
Totals : 578.12684

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001208

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\003F0301.D
Sample Name: gc118p137 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   3
Acq. Instrument : Veronica                          Location : Vial 3
Injection Date  : 03-Aug-11, 22:03:34                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	74.66510	1.50126e-1	11.20914		1,3-Butadiene
5.364	MM	32.20111	1.89808e-1	6.11202		Pentane
5.943	BV	26.61576	3.45970e-1	9.20827		Acrolein
6.104	VV	39.45575	1.80844e-1	7.13533		Acetone
6.527	MM	15.73328	8.19992e-1	12.90117		Dichloromethane
6.885	BB	49.23299	1.32170e-1	6.50711		Hexane
8.371	BB	80.43694	1.07550e-1	8.65097		Benzene
8.844	BV	28.11043	5.13896e-1	14.44583		Trichloroethylene
9.830	BB	87.67273	9.90893e-2	8.68743		Toluene
10.258	BB	29.82384	5.62814e-1	16.78527		Tetrachloroethylene
10.679	VB	31.05643	7.35762e-1	22.85014		1,2-Dibromoethane

Totals : 124.49269

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001209

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\003F0302.D
Sample Name: gc118p137 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   3
Acq. Instrument : Veronica                          Location : Vial 3
Injection Date  : 03-Aug-11, 22:21:22                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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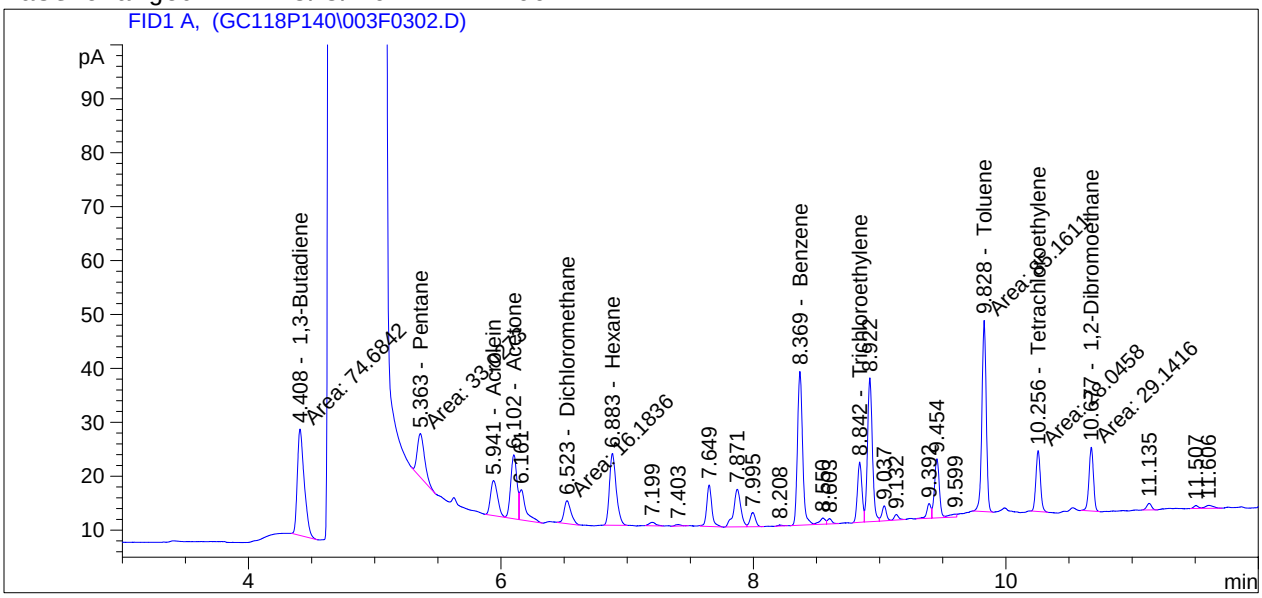


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	74.68420	1.50126e-1	11.21201		1,3-Butadiene
5.363	MM	33.02729	1.89175e-1	6.24795		Pentane
5.941	VV	25.10314	3.46340e-1	8.69422		Acrolein
6.102	VV	40.72352	1.82129e-1	7.41695		Acetone
6.523	MM	16.18362	8.21204e-1	13.29005		Dichloromethane
6.883	BB	49.46030	1.32165e-1	6.53692		Hexane
8.369	BB	80.62607	1.07556e-1	8.67183		Benzene
8.842	BV	27.87295	5.13816e-1	14.32157		Trichloroethylene
9.828	MM	85.16109	9.87758e-2	8.41186		Toluene
10.256	MM	28.04577	5.62249e-1	15.76869		Tetrachloroethylene
10.677	MM	29.14163	7.34320e-1	21.39928		1,2-Dibromoethane

Totals : 121.97134

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001210

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\003F0303.D
Sample Name: gc118p137 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   3
Acq. Instrument : Veronica                          Location : Vial 3
Injection Date  : 03-Aug-11, 22:39:11                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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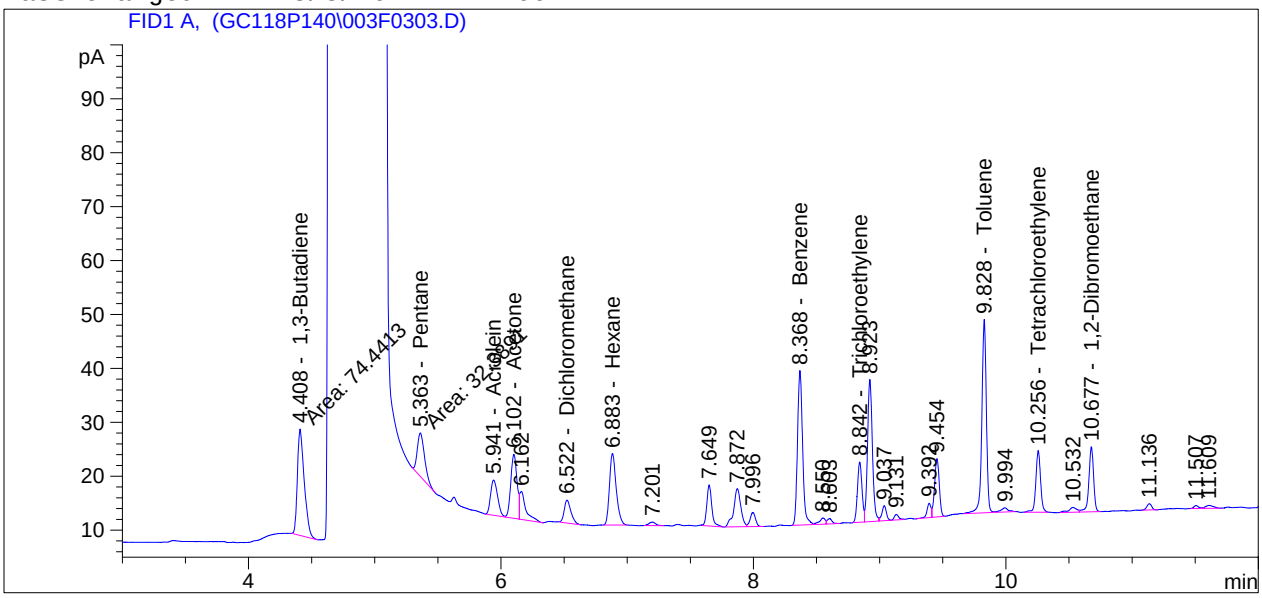


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	74.44127	1.50125e-1	11.17552		1,3-Butadiene
5.363	MM	32.38907	1.89661e-1	6.14294		Pentane
5.941	VV	25.13787	3.46331e-1	8.70602		Acrolein
6.102	VV	41.14904	1.82543e-1	7.51147		Acetone
6.522	BB	15.68038	8.19845e-1	12.85549		Dichloromethane
6.883	BB	49.34695	1.32167e-1	6.52206		Hexane
8.368	BB	80.40044	1.07549e-1	8.64695		Benzene
8.842	BV	27.93996	5.13839e-1	14.35664		Trichloroethylene
9.828	BB	89.22945	9.92748e-2	8.85824		Toluene
10.256	BB	29.75654	5.62794e-1	16.74680		Tetrachloroethylene
10.677	VB	31.49629	7.36069e-1	23.18343		1,2-Dibromoethane

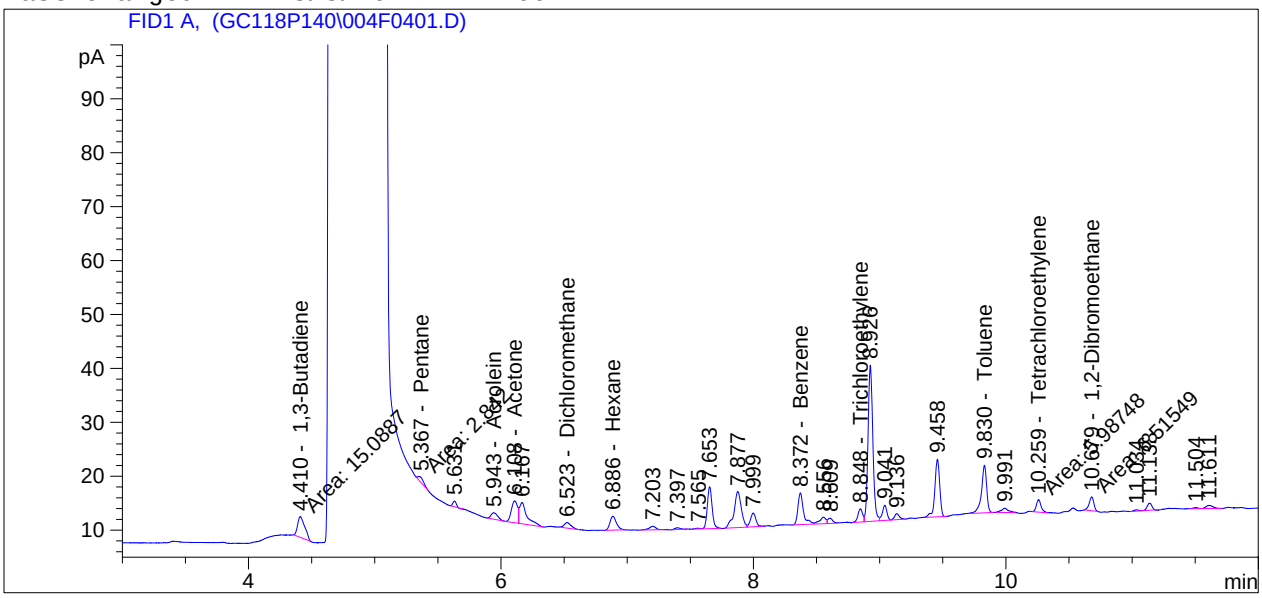
Totals : 124.70555

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001211

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\004F0401.D
Sample Name: gc118p137 #1

Acq. Operator	: JBB	Seq. Line	: 4
Acq. Instrument	: Veronica	Location	: Vial 4
Injection Date	: 03-Aug-11, 23:12:41	Inj	: 1
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/3/2011 8:27:48 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.410	MM	15.08873	1.49826e-1	2.26068		1,3-Butadiene
5.367	MM	2.84200	4.50880e-1	1.28140		Pentane
5.943	BV	4.30224	3.77157e-1	1.62262		Acrolein
6.108	VV	13.75011	1.09262e-1	1.50236		Acetone
6.523	BB	3.89121	6.87497e-1	2.67520		Dichloromethane
6.886	BB	9.21334	1.36400e-1	1.25670		Hexane
8.372	BB	17.95813	9.80483e-2	1.76076		Benzene
8.848	BV	6.25874	4.81257e-1	3.01206		Trichloroethylene
9.830	BB	25.11224	7.26048e-2	1.82327		Toluene
10.259	MM	5.98748	5.28151e-1	3.16229		Tetrachloroethylene
10.679	MM	6.51549	6.54224e-1	4.26259		1,2-Dibromoethane

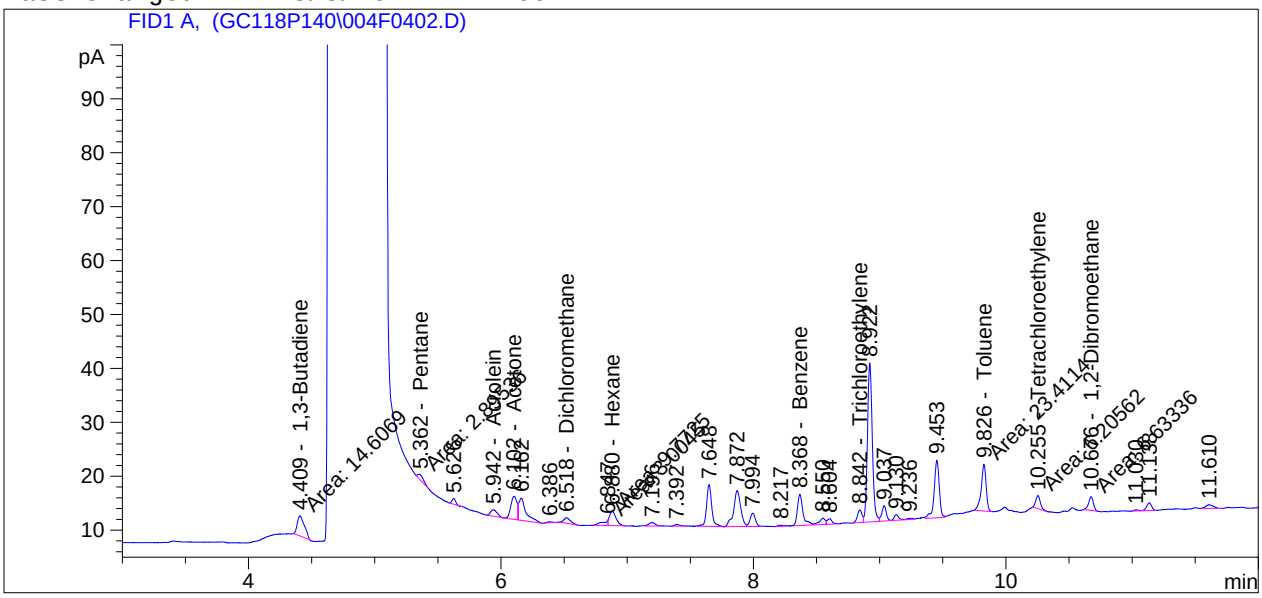
Totals : 24.61994

*** End of Report ***

EM-BTRF-001212

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\004F0402.D
Sample Name: gc118p137 #1

Acq. Operator	: JBB	Seq. Line	: 4
Acq. Instrument	: Veronica	Location	: Vial 4
Injection Date	: 03-Aug-11, 23:30:21	Inj	: 2
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/3/2011 8:27:48 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	14.60688	1.49815e-1	2.18833		1,3-Butadiene
5.362	MM	2.89536	4.45602e-1	1.29018		Pentane
5.942	BV	4.29101	3.77157e-1	1.61839		Acrolein
6.102	VV	14.41507	1.09262e-1	1.57502		Acetone
6.518	BB	3.76467	6.85848e-1	2.58199		Dichloromethane
6.880	FM	9.77250	1.36306e-1	1.33205		Hexane
8.368	VB	17.54150	9.79439e-2	1.71808		Benzene
8.842	BV	5.97116	4.80042e-1	2.86641		Trichloroethylene
9.826	MM	23.41138	7.12031e-2	1.66696		Toluene
10.255	MM	6.20562	5.28876e-1	3.28200		Tetrachloroethylene
10.676	MM	6.63336	6.54957e-1	4.34456		1,2-Dibromoethane

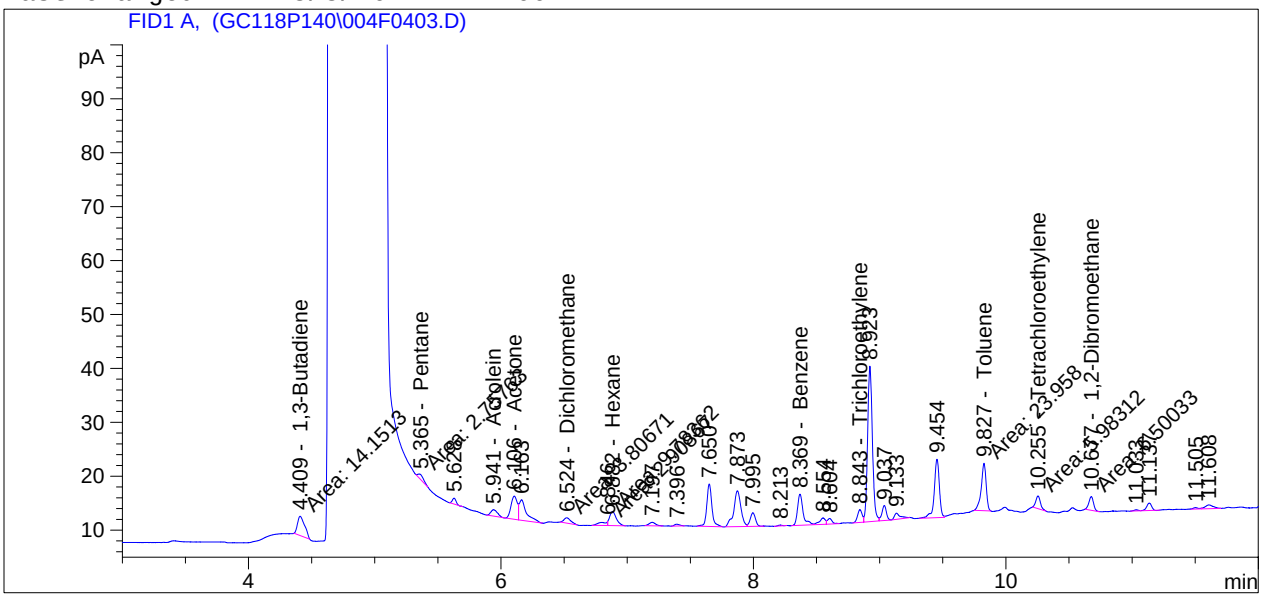
Totals : 24.46397

*** End of Report ***

EM-BTRF-001213

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\004F0403.D
Sample Name: gc118p137 #1

Acq. Operator	: JBB	Seq. Line	: 4
Acq. Instrument	: Veronica	Location	: Vial 4
Injection Date	: 03-Aug-11, 23:48:06	Inj	: 3
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/3/2011 8:27:48 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	14.15128	1.49815e-1	2.12007		1,3-Butadiene
5.365	MM	2.75763	4.59640e-1	1.26752		Pentane
5.941	BV	4.28510	3.77157e-1	1.61616		Acrolein
6.106	VV	14.85074	1.12435e-1	1.66975		Acetone
6.524	MM	3.80671	6.85848e-1	2.61082		Dichloromethane
6.882	FM	9.78362	1.36300e-1	1.33351		Hexane
8.369	BB	17.67497	9.79439e-2	1.73116		Benzene
8.843	BV	5.92655	4.80042e-1	2.84499		Trichloroethylene
9.827	MM	23.95801	7.12031e-2	1.70588		Toluene
10.255	MM	5.98312	5.28151e-1	3.15999		Tetrachloroethylene
10.677	MM	6.50033	6.54224e-1	4.25268		1,2-Dibromoethane

Totals : 24.31253

*** End of Report ***

EM-BTRF-001214

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\005F0601.D
Sample Name: gc118p137 #2

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   6
Acq. Instrument : Veronica                          Location : Vial 5
Injection Date  : 04-Aug-11, 00:59:14                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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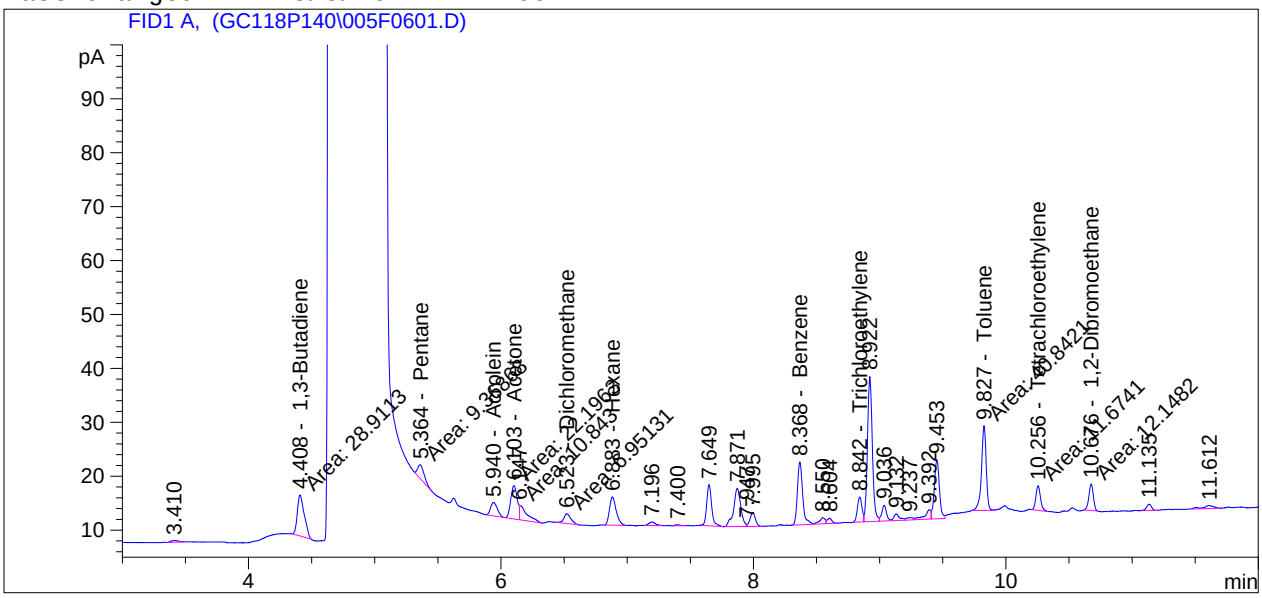


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	MM	28.91132	1.50005e-1	4.33686		1,3-Butadiene
5.364	MM	9.36868	2.51398e-1	2.35527		Pentane
5.940	VV	9.26349	3.57462e-1	3.31134		Acrolein
6.103	MF	22.19626	1.48738e-1	3.30143		Acetone
6.523	MM	6.95131	7.64990e-1	5.31768		Dichloromethane
6.883	BB	19.50779	1.33731e-1	2.60879		Hexane
8.368	BB	33.69397	1.03761e-1	3.49613		Benzene
8.842	BV	11.68691	5.00758e-1	5.85232		Trichloroethylene
9.827	MM	40.84208	8.68994e-2	3.54915		Toluene
10.256	MM	11.67411	5.48950e-1	6.40850		Tetrachloroethylene
10.676	MM	12.14825	7.01603e-1	8.52324		1,2-Dibromoethane

Totals : 49.06071

```
==========================================================================
                        *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\005F0602.D
Sample Name: gc118p137 #2

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   6
Acq. Instrument : Veronica                          Location : Vial 5
Injection Date  : 04-Aug-11, 01:16:59                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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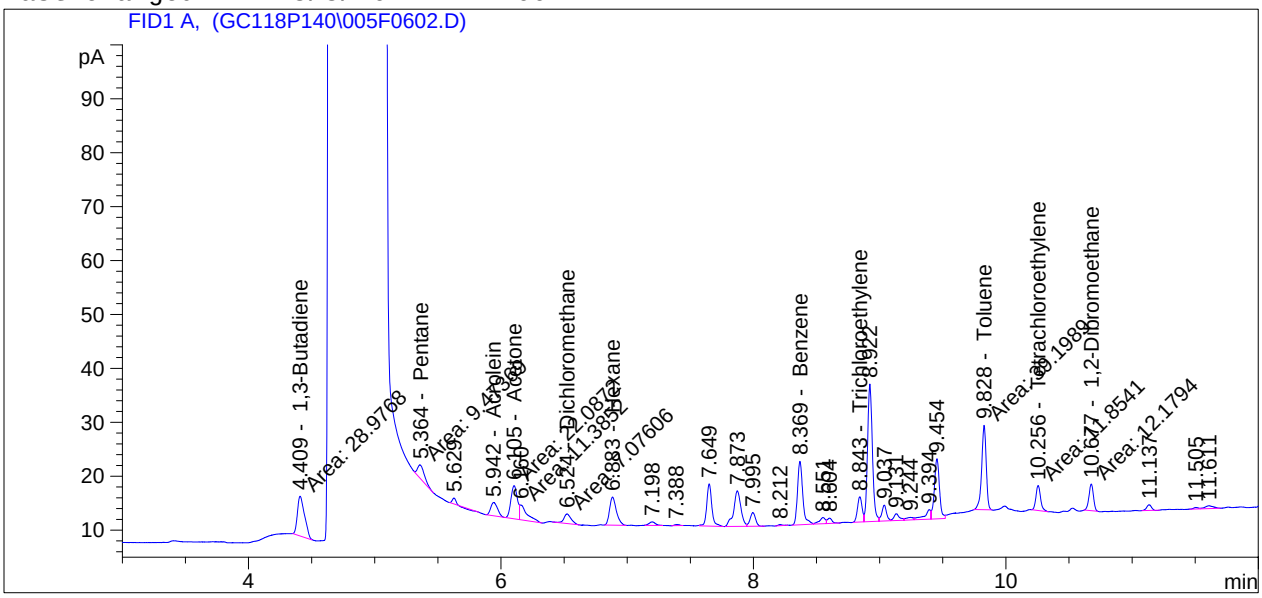


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	28.97683	1.50006e-1	4.34670		1,3-Butadiene
5.364	MM	9.47369	2.50436e-1	2.37255		Pentane
5.942	BV	9.27036	3.57448e-1	3.31367		Acrolein
6.105	MF	22.08724	1.48376e-1	3.27721		Acetone
6.524	MM	7.07606	7.66727e-1	5.42541		Dichloromethane
6.883	BB	19.48355	1.33734e-1	2.60561		Hexane
8.369	BB	33.95927	1.03812e-1	3.52538		Benzene
8.843	BV	11.89888	5.01159e-1	5.96323		Trichloroethylene
9.828	MM	39.19893	8.59428e-2	3.36887		Toluene
10.256	MM	11.85407	5.49296e-1	6.51139		Tetrachloroethylene
10.677	MM	12.17941	7.01746e-1	8.54685		1,2-Dibromoethane

Totals : 49.25687

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==========================================================================
                        *** End of Report ***
```
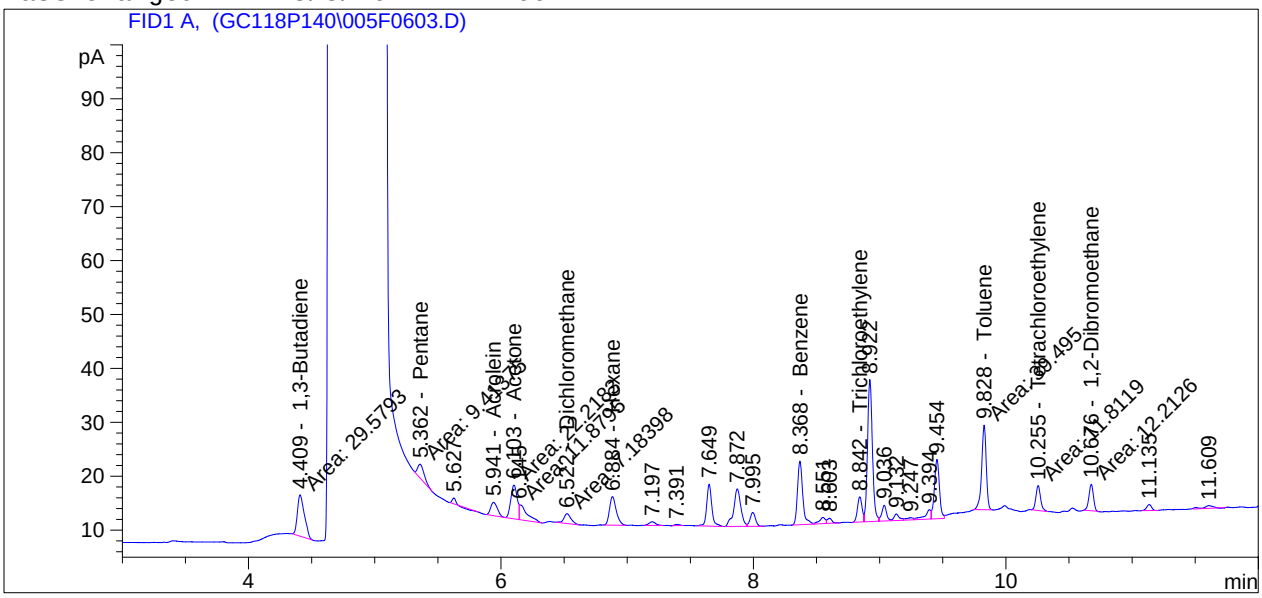

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\005F0603.D
Sample Name: gc118p137 #2

==========

Acq. Operator : JBB Seq. Line : 6
Acq. Instrument : Veronica Location : Vial 5
Injection Date : 04-Aug-11, 01:34:44 Inj : 3
Inj Volume : 0.2 µl
Sequence File : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed : 8/3/2011 8:27:48 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed : 8/8/2011 4:47:00 PM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 8/8/2011 3:48:45 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	29.57927	1.50010e-1	4.43718		1,3-Butadiene
5.362	MM	9.41375	2.50982e-1	2.36269		Pentane
5.941	BV	9.22799	3.57529e-1	3.29928		Acrolein
6.103	MF	22.21833	1.48811e-1	3.30633		Acetone
6.522	MM	7.18398	7.68181e-1	5.51860		Dichloromethane
6.884	BB	19.63965	1.33713e-1	2.62608		Hexane
8.368	BB	33.96746	1.03814e-1	3.52629		Benzene
8.842	BV	11.81785	5.01008e-1	5.92083		Trichloroethylene
9.828	MM	39.49500	8.61211e-2	3.40135		Toluene
10.255	MM	11.81188	5.49216e-1	6.48727		Tetrachloroethylene
10.676	MM	12.21259	7.01898e-1	8.57200		1,2-Dibromoethane

Totals : 49.45790

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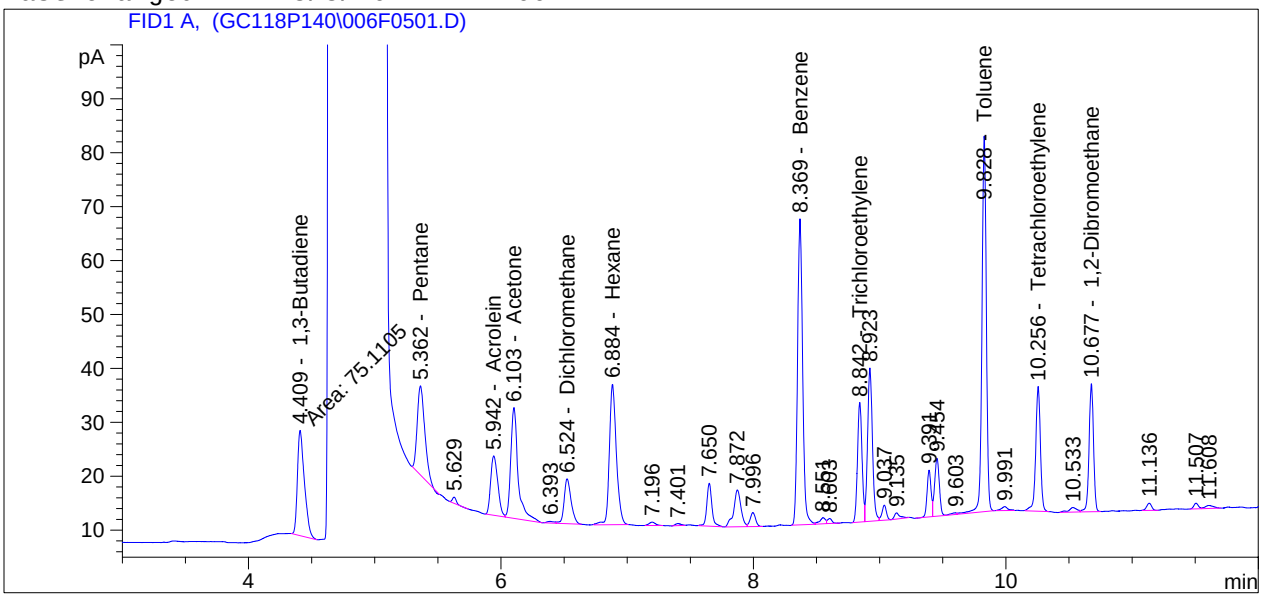
*** End of Report ***

EM-BTRF-001217

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\006F0501.D
Sample Name: gc118p137 #3ss

Acq. Operator	: JBB	Seq. Line	: 5
Acq. Instrument	: Veronica	Location	: Vial 6
Injection Date	: 04-Aug-11, 00:05:54	Inj	: 1
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/3/2011 8:27:48 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

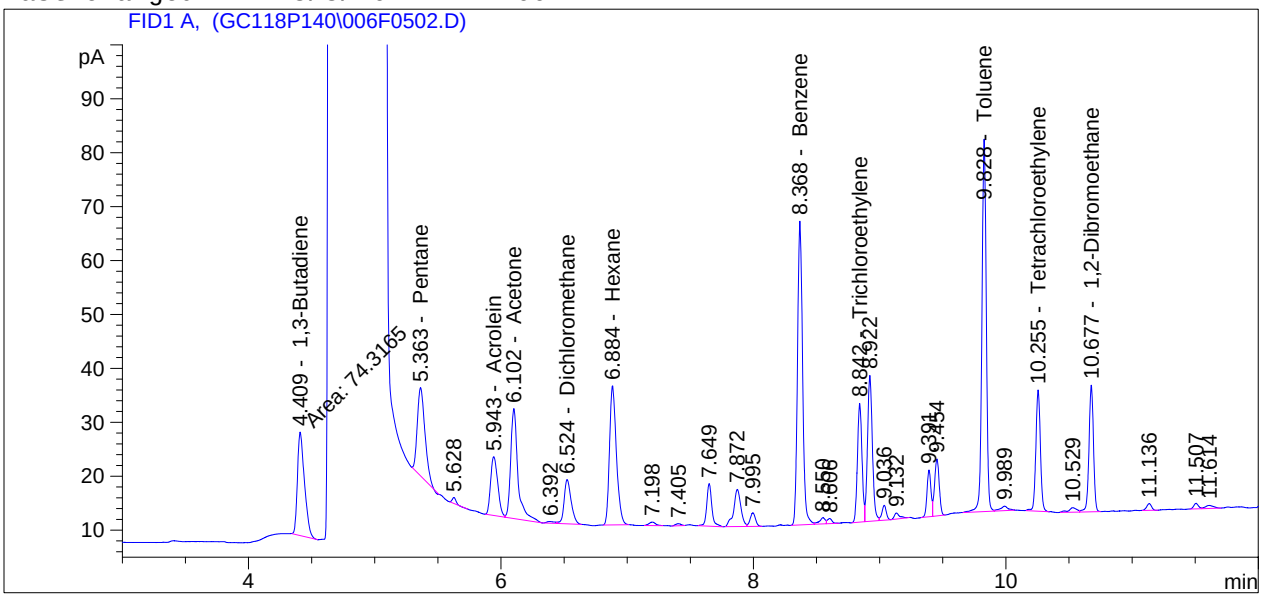
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	75.11055	1.50126e-1	11.27605		1,3-Butadiene
5.362	BB	68.55032	1.76407e-1	12.09275		Pentane
5.942	BV	43.16833	3.43618e-1	14.83342		Acrolein
6.103	VB	82.69247	2.02432e-1	16.73964		Acetone
6.524	VB	31.78969	8.41982e-1	26.76635		Dichloromethane
6.884	BB	100.40309	1.31648e-1	13.21783		Hexane
8.369	BB	158.65086	1.08896e-1	17.27647		Benzene
8.842	BV	55.50272	5.18510e-1	28.77869		Trichloroethylene
9.828	VB	167.92763	1.04170e-1	17.49304		Toluene
10.256	BB	60.22330	5.67315e-1	34.16559		Tetrachloroethylene
10.677	VB	58.67445	7.46092e-1	43.77657		1,2-Dibromoethane
Totals :				236.41639		

*** End of Report ***

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\006F0502.D
Sample Name: gc118p137 #3ss

Acq. Operator	: JBB	Seq. Line	: 5
Acq. Instrument	: Veronica	Location	: Vial 6
Injection Date	: 04-Aug-11, 00:23:42	Inj	: 2
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/3/2011 8:27:48 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

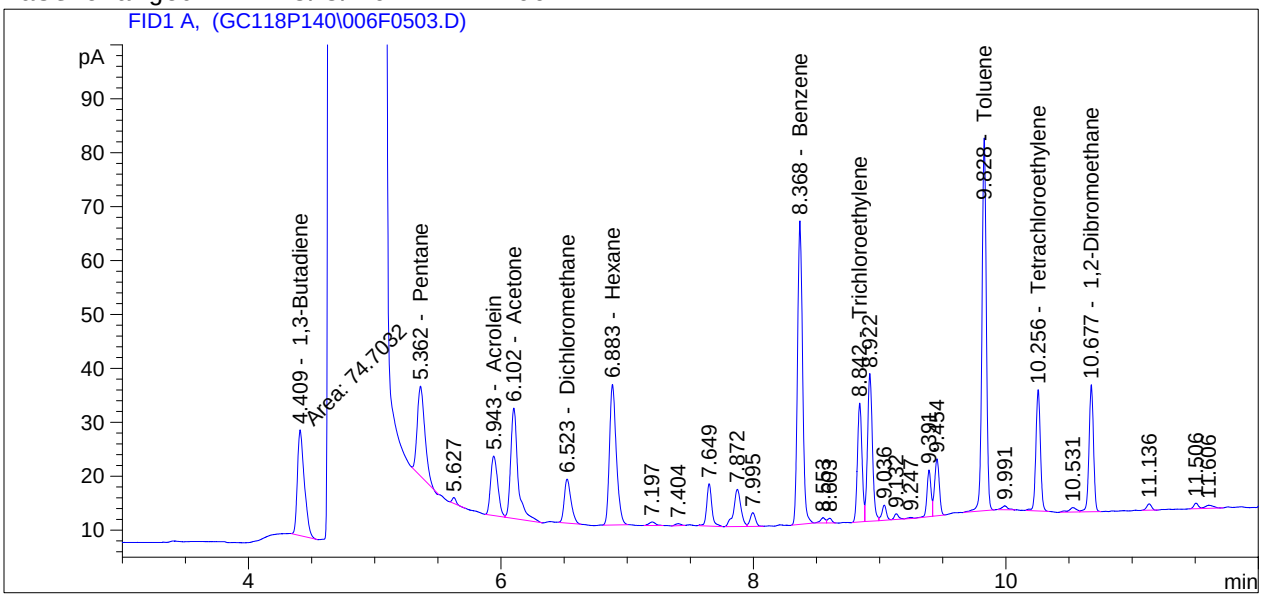
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	74.31646	1.50125e-1	11.15677		1,3-Butadiene
5.363	BB	68.42970	1.76428e-1	12.07291		Pentane
5.943	BV	42.64298	3.43665e-1	14.65489		Acrolein
6.102	VB	81.58979	2.02166e-1	16.49470		Acetone
6.524	VB	31.62698	8.41871e-1	26.62584		Dichloromethane
6.884	BB	97.50893	1.31663e-1	12.83828		Hexane
8.368	BB	157.42126	1.08885e-1	17.14087		Benzene
8.842	BV	55.07460	5.18473e-1	28.55468		Trichloroethylene
9.828	BV	166.22408	1.04113e-1	17.30612		Toluene
10.255	BB	56.42928	5.67018e-1	31.99643		Tetrachloroethylene
10.677	VB	58.22442	7.46003e-1	43.43557		1,2-Dibromoethane

Totals : 232.27705

*** End of Report ***

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\006F0503.D
Sample Name: gc118p137 #3ss

Acq. Operator	: JBB	Seq. Line	: 5
Acq. Instrument	: Veronica	Location	: Vial 6
Injection Date	: 04-Aug-11, 00:41:27	Inj	: 3
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/3/2011 8:27:48 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	74.70323	1.50126e-1	11.21487		1,3-Butadiene
5.362	BB	69.28531	1.76281e-1	12.21369		Pentane
5.943	BV	42.94404	3.43638e-1	14.75720		Acrolein
6.102	VB	82.21667	2.02318e-1	16.63395		Acetone
6.523	BB	30.08709	8.40763e-1	25.29610		Dichloromethane
6.883	BB	97.71064	1.31662e-1	12.86473		Hexane
8.368	BB	156.37598	1.08876e-1	17.02559		Benzene
8.842	BV	55.04536	5.18470e-1	28.53938		Trichloroethylene
9.828	BB	165.10388	1.04075e-1	17.18321		Toluene
10.256	BB	56.44112	5.67019e-1	32.00320		Tetrachloroethylene
10.677	VB	58.03527	7.45964e-1	43.29225		1,2-Dibromoethane

Totals : 231.02417

*** End of Report ***

EM-BTRF-001220

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\018F3201.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  32
Acq. Instrument : Veronica                          Location : Vial 18
Injection Date  : 06-Aug-11, 08:33:12                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/5/2011 2:13:15 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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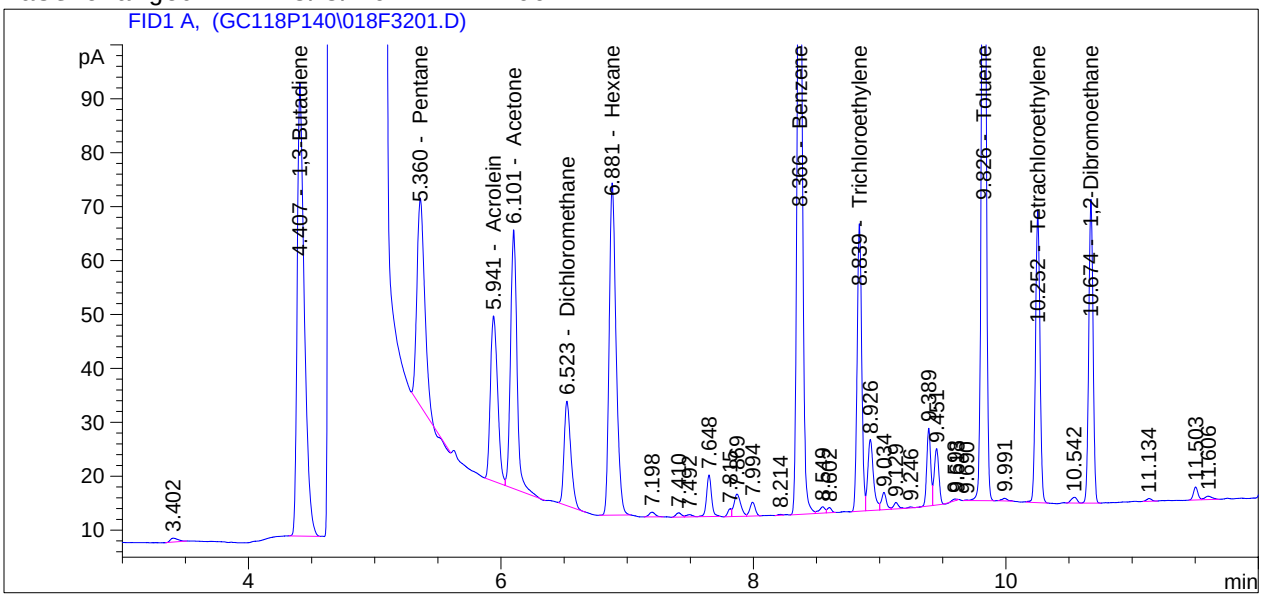


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	BB	328.76965	1.50184e-1	49.37600		1,3-Butadiene
5.360	BV	162.43253	1.69546e-1	27.53972		Pentane
5.941	VV	121.99685	3.41174e-1	41.62219		Acrolein
6.101	VB	171.27374	2.12621e-1	36.41647		Acetone
6.523	BB	72.09087	8.54027e-1	61.56758		Dichloromethane
6.881	BB	233.89307	1.31361e-1	30.72443		Hexane
8.366	BB	379.69095	1.09702e-1	41.65294		Benzene
8.839	BV	133.82567	5.21281e-1	69.76073		Trichloroethylene
9.826	VB	384.97369	1.07299e-1	41.30743		Toluene
10.252	BB	133.33574	5.69737e-1	75.96624		Tetrachloroethylene
10.674	VB	134.43591	7.52639e-1	101.18170		1,2-Dibromoethane
Totals :				577.11542		

```
==========================================================================
                        *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\018F3202.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  32
Acq. Instrument : Veronica                          Location : Vial 18
Injection Date  : 06-Aug-11, 08:51:00                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/5/2011 2:13:15 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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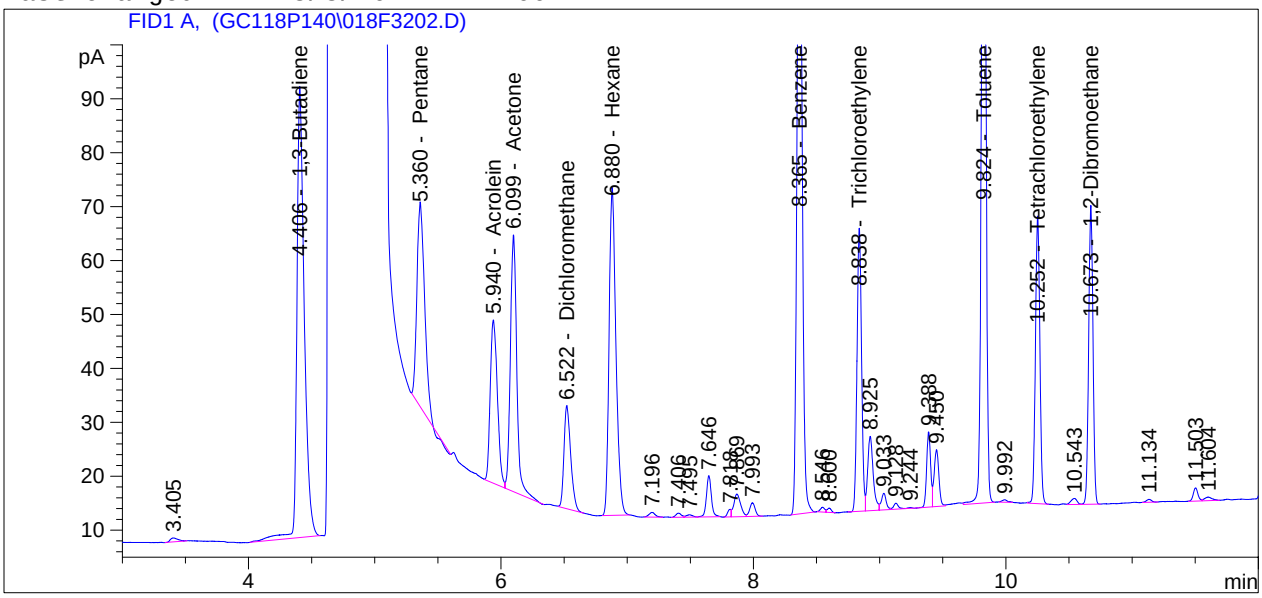


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.406	BB	340.36954	1.50185e-1	51.11832		1,3-Butadiene
5.360	BV	158.57910	1.69667e-1	26.90569		Pentane
5.940	VV	119.54715	3.41202e-1	40.78969		Acrolein
6.099	VB	168.63133	2.12472e-1	35.82951		Acetone
6.522	BB	70.89097	8.53867e-1	60.53143		Dichloromethane
6.880	BB	230.13512	1.31365e-1	30.23159		Hexane
8.365	BB	371.44177	1.09689e-1	40.74321		Benzene
8.838	BV	131.32126	5.21243e-1	68.45032		Trichloroethylene
9.824	BB	381.79694	1.07279e-1	40.95887		Toluene
10.252	BB	131.24866	5.69705e-1	74.77299		Tetrachloroethylene
10.673	VB	132.35098	7.52559e-1	99.60193		1,2-Dibromoethane

Totals : 569.93355

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001222

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\018F3203.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  32
Acq. Instrument : Veronica                          Location : Vial 18
Injection Date  : 06-Aug-11, 09:08:47                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/5/2011 2:13:15 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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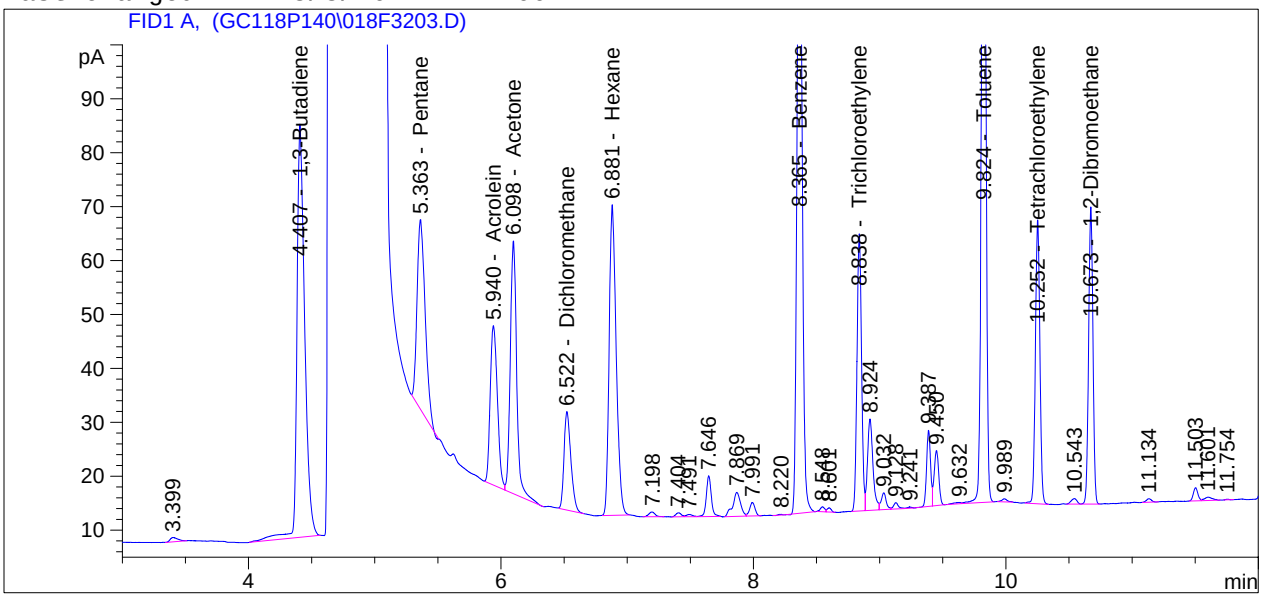


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	BB	329.58020	1.50184e-1	49.49774		1,3-Butadiene
5.363	BB	156.57814	1.69733e-1	26.57646		Pentane
5.940	BV	116.75988	3.41234e-1	39.84248		Acrolein
6.098	VB	165.36565	2.12282e-1	35.10409		Acetone
6.522	BB	69.11265	8.53618e-1	58.99580		Dichloromethane
6.881	BB	224.22137	1.31370e-1	29.45603		Hexane
8.365	VB	364.28815	1.09678e-1	39.95430		Benzene
8.838	BV	129.10094	5.21209e-1	67.28855		Trichloroethylene
9.824	VB	375.68359	1.07239e-1	40.28812		Toluene
10.252	BB	130.21849	5.69689e-1	74.18401		Tetrachloroethylene
10.673	VB	131.61671	7.52530e-1	99.04557		1,2-Dibromoethane

Totals : 560.23315

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001223

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\031F4501.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  45
Acq. Instrument : Veronica                          Location : Vial 31
Injection Date  : 07-Aug-11, 03:58:39                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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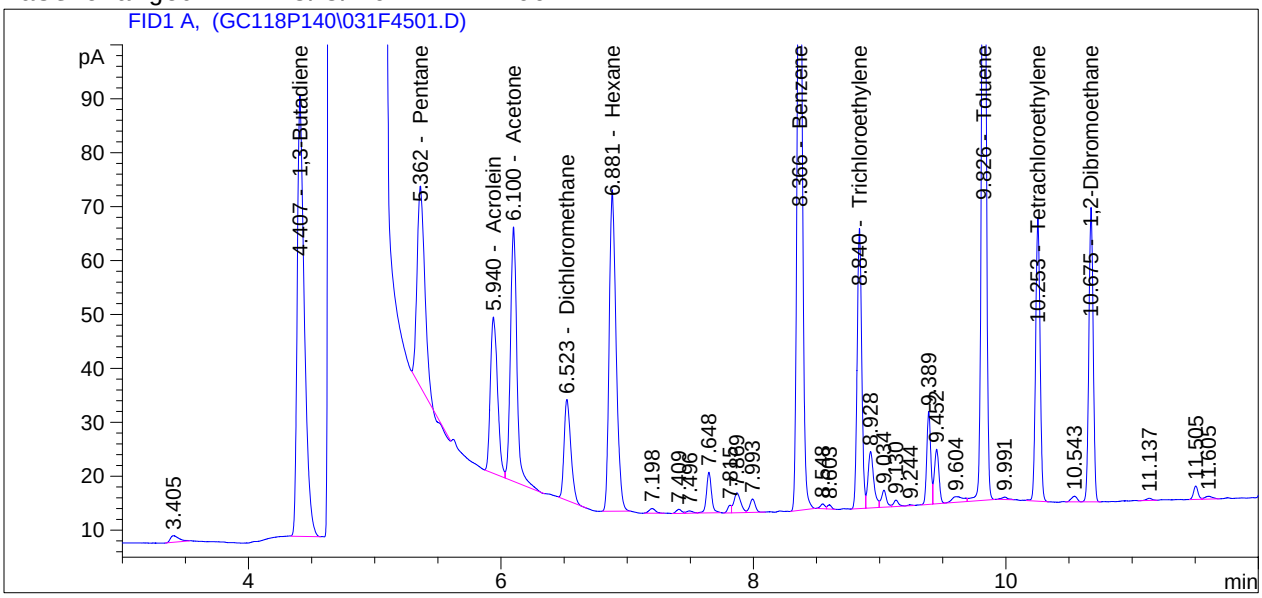


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	BB	319.82104	1.50184e-1	48.03191		1,3-Butadiene
5.362	BV	154.64316	1.69798e-1	26.25809		Pentane
5.940	VV	115.07146	3.41255e-1	39.26869		Acrolein
6.100	VB	168.54343	2.12467e-1	35.80998		Acetone
6.523	BB	69.77586	8.53712e-1	59.56850		Dichloromethane
6.881	BB	227.20953	1.31367e-1	29.84791		Hexane
8.366	BB	366.97281	1.09682e-1	40.25037		Benzene
8.840	BV	130.34361	5.21228e-1	67.93877		Trichloroethylene
9.826	VB	375.51675	1.07238e-1	40.26981		Toluene
10.253	BB	129.52890	5.69678e-1	73.78975		Tetrachloroethylene
10.675	VB	130.38617	7.52481e-1	98.11317		1,2-Dibromoethane

Totals : 559.14695

```
==========================================================================
                        *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\031F4502.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  45
Acq. Instrument : Veronica                          Location : Vial 31
Injection Date  : 07-Aug-11, 04:16:22                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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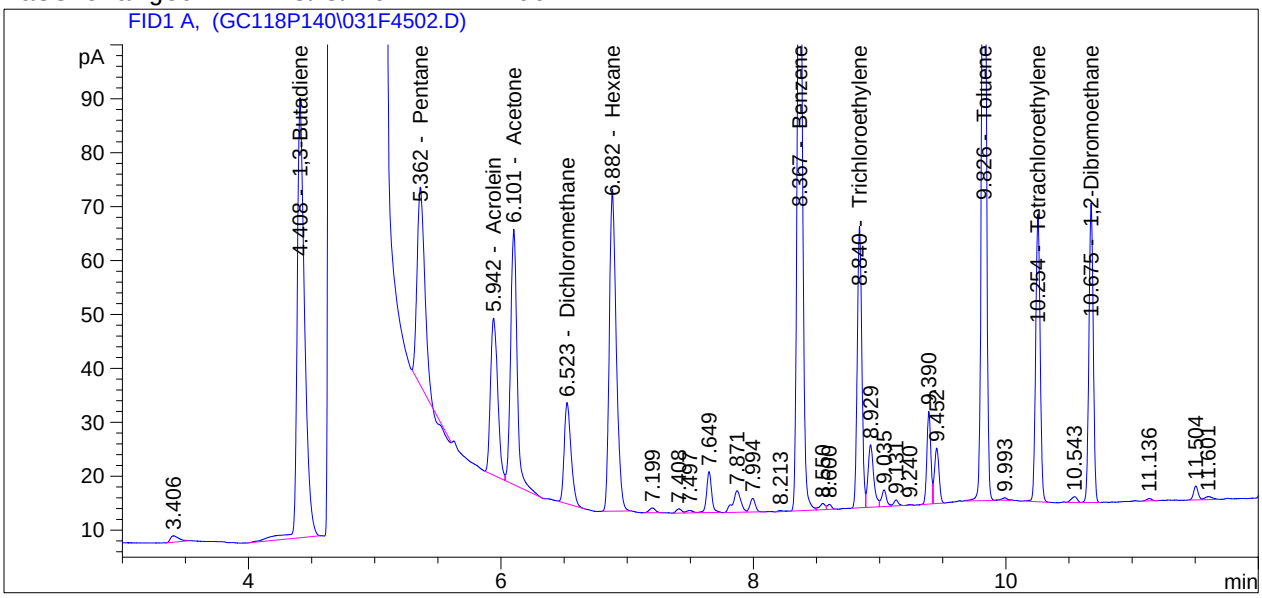


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.408	BB	336.97702	1.50185e-1	50.60876		1,3-Butadiene
5.362	BB	150.35803	1.69948e-1	25.55303		Pentane
5.942	VV	115.62033	3.41248e-1	39.45522		Acrolein
6.101	VB	169.19283	2.12504e-1	35.95423		Acetone
6.523	BB	70.57950	8.53824e-1	60.26247		Dichloromethane
6.882	BB	229.06569	1.31366e-1	30.09134		Hexane
8.367	BB	372.89200	1.09692e-1	40.90314		Benzene
8.840	BV	131.22165	5.21242e-1	68.39820		Trichloroethylene
9.826	BB	378.46243	1.07258e-1	40.59301		Toluene
10.254	BB	131.51465	5.69709e-1	74.92506		Tetrachloroethylene
10.675	VB	132.61778	7.52569e-1	99.80409		1,2-Dibromoethane

Totals : 566.54855

```
==========================================================================
                        *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\031F4503.D
Sample Name: gc118p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  45
Acq. Instrument : Veronica                          Location : Vial 31
Injection Date  : 07-Aug-11, 04:34:06                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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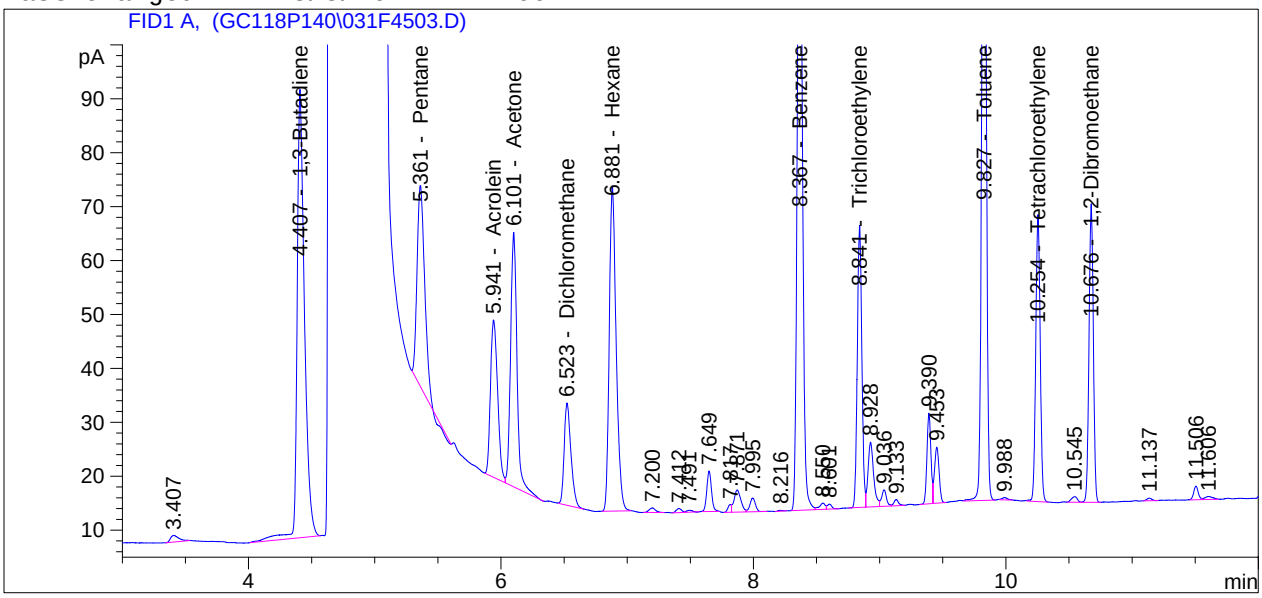


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	BB	338.97528	1.50185e-1	50.90890		1,3-Butadiene
5.361	BV	151.84717	1.69895e-1	25.79805		Pentane
5.941	VV	114.96237	3.41256e-1	39.23162		Acrolein
6.101	VB	167.06340	2.12382e-1	35.48122		Acetone
6.523	BB	70.70301	8.53841e-1	60.36913		Dichloromethane
6.881	BB	229.26949	1.31365e-1	30.11807		Hexane
8.367	BV	372.48227	1.09691e-1	40.85796		Benzene
8.841	BV	131.10507	5.21240e-1	68.33720		Trichloroethylene
9.827	BB	377.85132	1.07254e-1	40.52596		Toluene
10.254	BB	131.32066	5.69706e-1	74.81416		Tetrachloroethylene
10.676	VB	132.29642	7.52557e-1	99.56059		1,2-Dibromoethane

Totals : 566.00283

==
*** End of Report ***

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\039F5303.D
Sample Name: gc116p137 #5

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  53
Acq. Instrument : Veronica                          Location : Vial 39
Injection Date  : 07-Aug-11, 16:37:33                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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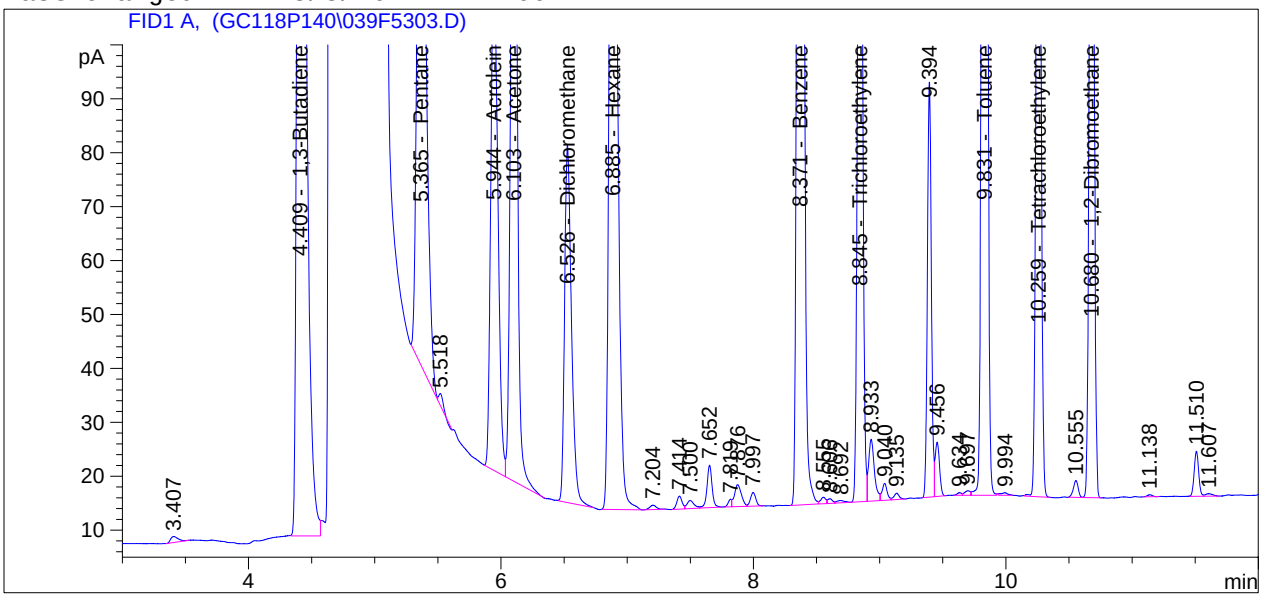


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	BBA	1210.44641	1.50197e-1	181.80508		1,3-Butadiene
5.365	BV	624.32867	1.65839e-1	103.53805		Pentane
5.944	VV	363.21085	3.40285e-1	123.59537		Acrolein
6.103	VB	542.74976	2.19132e-1	118.93359		Acetone
6.526	BB	251.26018	8.60803e-1	216.28548		Dichloromethane
6.885	BB	820.44629	1.31207e-1	107.64818		Hexane
8.371	BV	1294.99207	1.10111e-1	142.59304		Benzene
8.845	VV	458.59564	5.22671e-1	239.69479		Trichloroethylene
9.831	VB	1287.58435	1.08997e-1	140.34228		Toluene
10.259	BB	454.39313	5.71146e-1	259.52472		Tetrachloroethylene
10.680	VB	457.07925	7.56218e-1	345.65145		1,2-Dibromoethane

```
Totals :                          1979.61204

==========================================================================
                        *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\039F5401.D
Sample Name: gc116p137 #5

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  54
Acq. Instrument : Veronica                          Location : Vial 39
Injection Date  : 07-Aug-11, 17:31:18                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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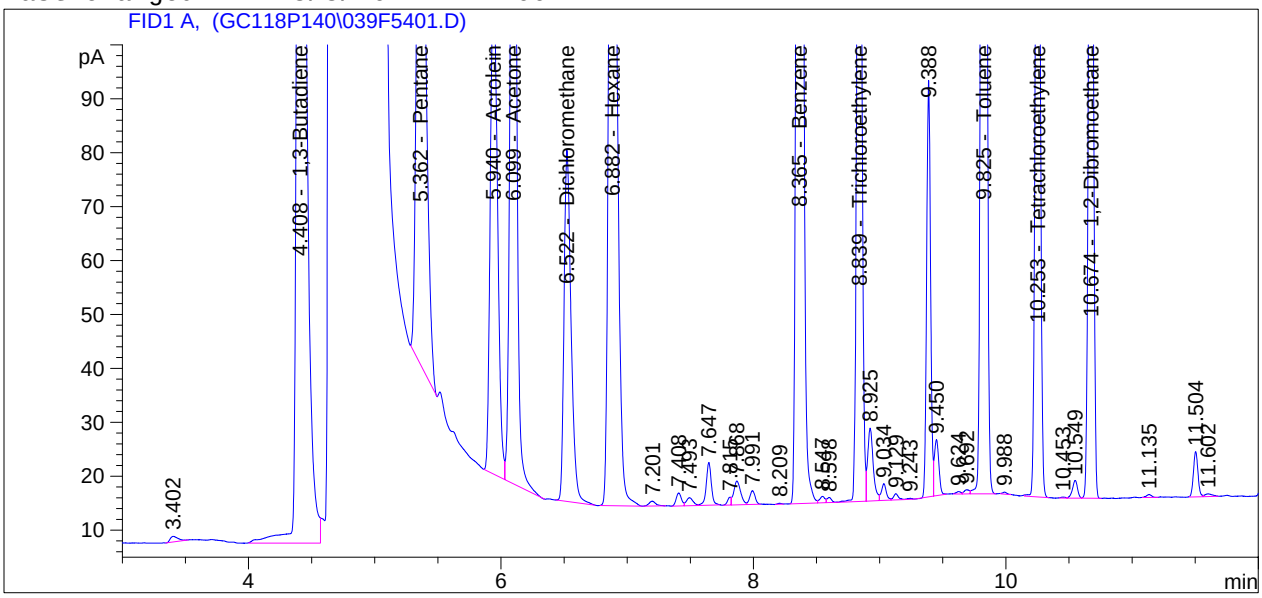
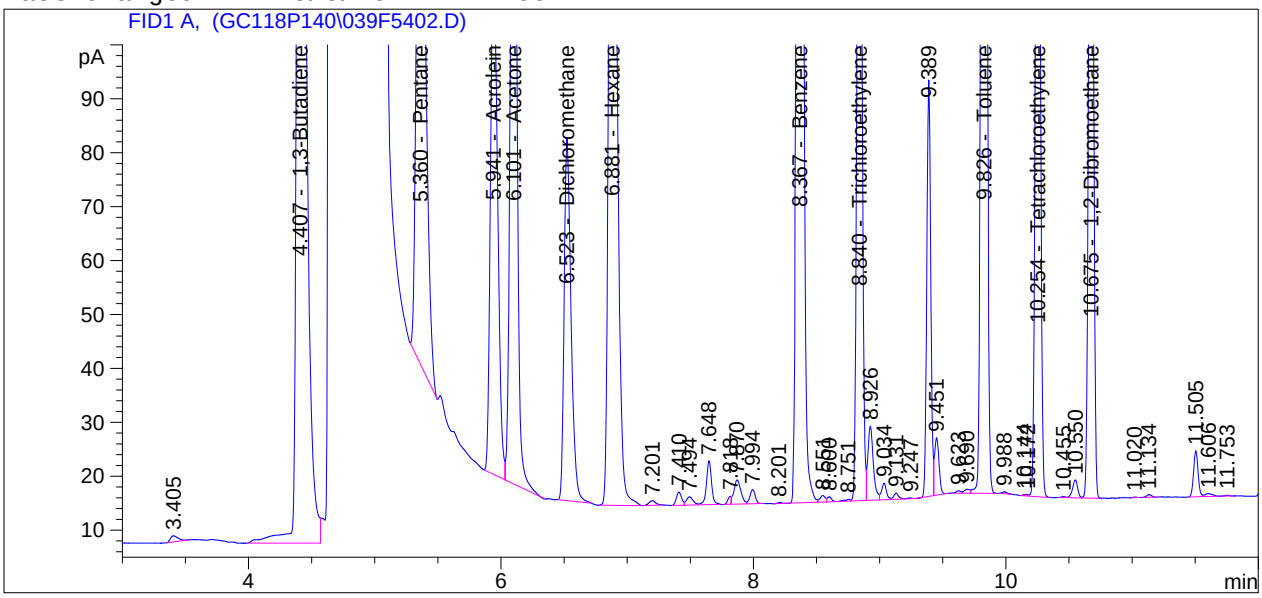



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.408 BBA    1249.15820 1.50197e-1  187.61965    1,3-Butadiene
  5.362 BV      614.31586 1.65860e-1  101.89059    Pentane
  5.940 VV      363.70468 3.40285e-1  123.76319    Acrolein
  6.099 VB      546.82672 2.19154e-1  119.83922    Acetone
  6.522 BB      252.43402 8.60816e-1  217.29913    Dichloromethane
  6.882 BB      819.67859 1.31207e-1  107.54750    Hexane
  8.365 BB     1299.79504 1.10112e-1  143.12272    Benzene
  8.839 VV      461.89297 5.22675e-1  241.42010    Trichloroethylene
  9.825 VB     1296.62573 1.09002e-1  141.33430    Toluene
 10.253 BB      458.04913 5.71150e-1  261.61497    Tetrachloroethylene
 10.674 VB      462.38330 7.56235e-1  349.67037    1,2-Dibromoethane

Totals :                             1995.12175


==========================================================================
                         *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\039F5402.D
Sample Name: gc116p137 #5

Acq. Operator	: JBB	Seq. Line	: 54
Acq. Instrument	: Veronica	Location	: Vial 39
Injection Date	: 07-Aug-11, 17:49:12	Inj	: 2
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	BBA	1281.11743	1.50197e-1	192.41997		1,3-Butadiene
5.360	BV	636.75824	1.65814e-1	105.58316		Pentane
5.941	VV	374.01251	3.40272e-1	127.26617		Acrolein
6.101	VB	555.91901	2.19203e-1	121.85892		Acetone
6.523	BB	256.32034	8.60857e-1	220.65508		Dichloromethane
6.881	BB	839.33929	1.31205e-1	110.12591		Hexane
8.367	BB	1326.20190	1.10115e-1	146.03489		Benzene
8.840	VV	469.56604	5.22685e-1	245.43499		Trichloroethylene
9.826	VB	1319.53064	1.09014e-1	143.84744		Toluene
10.254	VV	466.24844	5.71161e-1	266.30277		Tetrachloroethylene
10.675	VV	470.35065	7.56260e-1	355.70730		1,2-Dibromoethane

Totals : 2035.23659

*** End of Report ***

EM-BTRF-001229

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\040F5501.D
Sample Name: gc116p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  55
Acq. Instrument : Veronica                          Location : Vial 40
Injection Date  : 07-Aug-11, 18:07:06                    Inj :   1
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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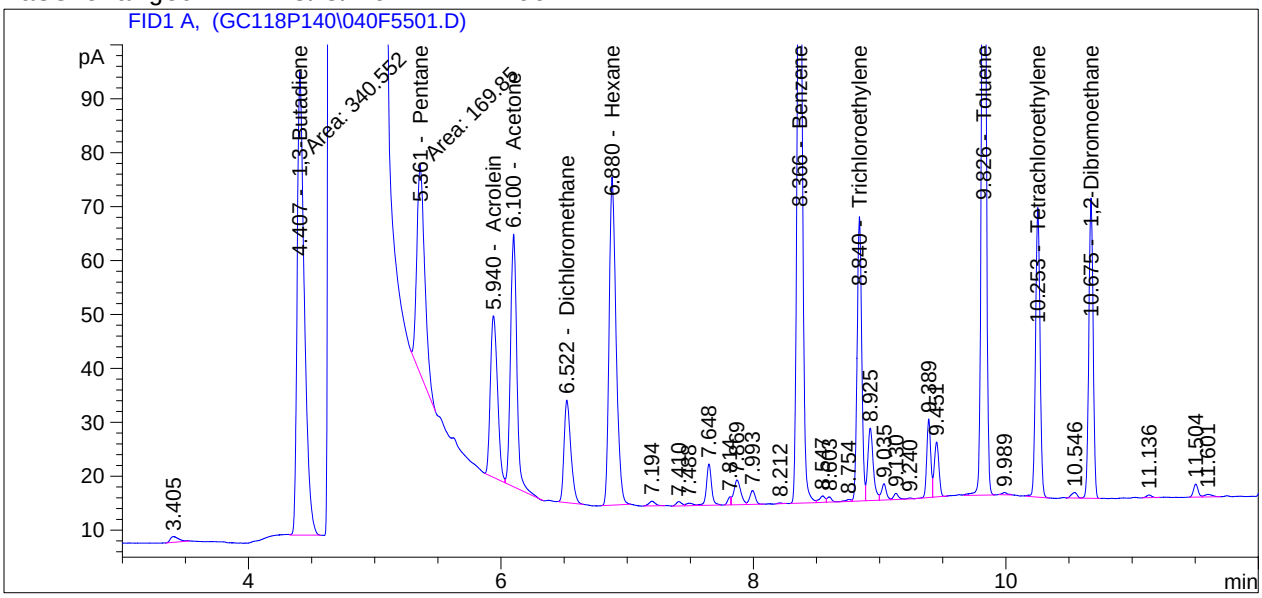


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	MM	340.55222	1.50185e-1	51.14576		1,3-Butadiene
5.361	MM	169.85022	1.69327e-1	28.76019		Pentane
5.940	VV	117.65128	3.41224e-1	40.14541		Acrolein
6.100	VB	162.67693	2.12119e-1	34.50684		Acetone
6.522	BB	71.09290	8.53894e-1	60.70580		Dichloromethane
6.880	BB	232.46857	1.31362e-1	30.53761		Hexane
8.366	BB	375.03680	1.09695e-1	41.13967		Benzene
8.840	VV	132.52448	5.21261e-1	69.07989		Trichloroethylene
9.826	BB	378.47531	1.07258e-1	40.59442		Toluene
10.253	BB	132.42249	5.69723e-1	75.44410		Tetrachloroethylene
10.675	VB	132.92320	7.52581e-1	100.03551		1,2-Dibromoethane

Totals : 572.09520

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001230

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\040F5502.D
Sample Name: gc116p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  55
Acq. Instrument : Veronica                          Location : Vial 40
Injection Date  : 07-Aug-11, 18:25:17                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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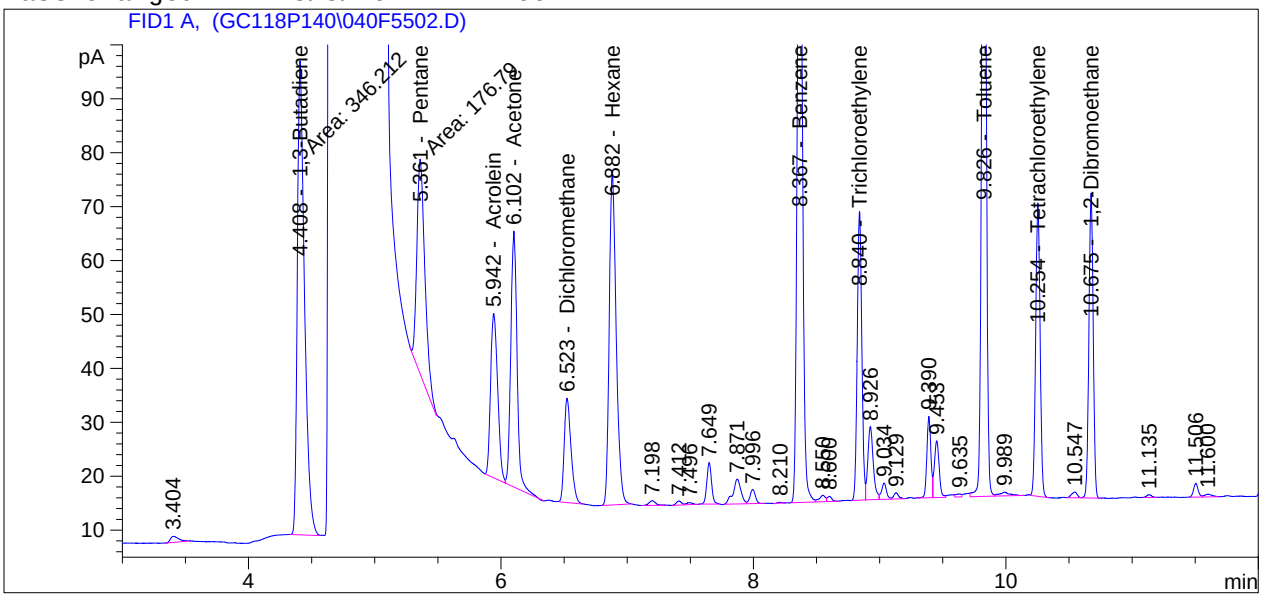


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.408 MM      346.21158 1.50185e-1   51.99580    1,3-Butadiene
  5.361 MM      176.79001 1.69139e-1   29.90203    Pentane
  5.942 VV      119.05019 3.41207e-1   40.62081    Acrolein
  6.102 VB      164.47255 2.12228e-1   34.90570    Acetone
  6.523 BB       72.43600 8.54073e-1   61.86561    Dichloromethane
  6.882 BB      237.08691 1.31358e-1   31.14329    Hexane
  8.367 BB      381.10651 1.09704e-1   41.80904    Benzene
  8.840 BV      134.30956 5.21288e-1   70.01393    Trichloroethylene
  9.826 BV      387.93839 1.07318e-1   41.63272    Toluene
 10.254 BB      133.60457 5.69741e-1   76.11994    Tetrachloroethylene
 10.675 VB      135.18585 7.52667e-1  101.74994    1,2-Dibromoethane

Totals :                              581.75880


==========================================================================
                         *** End of Report ***
```

EM-BTRF-001231

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\040F5503.D
Sample Name: gc116p137 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  55
Acq. Instrument : Veronica                          Location : Vial 40
Injection Date  : 07-Aug-11, 18:43:10                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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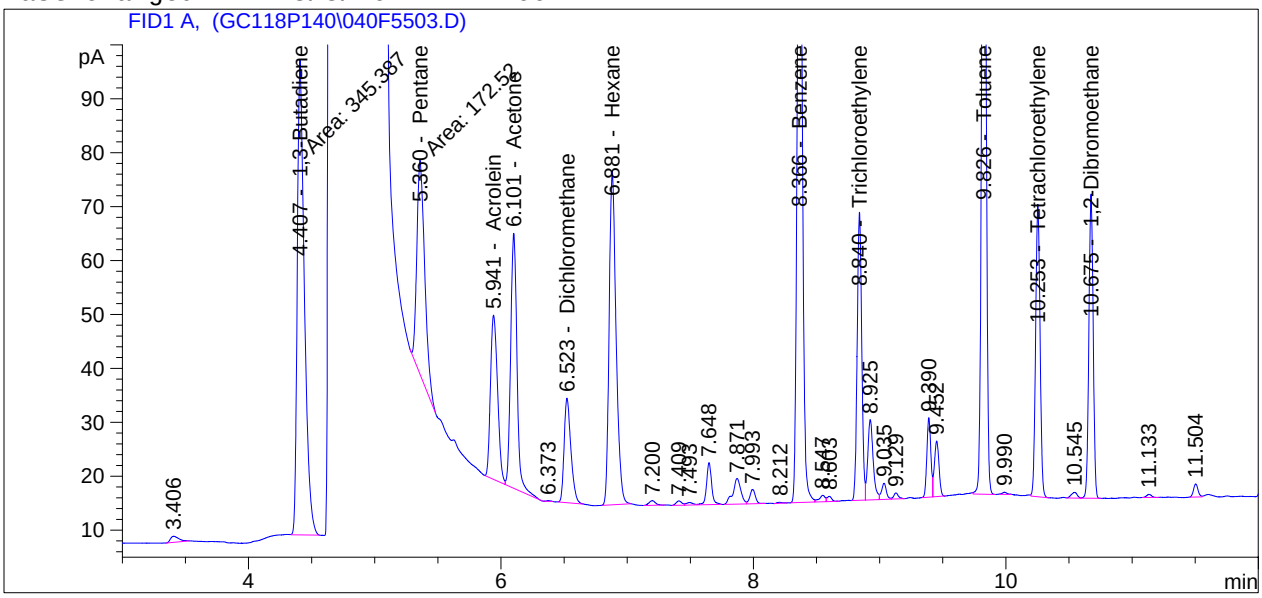



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

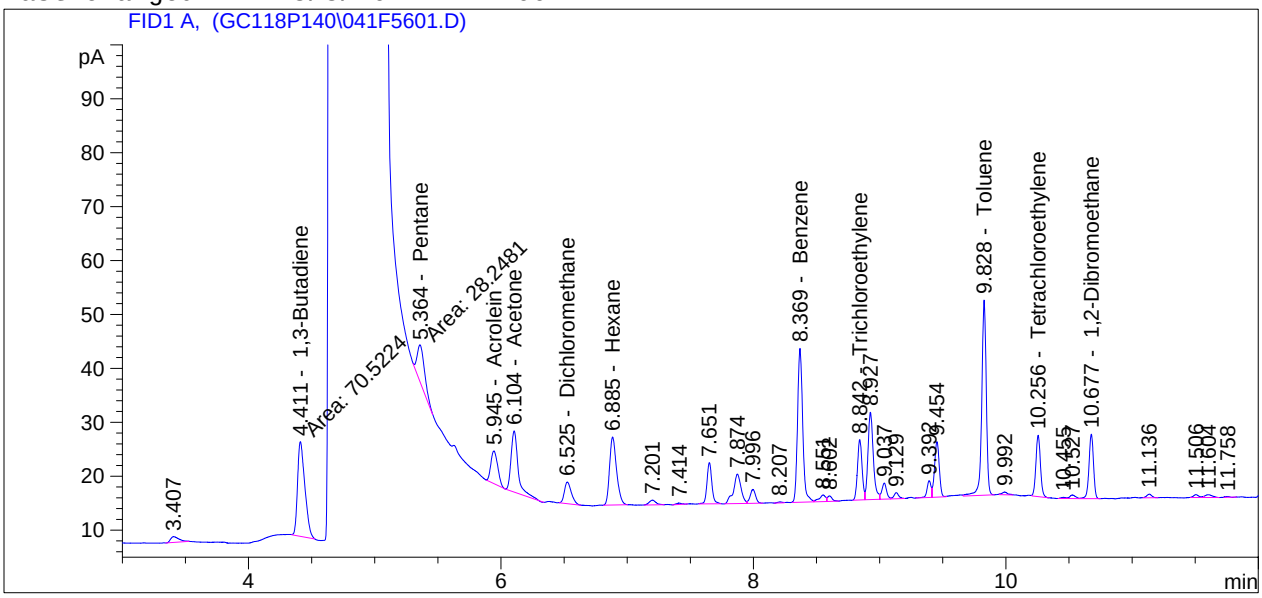
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.407	MM	345.38733	1.50185e-1	51.87200		1,3-Butadiene
5.360	MM	172.51982	1.69253e-1	29.19943		Pentane
5.941	VV	118.84547	3.41210e-1	40.55123		Acrolein
6.101	VB	164.67970	2.12241e-1	34.95172		Acetone
6.523	BB	72.24603	8.54048e-1	61.70156		Dichloromethane
6.881	BB	236.01823	1.31359e-1	31.00313		Hexane
8.366	BV	379.73434	1.09702e-1	41.65772		Benzene
8.840	BV	133.78088	5.21280e-1	69.73730		Trichloroethylene
9.826	BB	381.23514	1.07276e-1	40.89723		Toluene
10.253	BB	133.35751	5.69737e-1	75.97869		Tetrachloroethylene
10.675	VB	134.61635	7.52646e-1	101.31842		1,2-Dibromoethane

Totals : 578.86844

```
==========================================================================
                        *** End of Report ***
```

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\041F5601.D
Sample Name: gc116p137 #3

Acq. Operator	: JBB	Seq. Line	: 56
Acq. Instrument	: Veronica	Location	: Vial 41
Injection Date	: 07-Aug-11, 19:36:52	Inj	: 1
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.411	MM	70.52242	1.50121e-1	10.58690		1,3-Butadiene
5.364	MM	28.24814	1.93344e-1	5.46161		Pentane
5.945	VV	22.68368	3.47034e-1	7.87200		Acrolein
6.104	VV	43.62578	1.84791e-1	8.06164		Acetone
6.525	BB	15.41556	8.19095e-1	12.62681		Dichloromethane
6.885	BB	48.48796	1.32185e-1	6.40940		Hexane
8.369	BB	80.96056	1.07567e-1	8.70872		Benzene
8.842	BV	28.13053	5.13903e-1	14.45635		Trichloroethylene
9.828	BB	90.47380	9.94185e-2	8.99477		Toluene
10.256	BB	28.33025	5.62344e-1	15.93134		Tetrachloroethylene
10.677	VB	29.58226	7.34668e-1	21.73315		1,2-Dibromoethane

Totals : 120.84269

*** End of Report ***

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\041F5602.D
Sample Name: gc116p137 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  56
Acq. Instrument : Veronica                          Location : Vial 41
Injection Date  : 07-Aug-11, 19:54:44                    Inj :   2
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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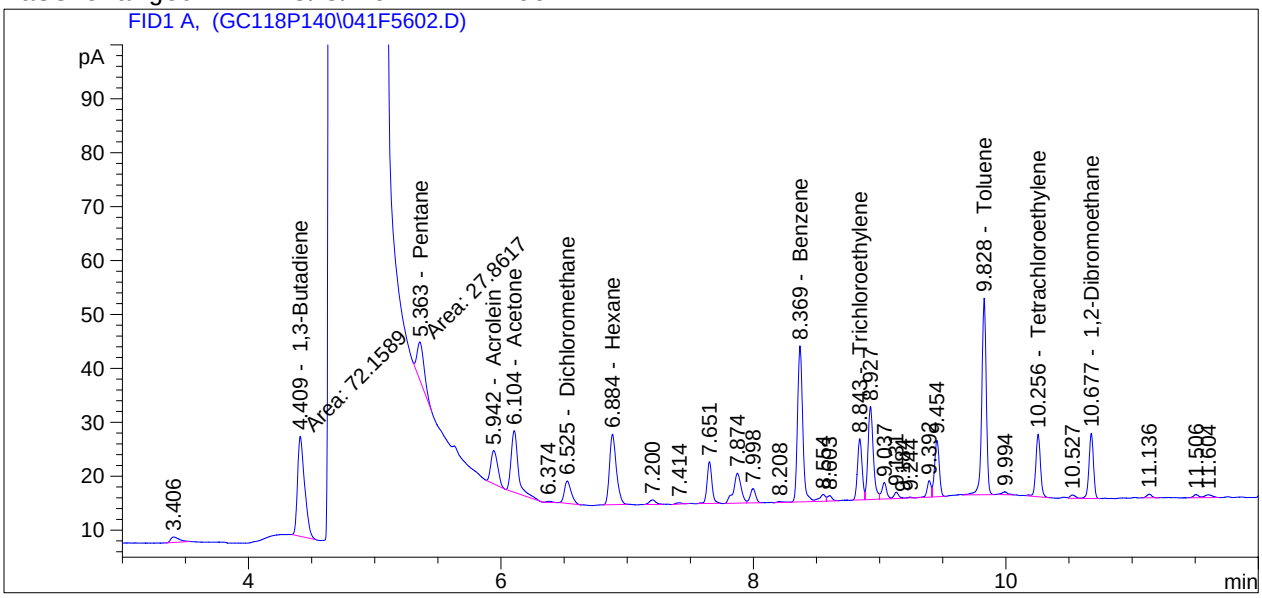


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	72.15893	1.50123e-1	10.83271		1,3-Butadiene
5.363	MM	27.86174	1.93744e-1	5.39804		Pentane
5.942	VV	23.31966	3.46838e-1	8.08813		Acrolein
6.104	VV	44.47350	1.85502e-1	8.24994		Acetone
6.525	BB	15.57475	8.19549e-1	12.76428		Dichloromethane
6.884	BB	49.10918	1.32172e-1	6.49087		Hexane
8.369	BB	82.20397	1.07608e-1	8.84585		Benzene
8.843	BV	28.64065	5.14069e-1	14.72327		Trichloroethylene
9.828	VB	89.95525	9.93591e-2	8.93787		Toluene
10.256	BB	29.54892	5.62731e-1	16.62809		Tetrachloroethylene
10.677	BB	29.56568	7.34655e-1	21.72059		1,2-Dibromoethane

Totals : 122.67963

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001234

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\041F5603.D
Sample Name: gc116p137 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  56
Acq. Instrument : Veronica                          Location : Vial 41
Injection Date  : 07-Aug-11, 20:12:35                    Inj :   3
                                                  Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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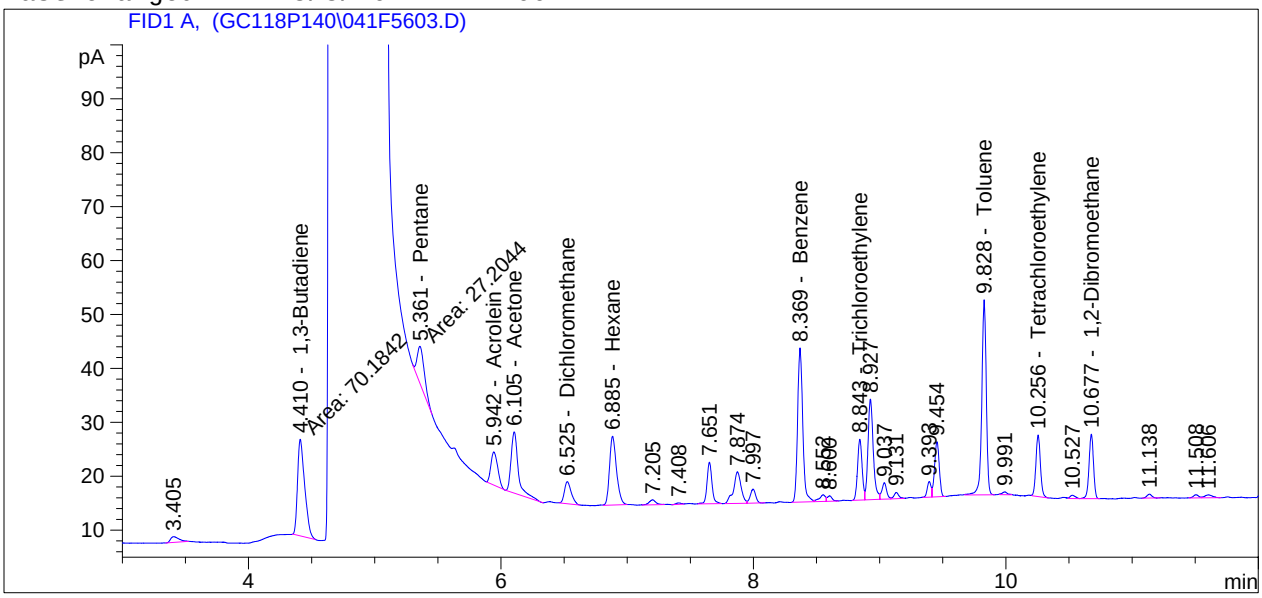


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.410	MM	70.18423	1.50121e-1	10.53611		1,3-Butadiene
5.361	MM	27.20439	1.94449e-1	5.28988		Pentane
5.942	VV	23.11012	3.46901e-1	8.01692		Acrolein
6.105	VV	44.54469	1.85561e-1	8.26575		Acetone
6.525	BB	15.42625	8.19126e-1	12.63604		Dichloromethane
6.885	BB	48.84595	1.32178e-1	6.45635		Hexane
8.369	BB	81.08231	1.07572e-1	8.72215		Benzene
8.843	BV	28.30105	5.13959e-1	14.54558		Trichloroethylene
9.828	BB	89.53070	9.93100e-2	8.89129		Toluene
10.256	BB	28.40261	5.62368e-1	15.97271		Tetrachloroethylene
10.677	VB	29.36428	7.34497e-1	21.56798		1,2-Dibromoethane

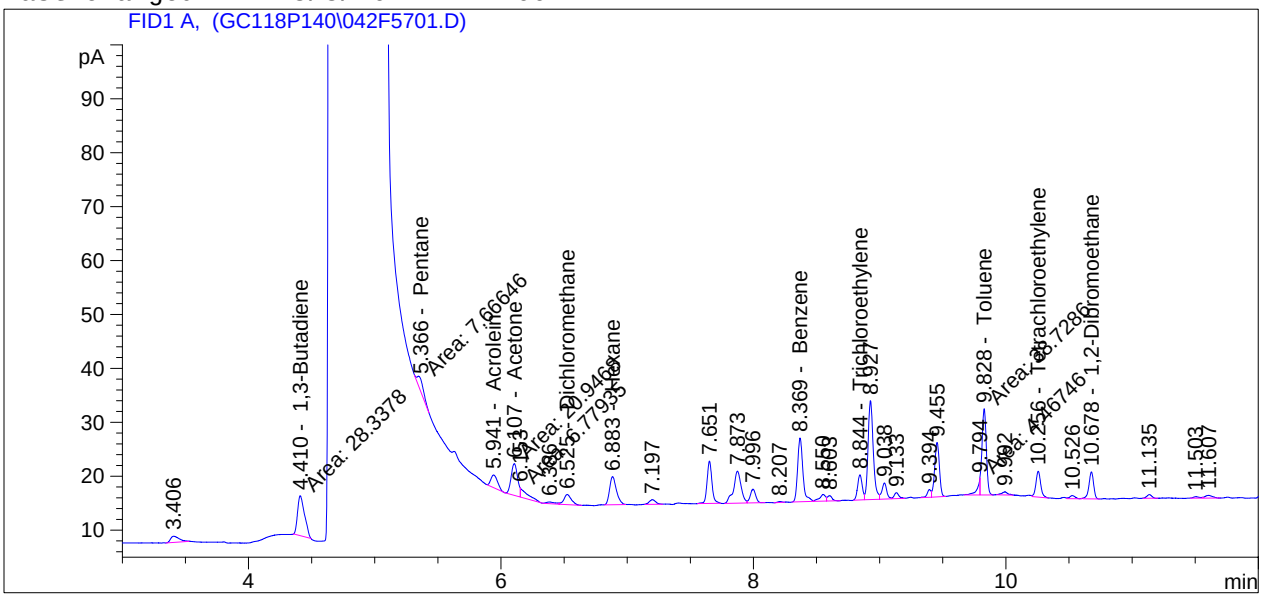
Totals : 120.90076

```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001235

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\042F5701.D
Sample Name: gc116p137 #2

Acq. Operator	: JBB	Seq. Line	: 57
Acq. Instrument	: Veronica	Location	: Vial 42
Injection Date	: 07-Aug-11, 21:06:13	Inj	: 1
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

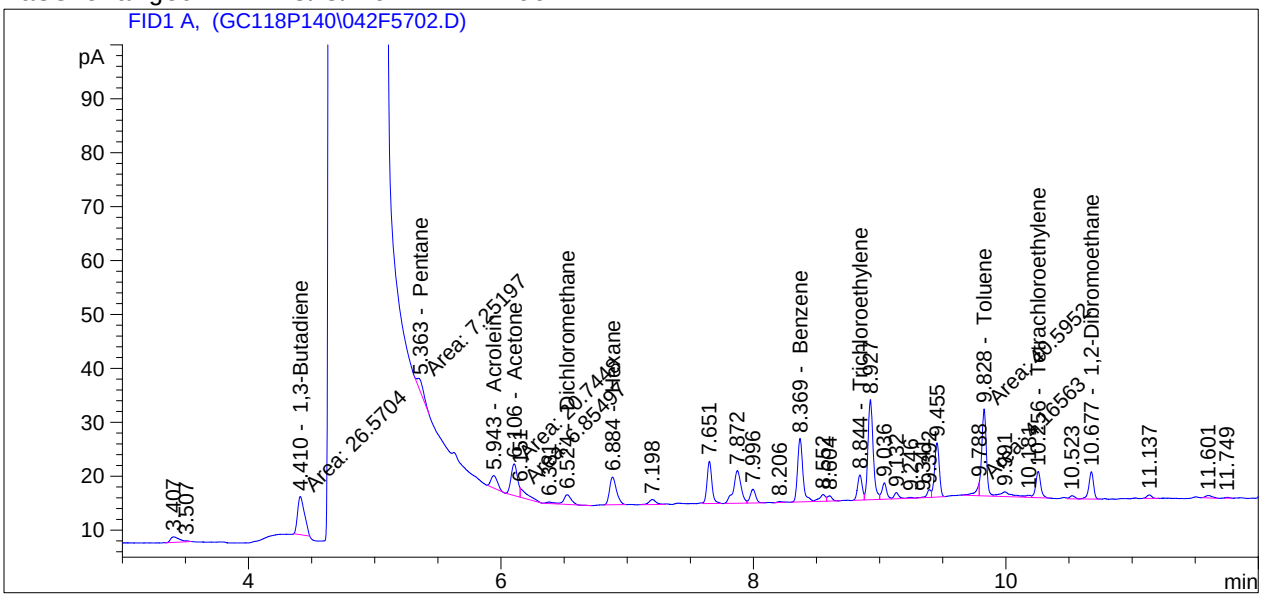
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.410	MM	28.33783	1.50002e-1	4.25072		1,3-Butadiene
5.366	MM	7.66646	2.70685e-1	2.07519		Pentane
5.941	VV	8.59891	3.58824e-1	3.08549		Acrolein
6.107	MF	20.94678	1.44360e-1	3.02388		Acetone
6.525	VV	7.61911	7.73627e-1	5.89435		Dichloromethane
6.883	BB	19.49557	1.33732e-1	2.60719		Hexane
8.369	BB	34.43260	1.03901e-1	3.57758		Benzene
8.844	BV	11.79727	5.00969e-1	5.91007		Trichloroethylene
9.828	FM	38.72859	8.56540e-2	3.31726		Toluene
10.256	BB	12.58762	5.50604e-1	6.93079		Tetrachloroethylene
10.678	BB	12.82191	7.04550e-1	9.03368		1,2-Dibromoethane
Totals :				49.70619		

*** End of Report ***

EM-BTRF-001236

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\042F5702.D
Sample Name: gc116p137 #2

Acq. Operator	: JBB	Seq. Line	: 57
Acq. Instrument	: Veronica	Location	: Vial 42
Injection Date	: 07-Aug-11, 21:24:03	Inj	: 2
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/8/2011 3:48:45 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

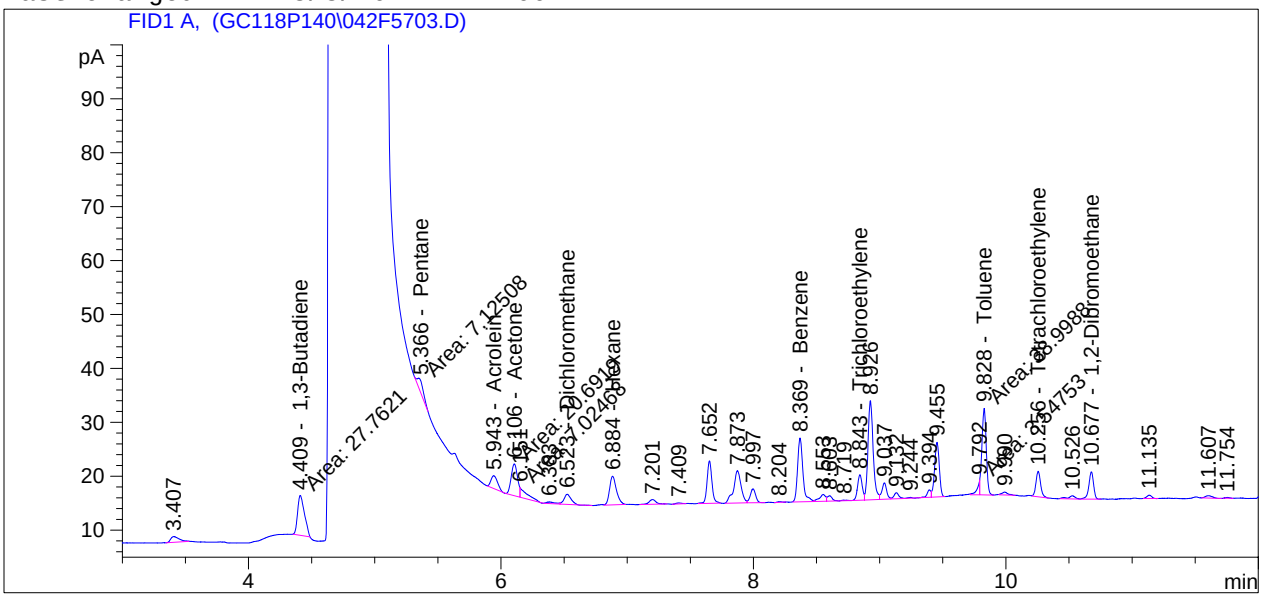
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.410	MM	26.57038	1.49988e-1	3.98524		1,3-Butadiene
5.363	MM	7.25197	2.76752e-1	2.00700		Pentane
5.943	VV	8.30650	3.59492e-1	2.98612		Acrolein
6.106	MF	20.74478	1.43603e-1	2.97901		Acetone
6.524	VV	7.49140	7.72094e-1	5.78406		Dichloromethane
6.884	BB	19.59066	1.33720e-1	2.61965		Hexane
8.369	BV	34.35600	1.03887e-1	3.56913		Benzene
8.844	BV	11.86449	5.01095e-1	5.94524		Trichloroethylene
9.828	FM	40.59520	8.67606e-2	3.52207		Toluene
10.256	VB	13.09014	5.51415e-1	7.21810		Tetrachloroethylene
10.677	VB	13.12394	7.05774e-1	9.26254		1,2-Dibromoethane
Totals :				49.87816		

*** End of Report ***

EM-BTRF-001237

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\042F5703.D
Sample Name: gc116p137 #2

Acq. Operator	: JBB	Seq. Line	: 57
Acq. Instrument	: Veronica	Location	: Vial 42
Injection Date	: 07-Aug-11, 21:41:52	Inj	: 3
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	27.76211	1.49997e-1	4.16424		1,3-Butadiene
5.366	MM	7.12508	2.78750e-1	1.98612		Pentane
5.943	VV	8.60451	3.58811e-1	3.08740		Acrolein
6.106	MF	20.69186	1.43402e-1	2.96725		Acetone
6.523	BB	7.32882	7.70066e-1	5.64367		Dichloromethane
6.884	BB	20.05870	1.33660e-1	2.68104		Hexane
8.369	BB	34.75394	1.03960e-1	3.61302		Benzene
8.843	VV	12.13254	5.01584e-1	6.08549		Trichloroethylene
9.828	FM	38.99881	8.58208e-2	3.34691		Toluene
10.256	BB	12.06950	5.49697e-1	6.63456		Tetrachloroethylene
10.677	VB	13.06119	7.05524e-1	9.21498		1,2-Dibromoethane
Totals :				49.42468		

*** End of Report ***

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\043F5801.D
Sample Name: gc116p137 #1

```
==================================================================
Acq. Operator   : JBB                          Seq. Line :  58
Acq. Instrument : Veronica                      Location : Vial 43
Injection Date  : 07-Aug-11, 22:35:17                Inj :   1
                                              Inj Volume : 0.2 µl
Sequence File   : C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S
Acq. Method     : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/6/2011 5:52:32 PM
Analysis Method : C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Last changed    : 8/8/2011 4:47:00 PM
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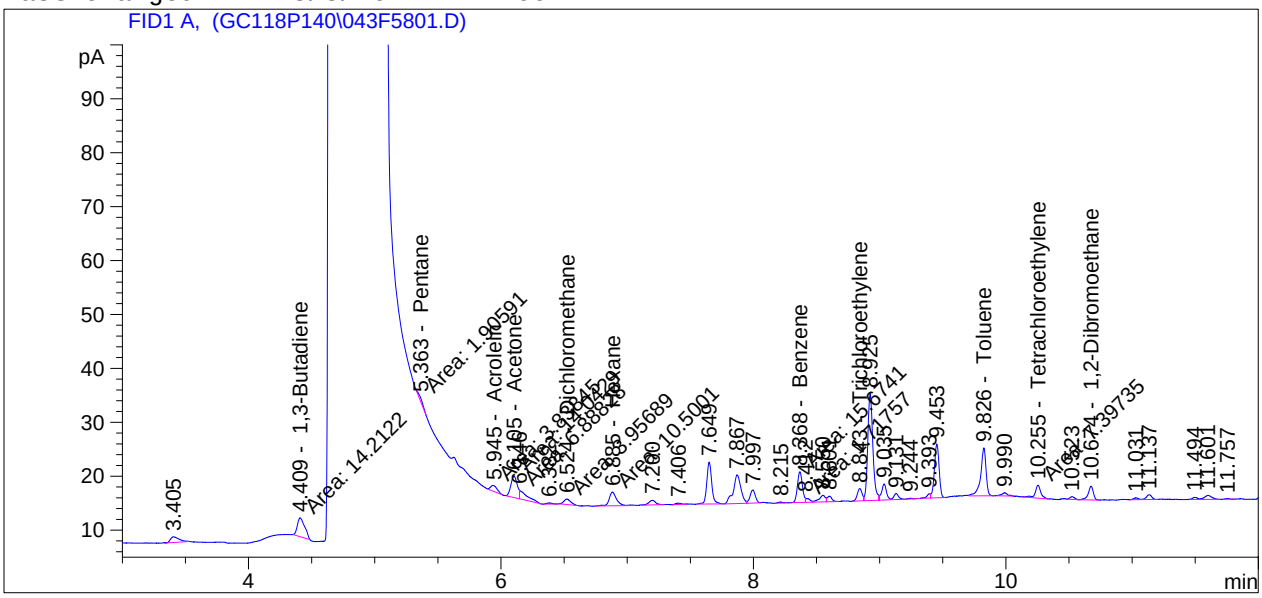
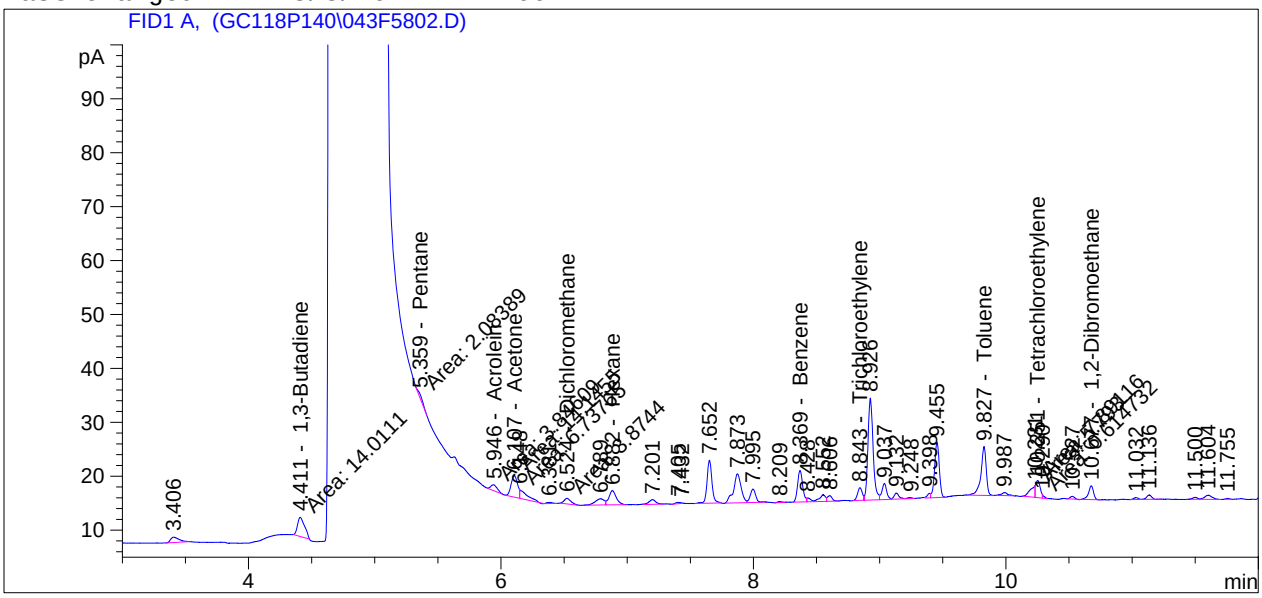



```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/8/2011 3:48:45 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]
-------|------|----------|----------|----------|--|-----------------
  4.409 MM       14.21223 1.49815e-1    2.12920    1,3-Butadiene
  5.363 MM        1.90591 4.73617e-1 9.02670e-1    Pentane
  5.945 MM        3.83845 3.77157e-1    1.44770    Acrolein
  6.105 MF       14.04291 1.09262e-1    1.53435    Acetone
  6.524 MM        3.95689 6.90419e-1    2.73191    Dichloromethane
  6.885 MM       10.50015 1.35948e-1    1.42748    Hexane
  8.368 MF       15.67406 9.79439e-2    1.53518    Benzene
  8.843 BV        6.01838 4.80042e-1    2.88908    Trichloroethylene
  9.826 BB       26.28687 7.42633e-2    1.95215    Toluene
 10.255 MM        7.39735 5.35780e-1    3.96335    Tetrachloroethylene
 10.674 VV        7.14505 6.62315e-1    4.73227    1,2-Dibromoethane

Totals :                               25.24535


==================================================================
                        *** End of Report ***
```

EM-BTRF-001239

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\043F5802.D
Sample Name: gc116p137 #1

Acq. Operator	: JBB	Seq. Line	: 58
Acq. Instrument	: Veronica	Location	: Vial 43
Injection Date	: 07-Aug-11, 22:53:04	Inj	: 2
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.411	MM	14.01110	1.49815e-1	2.09907		1,3-Butadiene
5.359	MM	2.08389	4.73617e-1	9.86963e-1		Pentane
5.946	MM	3.84609	3.77157e-1	1.45058		Acrolein
6.107	MF	14.14552	1.09262e-1	1.54557		Acetone
6.524	MM	3.87440	6.86734e-1	2.66068		Dichloromethane
6.882	VB	10.62116	1.35894e-1	1.44335		Hexane
8.369	BV	16.23872	9.79439e-2	1.59048		Benzene
8.843	BV	6.08158	4.80042e-1	2.91941		Trichloroethylene
9.827	BB	26.53707	7.45976e-2	1.97960		Toluene
10.251	MF	7.89116	5.38029e-1	4.24568		Tetrachloroethylene
10.677	BB	6.96145	6.59799e-1	4.59316		1,2-Dibromoethane

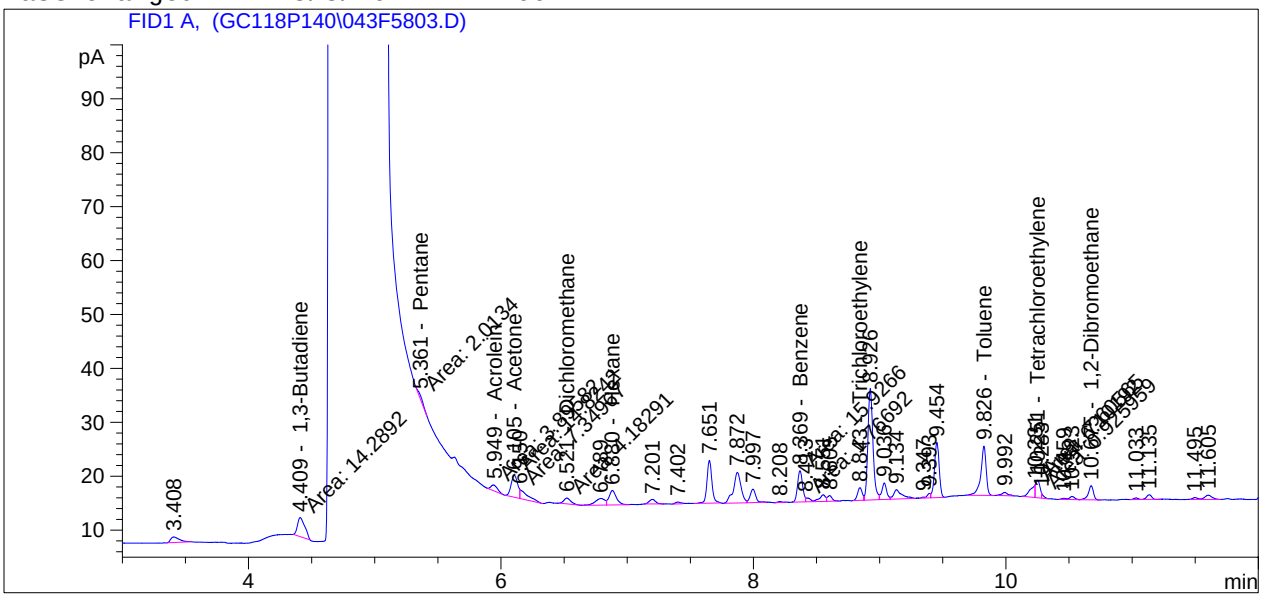
Totals : 25.51455

*** End of Report ***

EM-BTRF-001240

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\043F5803.D
Sample Name: gc116p137 #1

Acq. Operator	: JBB	Seq. Line	: 58
Acq. Instrument	: Veronica	Location	: Vial 43
Injection Date	: 07-Aug-11, 23:10:50	Inj	: 3
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

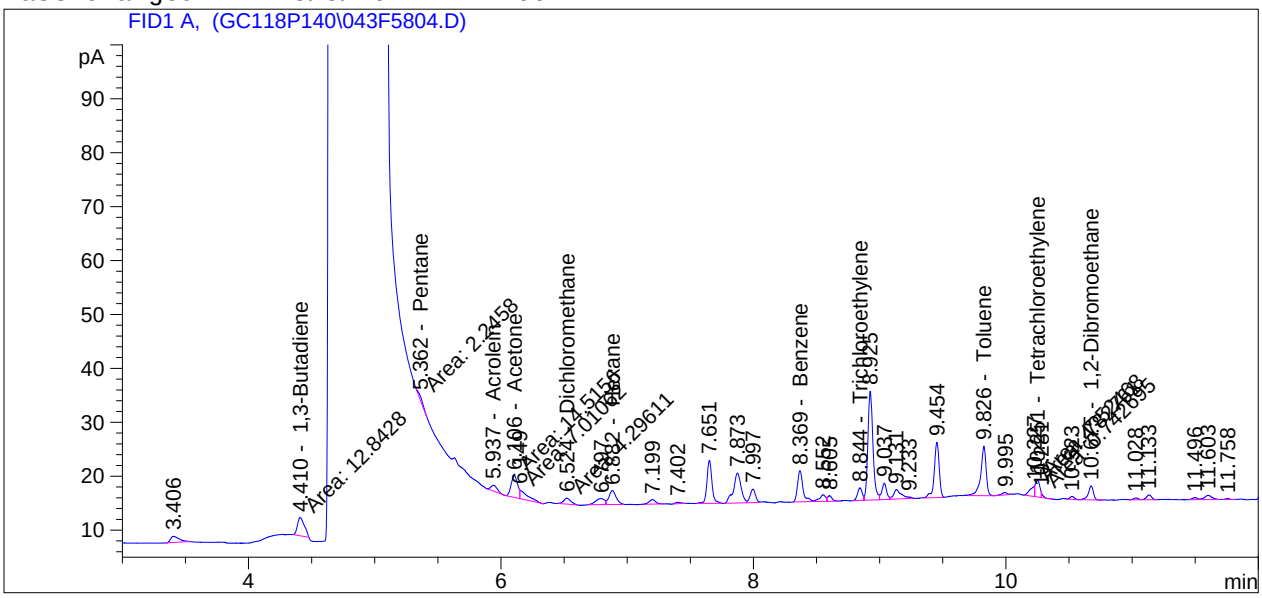
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.409	MM	14.28916	1.49815e-1	2.14073		1,3-Butadiene
5.361	MM	2.01340	4.73617e-1	9.53578e-1		Pentane
5.949	MM	3.89582	3.77157e-1	1.46934		Acrolein
6.105	MF	14.82419	1.12239e-1	1.66385		Acetone
6.521	MM	4.18291	6.99773e-1	2.92709		Dichloromethane
6.880	VV	10.85353	1.35792e-1	1.47382		Hexane
8.369	MF	15.92662	9.79439e-2	1.55991		Benzene
8.843	BV	6.01784	4.80042e-1	2.88882		Trichloroethylene
9.826	BB	26.92549	7.51043e-2	2.02222		Toluene
10.251	MF	7.60565	5.36764e-1	4.08244		Tetrachloroethylene
10.675	BB	7.25231	6.63726e-1	4.81355		1,2-Dibromoethane
Totals :				25.99534		

*** End of Report ***

EM-BTRF-001241

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\043F5804.D
Sample Name: gc116p137 #1

Acq. Operator	: JBB	Seq. Line	: 58
Acq. Instrument	: Veronica	Location	: Vial 43
Injection Date	: 07-Aug-11, 23:28:37	Inj	: 4
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

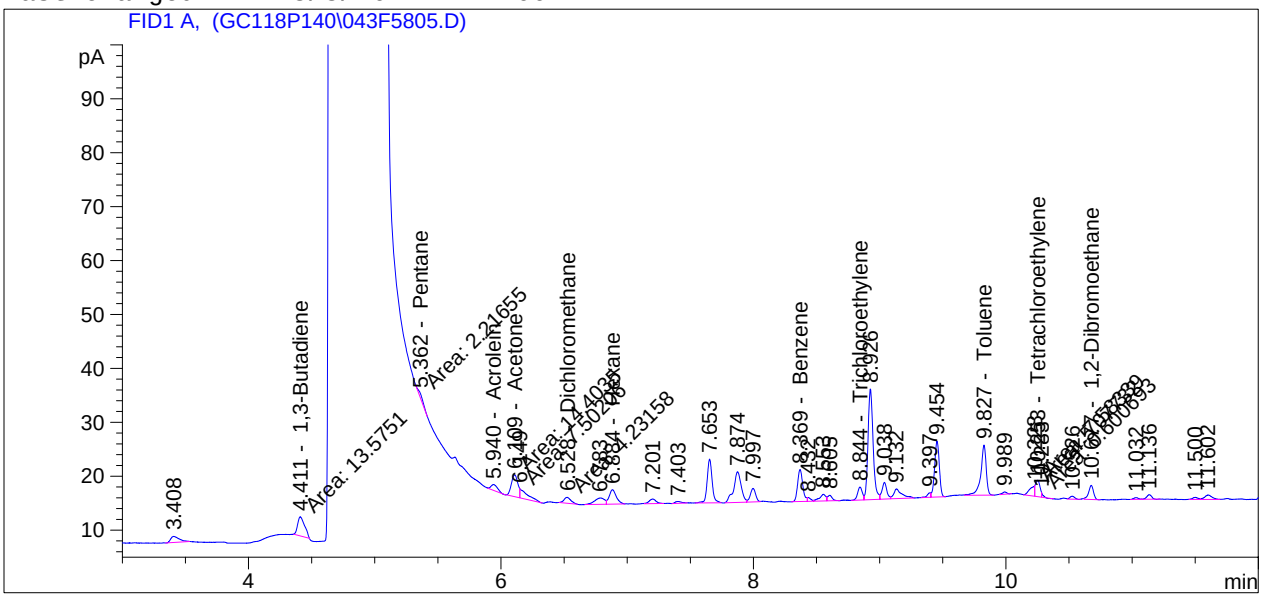
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.410	MM	12.84275	1.49815e-1	1.92404		1,3-Butadiene
5.362	MM	2.24580	4.73617e-1	1.06365		Pentane
5.937	BV	3.66205	3.77157e-1	1.38117		Acrolein
6.106	MF	14.51564	1.09903e-1	1.59531		Acetone
6.524	MM	4.29611	7.04088e-1	3.02484		Dichloromethane
6.882	VB	10.32735	1.36029e-1	1.40481		Hexane
8.369	BB	17.43364	9.79439e-2	1.70752		Benzene
8.844	BV	6.08336	4.80046e-1	2.92029		Trichloroethylene
9.826	BB	27.21523	7.54728e-2	2.05401		Toluene
10.251	MF	7.52468	5.36388e-1	4.03615		Tetrachloroethylene
10.675	VB	7.22124	6.63322e-1	4.79001		1,2-Dibromoethane
Totals :				25.90179		

*** End of Report ***

EM-BTRF-001242

Data File C:\GC2011Q3\VERONICA\DATA\AUG11\GC118P140\043F5805.D
Sample Name: gc116p137 #1

Acq. Operator	: JBB	Seq. Line	: 58
Acq. Instrument	: Veronica	Location	: Vial 43
Injection Date	: 07-Aug-11, 23:46:26	Inj	: 5
		Inj Volume	: 0.2 µl
Sequence File	: C:\GC2011Q3\VERONICA\SEQUENCE\GC118P140.S		
Acq. Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/6/2011 5:52:32 PM		
Analysis Method	: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M		
Last changed	: 8/8/2011 4:47:00 PM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	8/8/2011 3:48:45 PM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount	Grp	Name
4.411	MM	13.57511	1.49815e-1	2.03376		1,3-Butadiene
5.362	MM	2.21655	4.73617e-1	1.04979		Pentane
5.940	BB	3.74707	3.77157e-1	1.41323		Acrolein
6.109	MF	14.40347	1.09262e-1	1.57375		Acetone
6.528	MM	4.23158	7.01657e-1	2.96912		Dichloromethane
6.884	VB	10.39065	1.35999e-1	1.41312		Hexane
8.369	BV	16.84610	9.79439e-2	1.64997		Benzene
8.844	BV	6.18330	4.80744e-1	2.97259		Trichloroethylene
9.827	BB	27.94884	7.63717e-2	2.13450		Toluene
10.253	MF	7.58339	5.36662e-1	4.06971		Tetrachloroethylene
10.677	BB	6.99804	6.60311e-1	4.62089		1,2-Dibromoethane

Totals : 25.90042

*** End of Report ***

EM-BTRF-001243

method: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Modified on: 8/6/2011 at 5:52:32 PM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 40 'C (On)
- Initial time: 2.00 min
- Maximum temp: 300 'C
- Equilibration time: 1.00 min
- Ramps:

#	Rate	Final temp	Final time
1	25.00	240	2.00
2	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 12.00 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Splitless
- Initial temp: 225 'C (On)
- Pressure: 10.15 psi (On)
- Purge flow: 100.0 mL/min
- Purge time: 0.50 min
- Total flow: 116.6 mL/min
- Gas saver: On
- Saver flow: 20.0 mL/min
- Saver time: 5.00 min
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 225 'C (On)
- Pressure: 5.13 psi (On)
- Split ratio: 1:1
- Split flow: 2.0 mL/min
- Total flow: 10.1 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 10975
- Rtx-624 105m x 0.53mm x 3.0um
- Max temperature: 240 'C
- Nominal length: 105.0 m
- Nominal diameter: 530.00 um
- Nominal film thickness: 3.00 um
- Mode: constant pressure
- Pressure: 10.15 psi
- Nominal initial flow: 10.4 mL/min
- Average velocity: 61 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: Restek 10198
- Rtx-1 30m x 0.32mm x 4.0um
- Max temperature: 350 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant pressure
- Pressure: 5.13 psi
- Nominal initial flow: 2.0 mL/min
- Average velocity: 39 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (Off)
- Air flow: 450.0 mL/min (Off)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: Off
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: Off
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

method: C:\GC2011Q3\VERONICA\METHODS\GC118P140.M
Modified on: 8/6/2011 at 5:52:32 PM

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint

GC Injector

Front Injector:

Sample Washes	0
Sample Pumps	7
Injection Volume	0.20 microliters
Syringe Size	10.0 microliters
PreInj Solvent A Washes	0
PreInj Solvent B Washes	0
PostInj Solvent A Washes	3
PostInj Solvent B Washes	3
Viscosity Delay	2 seconds
Plunger Speed	Variable
Injection Speed	6000.00 microliters/minutes
Draw Speed	300.00 microliters/minutes
Dispense Speed	6000.00 microliters/minutes
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes

Back Injector:
No parameters specified

Sequence: C:\GC2011Q3\VERONICA\SEQUENCE\gc118p140.txt
Sequence Table (Front Injector):

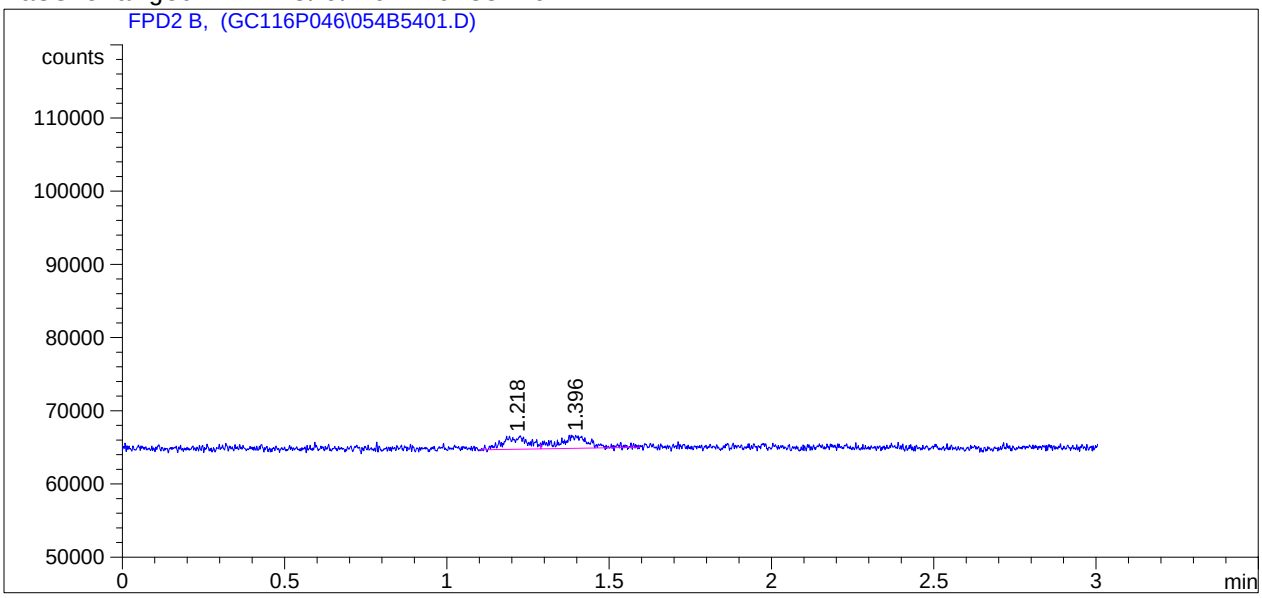
Line	Vial	Sample Name	Method	Inj	Type	
1	Vial 1	gc118p137 #5	GC118P140	3	Sample	
2	Vial 2	gc118p137 #4	GC118P140	3	Sample	
3	Vial 3	gc118p137 #3	GC118P140	3	Sample	
4	Vial 4	gc118p137 #2	GC118P140	3	Sample	
5	Vial 6	gc118p137 #3ss	GC118P140	3	Sample	
6	Vial 5	gc118p137 #1	GC118P140	7	Sample	
7	Vial 5	pause	PAUSE	1	Sample	
8	Vial 91	0611-12 R1 Bag Cond #MS	GC118P140	3	Sample	NR
9	Vial 92	0711-12 T1R1 Bag Cond #MS	GC118P140	3	Sample	123
10	Vial 91	0611-12 R1 Bag Cond #MS	GC118P140	5	Sample	345
11	Vial 93	0611-22 ICR1 Bag Cond A #MS	GC118P140	5	Sample	345
12	Vial 94	0611-161 R2 Bag COND #MS	GC118P140	5	Sample	345
13	Vial 95	0711-81 T1R1 Bag COND #MS	GC118P140	5	Sample	345
14	Vial 96	0711-64 R1 Bag COND #MS	GC118P140	5	Sample	NR
15	Vial 97	0711-08 Bag COND #MS	GC118P140	5	Sample	
16	Vial 98	gc116p137 #3	GC118P140	5	Sample	
17	Vial 99	gc116p137 #4	GC118P140	5	Sample	
18	Vial 100	RB H2O	GC118P140	5	Sample	
19	Vial 5	pause	PAUSE	1	Sample	
20	Vial 7	0711-64 R1 Bag COND #MS	GC118P140	5	Sample	123*
21	Vial 5	pause	PAUSE	1	Sample	
22	Vial 8	0711-64 R1 Bag COND #MS	GC118P140	5	Sample	
23	Vial 9	RB H2O	GC118P140	5	Sample	
24	Vial 10	0711-08 Bag COND	GC118P140	5	Sample	
25	Vial 11	0611-12 R1 Bag Cond	GC118P140	5	Sample	
26	Vial 12	0611-12 R2 Bag Cond	GC118P140	5	Sample	
27	Vial 13	0711-12 T2R1 Bag Cond	GC118P140	5	Sample	
28	Vial 14	0711-12 T2R2 Bag Cond	GC118P140	5	Sample	
29	Vial 15	0711-12 T2R3 Bag Cond	GC118P140	5	Sample	
30	Vial 16	0611-22 ICR1 Bag Cond A	GC118P140	5	Sample	
31	Vial 17	0611-22 ICR1 Bag Cond B	GC118P140	5	Sample	
32	Vial 18	gc118p137 #4	GC118P140	5	Sample	
33	Vial 19	gc118p137 #3	GC118P140	5	Sample	
34	Vial 20	RB H2O	GC118P140	5	Sample	
35	Vial 21	0611-22 ICR2 Bag Cond A	GC118P140	5	Sample	
36	Vial 22	0611-22 ICR2 Bag Cond B	GC118P140	5	Sample	
37	Vial 23	0611-22 ICR3 Bag Cond A	GC118P140	5	Sample	
38	Vial 24	0611-22 ICR3 Bag Cond B	GC118P140	5	Sample	
39	Vial 25	0611-161 R1 Bag COND	GC118P140	5	Sample	
40	Vial 26	0611-161 R2 Bag COND	GC118P140	5	Sample	
41	Vial 27	0611-161 R3 Bag COND	GC118P140	5	Sample	
42	Vial 28	0711-81 T1R01 Bag COND	GC118P140	5	Sample	
43	Vial 29	0711-81 T1R1 Bag COND	GC118P140	5	Sample	
44	Vial 30	0711-81 T1R2 Bag COND	GC118P140	5	Sample	
45	Vial 31	gc118p137 #4	GC118P140	5	Sample	
46	Vial 32	gc118p137 #3	GC118P140	5	Sample	
47	Vial 33	RB H2O	GC118P140	5	Sample	
48	Vial 34	0711-81 T1R3 Bag COND	GC118P140	5	Sample	
49	Vial 35	0711-64 Bag COND FB	GC118P140	5	Sample	
50	Vial 36	0711-64 R1 Bag COND	GC118P140	5	Sample	345
51	Vial 37	0711-64 R2 Bag COND	GC118P140	5	Sample	345
52	Vial 38	0711-64 R3 Bag COND	GC118P140	5	Sample	
53	Vial 39	gc116p137 #5	GC118P140	5	Sample	
54	Vial 40	gc116p137 #4	GC118P140	5	Sample	
55	Vial 41	gc116p137 #3	GC118P140	5	Sample	
56	Vial 42	gc116p137 #2	GC118P140	5	Sample	
57	Vial 43	gc116p137 #1	GC118P140	5	Sample	

123* = all compounds reproduce except PERC (inhomogenous sample)

Sample Chromatograms

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\054B5401.D
Sample Name: 0711-64 R1 Bag COND

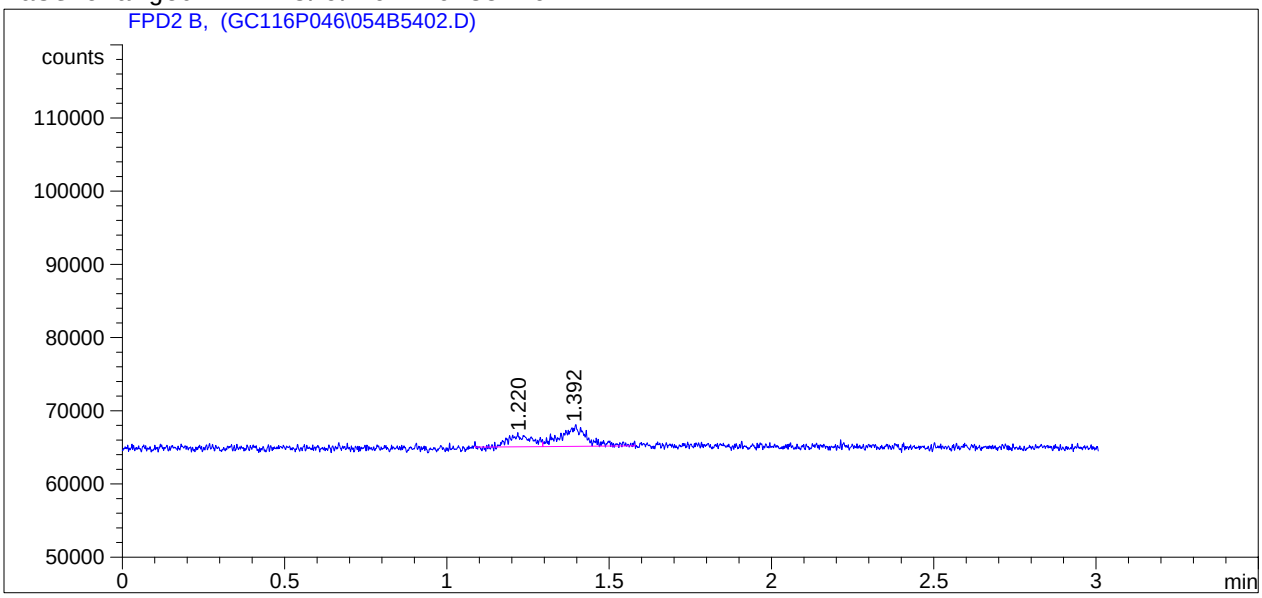
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  54
Acq. Instrument : Instrument 1                      Location : Vial 54
Injection Date  : 7/30/2011 12:30:40 PM                  Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\054B5402.D
Sample Name: 0711-64 R1 Bag COND

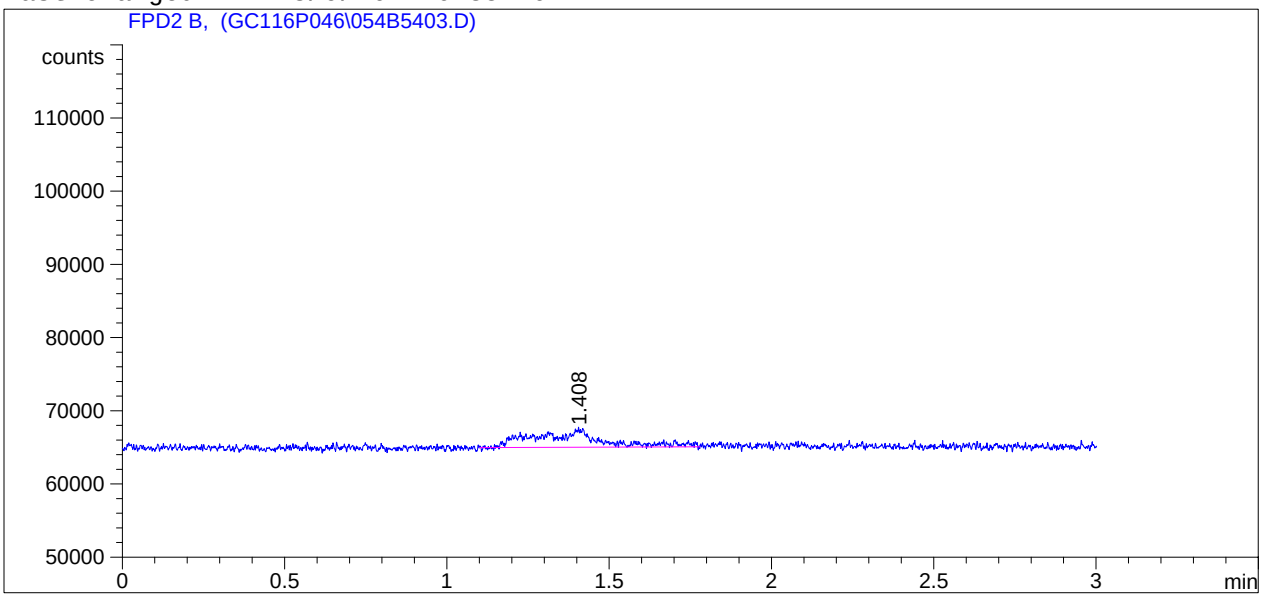
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  54
Acq. Instrument : Instrument 1                  Location : Vial 54
Injection Date  : 7/30/2011 12:34:50 PM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\054B5403.D
Sample Name: 0711-64 R1 Bag COND

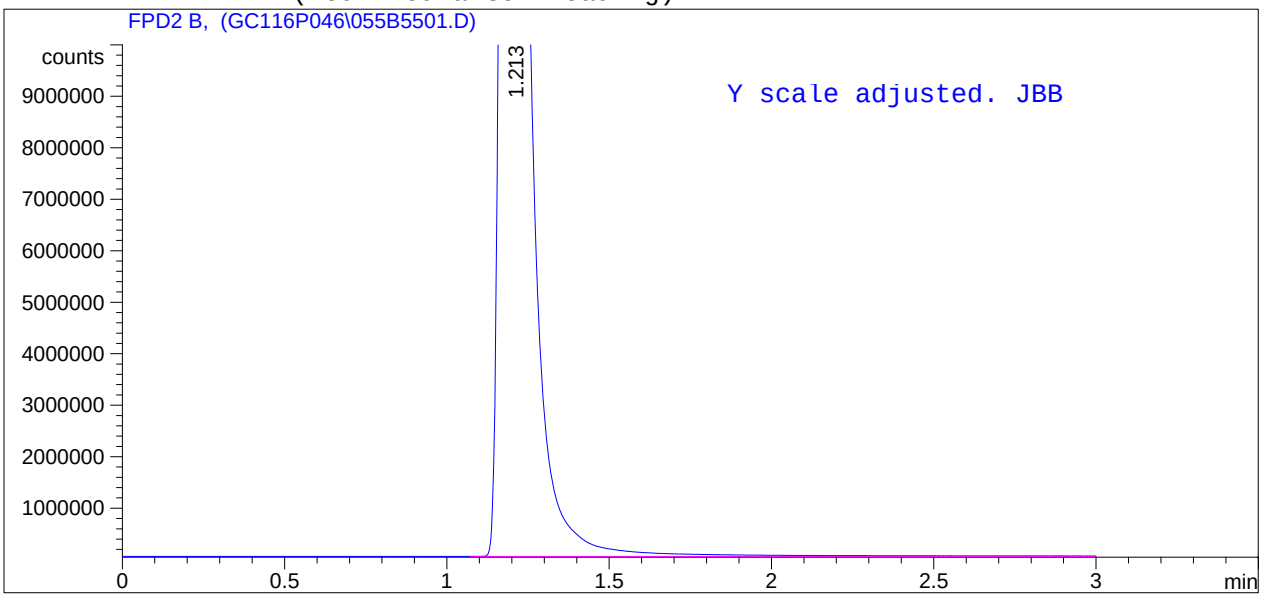
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  54
Acq. Instrument : Instrument 1                  Location : Vial 54
Injection Date  : 7/30/2011 12:39:06 PM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\055B5501.D
Sample Name: 0711-64 R2 Bag COND

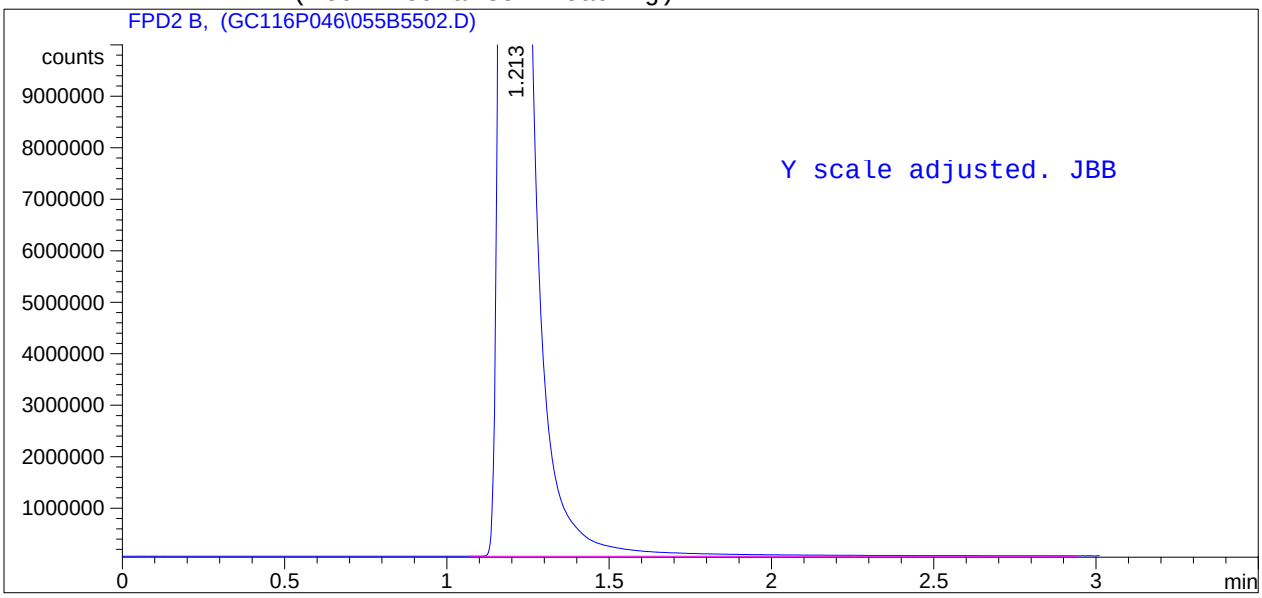
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  55
Acq. Instrument : Instrument 1                  Location : Vial 55
Injection Date  : 7/30/2011 12:51:45 PM              Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 7:04:53 PM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\055B5502.D
Sample Name: 0711-64 R2 Bag COND

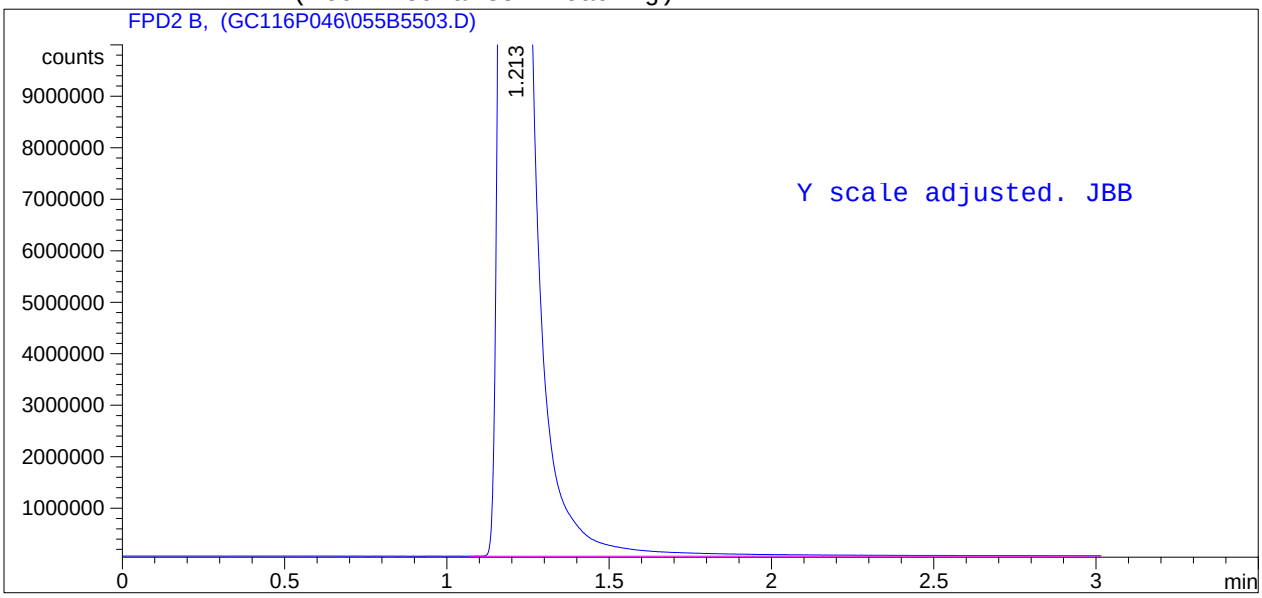
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  55
Acq. Instrument : Instrument 1                  Location : Vial 55
Injection Date  : 7/30/2011 12:55:57 PM              Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 7:04:53 PM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\055B5503.D
Sample Name: 0711-64 R2 Bag COND

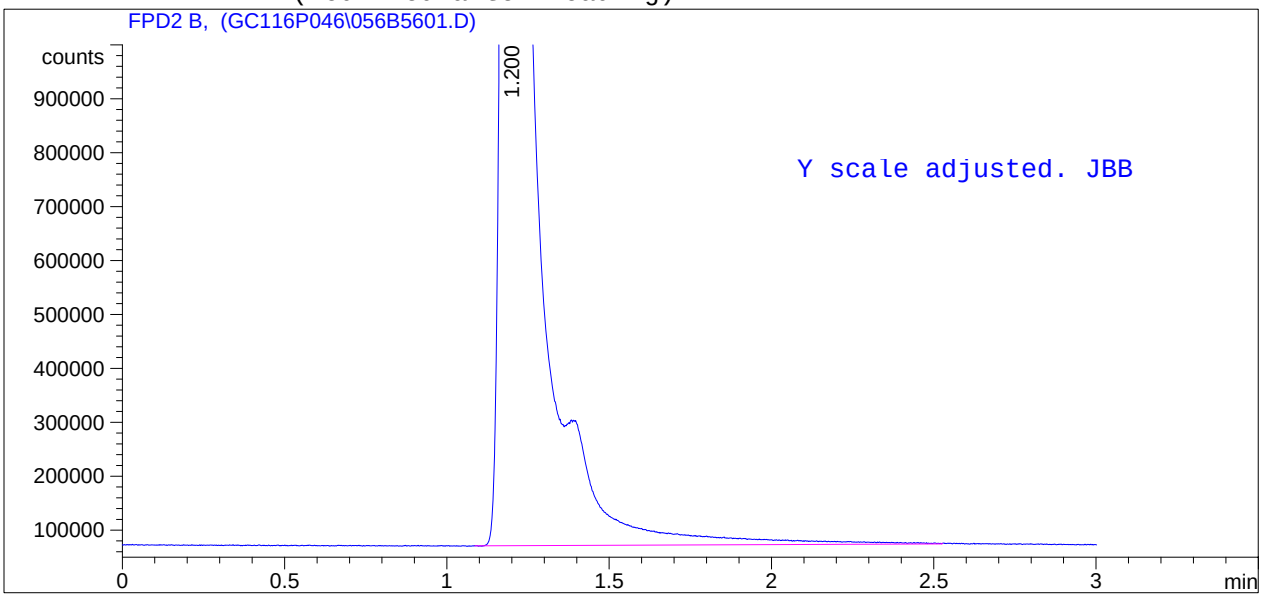
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  55
Acq. Instrument : Instrument 1                      Location : Vial 55
Injection Date  : 7/30/2011 1:00:08 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 7:04:53 PM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\056B5601.D
Sample Name: 0711-64 R3 Bag COND

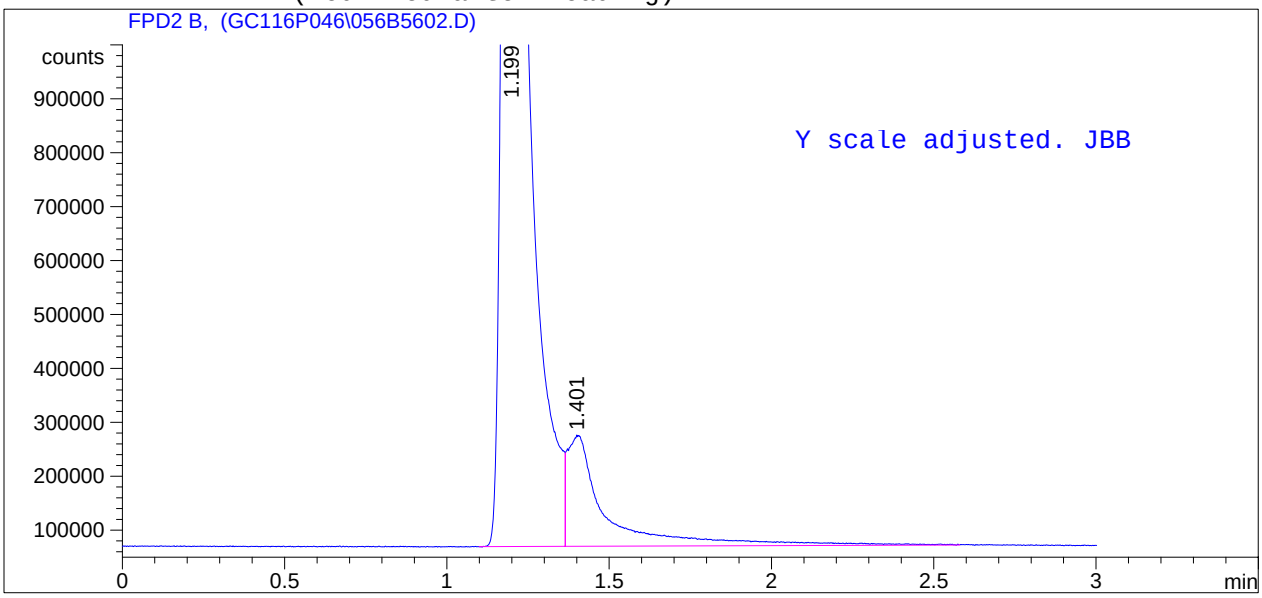
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  56
Acq. Instrument : Instrument 1                  Location : Vial 56
Injection Date  : 7/30/2011 1:12:52 PM               Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 7:05:41 PM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\056B5602.D
Sample Name: 0711-64 R3 Bag COND

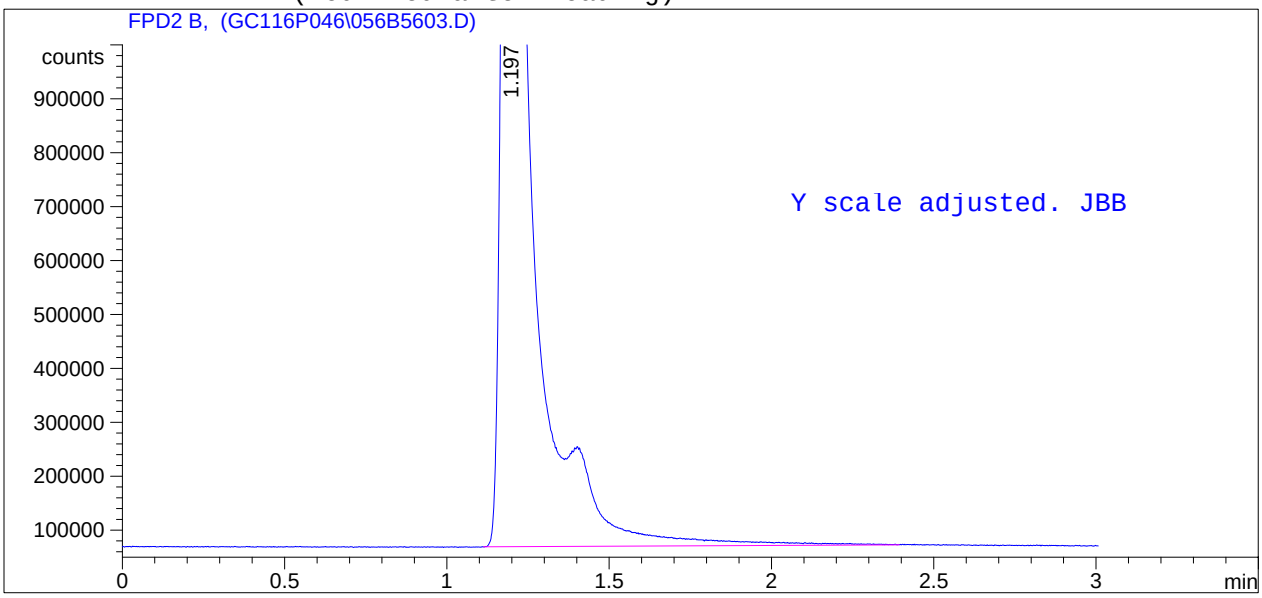
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  56
Acq. Instrument : Instrument 1                  Location : Vial 56
Injection Date  : 7/30/2011 1:17:08 PM               Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 7:05:41 PM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\056B5603.D
Sample Name: 0711-64 R3 Bag COND

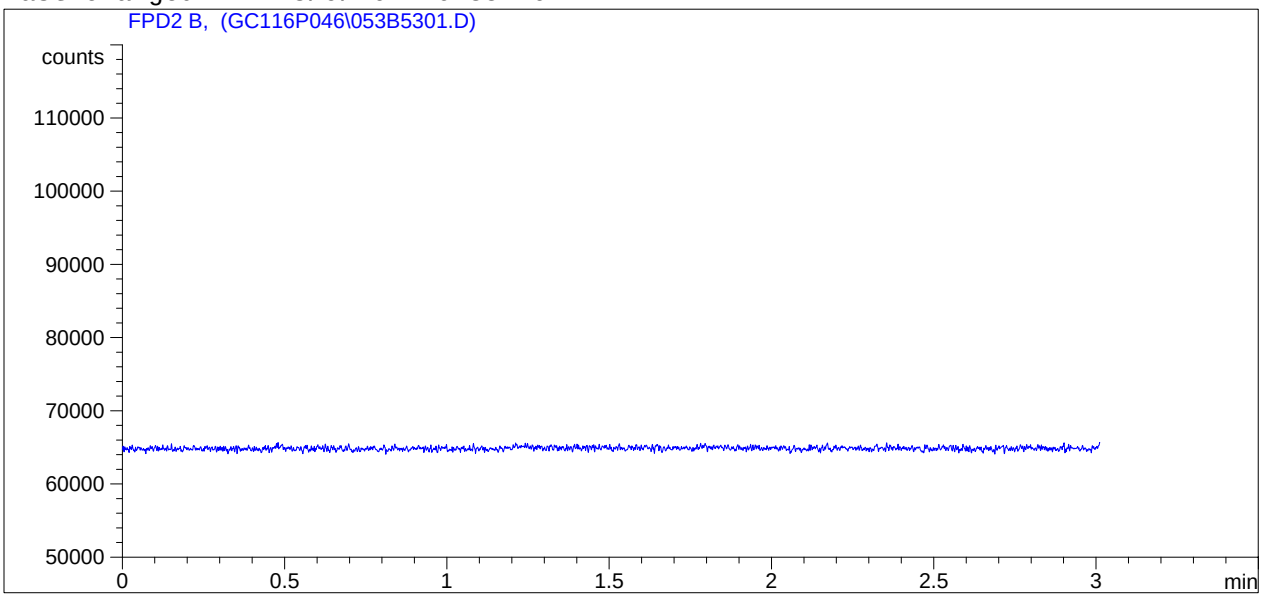
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  56
Acq. Instrument : Instrument 1                  Location : Vial 56
Injection Date  : 7/30/2011 1:21:20 PM               Inj :   3
                                               Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 7:05:41 PM
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\053B5301.D
Sample Name: 0711-64 Bag COND FB

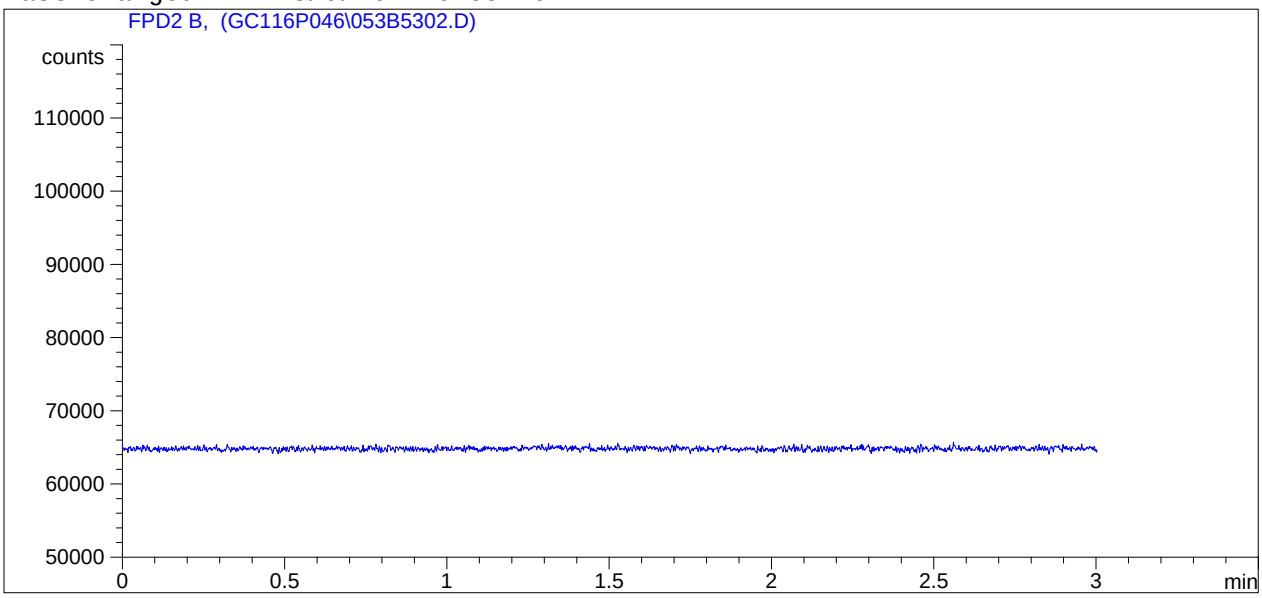
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  53
Acq. Instrument : Instrument 1                  Location : Vial 53
Injection Date  : 7/30/2011 12:09:40 PM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\053B5302.D
Sample Name: 0711-64 Bag COND FB

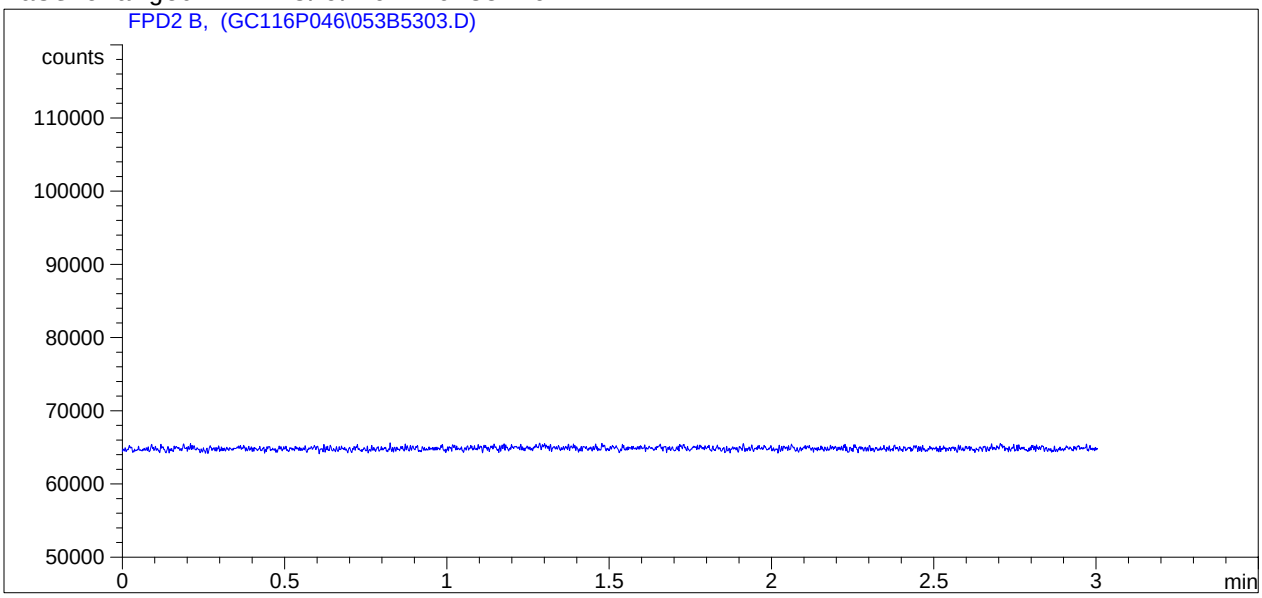
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  53
Acq. Instrument : Instrument 1                  Location : Vial 53
Injection Date  : 7/30/2011 12:13:51 PM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\053B5303.D
Sample Name: 0711-64 Bag COND FB

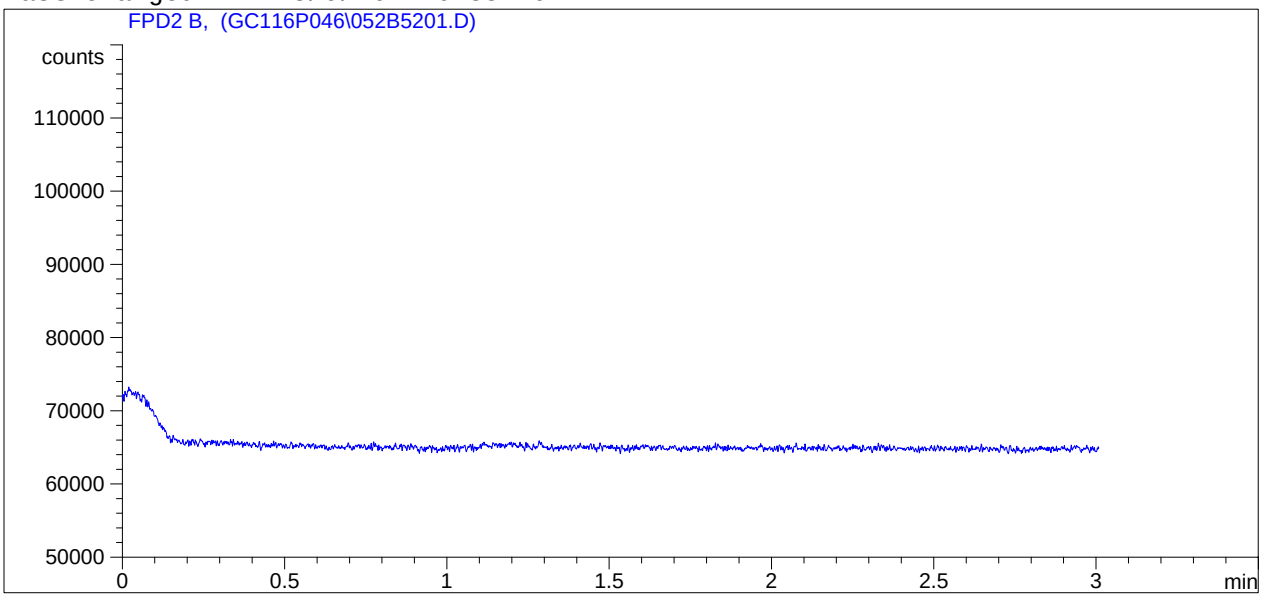
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  53
Acq. Instrument : Instrument 1                      Location : Vial 53
Injection Date  : 7/30/2011 12:18:01 PM                  Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\052B5201.D
Sample Name: RB H2O

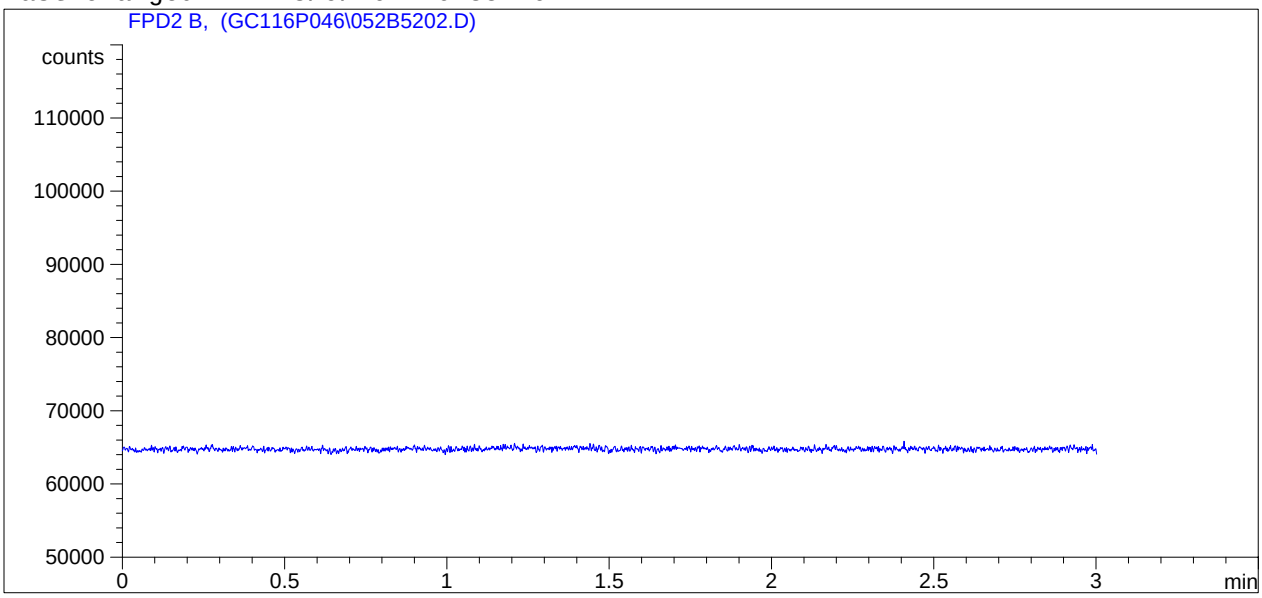
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  52
Acq. Instrument : Instrument 1                      Location : Vial 52
Injection Date  : 7/30/2011 11:48:35 AM                  Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\052B5202.D
Sample Name: RB H2O

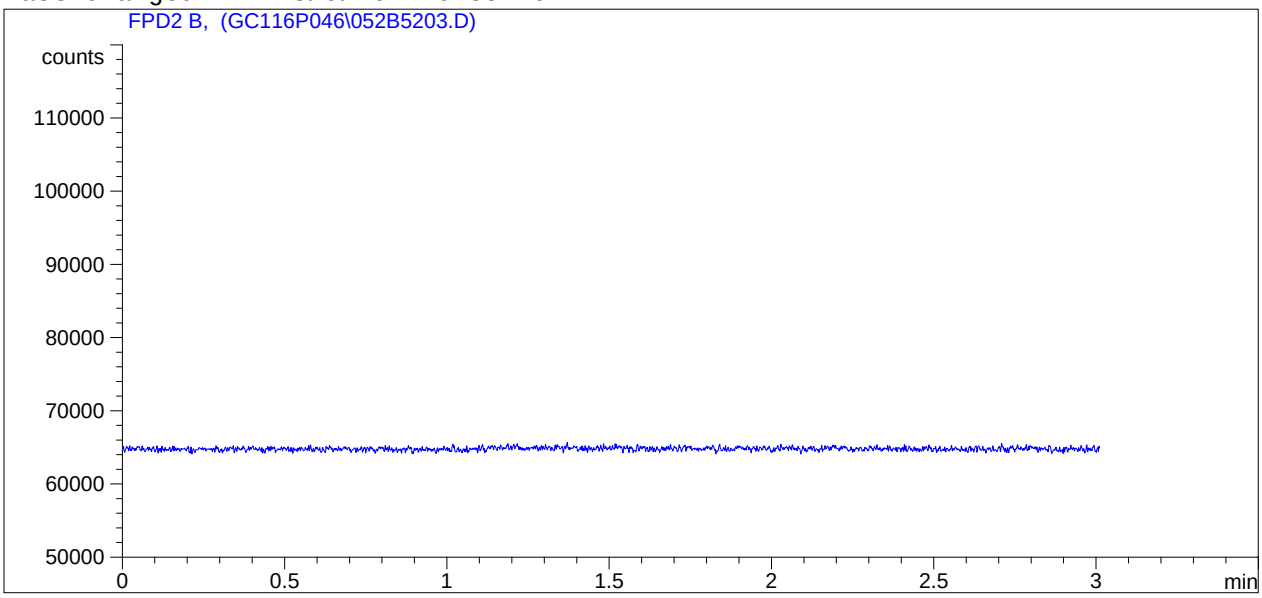
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  52
Acq. Instrument : Instrument 1                  Location : Vial 52
Injection Date  : 7/30/2011 11:52:46 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\052B5203.D
Sample Name: RB H2O

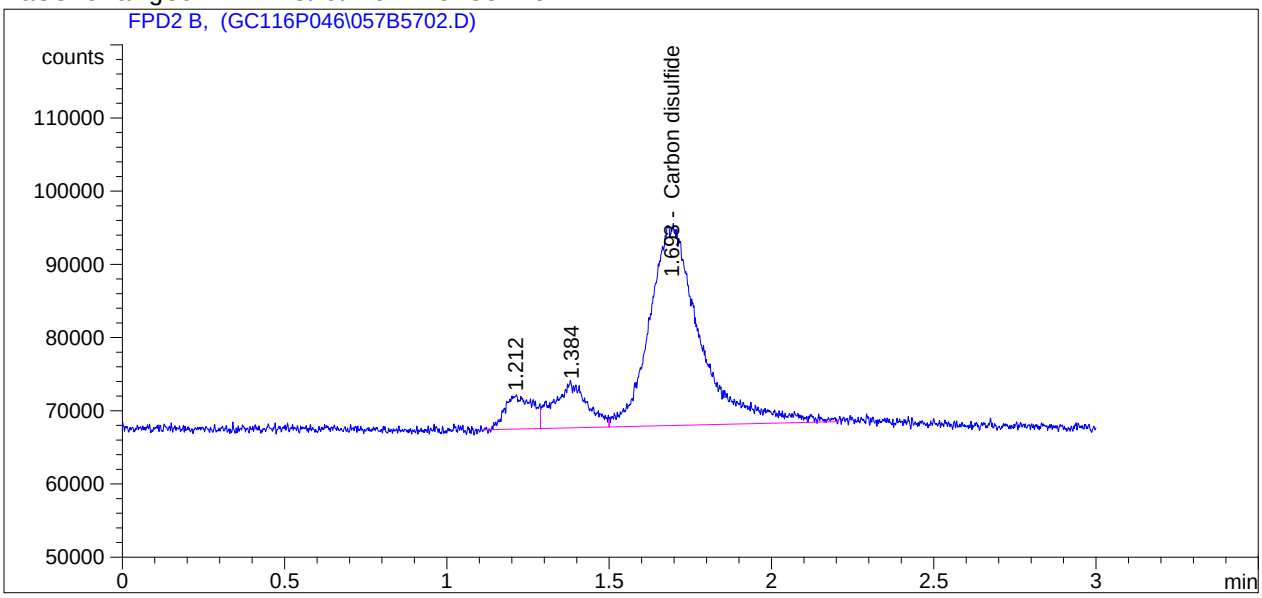
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  52
Acq. Instrument : Instrument 1                  Location : Vial 52
Injection Date  : 7/30/2011 11:56:57 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661            -          -          -         Carbon disulfide

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\057B5702.D
Sample Name: 0711-64 R1 Bag COND #MS

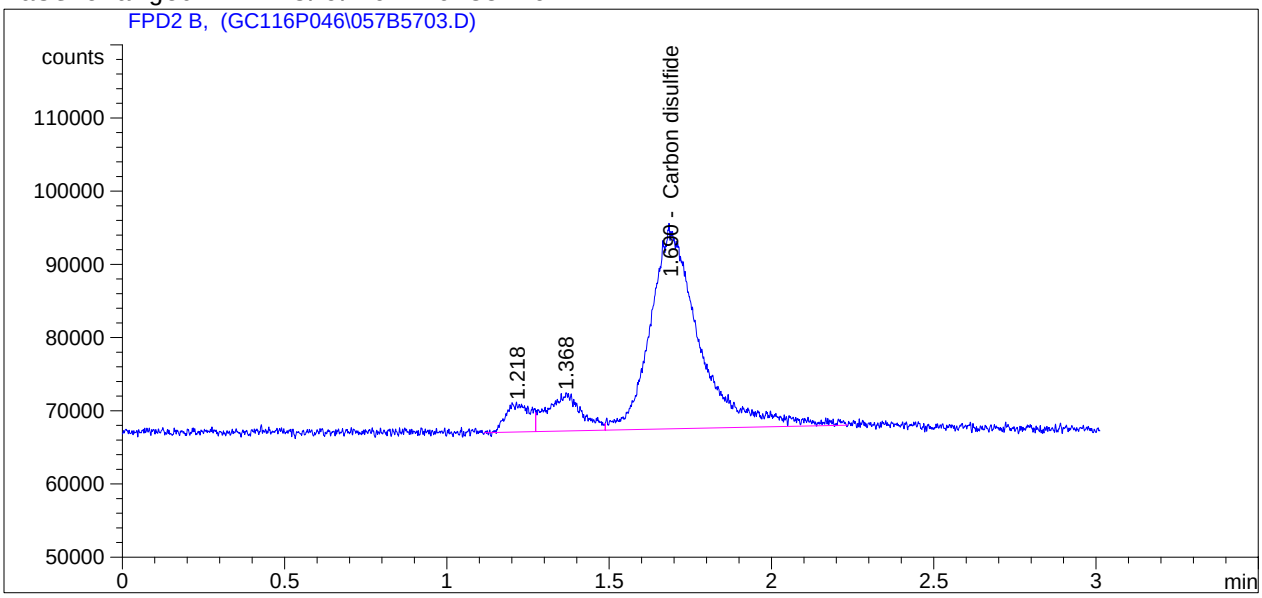
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  57
Acq. Instrument : Instrument 1                  Location : Vial 57
Injection Date  : 7/30/2011 1:38:15 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.693 VB     2.94434e5  8.70028e-6    2.56166    Carbon disulfide

Totals :                                 2.56166


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\057B5703.D
Sample Name: 0711-64 R1 Bag COND #MS

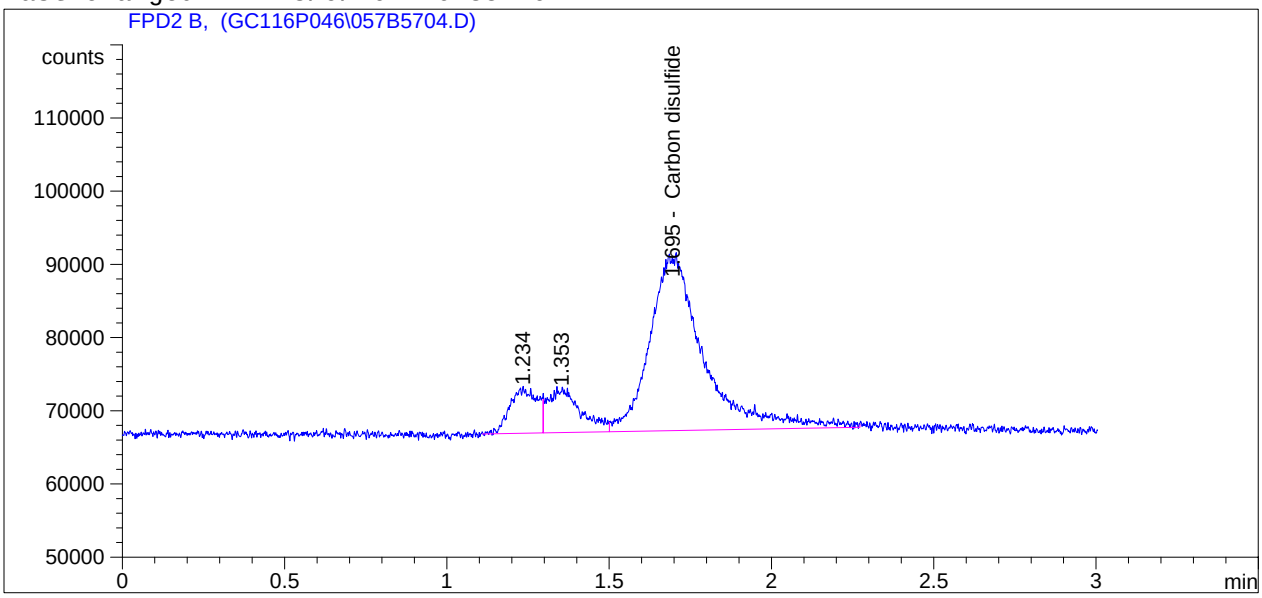
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  57
Acq. Instrument : Instrument 1                  Location : Vial 57
Injection Date  : 7/30/2011 1:42:26 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.690 VB     2.87620e5  8.77223e-6    2.52307    Carbon disulfide

Totals :                                 2.52307


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\057B5704.D
Sample Name: 0711-64 R1 Bag COND #MS

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  57
Acq. Instrument : Instrument 1                  Location : Vial 57
Injection Date  : 7/30/2011 1:46:41 PM               Inj :   4
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.695 VB     2.76045e5  8.89913e-6    2.45656    Carbon disulfide

Totals :                                 2.45656


==========================================================================
                          *** End of Report ***
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : Tuesday, August 09, 2011 6:35:37 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.200 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear (some peaks differ, see below)
Origin : Connected (some peaks differ, see below)
Weight : Quadratic (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FPD2 B,

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref Grp	Name
1.661	2	2	5.03000e-1	3.22331e4	1.56051e-5		Carbon disulfide
		3	1.00600	7.65855e4	1.31357e-5		
		4	2.00800	1.97205e5	1.01823e-5		
		5	4.98900	8.92069e5	5.59262e-6		
		6	9.88000	2.87746e6	3.43359e-6		

More compound-specific settings:

Compound: Carbon disulfide
Time Window : From 1.515 min To 1.761 min
Curve Type : Quadratic
Origin : Connected
Calibration Level Weights:/
Level 2 : 1
Level 3 : 0.25
Level 4 : 0.062749
Level 5 : 0.010165
Level 6 : 0.002592

Peak Sum Table

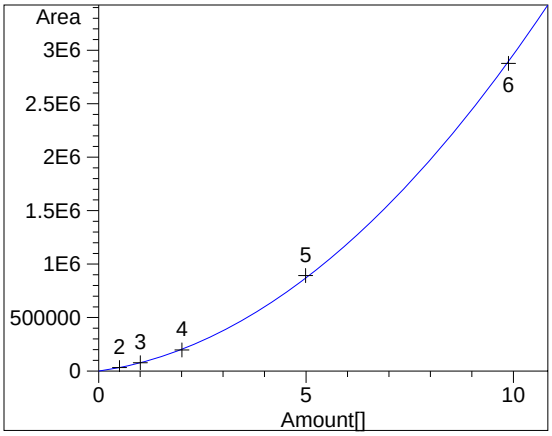
No Entries in table

EM-BTRF-001267

==========

Calibration Curves

==========

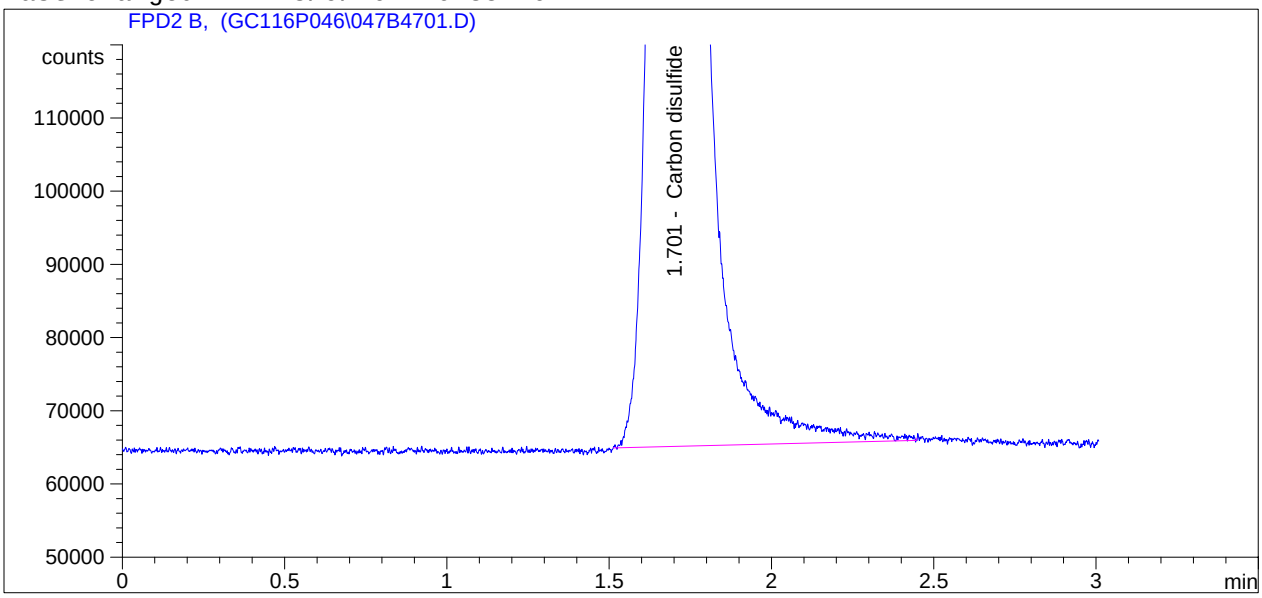


Carbon disulfide at exp. RT: 1.661
FPD2 B,
Correlation: 0.99985
Residual Std. Dev.: 17223.92722
Formula: $y = ax^2 + bx + c$
a: 24289.70348
b: 53081.26111
c: -933.12664
x: Amount
y: Area
Calibration Level Weights:
Level 2 : 1
Level 3 : 0.25
Level 4 : 0.062749
Level 5 : 0.010165
Level 6 : 0.002592

==========

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\047B4701.D
Sample Name: gc116p46 #6

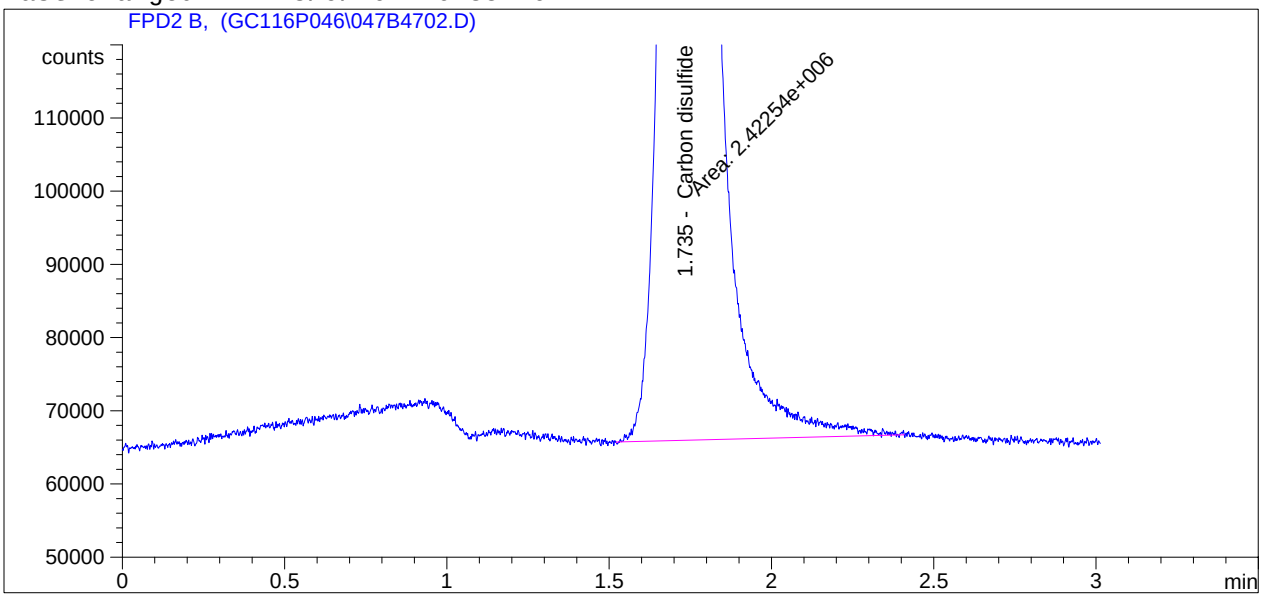
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  47
Acq. Instrument : Instrument 1                  Location : Vial 47
Injection Date  : 7/30/2011 10:03:20 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.701 BB     2.62694e6  3.56535e-6    9.36595    Carbon disulfide

Totals :                                 9.36595


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\047B4702.D
Sample Name: gc116p46 #6

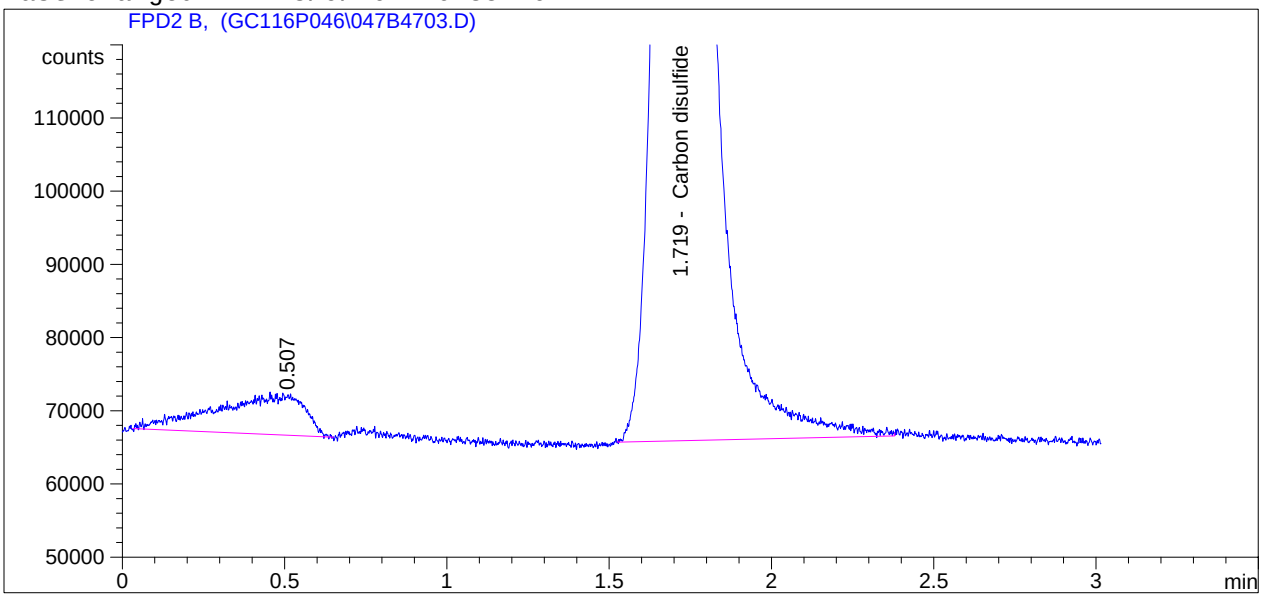
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  47
Acq. Instrument : Instrument 1                      Location : Vial 47
Injection Date  : 7/30/2011 10:07:31 AM                  Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.735 MM     2.42254e6  3.69678e-6    8.95560    Carbon disulfide

Totals :                                 8.95560


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\047B4703.D
Sample Name: gc116p46 #6

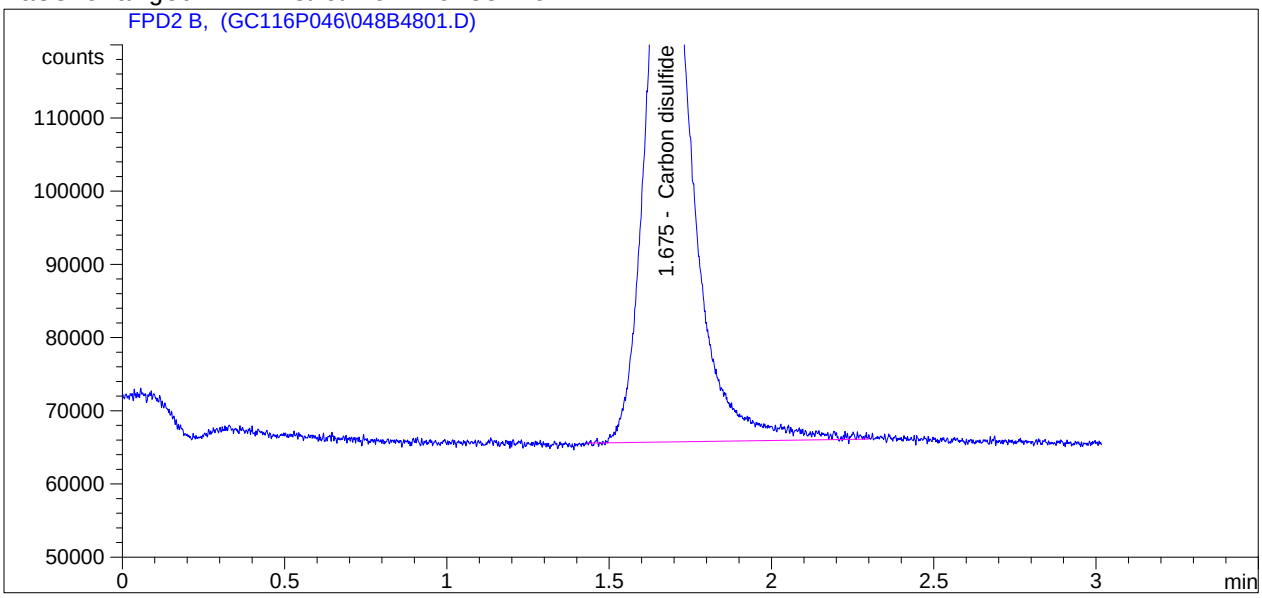
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  47
Acq. Instrument : Instrument 1                  Location : Vial 47
Injection Date  : 7/30/2011 10:11:47 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.719 BB     2.49668e6  3.64738e-6    9.10634    Carbon disulfide

Totals :                                 9.10634


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\048B4801.D
Sample Name: gc116p46 #5

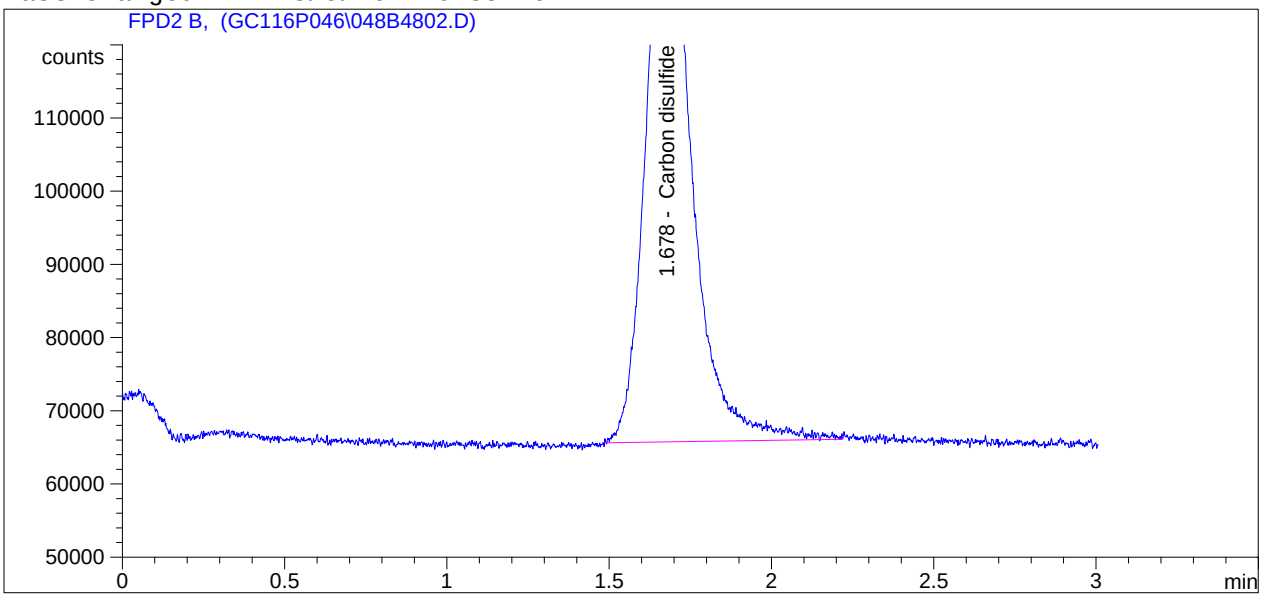
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  48
Acq. Instrument : Instrument 1                  Location : Vial 48
Injection Date  : 7/30/2011 10:24:21 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.675 BB     8.03065e5  5.93160e-6    4.76346    Carbon disulfide

Totals :                                 4.76346


==========================================================================
                         *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\048B4802.D
Sample Name: gc116p46 #5

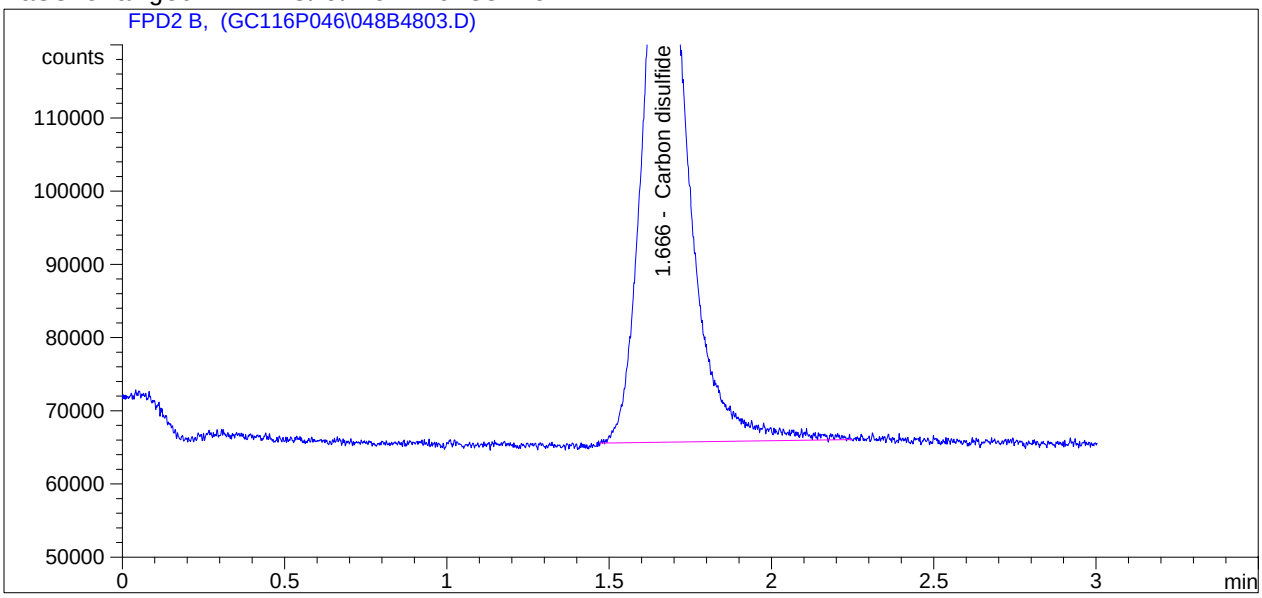
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  48
Acq. Instrument : Instrument 1                  Location : Vial 48
Injection Date  : 7/30/2011 10:28:38 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.678 BB     7.69959e5  6.03398e-6    4.64591    Carbon disulfide

Totals :                                 4.64591


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\048B4803.D
Sample Name: gc116p46 #5

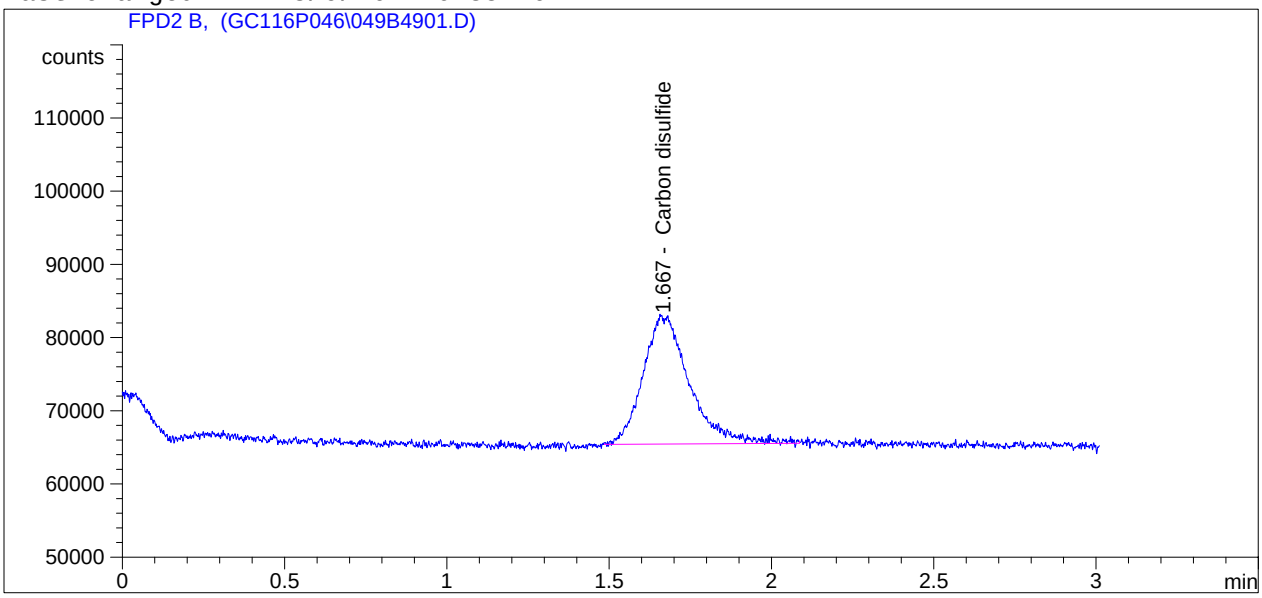
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  48
Acq. Instrument : Instrument 1                  Location : Vial 48
Injection Date  : 7/30/2011 10:32:45 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.666 BB     7.65346e5  6.04869e-6    4.62934    Carbon disulfide

Totals :                                 4.62934


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\049B4901.D
Sample Name: gc116p46 #4

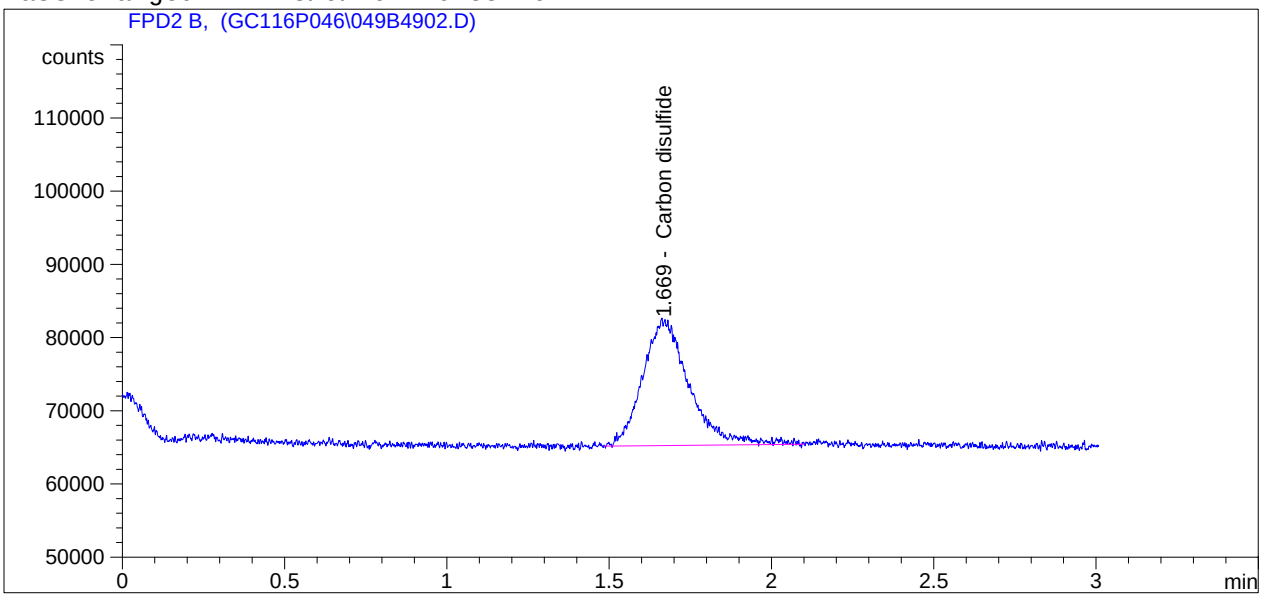
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Instrument 1                  Location : Vial 49
Injection Date  : 7/30/2011 10:45:29 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.667 BB     1.73708e5  1.03784e-5    1.80282    Carbon disulfide

Totals :                                 1.80282


==========================================================================
                         *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\049B4902.D
Sample Name: gc116p46 #4

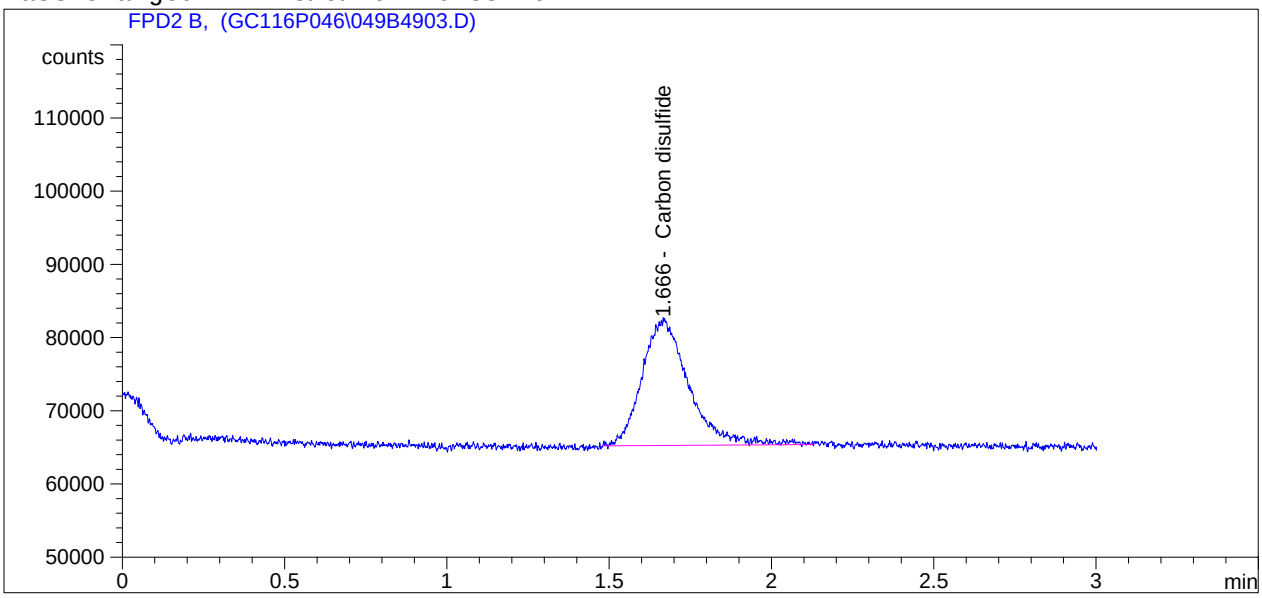
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Instrument 1                  Location : Vial 49
Injection Date  : 7/30/2011 10:49:40 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.669 BB     1.71082e5  1.04283e-5    1.78409    Carbon disulfide

Totals :                                 1.78409


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\049B4903.D
Sample Name: gc116p46 #4

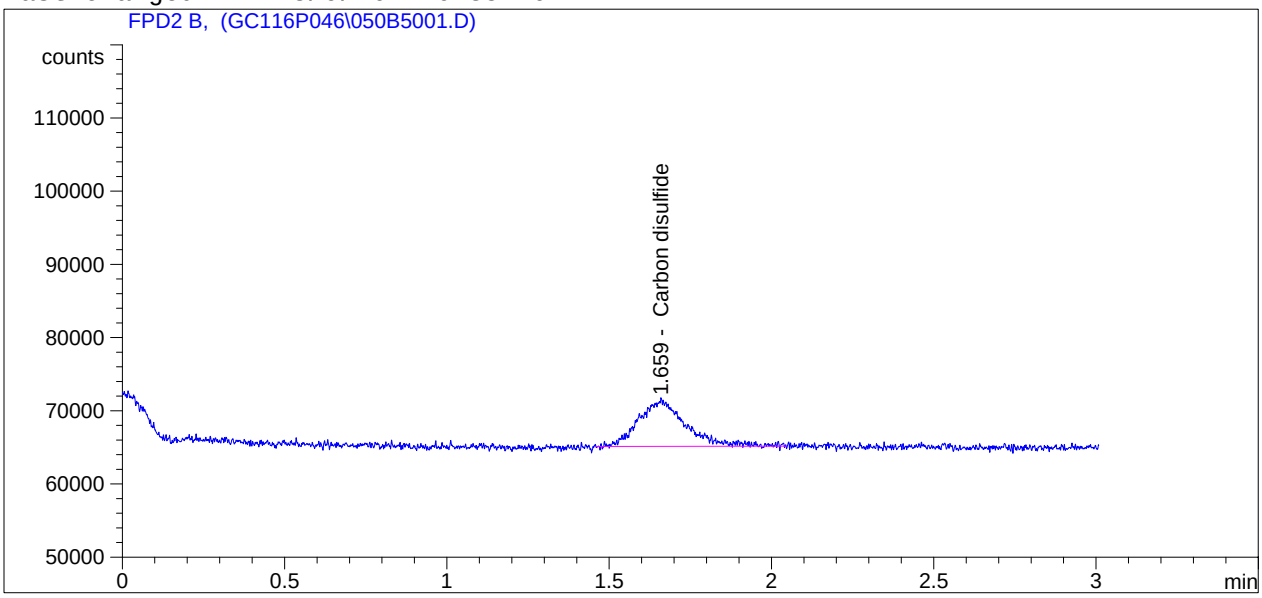
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Instrument 1                  Location : Vial 49
Injection Date  : 7/30/2011 10:53:56 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.666 BB     1.72265e5  1.04057e-5    1.79254    Carbon disulfide

Totals :                                 1.79254


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\050B5001.D
Sample Name: gc116p46 #3

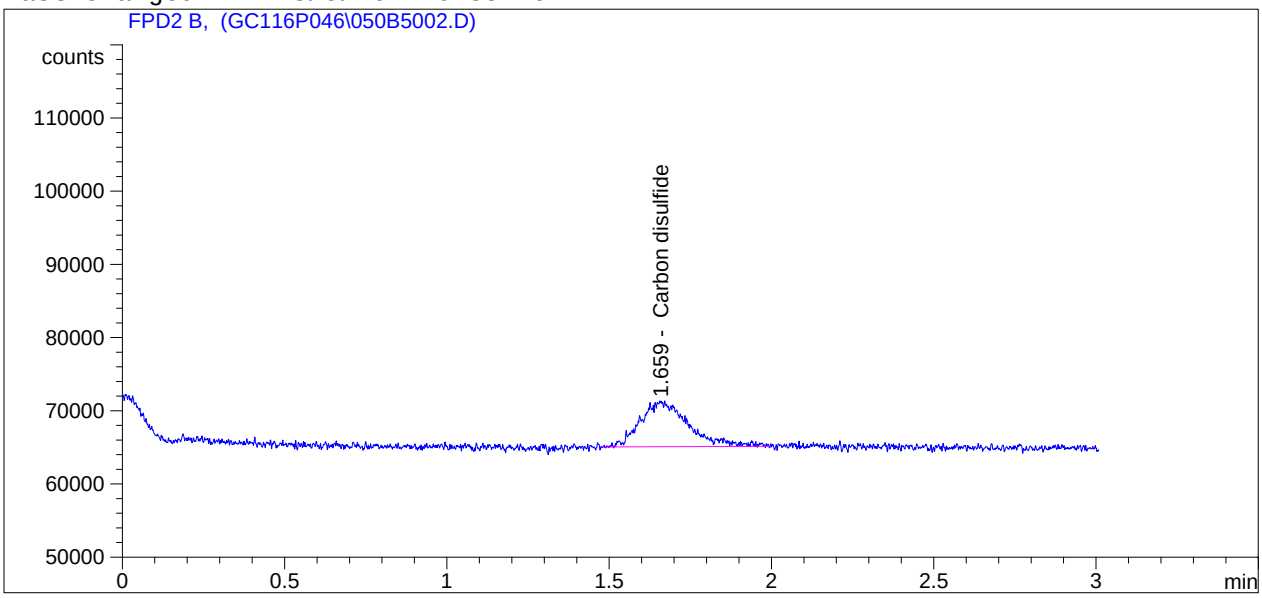
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  50
Acq. Instrument : Instrument 1                      Location : Vial 50
Injection Date  : 7/30/2011 11:06:28 AM                  Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.659 BB     6.32645e4  1.36907e-5 8.66137e-1    Carbon disulfide

Totals :                              8.66137e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\050B5002.D
Sample Name: gc116p46 #3

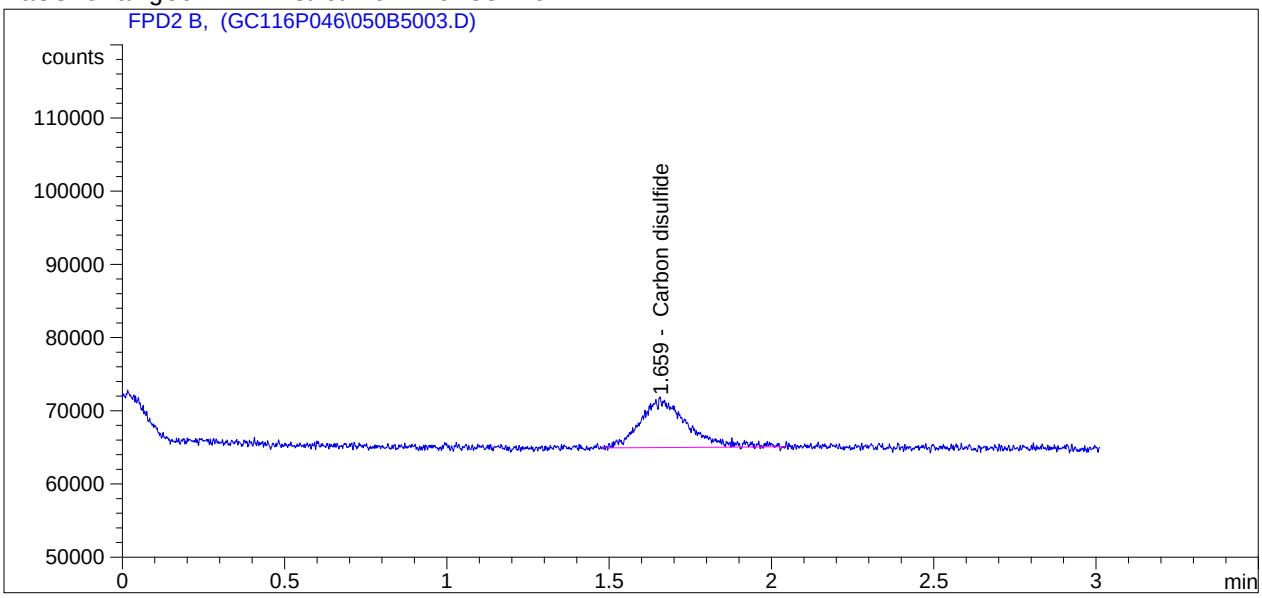
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  50
Acq. Instrument : Instrument 1                  Location : Vial 50
Injection Date  : 7/30/2011 11:10:44 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.659 BB     6.32117e4  1.36934e-5 8.65582e-1    Carbon disulfide

Totals :                              8.65582e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\050B5003.D
Sample Name: gc116p46 #3

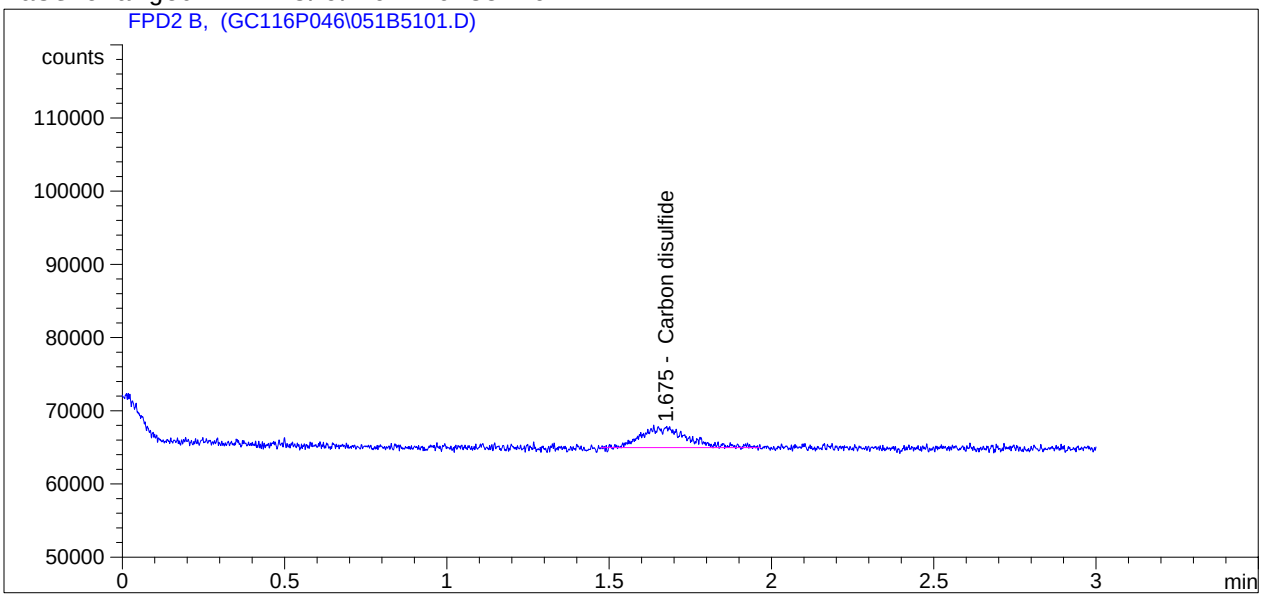
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  50
Acq. Instrument : Instrument 1                  Location : Vial 50
Injection Date  : 7/30/2011 11:14:56 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.659 BB     6.63745e4  1.35376e-5 8.98551e-1    Carbon disulfide

Totals :                              8.98551e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\051B5101.D
Sample Name: gc116p46 #2

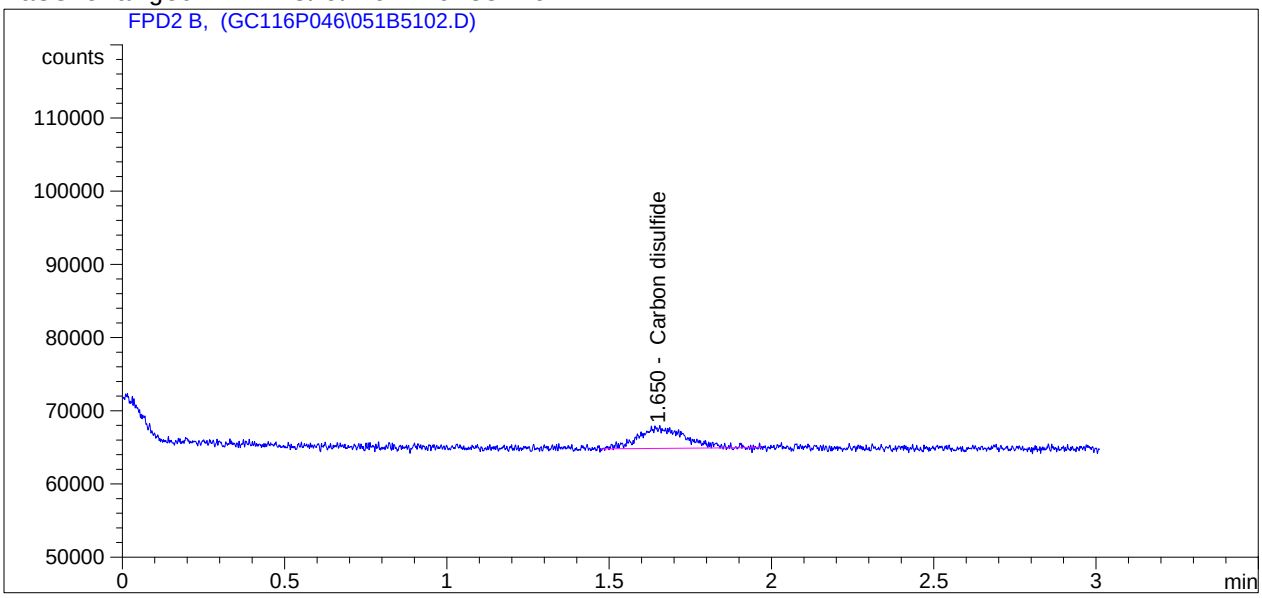
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  51
Acq. Instrument : Instrument 1                      Location : Vial 51
Injection Date  : 7/30/2011 11:27:33 AM                  Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.675 BB     2.71387e4  1.57620e-5 4.27759e-1    Carbon disulfide

Totals :                              4.27759e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\051B5102.D
Sample Name: gc116p46 #2

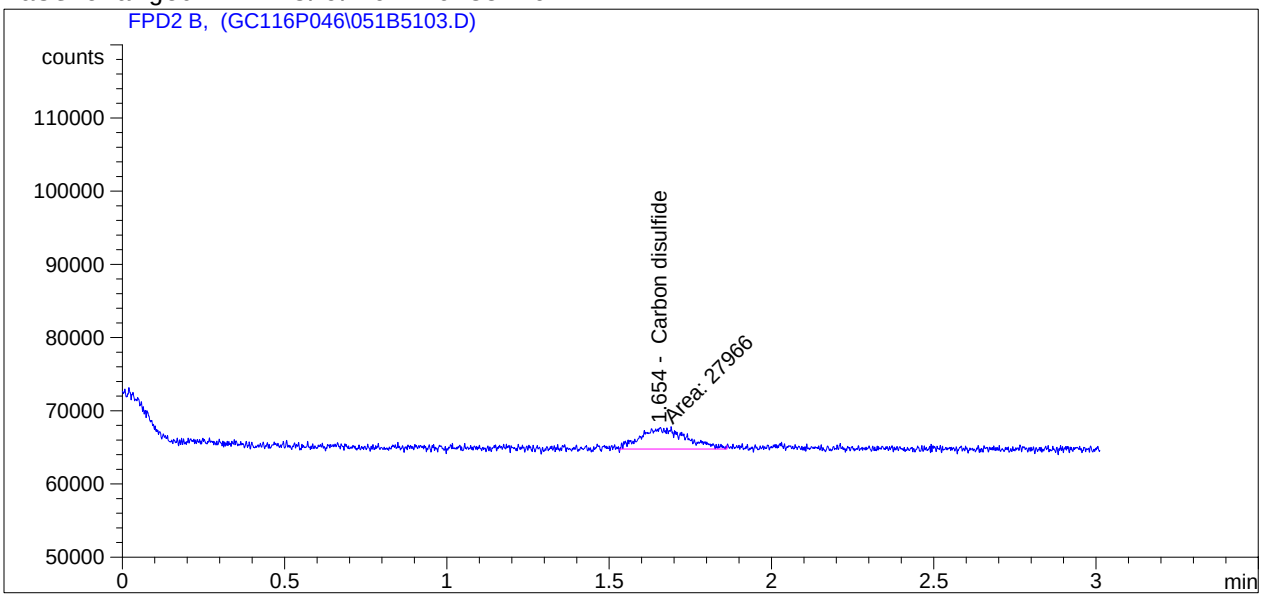
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  51
Acq. Instrument : Instrument 1                      Location : Vial 51
Injection Date  : 7/30/2011 11:31:45 AM                  Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.650 BB     2.87164e4  1.57620e-5 4.52627e-1    Carbon disulfide

Totals :                              4.52627e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\051B5103.D
Sample Name: gc116p46 #2

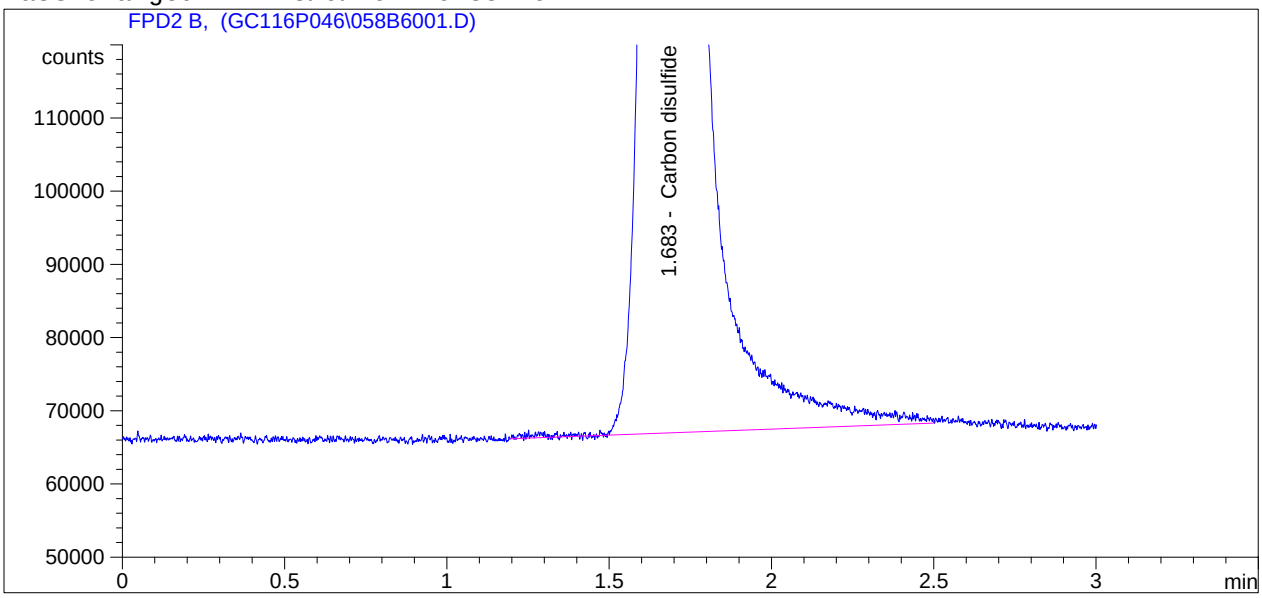
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  51
Acq. Instrument : Instrument 1                  Location : Vial 51
Injection Date  : 7/30/2011 11:35:56 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.654 MM     2.79660e4  1.57620e-5 4.40799e-1    Carbon disulfide

Totals :                              4.40799e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\058B6001.D
Sample Name: gc116p46 #6

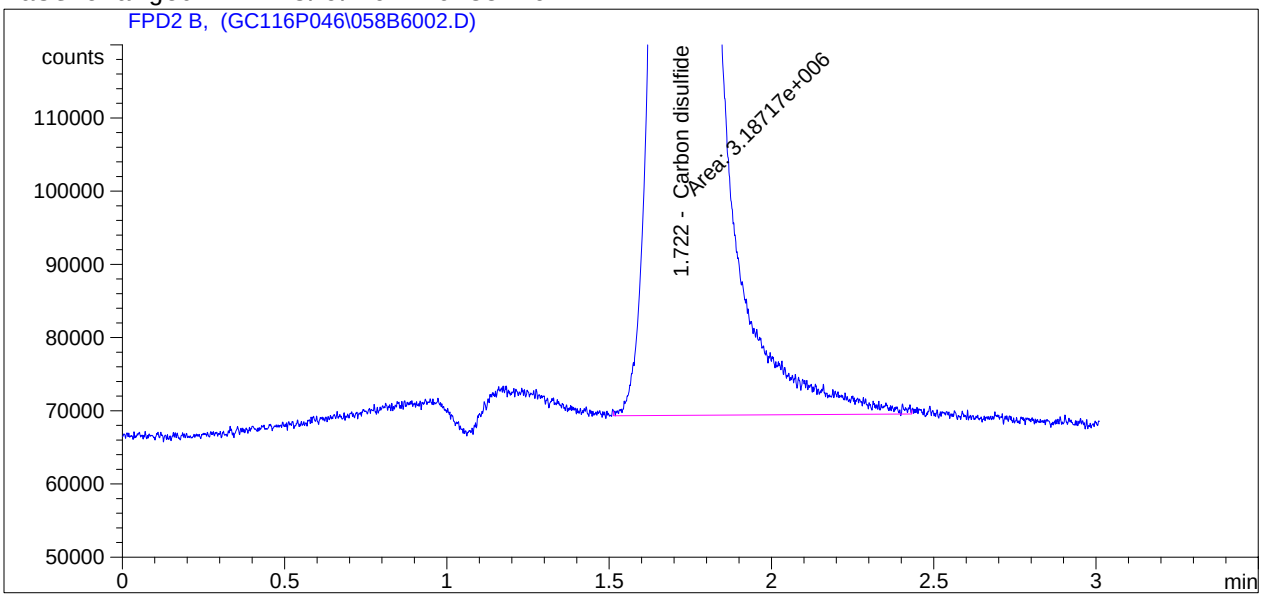
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  60
Acq. Instrument : Instrument 1                  Location : Vial 58
Injection Date  : 7/30/2011 2:40:20 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.683 BB     3.36635e6  3.18804e-6   10.73204    Carbon disulfide

Totals :                                10.73204


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\058B6002.D
Sample Name: gc116p46 #6

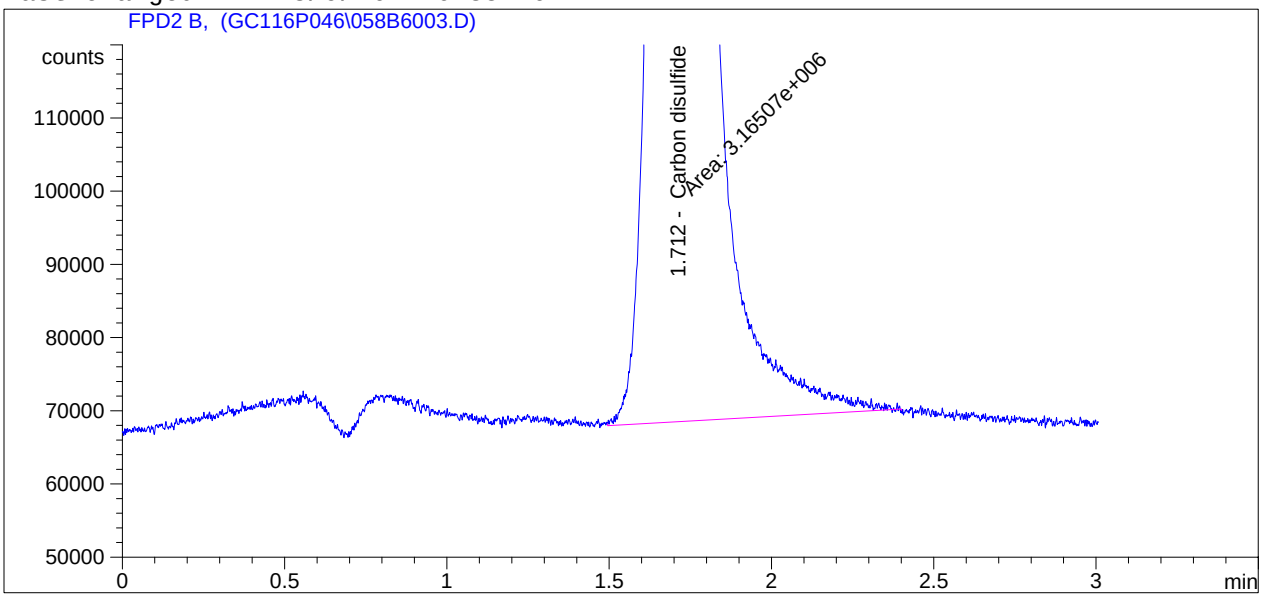
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  60
Acq. Instrument : Instrument 1                  Location : Vial 58
Injection Date  : 7/30/2011 2:44:32 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.722 MM     3.18717e6  3.26807e-6   10.41590    Carbon disulfide

Totals :                                10.41590


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\058B6003.D
Sample Name: gc116p46 #6

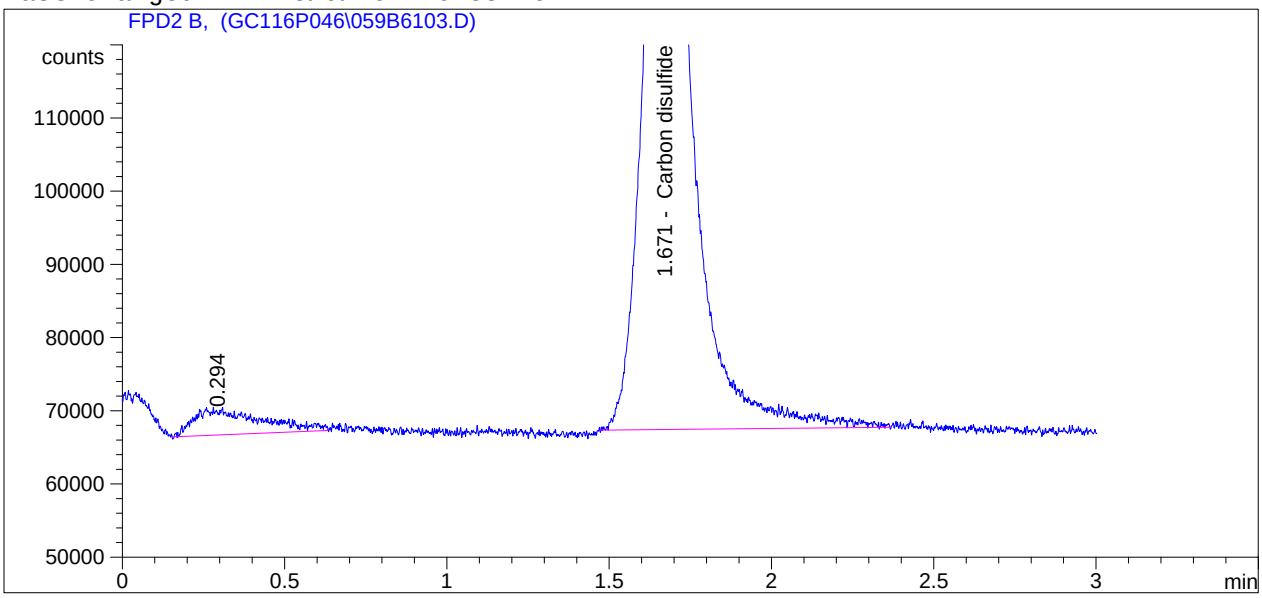
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  60
Acq. Instrument : Instrument 1                  Location : Vial 58
Injection Date  : 7/30/2011 2:48:48 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.712 MM     3.16507e6  3.27838e-6   10.37630    Carbon disulfide

Totals :                                10.37630


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\059B6103.D
Sample Name: gc116p46 #5

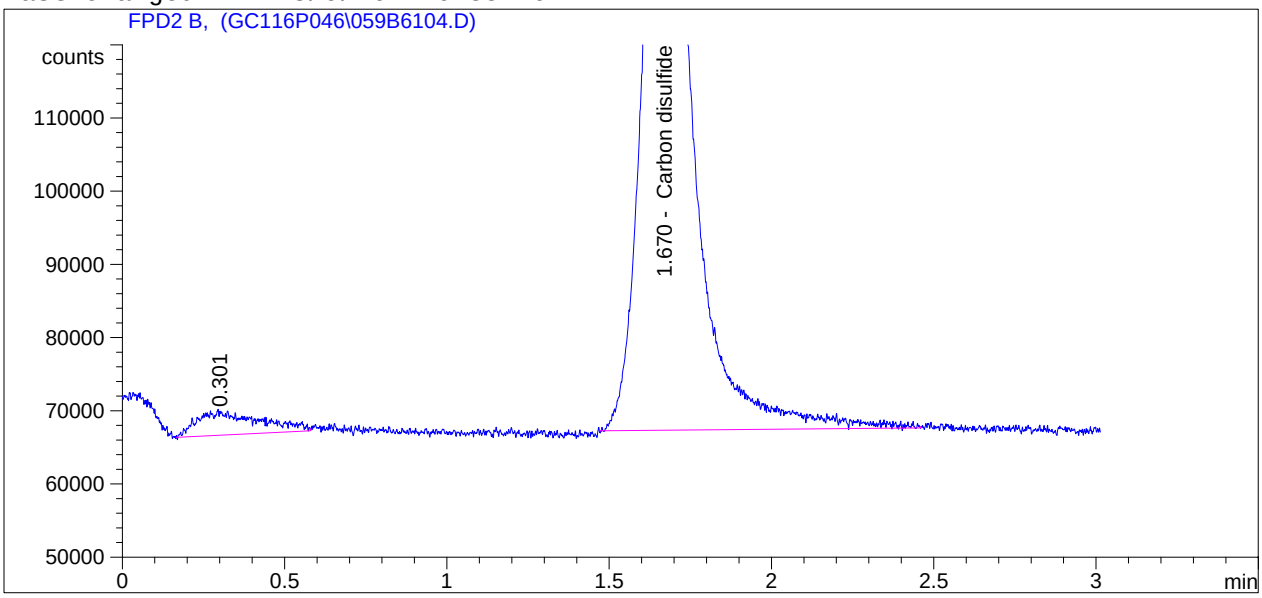
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  61
Acq. Instrument : Instrument 1                      Location : Vial 59
Injection Date  : 7/30/2011 3:09:44 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.671 BB     9.98719e5  5.42191e-6    5.41497    Carbon disulfide

Totals :                                 5.41497


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\059B6104.D
Sample Name: gc116p46 #5

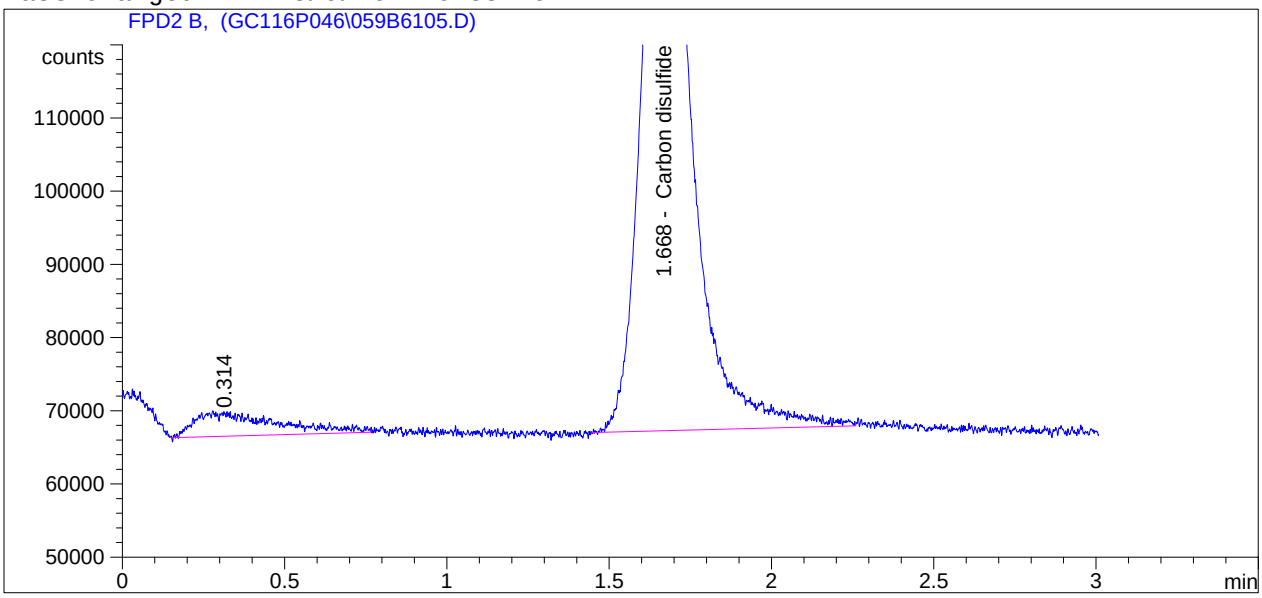
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  61
Acq. Instrument : Instrument 1                      Location : Vial 59
Injection Date  : 7/30/2011 3:14:01 PM                   Inj :   4
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.670 BB     1.03205e6  5.34815e-6    5.51956    Carbon disulfide

Totals :                                 5.51956


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\059B6105.D
Sample Name: gc116p46 #5

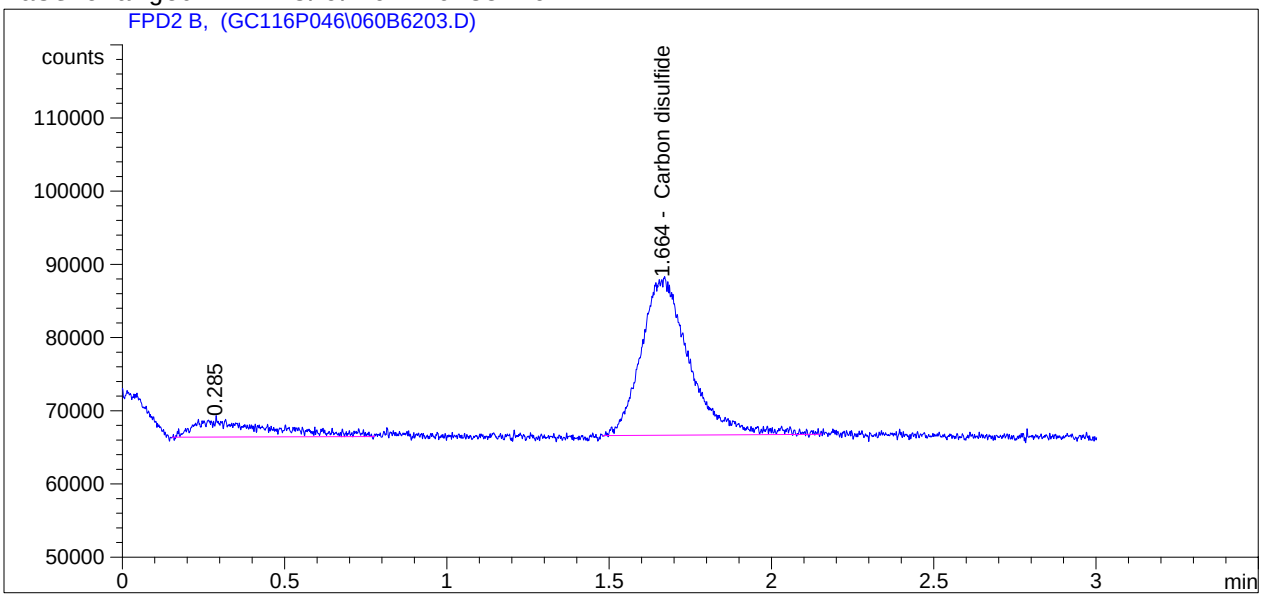
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  61
Acq. Instrument : Instrument 1                  Location : Vial 59
Injection Date  : 7/30/2011 3:18:12 PM               Inj :   5
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.668 BB     9.83275e5  5.45720e-6    5.36593    Carbon disulfide

Totals :                                 5.36593


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\060B6203.D
Sample Name: gc116p46 #4

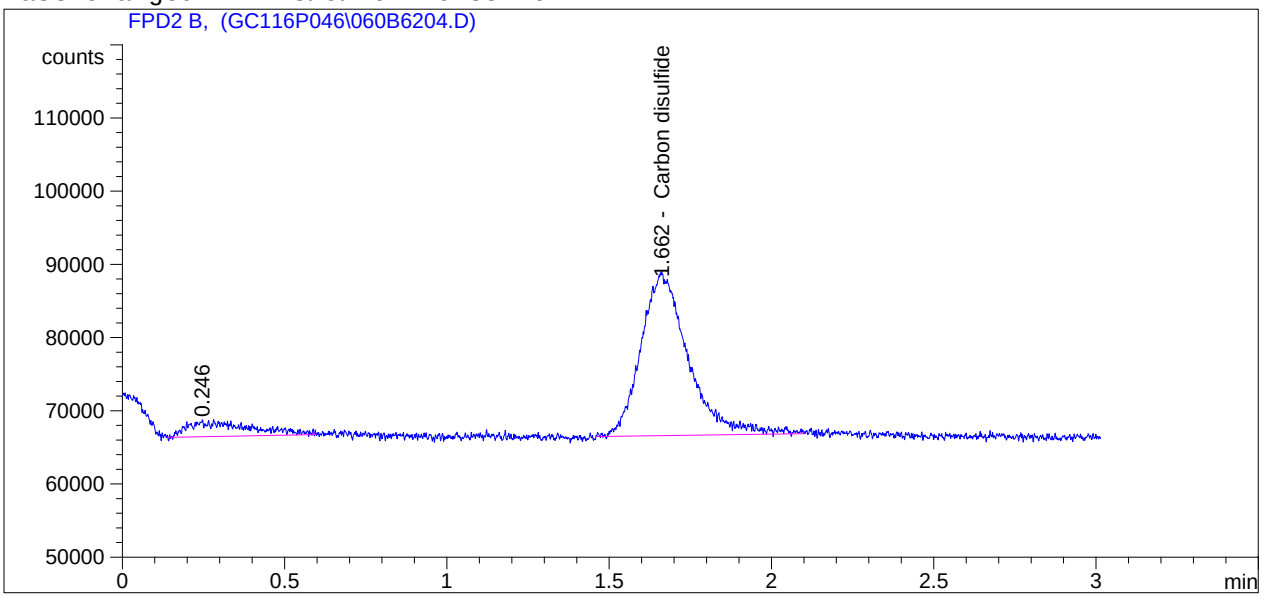
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  62
Acq. Instrument : Instrument 1                  Location : Vial 60
Injection Date  : 7/30/2011 3:30:51 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.664 BB     2.21402e5  9.59371e-6    2.12407    Carbon disulfide

Totals :                                 2.12407


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\060B6204.D
Sample Name: gc116p46 #4

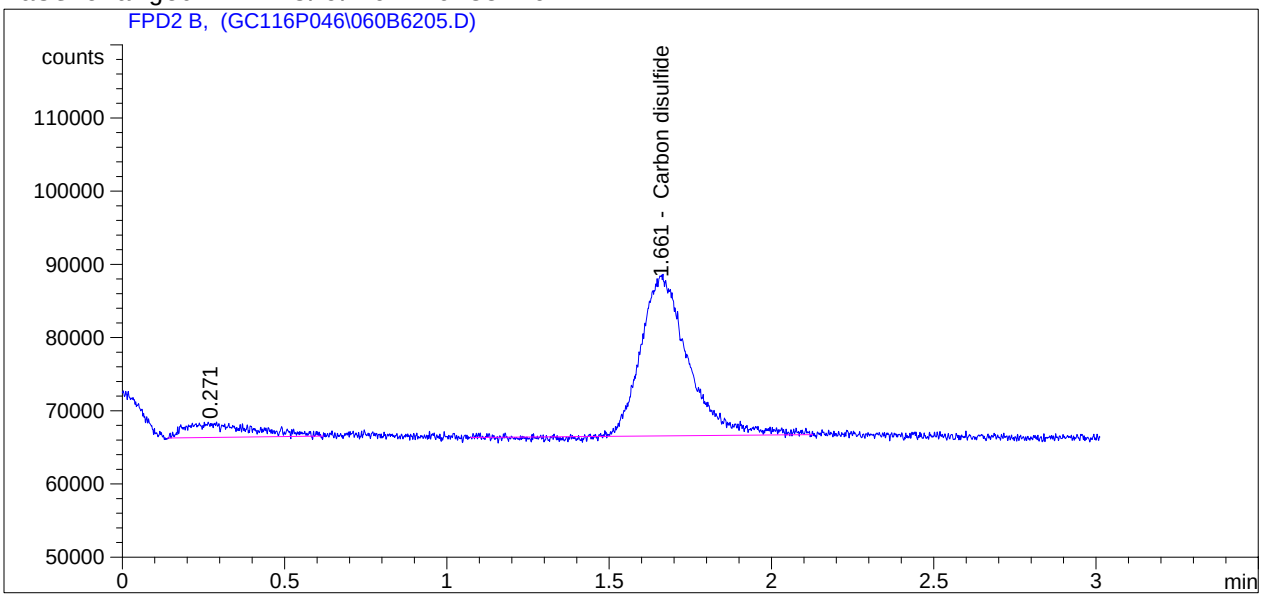
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  62
Acq. Instrument : Instrument 1                  Location : Vial 60
Injection Date  : 7/30/2011 3:35:03 PM               Inj :   4
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.662 BB     2.25142e5  9.54025e-6    2.14792    Carbon disulfide

Totals :                                 2.14792


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\060B6205.D
Sample Name: gc116p46 #4

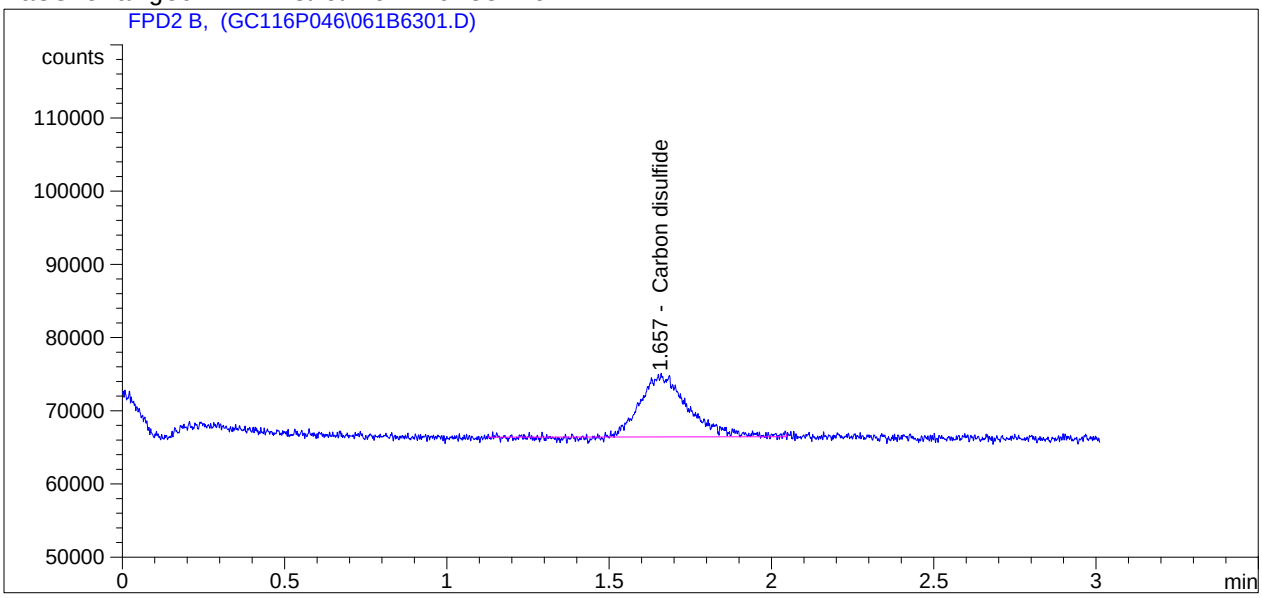
```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  62
Acq. Instrument : Instrument 1                  Location : Vial 60
Injection Date  : 7/30/2011 3:39:14 PM               Inj :   5
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.661 BB     2.19630e5  9.61940e-6    2.11271    Carbon disulfide

Totals :                                 2.11271


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\061B6301.D
Sample Name: gc116p46 #3

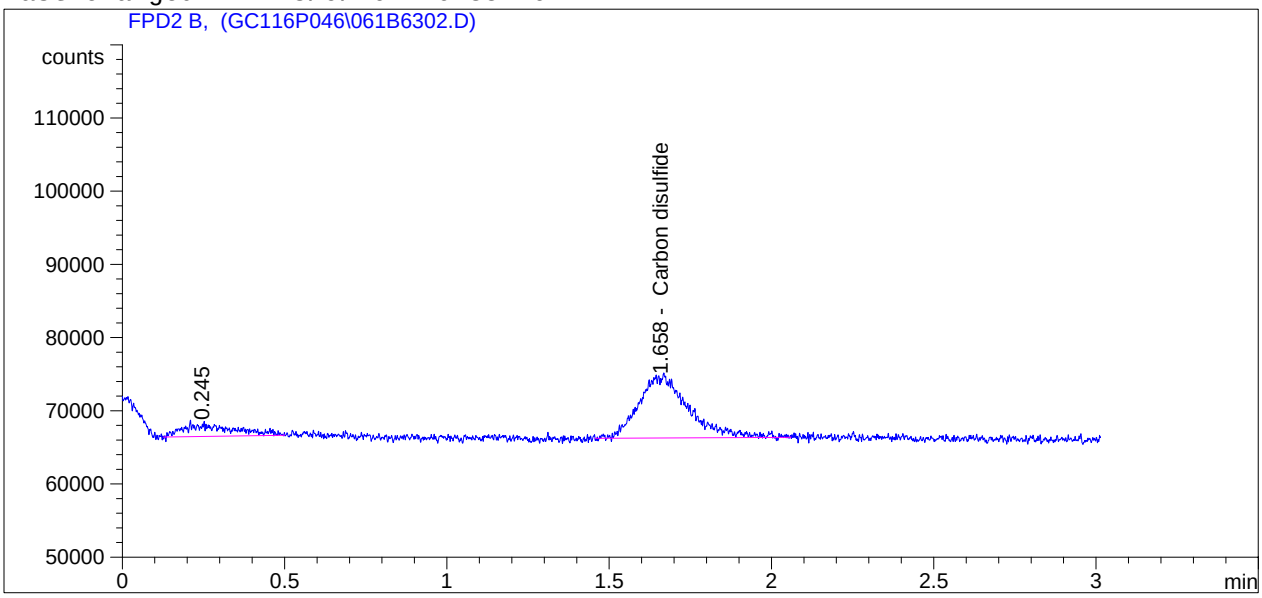
```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  63
Acq. Instrument : Instrument 1                      Location : Vial 61
Injection Date  : 7/30/2011 3:43:30 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|------------------
  1.657 BB     8.47789e4  1.27449e-5    1.08050    Carbon disulfide

Totals :                                 1.08050


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\061B6302.D
Sample Name: gc116p46 #3

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  63
Acq. Instrument : Instrument 1                  Location : Vial 61
Injection Date  : 7/30/2011 3:47:41 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```



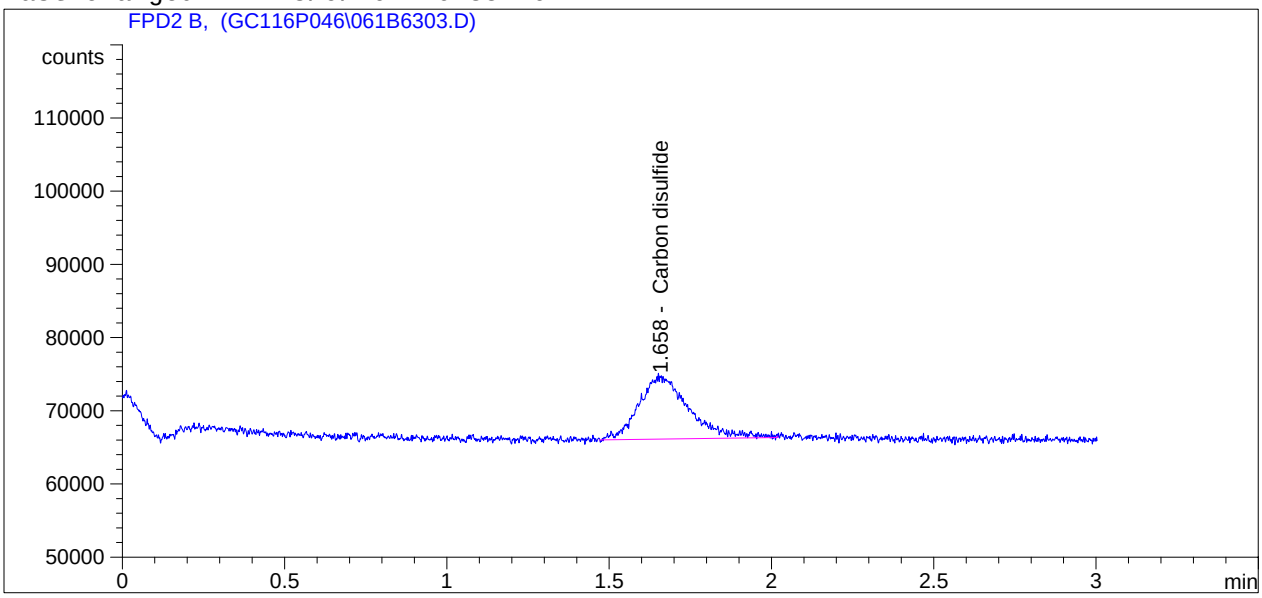

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.658 BB     9.05404e4  1.25293e-5    1.13441    Carbon disulfide

Totals :                                 1.13441


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\061B6303.D
Sample Name: gc116p46 #3

==========

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Instrument 1	Location	: Vial 61
Injection Date	: 7/30/2011 3:51:58 PM	Inj	: 3
		Inj Volume	: 1 µl

Sequence File : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed : 8/9/2011 6:35:40 PM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Tuesday, August 09, 2011 6:35:37 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount	Grp	Name
1.658	BB	9.13428e4	1.25003e-5	1.14181		Carbon disulfide

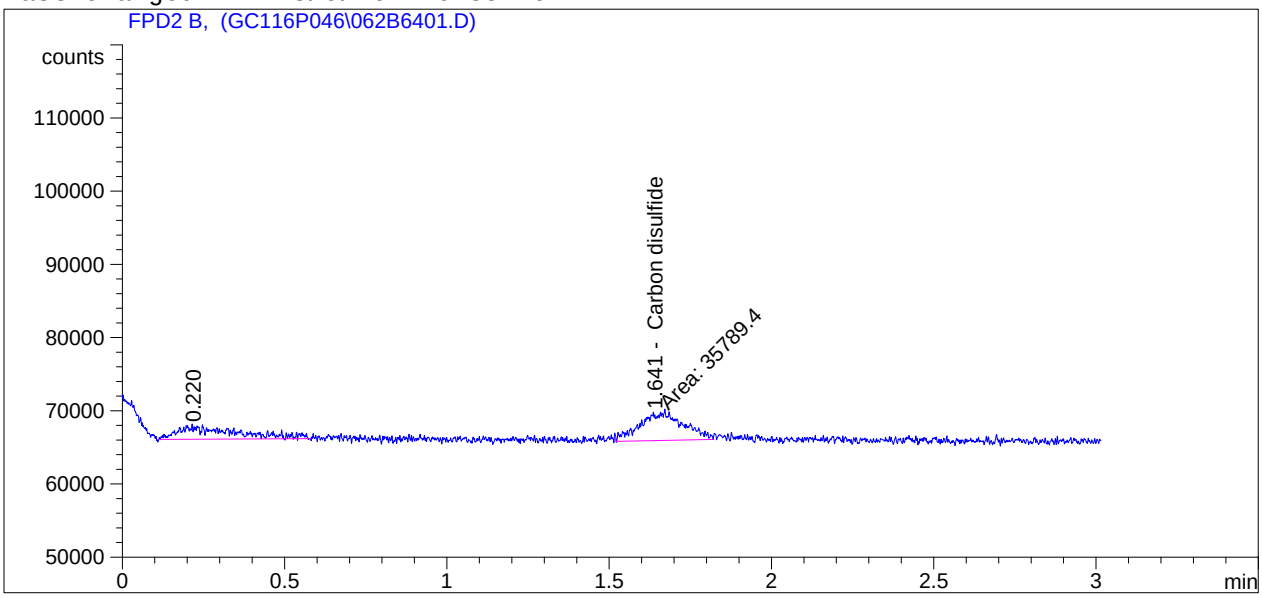
Totals : 1.14181

==========

*** End of Report ***

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\062B6401.D
Sample Name: gc116p46 #2

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  64
Acq. Instrument : Instrument 1                  Location : Vial 62
Injection Date  : 7/30/2011 4:04:36 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```

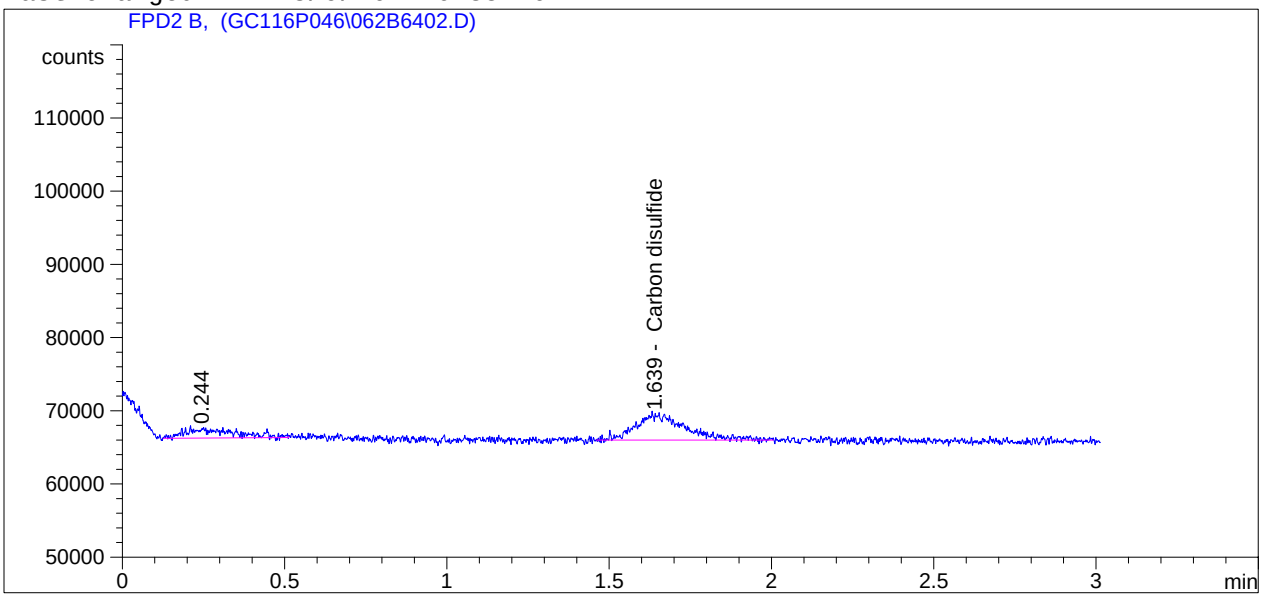



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.641 MM     3.57894e4  1.54307e-5 5.52257e-1    Carbon disulfide

Totals :                              5.52257e-1


==========================================================================
                          *** End of Report ***
```

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\062B6402.D
Sample Name: gc116p46 #2

==========

Acq. Operator	: JBB	Seq. Line	: 64
Acq. Instrument	: Instrument 1	Location	: Vial 62
Injection Date	: 7/30/2011 4:08:48 PM	Inj	: 2
		Inj Volume	: 1 µl
Sequence File	: C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S		
Acq. Method	: G:\GC2011Q3\OSCAR\METHODS\GC116P46.M		
Last changed	: 7/29/2011 9:37:57 PM by JBB		
Analysis Method	: C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M		
Last changed	: 8/9/2011 6:35:40 PM		



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Tuesday, August 09, 2011 6:35:37 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

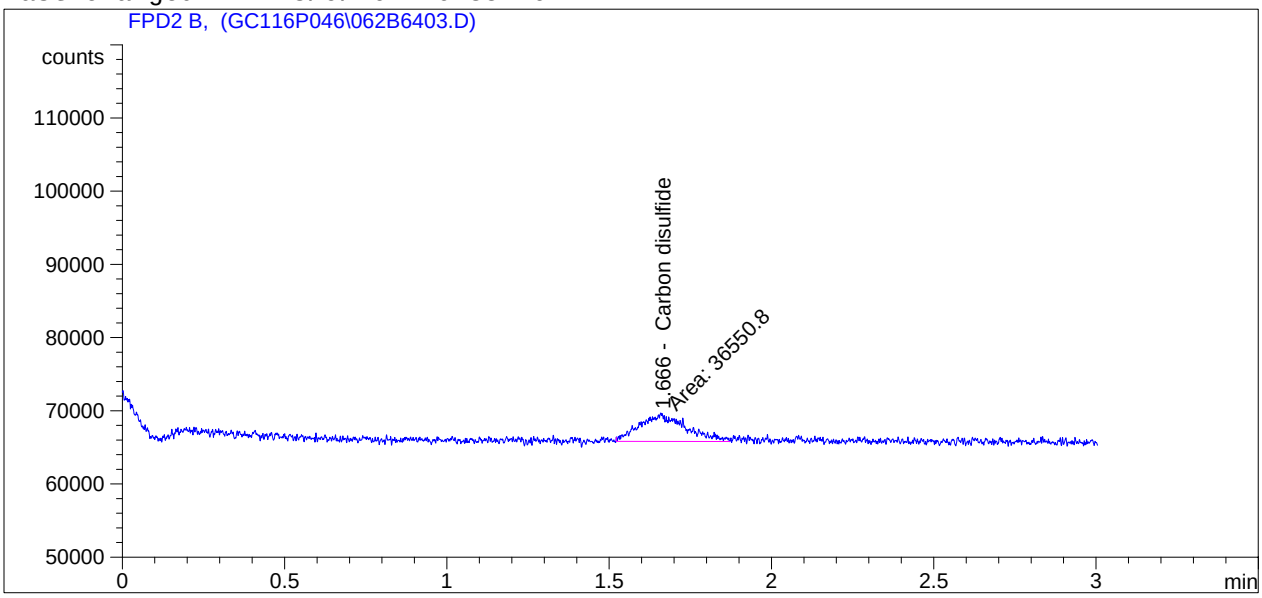
RetTime [min]	Type	Area counts*s	Amt/Area	Amount	Grp	Name
1.639	BB	3.72375e4	1.53147e-5	5.70280e-1		Carbon disulfide
Totals :				5.70280e-1		

==========

*** End of Report ***

Data File C:\GC2011Q3\OSCAR\DATA\JUL11\GC116P046\062B6403.D
Sample Name: gc116p46 #2

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  64
Acq. Instrument : Instrument 1                      Location : Vial 62
Injection Date  : 7/30/2011 4:13:04 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : C:\GC2011Q3\OSCAR\SEQUENCE\GC116P046.S
Acq. Method     : G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Last changed    : 7/29/2011 9:37:57 PM by JBB
Analysis Method : C:\GC2011Q3\OSCAR\METHODS\GC116P46B.M
Last changed    : 8/9/2011 6:35:40 PM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, August 09, 2011 6:35:37 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FPD2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s
-------|------|----------|----------|----------|--|-----------------
  1.666 MM     3.65508e4  1.53692e-5 5.61758e-1    Carbon disulfide

Totals :                              5.61758e-1


==========================================================================
                          *** End of Report ***
```

method: G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Modified on: 7/29/2011 at 9:37:57 PM

OVEN\DET

Runtime (min): 3.0

Zone Temperatures:

	State	Setpoint
Inl. A	ON	200 C.
Inl. B	ON	225 C.
Det. A	ON	300 C.
Det. B	ON	175 C.
Aux.	OFF	50 C.

Oven Zone:

Oven max	280 C.
Equib Time	1.00 Min.
Oven State	ON
Cryo State	OFF
Ambient	25 C.
Cryo Blast	OFF

Oven Program:

	Setpoint
Initial Temp.:	40 C.
Initial Time:	3.00 Min.

Level	Rate (C/min.)	Final Temp.(C)	Final Time (min)
1	0.00	0	0.00

Purge Valve Settings

Purge A/B

	Init Value	On Time (Min.)	Off Time (Min.)
A (Valve 3)	On	0.00	100.00
B (Valve 4)	On	0.00	100.00

A - Splitless Injection: No
B - Splitless Injection: No

Valves/Relays Information

Initial Setpoints:
5890 Valves:

Valve 1:	Off
Valve 2:	Off
Valve 3 (Purge A):	On
Valve 4 (Purge B):	On

Detector Information

Detector A:
Type FID
State OFF

Detector B:
Type FPD

EM-BTRF-001299

method: G:\GC2011Q3\OSCAR\METHODS\GC116P46.M
Modified on: 7/29/2011 at 9:37:57 PM
State ON

Signal Information

Save Data:	Signal 2

Signal 1:

Signal	Testplot
Data rate	20.000 Hz.
Peakwidth	0.013 min.
Start Time	0.00 min.
Stop Time	650.00 min.

Signal 2:

Signal	Det. B
Data rate	20.000 Hz.
Peakwidth	0.013 min.
Start Time	0.00 min.
Stop Time	650.00 min.

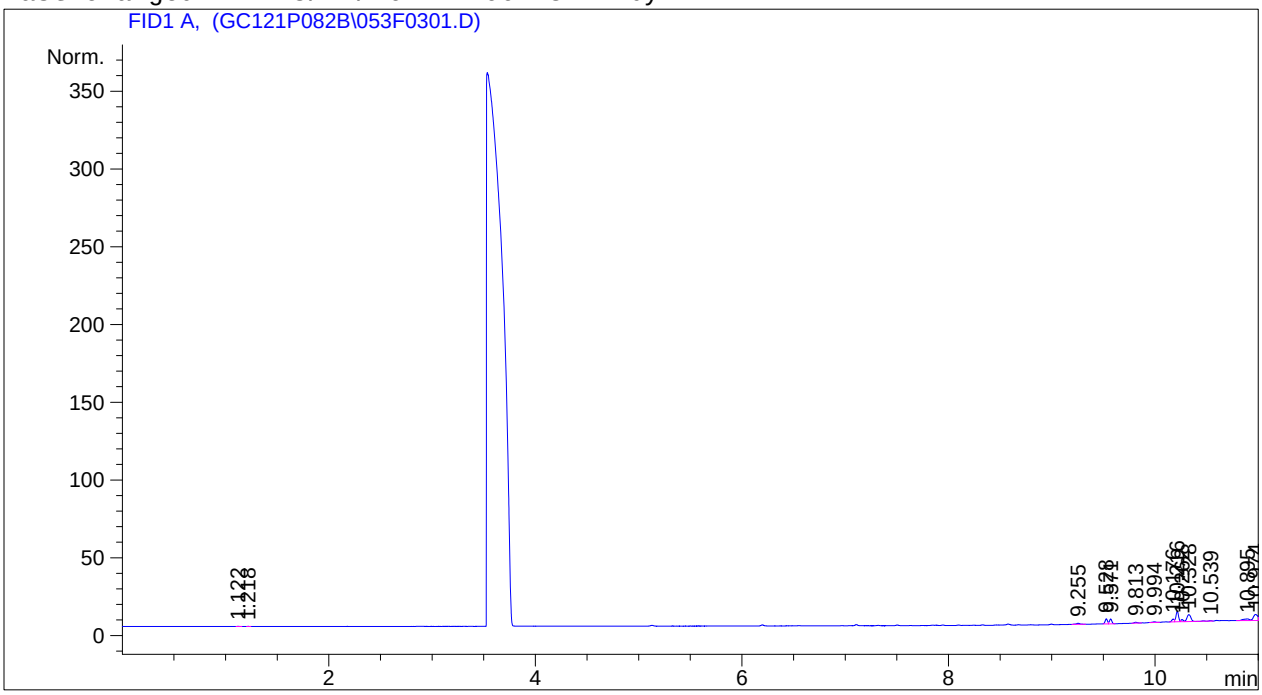
Sequence: C:\gc2011q3\Oscar\sequence\gc116p046.txt
Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type	
1	Vial 1	gc116p46 #6	GC116P46	7	Sample	
2	Vial 2	gc116p46 #5	GC116P46	7	Sample	
3	Vial 3	gc116p46 #4	GC116P46	7	Sample	
4	Vial 4	gc116p46 #3	GC116P46	7	Sample	
5	Vial 5	gc116p46 #2	GC116P46	7	Sample	
6	Vial 6	gc116p46 #1	GC116P46	7	Sample	
7	Vial 7	gc116p46 #3ss	GC116P46	7	Sample	345
8	Vial 8	RB H2O	GC116P46	5	Sample	
9	Vial 9	0611-12 R1 Bag Cond	GC116P46	5	Sample	
10	Vial 10	0611-12 R2 Bag Cond	GC116P46	5	Sample	
11	Vial 11	0611-12 R1 Bag Cond #MS	GC116P46	5	Sample	234
12	Vial 12	gc116p46 #4	GC116P46	5	Sample	
13	Vial 13	gc116p46 #3	GC116P46	5	Sample	
14	Vial 14	RB H2O	GC116P46	5	Sample	
15	Vial 15	0711-12 T2R1 Bag Cond	GC116P46	5	Sample	
16	Vial 16	0711-12 T2R2 Bag Cond	GC116P46	5	Sample	
17	Vial 17	0711-12 T2R3 Bag Cond	GC116P46	5	Sample	
18	Vial 18	0711-12 T2R1 Bag Cond #MS	GC116P46	5	Sample	345
19	Vial 19	gc116p46 #6	GC116P46	5	Sample	
20	Vial 20	gc116p46 #5	GC116P46	5	Sample	
21	Vial 21	gc116p46 #4	GC116P46	5	Sample	345
22	Vial 22	gc116p46 #3	GC116P46	5	Sample	
23	Vial 23	gc116p46 #2	GC116P46	5	Sample	
24	Vial 24	RB H2O	GC116P46	5	Sample	
25	Vial 25	0611-22 ICR1 Bag Cond A	GC116P46	5	Sample	
26	Vial 26	0611-22 ICR1 Bag Cond B	GC116P46	5	Sample	
27	Vial 27	0611-22 ICR2 Bag Cond A	GC116P46	5	Sample	
28	Vial 28	0611-22 ICR2 Bag Cond B	GC116P46	5	Sample	
29	Vial 29	0611-22 ICR3 Bag Cond A	GC116P46	5	Sample	
30	Vial 30	0611-22 ICR3 Bag Cond B	GC116P46	5	Sample	
31	Vial 31	0611-22 ICR1 Bag Cond A #MS	GC116P46	5	Sample	345
32	Vial 32	gc116p46 #4	GC116P46	5	Sample	
33	Vial 33	gc116p46 #3	GC116P46	5	Sample	
34	Vial 34	RB H2O	GC116P46	5	Sample	
35	Vial 35	0611-161 R1 Bag COND	GC116P46	5	Sample	
36	Vial 36	0611-161 R2 Bag COND	GC116P46	5	Sample	
37	Vial 37	0611-161 R3 Bag COND	GC116P46	5	Sample	
38	Vial 38	0611-161 R1 Bag COND #MS	GC116P46	5	Sample	345
39	Vial 39	gc116p46 #4	GC116P46	5	Sample	
40	Vial 40	gc116p46 #3	GC116P46	5	Sample	
41	Vial 41	RB H2O	GC116P46	5	Sample	
42	Vial 42	0711-81 T1R01 Bag COND	GC116P46	5	Sample	
43	Vial 43	0711-81 T1R1 Bag COND	GC116P46	5	Sample	
44	Vial 44	0711-81 T1R2 Bag COND	GC116P46	5	Sample	
45	Vial 45	0711-81 T1R3 Bag COND	GC116P46	5	Sample	
46	Vial 46	0711-81 T1R1 Bag COND #MS	GC116P46	5	Sample	
47	Vial 47	gc116p46 #6	GC116P46	5	Sample	
48	Vial 48	gc116p46 #5	GC116P46	5	Sample	
49	Vial 49	gc116p46 #4	GC116P46	5	Sample	
50	Vial 50	gc116p46 #3	GC116P46	5	Sample	
51	Vial 51	gc116p46 #2	GC116P46	5	Sample	345
52	Vial 52	RB H2O	GC116P46	5	Sample	
53	Vial 53	0711-64 Bag COND FB	GC116P46	5	Sample	
54	Vial 54	0711-64 R1 Bag COND	GC116P46	5	Sample	
55	Vial 55	0711-64 R2 Bag COND	GC116P46	5	Sample	
56	Vial 56	0711-64 R3 Bag COND	GC116P46	5	Sample	
57	Vial 57	0711-64 R1 Bag COND #MS	GC116P46	5	Sample	345
58	Vial 58	gc116p46 #6	GC116P46	5	Sample	
59	Vial 46	0711-81 T1R1 Bag COND #MS	GC116P46	5	Sample	
60	Vial 58	gc116p46 #6	GC116P46	5	Sample	
61	Vial 59	gc116p46 #5	GC116P46	5	Sample	345
62	Vial 60	gc116p46 #4	GC116P46	5	Sample	345
63	Vial 61	gc116p46 #3	GC116P46	5	Sample	
64	Vial 62	gc116p46 #2	GC116P46	5	Sample	

Sample Chromatograms

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\053F0301.D
Sample Name: M18 R1A Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 3
Acq. Instrument	: Lucy	Location	: Vial 53
Injection Date	: 01-Aug-11, 11:47:28	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

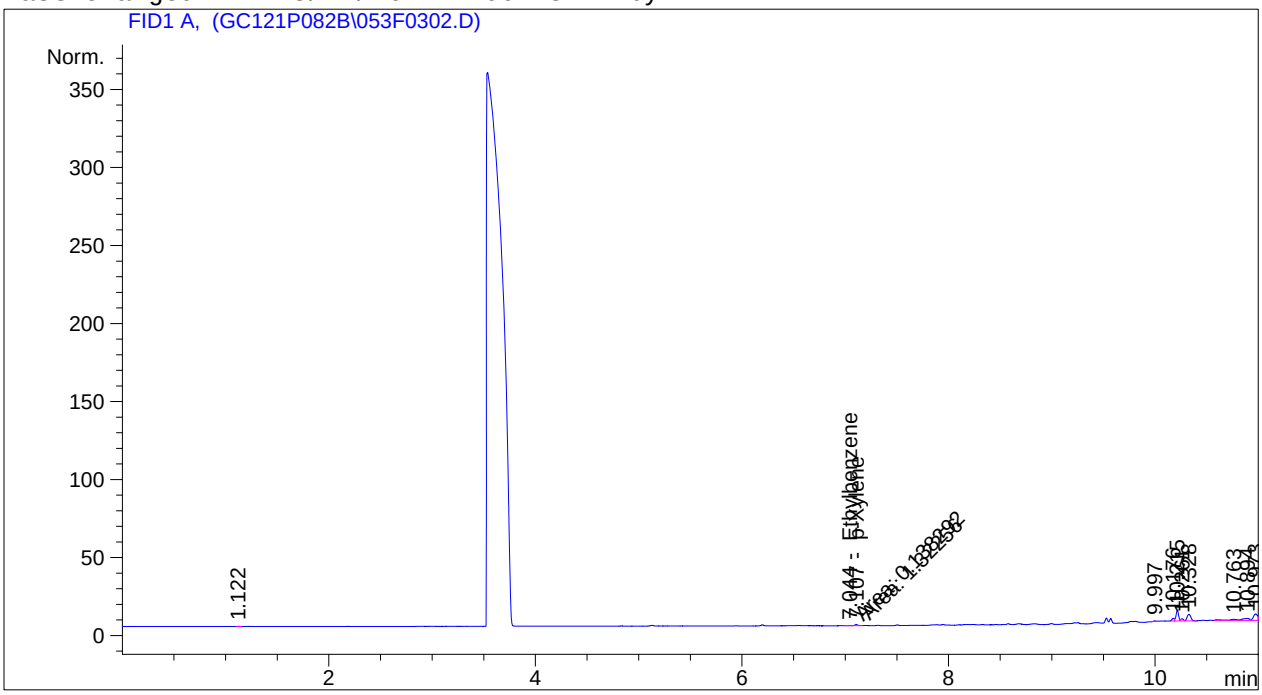
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 0.00000

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\053F0302.D
Sample Name: M18 R1A Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 3
Acq. Instrument	: Lucy	Location	: Vial 53
Injection Date	: 01-Aug-11, 12:09:11	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	FM	1.38292e-1	4.99275e-1	6.90454e-2		Ethylbenzene
7.107	FM	1.32256	4.95133e-1	6.54844e-1		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				7.23889e-1		

Manual Int. "II" (KAM)

EM-BTRF-001304

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\053F0303.D
Sample Name: M18 R1A Cond ext 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :   3
Acq. Instrument : Lucy                          Location : Vial 53
Injection Date  : 01-Aug-11, 12:30:52                Inj :   3
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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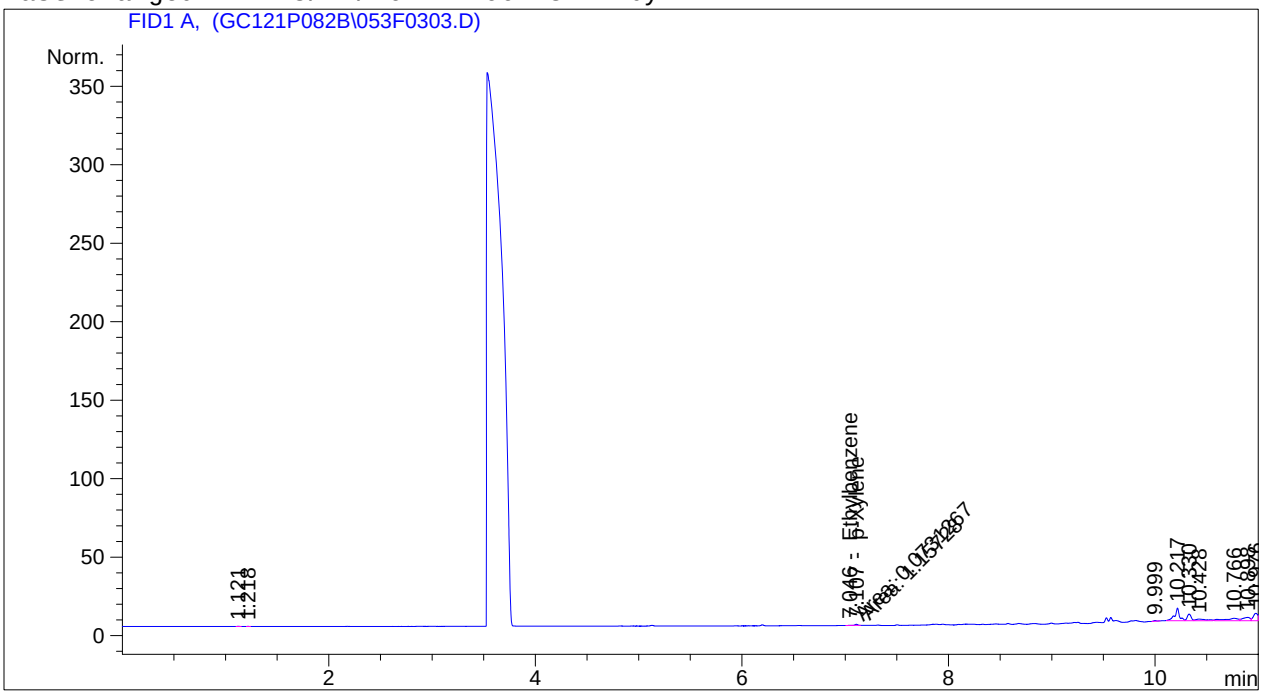


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -          Acetonitrile
  3.138            -          -          -          Acrylonitrile
  4.005            -          -          -          MTBE
  5.279            -          -          -          2-Nitropropane
  5.492            -          -          -          Isooctane
  5.787            -          -          -          MIBK
  6.921            -          -          -          Chlorobenzene
  7.046 MM     7.31267e-2 4.99275e-1 3.65103e-2    Ethylbenzene
  7.107 MM        1.15728 4.95133e-1 5.73006e-1    p-Xylene
  7.270            -          -          -          Styrene
  7.320            -          -          -          o-Xylene
  7.561            -          -          -          Cumene
  8.709            -          -          -          Nitrobenzene

Totals :                              6.09516e-1
```

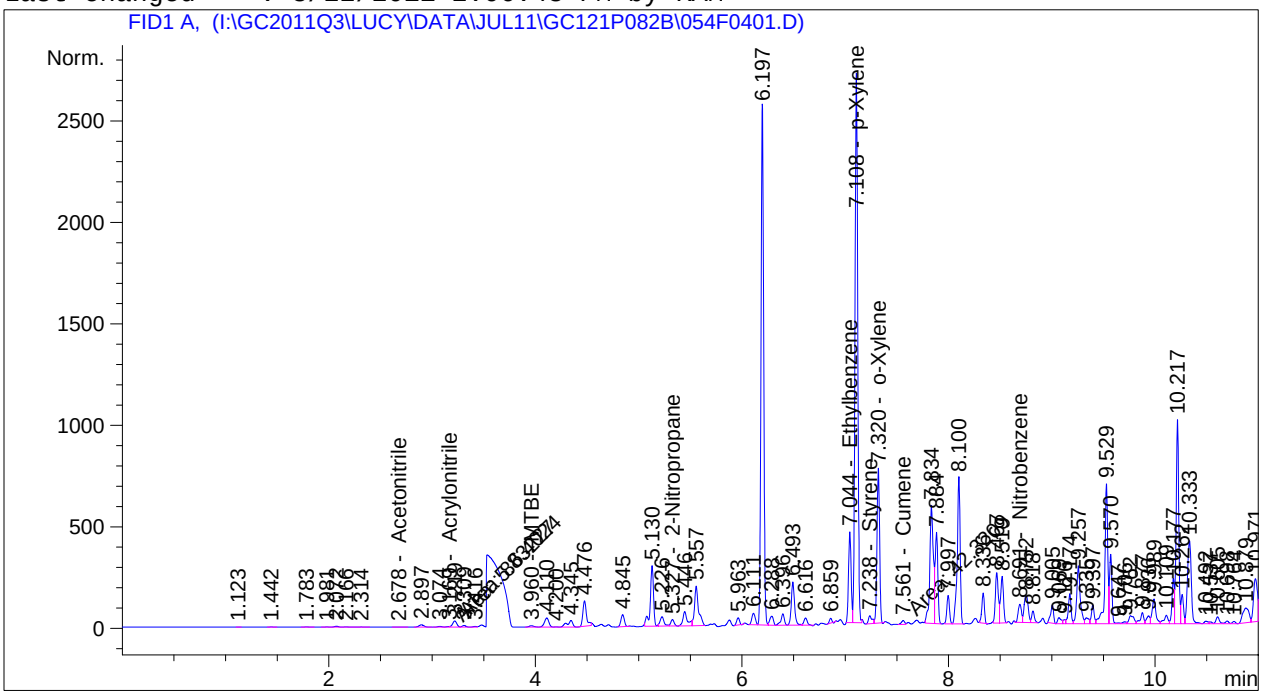
Manual Int. “II” (KAM)

EM-BTRF-001305

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\054F0401.D
Sample Name: M18 R1A XAD FH 0711-64

==========

Acq. Operator : JBB Seq. Line : 4
Acq. Instrument : Lucy Location : Vial 54
Injection Date : 01-Aug-11, 12:52:28 Inj : 1
Inj Volume : External
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed : 8/22/2011 2:06:43 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BB	9.00069e-1	2.49935	2.24959		Acetonitrile
3.169	MF	5.83227	1.26793	7.39492		Acrylonitrile
3.960	BV	20.65236	9.94844e-1	20.54587		MTBE
5.327	BB	69.31502	1.26399	87.61382		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	780.63593	4.87172e-1	380.30365		Ethylbenzene
7.108	VB	5002.94238	4.84307e-1	2422.95851		p-Xylene
7.238	BV	96.37194	4.74338e-1	45.71286		Styrene
7.320	VB	1350.02234	4.79408e-1	647.21186		o-Xylene
7.561	MM	42.32087	4.85667e-1	20.55387		Cumene
8.691	BV	197.54048	8.00971e-1	158.22411		Nitrobenzene

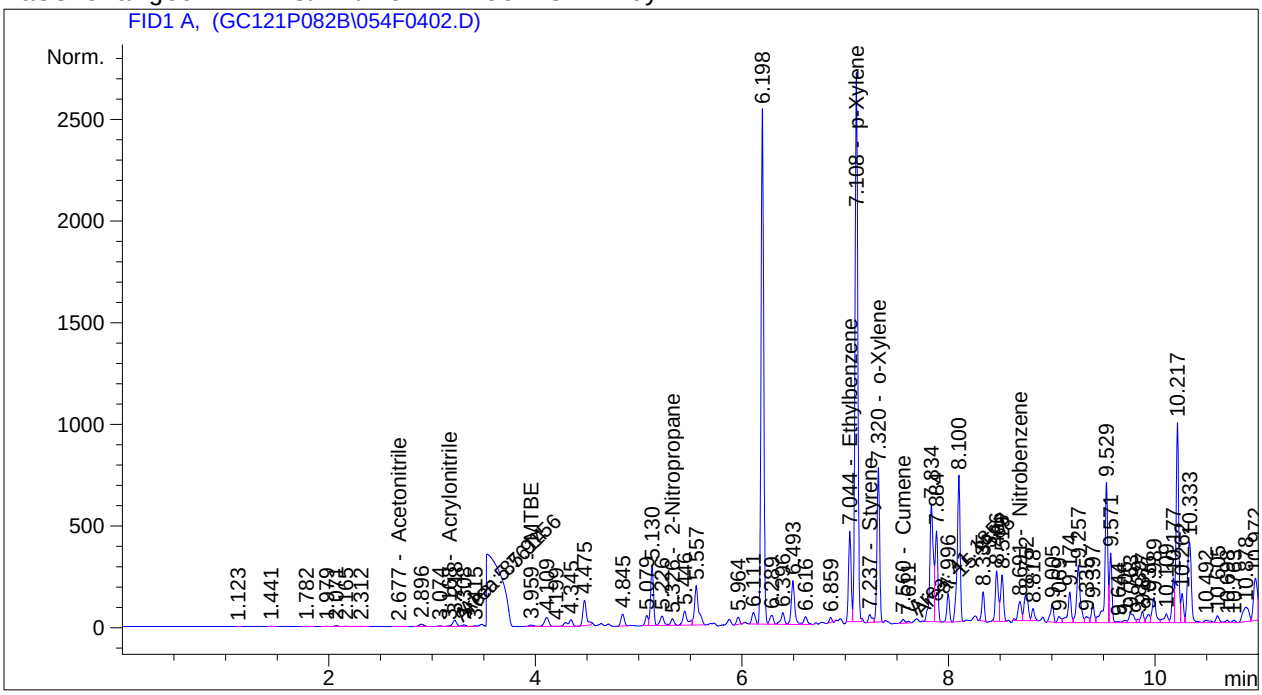
Totals : 3792.76906

Manual Int. "II" (KAM)

EM-BTRF-001306

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\054F0402.D
Sample Name: M18 R1A XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 4
Acq. Instrument	: Lucy	Location	: Vial 54
Injection Date	: 01-Aug-11, 13:14:08	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

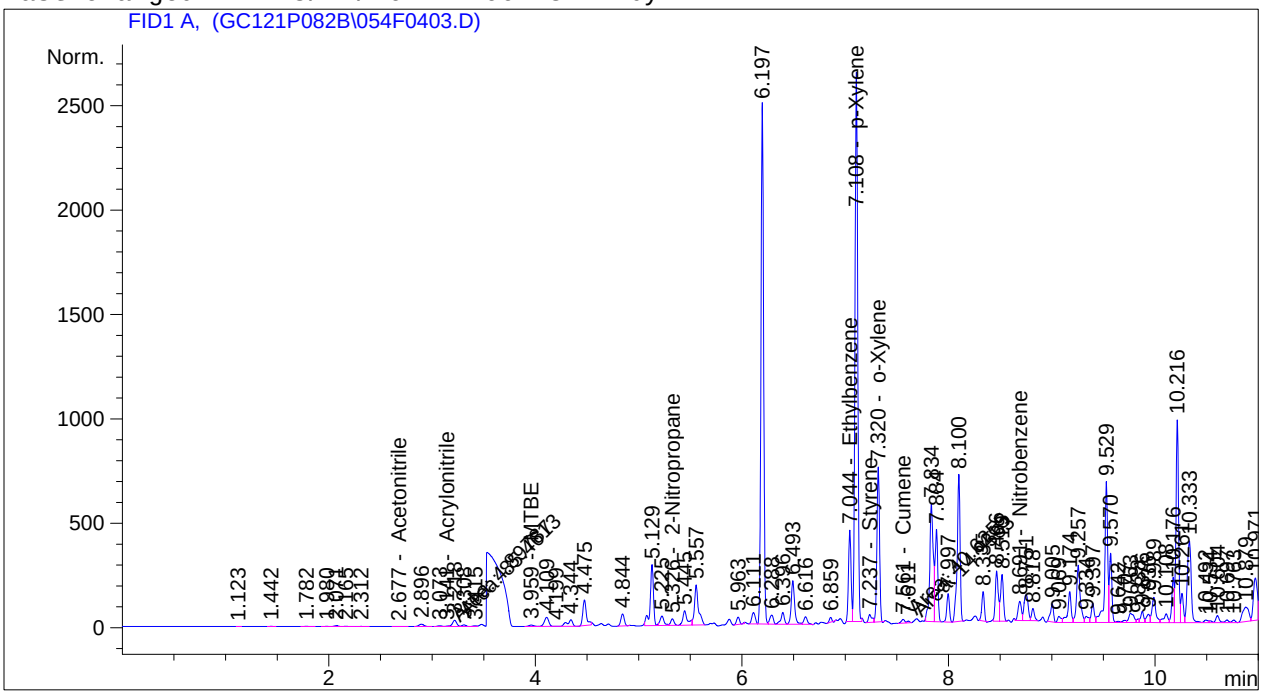
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	9.30538e-1	2.48935	2.31644		Acetonitrile
3.168	MF	5.76140	1.26848	7.30820		Acrylonitrile
3.959	BV	20.44995	9.94855e-1	20.34474		MTBE
5.326	BB	68.76265	1.26400	86.91600		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	777.01746	4.87172e-1	378.54103		Ethylbenzene
7.108	VB	4974.33838	4.84307e-1	2409.10561		p-Xylene
7.237	BV	94.93667	4.74349e-1	45.03311		Styrene
7.320	VB	1339.95056	4.79408e-1	642.38358		o-Xylene
7.560	MF	41.18573	4.85688e-1	20.00343		Cumene
8.691	BV	218.49838	8.00911e-1	174.99780		Nitrobenzene
Totals :				3786.94994		

Manual Int. “II” (KAM)

EM-BTRF-001307

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\054F0403.D
Sample Name: M18 R1A XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 4
Acq. Instrument	: Lucy	Location	: Vial 54
Injection Date	: 01-Aug-11, 13:35:43	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	8.91056e-1	2.50244	2.22982		Acetonitrile
3.141	MF	4.89787	1.27639	6.25159		Acrylonitrile
3.959	BV	20.23003	9.94868e-1	20.12622		MTBE
5.326	BB	70.24265	1.26399	88.78571		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	760.01251	4.87173e-1	370.25762		Ethylbenzene
7.108	VB	4867.45703	4.84307e-1	2357.34306		p-Xylene
7.237	BV	92.31833	4.74370e-1	43.79305		Styrene
7.320	VB	1310.97534	4.79409e-1	628.49323		o-Xylene
7.561	MF	40.62546	4.85699e-1	19.73175		Cumene
8.691	BV	208.26357	8.00939e-1	166.80635		Nitrobenzene
Totals :				3703.81839		

Manual Int. "II" (KAM)

EM-BTRF-001308

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\001F0501.D
Sample Name: M18 R1A XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   5
Acq. Instrument : Lucy                              Location : Vial 1
Injection Date  : 01-Aug-11, 13:57:35                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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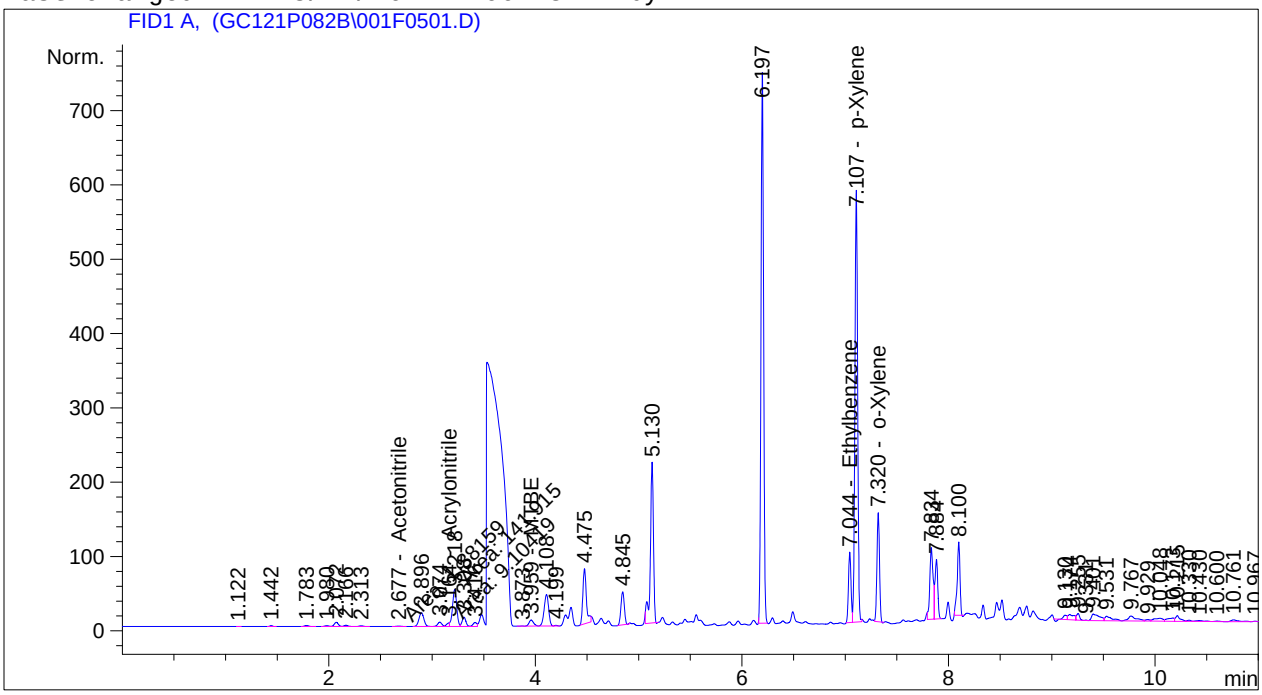


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	MM	1.38159	2.39293	3.30606		Acetonitrile
3.164	MF	9.10419	1.25200	11.39842		Acrylonitrile
3.959	VV	25.24429	9.94626e-1	25.10863		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	163.68764	4.87375e-1	79.77726		Ethylbenzene
7.107	VB	1070.62048	4.84334e-1	518.53820		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	252.07697	4.79500e-1	120.87085		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				758.99942		

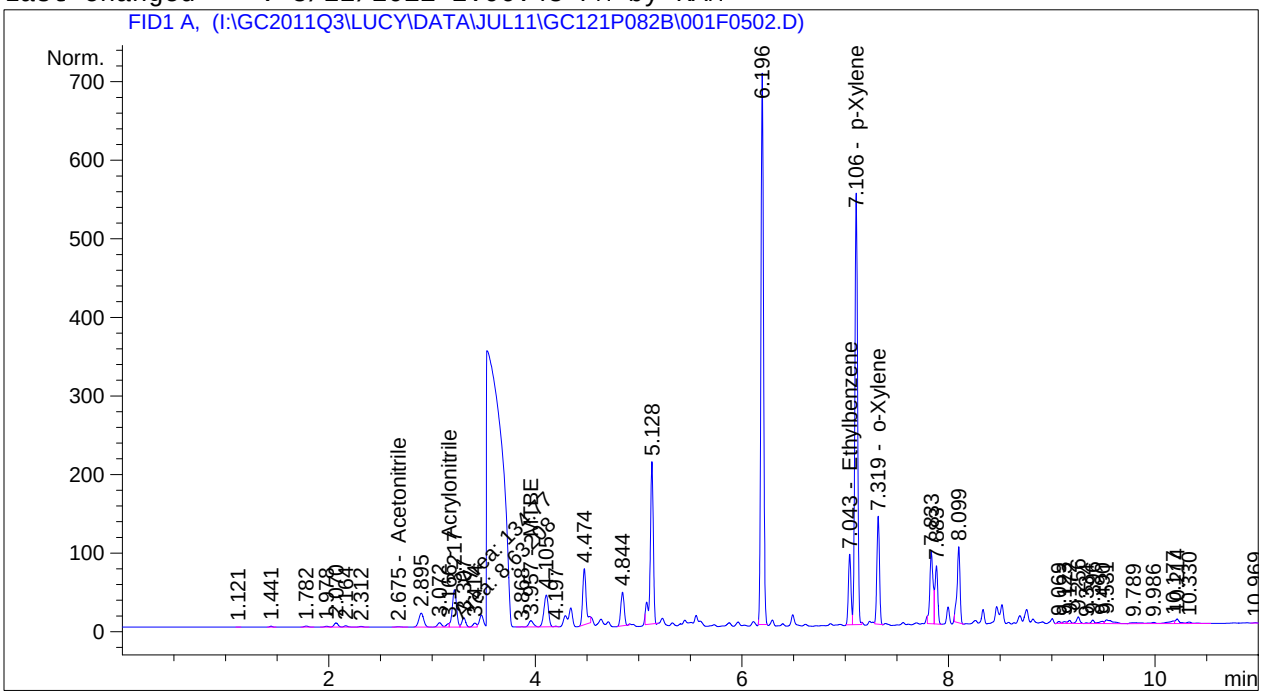
Manual Int. "II" (KAM)

EM-BTRF-001309

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\001F0502.D
Sample Name: M18 R1A XAD BH 0711-64

==========

Acq. Operator : JBB Seq. Line : 5
Acq. Instrument : Lucy Location : Vial 1
Injection Date : 01-Aug-11, 14:19:21 Inj : 2
Inj Volume : External
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed : 8/22/2011 2:06:43 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.675	BB	1.36838	2.39485	3.27708		Acetonitrile
3.166	MF	8.63208	1.25355	10.82074		Acrylonitrile
3.957	VV	24.09432	9.94673e-1	23.96597		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.043	BV	155.12376	4.87389e-1	75.60565		Ethylbenzene
7.106	VB	1009.54578	4.84336e-1	488.95977		p-Xylene
7.270		-	-	-		Styrene
7.319	BB	240.78621	4.79505e-1	115.45820		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 718.08740

Manual Int. “II” (KAM

EM-BTRF-001310

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\001F0503.D
Sample Name: M18 R1A XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   5
Acq. Instrument : Lucy                              Location : Vial 1
Injection Date  : 01-Aug-11, 14:41:15                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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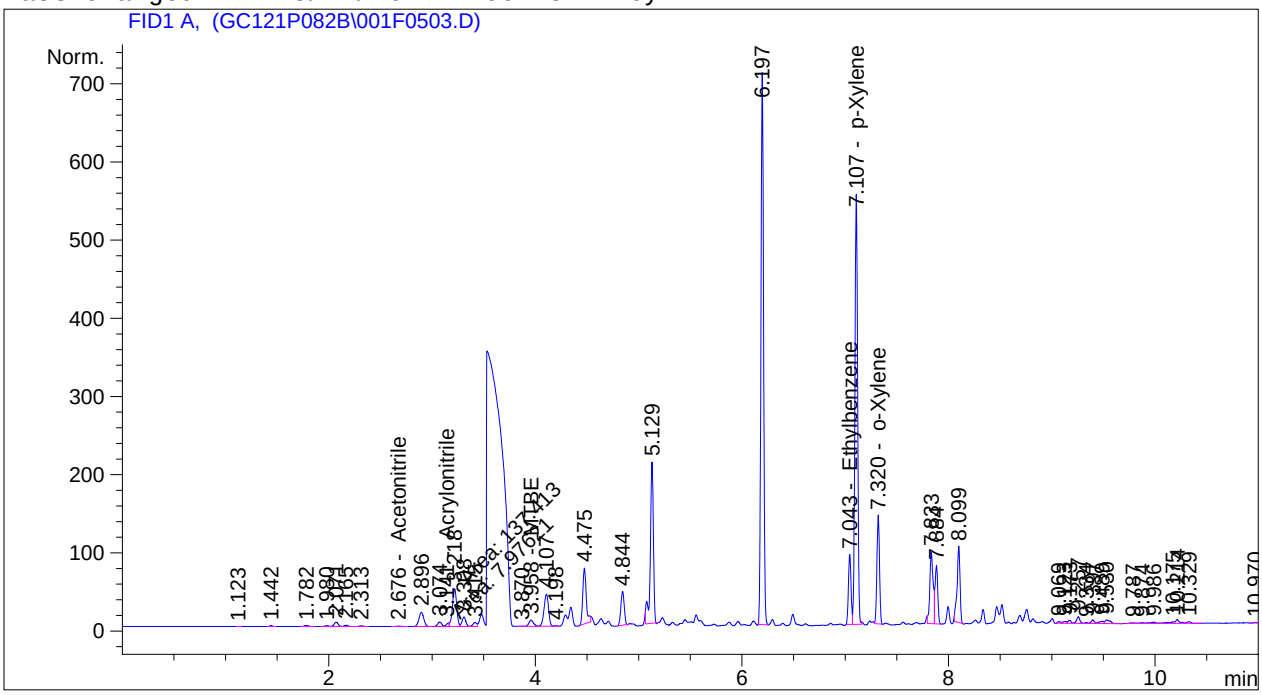


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	BB	1.40650	2.38941	3.36071		Acetonitrile
3.141	MF	7.97621	1.25601	10.01823		Acrylonitrile
3.958	VV	24.28318	9.94665e-1	24.15363		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.043	BV	155.51854	4.87389e-1	75.79795		Ethylbenzene
7.107	VB	1013.11841	4.84336e-1	490.68999		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	241.87256	4.79505e-1	115.97898		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

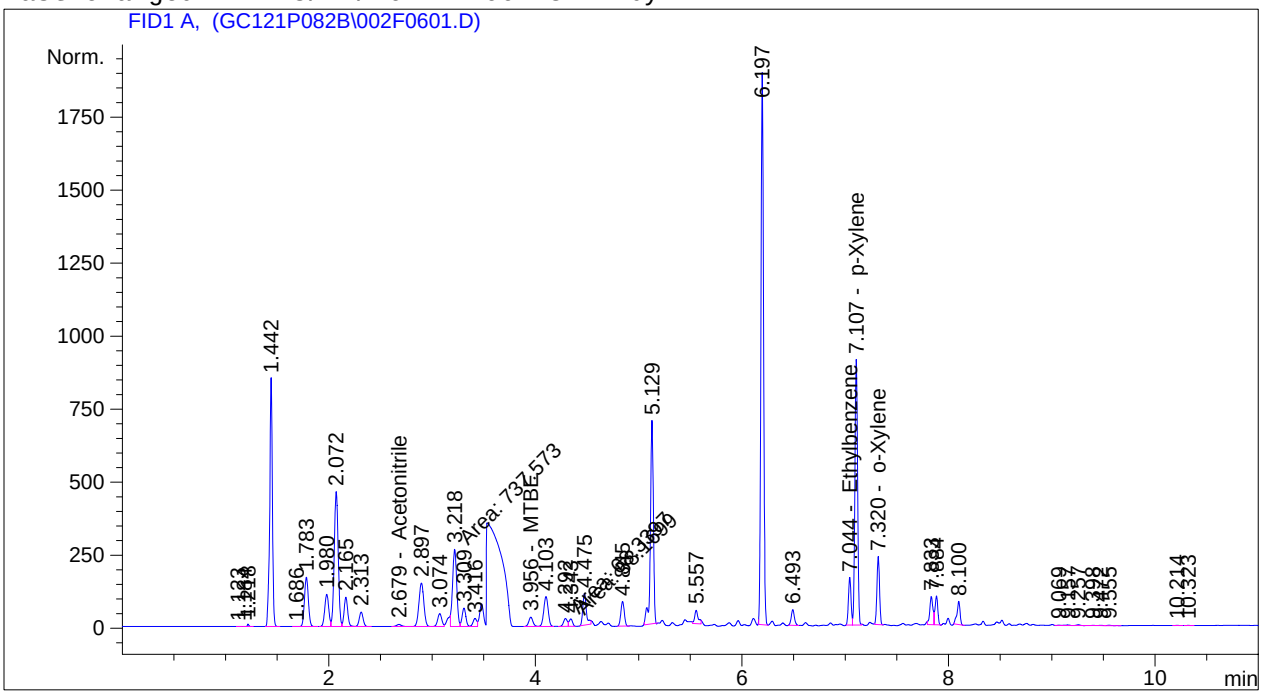
Manual Int. “II” (KAM)

```
Totals :                                  719.99948
```

EM-BTRF-001311

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\002F0601.D
Sample Name: M18 R1A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 6
Acq. Instrument	: Lucy	Location	: Vial 2
Injection Date	: 01-Aug-11, 15:02:57	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

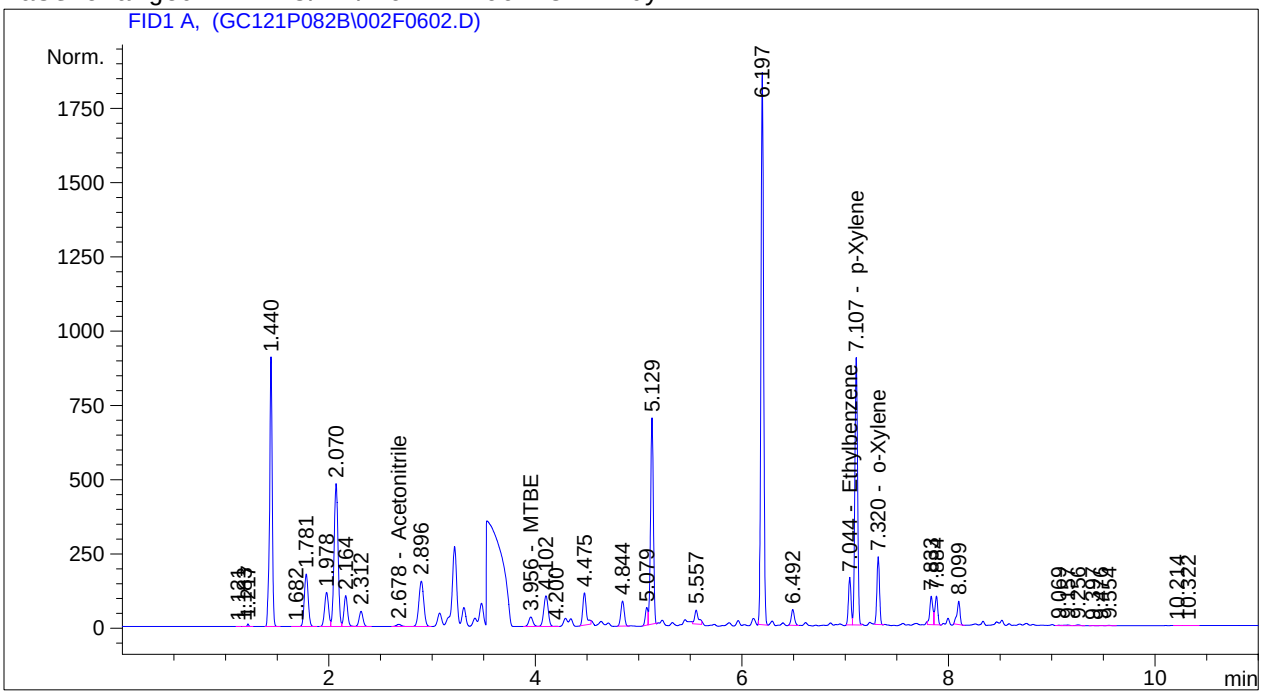
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.679	BV	23.18505	2.20587	51.14318		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	88.54053	9.93927e-1	88.00285		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	282.83008	4.87267e-1	137.81364		Ethylbenzene
7.107	VB	1671.91504	4.84322e-1	809.74467		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	405.33286	4.79457e-1	194.33976		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				1281.04411		

Manual Int. "II" (KAM)

EM-BTRF-001312

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\002F0602.D
Sample Name: M18 R1A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 6
Acq. Instrument	: Lucy	Location	: Vial 2
Injection Date	: 01-Aug-11, 15:24:39	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

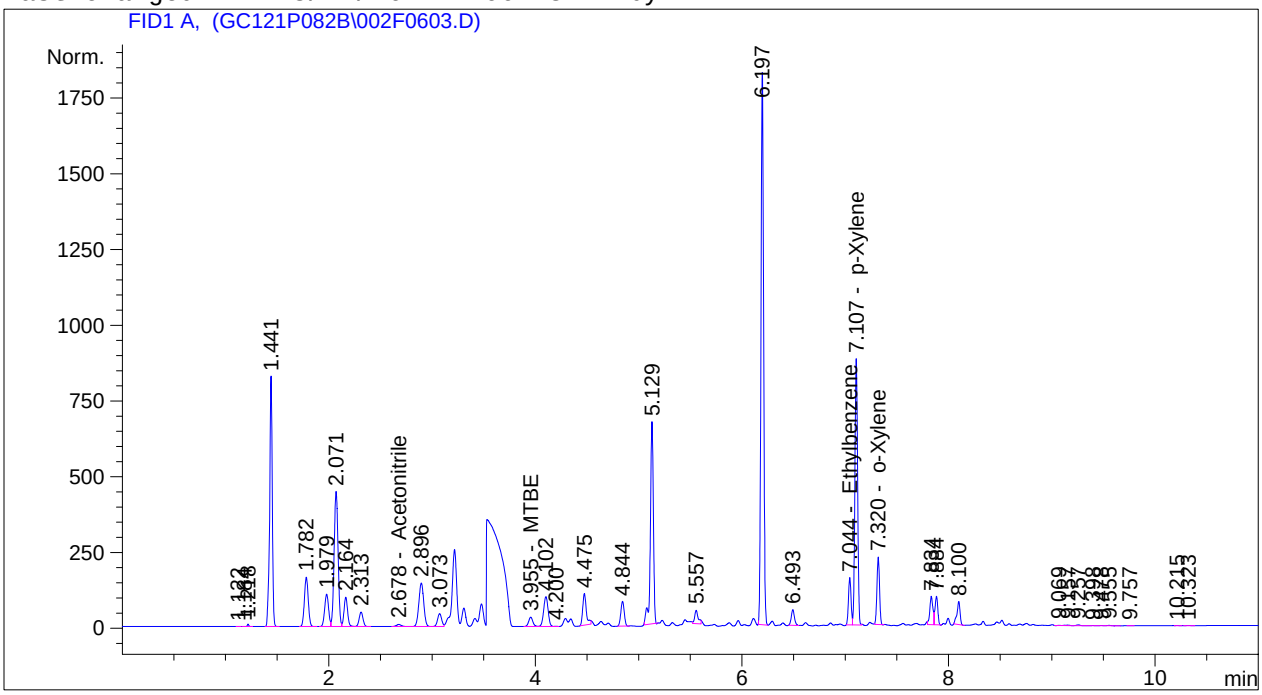
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BV	23.76469	2.20558	52.41493		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	89.40334	9.93925e-1	88.86019		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	277.45514	4.87269e-1	135.19542		Ethylbenzene
7.107	VB	1650.28735	4.84322e-1	799.27040		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	399.37473	4.79458e-1	191.48351		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :		1267.22444				

EM-BTRF-001313

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\002F0603.D
Sample Name: M18 R1A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 6
Acq. Instrument	: Lucy	Location	: Vial 2
Injection Date	: 01-Aug-11, 15:46:15	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

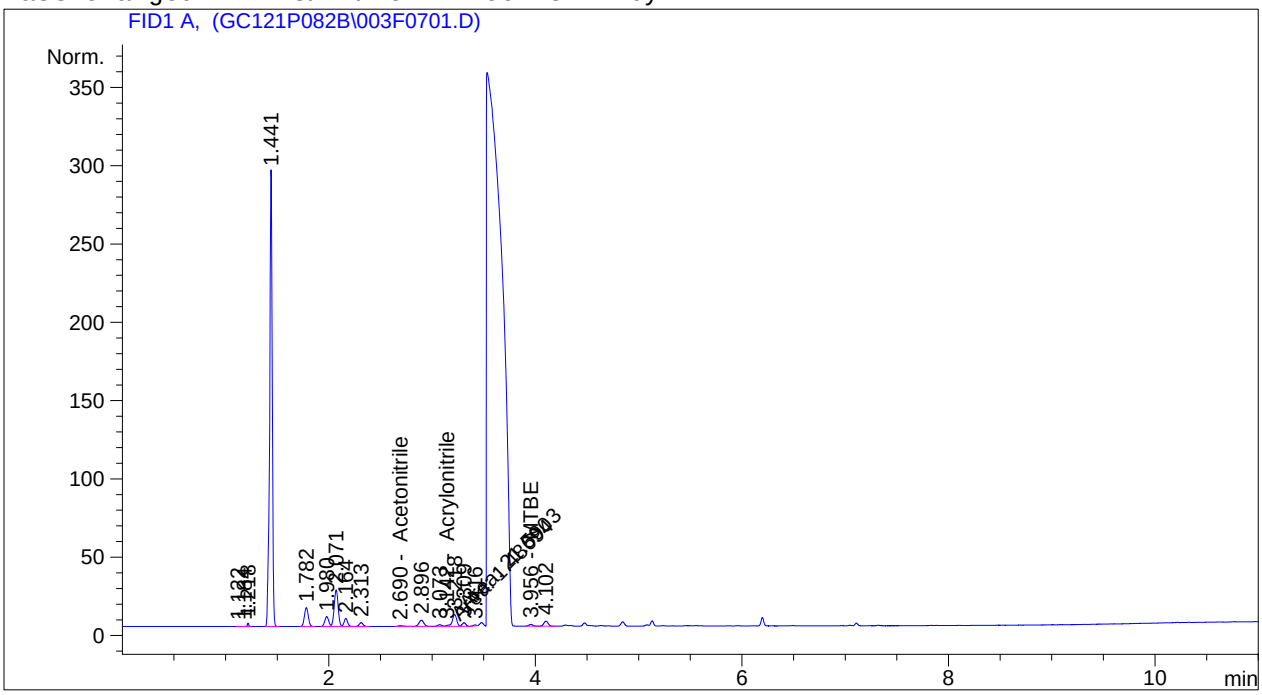
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BV	22.20622	2.20639	48.99561		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.955	BV	85.32834	9.93938e-1	84.81106		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	270.58481	4.87273e-1	131.84876		Ethylbenzene
7.107	VB	1608.63440	4.84323e-1	779.09790		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	389.17209	4.79460e-1	186.59250		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 1231.34584

EM-BTRF-001314

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\003F0701.D
Sample Name: M18 R1A CT BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 7
Acq. Instrument	: Lucy	Location	: Vial 3
Injection Date	: 01-Aug-11, 16:07:52	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.690	BB	1.79049	2.34751	4.20319		Acetonitrile
3.142	MF	1.48694	1.39750	2.07799		Acrylonitrile
3.956	BV	3.11194	1.00158	3.11685		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

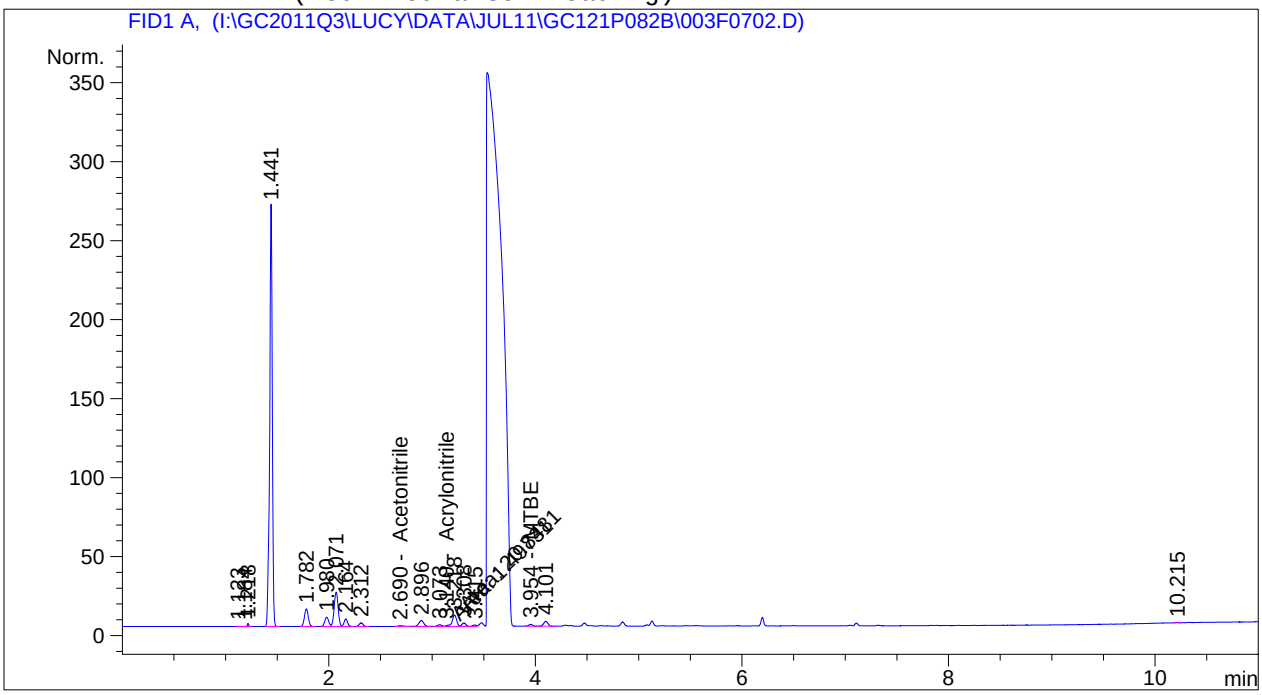
Totals : 9.39803

Manual Int. "II" (KAM)

EM-BTRF-001315

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\003F0702.D
Sample Name: M18 R1A CT BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 7
Acq. Instrument	: Lucy	Location	: Vial 3
Injection Date	: 01-Aug-11, 16:29:27	Inj	: 2
		Inj Volume	: External
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:55:06 PM by KAM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/22/2011 2:55:05 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.690	BB	1.77712	2.34866	4.17386		Acetonitrile
3.140	MF	1.49731	1.39629	2.09068		Acrylonitrile
3.954	BV	2.94914	1.00202	2.95509		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				9.21963		

Manual Int. “II” (KAM)

EM-BTRF-001316

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\003F0703.D
Sample Name: M18 R1A CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   7
Acq. Instrument : Lucy                              Location : Vial 3
Injection Date  : 01-Aug-11, 16:50:57                    Inj :   3
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
                  (modified after loading)
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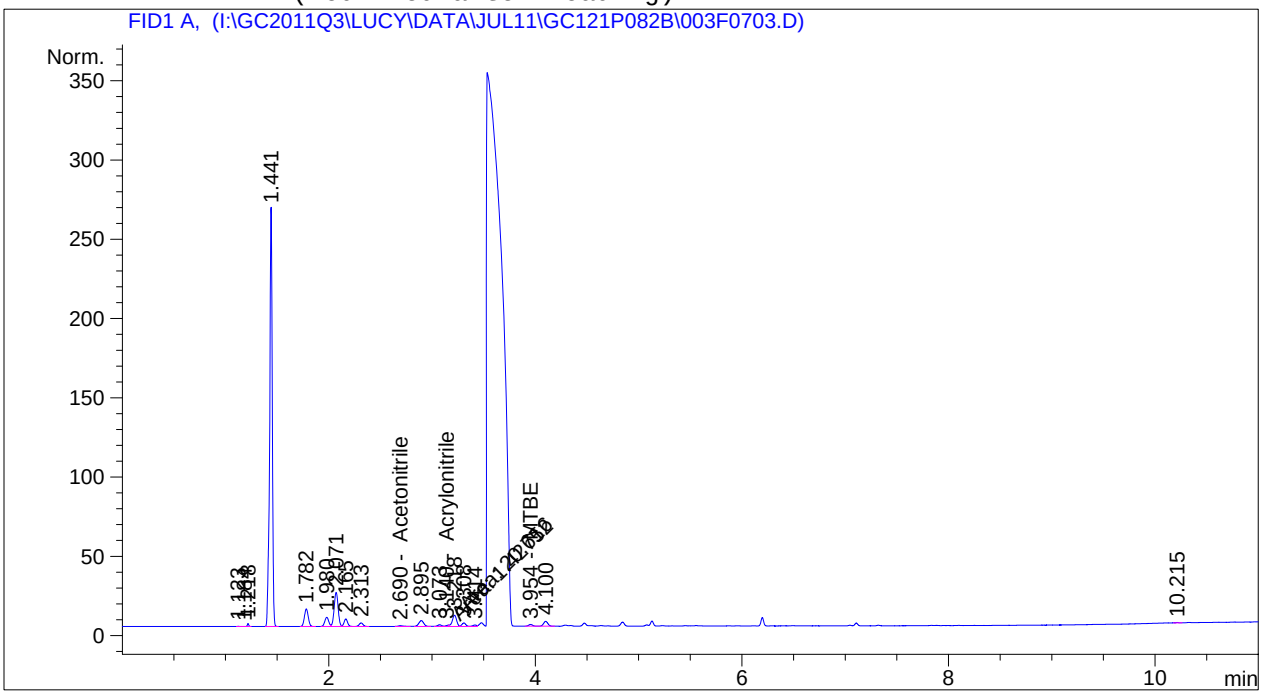


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.690 BB        1.75397    2.35070    4.12307    Acetonitrile
  3.140 MF        1.42752    1.40473    2.00529    Acrylonitrile
  3.954 BV        2.90655    1.00214    2.91277    MTBE
  5.279            -          -          -        2-Nitropropane
  5.492            -          -          -        Isooctane
  5.787            -          -          -        MIBK
  6.921            -          -          -        Chlorobenzene
  7.044            -          -          -        Ethylbenzene
  7.115            -          -          -        p-Xylene
  7.270            -          -          -        Styrene
  7.320            -          -          -        o-Xylene
  7.561            -          -          -        Cumene
  8.709            -          -          -        Nitrobenzene

Totals :                                 9.04113
```
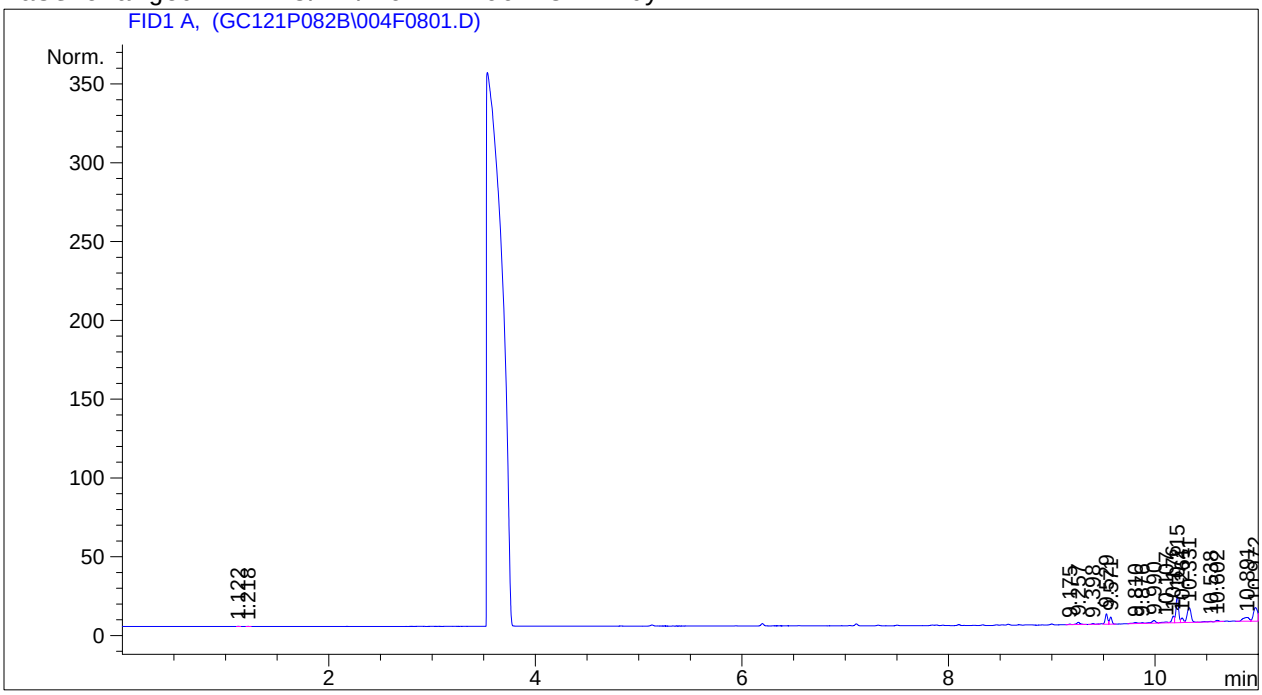

Manual Int. "II" (KAM)

EM-BTRF-001317

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\004F0801.D
Sample Name: M18 R1B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 8
Acq. Instrument	: Lucy	Location	: Vial 4
Injection Date	: 01-Aug-11, 17:13:11	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

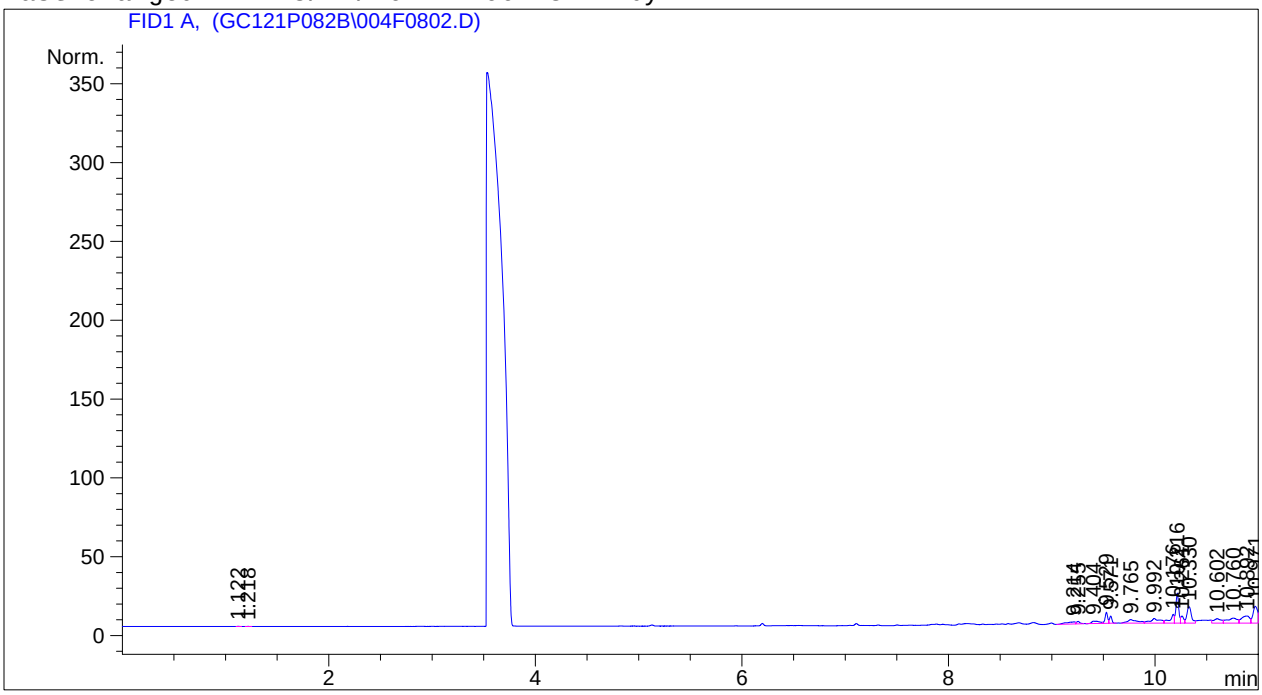
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 0.00000

EM-BTRF-001318

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\004F0802.D
Sample Name: M18 R1B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 8
Acq. Instrument	: Lucy	Location	: Vial 4
Injection Date	: 01-Aug-11, 17:35:22	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 0.00000

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\004F0803.D
Sample Name: M18 R1B Spk Cond ext 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :   8
Acq. Instrument : Lucy                          Location : Vial 4
Injection Date  : 01-Aug-11, 17:56:58                Inj :   3
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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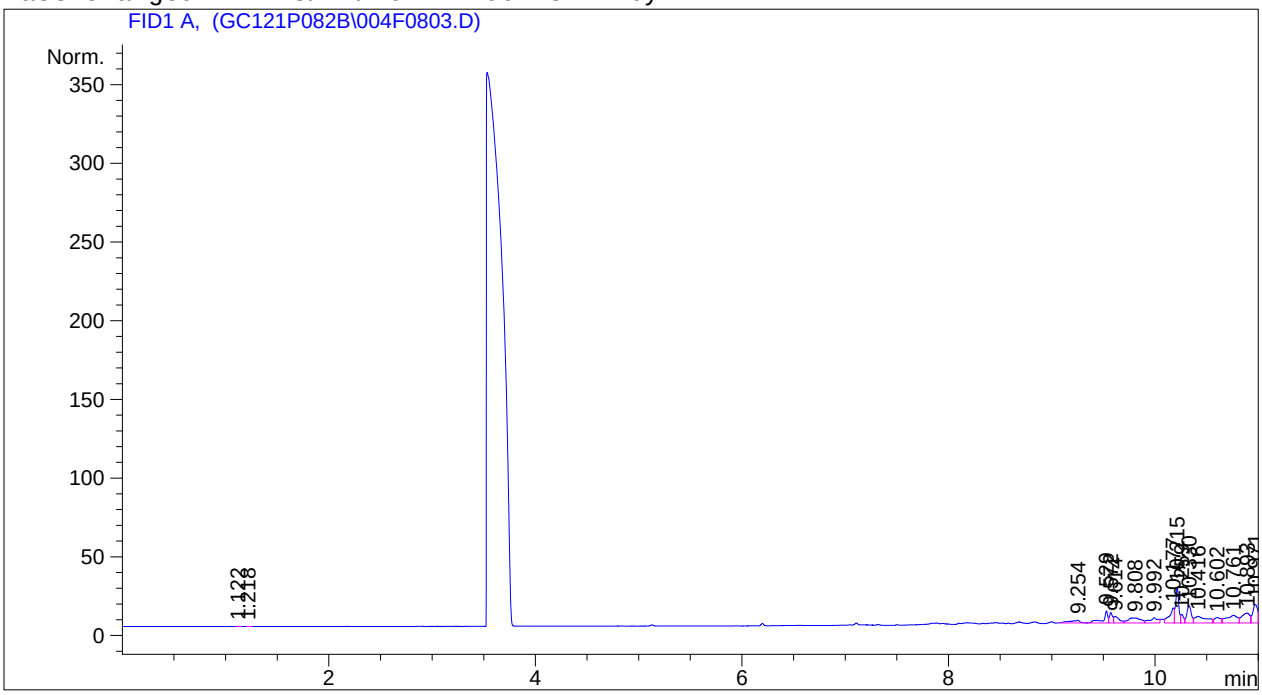


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 0.00000

EM-BTRF-001320

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\008F1201.D
Sample Name: M18 R1B Spk XAD FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  12
Acq. Instrument : Lucy                              Location : Vial 8
Injection Date  : 01-Aug-11, 21:37:50                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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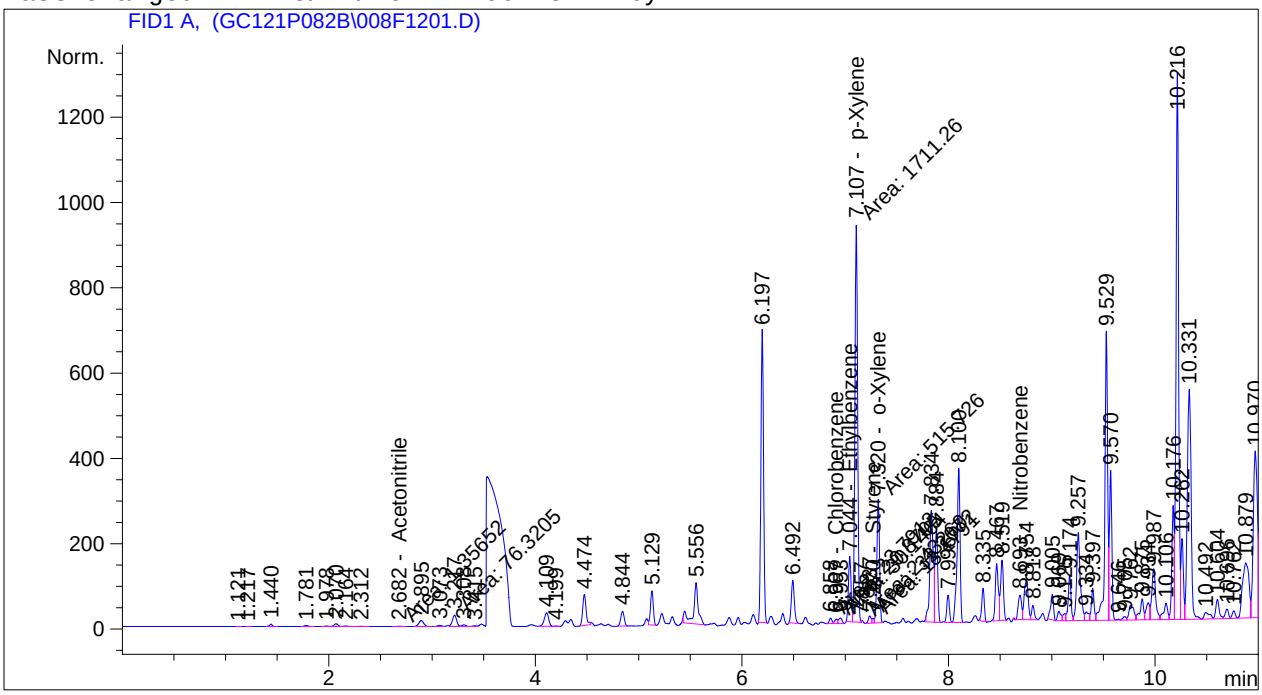

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External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.682	MM	1.35652	2.39661	3.25104		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.907	MF	20.87047	6.81410e-1	14.22134		Chlorobenzene
7.044	BV	269.84650	4.87274e-1	131.48911		Ethylbenzene
7.107	MF	1711.25854	4.84321e-1	828.79869		p-Xylene
7.270	MF	13.17910	4.78952e-1	6.31215		Styrene
7.320	FM	515.72595	4.79442e-1	247.26081		o-Xylene
7.561		-	-	-		Cumene
8.693	BV	133.76265	8.01266e-1	107.17943		Nitrobenzene
Totals :				1338.51258		

Manual Int. "II" (KAM)

EM-BTRF-001321

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\008F1202.D
Sample Name: M18 R1B Spk XAD FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  12
Acq. Instrument : Lucy                              Location : Vial 8
Injection Date  : 01-Aug-11, 22:00:15                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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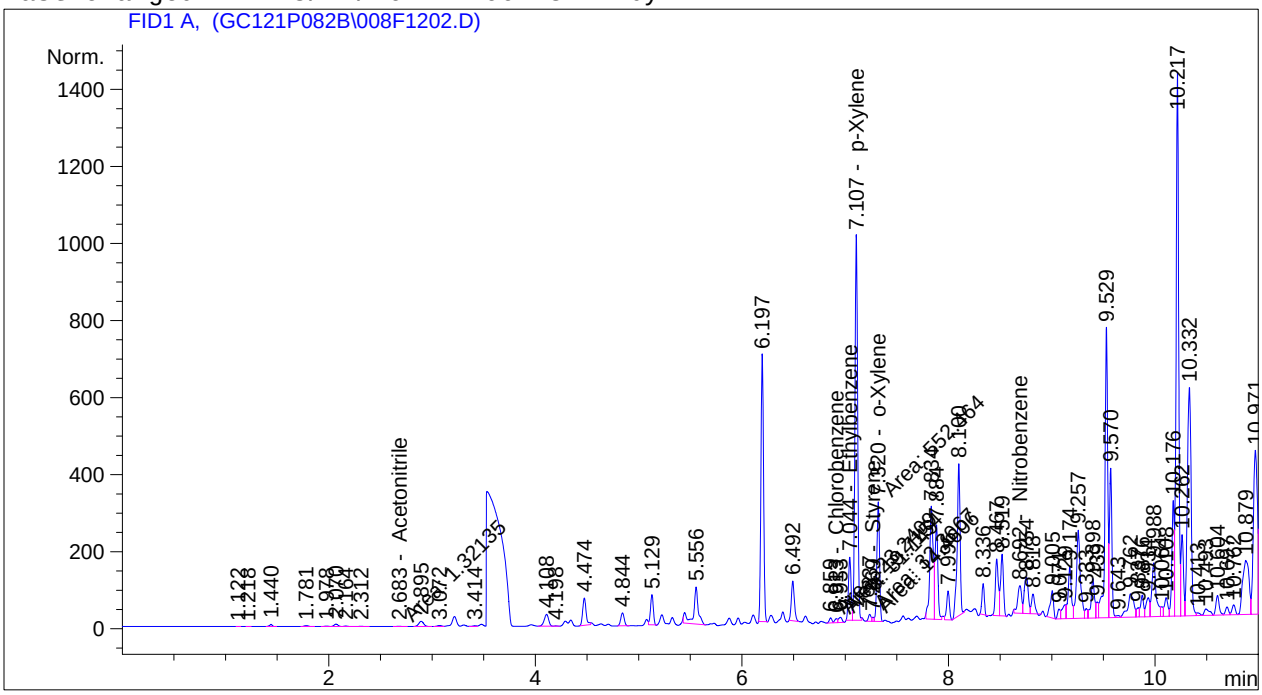


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.683 MM        1.32135    2.40200    3.17390    Acetonitrile
  3.138             -          -          -        Acrylonitrile
  4.005             -          -          -        MTBE
  5.279             -          -          -        2-Nitropropane
  5.492             -          -          -        Isooctane
  5.787             -          -          -        MIBK
  6.913 FM       19.71537 6.81416e-1   13.43438    Chlorobenzene
  7.044 BV      288.63068 4.87264e-1  140.63922    Ethylbenzene
  7.107 VB     1835.88318 4.84320e-1  889.15430    p-Xylene
  7.269 FM       14.46062 4.78478e-1    6.91909    Styrene
  7.320 FM      552.46368 4.79439e-1  264.87241    o-Xylene
  7.561             -          -          -        Cumene
  8.692 BV      192.32352 8.00987e-1  154.04871    Nitrobenzene

Totals :                             1472.24199
```

Manual Int. "II" (KAM)

EM-BTRF-001322

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\008F1203.D
Sample Name: M18 R1B Spk XAD FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  12
Acq. Instrument : Lucy                              Location : Vial 8
Injection Date  : 01-Aug-11, 22:22:46                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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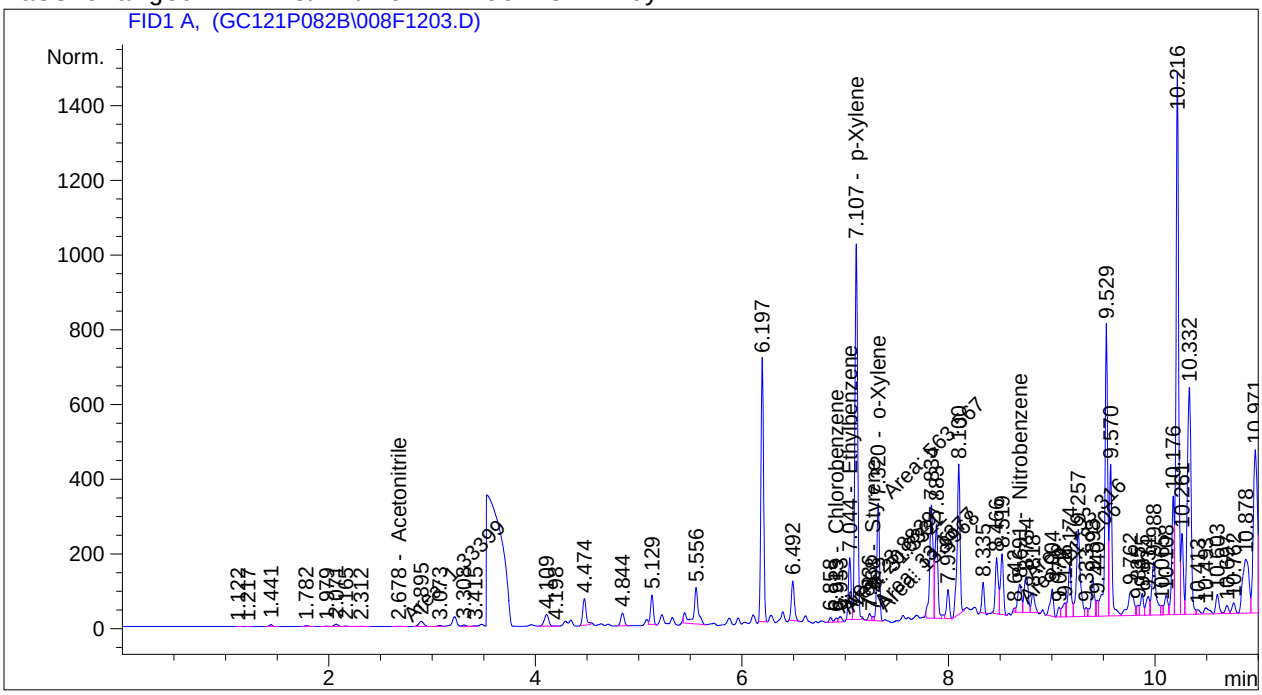


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	MM	1.33399	2.40003	3.20162		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.913	FM	20.63306	6.81411e-1	14.05960		Chlorobenzene
7.044	BV	293.98248	4.87261e-1	143.24618		Ethylbenzene
7.107	VB	1871.62146	4.84319e-1	906.46232		p-Xylene
7.268	FM	13.99683	4.78639e-1	6.69943		Styrene
7.320	FM	563.56732	4.79438e-1	270.19535		o-Xylene
7.561		-	-	-		Cumene
8.691	FM	193.31604	8.00984e-1	154.84307		Nitrobenzene
Totals :				1498.70758		

Manual Int. "II" (KAM)

EM-BTRF-001323

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\010F1401.D
Sample Name: M18 R1B Spk XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  14
Acq. Instrument : Lucy                              Location : Vial 10
Injection Date  : 01-Aug-11, 23:53:03                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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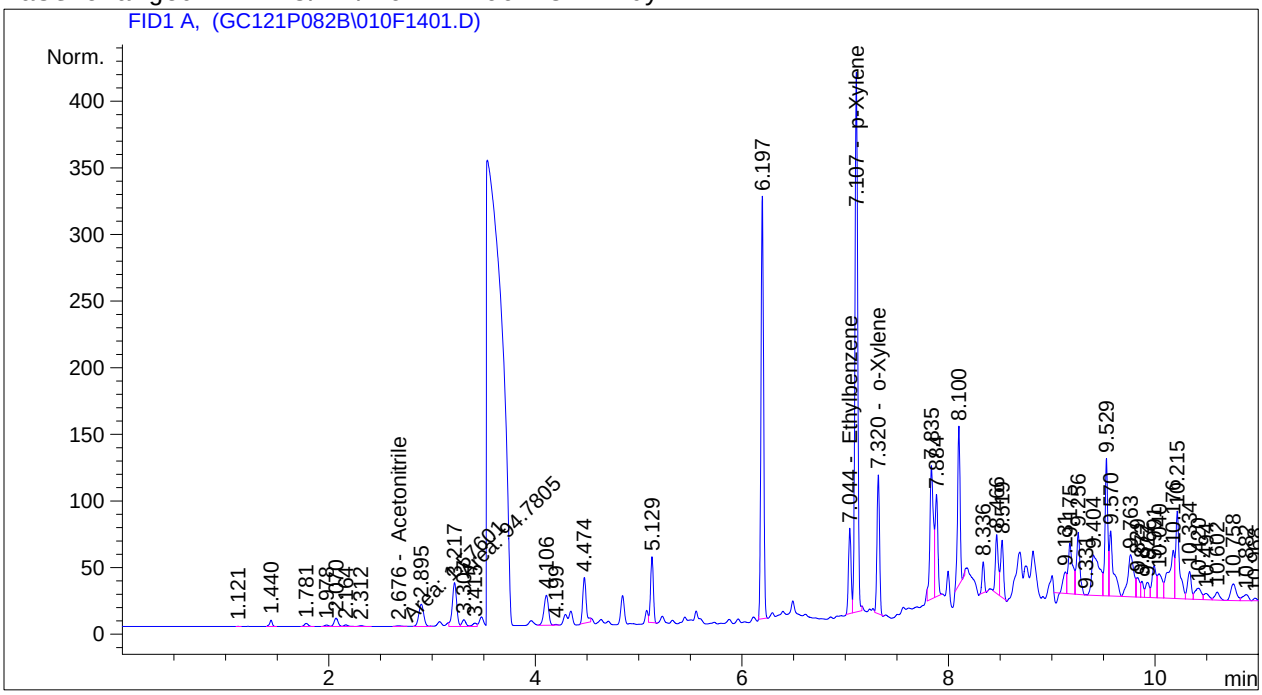


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	MM	1.57601	2.36840	3.73261		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	112.13440	4.87493e-1	54.66477		Ethylbenzene
7.107	VB	758.41962	4.84349e-1	367.33957		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	180.63620	4.79544e-1	86.62305		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

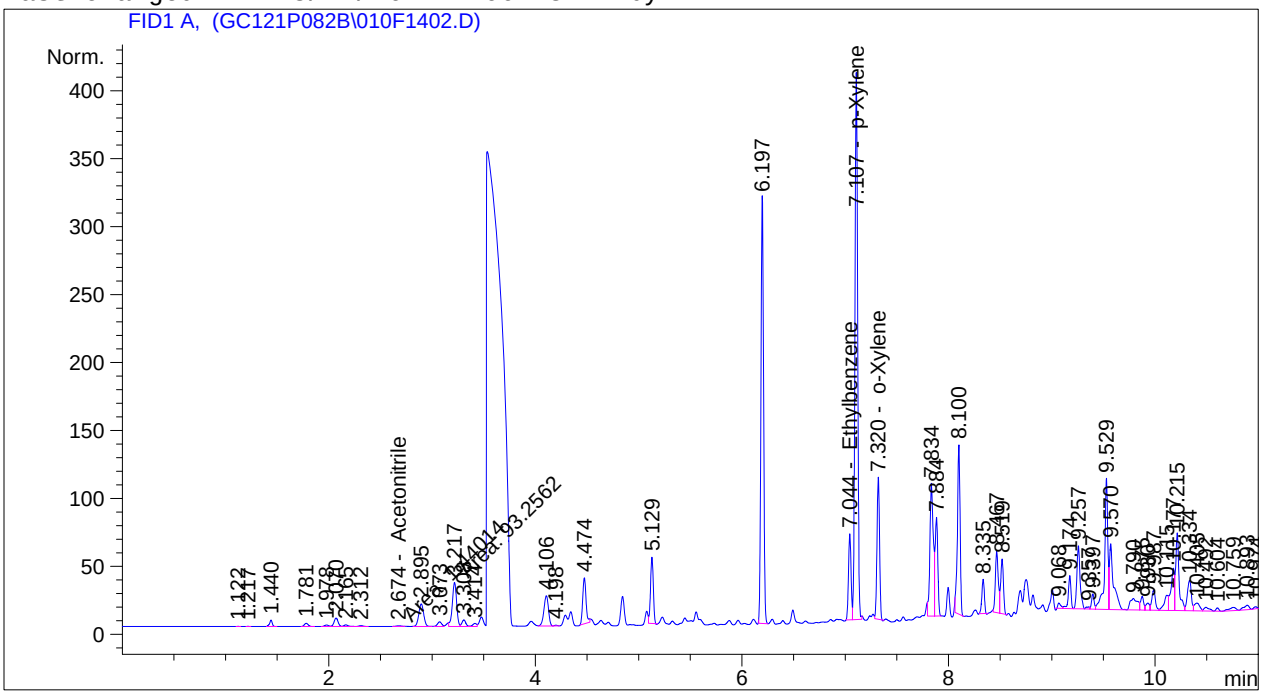
Manual Int. “II” (KAM)

Totals : 512.36001

EM-BTRF-001324

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\010F1402.D
Sample Name: M18 R1B Spk XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 14
Acq. Instrument	: Lucy	Location	: Vial 10
Injection Date	: 02-Aug-11, 00:15:37	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	MM	1.44014	2.38485	3.43450		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	109.37567	4.87503e-1	53.32094		Ethylbenzene
7.107	VB	741.97528	4.84350e-1	359.37560		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	180.91101	4.79544e-1	86.75479		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

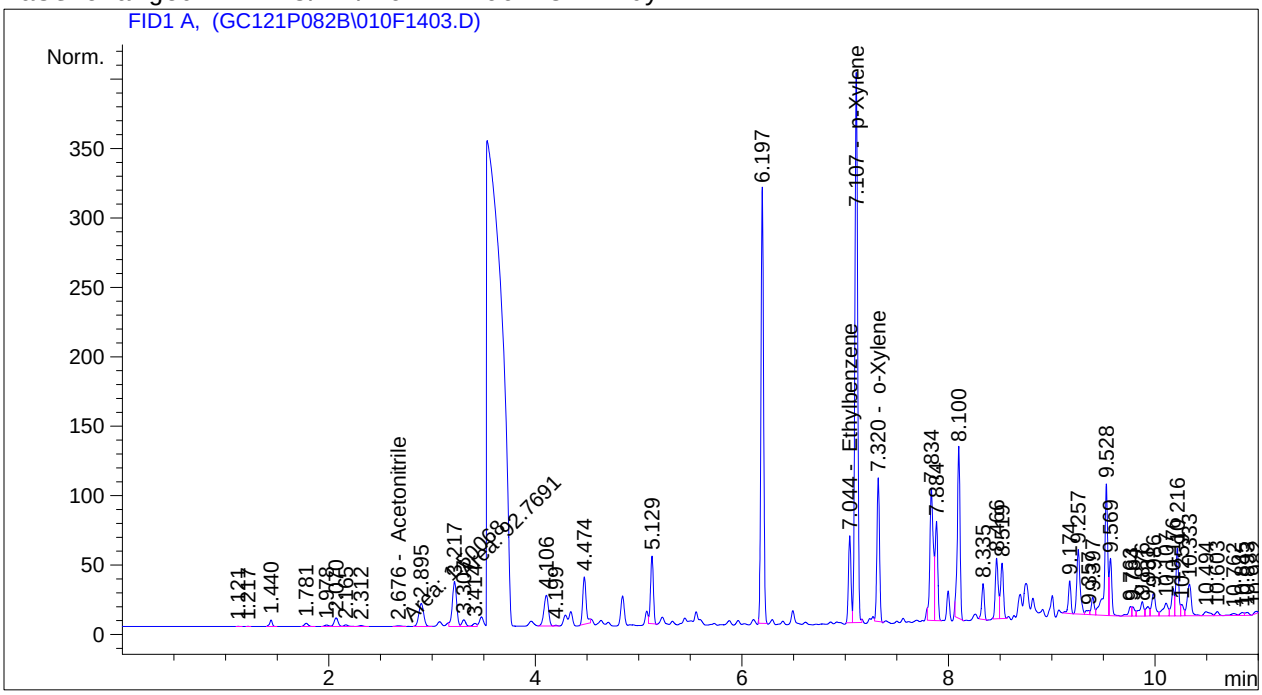
Totals : 502.88584

Manual Int. "II" (KAM)

EM-BTRF-001325

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\010F1403.D
Sample Name: M18 R1B Spk XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 14
Acq. Instrument	: Lucy	Location	: Vial 10
Injection Date	: 02-Aug-11, 00:38:09	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	MM	1.50068	2.37715	3.56734		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	108.07647	4.87507e-1	52.68808		Ethylbenzene
7.107	VB	737.38086	4.84350e-1	357.15052		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	179.94353	4.79545e-1	86.29100		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				499.69694		

Manual Int. "II" (KAM)

EM-BTRF-001326

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\011F1501.D
Sample Name: M18 R1B Spk CT FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  15
Acq. Instrument : Lucy                              Location : Vial 11
Injection Date  : 02-Aug-11, 01:00:49                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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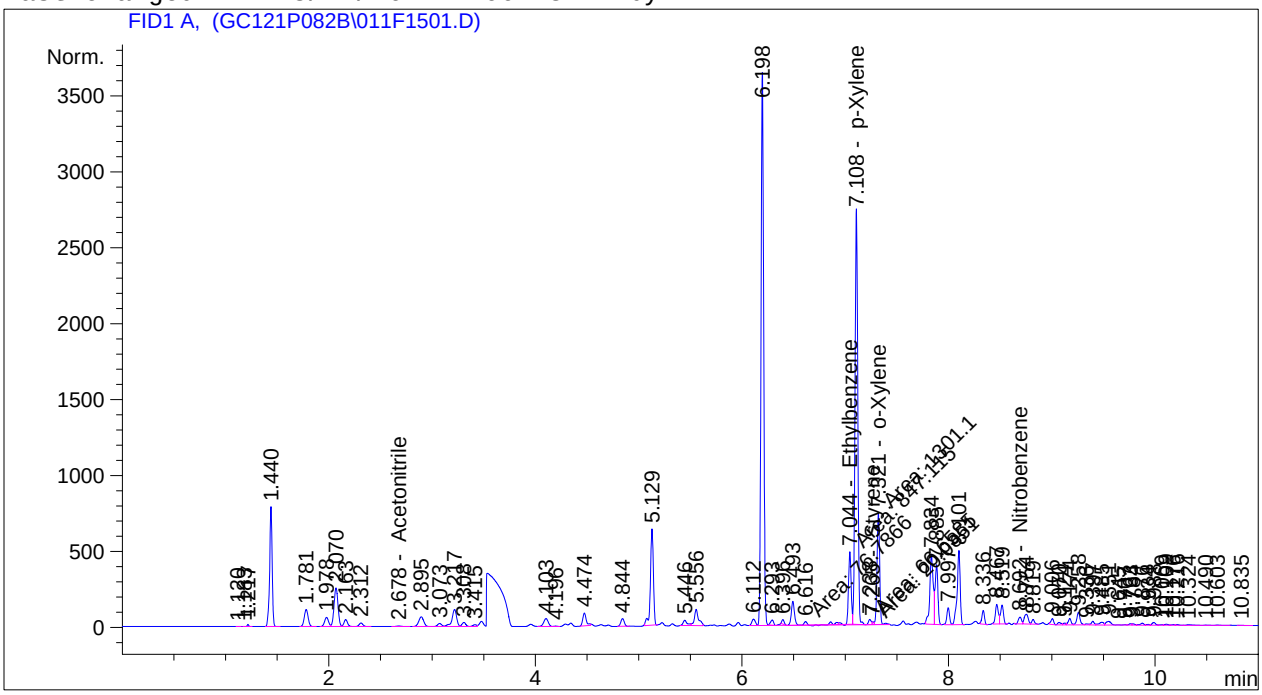


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BB	10.95694	2.21910	24.31451		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	FM T	847.11499	4.87167e-1	412.68678		Ethylbenzene
7.108	VV T	5068.52783	4.84307e-1	2454.72149		p-Xylene
7.265	FM	20.08513	4.77114e-1	9.58290		Styrene
7.321	FM	1301.10156	4.79409e-1	623.75986		o-Xylene
7.561		-	-	-		Cumene
8.692	BV	93.90263	8.01654e-1	75.27741		Nitrobenzene

Totals : 3600.34295

Manual Int. "II" (KAM

EM-BTRF-001327

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\011F1502.D
Sample Name: M18 R1B Spk CT FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  15
Acq. Instrument : Lucy                          Location : Vial 11
Injection Date  : 02-Aug-11, 01:23:27                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
                  (modified after loading)
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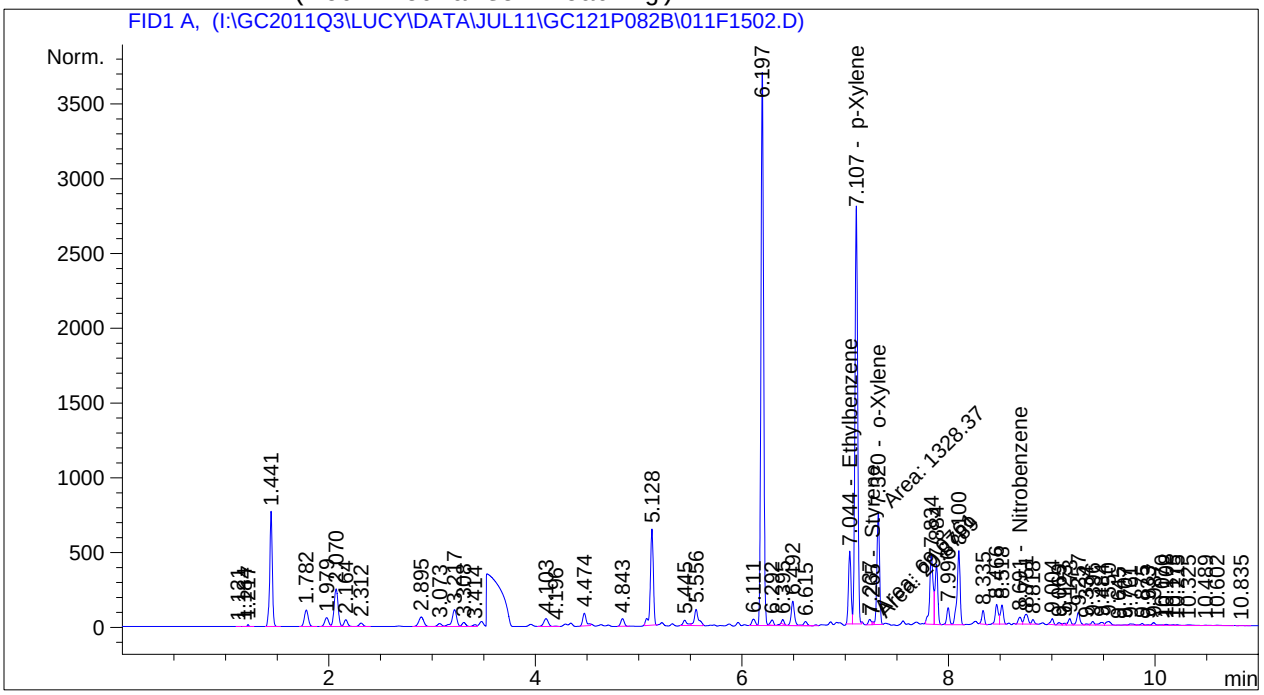


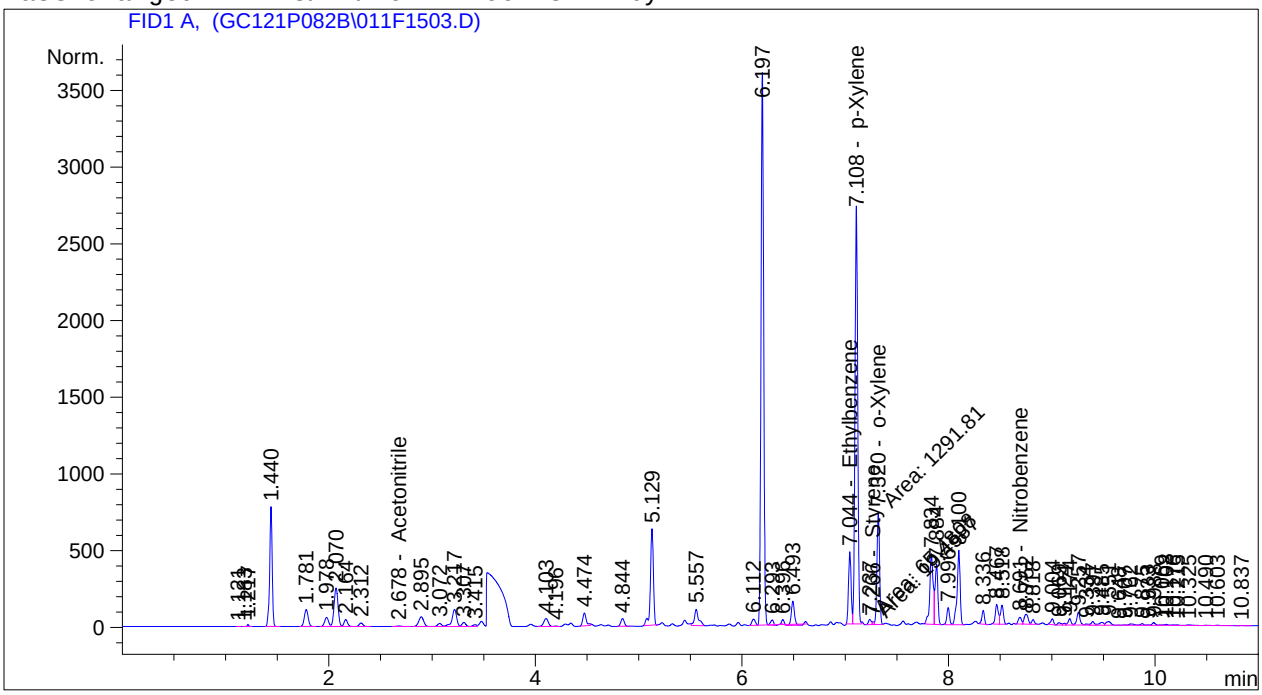

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -          Acetonitrile
  3.138            -          -          -          Acrylonitrile
  3.954            -          -          -          MTBE
  5.279            -          -          -          2-Nitropropane
  5.492            -          -          -          Isooctane
  5.787            -          -          -          MIBK
  6.921            -          -          -          Chlorobenzene
  7.044 BV       840.06458 4.87168e-1  409.25239    Ethylbenzene
  7.107 VB      5137.68604 4.84307e-1 2488.21475    p-Xylene
  7.265 FM        20.87893 4.76981e-1    9.95885    Styrene
  7.320 FM      1328.37158 4.79409e-1  636.83276    o-Xylene
  7.561            -          -          -          Cumene
  8.691 BV        95.47022 8.01633e-1   76.53204    Nitrobenzene

Totals :                               3620.79079
```

Manual Int. "II" (KAM)

EM-BTRF-001328

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\011F1503.D
Sample Name: M18 R1B Spk CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 15
Acq. Instrument	: Lucy	Location	: Vial 11
Injection Date	: 02-Aug-11, 01:46:07	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BB	10.87419	2.21929	24.13296		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	818.22821	4.87169e-1	398.61552		Ethylbenzene
7.108	VB	5003.00098	4.84307e-1	2422.98689		p-Xylene
7.266	FM	19.45869	4.77227e-1	9.28621		Styrene
7.320	FM	1291.81262	4.79409e-1	619.30686		o-Xylene
7.561		-	-	-		Cumene
8.691	BV	93.32015	8.01662e-1	74.81122		Nitrobenzene
Totals :				3549.13965		

Manual Int. "II" (KAM)

EM-BTRF-001329

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\013F1701.D
Sample Name: M18 R1B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  17
Acq. Instrument : Lucy                              Location : Vial 13
Injection Date  : 02-Aug-11, 03:16:52                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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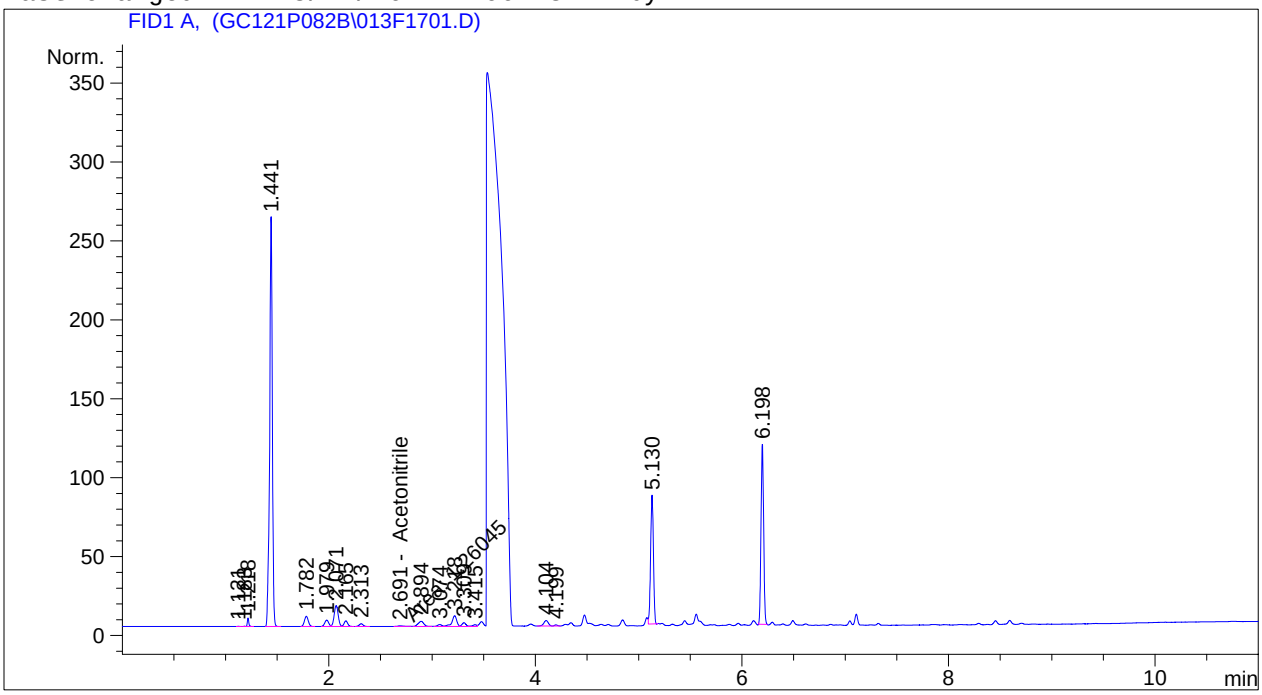


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.691 MM        1.26045    2.41205    3.04027    Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                 3.04027
```

EM-BTRF-001330

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\013F1702.D
Sample Name: M18 R1B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  17
Acq. Instrument : Lucy                          Location : Vial 13
Injection Date  : 02-Aug-11, 03:39:41                Inj :   2
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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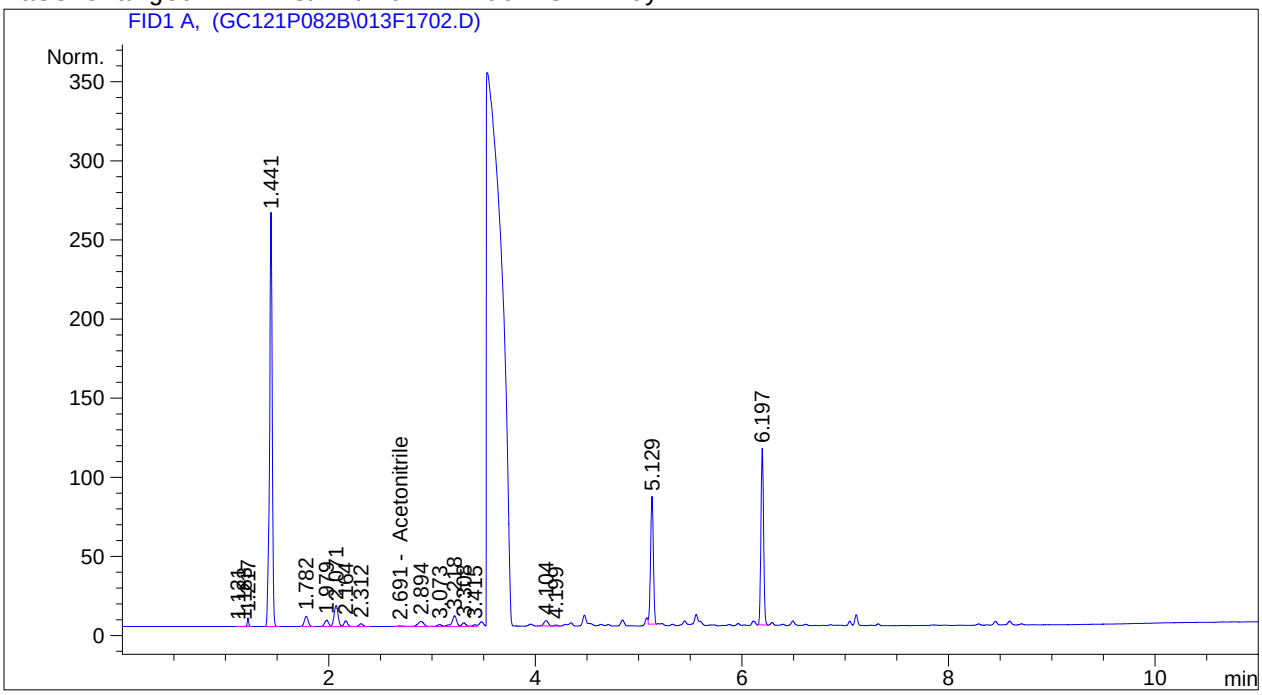



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

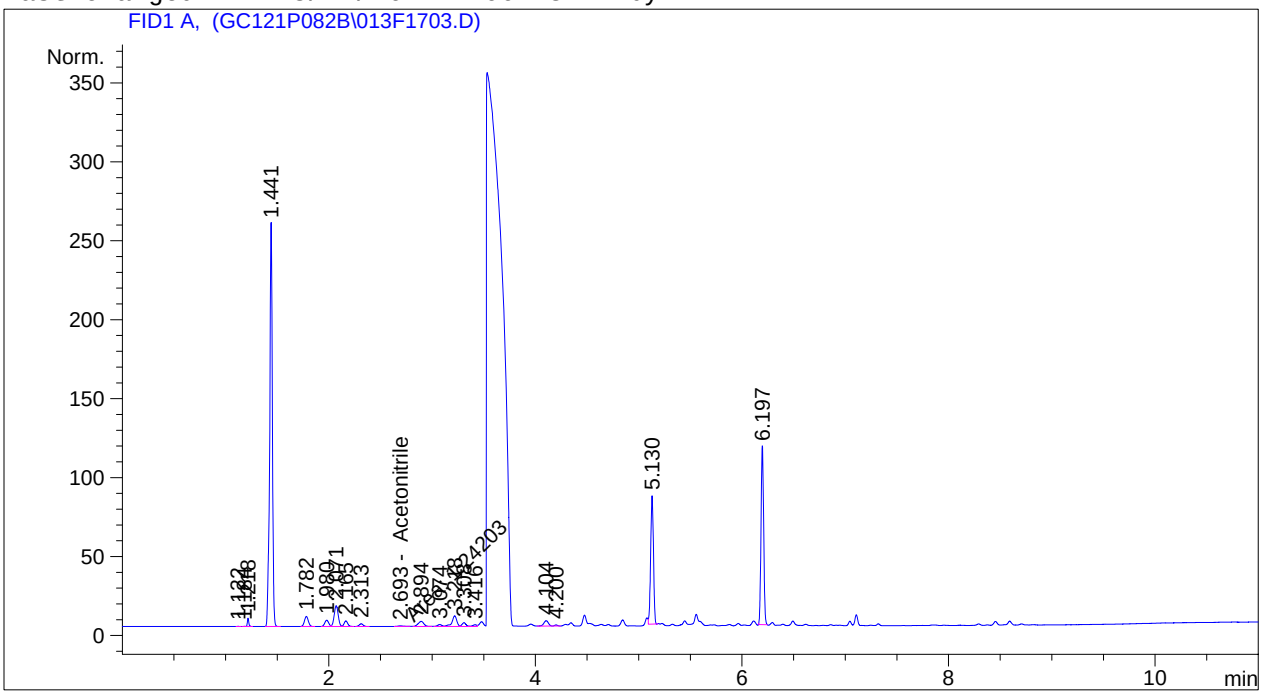
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.691	BB	1.64569	2.36101	3.88549		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 3.88549

EM-BTRF-001331

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\013F1703.D
Sample Name: M18 R1B Spk CT BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 17
Acq. Instrument	: Lucy	Location	: Vial 13
Injection Date	: 02-Aug-11, 04:02:19	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

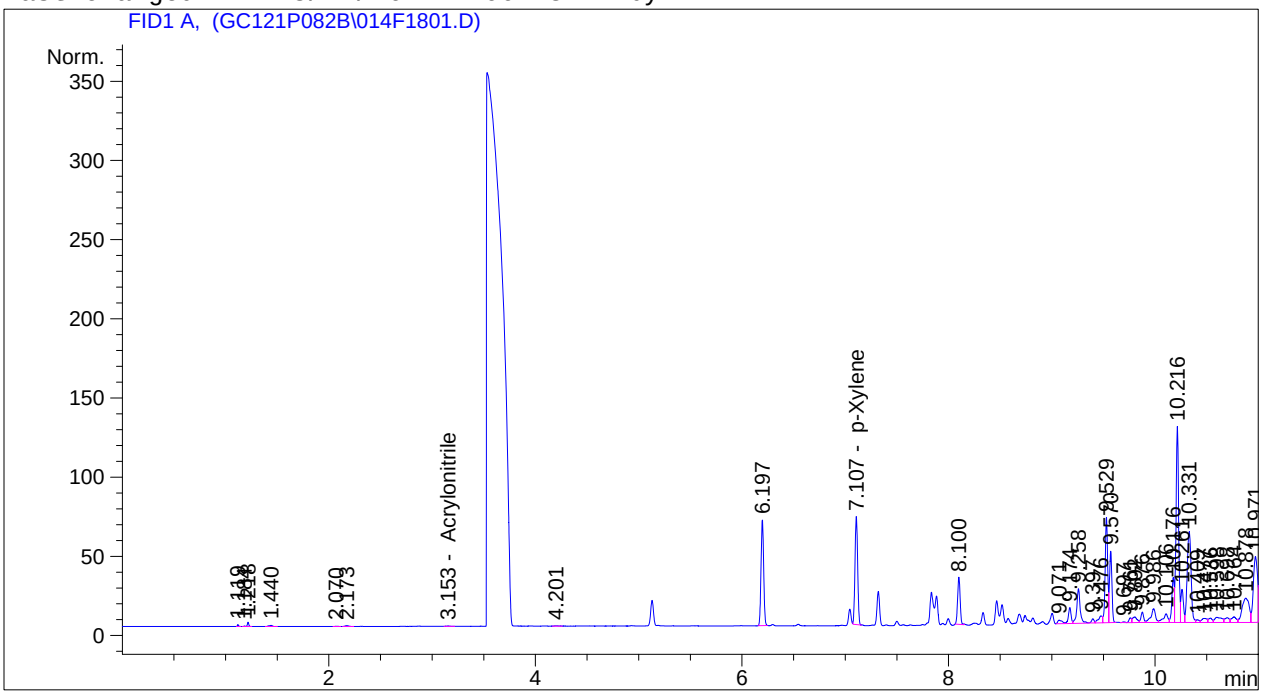
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.693	MM	1.24203	2.41529	2.99985		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 2.99985

EM-BTRF-001332

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\014F1801.D
Sample Name: M18 R2A Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 18
Acq. Instrument	: Lucy	Location	: Vial 14
Injection Date	: 02-Aug-11, 04:25:02	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

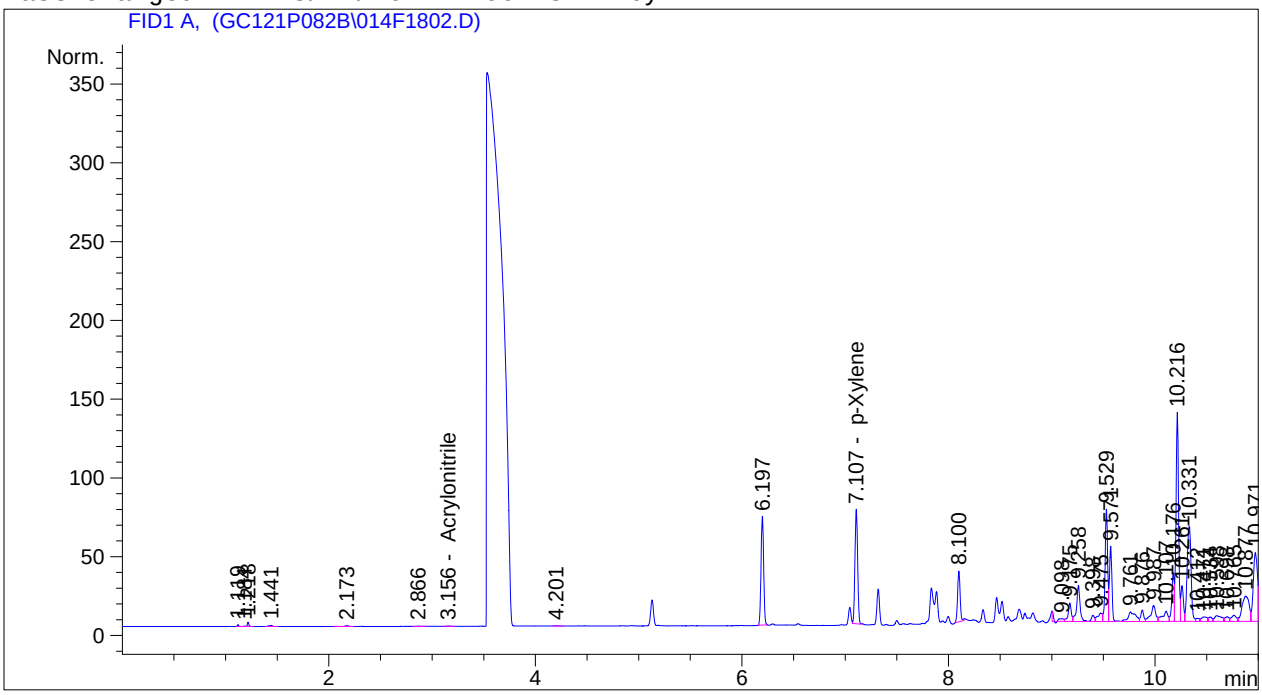
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.153	BB	4.28679e-1	1.46504	6.28032e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.107	BB	123.64304	4.84603e-1	59.91779		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				60.54583		

EM-BTRF-001333

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\014F1802.D
Sample Name: M18 R2A Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 18
Acq. Instrument	: Lucy	Location	: Vial 14
Injection Date	: 02-Aug-11, 04:47:44	Inj	: 2
		Inj Volume	: External

Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed : 8/22/2011 2:06:43 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

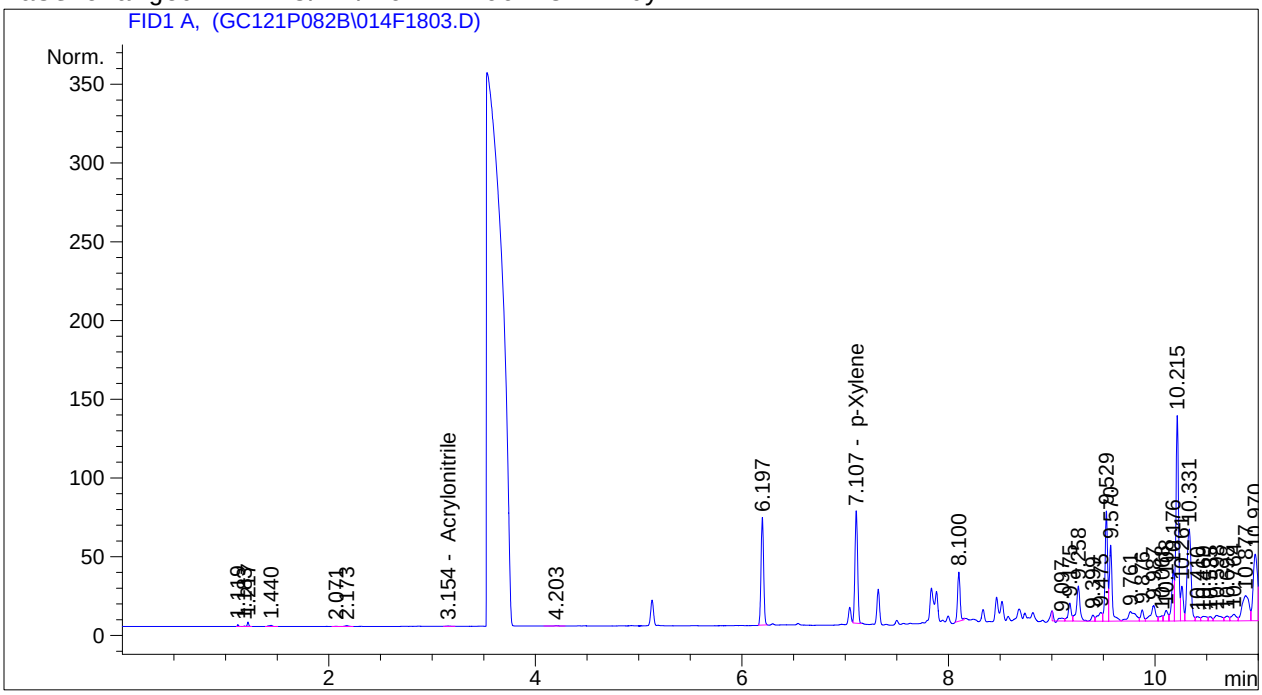
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.156	BB	4.35356e-1	1.46504	6.37814e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.107	BB	132.26376	4.84583e-1	64.09280		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 64.73062

EM-BTRF-001334

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\014F1803.D
Sample Name: M18 R2A Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 18
Acq. Instrument	: Lucy	Location	: Vial 14
Injection Date	: 02-Aug-11, 05:10:23	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.154	BB	4.33819e-1	1.46504	6.35563e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.107	BB	128.99809	4.84590e-1	62.51124		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :				63.14680		

EM-BTRF-001335

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\015F1901.D
Sample Name: M18 R2A XAD FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  19
Acq. Instrument : Lucy                              Location : Vial 15
Injection Date  : 02-Aug-11, 05:32:55                    Inj :   1
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
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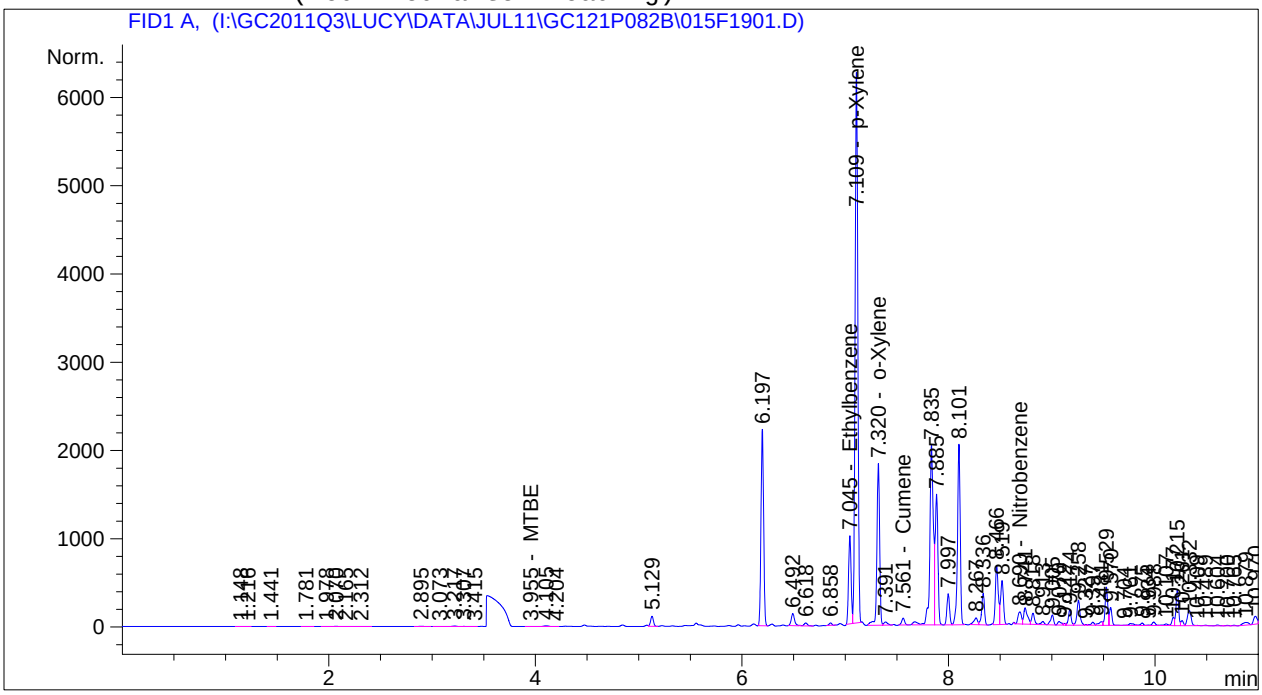


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -          Acetonitrile
  3.138            -          -          -          Acrylonitrile
  3.955 BV       3.15886    1.00146    3.16347      MTBE
  5.279            -          -          -          2-Nitropropane
  5.492            -          -          -          Isooctane
  5.787            -          -          -          MIBK
  6.921            -          -          -          Chlorobenzene
  7.045 BV     1706.66443 4.87142e-1  831.38847      Ethylbenzene
  7.109 VB S   1.14484e4  4.84302e-1 5544.48150      p-Xylene
  7.270            -          -          -          Styrene
  7.320 BV     3379.54224 4.79396e-1 1620.13782      o-Xylene
  7.561 BB      153.72177 4.85119e-1   74.57342      Cumene
  8.690 BV      329.97354 8.00722e-1  264.21710      Nitrobenzene

Totals :                              8337.96179
```
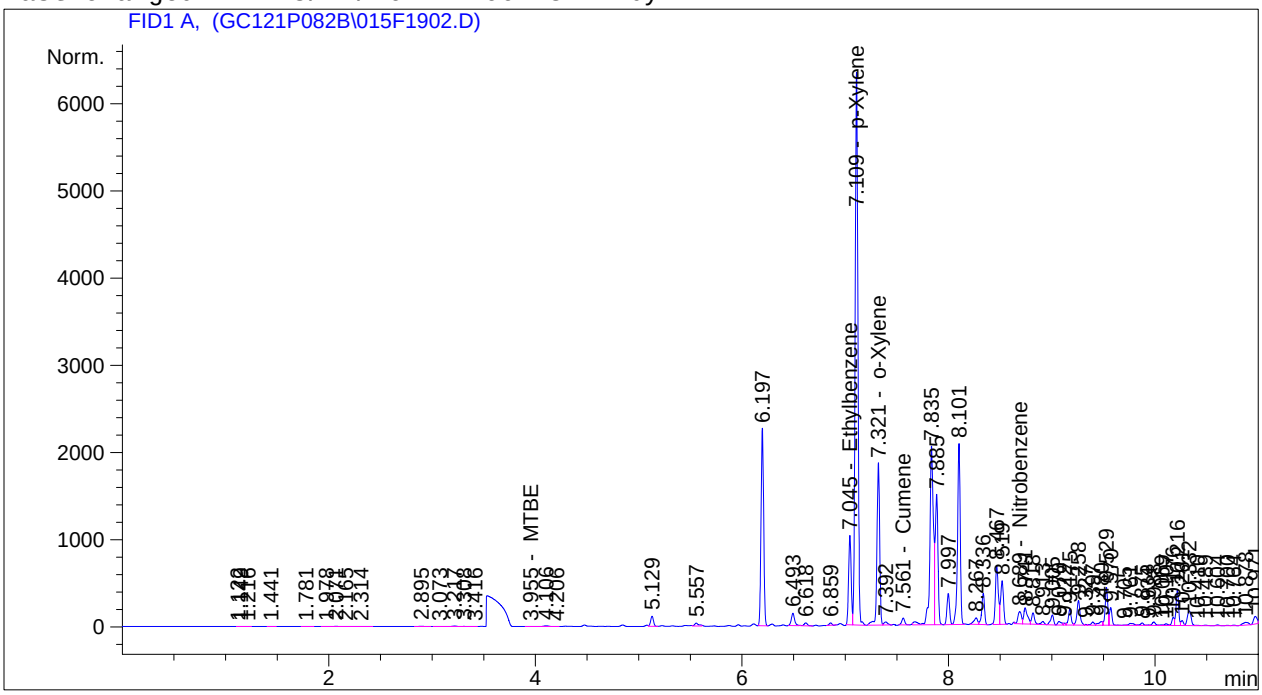

EM-BTRF-001336

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\015F1902.D
Sample Name: M18 R2A XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 19
Acq. Instrument	: Lucy	Location	: Vial 15
Injection Date	: 02-Aug-11, 05:55:33	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

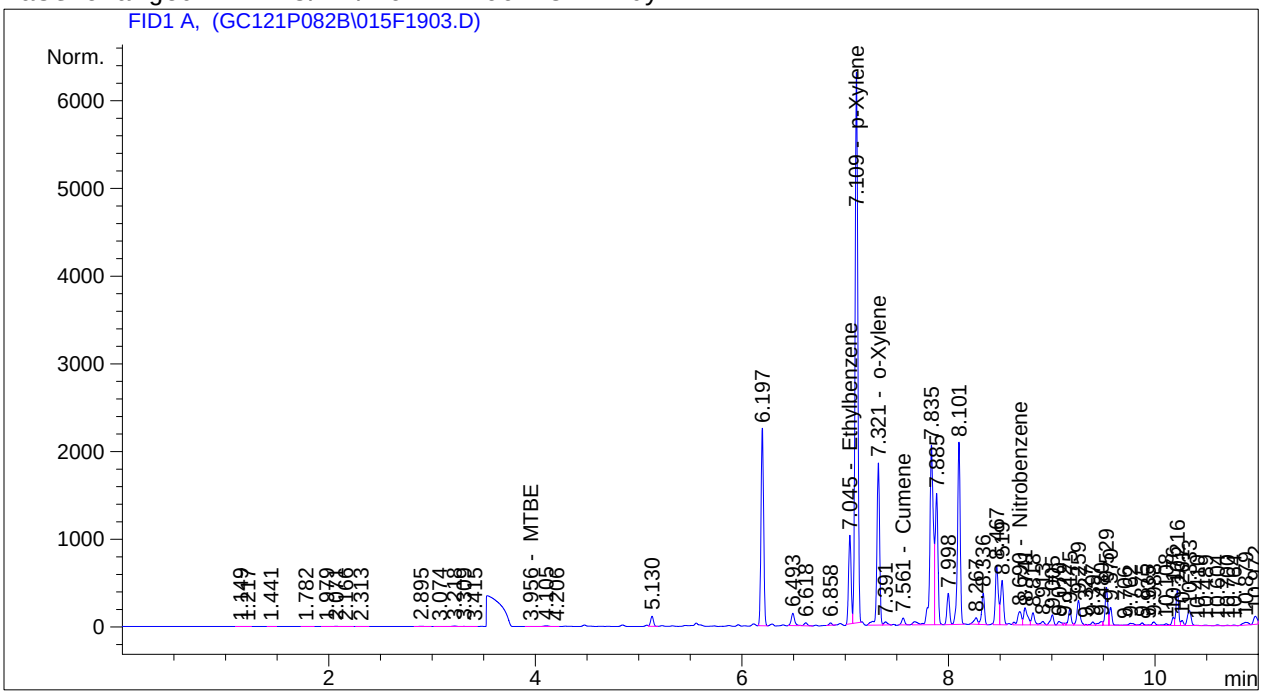
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.955	BV	3.19919	1.00136	3.20355		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	1769.70947	4.87141e-1	862.09882		Ethylbenzene
7.109	VB	S 1.17822e4	4.84302e-1	5706.16696		p-Xylene
7.270		-	-	-		Styrene
7.321	BV	3419.31104	4.79396e-1	1639.20247		o-Xylene
7.561	BB	155.71547	4.85117e-1	75.54019		Cumene
8.689	BV	336.19046	8.00715e-1	269.19282		Nitrobenzene

Totals : 8555.40482

EM-BTRF-001337

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\015F1903.D
Sample Name: M18 R2A XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 19
Acq. Instrument	: Lucy	Location	: Vial 15
Injection Date	: 02-Aug-11, 06:18:24	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	3.20534	1.00135	3.20965		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	1727.49561	4.87142e-1	841.53570		Ethylbenzene
7.109	VB	S 1.15826e4	4.84302e-1	5609.50245		p-Xylene
7.270		-	-	-		Styrene
7.321	BV	3413.15723	4.79396e-1	1636.25242		o-Xylene
7.561	BB	155.31241	4.85117e-1	75.34474		Cumene
8.690	BV	423.76117	8.00640e-1	339.28016		Nitrobenzene

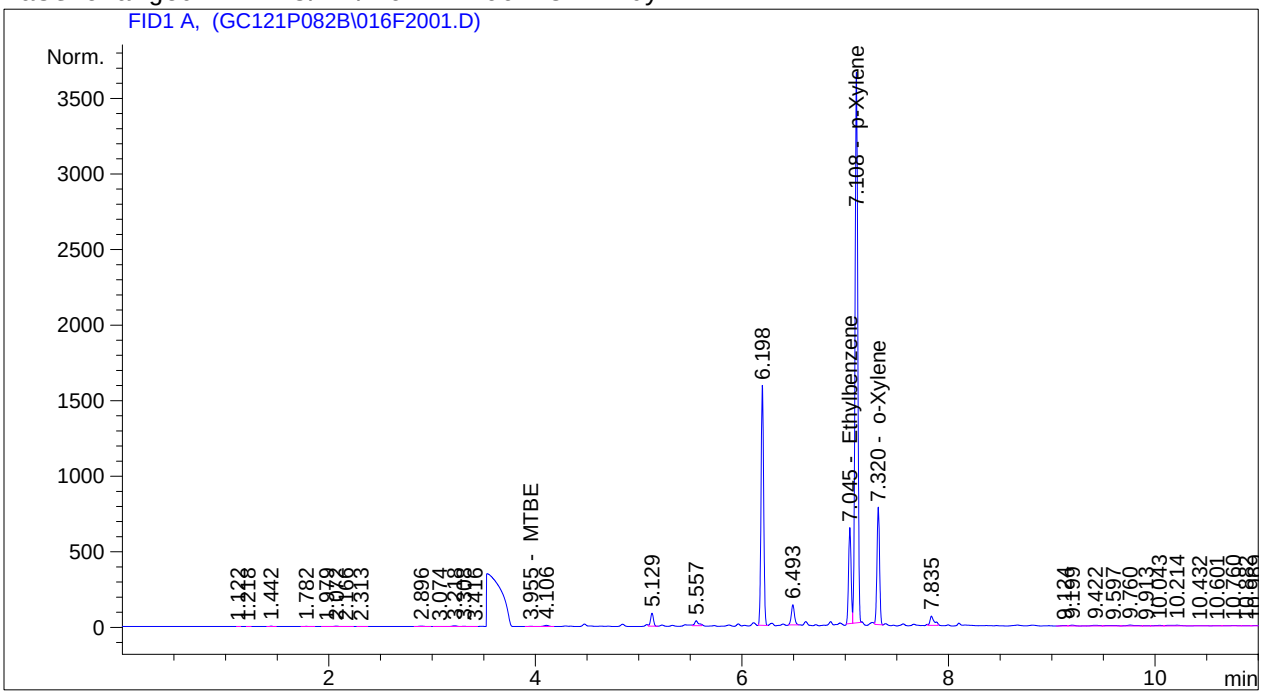
Totals : 8505.12513

EM-BTRF-001338

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\016F2001.D
Sample Name: M18 R2A XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 20
Acq. Instrument	: Lucy	Location	: Vial 16
Injection Date	: 02-Aug-11, 06:41:08	Inj	: 1
		Inj Volume	: External

Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed : 8/22/2011 2:06:43 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

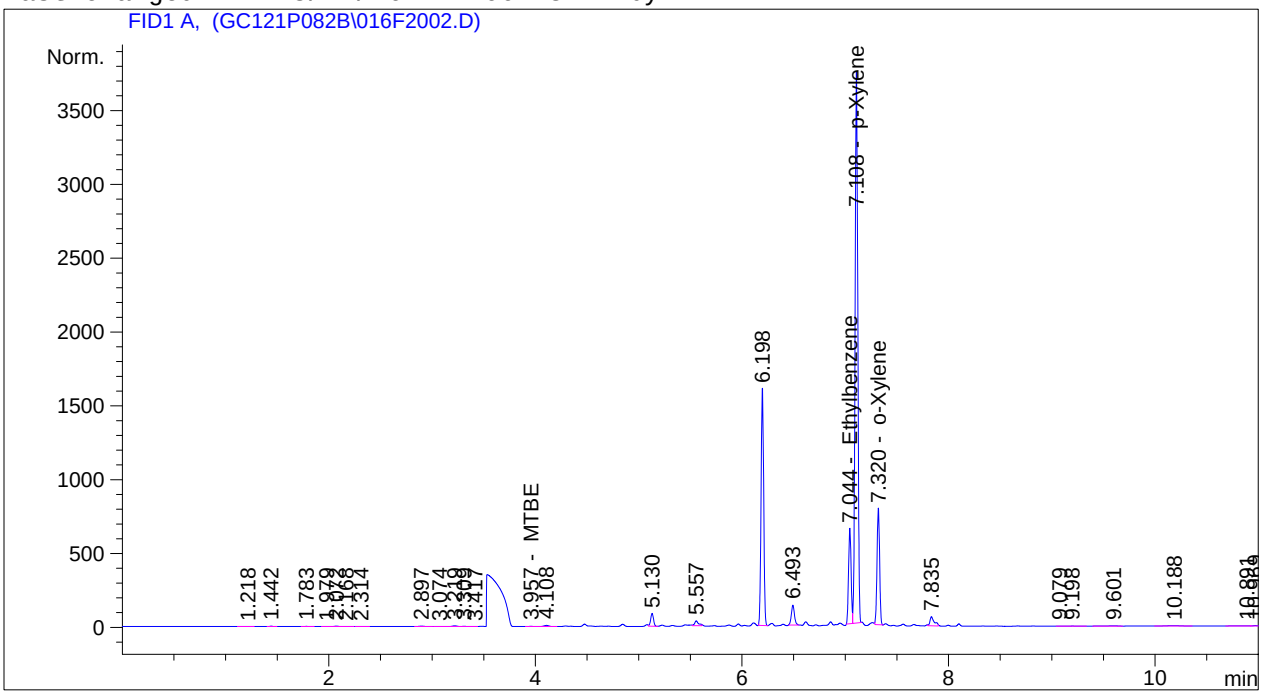
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.955	BV	2.51772	1.00345	2.52641		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	1085.19080	4.87156e-1	528.65770		Ethylbenzene
7.108	VB	S 6712.87793	4.84305e-1	3251.07891		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	1354.79346	4.79408e-1	649.49907		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 4431.76209

EM-BTRF-001339

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\016F2002.D
Sample Name: M18 R2A XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 20
Acq. Instrument	: Lucy	Location	: Vial 16
Injection Date	: 02-Aug-11, 07:04:01	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

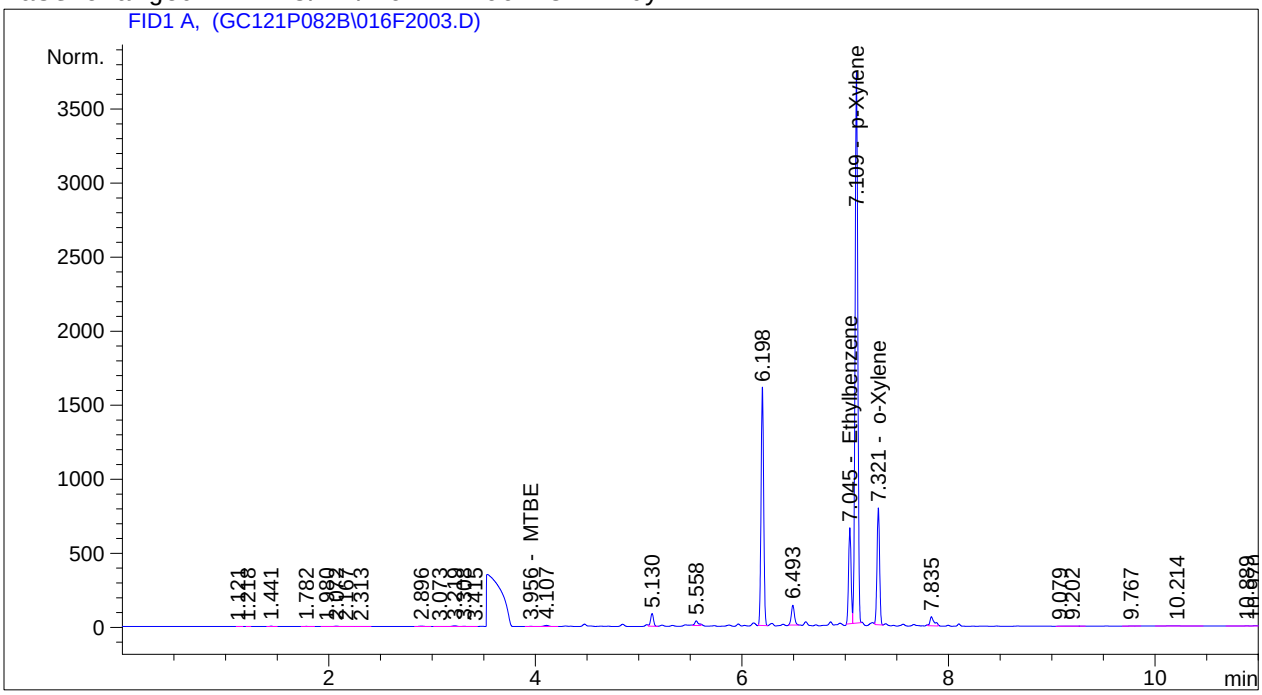
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.957	BV	2.44053	1.00376	2.44971		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	1102.62964	4.87156e-1	537.15247		Ethylbenzene
7.108	VB	S 6827.09863	4.84305e-1	3306.39590		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	1378.87292	4.79408e-1	661.04246		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 4507.04054

EM-BTRF-001340

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\016F2003.D
Sample Name: M18 R2A XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 20
Acq. Instrument	: Lucy	Location	: Vial 16
Injection Date	: 02-Aug-11, 07:26:57	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	2.45891	1.00368	2.46797		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	1097.72266	4.87156e-1	534.76219		Ethylbenzene
7.109	VB	S 6800.17285	4.84305e-1	3293.35577		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	1373.94214	4.79408e-1	658.67870		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

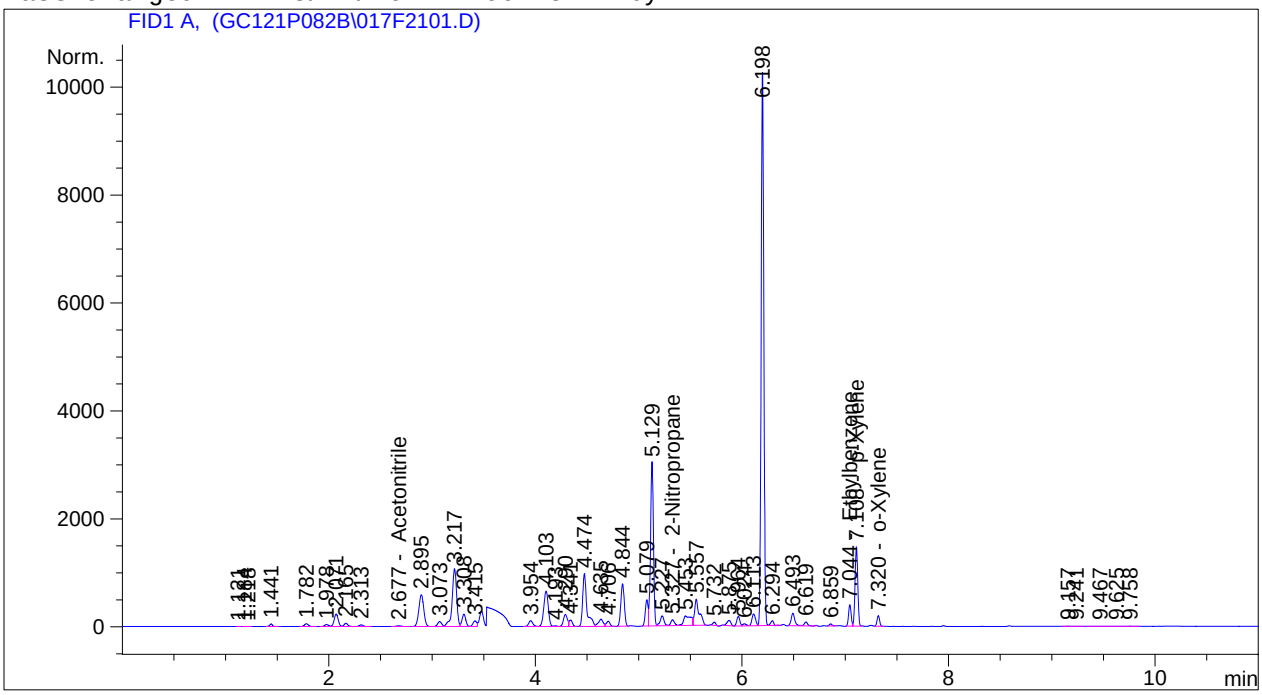
Totals : 4489.26463

EM-BTRF-001341

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\017F2101.D
Sample Name: M18 R2A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 21
Acq. Instrument	: Lucy	Location	: Vial 17
Injection Date	: 02-Aug-11, 07:49:47	Inj	: 1
		Inj Volume	: External

Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed : 8/22/2011 2:06:43 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

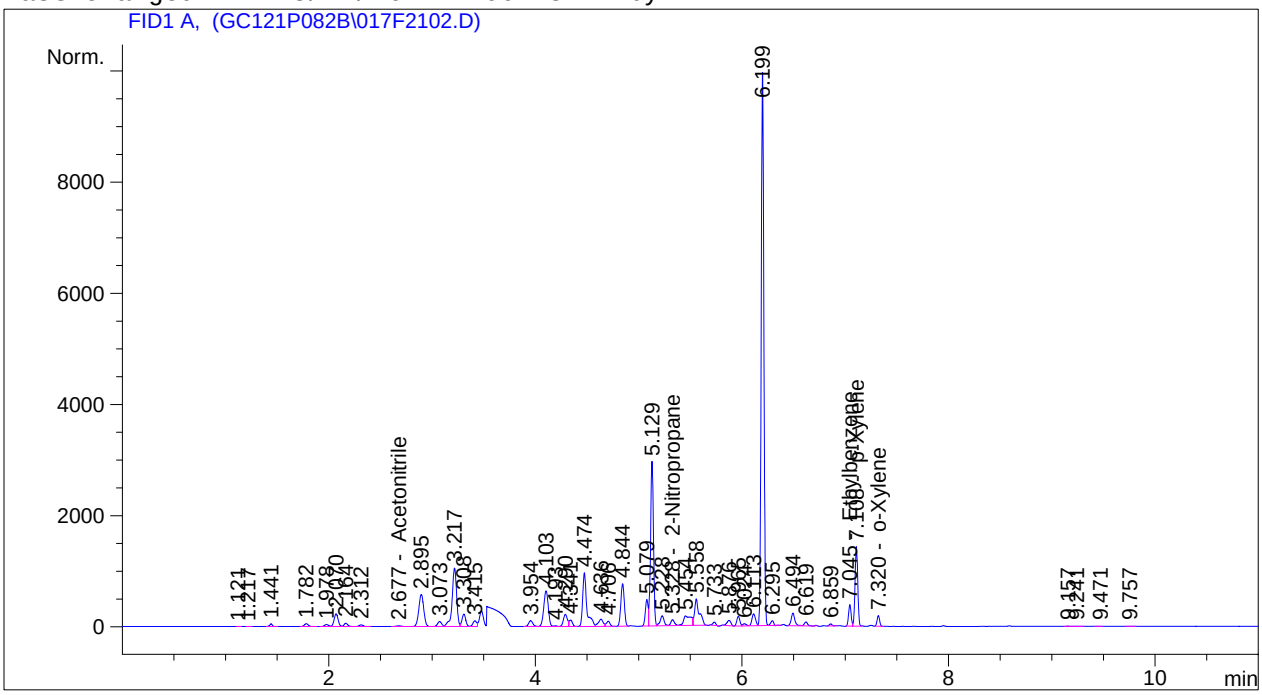
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	44.35627	2.20021	97.59316		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.327	VV	269.10025	1.26349	340.00554		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	681.68341	4.87179e-1	332.10214		Ethylbenzene
7.108	VB	2701.95898	4.84313e-1	1308.59411		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	340.06583	4.79471e-1	163.05158		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 2241.34653

EM-BTRF-001342

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\017F2102.D
Sample Name: M18 R2A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 21
Acq. Instrument	: Lucy	Location	: Vial 17
Injection Date	: 02-Aug-11, 08:12:34	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

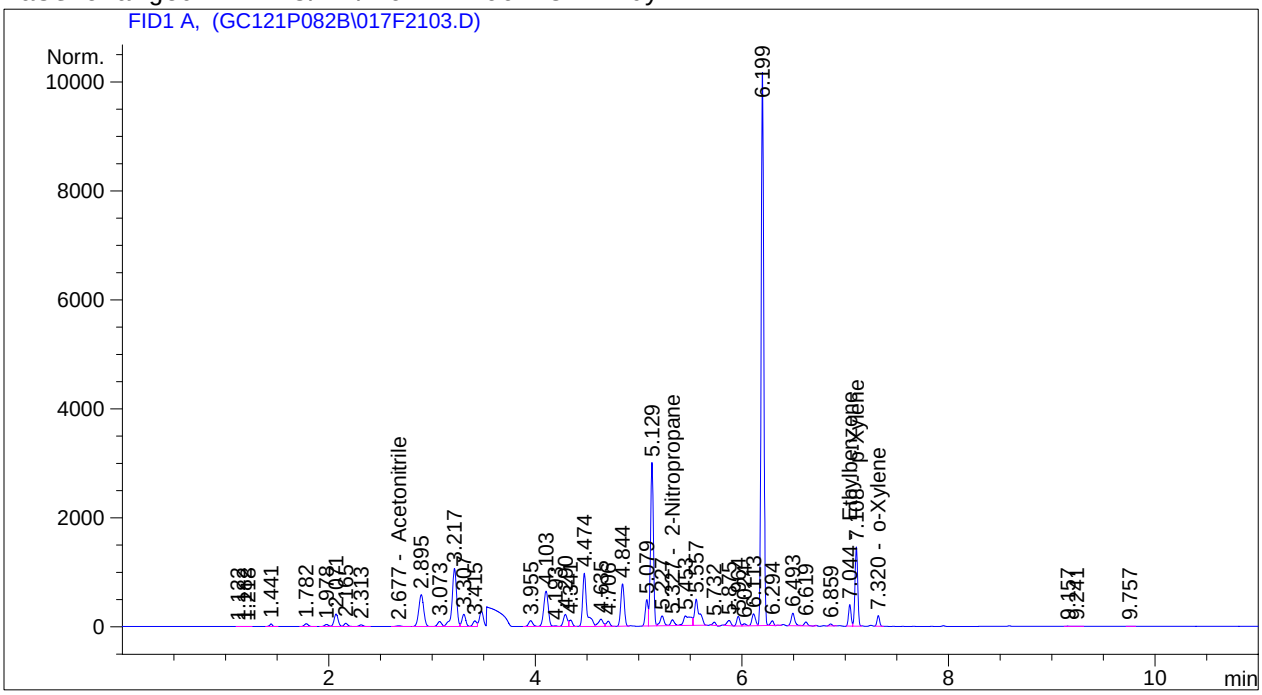
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	43.55953	2.20032	95.84509		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.328	VV	262.66132	1.26349	331.87113		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	661.87708	4.87181e-1	322.45412		Ethylbenzene
7.108	VB	2620.44507	4.84314e-1	1269.11699		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	329.61737	4.79473e-1	158.04273		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 2177.33007

EM-BTRF-001343

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\017F2103.D
Sample Name: M18 R2A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 21
Acq. Instrument	: Lucy	Location	: Vial 17
Injection Date	: 02-Aug-11, 08:35:28	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	44.02644	2.20026	96.86950		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.327	VV	266.12195	1.26349	336.24300		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	672.78613	4.87180e-1	327.76812		Ethylbenzene
7.108	VB	2663.59351	4.84313e-1	1290.01374		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	335.26404	4.79472e-1	160.74967		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 2211.64403

EM-BTRF-001344

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\020F2401.D
Sample Name: M18 R2A CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  24
Acq. Instrument : Lucy                              Location : Vial 20
Injection Date  : 02-Aug-11, 11:14:16                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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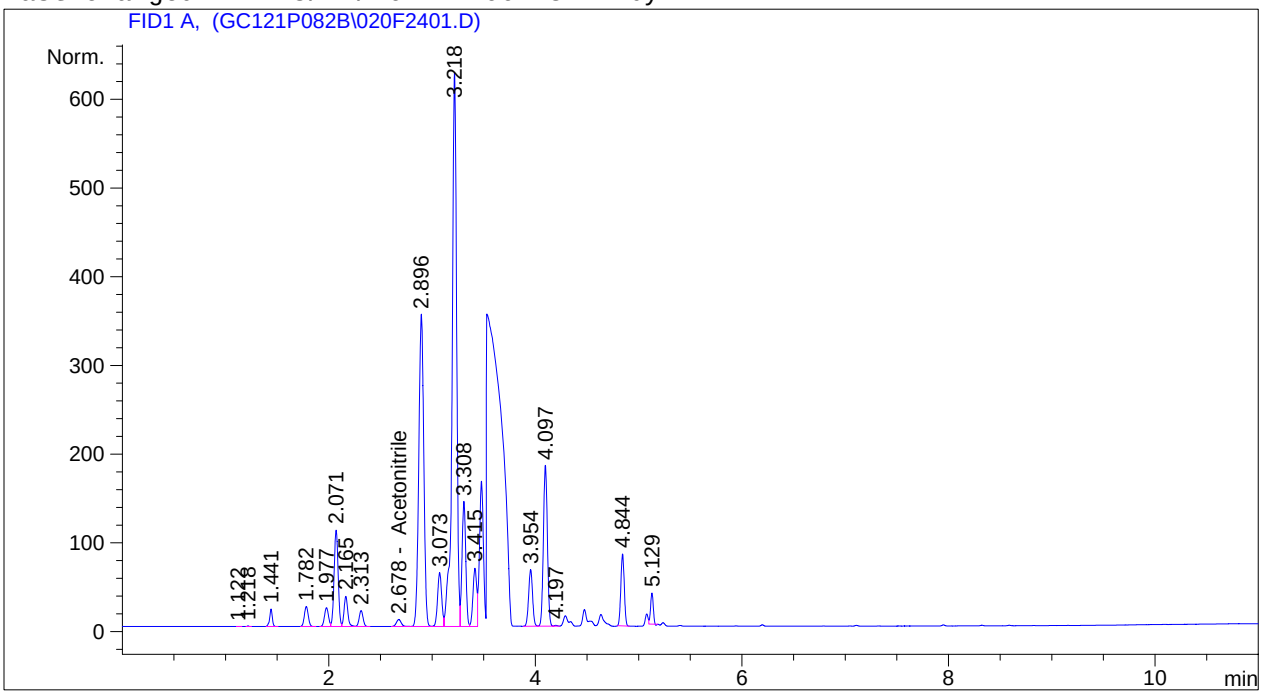


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.678 BV       25.96137    2.20460   57.23446    Acetonitrile
  3.138            -           -          -        Acrylonitrile
  4.005            -           -          -        MTBE
  5.279            -           -          -        2-Nitropropane
  5.492            -           -          -        Isooctane
  5.787            -           -          -        MIBK
  6.921            -           -          -        Chlorobenzene
  7.044            -           -          -        Ethylbenzene
  7.115            -           -          -        p-Xylene
  7.270            -           -          -        Styrene
  7.320            -           -          -        o-Xylene
  7.561            -           -          -        Cumene
  8.709            -           -          -        Nitrobenzene

Totals :                                57.23446
```

EM-BTRF-001345

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\020F2402.D
Sample Name: M18 R2A CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  24
Acq. Instrument : Lucy                              Location : Vial 20
Injection Date  : 02-Aug-11, 11:36:51                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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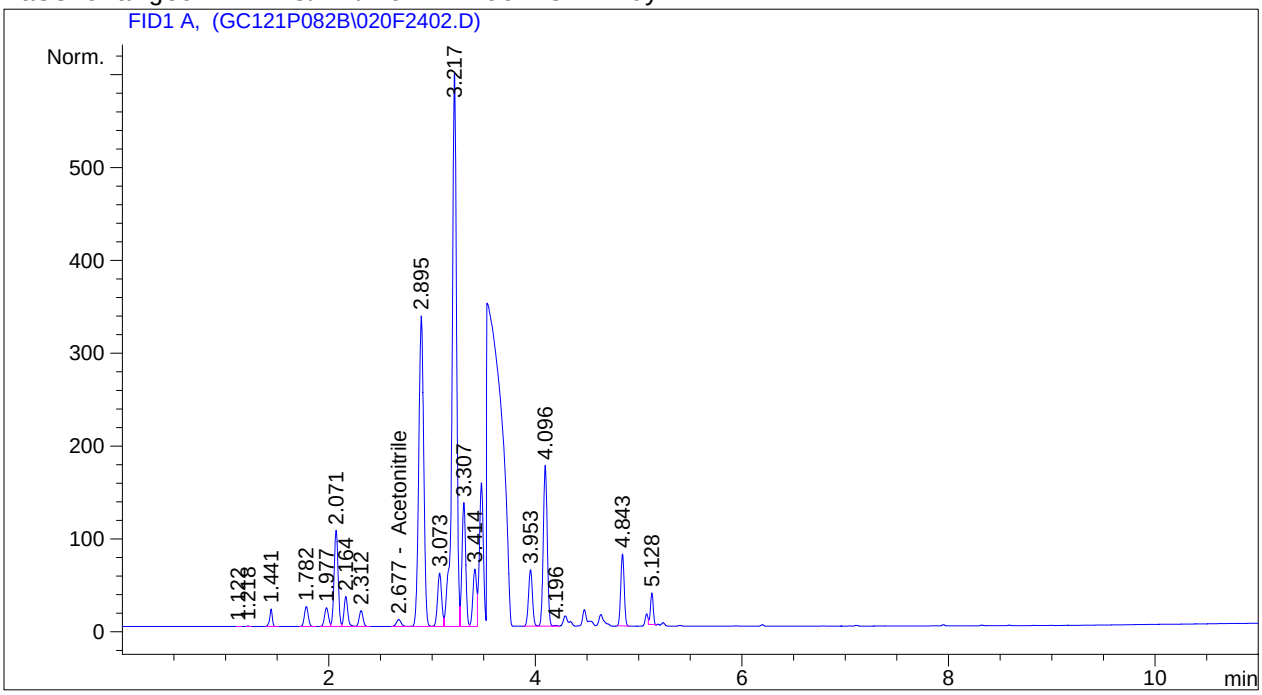


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.677 BB       24.49387    2.20524   54.01475    Acetonitrile
  3.138            -           -          -        Acrylonitrile
  4.005            -           -          -        MTBE
  5.279            -           -          -        2-Nitropropane
  5.492            -           -          -        Isooctane
  5.787            -           -          -        MIBK
  6.921            -           -          -        Chlorobenzene
  7.044            -           -          -        Ethylbenzene
  7.115            -           -          -        p-Xylene
  7.270            -           -          -        Styrene
  7.320            -           -          -        o-Xylene
  7.561            -           -          -        Cumene
  8.709            -           -          -        Nitrobenzene

Totals :                                54.01475
```

EM-BTRF-001346

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\020F2403.D
Sample Name: M18 R2A CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  24
Acq. Instrument : Lucy                              Location : Vial 20
Injection Date  : 02-Aug-11, 11:59:29                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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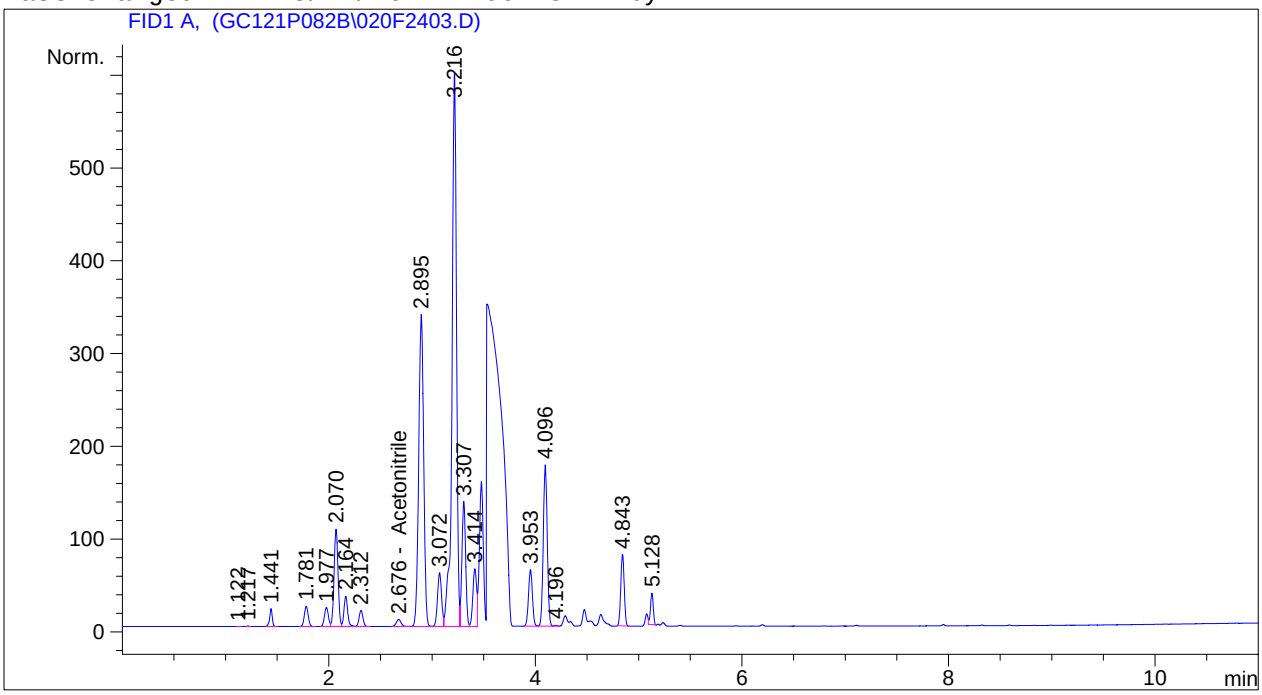


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.676 BB       24.72295    2.20513   54.51736    Acetonitrile
  3.138            -           -          -        Acrylonitrile
  4.005            -           -          -        MTBE
  5.279            -           -          -        2-Nitropropane
  5.492            -           -          -        Isooctane
  5.787            -           -          -        MIBK
  6.921            -           -          -        Chlorobenzene
  7.044            -           -          -        Ethylbenzene
  7.115            -           -          -        p-Xylene
  7.270            -           -          -        Styrene
  7.320            -           -          -        o-Xylene
  7.561            -           -          -        Cumene
  8.709            -           -          -        Nitrobenzene

Totals :                                54.51736
```
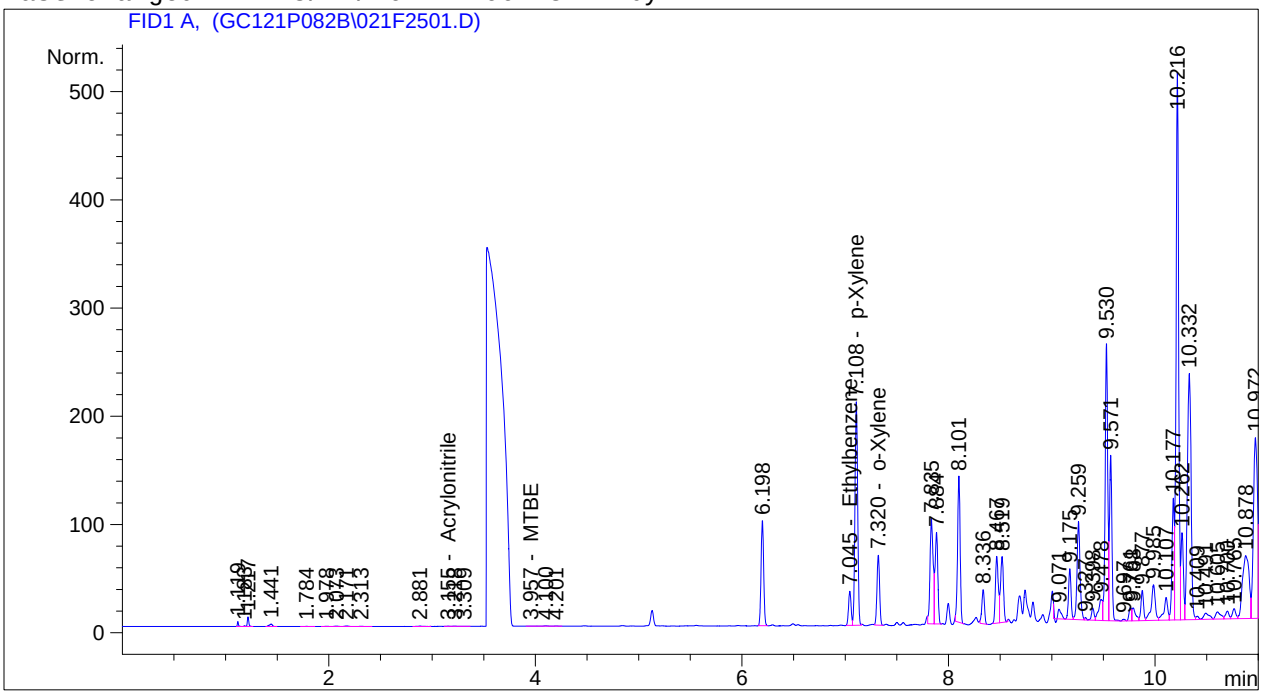

EM-BTRF-001347

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\021F2501.D
Sample Name: M18 R2B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 25
Acq. Instrument	: Lucy	Location	: Vial 21
Injection Date	: 02-Aug-11, 12:22:05	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

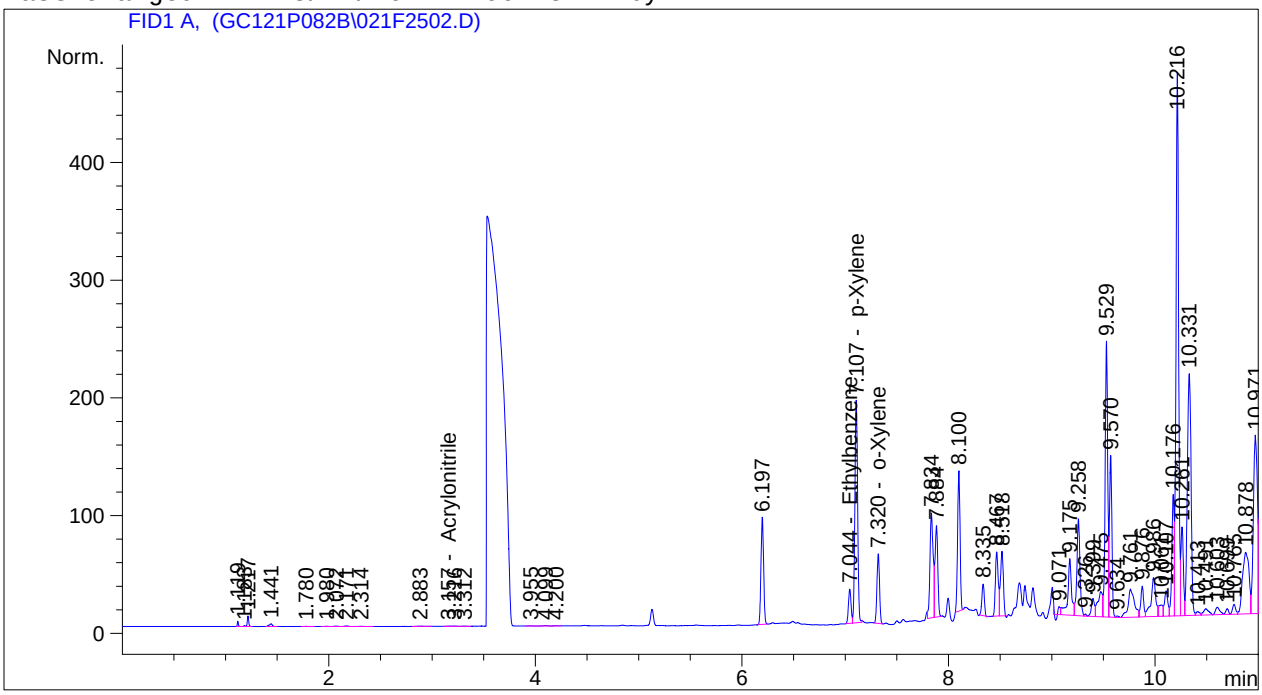
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.155	BV	3.89481e-1	1.46504	5.70606e-1		Acrylonitrile
3.957	BB	2.00336e-1	1.01056	2.02451e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	54.22614	4.87894e-1	26.45663		Ethylbenzene
7.108	VB	377.65741	4.84399e-1	182.93675		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	113.43337	4.79637e-1	54.40687		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 264.57331

EM-BTRF-001348

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\021F2502.D
Sample Name: M18 R2B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 25
Acq. Instrument	: Lucy	Location	: Vial 21
Injection Date	: 02-Aug-11, 12:44:37	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

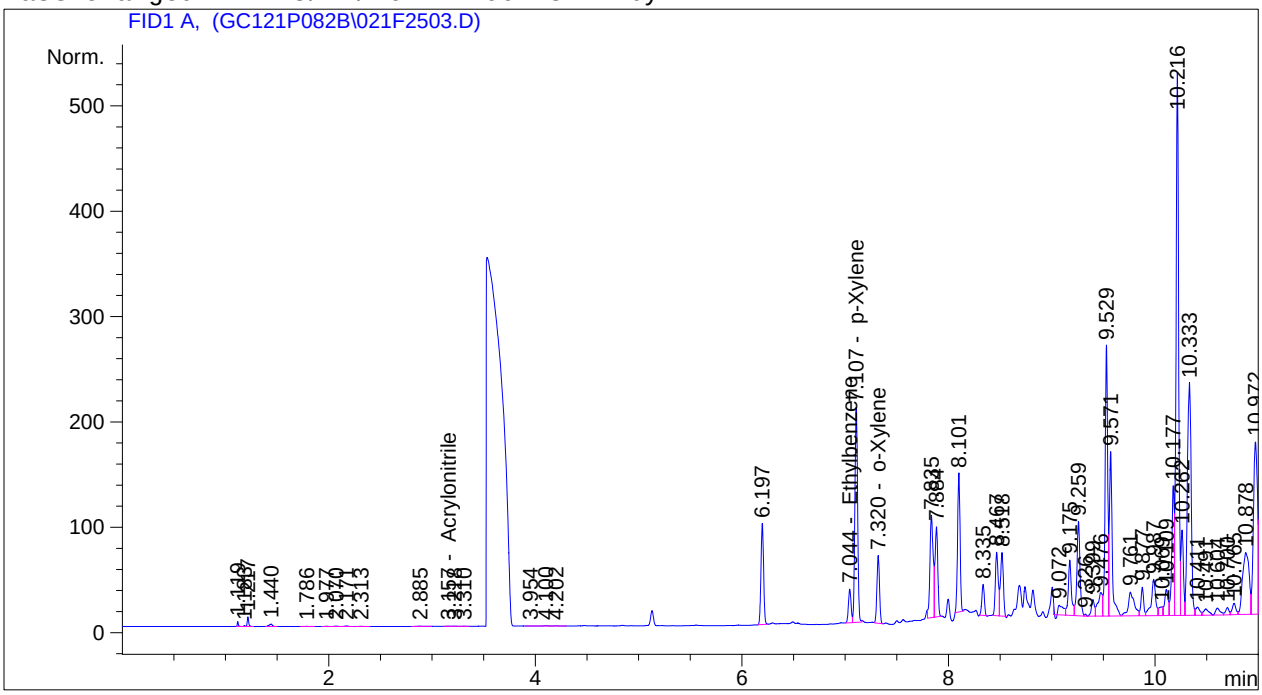
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.157	BV	3.93050e-1	1.46504	5.75834e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	50.68157	4.87949e-1	24.73001		Ethylbenzene
7.107	VB	350.98553	4.84406e-1	170.01958		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	102.68587	4.79663e-1	49.25466		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 244.58008

EM-BTRF-001349

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\021F2503.D
Sample Name: M18 R2B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 25
Acq. Instrument	: Lucy	Location	: Vial 21
Injection Date	: 02-Aug-11, 13:07:22	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

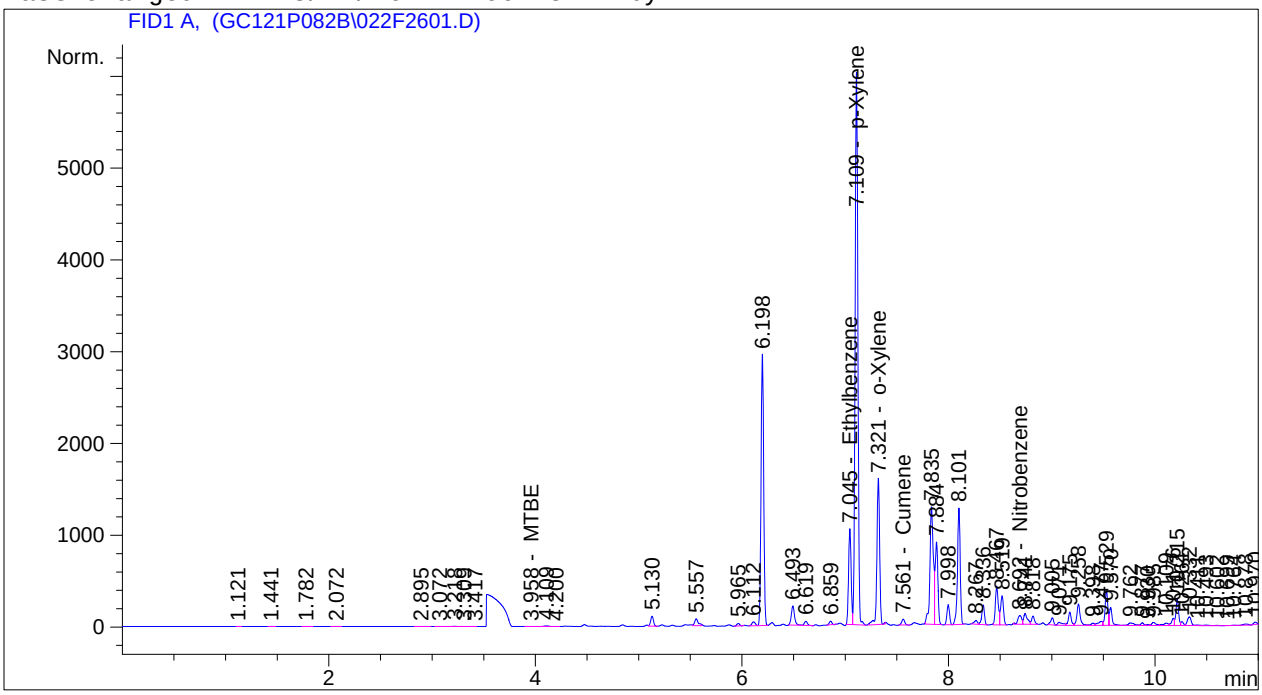
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.157	BV	4.06552e-1	1.46504	5.95615e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	55.80339	4.87873e-1	27.22494		Ethylbenzene
7.107	VB	378.81195	4.84398e-1	183.49589		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	111.50357	4.79642e-1	53.48175		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 264.79820

EM-BTRF-001350

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\022F2601.D
Sample Name: M18 R2B Spk XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 26
Acq. Instrument	: Lucy	Location	: Vial 22
Injection Date	: 02-Aug-11, 13:30:22	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.958	BV	1.53955	1.00968	1.55445		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	1810.82654	4.87141e-1	882.12767		Ethylbenzene
7.109	VB	S 1.12479e4	4.84303e-1	5447.39891		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	2943.03394	4.79397e-1	1410.88131		o-Xylene
7.561	BB	126.89043	4.85163e-1	61.56260		Cumene
8.692	BV	250.11891	8.00840e-1	200.30533		Nitrobenzene

Totals : 8003.83027

EM-BTRF-001351

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\022F2602.D
Sample Name: M18 R2B Spk XAD FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  26
Acq. Instrument : Lucy                              Location : Vial 22
Injection Date  : 02-Aug-11, 13:52:52                    Inj :   2
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
                  (modified after loading)
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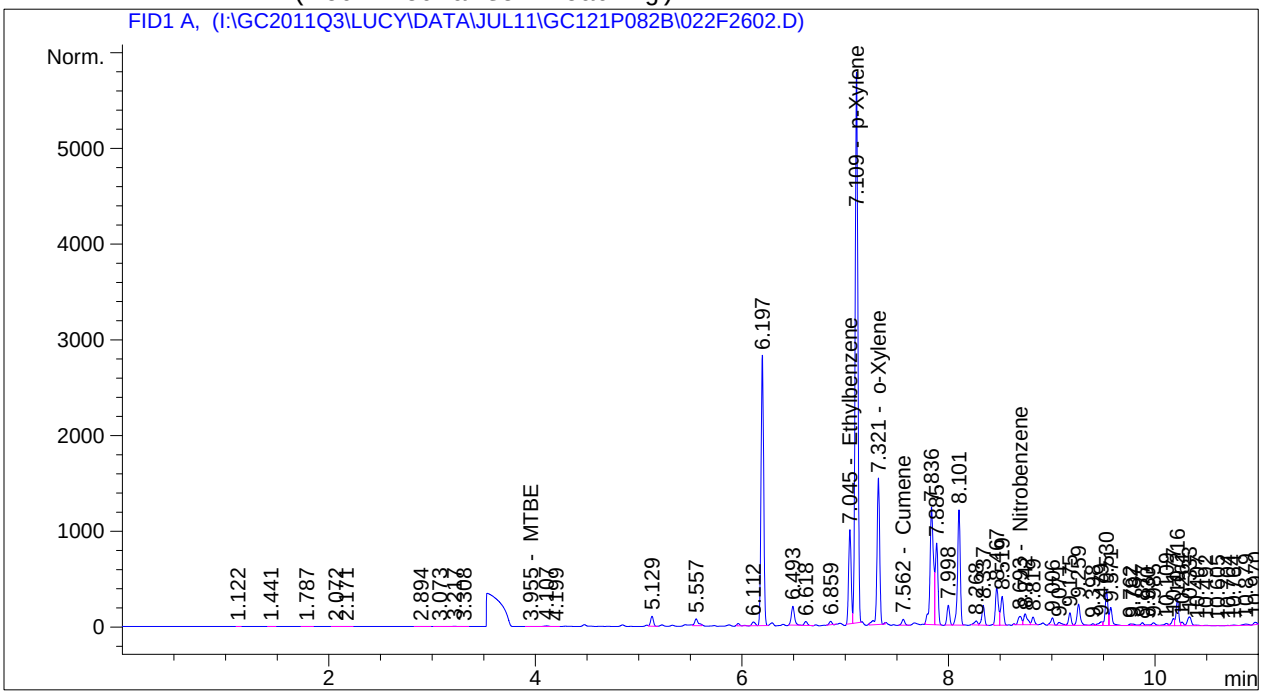


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  3.955 BV       1.53284    1.00975    1.54778     MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.045 BV     1686.56421 4.87143e-1  821.59730    Ethylbenzene
  7.109 VB S   1.05057e4  4.84303e-1 5087.92594    p-Xylene
  7.270            -          -          -         Styrene
  7.321 BB     2789.54126 4.79397e-1 1337.29887    o-Xylene
  7.562 BB      118.92419 4.85180e-1   57.69969    Cumene
  8.693 BV      222.56204 8.00901e-1  178.25015    Nitrobenzene

Totals :                              7484.31974
```
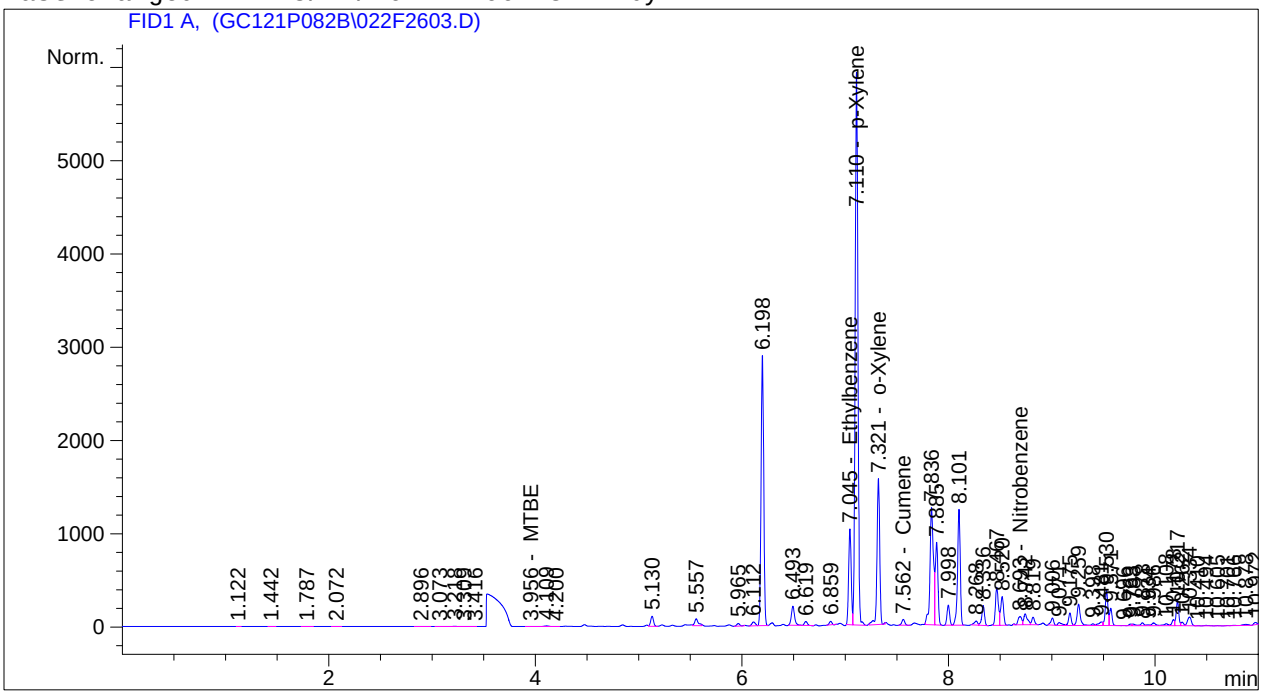

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\022F2603.D
Sample Name: M18 R2B Spk XAD FH 0711-64

```
==================================================================
Acq. Operator   : JBB                          Seq. Line :  26
Acq. Instrument : Lucy                          Location : Vial 22
Injection Date  : 02-Aug-11, 14:14:40                Inj :   3
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```

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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  3.956 BV       1.50600    1.01003    1.52111     MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.045 BV     1770.13379 4.87141e-1  862.30551     Ethylbenzene
  7.110 VB S   1.10036e4  4.84303e-1 5329.07525     p-Xylene
  7.270            -          -          -         Styrene
  7.321 BB     2876.86206 4.79397e-1 1379.15935     o-Xylene
  7.562 BB      123.22450 4.85171e-1   59.78495     Cumene
  8.693 BV      226.79451 8.00891e-1  181.63762     Nitrobenzene

Totals :                              7813.48380
```

EM-BTRF-001353

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\023F2701.D
Sample Name: M18 R2B Spk XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  27
Acq. Instrument : Lucy                          Location : Vial 23
Injection Date  : 02-Aug-11, 14:36:32                Inj :   1
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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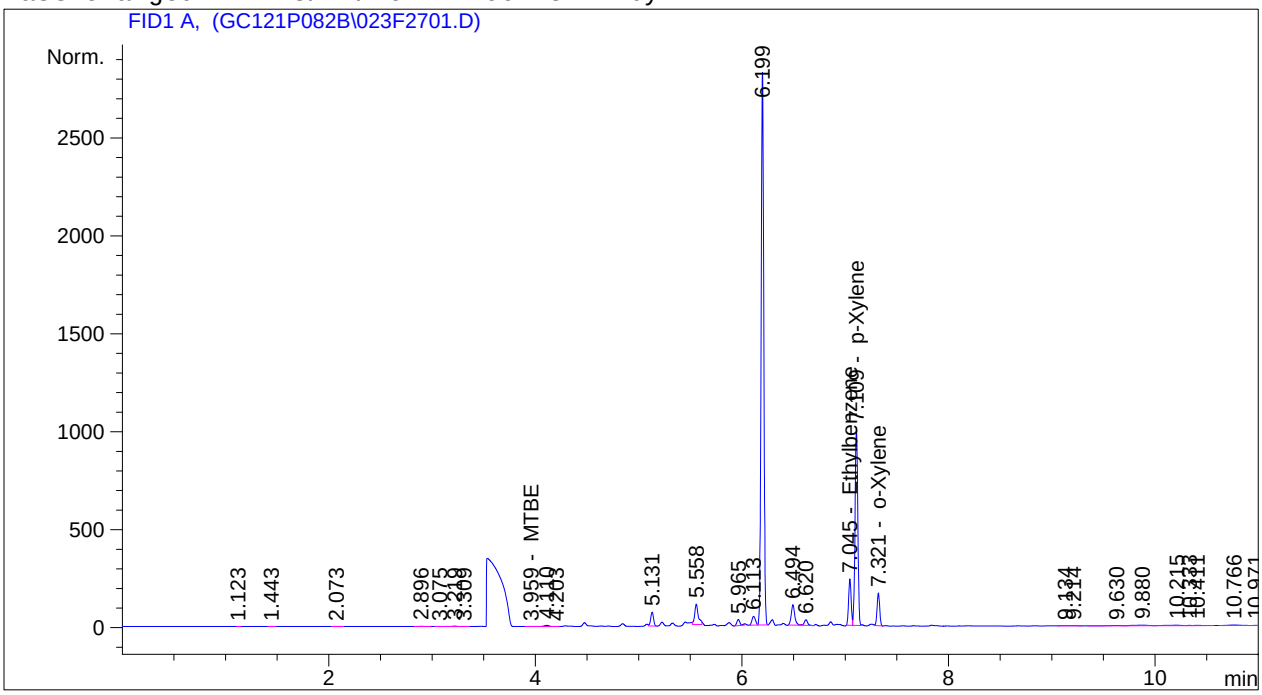
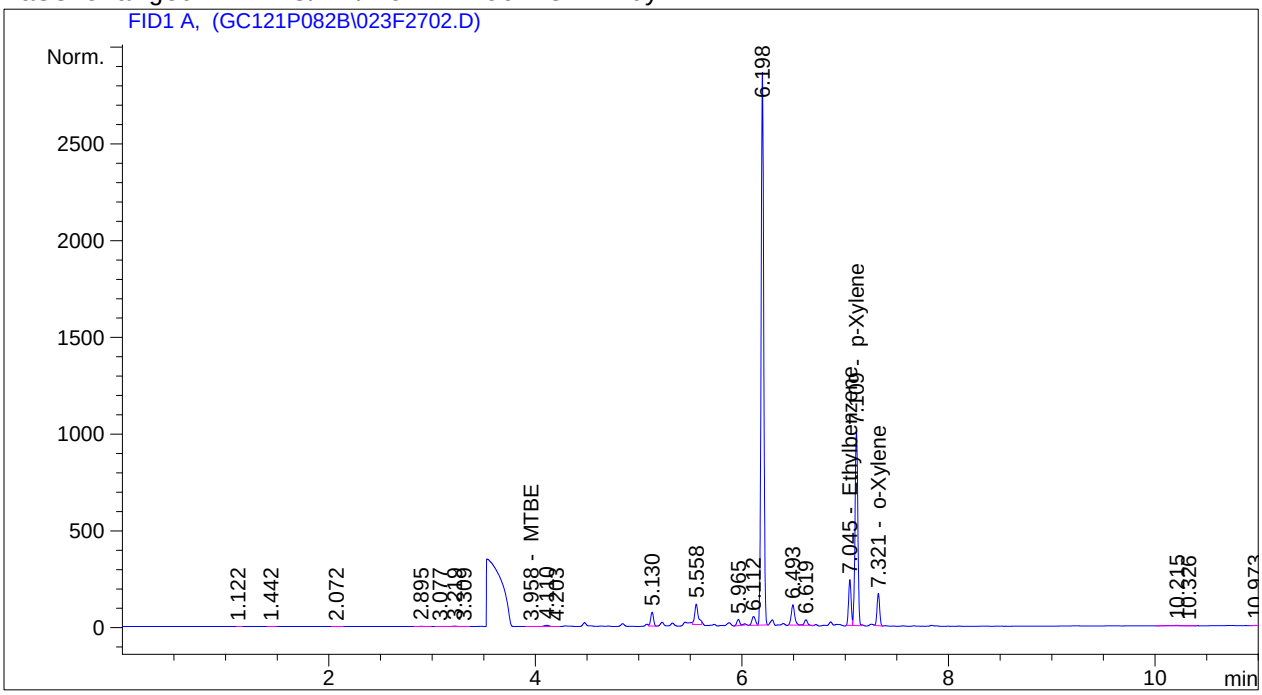



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -          Acetonitrile
  3.138            -          -          -          Acrylonitrile
  3.959 BV       1.15348    1.01056    1.16566     MTBE
  5.279            -          -          -          2-Nitropropane
  5.492            -          -          -          Isooctane
  5.787            -          -          -          MIBK
  6.921            -          -          -          Chlorobenzene
  7.045 BV     402.28671 4.87222e-1  196.00308     Ethylbenzene
  7.109 VB    1860.55518 4.84319e-1  901.10293     p-Xylene
  7.270            -          -          -          Styrene
  7.321 BB     288.99030 4.79485e-1  138.56663     o-Xylene
  7.561            -          -          -          Cumene
  8.709            -          -          -          Nitrobenzene

Totals :                             1236.83829
```

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\023F2702.D
Sample Name: M18 R2B Spk XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  27
Acq. Instrument : Lucy                              Location : Vial 23
Injection Date  : 02-Aug-11, 14:58:30                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

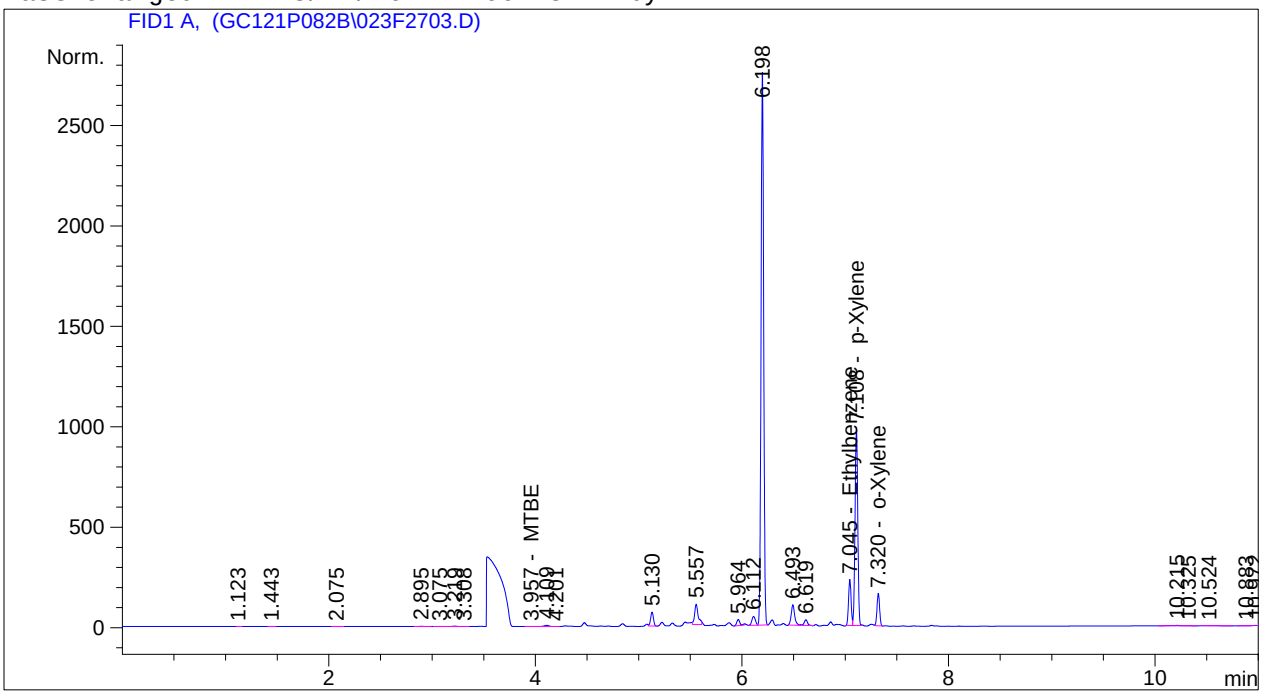
Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  3.958 BV       1.13321    1.01056    1.14517    MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.045 BV     406.88004 4.87221e-1  198.24057    Ethylbenzene
  7.109 VB    1878.54810 4.84319e-1  909.81689    p-Xylene
  7.270            -          -          -         Styrene
  7.321 BB     291.35840 4.79485e-1  139.70186    o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                            1248.90449
```

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\023F2703.D
Sample Name: M18 R2B Spk XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 27
Acq. Instrument	: Lucy	Location	: Vial 23
Injection Date	: 02-Aug-11, 15:20:18	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.957	BV	1.14530	1.01056	1.15739		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	391.17960	4.87225e-1	190.59260		Ethylbenzene
7.108	VB	1806.79285	4.84320e-1	875.06588		p-Xylene
7.270		-	-	-		Styrene
7.320	BB	280.78351	4.79488e-1	134.63240		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 1201.44827

EM-BTRF-001356

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\024F2801.D
Sample Name: M18 R2B Spk CT FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  28
Acq. Instrument : Lucy                              Location : Vial 24
Injection Date  : 02-Aug-11, 15:42:05                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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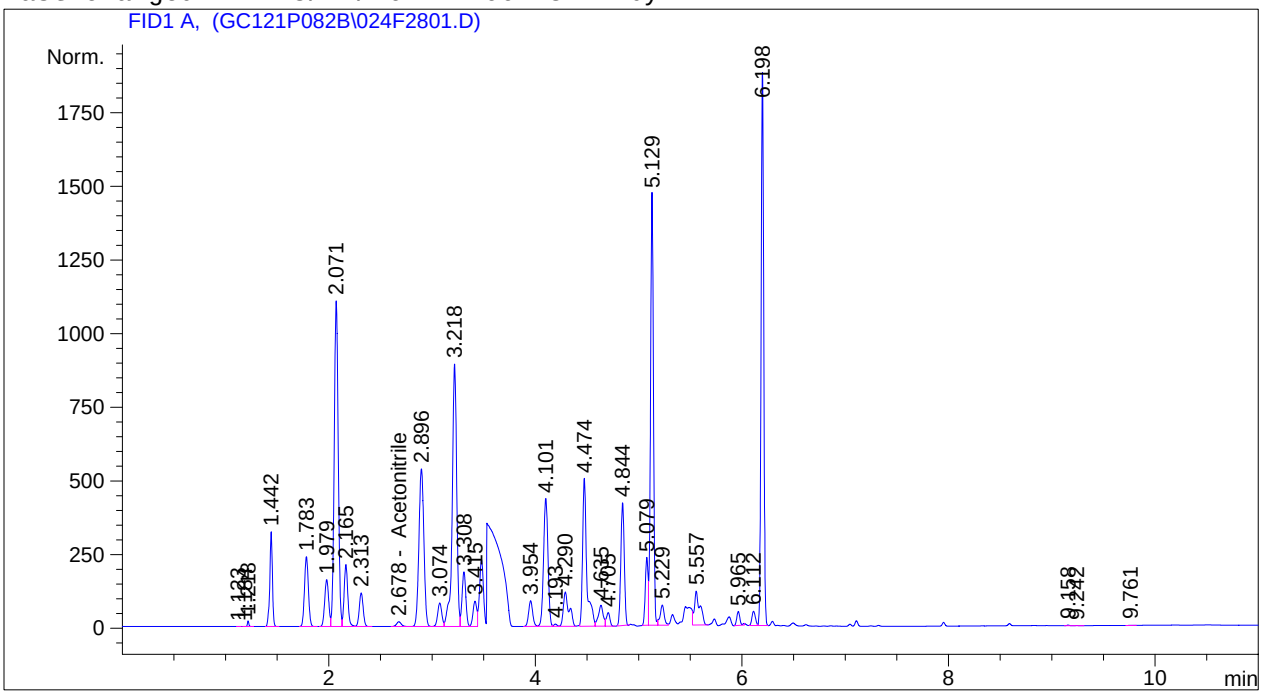


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BV	51.63555	2.19934	113.56400		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 113.56400

EM-BTRF-001357

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\024F2802.D
Sample Name: M18 R2B Spk CT FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  28
Acq. Instrument : Lucy                              Location : Vial 24
Injection Date  : 02-Aug-11, 16:03:34                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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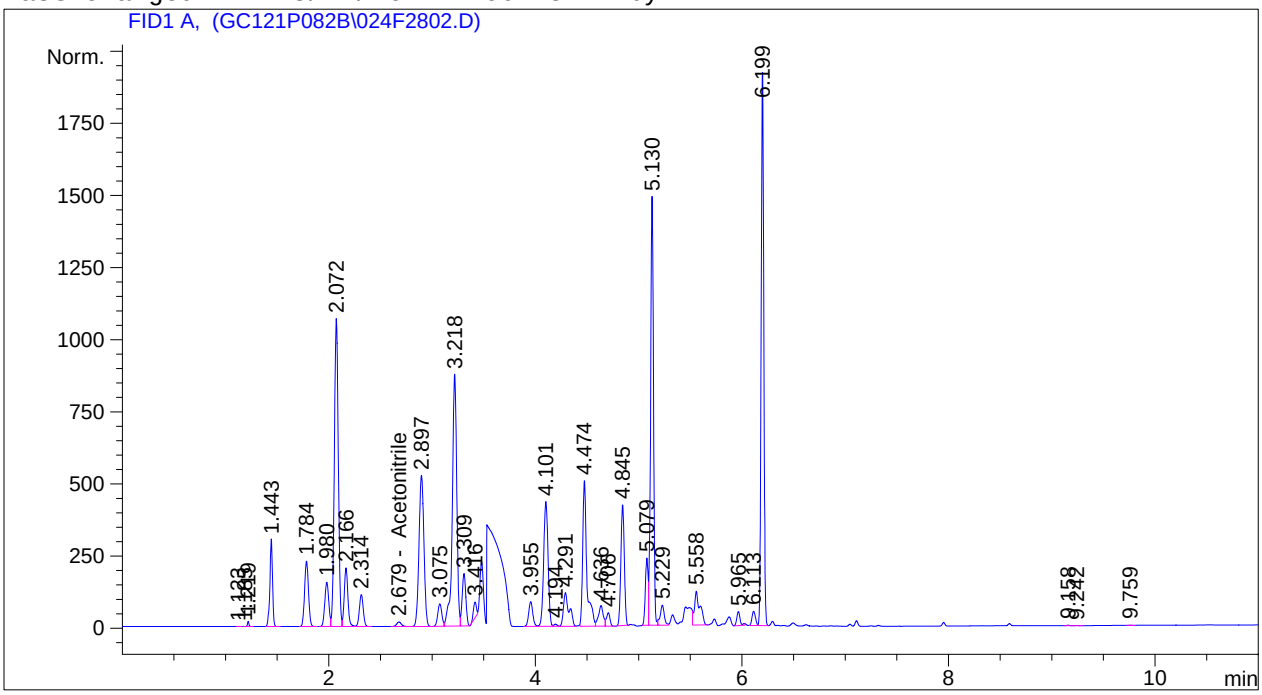


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.679	BV	49.18315	2.19960	108.18340		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 108.18340

EM-BTRF-001358

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\024F2803.D
Sample Name: M18 R2B Spk CT FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  28
Acq. Instrument : Lucy                              Location : Vial 24
Injection Date  : 02-Aug-11, 16:25:20                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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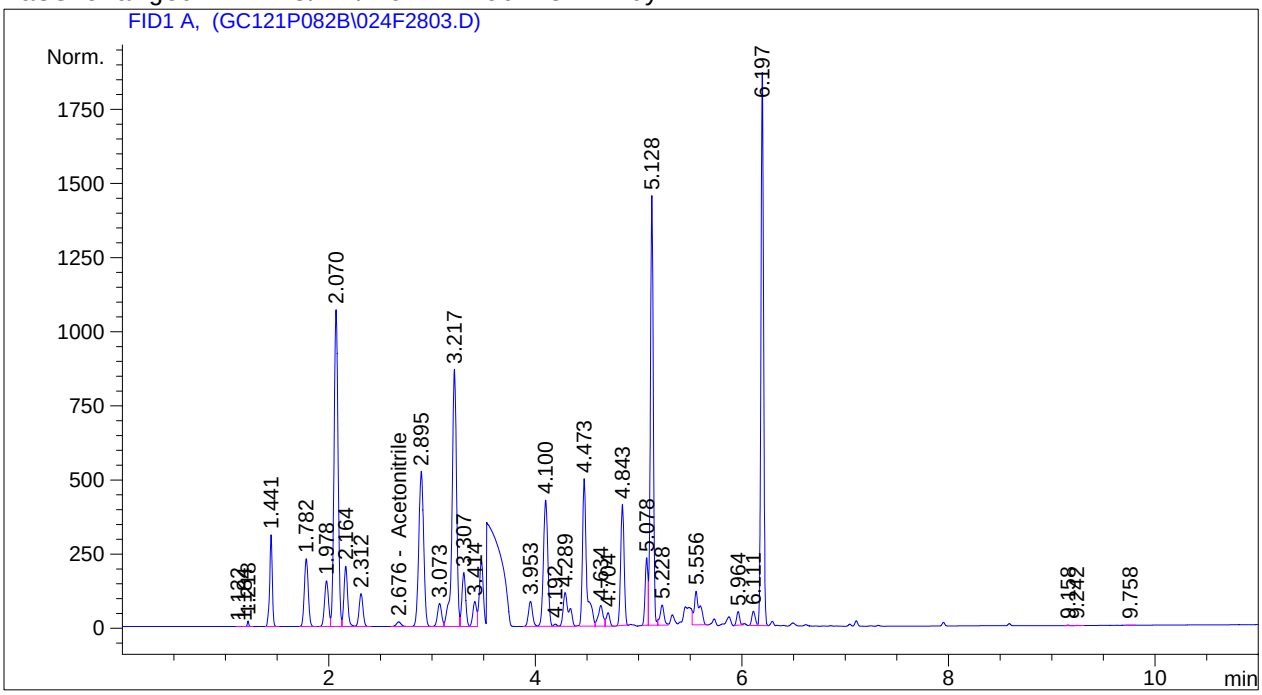


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	BV	50.04134	2.19951	110.06629		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 110.06629

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\025F2901.D
Sample Name: M18 R2B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  29
Acq. Instrument : Lucy                              Location : Vial 25
Injection Date  : 02-Aug-11, 16:46:56                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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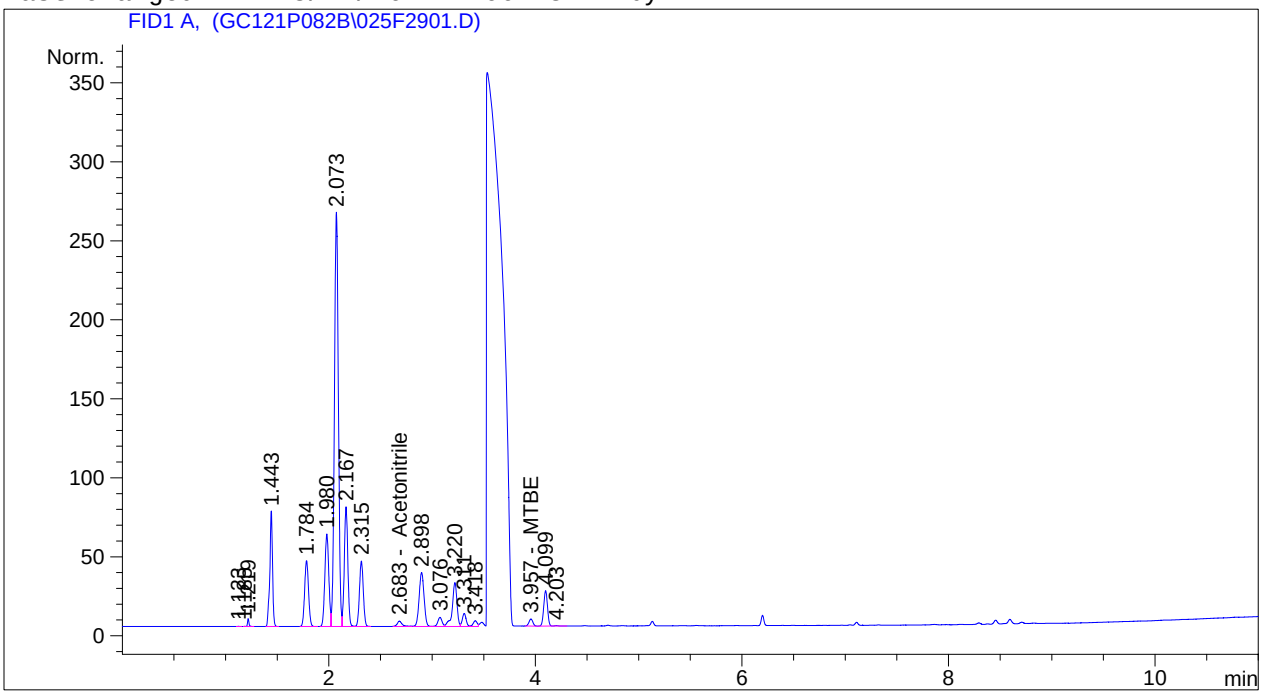


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.683 BB       10.96705    2.21907   24.33670    Acetonitrile
  3.138            -           -         -         Acrylonitrile
  3.957 BV       11.79632 9.95741e-1   11.74607    MTBE
  5.279            -           -         -         2-Nitropropane
  5.492            -           -         -         Isooctane
  5.787            -           -         -         MIBK
  6.921            -           -         -         Chlorobenzene
  7.044            -           -         -         Ethylbenzene
  7.115            -           -         -         p-Xylene
  7.270            -           -         -         Styrene
  7.320            -           -         -         o-Xylene
  7.561            -           -         -         Cumene
  8.709            -           -         -         Nitrobenzene

Totals :                                36.08277
```

EM-BTRF-001360

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\025F2902.D
Sample Name: M18 R2B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  29
Acq. Instrument : Lucy                              Location : Vial 25
Injection Date  : 02-Aug-11, 17:08:42                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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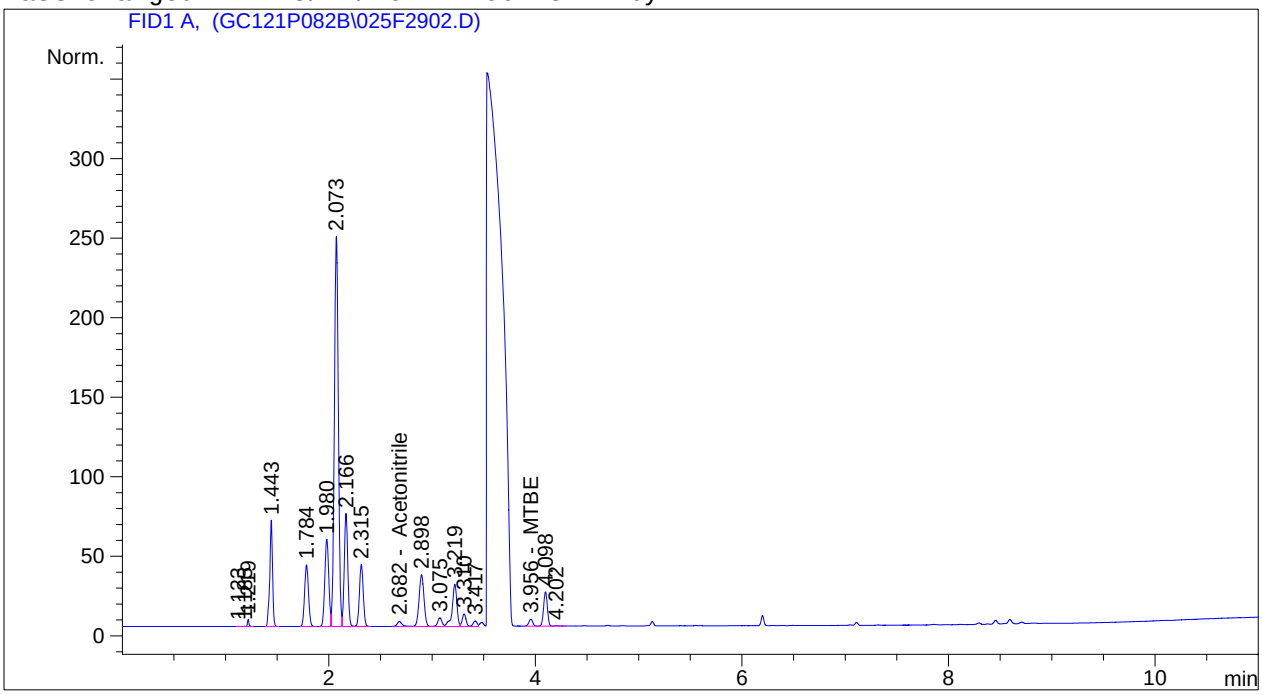


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.682 BB       10.27634    2.22076   22.82127    Acetonitrile
  3.138            -           -         -         Acrylonitrile
  3.956 BV       11.37580 9.95818e-1   11.32823    MTBE
  5.279            -           -         -         2-Nitropropane
  5.492            -           -         -         Isooctane
  5.787            -           -         -         MIBK
  6.921            -           -         -         Chlorobenzene
  7.044            -           -         -         Ethylbenzene
  7.115            -           -         -         p-Xylene
  7.270            -           -         -         Styrene
  7.320            -           -         -         o-Xylene
  7.561            -           -         -         Cumene
  8.709            -           -         -         Nitrobenzene

Totals :                                34.14950
```

EM-BTRF-001361

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\025F2903.D
Sample Name: M18 R2B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  29
Acq. Instrument : Lucy                              Location : Vial 25
Injection Date  : 02-Aug-11, 17:30:10                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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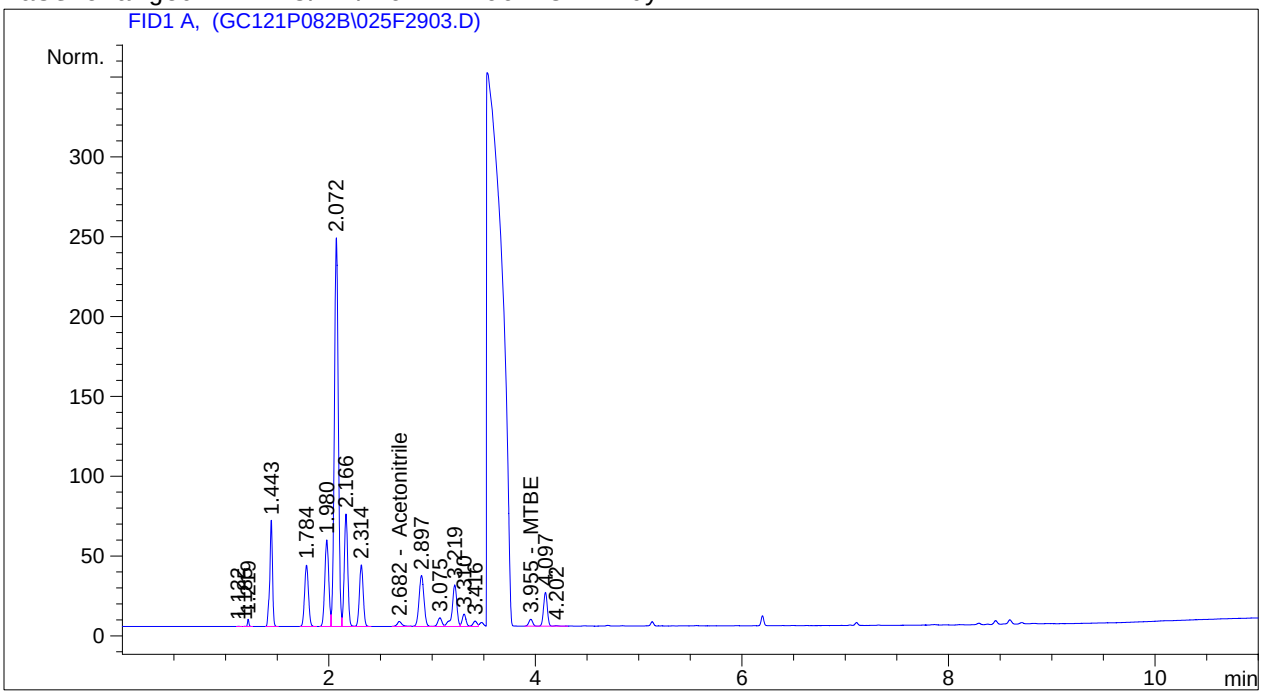


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

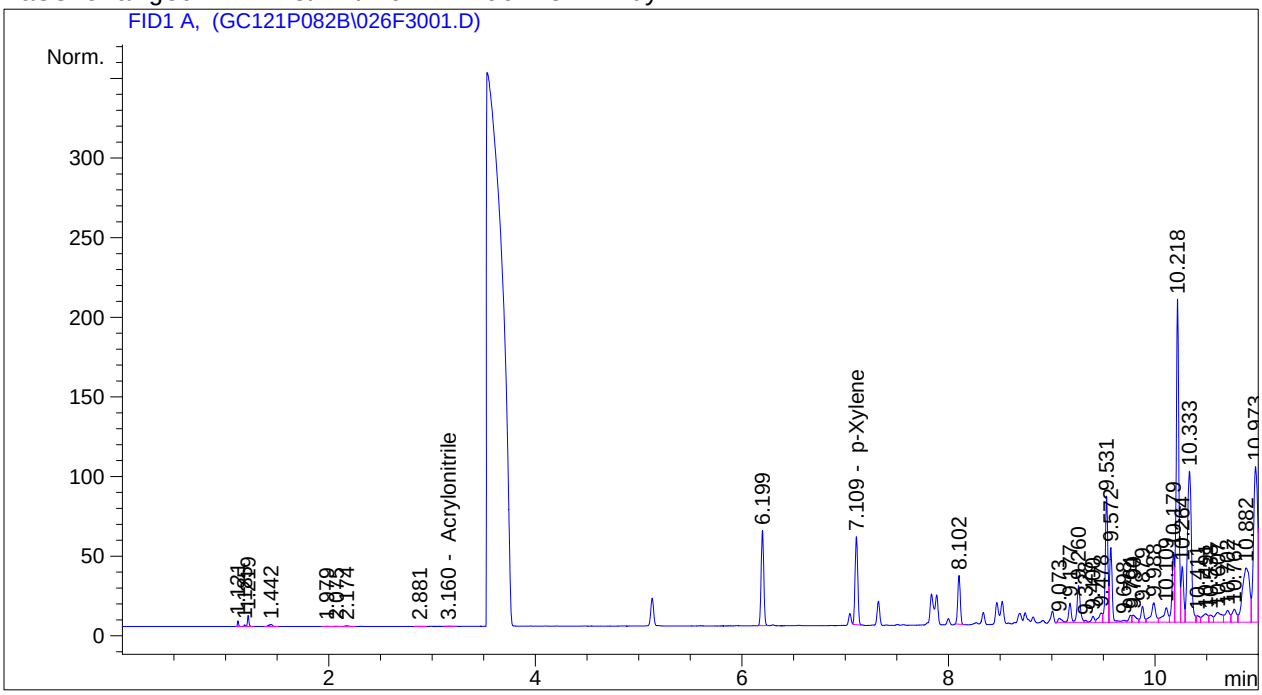
Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.682 BB       10.10535    2.22121   22.44612    Acetonitrile
  3.138            -           -         -         Acrylonitrile
  3.955 BV       11.27734 9.95837e-1   11.23039    MTBE
  5.279            -           -         -         2-Nitropropane
  5.492            -           -         -         Isooctane
  5.787            -           -         -         MIBK
  6.921            -           -         -         Chlorobenzene
  7.044            -           -         -         Ethylbenzene
  7.115            -           -         -         p-Xylene
  7.270            -           -         -         Styrene
  7.320            -           -         -         o-Xylene
  7.561            -           -         -         Cumene
  8.709            -           -         -         Nitrobenzene

Totals :                                33.67650
```

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\026F3001.D
Sample Name: M18 R3A Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 30
Acq. Instrument	: Lucy	Location	: Vial 26
Injection Date	: 02-Aug-11, 17:51:20	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.160	BB	2.83664e-1	1.46504	4.15579e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	100.76421	4.84672e-1	48.83760		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 49.25317

EM-BTRF-001363

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\026F3002.D
Sample Name: M18 R3A Cond ext 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  30
Acq. Instrument : Lucy                          Location : Vial 26
Injection Date  : 02-Aug-11, 18:12:32               Inj :   2
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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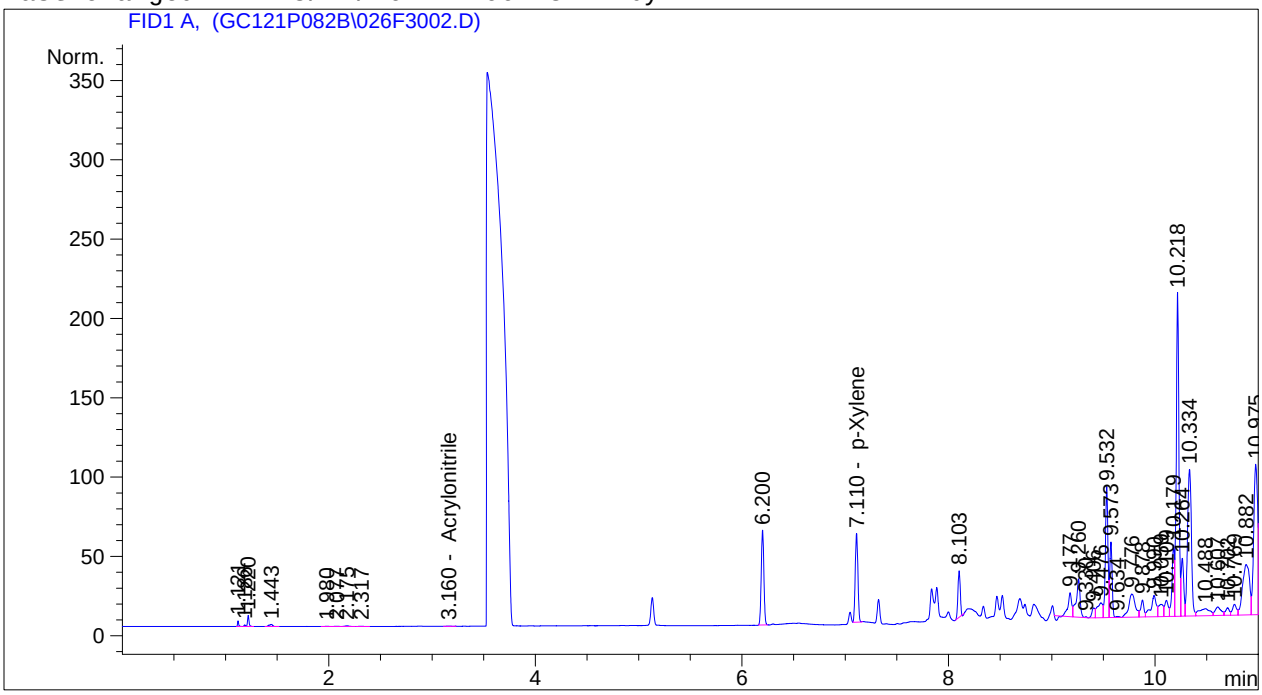


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.160	BB	3.79919e-1	1.46504	5.56597e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.110	BB	101.23368	4.84670e-1	49.06496		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 49.62156

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\026F3003.D
Sample Name: M18 R3A Cond ext 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  30
Acq. Instrument : Lucy                              Location : Vial 26
Injection Date  : 02-Aug-11, 18:33:46                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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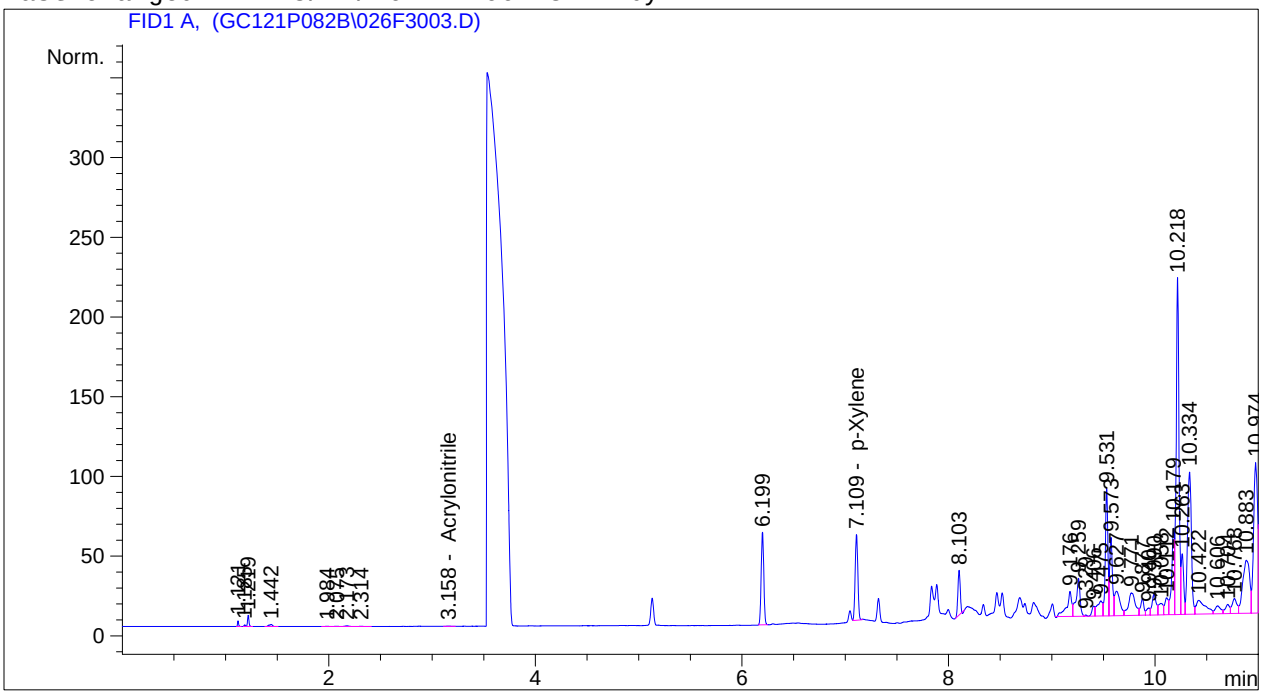
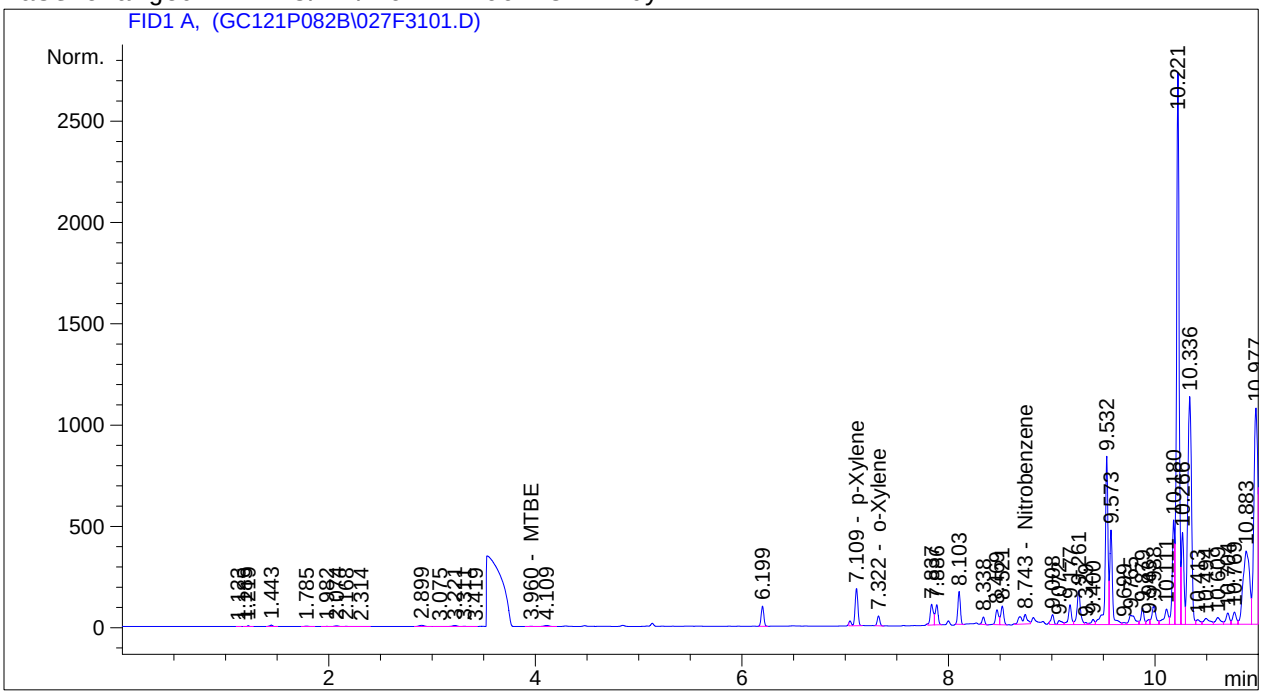



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.158 BB     3.43445e-1    1.46504 5.03160e-1    Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.109 BB       98.01980 4.84682e-1   47.50848    p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                48.01164
```

EM-BTRF-001365

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\027F3101.D
Sample Name: M18 R3A XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 31
Acq. Instrument	: Lucy	Location	: Vial 27
Injection Date	: 02-Aug-11, 18:54:50	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

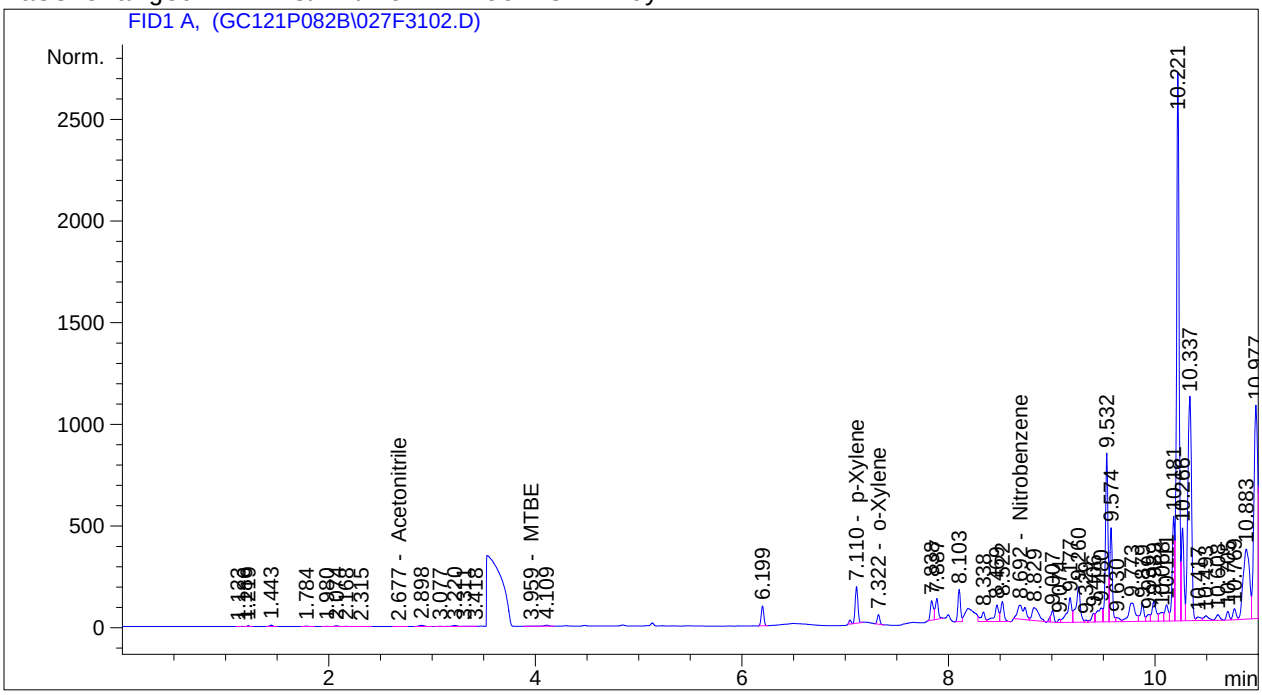
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.960	BV	1.26860	1.01056	1.28199		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	374.23529	4.84400e-1	181.27942		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	84.46658	4.79723e-1	40.52057		o-Xylene
7.561		-	-	-		Cumene
8.743	BV	204.75835	8.00949e-1	164.00094		Nitrobenzene
Totals :				387.08291		

EM-BTRF-001366

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\027F3102.D
Sample Name: M18 R3A XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 31
Acq. Instrument	: Lucy	Location	: Vial 27
Injection Date	: 02-Aug-11, 19:16:03	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	2.24975e-1	2.66065	5.98578e-1		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.959	BV	1.27019	1.01056	1.28360		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.110	BB	353.79160	4.84405e-1	171.37855		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	78.55125	4.79748e-1	37.68483		o-Xylene
7.561		-	-	-		Cumene
8.692	BB	348.44263	8.00702e-1	278.99886		Nitrobenzene

Totals : 489.94442

EM-BTRF-001367

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\027F3103.D
Sample Name: M18 R3A XAD FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  31
Acq. Instrument : Lucy                              Location : Vial 27
Injection Date  : 02-Aug-11, 19:37:16                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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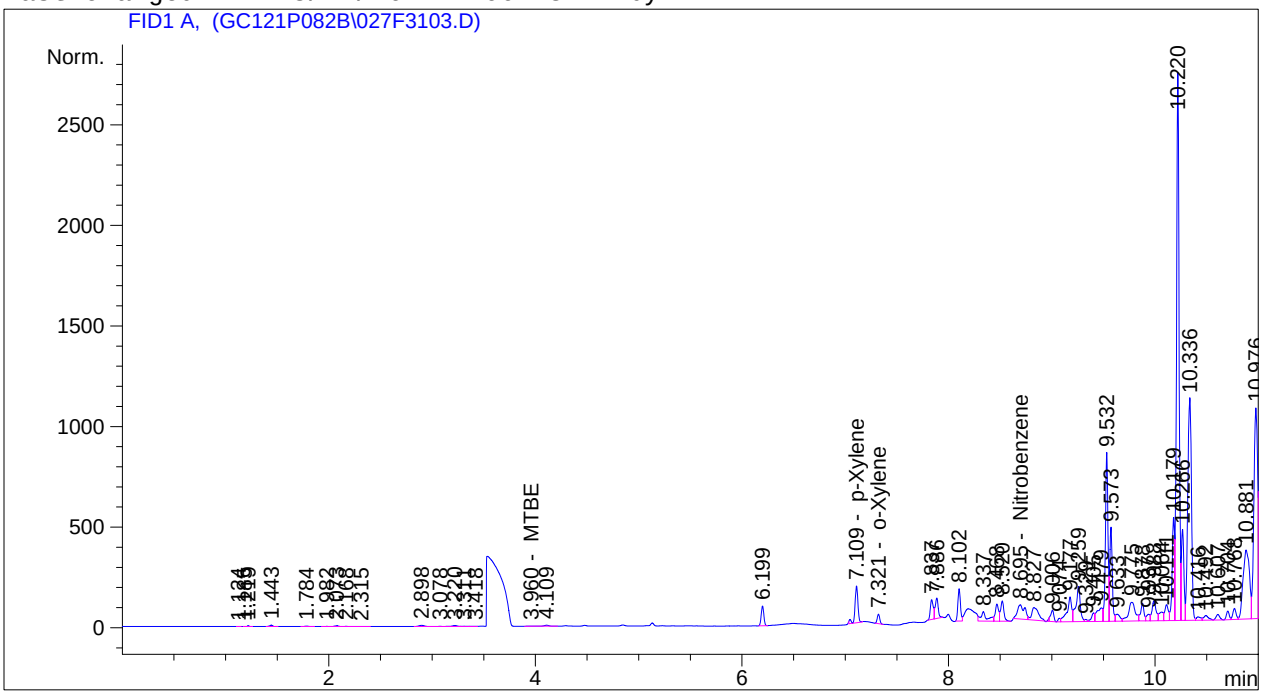


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

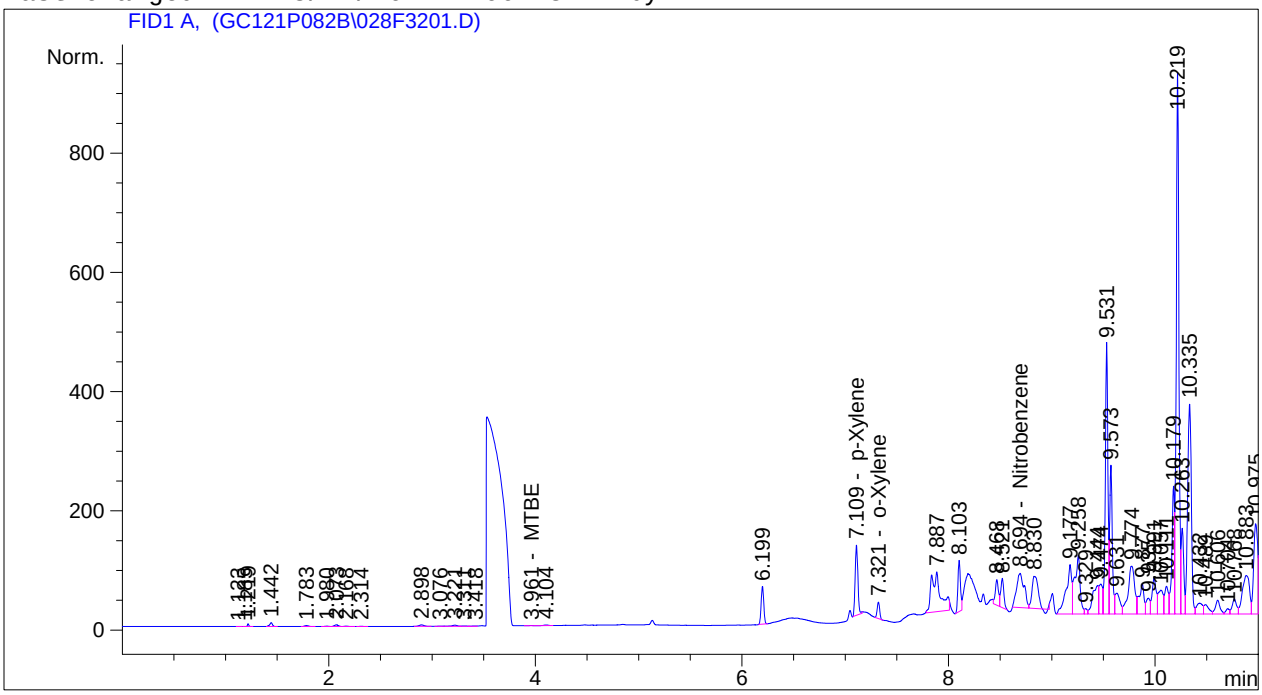
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.960	BV	1.22878	1.01056	1.24175		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	361.76273	4.84403e-1	175.23896		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	79.27328	4.79745e-1	38.03096		o-Xylene
7.561		-	-	-		Cumene
8.695	BB	345.86084	8.00705e-1	276.93252		Nitrobenzene

Totals : 491.44420

EM-BTRF-001368

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\028F3201.D
Sample Name: M18 R3A XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 32
Acq. Instrument	: Lucy	Location	: Vial 28
Injection Date	: 02-Aug-11, 19:58:31	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.961	BV	4.99049e-1	1.01056	5.04316e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	217.89642	4.84472e-1	105.56463		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	46.26354	4.80000e-1	22.20651		o-Xylene
7.561		-	-	-		Cumene
8.694	BV	295.38718	8.00765e-1	236.53585		Nitrobenzene
Totals :				364.81131		

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\028F3202.D
Sample Name: M18 R3A XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  32
Acq. Instrument : Lucy                          Location : Vial 28
Injection Date  : 02-Aug-11, 20:19:40                Inj :   2
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
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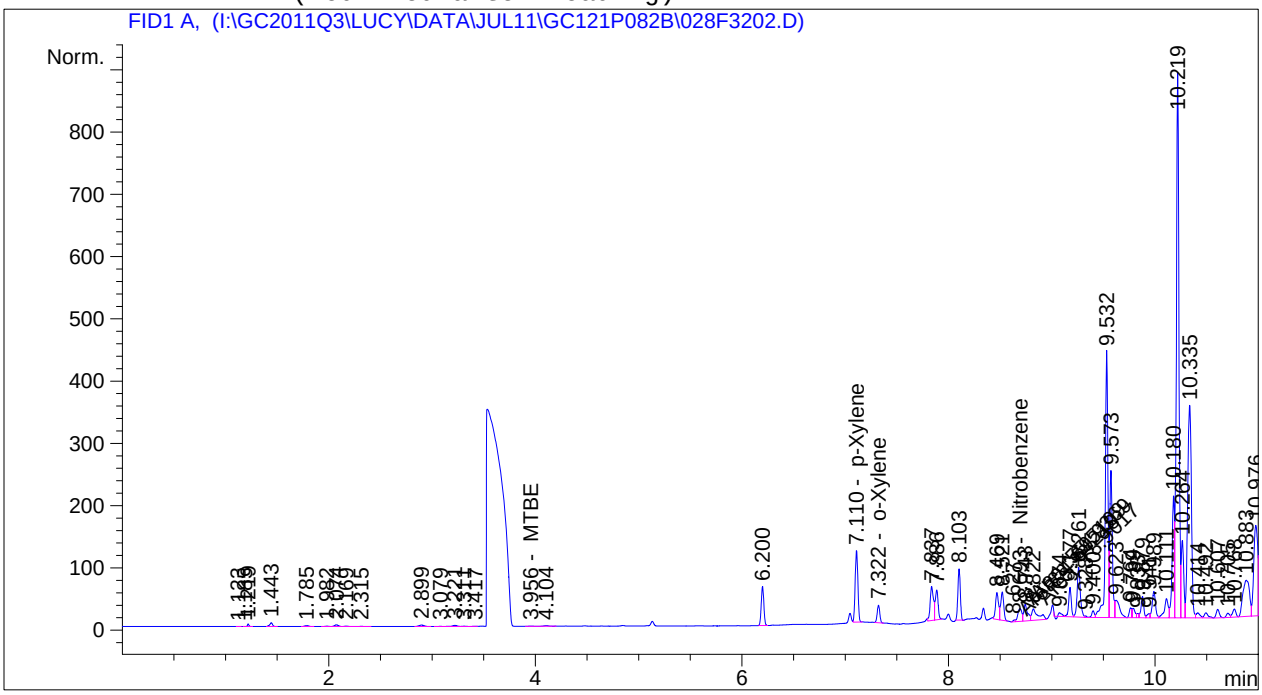


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	5.50564e-1	1.01056	5.56376e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.110	BB	209.85837	4.84478e-1	101.67181		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	49.50712	4.79960e-1	23.76145		o-Xylene
7.561		-	-	-		Cumene
8.693	MF	55.51090	8.02555e-1	44.55053		Nitrobenzene

Totals : 170.54016

EM-BTRF-001370

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\028F3203.D
Sample Name: M18 R3A XAD BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  32
Acq. Instrument : Lucy                          Location : Vial 28
Injection Date  : 02-Aug-11, 20:40:51                Inj :   3
                                              Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
                  (modified after loading)
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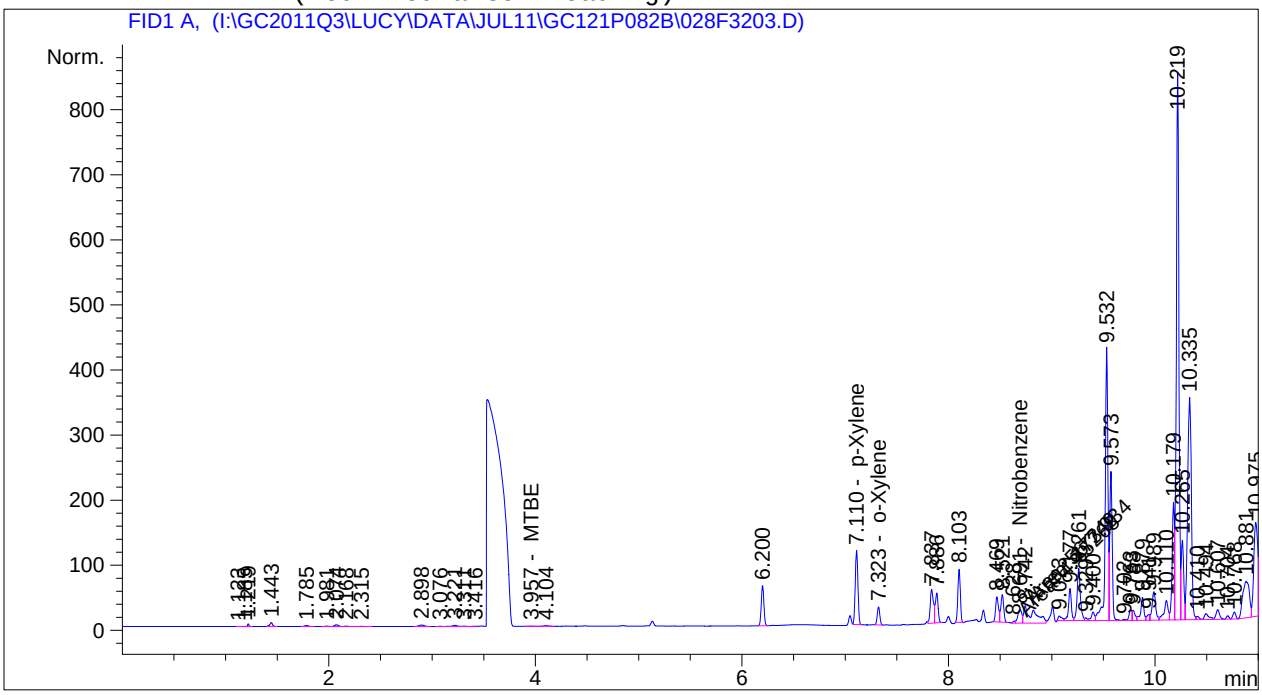


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.957	BV	5.27820e-1	1.01056	5.33391e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.110	BB	206.36382	4.84481e-1	99.97940		p-Xylene
7.270		-	-	-		Styrene
7.323	BB	47.82301	4.79980e-1	22.95410		o-Xylene
7.561		-	-	-		Cumene
8.691	FM	56.74904	8.02507e-1	45.54148		Nitrobenzene

Totals : 169.00837

EM-BTRF-001371

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\029F3301.D
Sample Name: M18 R3A CT FH 0711-64

```
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Acq. Operator   : JBB                          Seq. Line :  33
Acq. Instrument : Lucy                          Location : Vial 29
Injection Date  : 02-Aug-11, 21:02:03                Inj :   1
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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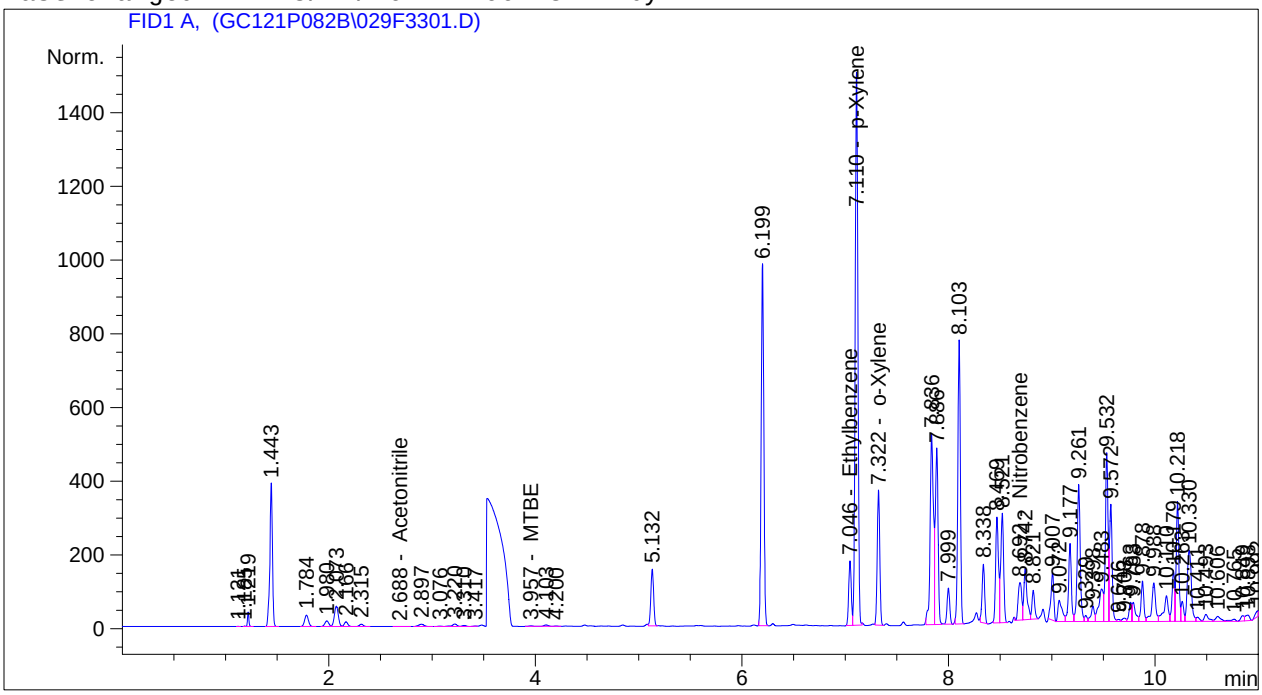


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.688 BB     9.42965e-1    2.48546    2.34371    Acetonitrile
  3.138             -           -          -       Acrylonitrile
  3.957 BV        3.96023 9.99880e-1    3.95976    MTBE
  5.279             -           -          -       2-Nitropropane
  5.492             -           -          -       Isooctane
  5.787             -           -          -       MIBK
  6.921             -           -          -       Chlorobenzene
  7.046 BV      302.29987 4.87257e-1  147.29772    Ethylbenzene
  7.110 VB     2768.79102 4.84313e-1 1340.96081    p-Xylene
  7.270             -           -          -       Styrene
  7.322 BB      632.47351 4.79432e-1  303.22810    o-Xylene
  7.561             -           -          -       Cumene
  8.692 BV      244.47765 8.00852e-1  195.79034    Nitrobenzene

Totals :                            1993.58043
```

EM-BTRF-001372

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\029F3302.D
Sample Name: M18 R3A CT FH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  33
Acq. Instrument : Lucy                              Location : Vial 29
Injection Date  : 02-Aug-11, 21:23:07                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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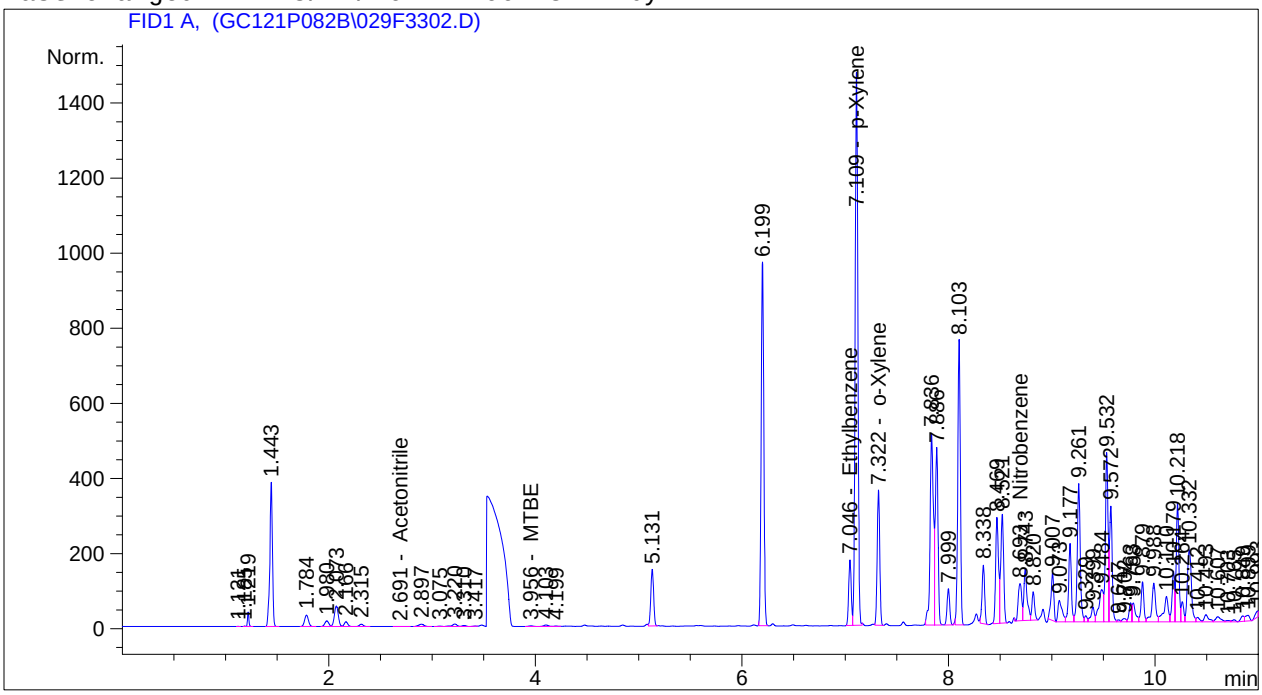


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```
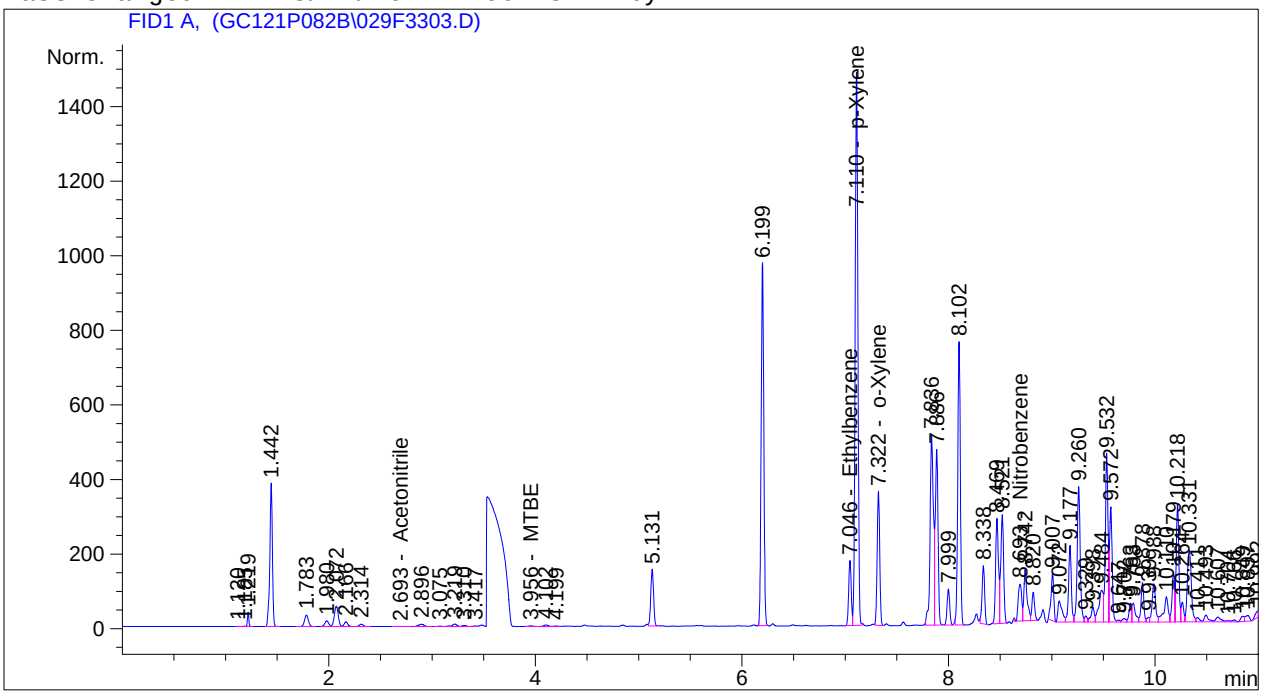

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.691	BB	9.95021e-1	2.47022	2.45792		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	3.90224	9.99972e-1	3.90213		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	299.97699	4.87258e-1	146.16621		Ethylbenzene
7.109	VB	2737.54614	4.84313e-1	1325.82895		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	624.98578	4.79433e-1	299.63858		o-Xylene
7.561		-	-	-		Cumene
8.693	BV	232.24480	8.00878e-1	185.99976		Nitrobenzene
Totals :				1963.99354		

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\029F3303.D
Sample Name: M18 R3A CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 33
Acq. Instrument	: Lucy	Location	: Vial 29
Injection Date	: 02-Aug-11, 21:44:13	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

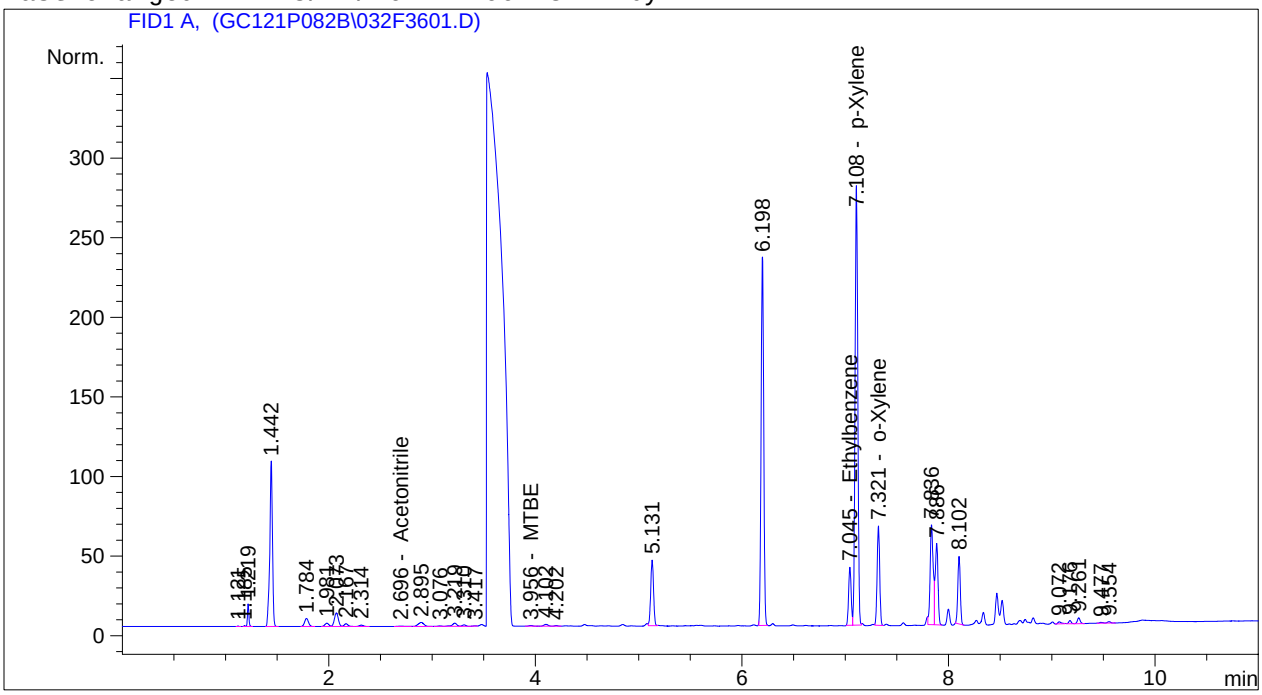
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.693	BB	1.06210	2.45277	2.60510		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BB	3.88182	1.00001	3.88184		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	298.99185	4.87259e-1	145.68633		Ethylbenzene
7.110	VB	2728.95190	4.84313e-1	1321.66676		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	623.67566	4.79433e-1	299.01052		o-Xylene
7.561		-	-	-		Cumene
8.693	BV	235.29251	8.00871e-1	188.43900		Nitrobenzene
Totals :				1961.28956		

EM-BTRF-001374

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\032F3601.D
Sample Name: M18 R3A CT BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 36
Acq. Instrument	: Lucy	Location	: Vial 32
Injection Date	: 03-Aug-11, 00:12:30	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

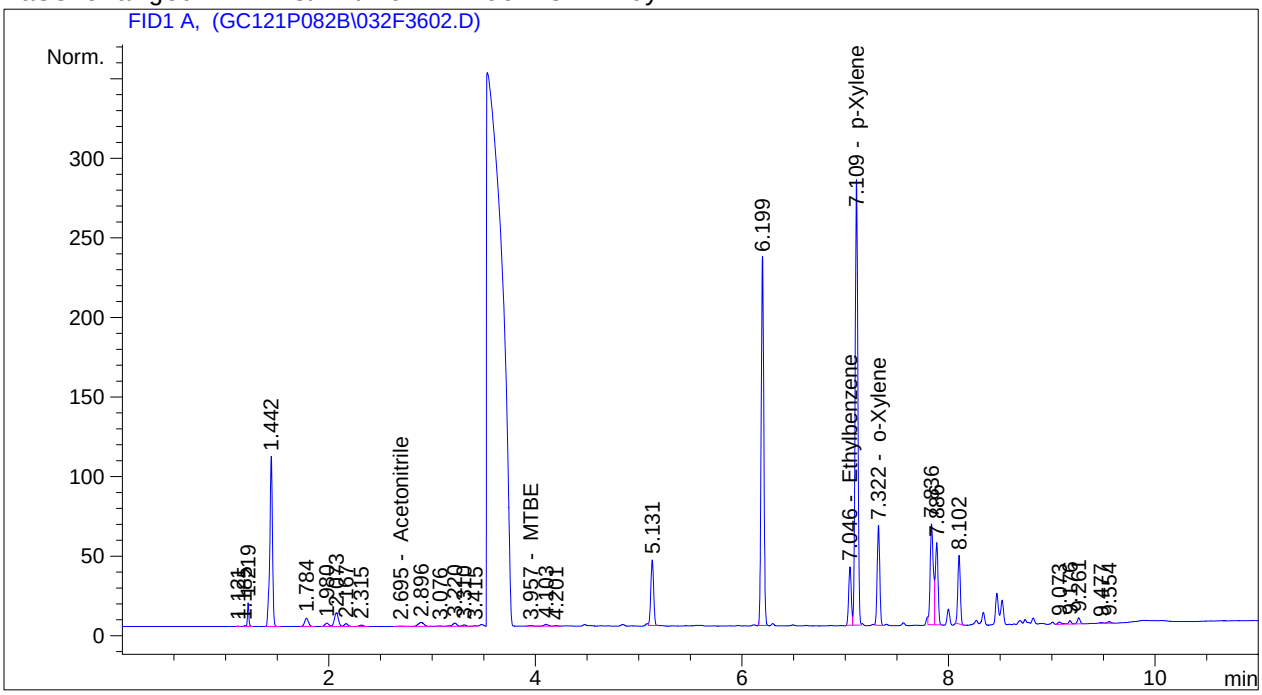
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.696	BB	8.40759e-1	2.52089	2.11946		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BB	1.14499	1.01056	1.15708		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	62.53819	4.87791e-1	30.50558		Ethylbenzene
7.108	VB	508.13422	4.84373e-1	246.12656		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	107.71101	4.79651e-1	51.66365		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 331.57233

EM-BTRF-001375

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\032F3602.D
Sample Name: M18 R3A CT BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 36
Acq. Instrument	: Lucy	Location	: Vial 32
Injection Date	: 03-Aug-11, 00:33:46	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

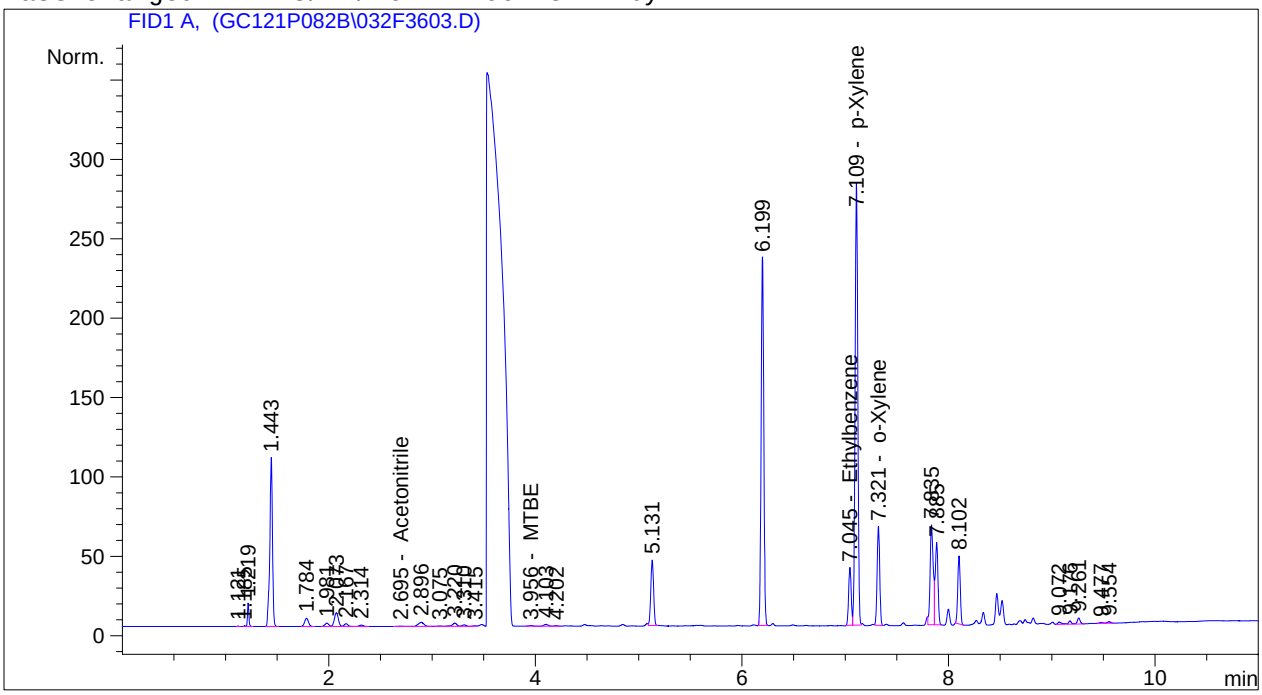
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.695	BB	8.36279e-1	2.52264	2.10963		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.957	BV	1.25204	1.01056	1.26526		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	62.96131	4.87787e-1	30.71169		Ethylbenzene
7.109	VB	511.79581	4.84373e-1	247.89986		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	108.45972	4.79649e-1	52.02257		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 334.00901

EM-BTRF-001376

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\032F3603.D
Sample Name: M18 R3A CT BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 36
Acq. Instrument	: Lucy	Location	: Vial 32
Injection Date	: 03-Aug-11, 00:54:55	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

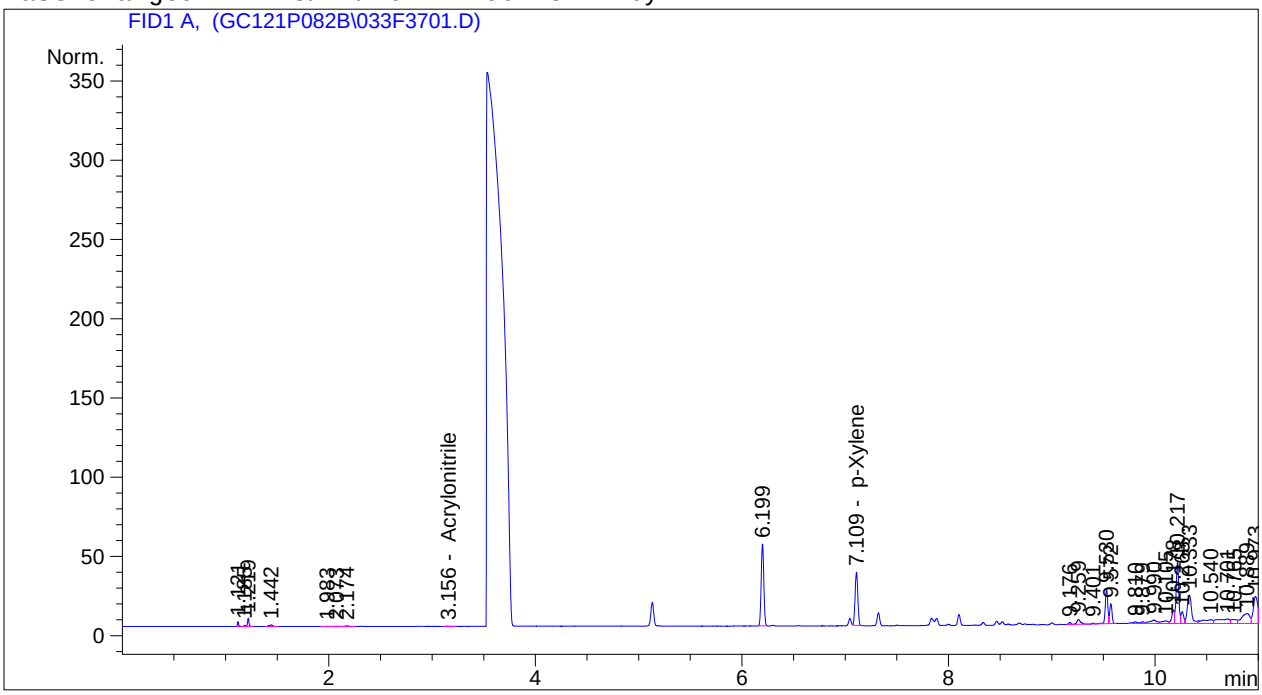
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.695	BB	8.86738e-1	2.50394	2.22034		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BB	1.17763	1.01056	1.19006		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	63.08965	4.87785e-1	30.77420		Ethylbenzene
7.109	VB	511.87671	4.84373e-1	247.93904		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	108.61337	4.79648e-1	52.09623		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 334.21987

EM-BTRF-001377

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\033F3701.D
Sample Name: M18 R3B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 37
Acq. Instrument	: Lucy	Location	: Vial 33
Injection Date	: 03-Aug-11, 01:16:06	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

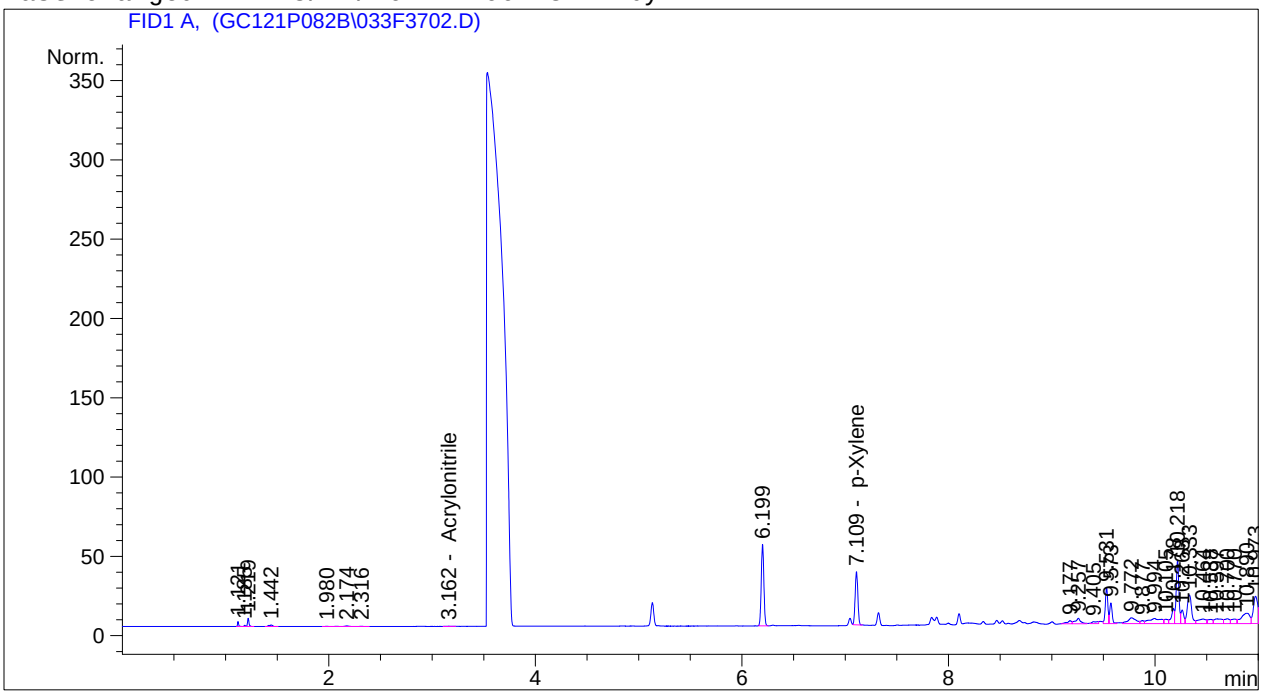
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.156	BB	3.20703e-1	1.46504	4.69843e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	61.22541	4.84913e-1	29.68899		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 30.15883

EM-BTRF-001378

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\033F3702.D
Sample Name: M18 R3B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 37
Acq. Instrument	: Lucy	Location	: Vial 33
Injection Date	: 03-Aug-11, 01:37:17	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

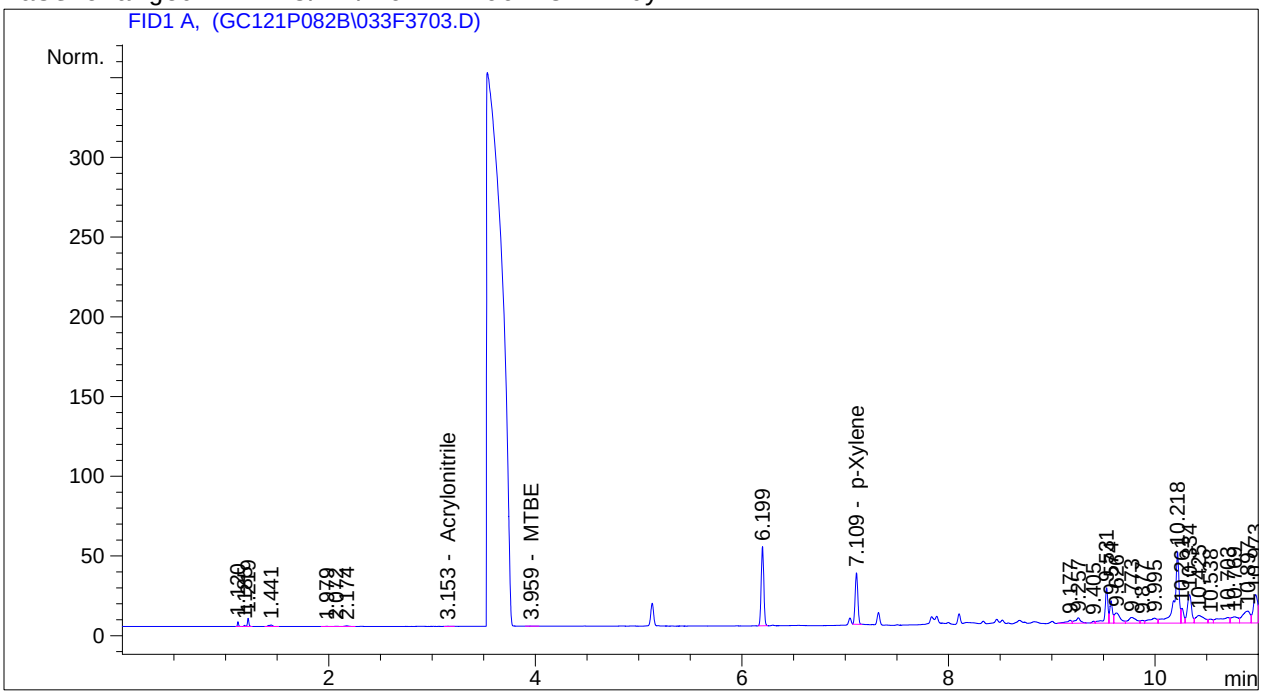
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.162	BB	3.05361e-1	1.46504	4.47366e-1		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	60.87370	4.84916e-1	29.51865		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 29.96602

EM-BTRF-001379

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\033F3703.D
Sample Name: M18 R3B Spk Cond ext 0711-64

Acq. Operator	: JBB	Seq. Line	: 37
Acq. Instrument	: Lucy	Location	: Vial 33
Injection Date	: 03-Aug-11, 01:58:29	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

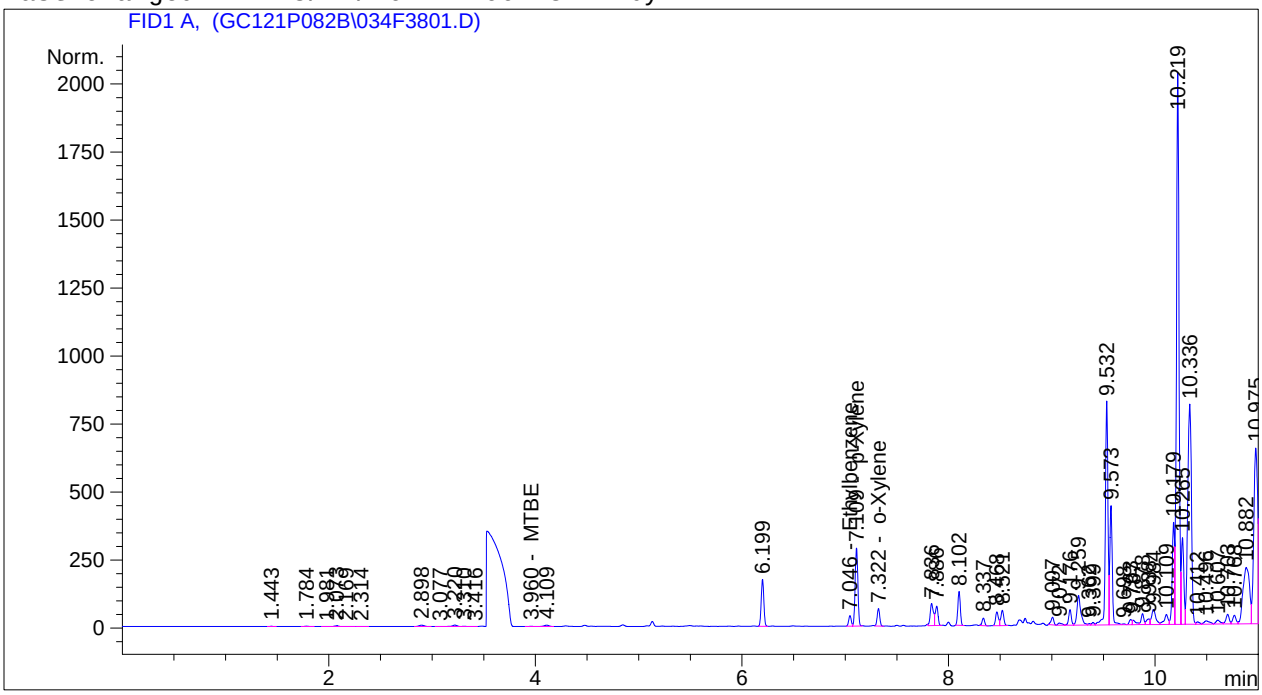
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.153	BB	2.45300e-1	1.46504	3.59374e-1		Acrylonitrile
3.959	BB	1.21328e-1	1.01056	1.22609e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.109	BB	58.25629	4.84944e-1	28.25104		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 28.73303

EM-BTRF-001380

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\034F3801.D
Sample Name: M18 R3B Spk XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 38
Acq. Instrument	: Lucy	Location	: Vial 34
Injection Date	: 03-Aug-11, 02:19:39	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

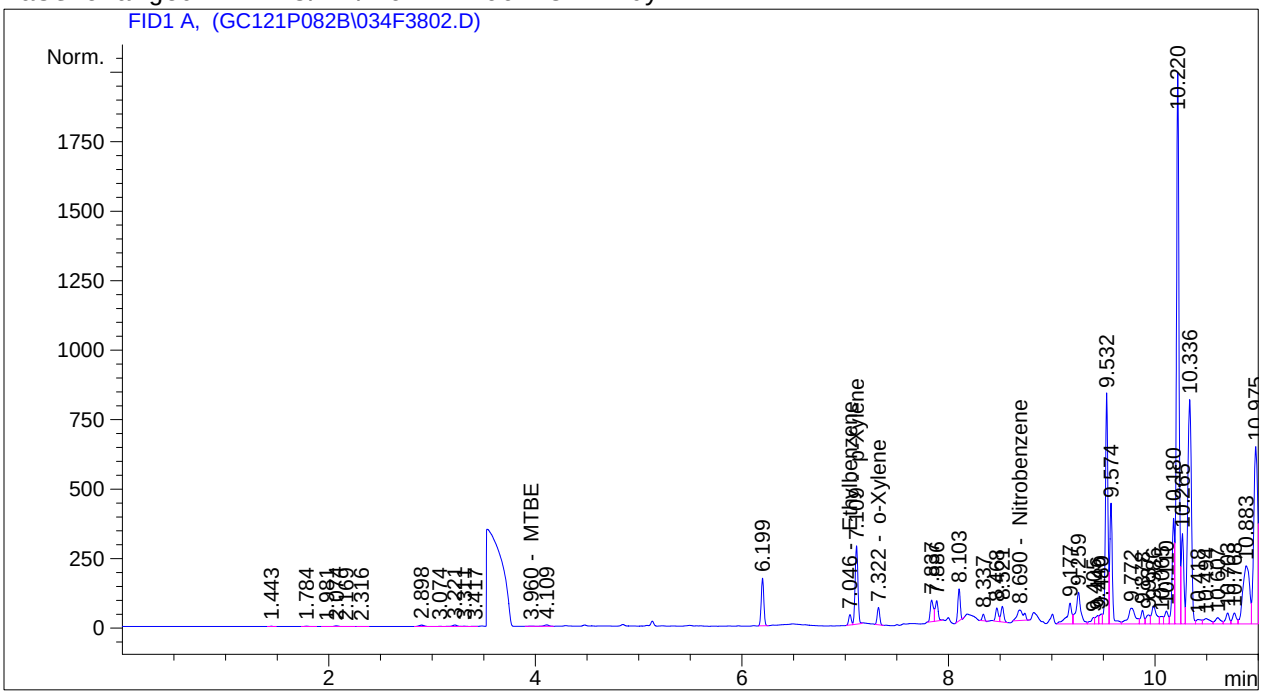
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.960	BV	1.21342	1.01056	1.22622		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	66.01948	4.87756e-1	32.20138		Ethylbenzene
7.109	VB	529.10059	4.84370e-1	256.28055		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	111.30770	4.79642e-1	53.38786		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 343.09601

EM-BTRF-001381

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\034F3802.D
Sample Name: M18 R3B Spk XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 38
Acq. Instrument	: Lucy	Location	: Vial 34
Injection Date	: 03-Aug-11, 02:40:50	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

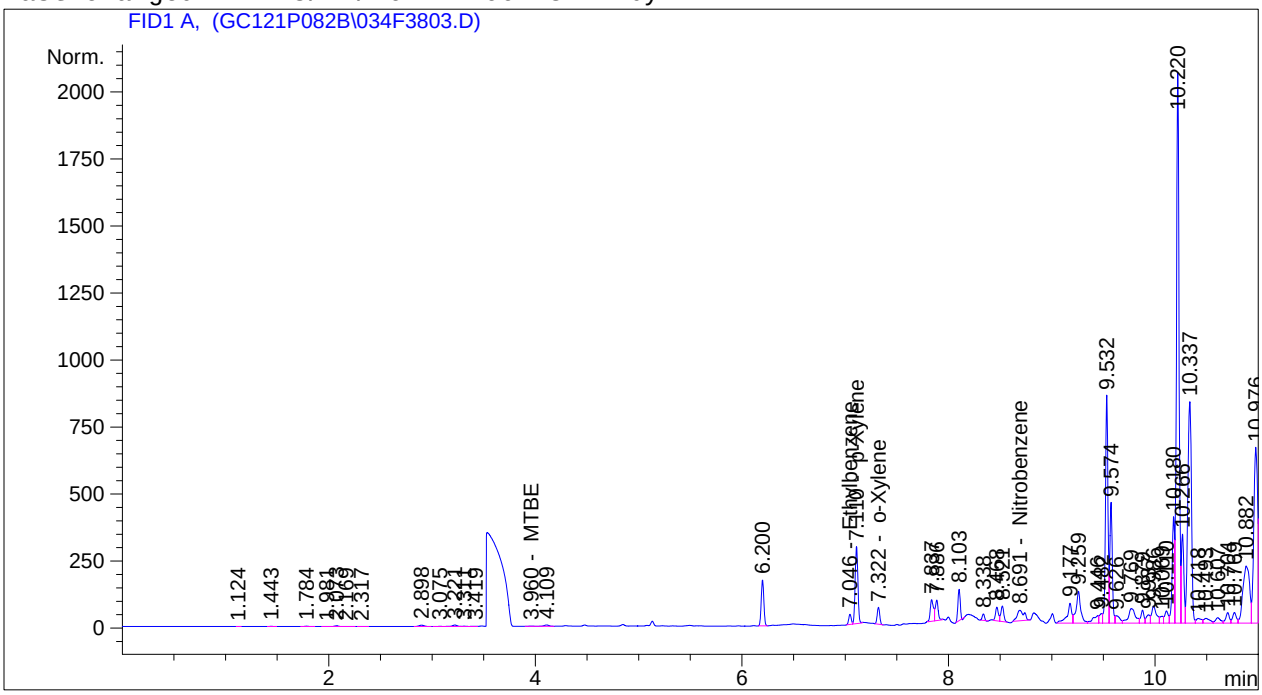
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.960	BV	1.13769	1.01056	1.14970		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	63.84840	4.87777e-1	31.14381		Ethylbenzene
7.109	VB	525.33923	4.84371e-1	254.45893		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	104.70752	4.79658e-1	50.22381		o-Xylene
7.561		-	-	-		Cumene
8.690	BB	165.27525	8.01091e-1	132.40059		Nitrobenzene
Totals :				469.37685		

EM-BTRF-001382

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\034F3803.D
Sample Name: M18 R3B Spk XAD FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 38
Acq. Instrument	: Lucy	Location	: Vial 34
Injection Date	: 03-Aug-11, 03:02:02	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

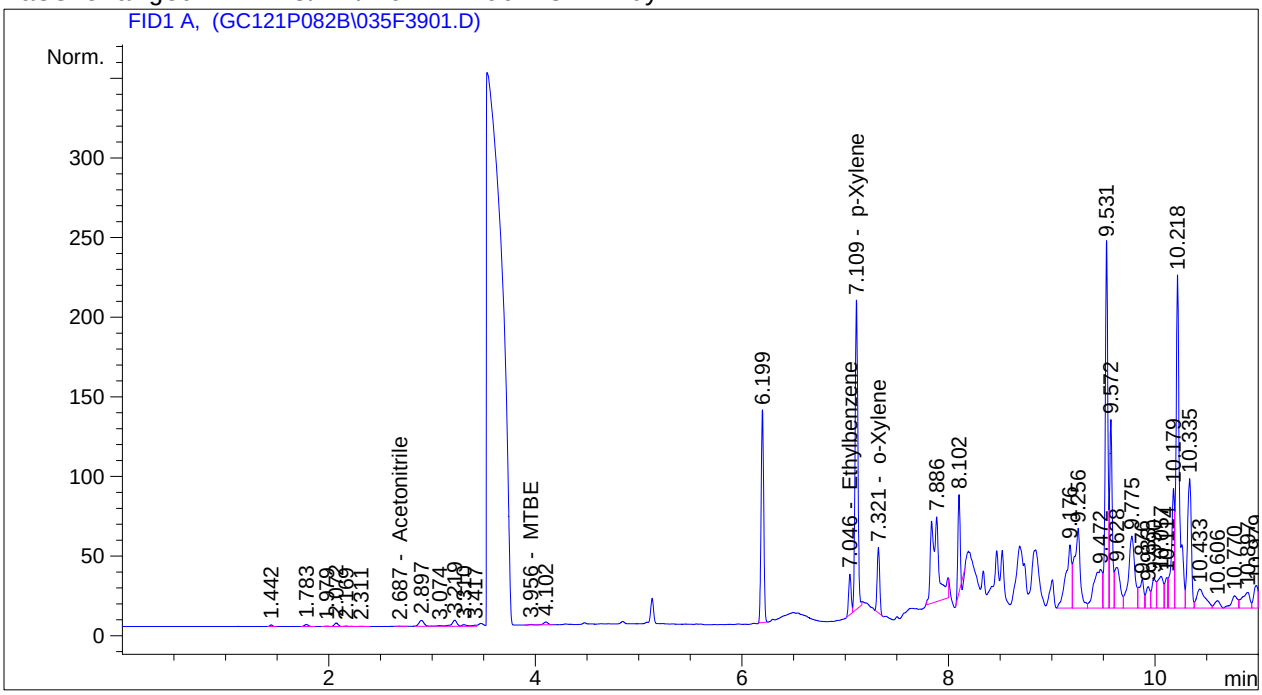
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.960	BV	1.12671	1.01056	1.13861		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	64.44607	4.87771e-1	31.43494		Ethylbenzene
7.110	VB	531.25897	4.84370e-1	257.32586		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	108.13651	4.79650e-1	51.86763		o-Xylene
7.561		-	-	-		Cumene
8.691	BB	181.65103	8.01025e-1	145.50697		Nitrobenzene
Totals :				487.27400		

EM-BTRF-001383

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\035F3901.D
Sample Name: M18 R3B Spk XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 39
Acq. Instrument	: Lucy	Location	: Vial 35
Injection Date	: 03-Aug-11, 03:23:12	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

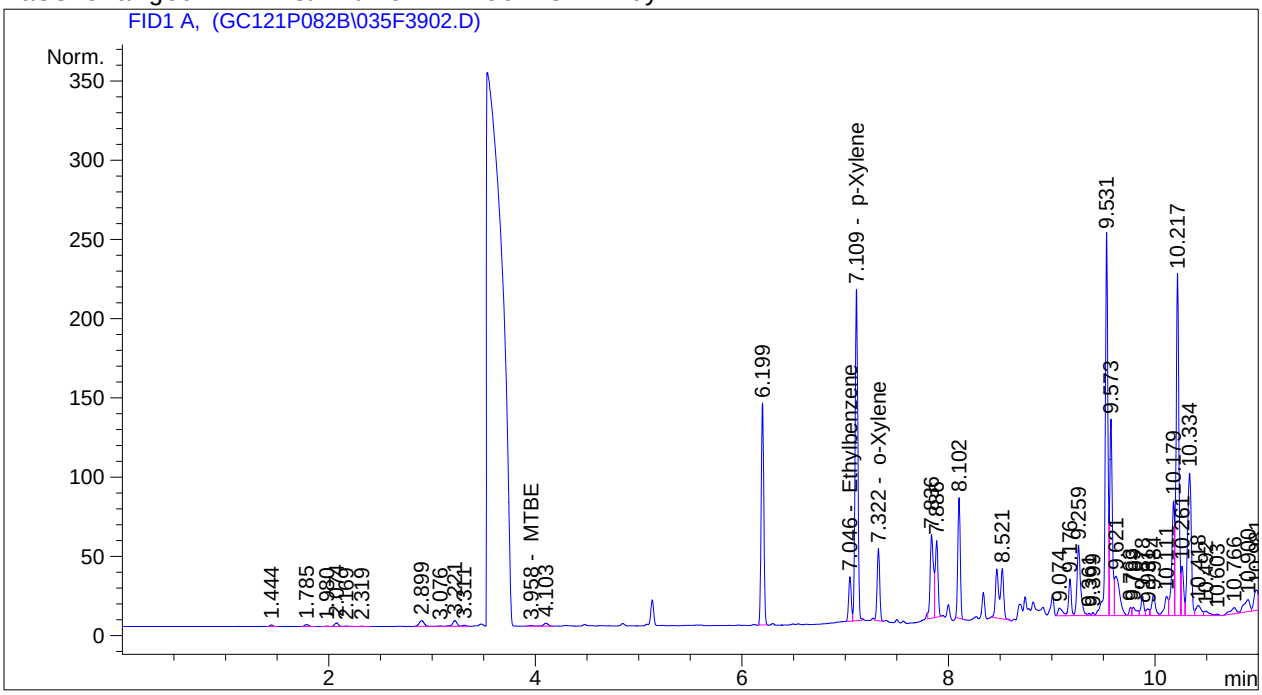
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.687	BB	1.46109e-1	2.66065	3.88744e-1		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	9.03577e-1	1.01056	9.13115e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	42.72330	4.88104e-1	20.85340		Ethylbenzene
7.109	VB	360.39633	4.84403e-1	174.57722		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	70.08927	4.79792e-1	33.62827		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 230.36074

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\035F3902.D
Sample Name: M18 R3B Spk XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 39
Acq. Instrument	: Lucy	Location	: Vial 35
Injection Date	: 03-Aug-11, 03:44:25	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

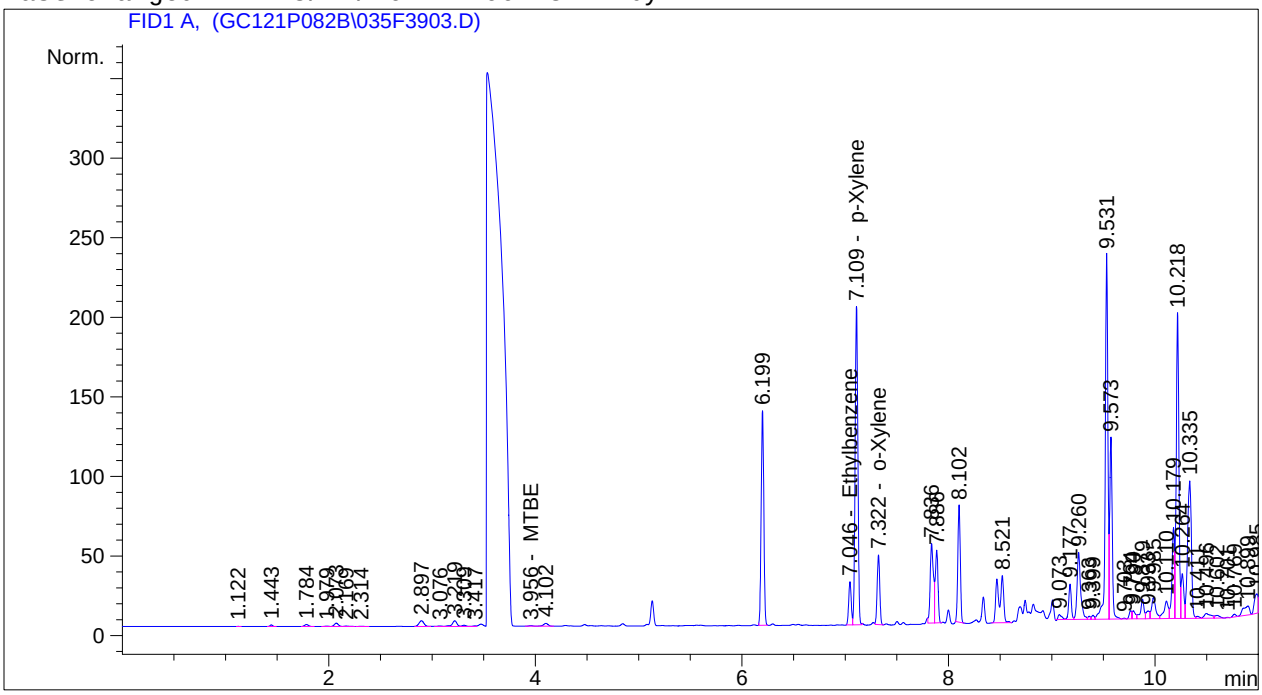
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.958	BV	9.70668e-1	1.01056	9.80913e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	48.68325	4.87983e-1	23.75659		Ethylbenzene
7.109	VB	385.49307	4.84397e-1	186.73155		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	79.58558	4.79744e-1	38.18067		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene
Totals :			249.64973			

EM-BTRF-001385

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\035F3903.D
Sample Name: M18 R3B Spk XAD BH 0711-64

Acq. Operator	: JBB	Seq. Line	: 39
Acq. Instrument	: Lucy	Location	: Vial 35
Injection Date	: 03-Aug-11, 04:05:33	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

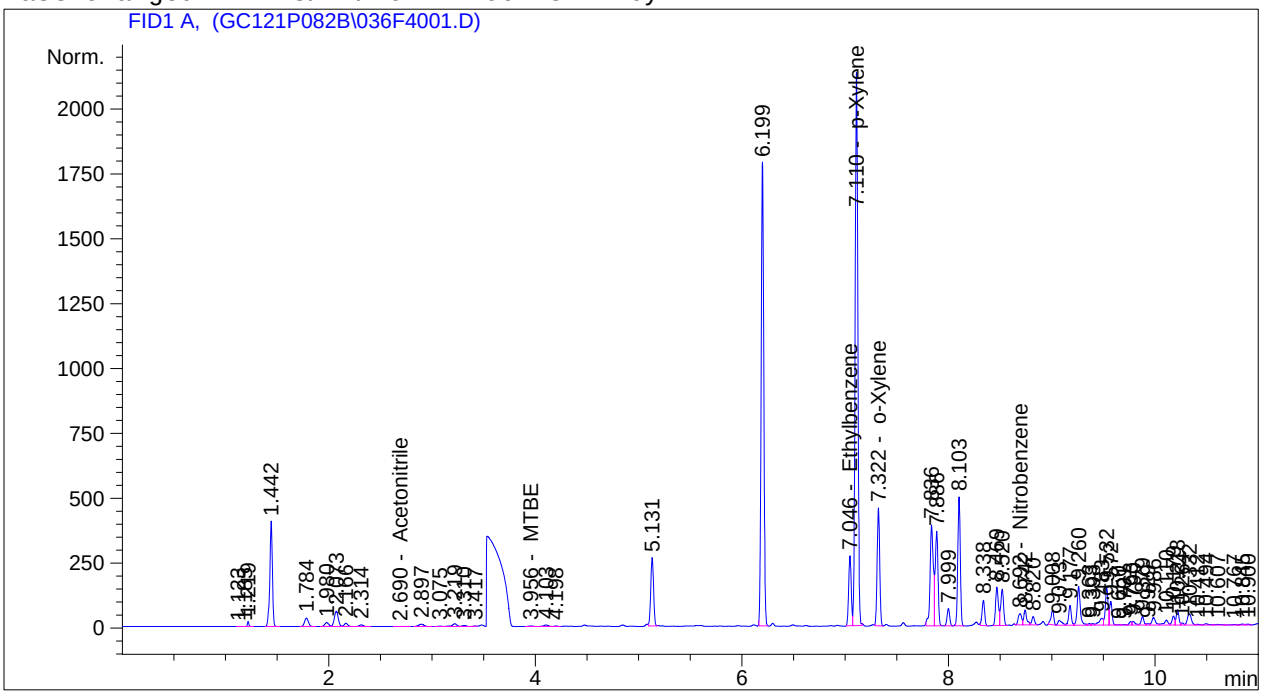
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	8.97270e-1	1.01056	9.06741e-1		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	46.15635	4.88030e-1	22.52570		Ethylbenzene
7.109	VB	371.29639	4.84400e-1	179.85611		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	76.32884	4.79759e-1	36.61944		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 239.90798

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\036F4001.D
Sample Name: M18 R3B Spk CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 40
Acq. Instrument	: Lucy	Location	: Vial 36
Injection Date	: 03-Aug-11, 04:26:40	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

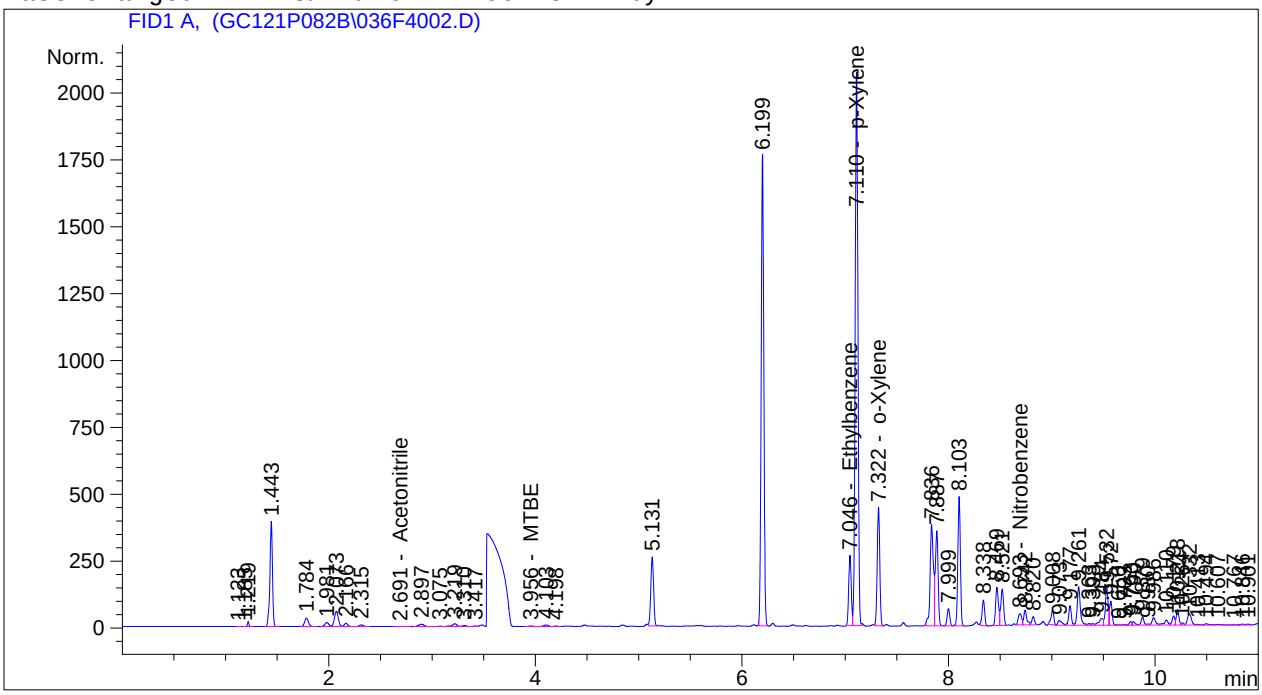
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.690	BB	1.44322	2.38444	3.44126		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	5.39345	9.98224e-1	5.38387		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	464.21194	4.87208e-1	226.16795		Ethylbenzene
7.110	VB	3929.96875	4.84309e-1	1903.31825		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	787.62286	4.79423e-1	377.60472		o-Xylene
7.561		-	-	-		Cumene
8.692	BV	101.29787	8.01559e-1	81.19620		Nitrobenzene
Totals :			2597.11226			

EM-BTRF-001387

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\036F4002.D
Sample Name: M18 R3B Spk CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 40
Acq. Instrument	: Lucy	Location	: Vial 36
Injection Date	: 03-Aug-11, 04:47:44	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	: Signal
Calib. Data Modified	: 8/15/2011 6:30:17 PM
Multiplier:	: 1.0000
Dilution:	: 1.0000

Do not use Multiplier & Dilution Factor with ISTDs

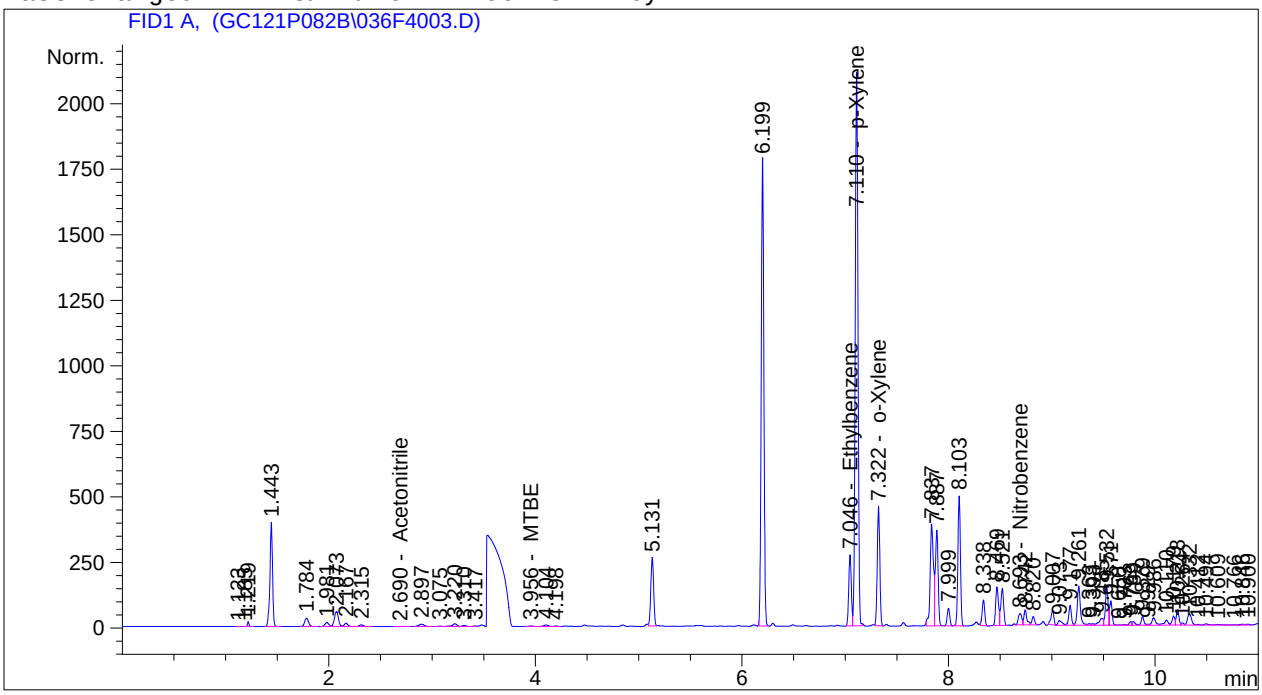
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.691	BB	1.38488	2.39246	3.31328		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	5.26364	9.98337e-1	5.25488		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	452.37564	4.87211e-1	220.40228		Ethylbenzene
7.110	VB	3828.46460	4.84309e-1	1854.15987		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	766.20038	4.79424e-1	367.33505		o-Xylene
7.561		-	-	-		Cumene
8.693	BV	98.13931	8.01598e-1	78.66825		Nitrobenzene
Totals :				2529.13361		

EM-BTRF-001388

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\036F4003.D
Sample Name: M18 R3B Spk CT FH 0711-64

Acq. Operator	: JBB	Seq. Line	: 40
Acq. Instrument	: Lucy	Location	: Vial 36
Injection Date	: 03-Aug-11, 05:08:58	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.690	BB	1.46020	2.38223	3.47852		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.956	BV	5.33140	9.98277e-1	5.32222		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.046	BV	464.99387	4.87208e-1	226.54884		Ethylbenzene
7.110	VB	3932.35864	4.84309e-1	1904.47567		p-Xylene
7.270		-	-	-		Styrene
7.322	BB	787.14526	4.79423e-1	377.37577		o-Xylene
7.561		-	-	-		Cumene
8.693	BV	102.03537	8.01550e-1	81.78646		Nitrobenzene
Totals :			2598.98747			

EM-BTRF-001389

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\037F4101.D
Sample Name: M18 R3B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  41
Acq. Instrument : Lucy                              Location : Vial 37
Injection Date  : 03-Aug-11, 05:30:10                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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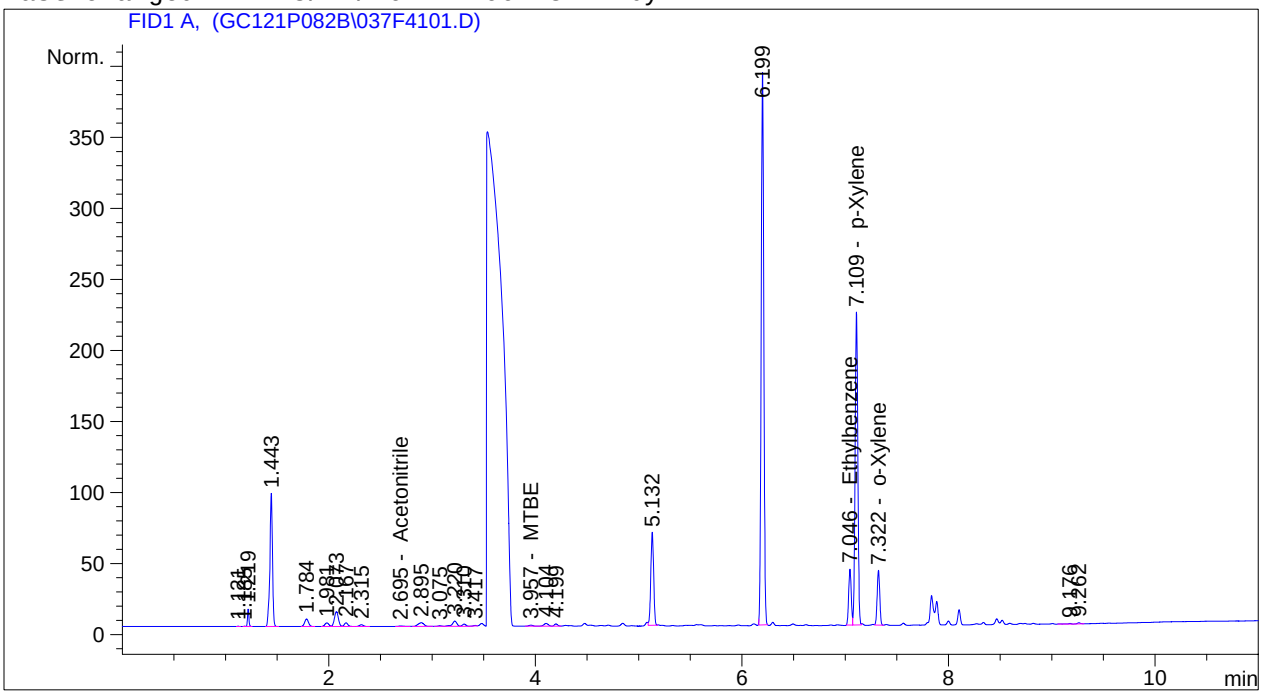


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.695 BB        1.08805    2.44660    2.66201    Acetonitrile
  3.138             -          -          -        Acrylonitrile
  3.957 BV        1.94137    1.00636    1.95372    MTBE
  5.279             -          -          -        2-Nitropropane
  5.492             -          -          -        Isooctane
  5.787             -          -          -        MIBK
  6.921             -          -          -        Chlorobenzene
  7.046 BV       67.73531 4.87740e-1   33.03719    Ethylbenzene
  7.109 VB      403.37509 4.84392e-1  195.39180    p-Xylene
  7.270             -          -          -        Styrene
  7.322 BB       66.97439 4.79811e-1   32.13503    o-Xylene
  7.561             -          -          -        Cumene
  8.709             -          -          -        Nitrobenzene

Totals :                              265.17975
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Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\037F4102.D
Sample Name: M18 R3B Spk CT BH 0711-64

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==========================================================================
Acq. Operator   : JBB                          Seq. Line :  41
Acq. Instrument : Lucy                          Location : Vial 37
Injection Date  : 03-Aug-11, 05:51:16                Inj :   2
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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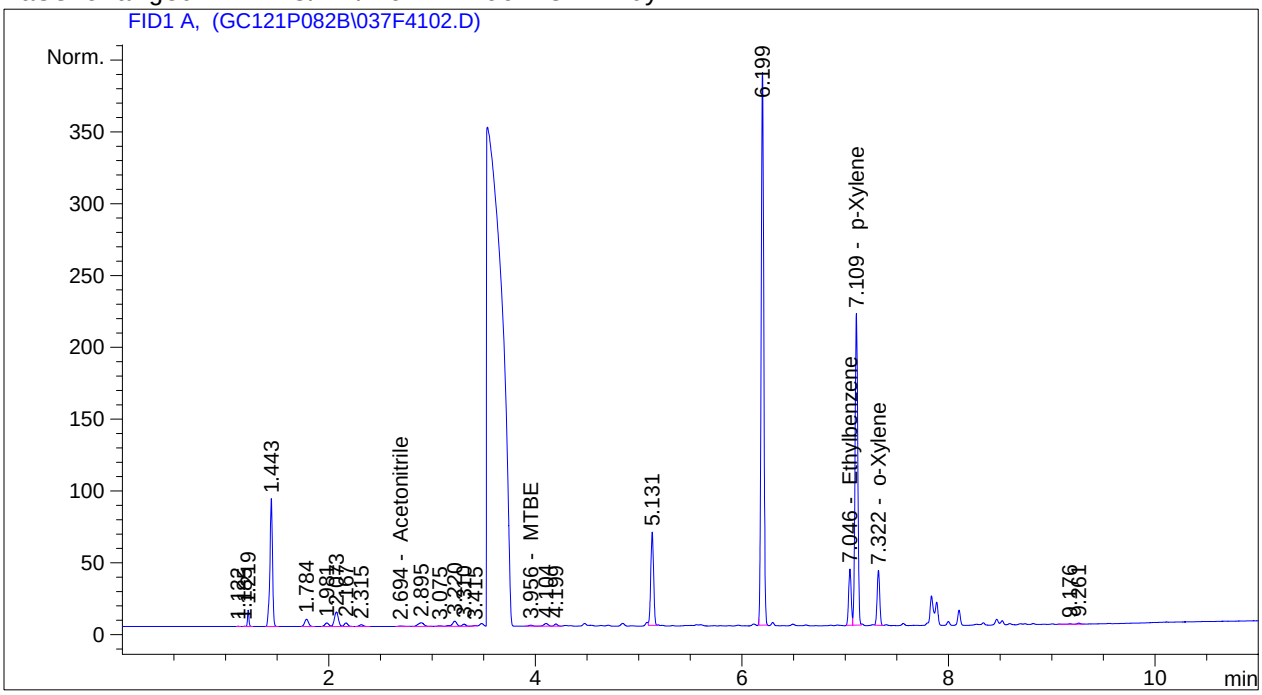


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.694 BB        1.04570    2.45683    2.56910    Acetonitrile
  3.138             -          -          -        Acrylonitrile
  3.956 BV        1.95443    1.00627    1.96669    MTBE
  5.279             -          -          -        2-Nitropropane
  5.492             -          -          -        Isooctane
  5.787             -          -          -        MIBK
  6.921             -          -          -        Chlorobenzene
  7.046 BV       66.90578 4.87747e-1   32.63311    Ethylbenzene
  7.109 VB      398.85559 4.84393e-1  193.20301    p-Xylene
  7.270             -          -          -        Styrene
  7.322 BB       66.25801 4.79815e-1   31.79161    o-Xylene
  7.561             -          -          -        Cumene
  8.709             -          -          -        Nitrobenzene

Totals :                              262.16351
```
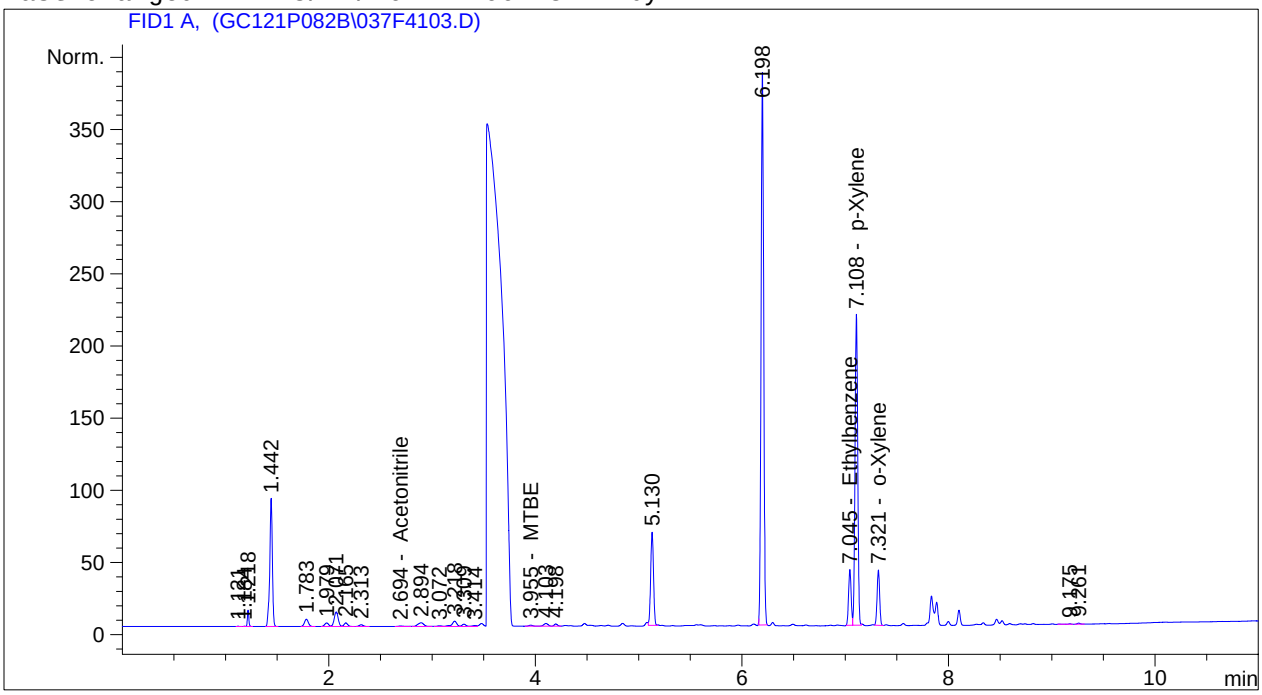

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\037F4103.D
Sample Name: M18 R3B Spk CT BH 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  41
Acq. Instrument : Lucy                              Location : Vial 37
Injection Date  : 03-Aug-11, 06:12:23                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```



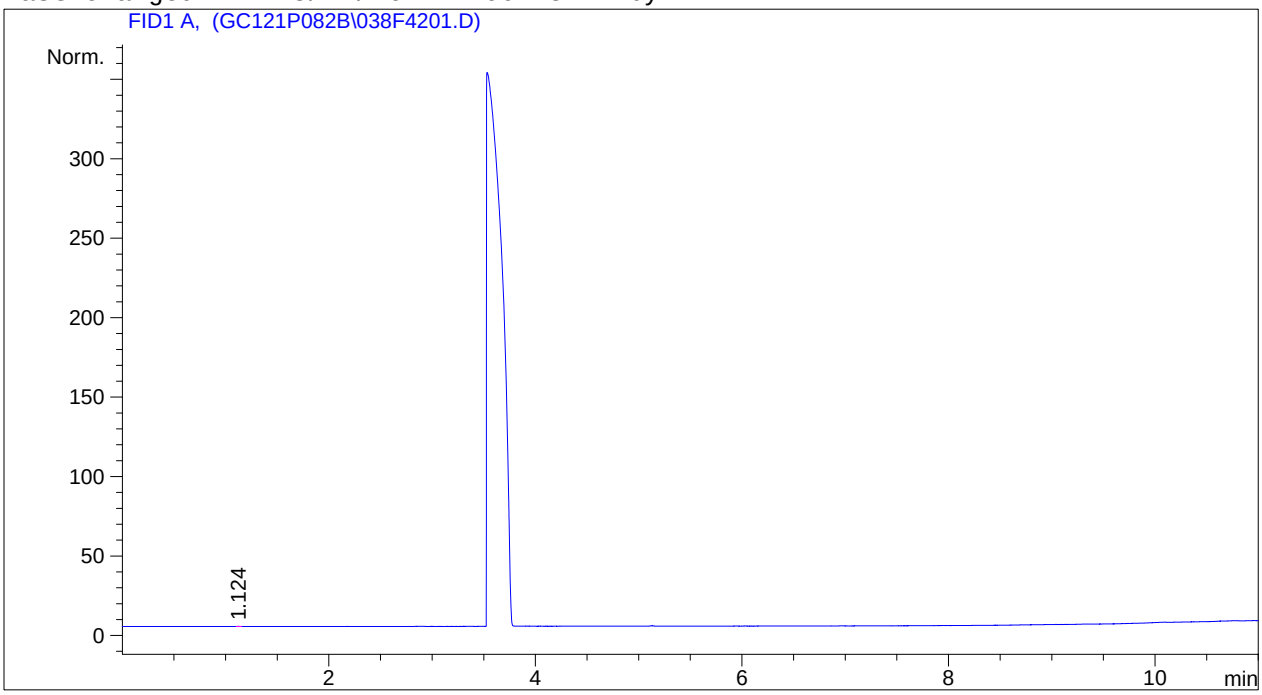

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.694	BB	1.13822	2.43547	2.77210		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.955	BV	1.90653	1.00659	1.91910		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.045	BV	66.40578	4.87752e-1	32.38955		Ethylbenzene
7.108	VB	396.02350	4.84394e-1	191.83143		p-Xylene
7.270		-	-	-		Styrene
7.321	BB	65.75168	4.79819e-1	31.54888		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 260.46105

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\038F4201.D
Sample Name: M18 H2O Cond FB-A 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  42
Acq. Instrument : Lucy                          Location : Vial 38
Injection Date  : 03-Aug-11, 06:33:37                Inj :   1
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```

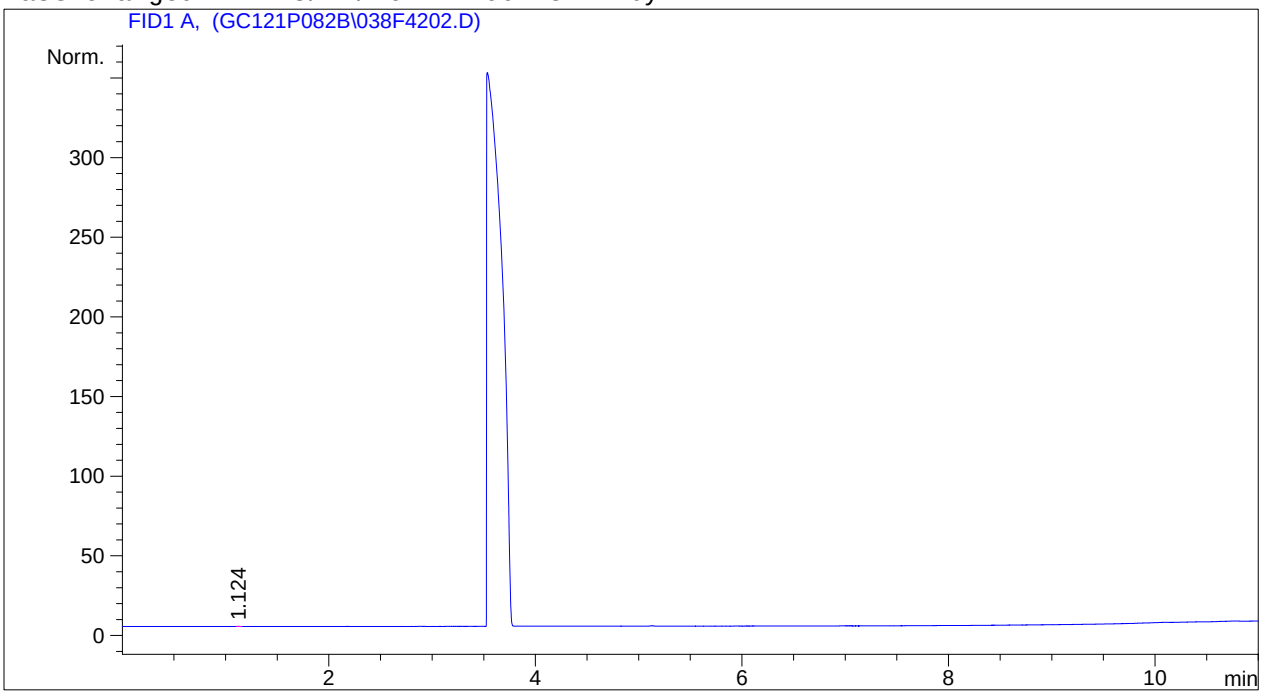



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                0.00000
```

EM-BTRF-001393

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\038F4202.D
Sample Name: M18 H2O Cond FB-A 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  42
Acq. Instrument : Lucy                          Location : Vial 38
Injection Date  : 03-Aug-11, 06:54:54                Inj :   2
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```

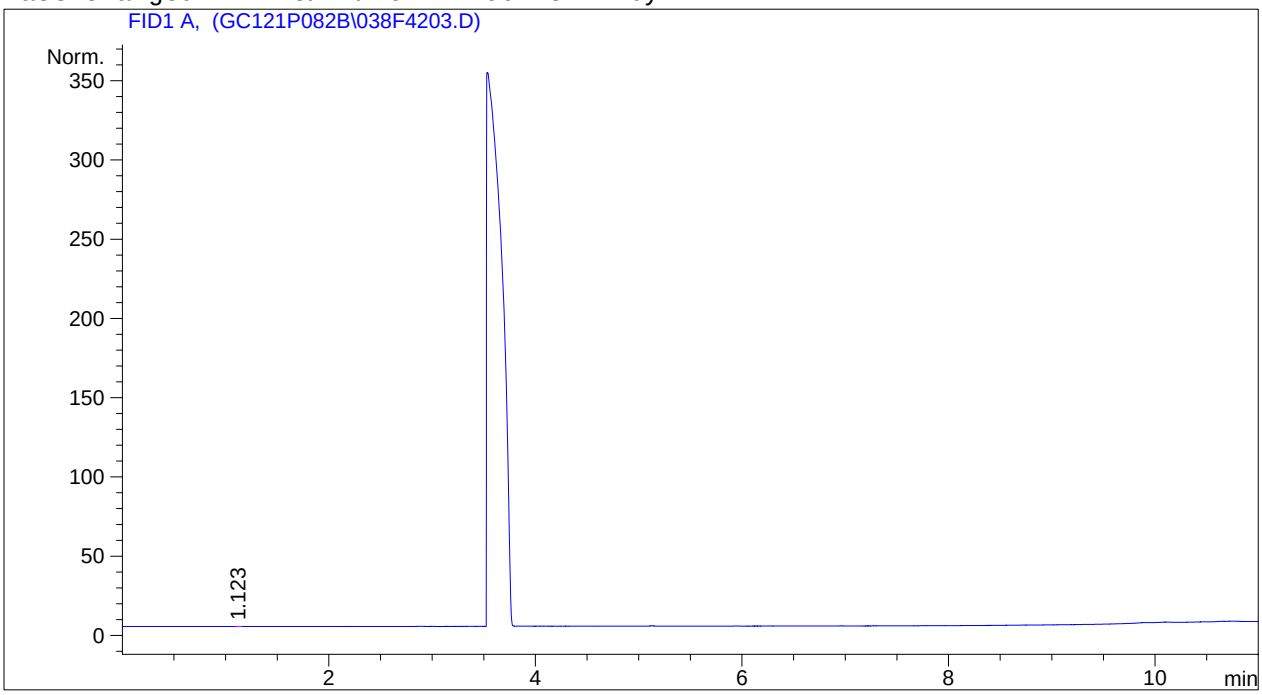



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                0.00000
```

EM-BTRF-001394

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\038F4203.D
Sample Name: M18 H2O Cond FB-A 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  42
Acq. Instrument : Lucy                          Location : Vial 38
Injection Date  : 03-Aug-11, 07:16:16                Inj :   3
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                0.00000
```

EM-BTRF-001395

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\039F4301.D
Sample Name: M18 H2O Cond RB 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  43
Acq. Instrument : Lucy                          Location : Vial 39
Injection Date  : 03-Aug-11, 07:37:31                Inj :   1
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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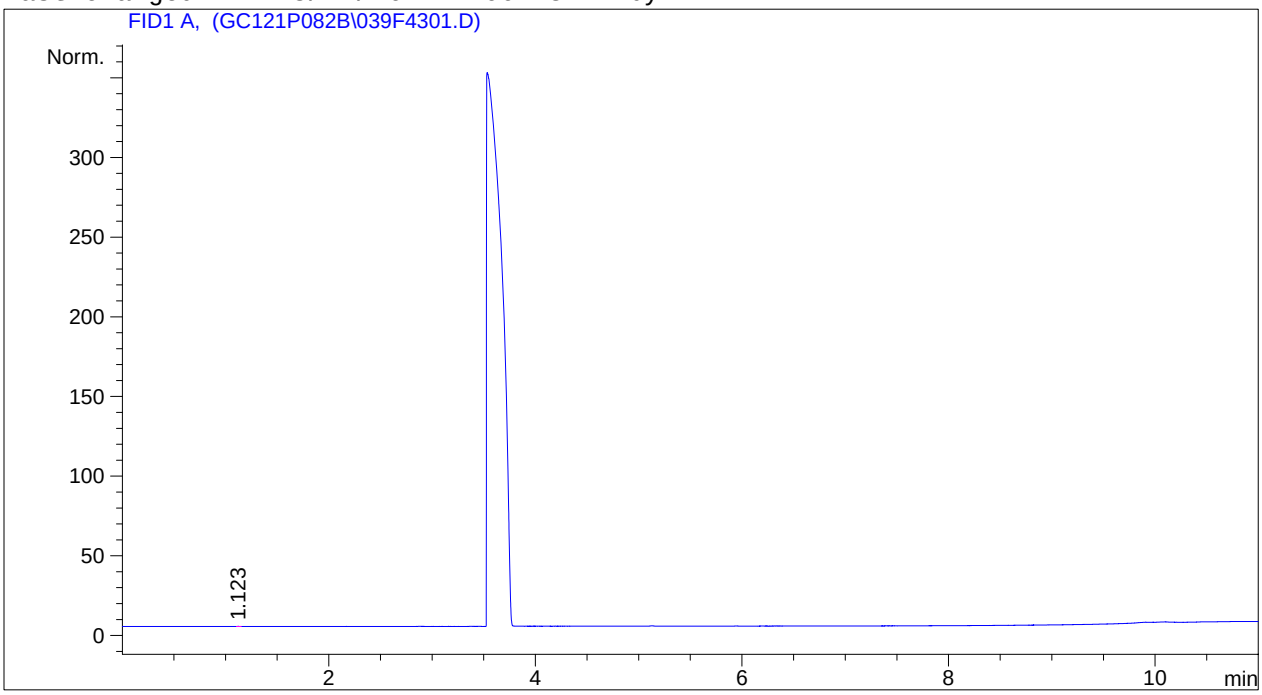



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

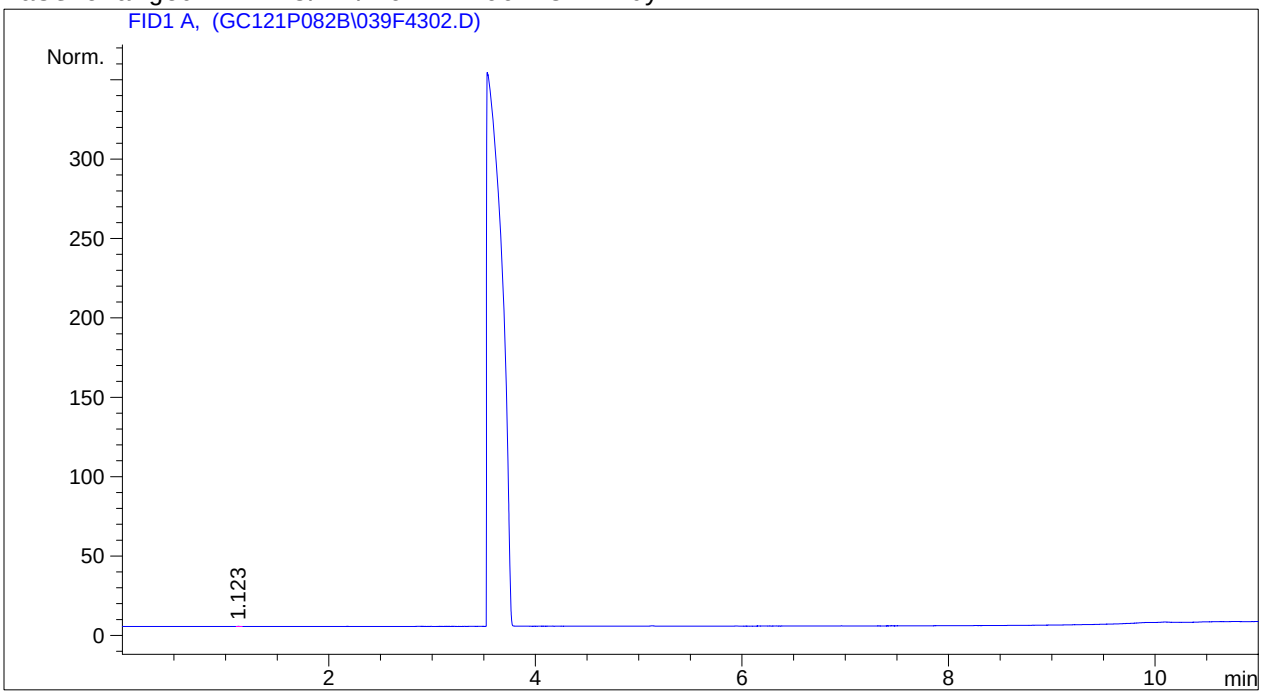
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                 0.00000
```

EM-BTRF-001396

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\039F4302.D
Sample Name: M18 H2O Cond RB 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  43
Acq. Instrument : Lucy                          Location : Vial 39
Injection Date  : 03-Aug-11, 07:58:50                Inj :   2
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

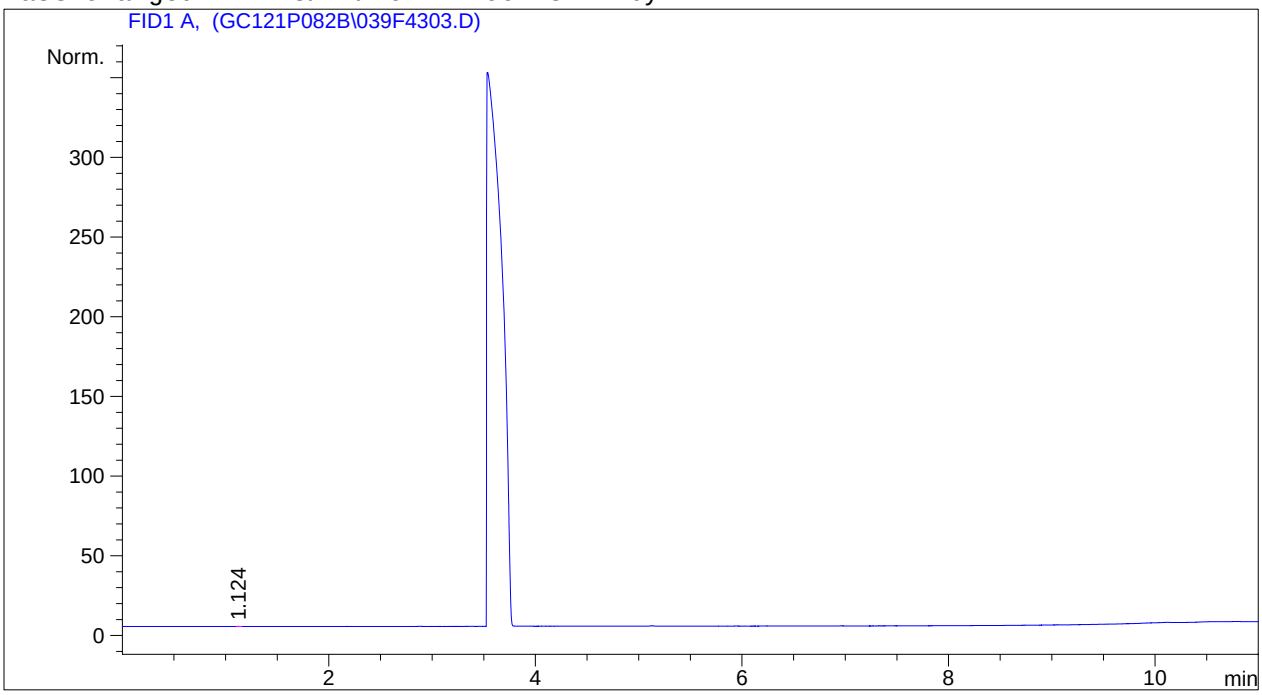
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                 0.00000
```

EM-BTRF-001397

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\039F4303.D
Sample Name: M18 H2O Cond RB 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  43
Acq. Instrument : Lucy                          Location : Vial 39
Injection Date  : 03-Aug-11, 08:20:08                Inj :   3
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

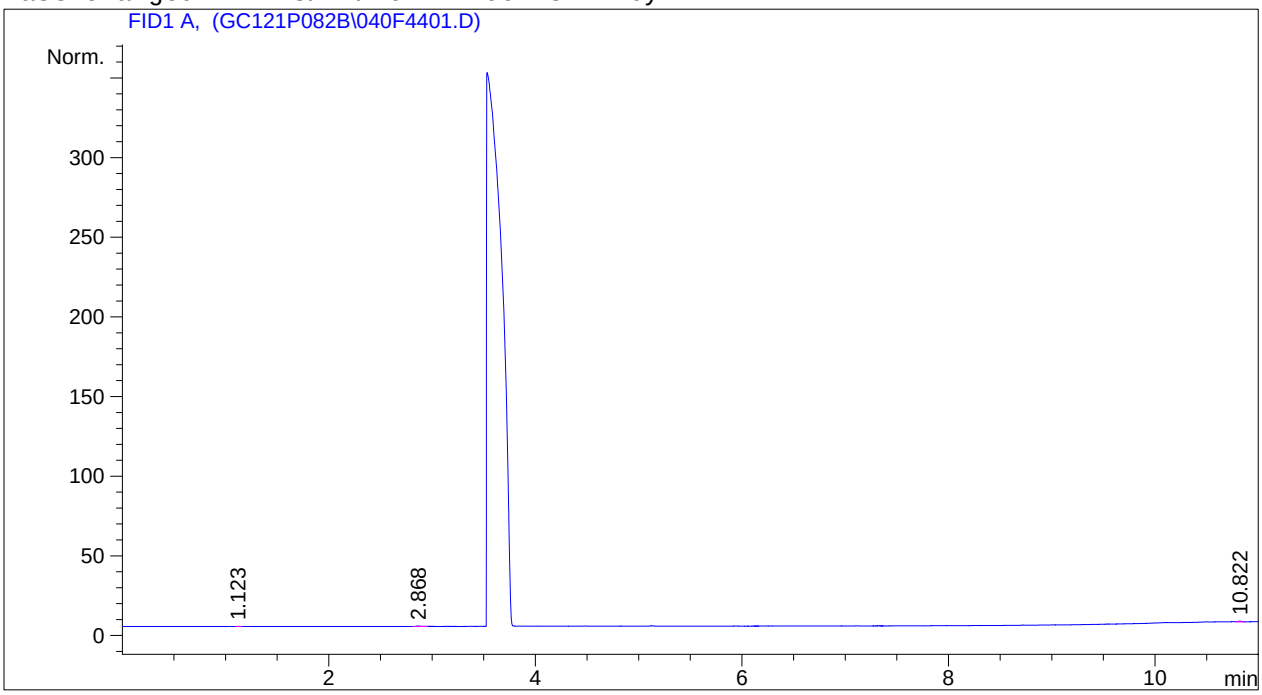
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                 0.00000
```

EM-BTRF-001398

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\040F4401.D
Sample Name: M18 H2O XAD FB-A 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  44
Acq. Instrument : Lucy                          Location : Vial 40
Injection Date  : 03-Aug-11, 08:41:55                Inj :   1
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

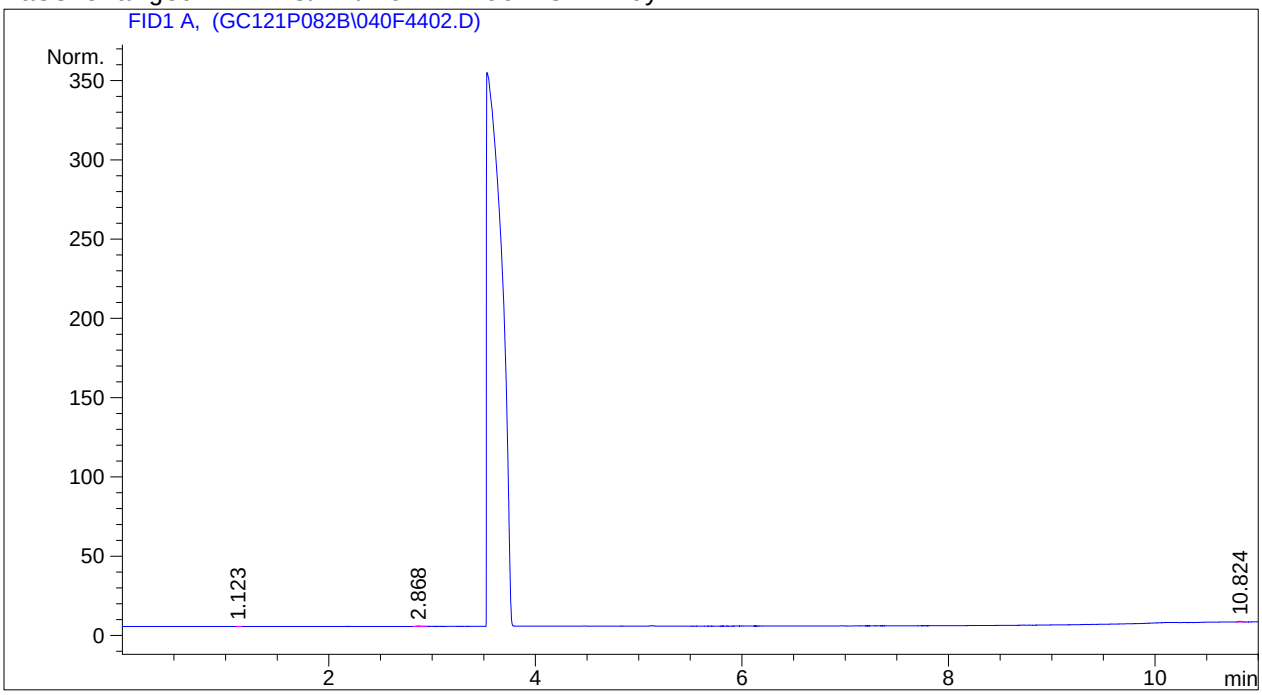
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                0.00000
```

EM-BTRF-001399

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\040F4402.D
Sample Name: M18 H2O XAD FB-A 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  44
Acq. Instrument : Lucy                          Location : Vial 40
Injection Date  : 03-Aug-11, 09:03:44                Inj :   2
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                0.00000
```

EM-BTRF-001400

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\040F4403.D
Sample Name: M18 H2O XAD FB-A 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  44
Acq. Instrument : Lucy                          Location : Vial 40
Injection Date  : 03-Aug-11, 09:25:39                Inj :   3
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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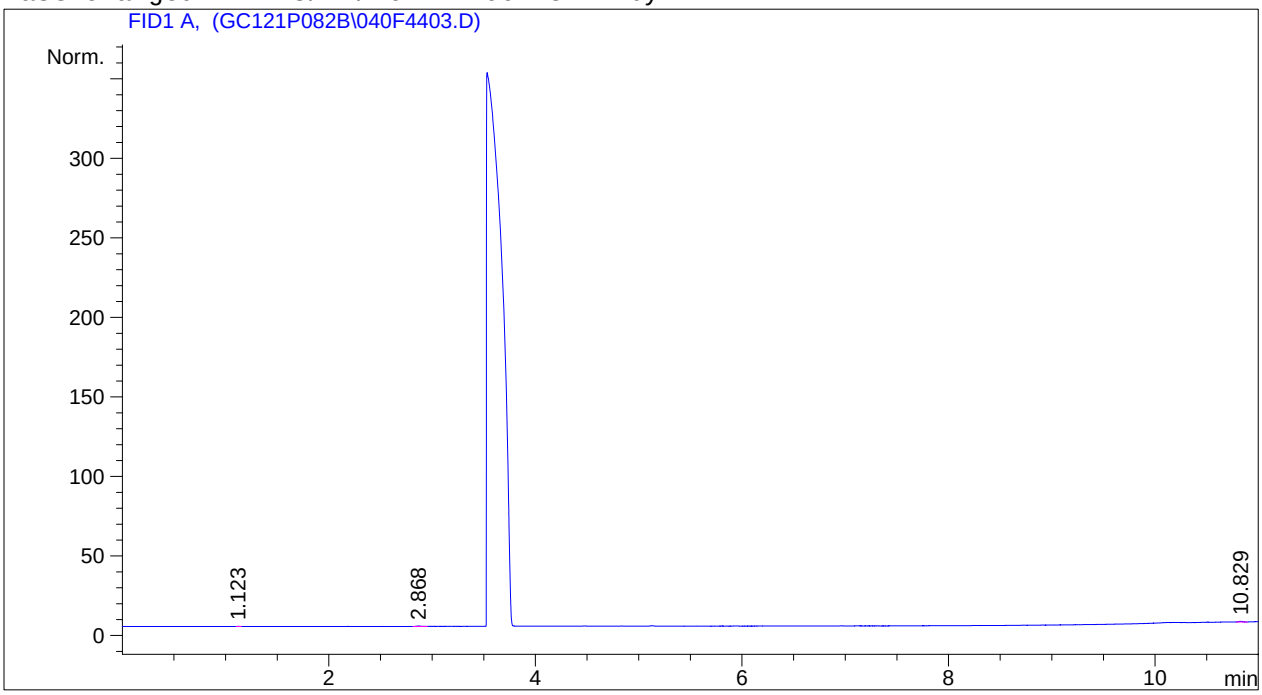


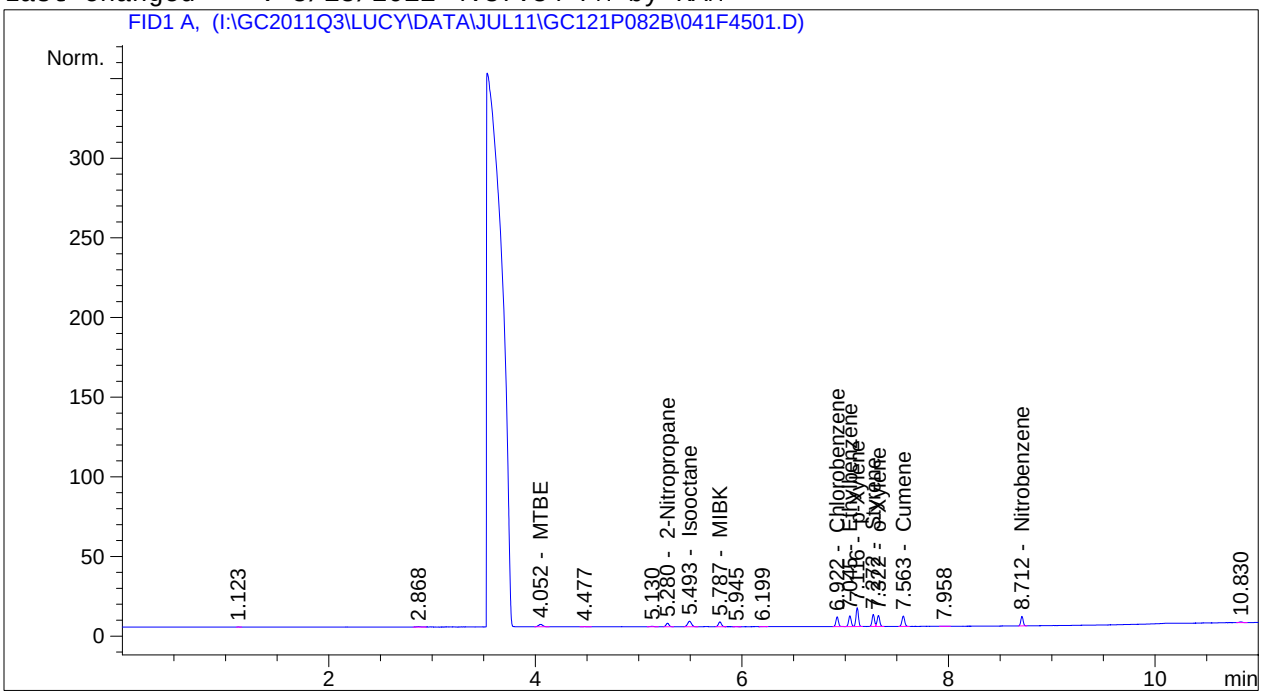

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                0.00000
```

EM-BTRF-001401

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\041F4501.D
Sample Name: XAD LCS 1 0711-64

==========

Acq. Operator : JBB Seq. Line : 45
Acq. Instrument : Lucy Location : Vial 41
Injection Date : 03-Aug-11, 09:47:34 Inj : 1
Inj Volume : External
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed : 8/18/2011 4:37:34 PM by KAM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

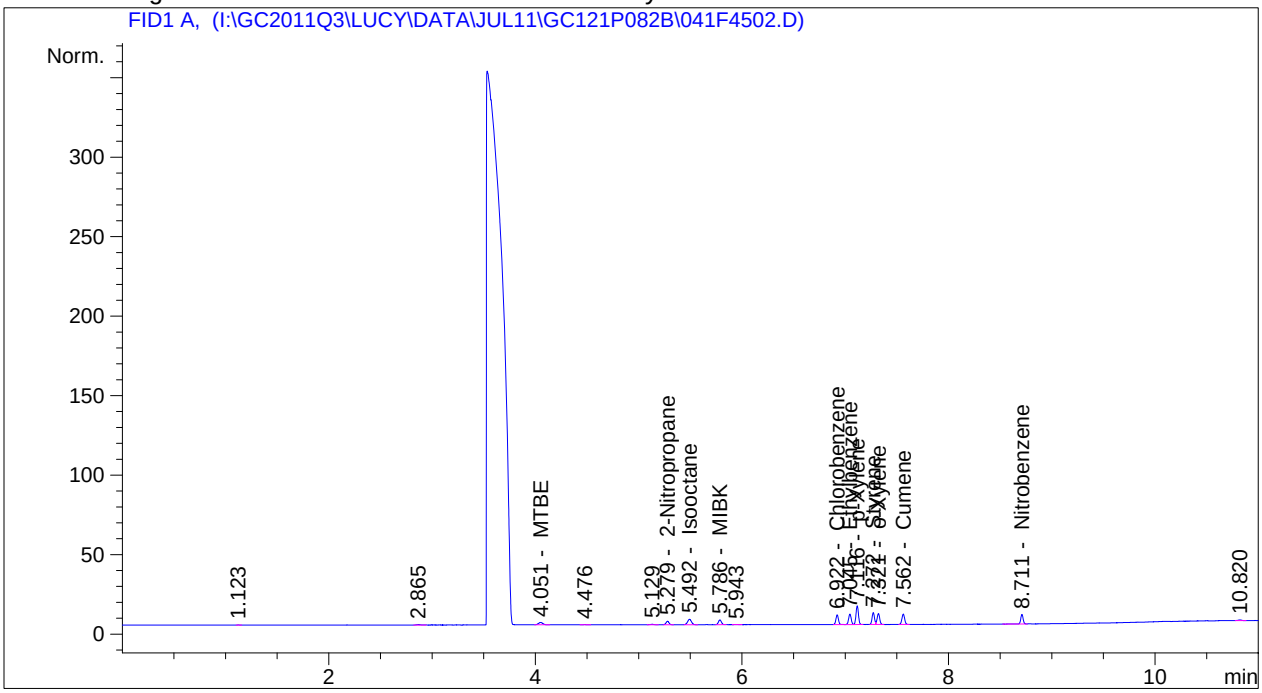
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.052	BB	4.35453	9.99316e-1	4.35155		MTBE
5.280	BB	4.27056	1.27434	5.44217		2-Nitropropane
5.493	BB	8.99941	5.63366e-1	5.06996		Isooctane
5.787	BB	6.15955	7.84359e-1	4.83130		MIBK
6.922	BV	10.38417	6.81522e-1	7.07704		Chlorobenzene
7.045	VV	11.53413	4.90770e-1	5.66060		Ethylbenzene
7.116	VB	19.46984	4.86229e-1	9.46680		p-Xylene
7.272	BV	12.36165	4.79305e-1	5.92500		Styrene
7.322	VB	12.08129	4.81735e-1	5.81998		o-Xylene
7.563	BB	11.97503	4.87584e-1	5.83883		Cumene
8.712	BV	9.50106	8.13224e-1	7.72650		Nitrobenzene
Totals :				67.20972		

EPA M18 LCS XAD tube desorbed in 5mL CS2 Tag (ug):
0
0
22.14
29.05
24.1
23.9
33.18
25.97
42.96
27.15
26.35
26.0
36.05

2

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\041F4502.D
Sample Name: XAD LCS 1 0711-64

Acq. Operator	: JBB	Seq. Line	: 45
Acq. Instrument	: Lucy	Location	: Vial 41
Injection Date	: 03-Aug-11, 10:09:21	Inj	: 2
		Inj Volume	: External
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/18/2011 4:37:34 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.051	BB	4.31407	9.99369e-1	4.31135		MTBE
5.279	BB	4.34927	1.27415	5.54161		2-Nitropropane
5.492	BB	8.91566	5.63386e-1	5.02296		Isooctane
5.786	BB	6.11103	7.84466e-1	4.79390		MIBK
6.922	BV	10.38900	6.81522e-1	7.08033		Chlorobenzene
7.045	VV	11.45848	4.90794e-1	5.62375		Ethylbenzene
7.116	VB	19.36714	4.86239e-1	9.41706		p-Xylene
7.272	BV	12.29704	4.79335e-1	5.89440		Styrene
7.321	VB	12.02573	4.81746e-1	5.79334		o-Xylene
7.562	BB	11.97981	4.87583e-1	5.84115		Cumene
8.711	BB	9.31176	8.13486e-1	7.57499		Nitrobenzene
Totals :				66.89483		

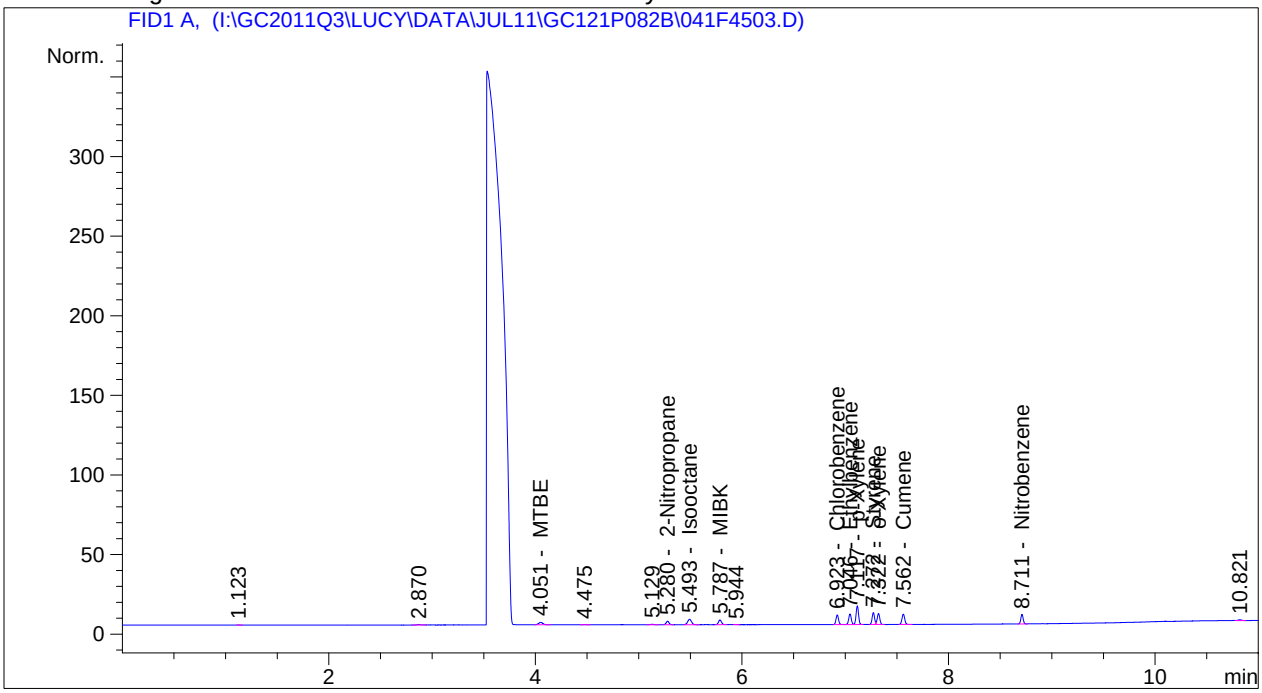
EPA M18 LCS XAD tube desorbed in 5mL CS2 Tag (ug):
0
0
22.14
29.05
24.1
23.9
33.18
25.97
42.96
27.15
26.35
26.0
36.05

EM-BTRF-001403

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\041F4503.D
Sample Name: XAD LCS 1 0711-64

==========

Acq. Operator : JBB Seq. Line : 45
Acq. Instrument : Lucy Location : Vial 41
Injection Date : 03-Aug-11, 10:31:06 Inj : 3
Inj Volume : External
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed : 8/18/2011 4:37:34 PM by KAM



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

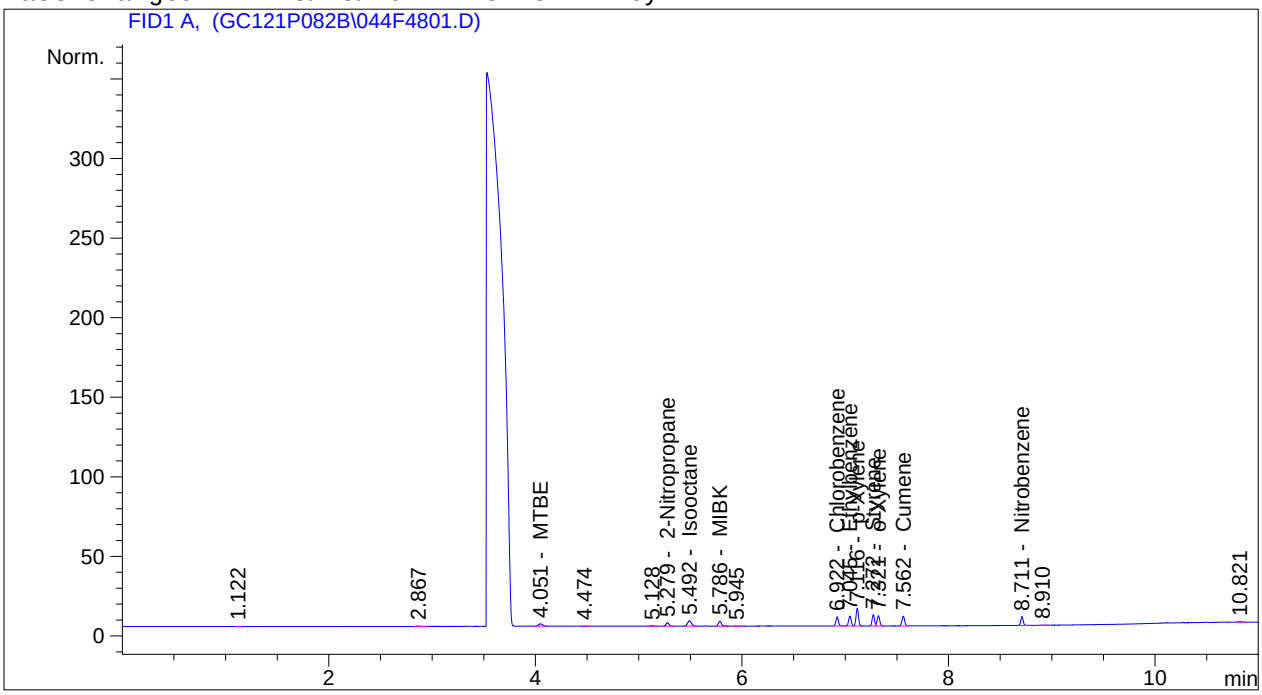
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name	EPA M18 LCS XAD tube desorbed in 5mL CS2 Tag (ug):
2.703		-	-	-		Acetonitrile	0
3.138		-	-	-		Acrylonitrile	0
4.051	BB	4.37102	9.99294e-1	4.36793		MTBE	22.14
5.280	BB	4.31655	1.27423	5.50026		2-Nitropropane	29.05
5.493	BB	8.95902	5.63376e-1	5.04730		Isooctane	24.1
5.787	BB	6.14591	7.84389e-1	4.82078		MIBK	23.9
6.923	BV	10.35758	6.81522e-1	7.05892		Chlorobenzene	33.18
7.046	VV	11.54004	4.90768e-1	5.66348		Ethylbenzene	25.97
7.117	VB	19.46165	4.86230e-1	9.46283		p-Xylene	42.96
7.272	BV	12.28958	4.79338e-1	5.89087		Styrene	27.15
7.322	VB	12.00896	4.81749e-1	5.78530		o-Xylene	26.35
7.562	BB	12.05656	4.87566e-1	5.87836		Cumene	26.0
8.711	BV	9.43359	8.13316e-1	7.67249		Nitrobenzene	36.05
Totals :				67.14853			

EM-BTRF-001404

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\044F4801.D
Sample Name: XAD LCS 2 0711-64

Acq. Operator	: JBB	Seq. Line	: 48
Acq. Instrument	: Lucy	Location	: Vial 44
Injection Date	: 03-Aug-11, 13:03:24	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/18/2011 4:37:34 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name	EPA M18 LCS XAD tube desorbed in 5mL CS2 Tag (ug):
2.703		-	-	-		Acetonitrile	0
3.138		-	-	-		Acrylonitrile	0
4.051	BB	4.31343	9.99370e-1	4.31071		MTBE	22.14
5.279	BB	4.32607	1.27420	5.51229		2-Nitropropane	29.05
5.492	BB	8.74456	5.63430e-1	4.92695		Isooctane	24.1
5.786	BB	5.97151	7.84786e-1	4.68635		MIBK	23.9
6.922	BB	9.99563	6.81530e-1	6.81233		Chlorobenzene	33.18
7.045	BV	10.95403	4.90963e-1	5.37803		Ethylbenzene	25.97
7.116	VB	18.37297	4.86344e-1	8.93558		p-Xylene	42.96
7.272	BV	11.58569	4.79687e-1	5.55750		Styrene	27.15
7.321	VB	11.32121	4.81893e-1	5.45561		o-Xylene	26.35
7.562	BB	11.18660	4.87772e-1	5.45651		Cumene	26.0
8.711	BB	8.86527	8.14148e-1	7.21764		Nitrobenzene	36.05
Totals :				64.24950			

EM-BTRF-001405

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\044F4802.D
Sample Name: XAD LCS 2 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  48
Acq. Instrument : Lucy                          Location : Vial 44
Injection Date  : 03-Aug-11, 13:25:09                Inj :   2
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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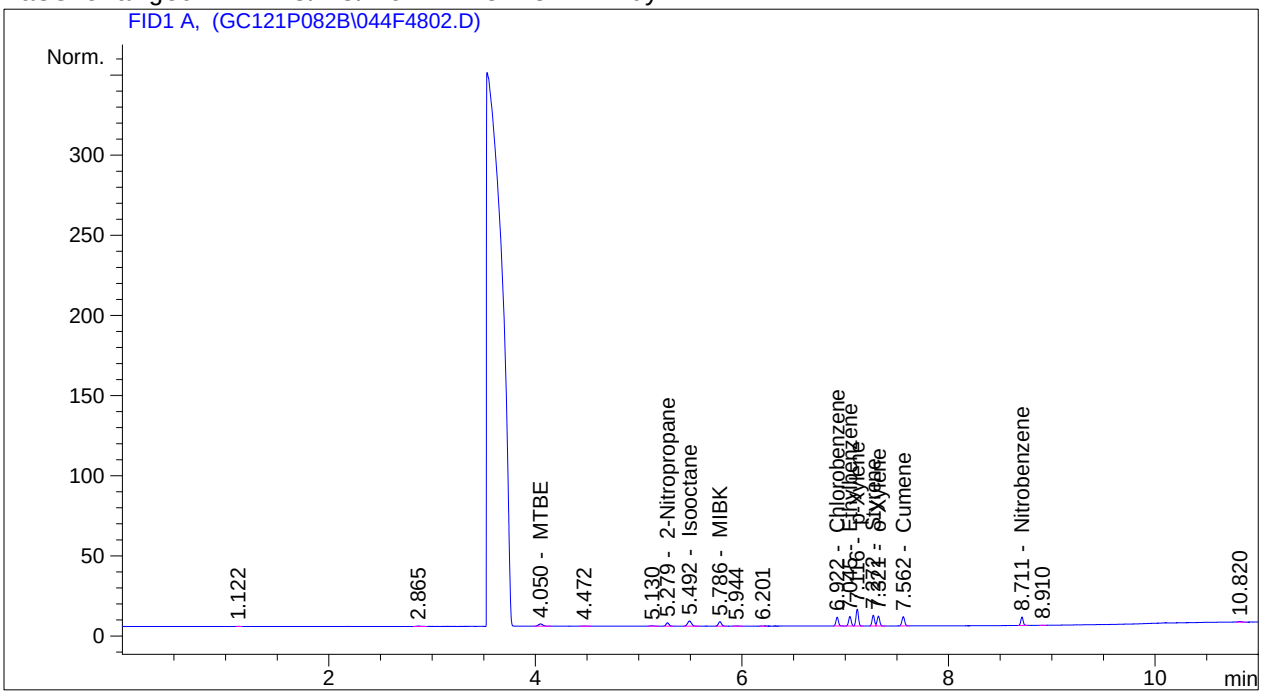


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|----------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.050 BB        4.15139 9.99593e-1    4.14970    MTBE
  5.279 BB        4.11846    1.27475    5.25002    2-Nitropropane
  5.492 BB        8.32777 5.63544e-1    4.69306    Isooctane
  5.786 BB        5.73139 7.85372e-1    4.50127    MIBK
  6.922 BB        9.36521 6.81546e-1    6.38282    Chlorobenzene
  7.045 BV       10.27853 4.91216e-1    5.04898    Ethylbenzene
  7.116 VB       17.37667 4.86461e-1    8.45308    p-Xylene
  7.272 BV       10.92953 4.80052e-1    5.24674    Styrene
  7.321 VB       10.68366 4.82042e-1    5.14997    o-Xylene
  7.562 BB       10.59201 4.87933e-1    5.16819    Cumene
  8.711 BB        8.36562 8.14972e-1    6.81775    Nitrobenzene

Totals :                               60.86158
```
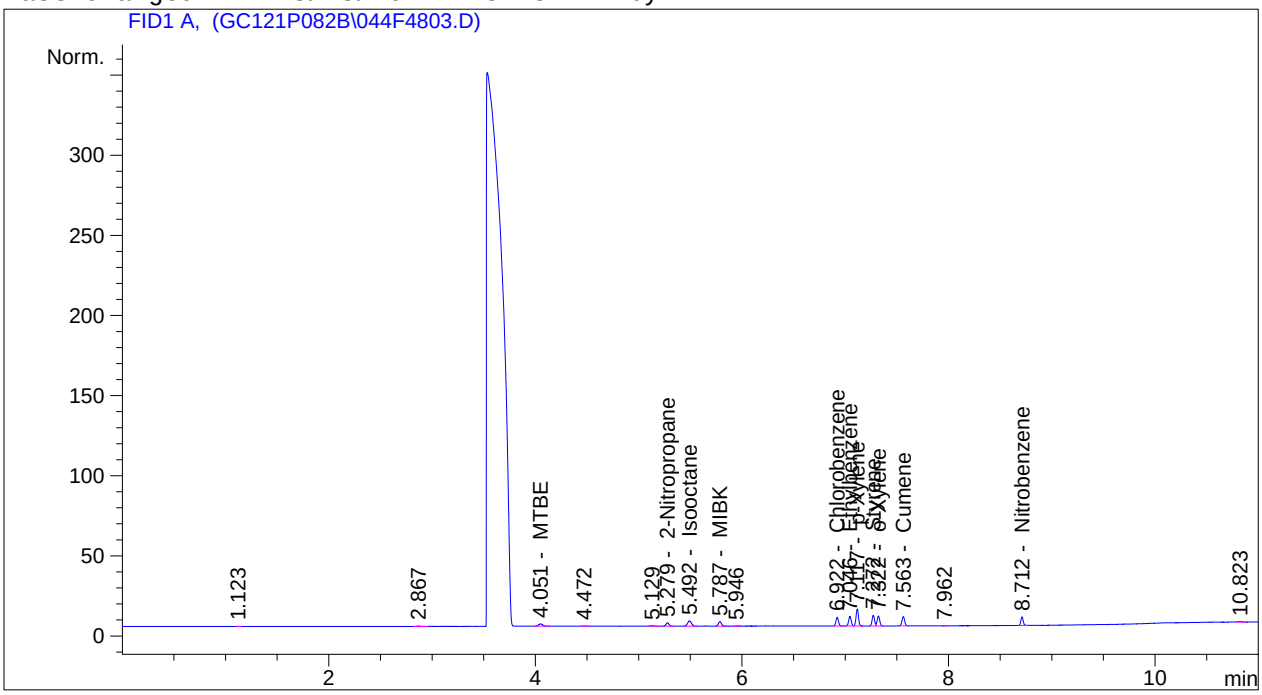

EPA M18 LCS XAD tube desorbed in 5mL CS2 Tag (ug):
0
0
22.14
29.05
24.1
23.9
33.18
25.97
42.96
27.15
26.35
26.0
36.05

EM-BTRF-001406

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\044F4803.D
Sample Name: XAD LCS 2 0711-64

Acq. Operator	: JBB	Seq. Line	: 48
Acq. Instrument	: Lucy	Location	: Vial 44
Injection Date	: 03-Aug-11, 13:46:58	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/18/2011 4:37:34 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.051	BB	4.09392	9.99676e-1	4.09259		MTBE
5.279	BB	4.10750	1.27478	5.23617		2-Nitropropane
5.492	BB	8.39600	5.63525e-1	4.73135		Isooctane
5.787	BB	5.78573	7.85235e-1	4.54316		MIBK
6.922	BB	9.37808	6.81546e-1	6.39159		Chlorobenzene
7.046	BV	10.32747	4.91197e-1	5.07282		Ethylbenzene
7.117	VB	17.39775	4.86459e-1	8.46329		p-Xylene
7.272	BV	10.94615	4.80042e-1	5.25461		Styrene
7.322	VB	10.68310	4.82042e-1	5.14971		o-Xylene
7.563	BB	10.61587	4.87926e-1	5.17976		Cumene
8.712	BB	8.31487	8.15061e-1	6.77712		Nitrobenzene
Totals :				60.89217		

EPA M18 LCS XAD tube desorbed in 5mL CS2 Tag (ug):
0
0
22.14
29.05
24.1
23.9
33.18
25.97
42.96
27.15
26.35
26.0
36.05

EM-BTRF-001407

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\045F4901.D
Sample Name: XAD MB 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Lucy                          Location : Vial 45
Injection Date  : 03-Aug-11, 14:08:48                Inj :   1
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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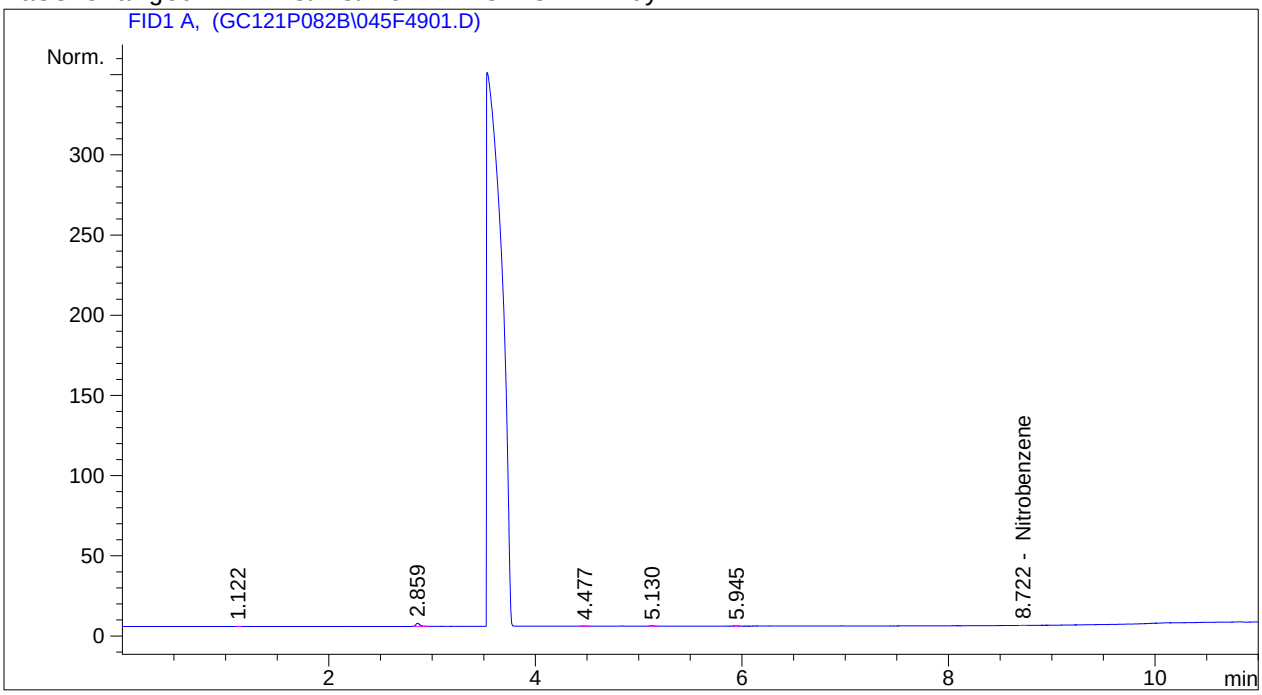


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.722 BV     1.55390e-1 8.43310e-1 1.31042e-1    Nitrobenzene

Totals :                              1.31042e-1
```

EM-BTRF-001408

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\045F4902.D
Sample Name: XAD MB 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Lucy                          Location : Vial 45
Injection Date  : 03-Aug-11, 14:30:43                Inj :   2
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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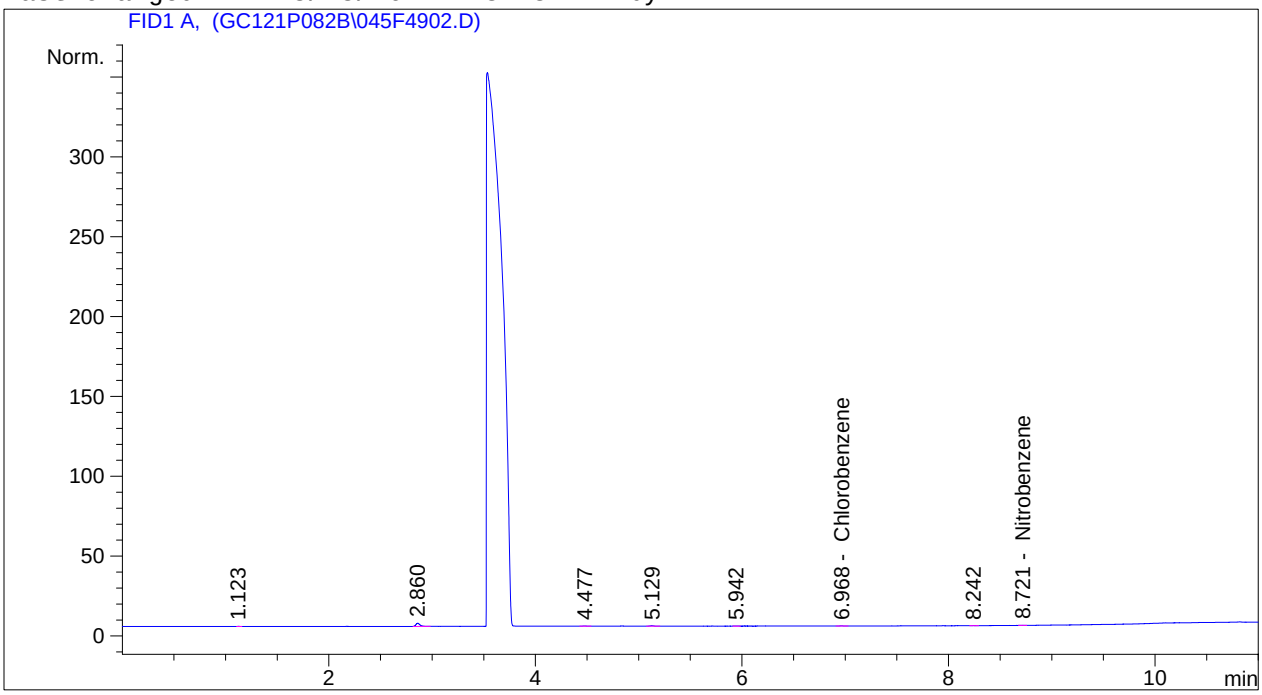


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.968 BB     2.23826e-1 6.82013e-1 1.52652e-1    Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.721 BV     1.45517e-1 8.43310e-1 1.22716e-1    Nitrobenzene

Totals :                              2.75368e-1
```

EM-BTRF-001409

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\045F4903.D
Sample Name: XAD MB 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  49
Acq. Instrument : Lucy                          Location : Vial 45
Injection Date  : 03-Aug-11, 14:52:37                Inj :   3
                                              Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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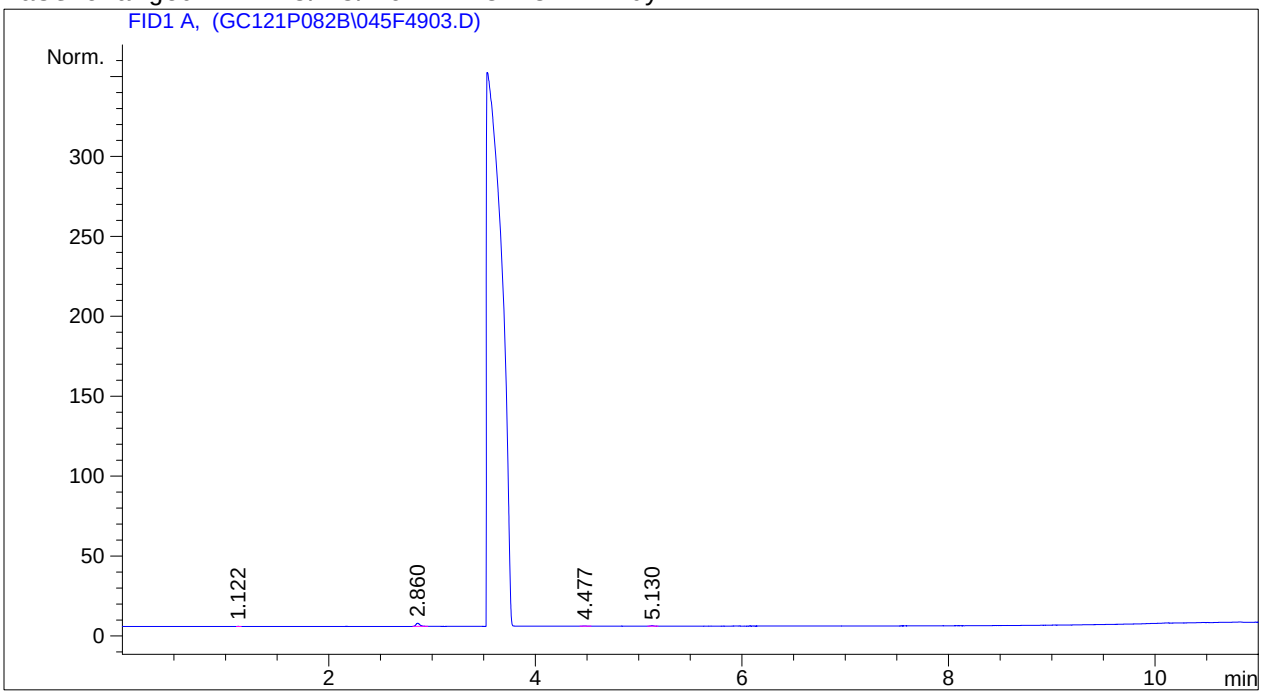


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

Totals :                                 0.00000
```

EM-BTRF-001410

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\046F5001.D
Sample Name: AQ LCS 3 0611-49

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  50
Acq. Instrument : Lucy                              Location : Vial 46
Injection Date  : 03-Aug-11, 15:14:29                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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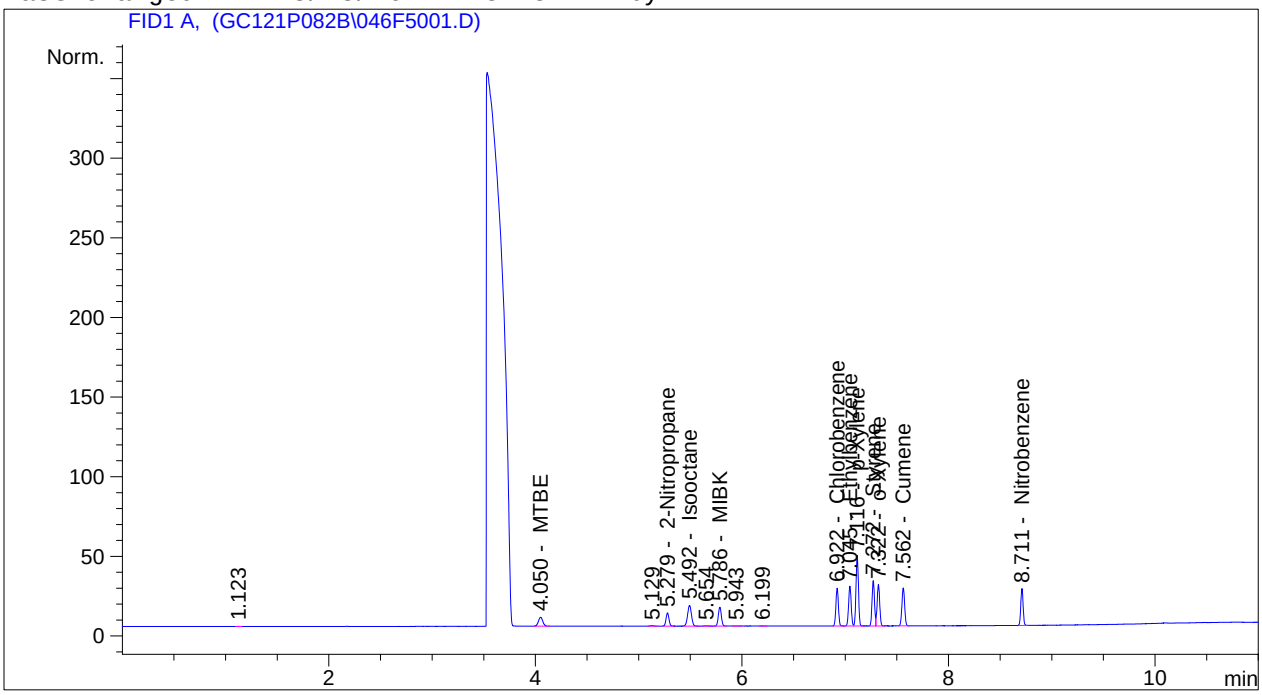


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.050 BB       16.25617 9.95167e-1   16.17759    MTBE
  5.279 BB       16.35820    1.26619   20.71267    2-Nitropropane
  5.492 BB       33.67463 5.61745e-1   18.91655    Isooctane
  5.786 BB       24.16688 7.74253e-1   18.71129    MIBK
  6.922 BB       40.18422 6.81356e-1   27.37978    Chlorobenzene
  7.045 BV       43.56836 4.88084e-1   21.26504    Ethylbenzene
  7.116 VB       73.06707 4.84813e-1   35.42389    p-Xylene
  7.272 BV       46.91919 4.75108e-1   22.29169    Styrene
  7.322 VB       45.17526 4.80015e-1   21.68481    o-Xylene
  7.562 BB       44.06842 4.85637e-1   21.40128    Cumene
  8.711 BB       36.48719 8.03703e-1   29.32488    Nitrobenzene

Totals :                              253.28947
```

EPA M18 AQ extract LCS. H2O extracted with 5mL
CS2 Tag (ug):
0
0
88.6
116.2
96.4
95.5
132.7
103.9
171.9
108.6
171.9
104
144.2

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\046F5002.D
Sample Name: AQ LCS 3 0611-49

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  50
Acq. Instrument : Lucy                              Location : Vial 46
Injection Date  : 03-Aug-11, 15:36:26                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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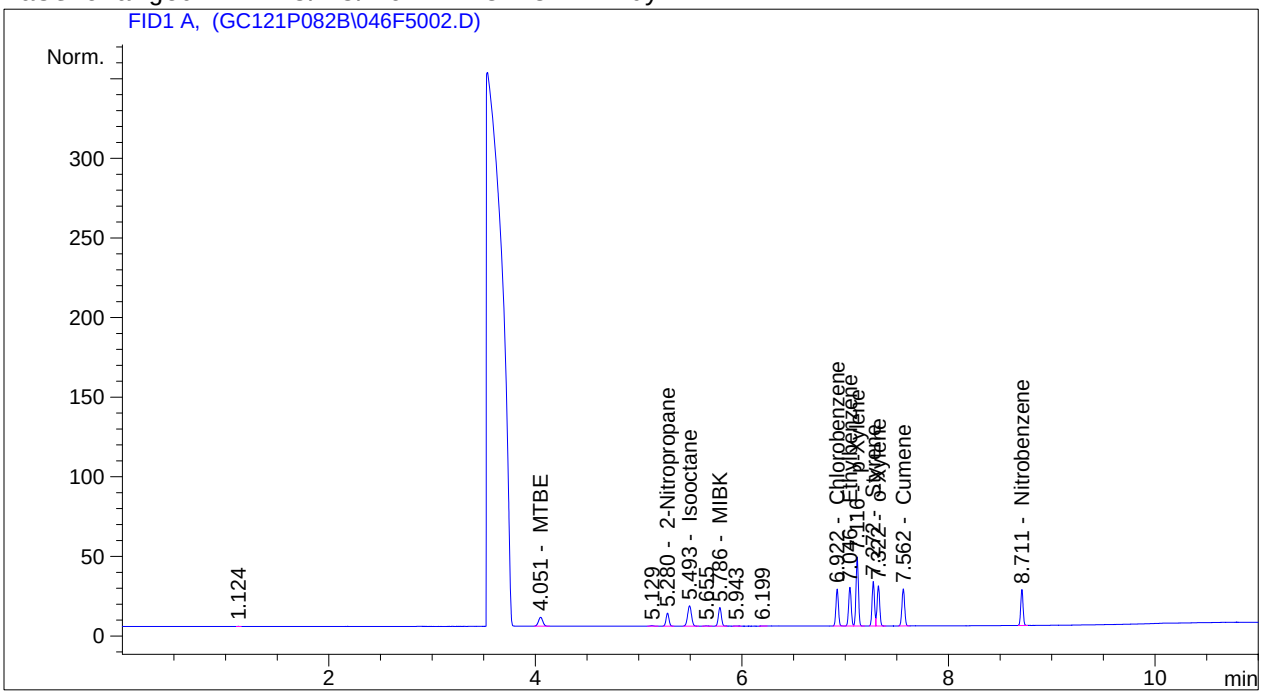


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.051 BB       16.35065 9.95158e-1   16.27148    MTBE
  5.280 BB       16.13658    1.26623   20.43268    2-Nitropropane
  5.493 BB       33.10160 5.61755e-1   18.59500    Isooctane
  5.786 BB       23.65890 7.74328e-1   18.31974    MIBK
  6.922 BV       39.14778 6.81358e-1   26.67365    Chlorobenzene
  7.046 VV       42.38020 4.88112e-1   20.68627    Ethylbenzene
  7.116 VB       70.97899 4.84828e-1   34.41264    p-Xylene
  7.272 BV       45.60386 4.75152e-1   21.66874    Styrene
  7.322 VB       43.91853 4.80033e-1   21.08235    o-Xylene
  7.562 BB       42.68021 4.85661e-1   20.72812    Cumene
  8.711 BB       35.45159 8.03801e-1   28.49604    Nitrobenzene

Totals :                              247.36670
```

EPA M18 AQ extract LCS. H2O extracted with 5mL CS2 Tag (ug):
0
0
88.6
116.2
96.4
95.5
132.7
103.9
171.9
108.6
171.9
104
144.2

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\046F5003.D
Sample Name: AQ LCS 3 0611-49

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :  50
Acq. Instrument : Lucy                          Location : Vial 46
Injection Date  : 03-Aug-11, 15:58:16                Inj :   3
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/18/2011 4:37:34 PM by KAM
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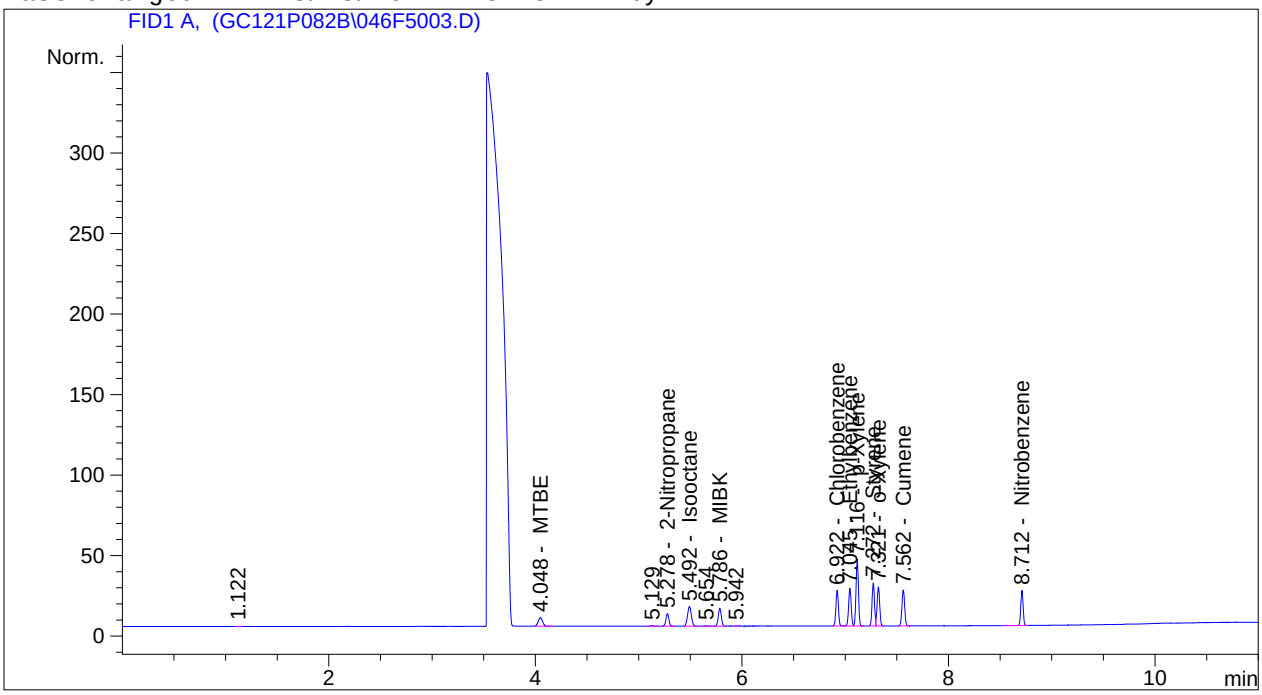


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.048 BB       15.42839 9.95248e-1   15.35508    MTBE
  5.278 BB       15.33960    1.26639   19.42585    2-Nitropropane
  5.492 BB       31.55683 5.61785e-1   17.72814    Isooctane
  5.786 BB       22.61222 7.74491e-1   17.51296    MIBK
  6.922 BV       37.46437 6.81361e-1   25.52675    Chlorobenzene
  7.045 VV       40.60678 4.88155e-1   19.82240    Ethylbenzene
  7.116 VB       68.03595 4.84851e-1   32.98732    p-Xylene
  7.272 BV       43.72917 4.75218e-1   20.78088    Styrene
  7.321 VB       42.08224 4.80061e-1   20.20205    o-Xylene
  7.562 BB       41.03094 4.85691e-1   19.92837    Cumene
  8.712 BB       34.49445 8.03897e-1   27.72999    Nitrobenzene

Totals :                              236.99980
```

EPA M18 AQ extract LCS. H2O extracted with 5mL CS2 Tag (ug):
0
0
88.6
116.2
96.4
95.5
132.7
103.9
171.9
108.6
171.9
104
144.2

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\005F0901.D
Sample Name: M18 R1B Spk Cond ext-LD 0711-64

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :   9
Acq. Instrument : Lucy                          Location : Vial 5
Injection Date  : 01-Aug-11, 18:18:29                Inj :   1
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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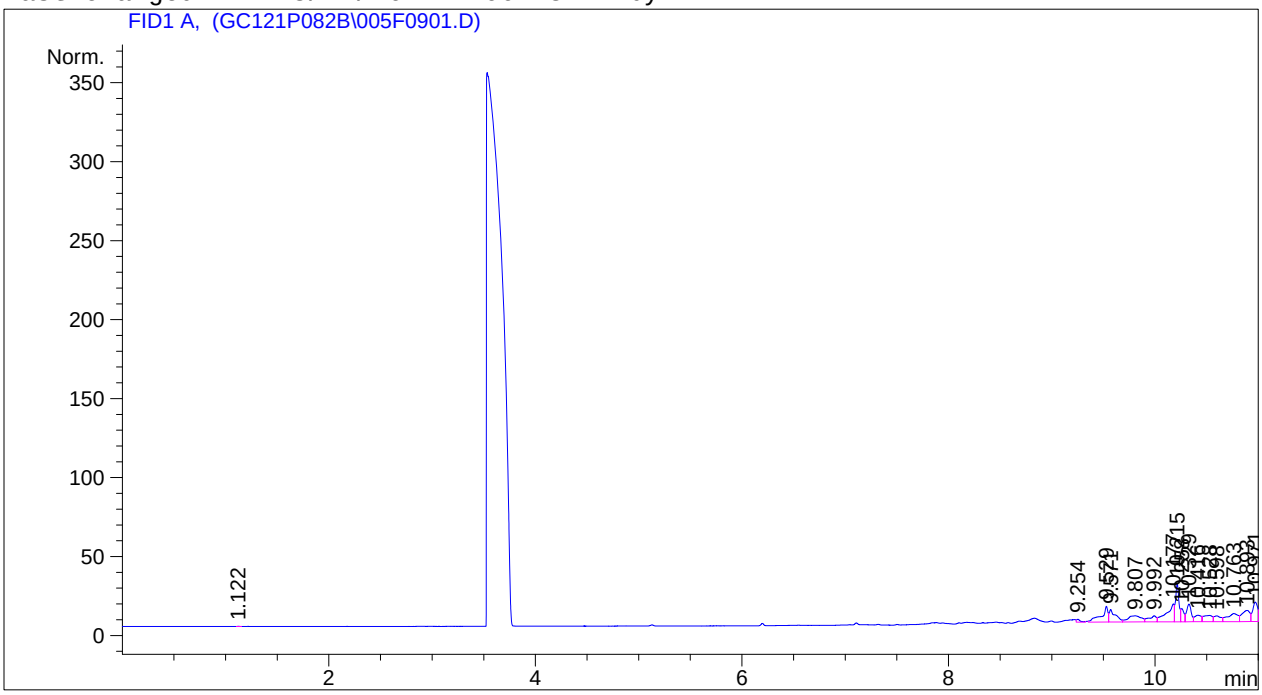



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.703            -          -          -         Acetonitrile
  3.138            -          -          -         Acrylonitrile
  4.005            -          -          -         MTBE
  5.279            -          -          -         2-Nitropropane
  5.492            -          -          -         Isooctane
  5.787            -          -          -         MIBK
  6.921            -          -          -         Chlorobenzene
  7.044            -          -          -         Ethylbenzene
  7.115            -          -          -         p-Xylene
  7.270            -          -          -         Styrene
  7.320            -          -          -         o-Xylene
  7.561            -          -          -         Cumene
  8.709            -          -          -         Nitrobenzene

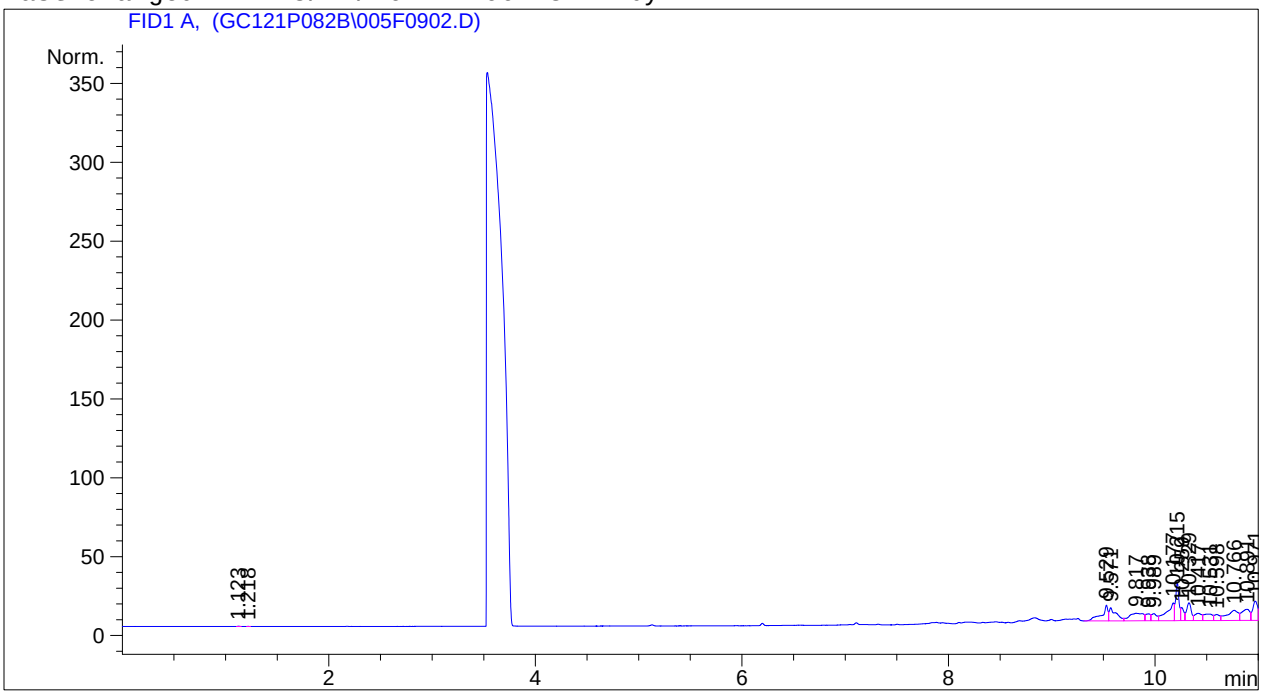
Totals :                                0.00000
```

EM-BTRF-001414

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\005F0902.D
Sample Name: M18 R1B Spk Cond ext-LD 0711-64

==========

Acq. Operator : JBB Seq. Line : 9
Acq. Instrument : Lucy Location : Vial 5
Injection Date : 01-Aug-11, 18:40:03 Inj : 2
Inj Volume : External
Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed : 8/22/2011 2:06:43 PM by KAM



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

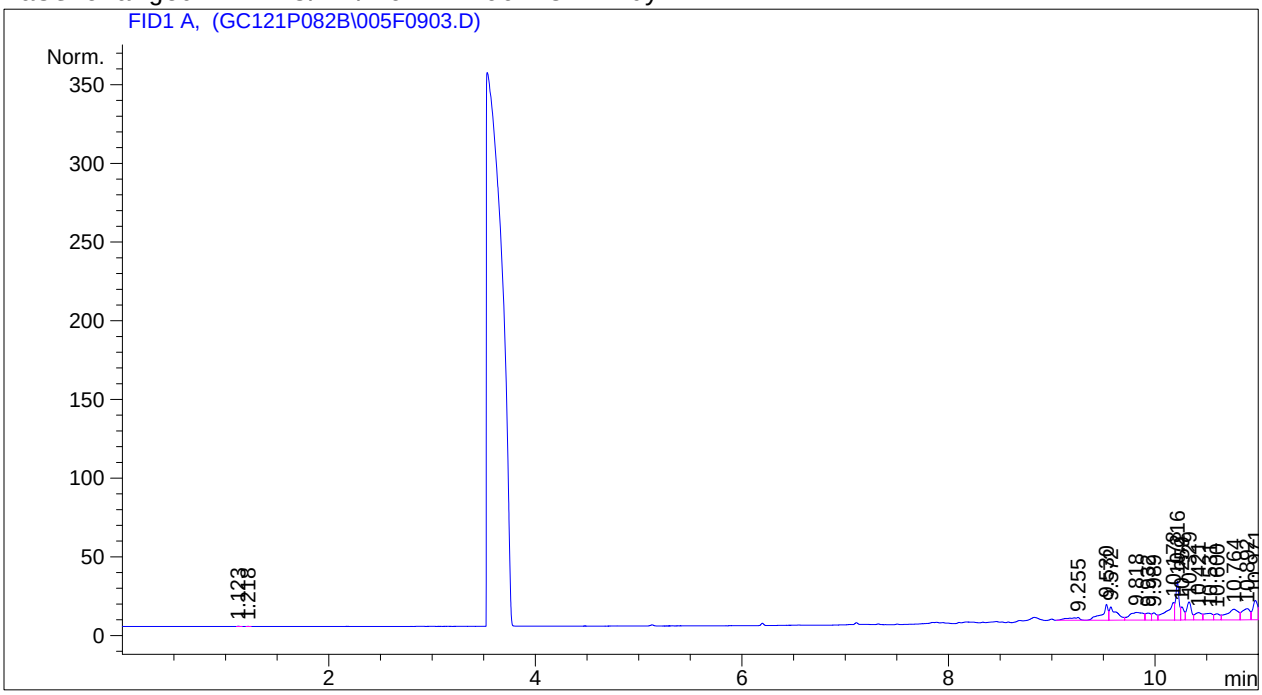
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 0.00000

EM-BTRF-001415

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\005F0903.D
Sample Name: M18 R1B Spk Cond ext-LD 0711-64

Acq. Operator	: JBB	Seq. Line	: 9
Acq. Instrument	: Lucy	Location	: Vial 5
Injection Date	: 01-Aug-11, 19:01:42	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/15/2011 6:30:17 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

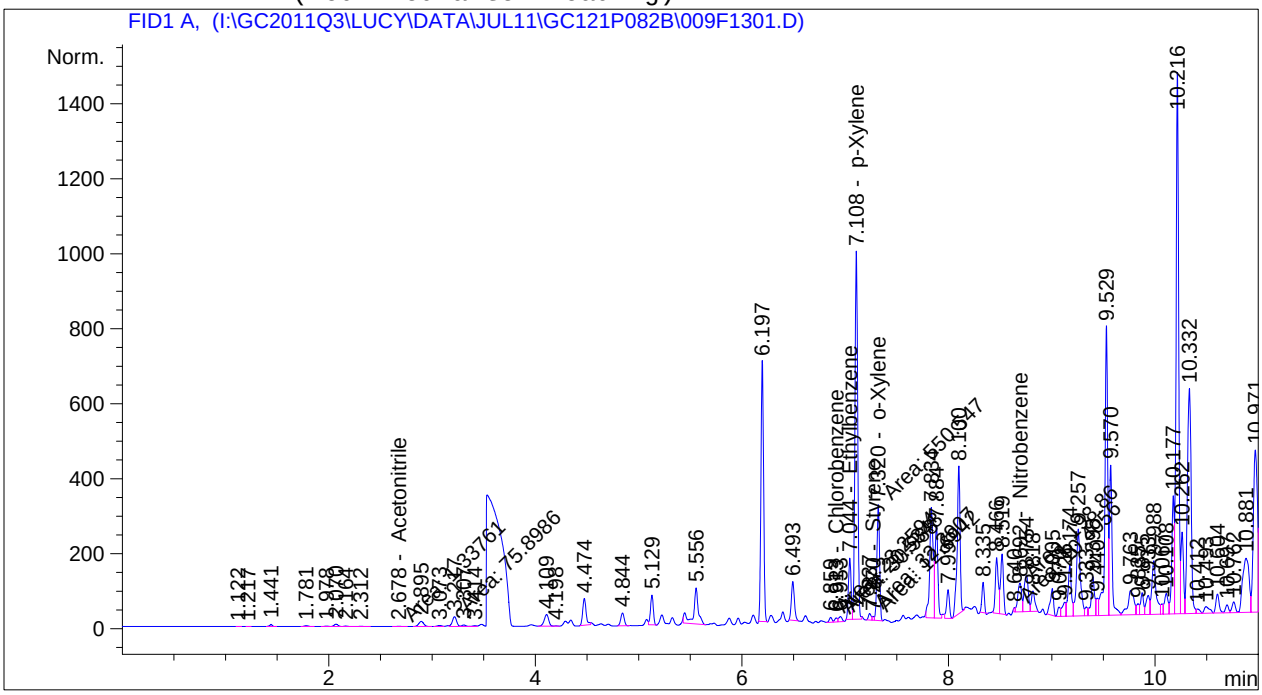
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044		-	-	-		Ethylbenzene
7.115		-	-	-		p-Xylene
7.270		-	-	-		Styrene
7.320		-	-	-		o-Xylene
7.561		-	-	-		Cumene
8.709		-	-	-		Nitrobenzene

Totals : 0.00000

EM-BTRF-001416

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\009F1301.D
Sample Name: M18 R1B Spk XAD FH-LD 0711-64

Acq. Operator	: JBB	Seq. Line	: 13
Acq. Instrument	: Lucy	Location	: Vial 9
Injection Date	: 01-Aug-11, 22:45:17	Inj	: 1
		Inj Volume	: External
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:55:06 PM by KAM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/22/2011 2:55:31 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

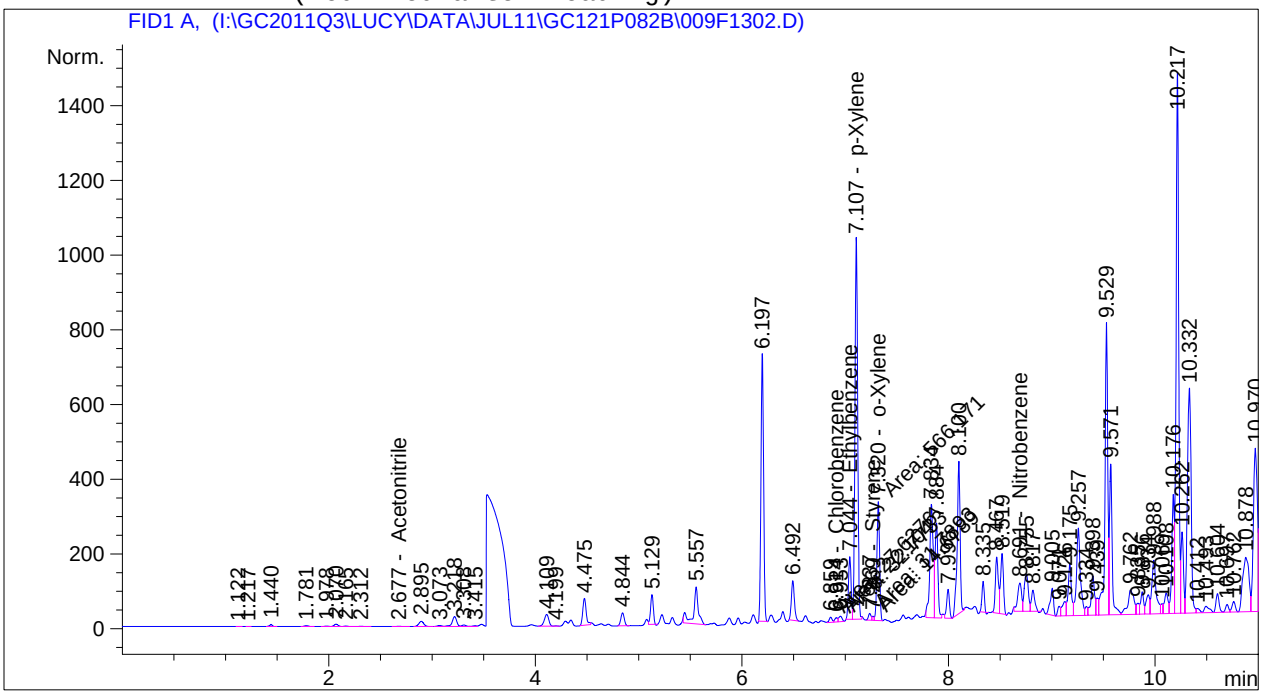
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	MM	1.33761	2.39947	3.20957		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.954		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.913	FM	20.53476	6.81412e-1	13.99262		Chlorobenzene
7.044	BV	287.44742	4.87264e-1	140.06283		Ethylbenzene
7.108	VB	1834.94690	4.84320e-1	888.70086		p-Xylene
7.270	FM	12.69423	4.79156e-1	6.08251		Styrene
7.320	FM	550.54687	4.79439e-1	263.95351		o-Xylene
7.561		-	-	-		Cumene
8.692	FM	198.85999	8.00966e-1	159.28018		Nitrobenzene
Totals :				1475.28209		

Manual Int. “II” (KAM)

EM-BTRF-001417

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\009F1302.D
Sample Name: M18 R1B Spk XAD FH-LD 0711-64

Acq. Operator	: JBB	Seq. Line	: 13
Acq. Instrument	: Lucy	Location	: Vial 9
Injection Date	: 01-Aug-11, 23:07:52	Inj	: 2
		Inj Volume	: External
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:55:06 PM by KAM (modified after loading)		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/22/2011 2:55:31 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BB	1.84558	2.34292	4.32406		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.954		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.914	FM	22.10397	6.81404e-1	15.06172		Chlorobenzene
7.044	BV	297.51031	4.87259e-1	144.96465		Ethylbenzene
7.107	VB	1885.65820	4.84319e-1	913.26031		p-Xylene
7.269	FM	14.67886	4.78405e-1	7.02245		Styrene
7.320	FM	566.17096	4.79437e-1	271.44350		o-Xylene
7.561		-	-	-		Cumene
8.691	BV	205.36475	8.00947e-1	164.48627		Nitrobenzene
Totals :				1520.56296		

Manual Int. "II" (KAM)

EM-BTRF-001418

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\009F1303.D
Sample Name: M18 R1B Spk XAD FH-LD 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  13
Acq. Instrument : Lucy                              Location : Vial 9
Injection Date  : 01-Aug-11, 23:30:22                    Inj :   3
                                                  Inj Volume : External
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:55:06 PM by KAM
                  (modified after loading)
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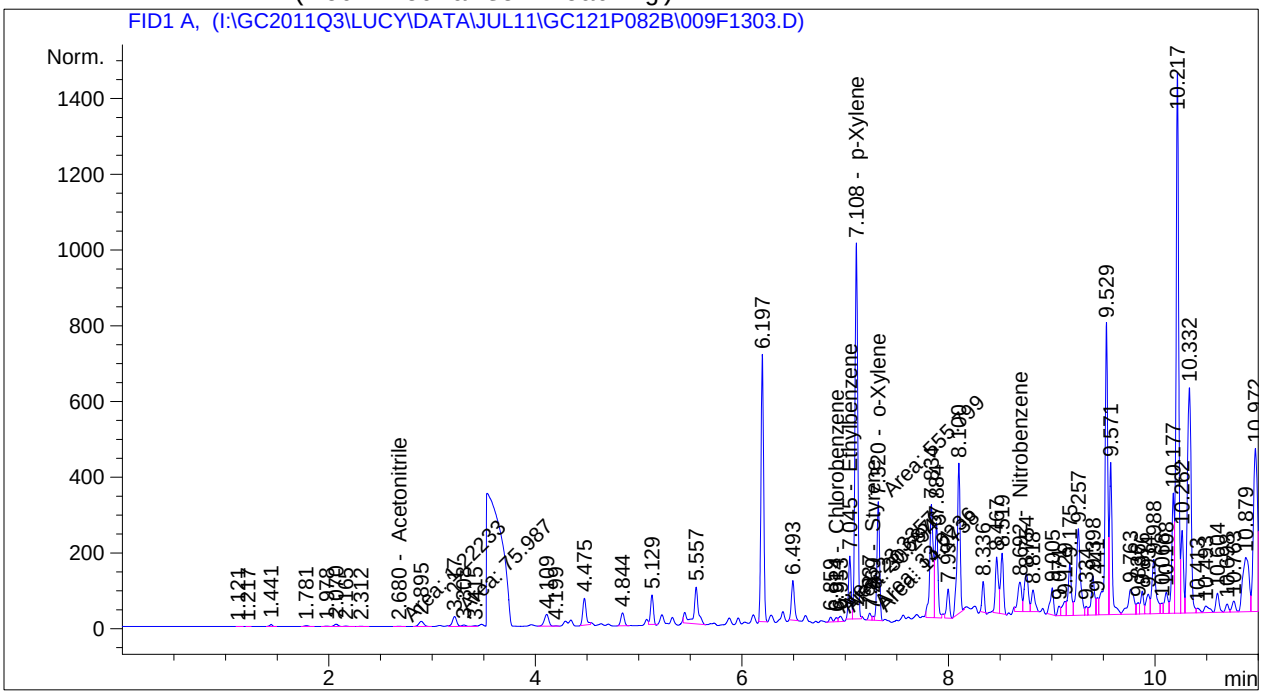



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/22/2011 2:55:31 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

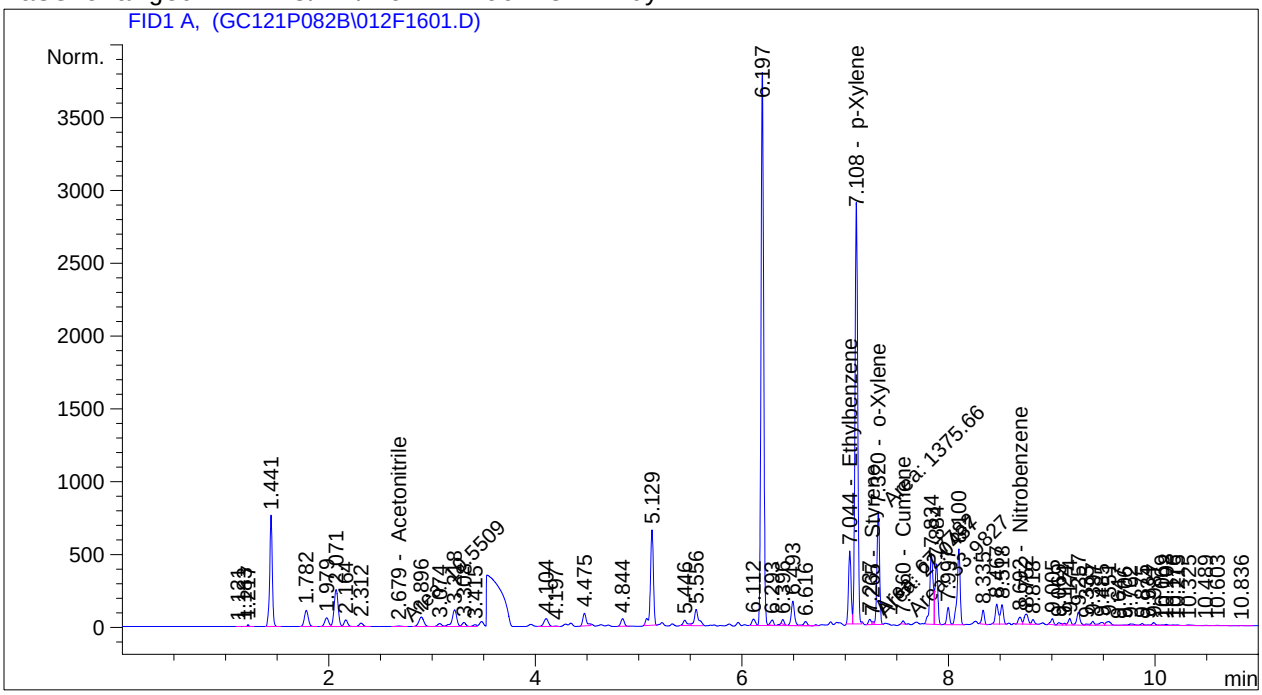
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.680	MM	1.22233	2.41885	2.95663		Acetonitrile
3.138		-	-	-		Acrylonitrile
3.954		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.914	FM	20.68758	6.81411e-1	14.09674		Chlorobenzene
7.045	BV	288.90616	4.87263e-1	140.77341		Ethylbenzene
7.108	VB	1845.04028	4.84320e-1	893.58908		p-Xylene
7.269	FM	14.27382	4.78542e-1	6.83062		Styrene
7.320	FM	555.79871	4.79438e-1	266.47118		o-Xylene
7.561		-	-	-		Cumene
8.692	BV	204.86317	8.00948e-1	164.08484		Nitrobenzene
Totals :				1488.80250		

Manual Int. "II" (KAM)

EM-BTRF-001419

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\012F1601.D
Sample Name: M18 R1B Spk CT FH-LD 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  16
Acq. Instrument : Lucy                              Location : Vial 12
Injection Date  : 02-Aug-11, 02:08:52                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

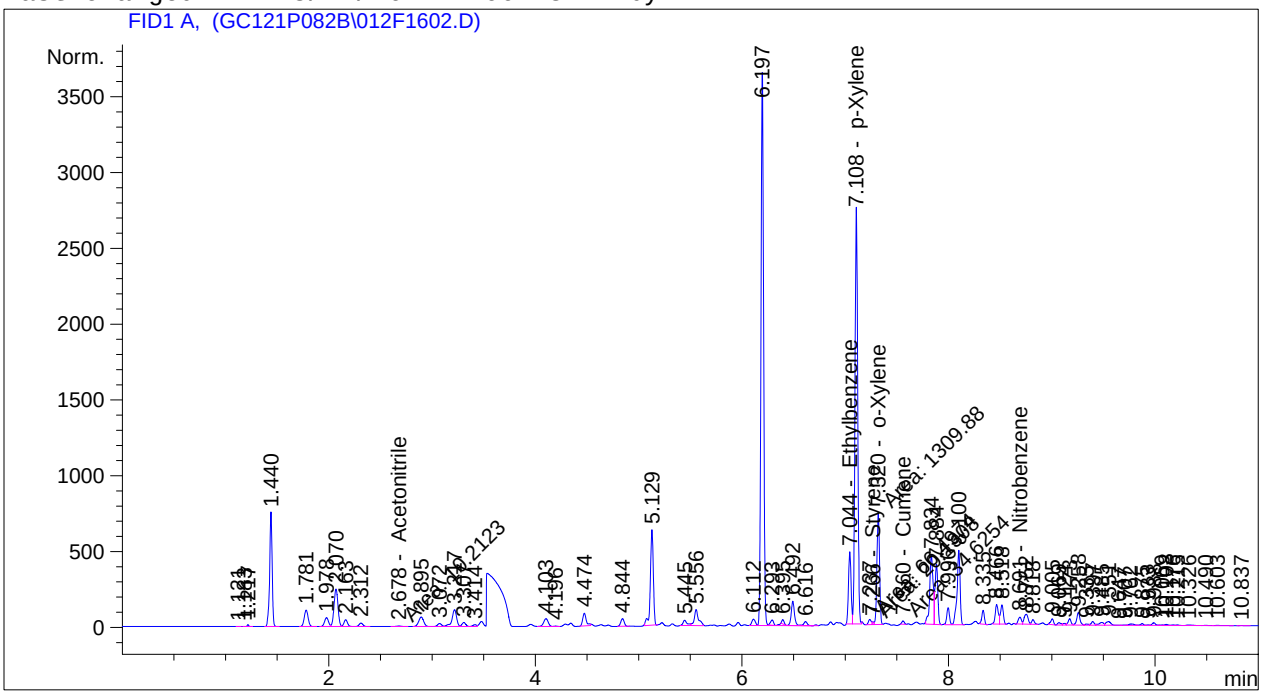
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.679	MM	10.55095	2.22006	23.42376		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	868.67120	4.87166e-1	423.18719		Ethylbenzene
7.108	VB	5316.24121	4.84306e-1	2574.68888		p-Xylene
7.265	FM	22.04366	4.76802e-1	10.51047		Styrene
7.320	FM	1375.66345	4.79408e-1	659.50388		o-Xylene
7.560	MM	33.98274	4.85853e-1	16.51062		Cumene
8.692	BV	99.78052	8.01577e-1	79.98179		Nitrobenzene
Totals :				3787.80658		

Manual Int. “II” (KAM)

EM-BTRF-001420

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\012F1602.D
Sample Name: M18 R1B Spk CT FH-LD 0711-64

Acq. Operator	: JBB	Seq. Line	: 16
Acq. Instrument	: Lucy	Location	: Vial 12
Injection Date	: 02-Aug-11, 02:31:26	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M		
Last changed	: 8/22/2011 2:06:43 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	8/15/2011 6:30:17 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	MM	10.21233	2.22093	22.68084		Acetonitrile
3.138		-	-	-		Acrylonitrile
4.005		-	-	-		MTBE
5.279		-	-	-		2-Nitropropane
5.492		-	-	-		Isooctane
5.787		-	-	-		MIBK
6.921		-	-	-		Chlorobenzene
7.044	BV	826.81903	4.87169e-1	402.80026		Ethylbenzene
7.108	VB	5060.08496	4.84307e-1	2450.63261		p-Xylene
7.266	FM	20.13078	4.77106e-1	9.60452		Styrene
7.320	FM	1309.88086	4.79409e-1	627.96854		o-Xylene
7.560	MM	34.62538	4.85836e-1	16.82224		Cumene
8.691	BV	94.38557	8.01647e-1	75.66394		Nitrobenzene
Totals :			3606.17295			

Manual Int. “II” (KAM)

EM-BTRF-001421

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\012F1603.D
Sample Name: M18 R1B Spk CT FH-LD 0711-64

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  16
Acq. Instrument : Lucy                              Location : Vial 12
Injection Date  : 02-Aug-11, 02:54:11                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M
Last changed    : 8/22/2011 2:06:43 PM by KAM
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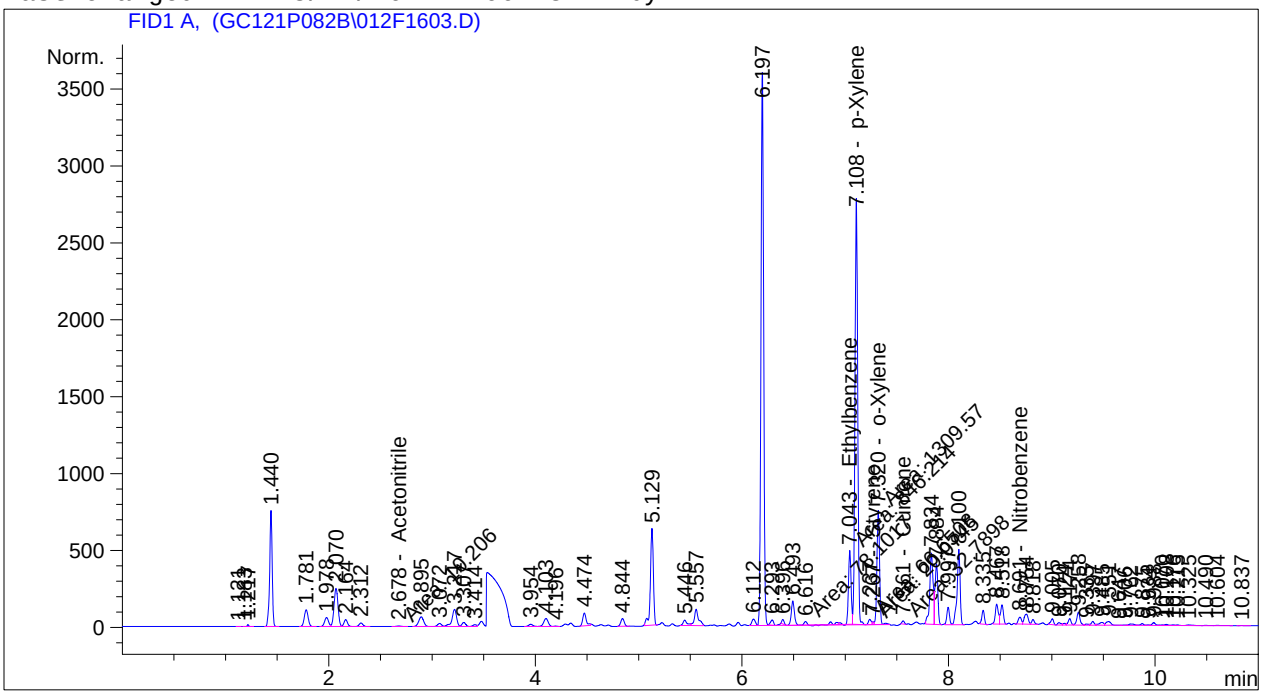


```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/15/2011 6:30:17 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.678 MM       10.20605    2.22094   22.66705    Acetonitrile
  3.138            -           -          -        Acrylonitrile
  4.005            -           -          -        MTBE
  5.279            -           -          -        2-Nitropropane
  5.492            -           -          -        Isooctane
  5.787            -           -          -        MIBK
  6.921            -           -          -        Chlorobenzene
  7.043 FM T     846.21436 4.87167e-1  412.24806    Ethylbenzene
  7.108 VV T    5083.79785 4.84307e-1 2462.11675    p-Xylene
  7.267 FM        20.07450 4.77116e-1    9.57786    Styrene
  7.320 FM      1309.56995 4.79409e-1  627.81950    o-Xylene
  7.561 MM        32.78983 4.85887e-1   15.93216    Cumene
  8.691 BV        94.29767 8.01648e-1   75.59358    Nitrobenzene

Totals :                               3625.95496
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 8/22/2011 2:55:31 PM

Rel. Reference Window : 1.000 %
Abs. Reference Window : 0.050 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Resp)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref Grp	Name
2.703	1	1	1.56700	6.23369e-1	2.51376		Acetonitrile
		2	3.13100	1.18396	2.64451		
		3	15.53300	6.69786	2.31910		
		4	74.70700	34.60423	2.15890		
		5	261.47600	130.11758	2.00954		
3.138	1	1	1.56900	1.07608	1.45808		Acrylonitrile
		2	3.13600	2.35326	1.33262		
		3	15.55500	11.84606	1.31310		
		4	74.81200	60.24946	1.24170		
		5	261.84300	219.02747	1.19548		
		6	1571.10000	1341.22319	1.17139		
3.954	1	1	1.47500	1.46115	1.00948		MTBE
		2	2.94600	2.94612	9.99958e-1		
		3	14.61500	14.39764	1.01510		
		4	70.29300	70.30828	9.99783e-1		
		5	246.02500	248.49334	9.90067e-1		
		6	1476.15200	1515.36365	9.74124e-1		
5.279	1	1	1.93400	1.50652	1.28375		2-Nitropropane
		2	3.86500	2.98096	1.29656		
		3	19.17200	14.90316	1.28644		
		4	92.20900	72.87809	1.26525		
		5	322.73100	255.64794	1.26240		
		6	1936.38400	1567.54635	1.23530		
5.492	1	1	1.37600	2.41970	5.68666e-1		Isooctane
		2	2.74900	4.86602	5.64938e-1		
		3	13.63600	23.89289	5.70714e-1		
		4	65.58300	117.03018	5.60394e-1		
		5	229.54000	407.76338	5.62925e-1		

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref	Grp	Name
		6	1377.24000	2493.27279	5.52382e-1			
5.787	1	1	1.59100	1.96785	8.08495e-1			MIBK
		2	3.17900	3.98112	7.98518e-1			
		3	15.76700	19.96176	7.89860e-1			
		4	75.83200	98.50912	7.69797e-1			
		5	265.41300	343.67462	7.72280e-1			
		6	1592.48000	2112.54346	7.53821e-1			
6.921	1	1	2.21000	3.24211	6.81655e-1			Chlorobenzene
		2	4.41500	6.48840	6.80445e-1			
		3	21.89900	31.64641	6.91990e-1			
		4	105.32300	156.29663	6.73866e-1			
		5	368.63100	536.24235	6.87434e-1			
		6	2211.78600	3285.65153	6.73165e-1			
7.044	1	1	1.73000	3.46118	4.99830e-1			Ethylbenzene
		2	3.45600	7.04398	4.90631e-1			
		3	17.14300	34.56026	4.96032e-1			
		4	82.45000	171.41103	4.81008e-1			
		5	288.57400	585.64282	4.92747e-1			
		6	1731.44200	3593.56551	4.81817e-1			
7.115	1	1	1.71700	3.46070	4.96142e-1			p-Xylene
		2	3.43000	7.05574	4.86129e-1			
		3	17.01500	34.46620	4.93672e-1			
		4	81.83600	171.23450	4.77918e-1			
		5	286.42600	584.49827	4.90037e-1			
		6	1718.55600	3587.20581	4.79079e-1			
7.270	1	1	1.80800	3.67586	4.91857e-1			Styrene
		2	3.61300	7.47333	4.83453e-1			
		3	17.92300	37.04645	4.83798e-1			
		4	86.19900	184.64205	4.66844e-1			
		5	301.69800	630.07981	4.78825e-1			
		6	1810.18800	3872.27059	4.67475e-1			
7.320	1	1	1.75500	3.60213	4.87211e-1			o-Xylene
		2	3.50600	7.27004	4.82253e-1			
		3	17.39100	35.71638	4.86919e-1			
		4	83.64200	177.10457	4.72275e-1			
		5	292.74700	603.04624	4.85447e-1			
		6	1756.48000	3700.39941	4.74673e-1			
7.561	1	1	1.73200	3.50738	4.93816e-1			Cumene
		2	3.46000	7.07944	4.88739e-1			
		3	17.16300	34.83532	4.92690e-1			
		4	82.54700	173.05892	4.76988e-1			
		5	288.91300	587.33661	4.91904e-1			
		6	1733.48000	3613.25920	4.79755e-1			
8.709	1	1	2.40100	2.85042	8.42333e-1			Nitrobenzene
		2	4.79800	5.84870	8.20353e-1			
		3	23.79800	29.00776	8.20401e-1			
		4	114.45700	144.99961	7.89361e-1			
		5	400.59900	493.99102	8.10944e-1			
		6	2403.59400	3053.97591	7.87038e-1			

More compound-specific settings:

Compound: Isooctane
  Time Window : From 5.467 min To 5.541 min

2 Warnings or Errors :

Warning : Overlapping peak time windows at 7.044 min, signal 1
Warning : Overlapping peak time windows at 7.27 min, signal 1

==========

Peak Sum Table

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No Entries in table

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Calibration Curves

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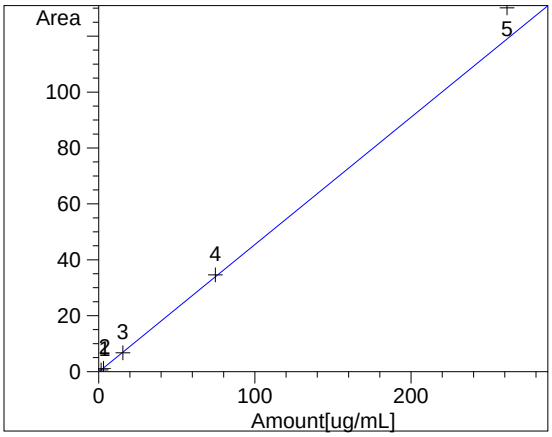
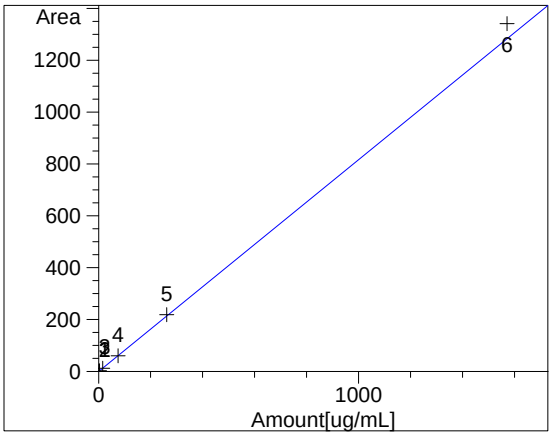
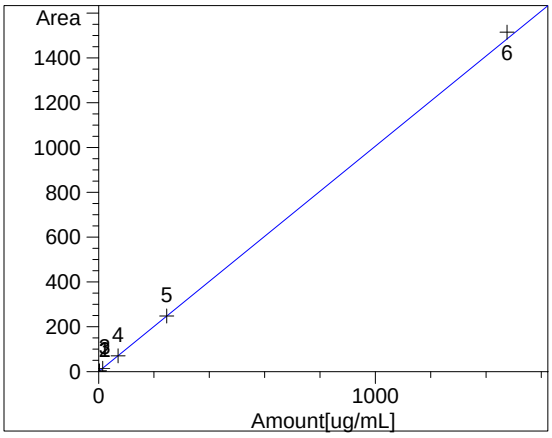


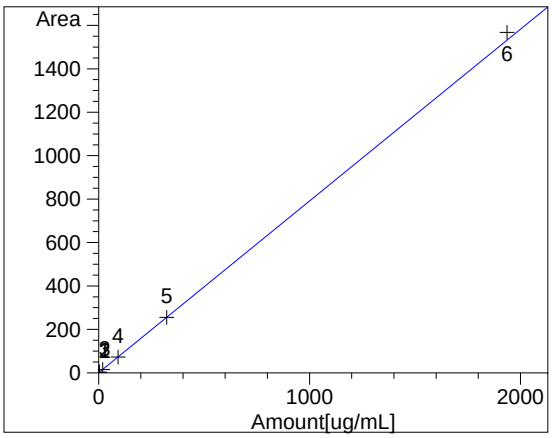
Acetonitrile at exp. RT: 2.703
FID1 A,
Correlation: 0.99620
Residual Std. Dev.: 6.40303
Formula: y = mx + b
m: 4.55785e-1
b: -1.25261e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.277214
Level 3 : 0.008662
Level 4 : 0.000325
Level 5 : 0.000023



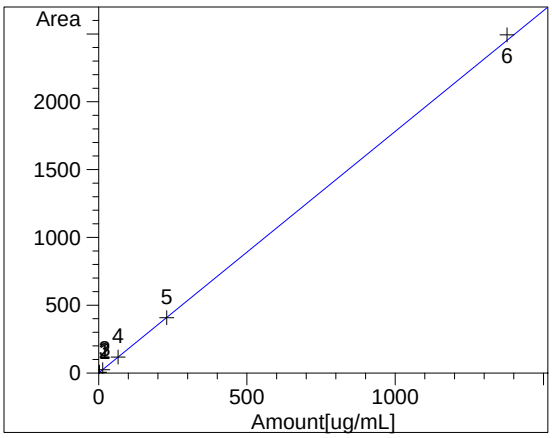
Acrylonitrile at exp. RT: 3.138
FID1 A,
Correlation: 0.99929
Residual Std. Dev.: 28.83872
Formula: y = mx + b
m: 8.17264e-1
b: -2.11328e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.209096
Level 3 : 0.008252
Level 4 : 0.000319
Level 5 : 0.000024
Level 6 : 6.43699e-007



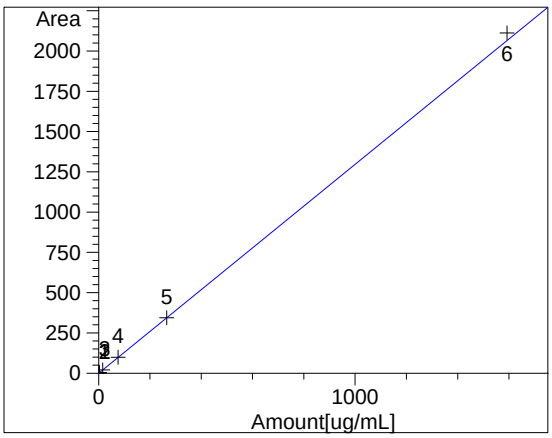
MTBE at exp. RT: 3.954
FID1 A,
Correlation: 0.99989
Residual Std. Dev.: 14.90969
Formula: y = mx + b
m: 1.00639
b: -2.48345e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.245973
Level 3 : 0.010299
Level 4 : 0.000432
Level 5 : 0.000035
Level 6 : 9.29726e-007



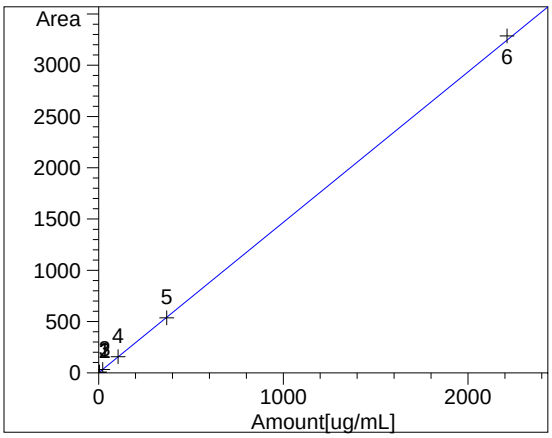
2-Nitropropane at exp. RT: 5.279
FID1 A,
Correlation: 0.99987
Residual Std. Dev.: 17.40272
Formula: y = mx + b
m: 7.91568e-1
b: -3.72856e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.255411
Level 3 : 0.010219
Level 4 : 0.000427
Level 5 : 0.000035
Level 6 : 9.23654e-007



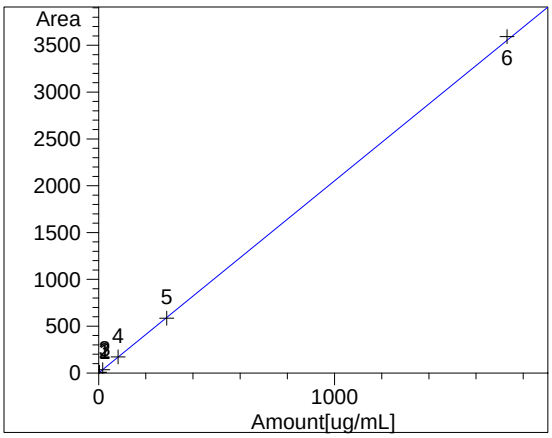
Isooctane at exp. RT: 5.492
FID1 A,
Correlation: 0.99994
Residual Std. Dev.: 19.51510
Formula: y = mx + b
m: 1.78204
b: -3.54730e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.247272
Level 3 : 0.010256
Level 4 : 0.000427
Level 5 : 0.000035
Level 6 : 9.41851e-007



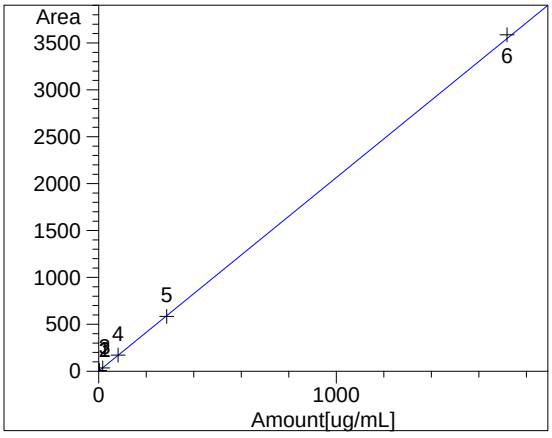
MIBK at exp. RT: 5.787
FID1 A,
Correlation: 0.99987
Residual Std. Dev.: 23.31961
Formula: y = mx + b
m: 1.29736
b: -1.08375e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.244329
Level 3 : 0.009718
Level 4 : 0.000399
Level 5 : 0.000033
Level 6 : 8.6771e-007



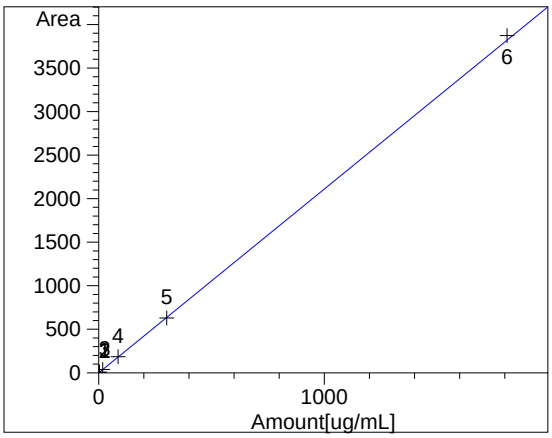
Chlorobenzene at exp. RT: 6.921
FID1 A,
Correlation: 0.99992
Residual Std. Dev.: 19.78252
Formula: y = mx + b
m: 1.46778
b: -3.39780e-3
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.249678
Level 3 : 0.010496
Level 4 : 0.00043
Level 5 : 0.000037
Level 6 : 9.7367e-007



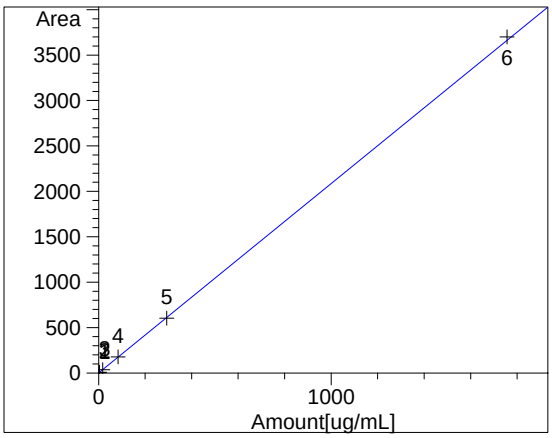
Ethylbenzene at exp. RT: 7.044
FID1 A,
Correlation: 0.99991
Residual Std. Dev.: 19.91021
Formula: y = mx + b
m: 2.05289
b: -8.64768e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.241441
Level 3 : 0.01003
Level 4 : 0.000408
Level 5 : 0.000035
Level 6 : 9.27676e-007



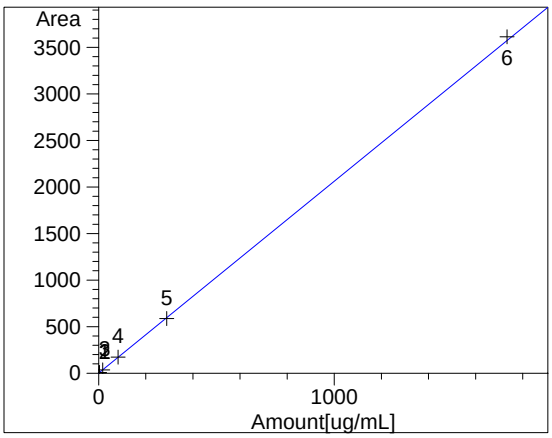
p-Xylene at exp. RT: 7.115
FID1 A,
Correlation: 0.99990
Residual Std. Dev.: 19.70778
Formula: y = mx + b
m: 2.06484
b: -7.75726e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.240571
Level 3 : 0.010082
Level 4 : 0.000408
Level 5 : 0.000035
Level 6 : 9.30713e-007



Styrene at exp. RT: 7.270
FID1 A,
Correlation: 0.99989
Residual Std. Dev.: 25.41296
Formula: y = mx + b
m: 2.11146
b: -1.48721e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.24193
Level 3 : 0.009845
Level 4 : 0.000396
Level 5 : 0.000034
Level 6 : 9.01129e-007

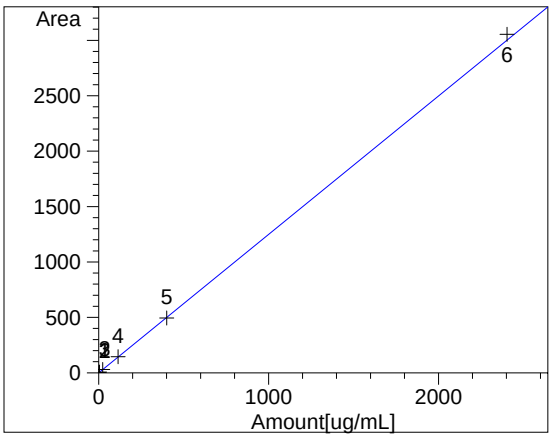


o-Xylene at exp. RT: 7.320
FID1 A,
Correlation: 0.99991
Residual Std. Dev.: 18.66233
Formula: y = mx + b
m: 2.08600
b: -5.91641e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.245497
Level 3 : 0.010171
Level 4 : 0.000414
Level 5 : 0.000036
Level 6 : 9.47594e-007



Cumene at exp. RT: 7.561
FID1 A,
Correlation: 0.99990
Residual Std. Dev.: 19.75080
Formula: y = mx + b
m: 2.06223
b: -6.59987e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.245453
Level 3 : 0.010137
Level 4 : 0.000411
Level 5 : 0.000036
Level 6 : 9.42251e-007

Method I:\GC2011Q3\LUCY\METHODS\GC121P080_HIGH.M



Nitrobenzene at exp. RT: 8.709
FID1 A,
Correlation: 0.99986
Residual Std. Dev.: 25.70094
Formula: y = mx + b
m: 1.24945
b: -1.52816e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.237519
Level 3 : 0.009656
Level 4 : 0.000386
Level 5 : 0.000033
Level 6 : 8.71135e-007

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Calibration Table

Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.050 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Resp)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref Grp	Name
2.703	1	1	1.56700	6.23369e-1	2.51376		Acetonitrile
		2	3.13100	1.18396	2.64451		
		3	15.53300	6.69786	2.31910		
		4	74.70700	34.60423	2.15890		
		5	261.47600	130.11758	2.00954		
3.178	1	1	1.56900	1.07608	1.45808		Acrylonitrile
		2	3.13600	2.35326	1.33262		
		3	15.55500	11.84606	1.31310		
		4	74.81200	60.24946	1.24170		
		5	261.84300	219.02747	1.19548		
		6	1571.10000	1341.22319	1.17139		
4.051	1	1	1.47500	1.46115	1.00948		MTBE
		2	2.94600	2.94612	9.99958e-1		
		3	14.61500	14.39764	1.01510		
		4	70.29300	70.30828	9.99783e-1		
		5	246.02500	248.49334	9.90067e-1		
		6	1476.15200	1515.36365	9.74124e-1		
5.279	1	1	1.93400	1.50652	1.28375		2-Nitropropane
		2	3.86500	2.98096	1.29656		
		3	19.17200	14.90316	1.28644		
		4	92.20900	72.87809	1.26525		
		5	322.73100	255.64794	1.26240		
		6	1936.38400	1567.54635	1.23530		
5.492	1	1	1.37600	2.41970	5.68666e-1		Isooctane
		2	2.74900	4.86602	5.64938e-1		
		3	13.63600	23.89289	5.70714e-1		
		4	65.58300	117.03018	5.60394e-1		
		5	229.54000	407.76338	5.62925e-1		

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref Grp	Name
		6	1377.24000	2493.27279	5.52382e-1		
5.787	1	1	1.59100	1.96785	8.08495e-1		MIBK
		2	3.17900	3.98112	7.98518e-1		
		3	15.76700	19.96176	7.89860e-1		
		4	75.83200	98.50912	7.69797e-1		
		5	265.41300	343.67462	7.72280e-1		
		6	1592.48000	2112.54346	7.53821e-1		
6.921	1	1	2.21000	3.24211	6.81655e-1		Chlorobenzene
		2	4.41500	6.48840	6.80445e-1		
		3	21.89900	31.64641	6.91990e-1		
		4	105.32300	156.29663	6.73866e-1		
		5	368.63100	536.24235	6.87434e-1		
		6	2211.78600	3285.65153	6.73165e-1		
7.044	1	1	1.73000	3.46118	4.99830e-1		Ethylbenzene
		2	3.45600	7.04398	4.90631e-1		
		3	17.14300	34.56026	4.96032e-1		
		4	82.45000	171.41103	4.81008e-1		
		5	288.57400	585.64282	4.92747e-1		
		6	1731.44200	3593.56551	4.81817e-1		
7.115	1	1	1.71700	3.46070	4.96142e-1		p-Xylene
		2	3.43000	7.05574	4.86129e-1		
		3	17.01500	34.46620	4.93672e-1		
		4	81.83600	171.23450	4.77918e-1		
		5	286.42600	584.49827	4.90037e-1		
		6	1718.55600	3587.20581	4.79079e-1		
7.270	1	1	1.80800	3.67586	4.91857e-1		Styrene
		2	3.61300	7.47333	4.83453e-1		
		3	17.92300	37.04645	4.83798e-1		
		4	86.19900	184.64205	4.66844e-1		
		5	301.69800	630.07981	4.78825e-1		
		6	1810.18800	3872.27059	4.67475e-1		
7.320	1	1	1.75500	3.60213	4.87211e-1		o-Xylene
		2	3.50600	7.27004	4.82253e-1		
		3	17.39100	35.71638	4.86919e-1		
		4	83.64200	177.10457	4.72275e-1		
		5	292.74700	603.04624	4.85447e-1		
		6	1756.48000	3700.39941	4.74673e-1		
7.561	1	1	1.73200	3.50738	4.93816e-1		Cumene
		2	3.46000	7.07944	4.88739e-1		
		3	17.16300	34.83532	4.92690e-1		
		4	82.54700	173.05892	4.76988e-1		
		5	288.91300	587.33661	4.91904e-1		
		6	1733.48000	3613.25920	4.79755e-1		
8.709	1	1	2.40100	2.85042	8.42333e-1		Nitrobenzene
		2	4.79800	5.84870	8.20353e-1		
		3	23.79800	29.00776	8.20401e-1		
		4	114.45700	144.99961	7.89361e-1		
		5	400.59900	493.99102	8.10944e-1		
		6	2403.59400	3053.97591	7.87038e-1		

More compound-specific settings:

Compound: Isooctane
  Time Window : From 5.467 min To 5.541 min

2 Warnings or Errors :

Warning : Overlapping peak time windows at 7.044 min, signal 1
Warning : Overlapping peak time windows at 7.27 min, signal 1

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Peak Sum Table

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No Entries in table

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Calibration Curves

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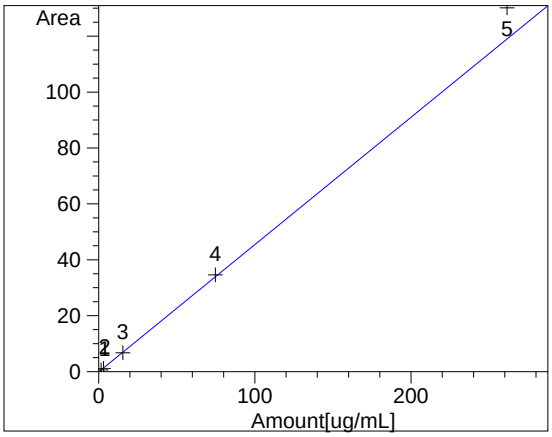
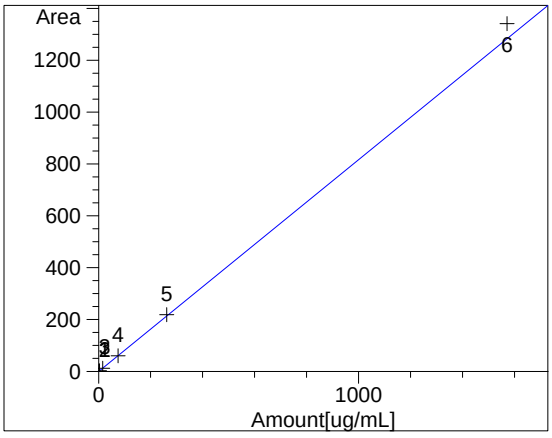
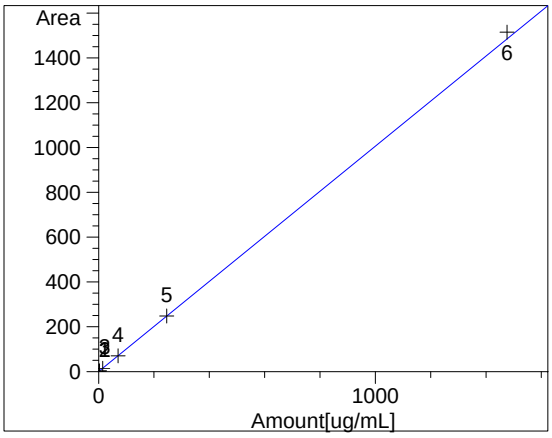


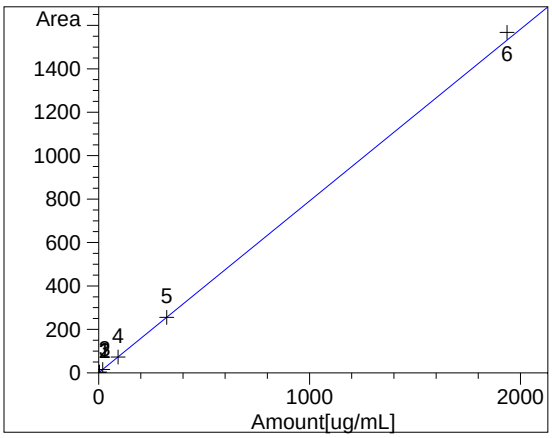
Acetonitrile at exp. RT: 2.703
FID1 A,
Correlation: 0.99620
Residual Std. Dev.: 6.40303
Formula: y = mx + b
m: 4.55785e-1
b: -1.25261e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.277214
Level 3 : 0.008662
Level 4 : 0.000325
Level 5 : 0.000023



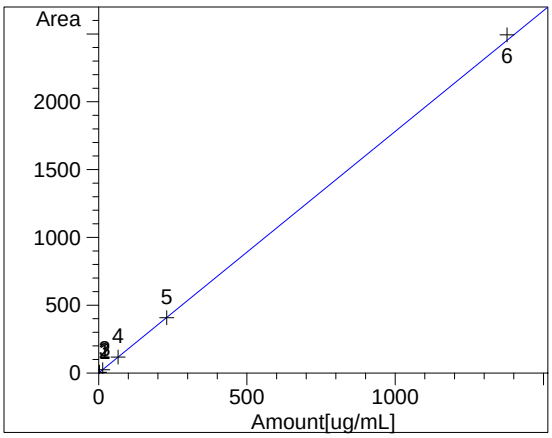
Acrylonitrile at exp. RT: 3.178
FID1 A,
Correlation: 0.99929
Residual Std. Dev.: 28.83872
Formula: y = mx + b
m: 8.17264e-1
b: -2.11328e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.209096
Level 3 : 0.008252
Level 4 : 0.000319
Level 5 : 0.000024
Level 6 : 6.43699e-007



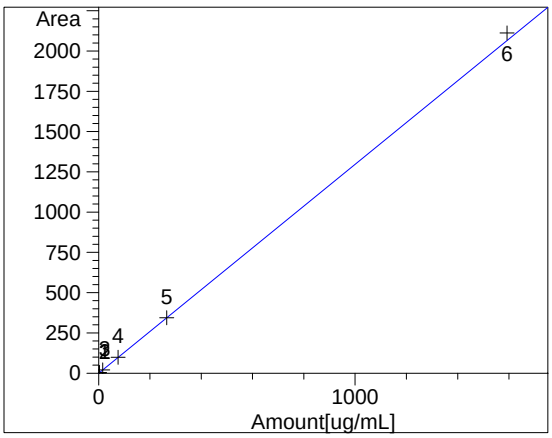
MTBE at exp. RT: 4.051
FID1 A,
Correlation: 0.99989
Residual Std. Dev.: 14.90969
Formula: y = mx + b
m: 1.00639
b: -2.48345e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.245973
Level 3 : 0.010299
Level 4 : 0.000432
Level 5 : 0.000035
Level 6 : 9.29726e-007



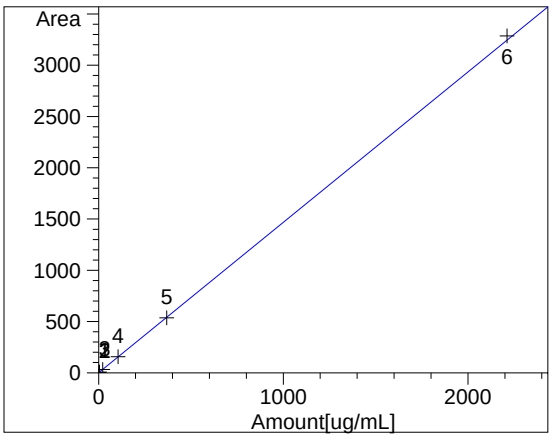
2-Nitropropane at exp. RT: 5.279
FID1 A,
Correlation: 0.99987
Residual Std. Dev.: 17.40272
Formula: y = mx + b
m: 7.91568e-1
b: -3.72856e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.255411
Level 3 : 0.010219
Level 4 : 0.000427
Level 5 : 0.000035
Level 6 : 9.23654e-007



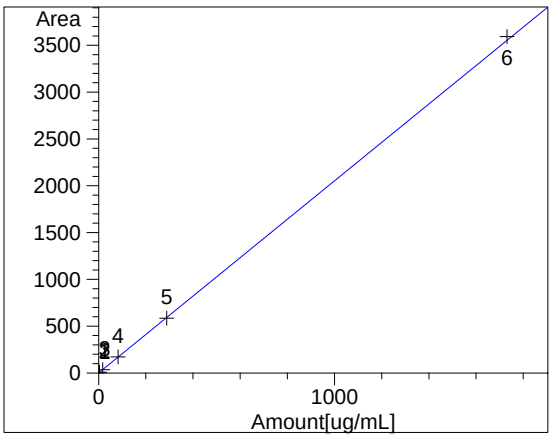
Isooctane at exp. RT: 5.492
FID1 A,
Correlation: 0.99994
Residual Std. Dev.: 19.51510
Formula: y = mx + b
m: 1.78204
b: -3.54730e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.247272
Level 3 : 0.010256
Level 4 : 0.000427
Level 5 : 0.000035
Level 6 : 9.41851e-007



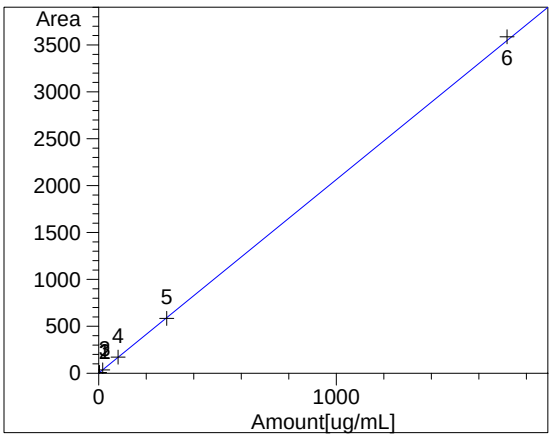
MIBK at exp. RT: 5.787
FID1 A,
Correlation: 0.99987
Residual Std. Dev.: 23.31961
Formula: y = mx + b
m: 1.29736
b: -1.08375e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.244329
Level 3 : 0.009718
Level 4 : 0.000399
Level 5 : 0.000033
Level 6 : 8.6771e-007



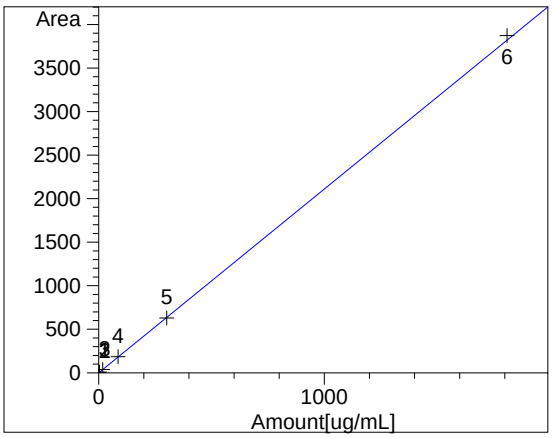
Chlorobenzene at exp. RT: 6.921
FID1 A,
Correlation: 0.99992
Residual Std. Dev.: 19.78252
Formula: y = mx + b
m: 1.46778
b: -3.39780e-3
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.249678
Level 3 : 0.010496
Level 4 : 0.00043
Level 5 : 0.000037
Level 6 : 9.7367e-007



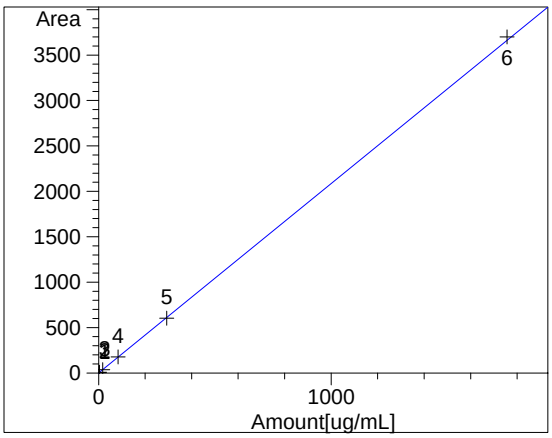
Ethylbenzene at exp. RT: 7.044
FID1 A,
Correlation: 0.99991
Residual Std. Dev.: 19.91021
Formula: y = mx + b
m: 2.05289
b: -8.64768e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.241441
Level 3 : 0.01003
Level 4 : 0.000408
Level 5 : 0.000035
Level 6 : 9.27676e-007



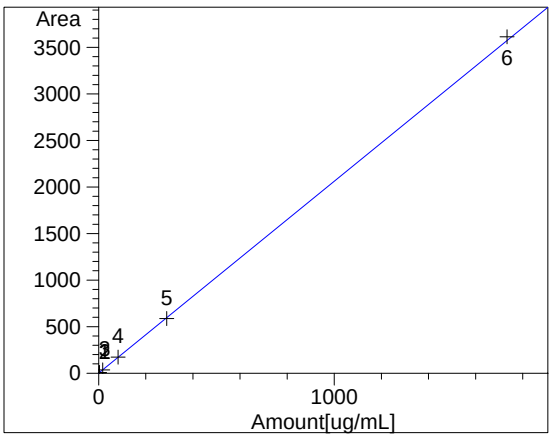
p-Xylene at exp. RT: 7.115
FID1 A,
Correlation: 0.99990
Residual Std. Dev.: 19.70778
Formula: y = mx + b
m: 2.06484
b: -7.75726e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.240571
Level 3 : 0.010082
Level 4 : 0.000408
Level 5 : 0.000035
Level 6 : 9.30713e-007



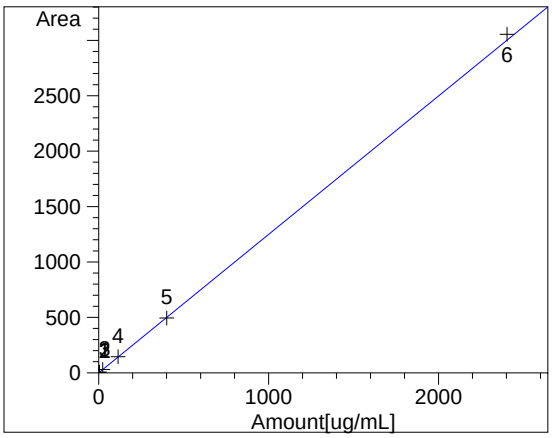
Styrene at exp. RT: 7.270
FID1 A,
Correlation: 0.99989
Residual Std. Dev.: 25.41296
Formula: y = mx + b
m: 2.11146
b: -1.48721e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.24193
Level 3 : 0.009845
Level 4 : 0.000396
Level 5 : 0.000034
Level 6 : 9.01129e-007



o-Xylene at exp. RT: 7.320
FID1 A,
Correlation: 0.99991
Residual Std. Dev.: 18.66233
Formula: y = mx + b
m: 2.08600
b: -5.91641e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.245497
Level 3 : 0.010171
Level 4 : 0.000414
Level 5 : 0.000036
Level 6 : 9.47594e-007



Cumene at exp. RT: 7.561
FID1 A,
Correlation: 0.99990
Residual Std. Dev.: 19.75080
Formula: y = mx + b
m: 2.06223
b: -6.59987e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.245453
Level 3 : 0.010137
Level 4 : 0.000411
Level 5 : 0.000036
Level 6 : 9.42251e-007



Nitrobenzene at exp. RT: 8.709
FID1 A,
Correlation: 0.99986
Residual Std. Dev.: 25.70094
Formula: y = mx + b
m: 1.24945
b: -1.52816e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.237519
Level 3 : 0.009656
Level 4 : 0.000386
Level 5 : 0.000033
Level 6 : 8.71135e-007

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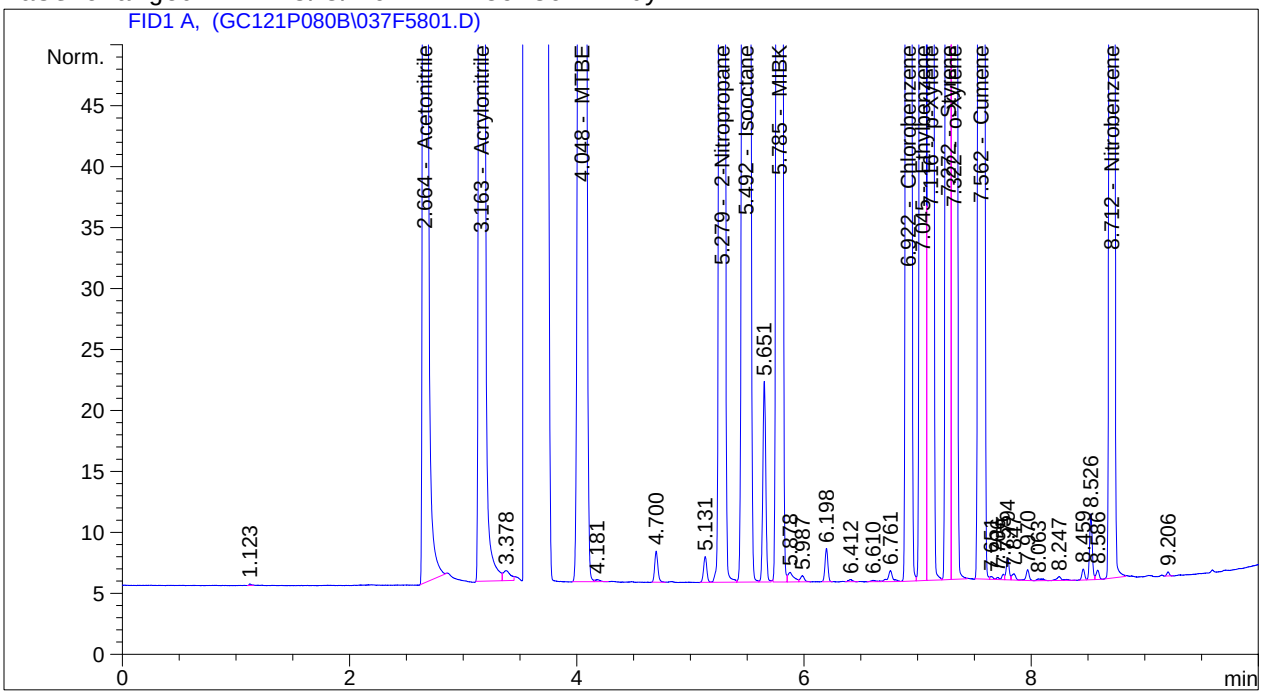
Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\037F5801.D
Sample Name: gc121p67 #6

Acq. Operator	: JBB	Seq. Line	: 58
Acq. Instrument	: Lucy	Location	: Vial 37
Injection Date	: 28-Jul-11, 05:36:45	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

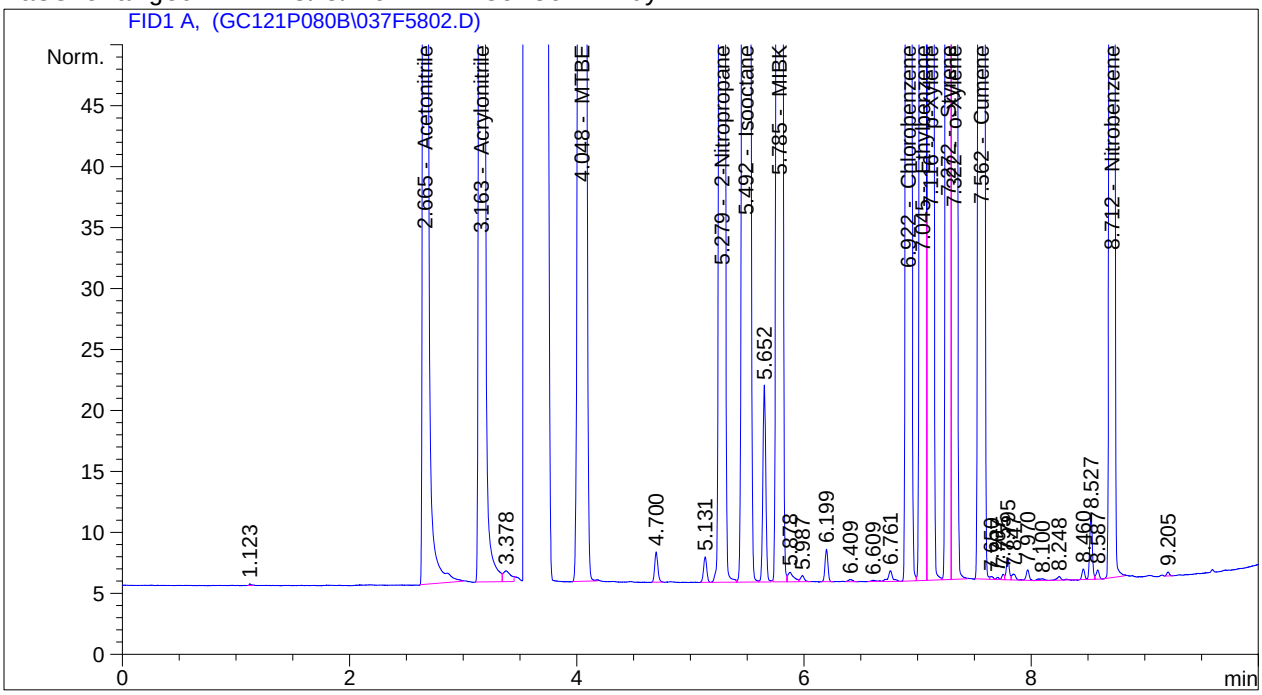
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.664	BB	802.04364	2.19436	1759.97079		Acetonitrile
3.163	BV	1355.18921	1.22379	1658.46076		Acrylonitrile
4.048	BV	1538.20056	9.93665e-1	1528.45557		MTBE
5.279	VV	1593.92822	1.26334	2013.68084		2-Nitropropane
5.492	VV	2536.64697	5.61162e-1	1423.46901		Isooctane
5.785	BV	2149.29004	7.70836e-1	1656.74927		MIBK
6.922	VV	3341.71655	6.81300e-1	2276.71000		Chlorobenzene
7.045	VV	3654.56714	4.87129e-1	1780.24623		Ethylbenzene
7.116	VV	3648.09546	4.84309e-1	1766.80724		p-Xylene
7.272	VV	3937.35156	4.73625e-1	1864.82785		Styrene
7.322	VB	3762.76099	4.79395e-1	1803.84800		o-Xylene
7.562	BV	3673.95679	4.84920e-1	1781.57507		Cumene
8.712	VB	3101.68335	8.00391e-1	2482.55899		Nitrobenzene
Totals :				2.37974e4		

EM-BTRF-001438

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\037F5802.D
Sample Name: gc121p67 #6

Acq. Operator	: JBB	Seq. Line	: 58
Acq. Instrument	: Lucy	Location	: Vial 37
Injection Date	: 28-Jul-11, 05:58:32	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.665	BB	793.91156	2.19436	1742.12888		Acetonitrile
3.163	BV	1324.80249	1.22379	1621.27974		Acrylonitrile
4.048	BB	1501.19409	9.93665e-1	1491.68414		MTBE
5.279	VV	1561.77283	1.26335	1973.05844		2-Nitropropane
5.492	VV	2487.44873	5.61162e-1	1395.86123		Isooctane
5.785	BV	2110.65625	7.70836e-1	1626.97047		MIBK
6.922	VV	3292.46606	6.81300e-1	2243.15569		Chlorobenzene
7.045	VV	3603.26904	4.87129e-1	1755.25802		Ethylbenzene
7.116	VV	3597.65430	4.84310e-1	1742.37863		p-Xylene
7.272	VV	3884.49438	4.73625e-1	1839.79432		Styrene
7.322	VB	3712.37354	4.79395e-1	1779.69290		o-Xylene
7.562	BV	3626.74414	4.84920e-1	1758.68112		Cumene
8.712	VB	3069.50269	8.00391e-1	2456.80315		Nitrobenzene
Totals :			2.34267e4			

EM-BTRF-001439

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\037F5803.D
Sample Name: gc121p67 #6

```
==================================================================
Acq. Operator   : JBB                          Seq. Line :  58
Acq. Instrument : Lucy                          Location : Vial 37
Injection Date  : 28-Jul-11, 06:20:15                Inj :   3
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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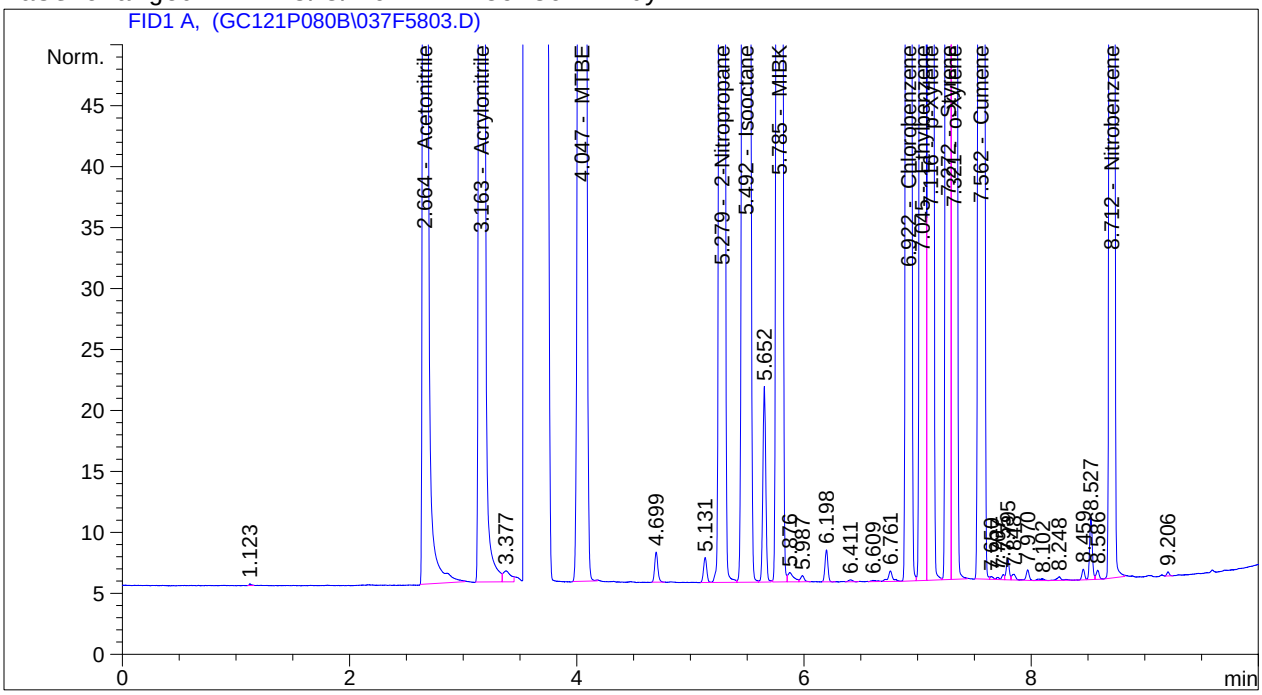


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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

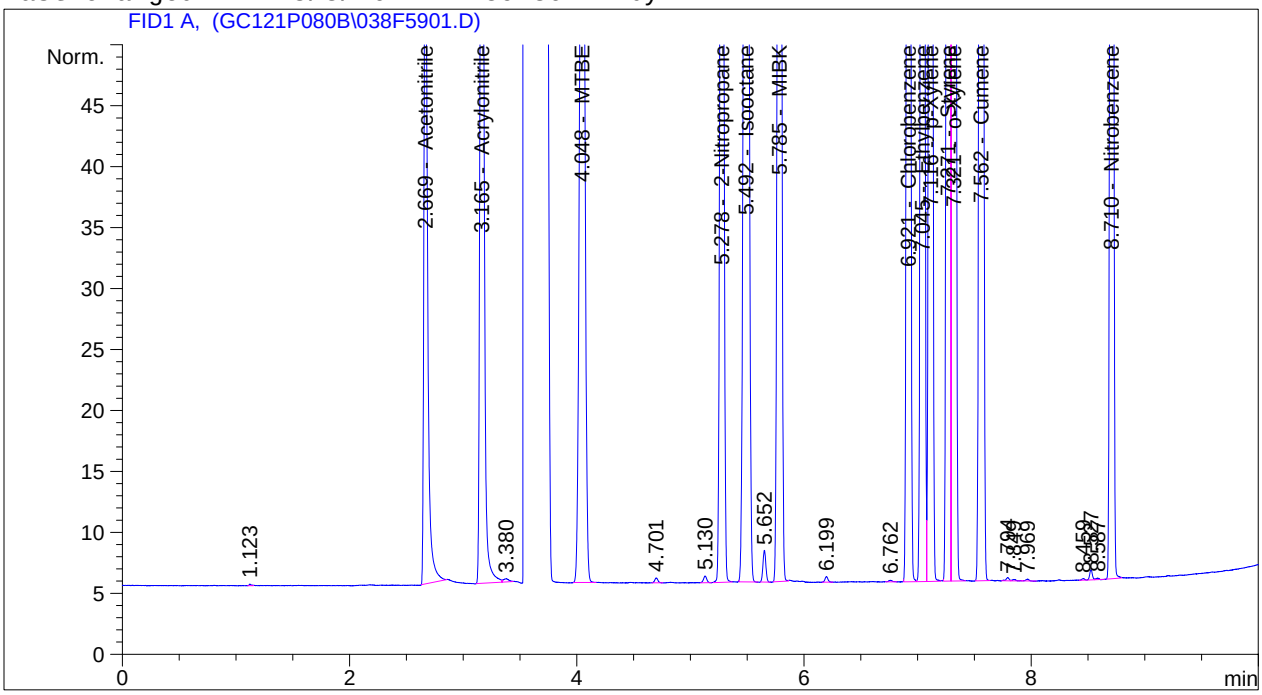
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.664 BB      807.79224    2.19436 1772.58329    Acetonitrile
  3.163 BV     1343.67786    1.22379 1644.37553    Acrylonitrile
  4.047 BB     1506.69629 9.93665e-1 1497.15139    MTBE
  5.279 VV     1546.93799    1.26335 1954.31737    2-Nitropropane
  5.492 VV     2455.72266 5.61162e-1 1378.05802    Isooctane
  5.785 BV     2077.68408 7.70837e-1 1601.55563    MIBK
  6.922 VV     3222.77197 6.81300e-1 2195.67319    Chlorobenzene
  7.045 VV     3522.86035 4.87130e-1 1716.08953    Ethylbenzene
  7.116 VV     3515.86768 4.84310e-1 1702.76943    p-Xylene
  7.272 VV     3794.96582 4.73626e-1 1797.39296    Styrene
  7.321 VB     3626.06372 4.79395e-1 1738.31708    o-Xylene
  7.562 BV     3539.07666 4.84920e-1 1716.17017    Cumene
  8.712 VB     2990.74170 8.00392e-1 2393.76669    Nitrobenzene

Totals :                             2.31082e4
```

EM-BTRF-001440

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\038F5901.D
Sample Name: gc121p67 #5

Acq. Operator	: JBB	Seq. Line	: 59
Acq. Instrument	: Lucy	Location	: Vial 38
Injection Date	: 28-Jul-11, 06:42:07	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.669	BB	129.44751	2.19614	284.28463		Acetonitrile
3.165	BV	219.95047	1.22477	269.38878		Acrylonitrile
4.048	BB	250.16380	9.93747e-1	248.59960		MTBE
5.278	BB	257.40979	1.26350	325.23680		2-Nitropropane
5.492	BB	410.26538	5.61202e-1	230.24189		Isooctane
5.785	BB	345.60431	7.71038e-1	266.47421		MIBK
6.921	BV	534.41174	6.81303e-1	364.09643		Chlorobenzene
7.045	VV	580.88312	4.87190e-1	283.00054		Ethylbenzene
7.116	VB	578.85236	4.84364e-1	280.37530		p-Xylene
7.271	BV	622.80646	4.73720e-1	295.03596		Styrene
7.321	VB	595.88660	4.79435e-1	285.68880		o-Xylene
7.562	BB	577.77240	4.84967e-1	280.20035		Cumene
8.710	BB	482.98874	8.00605e-1	386.68303		Nitrobenzene
Totals :			3799.30631			

EM-BTRF-001441

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\038F5902.D
Sample Name: gc121p67 #5

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  59
Acq. Instrument : Lucy                              Location : Vial 38
Injection Date  : 28-Jul-11, 07:03:52                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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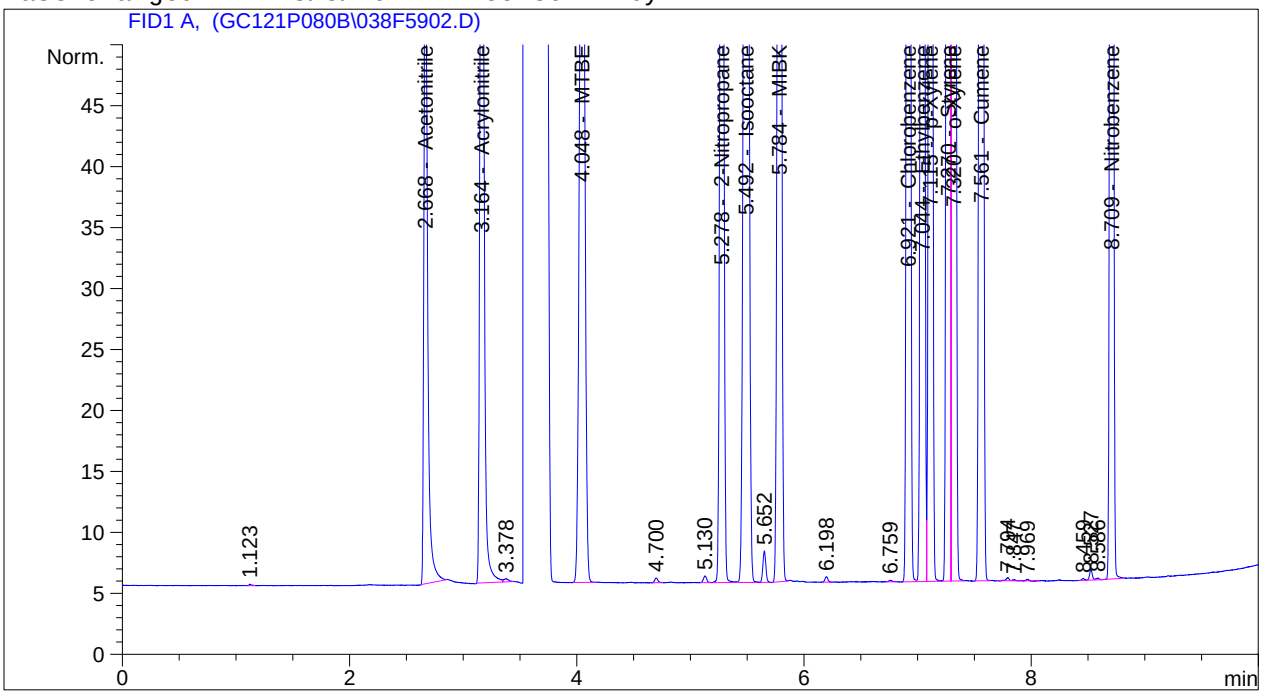


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

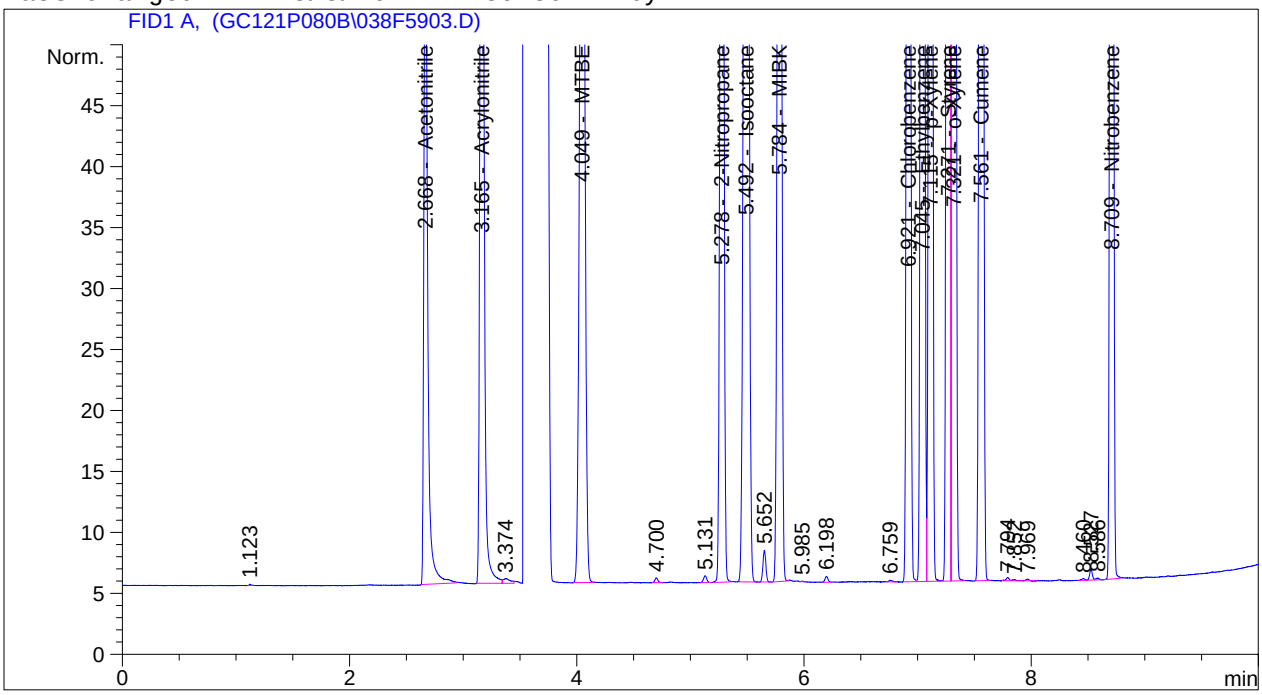
Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.668 BB      125.70856    2.19620  276.08133    Acetonitrile
  3.164 BV      213.70619    1.22480  261.74832    Acrylonitrile
  4.048 BB      243.49034 9.93750e-1  241.96852    MTBE
  5.278 BB      251.71011    1.26350  318.03631    2-Nitropropane
  5.492 BB      401.91080 5.61203e-1  225.55368    Isooctane
  5.784 BB      338.91345 7.71043e-1  261.31692    MIBK
  6.921 BV      531.78113 6.81303e-1  362.30419    Chlorobenzene
  7.044 VV      582.16888 4.87190e-1  283.62686    Ethylbenzene
  7.115 VB      581.54083 4.84364e-1  281.67732    p-Xylene
  7.270 BV      627.56018 4.73719e-1  297.28735    Styrene
  7.320 VB      600.71454 4.79434e-1  288.00325    o-Xylene
  7.561 BB      586.39807 4.84966e-1  284.38304    Cumene
  8.709 BB      495.18439 8.00598e-1  396.44384    Nitrobenzene

Totals :                             3778.43093
```

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\038F5903.D
Sample Name: gc121p67 #5

Acq. Operator	: JBB	Seq. Line	: 59
Acq. Instrument	: Lucy	Location	: Vial 38
Injection Date	: 28-Jul-11, 07:25:39	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.668	BB	135.19667	2.19605	296.89838		Acetonitrile
3.165	BV	223.42574	1.22475	273.64110		Acrylonitrile
4.049	BB	251.82587	9.93747e-1	250.25111		MTBE
5.278	BB	257.82391	1.26350	325.75997		2-Nitropropane
5.492	BB	411.11395	5.61202e-1	230.71807		Isooctane
5.784	BB	346.50610	7.71038e-1	267.16931		MIBK
6.921	BV	542.53418	6.81303e-1	369.63023		Chlorobenzene
7.045	VV	593.87646	4.87189e-1	289.32982		Ethylbenzene
7.115	VB	593.10162	4.84363e-1	287.27620		p-Xylene
7.271	BV	639.87280	4.73717e-1	303.11870		Styrene
7.321	VB	612.53760	4.79434e-1	293.67108		o-Xylene
7.561	BB	597.83936	4.84965e-1	289.93105		Cumene
8.709	VB	503.79993	8.00594e-1	403.33930		Nitrobenzene

Totals : 3880.73431

EM-BTRF-001443

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\039F6001.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  60
Acq. Instrument : Lucy                              Location : Vial 39
Injection Date  : 28-Jul-11, 07:47:28                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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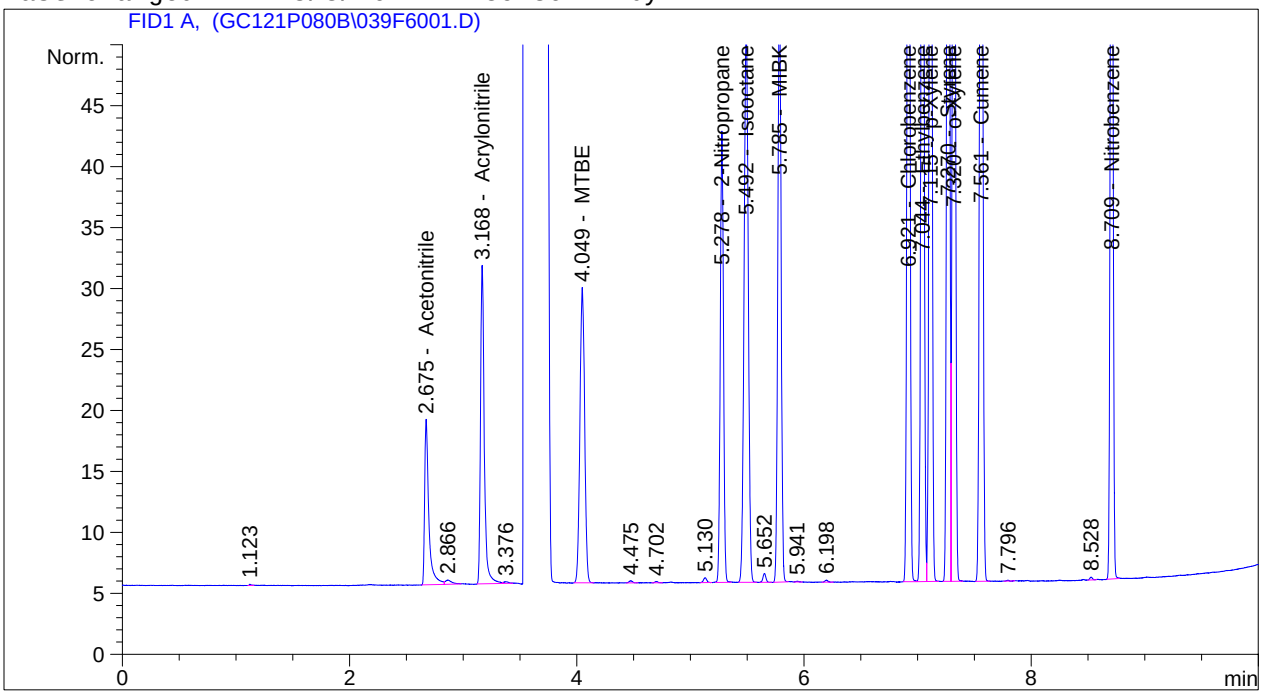


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

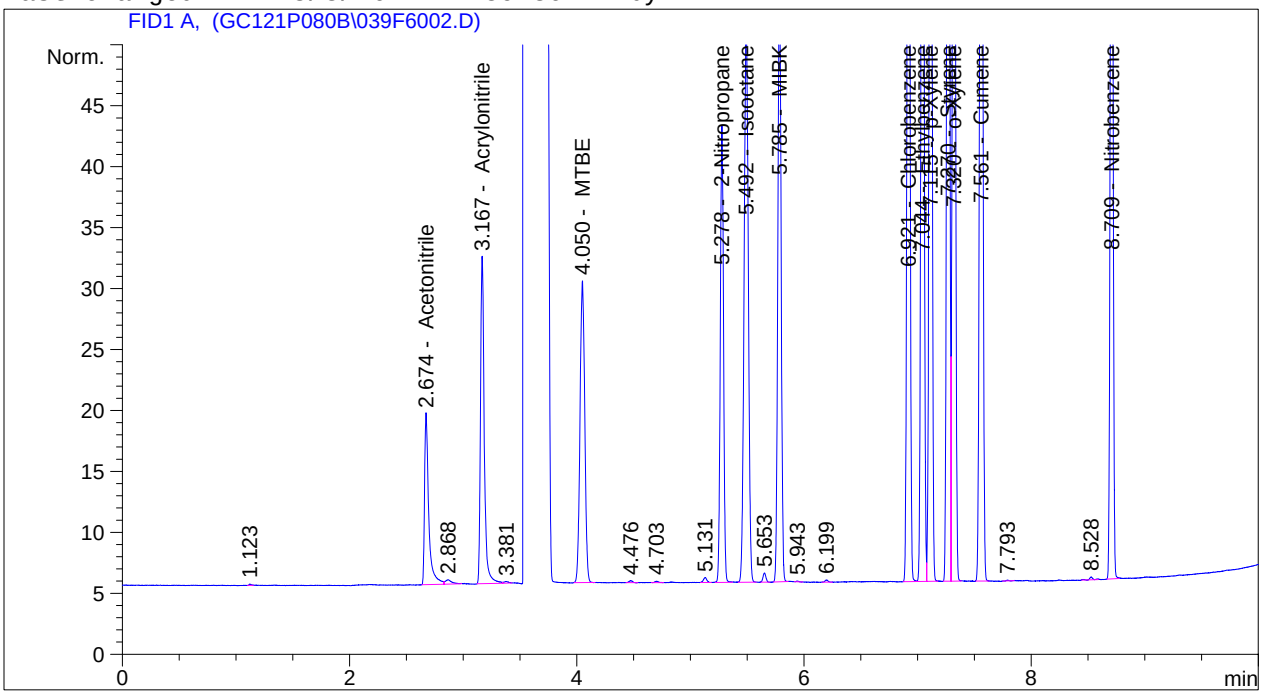
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.675 BB       34.50026    2.20198   75.96891    Acetonitrile
  3.168 BB       60.18592    1.22789   73.90174    Acrylonitrile
  4.049 BB       70.39931 9.93999e-1   69.97685    MTBE
  5.278 BB       73.06324    1.26396   92.34900    2-Nitropropane
  5.492 BB      117.29702 5.61324e-1   65.84158    Isooctane
  5.785 BB       98.73228 7.71643e-1   76.18606    MIBK
  6.921 BV      155.94182 6.81314e-1  106.24530    Chlorobenzene
  7.044 VV      170.64590 4.87364e-1   83.16675    Ethylbenzene
  7.115 VB      170.32555 4.84520e-1   82.52609    p-Xylene
  7.270 BV      183.53740 4.73991e-1   86.99504    Styrene
  7.320 VB      176.07887 4.79548e-1   84.43833    o-Xylene
  7.561 BB      171.70132 4.85098e-1   83.29191    Cumene
  8.709 BB      143.77763 8.01202e-1  115.19494    Nitrobenzene

Totals :                             1096.08251
```

EM-BTRF-001444

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\039F6002.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 60
Acq. Instrument	: Lucy	Location	: Vial 39
Injection Date	: 28-Jul-11, 08:09:22	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

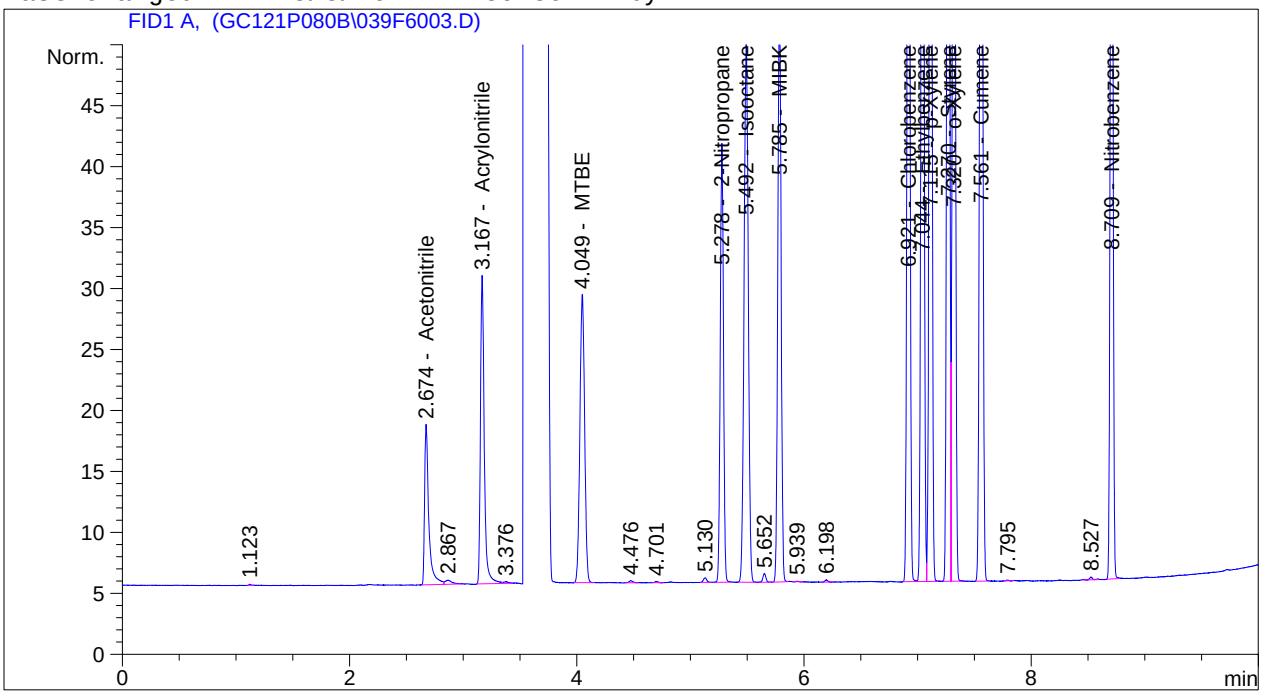
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BV	35.70412	2.20171	78.61022		Acetonitrile
3.167	BB	61.92765	1.22777	76.03291		Acrylonitrile
4.050	BB	71.99672	9.93991e-1	71.56412		MTBE
5.278	BB	74.34151	1.26395	93.96387		2-Nitropropane
5.492	BB	119.18610	5.61321e-1	66.90164		Isooctane
5.785	BB	100.16680	7.71631e-1	77.29178		MIBK
6.921	BV	158.93652	6.81313e-1	108.28559		Chlorobenzene
7.044	VV	174.38603	4.87359e-1	84.98864		Ethylbenzene
7.115	VB	174.23354	4.84515e-1	84.41873		p-Xylene
7.270	BV	187.85228	4.73982e-1	89.03860		Styrene
7.320	VB	180.17776	4.79545e-1	86.40329		o-Xylene
7.561	BB	176.16373	4.85093e-1	85.45578		Cumene
8.709	BB	147.29901	8.01182e-1	118.01328		Nitrobenzene
Totals :				1120.96843		

EM-BTRF-001445

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\039F6003.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 60
Acq. Instrument	: Lucy	Location	: Vial 39
Injection Date	: 28-Jul-11, 08:31:12	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

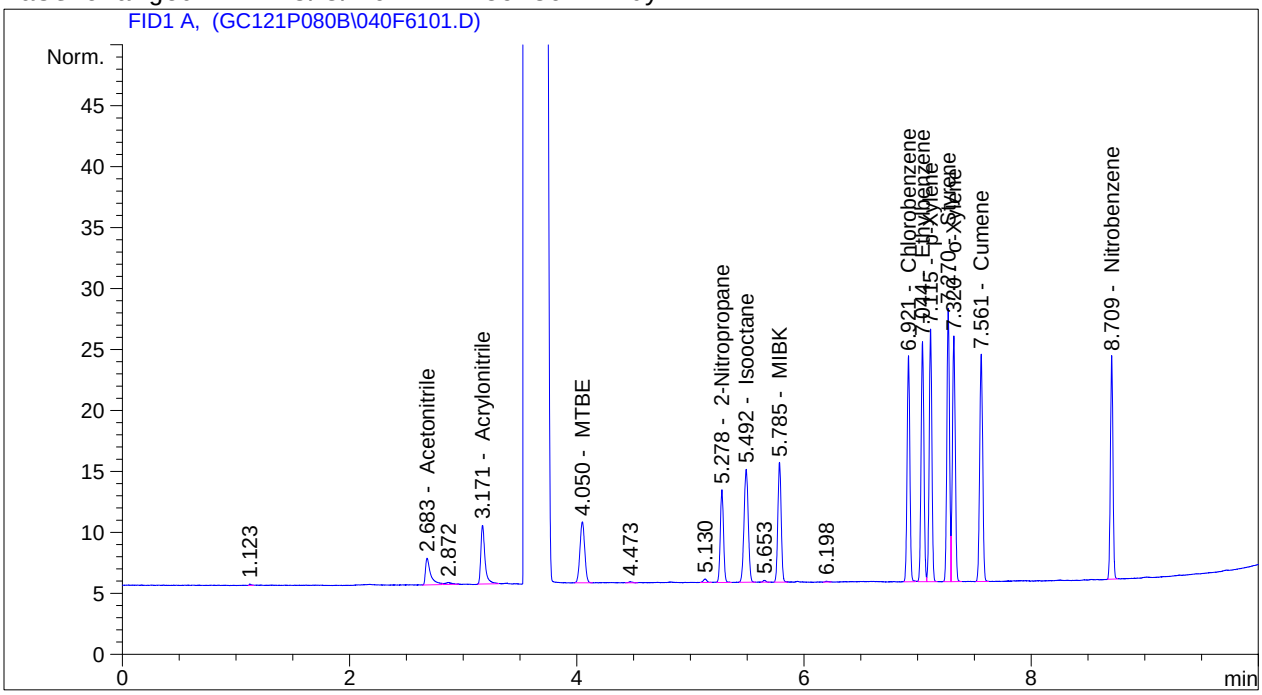
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BV	33.60832	2.20219	74.01200		Acetonitrile
3.167	BB	58.63482	1.22800	72.00383		Acrylonitrile
4.049	BB	68.52882	9.94009e-1	68.11825		MTBE
5.278	BB	71.22952	1.26398	90.03244		2-Nitropropane
5.492	BB	114.60743	5.61327e-1	64.33230		Isooctane
5.785	BB	96.62827	7.71661e-1	74.56429		MIBK
6.921	BV	154.01155	6.81314e-1	104.93021		Chlorobenzene
7.044	VV	169.20116	4.87367e-1	82.46299		Ethylbenzene
7.115	VB	169.14442	4.84521e-1	81.95408		p-Xylene
7.270	BV	182.53648	4.73993e-1	86.52100		Styrene
7.320	VB	175.05707	4.79549e-1	83.94849		o-Xylene
7.561	BB	171.31171	4.85098e-1	83.10298		Cumene
8.709	BB	143.92220	8.01201e-1	115.31064		Nitrobenzene
Totals :		1081.29350				

EM-BTRF-001446

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\040F6101.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 61
Acq. Instrument	: Lucy	Location	: Vial 40
Injection Date	: 28-Jul-11, 08:53:01	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.683	BB	6.80524	2.23440	15.20563		Acetonitrile
3.171	BB	12.04639	1.24506	14.99848		Acrylonitrile
4.050	BB	14.53324	9.95347e-1	14.46561		MTBE
5.278	BB	15.05715	1.26644	19.06903		2-Nitropropane
5.492	BB	24.05383	5.61981e-1	13.51781		Isooctane
5.785	BB	20.04340	7.74964e-1	15.53292		MIBK
6.921	BB	31.51136	6.81372e-1	21.47097		Chlorobenzene
7.044	BV	34.34001	4.88344e-1	16.76975		Ethylbenzene
7.115	VB	34.22427	4.85397e-1	16.61236		p-Xylene
7.270	BV	36.74857	4.75524e-1	17.47482		Styrene
7.320	VB	35.40973	4.80188e-1	17.00334		o-Xylene
7.561	BB	34.47873	4.85839e-1	16.75113		Cumene
8.709	BB	28.59324	8.04629e-1	23.00694		Nitrobenzene
Totals :				221.87878		

EM-BTRF-001447

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\040F6102.D
Sample Name: gc121p67 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  61
Acq. Instrument : Lucy                              Location : Vial 40
Injection Date  : 28-Jul-11, 09:14:49                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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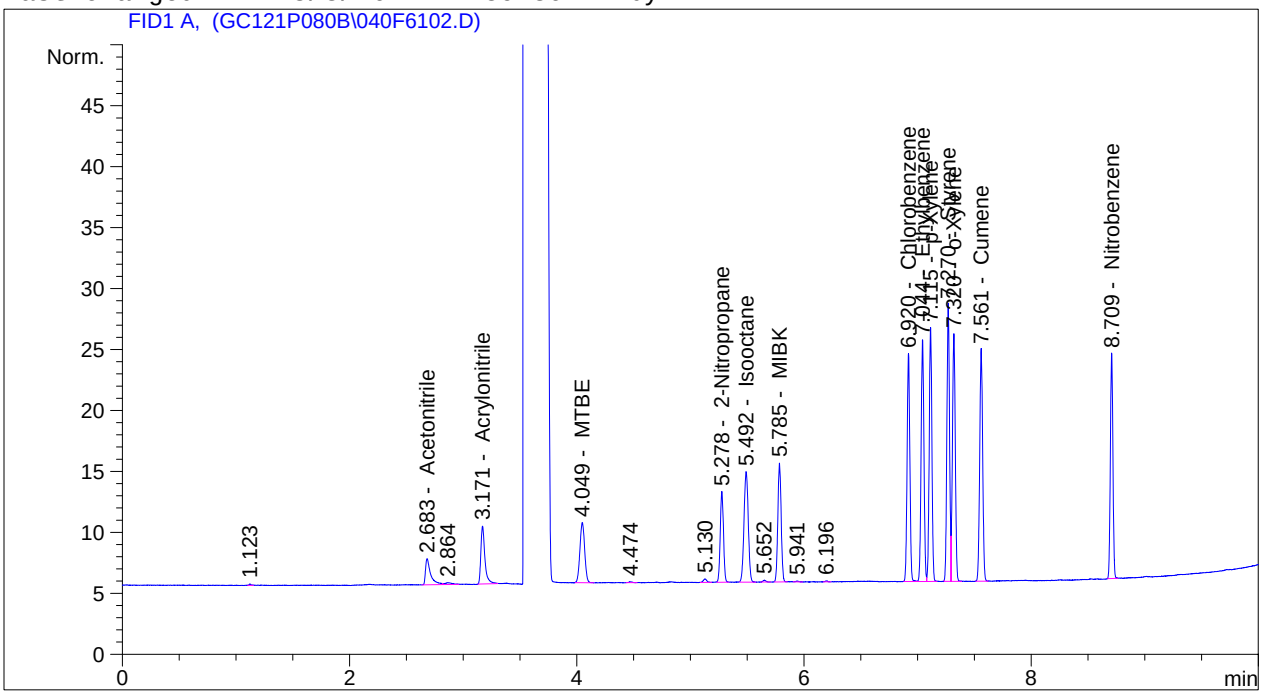


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.683 BB        6.63277    2.23545   14.82721    Acetonitrile
  3.171 BB       11.73717    1.24563   14.62011    Acrylonitrile
  4.049 BB       14.34176 9.95369e-1   14.27535    MTBE
  5.278 BB       14.76804    1.26650   18.70379    2-Nitropropane
  5.492 BB       23.73339 5.61993e-1   13.33799    Isooctane
  5.785 BB       19.78269 7.75019e-1   15.33197    MIBK
  6.920 BV       31.52278 6.81372e-1   21.47875    Chlorobenzene
  7.044 VV       34.43400 4.88341e-1   16.81553    Ethylbenzene
  7.115 VB       34.36944 4.85392e-1   16.68266    p-Xylene
  7.270 BV       36.95447 4.75513e-1   17.57233    Styrene
  7.320 VB       35.63355 4.80183e-1   17.11063    o-Xylene
  7.561 BB       34.77163 4.85832e-1   16.89316    Cumene
  8.709 BB       29.02835 8.04565e-1   23.35519    Nitrobenzene

Totals :                               221.00469
```

EM-BTRF-001448

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\040F6103.D
Sample Name: gc121p67 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  61
Acq. Instrument : Lucy                              Location : Vial 40
Injection Date  : 28-Jul-11, 09:37:16                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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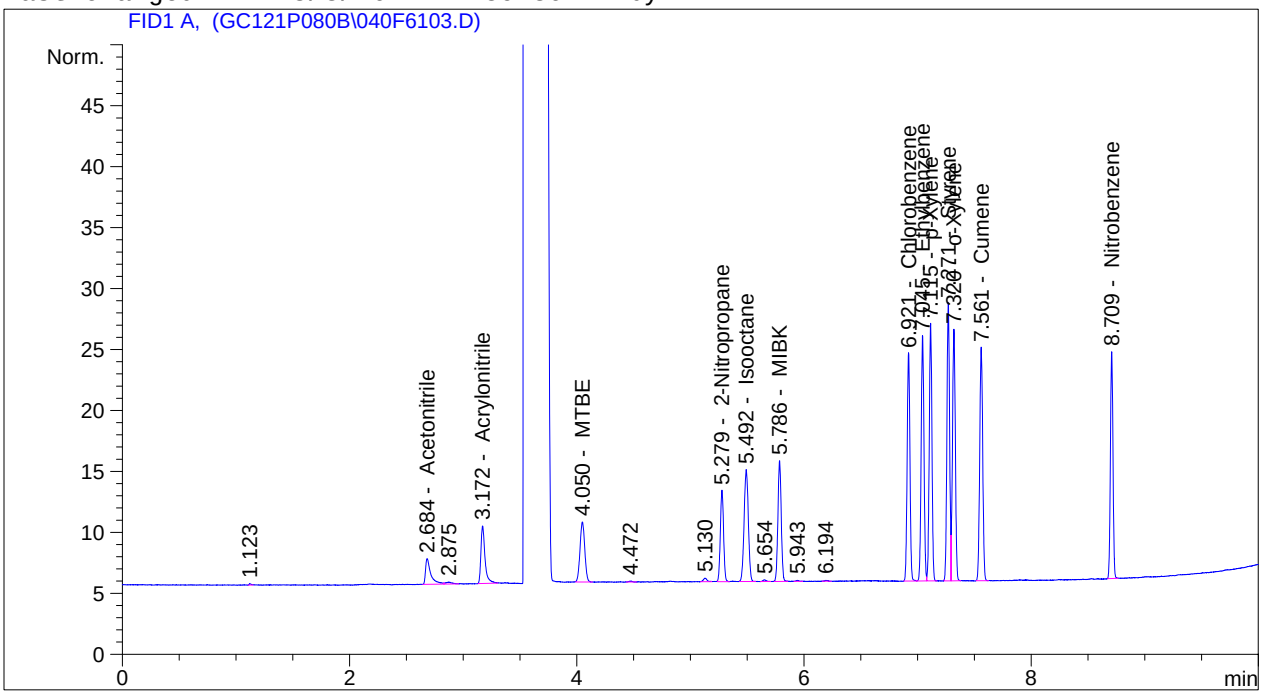


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

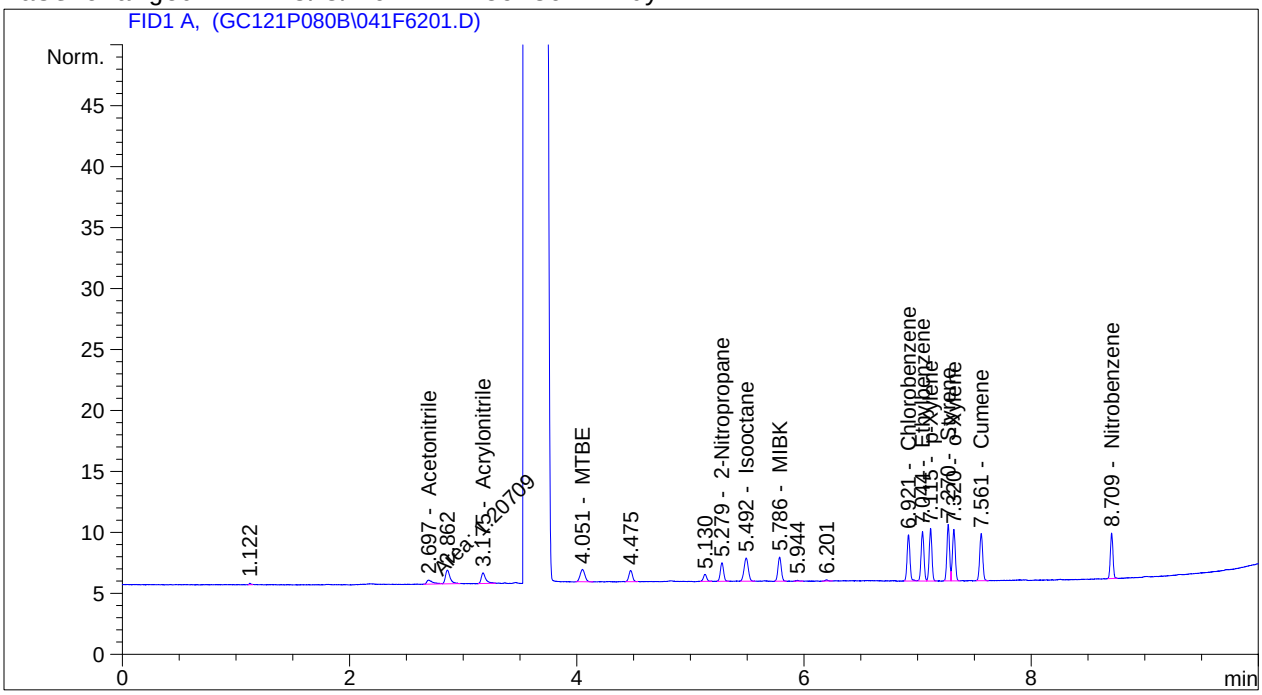
Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.65557	2.23531	14.87724		Acetonitrile
3.172	BB	11.75461	1.24559	14.64146		Acrylonitrile
4.050	BB	14.31792	9.95372e-1	14.25166		MTBE
5.279	BB	14.88428	1.26648	18.85064		2-Nitropropane
5.492	BB	23.89145	5.61987e-1	13.42669		Isooctane
5.786	BB	20.05917	7.74961e-1	15.54508		MIBK
6.921	BV	31.90509	6.81371e-1	21.73921		Chlorobenzene
7.045	VV	34.90676	4.88324e-1	17.04583		Ethylbenzene
7.115	VB	34.80487	4.85379e-1	16.89354		p-Xylene
7.271	BV	37.43632	4.75489e-1	17.80054		Styrene
7.320	VB	36.10587	4.80173e-1	17.33705		o-Xylene
7.561	BB	35.25561	4.85819e-1	17.12785		Cumene
8.709	BB	29.40170	8.04511e-1	23.65400		Nitrobenzene
Totals :				223.19078		

EM-BTRF-001449

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\041F6201.D
Sample Name: gc121p67 #2

Acq. Operator	: JBB	Seq. Line	: 62
Acq. Instrument	: Lucy	Location	: Vial 41
Injection Date	: 28-Jul-11, 09:59:47	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

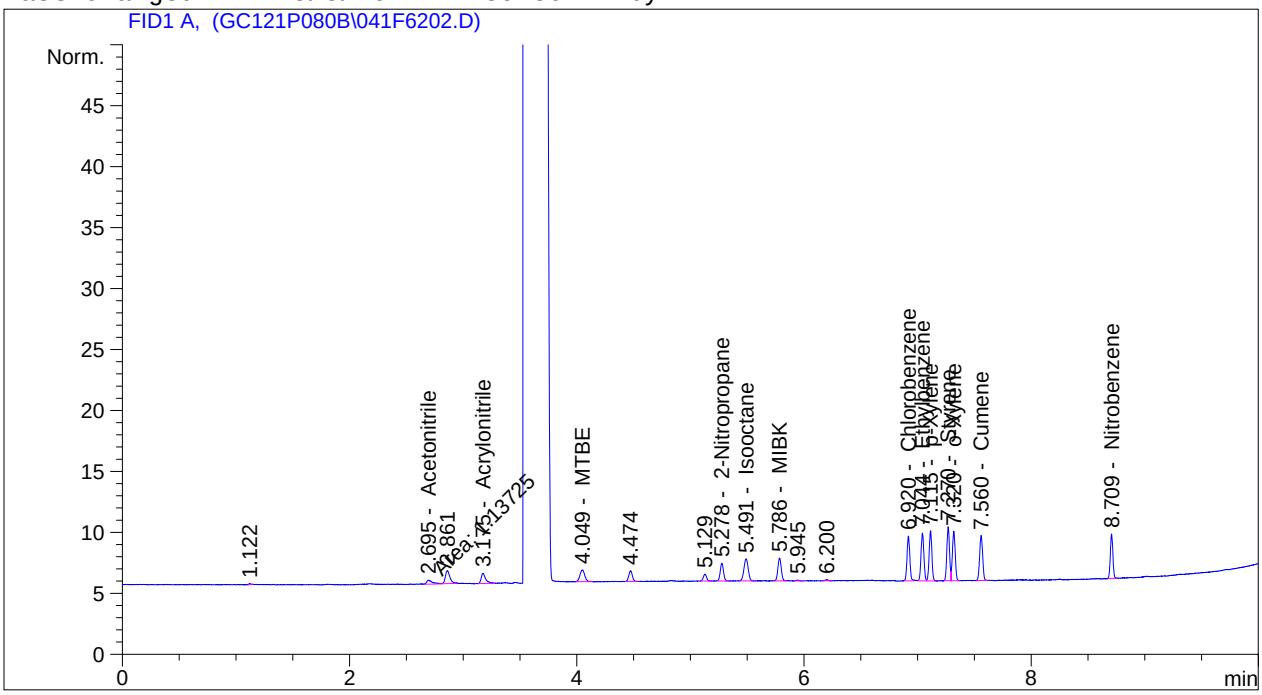
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.697	MM	1.20709	2.42169	2.92320		Acetonitrile
3.175	BB	2.38054	1.33222	3.17139		Acrylonitrile
4.051	BB	2.90439	1.00215	2.91062		MTBE
5.279	BB	3.02734	1.27887	3.87159		2-Nitropropane
5.492	BB	4.88924	5.65225e-1	2.76352		Isooctane
5.786	BB	4.01274	7.91614e-1	3.17655		MIBK
6.921	BB	6.57624	6.81651e-1	4.48270		Chlorobenzene
7.044	BV	7.09761	4.93053e-1	3.49949		Ethylbenzene
7.115	VB	7.10110	4.89590e-1	3.47663		p-Xylene
7.270	BV	7.53373	4.82956e-1	3.63846		Styrene
7.320	VB	7.33618	4.83253e-1	3.54523		o-Xylene
7.561	BB	7.16445	4.89378e-1	3.50613		Cumene
8.709	BB	5.91070	8.21044e-1	4.85294		Nitrobenzene
Totals :				45.81845		

EM-BTRF-001450

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\041F6202.D
Sample Name: gc121p67 #2

Acq. Operator	: JBB	Seq. Line	: 62
Acq. Instrument	: Lucy	Location	: Vial 41
Injection Date	: 28-Jul-11, 10:22:29	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.695	MM	1.13725	2.43567	2.76996		Acetonitrile
3.175	BB	2.28304	1.33686	3.05209		Acrylonitrile
4.049	BB	2.89576	1.00217	2.90205		MTBE
5.278	BB	2.88895	1.27962	3.69676		2-Nitropropane
5.491	BB	4.69173	5.65397e-1	2.65269		Isooctane
5.786	BB	3.84590	7.92517e-1	3.04795		MIBK
6.920	BB	6.26319	6.81668e-1	4.26942		Chlorobenzene
7.044	BV	6.87095	4.93248e-1	3.38908		Ethylbenzene
7.115	VB	6.90055	4.89743e-1	3.37950		p-Xylene
7.270	BV	7.27862	4.83284e-1	3.51764		Styrene
7.320	VB	7.06292	4.83403e-1	3.41424		o-Xylene
7.560	BB	6.85180	4.89582e-1	3.35452		Cumene
8.709	BB	5.68138	8.21879e-1	4.66941		Nitrobenzene
Totals :				44.11530		

EM-BTRF-001451

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\041F6203.D
Sample Name: gc121p67 #2

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  62
Acq. Instrument : Lucy                              Location : Vial 41
Injection Date  : 28-Jul-11, 10:45:14                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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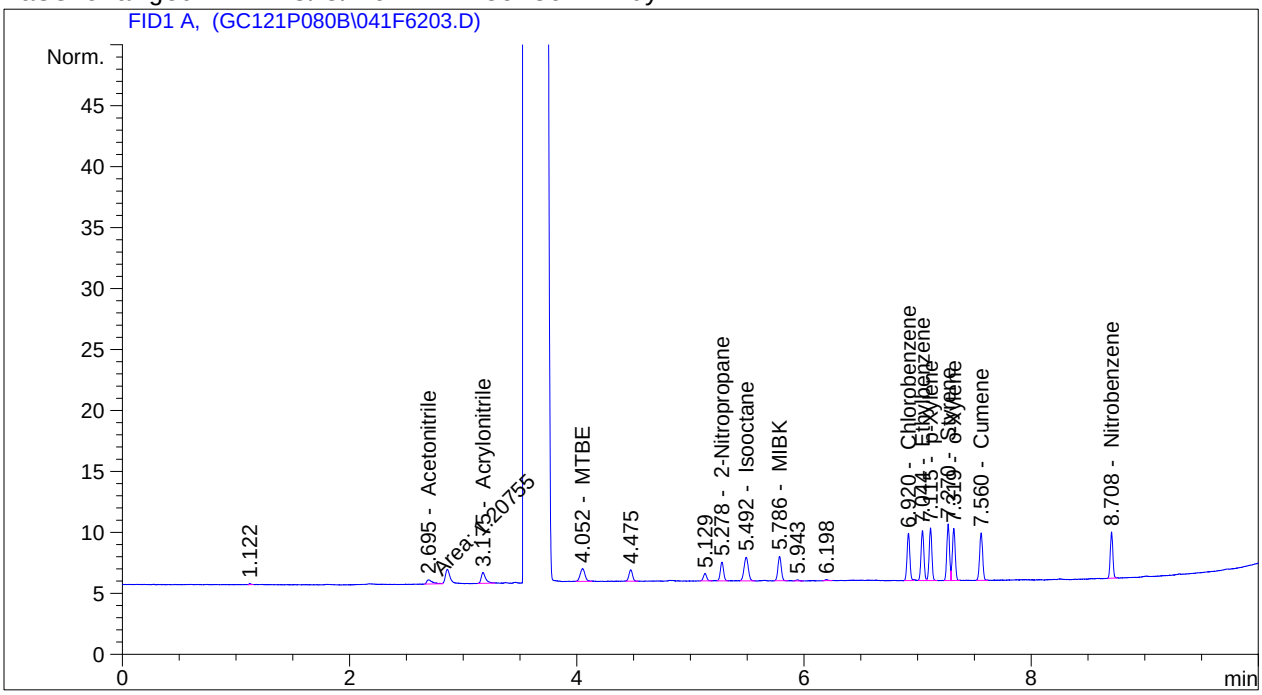


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

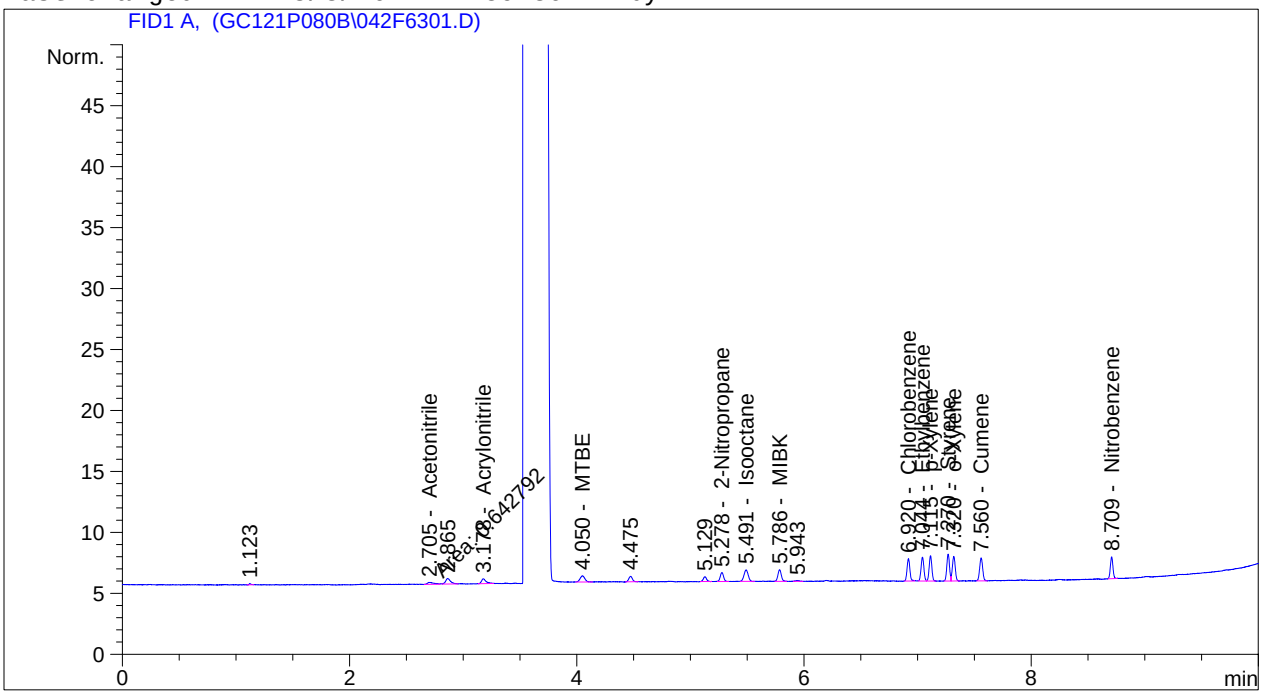
Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.695	MM	1.20755	2.42160	2.92422		Acetonitrile
3.175	BB	2.39620	1.33151	3.19056		Acrylonitrile
4.052	BB	3.03821	1.00177	3.04359		MTBE
5.278	BB	3.02657	1.27888	3.87061		2-Nitropropane
5.492	BB	5.01709	5.65121e-1	2.83526		Isooctane
5.786	BB	4.08472	7.91247e-1	3.23203		MIBK
6.920	BB	6.62577	6.81648e-1	4.51645		Chlorobenzene
7.044	BV	7.16339	4.92998e-1	3.53154		Ethylbenzene
7.115	VB	7.16557	4.89542e-1	3.50785		p-Xylene
7.270	BV	7.60763	4.82866e-1	3.67346		Styrene
7.319	VB	7.41104	4.83214e-1	3.58112		o-Xylene
7.560	BB	7.22206	4.89343e-1	3.53406		Cumene
8.708	BB	5.95403	8.20893e-1	4.88762		Nitrobenzene

Totals : 46.32837

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6301.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 11:07:31	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

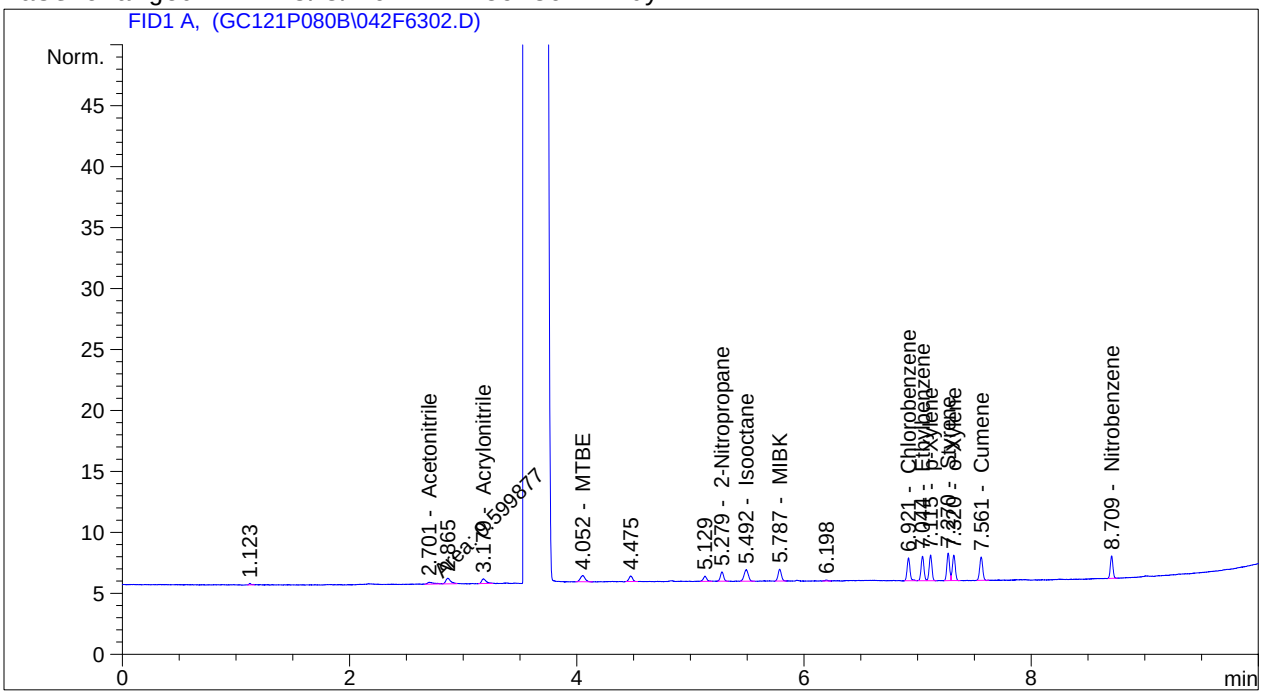
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.705	MM	6.42792e-1	2.62156	1.68512		Acetonitrile
3.178	BB	1.08443	1.46204	1.58548		Acrylonitrile
4.050	BB	1.46795	1.01046	1.48331		MTBE
5.278	BB	1.47663	1.29485	1.91202		2-Nitropropane
5.491	BB	2.39452	5.69391e-1	1.36342		Isooctane
5.786	BB	1.97167	8.13165e-1	1.60329		MIBK
6.920	BB	3.19456	6.82013e-1	2.17873		Chlorobenzene
7.044	BV	3.40685	4.99275e-1	1.70095		Ethylbenzene
7.115	VB	3.42914	4.95133e-1	1.69788		p-Xylene
7.270	BV	3.63434	4.92806e-1	1.79102		Styrene
7.320	VB	3.53450	4.87262e-1	1.72223		o-Xylene
7.560	BB	3.48666	4.94040e-1	1.72255		Cumene
8.709	BB	2.81579	8.43310e-1	2.37458		Nitrobenzene
Totals :				22.82058		

EM-BTRF-001453

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6302.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 11:29:44	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

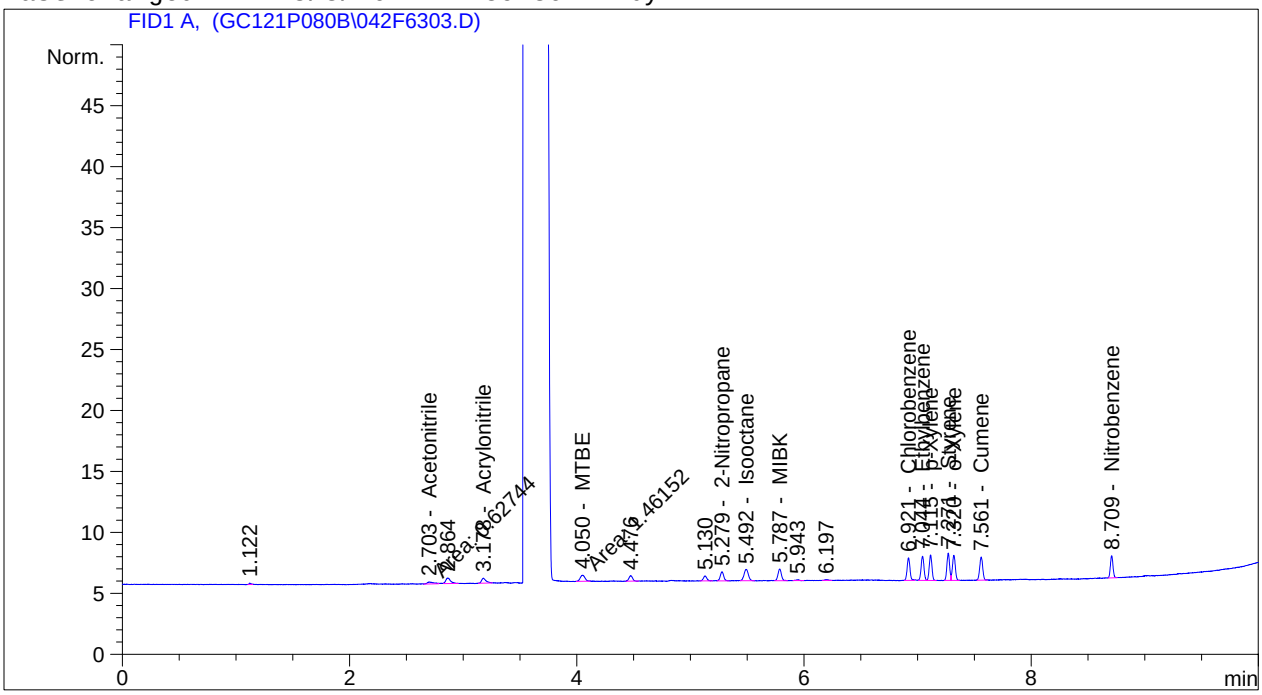
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.701	MM	5.99877e-1	2.65215	1.59096		Acetonitrile
3.179	BB	1.05350	1.46504	1.54342		Acrylonitrile
4.052	BB	1.45398	1.01056	1.46932		MTBE
5.279	BB	1.47879	1.29485	1.91482		2-Nitropropane
5.492	BB	2.41380	5.69391e-1	1.37439		Isooctane
5.787	BB	1.94760	8.13510e-1	1.58439		MIBK
6.921	BB	3.26932	6.82007e-1	2.22970		Chlorobenzene
7.044	BV	3.48448	4.99207e-1	1.73948		Ethylbenzene
7.115	VB	3.50679	4.95012e-1	1.73590		p-Xylene
7.270	BV	3.71724	4.92555e-1	1.83095		Styrene
7.320	VB	3.65661	4.87144e-1	1.78129		o-Xylene
7.561	BB	3.52324	4.93995e-1	1.74046		Cumene
8.709	BB	2.86361	8.43062e-1	2.41420		Nitrobenzene
Totals :				22.94928		

EM-BTRF-001454

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6303.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 11:52:24	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

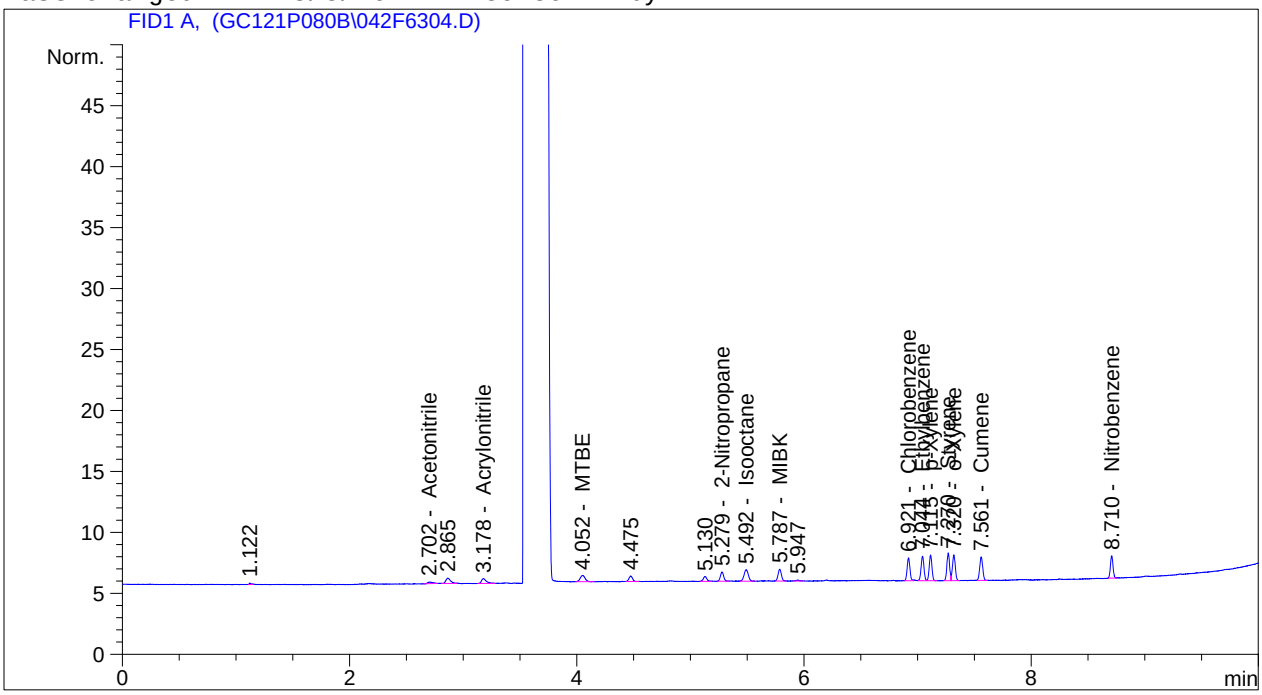
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703	MM	6.27440e-1	2.63203	1.65144		Acetonitrile
3.178	BB	1.09030	1.46076	1.59267		Acrylonitrile
4.050	MM	1.46152	1.01053	1.47691		MTBE
5.279	BB	1.56414	1.29343	2.02310		2-Nitropropane
5.492	BB	2.45077	5.69276e-1	1.39517		Isooctane
5.787	BB	1.98429	8.12895e-1	1.61302		MIBK
6.921	BB	3.26244	6.82008e-1	2.22501		Chlorobenzene
7.044	BV	3.49220	4.99180e-1	1.74324		Ethylbenzene
7.115	VB	3.44618	4.95133e-1	1.70632		p-Xylene
7.271	BV	3.67601	4.92768e-1	1.81142		Styrene
7.320	VB	3.61530	4.87232e-1	1.76149		o-Xylene
7.561	BB	3.51223	4.94023e-1	1.73513		Cumene
8.709	BB	2.87186	8.42940e-1	2.42080		Nitrobenzene
Totals :				23.15571		

EM-BTRF-001455

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6304.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 12:14:29	Inj	: 4
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

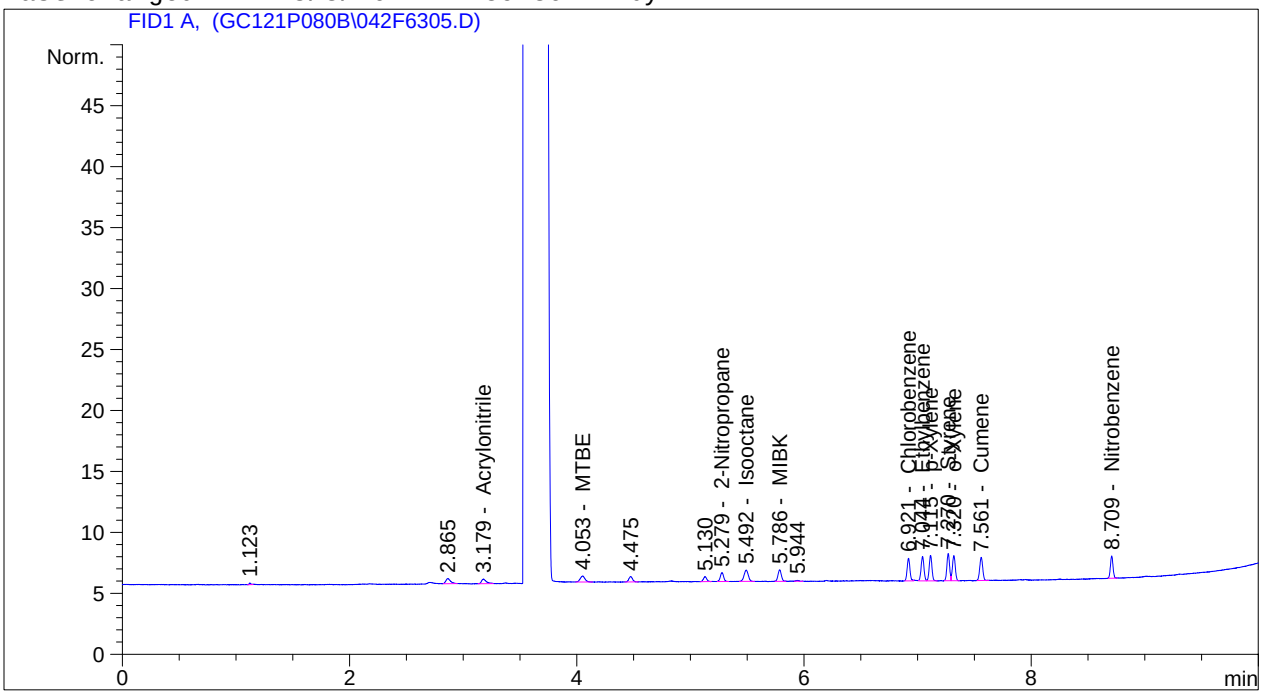
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.702	BB	4.08080e-1	2.66065	1.08576		Acetonitrile
3.178	BB	1.17494	1.44367	1.69623		Acrylonitrile
4.052	BB	1.50976	1.00999	1.52485		MTBE
5.279	BB	1.50548	1.29460	1.94900		2-Nitropropane
5.492	BB	2.42651	5.69357e-1	1.38155		Isooctane
5.787	BB	1.95976	8.13422e-1	1.59411		MIBK
6.921	BB	3.22071	6.82013e-1	2.19657		Chlorobenzene
7.044	BV	3.52027	4.99084e-1	1.75691		Ethylbenzene
7.115	VB	3.51242	4.94995e-1	1.73863		p-Xylene
7.270	BV	3.74164	4.92432e-1	1.84250		Styrene
7.320	VB	3.66796	4.87120e-1	1.78674		o-Xylene
7.561	BB	3.54015	4.93951e-1	1.74866		Cumene
8.710	BB	2.90589	8.42441e-1	2.44804		Nitrobenzene
Totals :				22.74954		

EM-BTRF-001456

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6305.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 12:36:17	Inj	: 5
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

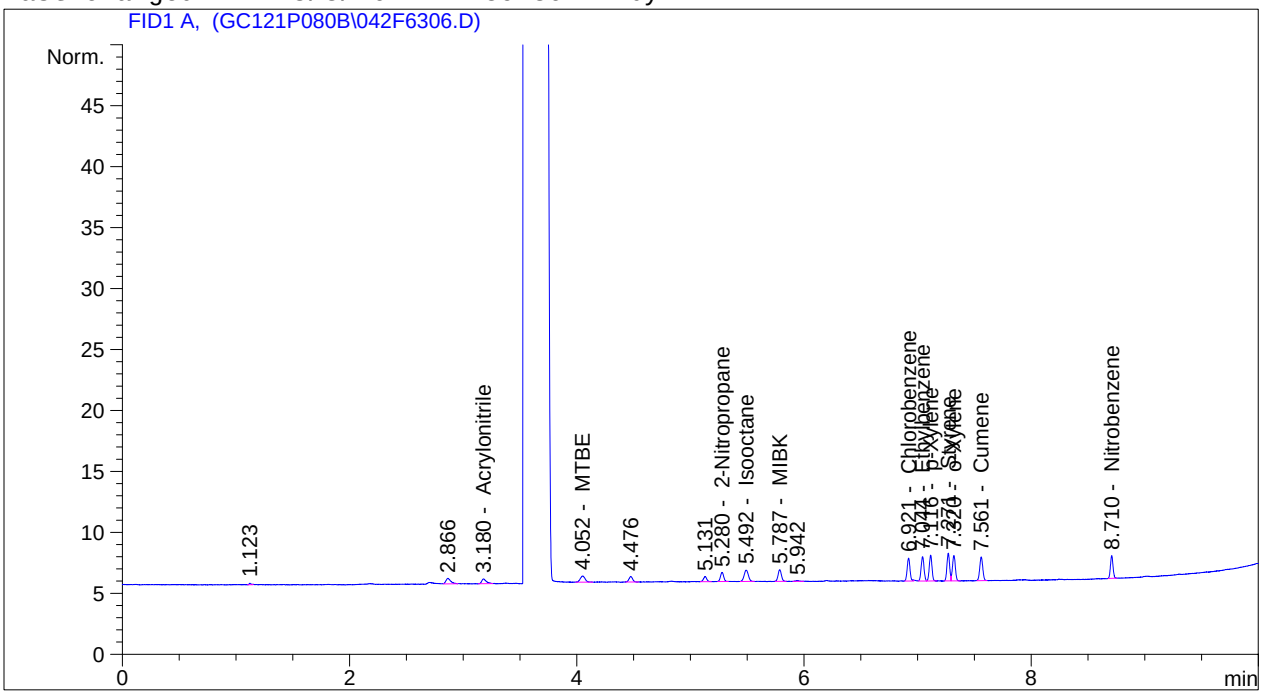
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.179	BB	1.08946	1.46094	1.59164		Acrylonitrile
4.053	BB	1.42677	1.01056	1.44183		MTBE
5.279	BB	1.45522	1.29485	1.88430		2-Nitropropane
5.492	BB	2.38610	5.69391e-1	1.35862		Isooctane
5.786	BB	1.92277	8.13510e-1	1.56419		MIBK
6.921	BB	3.18028	6.82013e-1	2.16900		Chlorobenzene
7.044	BV	3.47369	4.99244e-1	1.73422		Ethylbenzene
7.115	VB	3.49495	4.95049e-1	1.73017		p-Xylene
7.270	BV	3.66093	4.92806e-1	1.80413		Styrene
7.320	VB	3.58907	4.87262e-1	1.74882		o-Xylene
7.561	BB	3.48807	4.94040e-1	1.72325		Cumene
8.709	BB	2.88821	8.42698e-1	2.43389		Nitrobenzene
Totals :				21.18404		

EM-BTRF-001457

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6306.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 12:58:01	Inj	: 6
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

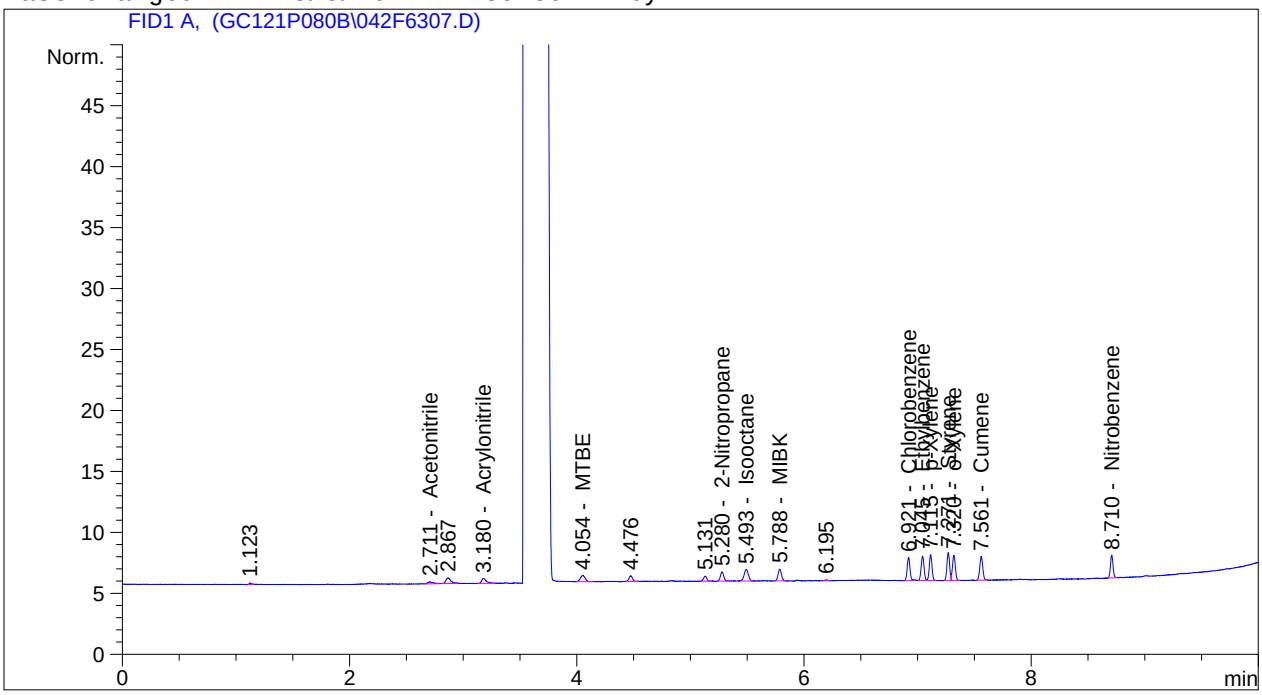
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.703		-	-	-		Acetonitrile
3.180	BB	1.11157	1.45622	1.61869		Acrylonitrile
4.052	BB	1.51335	1.00995	1.52842		MTBE
5.280	BB	1.47505	1.29485	1.90997		2-Nitropropane
5.492	BB	2.38904	5.69391e-1	1.36030		Isooctane
5.787	BB	1.95493	8.13510e-1	1.59035		MIBK
6.921	BB	3.25146	6.82011e-1	2.21753		Chlorobenzene
7.044	BV	3.48698	4.99198e-1	1.74069		Ethylbenzene
7.116	VB	3.48953	4.95065e-1	1.72754		p-Xylene
7.271	BV	3.73430	4.92469e-1	1.83902		Styrene
7.320	VB	3.66955	4.87116e-1	1.78750		o-Xylene
7.561	BB	3.58317	4.93843e-1	1.76952		Cumene
8.710	BB	2.92623	8.42148e-1	2.46432		Nitrobenzene
Totals :				21.55386		

EM-BTRF-001458

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\042F6307.D
Sample Name: gc121p67 #1

Acq. Operator	: JBB	Seq. Line	: 63
Acq. Instrument	: Lucy	Location	: Vial 42
Injection Date	: 28-Jul-11, 13:20:26	Inj	: 7
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

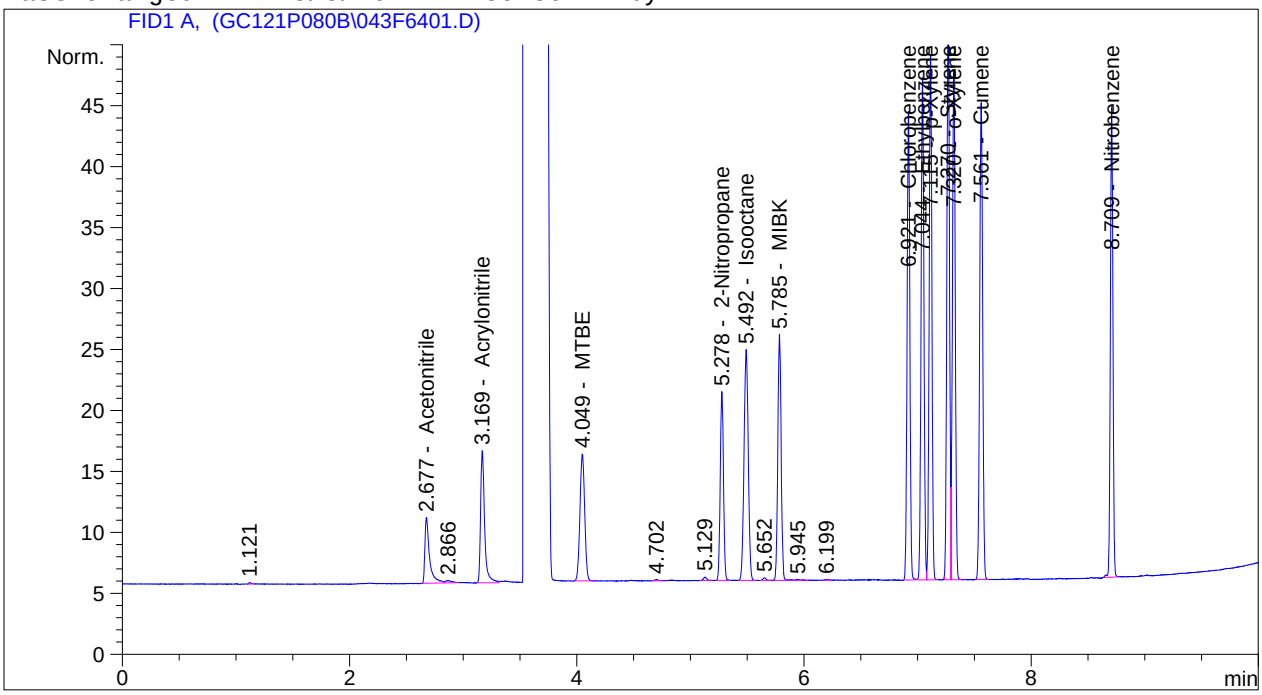
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.711	BB	5.26198e-1	2.66065	1.40003		Acetonitrile
3.180	BB	1.14625	1.44918	1.66112		Acrylonitrile
4.054	BB	1.48410	1.01028	1.49935		MTBE
5.280	BB	1.53814	1.29394	1.99026		2-Nitropropane
5.493	BB	2.42229	5.69372e-1	1.37918		Isooctane
5.788	BB	2.00691	8.12421e-1	1.63046		MIBK
6.921	BB	3.25596	6.82010e-1	2.22059		Chlorobenzene
7.045	BV	3.51895	4.99088e-1	1.75626		Ethylbenzene
7.115	VB	3.53553	4.94925e-1	1.74982		p-Xylene
7.271	BV	3.73995	4.92440e-1	1.84170		Styrene
7.320	VB	3.65566	4.87146e-1	1.78084		o-Xylene
7.561	BB	3.57699	4.93858e-1	1.76653		Cumene
8.710	BB	2.92061	8.42229e-1	2.45982		Nitrobenzene
Totals :				23.13597		

EM-BTRF-001459

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\043F6401.D
Sample Name: gc121p67 #3ss

Acq. Operator	: JBB	Seq. Line	: 64
Acq. Instrument	: Lucy	Location	: Vial 43
Injection Date	: 28-Jul-11, 13:43:00	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

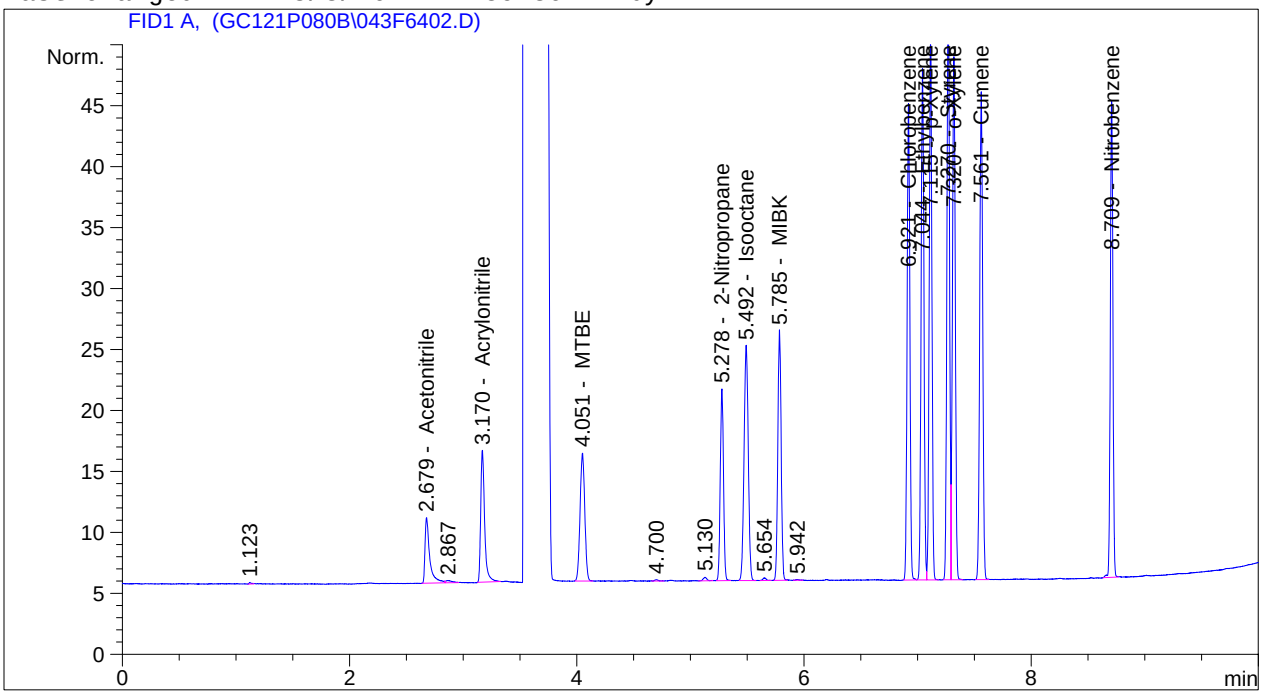
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.677	BV	15.12527	2.21219	33.45991		Acetonitrile
3.169	BB	26.51556	1.23335	32.70288		Acrylonitrile
4.049	BB	30.17768	9.94466e-1	30.01068		MTBE
5.278	BB	30.73509	1.26485	38.87521		2-Nitropropane
5.492	BB	49.19340	5.61558e-1	27.62497		Isooctane
5.785	BB	41.29173	7.72820e-1	31.91106		MIBK
6.921	BB	65.07131	6.81334e-1	44.33533		Chlorobenzene
7.044	BV	71.85896	4.87704e-1	35.04589		Ethylbenzene
7.115	VB	71.63073	4.84824e-1	34.72827		p-Xylene
7.270	BV	76.76894	4.74525e-1	36.42875		Styrene
7.320	VB	73.28394	4.79774e-1	35.15975		o-Xylene
7.561	BB	71.93024	4.85356e-1	34.91179		Cumene
8.709	BB	60.78399	8.02364e-1	48.77086		Nitrobenzene
Totals :				463.96535		

EM-BTRF-001460

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\043F6402.D
Sample Name: gc121p67 #3ss

Acq. Operator	: JBB	Seq. Line	: 64
Acq. Instrument	: Lucy	Location	: Vial 43
Injection Date	: 28-Jul-11, 14:05:23	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

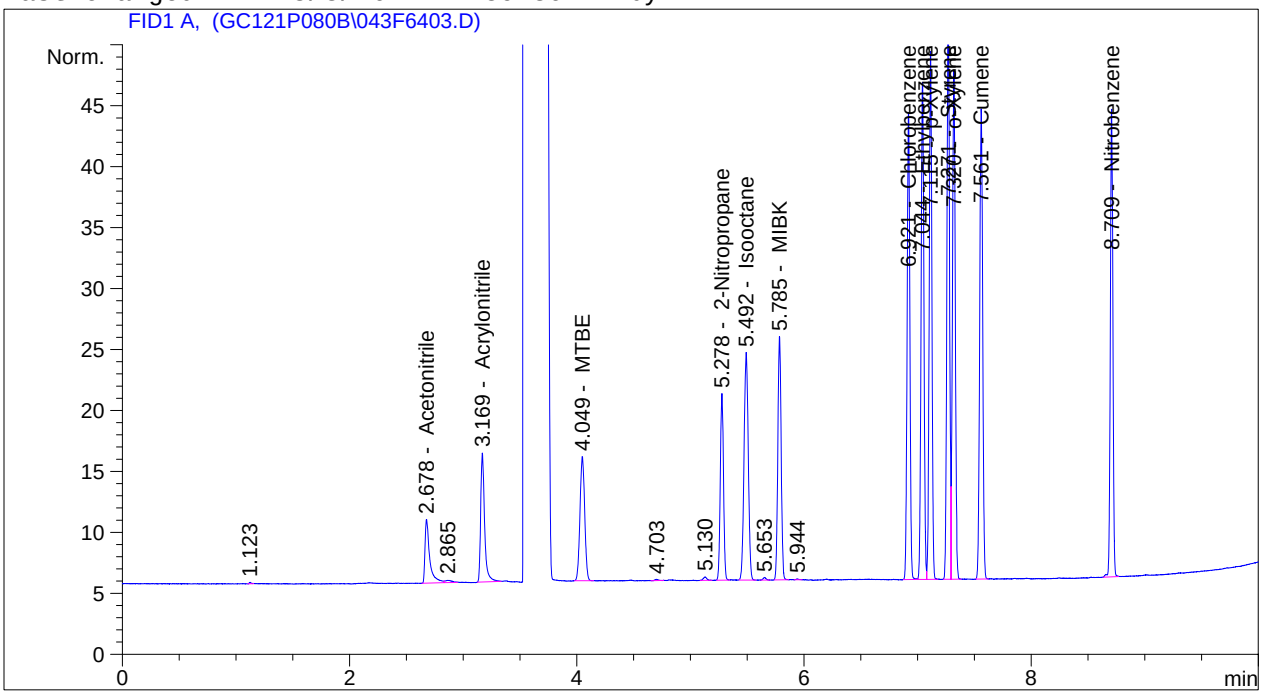
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.679	BB	15.27130	2.21201	33.78030		Acetonitrile
3.170	BB	25.82430	1.23361	31.85706		Acrylonitrile
4.051	BB	30.33313	9.94462e-1	30.16515		MTBE
5.278	BB	31.17258	1.26483	39.42790		2-Nitropropane
5.492	BB	49.87999	5.61553e-1	28.01025		Isooctane
5.785	BB	41.79311	7.72796e-1	32.29753		MIBK
6.921	BV	66.35646	6.81334e-1	45.21090		Chlorobenzene
7.044	VV	73.32431	4.87692e-1	35.75969		Ethylbenzene
7.115	VB	73.09007	4.84813e-1	35.43503		p-Xylene
7.270	BV	78.37143	4.74506e-1	37.18770		Styrene
7.320	VB	74.80958	4.79766e-1	35.89112		o-Xylene
7.561	BB	73.47783	4.85347e-1	35.66223		Cumene
8.709	BB	61.98877	8.02324e-1	49.73511		Nitrobenzene
Totals :				470.41995		

EM-BTRF-001461

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P080B\043F6403.D
Sample Name: gc121p67 #3ss

Acq. Operator	: JBB	Seq. Line	: 64
Acq. Instrument	: Lucy	Location	: Vial 43
Injection Date	: 28-Jul-11, 14:27:02	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P080B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.678	BB	14.88835	2.21247	32.94009		Acetonitrile
3.169	BB	25.30285	1.23381	31.21901		Acrylonitrile
4.049	BB	29.53109	9.94484e-1	29.36821		MTBE
5.278	BB	30.22874	1.26487	38.23553		2-Nitropropane
5.492	BB	48.43310	5.61565e-1	27.19832		Isooctane
5.785	BB	40.63184	7.72853e-1	31.40243		MIBK
6.921	BB	64.51769	6.81335e-1	43.95815		Chlorobenzene
7.044	BV	71.15600	4.87710e-1	34.70347		Ethylbenzene
7.115	VB	70.94511	4.84829e-1	34.39623		p-Xylene
7.271	BV	76.10542	4.74533e-1	36.11450		Styrene
7.320	VB	72.56622	4.79778e-1	34.81568		o-Xylene
7.561	BB	71.21174	4.85361e-1	34.56338		Cumene
8.709	BB	60.23228	8.02382e-1	48.32930		Nitrobenzene
Totals :				457.24428		

EM-BTRF-001462

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\001F0101.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   1
Acq. Instrument : Lucy                              Location : Vial 1
Injection Date  : 29-Jul-11, 17:09:03                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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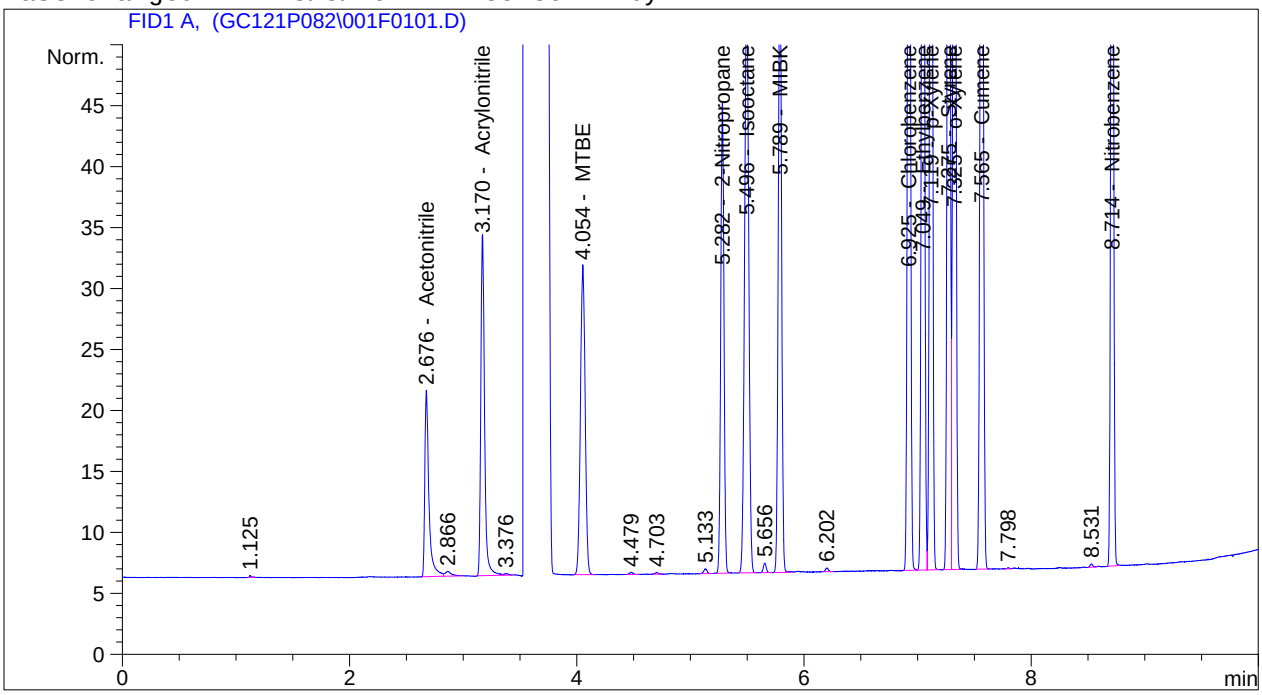


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	BV	38.12295	2.20122	83.91716		Acetonitrile
3.170	BB	64.03920	1.22763	78.61660		Acrylonitrile
4.054	BB	73.72084	9.93983e-1	73.27729		MTBE
5.282	BB	76.50282	1.26393	96.69427		2-Nitropropane
5.496	BB	122.70409	5.61316e-1	68.87577		Isooctane
5.789	BB	103.61989	7.71603e-1	79.95341		MIBK
6.925	BV	163.08266	6.81313e-1	111.11034		Chlorobenzene
7.049	VV	178.04630	4.87354e-1	86.77161		Ethylbenzene
7.119	VB	177.58904	4.84511e-1	86.04379		p-Xylene
7.275	BV	191.60188	4.73975e-1	90.81444		Styrene
7.325	VB	183.32874	4.79542e-1	87.91382		o-Xylene
7.565	BB	178.74983	4.85090e-1	86.70981		Cumene
8.714	BB	148.50354	8.01175e-1	118.97733		Nitrobenzene
Totals :				1149.67565		

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\001F0102.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   1
Acq. Instrument : Lucy                              Location : Vial 1
Injection Date  : 29-Jul-11, 17:36:41                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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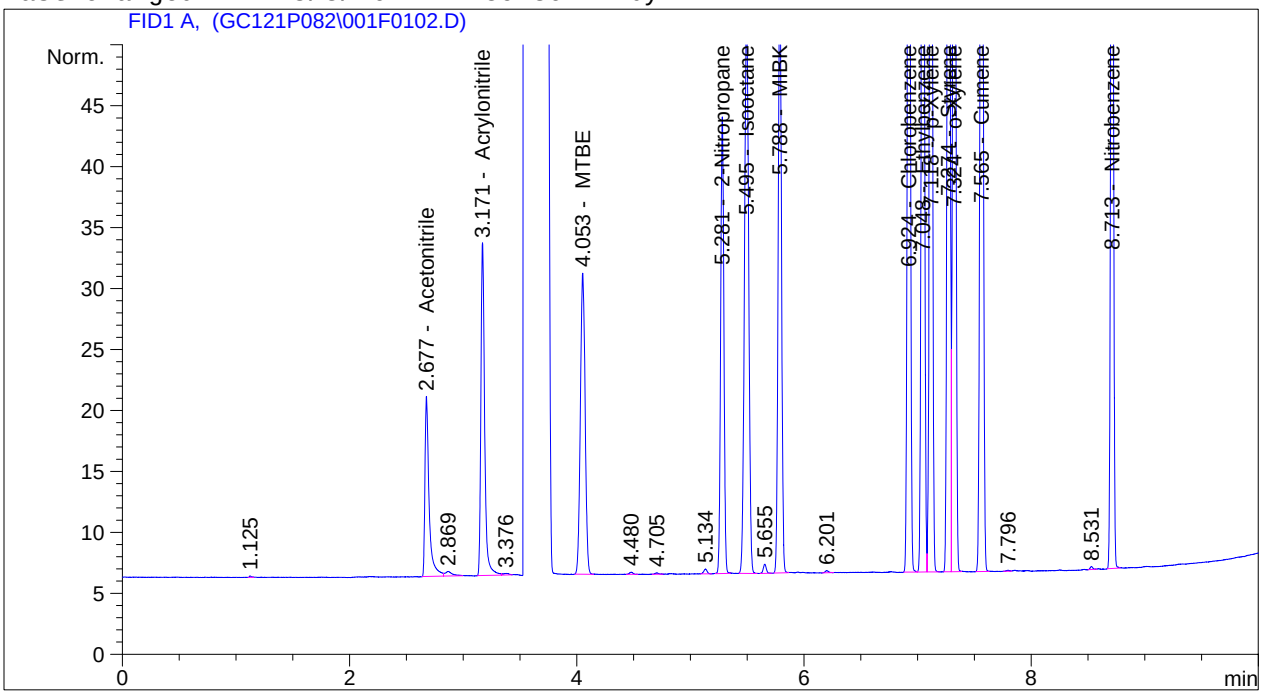


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.677 BV       37.21700    2.20140   81.92950    Acetonitrile
  3.171 BB       62.75595    1.22771   77.04642    Acrylonitrile
  4.053 BB       72.00865 9.93991e-1   71.57598    MTBE
  5.281 BB       74.19032    1.26395   93.77286    2-Nitropropane
  5.495 BB      118.79550 5.61321e-1   66.68245    Isooctane
  5.788 BB       99.76062 7.71634e-1   76.97870    MIBK
  6.924 BV      156.46487 6.81314e-1  106.60166    Chlorobenzene
  7.048 VV      170.55371 4.87365e-1   83.12184    Ethylbenzene
  7.118 VB      170.06085 4.84520e-1   82.39790    p-Xylene
  7.274 BV      183.40440 4.73991e-1   86.93205    Styrene
  7.324 VB      175.57446 4.79549e-1   84.19652    o-Xylene
  7.565 BB      171.08553 4.85098e-1   82.99330    Cumene
  8.713 BB      143.38094 8.01204e-1  114.87744    Nitrobenzene

Totals :                             1109.10661
```

EM-BTRF-001464

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\001F0103.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   1
Acq. Instrument : Lucy                              Location : Vial 1
Injection Date  : 29-Jul-11, 17:57:14                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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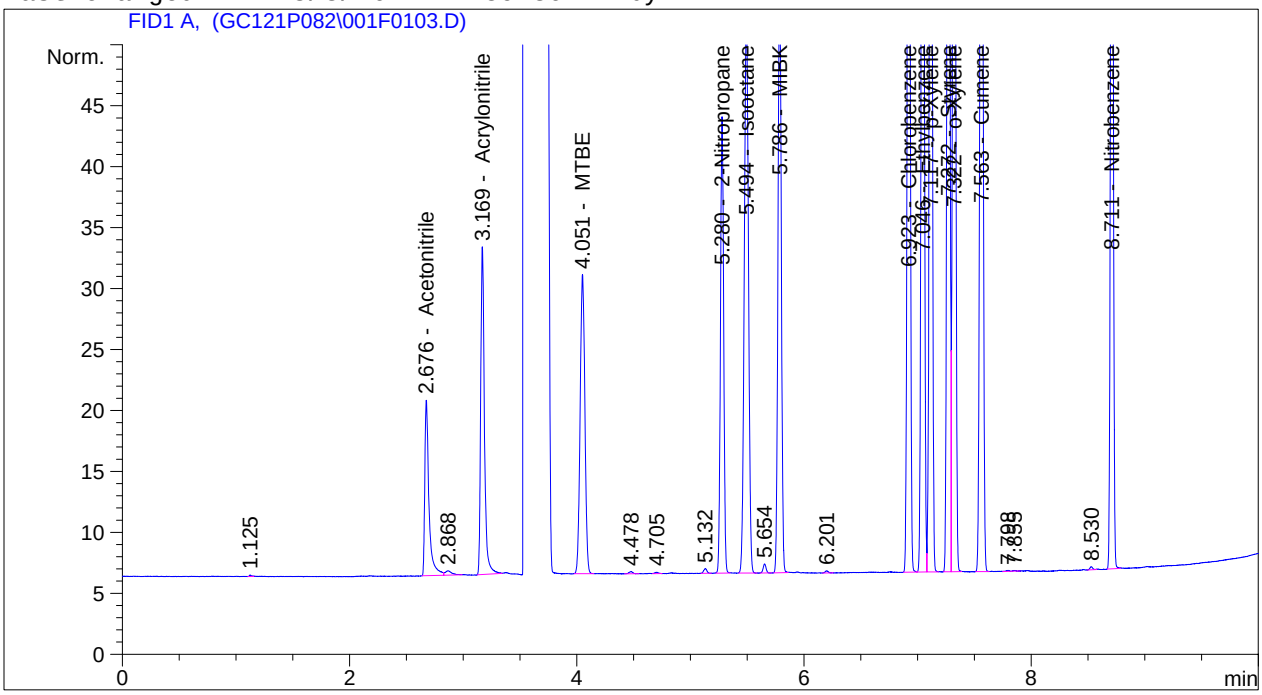


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	BV	36.36789	2.20157	80.06653		Acetonitrile
3.169	BB	61.19984	1.22782	75.14237		Acrylonitrile
4.051	BB	71.35887	9.93994e-1	70.93032		MTBE
5.280	BB	73.70954	1.26395	93.16549		2-Nitropropane
5.494	BB	118.36718	5.61322e-1	66.44210		Isooctane
5.786	BB	99.55700	7.71636e-1	76.82174		MIBK
6.923	BV	156.43356	6.81314e-1	106.58032		Chlorobenzene
7.046	VV	170.68971	4.87364e-1	83.18809		Ethylbenzene
7.117	VB	170.25974	4.84520e-1	82.49422		p-Xylene
7.272	BV	183.47766	4.73991e-1	86.96675		Styrene
7.322	VB	175.82971	4.79549e-1	84.31888		o-Xylene
7.563	BB	171.09377	4.85098e-1	82.99730		Cumene
8.711	BB	142.93410	8.01207e-1	114.51982		Nitrobenzene
Totals :		1103.63393				

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\002F0201.D
Sample Name: gc121p67 #3

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :   2
Acq. Instrument : Lucy                          Location : Vial 2
Injection Date  : 29-Jul-11, 18:18:12                Inj :   1
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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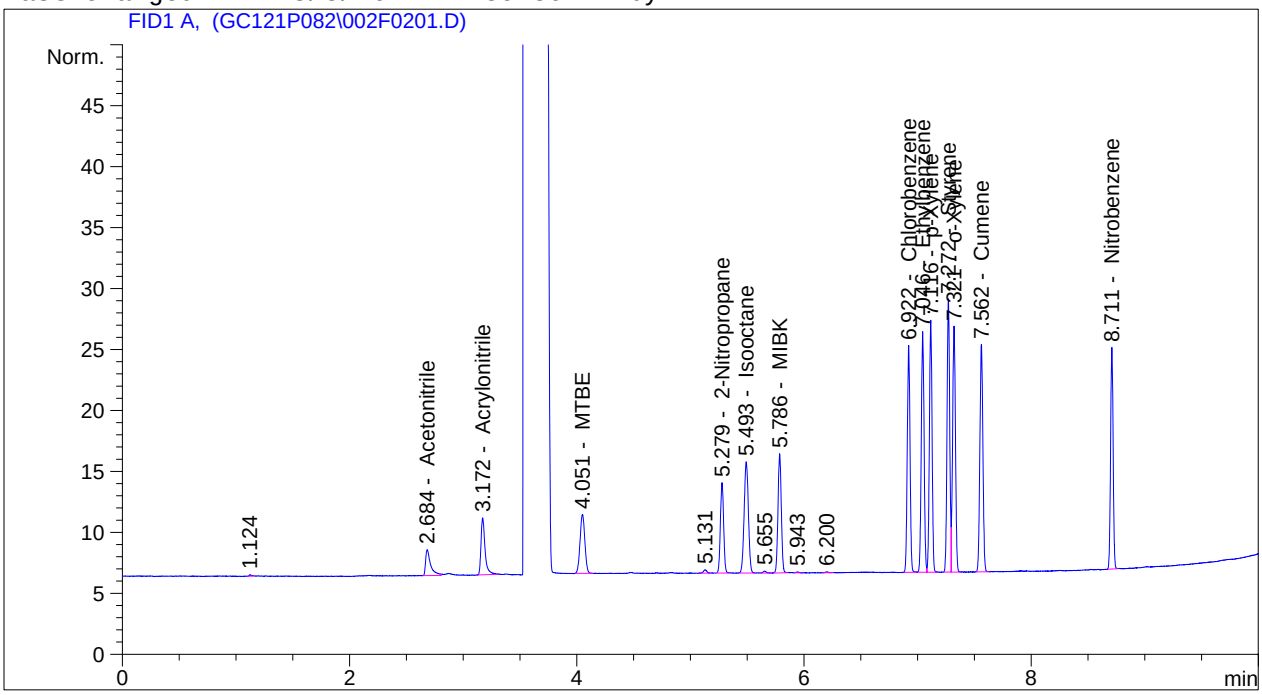


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.54128	2.23603	14.62650		Acetonitrile
3.172	BB	11.57576	1.24593	14.42261		Acrylonitrile
4.051	BB	14.14373	9.95393e-1	14.07858		MTBE
5.279	BB	14.71813	1.26652	18.64074		2-Nitropropane
5.493	BB	23.71527	5.61993e-1	13.32782		Isooctane
5.786	BB	19.79938	7.75016e-1	15.34483		MIBK
6.922	BB	31.41549	6.81373e-1	21.40565		Chlorobenzene
7.046	BV	34.19521	4.88350e-1	16.69921		Ethylbenzene
7.116	VB	34.10551	4.85401e-1	16.55484		p-Xylene
7.272	BV	36.68085	4.75527e-1	17.44274		Styrene
7.321	VB	35.27691	4.80191e-1	16.93966		o-Xylene
7.562	BB	34.34573	4.85843e-1	16.68664		Cumene
8.711	BB	28.48168	8.04646e-1	22.91766		Nitrobenzene
Totals :				219.08748		

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\002F0202.D
Sample Name: gc121p67 #3

```
==========================================================================
Acq. Operator   : JBB                          Seq. Line :   2
Acq. Instrument : Lucy                          Location : Vial 2
Injection Date  : 29-Jul-11, 18:39:19                Inj :   2
                                               Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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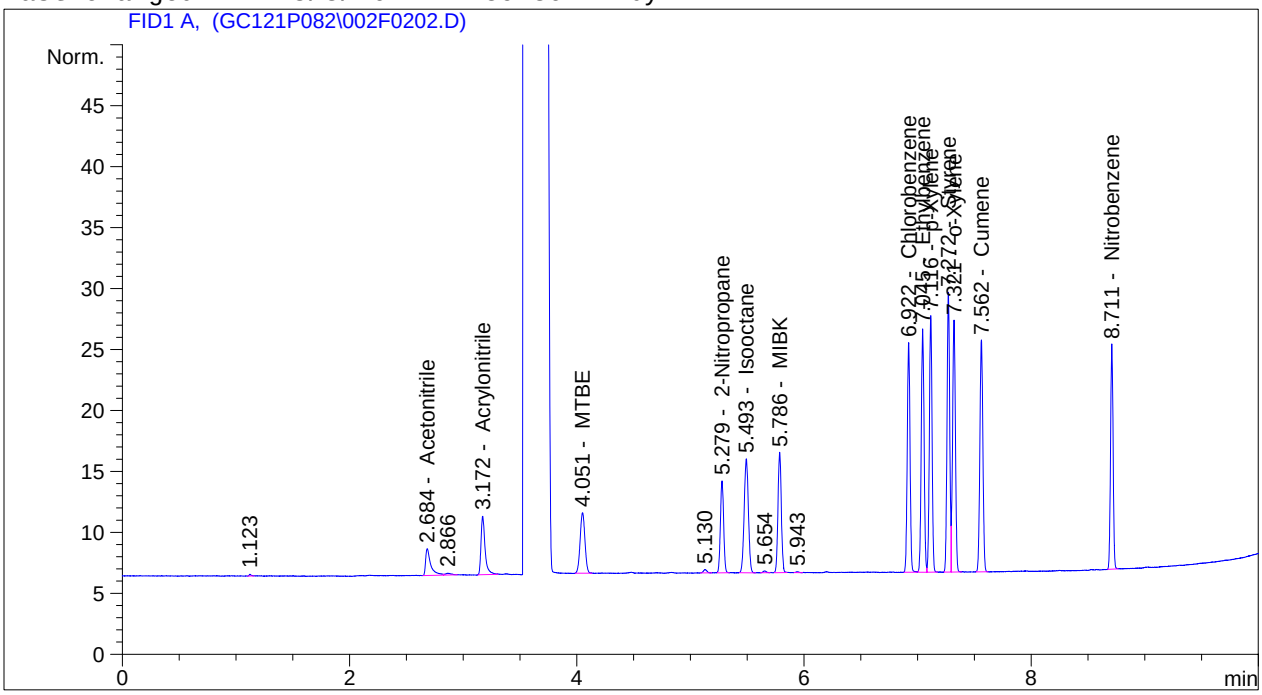


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.684 BB        6.80195    2.23442   15.19841    Acetonitrile
  3.172 BB       11.90279    1.24532   14.82276    Acrylonitrile
  4.051 BB       14.48672 9.95352e-1   14.41939    MTBE
  5.279 BB       14.97496    1.26646   18.96520    2-Nitropropane
  5.493 BB       24.20473 5.61976e-1   13.60248    Isooctane
  5.786 BB       20.17840 7.74937e-1   15.63698    MIBK
  6.922 BB       32.09730 6.81371e-1   21.87017    Chlorobenzene
  7.045 BV       34.95491 4.88323e-1   17.06928    Ethylbenzene
  7.116 VB       34.87689 4.85376e-1   16.92842    p-Xylene
  7.272 BV       37.48090 4.75486e-1   17.82166    Styrene
  7.321 VB       36.05184 4.80174e-1   17.31116    o-Xylene
  7.562 BB       35.11188 4.85823e-1   17.05815    Cumene
  8.711 BB       28.92614 8.04580e-1   23.27338    Nitrobenzene

Totals :                               223.97743
```

EM-BTRF-001467

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\002F0203.D
Sample Name: gc121p67 #3

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :   2
Acq. Instrument : Lucy                              Location : Vial 2
Injection Date  : 29-Jul-11, 19:00:28                    Inj :   3
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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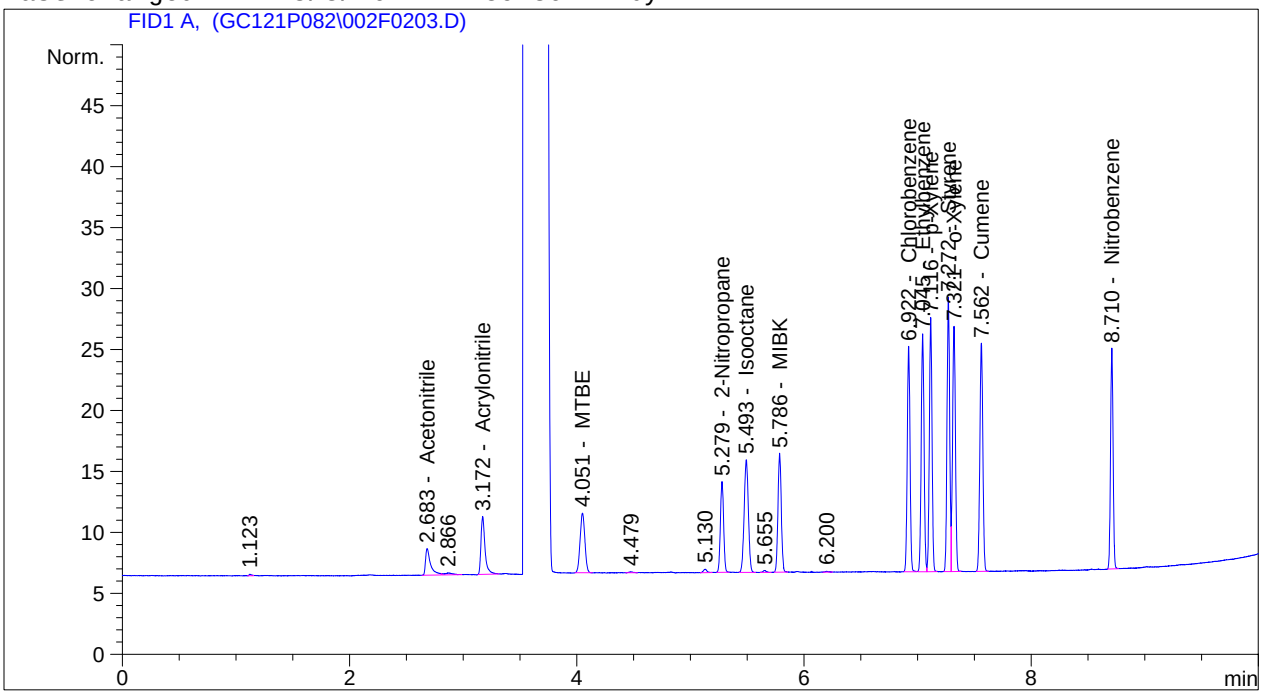


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

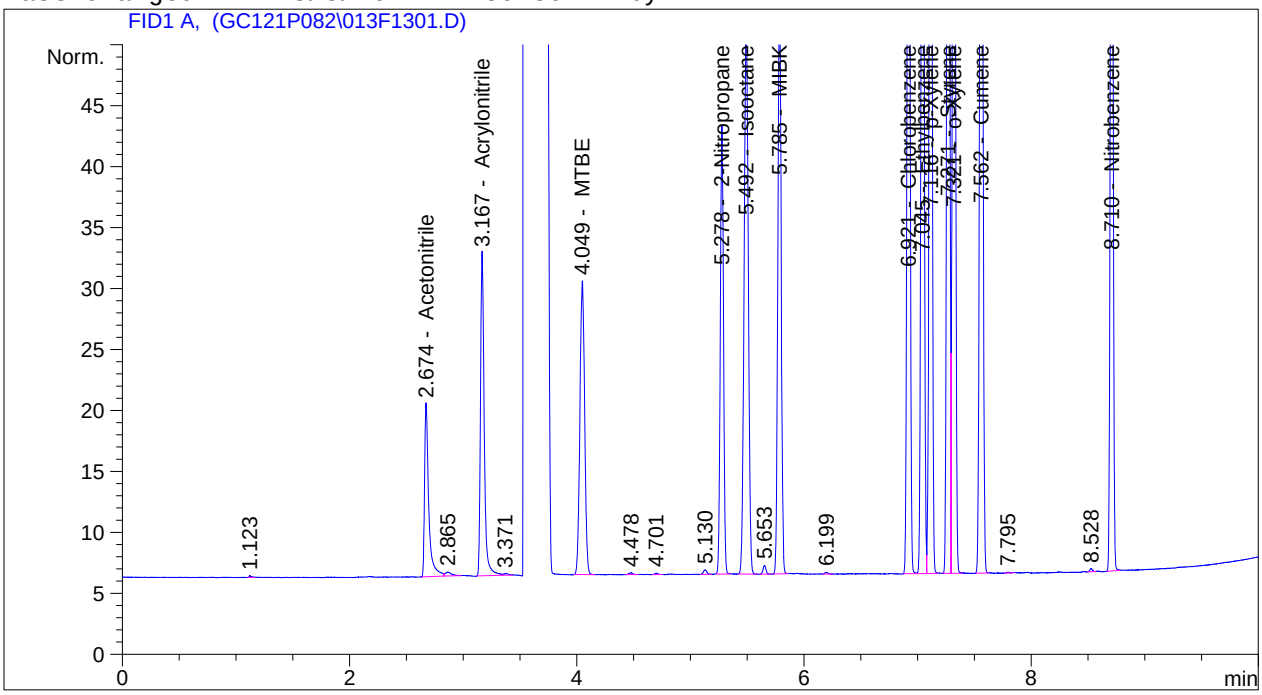
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.683	BB	6.66563	2.23525	14.89931		Acetonitrile
3.172	BB	11.78942	1.24553	14.68405		Acrylonitrile
4.051	BB	14.22859	9.95383e-1	14.16290		MTBE
5.279	BB	14.80207	1.26650	18.74678		2-Nitropropane
5.493	BB	23.82899	5.61989e-1	13.39163		Isooctane
5.786	BB	19.88509	7.74998e-1	15.41090		MIBK
6.922	BB	31.46090	6.81372e-1	21.43659		Chlorobenzene
7.045	BV	34.24250	4.88348e-1	16.72225		Ethylbenzene
7.116	VB	34.14198	4.85400e-1	16.57250		p-Xylene
7.272	BV	36.68602	4.75527e-1	17.44519		Styrene
7.321	VB	35.30919	4.80191e-1	16.95514		o-Xylene
7.562	BB	34.32069	4.85844e-1	16.67449		Cumene
8.710	BB	28.38111	8.04661e-1	22.83717		Nitrobenzene

Totals : 219.93890

EM-BTRF-001468

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\013F1301.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 13
Acq. Instrument	: Lucy	Location	: Vial 13
Injection Date	: 30-Jul-11, 06:03:46	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

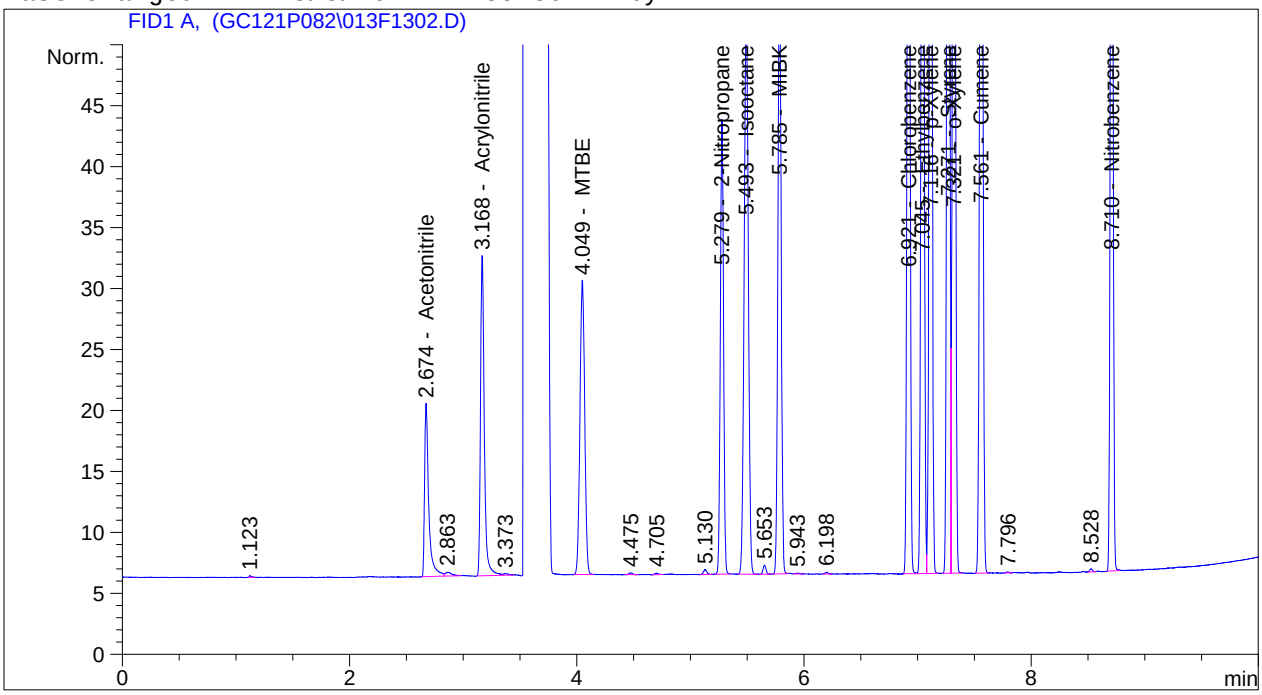
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BV	35.98299	2.20165	79.22205		Acetonitrile
3.167	BB	60.86110	1.22784	74.72790		Acrylonitrile
4.049	BB	70.10121	9.94001e-1	69.68065		MTBE
5.278	BB	72.57860	1.26396	91.73675		2-Nitropropane
5.492	BB	116.57478	5.61325e-1	65.43629		Isooctane
5.785	BB	98.14474	7.71648e-1	75.73318		MIBK
6.921	BV	155.42429	6.81314e-1	105.89270		Chlorobenzene
7.045	VV	170.27464	4.87365e-1	82.98591		Ethylbenzene
7.116	VB	170.12062	4.84520e-1	82.42685		p-Xylene
7.271	BV	183.55281	4.73991e-1	87.00234		Styrene
7.321	VB	175.81915	4.79549e-1	84.31382		o-Xylene
7.562	BB	171.73601	4.85098e-1	83.30873		Cumene
8.710	BB	144.49043	8.01198e-1	115.76543		Nitrobenzene
Totals :				1098.23260		

EM-BTRF-001469

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\013F1302.D
Sample Name: gc121p67 #4

Acq. Operator : JBB Seq. Line : 13
Acq. Instrument : Lucy Location : Vial 13
Injection Date : 30-Jul-11, 06:25:23 Inj : 2
Inj Volume : External
Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed : 8/3/2011 12:59:30 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

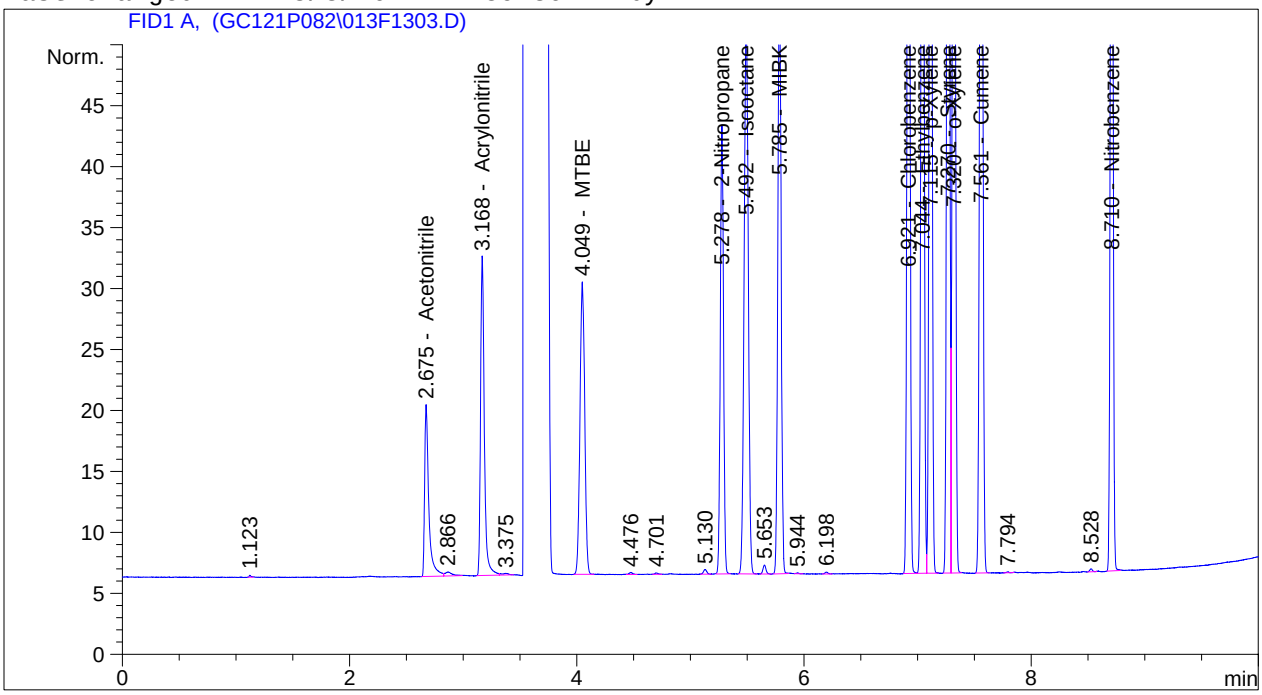
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BV	35.96941	2.20166	79.19227		Acetonitrile
3.168	BB	60.79063	1.22785	74.64167		Acrylonitrile
4.049	BB	70.22177	9.94000e-1	69.80044		MTBE
5.279	BB	73.20709	1.26396	92.53074		2-Nitropropane
5.493	BB	117.93398	5.61323e-1	66.19901		Isooctane
5.785	BB	99.33440	7.71638e-1	76.65016		MIBK
6.921	BV	158.05128	6.81314e-1	107.68248		Chlorobenzene
7.045	VV	173.27205	4.87361e-1	84.44600		Ethylbenzene
7.116	VB	173.13623	4.84516e-1	83.88730		p-Xylene
7.271	BV	186.83716	4.73984e-1	88.55783		Styrene
7.321	VB	178.84770	4.79546e-1	85.76567		o-Xylene
7.561	BB	174.80089	4.85094e-1	84.79492		Cumene
8.710	BB	145.71964	8.01191e-1	116.74922		Nitrobenzene

Totals : 1110.89771

EM-BTRF-001470

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\013F1303.D
Sample Name: gc121p67 #4

Acq. Operator : JBB Seq. Line : 13
Acq. Instrument : Lucy Location : Vial 13
Injection Date : 30-Jul-11, 06:47:06 Inj : 3
Inj Volume : External
Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed : 8/3/2011 12:59:30 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

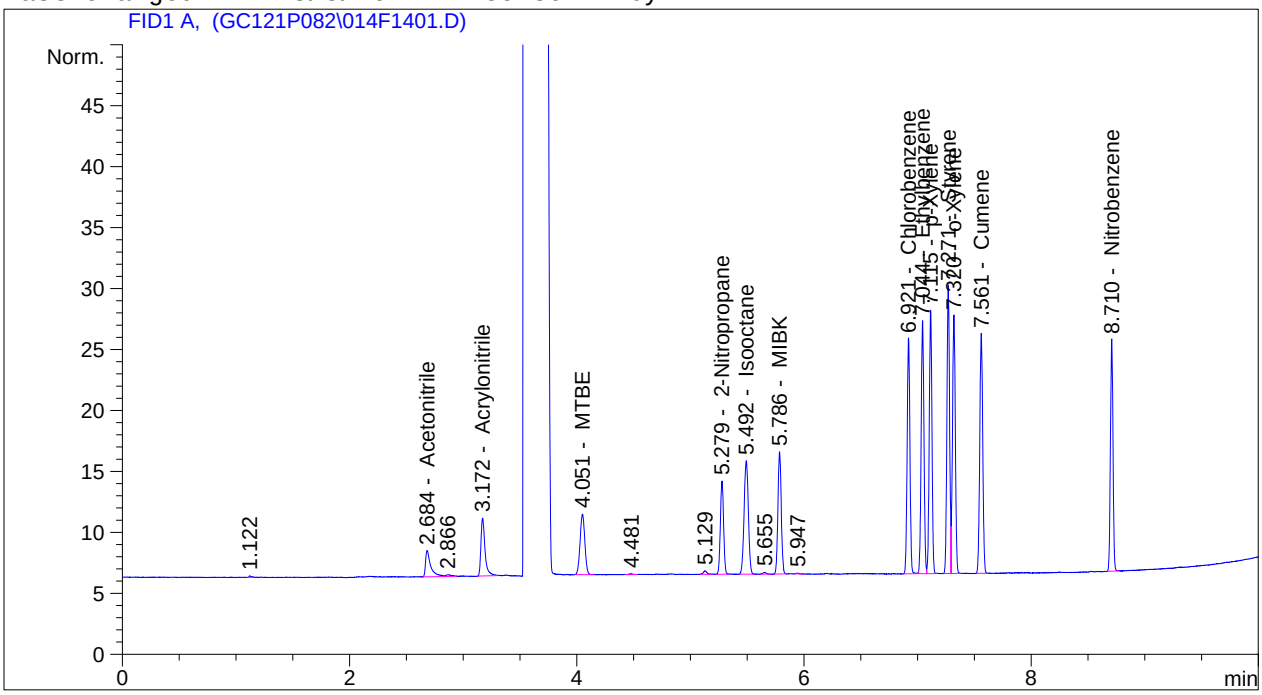
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.675	BV	35.75566	2.20170	78.72328		Acetonitrile
3.168	BB	60.27185	1.22788	74.00689		Acrylonitrile
4.049	BB	69.76365	9.94002e-1	69.34523		MTBE
5.278	BB	72.76883	1.26396	91.97707		2-Nitropropane
5.492	BB	117.13408	5.61324e-1	65.75014		Isooctane
5.785	BB	98.86109	7.71642e-1	76.28534		MIBK
6.921	BV	157.45291	6.81314e-1	107.27480		Chlorobenzene
7.044	VV	172.66211	4.87362e-1	84.14888		Ethylbenzene
7.115	VB	172.47179	4.84517e-1	83.56551		p-Xylene
7.270	BV	186.10745	4.73986e-1	88.21223		Styrene
7.320	VB	178.37862	4.79546e-1	85.54080		o-Xylene
7.561	BB	174.20825	4.85095e-1	84.50755		Cumene
8.710	BB	145.22600	8.01194e-1	116.35414		Nitrobenzene

Totals : 1105.69188

EM-BTRF-001471

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\014F1401.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 14
Acq. Instrument	: Lucy	Location	: Vial 14
Injection Date	: 30-Jul-11, 07:08:44	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

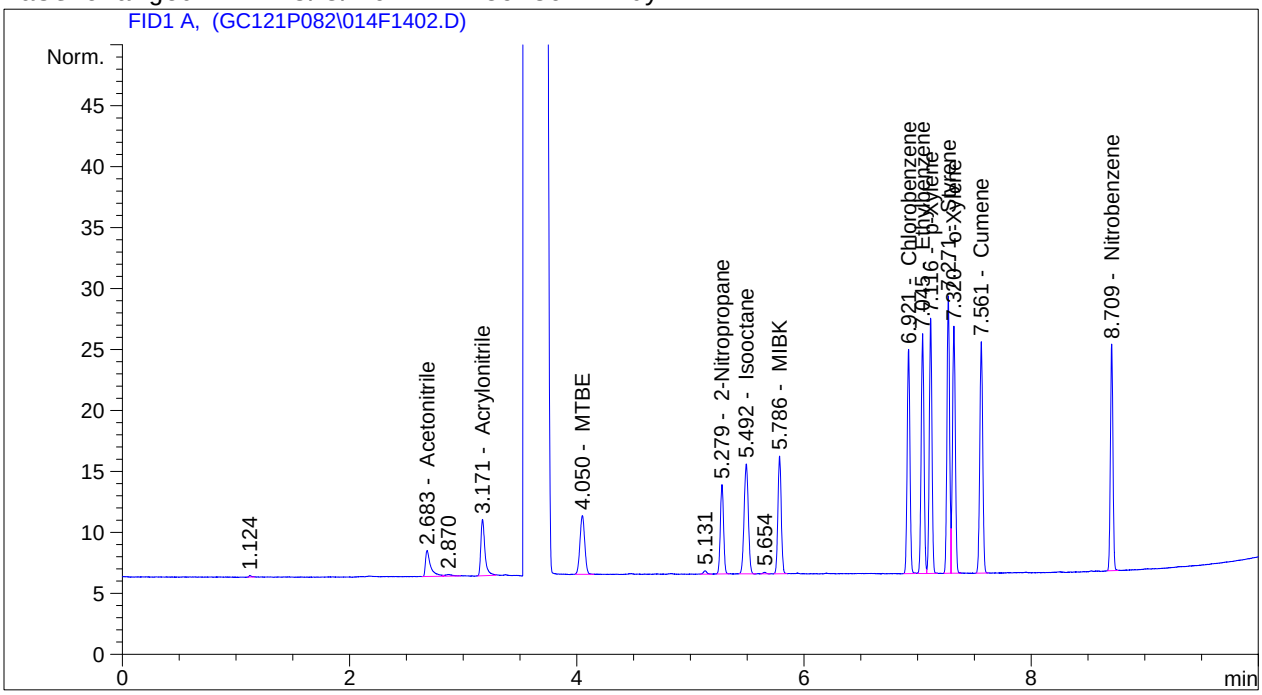
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.81947	2.23432	15.23684		Acetonitrile
3.172	BB	11.79300	1.24552	14.68843		Acrylonitrile
4.051	BB	14.38883	9.95364e-1	14.32212		MTBE
5.279	BB	15.10756	1.26643	19.13271		2-Nitropropane
5.492	BB	24.43682	5.61968e-1	13.73272		Isooctane
5.786	BB	20.45366	7.74881e-1	15.84915		MIBK
6.921	BB	32.81247	6.81369e-1	22.35742		Chlorobenzene
7.044	BV	35.81009	4.88294e-1	17.48585		Ethylbenzene
7.115	VB	35.77798	4.85349e-1	17.36482		p-Xylene
7.271	BV	38.52261	4.75435e-1	18.31502		Styrene
7.320	VB	37.06363	4.80152e-1	17.79619		o-Xylene
7.561	BB	36.16144	4.85796e-1	17.56709		Cumene
8.710	BB	29.89707	8.04442e-1	24.05047		Nitrobenzene
Totals :				227.89884		

EM-BTRF-001472

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\014F1402.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 14
Acq. Instrument	: Lucy	Location	: Vial 14
Injection Date	: 30-Jul-11, 07:30:39	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

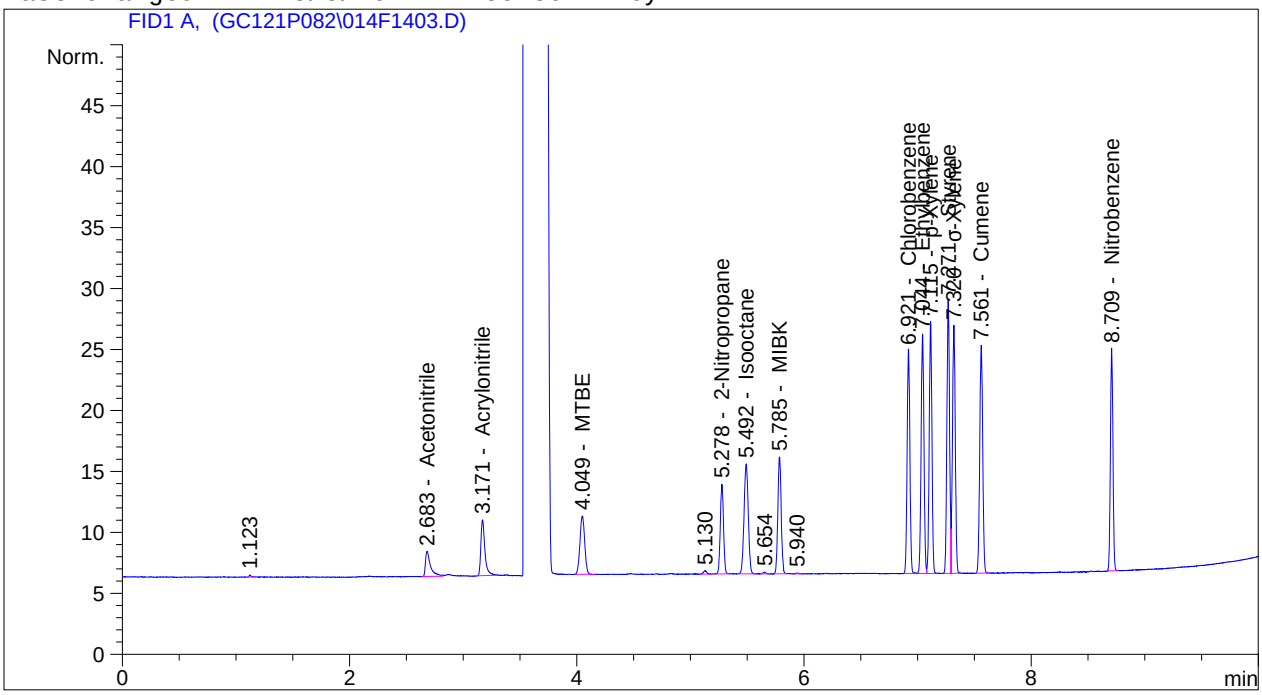
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.683	BB	6.61605	2.23555	14.79053		Acetonitrile
3.171	BB	11.46154	1.24616	14.28286		Acrylonitrile
4.050	BB	14.01947	9.95409e-1	13.95511		MTBE
5.279	BB	14.55790	1.26655	18.43832		2-Nitropropane
5.492	BB	23.40839	5.62004e-1	13.15561		Isooctane
5.786	BB	19.60983	7.75057e-1	15.19873		MIBK
6.921	BB	31.31175	6.81373e-1	21.33497		Chlorobenzene
7.045	BV	34.32076	4.88345e-1	16.76037		Ethylbenzene
7.116	VB	34.21053	4.85397e-1	16.60570		p-Xylene
7.271	BV	36.81523	4.75520e-1	17.50639		Styrene
7.320	VB	35.49578	4.80186e-1	17.04459		o-Xylene
7.561	BB	34.56657	4.85837e-1	16.79372		Cumene
8.709	BB	28.80765	8.04597e-1	23.17855		Nitrobenzene
Totals :				219.04546		

EM-BTRF-001473

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\014F1403.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 14
Acq. Instrument	: Lucy	Location	: Vial 14
Injection Date	: 30-Jul-11, 07:52:28	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.683	BB	6.45072	2.23662	14.42781		Acetonitrile
3.171	BB	11.31591	1.24645	14.10467		Acrylonitrile
4.049	BB	13.90294	9.95424e-1	13.83932		MTBE
5.278	BB	14.45610	1.26657	18.30972		2-Nitropropane
5.492	BB	23.33561	5.62007e-1	13.11477		Isooctane
5.785	BB	19.50527	7.75079e-1	15.11814		MIBK
6.921	BB	31.25241	6.81373e-1	21.29455		Chlorobenzene
7.044	BV	34.22424	4.88348e-1	16.71335		Ethylbenzene
7.115	VB	34.19087	4.85398e-1	16.59618		p-Xylene
7.271	BV	36.76103	4.75523e-1	17.48072		Styrene
7.320	VB	35.41644	4.80188e-1	17.00655		o-Xylene
7.561	BB	34.53661	4.85838e-1	16.77920		Cumene
8.709	BB	28.64020	8.04622e-1	23.04453		Nitrobenzene
Totals :				217.82950		

EM-BTRF-001474

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\025F2501.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  25
Acq. Instrument : Lucy                              Location : Vial 25
Injection Date  : 30-Jul-11, 19:04:17                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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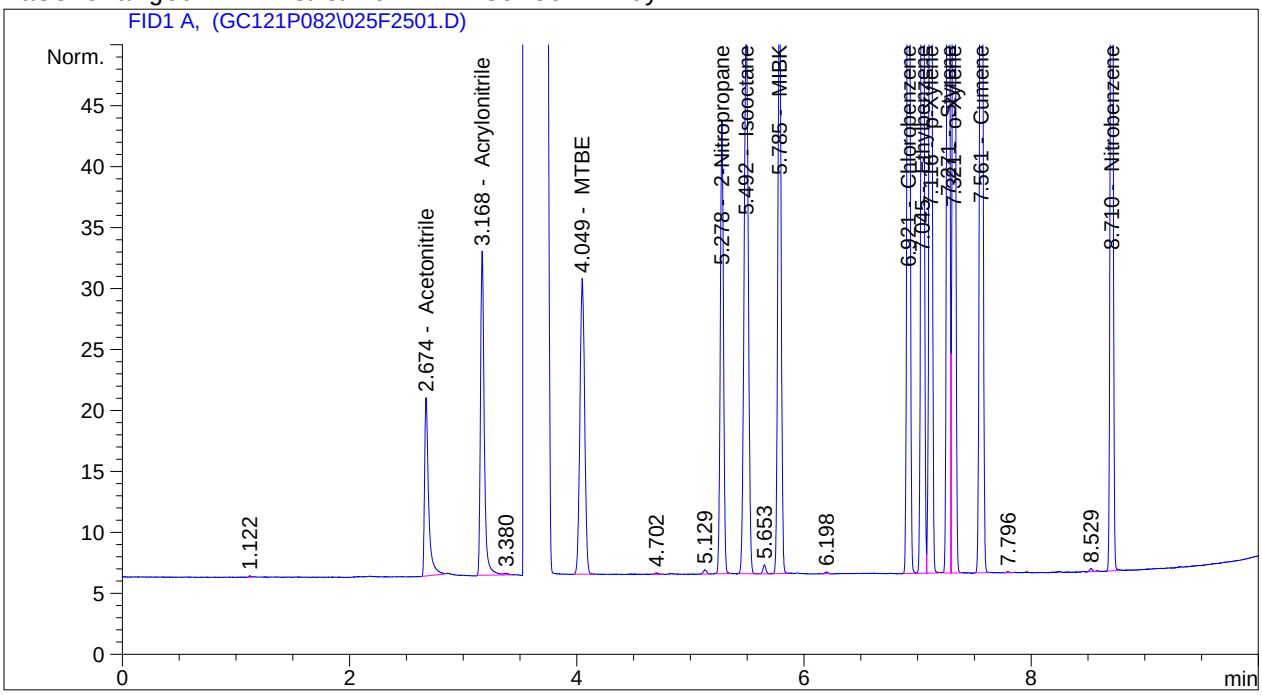


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                        External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BB	35.88929	2.20167	79.01647		Acetonitrile
3.168	BB	61.10873	1.22783	75.03089		Acrylonitrile
4.049	BB	70.36808	9.93999e-1	69.94582		MTBE
5.278	BB	72.77876	1.26396	91.98962		2-Nitropropane
5.492	BB	116.74709	5.61324e-1	65.53298		Isooctane
5.785	BB	98.25685	7.71647e-1	75.81960		MIBK
6.921	BV	154.33231	6.81314e-1	105.14874		Chlorobenzene
7.045	VV	168.68991	4.87367e-1	82.21396		Ethylbenzene
7.116	VB	168.44794	4.84522e-1	81.61677		p-Xylene
7.271	BV	181.30290	4.73996e-1	85.93677		Styrene
7.321	VB	173.76923	4.79550e-1	83.33111		o-Xylene
7.561	BB	169.50780	4.85100e-1	82.22825		Cumene
8.710	BB	141.74011	8.01214e-1	113.56421		Nitrobenzene

Totals : 1091.37516

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\025F2502.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  25
Acq. Instrument : Lucy                              Location : Vial 25
Injection Date  : 30-Jul-11, 19:25:52                    Inj :   2
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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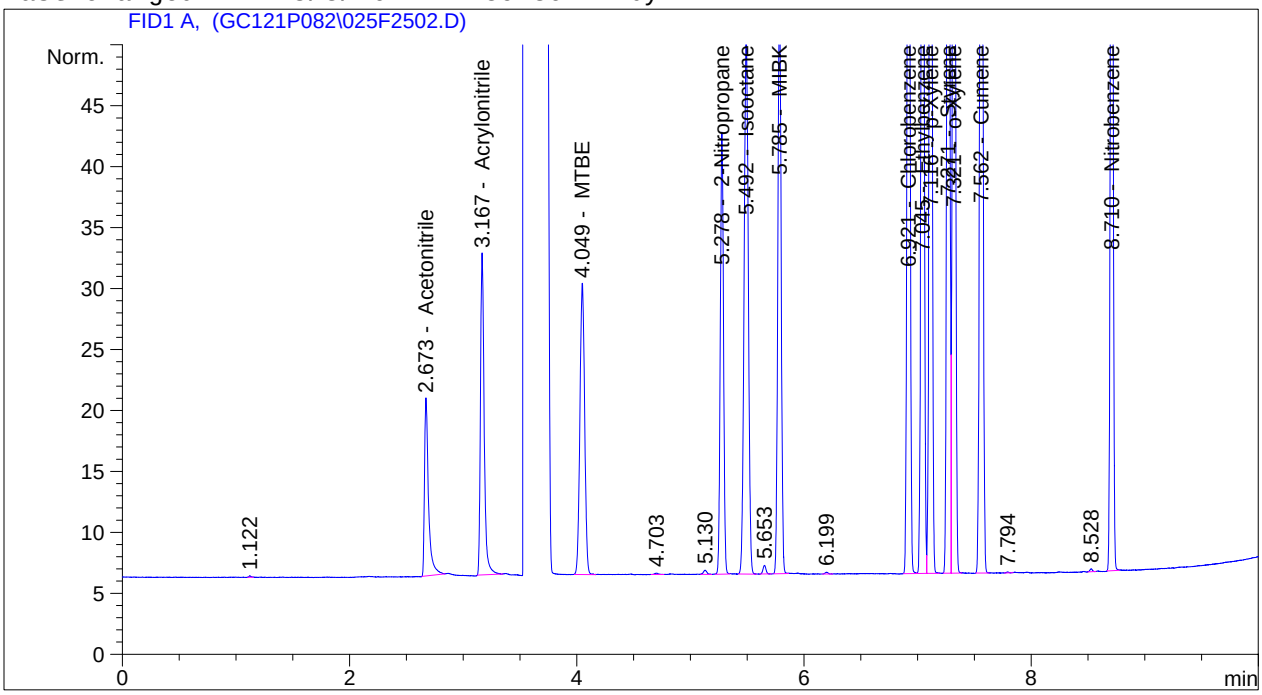


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

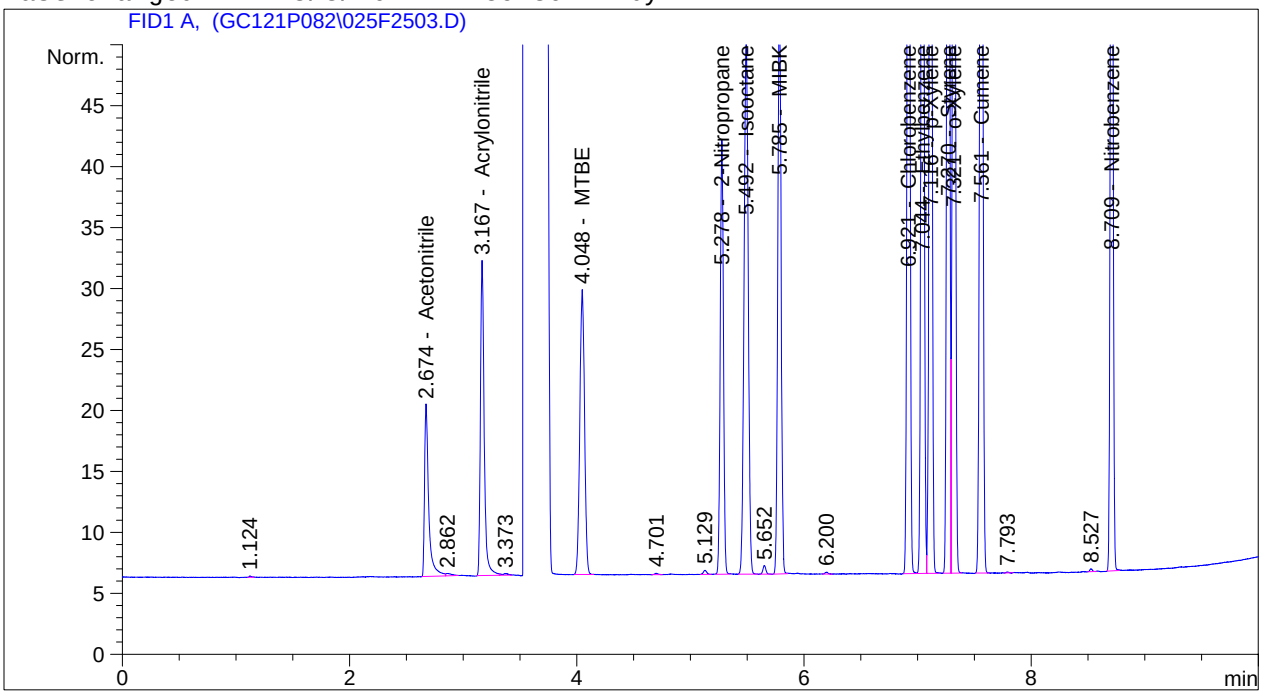
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.673	BB	35.88238	2.20167	79.00132		Acetonitrile
3.167	BB	60.33661	1.22788	74.08612		Acrylonitrile
4.049	BB	69.54605	9.94003e-1	69.12902		MTBE
5.278	BB	71.50623	1.26397	90.38201		2-Nitropropane
5.492	BB	114.54394	5.61328e-1	64.29667		Isooctane
5.785	BB	96.42647	7.71663e-1	74.40874		MIBK
6.921	BV	152.68744	6.81314e-1	104.02809		Chlorobenzene
7.045	VV	167.26675	4.87369e-1	81.52071		Ethylbenzene
7.116	VB	167.05553	4.84524e-1	80.94242		p-Xylene
7.271	BV	180.34761	4.73998e-1	85.48433		Styrene
7.321	VB	172.73828	4.79551e-1	82.83689		o-Xylene
7.562	BB	168.74506	4.85101e-1	81.85838		Cumene
8.710	BB	141.14684	8.01218e-1	113.08938		Nitrobenzene

Totals : 1081.06410

EM-BTRF-001476

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\025F2503.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 25
Acq. Instrument	: Lucy	Location	: Vial 25
Injection Date	: 30-Jul-11, 19:47:19	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

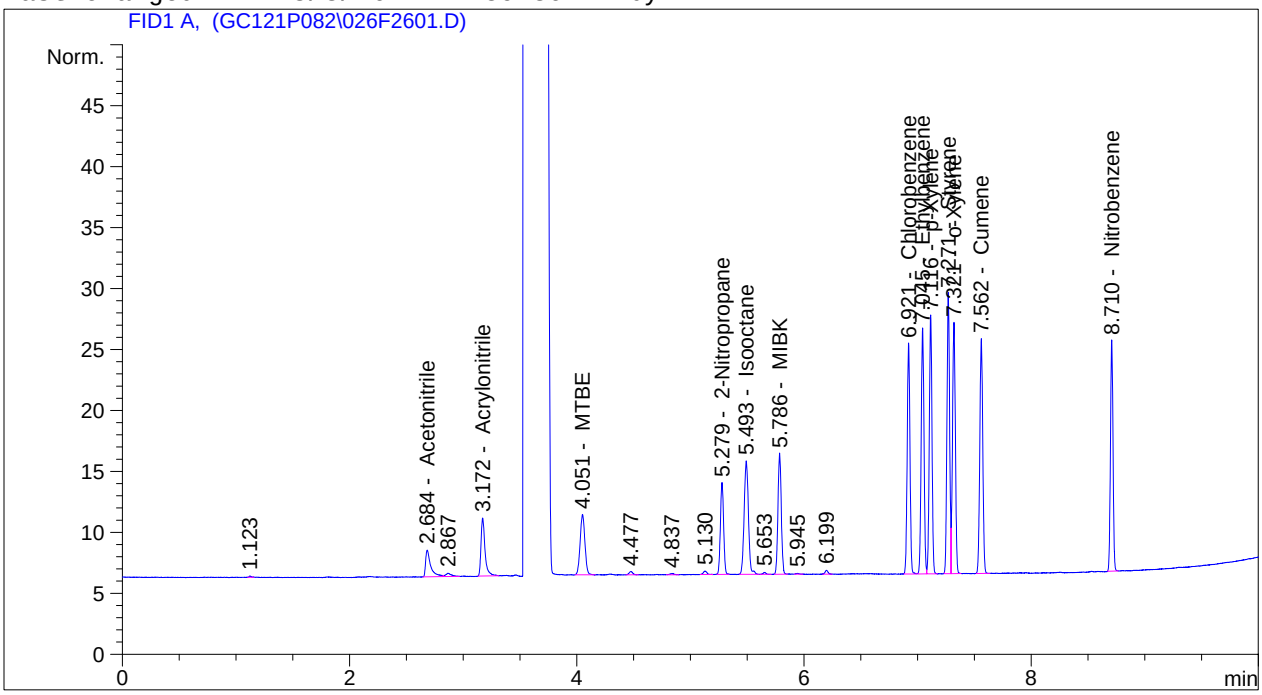
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BV	35.75892	2.20170	78.73044		Acetonitrile
3.167	BB	59.08525	1.22797	72.55497		Acrylonitrile
4.048	BB	67.93530	9.94012e-1	67.52850		MTBE
5.278	BB	70.56181	1.26398	89.18891		2-Nitropropane
5.492	BB	113.46107	5.61329e-1	63.68902		Isooctane
5.785	BB	95.61317	7.71670e-1	73.78185		MIBK
6.921	BV	151.91373	6.81314e-1	103.50096		Chlorobenzene
7.044	VV	166.56435	4.87371e-1	81.17856		Ethylbenzene
7.116	VB	166.40953	4.84525e-1	80.62957		p-Xylene
7.270	BV	179.47954	4.73999e-1	85.07321		Styrene
7.321	VB	172.04474	4.79552e-1	82.50442		o-Xylene
7.561	BB	168.05353	4.85102e-1	81.52305		Cumene
8.709	BB	140.55043	8.01222e-1	112.61204		Nitrobenzene
Totals :		1072.49549				

EM-BTRF-001477

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\026F2601.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 26
Acq. Instrument	: Lucy	Location	: Vial 26
Injection Date	: 30-Jul-11, 20:08:46	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

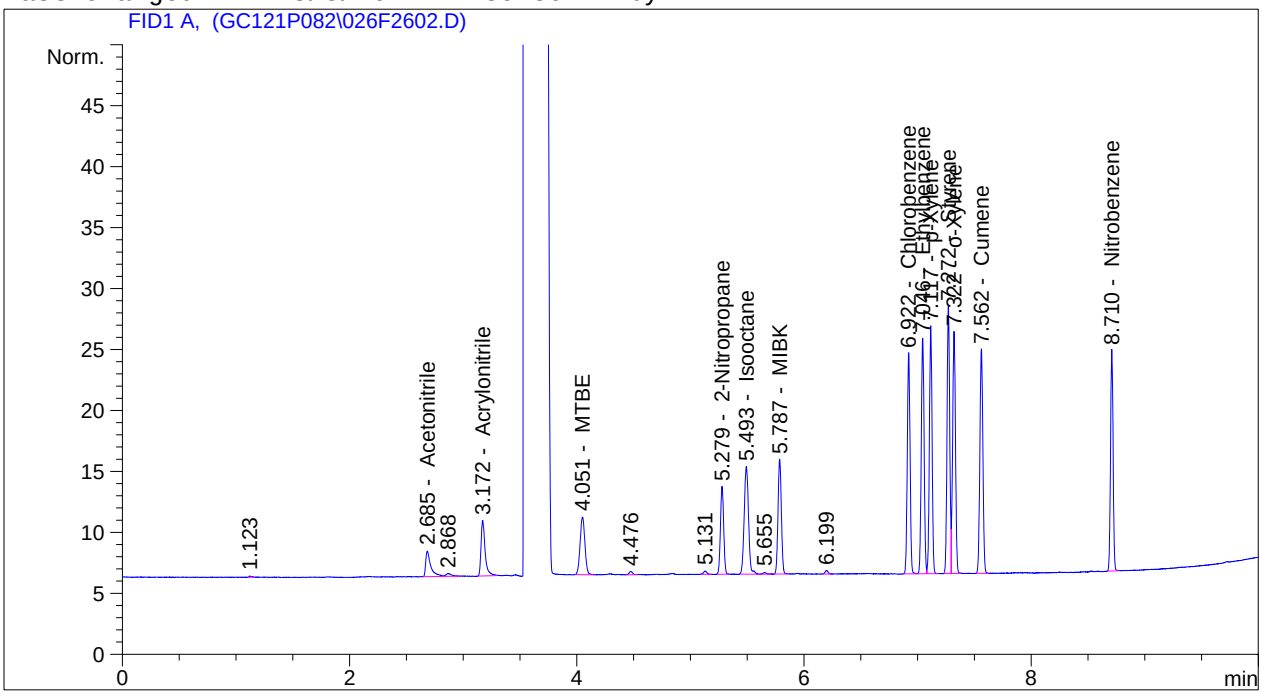
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.71830	2.23492	15.01488		Acetonitrile
3.172	BB	11.68779	1.24572	14.55969		Acrylonitrile
4.051	BB	14.40522	9.95362e-1	14.33840		MTBE
5.279	BB	14.85051	1.26649	18.80798		2-Nitropropane
5.493	BB	24.56719	5.61964e-1	13.80588		Isooctane
5.786	BB	20.12782	7.74947e-1	15.59799		MIBK
6.921	BB	32.05394	6.81371e-1	21.84063		Chlorobenzene
7.045	BV	34.98009	4.88322e-1	17.08155		Ethylbenzene
7.116	VB	34.96520	4.85374e-1	16.97119		p-Xylene
7.271	BV	37.57003	4.75482e-1	17.86387		Styrene
7.321	VB	36.20883	4.80171e-1	17.38641		o-Xylene
7.562	BB	35.27688	4.85818e-1	17.13816		Cumene
8.710	BB	29.63724	8.04478e-1	23.84251		Nitrobenzene
Totals :				224.24913		

EM-BTRF-001478

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\026F2602.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 26
Acq. Instrument	: Lucy	Location	: Vial 26
Injection Date	: 30-Jul-11, 20:30:18	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

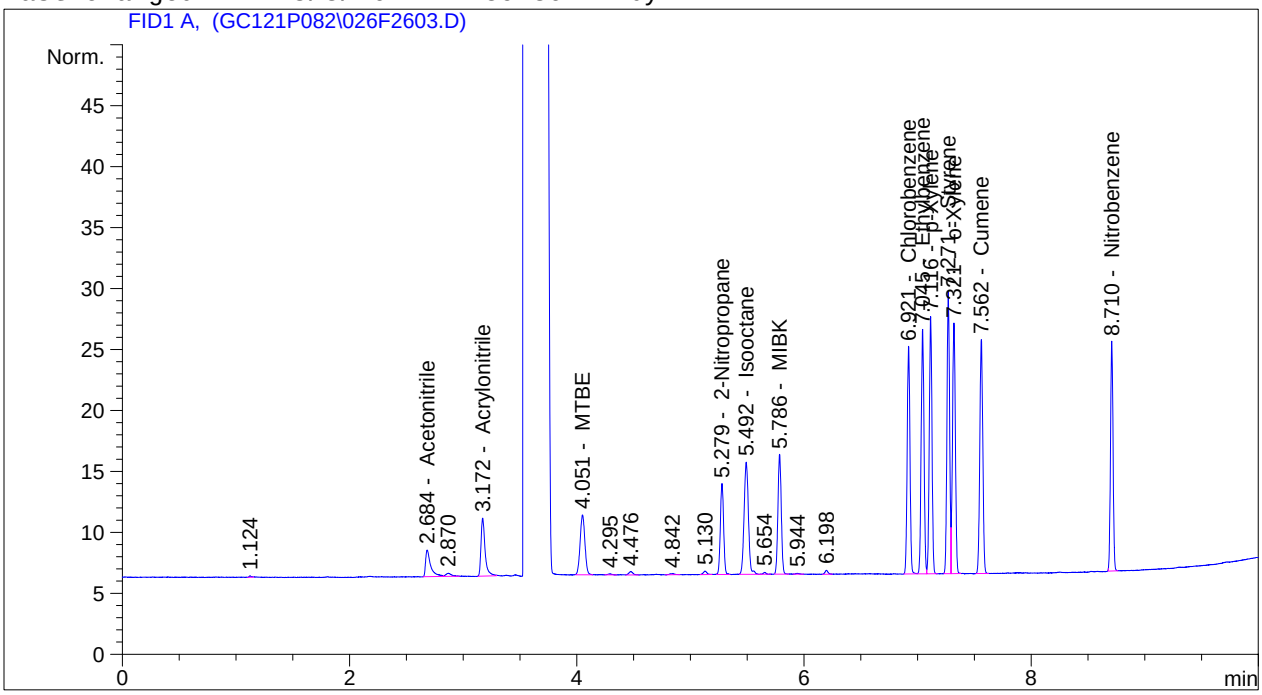
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.685	BB	6.45030	2.23662	14.42688		Acetonitrile
3.172	BB	11.33912	1.24640	14.13306		Acrylonitrile
4.051	BB	13.82598	9.95433e-1	13.76284		MTBE
5.279	BB	14.25654	1.26662	18.05760		2-Nitropropane
5.493	BB	23.50134	5.62001e-1	13.20777		Isooctane
5.787	BB	19.23858	7.75139e-1	14.91257		MIBK
6.922	BV	30.75945	6.81374e-1	20.95869		Chlorobenzene
7.046	VV	33.62953	4.88370e-1	16.42366		Ethylbenzene
7.117	VB	33.56272	4.85419e-1	16.29197		p-Xylene
7.272	BV	36.10001	4.75558e-1	17.16766		Styrene
7.322	VB	34.80334	4.80202e-1	16.71264		o-Xylene
7.562	BB	33.94339	4.85854e-1	16.49153		Cumene
8.710	BB	28.61517	8.04626e-1	23.02450		Nitrobenzene
Totals :				215.57137		

EM-BTRF-001479

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\026F2603.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 26
Acq. Instrument	: Lucy	Location	: Vial 26
Injection Date	: 30-Jul-11, 20:51:48	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.78169	2.23454	15.15396		Acetonitrile
3.172	BB	11.80885	1.24549	14.70782		Acrylonitrile
4.051	BB	14.28344	9.95376e-1	14.21740		MTBE
5.279	BB	14.89841	1.26648	18.86850		2-Nitropropane
5.492	BB	24.42174	5.61969e-1	13.72426		Isooctane
5.786	BB	20.02458	7.74968e-1	15.51841		MIBK
6.921	BV	32.03696	6.81371e-1	21.82906		Chlorobenzene
7.045	VV	34.99700	4.88321e-1	17.08978		Ethylbenzene
7.116	VB	34.96286	4.85374e-1	16.97005		p-Xylene
7.271	BV	37.63470	4.75479e-1	17.89450		Styrene
7.321	VB	36.25159	4.80170e-1	17.40691		o-Xylene
7.562	BB	35.38601	4.85816e-1	17.19108		Cumene
8.710	BB	29.47115	8.04501e-1	23.70958		Nitrobenzene
Totals :				224.28131		

EM-BTRF-001480

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\038F3801.D
Sample Name: gc121p67 #3

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==========================================================================
Acq. Operator   : JBB                              Seq. Line :  38
Acq. Instrument : Lucy                              Location : Vial 38
Injection Date  : 31-Jul-11, 09:02:46                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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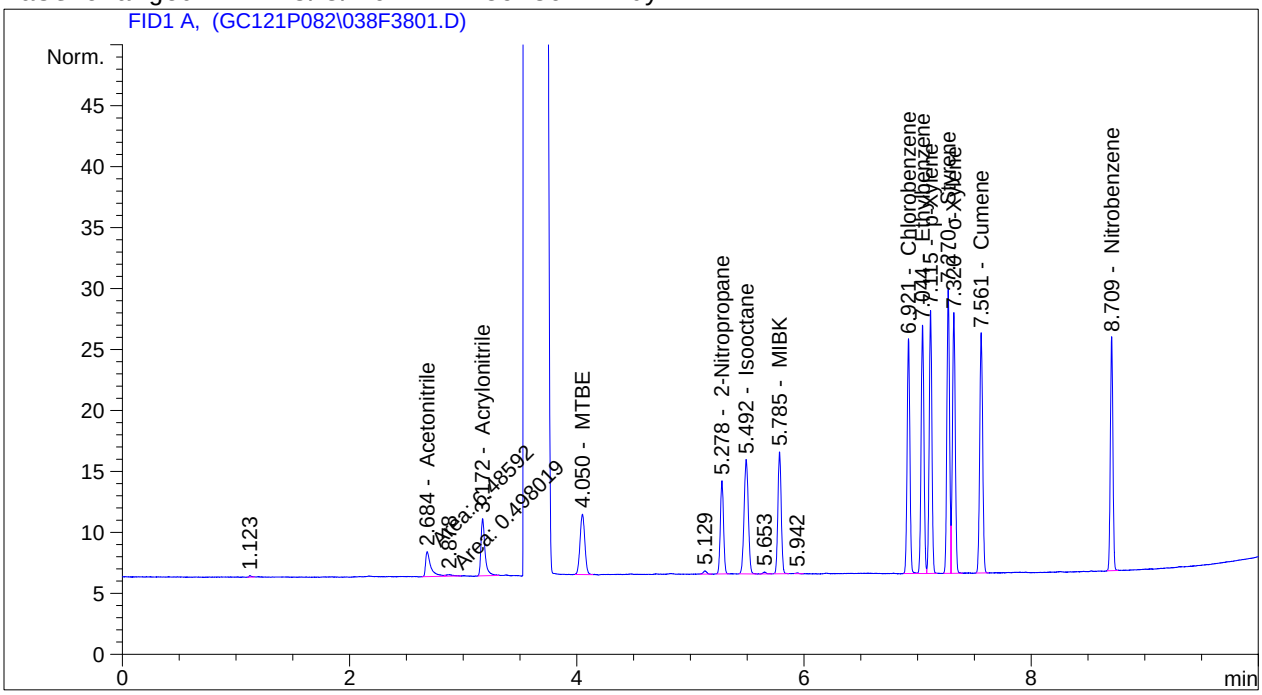


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```

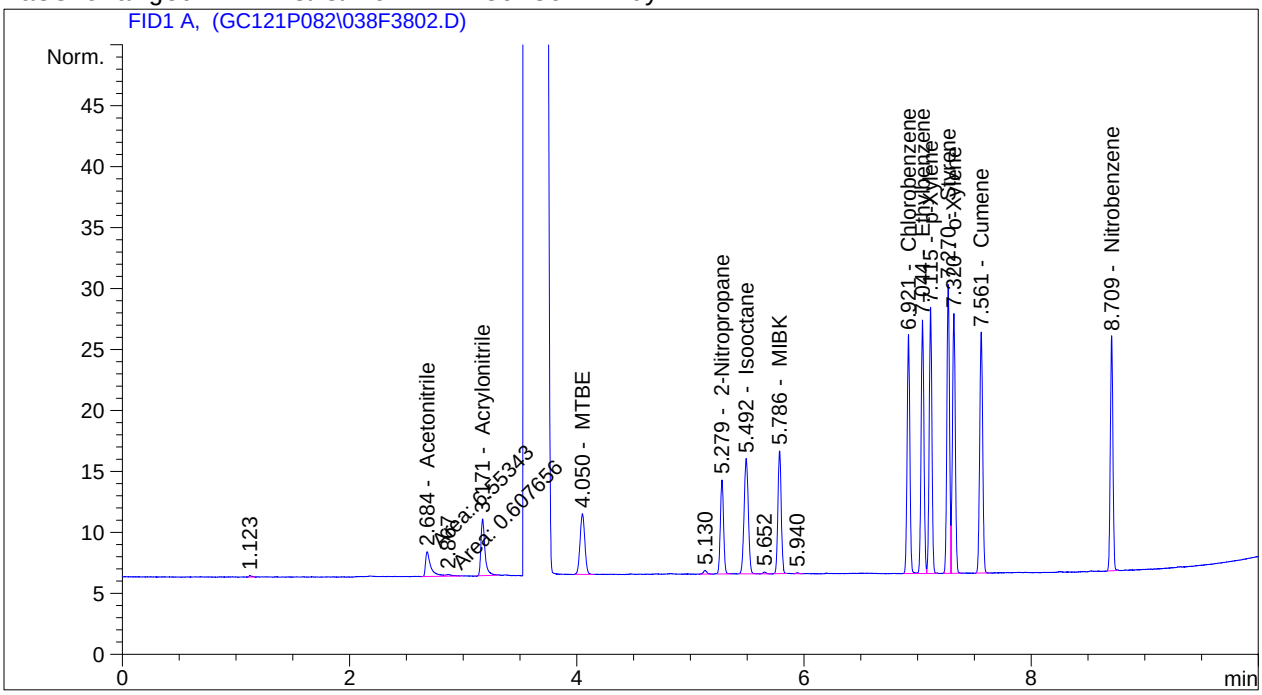
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	MF	6.48592	2.23639	14.50503		Acetonitrile
3.172	BB	11.50038	1.24608	14.33038		Acrylonitrile
4.050	BB	14.44644	9.95357e-1	14.37936		MTBE
5.278	BB	15.02916	1.26645	19.03367		2-Nitropropane
5.492	BB	24.35398	5.61971e-1	13.68623		Isooctane
5.785	BB	20.34311	7.74903e-1	15.76393		MIBK
6.921	BV	32.66018	6.81370e-1	22.25366		Chlorobenzene
7.044	VV	35.71571	4.88297e-1	17.43988		Ethylbenzene
7.115	VB	35.68587	4.85352e-1	17.32021		p-Xylene
7.270	BV	38.43654	4.75440e-1	18.27425		Styrene
7.320	VB	36.98920	4.80154e-1	17.76051		o-Xylene
7.561	BB	36.08060	4.85798e-1	17.52790		Cumene
8.709	BB	29.96144	8.04434e-1	24.10199		Nitrobenzene

Totals : 226.37700

EM-BTRF-001481

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\038F3802.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 38
Acq. Instrument	: Lucy	Location	: Vial 38
Injection Date	: 31-Jul-11, 09:24:27	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

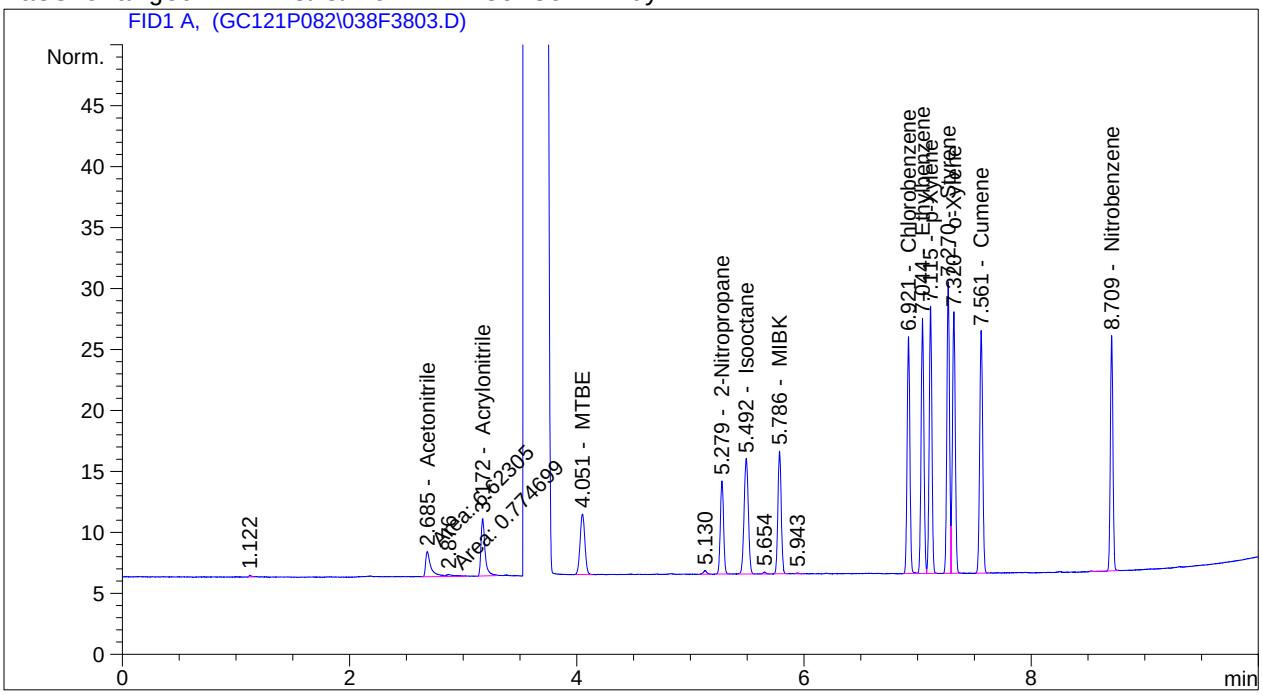
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	MF	6.55343	2.23595	14.65315		Acetonitrile
3.171	BB	11.42688	1.24622	14.24044		Acrylonitrile
4.050	BB	14.46721	9.95354e-1	14.40000		MTBE
5.279	BB	15.19879	1.26641	19.24797		2-Nitropropane
5.492	BB	24.53586	5.61965e-1	13.78830		Isooctane
5.786	BB	20.50300	7.74871e-1	15.88718		MIBK
6.921	BV	32.99878	6.81369e-1	22.48435		Chlorobenzene
7.044	VV	36.13971	4.88283e-1	17.64642		Ethylbenzene
7.115	VB	36.10443	4.85340e-1	17.52292		p-Xylene
7.270	BV	38.88221	4.75419e-1	18.48533		Styrene
7.320	VB	37.39579	4.80146e-1	17.95543		o-Xylene
7.561	BB	36.49037	4.85788e-1	17.72659		Cumene
8.709	BB	30.25651	8.04394e-1	24.33815		Nitrobenzene
Totals :				228.37622		

EM-BTRF-001482

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\038F3803.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 38
Acq. Instrument	: Lucy	Location	: Vial 38
Injection Date	: 31-Jul-11, 09:46:09	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.685	MF	6.62305	2.23551	14.80590		Acetonitrile
3.172	BB	11.68959	1.24572	14.56190		Acrylonitrile
4.051	BB	14.49564	9.95351e-1	14.42825		MTBE
5.279	BB	15.21747	1.26641	19.27156		2-Nitropropane
5.492	BB	24.57054	5.61964e-1	13.80776		Isooctane
5.786	BB	20.56148	7.74859e-1	15.93225		MIBK
6.921	BV	33.00510	6.81369e-1	22.48865		Chlorobenzene
7.044	VV	36.13041	4.88284e-1	17.64189		Ethylbenzene
7.115	VB	36.12673	4.85339e-1	17.53372		p-Xylene
7.270	BV	38.89269	4.75418e-1	18.49029		Styrene
7.320	VB	37.37160	4.80146e-1	17.94383		o-Xylene
7.561	BB	36.53892	4.85787e-1	17.75014		Cumene
8.709	BB	30.30097	8.04388e-1	24.37373		Nitrobenzene
Totals :				229.02987		

EM-BTRF-001483

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\048F4901.D
Sample Name: gc121p67 #4

```
==========================================================================
Acq. Operator   : JBB                              Seq. Line :  49
Acq. Instrument : Lucy                              Location : Vial 48
Injection Date  : 31-Jul-11, 20:55:27                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Last changed    : 7/21/2011 1:05:31 AM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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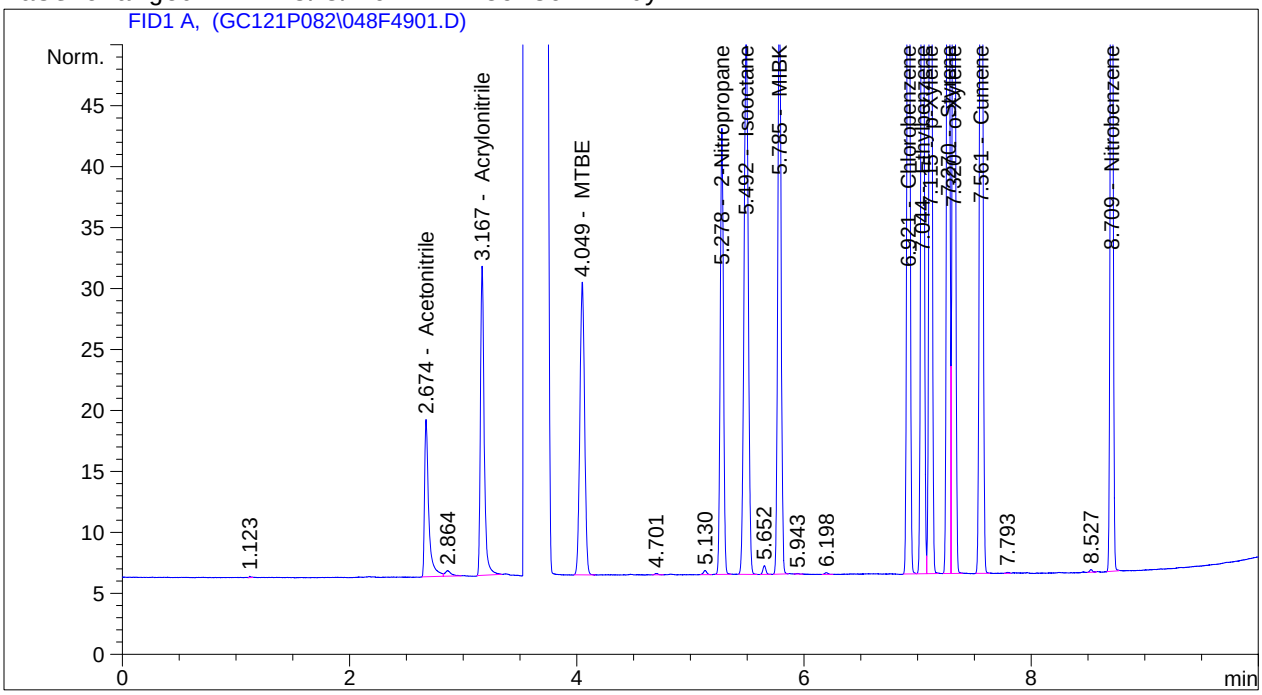


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==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.674 BV       32.91907    2.20236   72.49977    Acetonitrile
  3.167 BB       57.89775    1.22806   71.10195    Acrylonitrile
  4.049 BB       69.60616 9.94003e-1   69.18875    MTBE
  5.278 BB       72.27724    1.26397   91.35604    2-Nitropropane
  5.492 BB      115.46440 5.61326e-1   64.81319    Isooctane
  5.785 BB       96.90508 7.71659e-1   74.77765    MIBK
  6.921 BV      148.63097 6.81314e-1  101.26442    Chlorobenzene
  7.044 VV      160.75816 4.87380e-1   78.35026    Ethylbenzene
  7.115 VB      159.96439 4.84534e-1   77.50819    p-Xylene
  7.270 BV      171.61801 4.74017e-1   81.34993    Styrene
  7.320 VB      164.29471 4.79560e-1   78.78915    o-Xylene
  7.561 BB      158.74492 4.85113e-1   77.00920    Cumene
  8.709 BB      131.93629 8.01278e-1  105.71771    Nitrobenzene

Totals :                              1043.72622
```
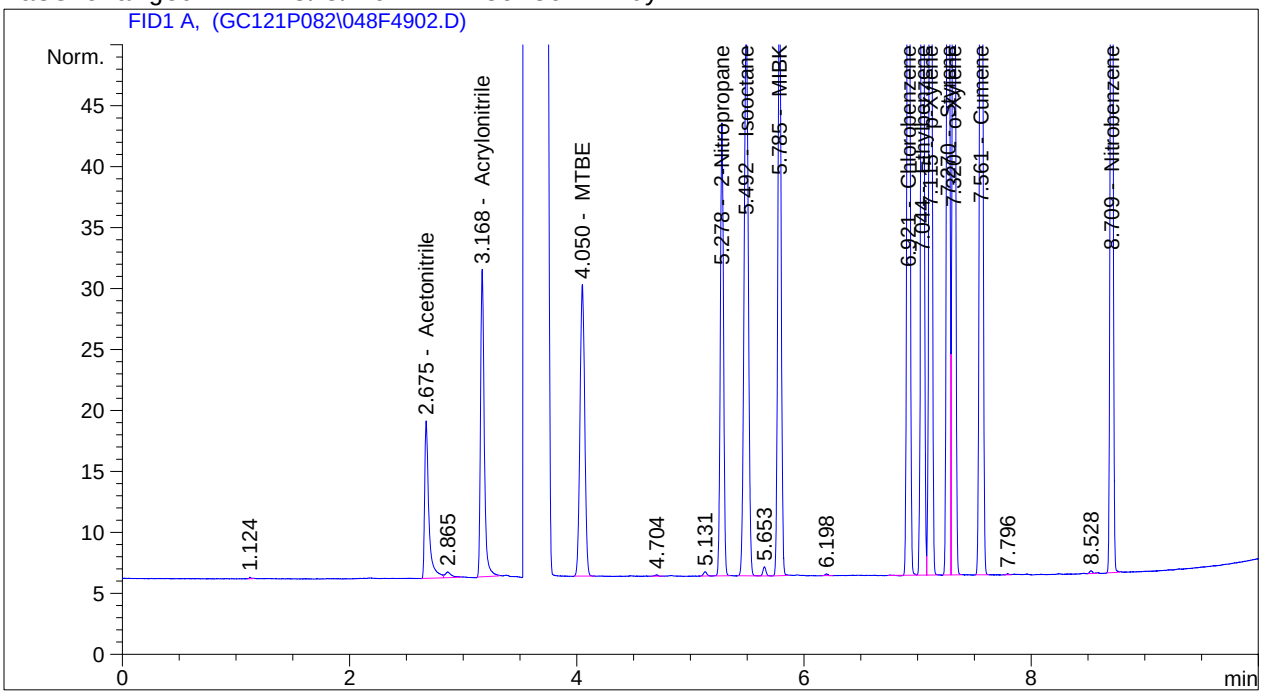

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\048F4902.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 49
Acq. Instrument	: Lucy	Location	: Vial 48
Injection Date	: 31-Jul-11, 21:17:05	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

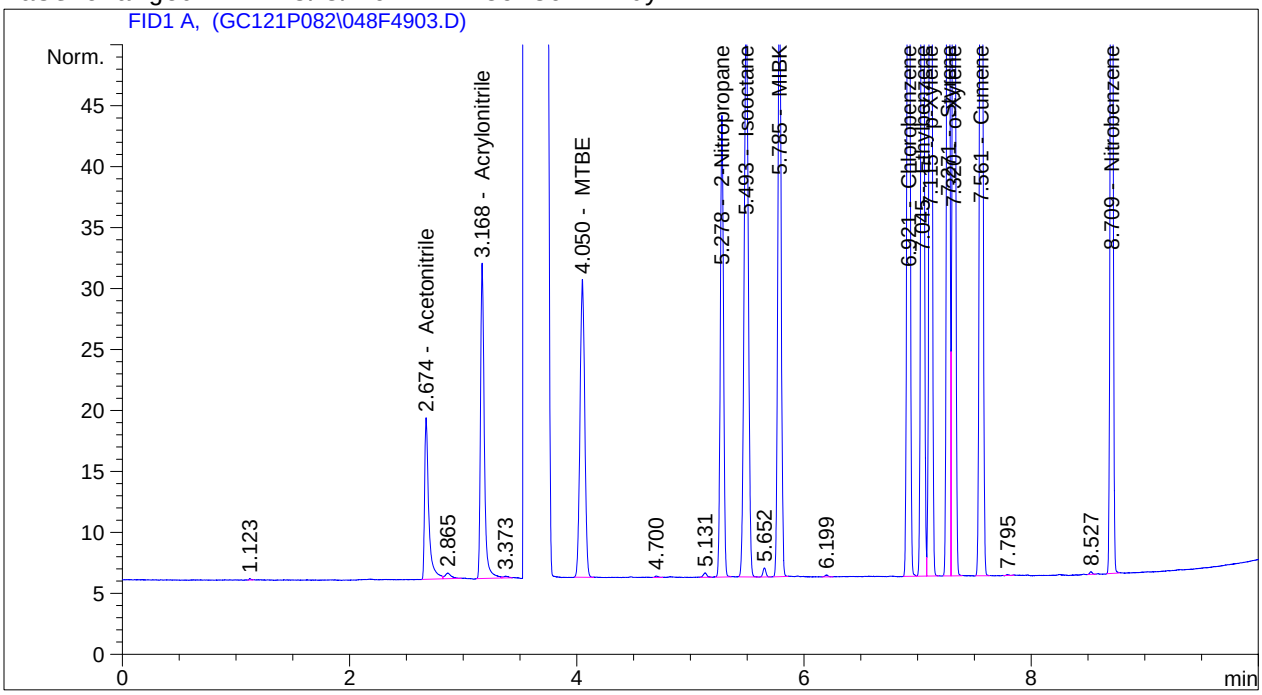
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.675	BV	32.92099	2.20236	72.50397		Acetonitrile
3.168	BB	57.49602	1.22809	70.61040		Acrylonitrile
4.050	BB	69.52020	9.94004e-1	69.10332		MTBE
5.278	BB	73.08454	1.26396	92.37591		2-Nitropropane
5.492	BB	117.63140	5.61323e-1	66.02921		Isooctane
5.785	BB	99.07625	7.71640e-1	76.45118		MIBK
6.921	BV	156.18086	6.81314e-1	106.40816		Chlorobenzene
7.044	VV	171.02179	4.87364e-1	83.34985		Ethylbenzene
7.115	VB	170.66003	4.84519e-1	82.68808		p-Xylene
7.270	BV	183.88663	4.73990e-1	87.16044		Styrene
7.320	VB	176.23965	4.79548e-1	84.51541		o-Xylene
7.561	BB	171.74292	4.85098e-1	83.31208		Cumene
8.709	BB	142.10901	8.01212e-1	113.85945		Nitrobenzene
Totals :				1088.36748		

EM-BTRF-001485

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082\048F4903.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 49
Acq. Instrument	: Lucy	Location	: Vial 48
Injection Date	: 31-Jul-11, 21:38:42	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078.M		
Last changed	: 7/21/2011 1:05:31 AM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

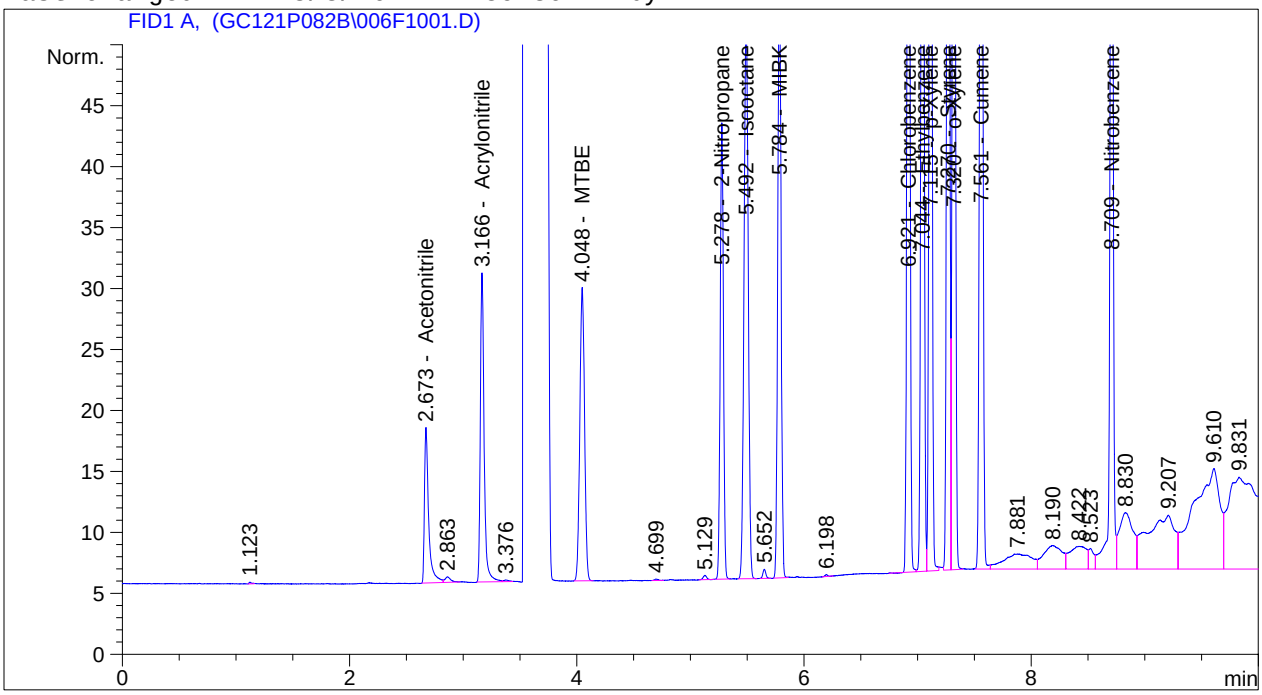
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BV	33.71082	2.20217	74.23687		Acetonitrile
3.168	BB	59.95515	1.22791	73.61938		Acrylonitrile
4.050	BB	70.83245	9.93997e-1	70.40725		MTBE
5.278	BB	74.11186	1.26395	93.67374		2-Nitropropane
5.493	BB	118.92491	5.61321e-1	66.75507		Isooctane
5.785	BB	100.13731	7.71631e-1	77.26905		MIBK
6.921	BV	158.09064	6.81314e-1	107.70929		Chlorobenzene
7.045	VV	173.06792	4.87361e-1	84.34656		Ethylbenzene
7.115	VB	172.76746	4.84517e-1	83.70871		p-Xylene
7.271	BV	186.13506	4.73985e-1	88.22531		Styrene
7.320	VB	178.59616	4.79546e-1	85.64508		o-Xylene
7.561	BB	174.17941	4.85095e-1	84.49356		Cumene
8.709	BB	144.83104	8.01196e-1	116.03804		Nitrobenzene
Totals :				1106.12790		

EM-BTRF-001486

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\006F1001.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 10
Acq. Instrument	: Lucy	Location	: Vial 6
Injection Date	: 01-Aug-11, 19:23:43	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

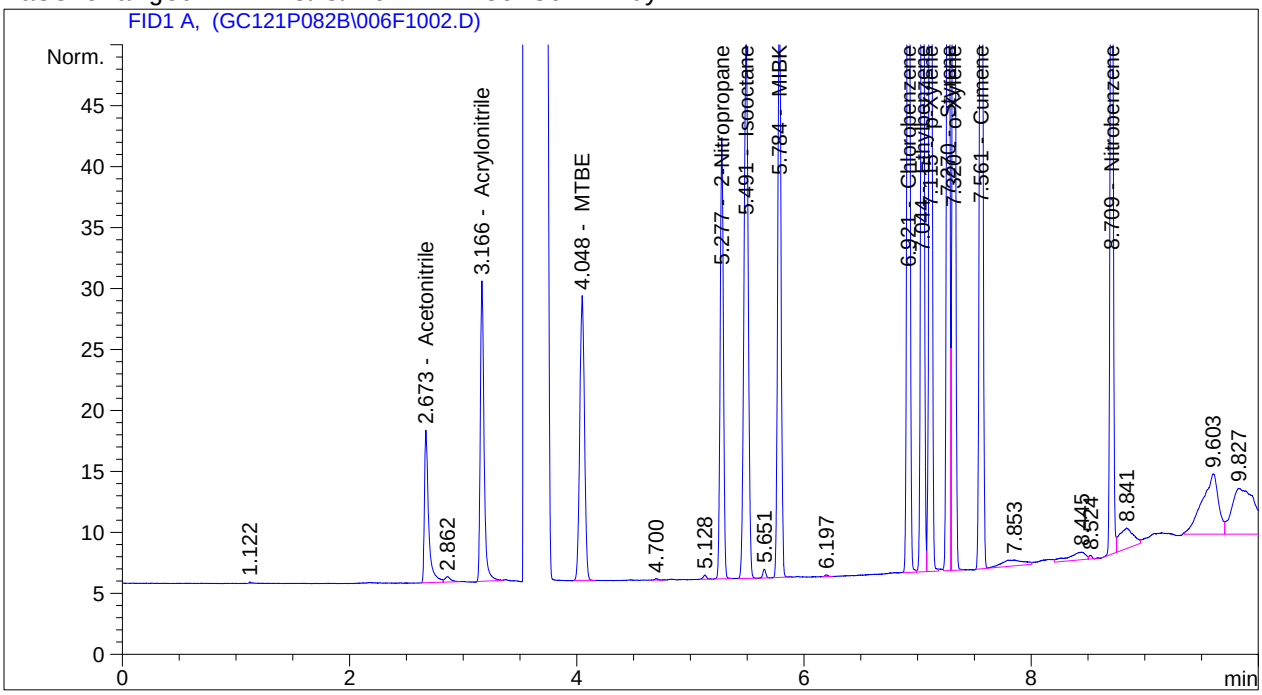
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.673	BV	32.54711	2.20246	71.68368		Acetonitrile
3.166	BB	58.45888	1.22802	71.78855		Acrylonitrile
4.048	BB	69.92081	9.94002e-1	69.50139		MTBE
5.278	BB	73.98222	1.26395	93.50996		2-Nitropropane
5.492	BB	119.29619	5.61321e-1	66.96342		Isooctane
5.784	BB	100.92064	7.71624e-1	77.87283		MIBK
6.921	BV	161.72905	6.81313e-1	110.18813		Chlorobenzene
7.044	VV	178.03743	4.87354e-1	86.76730		Ethylbenzene
7.115	VB	178.70575	4.84509e-1	86.58462		p-Xylene
7.270	BV	191.56810	4.73975e-1	90.79844		Styrene
7.320	VB	183.61331	4.79542e-1	88.05024		o-Xylene
7.561	BB	180.50468	4.85089e-1	87.56076		Cumene
8.709	VV	171.85509	8.01063e-1	137.66677		Nitrobenzene
Totals :		1138.93609				

EM-BTRF-001487

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\006F1002.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 10
Acq. Instrument	: Lucy	Location	: Vial 6
Injection Date	: 01-Aug-11, 19:46:02	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

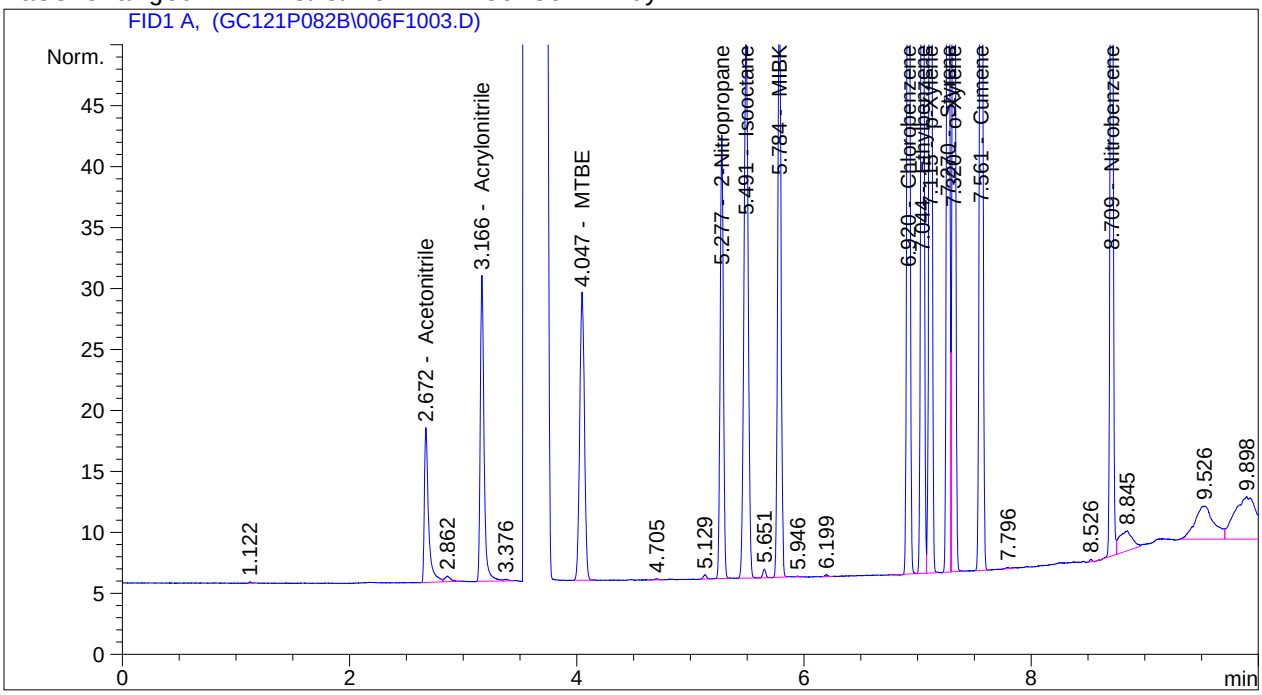
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.673	BV	31.68453	2.20269	69.79117		Acetonitrile
3.166	BB	56.30054	1.22819	69.14762		Acrylonitrile
4.048	BB	67.77047	9.94013e-1	67.36471		MTBE
5.277	BB	71.55732	1.26397	90.44655		2-Nitropropane
5.491	BB	115.10075	5.61327e-1	64.60913		Isooctane
5.784	BB	97.35469	7.71655e-1	75.12421		MIBK
6.921	BV	155.92407	6.81314e-1	106.23321		Chlorobenzene
7.044	VV	171.16513	4.87364e-1	83.41968		Ethylbenzene
7.115	VB	171.29399	4.84519e-1	82.99511		p-Xylene
7.270	BV	184.26079	4.73989e-1	87.33764		Styrene
7.320	VB	176.50887	4.79548e-1	84.64446		o-Xylene
7.561	BV	172.13208	4.85097e-1	83.50079		Cumene
8.709	BV	147.07806	8.01183e-1	117.83644		Nitrobenzene
Totals :				1082.45073		

EM-BTRF-001488

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\006F1003.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 10
Acq. Instrument	: Lucy	Location	: Vial 6
Injection Date	: 01-Aug-11, 20:08:23	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.672	BV	32.31340	2.20252	71.17092		Acetonitrile
3.166	BB	57.65371	1.22808	70.80335		Acrylonitrile
4.047	BB	68.64102	9.94008e-1	68.22973		MTBE
5.277	BB	71.82587	1.26397	90.78581		2-Nitropropane
5.491	BB	115.57446	5.61326e-1	64.87496		Isooctane
5.784	BB	97.67999	7.71652e-1	75.37495		MIBK
6.920	BV	155.47256	6.81314e-1	105.92560		Chlorobenzene
7.044	VV	170.72971	4.87364e-1	83.20758		Ethylbenzene
7.115	VB	170.64456	4.84519e-1	82.68059		p-Xylene
7.270	BV	184.37598	4.73989e-1	87.39220		Styrene
7.320	VB	176.56721	4.79548e-1	84.67243		o-Xylene
7.561	BB	172.62633	4.85097e-1	83.74046		Cumene
8.709	BV	147.69269	8.01180e-1	118.32836		Nitrobenzene
Totals :		1087.18692				

EM-BTRF-001489

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\006F2201.D
Sample Name: gc121p67 #4

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==========================================================================
Acq. Operator   : JBB                              Seq. Line :  22
Acq. Instrument : Lucy                              Location : Vial 6
Injection Date  : 02-Aug-11, 08:58:13                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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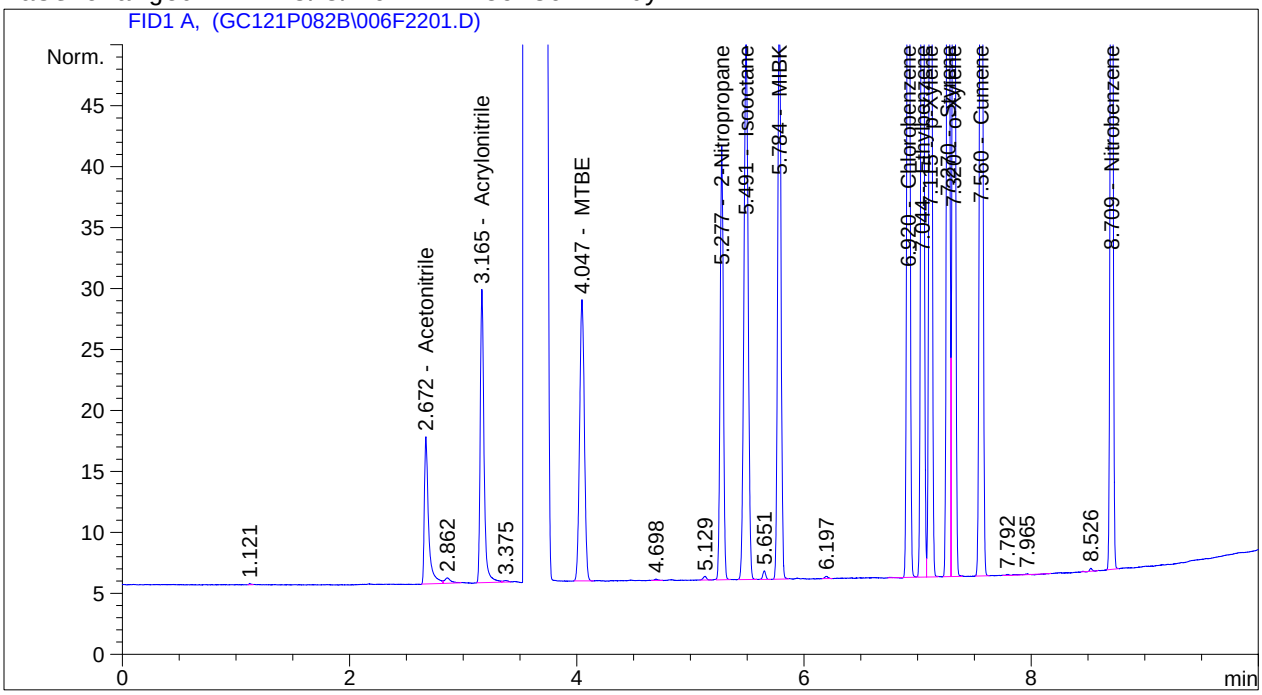


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

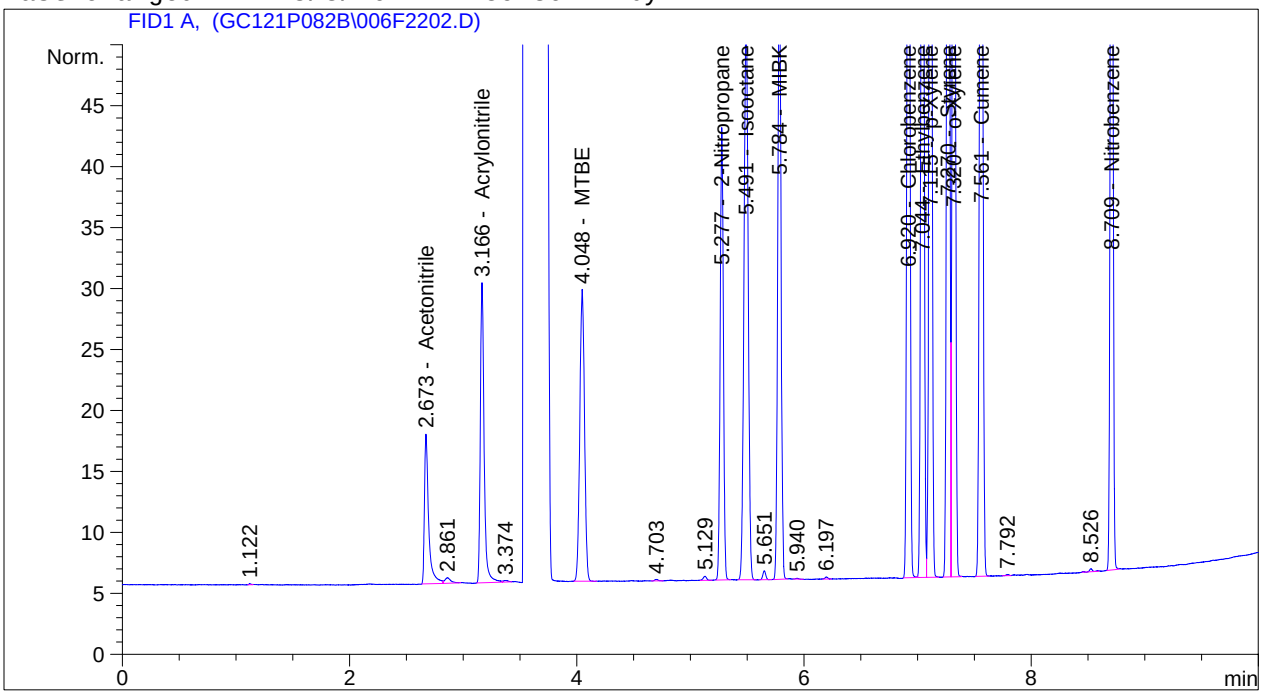
Signal 1: FID1 A,
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.672	BV	30.82542	2.20293	67.90626		Acetonitrile
3.165	BB	55.52984	1.22825	68.20459		Acrylonitrile
4.047	BB	67.30286	9.94015e-1	66.90007		MTBE
5.277	BB	70.51457	1.26398	89.12923		2-Nitropropane
5.491	BB	114.31925	5.61328e-1	64.17059		Isooctane
5.784	BB	96.79543	7.71660e-1	74.69314		MIBK
6.920	BB	155.03778	6.81314e-1	105.62938		Chlorobenzene
7.044	BV	170.58032	4.87365e-1	83.13481		Ethylbenzene
7.115	VB	170.61459	4.84519e-1	82.66608		p-Xylene
7.270	BV	184.17517	4.73989e-1	87.29709		Styrene
7.320	VB	176.62720	4.79548e-1	84.70119		o-Xylene
7.560	BB	172.90086	4.85096e-1	83.87358		Cumene
8.709	BB	145.94305	8.01189e-1	116.92804		Nitrobenzene

Totals : 1075.23404

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\006F2202.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 22
Acq. Instrument	: Lucy	Location	: Vial 6
Injection Date	: 02-Aug-11, 09:21:03	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

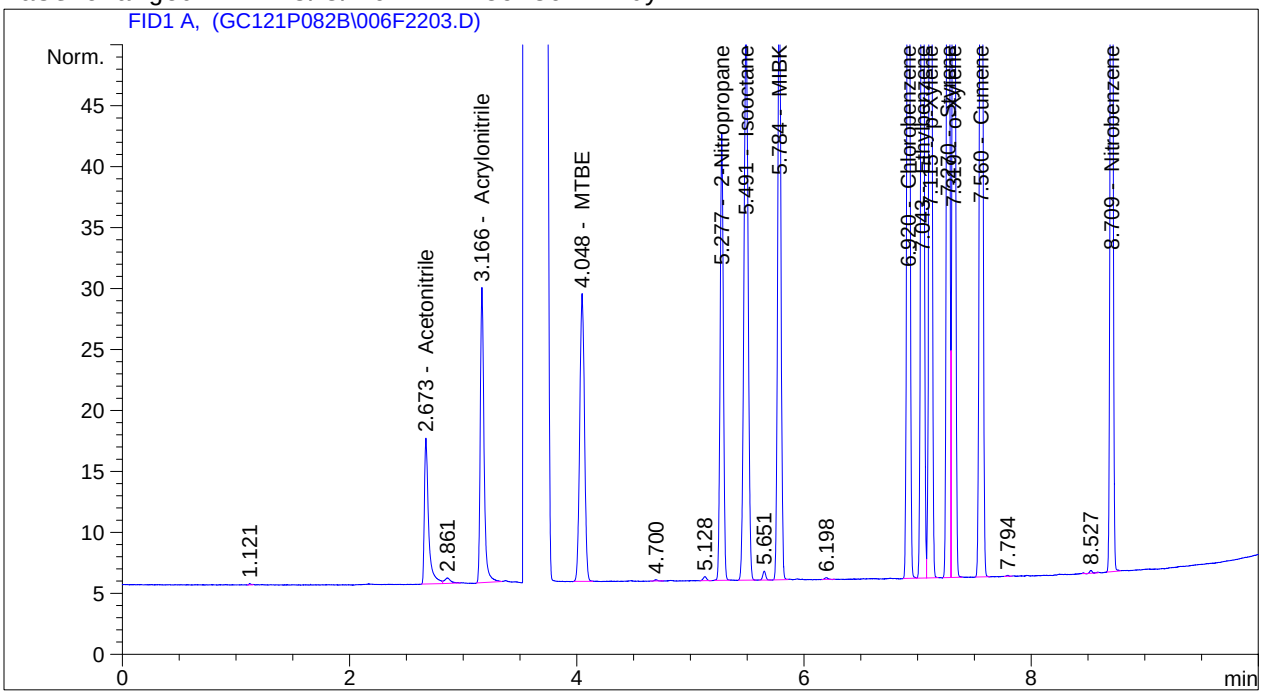
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.673	BV	31.24500	2.20281	68.82682		Acetonitrile
3.166	BB	56.76493	1.22815	69.71585		Acrylonitrile
4.048	BB	69.34206	9.94005e-1	68.92632		MTBE
5.277	BB	73.09154	1.26396	92.38475		2-Nitropropane
5.491	BB	118.75330	5.61321e-1	66.65877		Isooctane
5.784	BB	100.40862	7.71629e-1	77.47817		MIBK
6.920	BB	161.67802	6.81313e-1	110.15337		Chlorobenzene
7.044	BV	177.83403	4.87355e-1	86.66822		Ethylbenzene
7.115	VB	177.90620	4.84510e-1	86.19740		p-Xylene
7.270	BV	192.07683	4.73974e-1	91.03937		Styrene
7.320	VB	184.03630	4.79541e-1	88.25302		o-Xylene
7.561	BB	180.17526	4.85089e-1	87.40102		Cumene
8.709	BB	150.72121	8.01163e-1	120.75224		Nitrobenzene
Totals :		1114.45533				

EM-BTRF-001491

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\006F2203.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 22
Acq. Instrument	: Lucy	Location	: Vial 6
Injection Date	: 02-Aug-11, 09:43:45	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

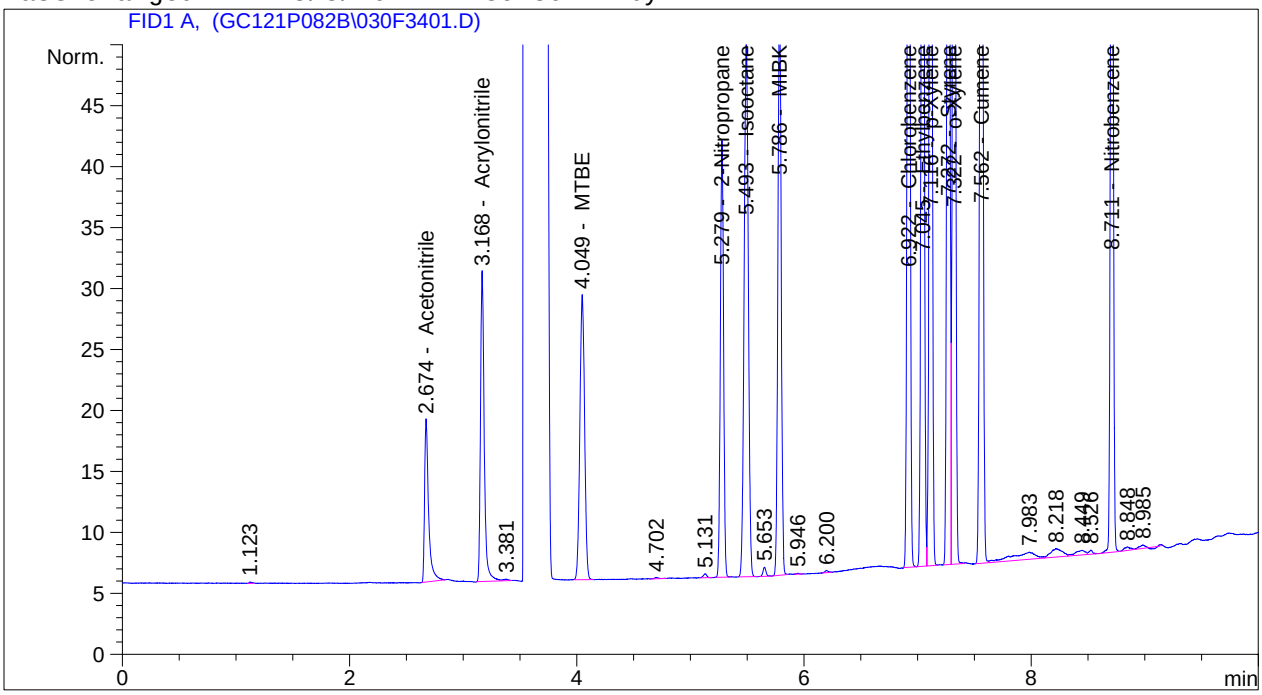
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.673	BV	30.48958	2.20303	67.16942		Acetonitrile
3.166	BB	55.36175	1.22827	67.99892		Acrylonitrile
4.048	BB	68.59226	9.94008e-1	68.18128		MTBE
5.277	BB	72.17506	1.26397	91.22695		2-Nitropropane
5.491	BB	117.27386	5.61324e-1	65.82858		Isooctane
5.784	BB	99.14294	7.71639e-1	76.50259		MIBK
6.920	BV	159.29282	6.81313e-1	108.52833		Chlorobenzene
7.043	VV	175.06570	4.87358e-1	85.31972		Ethylbenzene
7.115	VB	175.10815	4.84514e-1	84.84231		p-Xylene
7.270	BV	189.05229	4.73980e-1	89.60693		Styrene
7.319	VB	181.26405	4.79544e-1	86.92404		o-Xylene
7.560	BB	177.46248	4.85092e-1	86.08556		Cumene
8.709	BB	149.26013	8.01171e-1	119.58287		Nitrobenzene

Totals : 1097.79749

EM-BTRF-001492

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\030F3401.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 34
Acq. Instrument	: Lucy	Location	: Vial 30
Injection Date	: 02-Aug-11, 22:05:18	Inj	: 1
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

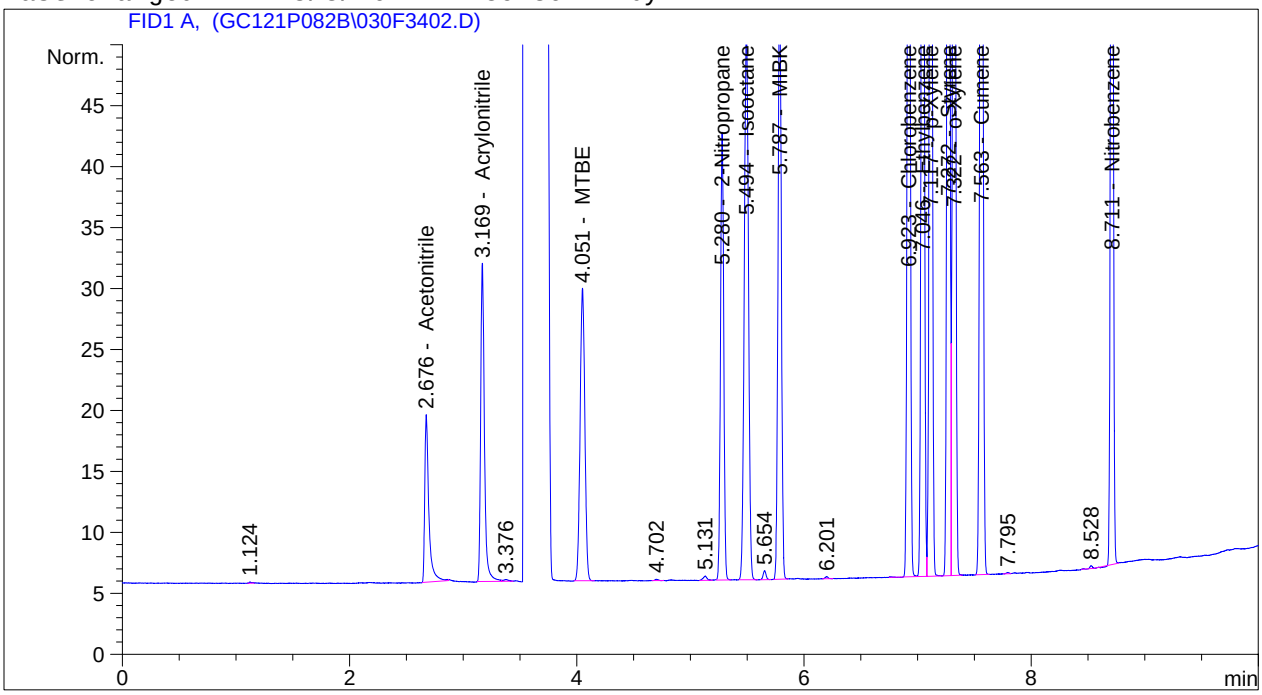
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BB	32.77859	2.20240	72.19154		Acetonitrile
3.168	BB	58.20733	1.22804	71.48076		Acrylonitrile
4.049	BB	67.89679	9.94012e-1	67.49023		MTBE
5.279	BB	70.85661	1.26398	89.56133		2-Nitropropane
5.493	BB	114.25141	5.61328e-1	64.13252		Isooctane
5.786	BB	96.68503	7.71661e-1	74.60804		MIBK
6.922	BV	155.09499	6.81314e-1	105.66835		Chlorobenzene
7.045	VV	170.79350	4.87364e-1	83.23865		Ethylbenzene
7.116	VB	170.76047	4.84519e-1	82.73672		p-Xylene
7.272	BV	184.48312	4.73989e-1	87.44294		Styrene
7.322	VB	176.93344	4.79548e-1	84.84800		o-Xylene
7.562	BB	173.59091	4.85096e-1	84.20819		Cumene
8.711	VB	147.14992	8.01183e-1	117.89395		Nitrobenzene
Totals :				1085.50123		

EM-BTRF-001493

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\030F3402.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 34
Acq. Instrument	: Lucy	Location	: Vial 30
Injection Date	: 02-Aug-11, 22:26:33	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

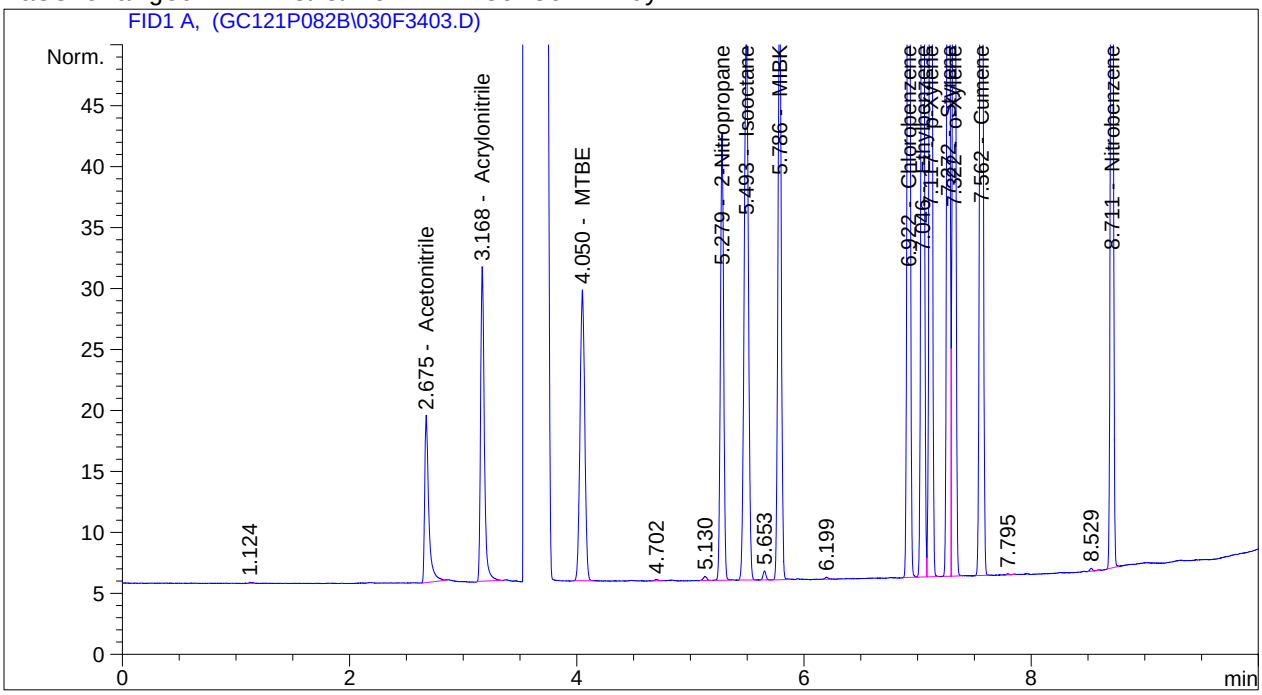
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.676	BB	34.42564	2.20200	75.80520		Acetonitrile
3.169	BB	59.70095	1.22793	73.30833		Acrylonitrile
4.051	BB	69.62215	9.94003e-1	69.20463		MTBE
5.280	BB	72.83170	1.26396	92.05650		2-Nitropropane
5.494	BB	117.43284	5.61323e-1	65.91779		Isooctane
5.787	BB	99.48519	7.71636e-1	76.76640		MIBK
6.923	BV	160.73596	6.81313e-1	109.51154		Chlorobenzene
7.046	VV	177.09810	4.87355e-1	86.30973		Ethylbenzene
7.117	VV	177.24516	4.84511e-1	85.87726		p-Xylene
7.272	VV	191.47487	4.73975e-1	90.75428		Styrene
7.322	VB	183.40982	4.79542e-1	87.95269		o-Xylene
7.563	BB	179.79060	4.85089e-1	87.21449		Cumene
8.711	VB	150.54286	8.01164e-1	120.60950		Nitrobenzene
Totals :				1121.28835		

EM-BTRF-001494

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\030F3403.D
Sample Name: gc121p67 #4

Acq. Operator	: JBB	Seq. Line	: 34
Acq. Instrument	: Lucy	Location	: Vial 30
Injection Date	: 02-Aug-11, 22:47:45	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

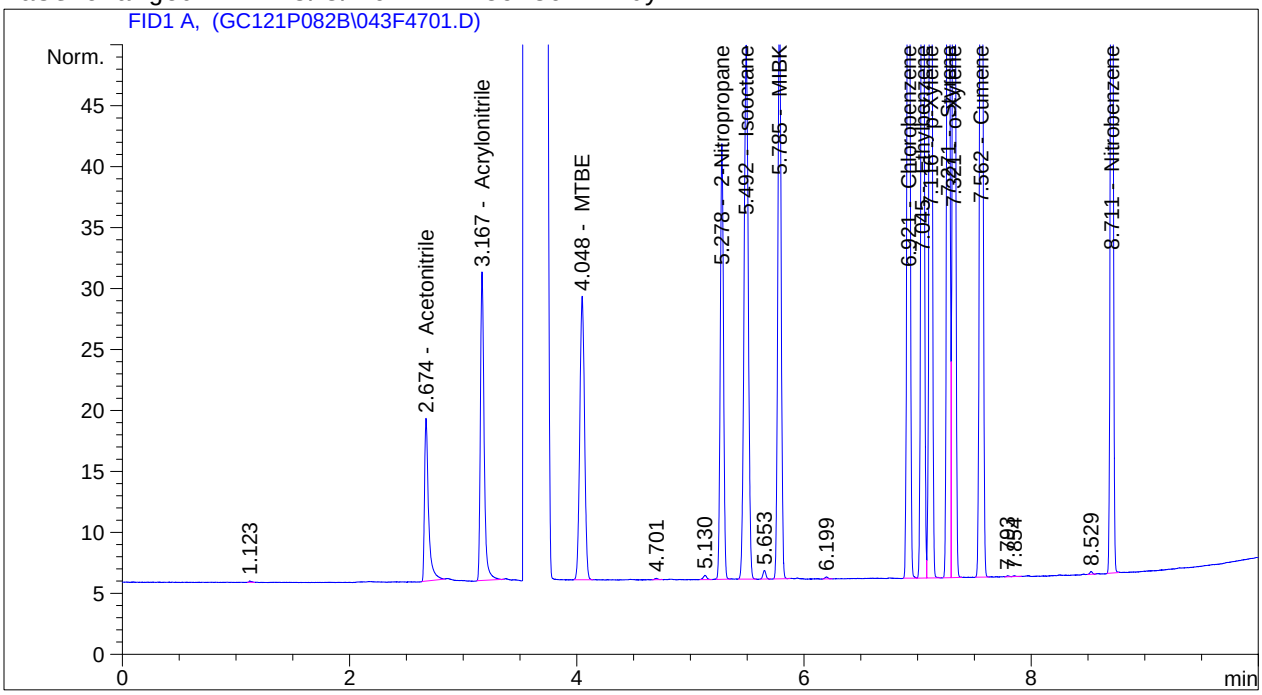
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.675	BB	34.03518	2.20209	74.94853		Acetonitrile
3.168	BB	58.89302	1.22799	72.31976		Acrylonitrile
4.050	BB	69.32256	9.94005e-1	68.90694		MTBE
5.279	BB	72.49860	1.26396	91.63569		2-Nitropropane
5.493	BB	116.70427	5.61324e-1	65.50895		Isooctane
5.786	BB	98.92479	7.71641e-1	76.33444		MIBK
6.922	BV	159.42293	6.81313e-1	108.61697		Chlorobenzene
7.046	VV	175.47910	4.87358e-1	85.52109		Ethylbenzene
7.117	VB	175.53745	4.84513e-1	85.05021		p-Xylene
7.272	BV	189.59776	4.73979e-1	89.86527		Styrene
7.322	VB	181.71770	4.79543e-1	87.14151		o-Xylene
7.562	BB	178.06494	4.85091e-1	86.37770		Cumene
8.711	BB	149.21063	8.01171e-1	119.54325		Nitrobenzene

Totals : 1111.77031

EM-BTRF-001495

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\043F4701.D
Sample Name: gc121p67 ~~#3~~ #4

Acq. Operator : JBB Seq. Line : 47
Acq. Instrument : Lucy Location : Vial 43
Injection Date : 03-Aug-11, 11:58:17 Inj : 1
Inj Volume : External
Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed : 8/3/2011 12:59:30 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

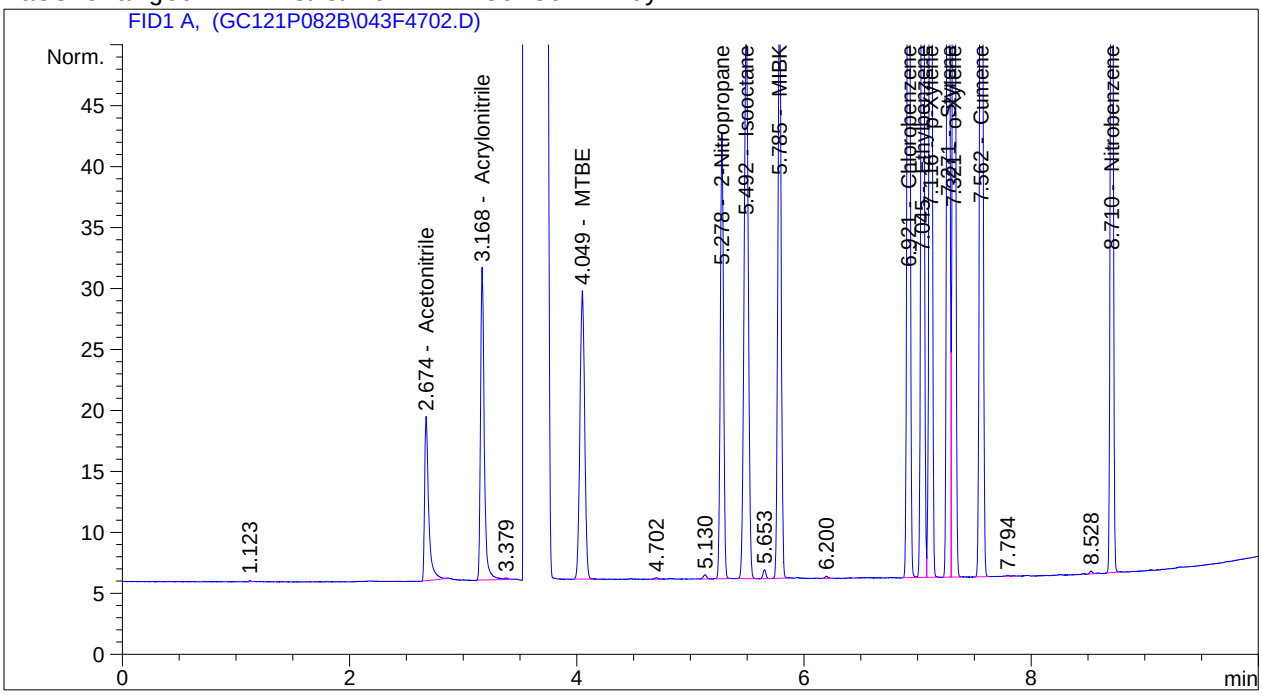
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BB	32.67106	2.20243	71.95563		Acetonitrile
3.167	BB	57.51309	1.22809	70.63129		Acrylonitrile
4.048	BB	67.75892	9.94013e-1	67.35323		MTBE
5.278	BB	70.56332	1.26398	89.19082		2-Nitropropane
5.492	BB	113.53043	5.61329e-1	63.72794		Isooctane
5.785	BB	95.69543	7.71670e-1	73.84526		MIBK
6.921	BV	151.81310	6.81314e-1	103.43240		Chlorobenzene
7.045	VV	166.18469	4.87371e-1	80.99362		Ethylbenzene
7.116	VB	165.99950	4.84526e-1	80.43099		p-Xylene
7.271	BV	178.88593	4.74001e-1	84.79207		Styrene
7.321	VB	171.40933	4.79553e-1	82.19981		o-Xylene
7.562	BB	167.49280	4.85102e-1	81.25115		Cumene
8.711	BB	139.42149	8.01229e-1	111.70850		Nitrobenzene

Totals : 1061.51271

EM-BTRF-001496

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\043F4702.D
Sample Name: gc121p67 ~~#3~~ #4

Acq. Operator	: JBB	Seq. Line	: 47
Acq. Instrument	: Lucy	Location	: Vial 43
Injection Date	: 03-Aug-11, 12:20:00	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM
Multiplier:	:	1.0000
Dilution:	:	1.0000

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

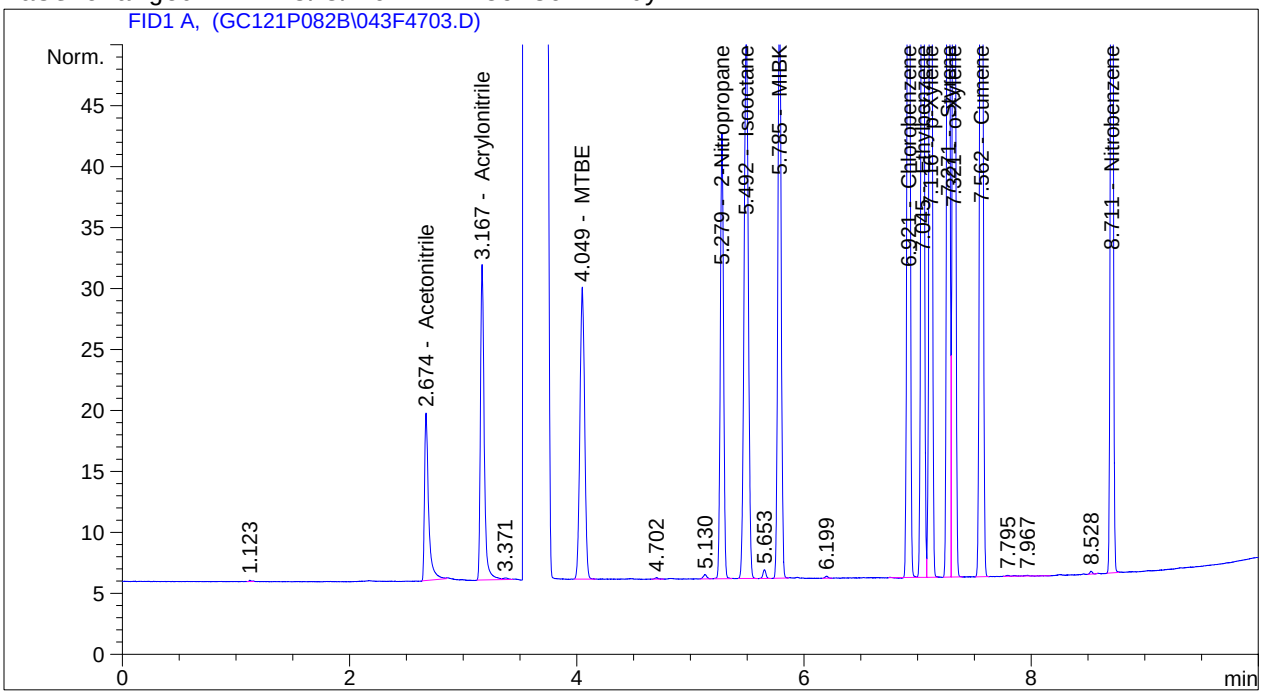
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BB	33.48963	2.20222	73.75159		Acetonitrile
3.168	BB	58.82919	1.22799	72.24166		Acrylonitrile
4.049	BB	68.88044	9.94007e-1	68.46763		MTBE
5.278	BB	72.17079	1.26397	91.22156		2-Nitropropane
5.492	BB	116.54168	5.61325e-1	65.41771		Isooctane
5.785	BB	98.33041	7.71646e-1	75.87629		MIBK
6.921	BV	157.49597	6.81314e-1	107.30414		Chlorobenzene
7.045	VV	172.80893	4.87361e-1	84.22040		Ethylbenzene
7.116	VB	172.65915	4.84517e-1	83.65625		p-Xylene
7.271	BV	186.25639	4.73985e-1	88.28277		Styrene
7.321	VB	178.44911	4.79546e-1	85.57459		o-Xylene
7.562	BB	174.67149	4.85094e-1	84.73218		Cumene
8.710	BB	145.14629	8.01194e-1	116.29034		Nitrobenzene
Totals :				1097.03713		

EM-BTRF-001497

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\043F4703.D
Sample Name: gc121p67 #3

#4

Acq. Operator : JBB Seq. Line : 47
Acq. Instrument : Lucy Location : Vial 43
Injection Date : 03-Aug-11, 12:41:45 Inj : 3
Inj Volume : External
Sequence File : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed : 8/3/2011 12:59:30 PM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.674	BB	34.13037	2.20207	75.15737		Acetonitrile
3.167	BB	59.67981	1.22793	73.28247		Acrylonitrile
4.049	BB	69.44810	9.94004e-1	69.03168		MTBE
5.279	BB	72.36343	1.26397	91.46493		2-Nitropropane
5.492	BB	116.32784	5.61325e-1	65.29771		Isooctane
5.785	BB	98.12390	7.71648e-1	75.71712		MIBK
6.921	BV	155.91954	6.81314e-1	106.23012		Chlorobenzene
7.045	VV	170.97668	4.87364e-1	83.32788		Ethylbenzene
7.116	VB	170.76839	4.84519e-1	82.74056		p-Xylene
7.271	BV	184.16554	4.73989e-1	87.29253		Styrene
7.321	VB	176.45679	4.79548e-1	84.61950		o-Xylene
7.562	BB	172.40944	4.85097e-1	83.63528		Cumene
8.711	BB	143.12357	8.01206e-1	114.67146		Nitrobenzene

Totals : 1092.46862

EM-BTRF-001498

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\051F5501.D
Sample Name: gc121p67 #3

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Acq. Operator   : JBB                              Seq. Line :  55
Acq. Instrument : Lucy                              Location : Vial 51
Injection Date  : 03-Aug-11, 20:38:46                    Inj :   1
                                                  Inj Volume : External
Sequence File   : I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S
Acq. Method     : G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Last changed    : 7/15/2011 6:02:41 PM
Analysis Method : I:\GC2011Q3\LUCY\METHODS\GC121P080.M
Last changed    : 8/3/2011 12:59:30 PM by KAM
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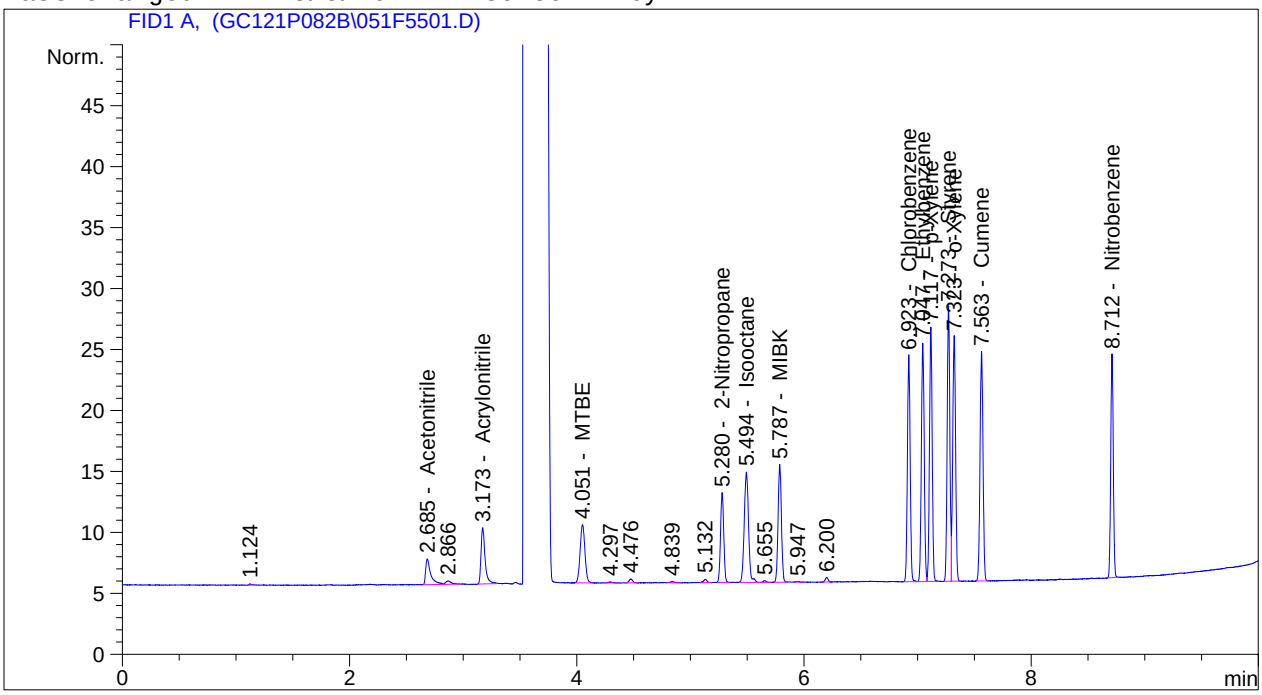


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                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 03, 2011 11:27:10 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,
```
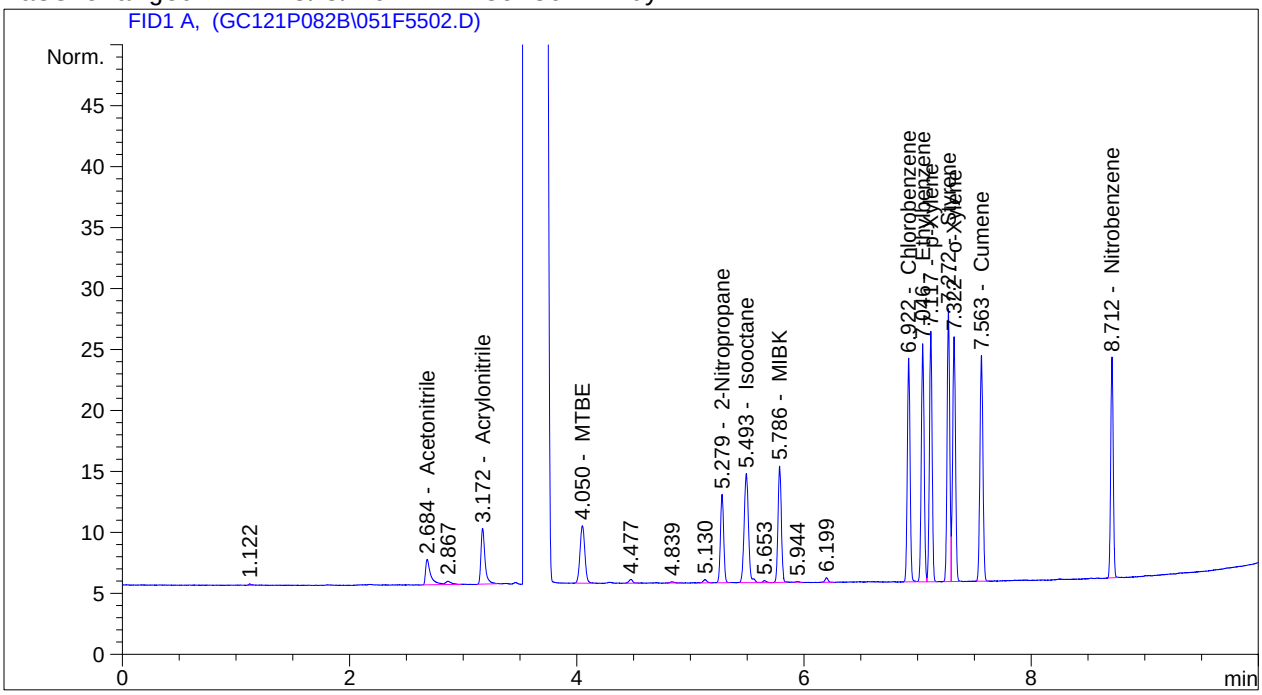

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.685	BB	6.51696	2.23619	14.57313		Acetonitrile
3.173	BB	11.37414	1.24633	14.17591		Acrylonitrile
4.051	BB	14.00412	9.95411e-1	13.93985		MTBE
5.280	BB	14.50162	1.26656	18.36723		2-Nitropropane
5.494	BB	24.11171	5.61979e-1	13.55029		Isooctane
5.787	BB	19.70161	7.75037e-1	15.26948		MIBK
6.923	BV	31.51264	6.81372e-1	21.47184		Chlorobenzene
7.047	VV	34.40649	4.88342e-1	16.80213		Ethylbenzene
7.117	VB	34.38688	4.85392e-1	16.69110		p-Xylene
7.273	BV	36.87049	4.75517e-1	17.53256		Styrene
7.323	VB	35.50698	4.80186e-1	17.04995		o-Xylene
7.563	BB	34.60587	4.85836e-1	16.81278		Cumene
8.712	BB	28.81299	8.04596e-1	23.18282		Nitrobenzene

Totals : 219.41908

EM-BTRF-001499

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\051F5502.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 55
Acq. Instrument	: Lucy	Location	: Vial 51
Injection Date	: 03-Aug-11, 21:00:10	Inj	: 2
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, August 03, 2011 11:27:10 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

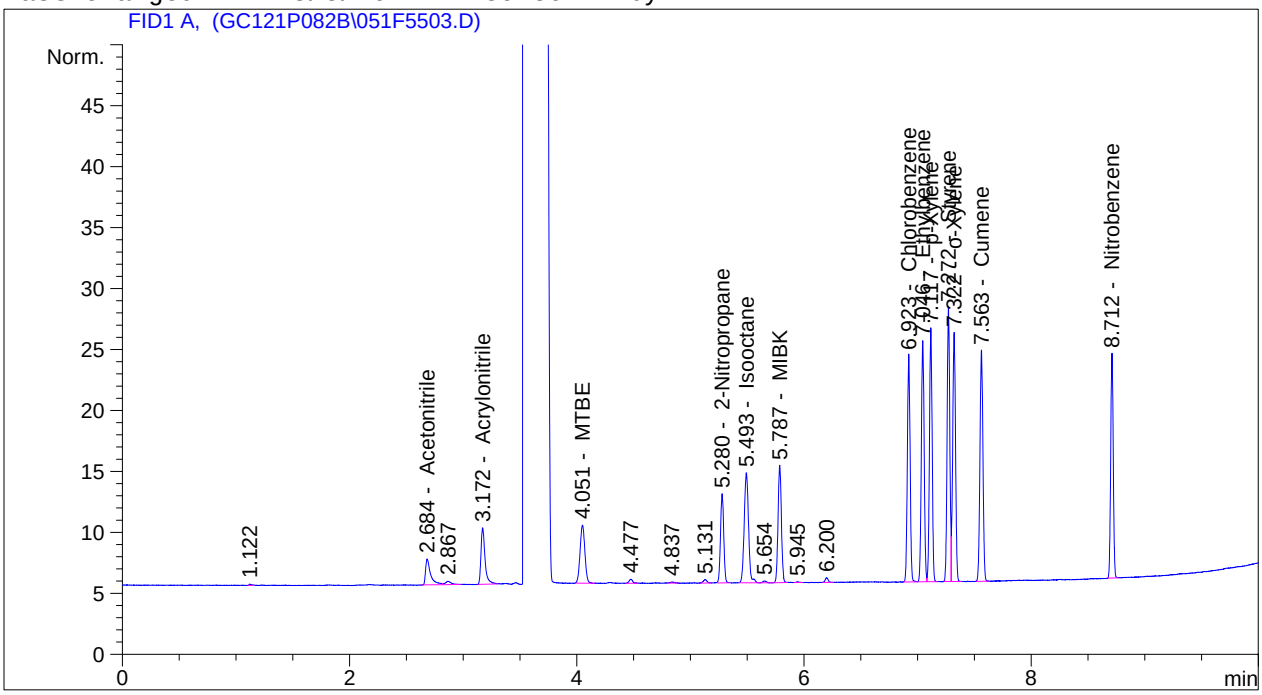
Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.40015	2.23696	14.31685		Acetonitrile
3.172	BB	11.21301	1.24666	13.97876		Acrylonitrile
4.050	BB	13.85273	9.95430e-1	13.78942		MTBE
5.279	BB	14.34608	1.26660	18.17072		2-Nitropropane
5.493	BB	23.83244	5.61989e-1	13.39357		Isooctane
5.786	BB	19.44520	7.75093e-1	15.07183		MIBK
6.922	BB	31.18188	6.81373e-1	21.24649		Chlorobenzene
7.046	BV	33.99198	4.88357e-1	16.60022		Ethylbenzene
7.117	VB	33.92540	4.85407e-1	16.46761		p-Xylene
7.272	BV	36.45075	4.75539e-1	17.33377		Styrene
7.322	VB	35.14070	4.80194e-1	16.87436		o-Xylene
7.563	BB	34.22424	4.85846e-1	16.62772		Cumene
8.712	BB	28.34450	8.04666e-1	22.80787		Nitrobenzene
Totals :				216.67920		

EM-BTRF-001500

Data File I:\GC2011Q3\LUCY\DATA\JUL11\GC121P082B\051F5503.D
Sample Name: gc121p67 #3

Acq. Operator	: JBB	Seq. Line	: 55
Acq. Instrument	: Lucy	Location	: Vial 51
Injection Date	: 03-Aug-11, 21:21:39	Inj	: 3
		Inj Volume	: External
Sequence File	: I:\GC2011Q3\LUCY\SEQUENCE\GC121P082B.S		
Acq. Method	: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M		
Last changed	: 7/15/2011 6:02:41 PM		
Analysis Method	: I:\GC2011Q3\LUCY\METHODS\GC121P080.M		
Last changed	: 8/3/2011 12:59:30 PM by KAM		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, August 03, 2011 11:27:10 AM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.684	BB	6.46850	2.23650	14.46682		Acetonitrile
3.172	BB	11.41288	1.24625	14.22332		Acrylonitrile
4.051	BB	13.93209	9.95420e-1	13.86828		MTBE
5.280	BB	14.52772	1.26656	18.40019		2-Nitropropane
5.493	BB	24.08389	5.61980e-1	13.53468		Isooctane
5.787	VB	19.73639	7.75029e-1	15.29628		MIBK
6.923	BV	31.59200	6.81372e-1	21.52591		Chlorobenzene
7.046	VV	34.47678	4.88339e-1	16.83637		Ethylbenzene
7.117	VB	34.41799	4.85391e-1	16.70617		p-Xylene
7.272	BV	36.97045	4.75512e-1	17.57990		Styrene
7.322	VB	35.64379	4.80183e-1	17.11554		o-Xylene
7.563	BB	34.78069	4.85831e-1	16.89755		Cumene
8.712	BB	28.81976	8.04595e-1	23.18825		Nitrobenzene
Totals :				219.63926		

EM-BTRF-001501

method: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Modified on: 7/15/2011 at 6:02:41 PM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 40 'C (On)
- Initial time: 2.00 min
- Maximum temp: 300 'C
- Equilibration time: 1.00 min
- Ramps:

#	Rate	Final temp	Final time
1	25.00	240	1.00
2	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 11.00 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 225 'C (On)
- Pressure: 6.45 psi (On)
- Split ratio: 10:1
- Split flow: 26.3 mL/min
- Total flow: 37.6 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 225 'C (On)
- Pressure: 0.97 psi (Off)
- Total flow: 50.0 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 10198
- Rtx-1 30m x 0.32mm x 4.0um
- Max temperature: 300 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.6 mL/min
- Nominal init pressure: 6.45 psi
- Average velocity: 49 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- (not installed)

FRONT DETECTOR (FID)
- Temperature: 300 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 300 'C (Off)
- Hydrogen flow: 40.0 mL/min (Off)
- Air flow: 450.0 mL/min (Off)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (Off)
- Makeup Gas Type: Nitrogen
- Flame: Off
- Electrometer: Off
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: Off
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

COLUMN COMP 1

COLUMN COMP 2

method: G:\GC2011Q3\LUCY\METHODS\GC121P078B.M
Modified on: 7/15/2011 at 6:02:41 PM
Derive from back detector Derive from front detector

POST RUN
Post Time: 0.00 min

TIME TABLE
Time Specifier Parameter & Setpoint

==========
CTCPAL METHOD
==========

Injection Volume: 1.00 ul
Syringe Size: 10ul
Cycle File: solvent_plug

CYCLE DETAILS

Air Volume (µl): 2
Pre Clean with Solvent 1 (): 0
Pre Clean with Solvent 2 (): 0
Plug Volume (µl): 1
Filling Speed (µl/s): 2
Inject to: GC Inj1
Injection Speed (µl/s): 50
Pre Inject Delay (ms): 0
Post Inject Delay (ms): 100
Post Clean with Solvent 1 (): 3
Post Clean with Solvent 2 (): 3
TRAY: MT1-Rear

method: G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Modified on: 7/21/2011 at 1:05:31 AM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 40 'C (On)
- Initial time: 2.00 min
- Maximum temp: 300 'C
- Equilibration time: 1.00 min
- Ramps:

#	Rate	Final temp	Final time
1	25.00	240	1.00
2	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 11.00 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 225 'C (On)
- Pressure: 6.45 psi (On)
- Split ratio: 10:1
- Split flow: 26.3 mL/min
- Total flow: 37.6 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 225 'C (On)
- Pressure: 0.97 psi (Off)
- Total flow: 50.0 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 10198
- Rtx-1 30m x 0.32mm x 4.0um
- Max temperature: 300 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.6 mL/min
- Nominal init pressure: 6.45 psi
- Average velocity: 49 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- (not installed)

FRONT DETECTOR (FID)
- Temperature: 300 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 300 'C (Off)
- Hydrogen flow: 40.0 mL/min (Off)
- Air flow: 450.0 mL/min (Off)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (Off)
- Makeup Gas Type: Nitrogen
- Flame: Off
- Electrometer: Off
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: Off
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

COLUMN COMP 1

COLUMN COMP 2

method: G:\GC2011Q3\LUCY\METHODS\GC121P078.M
Modified on: 7/21/2011 at 1:05:31 AM
Derive from back detector Derive from front detector

POST RUN
Post Time: 0.00 min

TIME TABLE
Time Specifier Parameter & Setpoint

==========
CTCPAL METHOD
==========
Injection Volume: 1.00 ul
Syringe Size: 10ul
Cycle File: solvent_plug

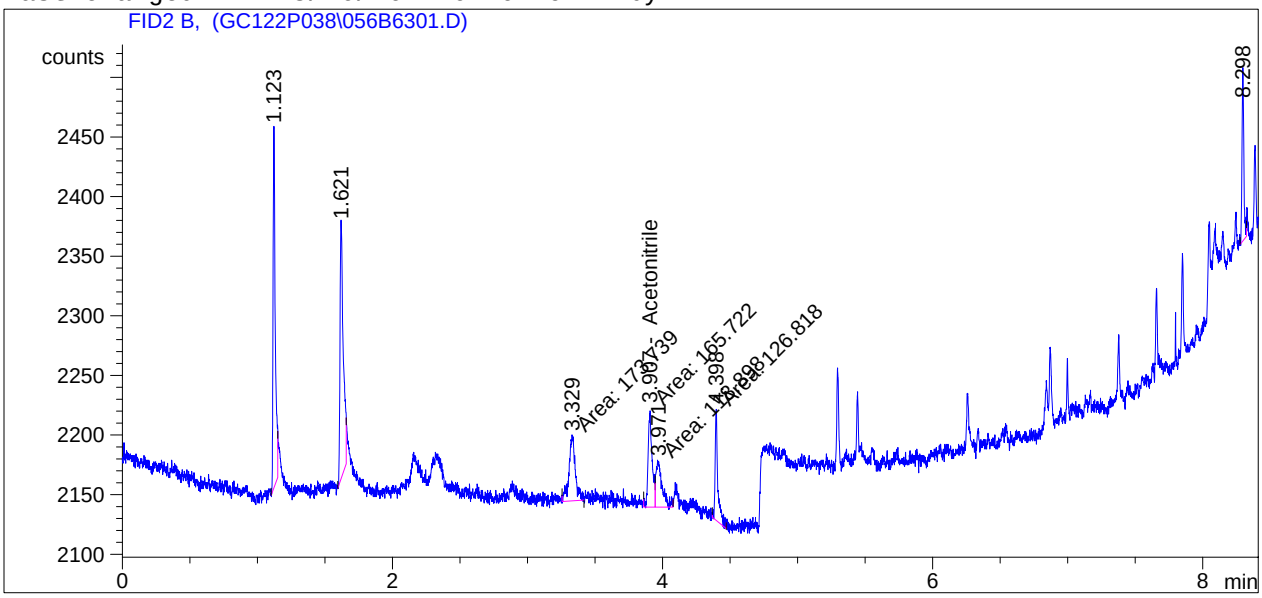
CYCLE DETAILS

Air Volume (µl): 2
Pre Clean with Solvent 1 (): 0
Pre Clean with Solvent 2 (): 0
Plug Volume (µl): 1
Filling Speed (µl/s): 2
Inject to: GC Inj1
Injection Speed (µl/s): 50
Pre Inject Delay (ms): 0
Post Inject Delay (ms): 100
Post Clean with Solvent 1 (): 3
Post Clean with Solvent 2 (): 3
TRAY: MT1-Frnt

Sample Chromatograms

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\056B6301.D
Sample Name: M18 R1A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  63
Acq. Instrument : Teller online                 Location : Vial 56
Injection Date  : 8/17/2011 9:23:38 AM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

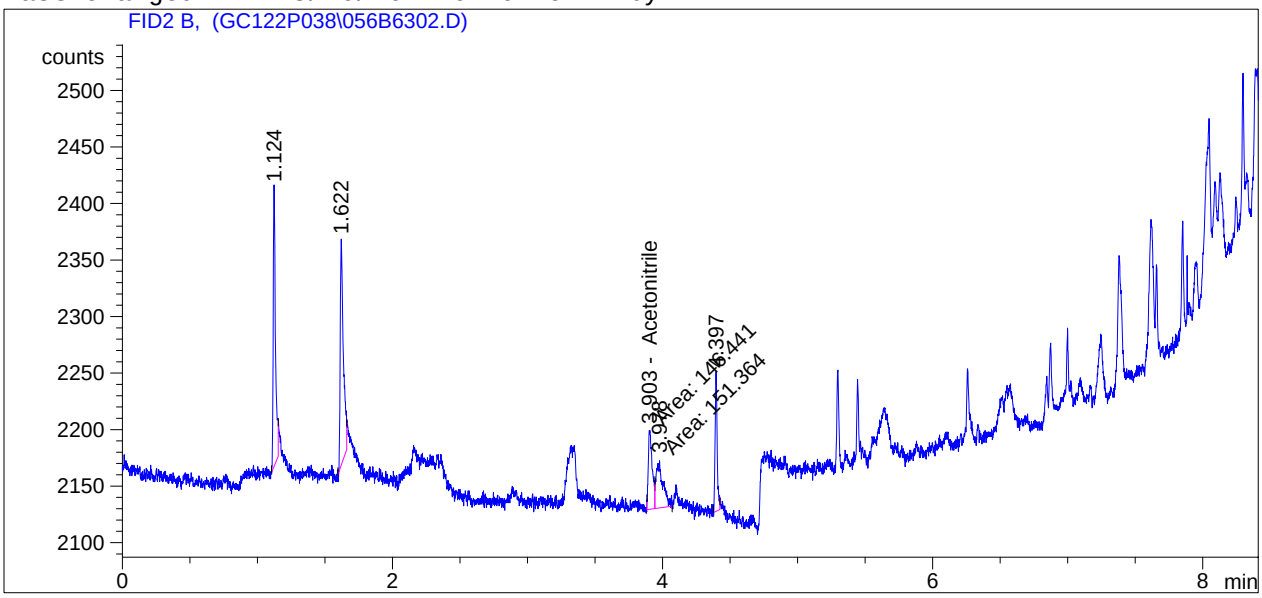



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -          Acrylonitrile
  3.907 MF      165.72183 3.69243e-3 6.11916e-1    Acetonitrile
  4.784            -          -          -          2-Nitropropane

Totals :                              6.11916e-1


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\056B6302.D
Sample Name: M18 R1A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  63
Acq. Instrument : Teller online                 Location : Vial 56
Injection Date  : 8/17/2011 9:37:23 AM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```



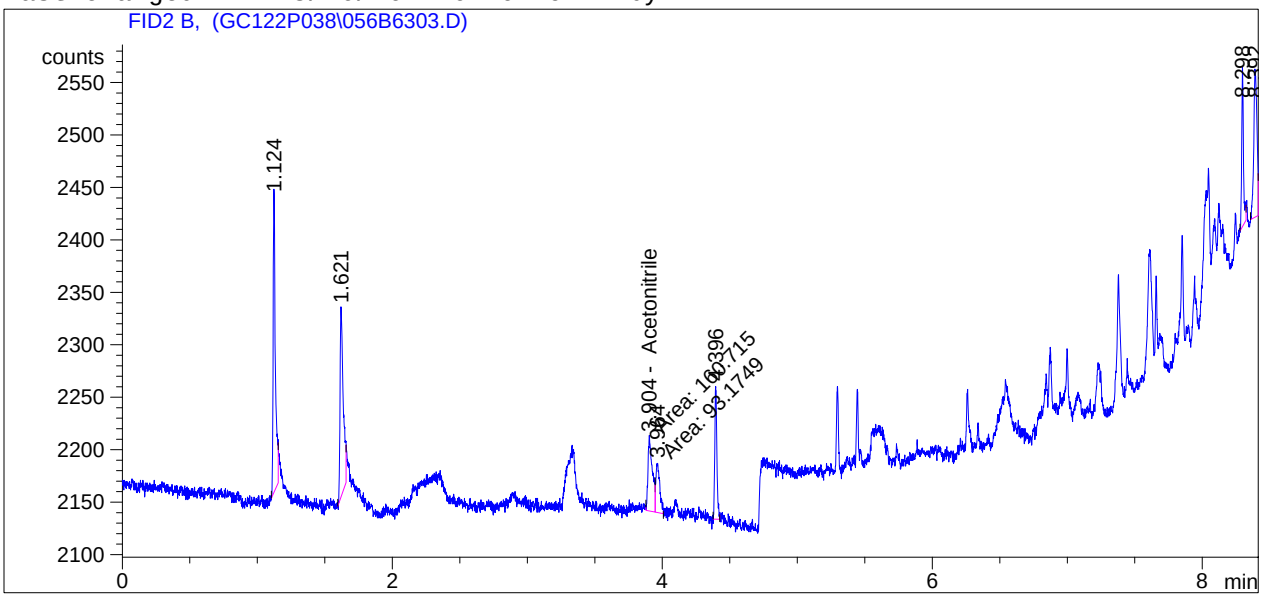

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -          Acrylonitrile
  3.903 MF      146.44064 3.69243e-3 5.40722e-1    Acetonitrile
  4.784            -          -          -          2-Nitropropane

Totals :                              5.40722e-1


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. "NI" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\056B6303.D
Sample Name: M18 R1A Cond Raff 0711-64

==========

Acq. Operator : kmt Seq. Line : 63
Acq. Instrument : Teller online Location : Vial 56
Injection Date : 8/17/2011 9:51:17 AM Inj : 3
Inj Volume : 1 µl
Sequence File : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 6:20:49 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.780		-	-	-		Acrylonitrile
3.904	MF	160.71501	3.69243e-3	5.93429e-1		Acetonitrile
4.784		-	-	-		2-Nitropropane

Manual Int. "NI" (KAM)

Totals : 5.93429e-1

1 Warnings or Errors :

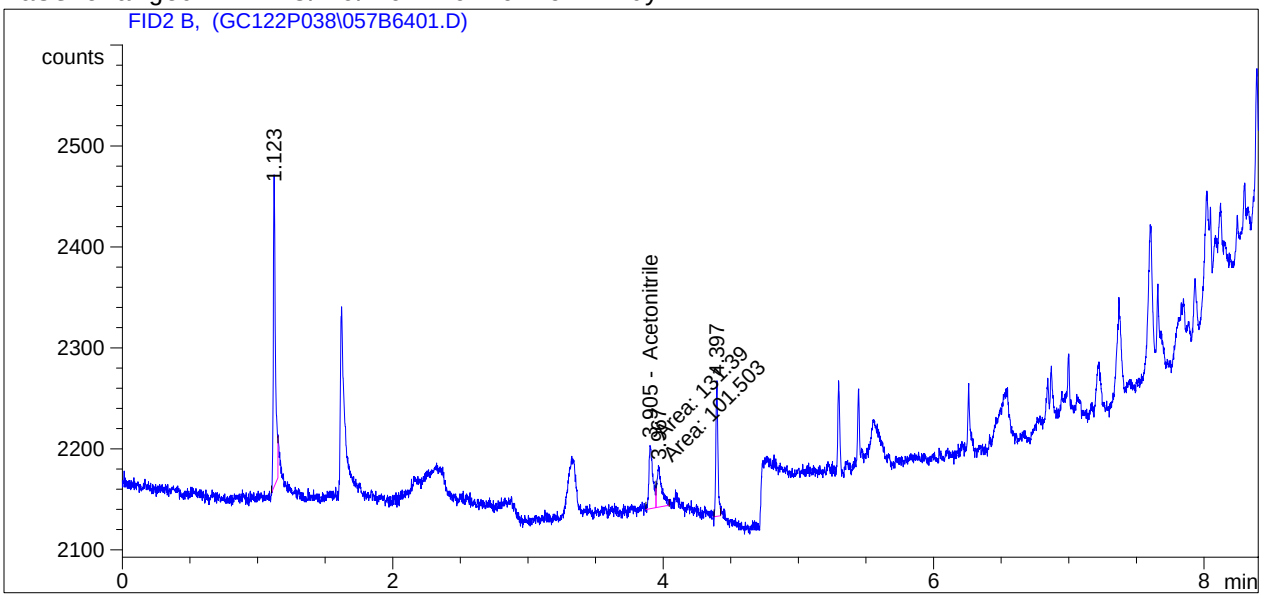
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\057B6401.D
Sample Name: M18 R1B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  64
Acq. Instrument : Teller online                 Location : Vial 57
Injection Date  : 8/17/2011 10:05:11 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

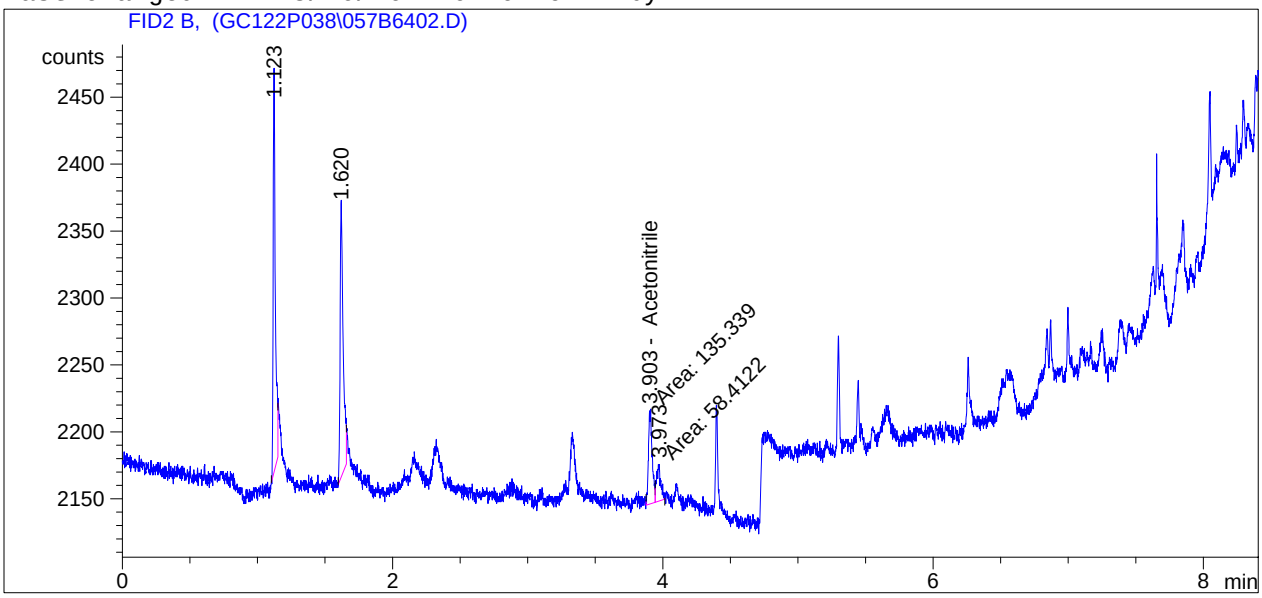



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.905 MF      131.39035 3.69243e-3 4.85150e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              4.85150e-1


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\057B6402.D
Sample Name: M18 R1B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  64
Acq. Instrument : Teller online                 Location : Vial 57
Injection Date  : 8/17/2011 10:19:09 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.903 MF      135.33893 3.69243e-3 4.99729e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              4.99729e-1


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\057B6403.D
Sample Name: M18 R1B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  64
Acq. Instrument : Teller online                 Location : Vial 57
Injection Date  : 8/17/2011 10:32:59 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
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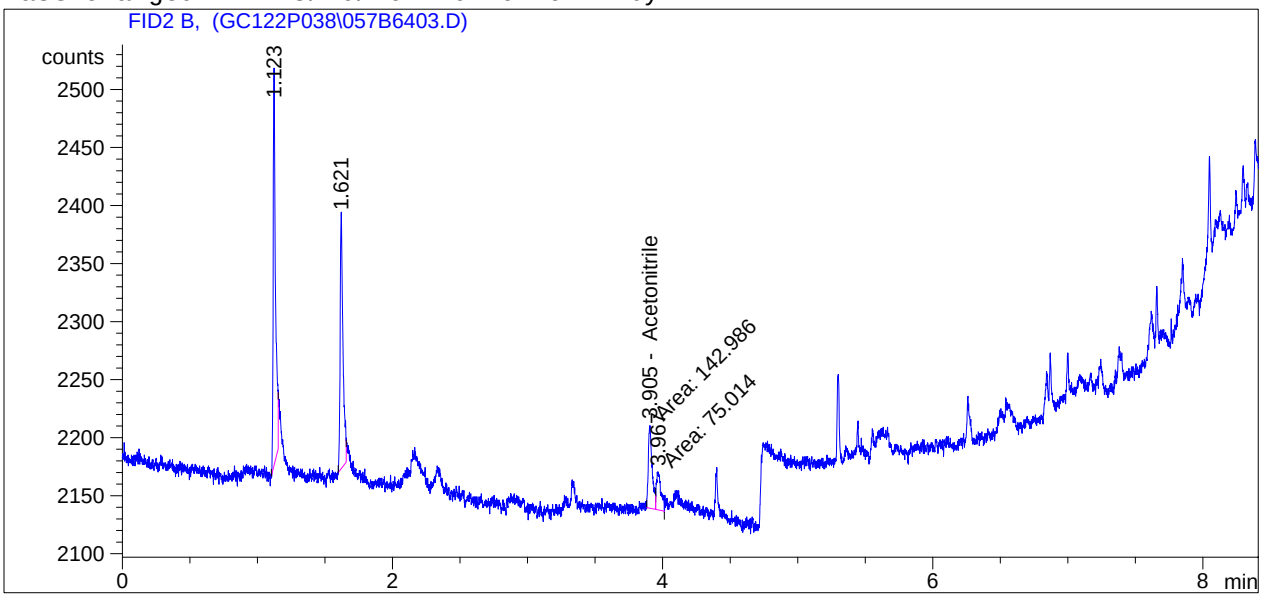



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.905 MF      142.98592 3.69243e-3 5.27965e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              5.27965e-1


1 Warnings or Errors :

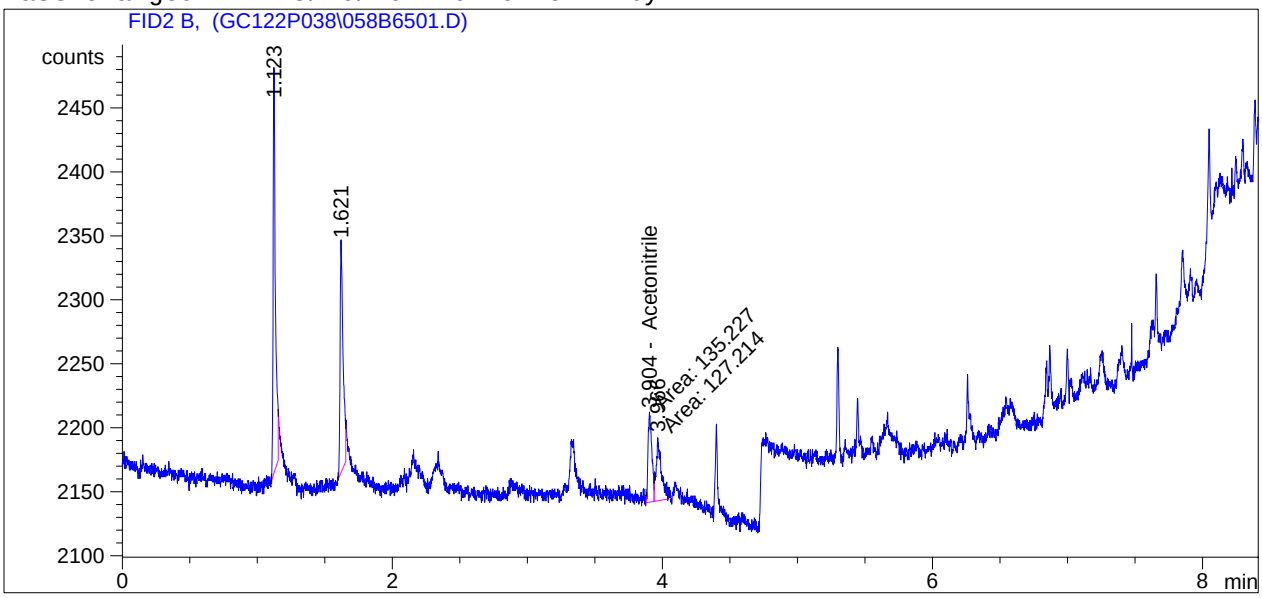
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\058B6501.D
Sample Name: M18 R1B Spkd Cond Raff-LD 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  65
Acq. Instrument : Teller online                 Location : Vial 58
Injection Date  : 8/17/2011 10:46:53 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.904 MF      135.22725 3.69243e-3 4.99317e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              4.99317e-1


1 Warnings or Errors :

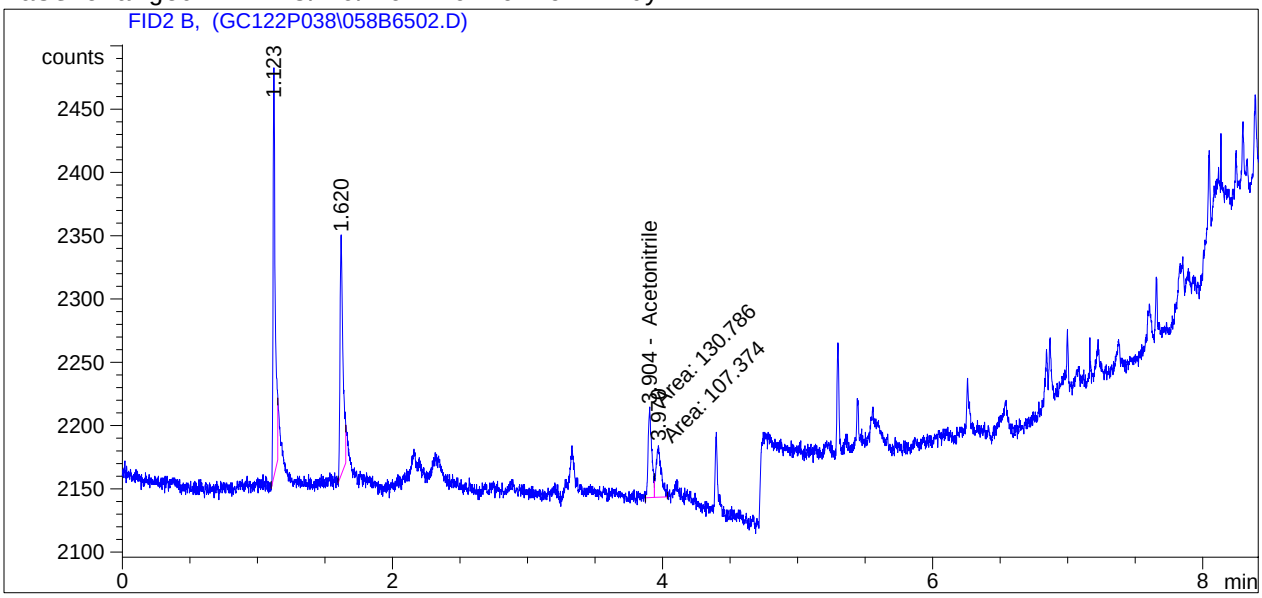
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\058B6502.D
Sample Name: M18 R1B Spkd Cond Raff-LD 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  65
Acq. Instrument : Teller online                 Location : Vial 58
Injection Date  : 8/17/2011 11:00:43 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -          Acrylonitrile
  3.904 MF      130.78569 3.69243e-3 4.82917e-1    Acetonitrile
  4.784            -          -          -          2-Nitropropane

Totals :                              4.82917e-1


1 Warnings or Errors :

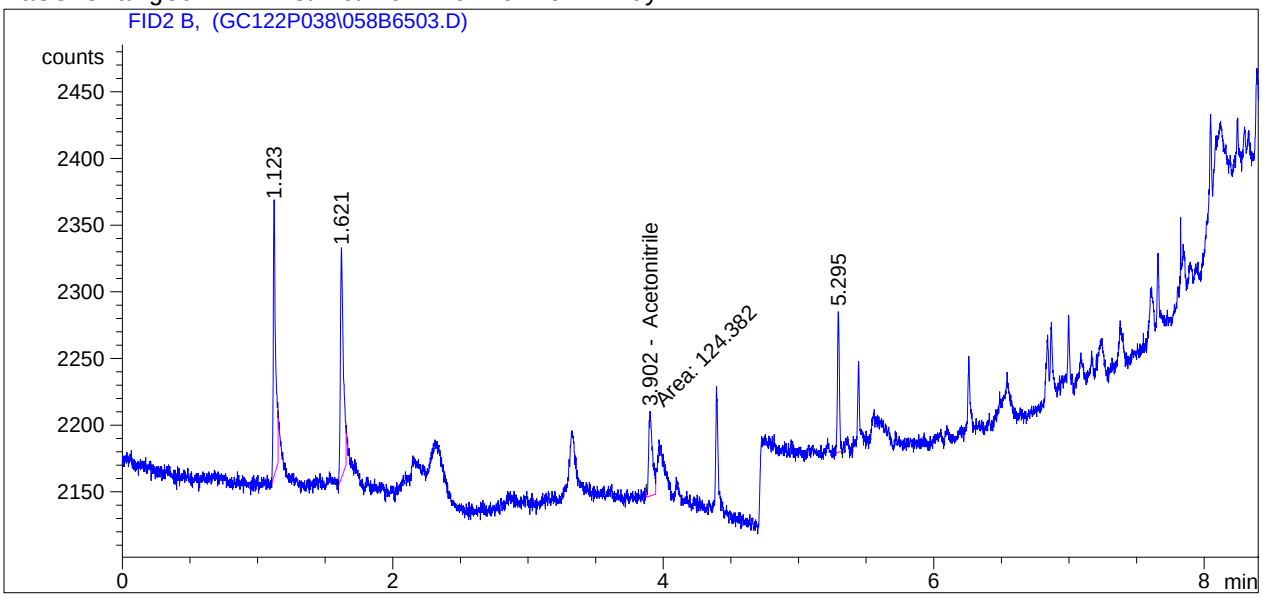
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\058B6503.D
Sample Name: M18 R1B Spkd Cond Raff-LD 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  65
Acq. Instrument : Teller online                 Location : Vial 58
Injection Date  : 8/17/2011 11:14:50 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -          Acrylonitrile
  3.902 MM      124.38165 3.69243e-3 4.59270e-1    Acetonitrile
  4.784            -          -          -          2-Nitropropane

Totals :                              4.59270e-1


1 Warnings or Errors :

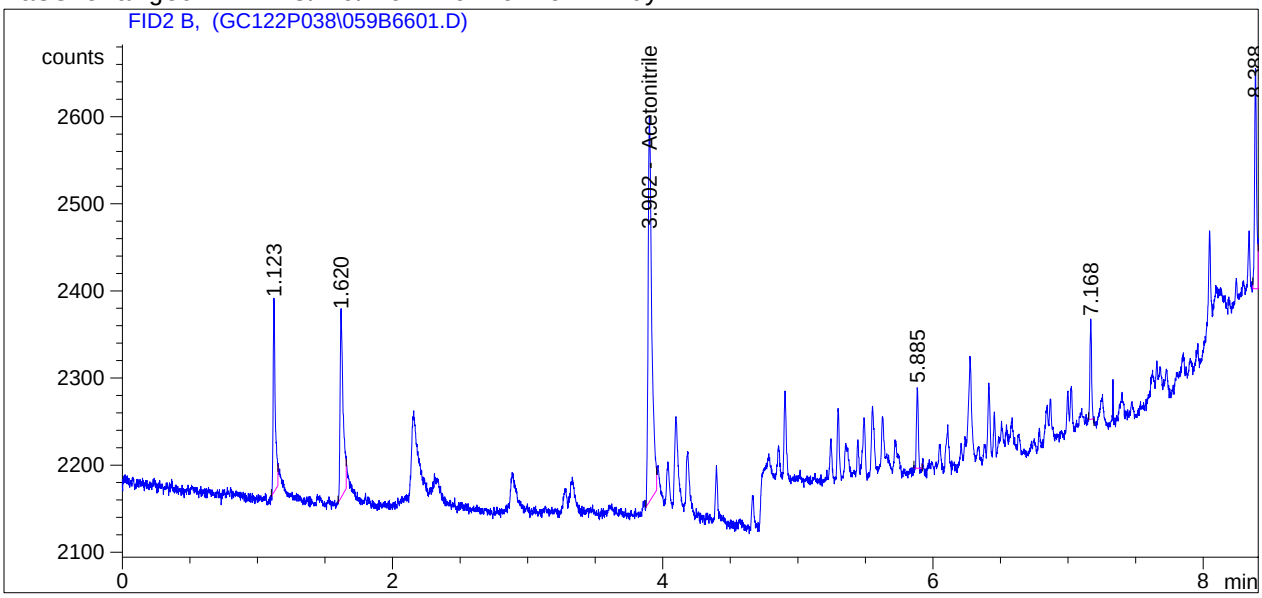
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. "NI" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\059B6601.D
Sample Name: M18 R2A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  66
Acq. Instrument : Teller online                 Location : Vial 59
Injection Date  : 8/17/2011 11:28:39 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 BB      817.50079 3.98534e-3    3.25802    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                 3.25802

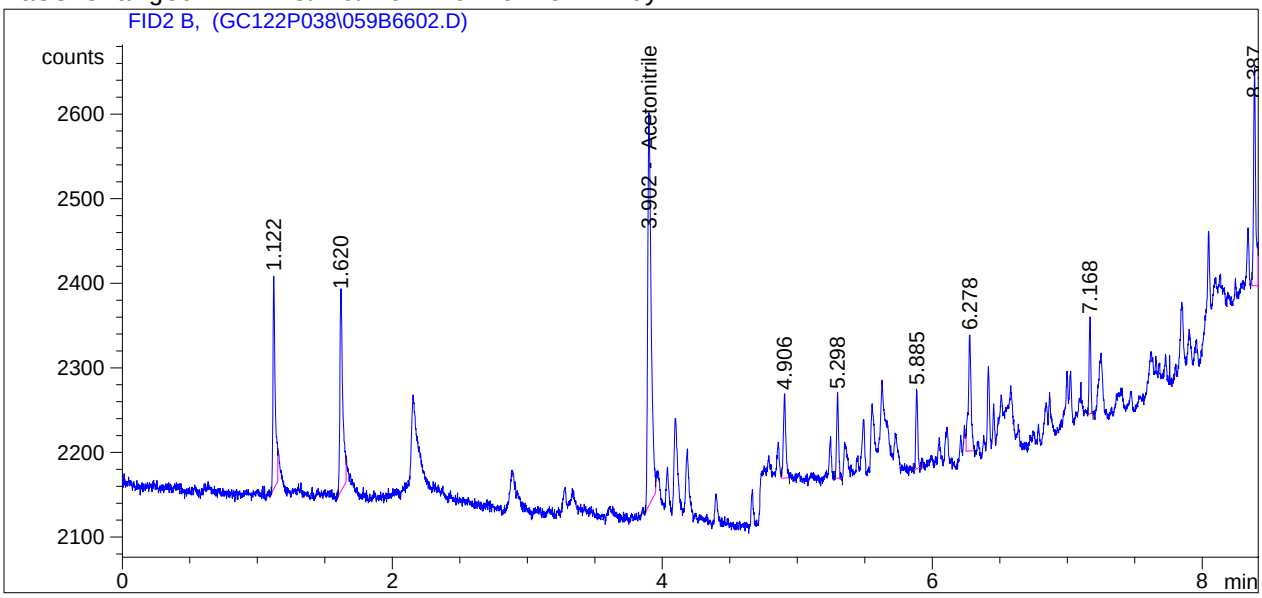

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\059B6602.D
Sample Name: M18 R2A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  66
Acq. Instrument : Teller online                 Location : Vial 59
Injection Date  : 8/17/2011 11:42:37 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 BB      807.35510 3.97848e-3    3.21205    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                3.21205

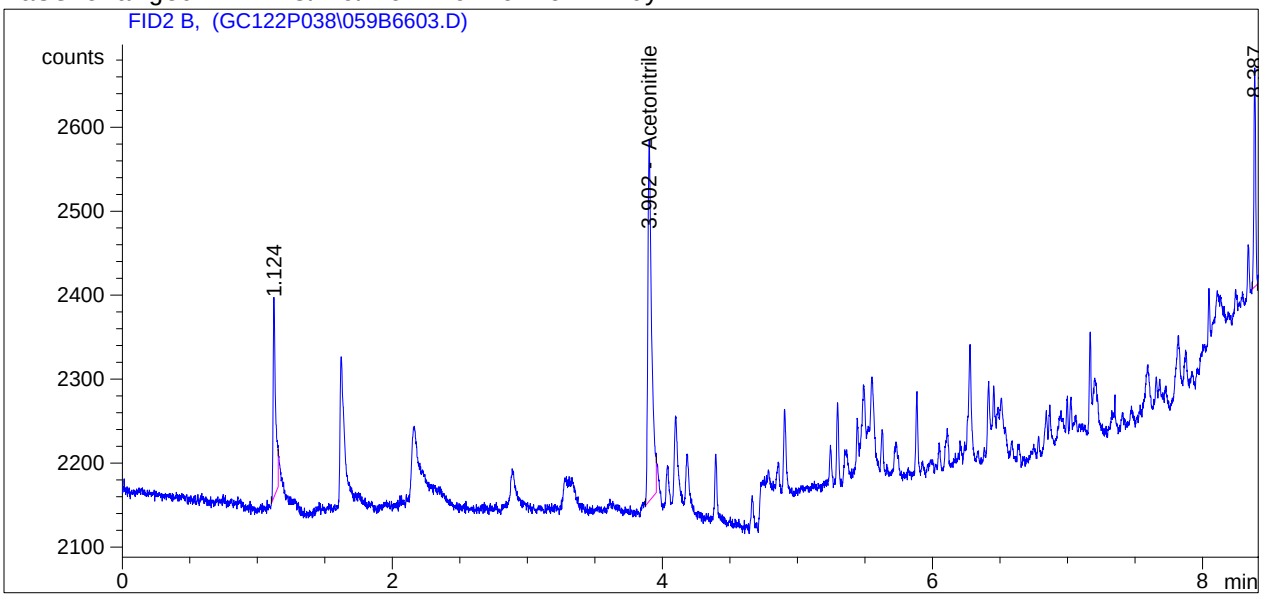

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\059B6603.D
Sample Name: M18 R2A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  66
Acq. Instrument : Teller online                 Location : Vial 59
Injection Date  : 8/17/2011 11:56:27 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 BB      831.17523 3.99431e-3    3.31997    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                 3.31997

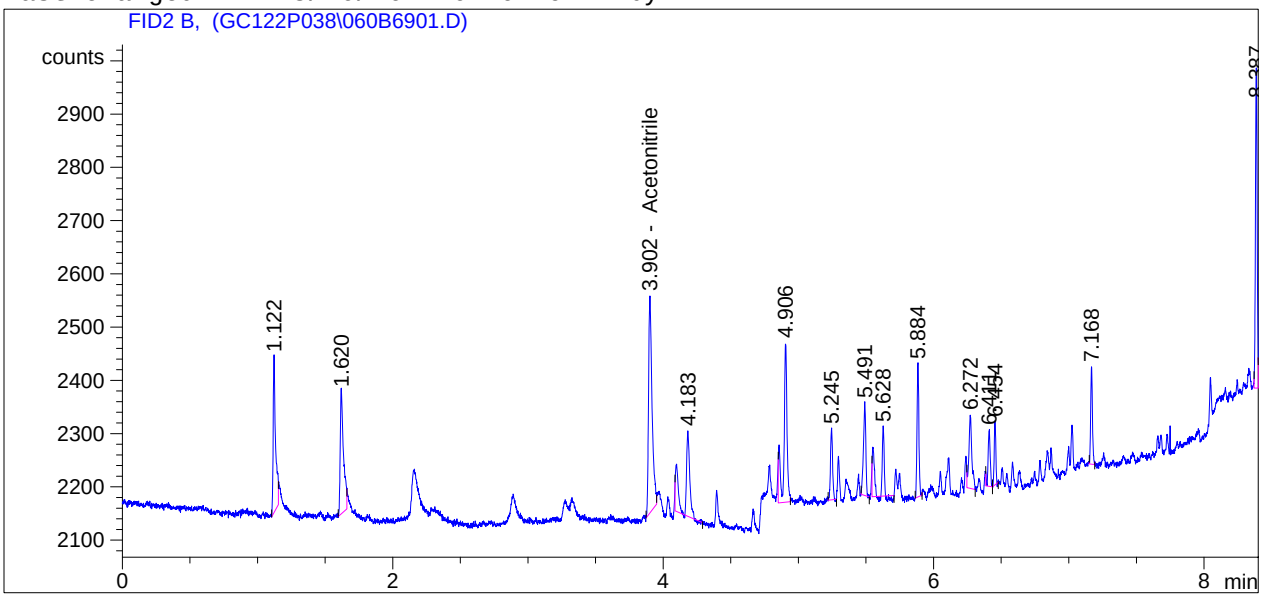

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\060B6901.D
Sample Name: M18 R2B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  69
Acq. Instrument : Teller online                 Location : Vial 60
Injection Date  : 8/17/2011 1:34:10 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 BB      728.85626 3.91899e-3    2.85638    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                 2.85638

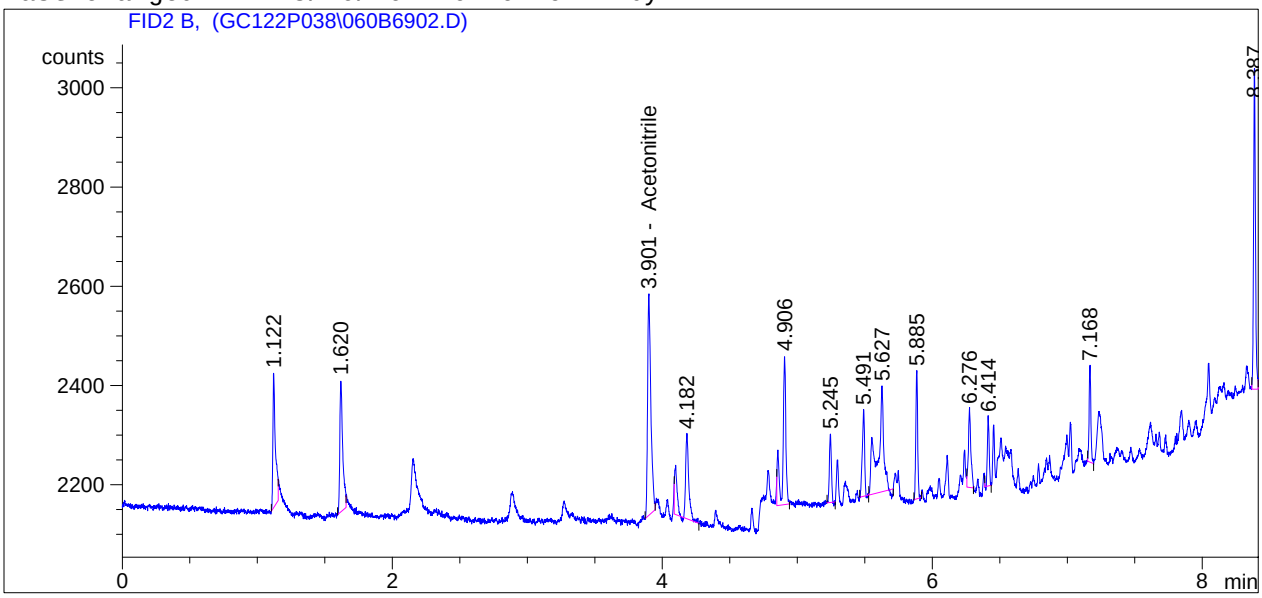

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\060B6902.D
Sample Name: M18 R2B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  69
Acq. Instrument : Teller online                 Location : Vial 60
Injection Date  : 8/17/2011 1:47:59 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.901 BB      746.50684 3.93346e-3    2.93635    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                 2.93635

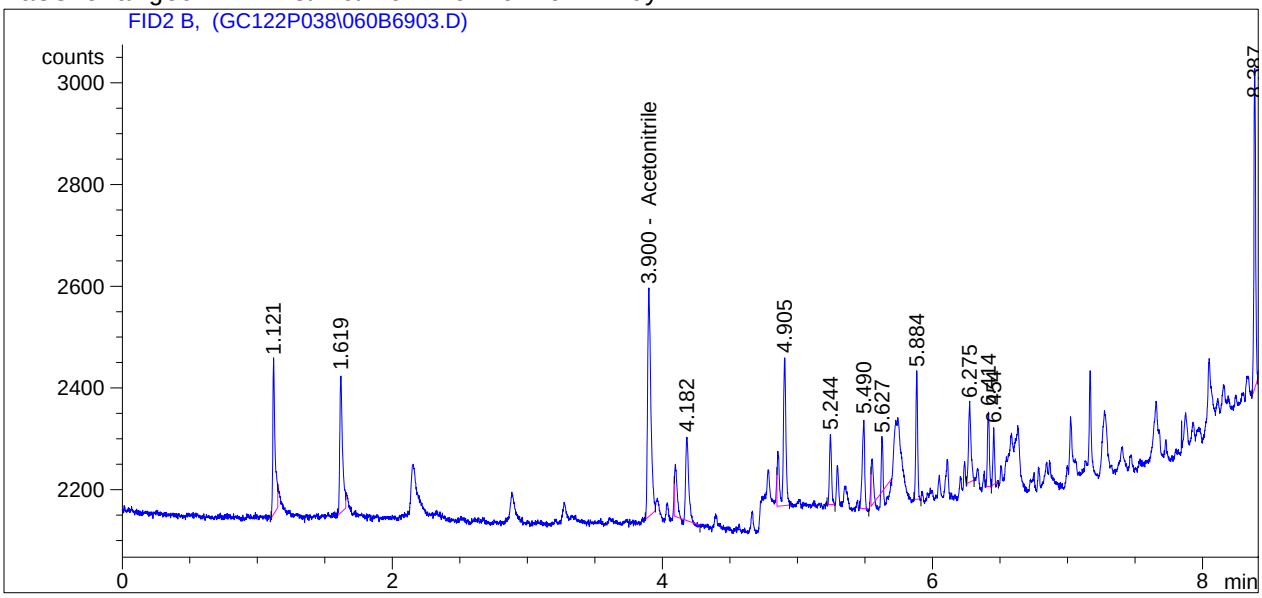

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\060B6903.D
Sample Name: M18 R2B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  69
Acq. Instrument : Teller online                 Location : Vial 60
Injection Date  : 8/17/2011 2:01:55 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.900 BB      742.62341 3.93034e-3    2.91876    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                 2.91876

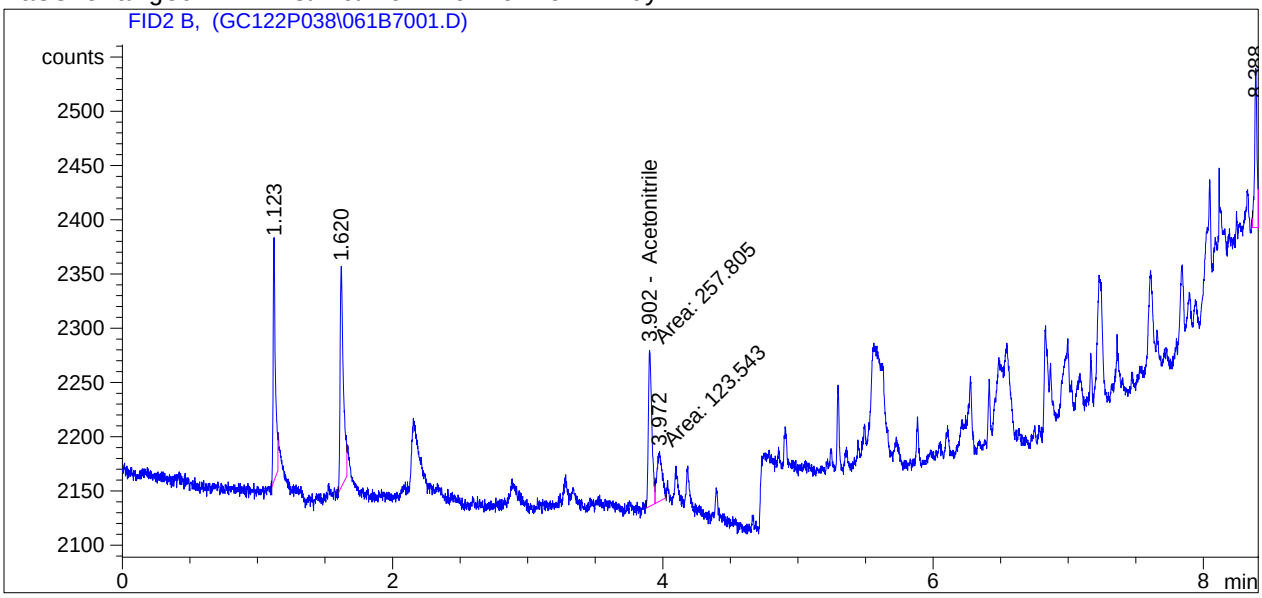

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\061B7001.D
Sample Name: M18 R3A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  70
Acq. Instrument : Teller online                 Location : Vial 61
Injection Date  : 8/17/2011 2:15:54 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 MF      257.80527 3.69243e-3 9.51928e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              9.51928e-1


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

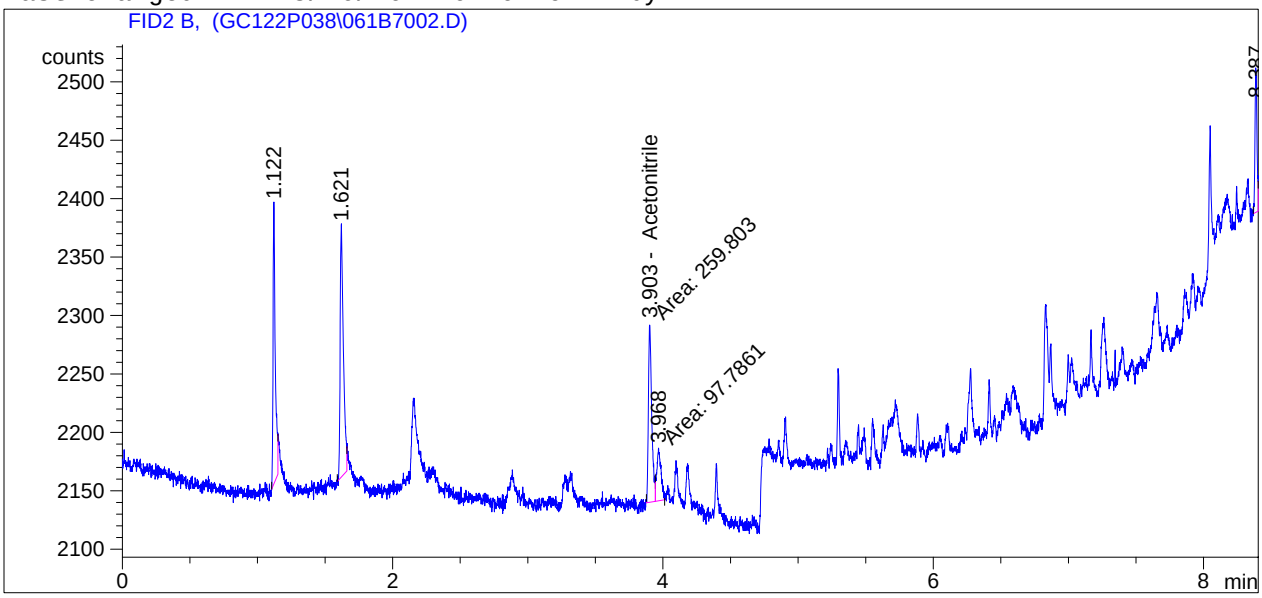
==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

EM-BTRF-001522

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\061B7002.D
Sample Name: M18 R3A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  70
Acq. Instrument : Teller online                 Location : Vial 61
Injection Date  : 8/17/2011 2:29:54 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -          Acrylonitrile
  3.903 MF      259.80350 3.69243e-3 9.59306e-1    Acetonitrile
  4.784            -          -          -          2-Nitropropane

Totals :                              9.59306e-1


1 Warnings or Errors :

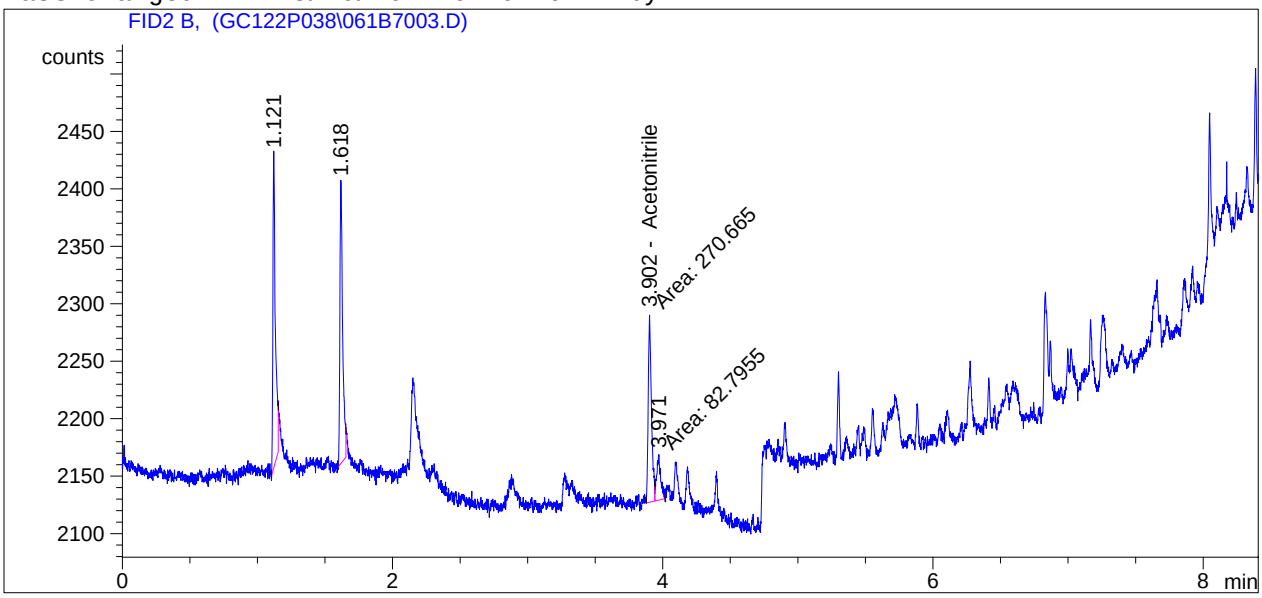
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\061B7003.D
Sample Name: M18 R3A Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  70
Acq. Instrument : Teller online                 Location : Vial 61
Injection Date  : 8/17/2011 2:43:41 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 MF      270.66547 3.69243e-3 9.99413e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              9.99413e-1


1 Warnings or Errors :

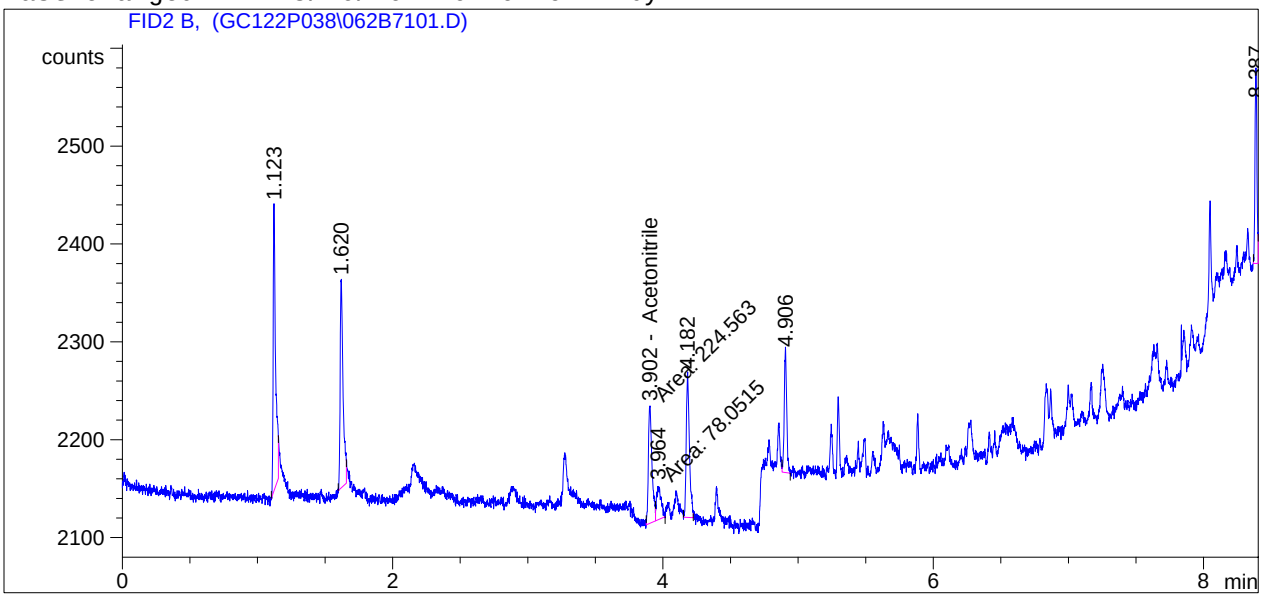
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\062B7101.D
Sample Name: M18 R3B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  71
Acq. Instrument : Teller online                 Location : Vial 62
Injection Date  : 8/17/2011 2:57:38 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 MF      224.56274 3.69243e-3 8.29182e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              8.29182e-1


1 Warnings or Errors :

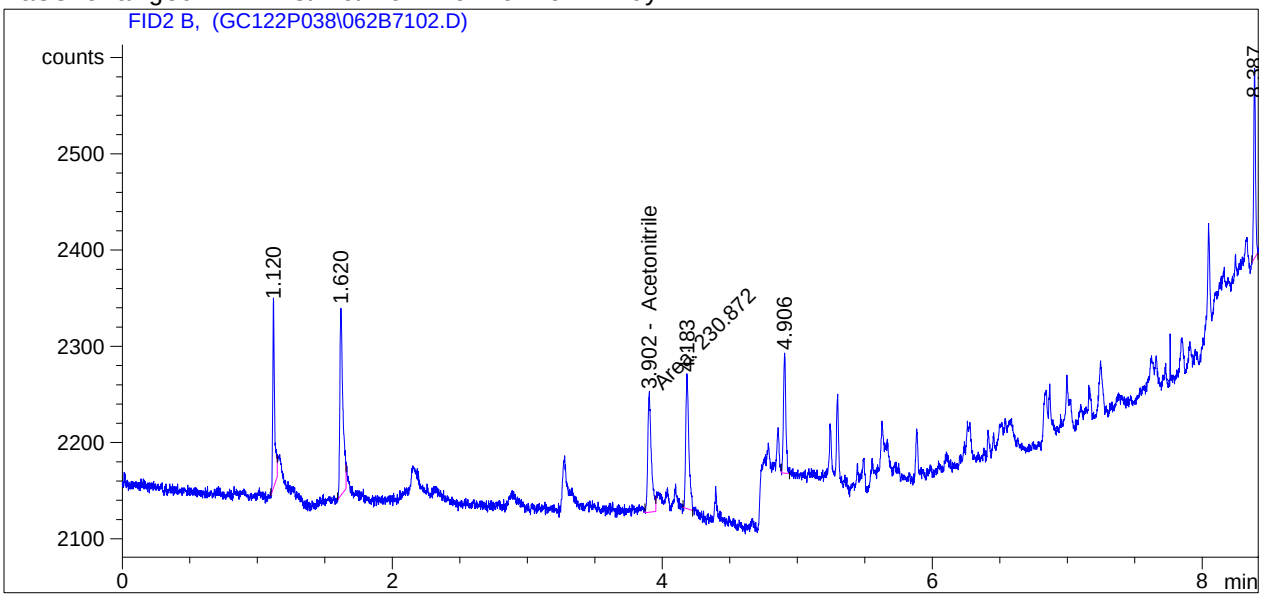
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. “NI” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\062B7102.D
Sample Name: M18 R3B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  71
Acq. Instrument : Teller online                 Location : Vial 62
Injection Date  : 8/17/2011 3:11:35 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.902 MM      230.87239 3.69243e-3 8.52480e-1    Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                              8.52480e-1


1 Warnings or Errors :

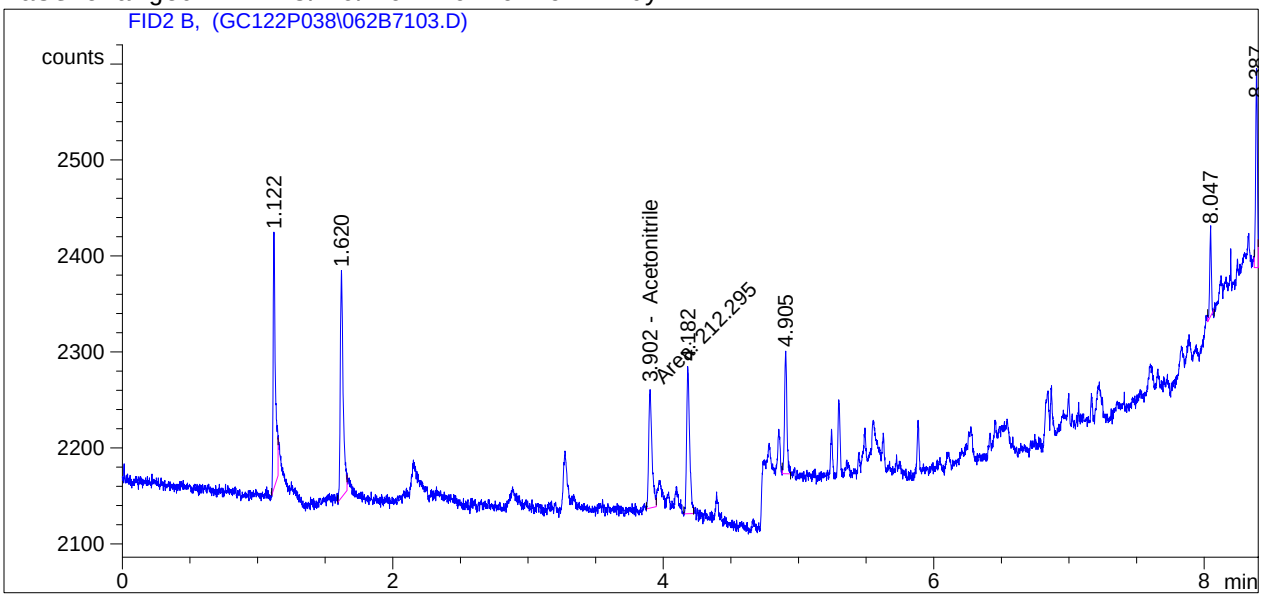
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. "NI" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\062B7103.D
Sample Name: M18 R3B Spkd Cond Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  71
Acq. Instrument : Teller online                 Location : Vial 62
Injection Date  : 8/17/2011 3:25:45 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -          Acrylonitrile
  3.902 MM      212.29489 3.69243e-3 7.83884e-1    Acetonitrile
  4.784            -          -          -          2-Nitropropane

Totals :                              7.83884e-1


1 Warnings or Errors :

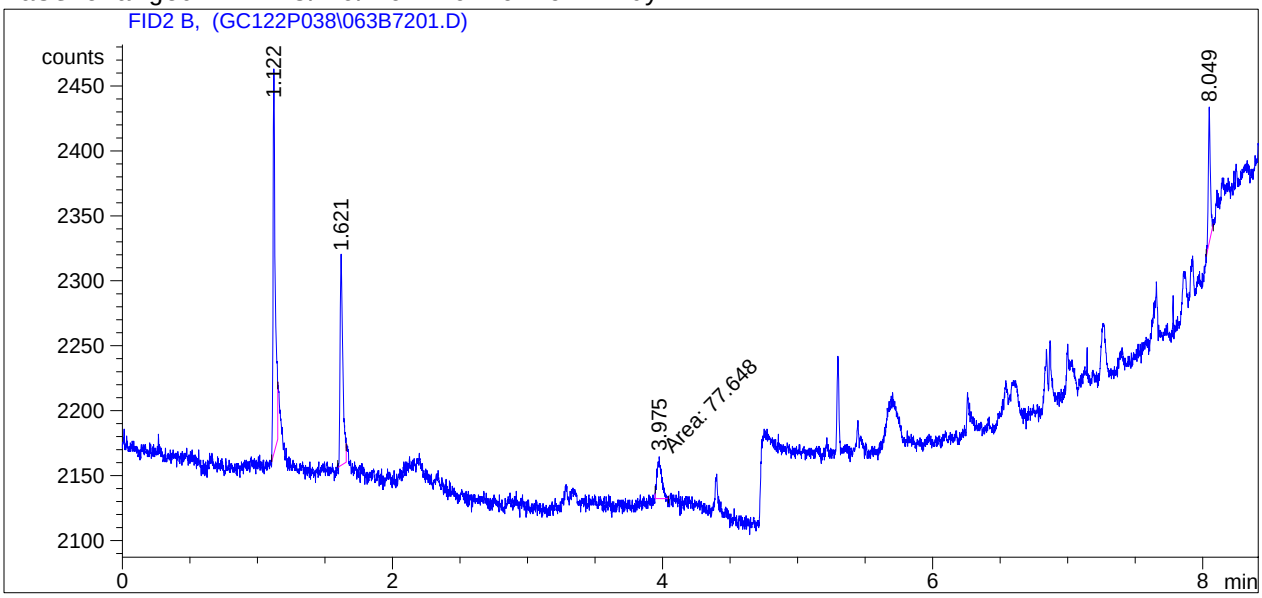
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Manual Int. "NI" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\063B7201.D
Sample Name: M18 H2O Cond FB-A Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  72
Acq. Instrument : Teller online                 Location : Vial 63
Injection Date  : 8/17/2011 3:39:35 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.780            -          -          -         Acrylonitrile
  3.903            -          -          -         Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                0.00000

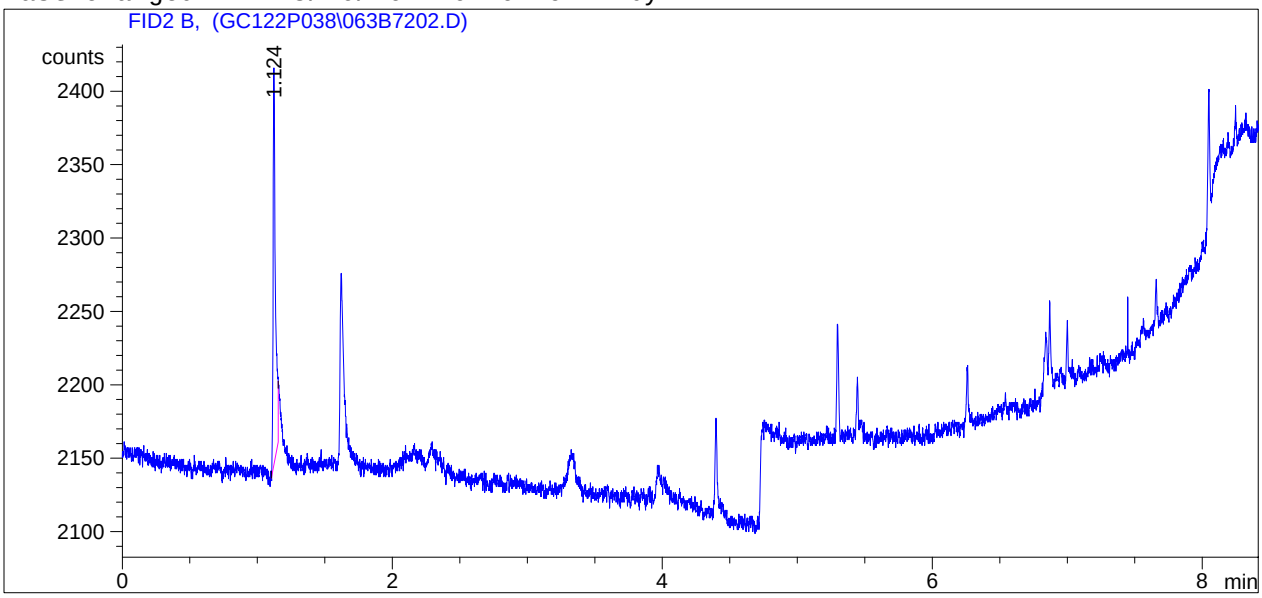

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\063B7202.D
Sample Name: M18 H2O Cond FB-A Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  72
Acq. Instrument : Teller online                 Location : Vial 63
Injection Date  : 8/17/2011 3:53:29 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.903            -          -          -         Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                0.00000

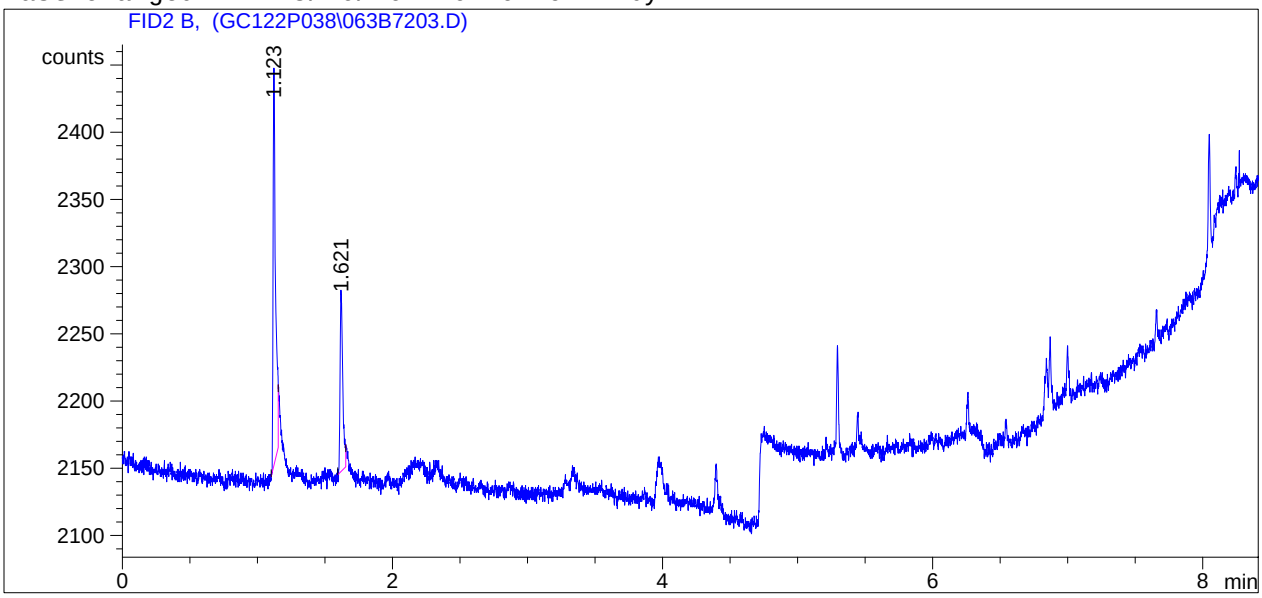

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\063B7203.D
Sample Name: M18 H2O Cond FB-A Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  72
Acq. Instrument : Teller online                 Location : Vial 63
Injection Date  : 8/17/2011 4:07:20 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.903            -          -          -         Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                0.00000

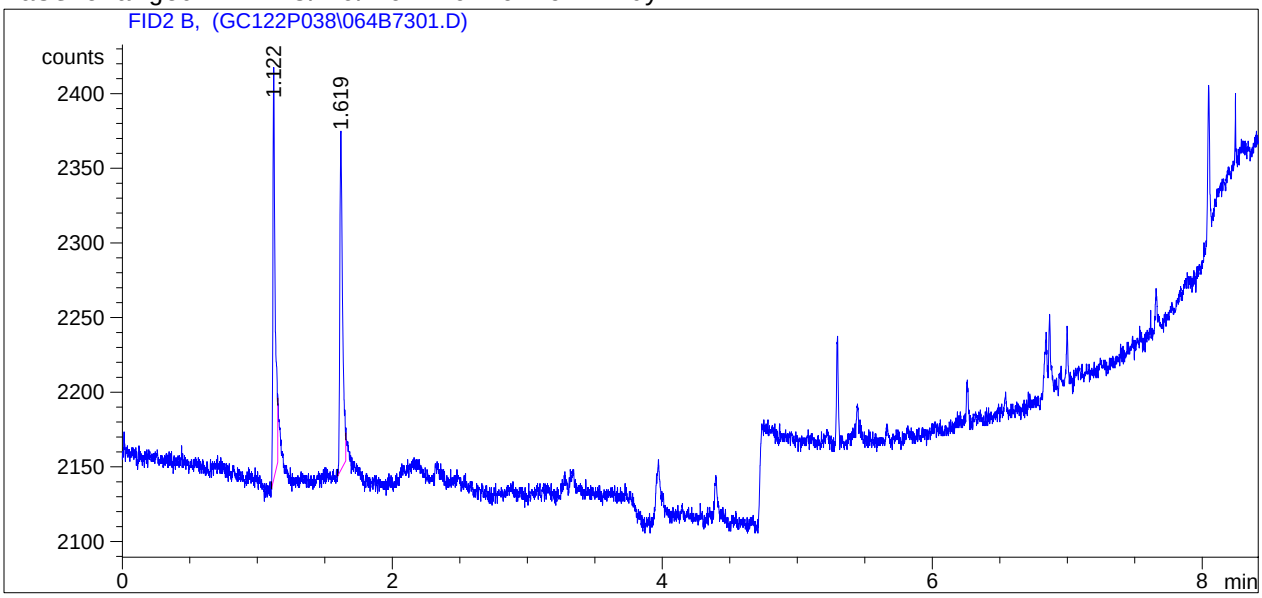

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\064B7301.D
Sample Name: M18 H2O Cond RB Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  73
Acq. Instrument : Teller online                 Location : Vial 64
Injection Date  : 8/17/2011 4:21:24 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.903            -          -          -         Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

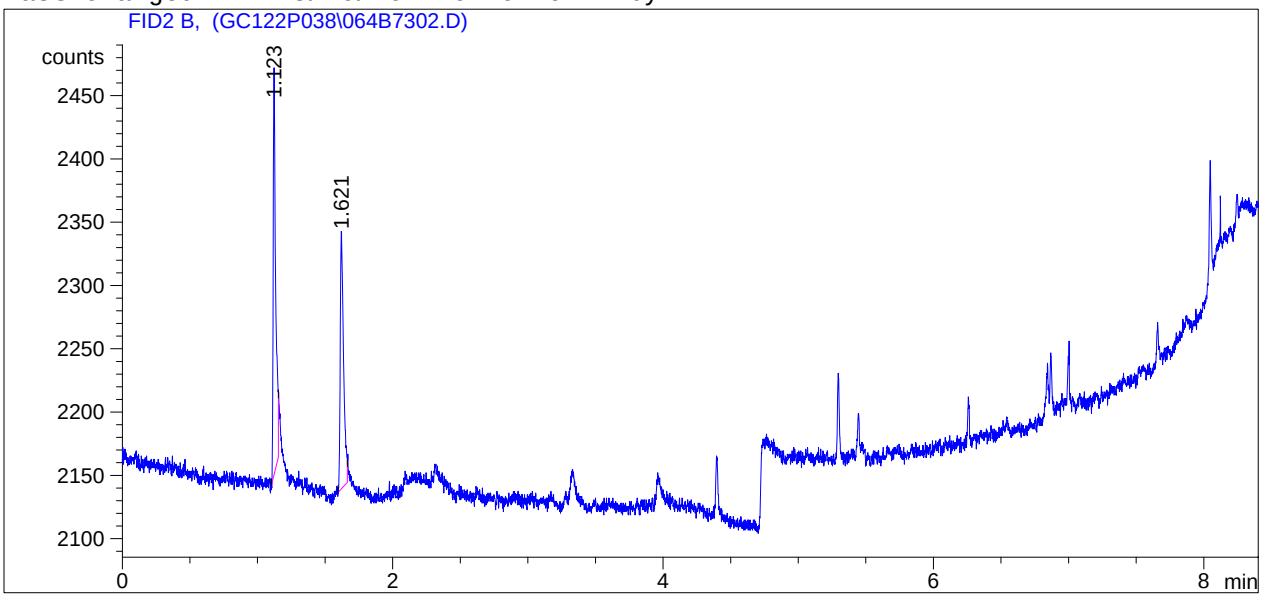
==========================================================================
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\064B7302.D
Sample Name: M18 H2O Cond RB Raff 0711-64

==========

Acq. Operator	: kmt	Seq. Line	: 73
Acq. Instrument	: Teller online	Location	: Vial 64
Injection Date	: 8/17/2011 4:35:19 PM	Inj	: 2
		Inj Volume	: 1 µl

Sequence File : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 6:20:49 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.780		-	-	-		Acrylonitrile
3.903		-	-	-		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 0.00000

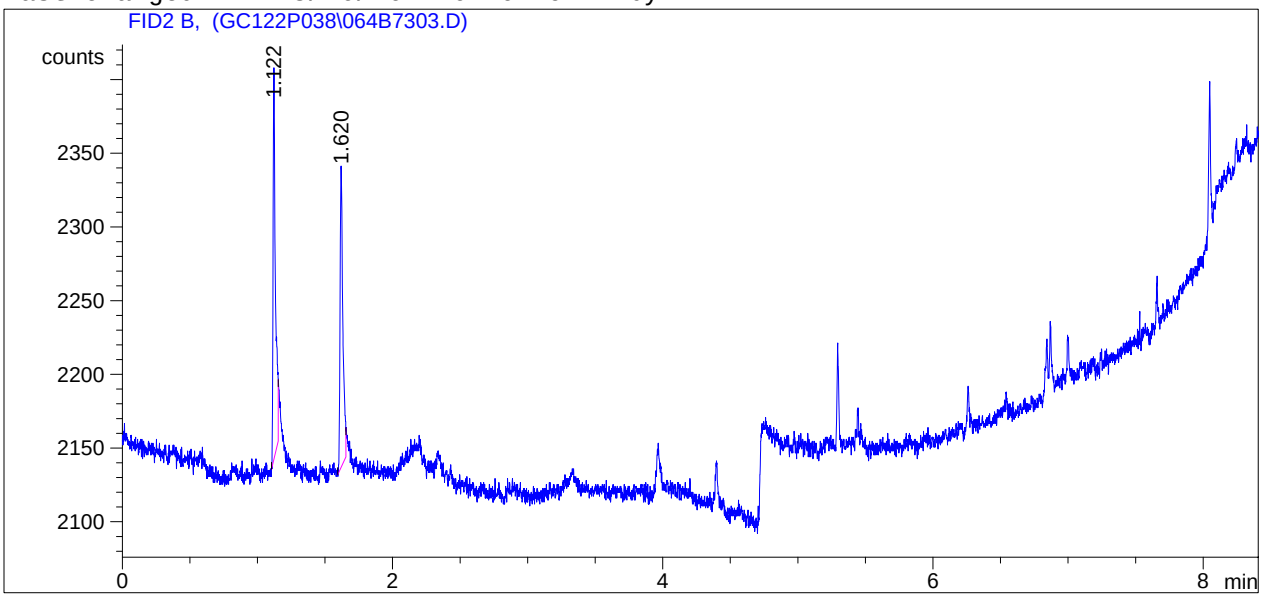
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\064B7303.D
Sample Name: M18 H2O Cond RB Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  73
Acq. Instrument : Teller online                 Location : Vial 64
Injection Date  : 8/17/2011 4:49:14 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780            -          -          -         Acrylonitrile
  3.903            -          -          -         Acetonitrile
  4.784            -          -          -         2-Nitropropane

Totals :                                0.00000

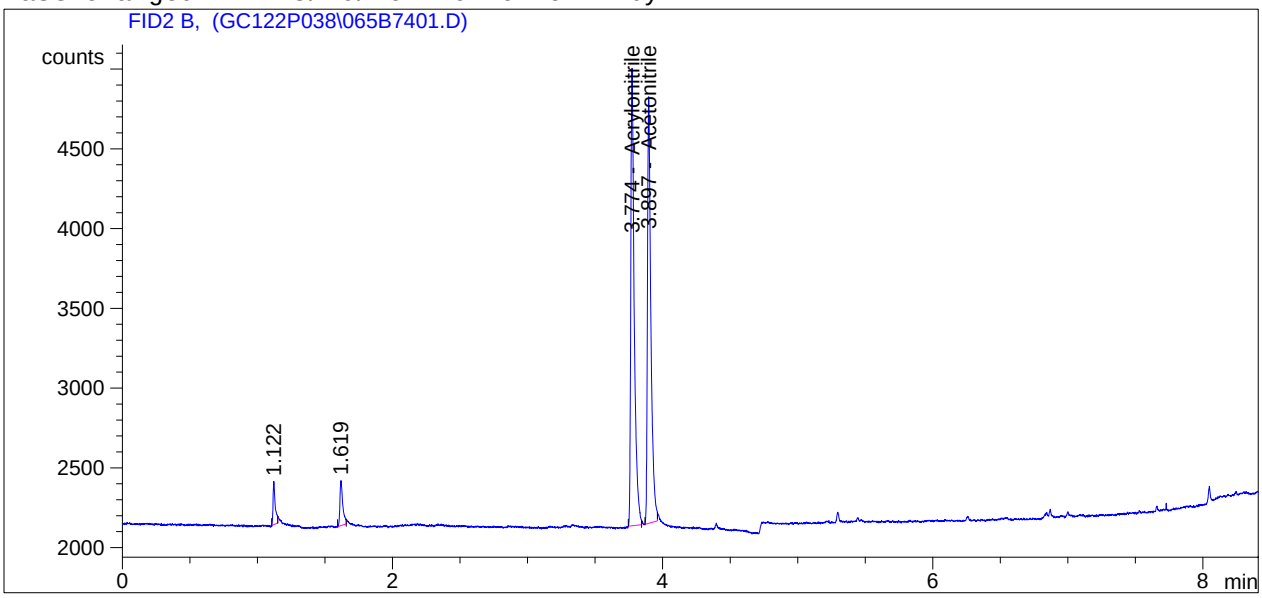

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\065B7401.D
Sample Name: AQ LCS 1 Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  74
Acq. Instrument : Teller online                 Location : Vial 65
Injection Date  : 8/17/2011 5:03:08 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.774	BB	5064.24658	3.51593e-3	17.80556		Acrylonitrile
3.897	BB	4712.90918	4.43622e-3	20.90751		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 38.71307

M18 AQ LCS 10mL H2O extracted with 2mL CS2. AQ layer analyzed (10mL volume) Tag (ug):
235.7
235.3

```
1 Warnings or Errors :

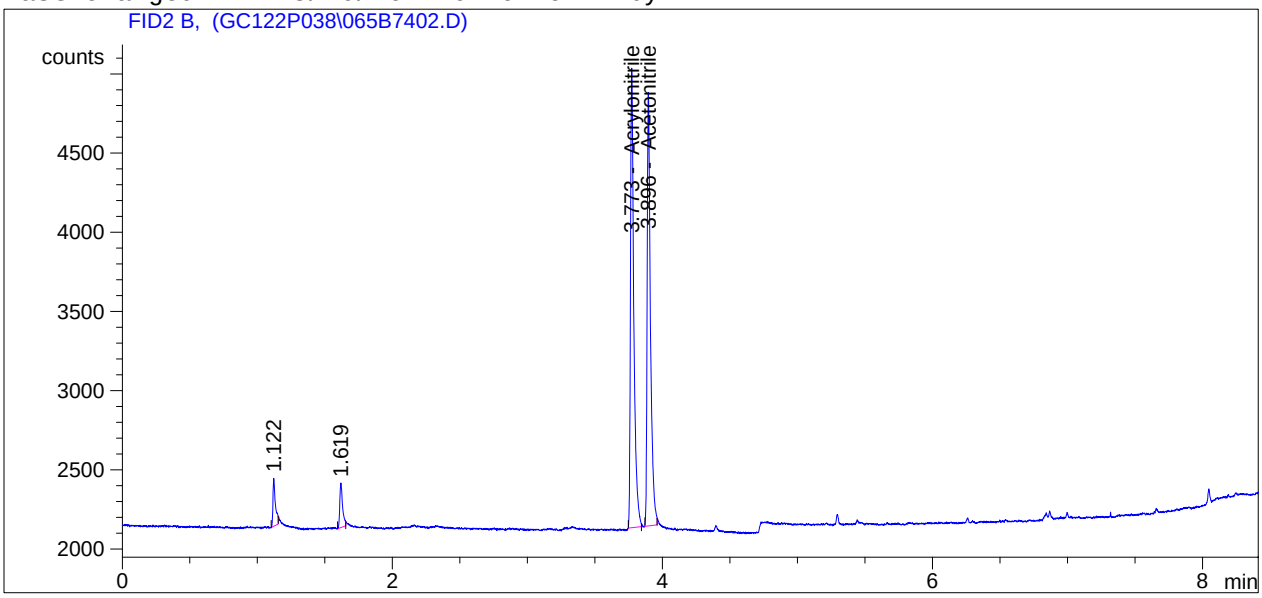
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\065B7402.D
Sample Name: AQ LCS 1 Raff 0711-64

==========

Acq. Operator : kmt Seq. Line : 74
Acq. Instrument : Teller online Location : Vial 65
Injection Date : 8/17/2011 5:17:08 PM Inj : 2
Inj Volume : 1 µl
Sequence File : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 6:20:49 PM by KMT



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.773	BB	4984.51758	3.51447e-3	17.51794		Acrylonitrile
3.896	BB	4672.67090	4.43541e-3	20.72520		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 38.24314

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

M18 AQ LCS
10mL H2O
extracted with 2mL
CS2. AQ layer
analyzed (10mL
volume) Tag (ug):
235.7
235.3

==========

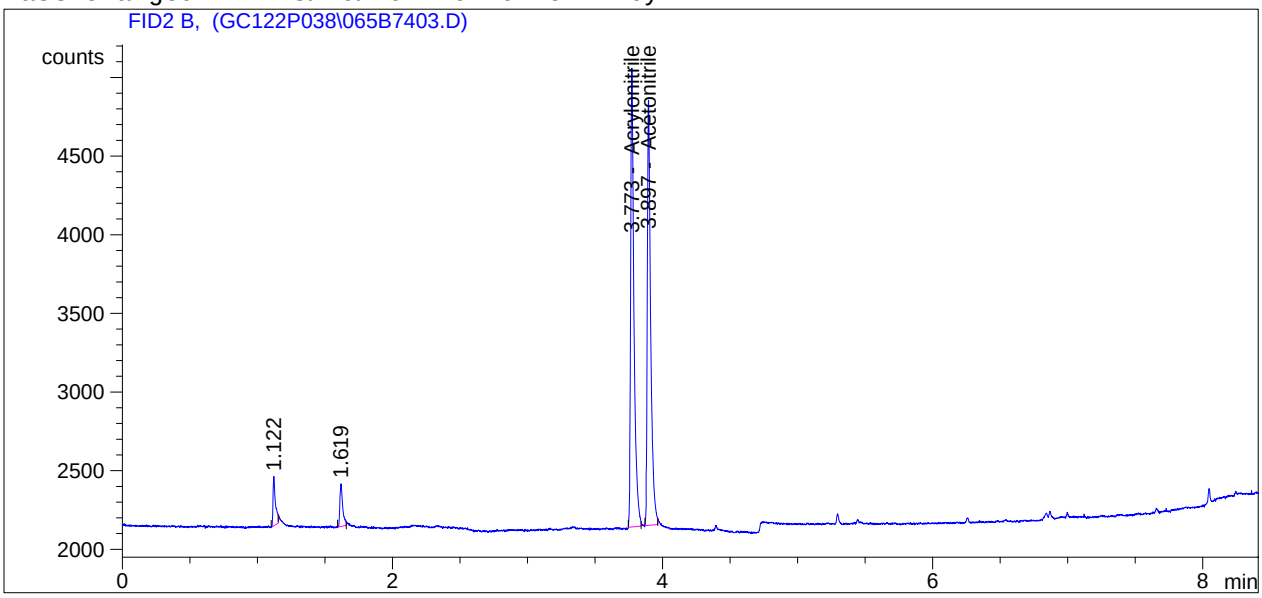
*** End of Report ***

EM-BTRF-001535

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\065B7403.D
Sample Name: AQ LCS 1 Raff 0711-64

==========

Acq. Operator : kmt Seq. Line : 74
Acq. Instrument : Teller online Location : Vial 65
Injection Date : 8/17/2011 5:31:06 PM Inj : 3
Inj Volume : 1 µl
Sequence File : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 6:20:49 PM by KMT



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.773	BB	4975.38574	3.51430e-3	17.48500		Acrylonitrile
3.897	BB	4694.07812	4.43584e-3	20.82219		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 38.30719

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

M18 AQ LCS 10mL H2O extracted with 2mL CS2. AQ layer analyzed (10mL volume) Tag (ug): 235.7 235.3

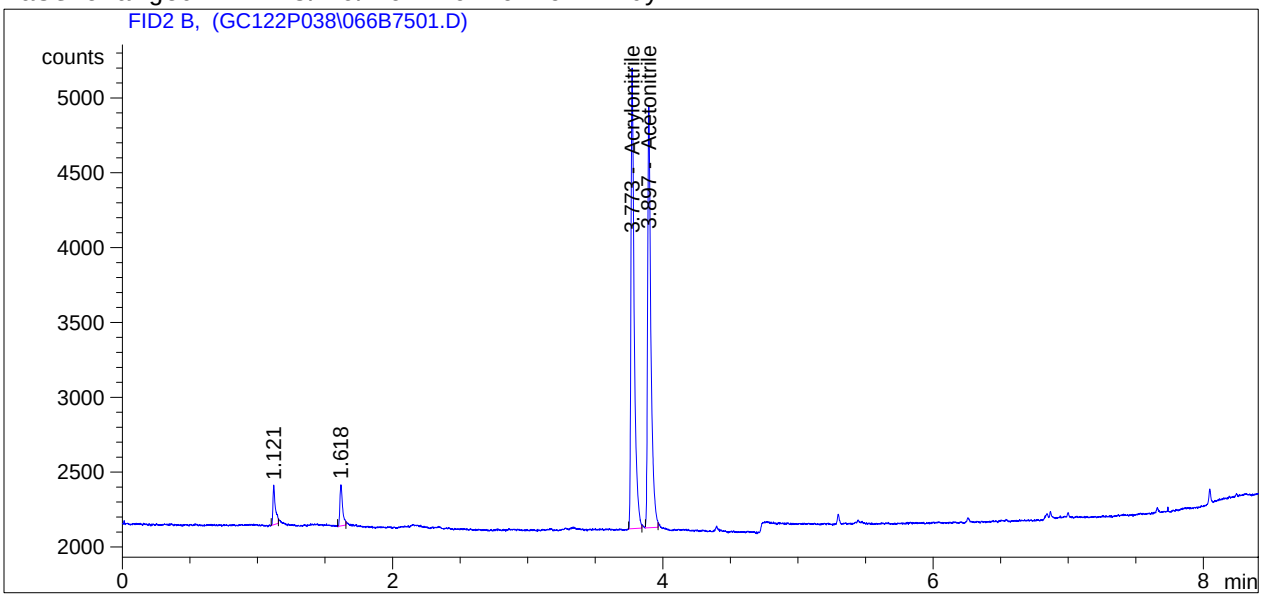
==========

*** End of Report ***

EM-BTRF-001536

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\066B7501.D
Sample Name: AQ LCS 2 Raff 0711-64

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  75
Acq. Instrument : Teller online                 Location : Vial 66
Injection Date  : 8/17/2011 5:45:06 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.773	BB	5108.88867	3.51673e-3	17.96661		Acrylonitrile
3.897	BB	4721.58740	4.43640e-3	20.94683		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 38.91344

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

M18 AQ LCS
10mL H2O
extracted with 2mL
CS2. AQ layer
analyzed (10mL
volume) Tag (ug):
235.7
235.3

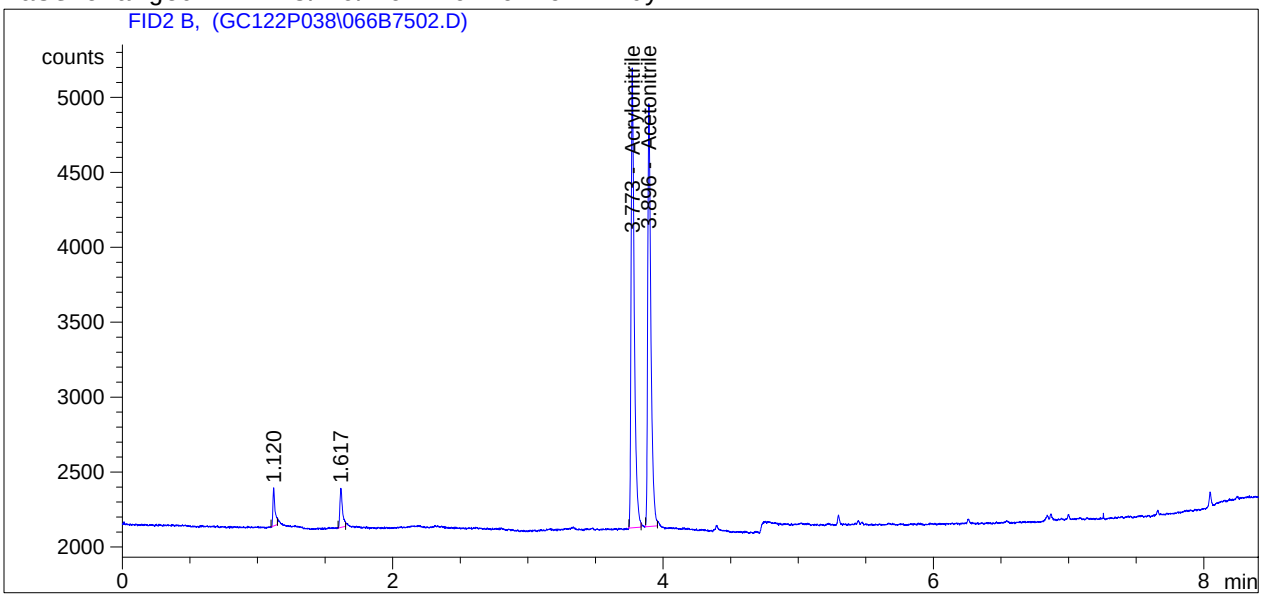
```
==========================================================================
                        *** End of Report ***
```

EM-BTRF-001537

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\066B7502.D
Sample Name: AQ LCS 2 Raff 0711-64

==========

Acq. Operator : kmt Seq. Line : 75
Acq. Instrument : Teller online Location : Vial 66
Injection Date : 8/17/2011 5:59:04 PM Inj : 2
Inj Volume : 1 µl
Sequence File : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 6:20:49 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.773	BB	4952.21143	3.51386e-3	17.40139		Acrylonitrile
3.896	BB	4573.81055	4.43334e-3	20.27728		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 37.67867

M18 AQ LCS
10mL H2O
extracted with 2mL
CS2. AQ layer
analyzed (10mL
volume) Tag (ug):
235.7
235.3

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

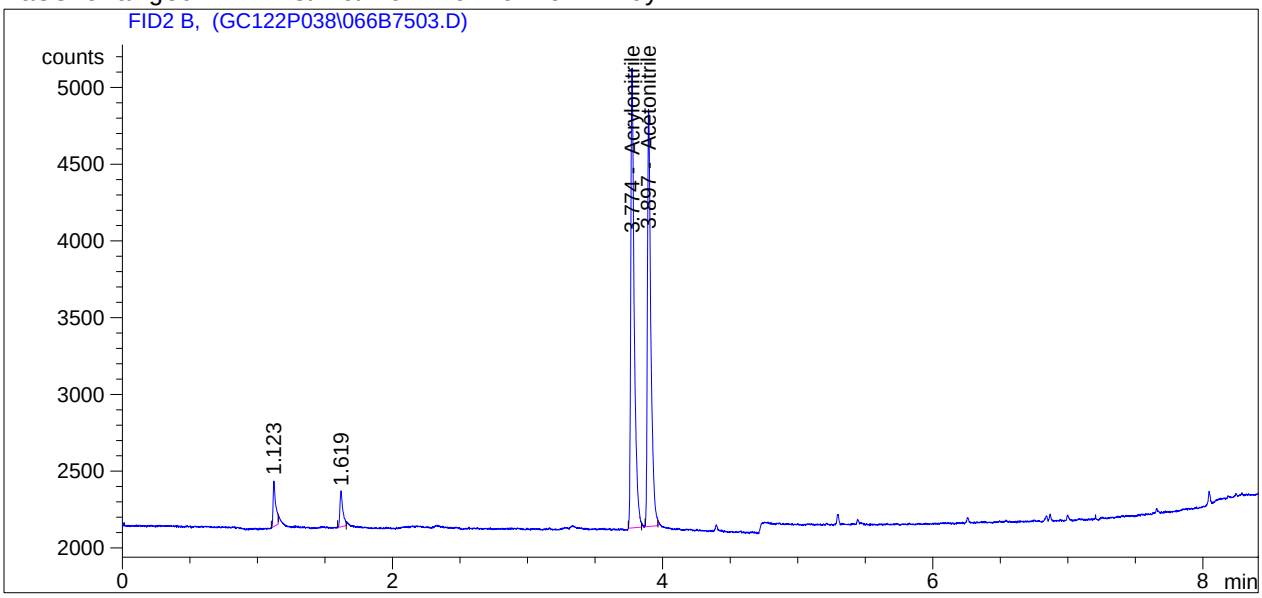
*** End of Report ***

EM-BTRF-001538

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\066B7503.D
Sample Name: AQ LCS 2 Raff 0711-64

==========

Acq. Operator : kmt Seq. Line : 75
Acq. Instrument : Teller online Location : Vial 66
Injection Date : 8/17/2011 6:13:10 PM Inj : 3
Inj Volume : 1 µl
Sequence File : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed : 8/16/2011 6:20:49 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.774	BB	5279.41406	3.51967e-3	18.58177		Acrylonitrile
3.897	BB	4782.83154	4.43761e-3	21.22432		Acetonitrile
4.784		-	-	-		2-Nitropropane

Totals : 39.80609

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

M18 AQ LCS
10mL H2O
extracted with 2mL
CS2. AQ layer
analyzed (10mL
volume) Tag (ug):
235.7
235.3

==========

*** End of Report ***

EM-BTRF-001539

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 8/16/2011 6:20:02 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Resp)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID2 B,

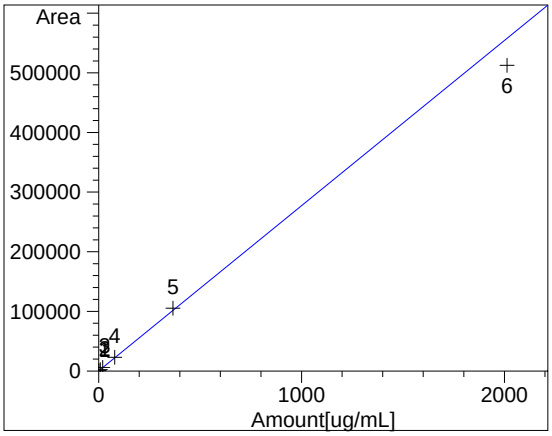
RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref	Grp	Name
3.780	1	1	2.01200	683.80528	2.94236e-3			Acrylonitrile
		2	8.03600	2338.36686	3.43659e-3			
		3	20.03000	5914.04883	3.38685e-3			
		4	78.94100	2.28784e4	3.45046e-3			
		5	366.00000	1.05256e5	3.47725e-3			
		6	2013.00000	5.12580e5	3.92719e-3			
3.903	1	1	1.96400	531.12041	3.69784e-3			Acetonitrile
		2	7.84300	1808.79211	4.33604e-3			
		3	19.54800	4561.36377	4.28556e-3			
		4	77.04300	1.76449e4	4.36630e-3			
		5	357.20000	8.14132e4	4.38750e-3			
		6	1964.60000	4.04380e5	4.85831e-3			
4.784	1	1	2.41900	568.69916	4.25357e-3			2-Nitropropane
		2	9.66300	1945.16650	4.96770e-3			
		3	24.08400	4864.18864	4.95129e-3			
		4	94.92100	1.90587e4	4.98045e-3			
		5	440.10000	8.94959e4	4.91754e-3			
		6	2420.48000	4.44477e5	5.44568e-3			

Peak Sum Table

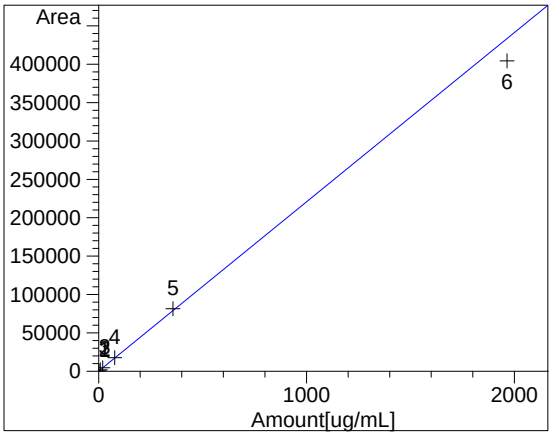
No Entries in table

EM-BTRF-001541

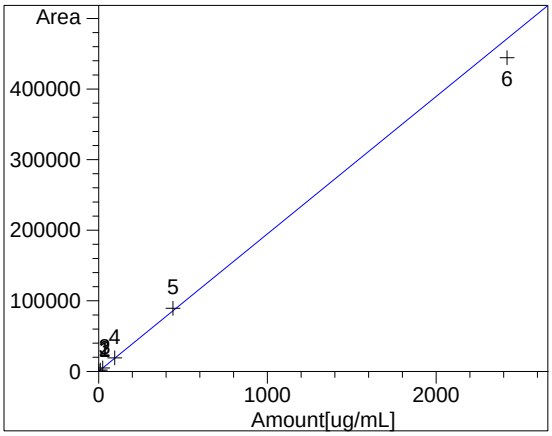
Calibration Curves



Acrylonitrile at exp. RT: 3.780
FID2 B,
Correlation: 0.99851
Residual Std. Dev.: 22855.47589
Formula: y = mx + b
m: 277.20114
b: 128.52511
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.085514
Level 3 : 0.013369
Level 4 : 0.000893
Level 5 : 0.000042
Level 6 : 1.77968e-006



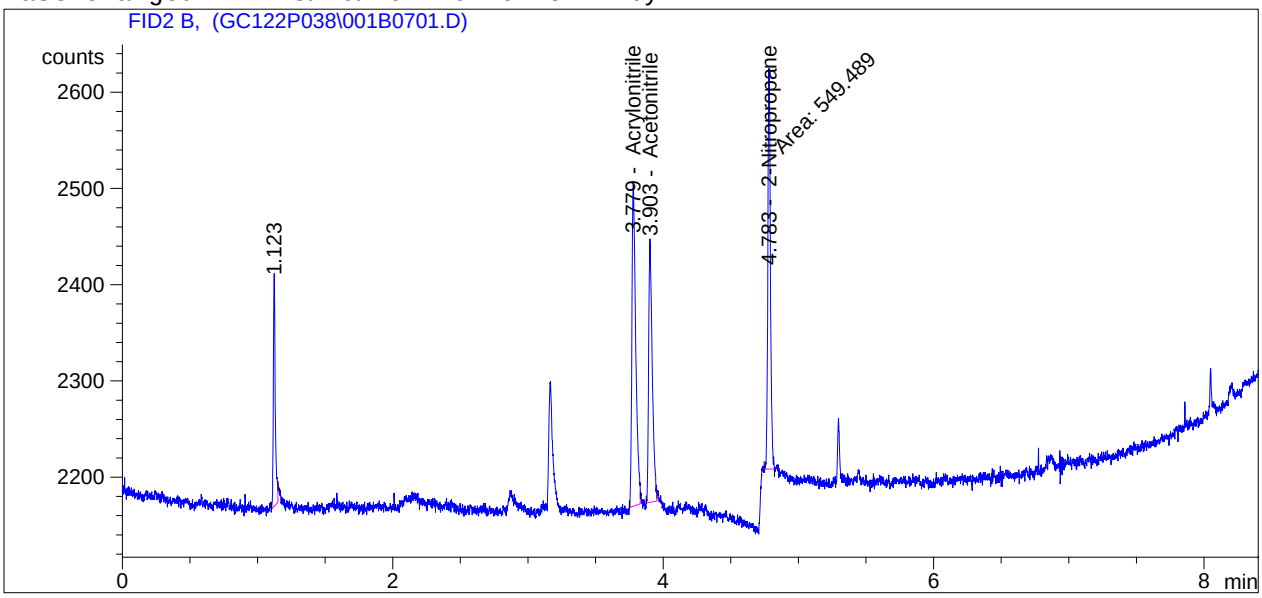
Acetonitrile at exp. RT: 3.903
FID2 B,
Correlation: 0.99898
Residual Std. Dev.: 14717.10451
Formula: y = mx + b
m: 220.70935
b: 98.42595
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.08622
Level 3 : 0.013558
Level 4 : 0.000906
Level 5 : 0.000043
Level 6 : 1.72507e-006



2-Nitropropane at exp. RT: 4.784
FID2 B,
Correlation: 0.99920
Residual Std. Dev.: 13632.19316
Formula: y = mx + b
m: 194.75049
b: 96.35906
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.085477
Level 3 : 0.013669
Level 4 : 0.00089
Level 5 : 0.00004
Level 6 : 1.63707e-006

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0701.D
Sample Name: gc122p038 #1

Acq. Operator	: kmt	Seq. Line	: 7
Acq. Instrument	: Teller online	Location	: Vial 1
Injection Date	: 8/15/2011 5:05:25 PM	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S		
Acq. Method	: G:\GC2011Q3\TELLER\METHODS\GC122P038.M		
Last changed	: 8/15/2011 1:51:07 PM by kmt		
Analysis Method	: I:\GC2011Q3\TELLER\METHODS\GC122P038.M		
Last changed	: 8/16/2011 6:20:49 PM by KMT		



External Standard Report

Sorted By : Signal
Calib. Data Modified : 8/16/2011 6:20:02 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.779	BB	659.83844	2.93186e-3	1.93455		Acrylonitrile
3.903	BB	508.06326	3.69243e-3	1.87599		Acetonitrile
4.783	MM	549.48938	4.26285e-3	2.34239		2-Nitropropane
Totals :				6.15293		

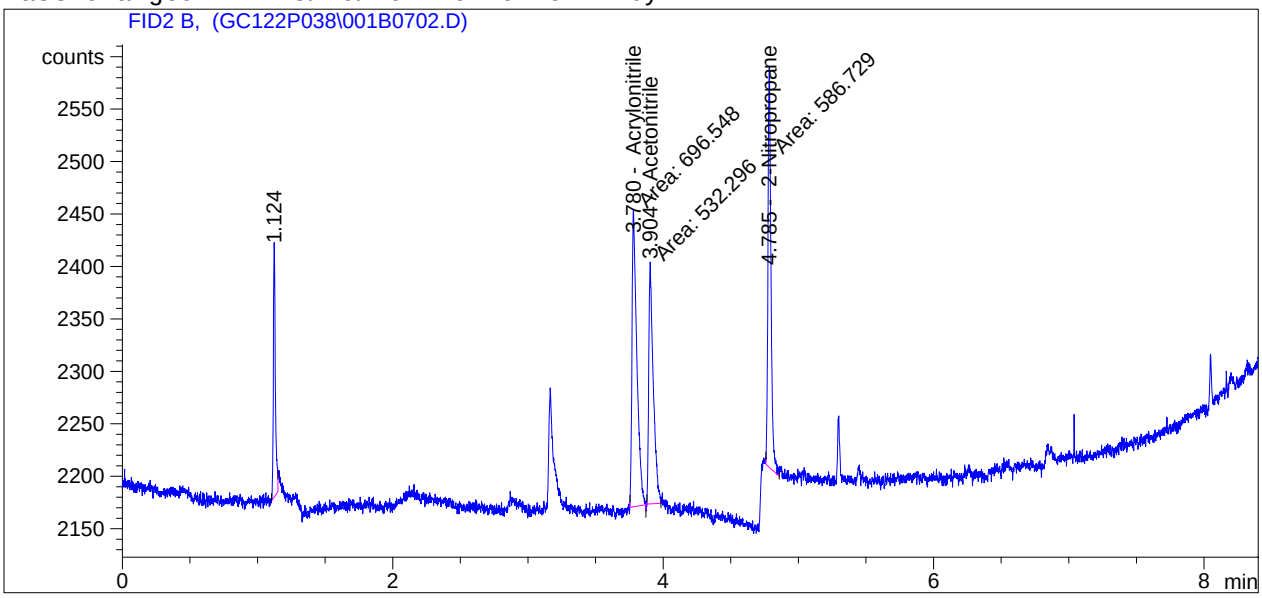
Manual Int. "II" (KAM)

*** End of Report ***

EM-BTRF-001543

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0702.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 5:19:23 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780 MM      696.54803 2.94185e-3    2.04914    Acrylonitrile
  3.904 MM      532.29565 3.69305e-3    1.96580    Acetonitrile
  4.785 MM      586.72870 4.29149e-3    2.51794    2-Nitropropane

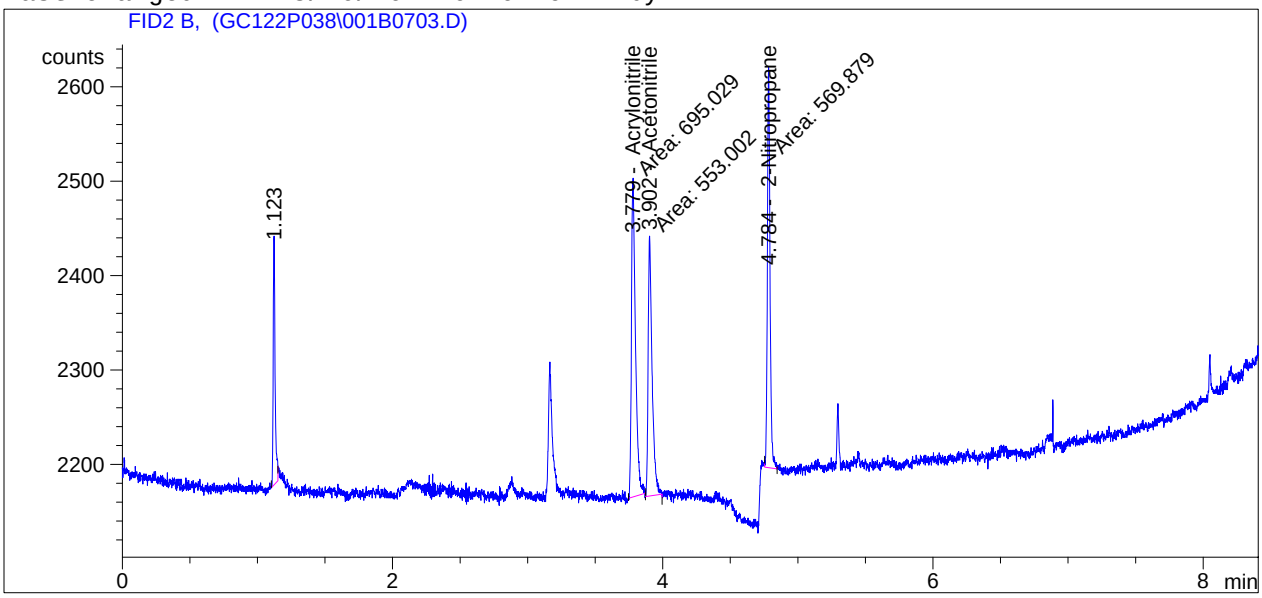
Totals :                                6.53287


==========================================================================
                          *** End of Report ***
```

Manual Int. "II" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0703.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 5:33:15 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.779 MM      695.02936 2.94039e-3    2.04366    Acrylonitrile
  3.902 MM      553.00232 3.72442e-3    2.05962    Acetonitrile
  4.784 MM      569.87939 4.26655e-3    2.43142    2-Nitropropane

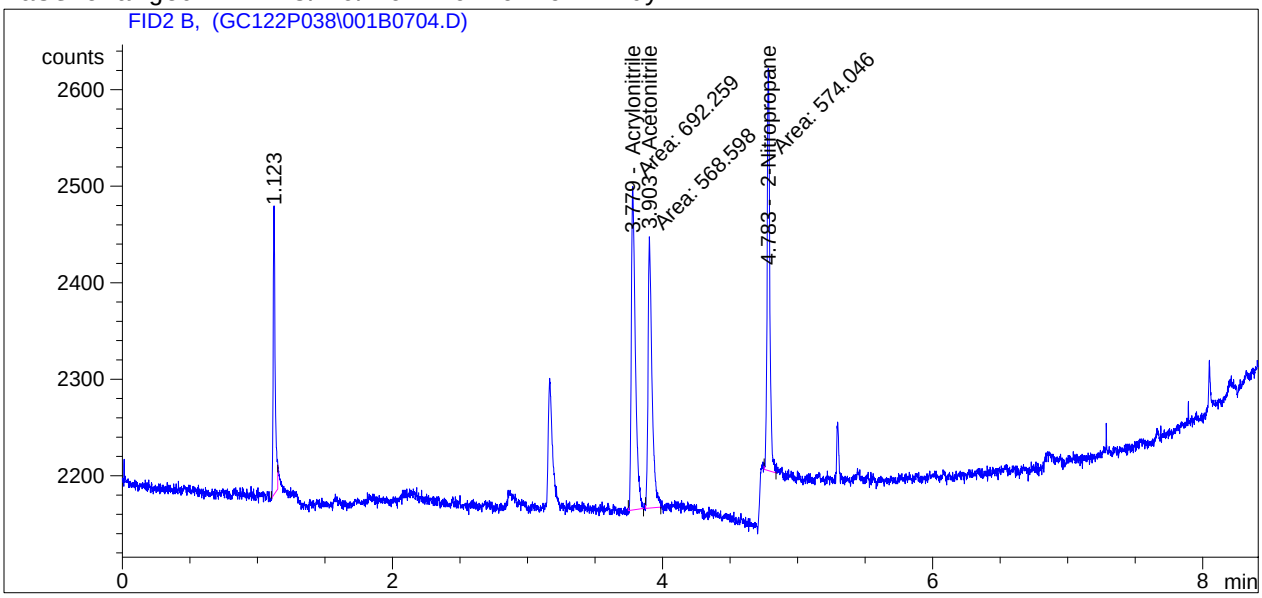
Totals :                                6.53469


==========================================================================
                          *** End of Report ***
```

Manual Int. "II" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0704.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 5:47:11 PM               Inj :   4
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.779 MM      692.25903 2.93772e-3    2.03366    Acrylonitrile
  3.903 MM      568.59753 3.74654e-3    2.13027    Acetonitrile
  4.783 MM      574.04608 4.27285e-3    2.45282    2-Nitropropane

Totals :                                6.61675


==========================================================================
                          *** End of Report ***
```

Manual Int. "II" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0705.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 6:01:01 PM               Inj :   5
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
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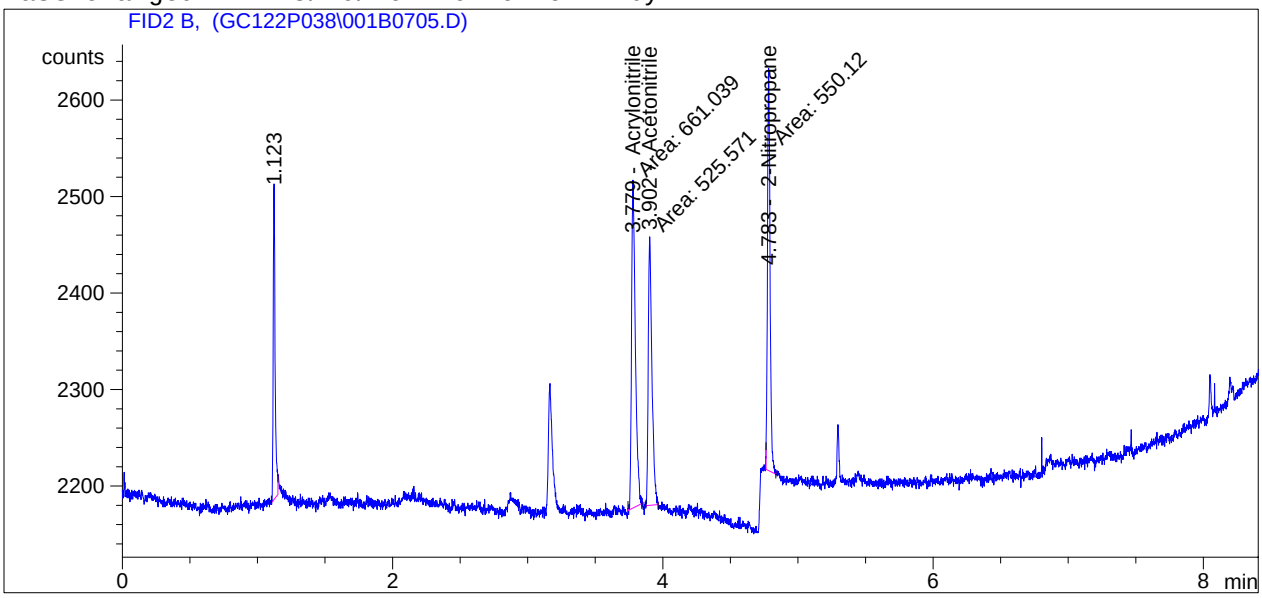
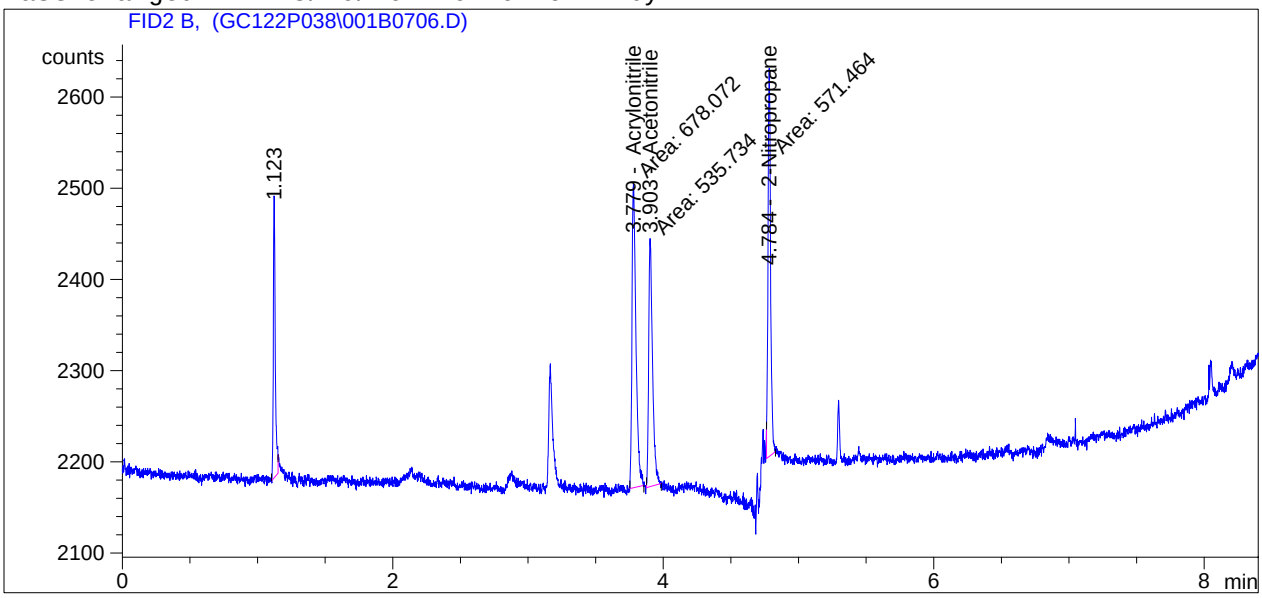



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.779 MM      661.03851 2.93186e-3    1.93807    Acrylonitrile
  3.902 MM      525.57141 3.69243e-3    1.94064    Acetonitrile
  4.783 MM      550.11987 4.26285e-3    2.34508    2-Nitropropane

Totals :                                6.22379


==========================================================================
                          *** End of Report ***
```

Manual Int. “II” (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0706.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 6:14:59 PM               Inj :   6
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

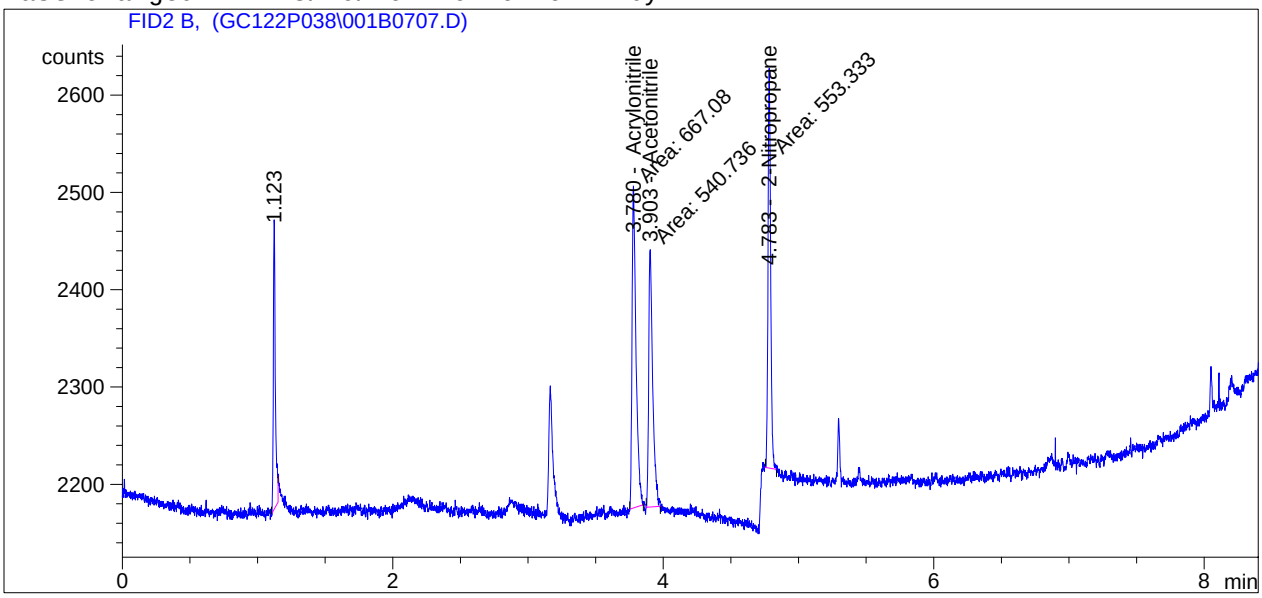



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.779 MM      678.07196 2.93186e-3    1.98801    Acrylonitrile
  3.903 MM      535.73364 3.69843e-3    1.98137    Acetonitrile
  4.784 MM      571.46405 4.26896e-3    2.43956    2-Nitropropane

Totals :                                6.40894


==========================================================================
                          *** End of Report ***
```

Manual Int. "II" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0707.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 6:28:51 PM               Inj :   7
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

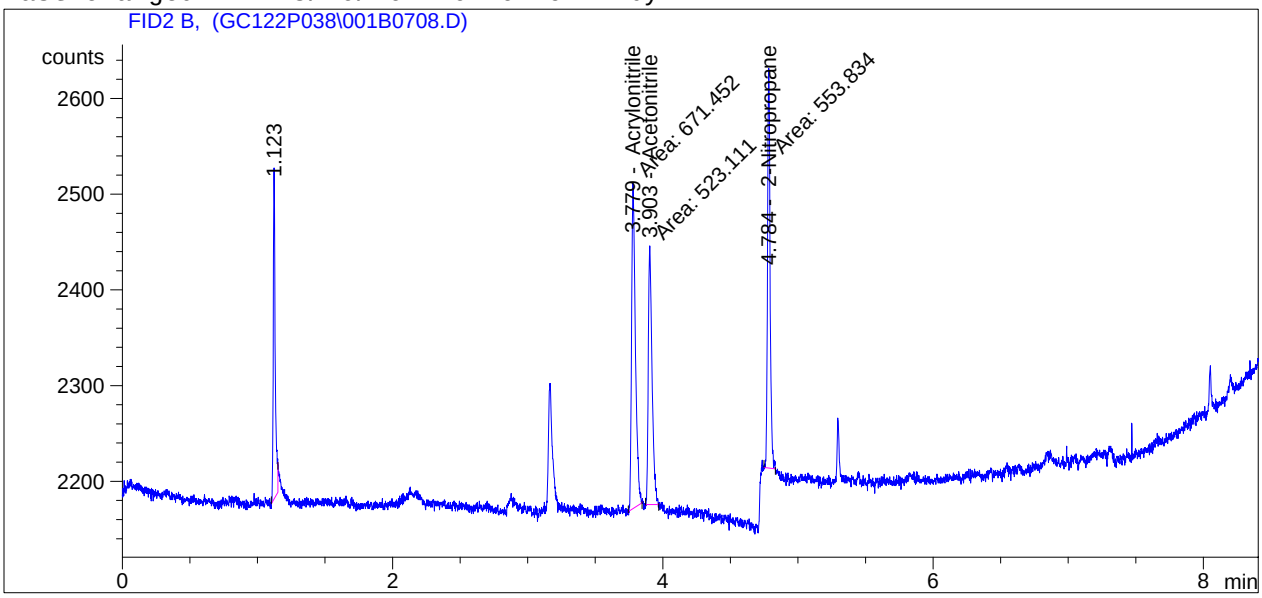



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.780 MM      667.07965 2.93186e-3    1.95578    Acrylonitrile
  3.903 MM      540.73584 3.70613e-3    2.00404    Acetonitrile
  4.783 MM      553.33295 4.26285e-3    2.35878    2-Nitropropane

Totals :                                6.31860


==========================================================================
                          *** End of Report ***
```

Manual Int. "II" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\001B0708.D
Sample Name: gc122p038 #1

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   7
Acq. Instrument : Teller online                 Location : Vial 1
Injection Date  : 8/15/2011 6:42:45 PM               Inj :   8
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

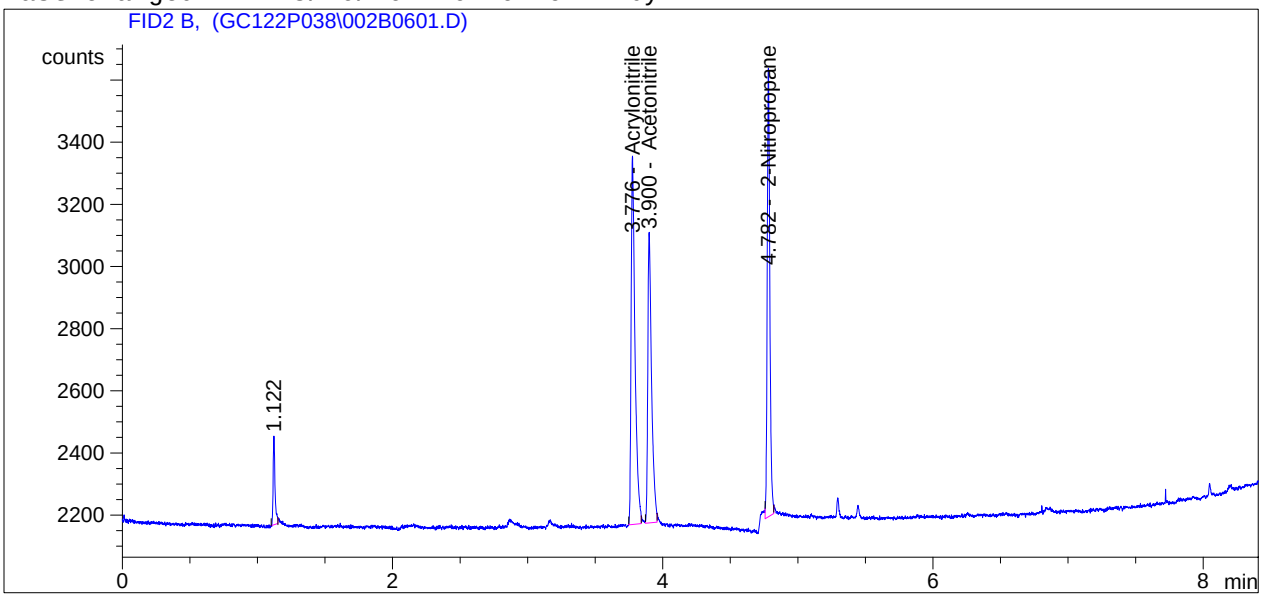



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.779 MM      671.45215 2.93186e-3    1.96860    Acrylonitrile
  3.903 MM      523.11084 3.69243e-3    1.93155    Acetonitrile
  4.784 MM      553.83398 4.26285e-3    2.36091    2-Nitropropane

Totals :                                6.26107


==========================================================================
                          *** End of Report ***
```

Manual Int. "II" (KAM)

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\002B0601.D
Sample Name: gc122p038 #2

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   6
Acq. Instrument : Teller online                 Location : Vial 2
Injection Date  : 8/15/2011 4:23:44 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

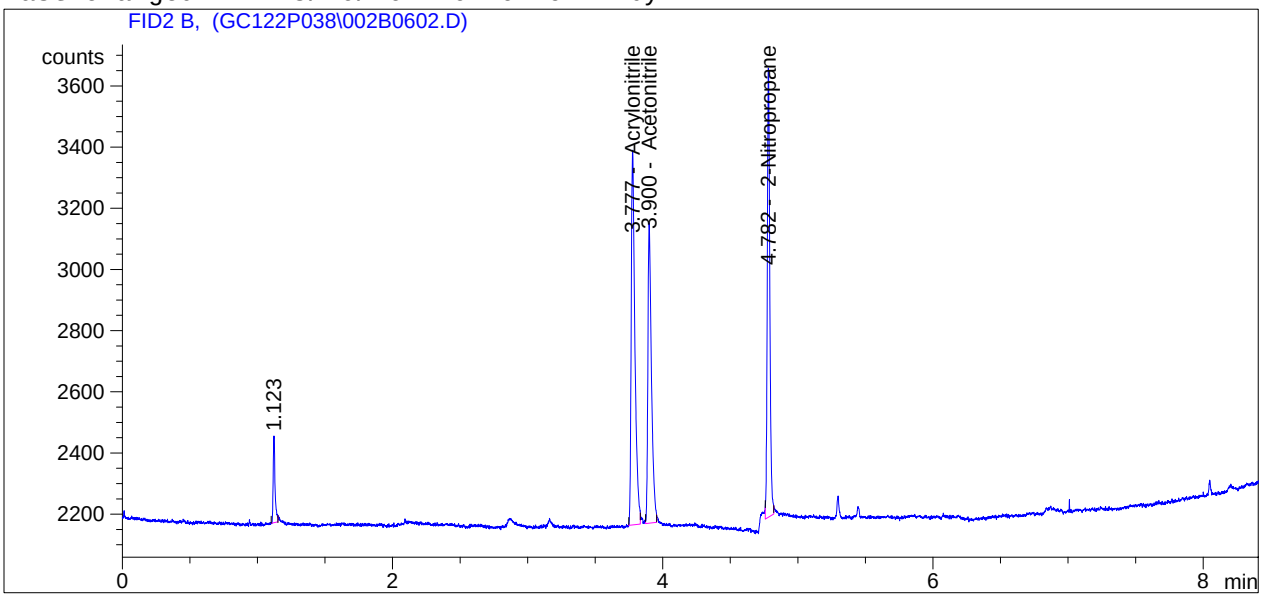
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.776	BB	2351.68188	3.41033e-3	8.02001		Acrylonitrile
3.900	BB	1813.10754	4.28489e-3	7.76896		Acetonitrile
4.782	BB	1948.47888	4.88084e-3	9.51022		2-Nitropropane

Totals : 25.29919

```
==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\002B0602.D
Sample Name: gc122p038 #2

```
==========================================================================
Acq. Operator   : kmt                              Seq. Line :   6
Acq. Instrument : Teller online                     Location : Vial 2
Injection Date  : 8/15/2011 4:37:33 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

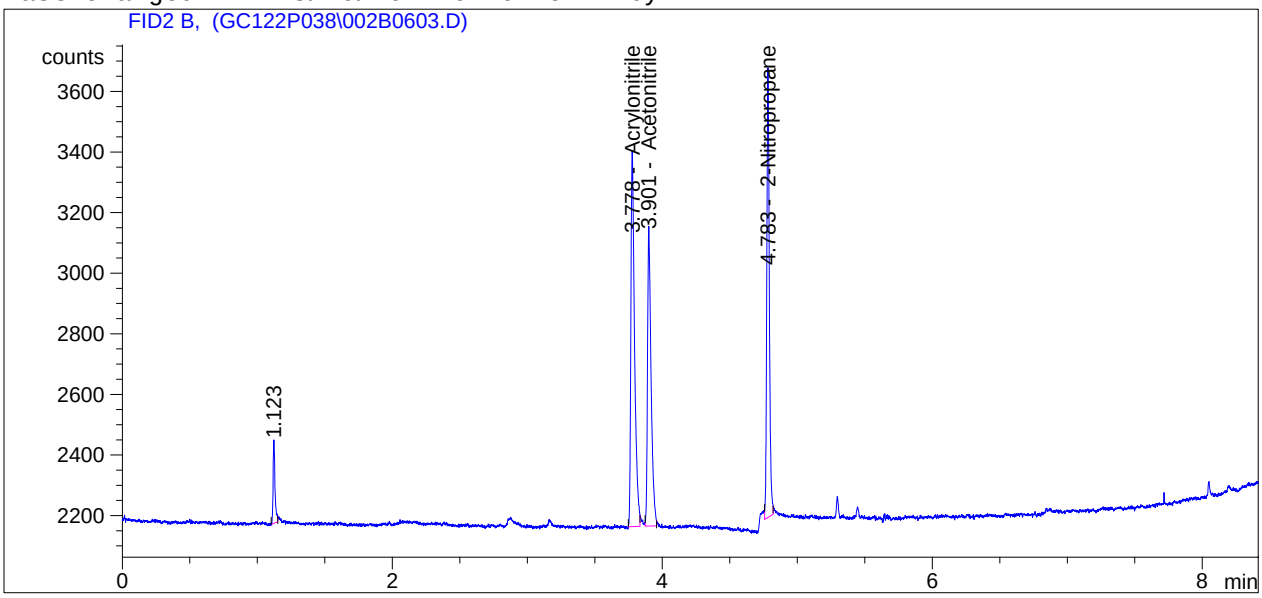
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.777	BB	2317.33398	3.40741e-3	7.89610		Acrylonitrile
3.900	BB	1805.63611	4.28387e-3	7.73511		Acetonitrile
4.782	BB	1937.86133	4.87945e-3	9.45570		2-Nitropropane

Totals : 25.08691

```
==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\002B0603.D
Sample Name: gc122p038 #2

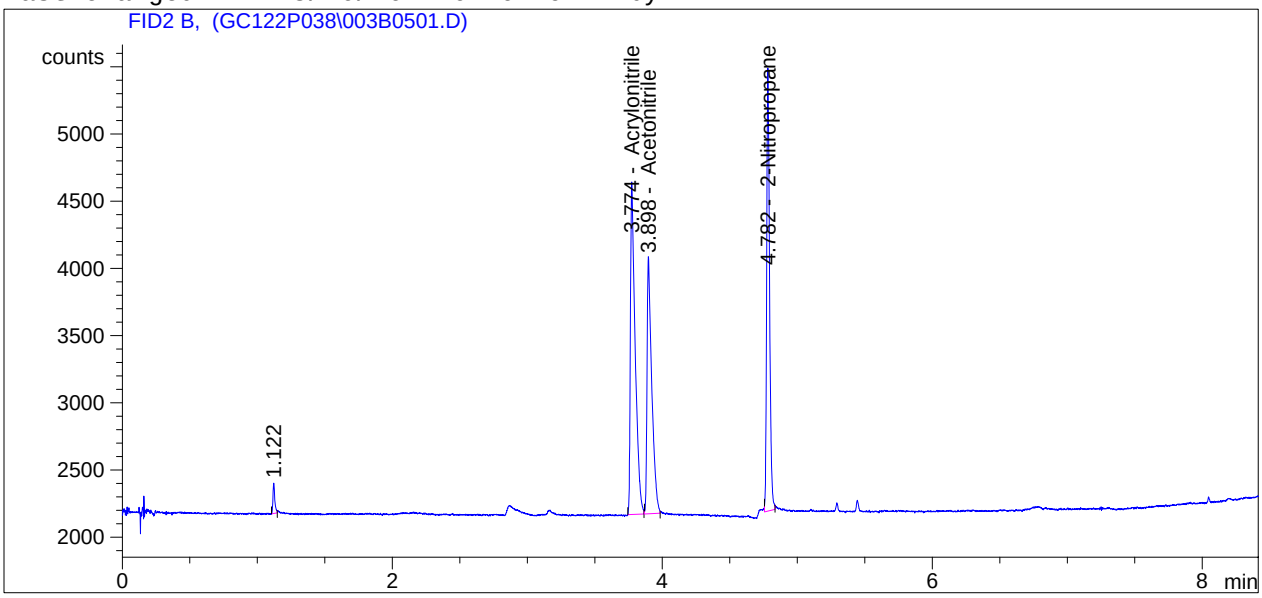
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   6
Acq. Instrument : Teller online                 Location : Vial 2
Injection Date  : 8/15/2011 4:51:27 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.778 BB     2346.08472 3.40986e-3    7.99982    Acrylonitrile
  3.901 BB     1807.63269 4.28414e-3    7.74415    Acetonitrile
  4.783 BB     1949.15930 4.88093e-3    9.51371    2-Nitropropane

Totals :                                25.25769


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B0501.D
Sample Name: gc122p038 #3

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   5
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/15/2011 3:41:45 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

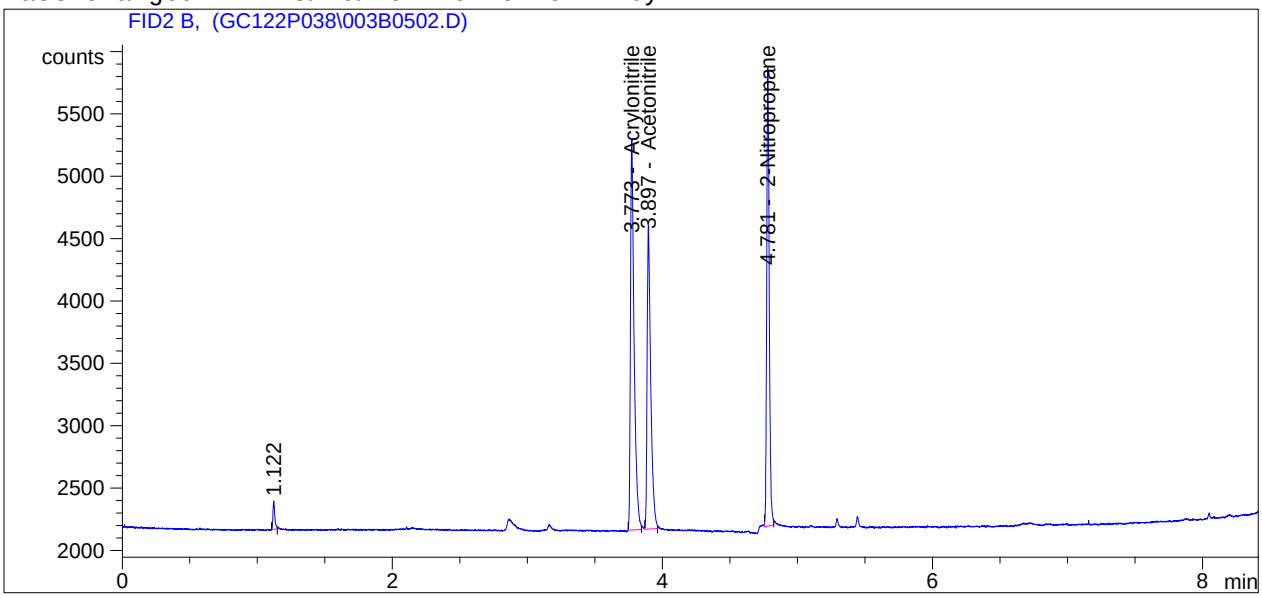
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.774	BB	6022.22803	3.53050e-3	21.26147		Acrylonitrile
3.898	BB	4633.76123	4.43461e-3	20.54890		Acetonitrile
4.782	BB	4942.21875	5.03466e-3	24.88240		2-Nitropropane

Totals : 66.69277

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B0502.D
Sample Name: gc122p038 #3

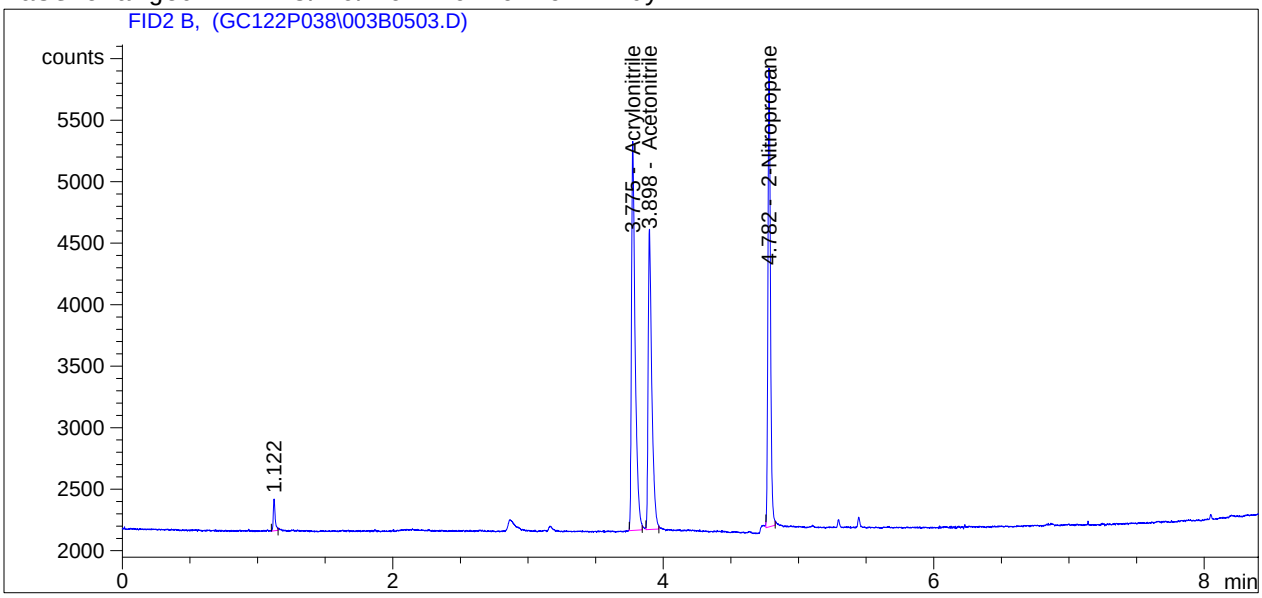
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   5
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/15/2011 3:55:52 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.773 BB     5812.05908 3.52771e-3   20.50329    Acrylonitrile
  3.897 BB     4494.06689 4.43161e-3   19.91597    Acetonitrile
  4.781 BB     4780.94678 5.03128e-3   24.05430    2-Nitropropane

Totals :                                64.47356


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B0503.D
Sample Name: gc122p038 #3

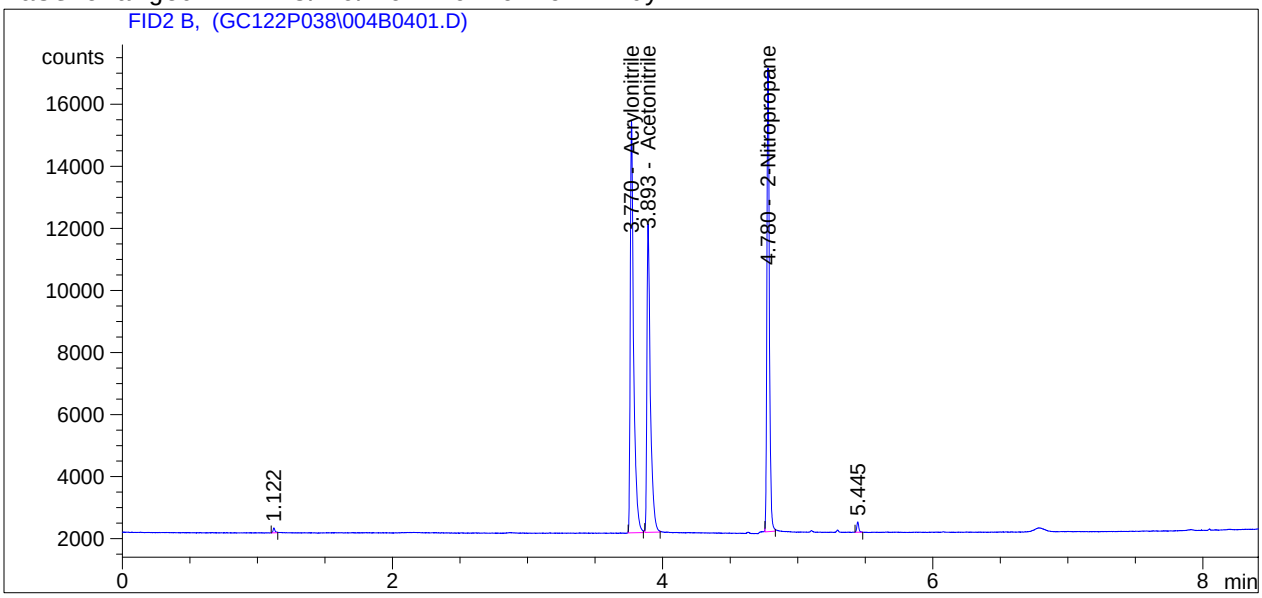
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   5
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/15/2011 4:09:46 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.775 BB     5907.85937 3.52901e-3   20.84888    Acrylonitrile
  3.898 BB     4556.26318 4.43297e-3   20.19777    Acetonitrile
  4.782 BB     4869.40039 5.03316e-3   24.50849    2-Nitropropane

Totals :                                65.55515


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B0401.D
Sample Name: gc122p038 #4

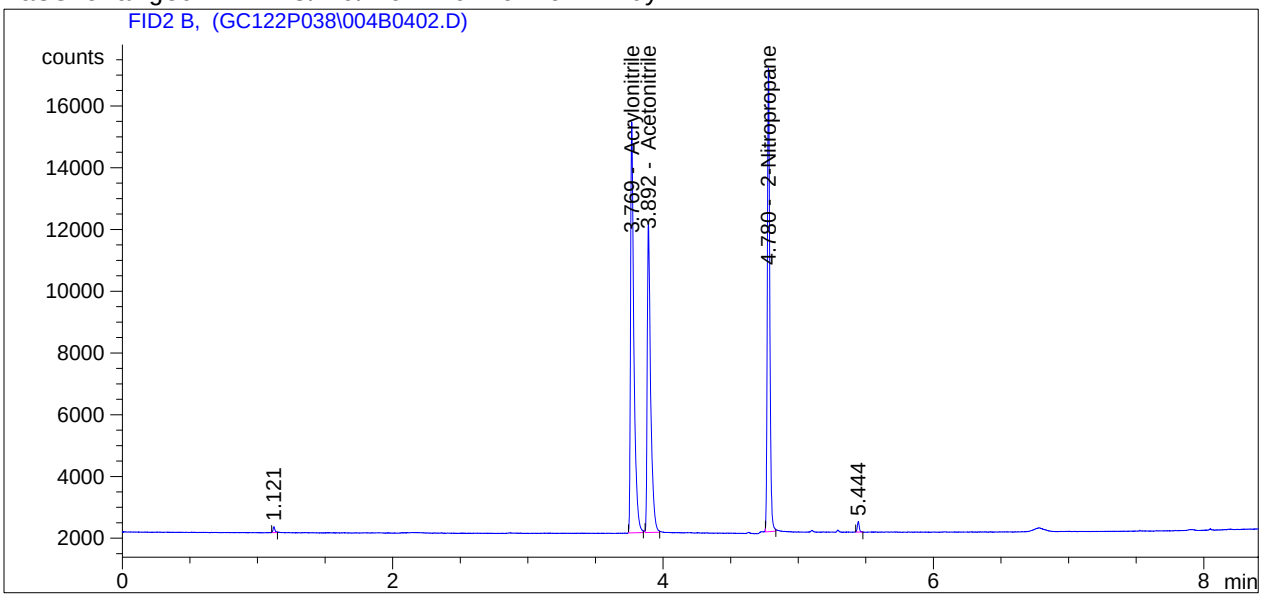
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   4
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/15/2011 2:59:48 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.770 BB     2.27419e4  3.58710e-3   81.57744    Acrylonitrile
  3.893 BB     1.75698e4  4.50546e-3   79.16013    Acetonitrile
  4.780 BB     1.89821e4  5.10871e-3   96.97379    2-Nitropropane

Totals :                               257.71135


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B0402.D
Sample Name: gc122p038 #4

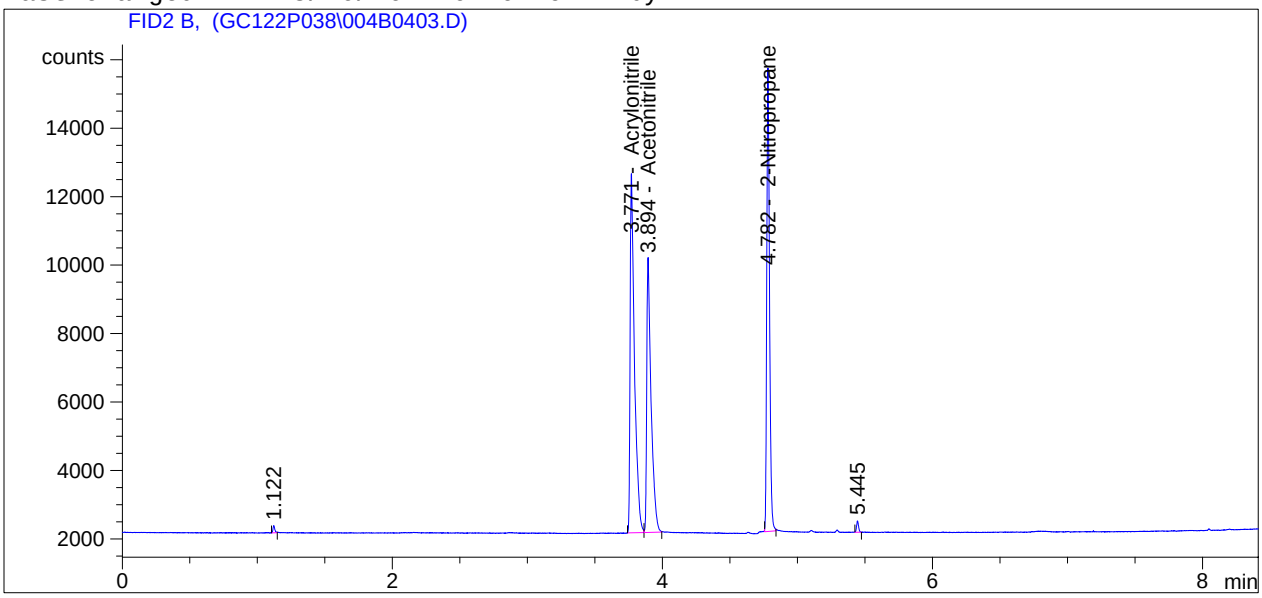
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   4
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/15/2011 3:13:46 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.769 BB     2.26428e4  3.58701e-3   81.22007    Acrylonitrile
  3.892 BB     1.74698e4  4.50532e-3   78.70720    Acetonitrile
  4.780 BB     1.88956e4  5.10859e-3   96.52997    2-Nitropropane

Totals :                               256.45724


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B0403.D
Sample Name: gc122p038 #4

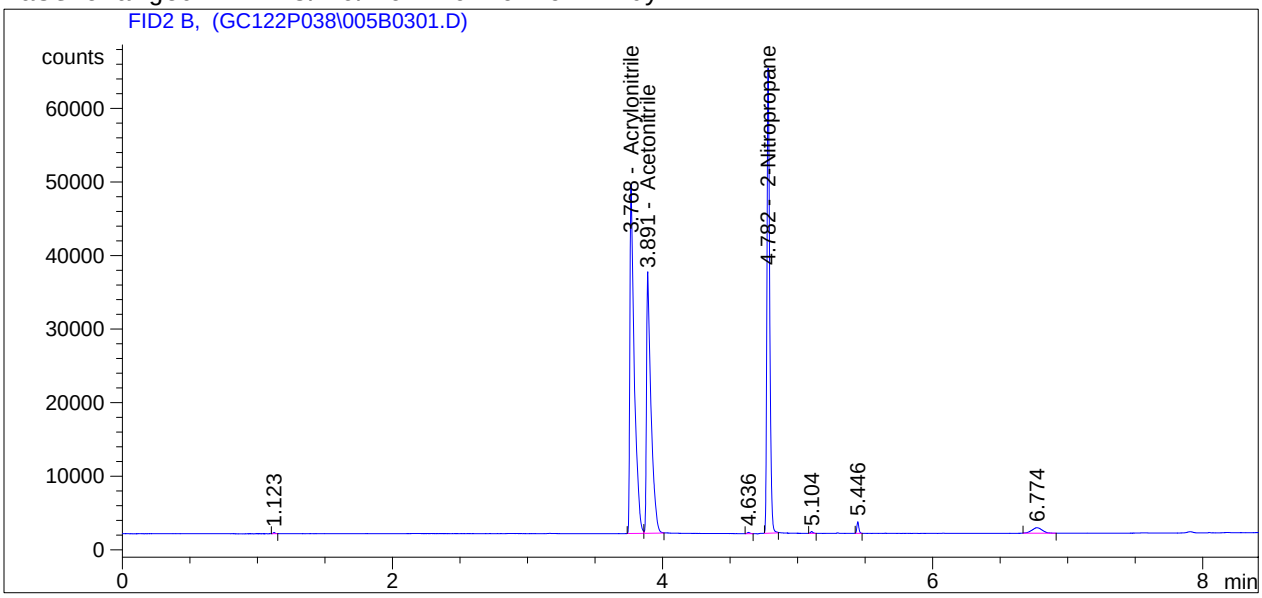
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   4
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/15/2011 3:27:47 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.771 BV     2.32504e4  3.58755e-3   83.41191    Acrylonitrile
  3.894 VB     1.78950e4  4.50593e-3   80.63374    Acetonitrile
  4.782 BB     1.92985e4  5.10914e-3   98.59850    2-Nitropropane

Totals :                               262.64414


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\005B0301.D
Sample Name: gc122p038 #5

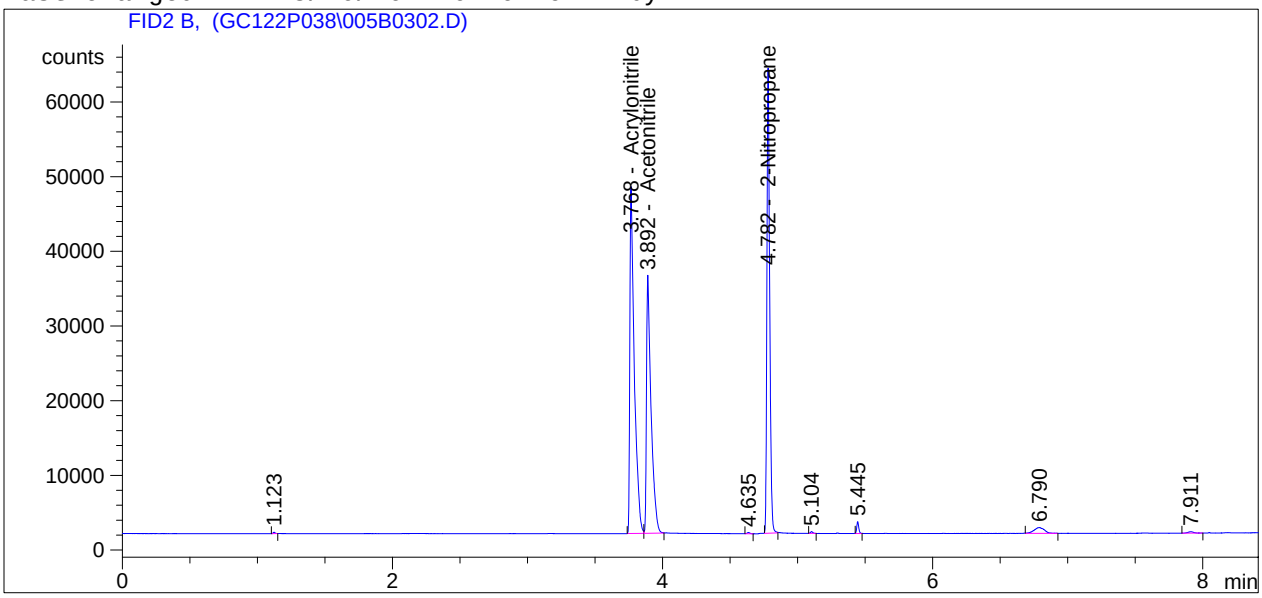
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   3
Acq. Instrument : Teller online                 Location : Vial 5
Injection Date  : 8/15/2011 2:17:53 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.768 BV     1.06025e5  3.60312e-3  382.01911    Acrylonitrile
  3.891 VB     8.20427e4  4.52541e-3  371.27677    Acetonitrile
  4.782 BB     9.01123e4  5.12928e-3  462.21164    2-Nitropropane

Totals :                              1215.50752


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\005B0302.D
Sample Name: gc122p038 #5

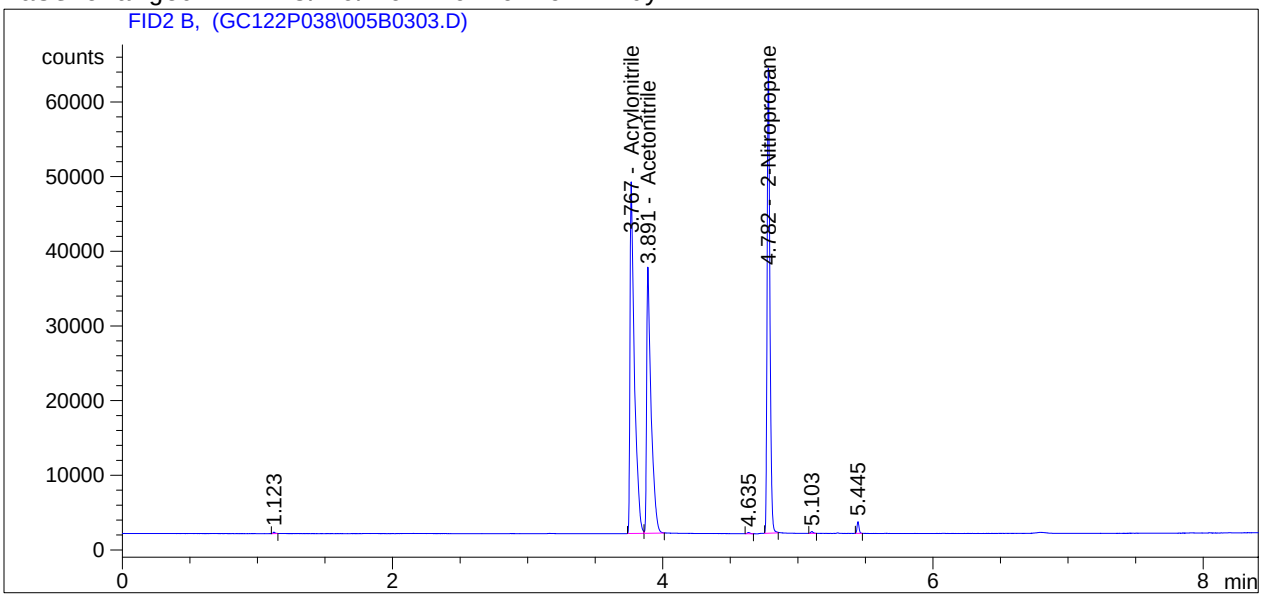
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   3
Acq. Instrument : Teller online                 Location : Vial 5
Injection Date  : 8/15/2011 2:31:46 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.768 BV     1.05140e5  3.60308e-3  378.82786    Acrylonitrile
  3.892 VB     8.12452e4  4.52536e-3  367.66370    Acetonitrile
  4.782 BB     8.93924e4  5.12924e-3  458.51504    2-Nitropropane

Totals :                              1205.00661


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\005B0303.D
Sample Name: gc122p038 #5

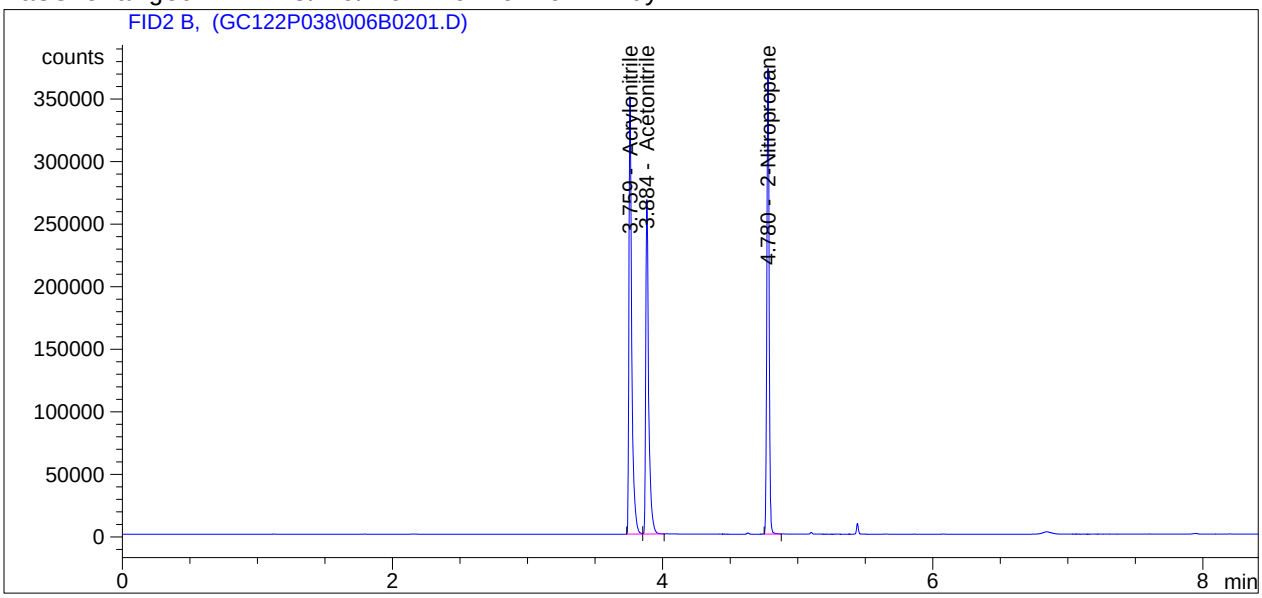
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   3
Acq. Instrument : Teller online                 Location : Vial 5
Injection Date  : 8/15/2011 2:45:45 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.767 BV     1.04602e5  3.60306e-3  376.88754    Acrylonitrile
  3.891 VB     8.09516e4  4.52534e-3  366.33319    Acetonitrile
  4.782 BB     8.89830e4  5.12921e-3  456.41312    2-Nitropropane

Totals :                              1199.63384


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\006B0201.D
Sample Name: gc122p038 #6

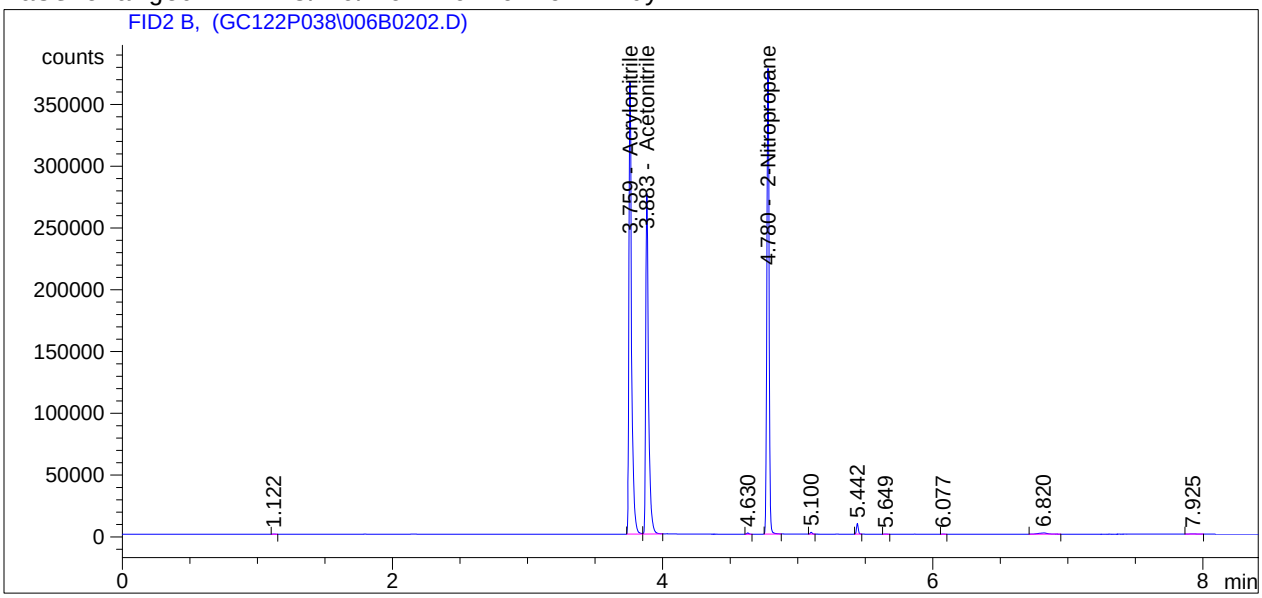
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   2
Acq. Instrument : Teller online                 Location : Vial 6
Injection Date  : 8/15/2011 1:09:26 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 12:39:02 PM by kmt
                  (modified after loading)
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.759 BV     5.01215e5  3.60656e-3 1807.66251    Acrylonitrile
  3.884 VB     3.98882e5  4.52973e-3 1806.82894    Acetonitrile
  4.780 BB     4.35217e5  5.13364e-3 2234.24697    2-Nitropropane

Totals :                              5848.73843


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\006B0202.D
Sample Name: gc122p038 #6

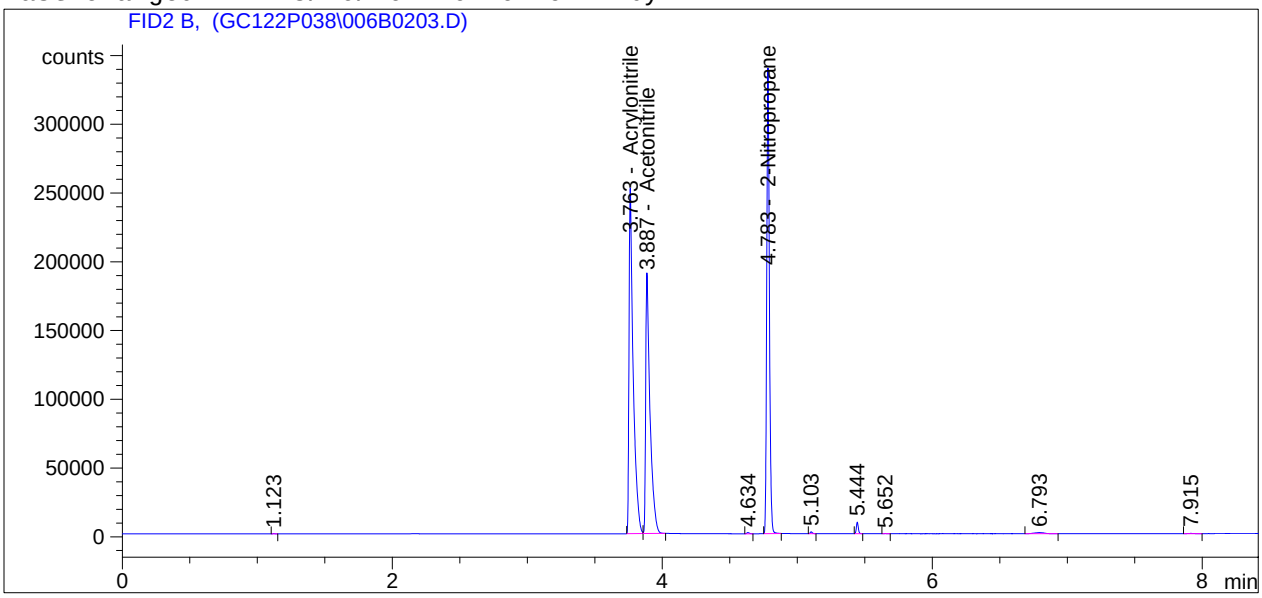
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   2
Acq. Instrument : Teller online                 Location : Vial 6
Injection Date  : 8/15/2011 1:23:20 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 12:39:02 PM by kmt
                  (modified after loading)
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.759 BV     4.97663e5  3.60656e-3 1794.85186    Acrylonitrile
  3.883 VB     3.95824e5  4.52972e-3 1792.97319    Acetonitrile
  4.780 BB     4.32228e5  5.13363e-3 2218.90042    2-Nitropropane

Totals :                              5806.72547


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\006B0203.D
Sample Name: gc122p038 #6

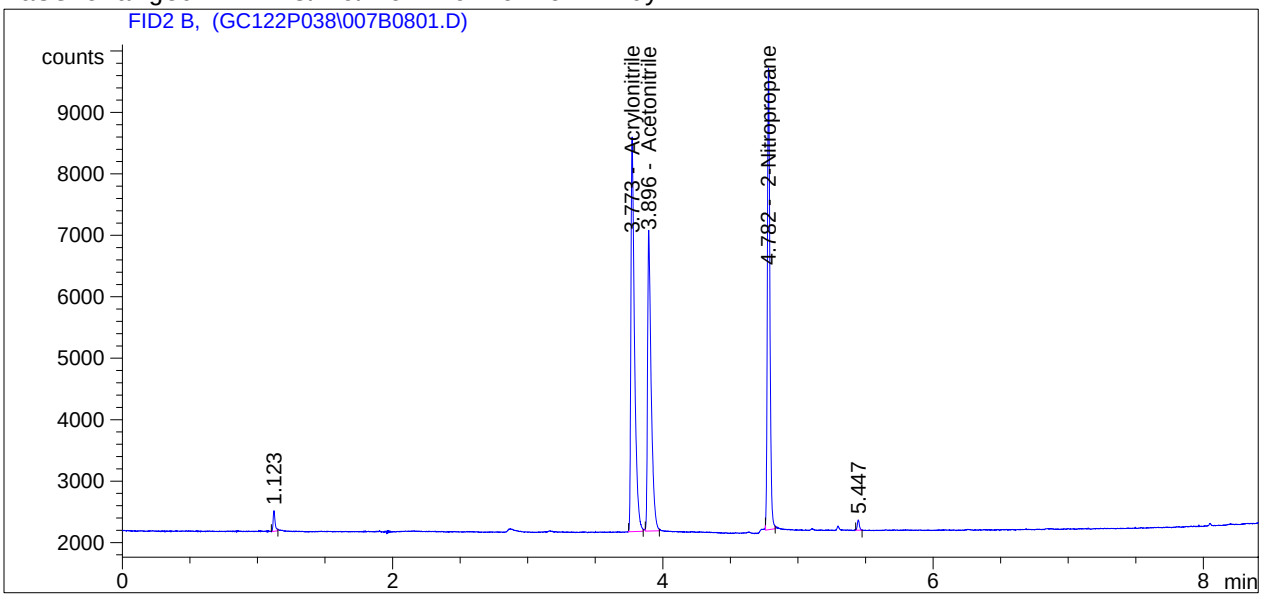
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   2
Acq. Instrument : Teller online                 Location : Vial 6
Injection Date  : 8/15/2011 1:52:14 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.763 BV     5.38862e5  3.60663e-3 1943.47454    Acrylonitrile
  3.887 VB     4.18432e5  4.52978e-3 1895.40528    Acetonitrile
  4.783 BB     4.65985e5  5.13371e-3 2392.23390    2-Nitropropane

Totals :                              6231.11371


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\007B0801.D
Sample Name: gc122p038 #3ss

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   8
Acq. Instrument : Teller online                 Location : Vial 7
Injection Date  : 8/15/2011 6:56:44 PM               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

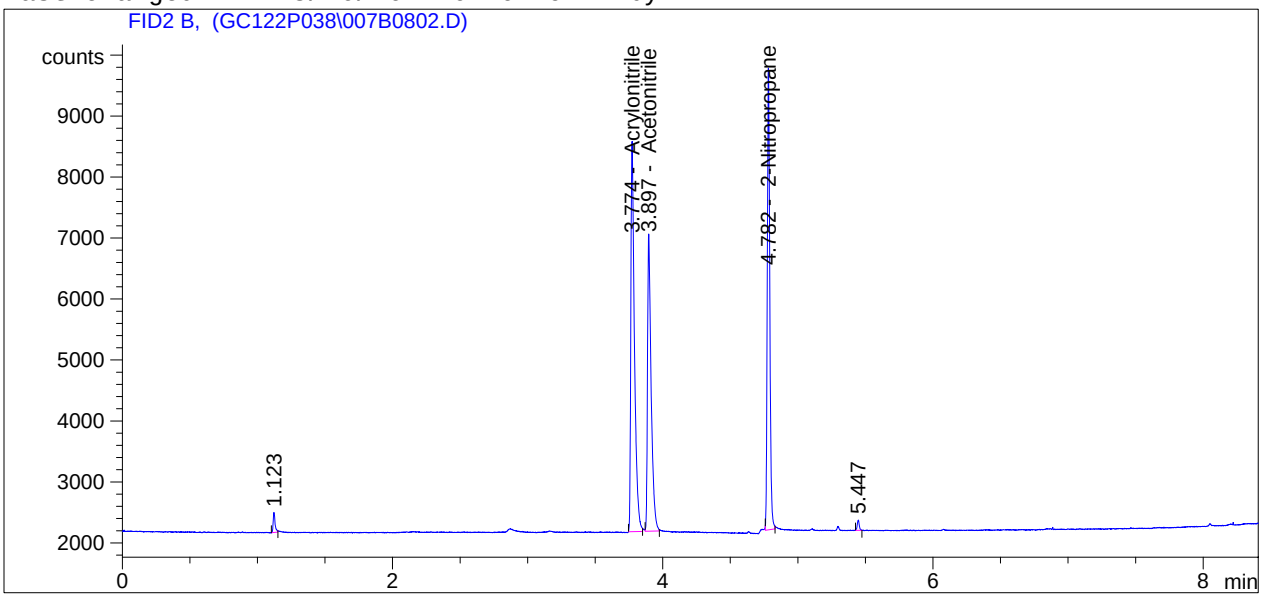



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|----------------
  3.773 BB     1.18897e4  3.56849e-3   42.42815    Acrylonitrile
  3.896 BB     9071.22656 4.48168e-3   40.65437    Acetonitrile
  4.782 BB     9782.56641 5.08420e-3   49.73650    2-Nitropropane

Totals :                               132.81902

==========================================================================
                          *** End of Report ***
```

Tag (ug/mL):
39.1
39.1
48.2

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\007B0802.D
Sample Name: gc122p038 #3ss

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   8
Acq. Instrument : Teller online                 Location : Vial 7
Injection Date  : 8/15/2011 7:10:41 PM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

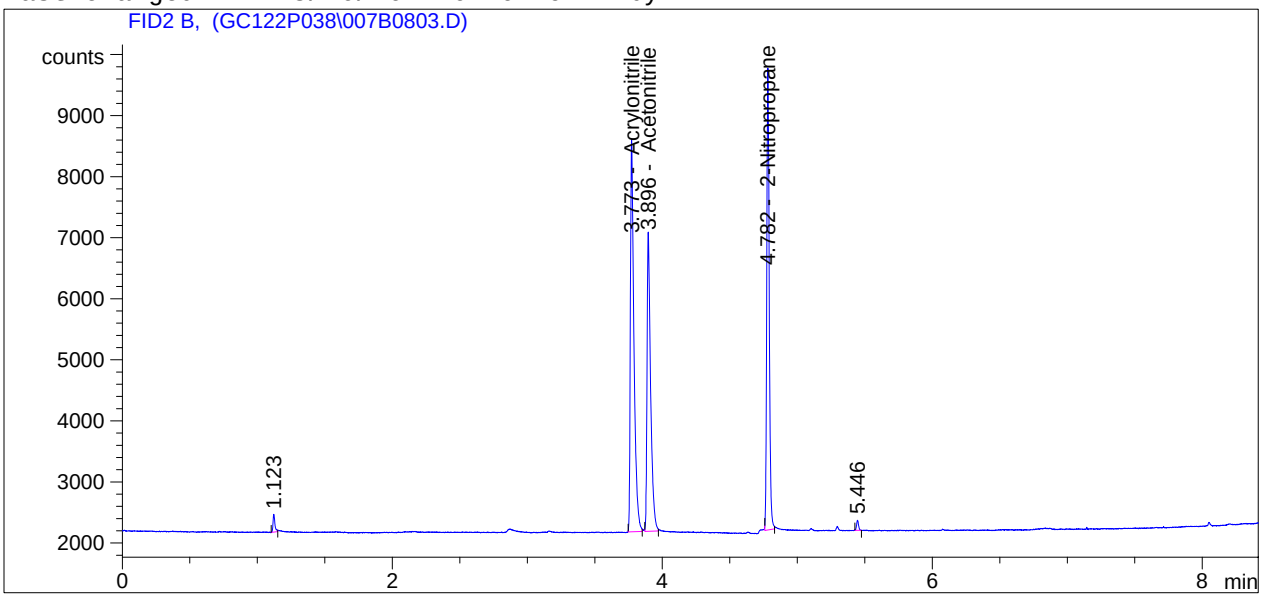



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|----------------
  3.774 BB     1.18825e4  3.56847e-3   42.40234    Acrylonitrile
  3.897 BB     9075.13379 4.48171e-3   40.67208    Acetonitrile
  4.782 BB     9803.38086 5.08430e-3   49.84337    2-Nitropropane

Totals :                               132.91779


==========================================================================
                          *** End of Report ***
```

Tag (ug/mL):
39.1
39.1
48.2

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\007B0803.D
Sample Name: gc122p038 #3ss

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :   8
Acq. Instrument : Teller online                 Location : Vial 7
Injection Date  : 8/15/2011 7:24:31 PM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

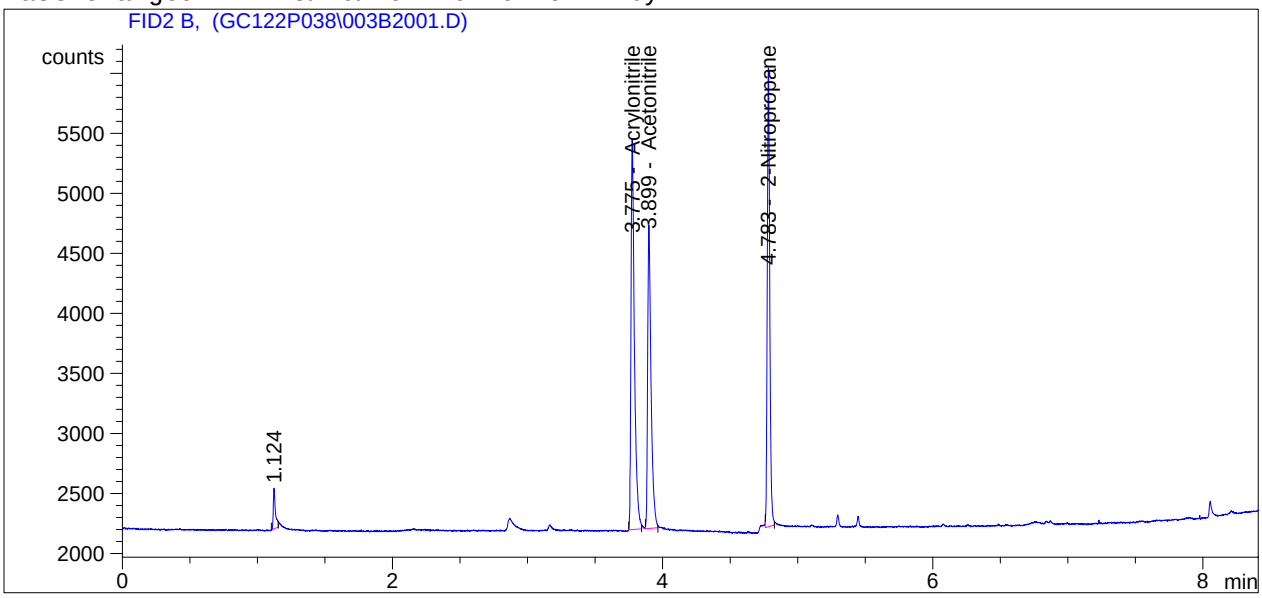
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.773	BB	1.17666e4	3.56808e-3	41.98425		Acrylonitrile
3.896	BB	8974.93750	4.48116e-3	40.21810		Acetonitrile
4.782	BB	9711.75879	5.08383e-3	49.37292		2-Nitropropane

Tag (ug/mL):
39.1
39.1
48.2

```
Totals :                              131.57527

==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B2001.D
Sample Name: gc122p038 #3

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  20
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/16/2011 3:15:22 AM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

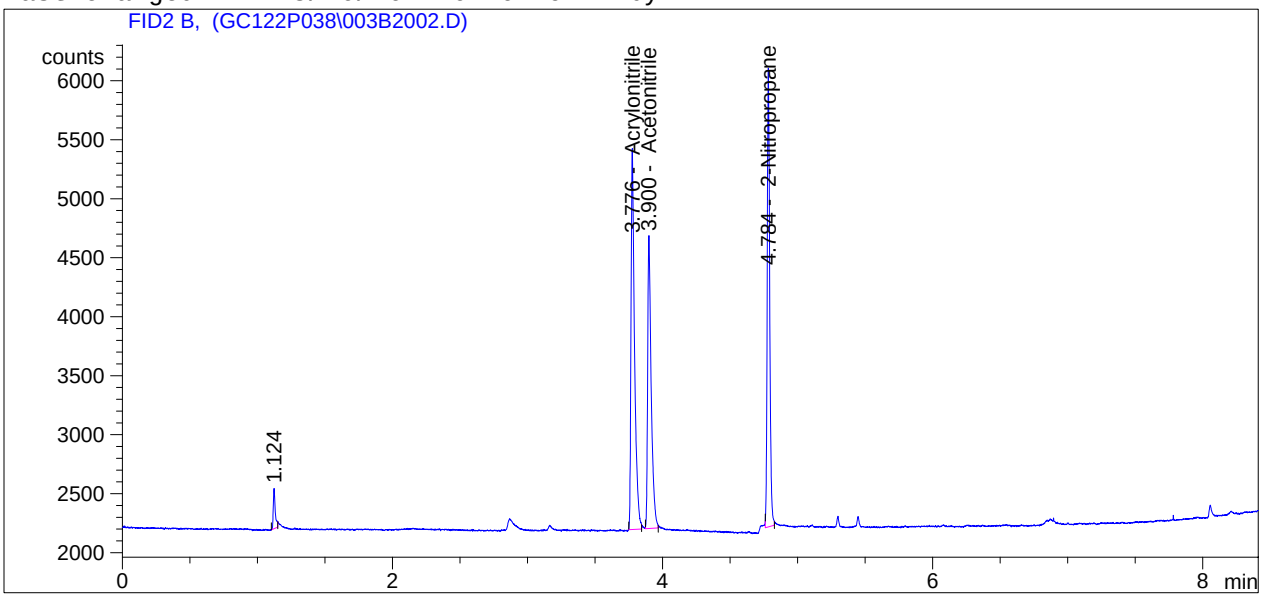
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.775	BB	5686.91406	3.52596e-3	20.05183		Acrylonitrile
3.899	BB	4386.16016	4.42917e-3	19.42706		Acetonitrile
4.783	BB	4883.98389	5.03347e-3	24.58338		2-Nitropropane

Totals : 64.06226

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B2002.D
Sample Name: gc122p038 #3

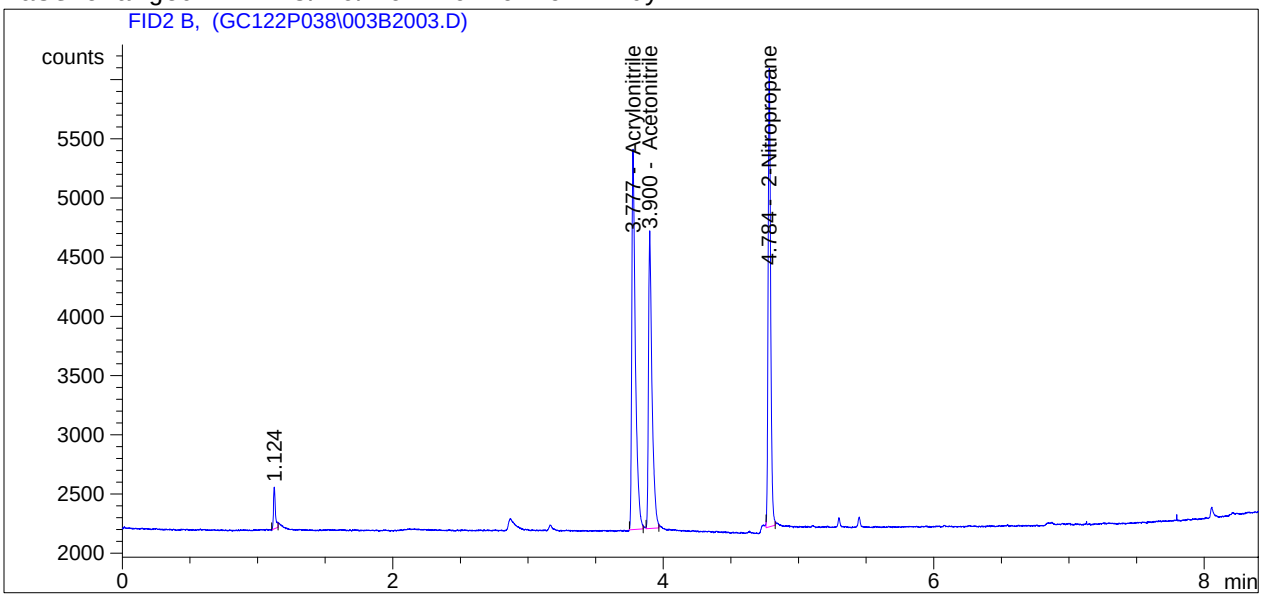
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  20
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/16/2011 3:29:12 AM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.776 BB     5829.42236 3.52795e-3   20.56592    Acrylonitrile
  3.900 BB     4503.79053 4.43183e-3   19.96003    Acetonitrile
  4.784 BB     4998.70703 5.03579e-3   25.17245    2-Nitropropane

Totals :                                65.69840


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B2003.D
Sample Name: gc122p038 #3

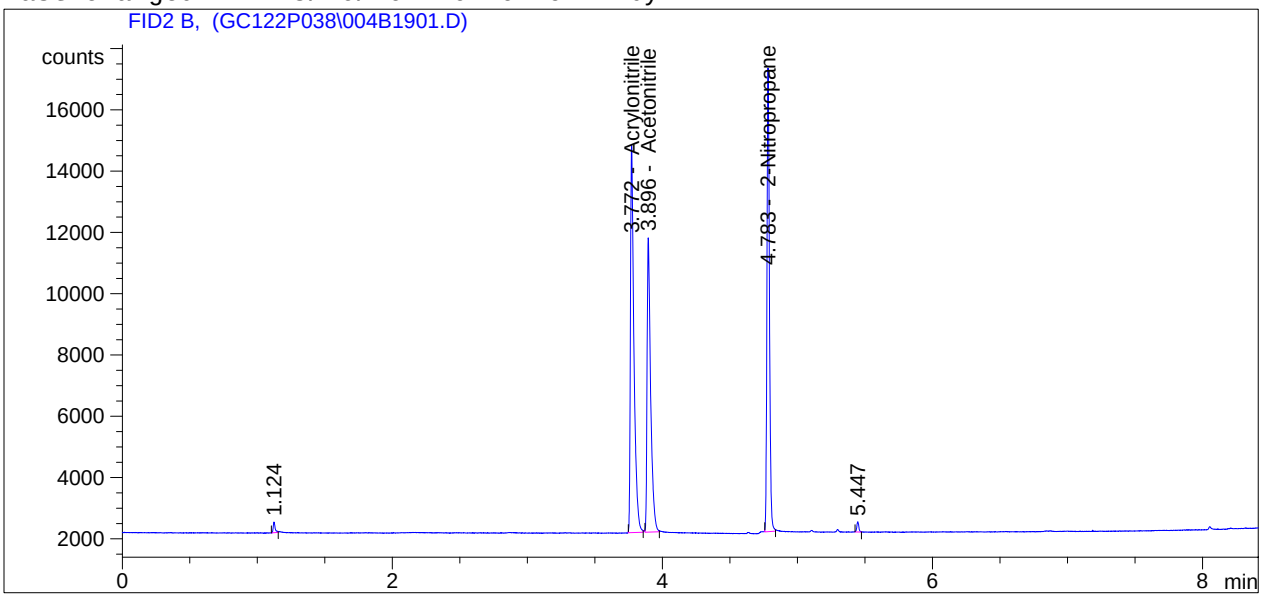
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  20
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/16/2011 3:42:58 AM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.777 BB     5916.97510 3.52913e-3   20.88177    Acrylonitrile
  3.900 BB     4551.11816 4.43286e-3   20.17446    Acetonitrile
  4.784 BB     5062.85303 5.03705e-3   25.50183    2-Nitropropane

Totals :                                66.55806


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B1901.D
Sample Name: gc122p038 #4

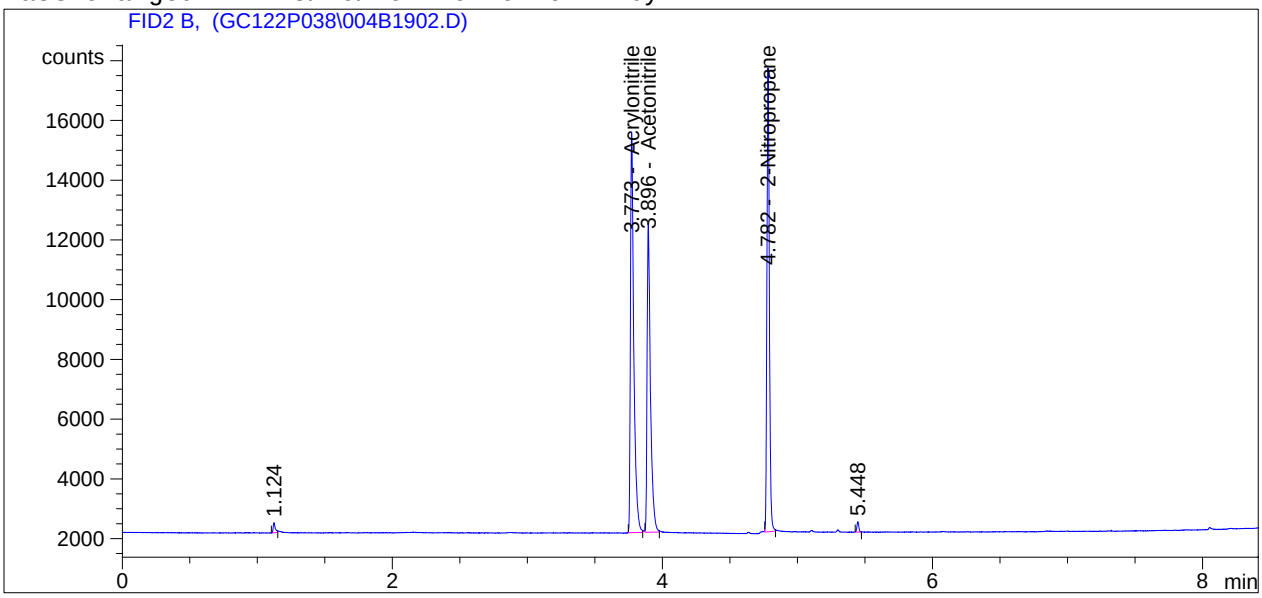
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  19
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/16/2011 2:33:52 AM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.772 BB     2.27367e4  3.58710e-3   81.55863    Acrylonitrile
  3.896 BB     1.75586e4  4.50545e-3   79.10938    Acetonitrile
  4.783 BB     1.93474e4  5.10920e-3   98.84952    2-Nitropropane

Totals :                               259.51753


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B1902.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  19
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/16/2011 2:47:42 AM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

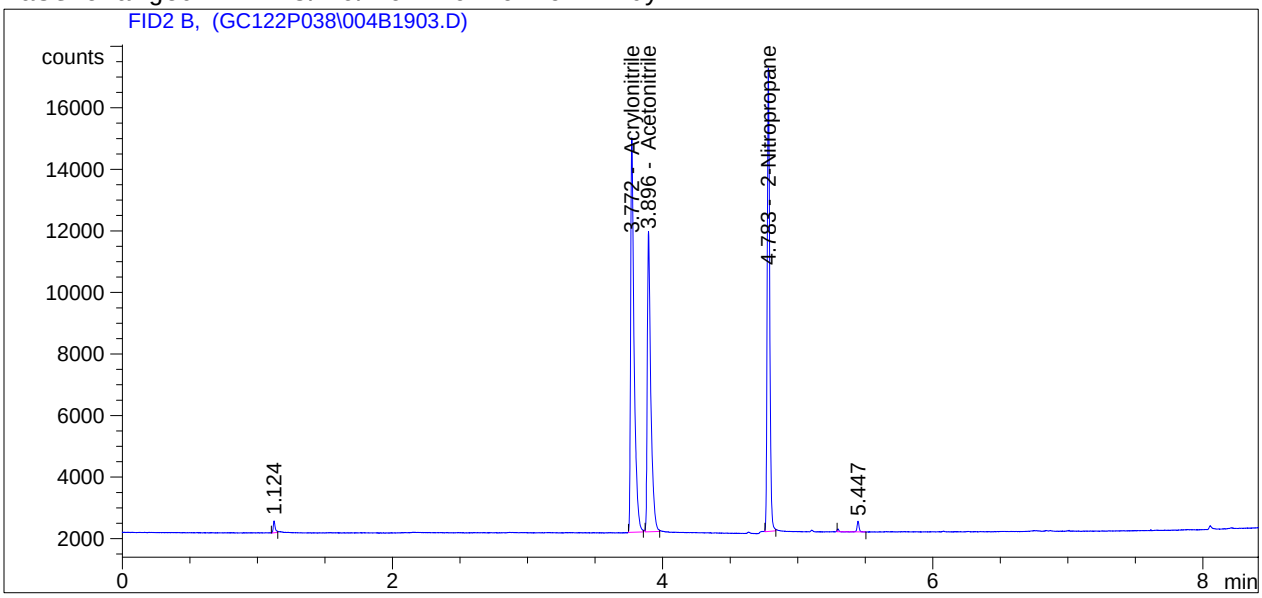
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.773	BB	2.28597e4	3.58721e-3	82.00244		Acrylonitrile
3.896	BB	1.77177e4	4.50568e-3	79.83002		Acetonitrile
4.782	BB	1.94922e4	5.10939e-3	99.59309		2-Nitropropane

Totals : 261.42554

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B1903.D
Sample Name: gc122p038 #4

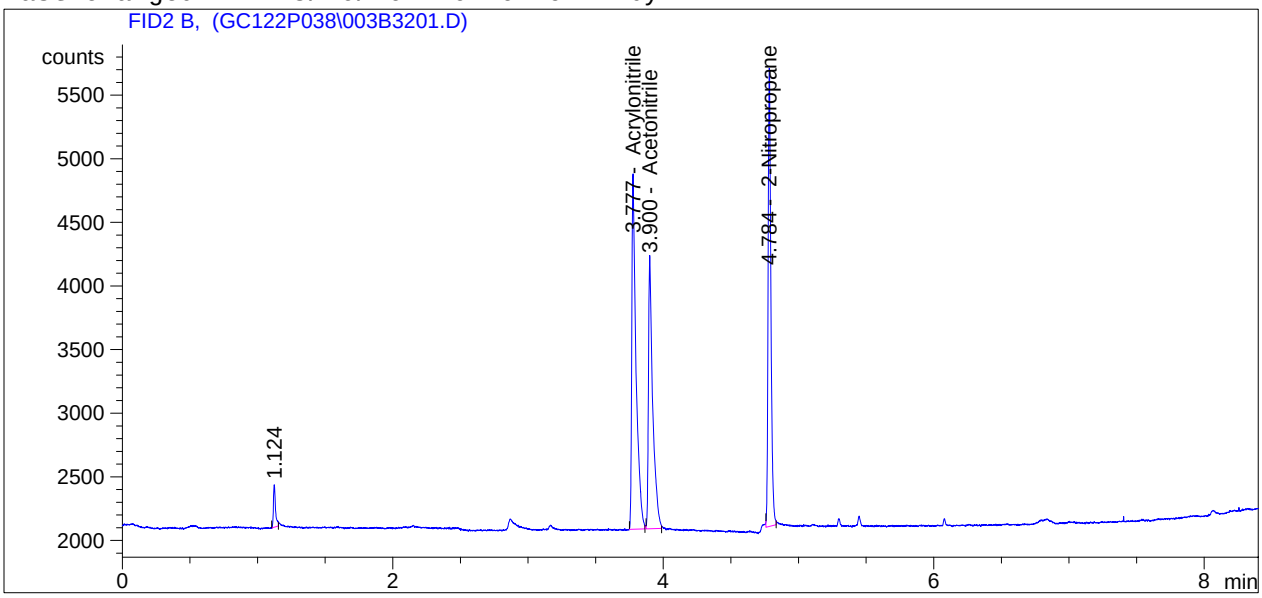
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  19
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/16/2011 3:01:36 AM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 1:51:07 PM by kmt
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.772 BB     2.26997e4  3.58706e-3   81.42543    Acrylonitrile
  3.896 BB     1.75112e4  4.50538e-3   78.89445    Acetonitrile
  4.783 BB     1.92812e4  5.10911e-3   98.50968    2-Nitropropane

Totals :                               258.82955


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B3201.D
Sample Name: gc122p038 #3

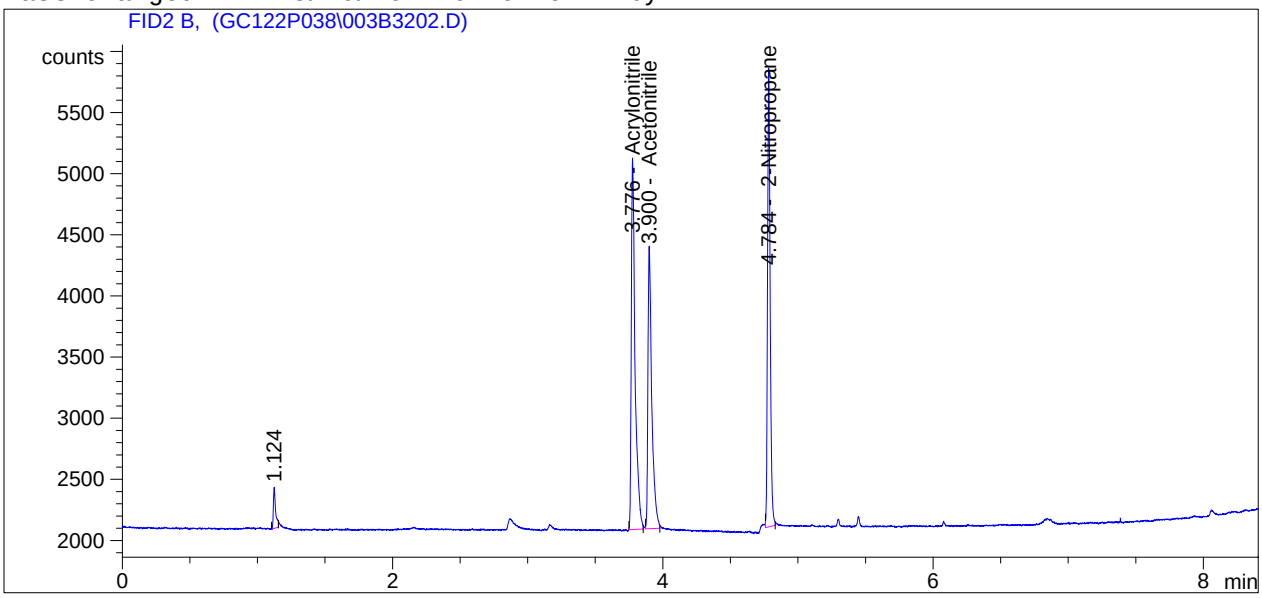
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  32
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/16/2011 11:41:44 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 4:34:18 PM by MM
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.777 BB     6054.02246 3.53090e-3   21.37617    Acrylonitrile
  3.900 BB     4678.54443 4.43553e-3   20.75181    Acetonitrile
  4.784 BB     5205.30713 5.03972e-3   26.23330    2-Nitropropane

Totals :                                68.36127


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B3202.D
Sample Name: gc122p038 #3

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  32
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/16/2011 11:55:37 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 4:34:18 PM by MM
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

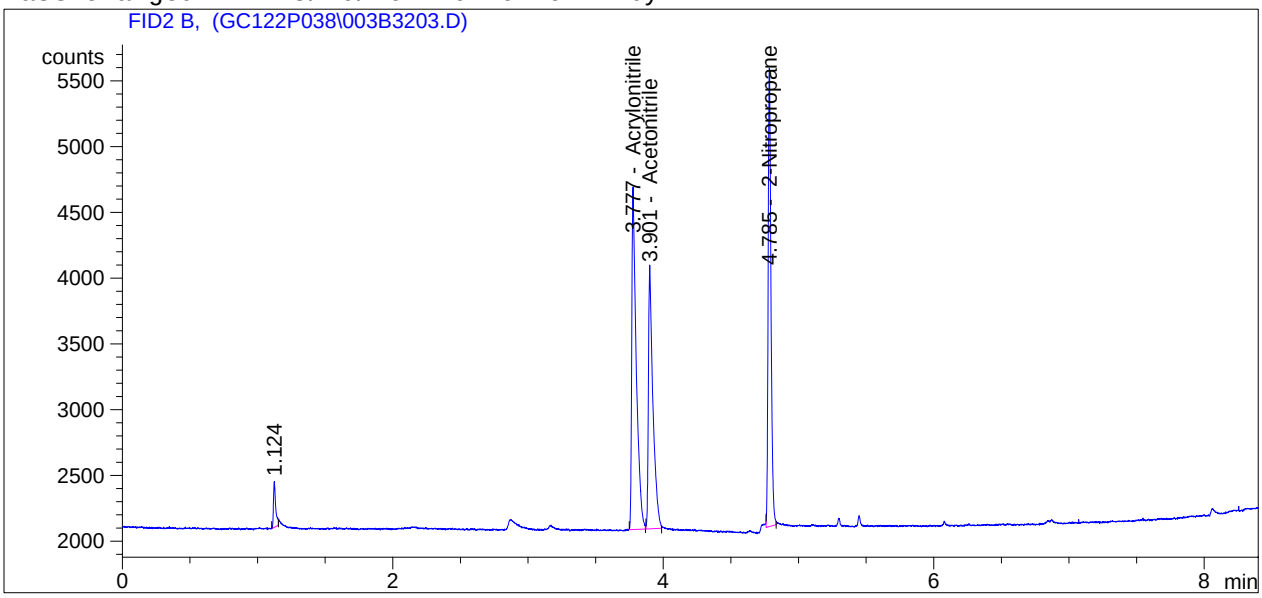
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.776	BB	5858.69873	3.52835e-3	20.67154		Acrylonitrile
3.900	BB	4519.77686	4.43218e-3	20.03246		Acetonitrile
4.784	BB	5041.56104	5.03663e-3	25.39250		2-Nitropropane

Totals : 66.09650

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\003B3203.D
Sample Name: gc122p038 #3

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  32
Acq. Instrument : Teller online                 Location : Vial 3
Injection Date  : 8/16/2011 12:09:25 PM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 4:34:18 PM by MM
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

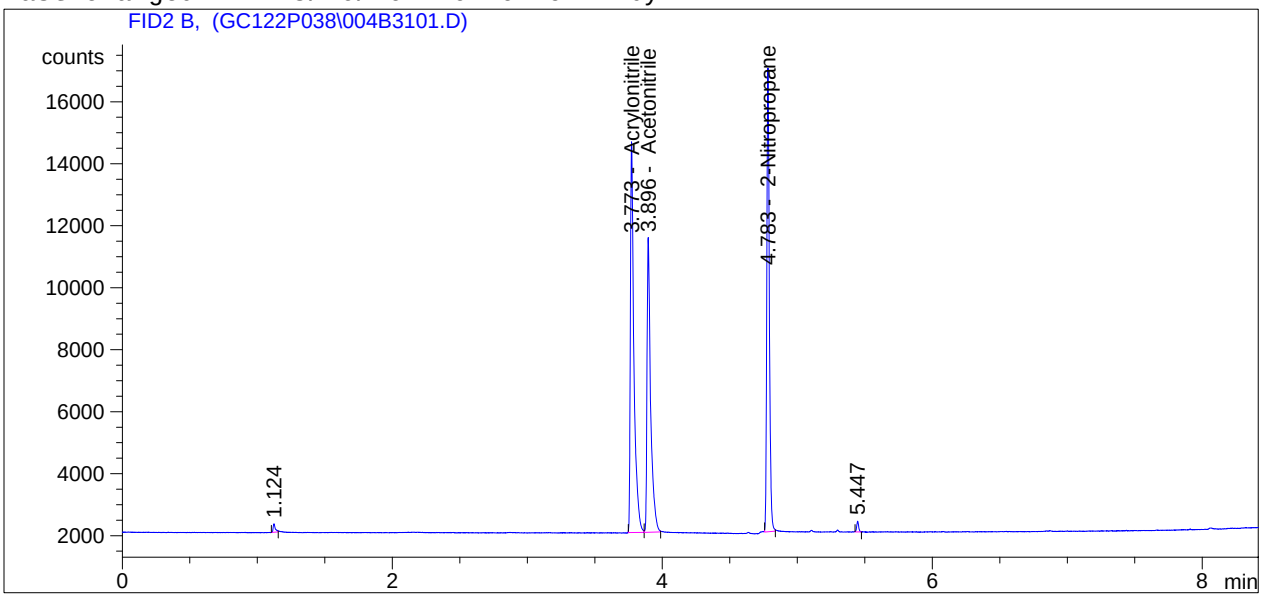
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.777	BB	5996.48633	3.53017e-3	21.16860		Acrylonitrile
3.901	BB	4610.65918	4.43412e-3	20.44423		Acetonitrile
4.785	BB	5108.55420	5.03792e-3	25.73650		2-Nitropropane

Totals : 67.34933

```
==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B3101.D
Sample Name: gc122p038 #4

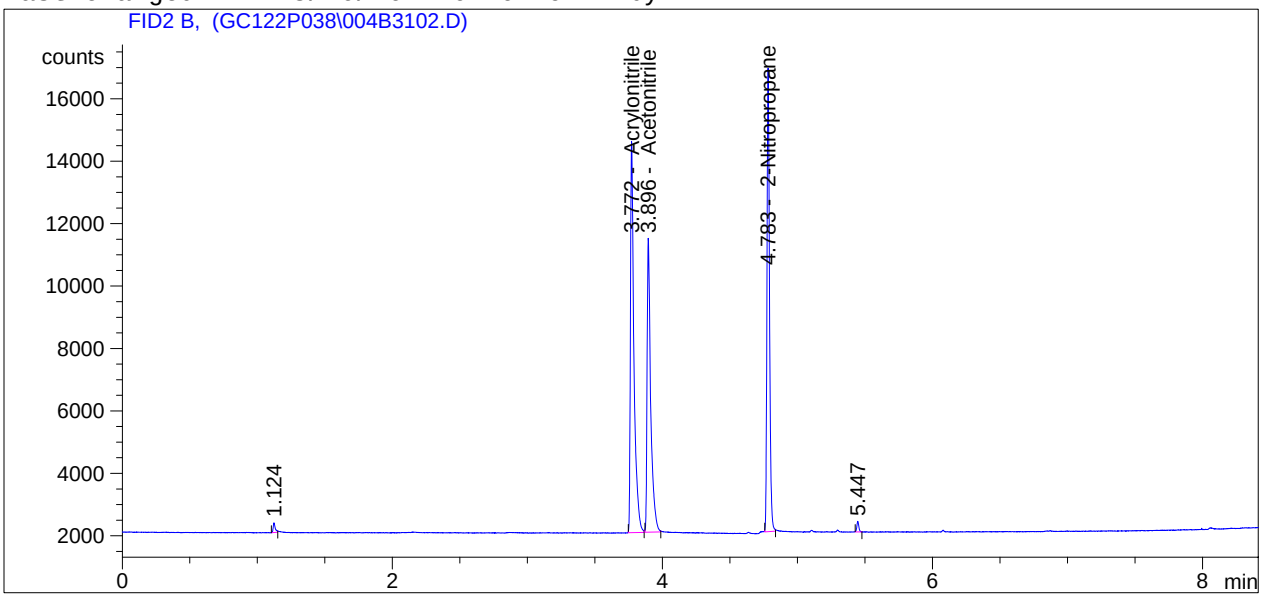
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  31
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/16/2011 11:00:08 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 4:34:18 PM by MM
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.773 BV     2.29353e4  3.58727e-3   82.27506    Acrylonitrile
  3.896 VB     1.76258e4  4.50554e-3   79.41371    Acetonitrile
  4.783 BB     1.96176e4  5.10955e-3  100.23713    2-Nitropropane

Totals :                               261.92590


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B3102.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  31
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/16/2011 11:14:00 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 4:34:18 PM by MM
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

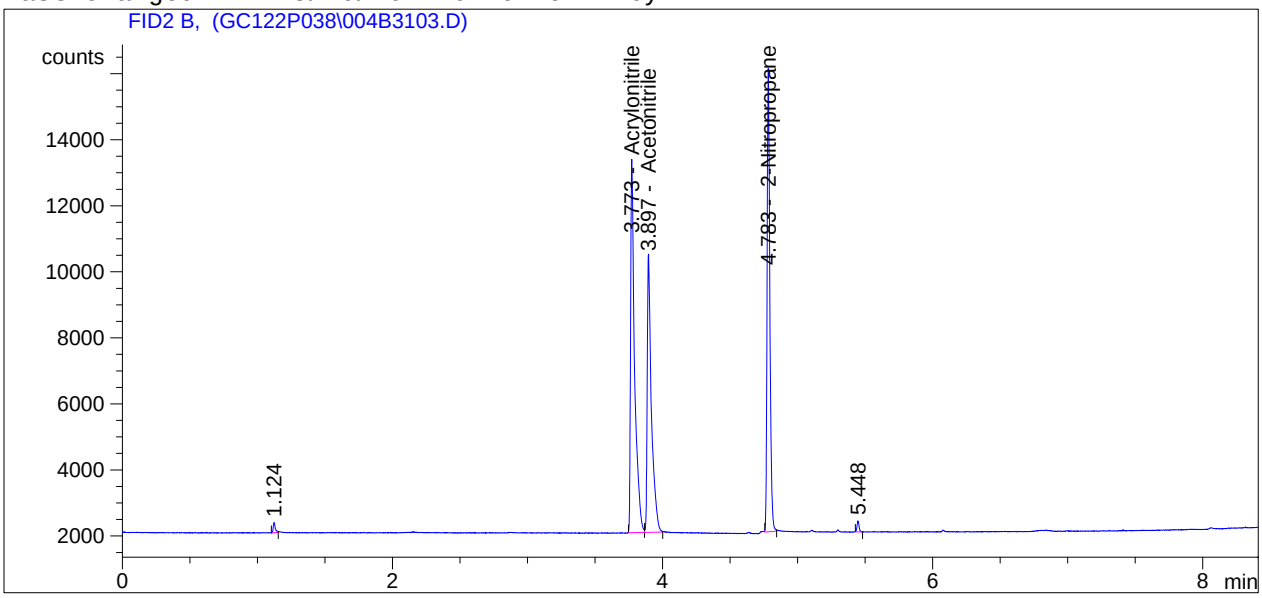
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.772	BB	2.26162e4	3.58699e-3	81.12415		Acrylonitrile
3.896	BB	1.74005e4	4.50522e-3	78.39294		Acetonitrile
4.783	BB	1.93460e4	5.10920e-3	98.84247		2-Nitropropane

Totals : 258.35956

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\004B3103.D
Sample Name: gc122p038 #4

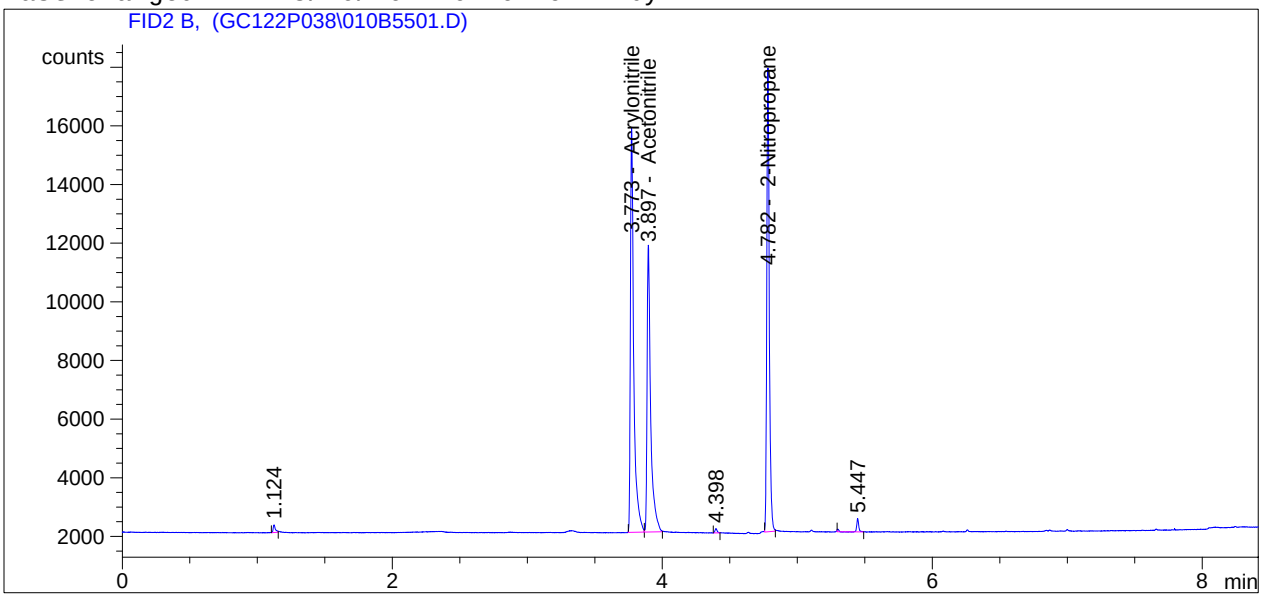
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  31
Acq. Instrument : Teller online                 Location : Vial 4
Injection Date  : 8/16/2011 11:27:55 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/15/2011 4:34:18 PM by MM
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.773 BV     2.33295e4  3.58761e-3   83.69729    Acrylonitrile
  3.897 VB     1.79346e4  4.50598e-3   80.81299    Acetonitrile
  4.783 BB     1.99157e4  5.10993e-3  101.76762    2-Nitropropane

Totals :                               266.27790


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B5501.D
Sample Name: gc122p038 #4

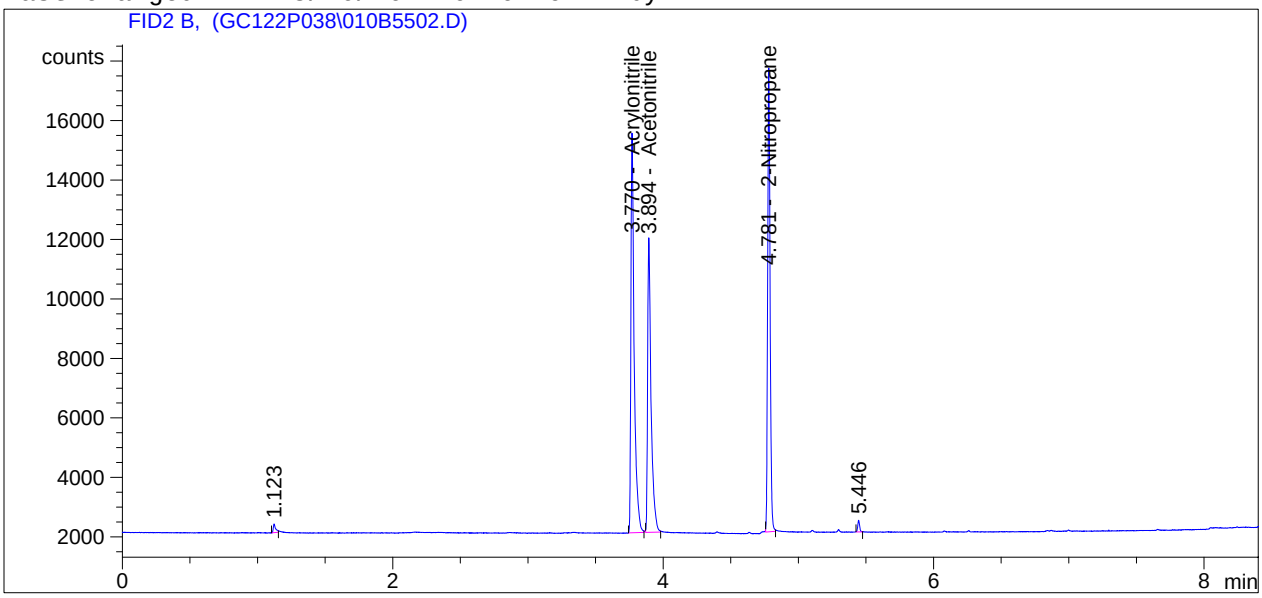
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  55
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/17/2011 3:51:49 AM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.773 BV     2.35758e4  3.58782e-3   84.58564    Acrylonitrile
  3.897 VB     1.80736e4  4.50617e-3   81.44291    Acetonitrile
  4.782 BB     2.04089e4  5.11053e-3  104.30020    2-Nitropropane

Totals :                               270.32876


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B5502.D
Sample Name: gc122p038 #4

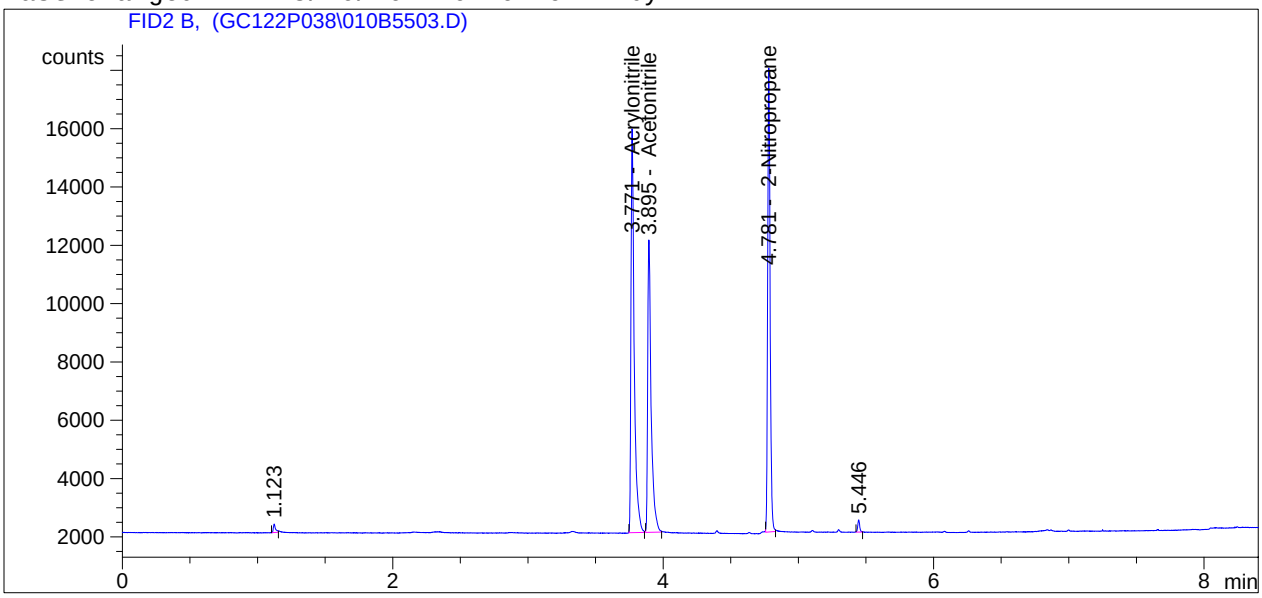
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  55
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/17/2011 4:05:42 AM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.770 BB     2.25213e4  3.58690e-3   80.78167    Acrylonitrile
  3.894 BB     1.73420e4  4.50513e-3   78.12792    Acetonitrile
  4.781 BB     1.94778e4  5.10937e-3   99.51941    2-Nitropropane

Totals :                               258.42900


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B5503.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  55
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/17/2011 4:19:36 AM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

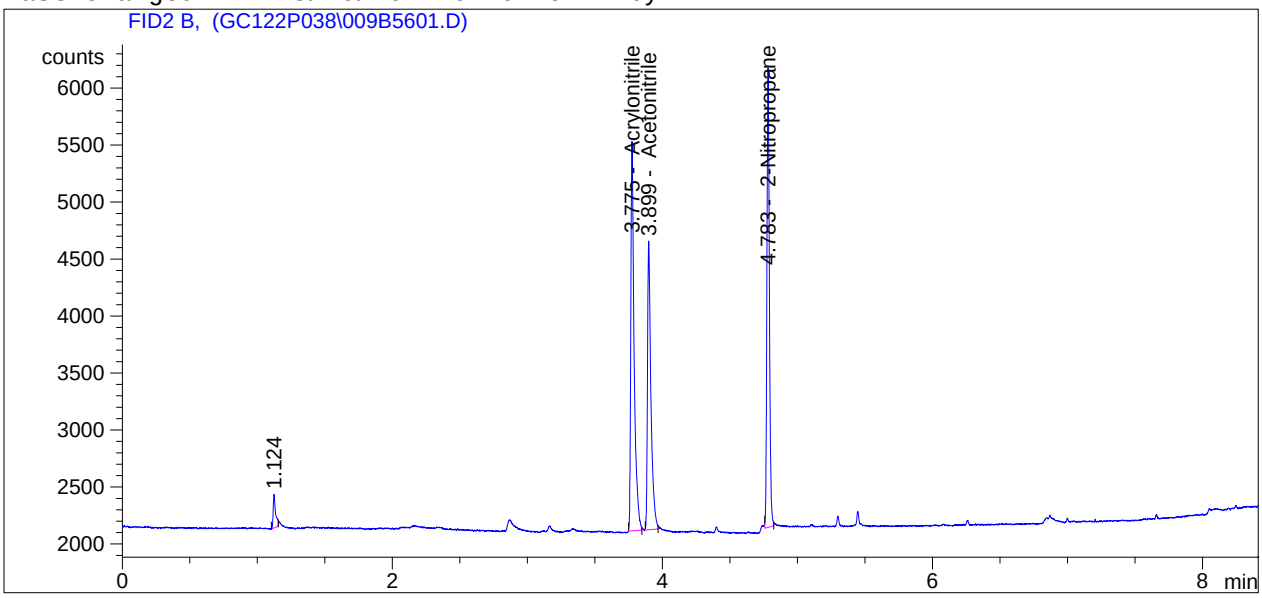
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.771	BB	2.31029e4	3.58742e-3	82.87987		Acrylonitrile
3.895	BB	1.77009e4	4.50565e-3	79.75429		Acetonitrile
4.781	BB	2.00114e4	5.11005e-3	102.25921		2-Nitropropane

Totals : 264.89336

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\009B5601.D
Sample Name: gc122p038 #3

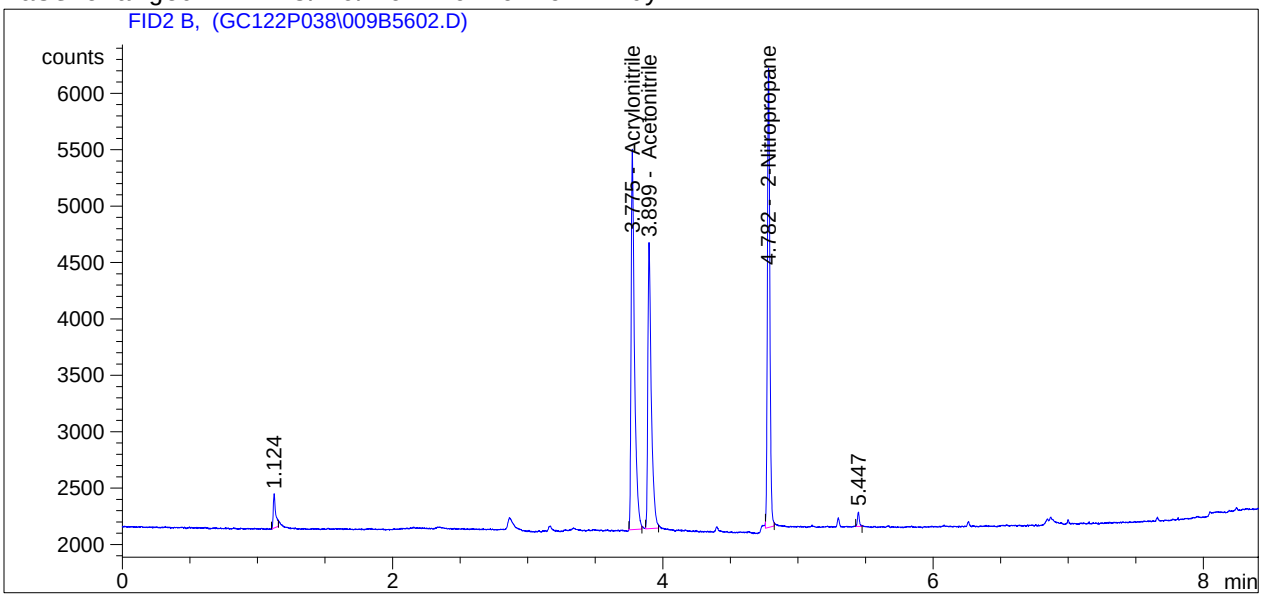
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  56
Acq. Instrument : Teller online                 Location : Vial 9
Injection Date  : 8/17/2011 4:33:18 AM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.775 BB     5818.83350 3.52781e-3   20.52772    Acrylonitrile
  3.899 BB     4459.72949 4.43085e-3   19.76039    Acetonitrile
  4.783 BB     5161.25391 5.03891e-3   26.00710    2-Nitropropane

Totals :                                66.29521


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\009B5602.D
Sample Name: gc122p038 #3

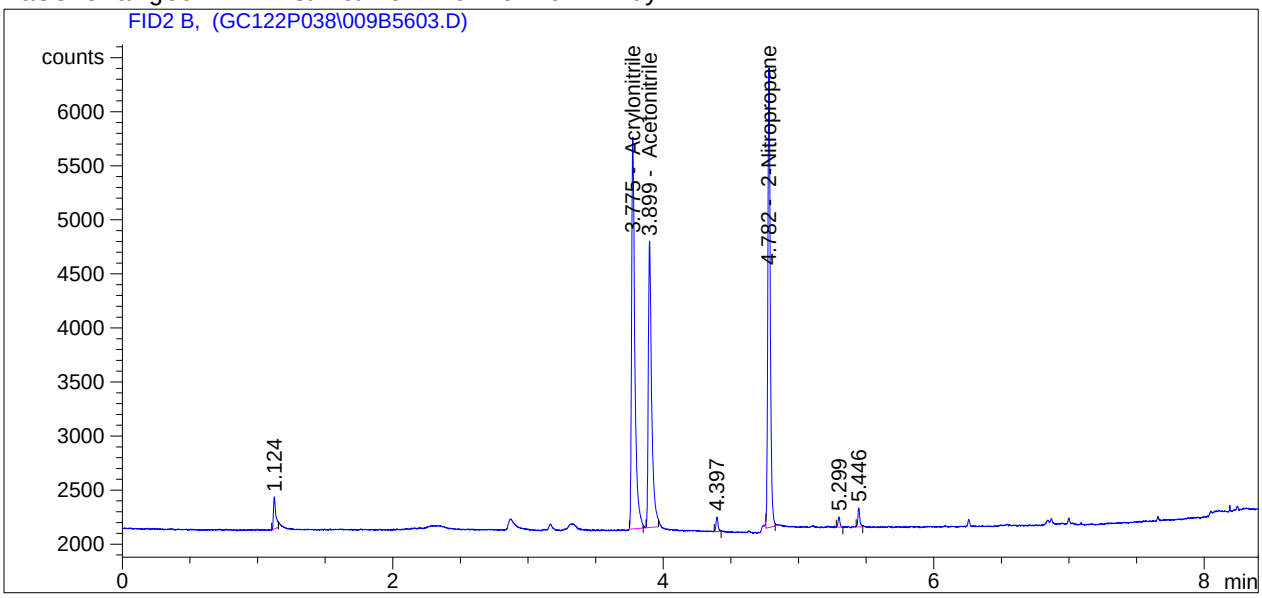
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  56
Acq. Instrument : Teller online                 Location : Vial 9
Injection Date  : 8/17/2011 4:47:12 AM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.775 BB     5809.85596 3.52768e-3   20.49534    Acrylonitrile
  3.899 BB     4472.07520 4.43113e-3   19.81633    Acetonitrile
  4.782 BB     5143.92432 5.03859e-3   25.91811    2-Nitropropane

Totals :                                66.22978


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\009B5603.D
Sample Name: gc122p038 #3

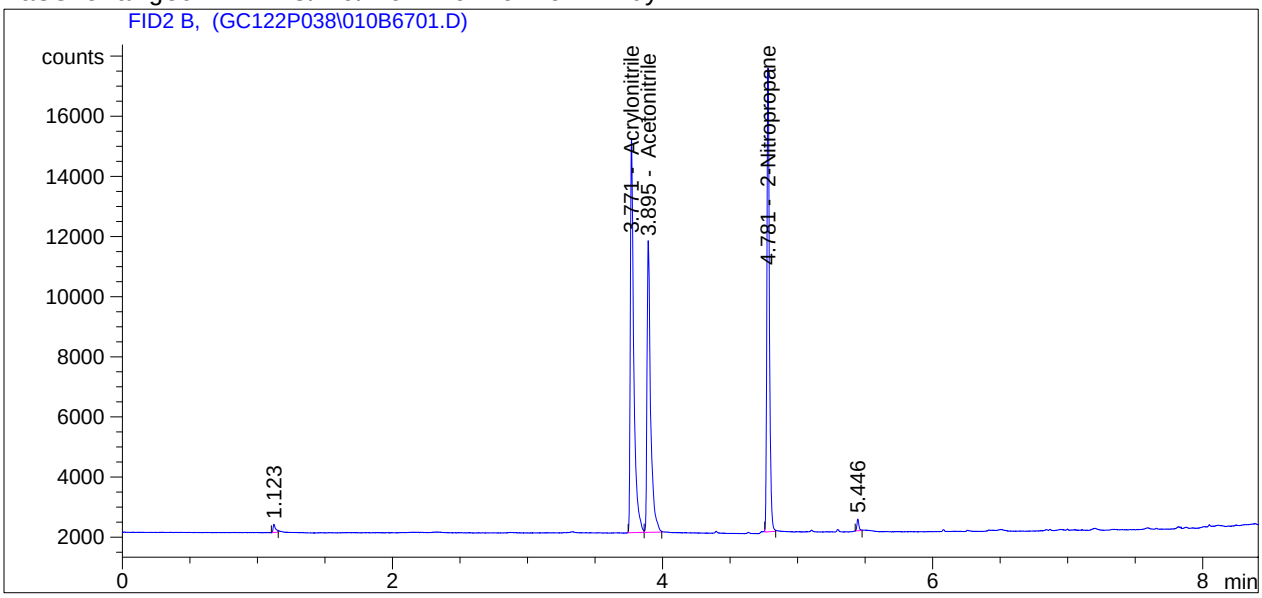
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  56
Acq. Instrument : Teller online                 Location : Vial 9
Injection Date  : 8/17/2011 5:00:53 AM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.775 BB     5984.38818 3.53001e-3   21.12496    Acrylonitrile
  3.899 BB     4517.46729 4.43213e-3   20.02199    Acetonitrile
  4.782 BB     5330.21045 5.04195e-3   26.87465    2-Nitropropane

Totals :                                68.02160


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B6701.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  67
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/17/2011 12:10:29 PM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```



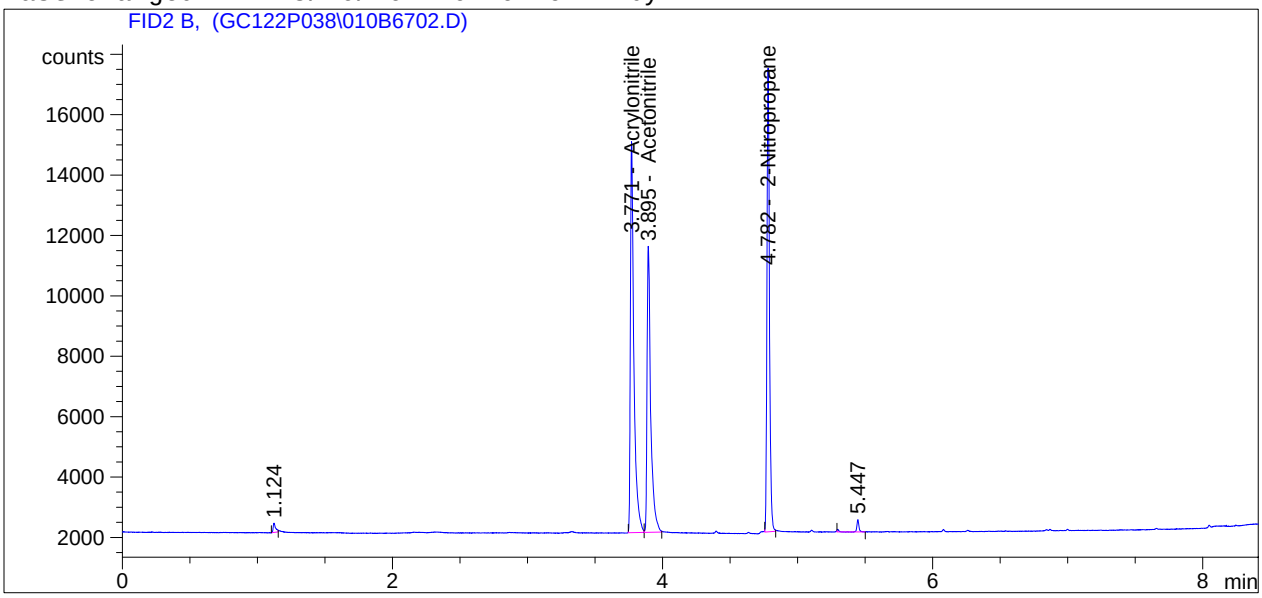

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.771	BV	2.30257e4	3.58735e-3	82.60126		Acrylonitrile
3.895	VB	1.76918e4	4.50564e-3	79.71282		Acetonitrile
4.781	BB	1.98403e4	5.10984e-3	101.38088		2-Nitropropane

```
Totals :                                 263.69497

==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B6702.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  67
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/17/2011 12:24:23 PM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

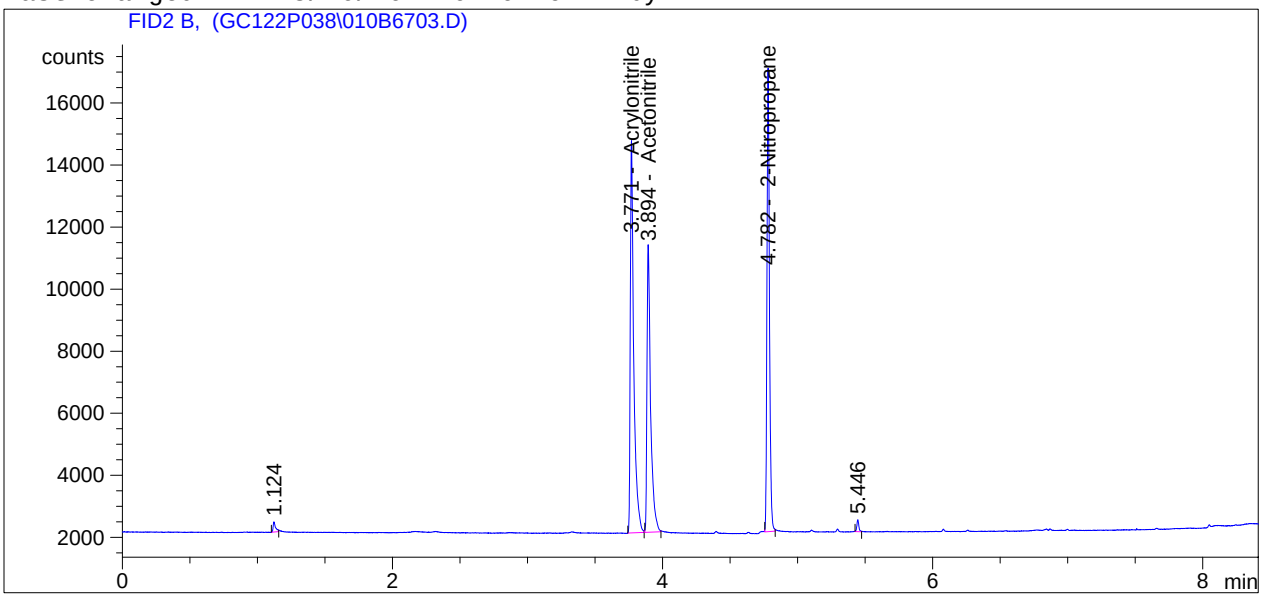
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.771	BV	2.30427e4	3.58737e-3	82.66245		Acrylonitrile
3.895	VB	1.76997e4	4.50565e-3	79.74862		Acetonitrile
4.782	BB	1.97950e4	5.10978e-3	101.14785		2-Nitropropane

Totals : 263.55892

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B6703.D
Sample Name: gc122p038 #4

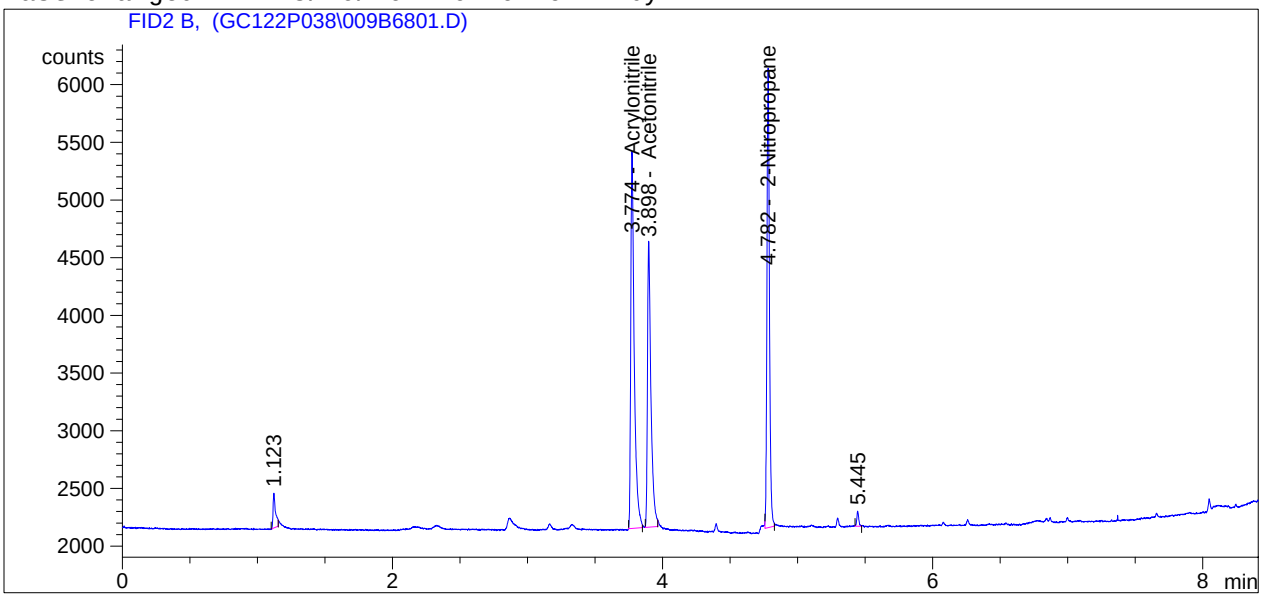
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  67
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/17/2011 12:38:22 PM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.771 BB     2.24338e4  3.58682e-3   80.46611    Acrylonitrile
  3.894 BB     1.71872e4  4.50490e-3   77.42662    Acetonitrile
  4.782 BB     1.92009e4  5.10901e-3   98.09767    2-Nitropropane

Totals :                               255.99041


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\009B6801.D
Sample Name: gc122p038 #3

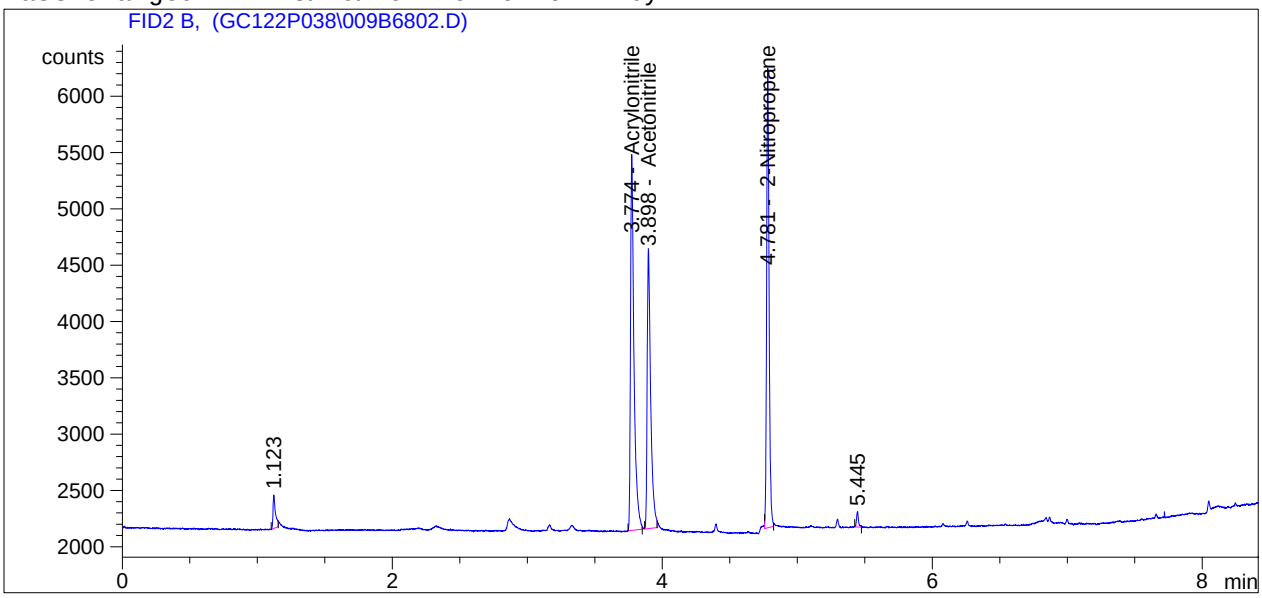
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  68
Acq. Instrument : Teller online                 Location : Vial 9
Injection Date  : 8/17/2011 12:52:16 PM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.774 BB     5820.12695 3.52783e-3   20.53239    Acrylonitrile
  3.898 BB     4416.28174 4.42987e-3   19.56354    Acetonitrile
  4.782 BB     5142.49658 5.03856e-3   25.91078    2-Nitropropane

Totals :                                66.00671


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\009B6802.D
Sample Name: gc122p038 #3

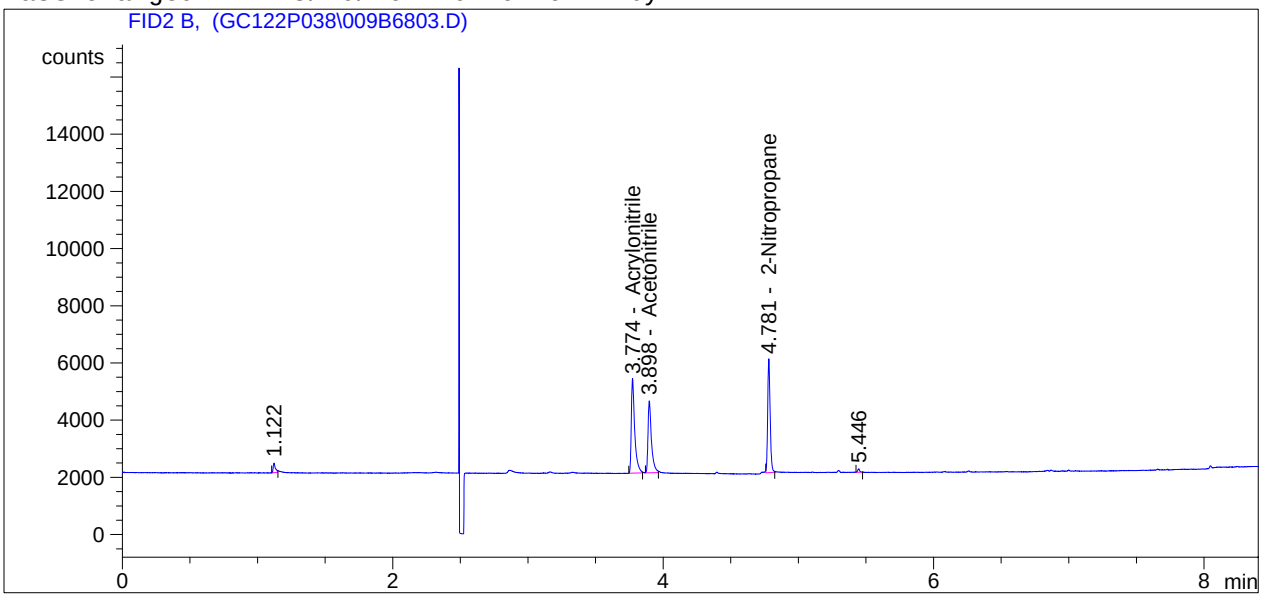
```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  68
Acq. Instrument : Teller online                 Location : Vial 9
Injection Date  : 8/17/2011 1:06:13 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|------------------
  3.774 BB     5907.09473 3.52900e-3   20.84613    Acrylonitrile
  3.898 BB     4453.19873 4.43070e-3   19.73080    Acetonitrile
  4.781 BB     5178.28271 5.03923e-3   26.09454    2-Nitropropane

Totals :                                66.67146


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\009B6803.D
Sample Name: gc122p038 #3

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  68
Acq. Instrument : Teller online                 Location : Vial 9
Injection Date  : 8/17/2011 1:20:10 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

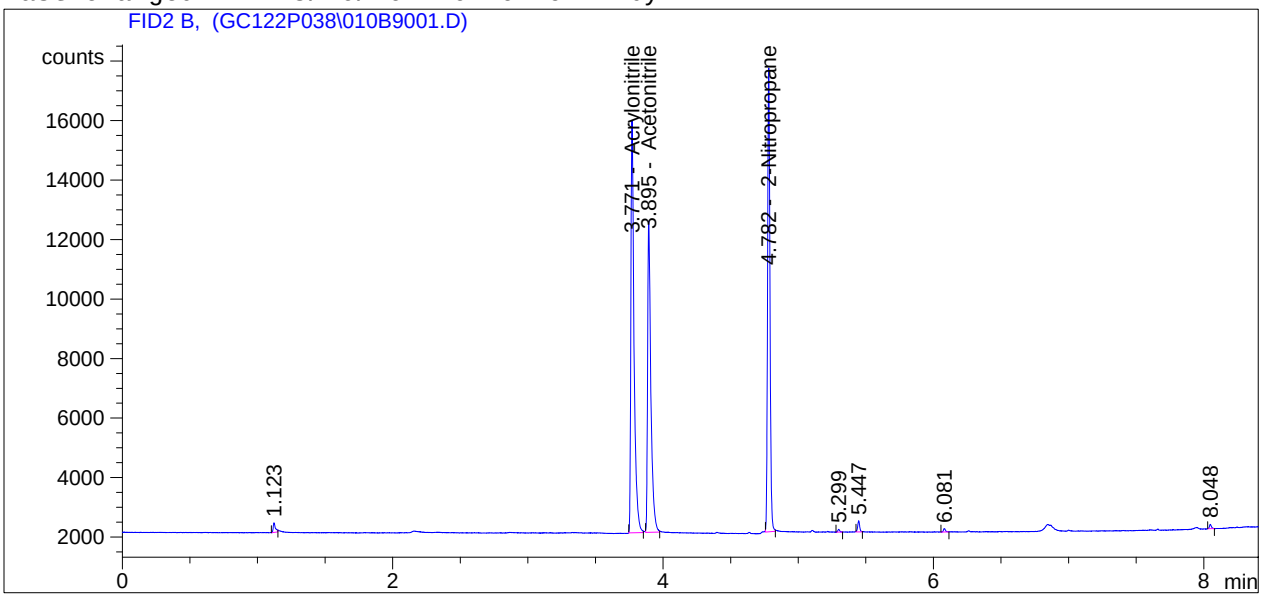
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.774	BB	5759.43018	3.52699e-3	20.31343		Acrylonitrile
3.898	BB	4401.63477	4.42953e-3	19.49717		Acetonitrile
4.781	BB	5062.53809	5.03704e-3	25.50021		2-Nitropropane

Totals : 65.31081

```
==========================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B9001.D
Sample Name: gc122p038 #4

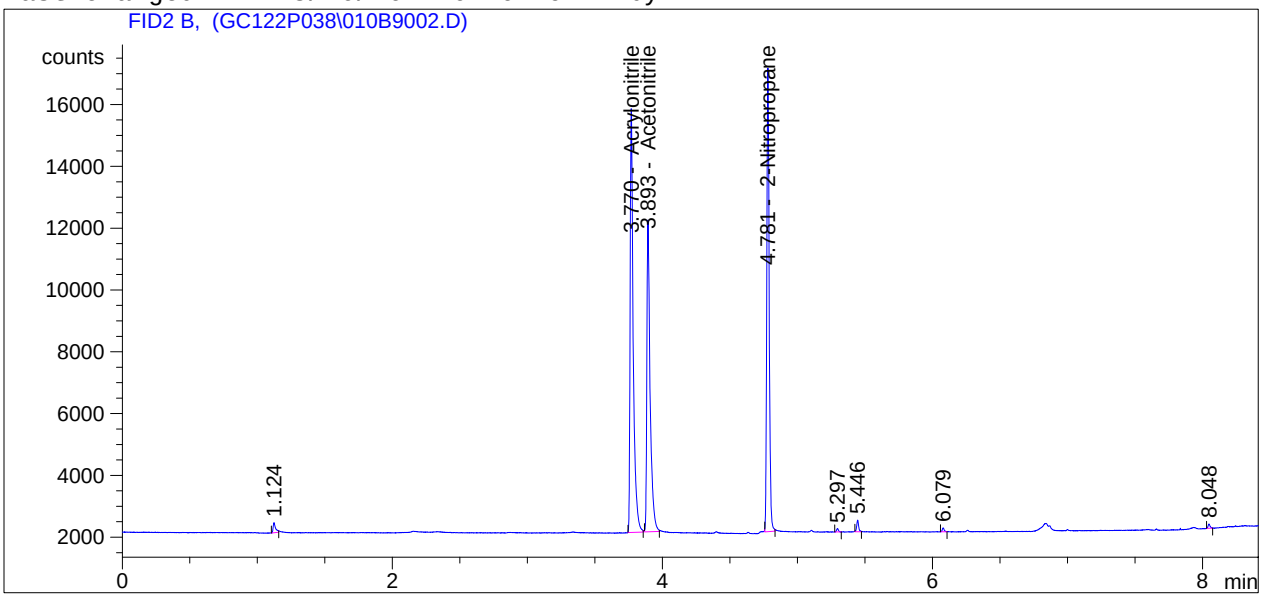
```
==========================================================================
Acq. Operator   : kmt                              Seq. Line :  90
Acq. Instrument : Teller online                     Location : Vial 10
Injection Date  : 8/18/2011 4:11:50 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.771 BB     2.23698e4  3.58676e-3   80.23512    Acrylonitrile
  3.895 BB     1.73569e4  4.50515e-3   78.19537    Acetonitrile
  4.782 BB     1.91412e4  5.10893e-3   97.79082    2-Nitropropane

Totals :                               256.22131


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B9002.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  90
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/18/2011 4:25:39 AM               Inj :   2
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,
```

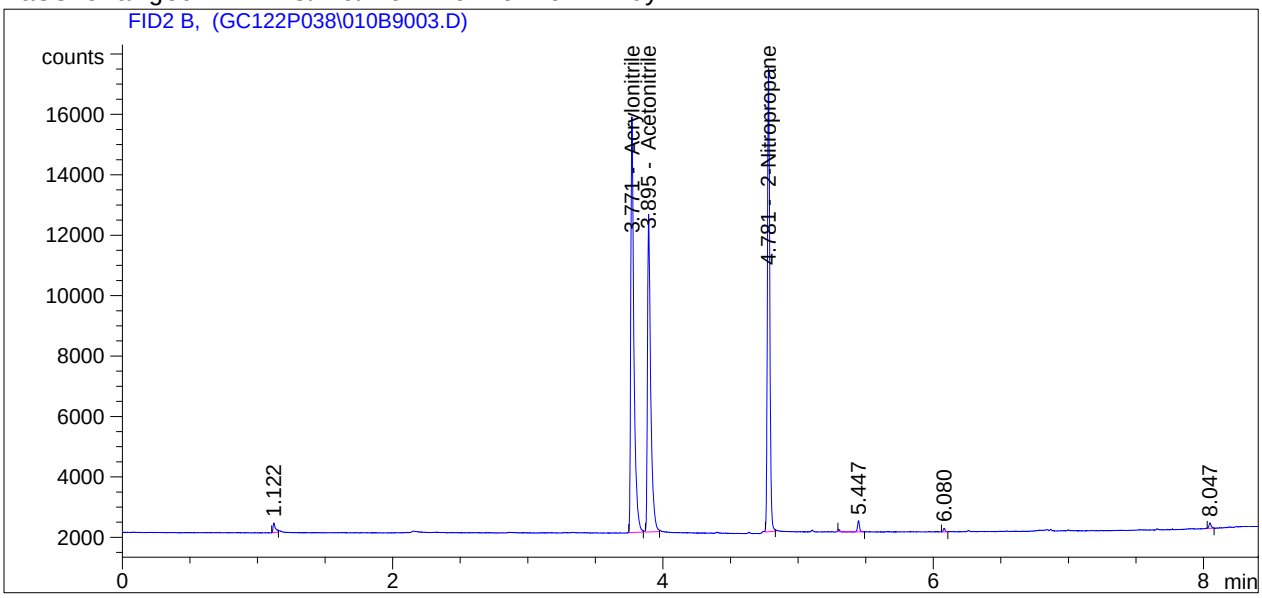
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ug/mL]	Grp	Name
3.770	BB	2.17484e4	3.58617e-3	77.99332		Acrylonitrile
3.893	BB	1.68562e4	4.50439e-3	75.92671		Acetonitrile
4.781	BB	1.85111e4	5.10805e-3	94.55554		2-Nitropropane

Totals : 248.47557

```
==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\TELLER\DATA\AUG11\GC122P038\010B9003.D
Sample Name: gc122p038 #4

```
==========================================================================
Acq. Operator   : kmt                          Seq. Line :  90
Acq. Instrument : Teller online                 Location : Vial 10
Injection Date  : 8/18/2011 4:39:30 AM               Inj :   3
                                              Inj Volume : 1 µl
Sequence File   : I:\GC2011Q3\TELLER\SEQUENCE\GC122P038.S
Acq. Method     : G:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 9:51:27 AM by KMT
Analysis Method : I:\GC2011Q3\TELLER\METHODS\GC122P038.M
Last changed    : 8/16/2011 6:20:49 PM by KMT
```

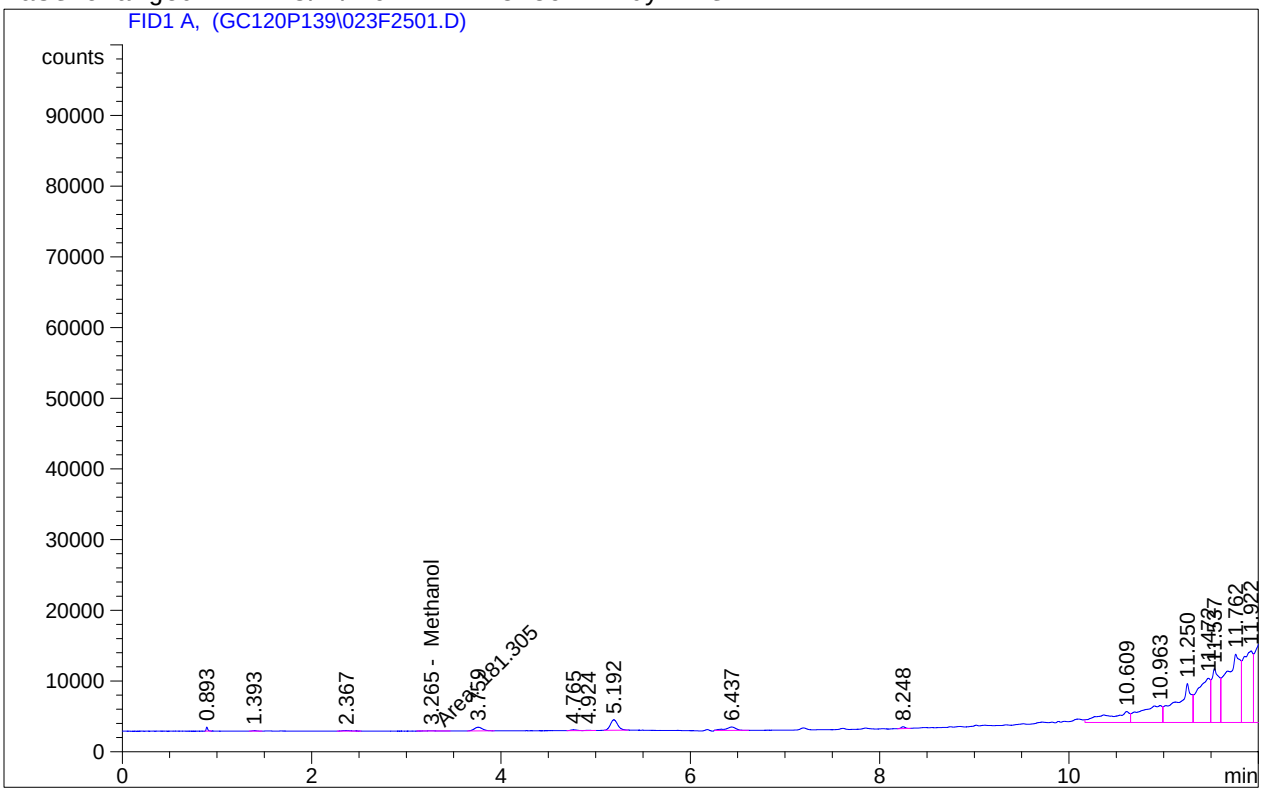



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      8/16/2011 6:20:02 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  3.771 BB     2.19931e4  3.58641e-3   78.87605    Acrylonitrile
  3.895 BB     1.72197e4  4.50495e-3   77.57407    Acetonitrile
  4.781 BB     1.88050e4  5.10846e-3   96.06468    2-Nitropropane

Totals :                               252.51480


==========================================================================
                          *** End of Report ***
```

Sample Chromatograms

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\023F2501.D
Sample Name: R1-Cond-m308 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  25
Acq. Instrument : Penn online                       Location : Vial 23
Injection Date  : 7/30/2011 4:39:48 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```



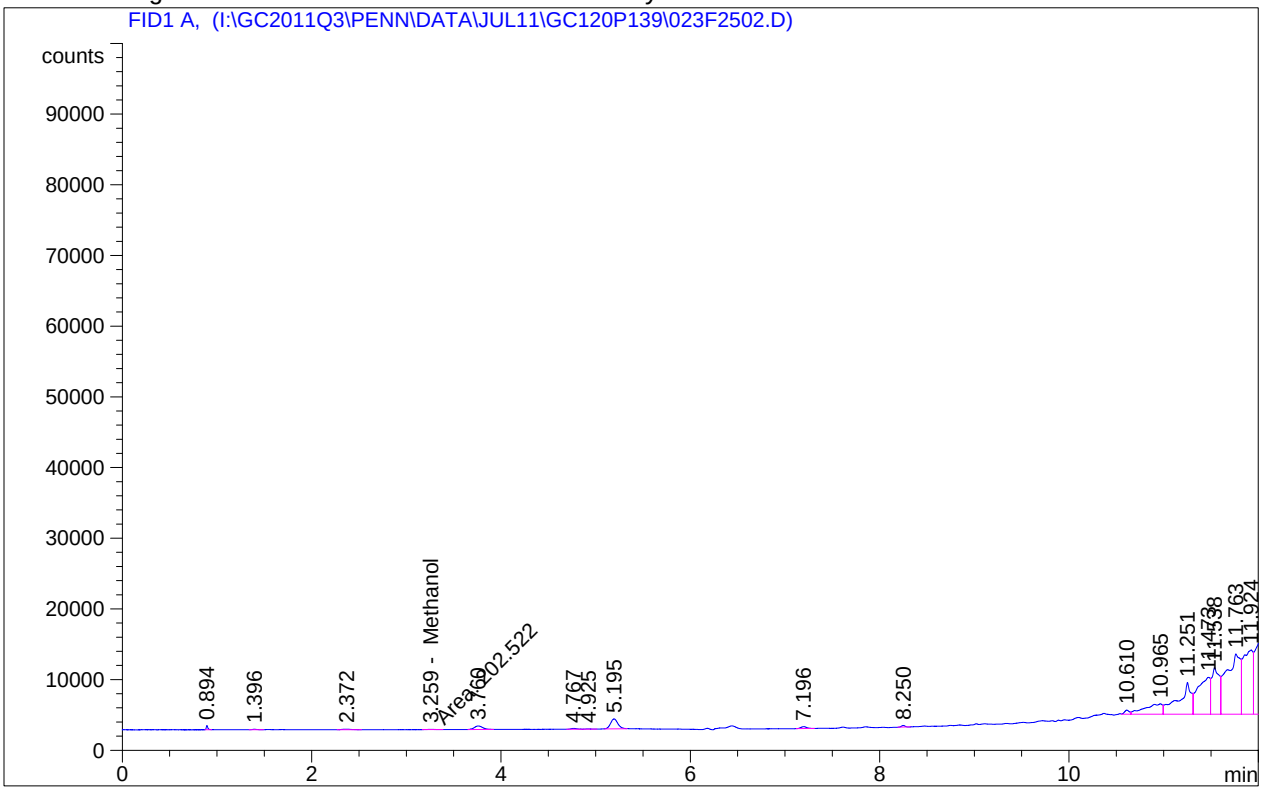

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.265 MM      181.30482 1.53680e-3 2.78630e-1    Methanol

Totals :                              2.78630e-1


Signal 2: FID2 B,    not found
```

Manual Int. "NI" (KAM)

EM-BTRF-001597

Data File I:\GC2011Q3\PENN\DATA\JUL11\GC120P139\023F2502.D
Sample Name: R1-Cond-m308 0711-64

```
==================================================================
Acq. Operator   : CLD                          Seq. Line :  25
Acq. Instrument : Penn online                   Location : Vial 23
Injection Date  : 7/30/2011 5:01:01 PM               Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```

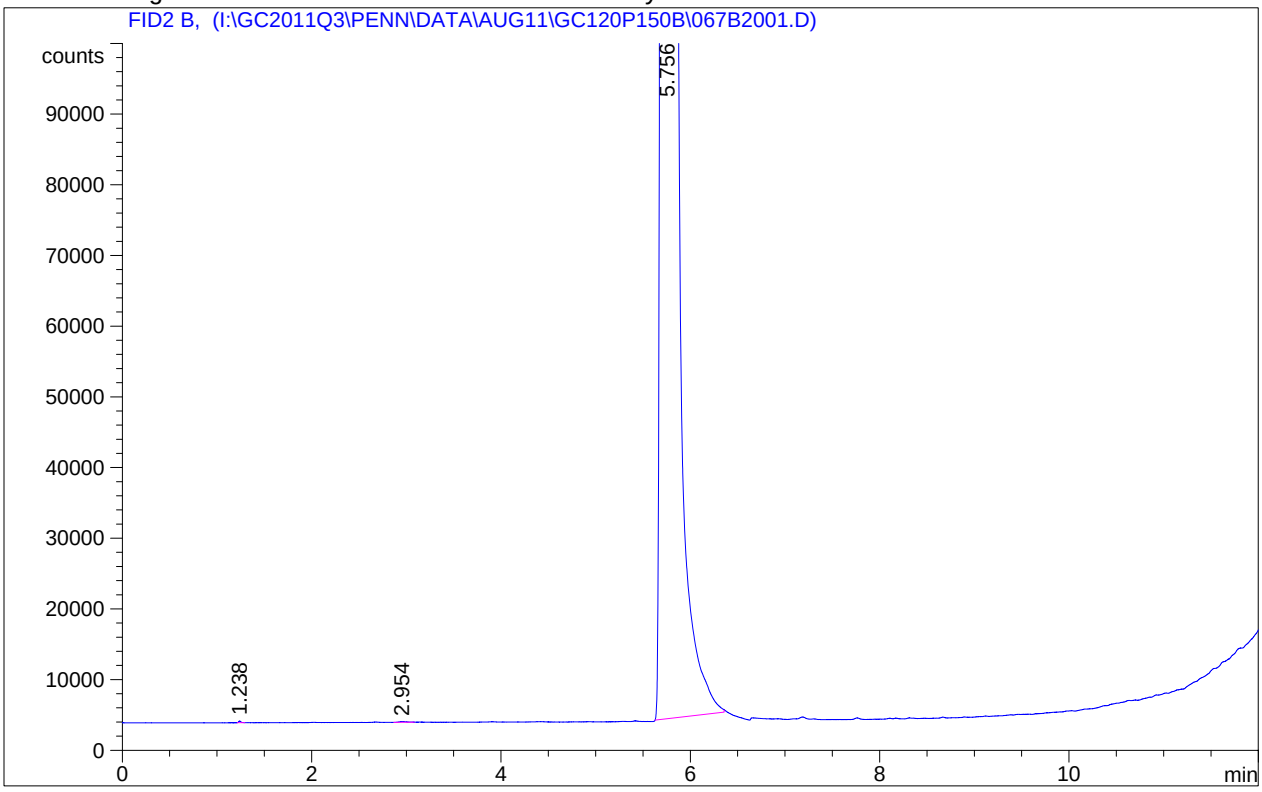



```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.259 MM      202.52226 1.53680e-3 3.11237e-1    Methanol  Manual Int. "NI" (KAM)

Totals :                              3.11237e-1



Signal 2: FID2 B,    not found

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.429            -          -          -         Methanol
```

EM-BTRF-001598

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\067B2001.D
Sample Name: m308-r1-sg-fh 0711-64

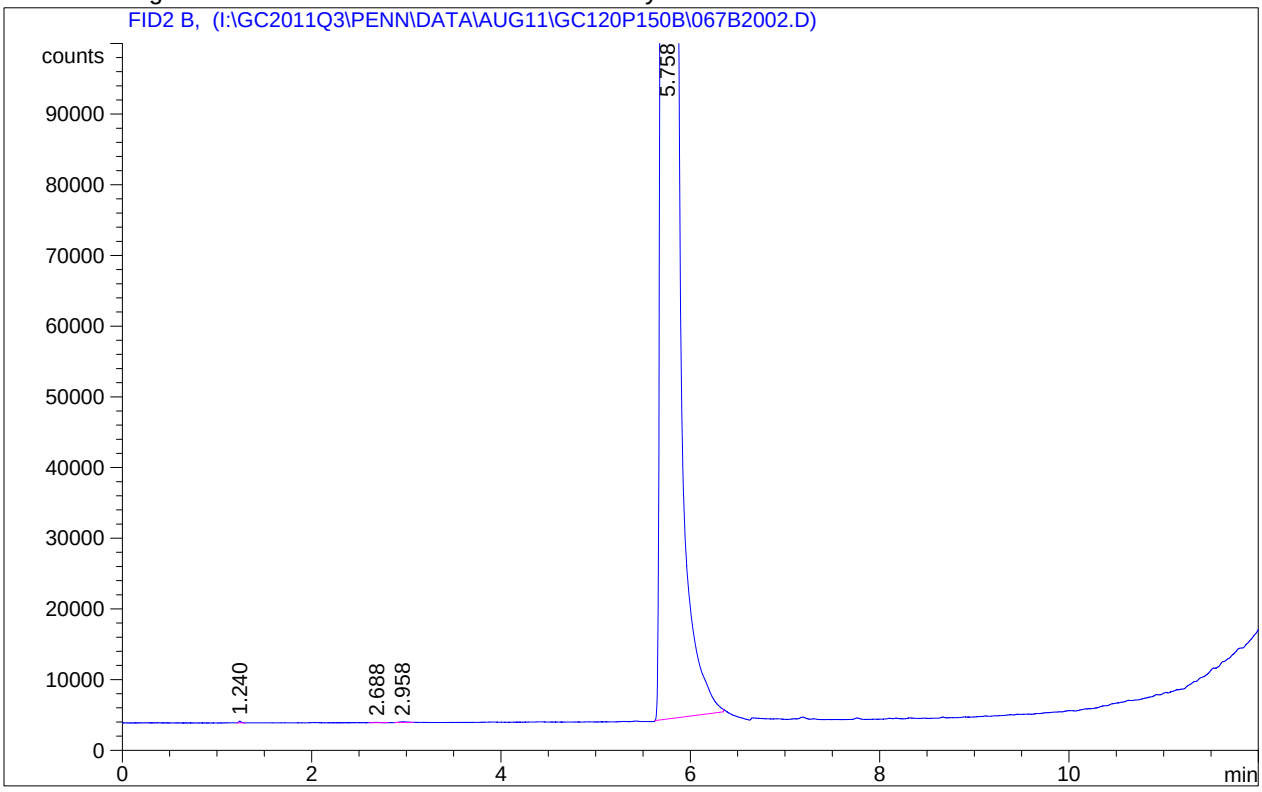
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  20
Acq. Instrument : Penn online                       Location : Vial 67
Injection Date  : 8/17/2011 10:50:23 PM                  Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\067B2002.D
Sample Name: m308-r1-sg-fh 0711-64

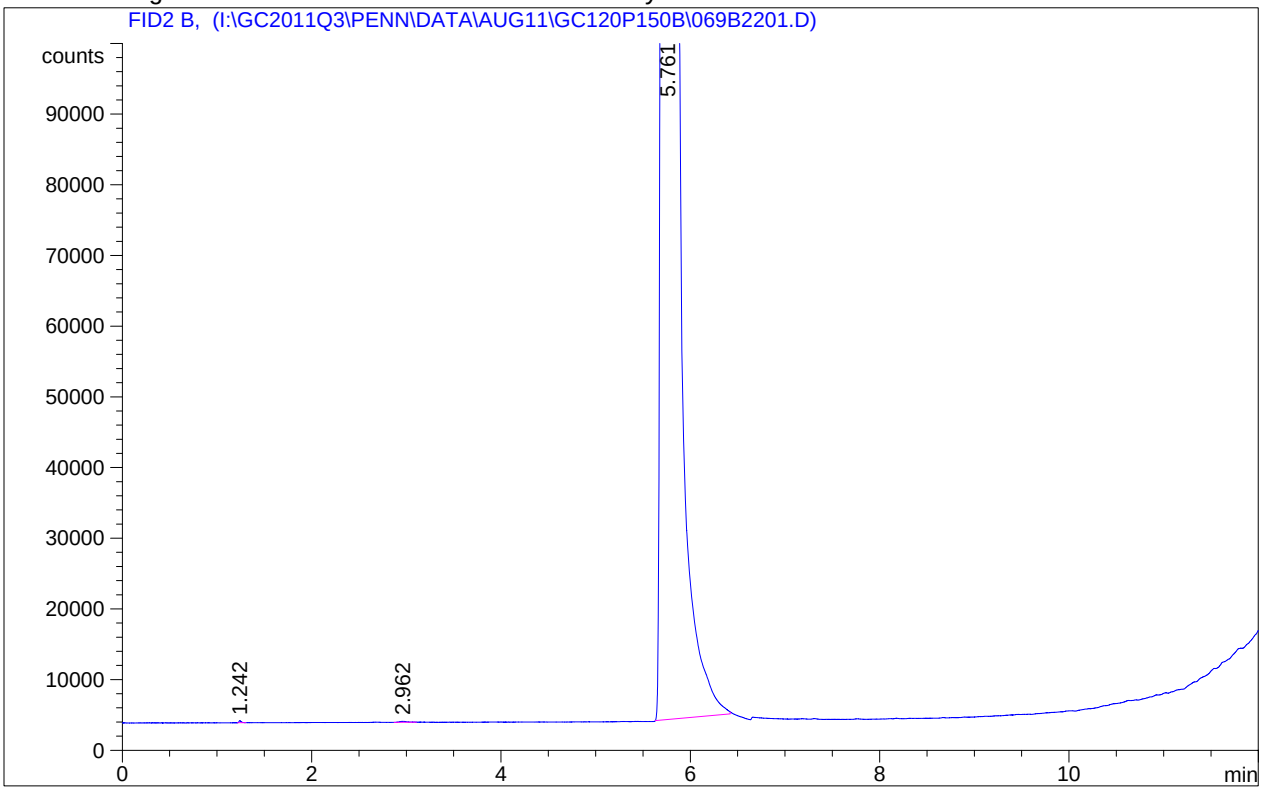
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  20
Acq. Instrument : Penn online                       Location : Vial 67
Injection Date  : 8/17/2011 11:12:59 PM                  Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\069B2201.D
Sample Name: m308-r1-sg-bh 0711-64

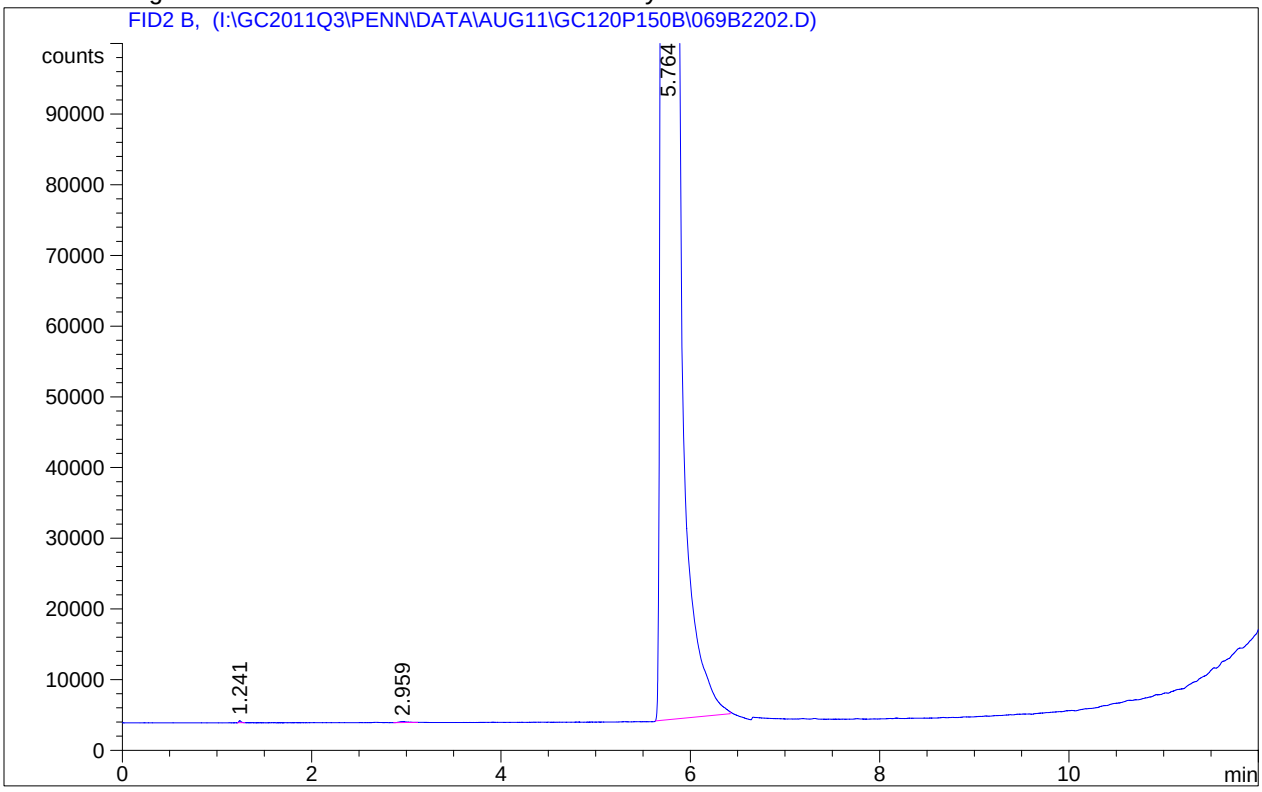
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  22
Acq. Instrument : Penn online                       Location : Vial 69
Injection Date  : 8/18/2011 1:06:12 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\069B2202.D
Sample Name: m308-r1-sg-bh 0711-64

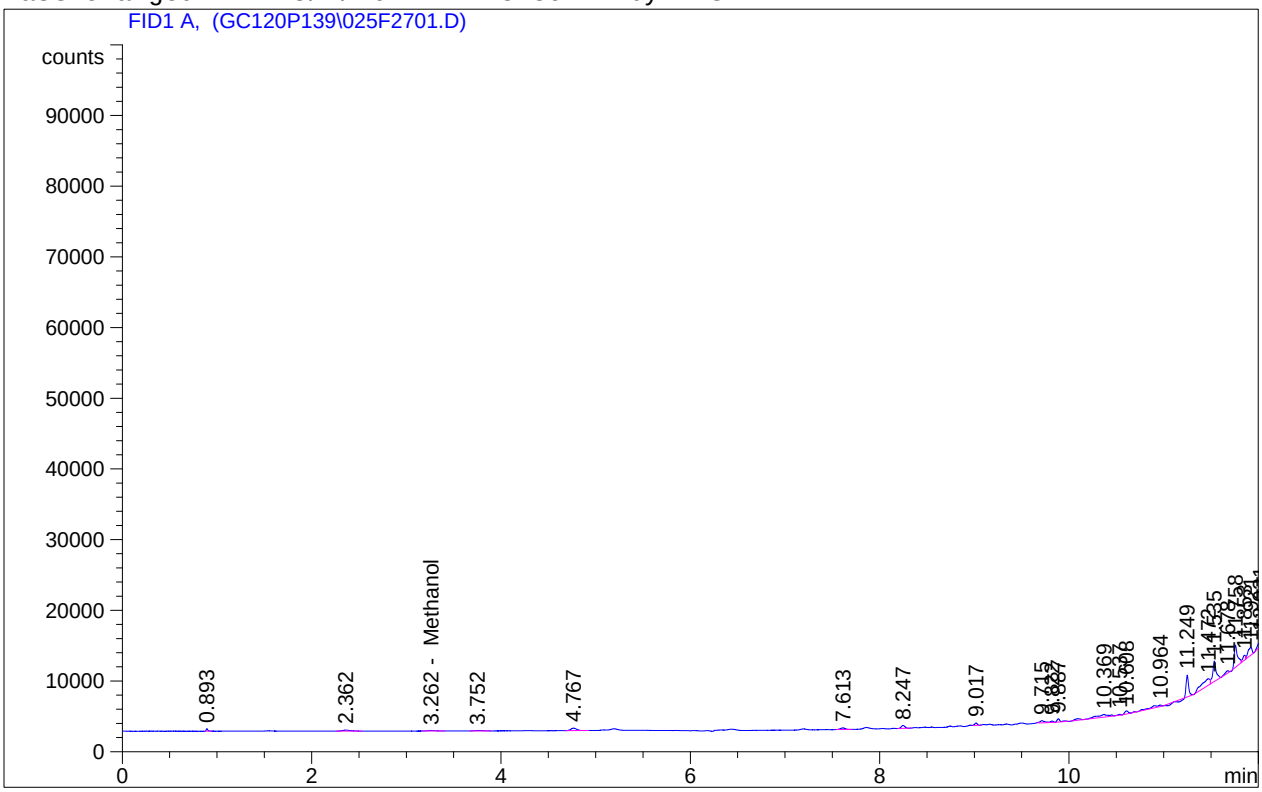
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  22
Acq. Instrument : Penn online                       Location : Vial 69
Injection Date  : 8/18/2011 1:28:51 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\025F2701.D
Sample Name: R2-Cond-m308 0711-64

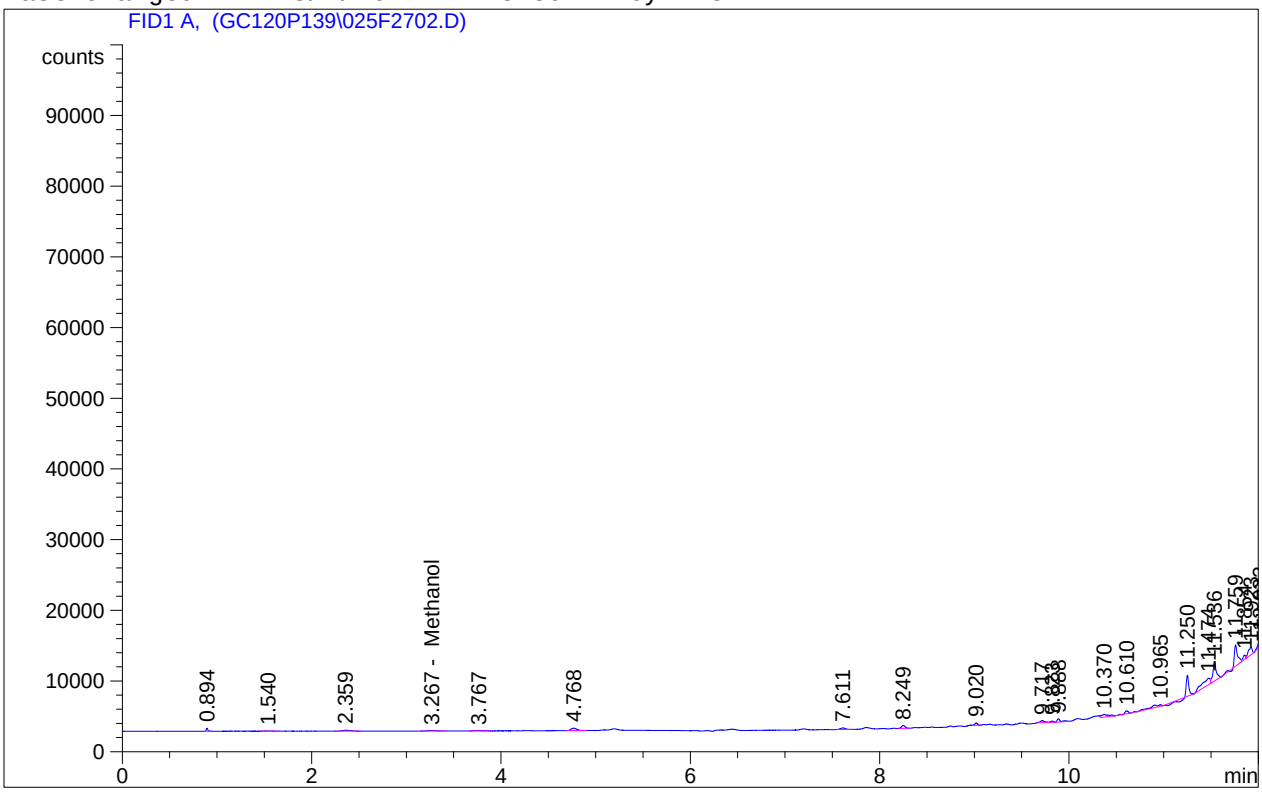
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  27
Acq. Instrument : Penn online                   Location : Vial 25
Injection Date  : 7/30/2011 6:04:27 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.262 BB      403.61655 1.53680e-3 6.20278e-1    Methanol

Totals :                              6.20278e-1



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\025F2702.D
Sample Name: R2-Cond-m308 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  27
Acq. Instrument : Penn online                       Location : Vial 25
Injection Date  : 7/30/2011 6:25:39 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```

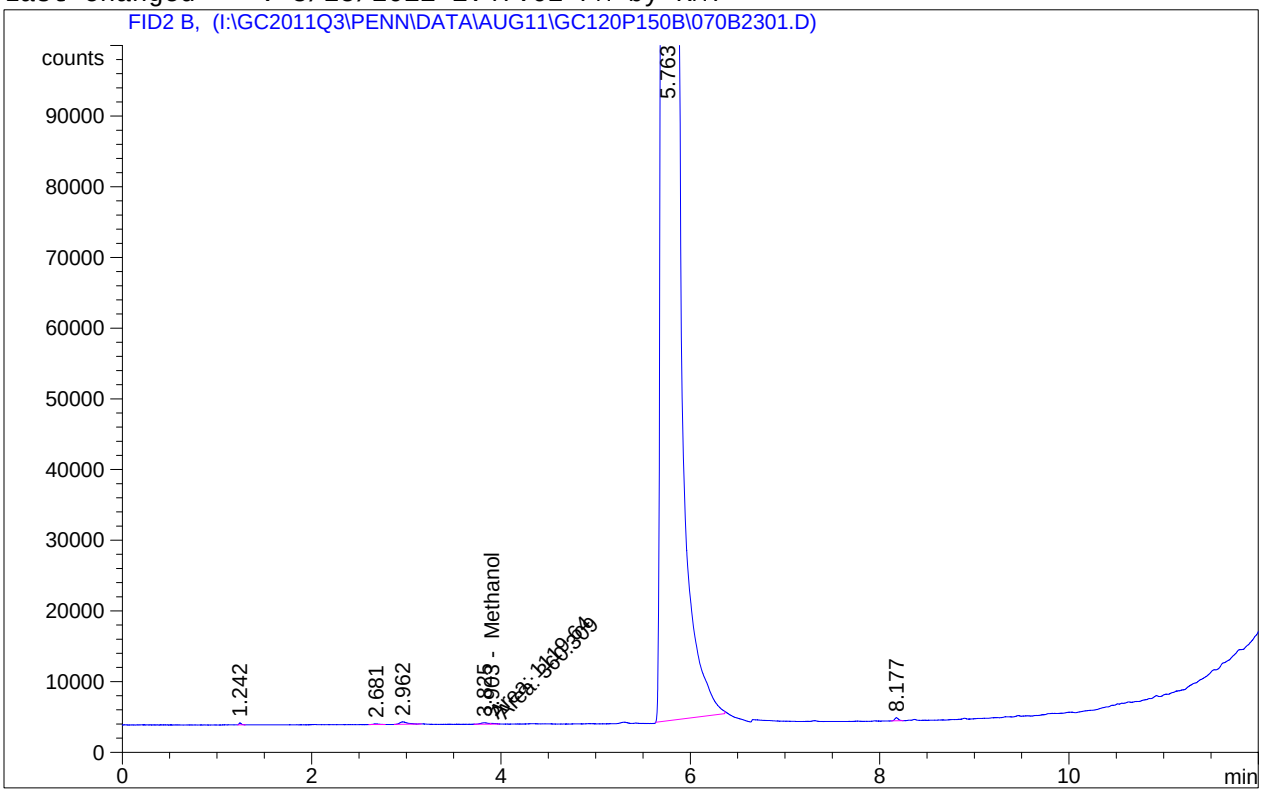



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.267 BB      412.07697 1.53680e-3 6.33280e-1    Methanol

Totals :                              6.33280e-1



Signal 2: FID2 B,    not found
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\070B2301.D
Sample Name: m308-r2-sg-fh 0711-64

==========

Acq. Operator : CLD Seq. Line : 23
Acq. Instrument : Penn online Location : Vial 70
Injection Date : 8/18/2011 2:14:06 AM Inj : 1
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name	
3.903	FM	360.30905	1.87344e-3	6.75019e-1		Methanol	**Manual Int. "II" (KAM)**

Totals : 6.75019e-1

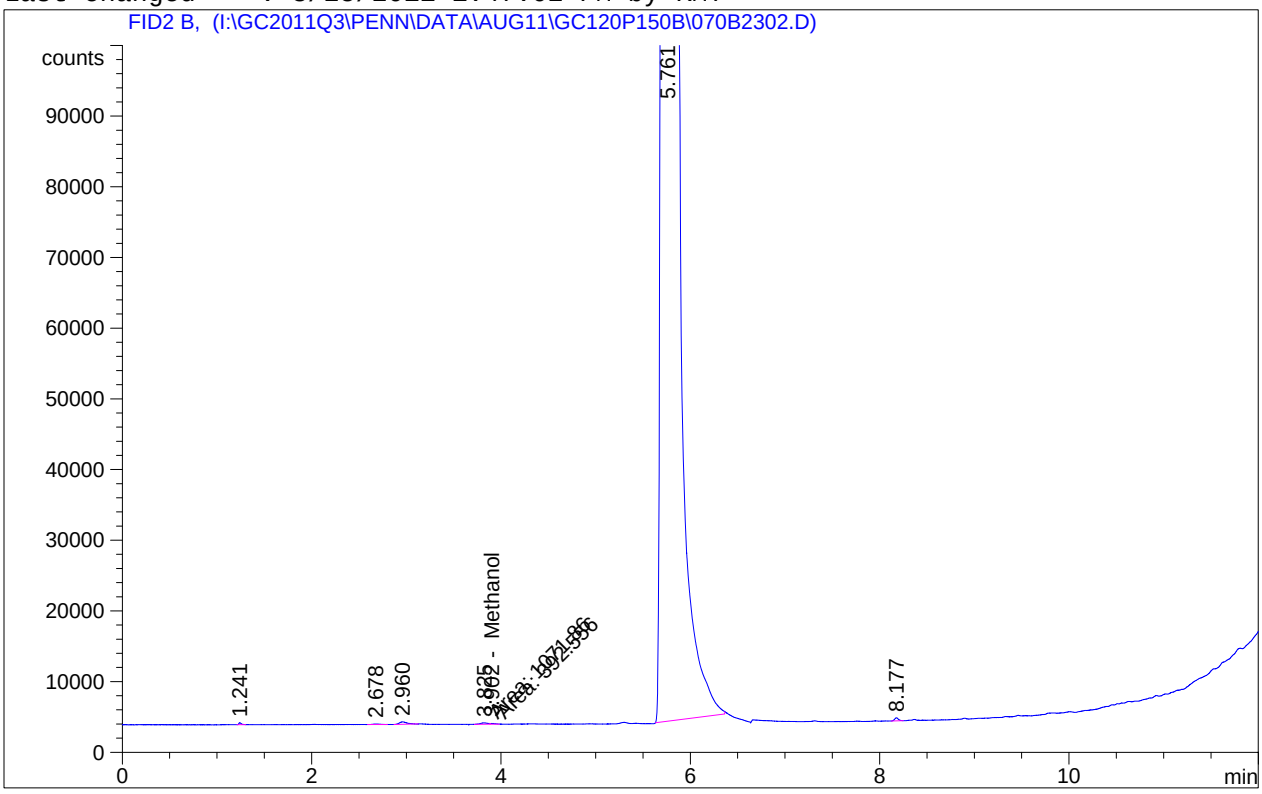
==========

*** End of Report ***

EM-BTRF-001605

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\070B2302.D
Sample Name: m308-r2-sg-fh 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  23
Acq. Instrument : Penn online                       Location : Vial 70
Injection Date  : 8/18/2011 2:36:41 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```



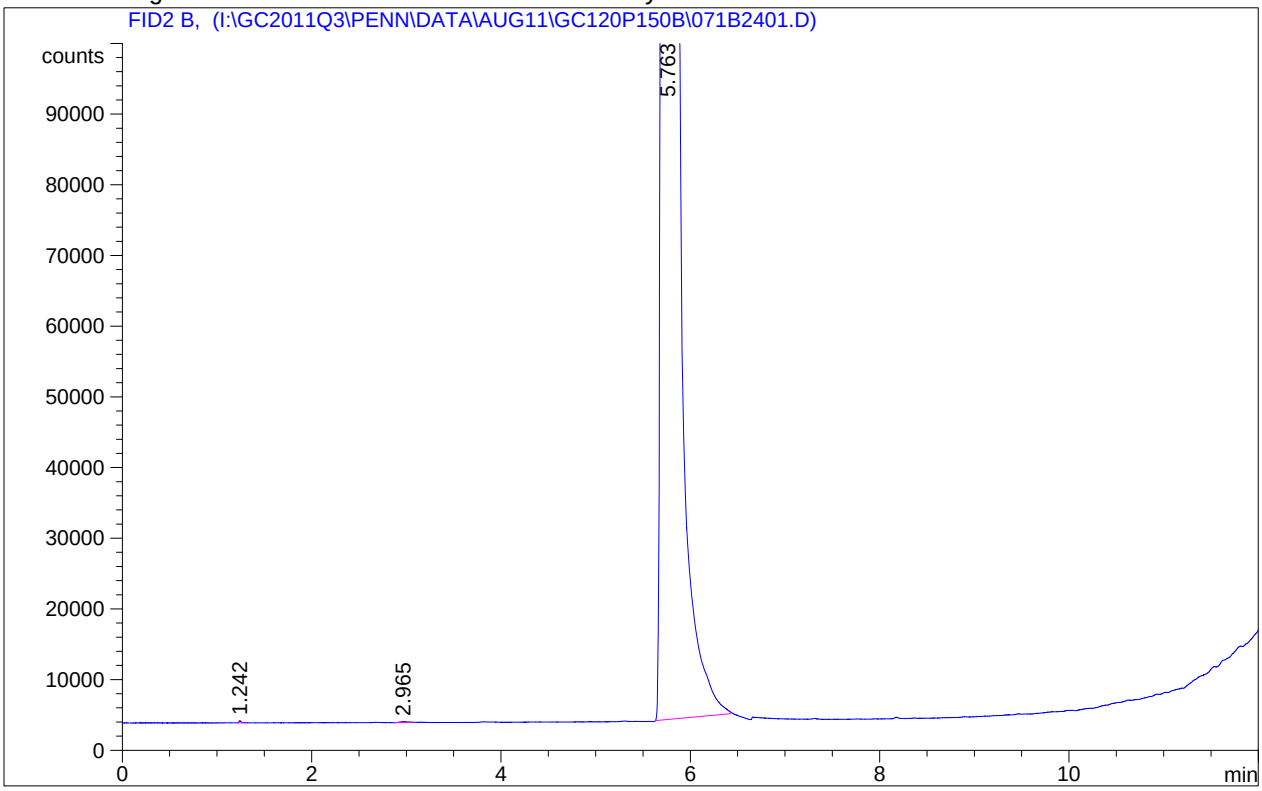

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.902 FM      392.55560 1.87344e-3 7.35431e-1    Methanol
```

Manual Int. "II" (KAM)

```
Totals :                              7.35431e-1

==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\071B2401.D
Sample Name: m308-r2-sg-bh 0711-64

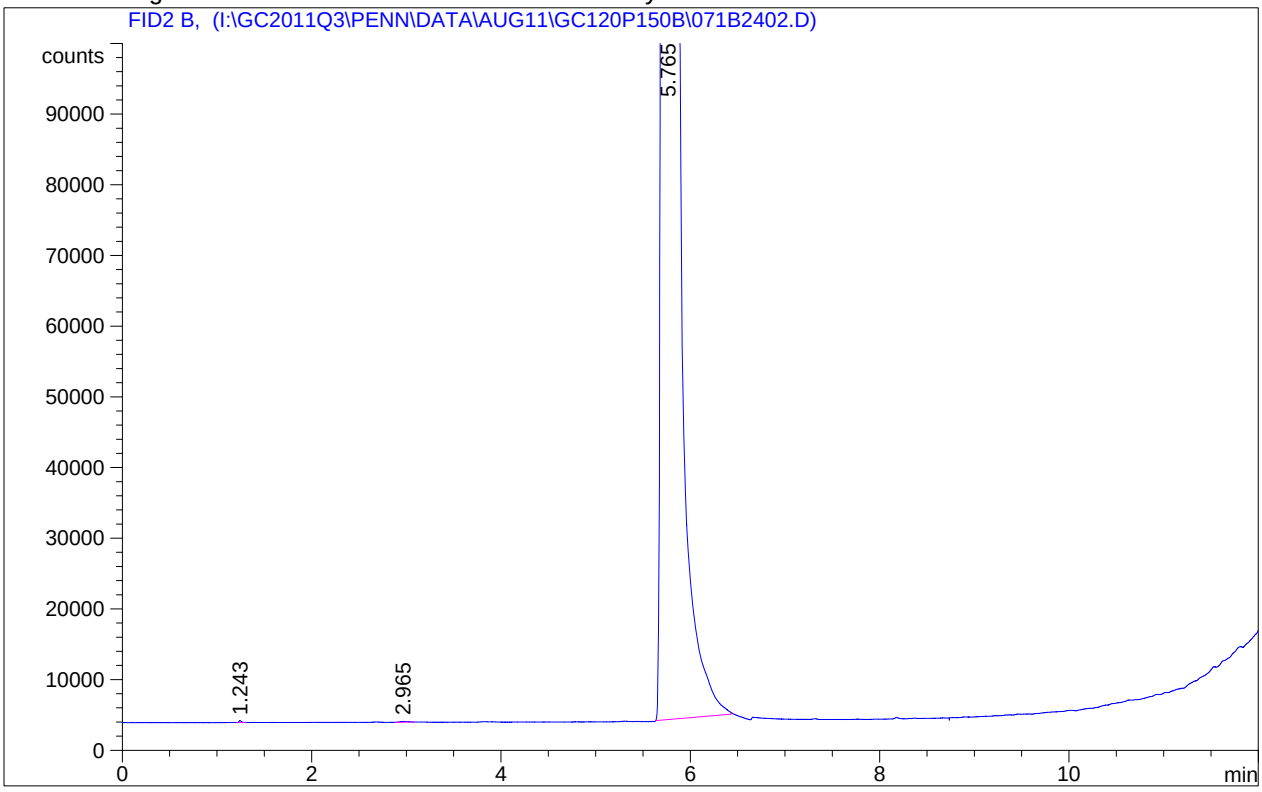
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  24
Acq. Instrument : Penn online                       Location : Vial 71
Injection Date  : 8/18/2011 3:22:00 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\071B2402.D
Sample Name: m308-r2-sg-bh 0711-64

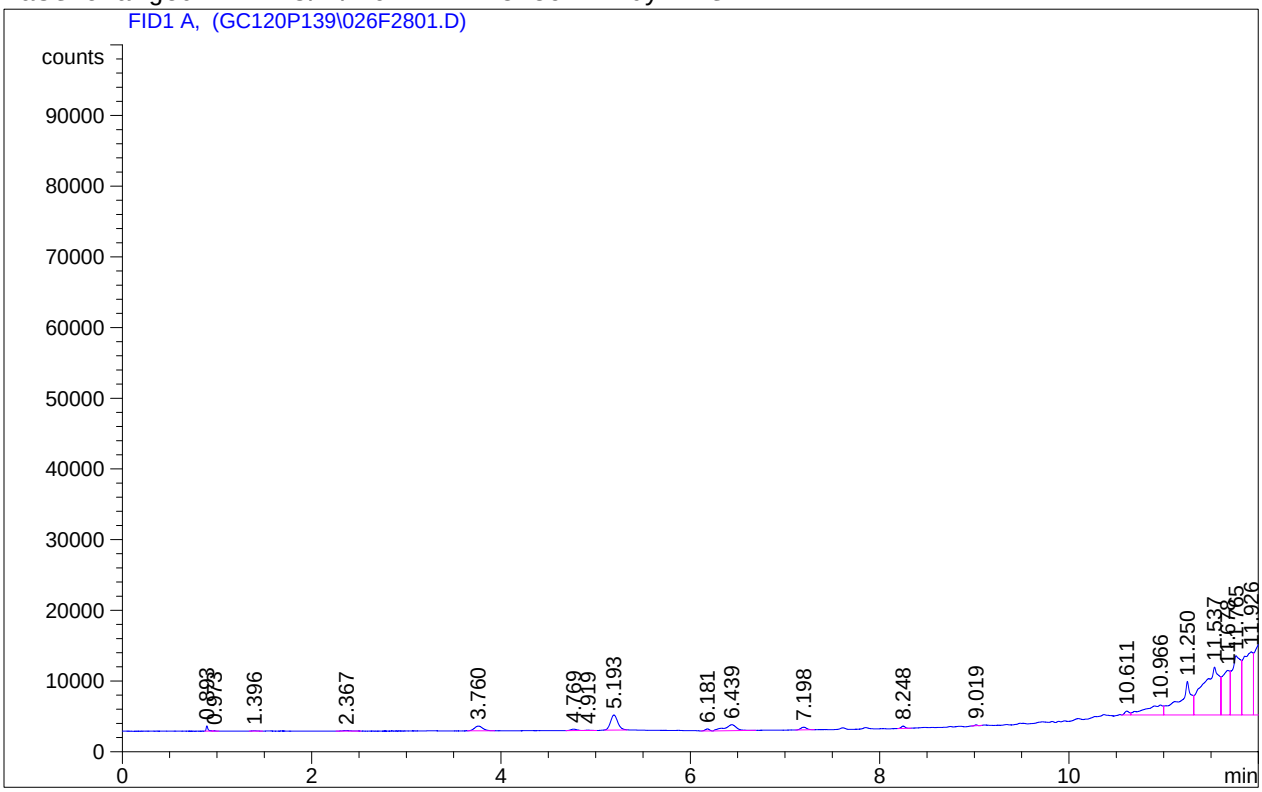
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  24
Acq. Instrument : Penn online                       Location : Vial 71
Injection Date  : 8/18/2011 3:44:36 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\026F2801.D
Sample Name: R3-Cond-m308 0711-64

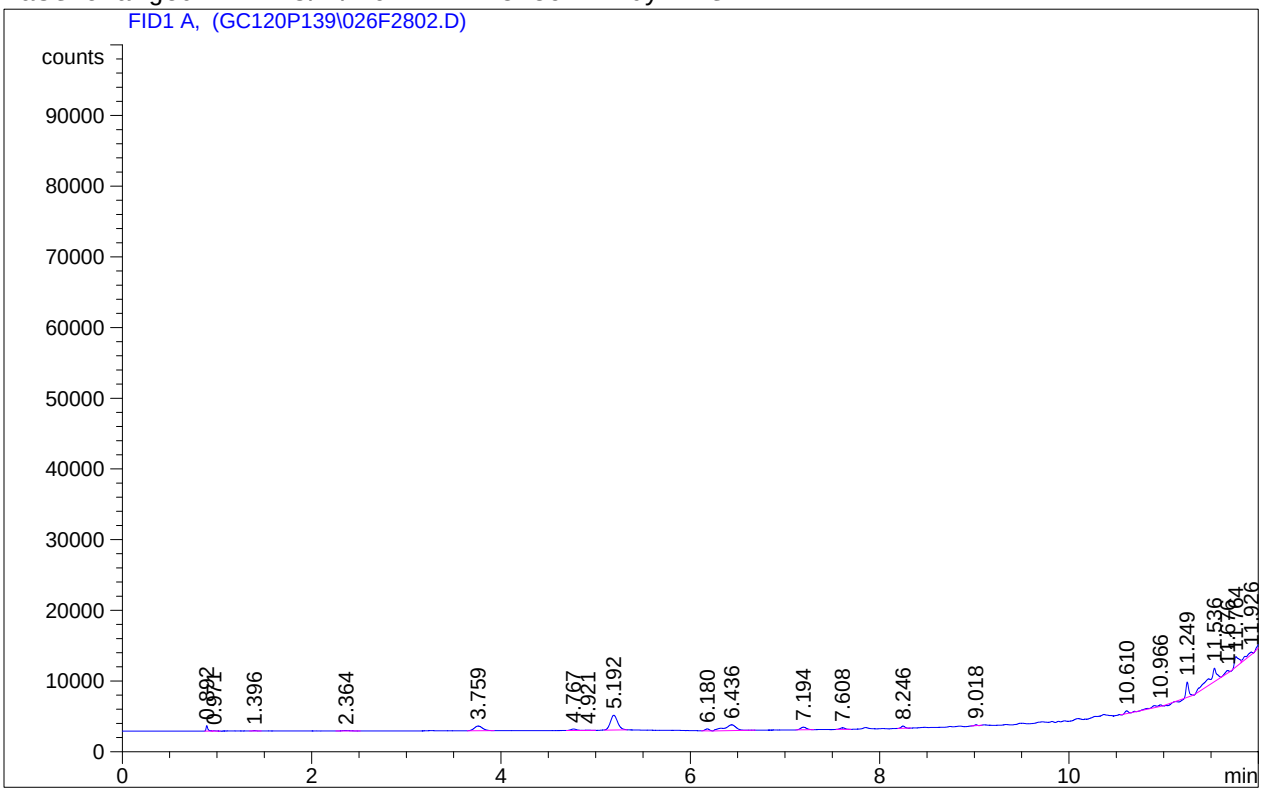
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  28
Acq. Instrument : Penn online                       Location : Vial 26
Injection Date  : 7/30/2011 6:46:48 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.296            -          -          -          Methanol

Totals :                                0.00000



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\026F2802.D
Sample Name: R3-Cond-m308 0711-64

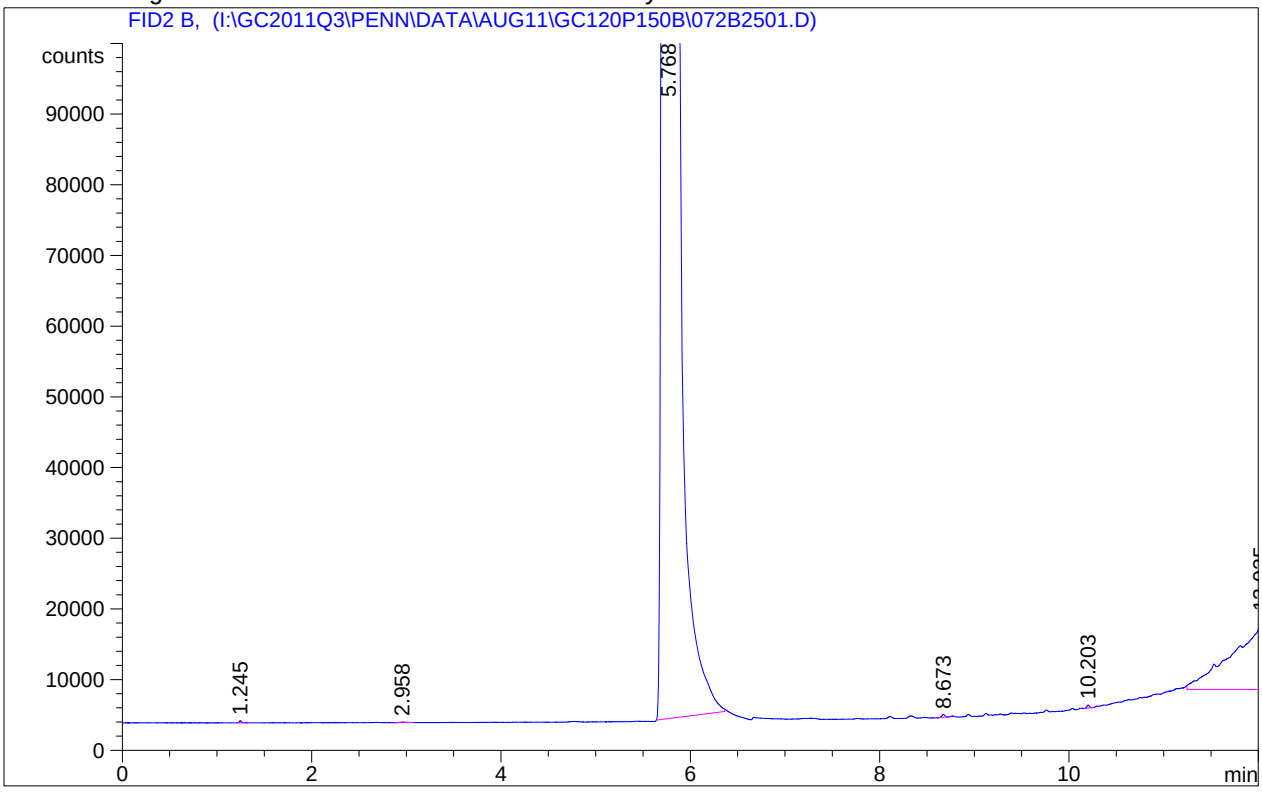
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  28
Acq. Instrument : Penn online                       Location : Vial 26
Injection Date  : 7/30/2011 7:07:53 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.296            -          -          -          Methanol

Totals :                                0.00000



Signal 2: FID2 B,    not found
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\072B2501.D
Sample Name: m308-r3-sg-fh 0711-64

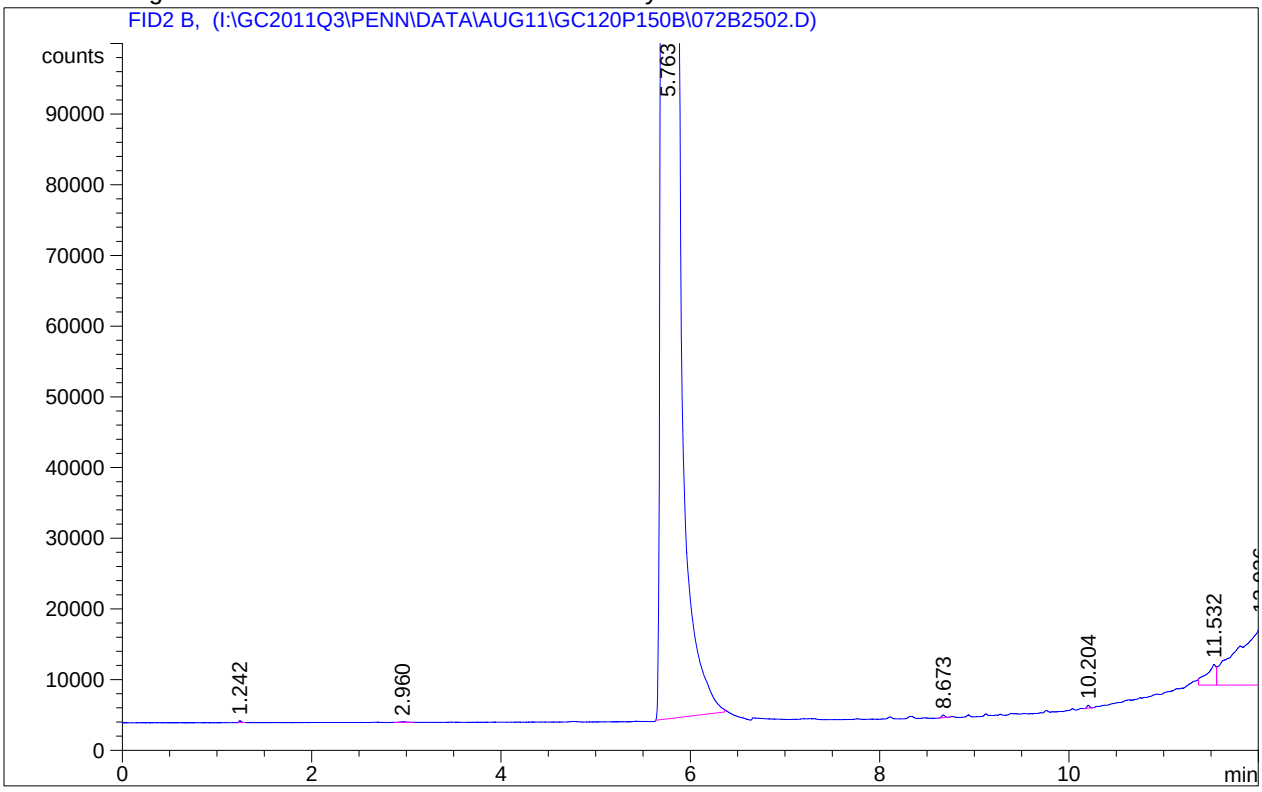
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  25
Acq. Instrument : Penn online                   Location : Vial 72
Injection Date  : 8/18/2011 4:29:59 AM               Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\072B2502.D
Sample Name: m308-r3-sg-fh 0711-64

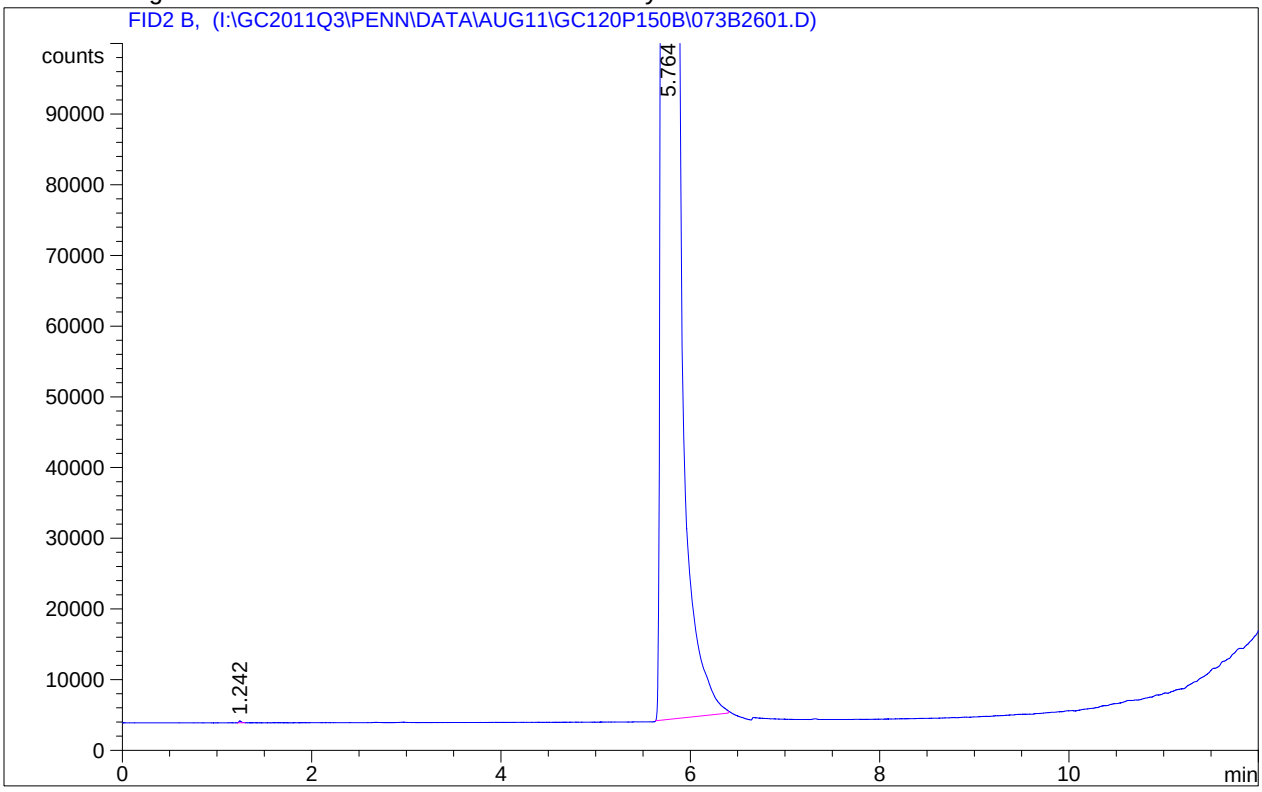
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  25
Acq. Instrument : Penn online                   Location : Vial 72
Injection Date  : 8/18/2011 4:52:39 AM               Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\073B2601.D
Sample Name: m308-r3-sg-bh 0711-64

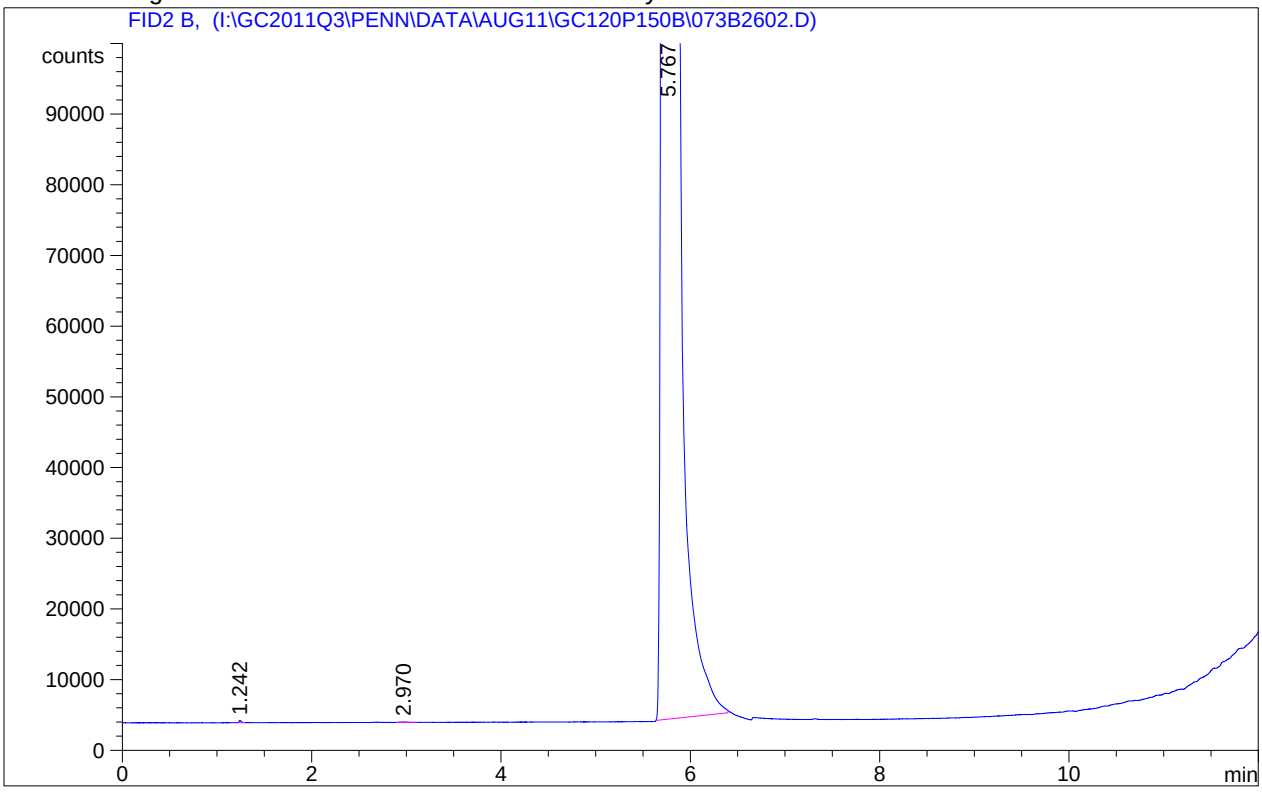
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  26
Acq. Instrument : Penn online                       Location : Vial 73
Injection Date  : 8/18/2011 5:37:58 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\073B2602.D
Sample Name: m308-r3-sg-bh 0711-64

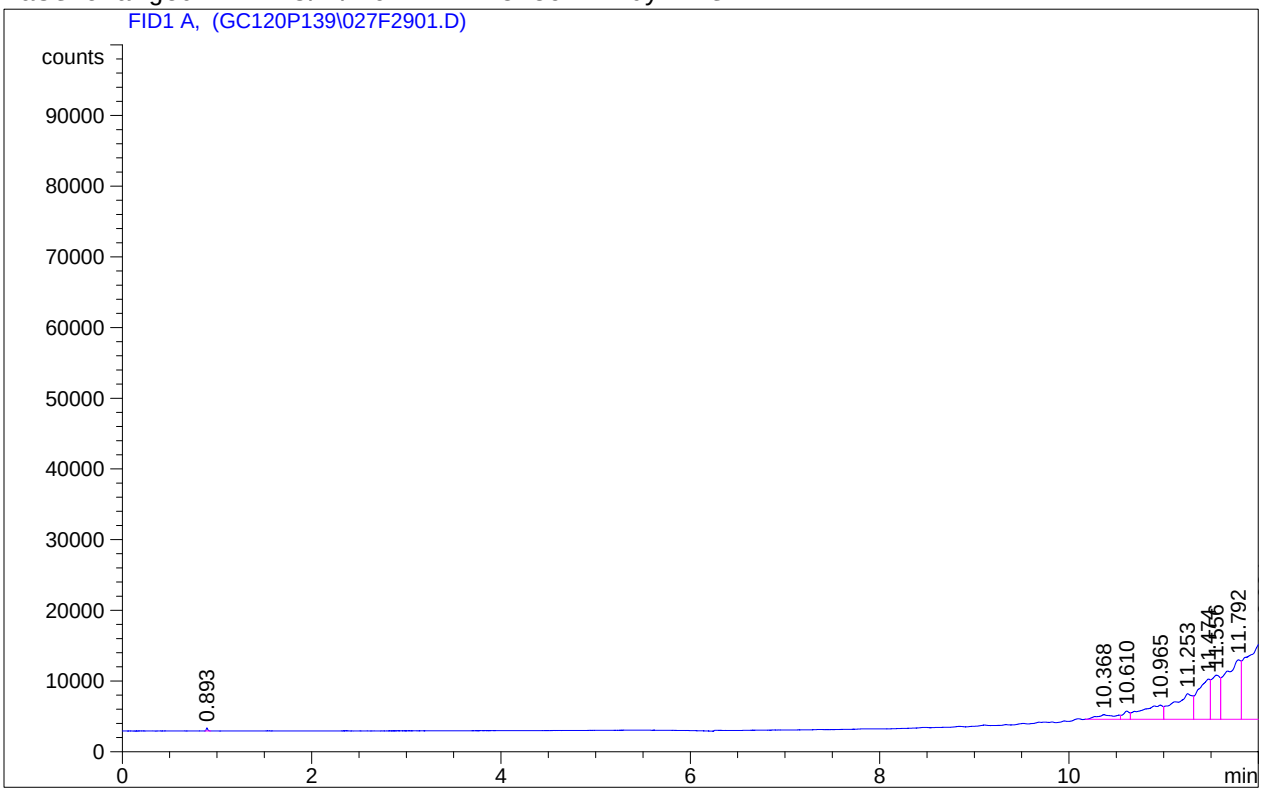
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  26
Acq. Instrument : Penn online                       Location : Vial 73
Injection Date  : 8/18/2011 6:00:29 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\027F2901.D
Sample Name: m308-H2O-fb 0711-64

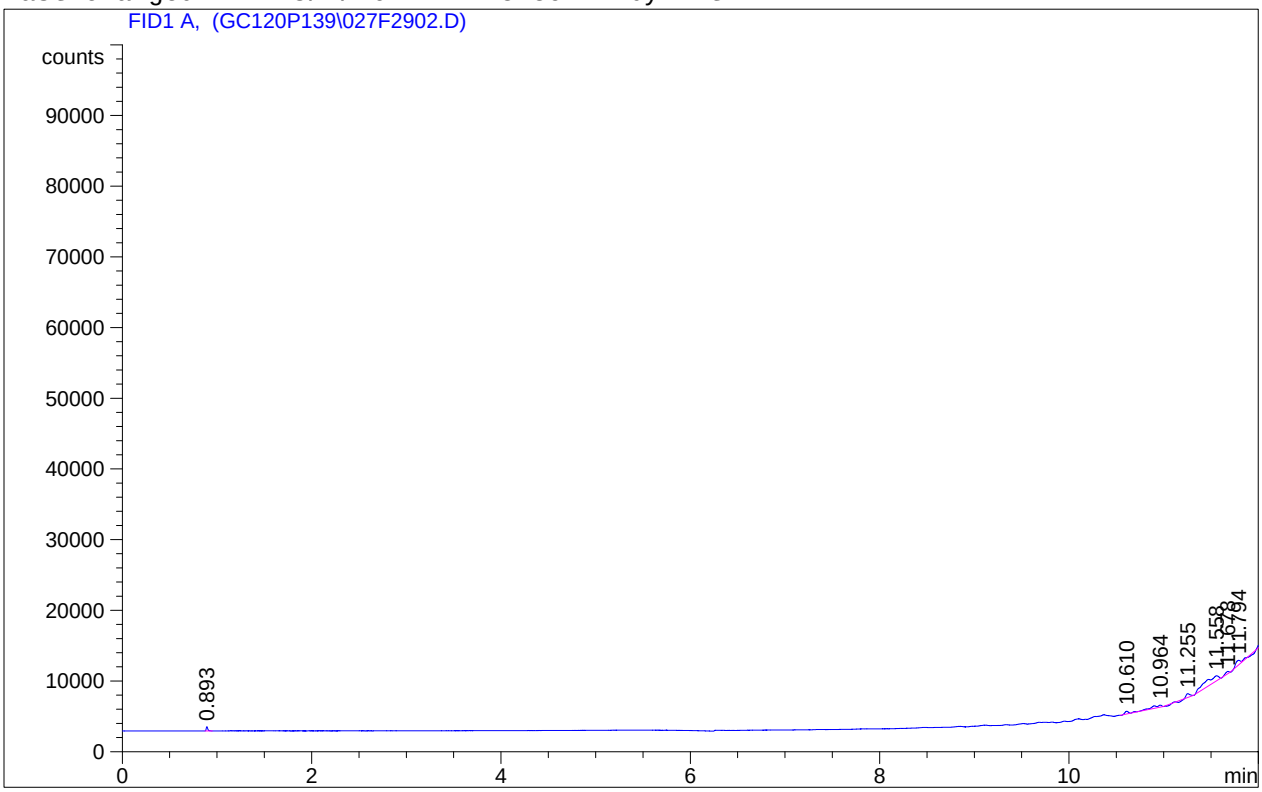
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  29
Acq. Instrument : Penn online                   Location : Vial 27
Injection Date  : 7/30/2011 7:28:57 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s               [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.296            -          -          -         Methanol

Totals :                                0.00000



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\027F2902.D
Sample Name: m308-H2O-fb 0711-64

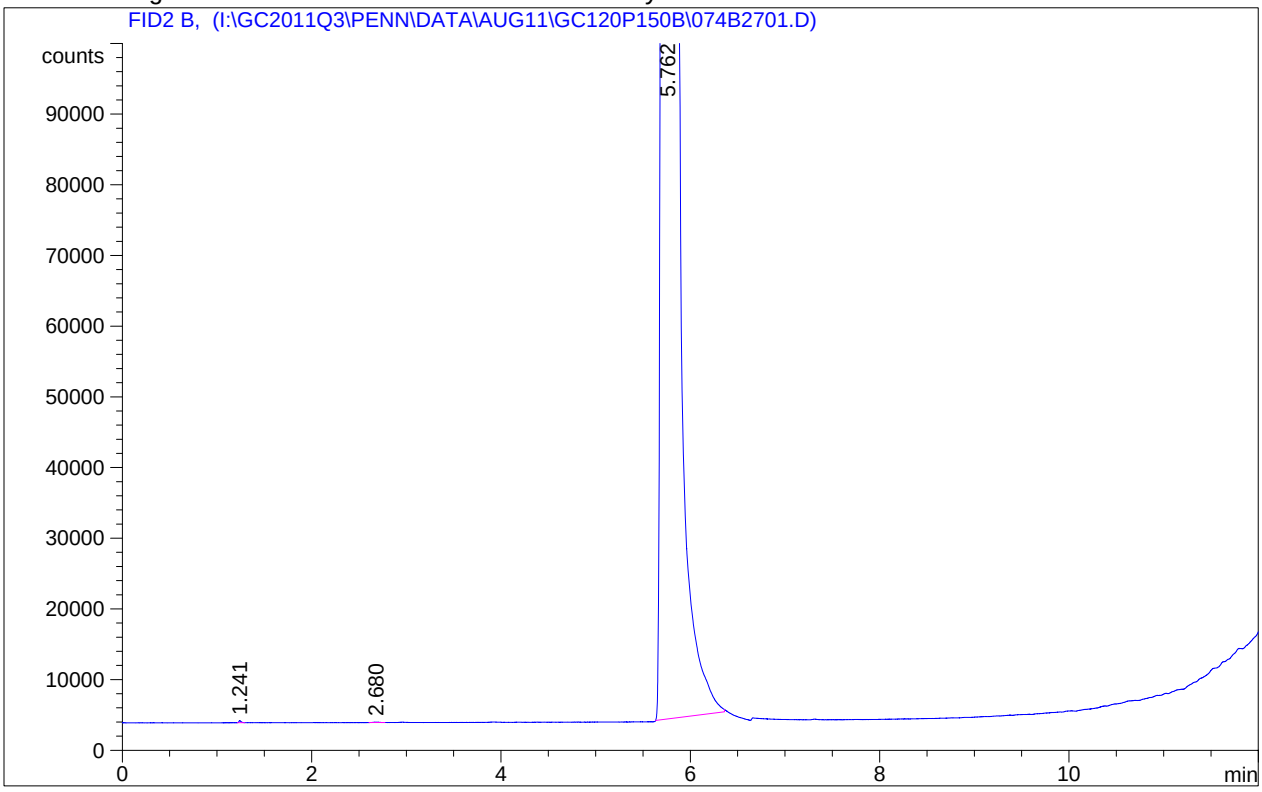
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  29
Acq. Instrument : Penn online                       Location : Vial 27
Injection Date  : 7/30/2011 7:50:02 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.296            -          -          -         Methanol

Totals :                                0.00000



Signal 2: FID2 B,    not found
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\074B2701.D
Sample Name: m308-sg-fb 0711-64

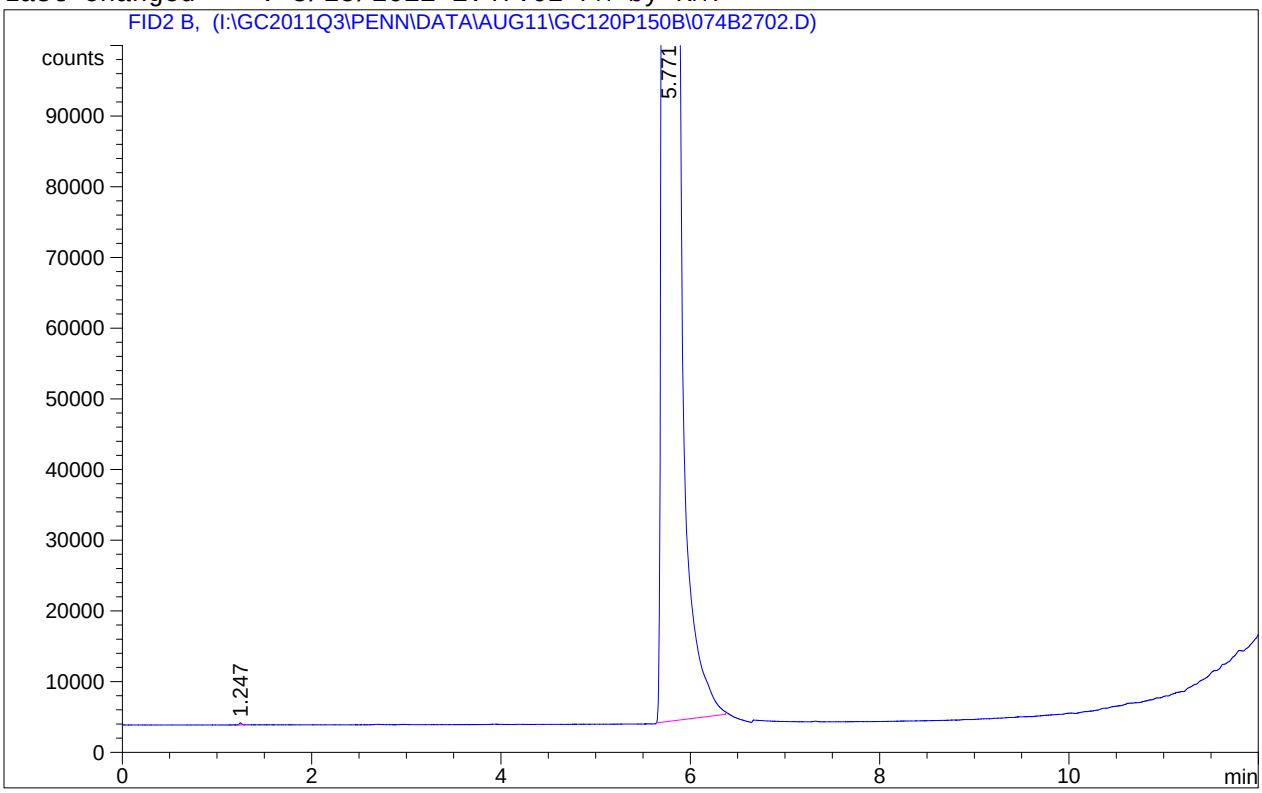
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  27
Acq. Instrument : Penn online                       Location : Vial 74
Injection Date  : 8/18/2011 6:45:52 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\074B2702.D
Sample Name: m308-sg-fb 0711-64

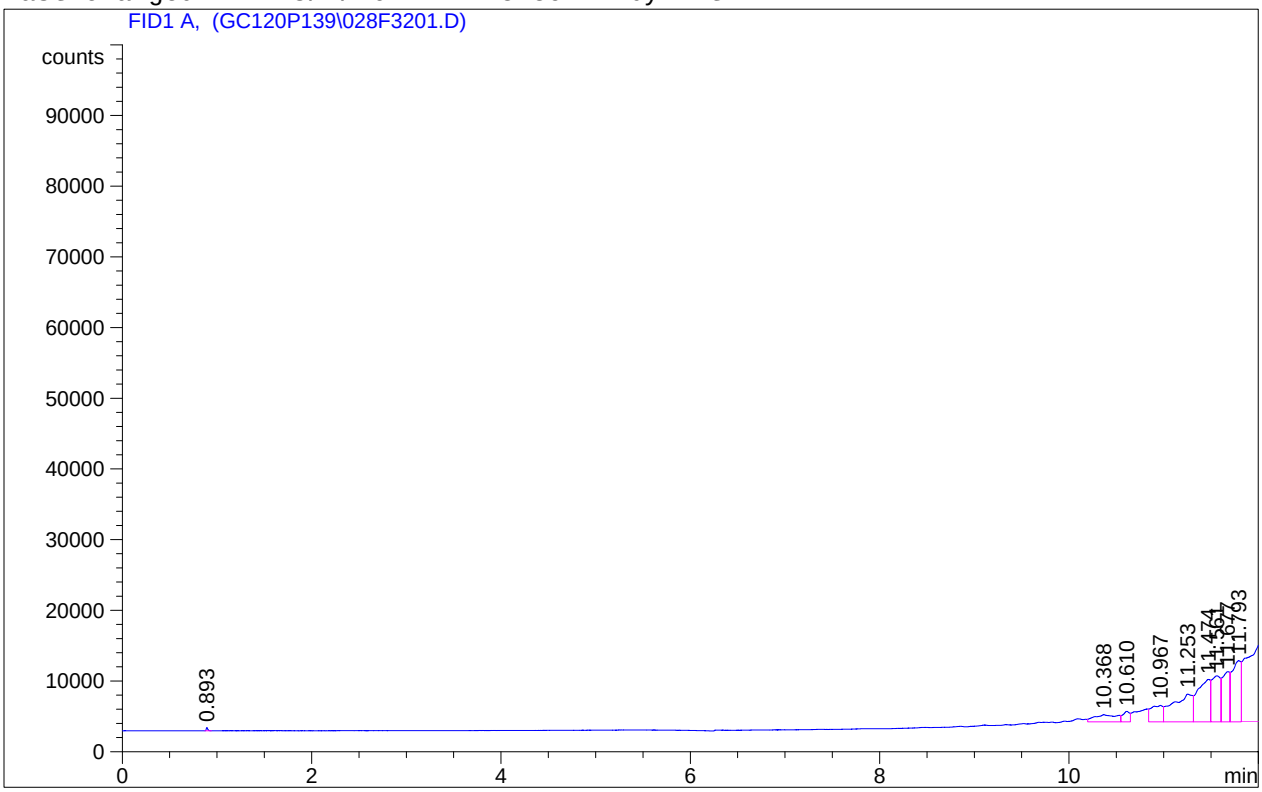
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  27
Acq. Instrument : Penn online                       Location : Vial 74
Injection Date  : 8/18/2011 7:08:27 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\028F3201.D
Sample Name: m308-H2O-rb 0711-64

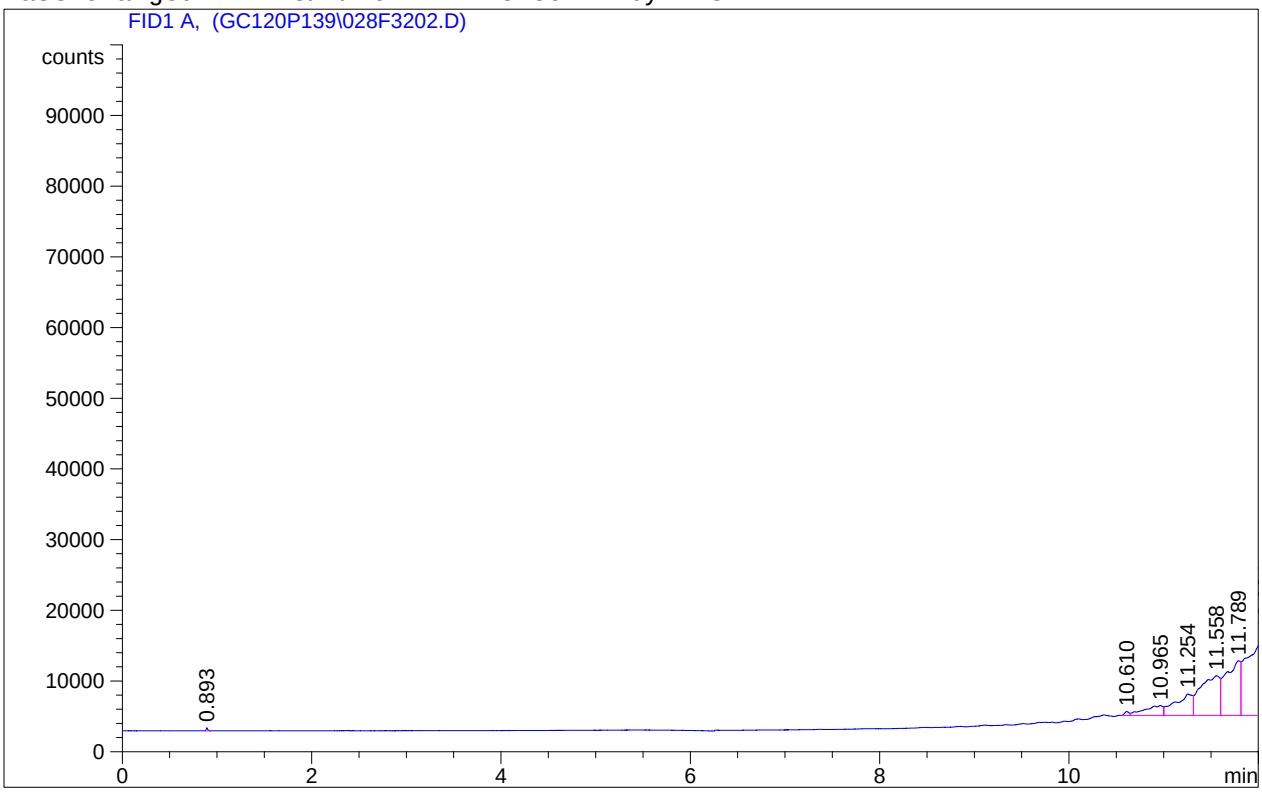
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  32
Acq. Instrument : Penn online                   Location : Vial 28
Injection Date  : 7/30/2011 10:17:35 PM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.296            -          -          -         Methanol

Totals :                                0.00000



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\028F3202.D
Sample Name: m308-H2O-rb 0711-64

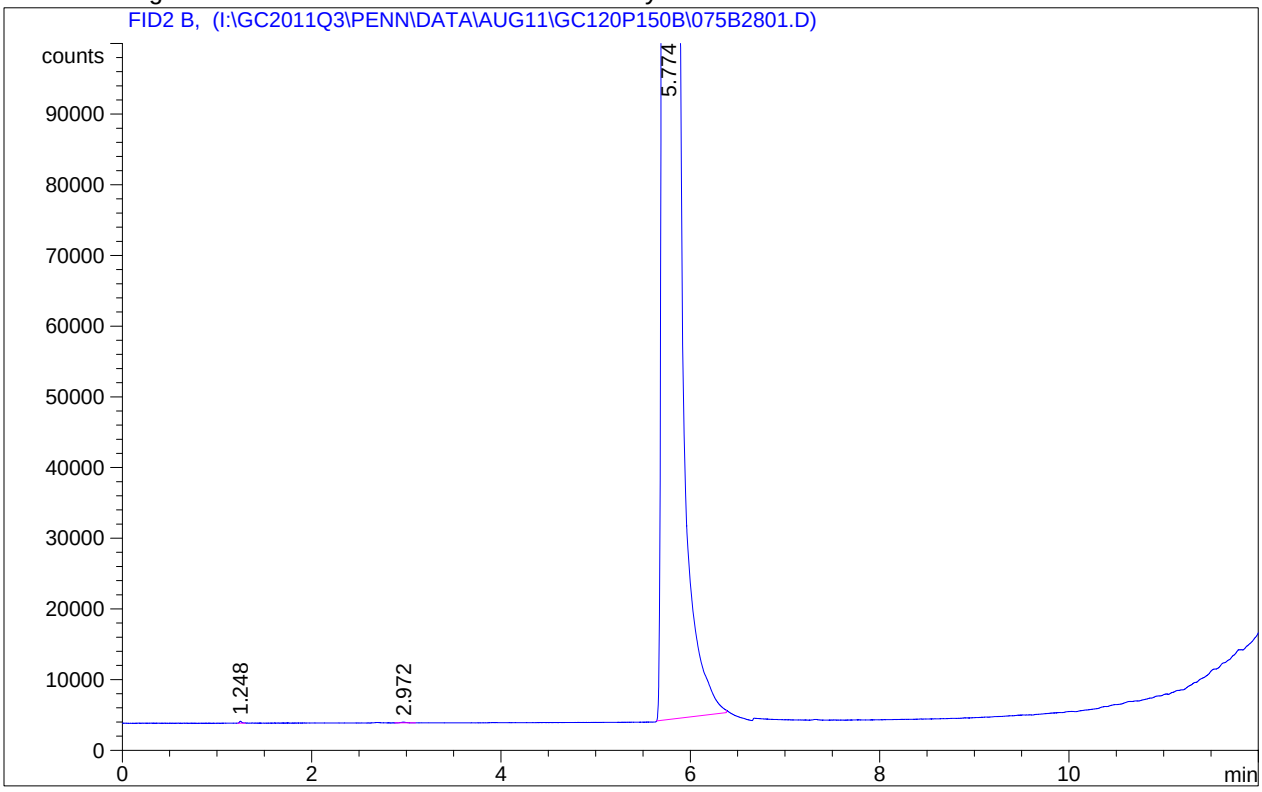
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  32
Acq. Instrument : Penn online                       Location : Vial 28
Injection Date  : 7/30/2011 10:38:44 PM                  Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.296            -          -          -         Methanol

Totals :                                0.00000



Signal 2: FID2 B,    not found
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\075B2801.D
Sample Name: m308-sg-mb 0711-64

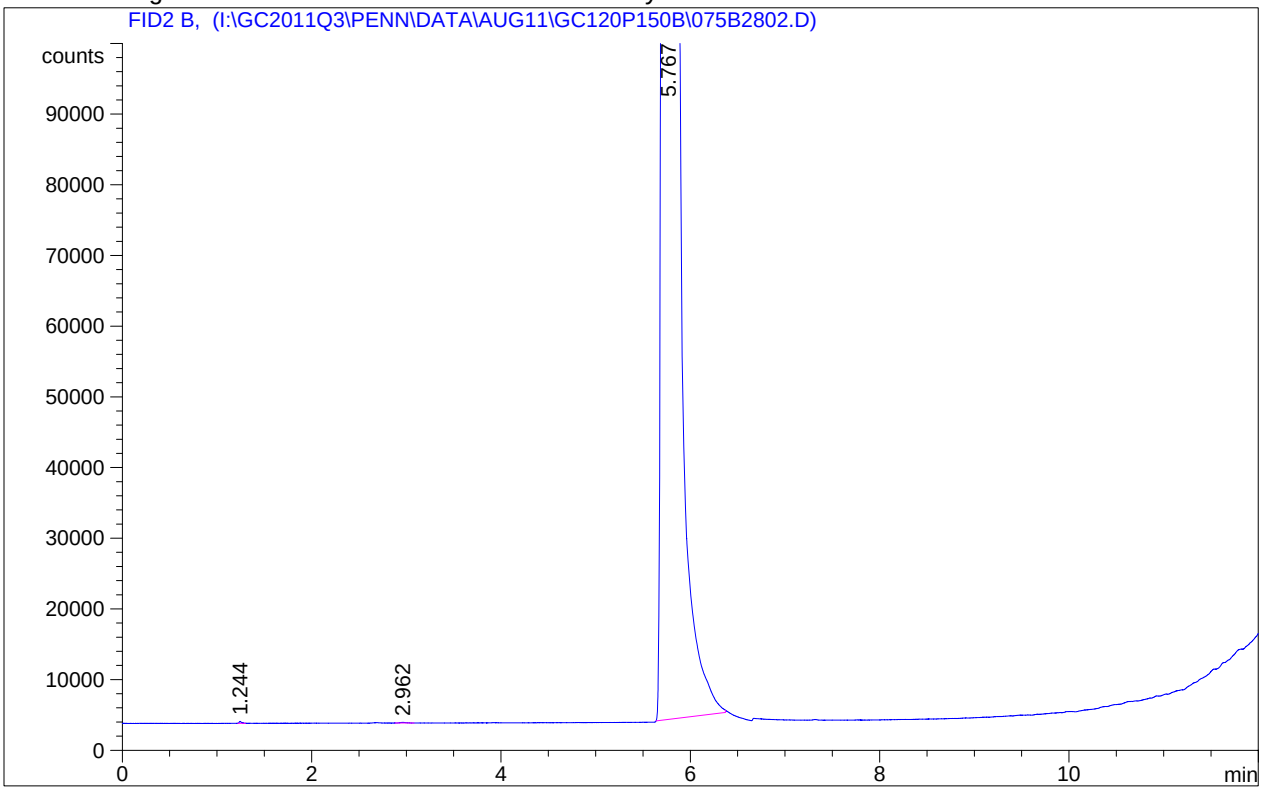
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  28
Acq. Instrument : Penn online                       Location : Vial 75
Injection Date  : 8/18/2011 7:53:46 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\075B2802.D
Sample Name: m308-sg-mb 0711-64

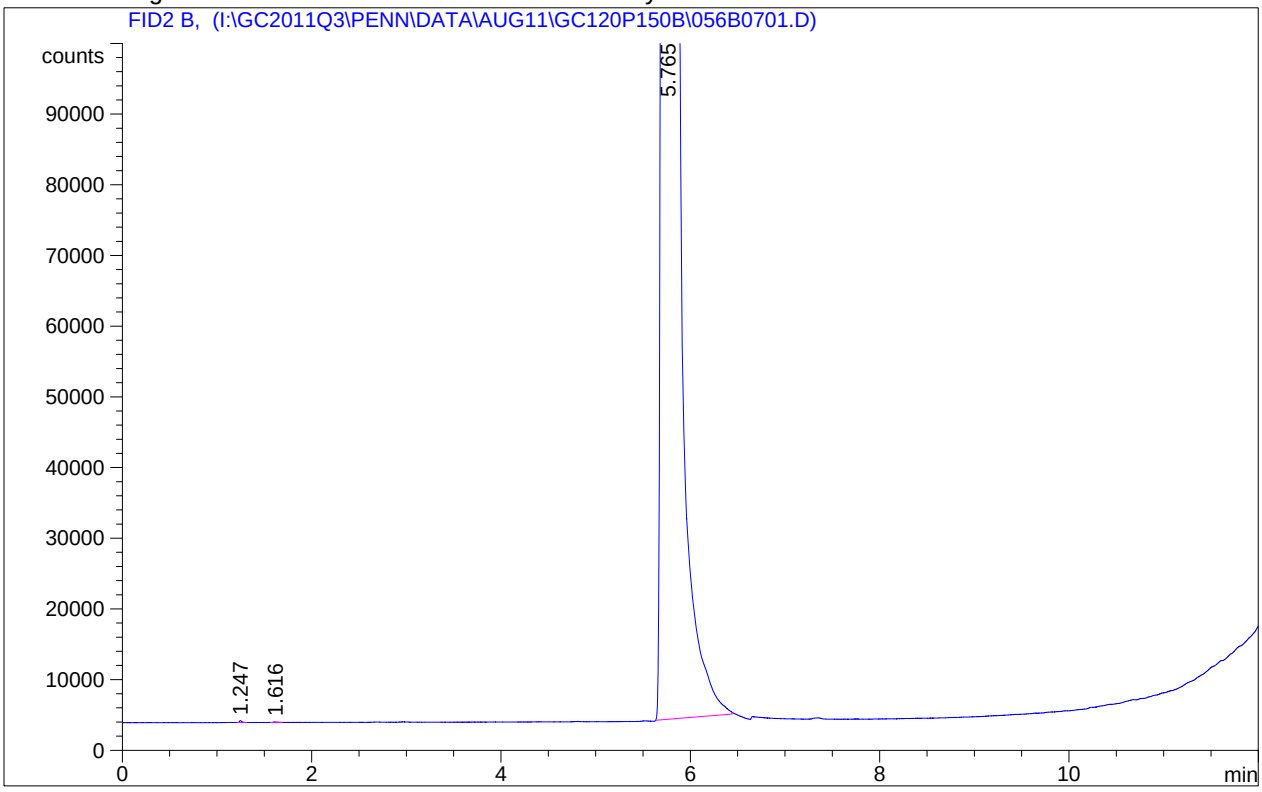
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  28
Acq. Instrument : Penn online                       Location : Vial 75
Injection Date  : 8/18/2011 8:16:31 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\056B0701.D
Sample Name: LB 3%p

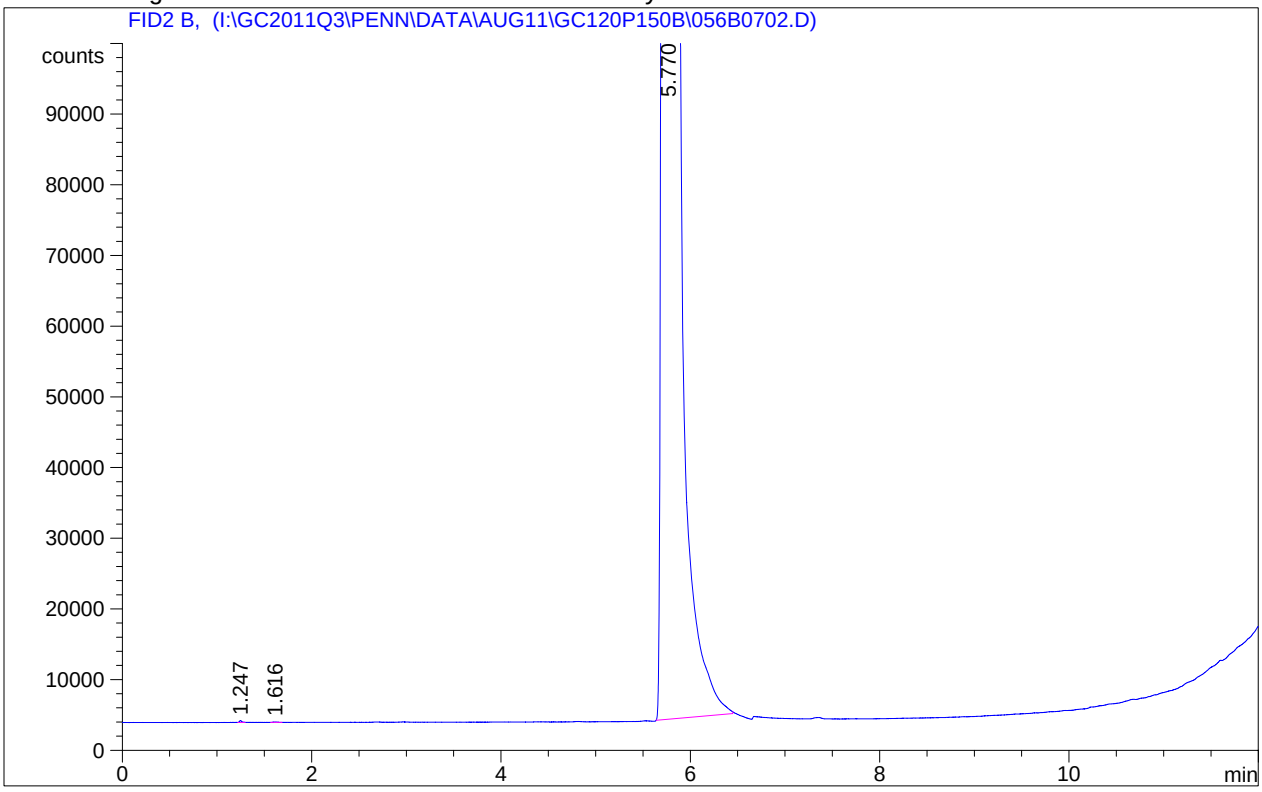
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   7
Acq. Instrument : Penn online                   Location : Vial 56
Injection Date  : 8/17/2011 5:51:47 AM               Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\056B0702.D
Sample Name: LB 3%p

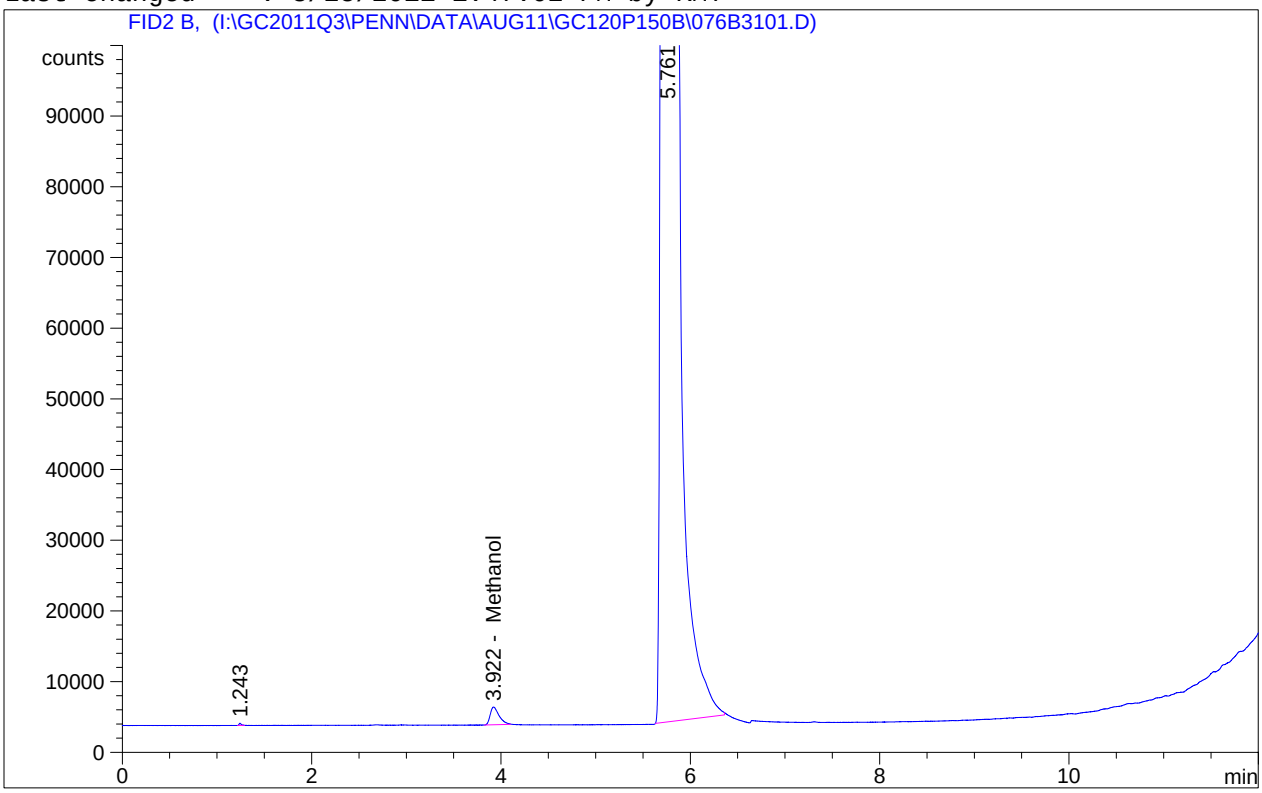
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   7
Acq. Instrument : Penn online                       Location : Vial 56
Injection Date  : 8/17/2011 6:14:27 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\076B3101.D
Sample Name: m308-sg-lcs 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  31
Acq. Instrument : Penn online                       Location : Vial 76
Injection Date  : 8/18/2011 11:17:41 AM                  Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

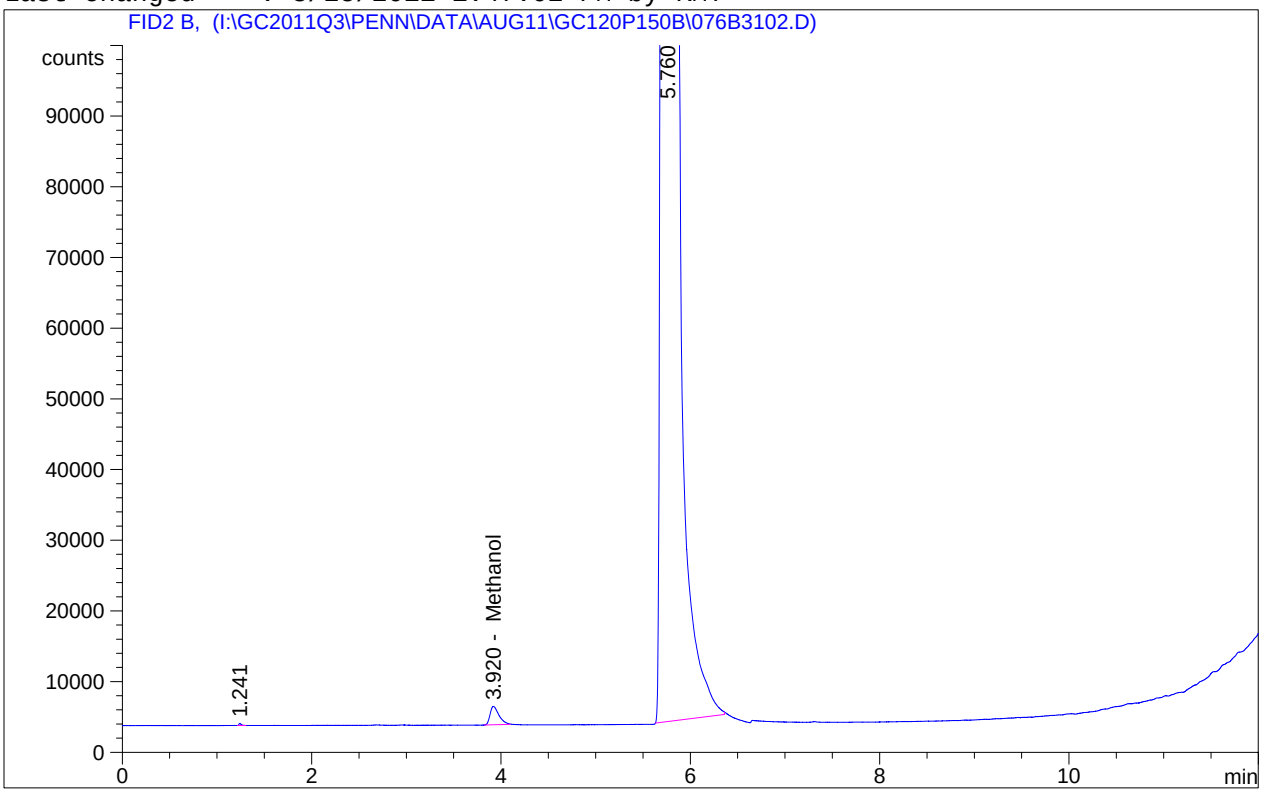



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------
  3.922 BB     1.63283e4  1.95050e-3   31.84837    Methanol

Totals :                                31.84837

==========================================================================
                         *** End of Report ***
```

EPA M308 SG LCS desorbed in 5mL 3% n-propanol Tag: 198ug

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\076B3102.D
Sample Name: m308-sg-lcs 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  31
Acq. Instrument : Penn online                       Location : Vial 76
Injection Date  : 8/18/2011 11:40:20 AM                  Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

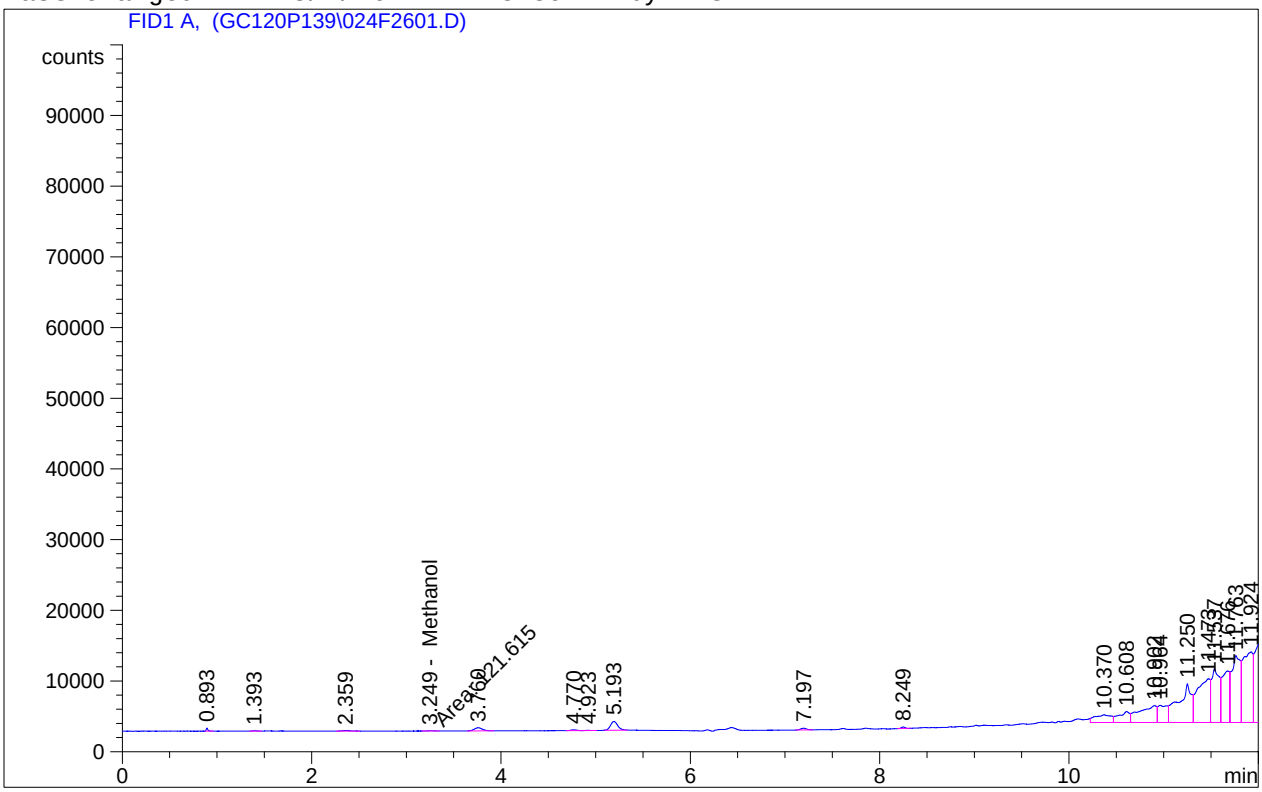



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------
  3.920 BB     1.70325e4  1.95068e-3   33.22493    Methanol

Totals :                               33.22493

==========================================================================
                         *** End of Report ***
```

EPA M308 SG LCS desorbed in 5mL 3% n-propanol Tag: 198ug

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\024F2601.D
Sample Name: R1-Cond-LD-m308 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  26
Acq. Instrument : Penn online                       Location : Vial 24
Injection Date  : 7/30/2011 5:22:10 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```



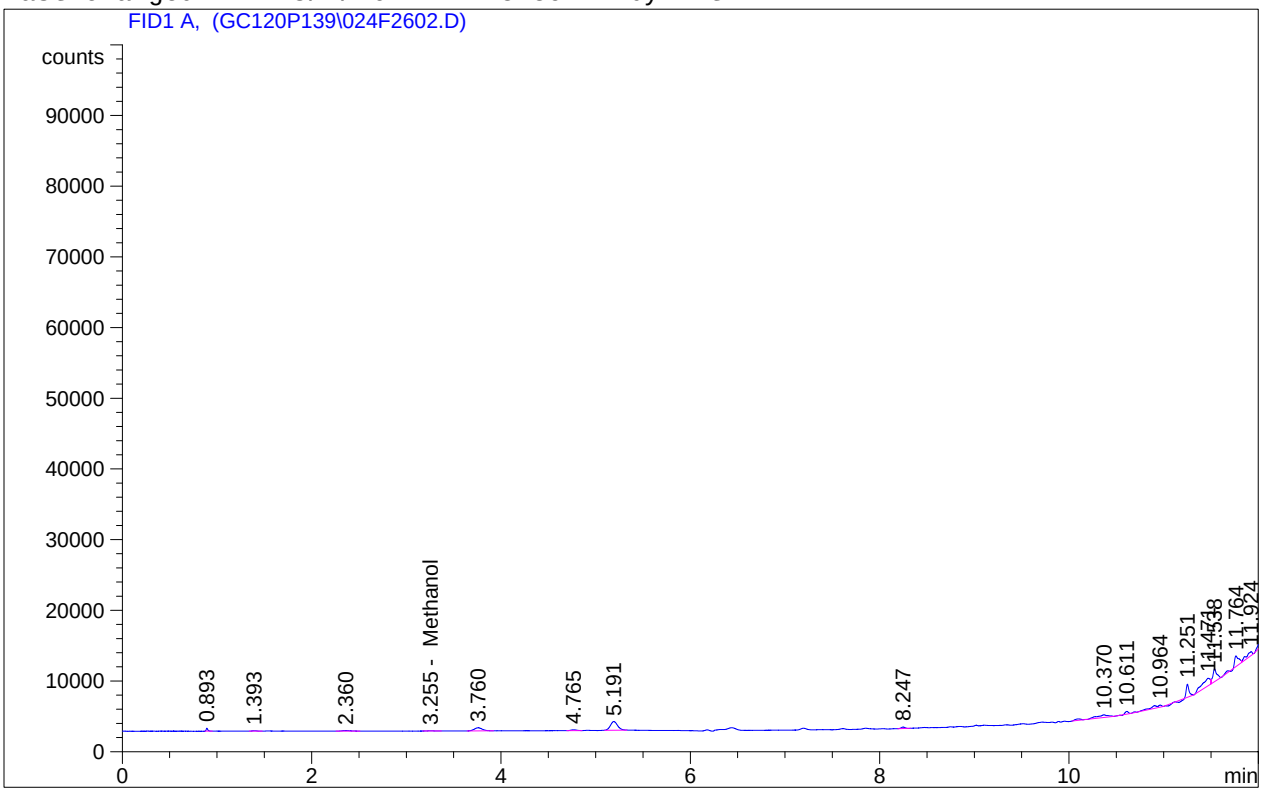

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.249 MM      121.61503 1.53680e-3 1.86898e-1    Methanol

Totals :                              1.86898e-1
```

Manual Int. "NI" (KAM)

```
Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\024F2602.D
Sample Name: R1-Cond-LD-m308 0711-64

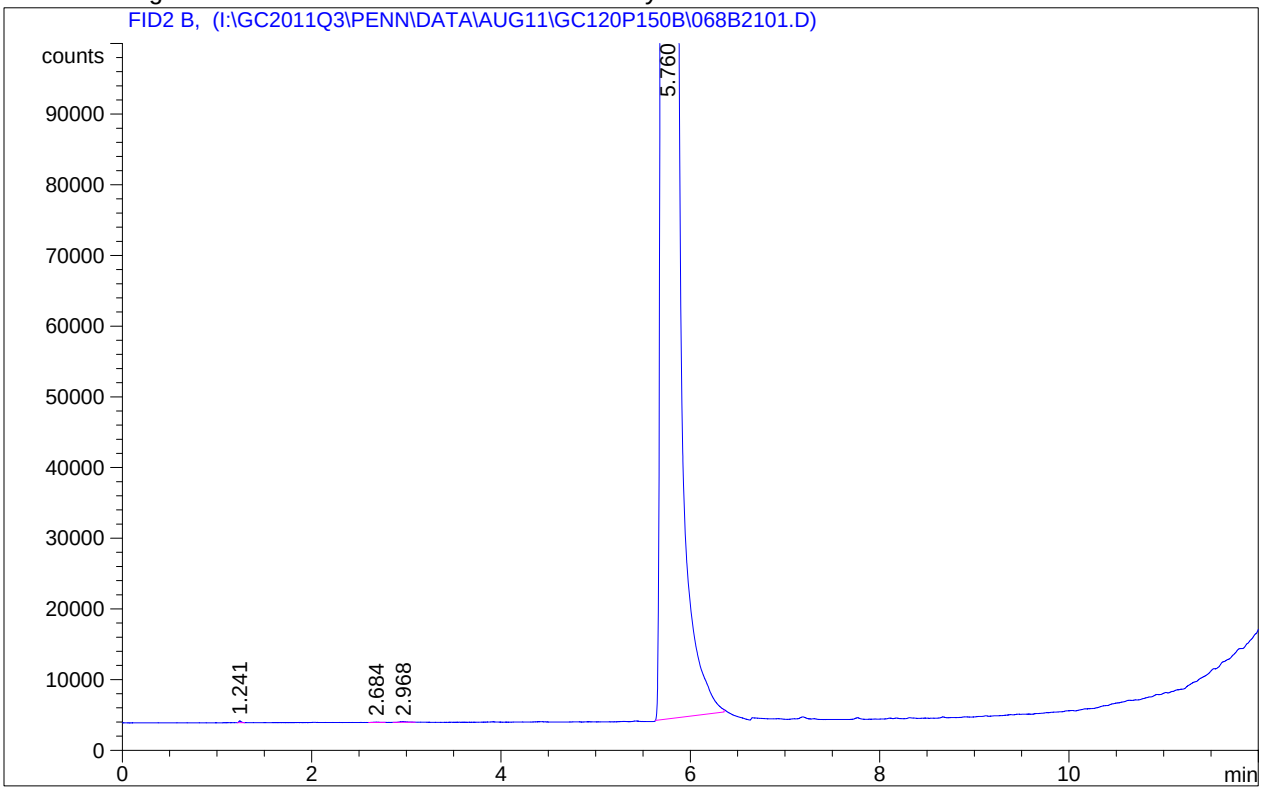
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  26
Acq. Instrument : Penn online                       Location : Vial 24
Injection Date  : 7/30/2011 5:43:18 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.255 BB      159.47047 1.53680e-3 2.45074e-1    Methanol

Totals :                              2.45074e-1



Signal 2: FID2 B,    not found
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\068B2101.D
Sample Name: m308-r1-sg-fh-ld 0711-64

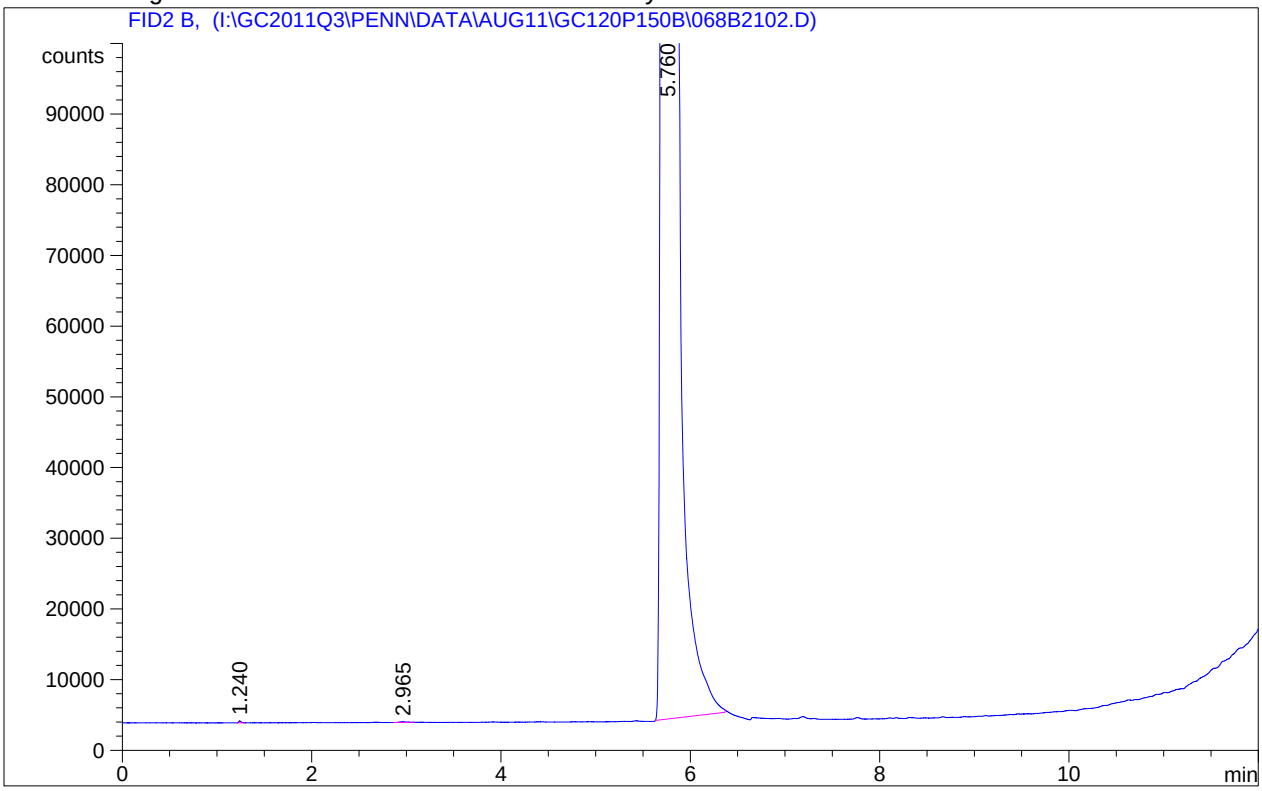
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  21
Acq. Instrument : Penn online                       Location : Vial 68
Injection Date  : 8/17/2011 11:58:18 PM                  Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\068B2102.D
Sample Name: m308-r1-sg-fh-ld 0711-64

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  21
Acq. Instrument : Penn online                       Location : Vial 68
Injection Date  : 8/18/2011 12:20:53 AM                  Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.947            -          -          -         Methanol

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : Monday, August 01, 2011 11:24:33 AM

Rel. Reference Window : 1.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 1.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

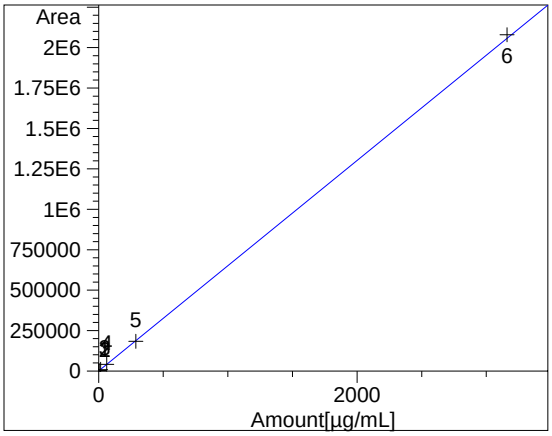
Signal 1: FID1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [µg/mL]	Area	Amt/Area	Ref Grp	Name
3.296	1	1	1.58000	1035.12217	1.52639e-3		Methanol
		2	3.15800	2023.79130	1.56044e-3		
		3	15.72600	1.03255e4	1.52302e-3		
		4	61.97700	4.07029e4	1.52267e-3		
		5	287.30000	1.83646e5	1.56443e-3		
		6	3160.80000	2.07966e6	1.51986e-3		
3.429	2	11	1.58000	1213.42151	1.30210e-3		Methanol
		12	3.15800	2525.09705	1.25065e-3		
		13	15.72600	1.17767e4	1.33535e-3		
		14	61.97700	4.58029e4	1.35312e-3		
		15	287.30000	2.02027e5	1.42209e-3		

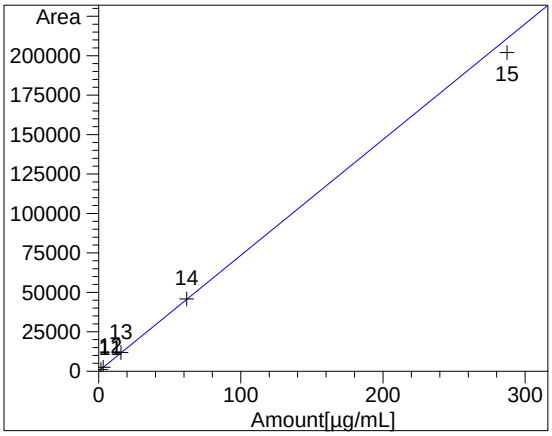
Peak Sum Table

No Entries in table

Calibration Curves



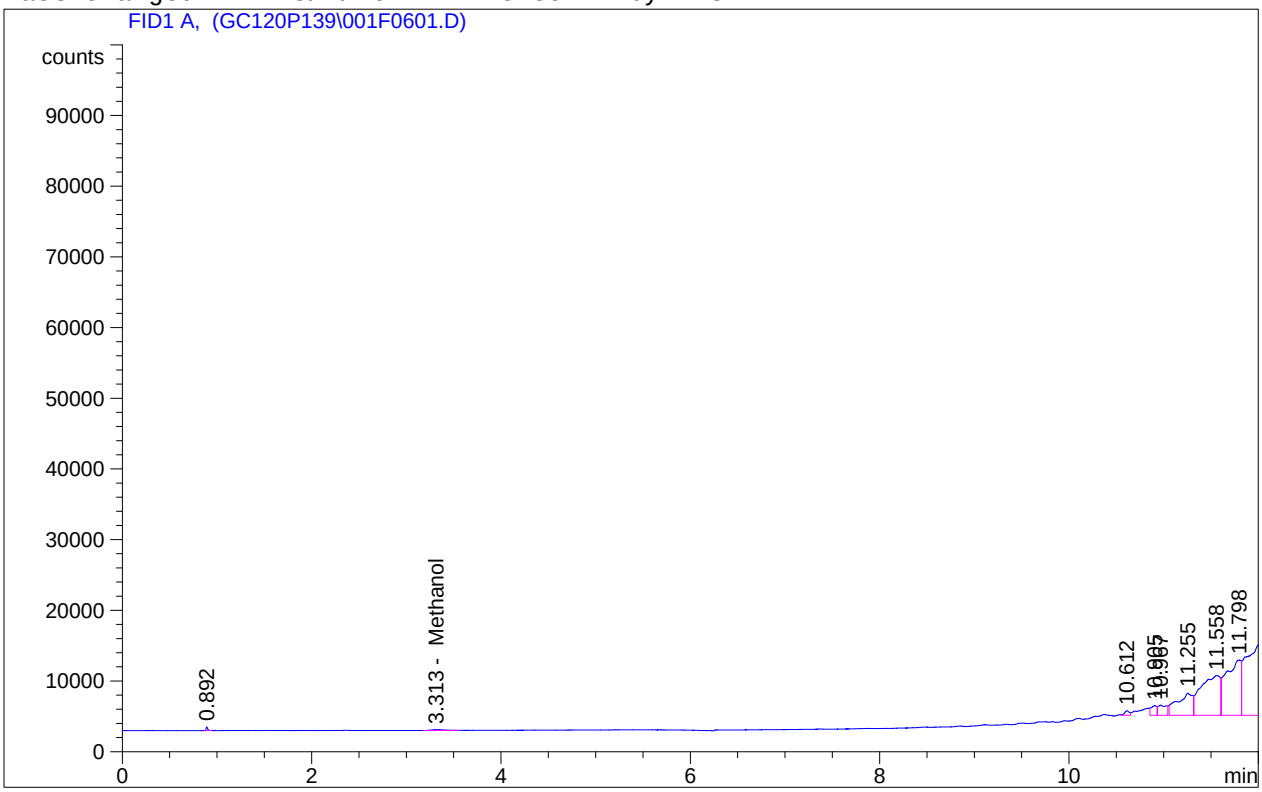
Methanol at exp. RT: 3.296
FID1 A,
Correlation: 0.99989
Residual Std. Dev.: 10780.44089
Formula: y = mx + b
m: 651.22221
b: -8.21698e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.250317
Level 3 : 0.010094
Level 4 : 0.00065
Level 5 : 0.00003
Level 6 : 2.49873e-007



Methanol at exp. RT: 3.429
FID2 B,
Correlation: 0.99905
Residual Std. Dev.: 5182.27787
Formula: y = mx + b
m: 734.11944
b: 85.27160
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.250317
Level 13 : 0.010094
Level 14 : 0.00065
Level 15 : 0.00003

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0601.D
Sample Name: gc120p112 #1

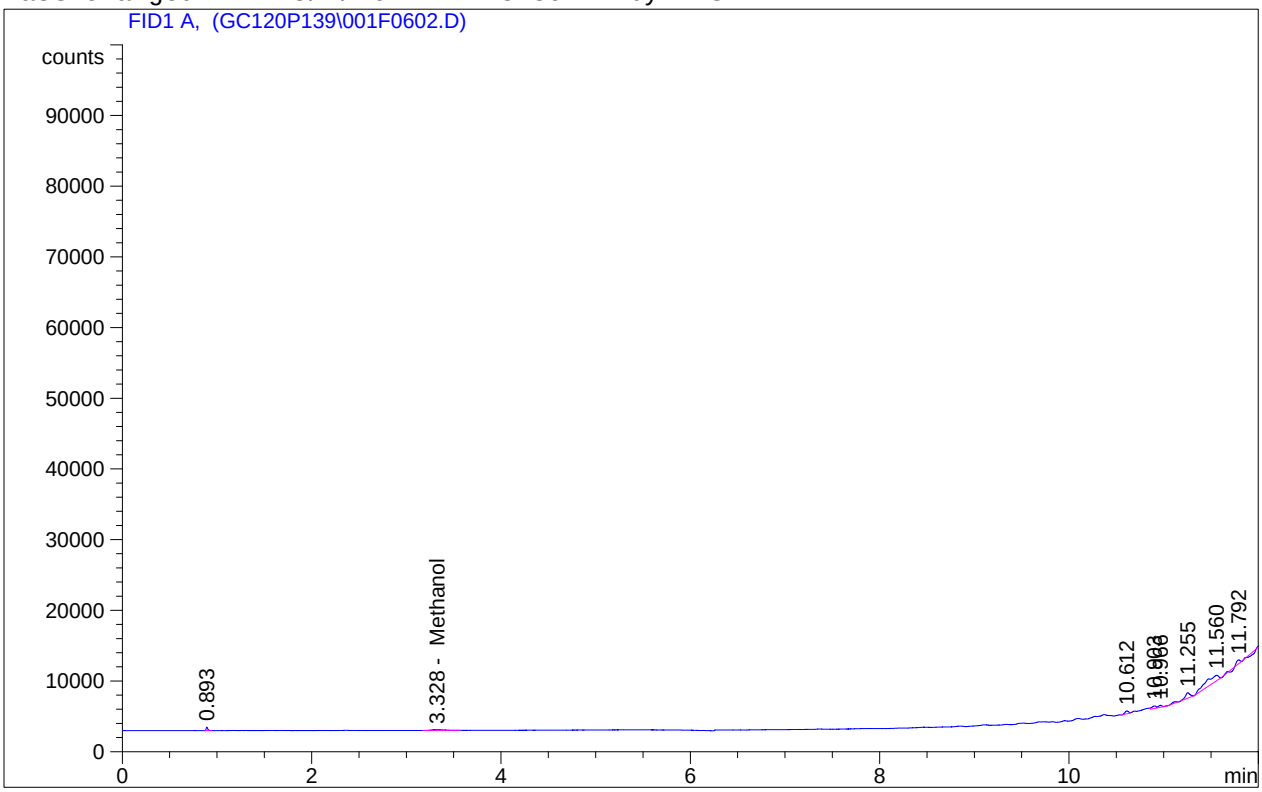
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 8:35:07 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.313 BB     1004.27667 1.53680e-3    1.54337    Methanol

Totals :                                1.54337



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0602.D
Sample Name: gc120p112 #1

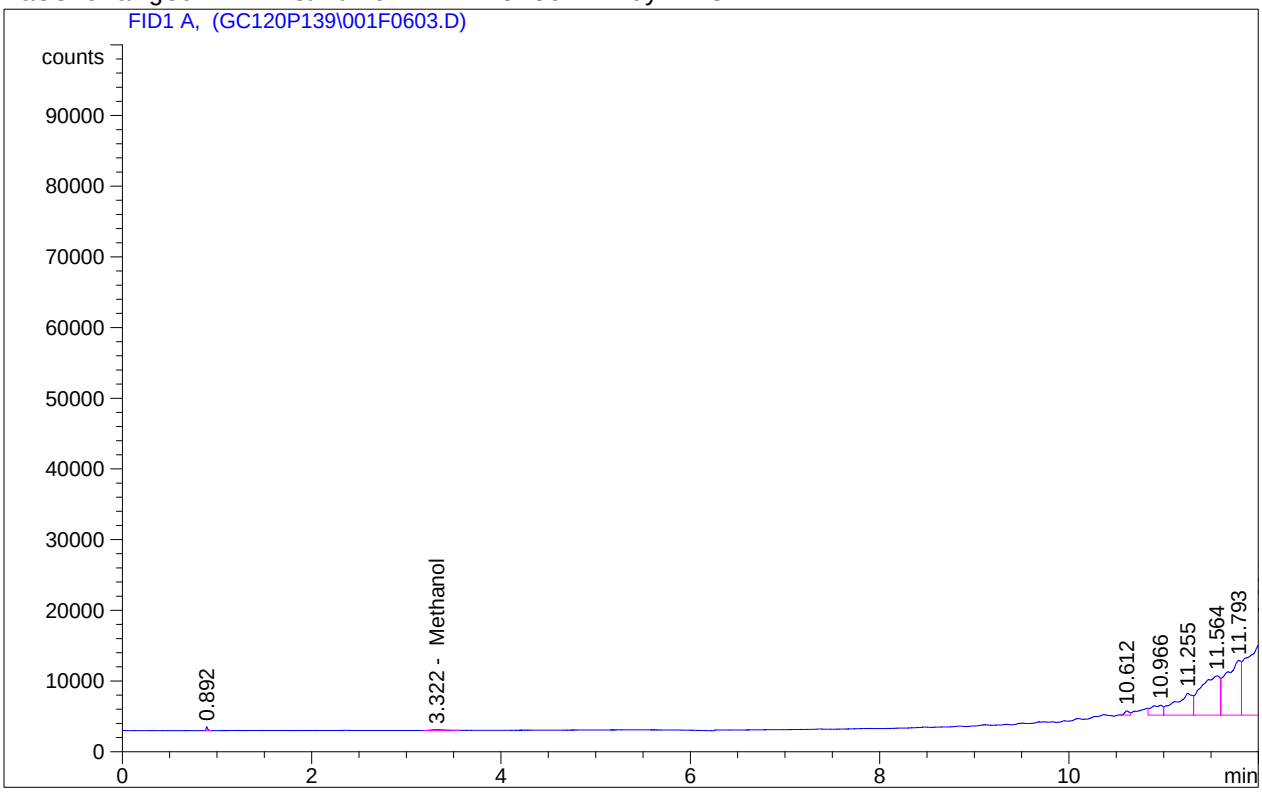
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 8:56:11 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.328 BB     1045.40942 1.53678e-3    1.60657    Methanol

Totals :                                1.60657



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0603.D
Sample Name: gc120p112 #1

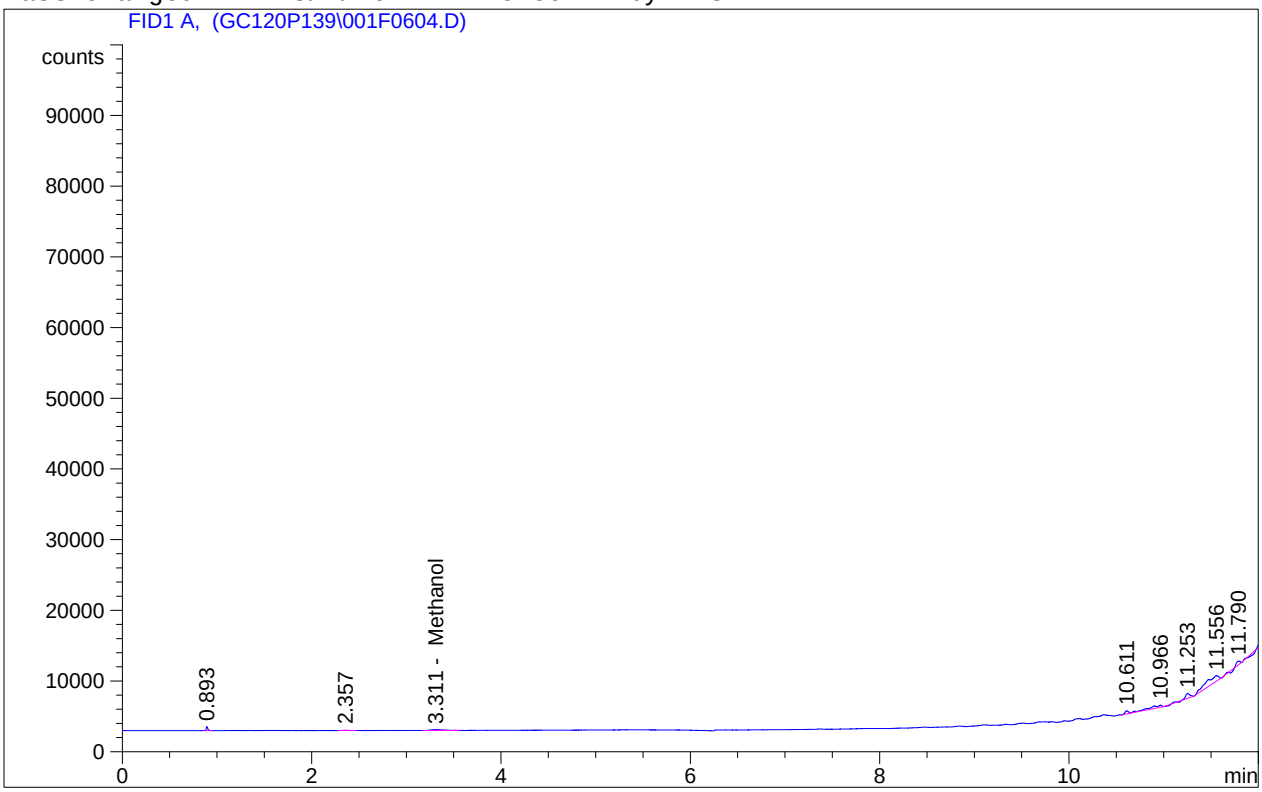
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 9:17:11 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.322 BB     1055.68042 1.53677e-3    1.62234    Methanol

Totals :                                1.62234



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0604.D
Sample Name: gc120p112 #1

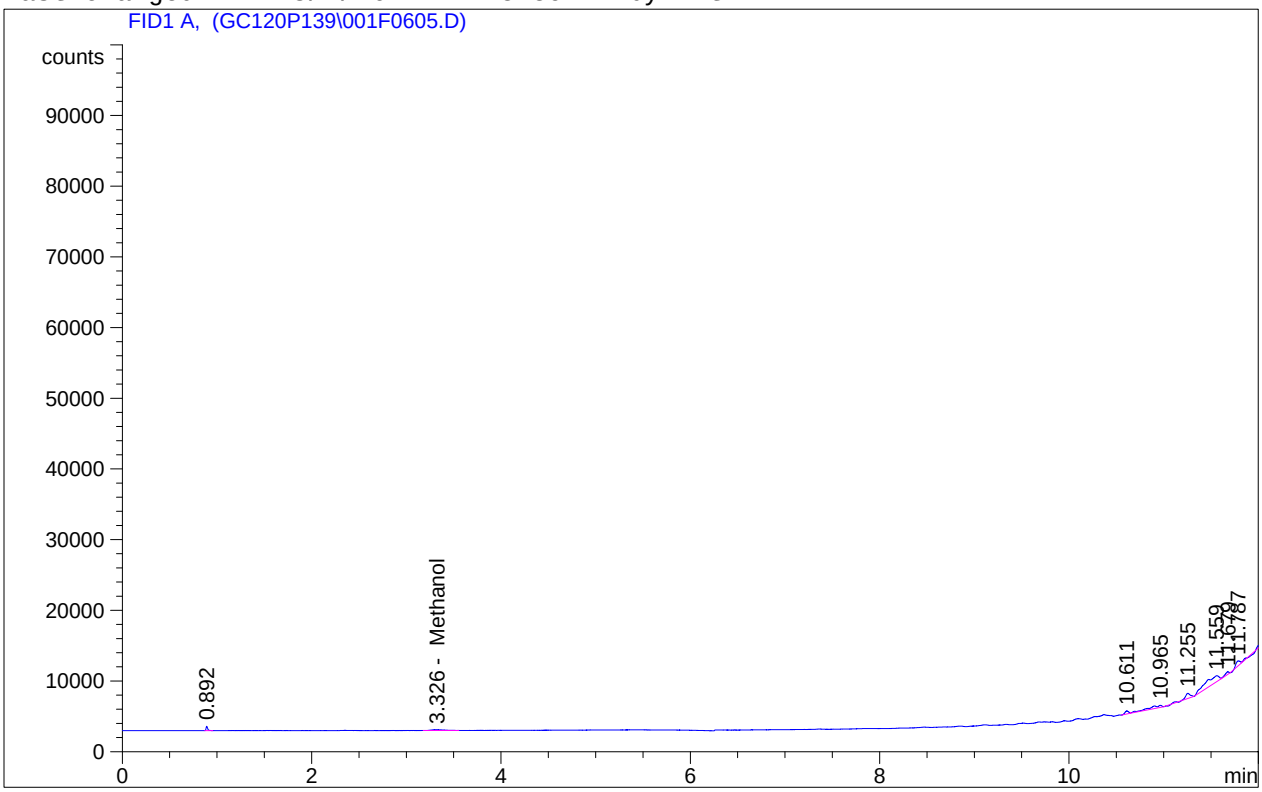
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 9:38:11 PM                   Inj :   4
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.311 BB     1036.78235 1.53679e-3    1.59332    Methanol

Totals :                                1.59332



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0605.D
Sample Name: gc120p112 #1

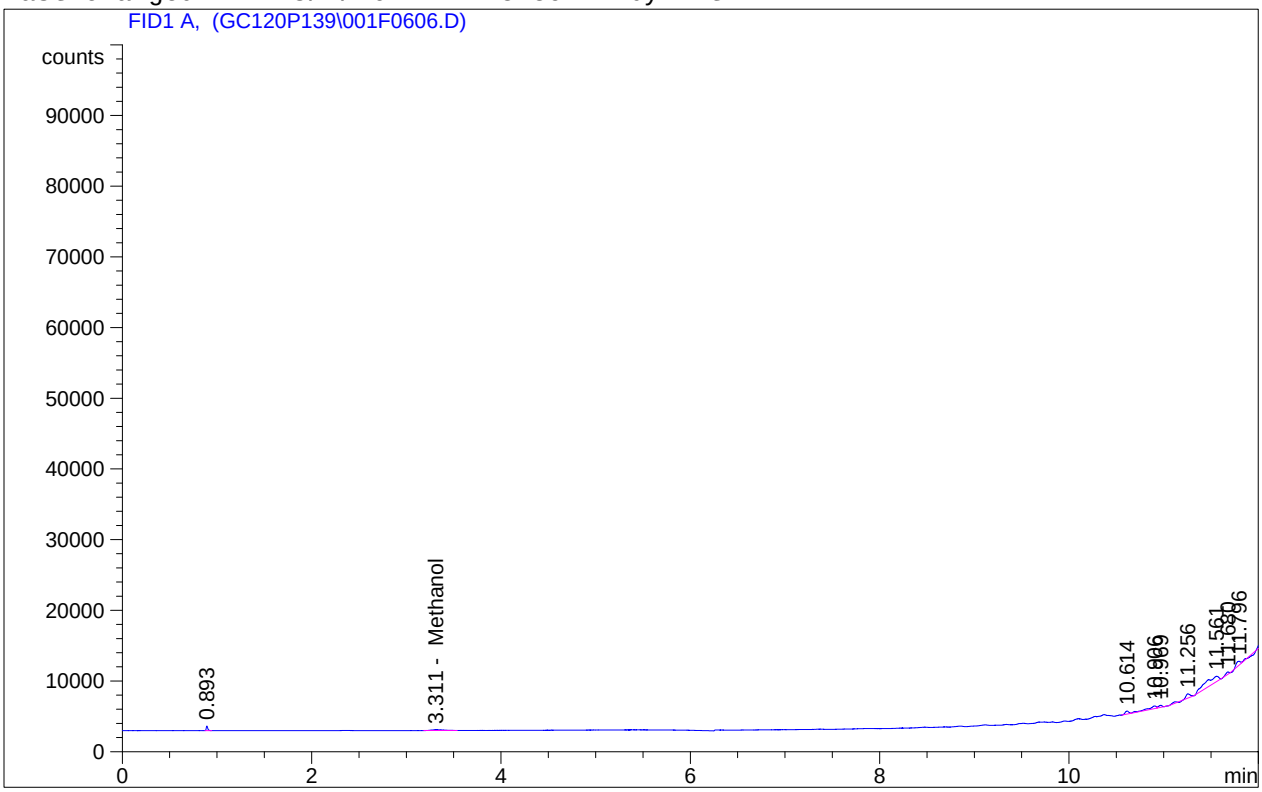
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 9:59:12 PM                   Inj :   5
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.326 BB     1023.92511 1.53680e-3    1.57357    Methanol

Totals :                                1.57357



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0606.D
Sample Name: gc120p112 #1

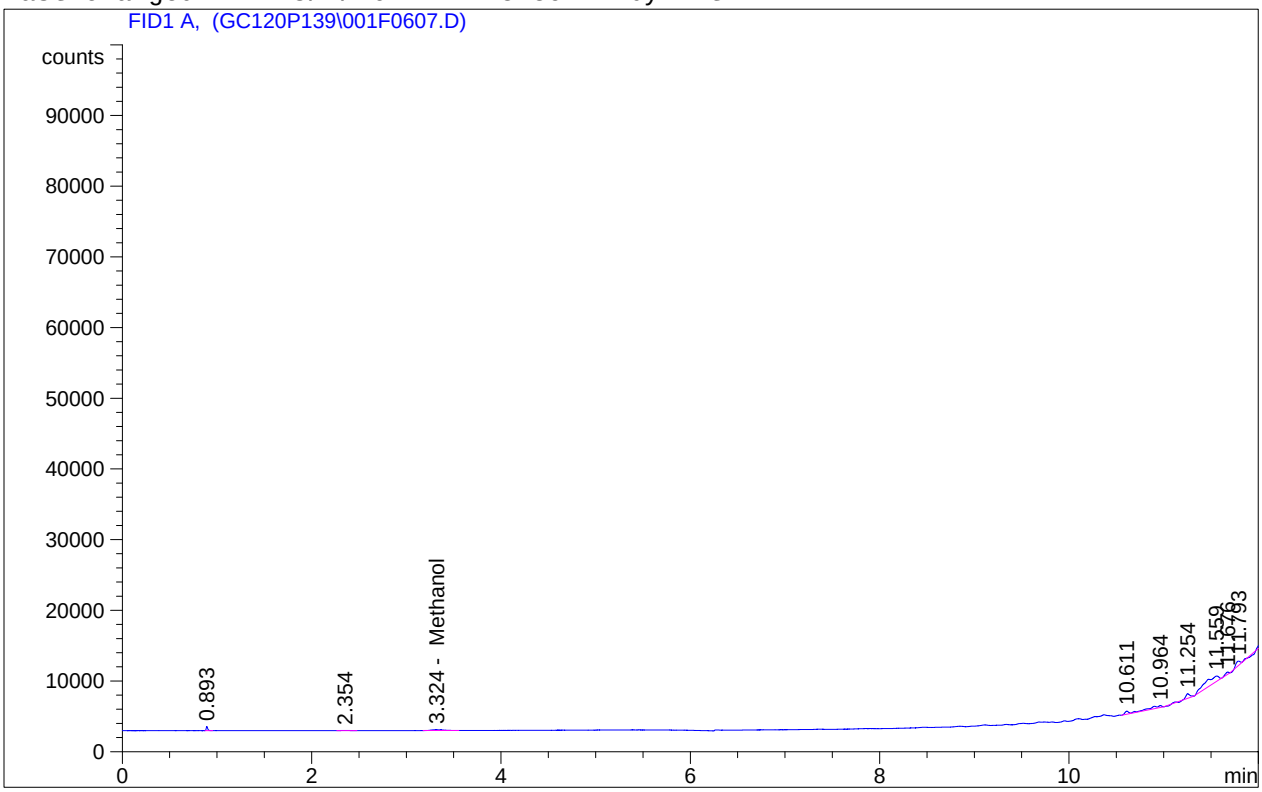
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   6
Acq. Instrument : Penn online                   Location : Vial 1
Injection Date  : 7/29/2011 10:20:20 PM              Inj :   6
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.311 BB     1015.20306 1.53680e-3    1.56017    Methanol

Totals :                                1.56017



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0607.D
Sample Name: gc120p112 #1

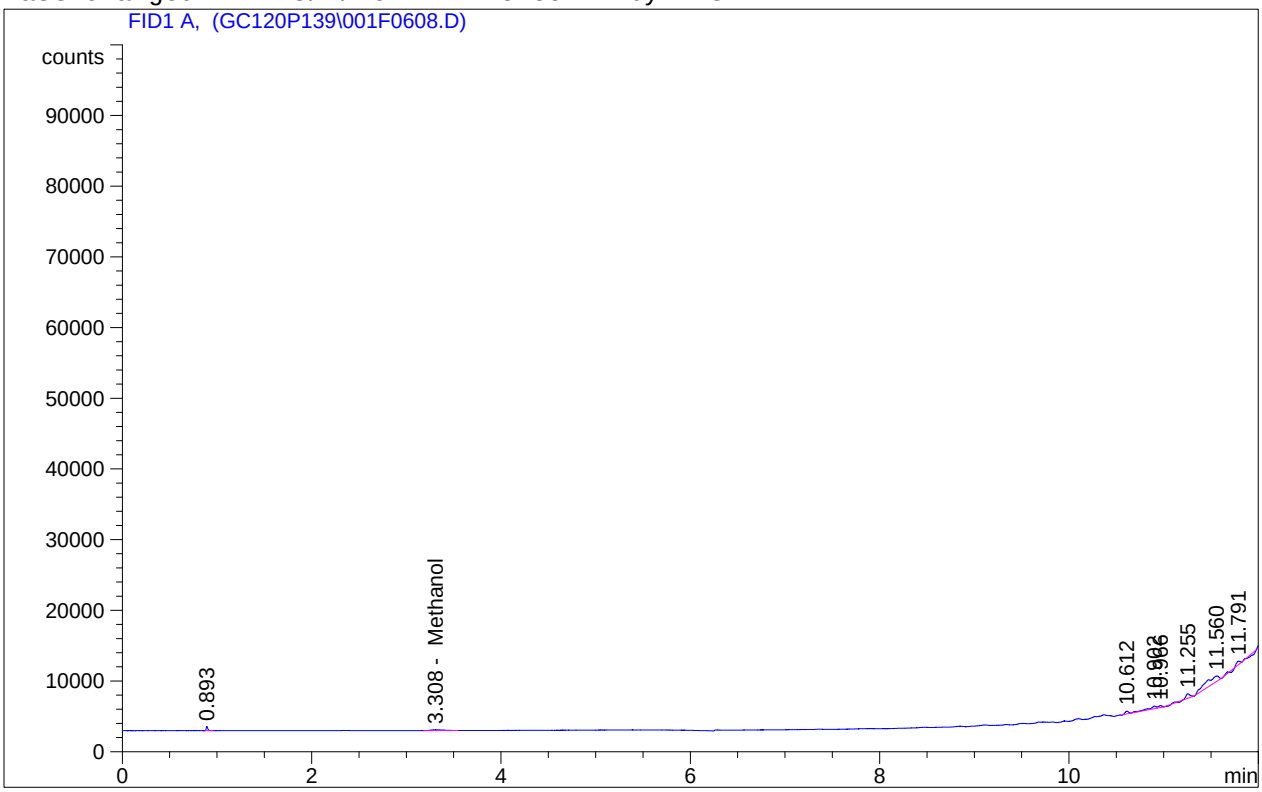
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 10:41:16 PM                  Inj :   7
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.324 BB     1041.79175 1.53679e-3    1.60101    Methanol

Totals :                                1.60101



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\001F0608.D
Sample Name: gc120p112 #1

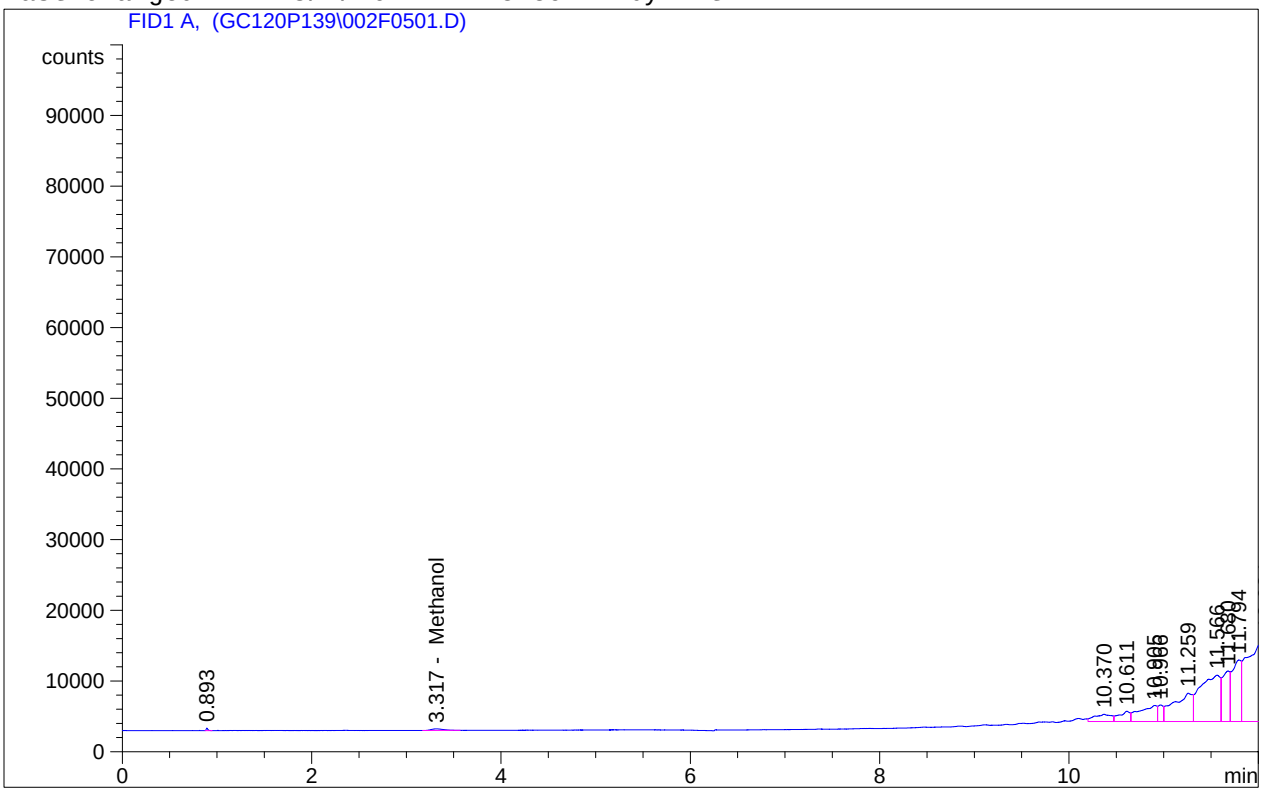
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 1
Injection Date  : 7/29/2011 11:02:21 PM                  Inj :   8
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.308 BB     1031.57166 1.53680e-3    1.58532    Methanol

Totals :                                1.58532



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\002F0501.D
Sample Name: gc120p112 #2

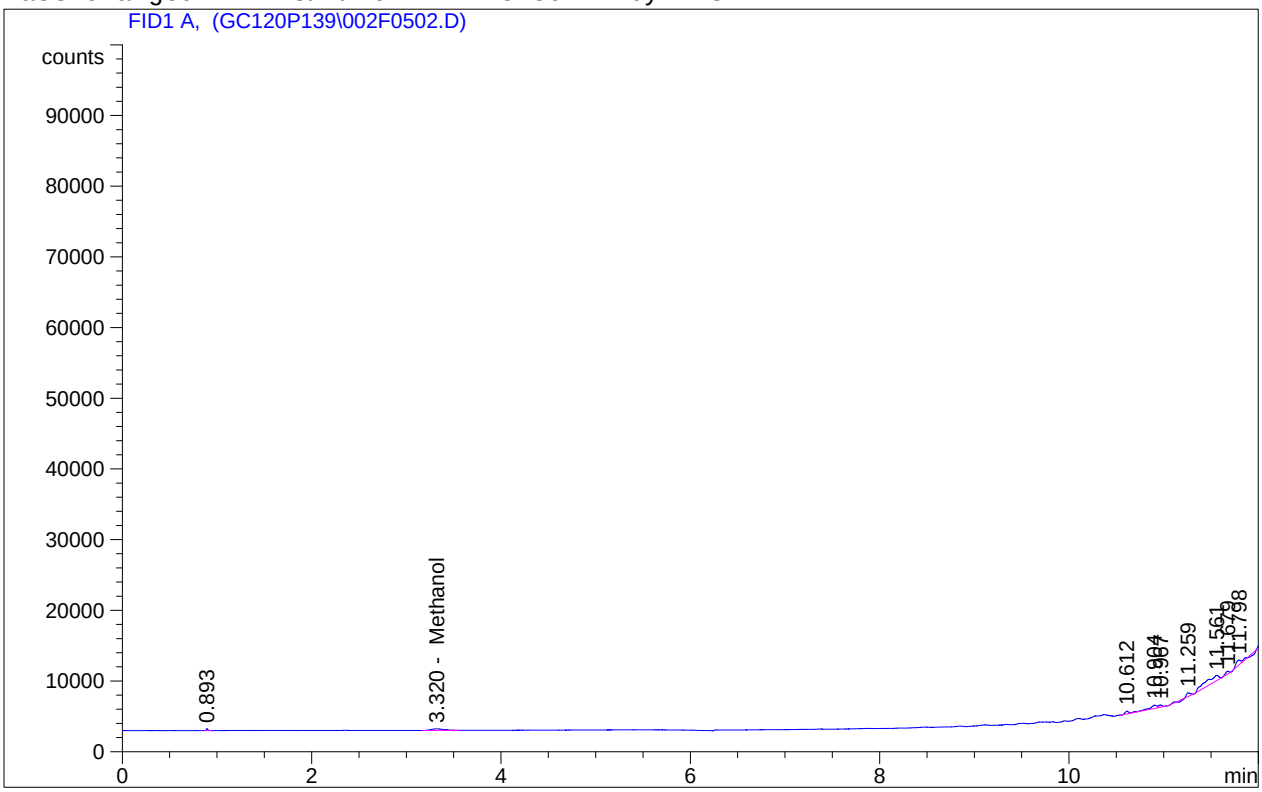
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   5
Acq. Instrument : Penn online                   Location : Vial 2
Injection Date  : 7/29/2011 7:31:59 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.317 BB     2046.95374 1.53619e-3    3.14451    Methanol

Totals :                                3.14451



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\002F0502.D
Sample Name: gc120p112 #2

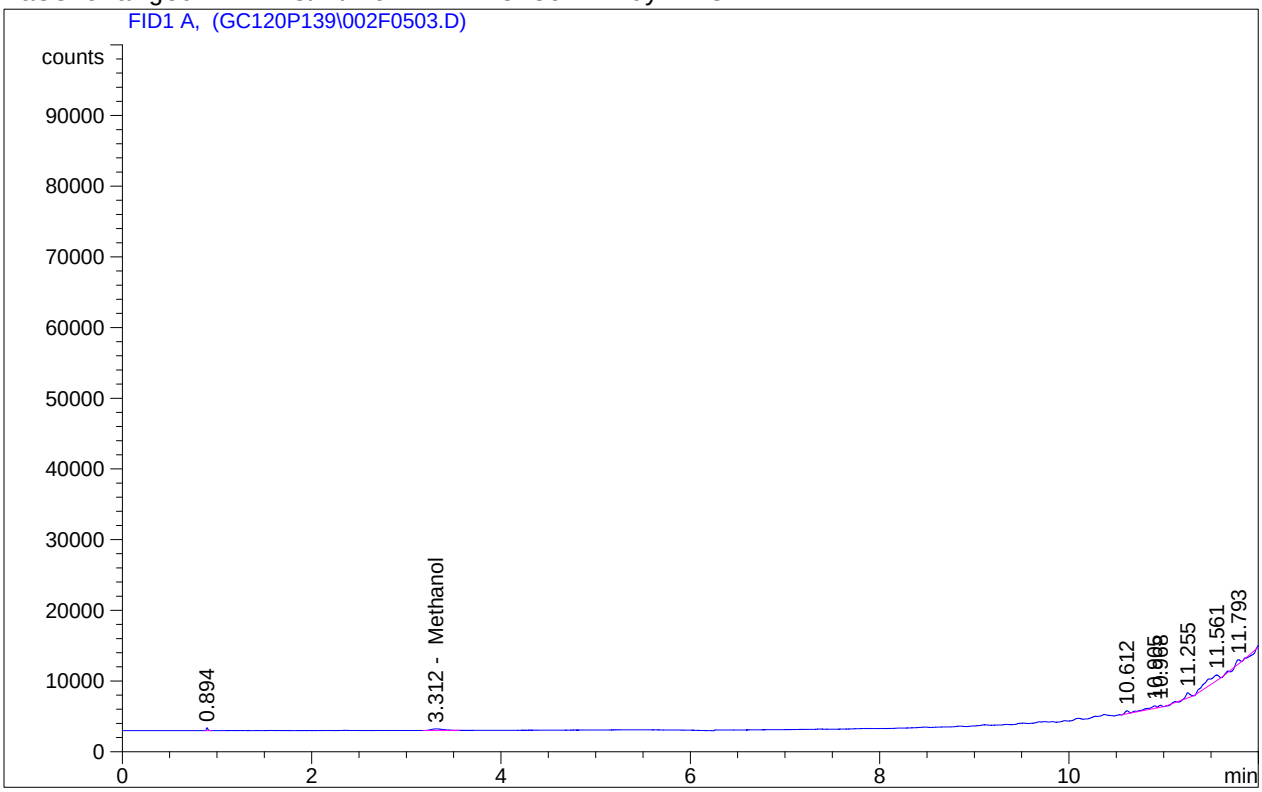
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 2
Injection Date  : 7/29/2011 7:53:03 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.320 BB     2028.64771 1.53620e-3    3.11640    Methanol

Totals :                                3.11640



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\002F0503.D
Sample Name: gc120p112 #2

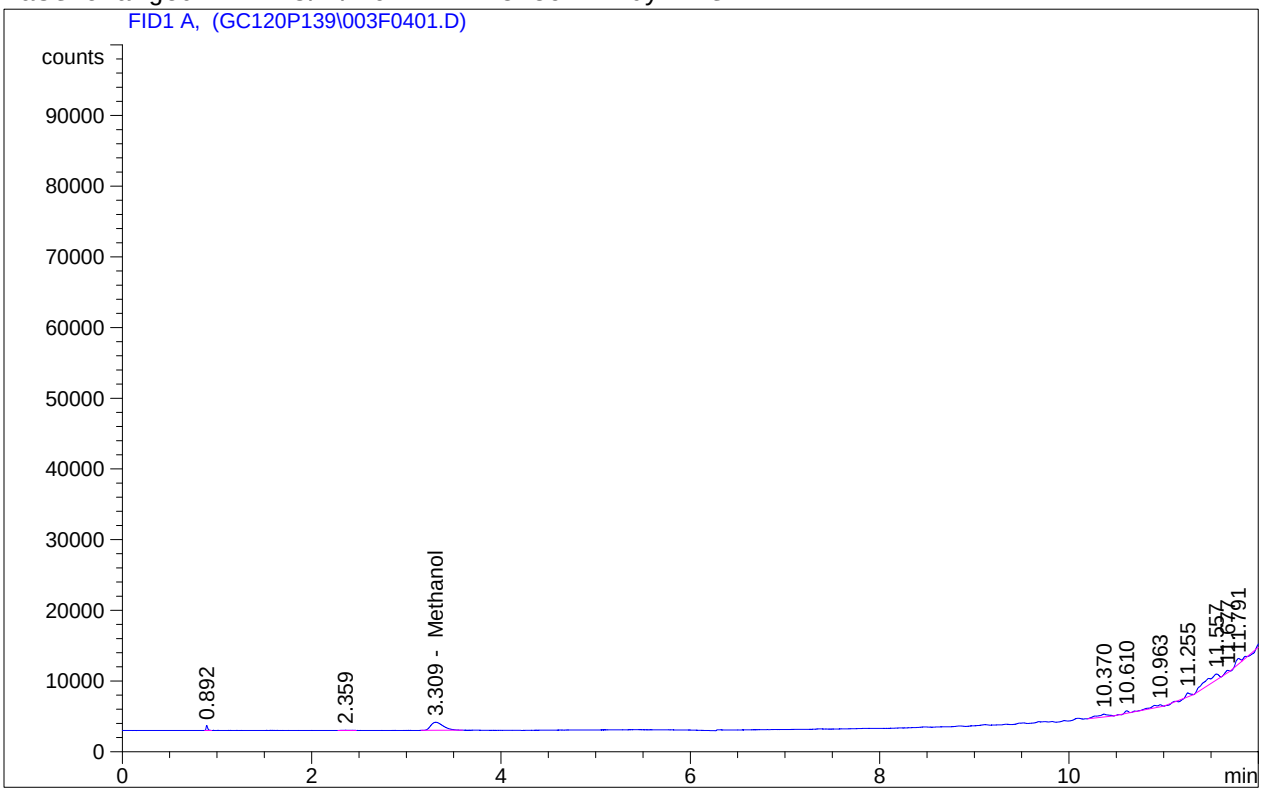
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 2
Injection Date  : 7/29/2011 8:14:07 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.312 BB     1995.77246 1.53621e-3    3.06592    Methanol

Totals :                                3.06592



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F0401.D
Sample Name: gc120p112 #3

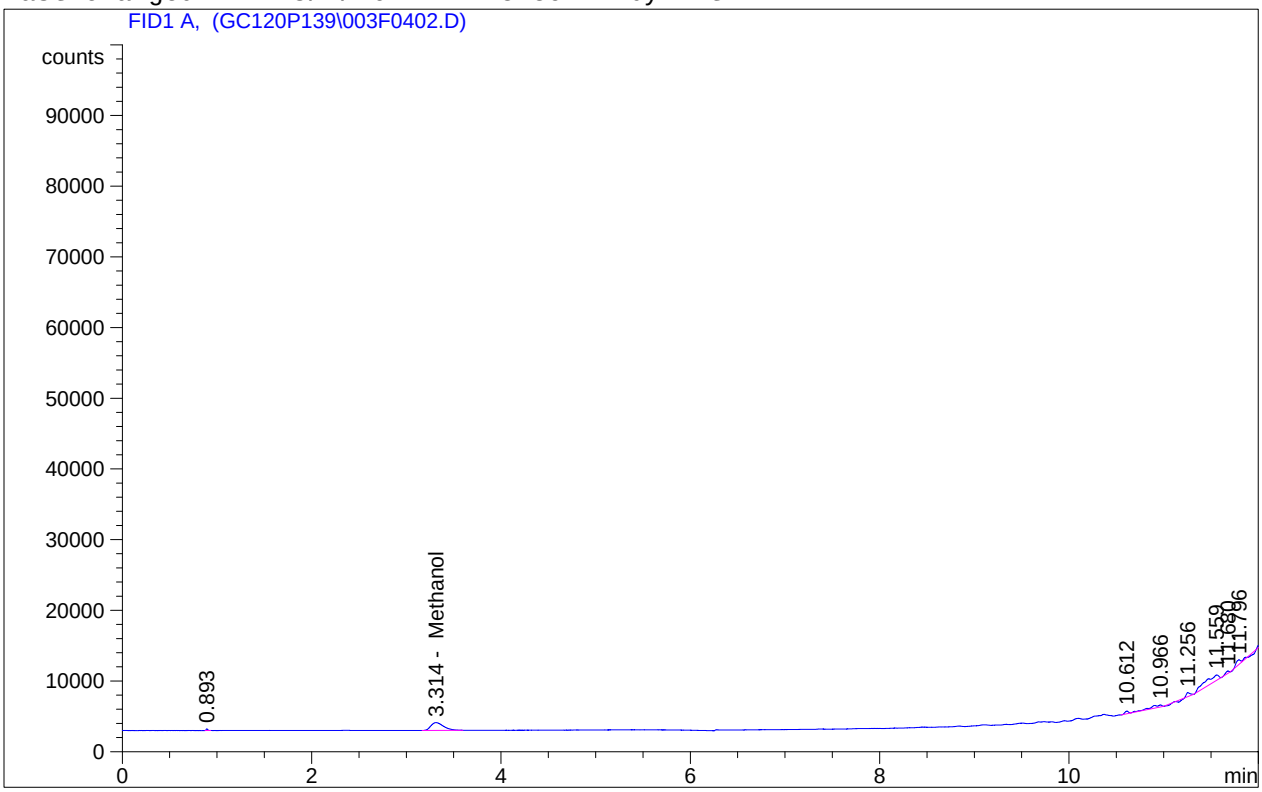
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   4
Acq. Instrument : Penn online                   Location : Vial 3
Injection Date  : 7/29/2011 6:22:19 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.309 BB     1.05413e4  1.53569e-3   16.18828    Methanol

Totals :                                16.18828



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F0402.D
Sample Name: gc120p112 #3

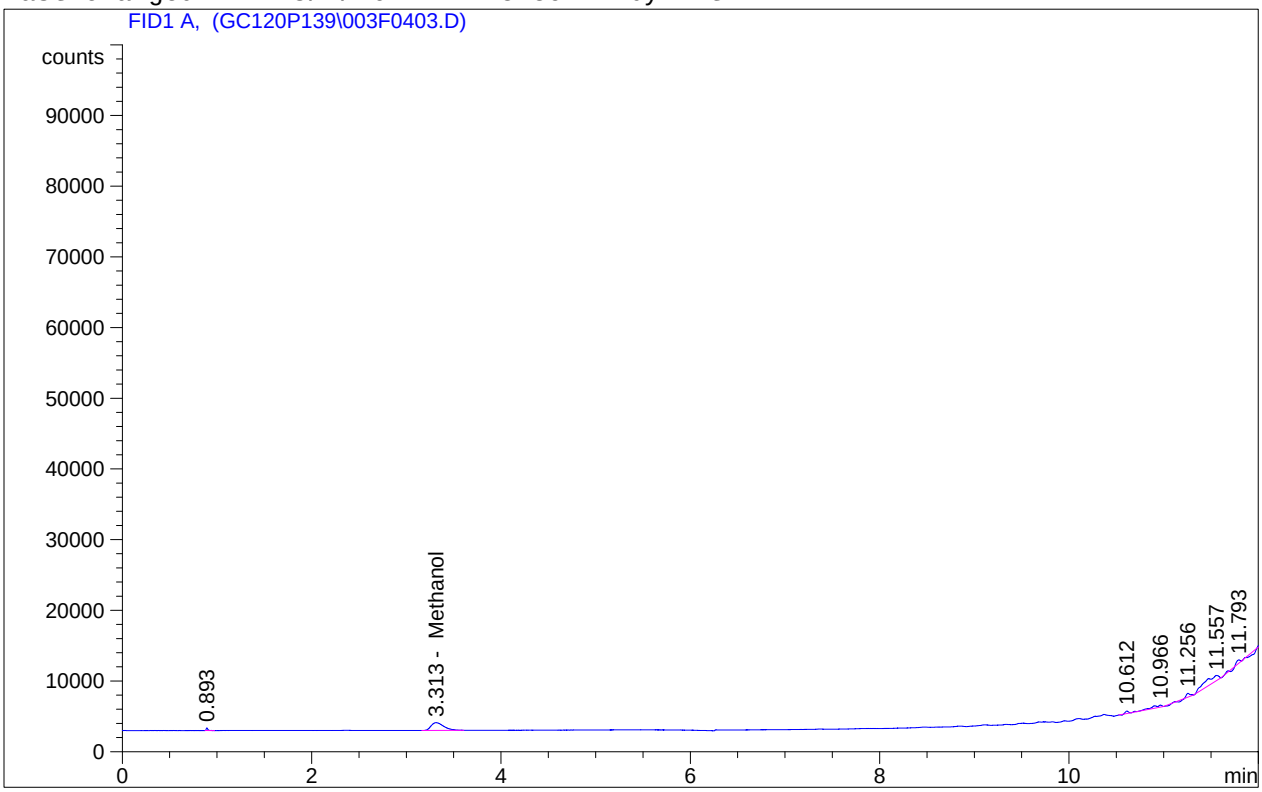
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   4
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/29/2011 6:49:50 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.314 BB     1.02178e4  1.53570e-3   15.69148    Methanol

Totals :                               15.69148



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F0403.D
Sample Name: gc120p112 #3

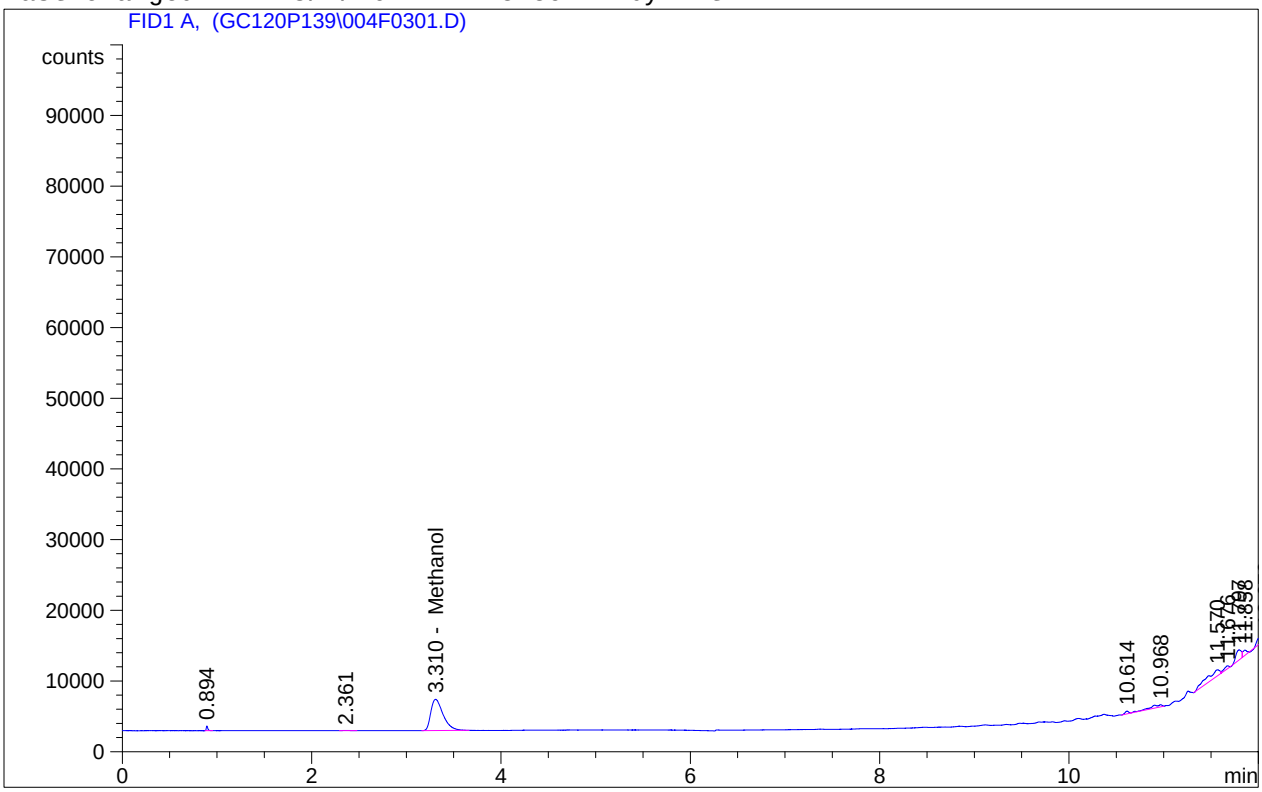
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   4
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/29/2011 7:10:55 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.313 BB     1.02174e4  1.53570e-3   15.69078    Methanol

Totals :                                15.69078



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F0301.D
Sample Name: gc120p112 #4

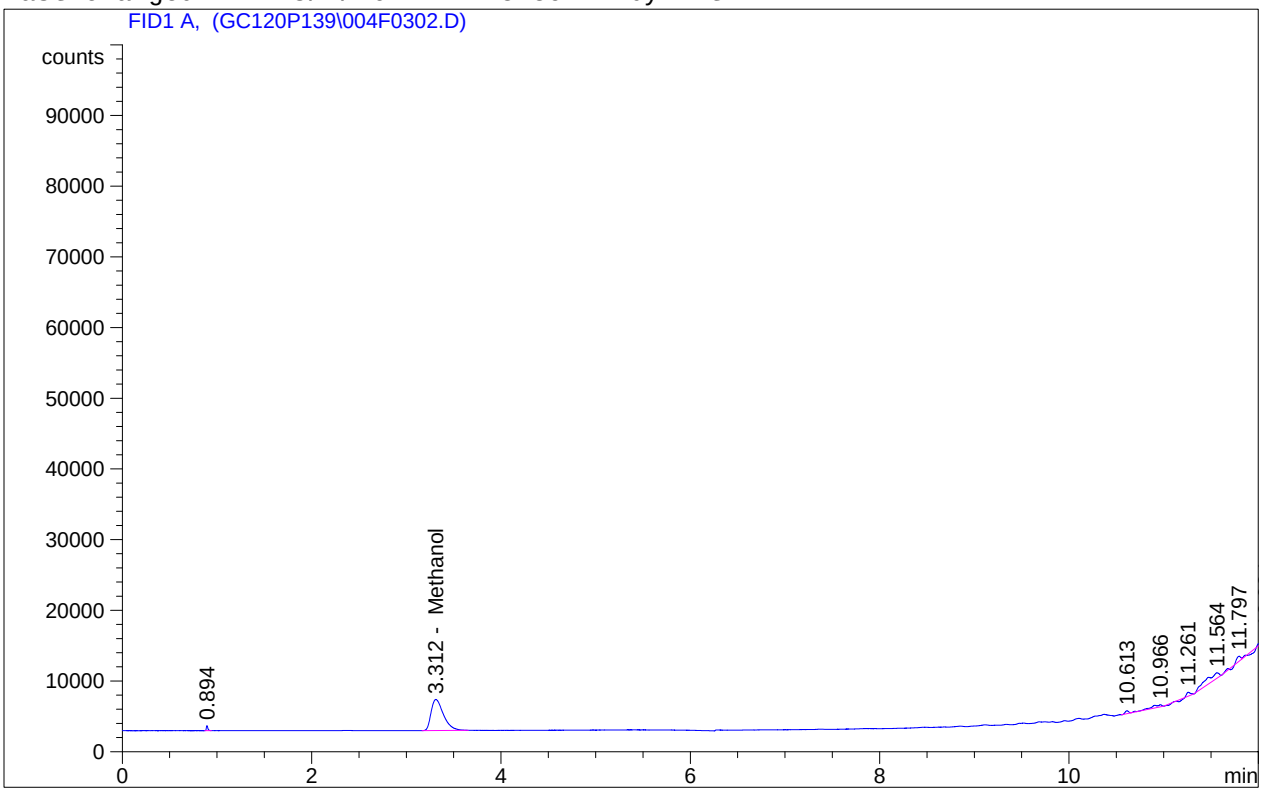
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   3
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/29/2011 3:50:14 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.310 BB     3.98086e4  1.53561e-3   61.13039    Methanol

Totals :                               61.13039



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F0302.D
Sample Name: gc120p112 #4

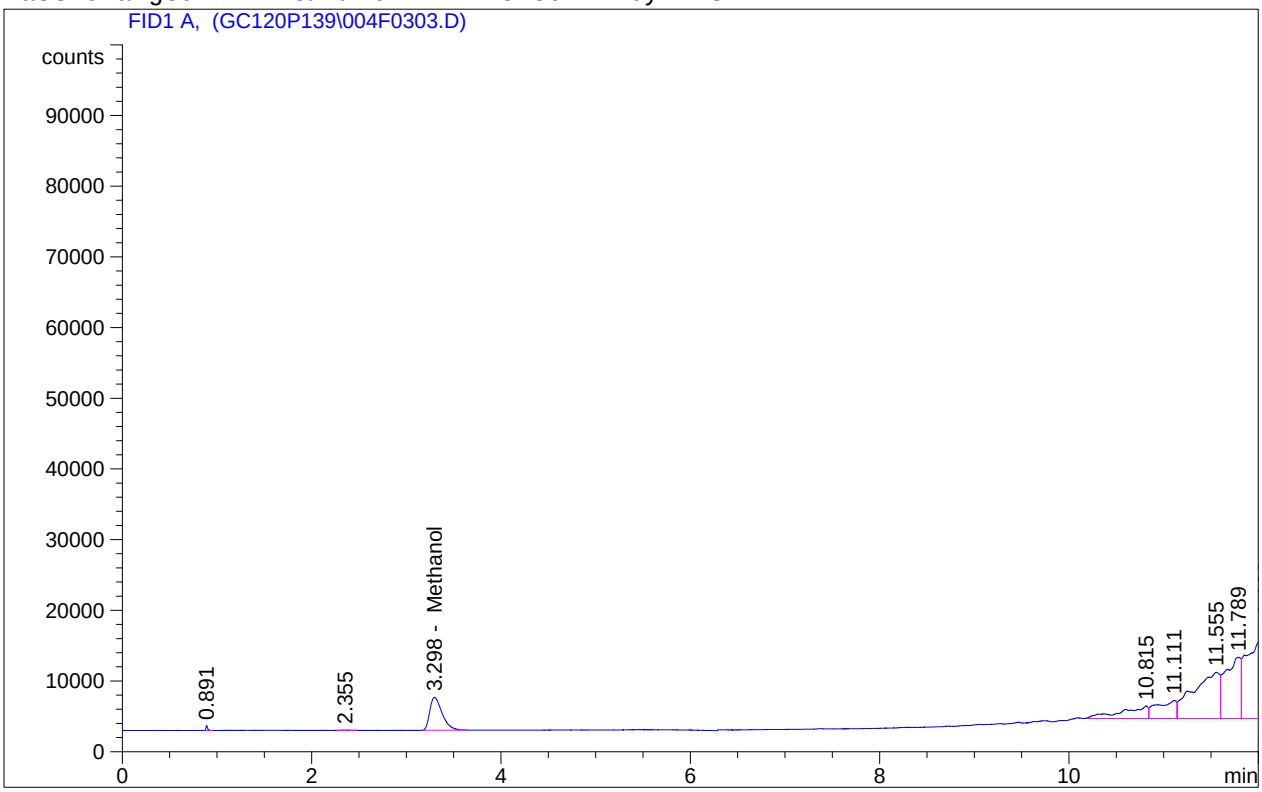
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   3
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/29/2011 4:11:22 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.312 BB     3.98921e4  1.53561e-3   61.25848    Methanol

Totals :                               61.25848



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F0303.D
Sample Name: gc120p112 #4

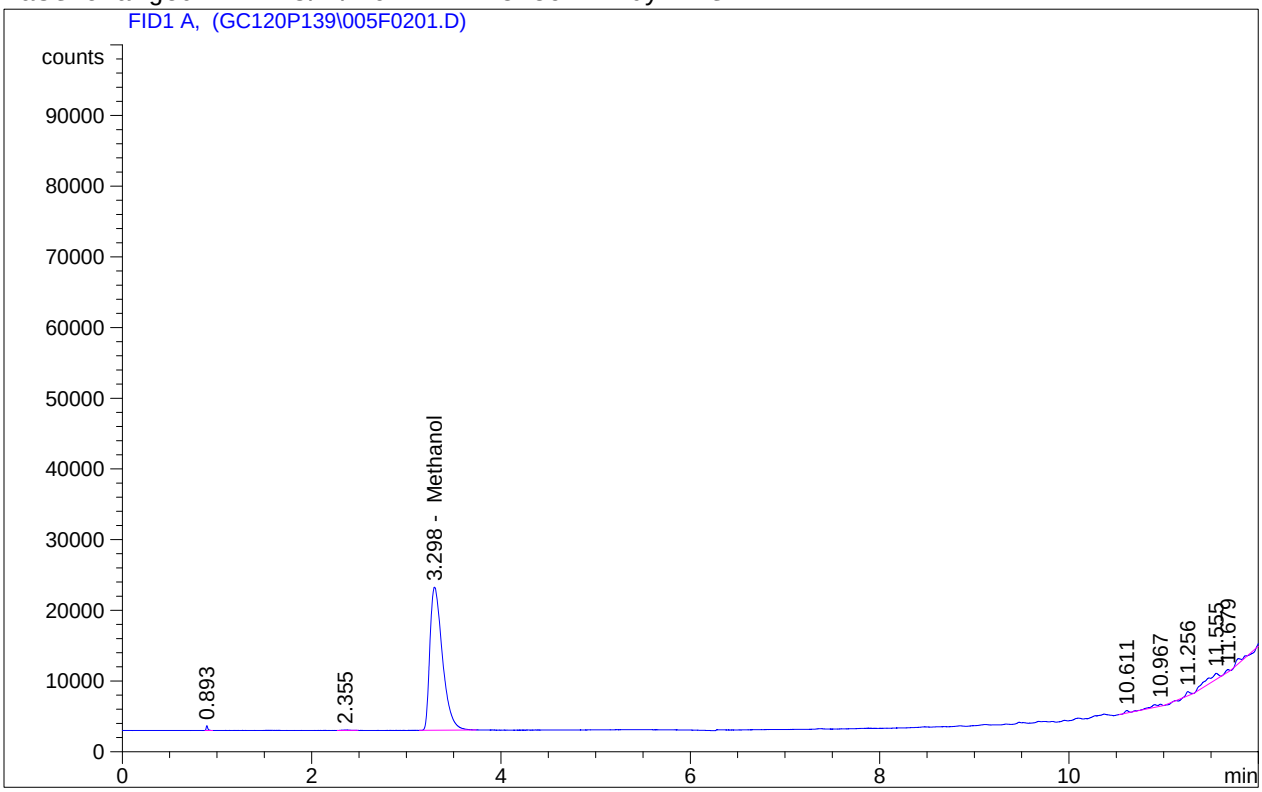
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   3
Acq. Instrument : Penn online                       Location : Vial 4
Injection Date  : 7/29/2011 6:01:14 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.298 BB     4.24081e4  1.53560e-3   65.12208    Methanol

Totals :                                65.12208



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\005F0201.D
Sample Name: gc120p112 #5

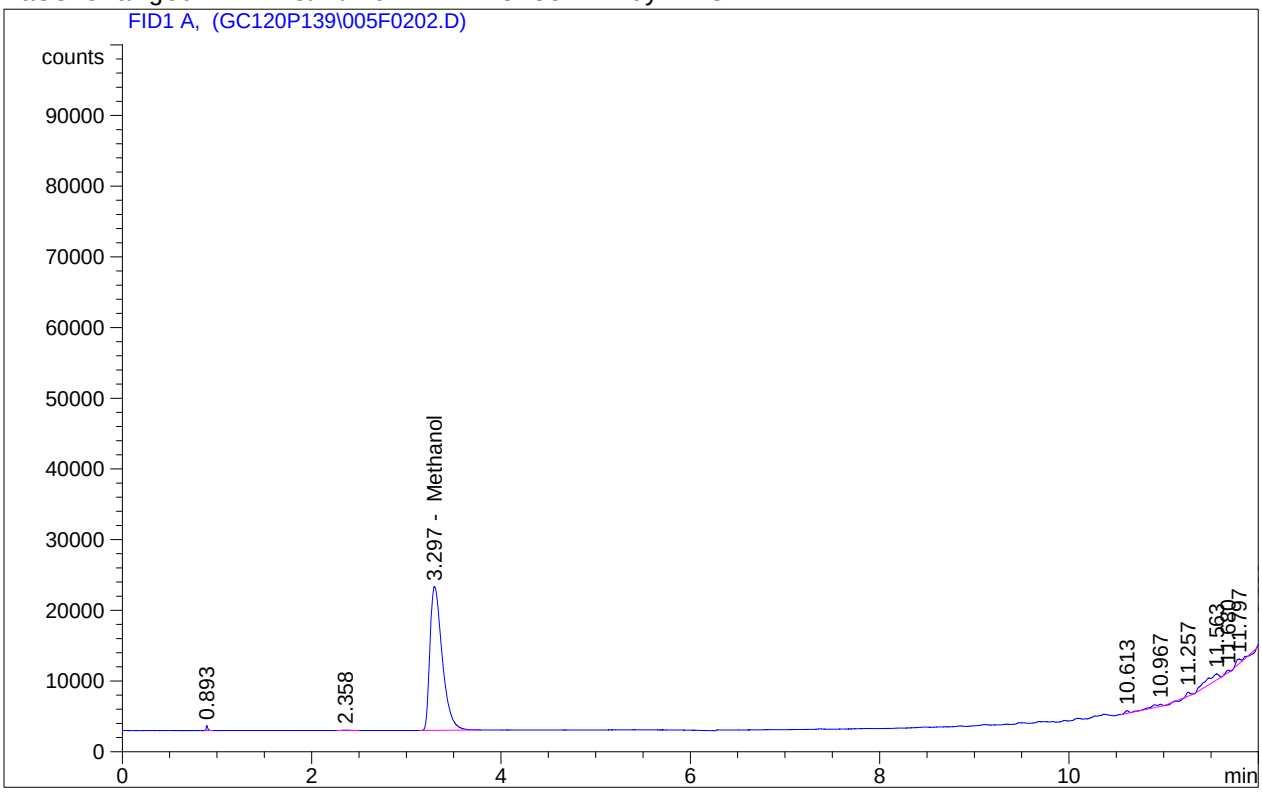
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   2
Acq. Instrument : Penn online                       Location : Vial 5
Injection Date  : 7/29/2011 2:46:44 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.298 BB     1.86365e5  1.53558e-3  286.17804    Methanol

Totals :                               286.17804



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\005F0202.D
Sample Name: gc120p112 #5

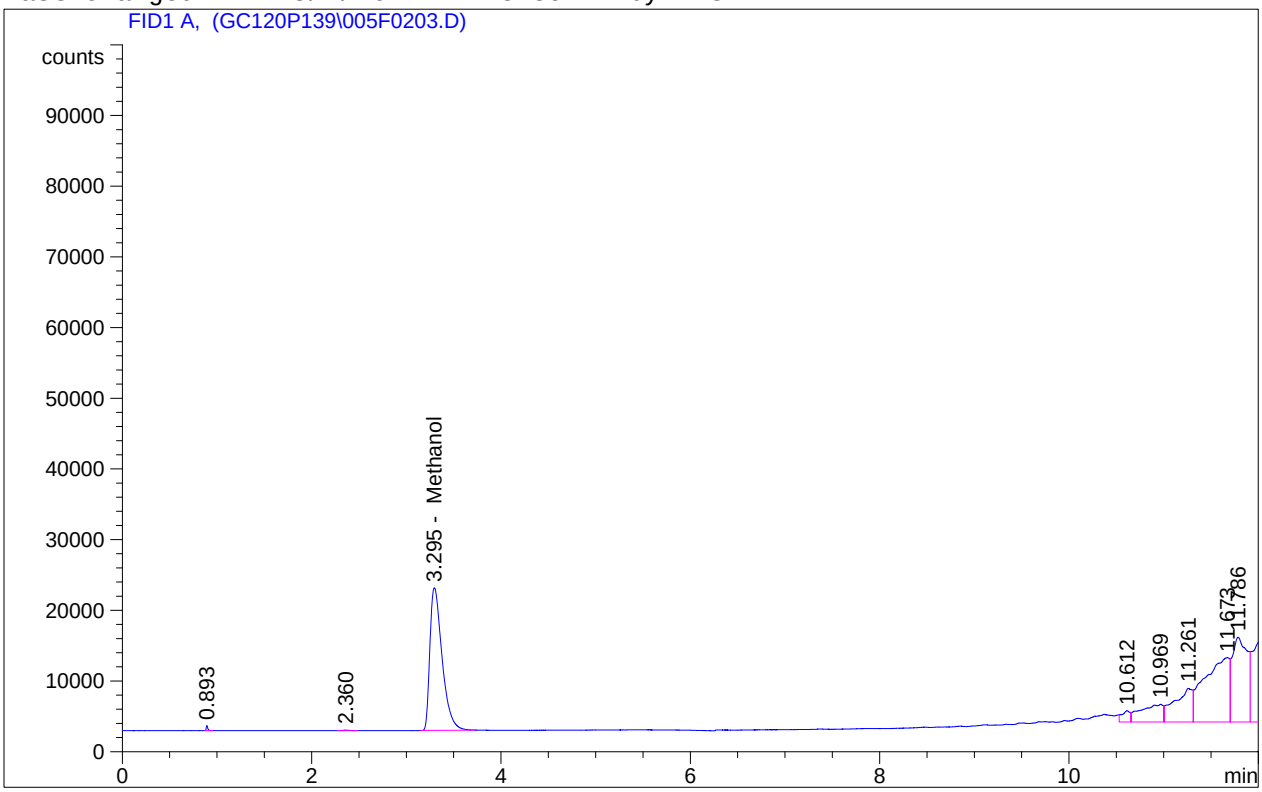
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   2
Acq. Instrument : Penn online                   Location : Vial 5
Injection Date  : 7/29/2011 3:07:53 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.297 BB     1.83720e5  1.53558e-3  282.11760    Methanol

Totals :                               282.11760



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\005F0203.D
Sample Name: gc120p112 #5

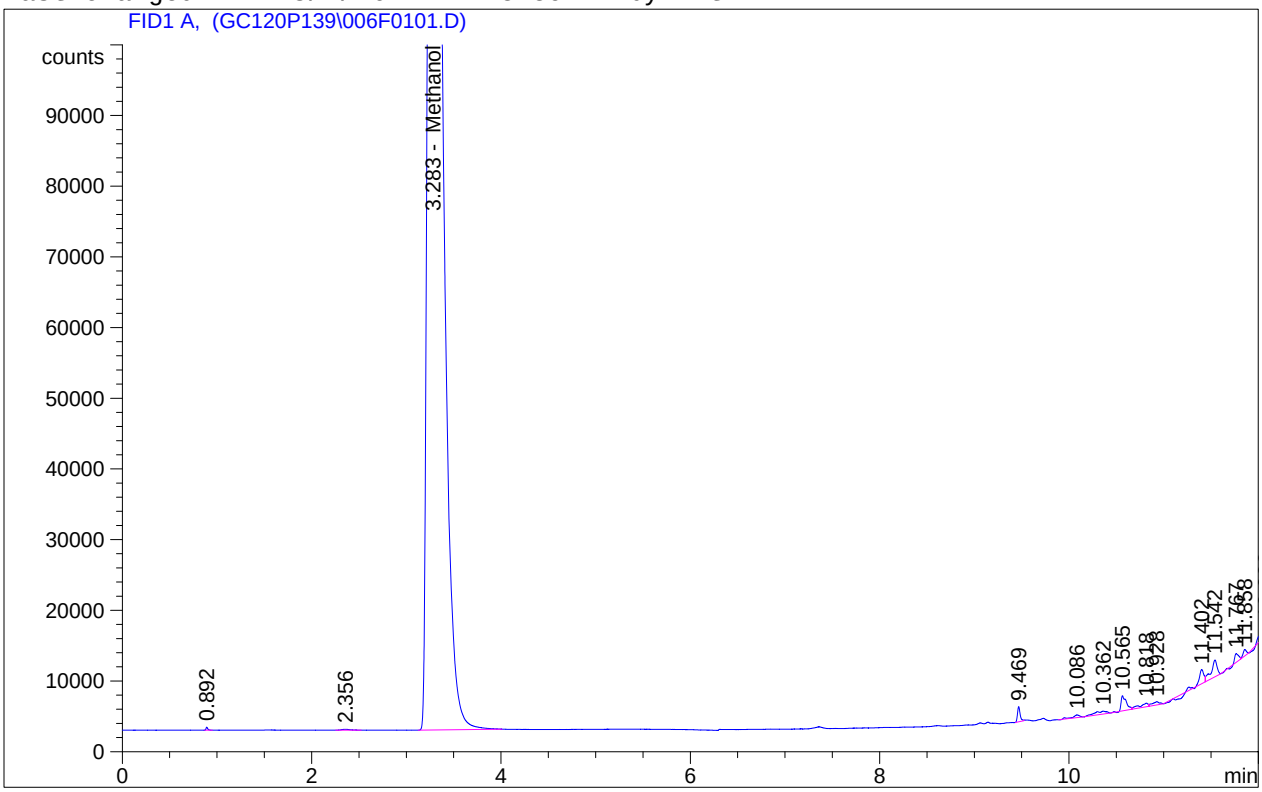
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   2
Acq. Instrument : Penn online                   Location : Vial 5
Injection Date  : 7/29/2011 3:29:01 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.295 BB     1.80852e5  1.53558e-3  277.71292    Methanol

Totals :                               277.71292



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\006F0101.D
Sample Name: gc120p112 #6

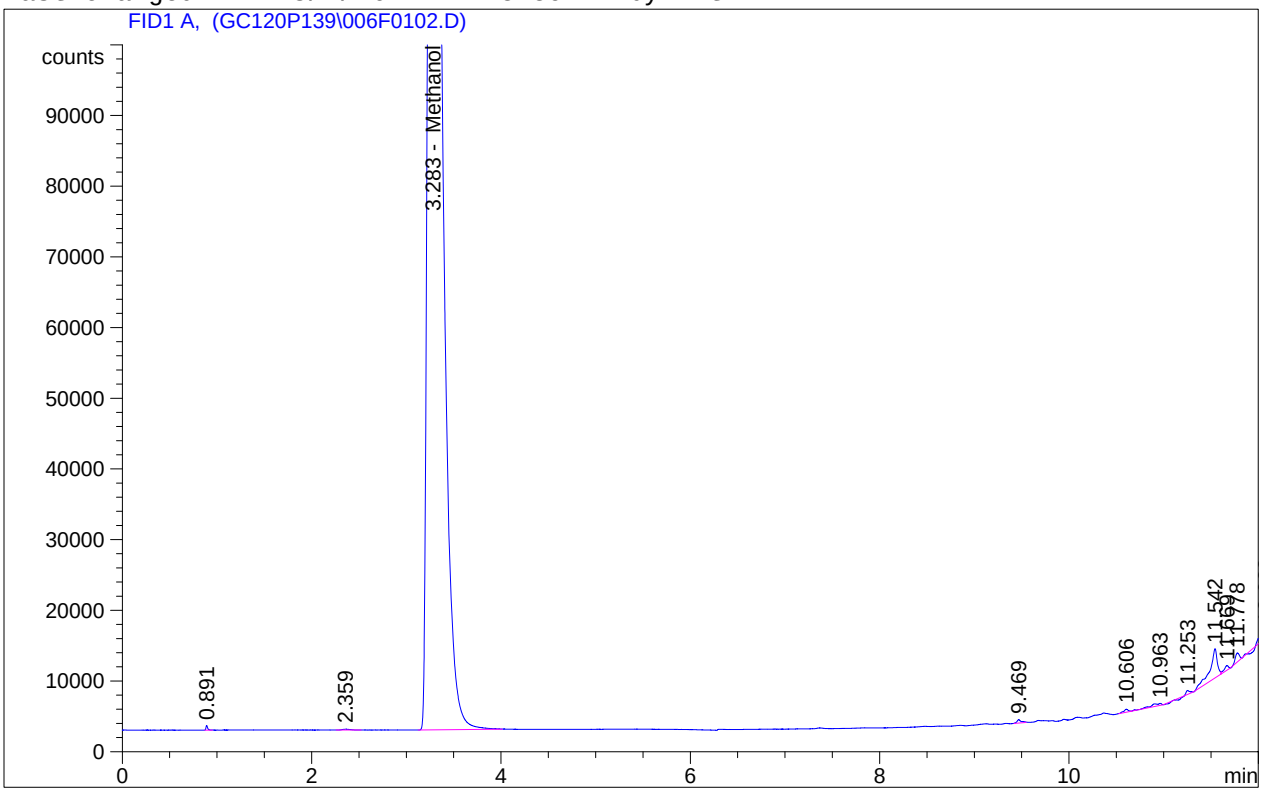
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   1
Acq. Instrument : Penn online                   Location : Vial 6
Injection Date  : 7/29/2011 1:43:20 PM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.283 BB     2.12693e6  1.53557e-3 3266.05927    Methanol

Totals :                              3266.05927



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\006F0102.D
Sample Name: gc120p112 #6

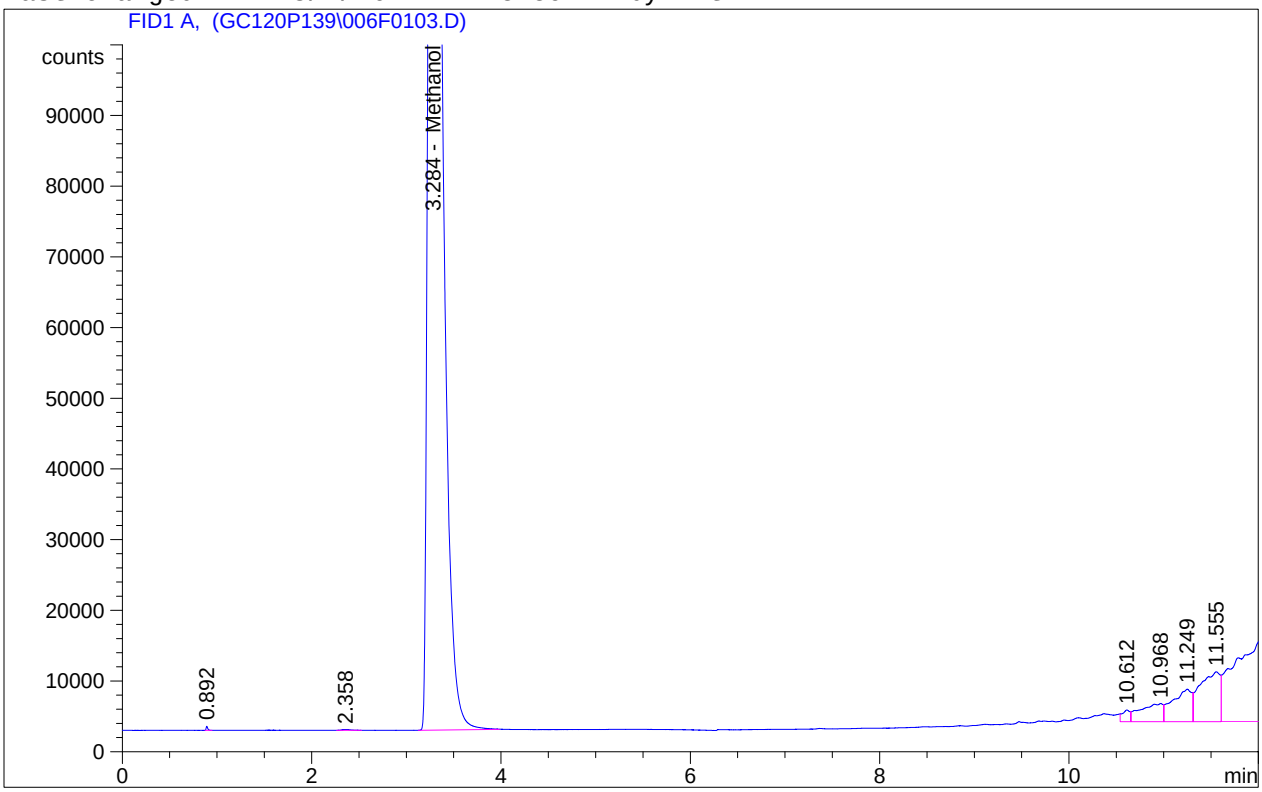
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   1
Acq. Instrument : Penn online                       Location : Vial 6
Injection Date  : 7/29/2011 2:04:25 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.283 BB     2.06436e6  1.53557e-3 3169.98646    Methanol

Totals :                              3169.98646



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\006F0103.D
Sample Name: gc120p112 #6

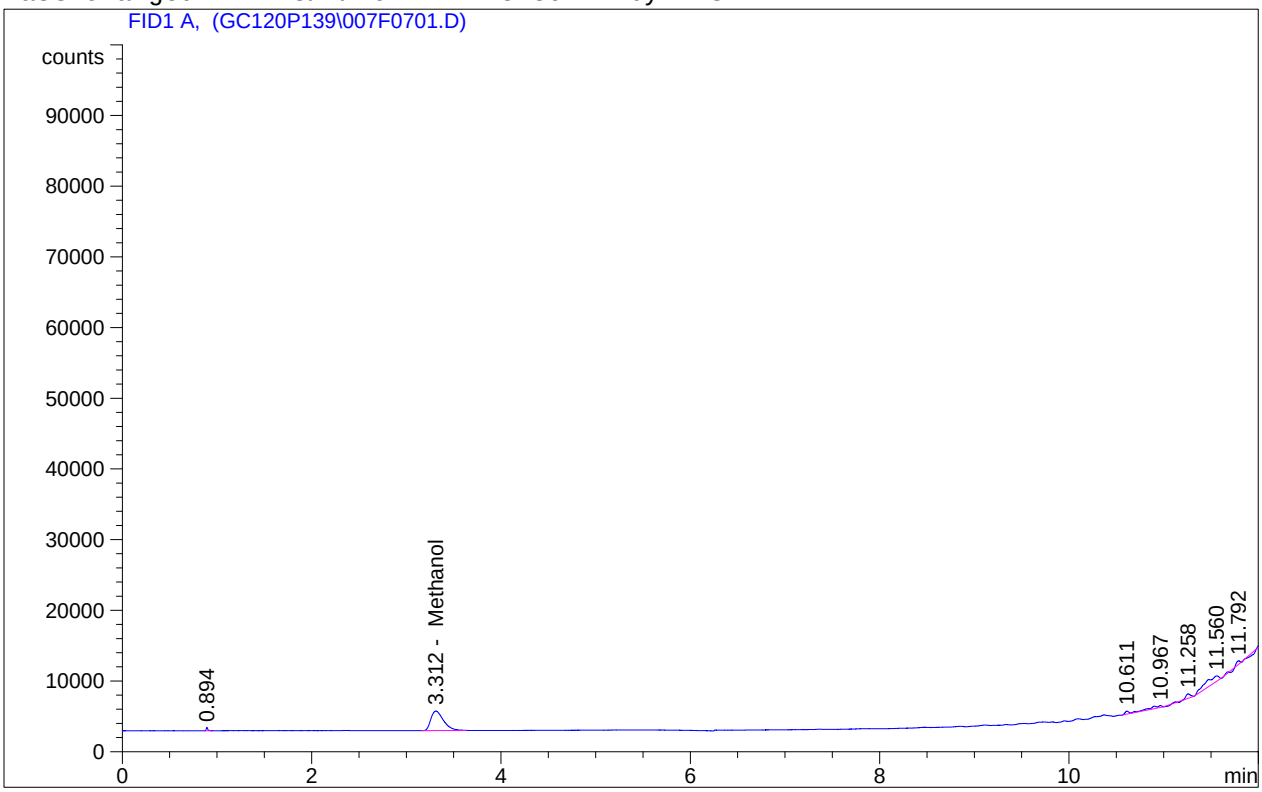
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   1
Acq. Instrument : Penn online                   Location : Vial 6
Injection Date  : 7/29/2011 2:25:31 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.284 BB     2.04769e6  1.53557e-3 3144.38613    Methanol

Totals :                              3144.38613



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\007F0701.D
Sample Name: gc120p12 #3ss

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   7
Acq. Instrument : Penn online                   Location : Vial 7
Injection Date  : 7/29/2011 11:23:26 PM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```

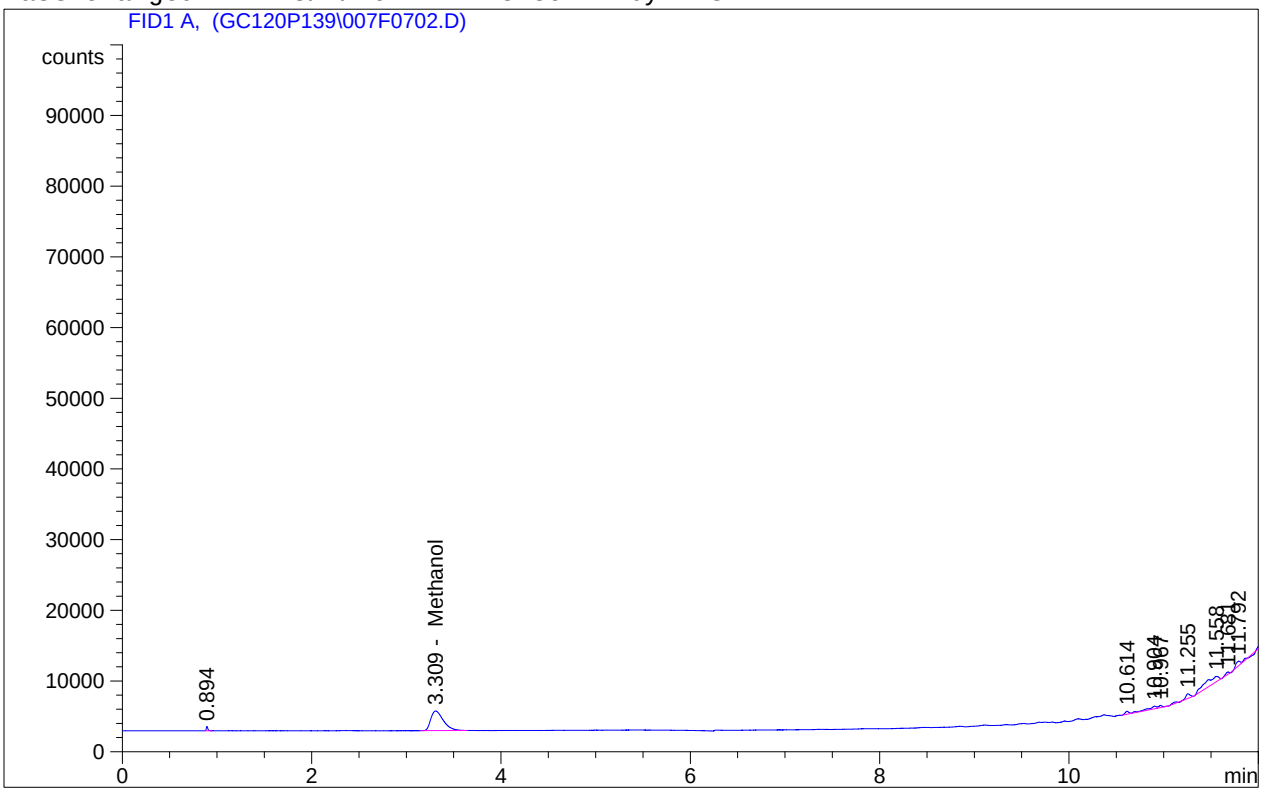



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|--------------
  3.312 BB     2.56108e4  1.53562e-3   39.32861    Methanol

Totals :                                39.32861


Signal 2: FID2 B,    not found
```

Tag:
39.353 ug/mL

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\007F0702.D
Sample Name: gc120p12 #3ss

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   7
Acq. Instrument : Penn online                   Location : Vial 7
Injection Date  : 7/29/2011 11:44:31 PM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```

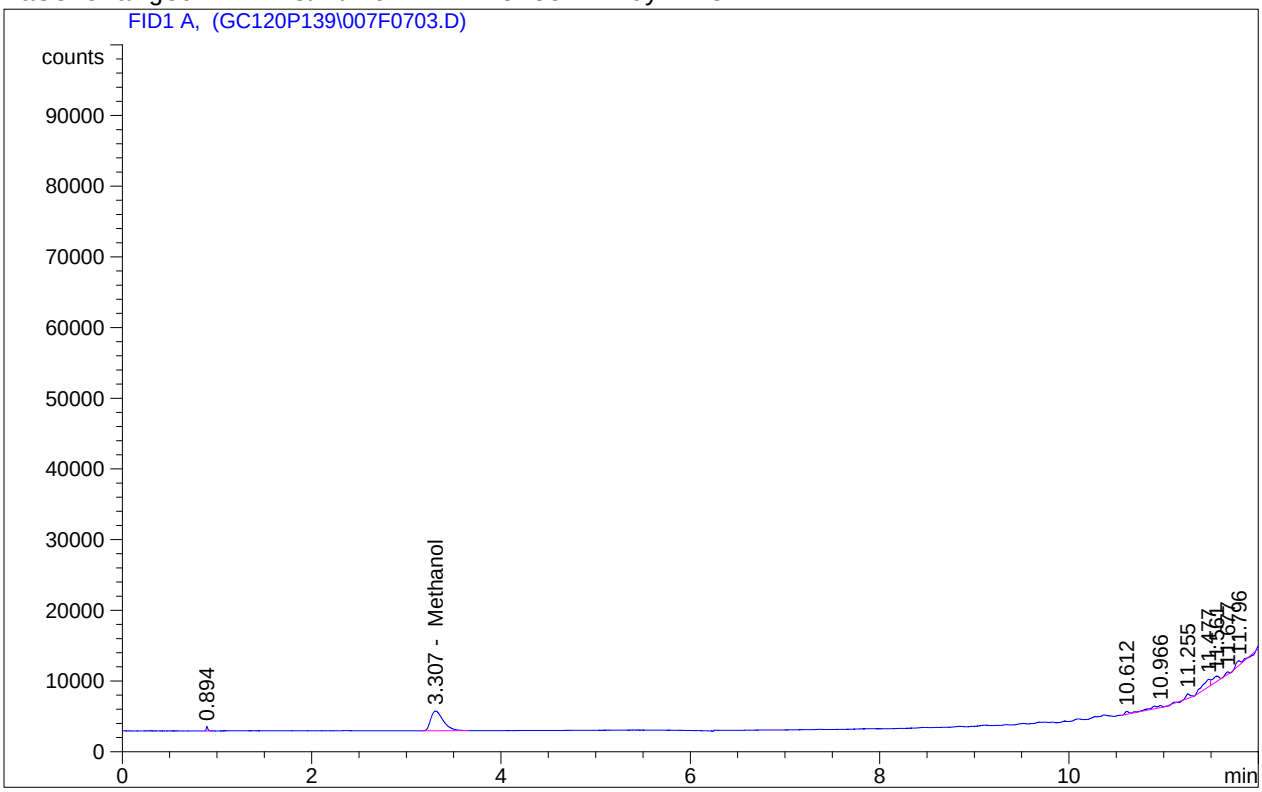



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------
  3.309 BB     2.55665e4  1.53562e-3   39.26051    Methanol

Totals :                               39.26051



Signal 2: FID2 B,    not found
```

Tag:
39.353 ug/mL

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\007F0703.D
Sample Name: gc120p12 #3ss

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   7
Acq. Instrument : Penn online                   Location : Vial 7
Injection Date  : 7/30/2011 12:05:39 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```



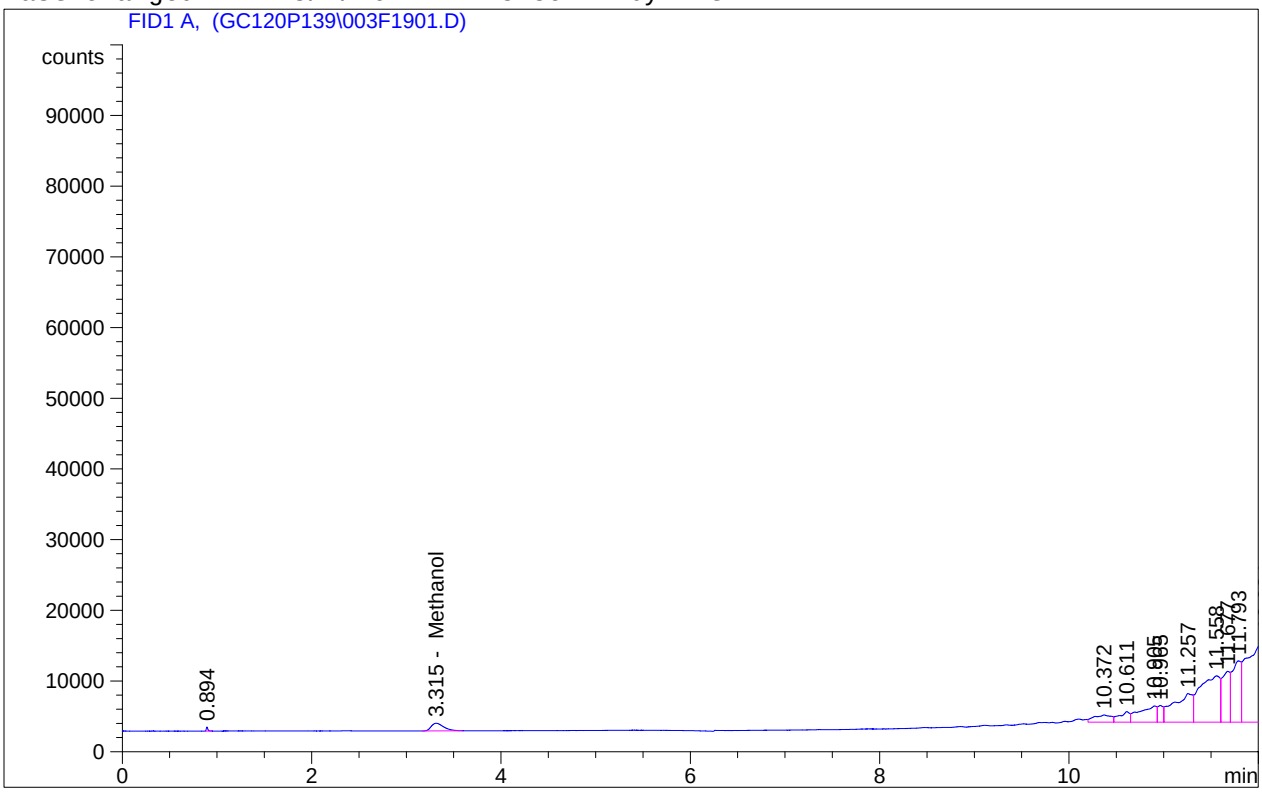

```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.307 BB     2.55621e4  1.53562e-3   39.25375    Methanol

Totals :                                39.25375


Signal 2: FID2 B,    not found
```

Tag:
39.353 ug/mL

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F1901.D
Sample Name: gc120p112 #3

==========

Acq. Operator : CLD Seq. Line : 19
Acq. Instrument : Penn online Location : Vial 3
Injection Date : 7/30/2011 12:04:43 PM Inj : 1
Inj Volume : 1 µl
Sequence File : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed : 8/1/2011 11:25:59 AM by kmt



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Monday, August 01, 2011 11:24:33 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

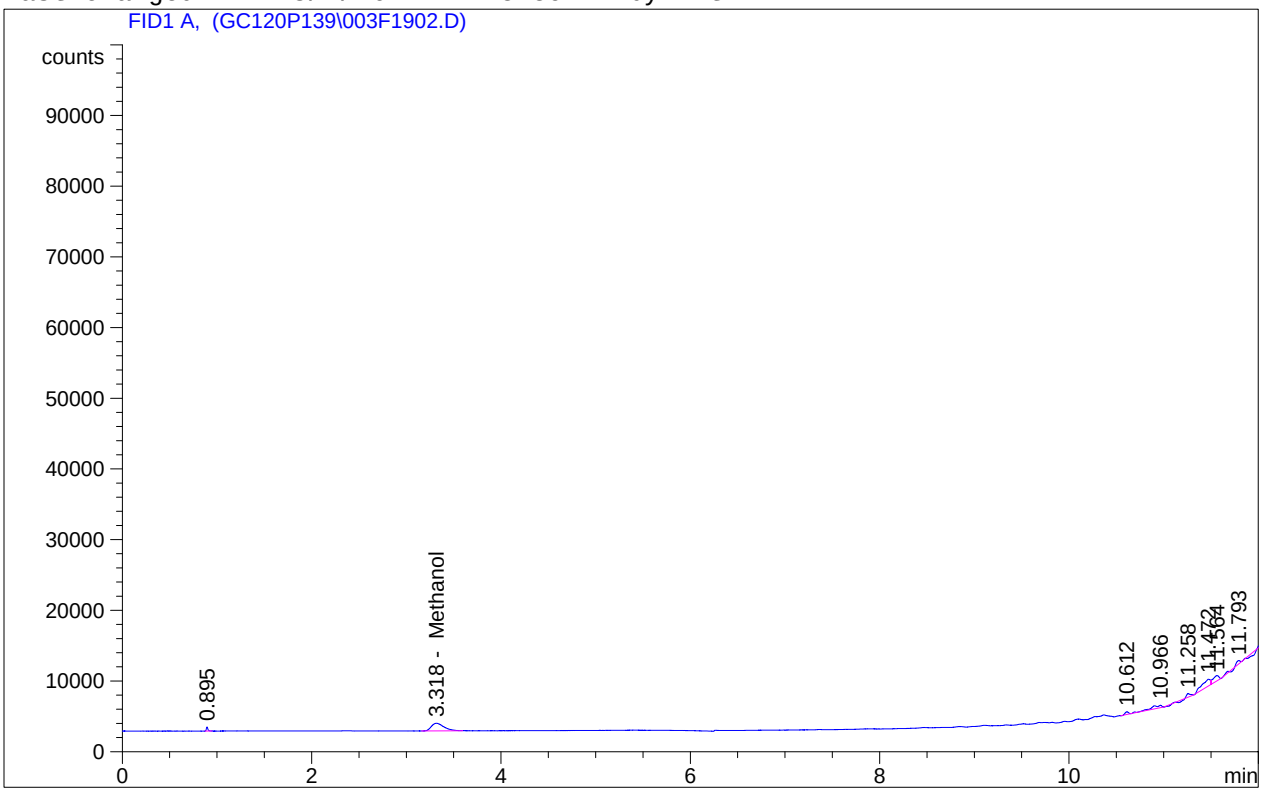
RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.315	BB	9858.61914	1.53570e-3	15.13990		Methanol

Totals : 15.13990

Signal 2: FID2 B, not found

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F1902.D
Sample Name: gc120p112 #3

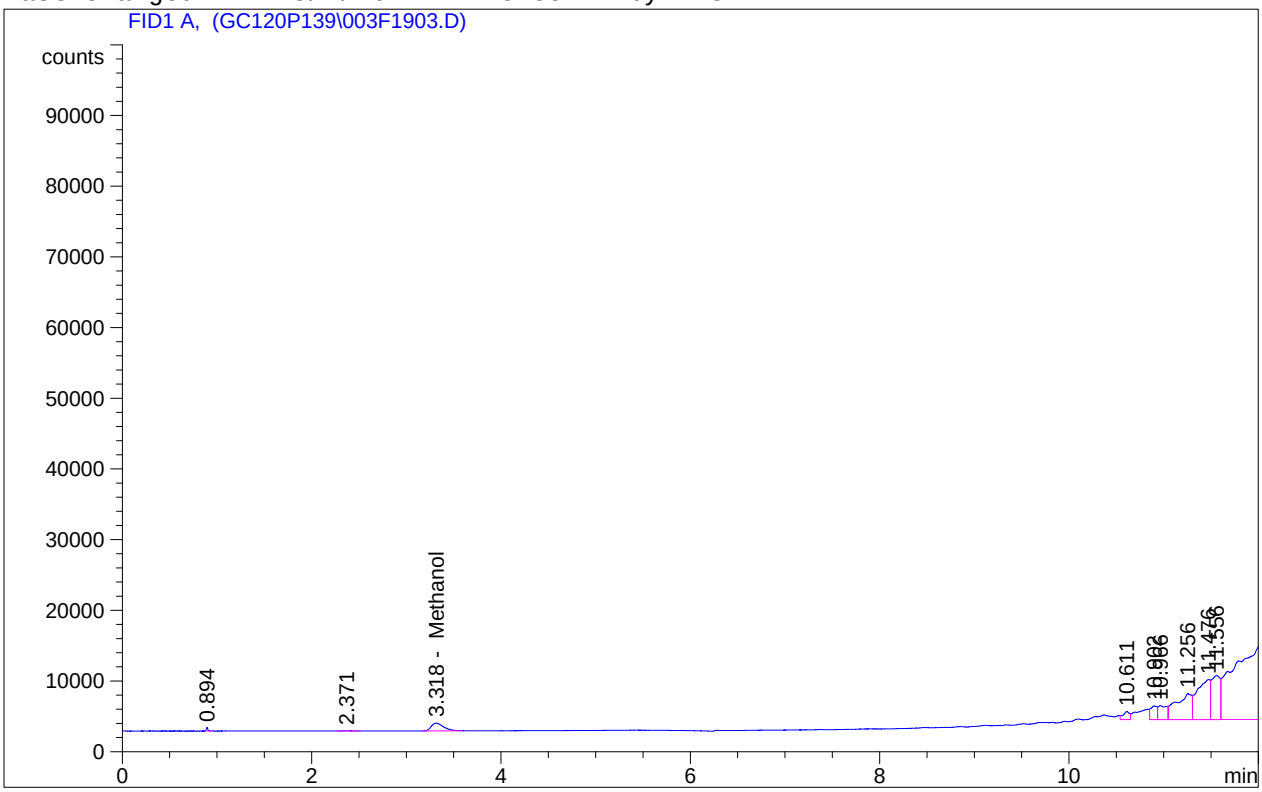
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  19
Acq. Instrument : Penn online                   Location : Vial 3
Injection Date  : 7/30/2011 12:25:52 PM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.318 BB     9844.86035 1.53570e-3   15.11878    Methanol

Totals :                               15.11878



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F1903.D
Sample Name: gc120p112 #3

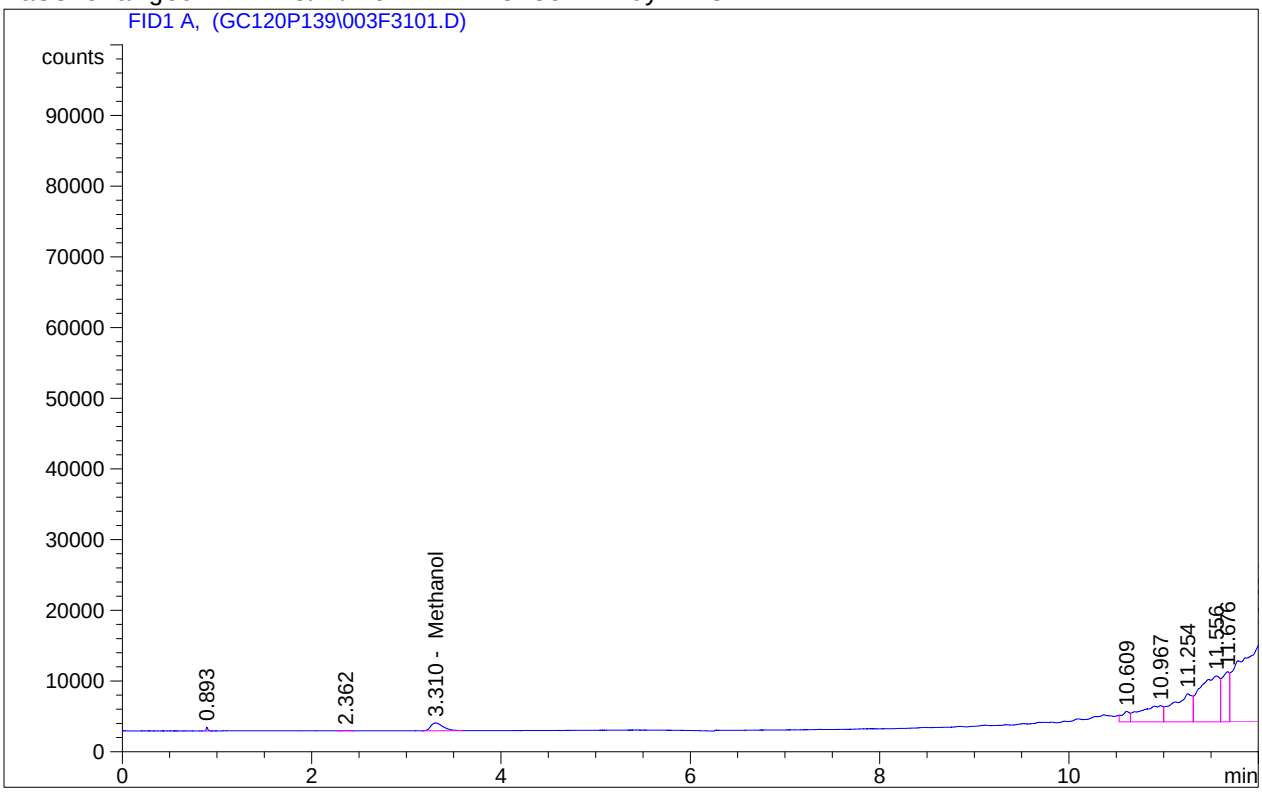
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  19
Acq. Instrument : Penn online                   Location : Vial 3
Injection Date  : 7/30/2011 12:47:02 PM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.318 BB     9823.42090 1.53570e-3   15.08585    Methanol

Totals :                               15.08585



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F3101.D
Sample Name: gc120p112 #3

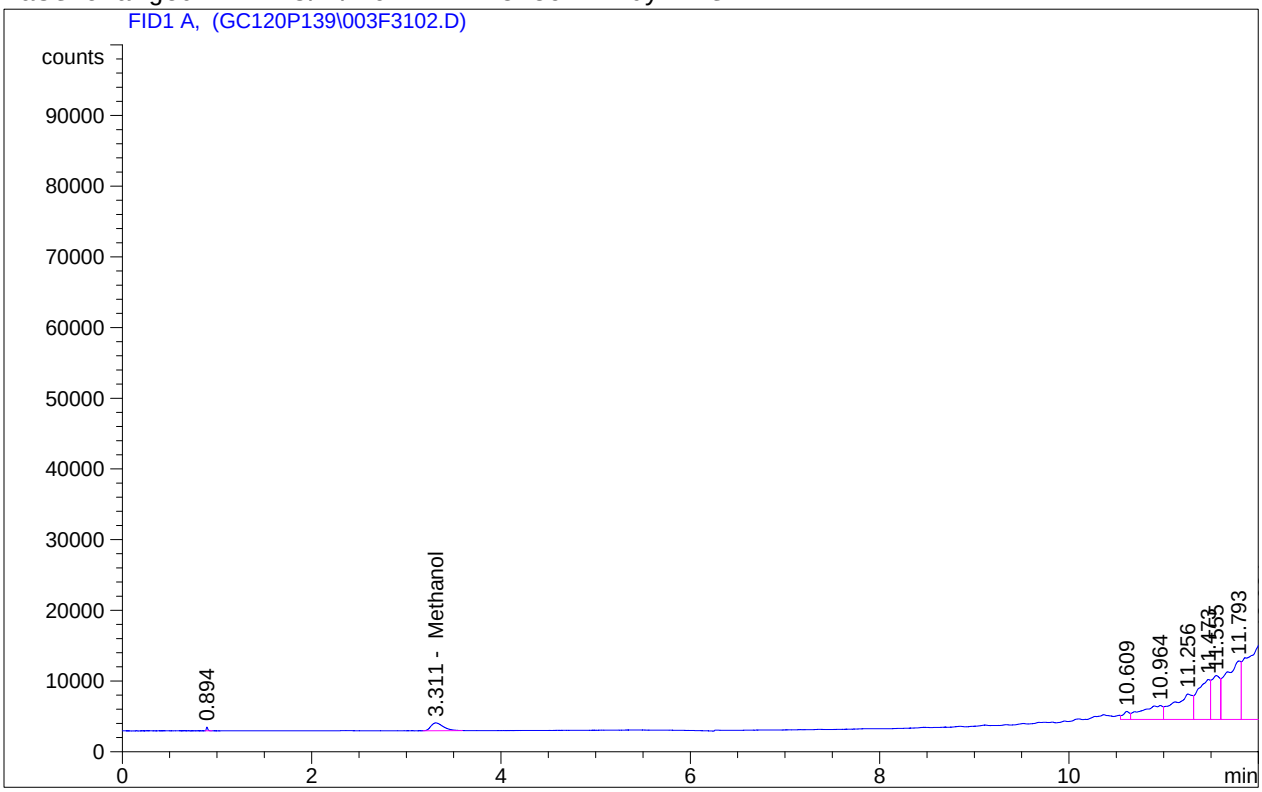
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  31
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/30/2011 9:14:22 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.310 BB     9892.47949 1.53570e-3   15.19190    Methanol

Totals :                               15.19190



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F3102.D
Sample Name: gc120p112 #3

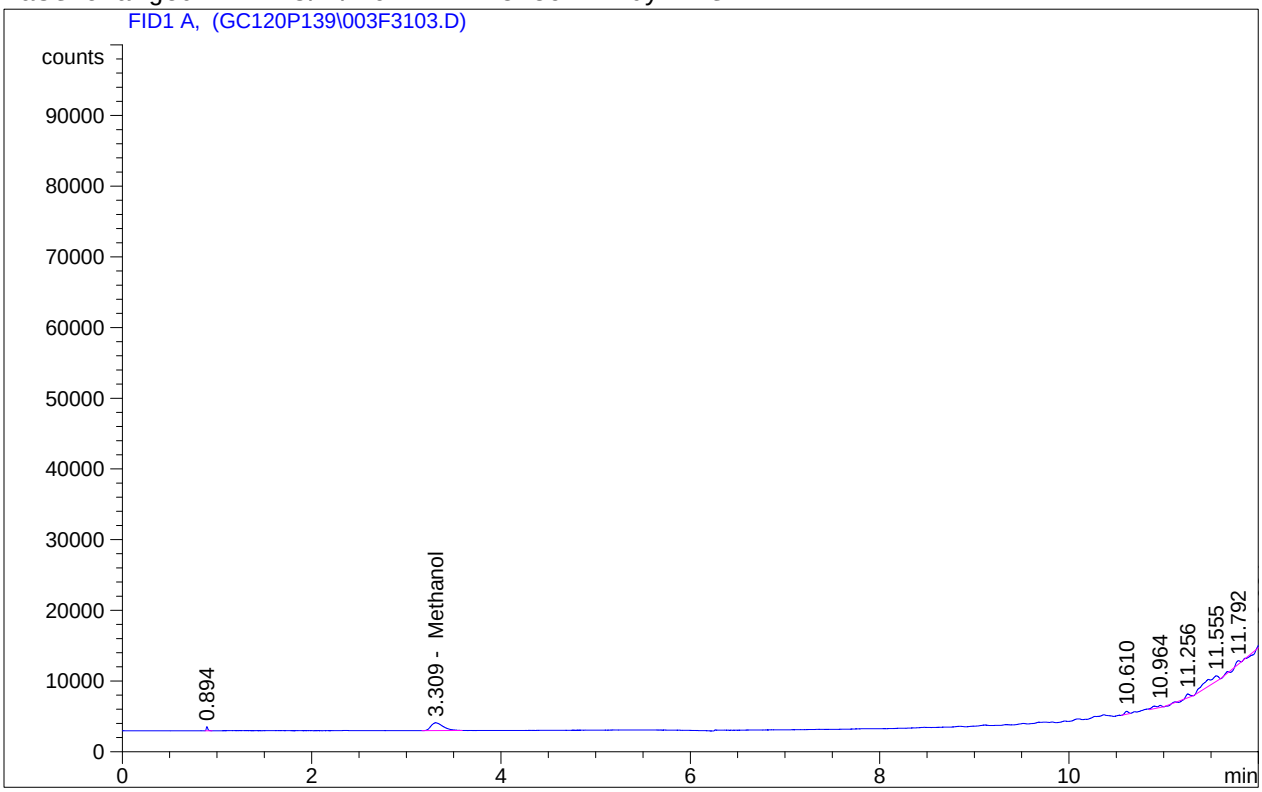
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  31
Acq. Instrument : Penn online                   Location : Vial 3
Injection Date  : 7/30/2011 9:35:26 PM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.311 BB     9994.85352 1.53570e-3   15.34910    Methanol

Totals :                                15.34910



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F3103.D
Sample Name: gc120p112 #3

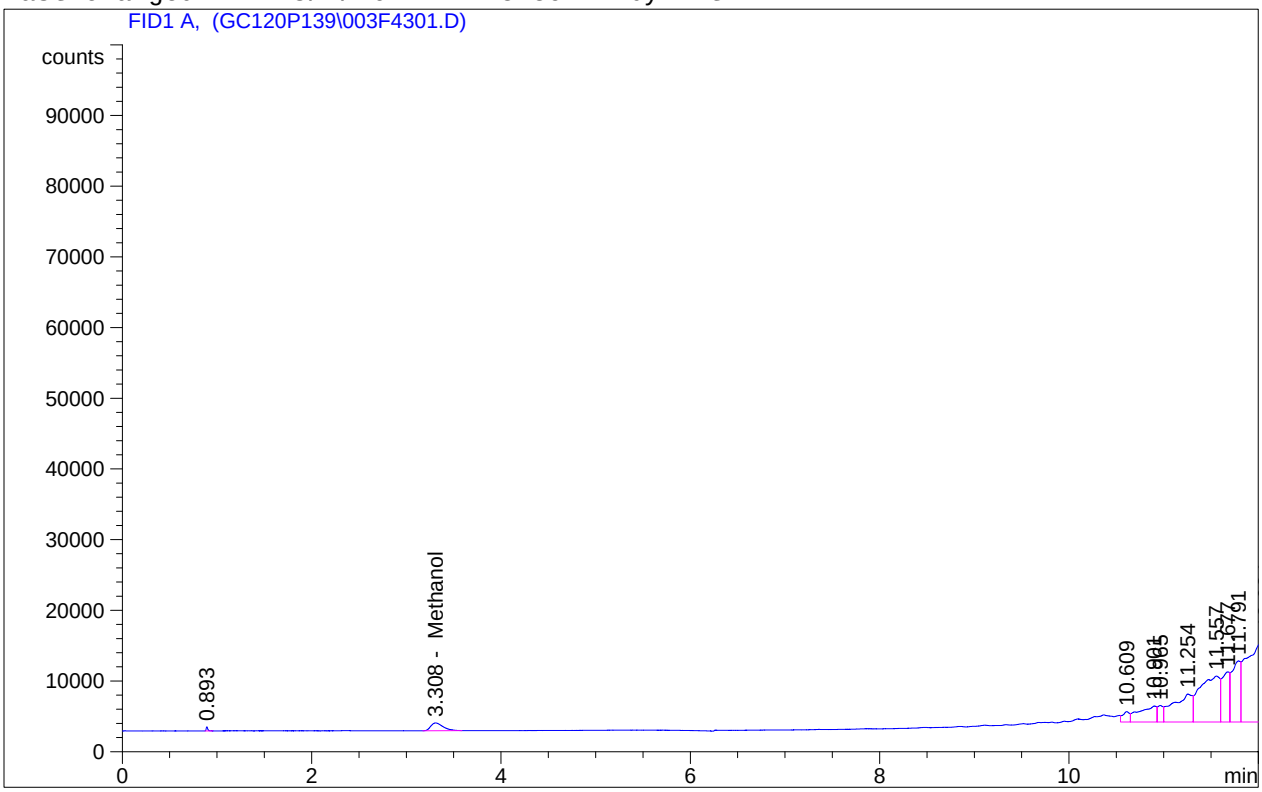
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  31
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/30/2011 9:56:30 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.309 BB     9927.46777 1.53570e-3   15.24562    Methanol

Totals :                               15.24562



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F4301.D
Sample Name: gc120p112 #3

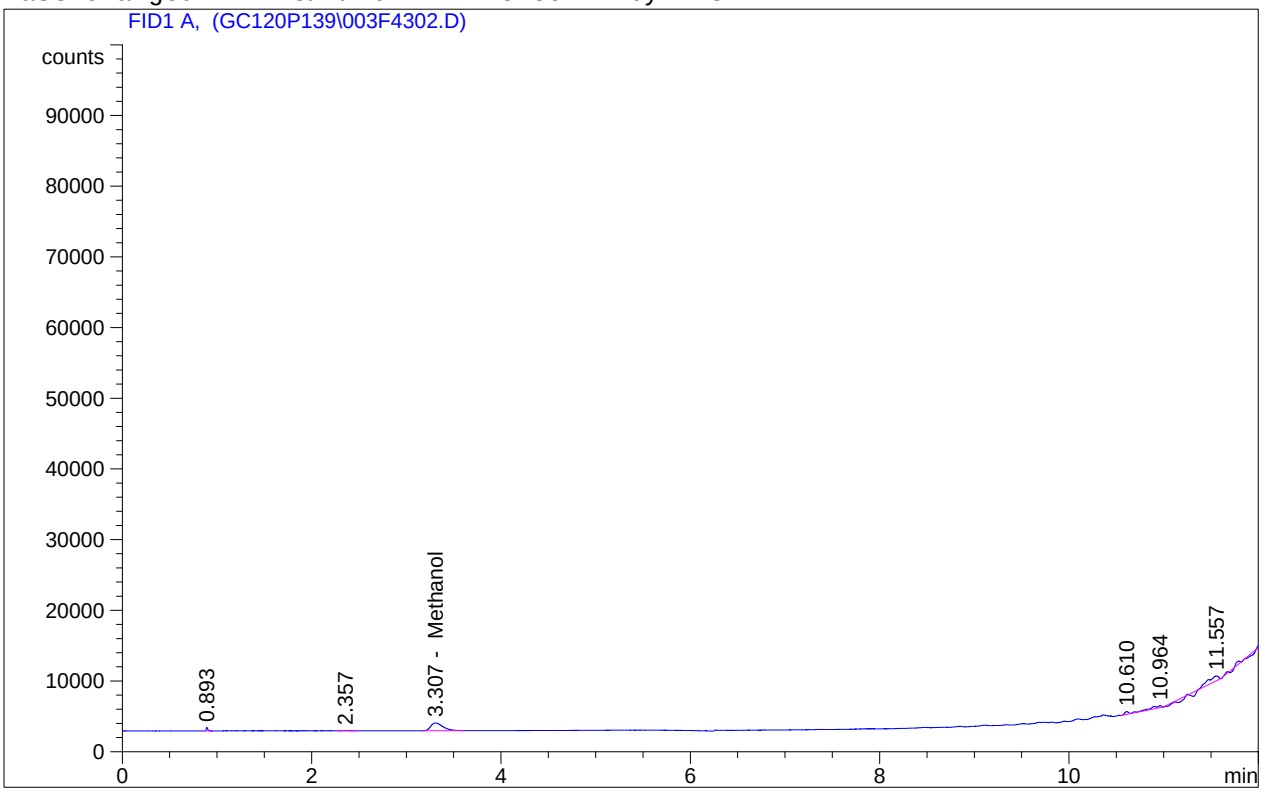
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  43
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/31/2011 6:23:01 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.308 BB     9890.20313 1.53570e-3   15.18840    Methanol

Totals :                               15.18840



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F4302.D
Sample Name: gc120p112 #3

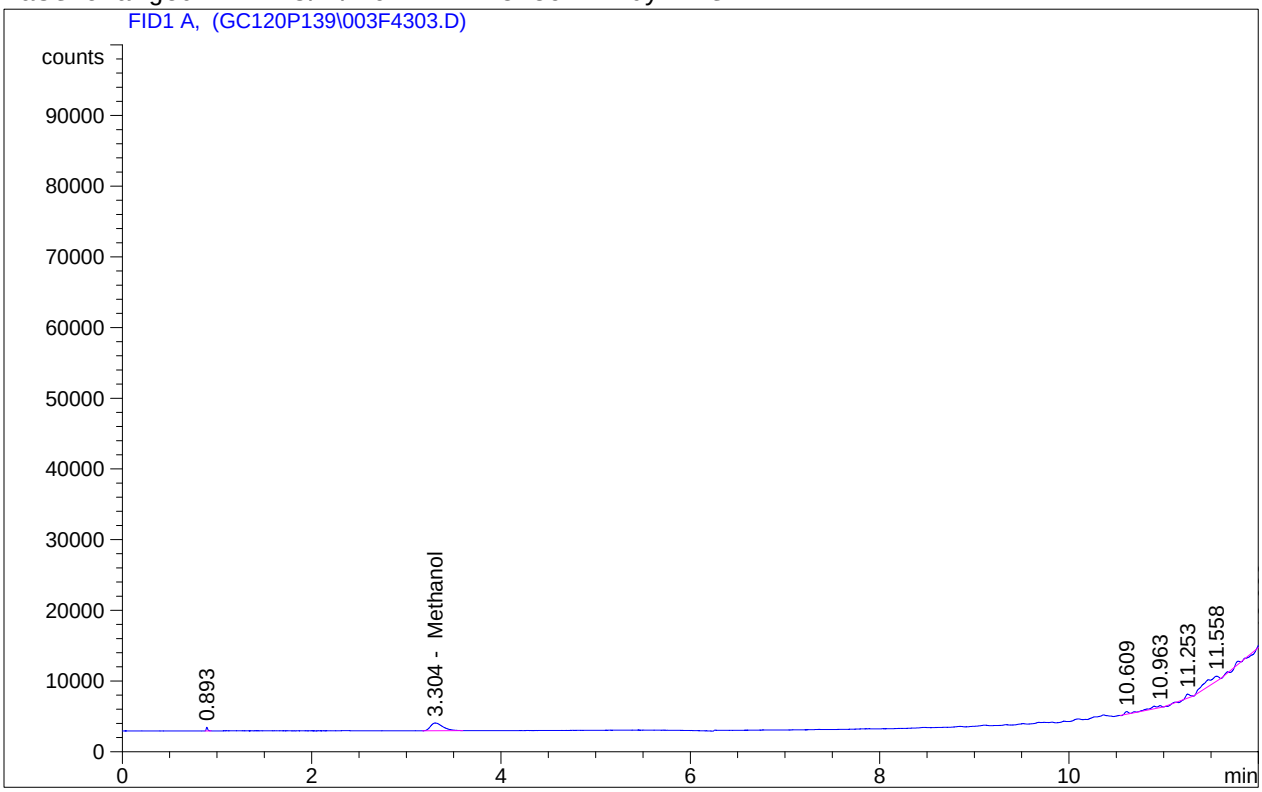
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  43
Acq. Instrument : Penn online                   Location : Vial 3
Injection Date  : 7/31/2011 6:44:05 AM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.307 BB     9932.46680 1.53570e-3   15.25330    Methanol

Totals :                               15.25330



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F4303.D
Sample Name: gc120p112 #3

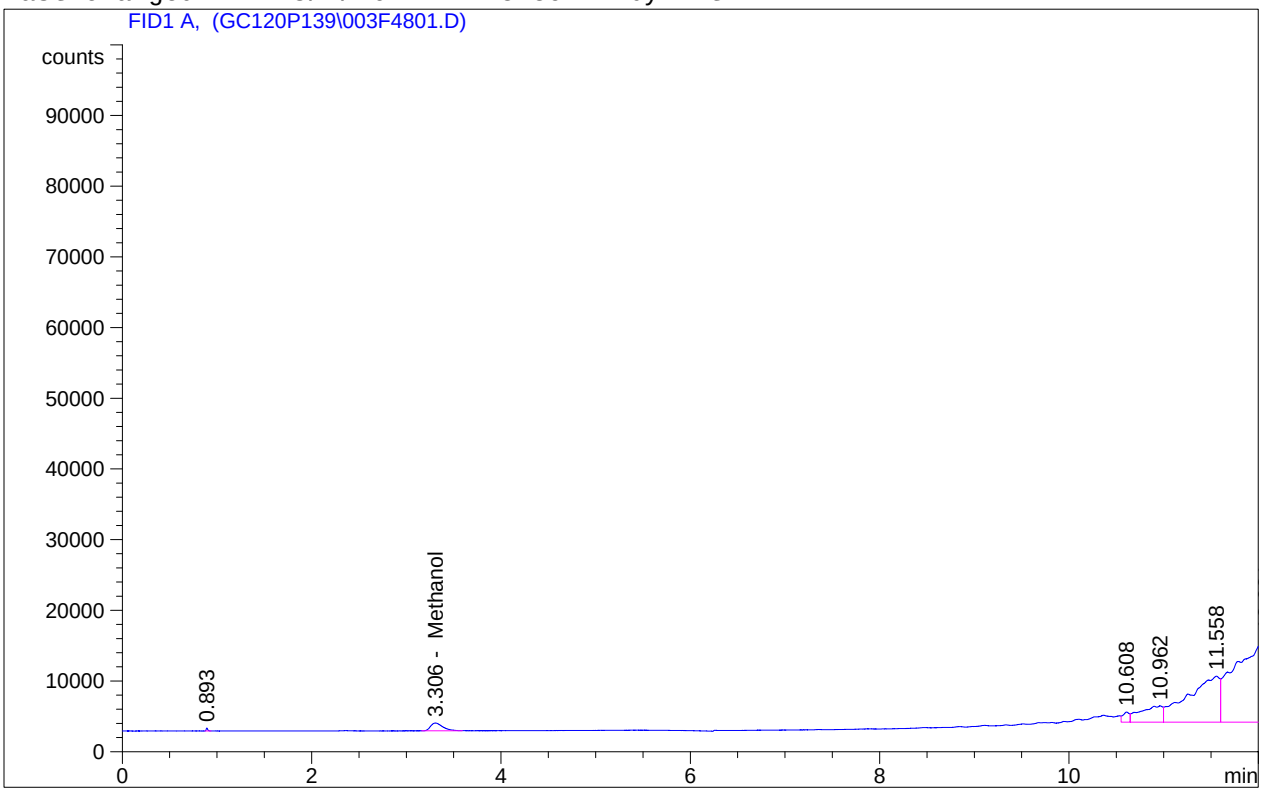
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  43
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/31/2011 7:05:10 AM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.304 BB     9839.37988 1.53570e-3   15.11036    Methanol

Totals :                               15.11036



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F4801.D
Sample Name: gc120p112 #3

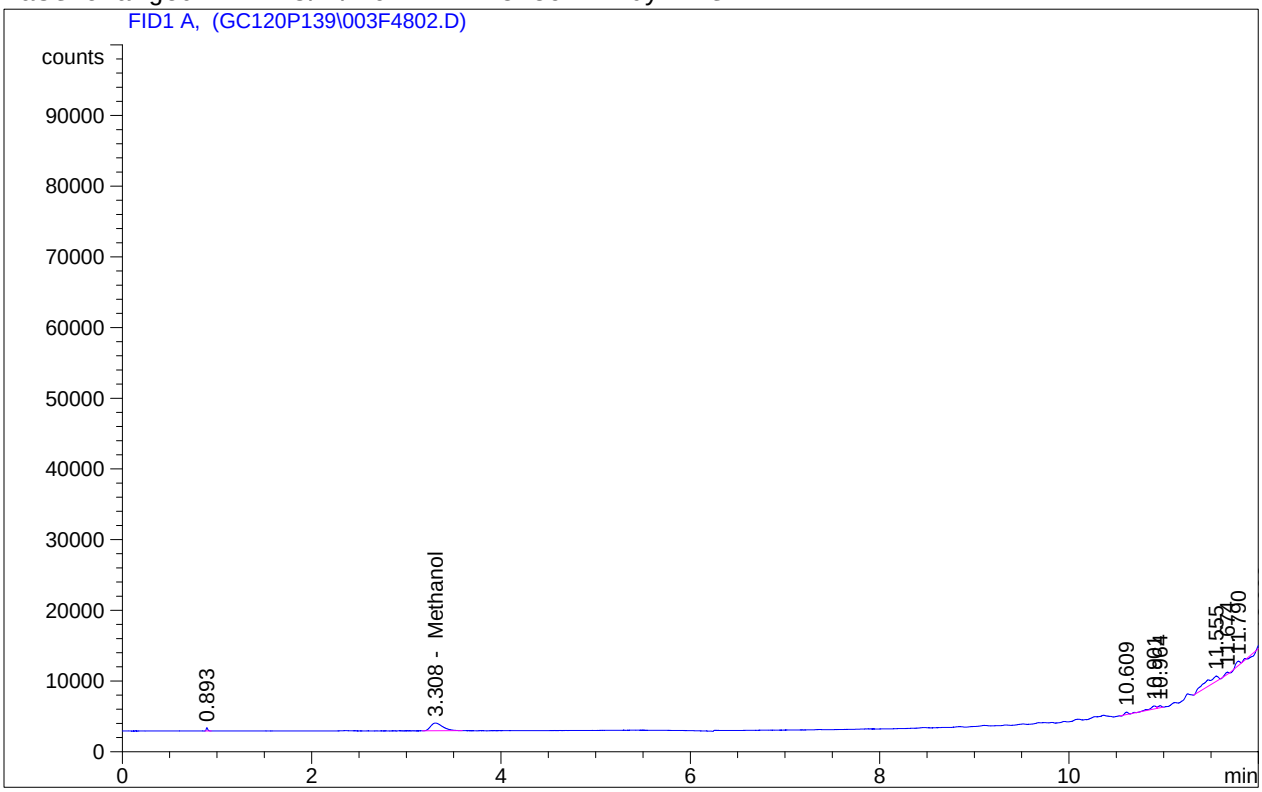
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  48
Acq. Instrument : Penn online                   Location : Vial 3
Injection Date  : 7/31/2011 10:36:49 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.306 BB     9883.15625 1.53570e-3   15.17758    Methanol

Totals :                               15.17758



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F4802.D
Sample Name: gc120p112 #3

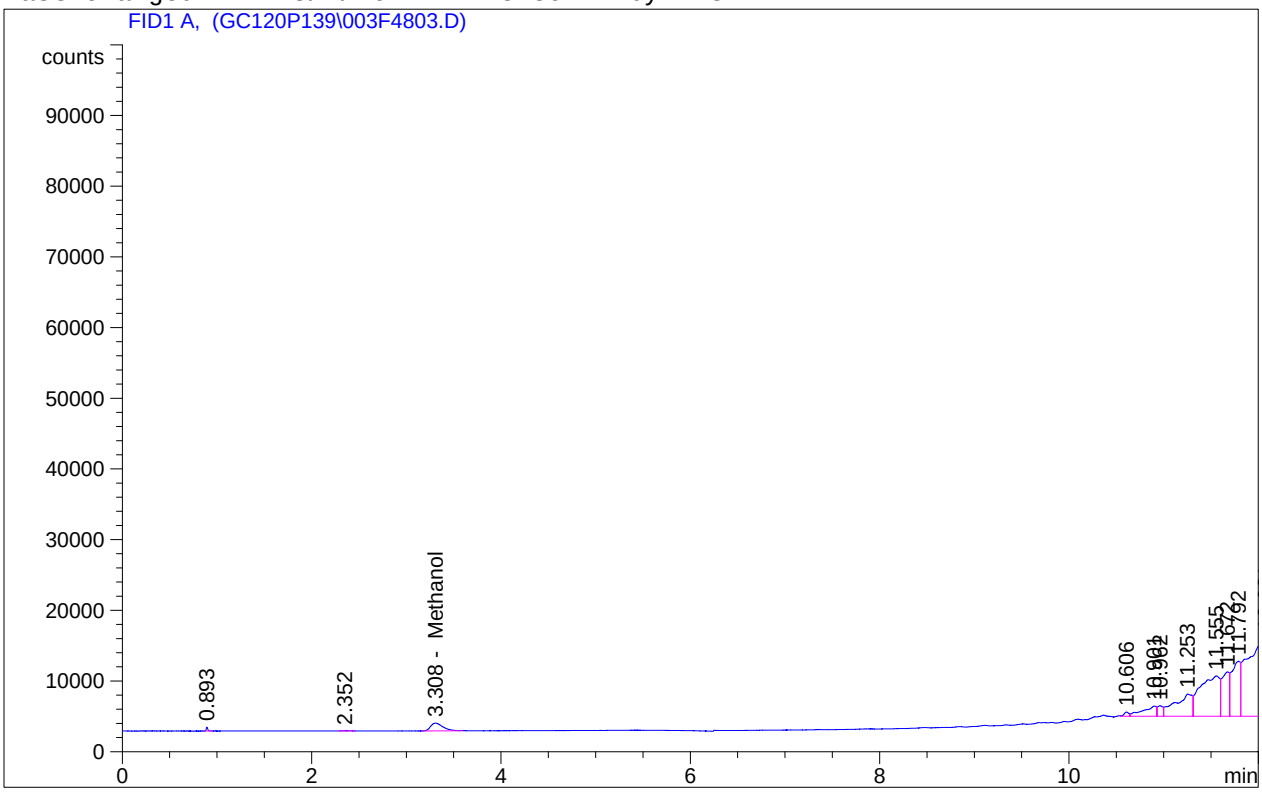
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  48
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/31/2011 10:57:57 AM                  Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.308 BB     9832.66406 1.53570e-3   15.10005    Methanol

Totals :                               15.10005



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\003F4803.D
Sample Name: gc120p112 #3

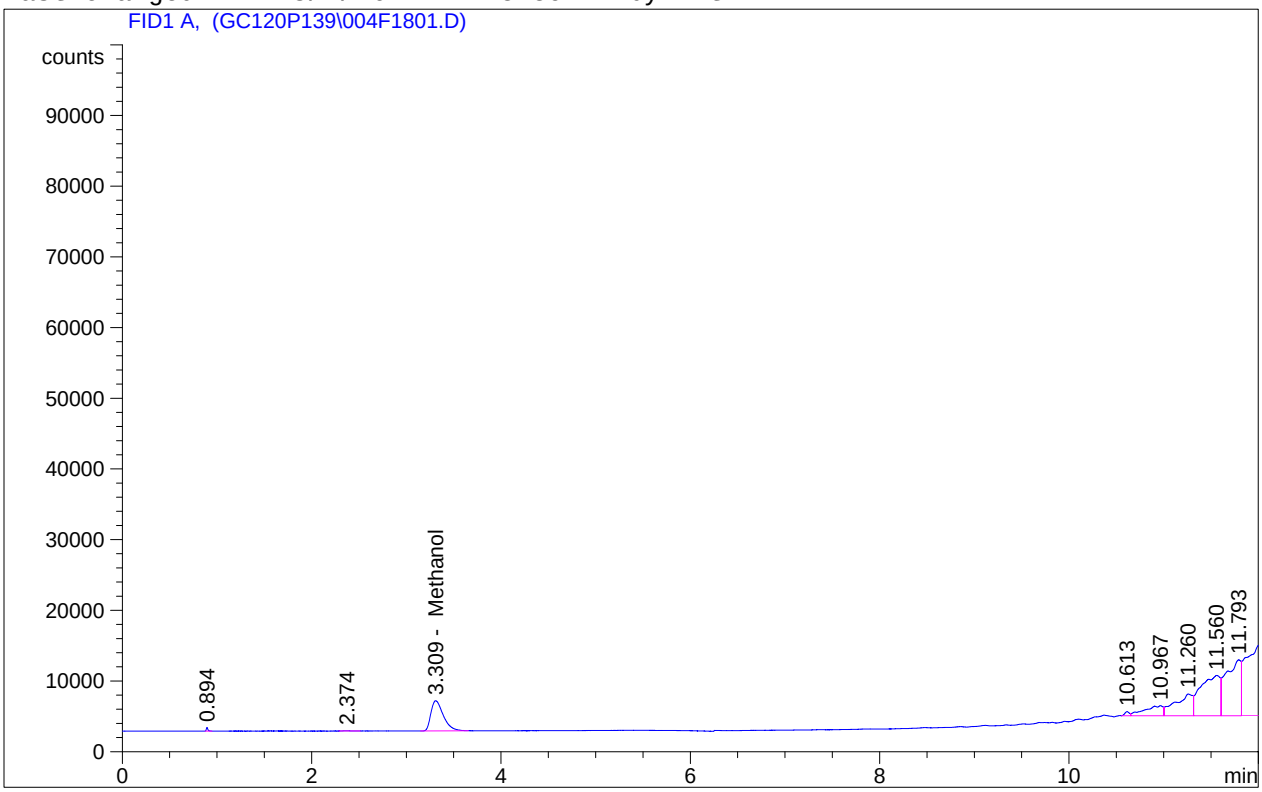
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  48
Acq. Instrument : Penn online                       Location : Vial 3
Injection Date  : 7/31/2011 11:19:05 AM                  Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.308 BB     9810.96777 1.53570e-3   15.06673    Methanol

Totals :                               15.06673



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F1801.D
Sample Name: gc120p112 #4

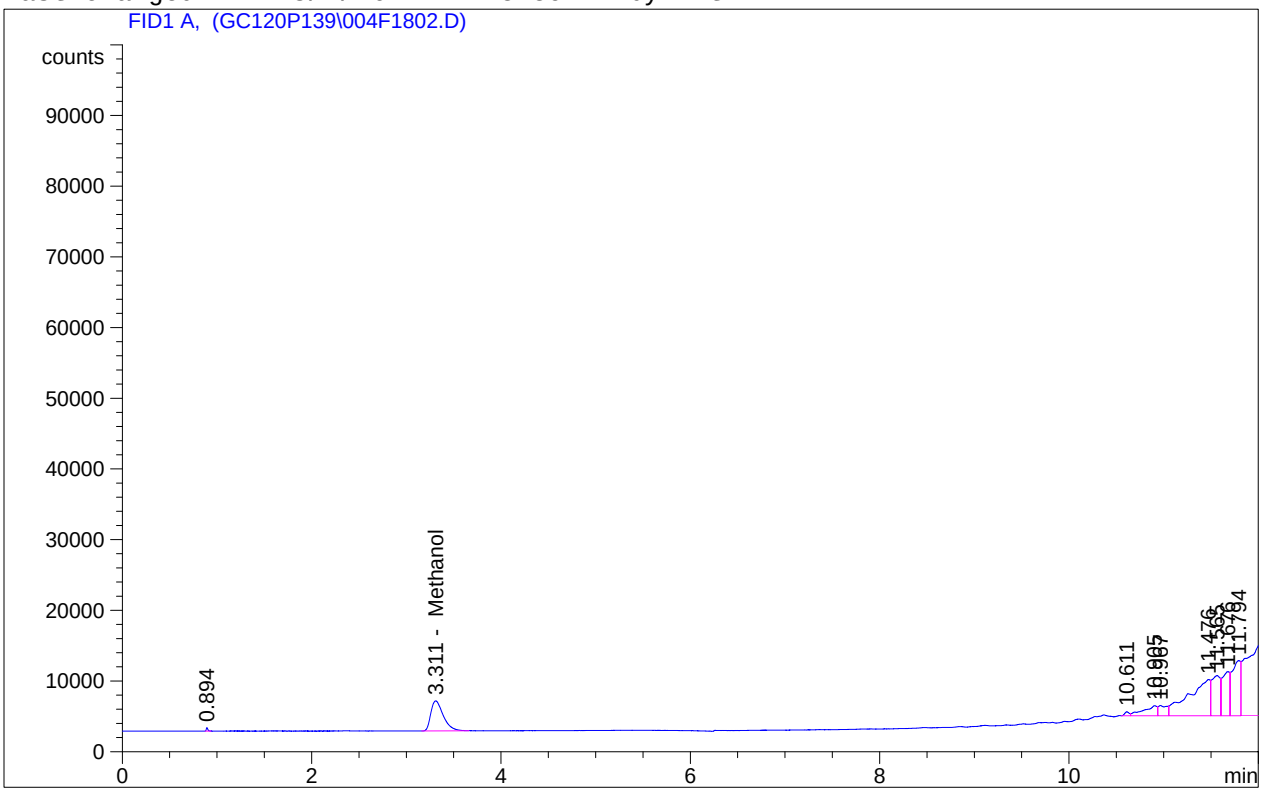
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  18
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/30/2011 11:01:18 AM              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.309 BB     3.88392e4  1.53561e-3   59.64169    Methanol

Totals :                                59.64169



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F1802.D
Sample Name: gc120p112 #4

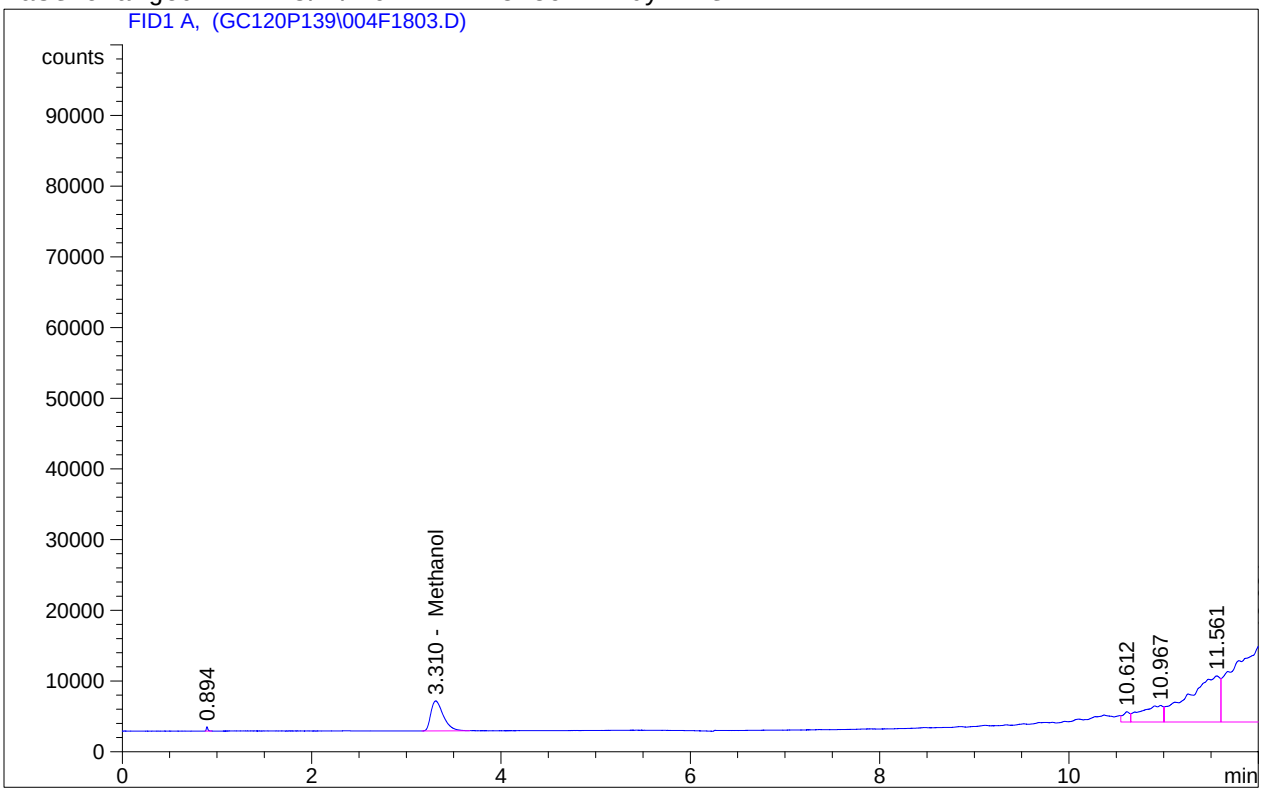
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  18
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/30/2011 11:22:27 AM              Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.311 BB     3.86938e4  1.53561e-3   59.41849    Methanol

Totals :                                59.41849



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F1803.D
Sample Name: gc120p112 #4

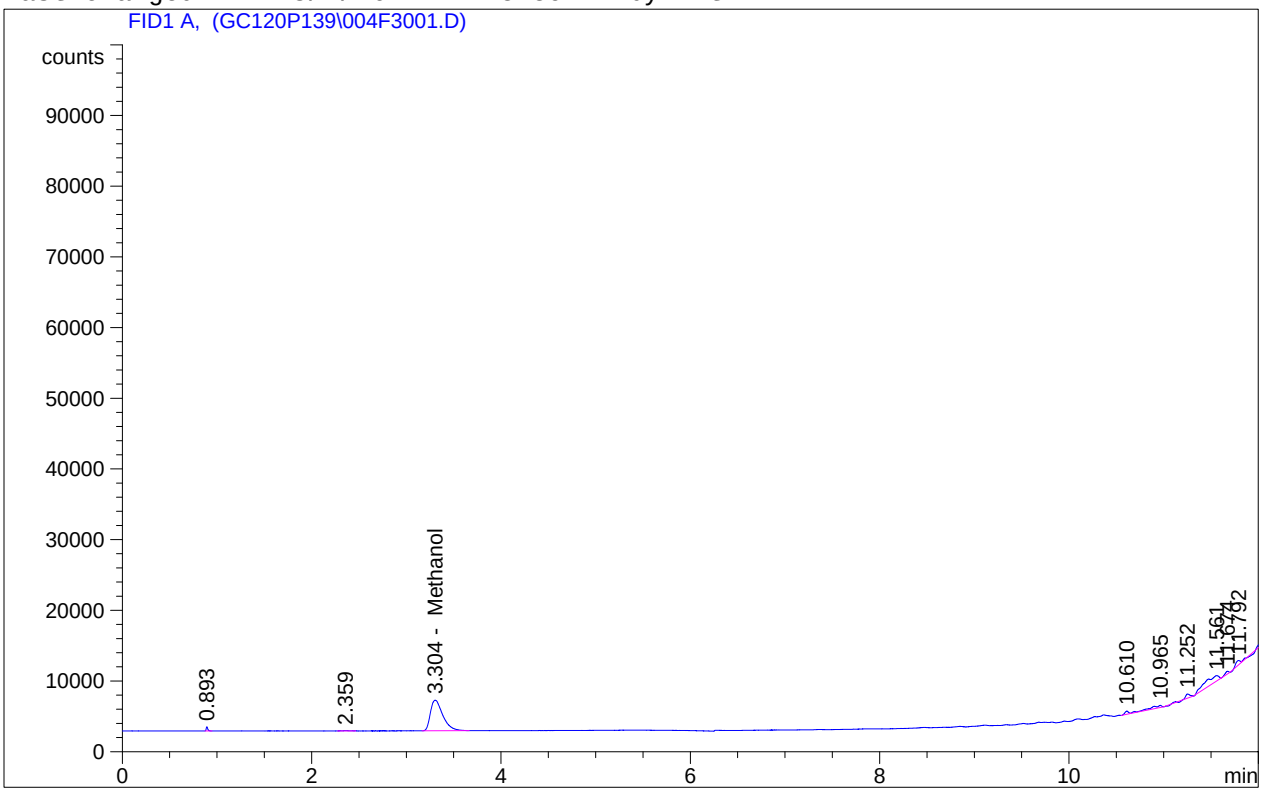
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  18
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/30/2011 11:43:35 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.310 BB     3.87331e4  1.53561e-3   59.47880    Methanol

Totals :                                59.47880



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F3001.D
Sample Name: gc120p112 #4

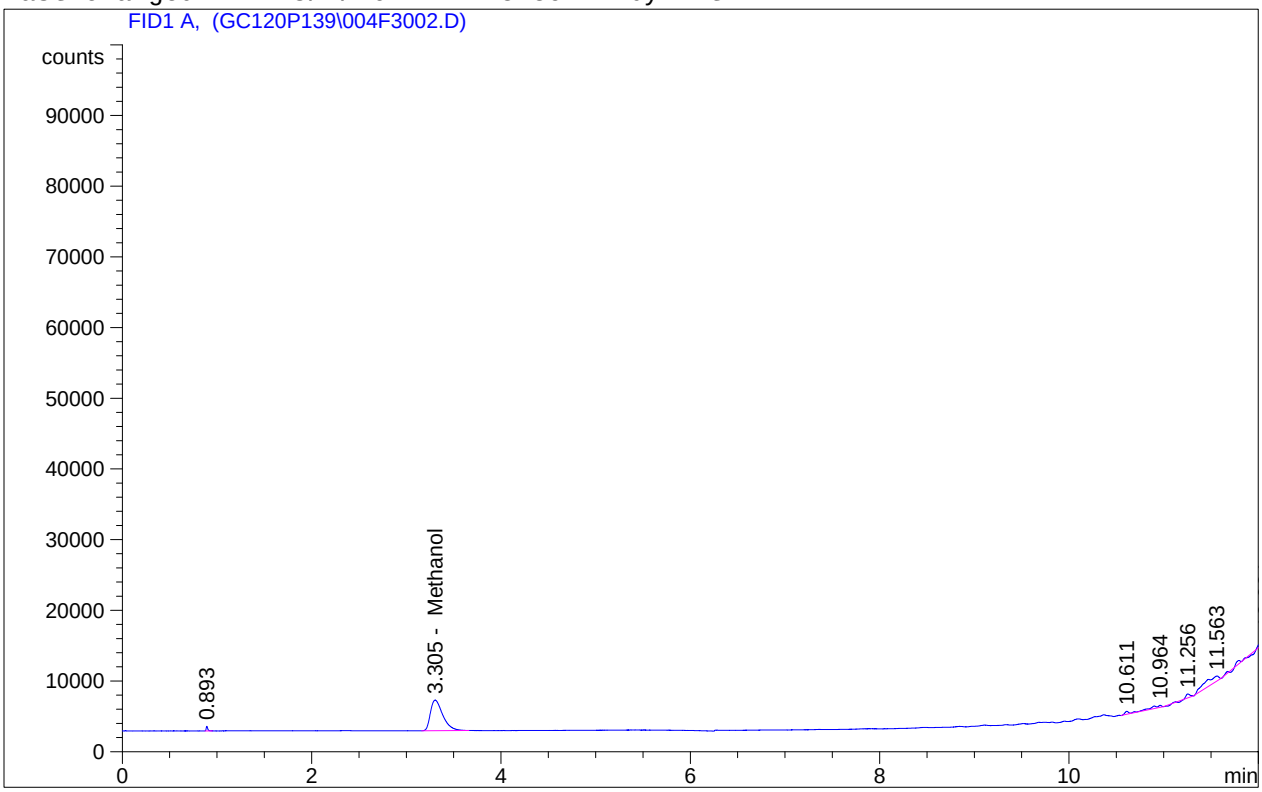
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  30
Acq. Instrument : Penn online                       Location : Vial 4
Injection Date  : 7/30/2011 8:11:05 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.304 BB     3.91851e4  1.53561e-3   60.17287    Methanol

Totals :                               60.17287



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F3002.D
Sample Name: gc120p112 #4

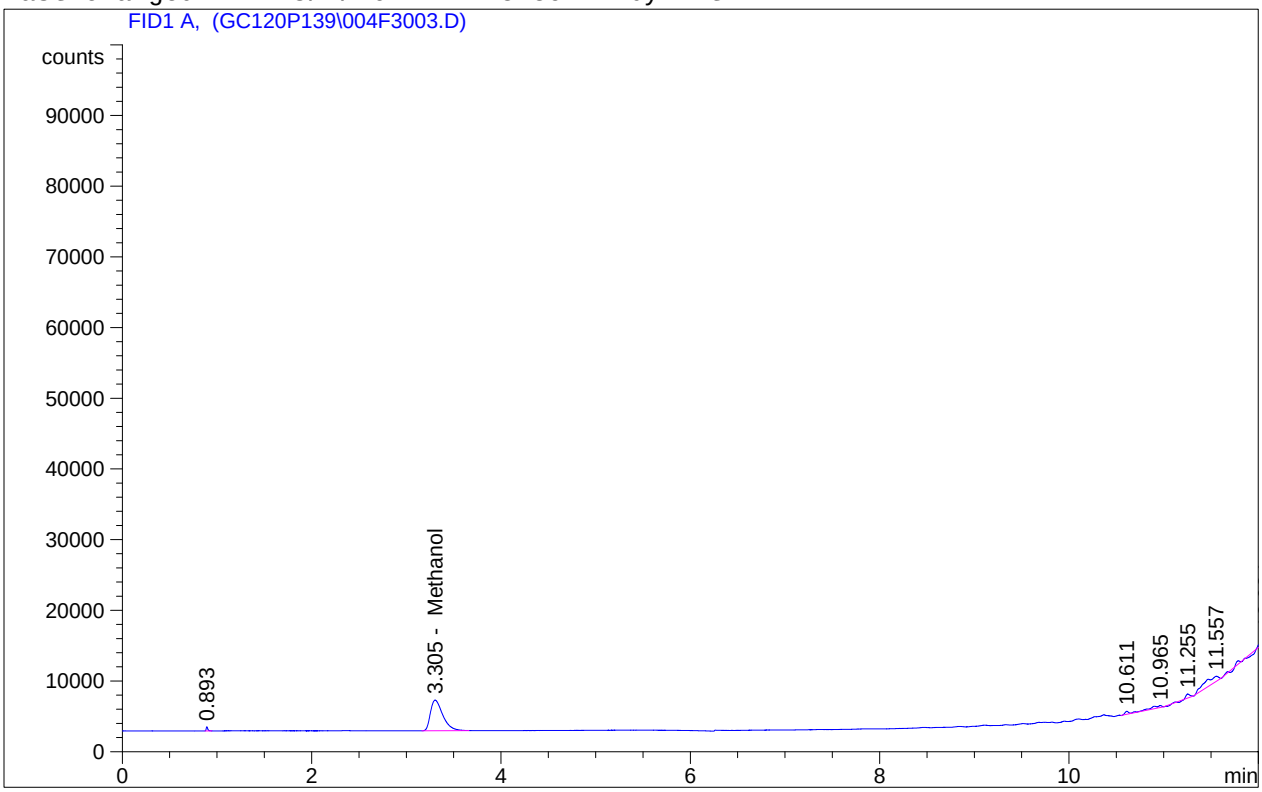
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  30
Acq. Instrument : Penn online                       Location : Vial 4
Injection Date  : 7/30/2011 8:32:10 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.305 BB     3.92369e4  1.53561e-3   60.25241    Methanol

Totals :                                60.25241



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F3003.D
Sample Name: gc120p112 #4

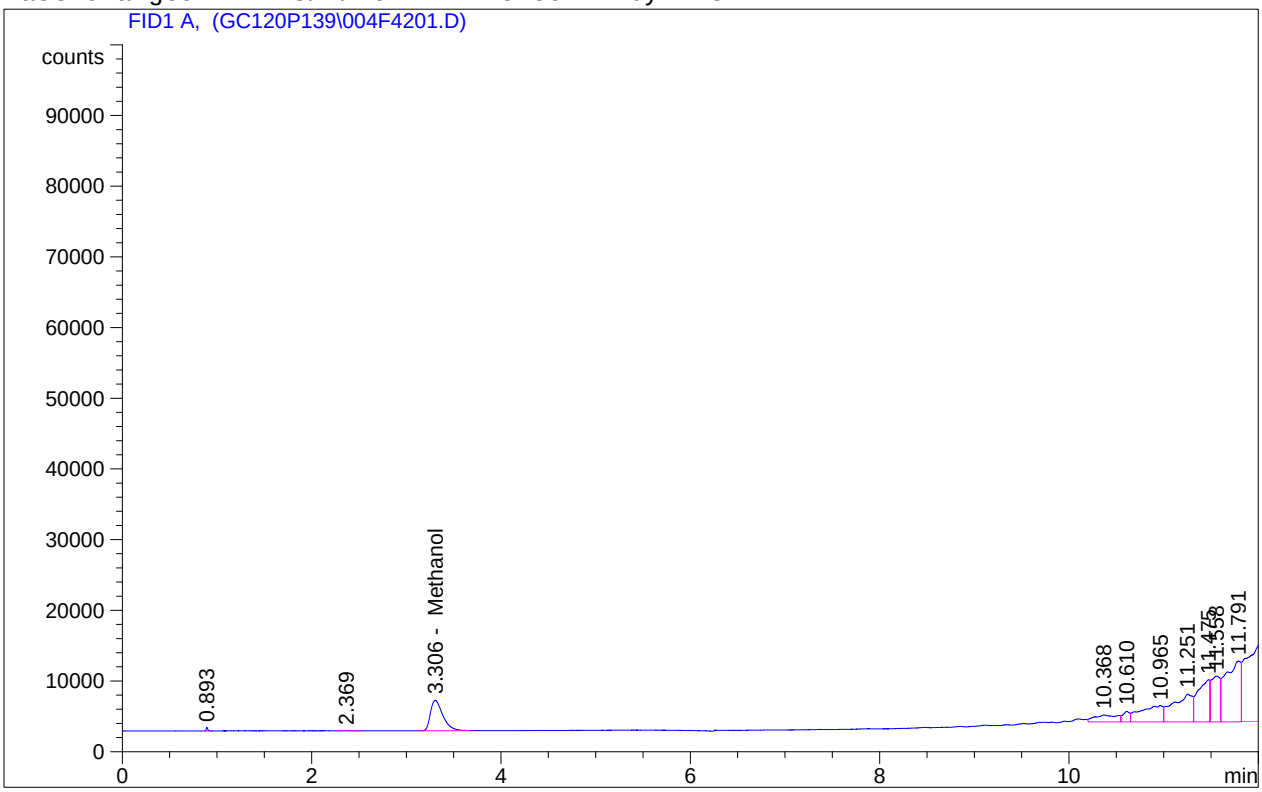
```
======================================================================
Acq. Operator   : CLD                          Seq. Line :  30
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/30/2011 8:53:18 PM               Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
======================================================================
                      External Standard Report
======================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.305 BB     3.92173e4  1.53561e-3   60.22228    Methanol

Totals :                               60.22228



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F4201.D
Sample Name: gc120p112 #4

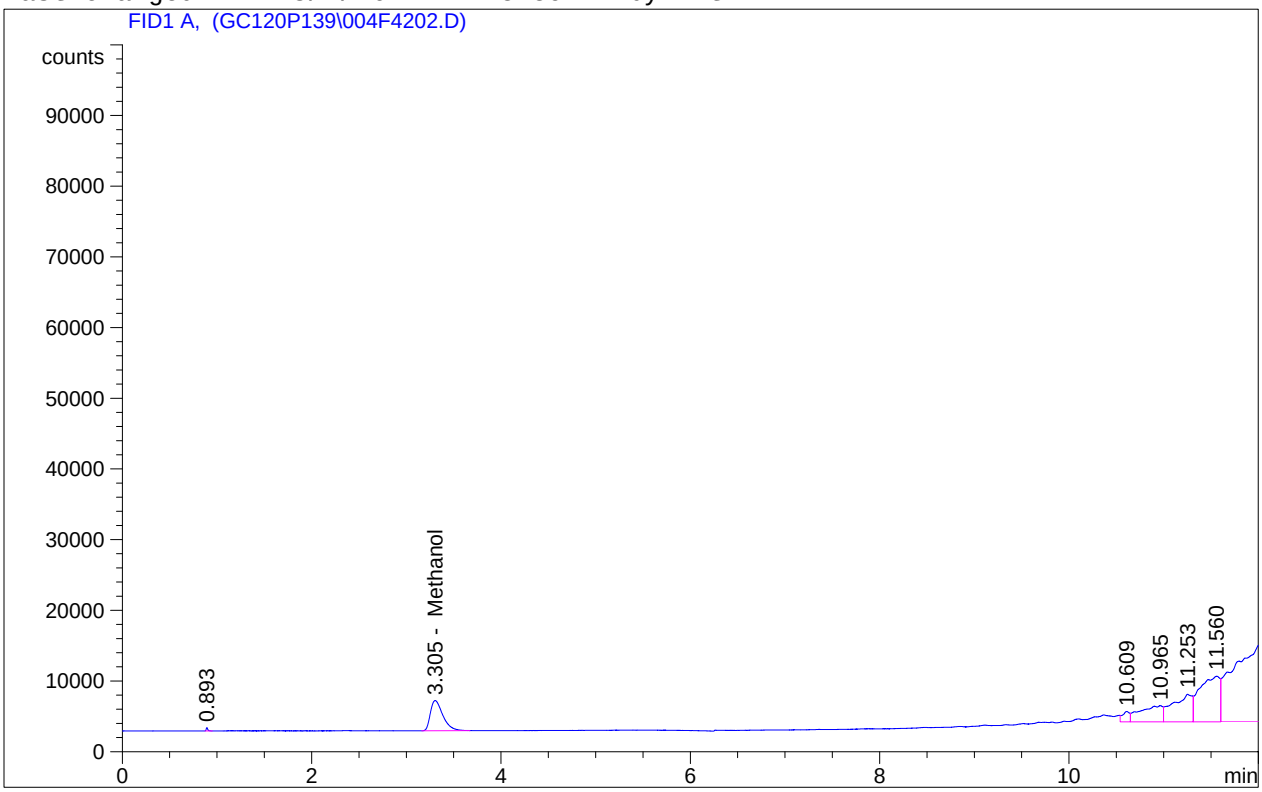
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  42
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/31/2011 5:19:44 AM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.306 BB     3.89937e4  1.53561e-3   59.87898    Methanol

Totals :                               59.87898



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F4202.D
Sample Name: gc120p112 #4

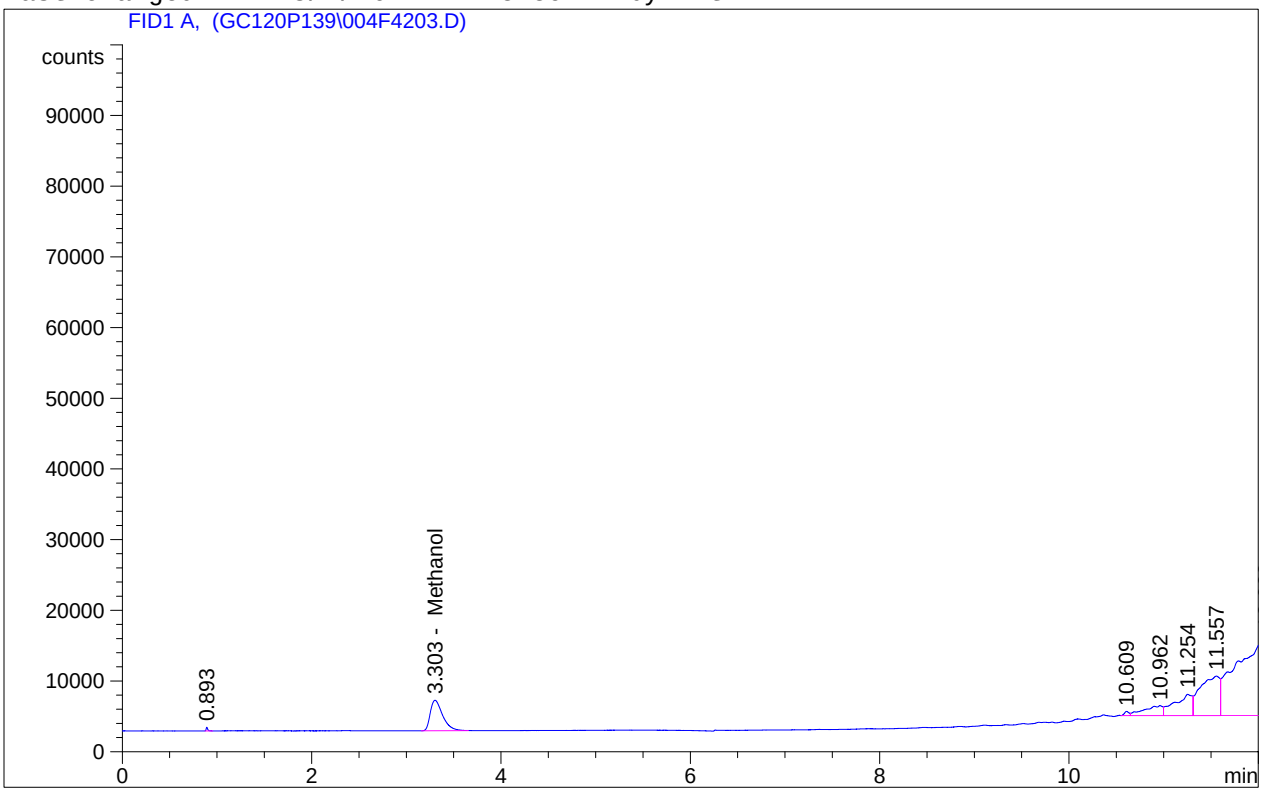
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  42
Acq. Instrument : Penn online                       Location : Vial 4
Injection Date  : 7/31/2011 5:40:52 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.305 BB     3.90263e4  1.53561e-3   59.92897    Methanol

Totals :                                59.92897



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F4203.D
Sample Name: gc120p112 #4

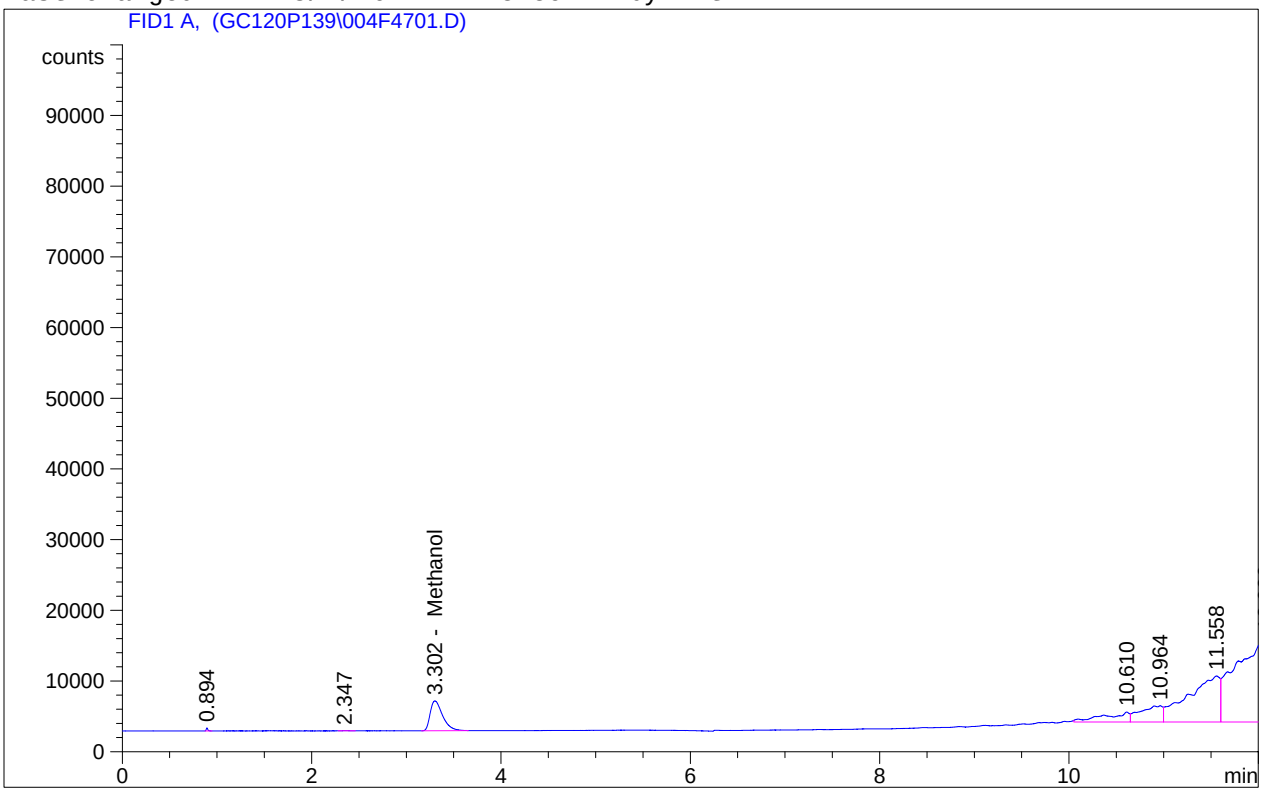
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  42
Acq. Instrument : Penn online                       Location : Vial 4
Injection Date  : 7/31/2011 6:01:56 AM                   Inj :   3
                                                  Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.303 BB     3.88715e4  1.53561e-3   59.69132    Methanol

Totals :                               59.69132



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F4701.D
Sample Name: gc120p112 #4

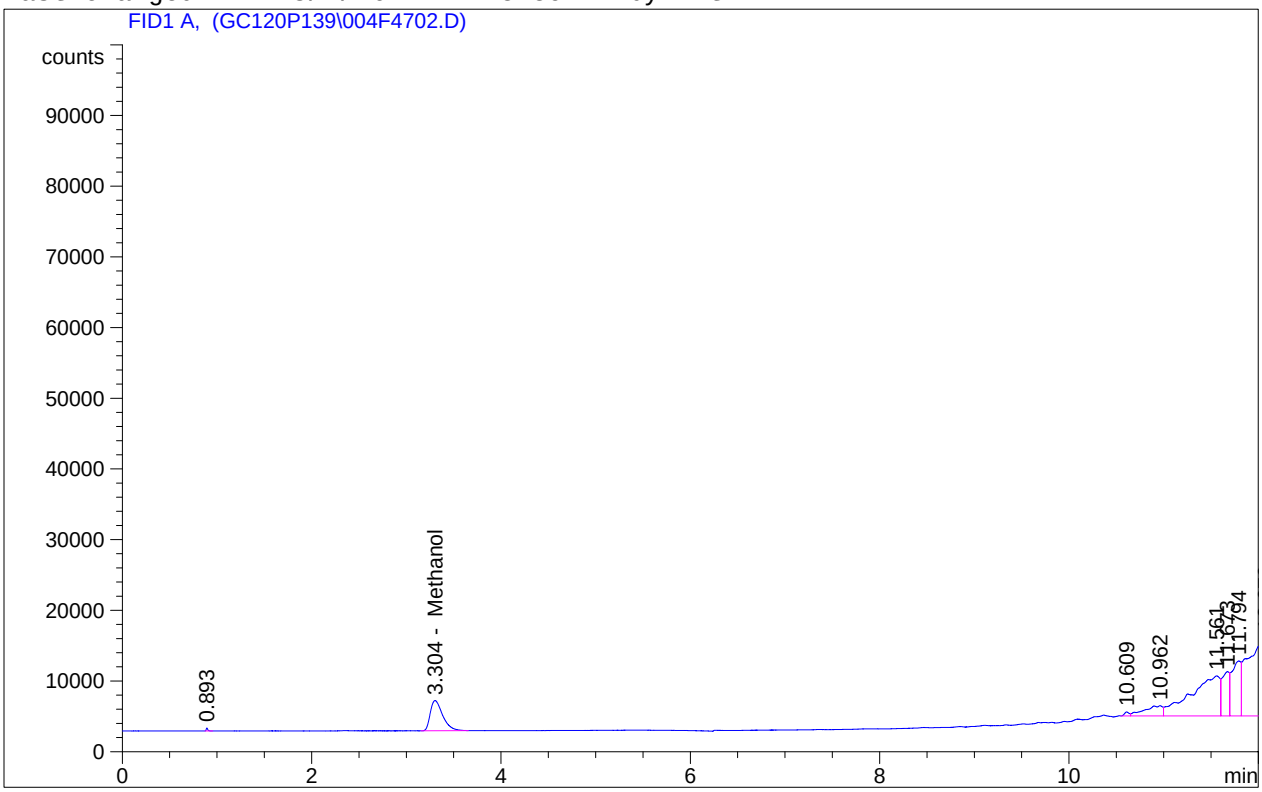
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  47
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/31/2011 9:33:18 AM               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.302 BB     3.83931e4  1.53561e-3   58.95675    Methanol

Totals :                               58.95675



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F4702.D
Sample Name: gc120p112 #4

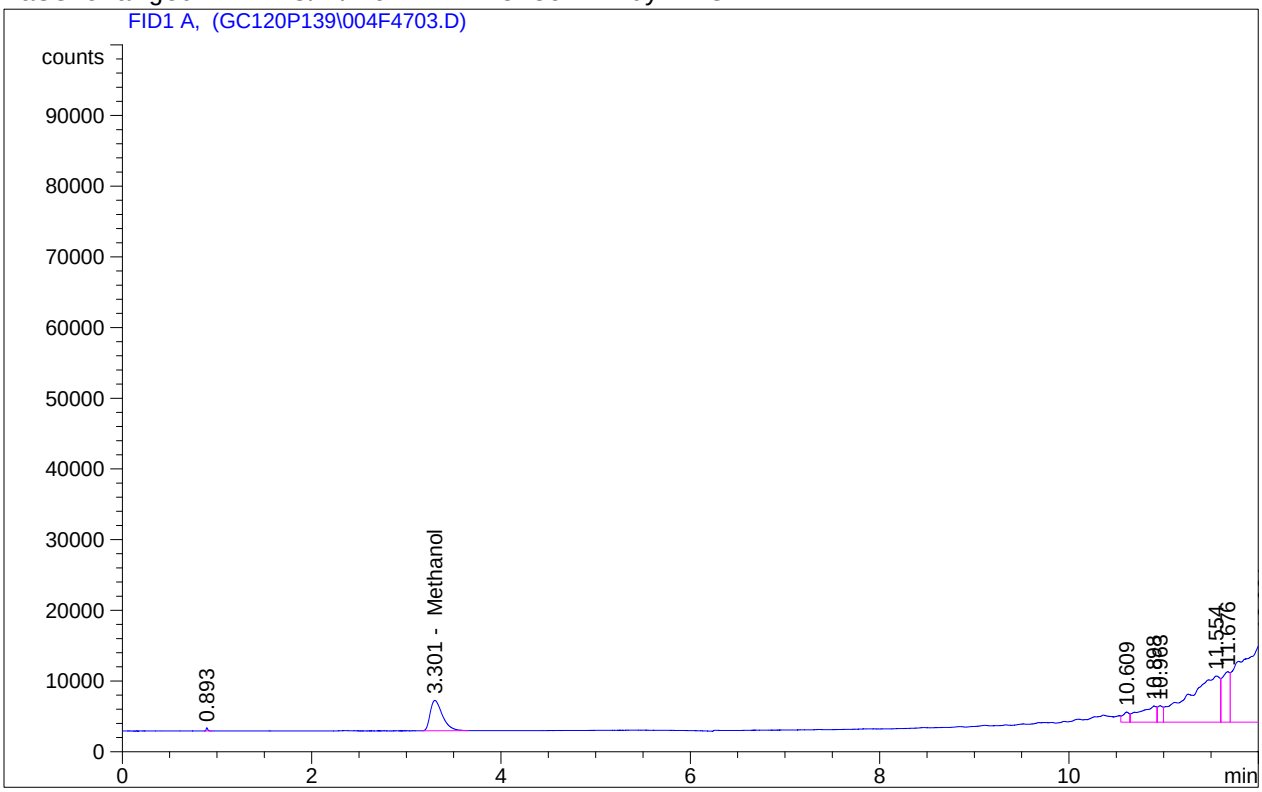
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  47
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/31/2011 9:54:27 AM               Inj :   2
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.304 BB     3.89590e4  1.53561e-3   59.82577    Methanol

Totals :                               59.82577



Signal 2: FID2 B,    not found
```

Data File G:\GC2011Q3\PENN\DATA\JUL11\GC120P139\004F4703.D
Sample Name: gc120p112 #4

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  47
Acq. Instrument : Penn online                   Location : Vial 4
Injection Date  : 7/31/2011 10:15:40 AM              Inj :   3
                                               Inj Volume : 1 µl
Sequence File   : G:\GC2011Q3\PENN\SEQUENCE\GC120P139.S
Acq. Method     : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 7/29/2011 12:24:08 PM by CLD
Analysis Method : G:\GC2011Q3\PENN\METHODS\GC120P139.M
Last changed    : 8/1/2011 11:25:59 AM by kmt
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, August 01, 2011 11:24:33 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.301 BB     3.86450e4  1.53561e-3   59.34356    Methanol

Totals :                               59.34356



Signal 2: FID2 B,    not found
```

Calibration Table

Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM

Rel. Reference Window : 5.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 5.000 %
Abs. Non-ref. Window : 0.100 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [µg/mL]	Area	Amt/Area	Ref	Grp	Name
3.947	2	11	1.58000	842.46301	1.87545e-3			Methanol
		12	3.15800	1661.76611	1.90039e-3			
		13	15.72600	7899.59896	1.99073e-3			
		14	61.97700	3.14881e4	1.96827e-3			
		15	287.30000	1.50644e5	1.90715e-3			

Peak Sum Table

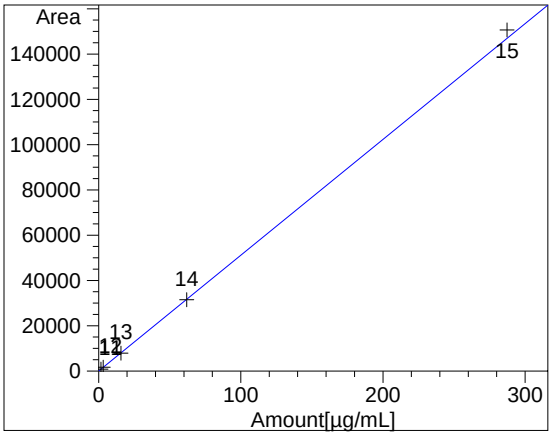
No Entries in table

EM-BTRF-001684

==========

Calibration Curves

==========

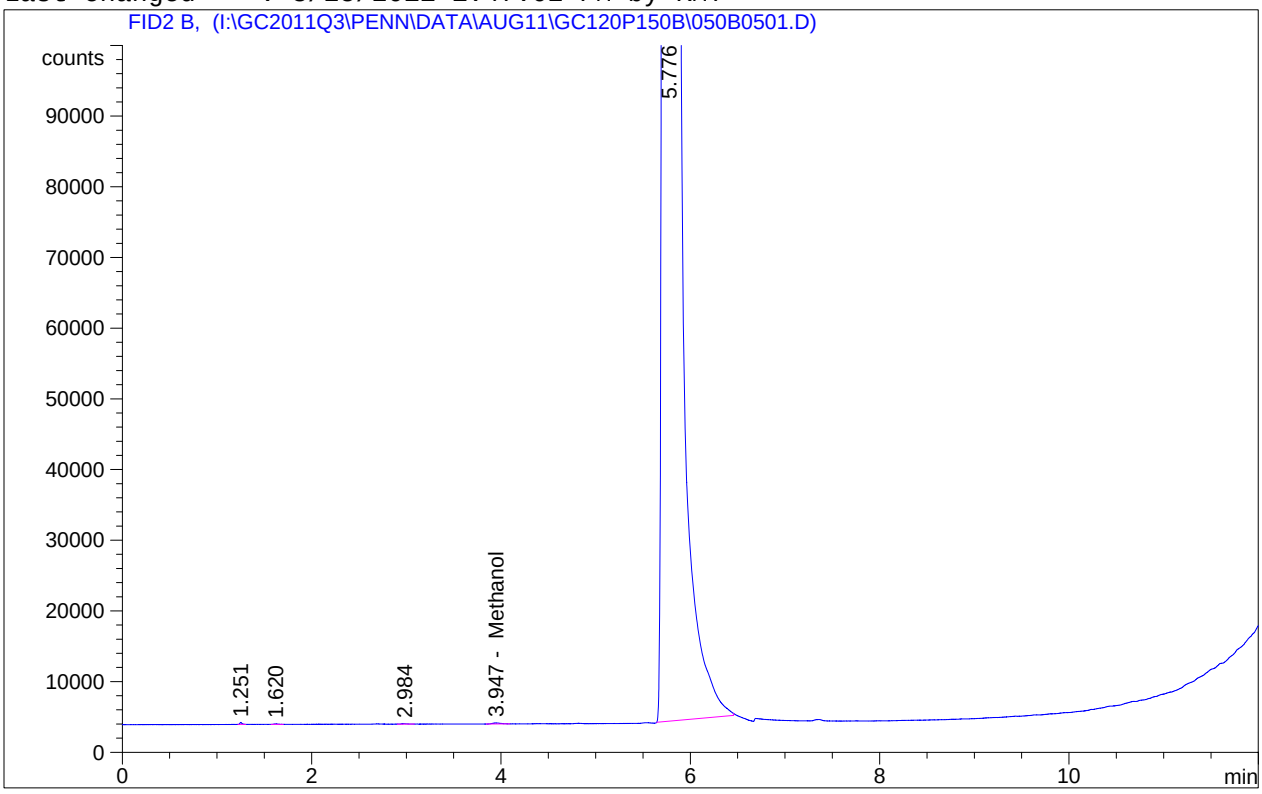


Methanol at exp. RT: 3.947
FID2 B,
Correlation: 0.99979
Residual Std. Dev.: 2103.35124
Formula: y = mx + b
m: 511.58782
b: 35.05739
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.250317
Level 13 : 0.010094
Level 14 : 0.00065
Level 15 : 0.00003

==========

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0501.D
Sample Name: gc120p146#1p

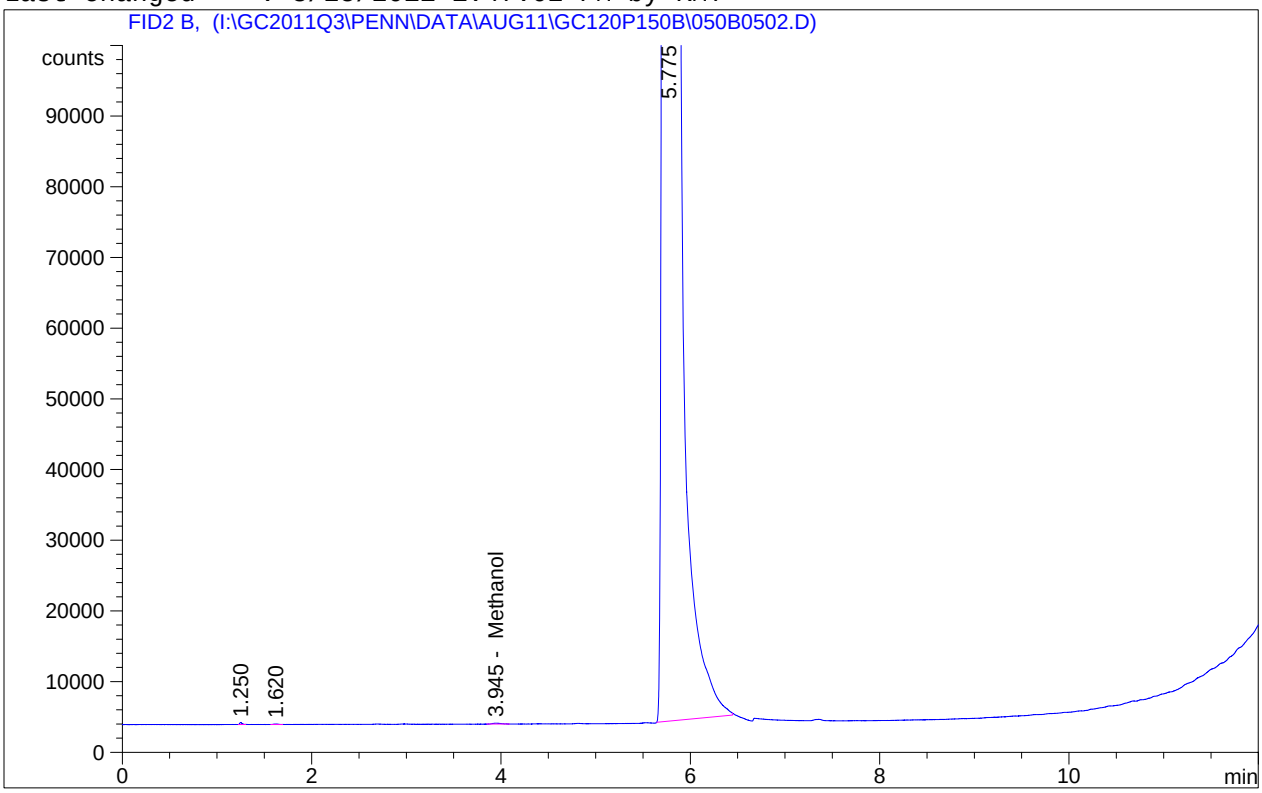
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 50
Injection Date  : 8/17/2011 1:43:13 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.947 BB      855.42853 1.87459e-3    1.60358    Methanol

Totals :                                1.60358


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0502.D
Sample Name: gc120p146#1p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 50
Injection Date  : 8/17/2011 2:05:39 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

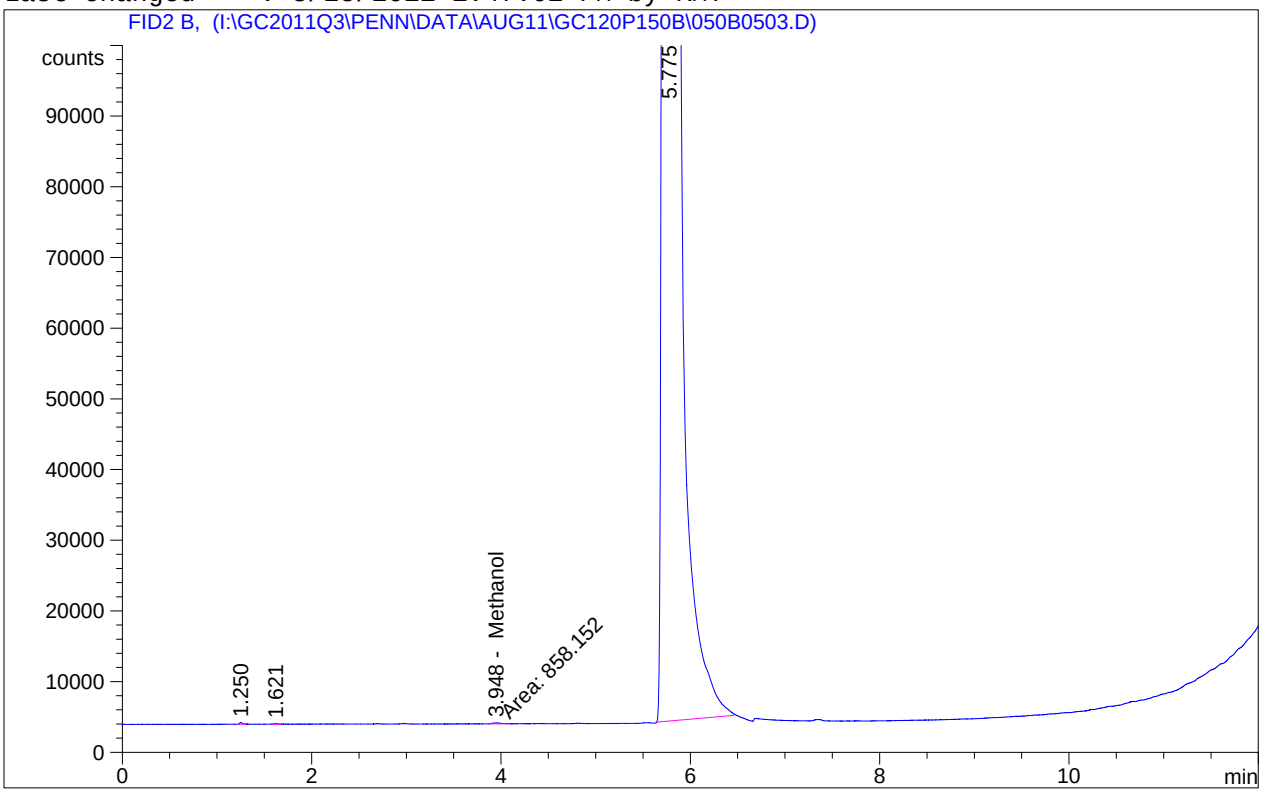



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.945 BB      813.80829 1.87344e-3    1.52462    Methanol

Totals :                                1.52462


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0503.D
Sample Name: gc120p146#1p

==========

Acq. Operator : CLD Seq. Line : 5
Acq. Instrument : Penn online Location : Vial 50
Injection Date : 8/17/2011 2:28:10 AM Inj : 3
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.948	MM	858.15222	1.87484e-3	1.60890		Methanol

Manual Int. "NI" (KAM)

Totals : 1.60890

==========

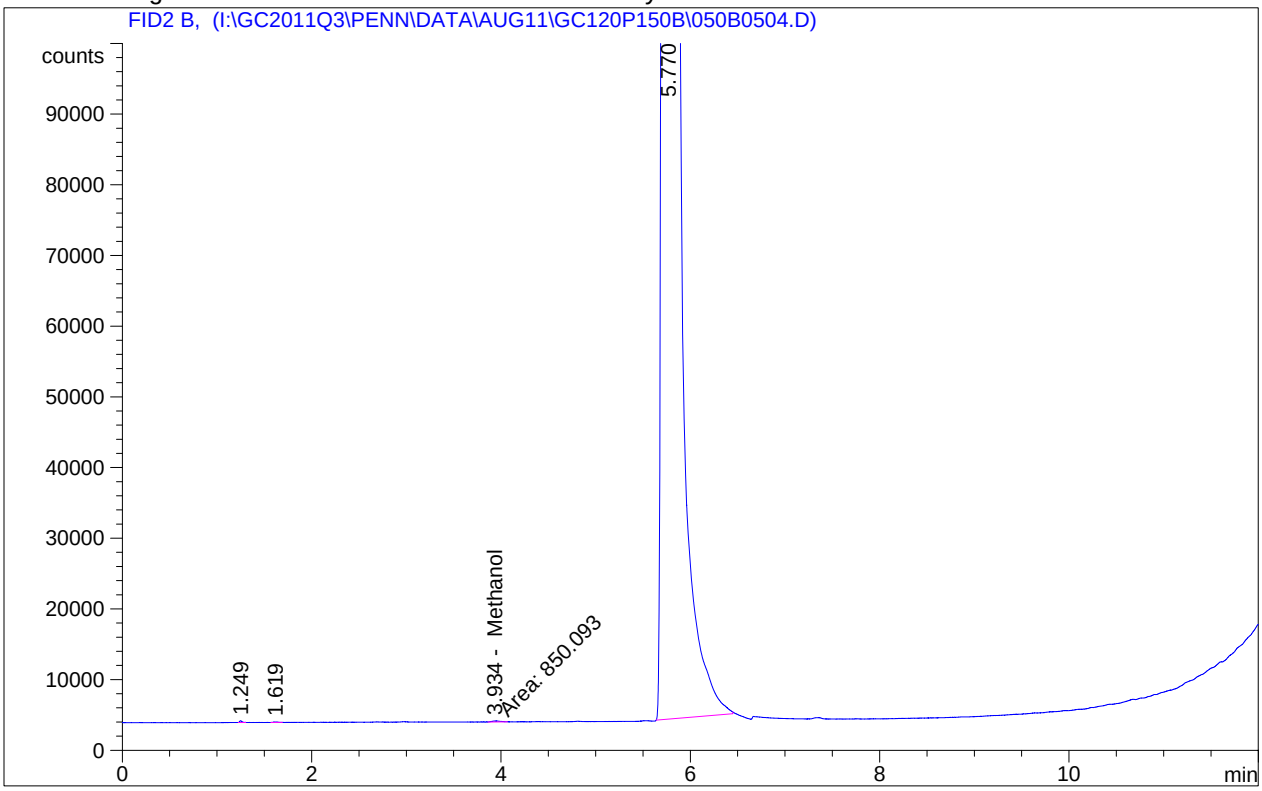
*** End of Report ***

EM-BTRF-001688

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0504.D
Sample Name: gc120p146#1p

==========

Acq. Operator : CLD Seq. Line : 5
Acq. Instrument : Penn online Location : Vial 50
Injection Date : 8/17/2011 2:50:59 AM Inj : 4
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.934	MM	850.09259	1.87409e-3	1.59315		Methanol

Manual Int. "NI" (KAM)

Totals : 1.59315

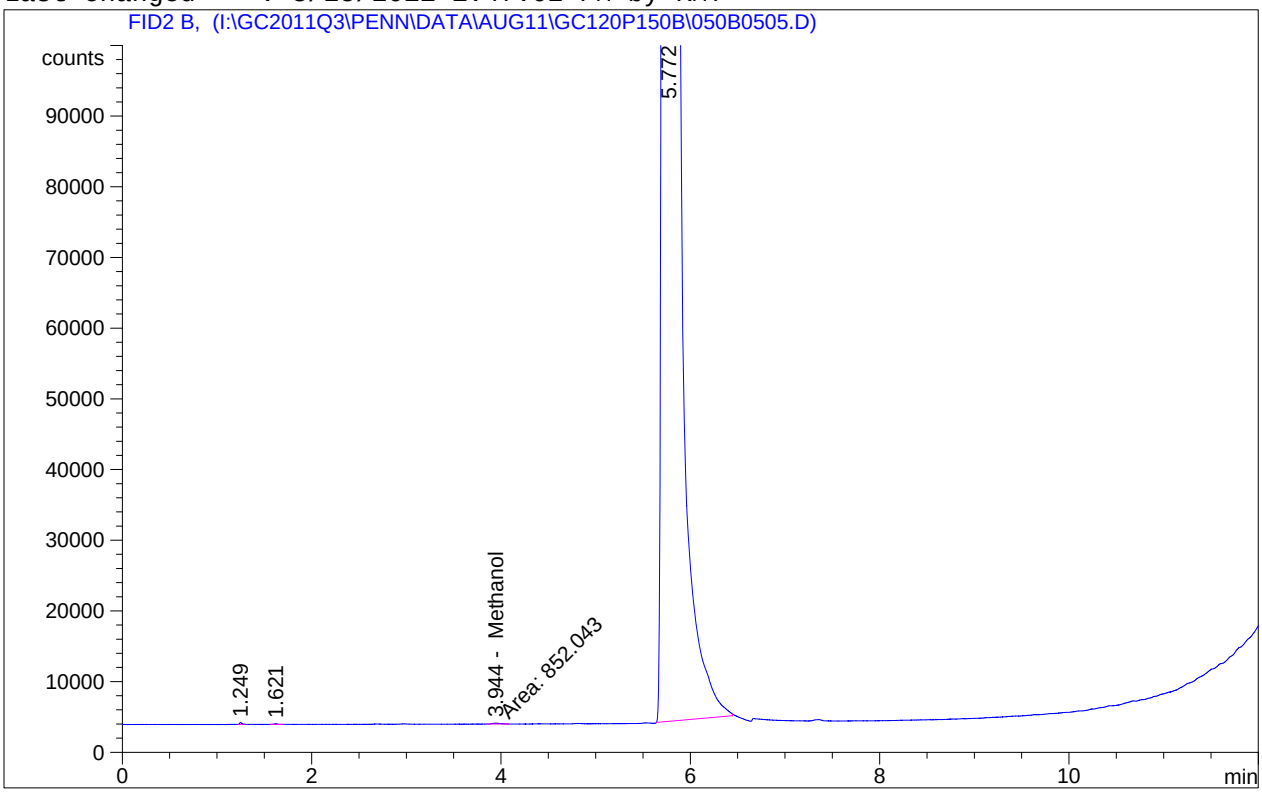
==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0505.D
Sample Name: gc120p146#1p

==========

Acq. Operator : CLD Seq. Line : 5
Acq. Instrument : Penn online Location : Vial 50
Injection Date : 8/17/2011 3:13:34 AM Inj : 5
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.944	MM	852.04266	1.87427e-3	1.59696		Methanol

Manual Int. "NI" (KAM)

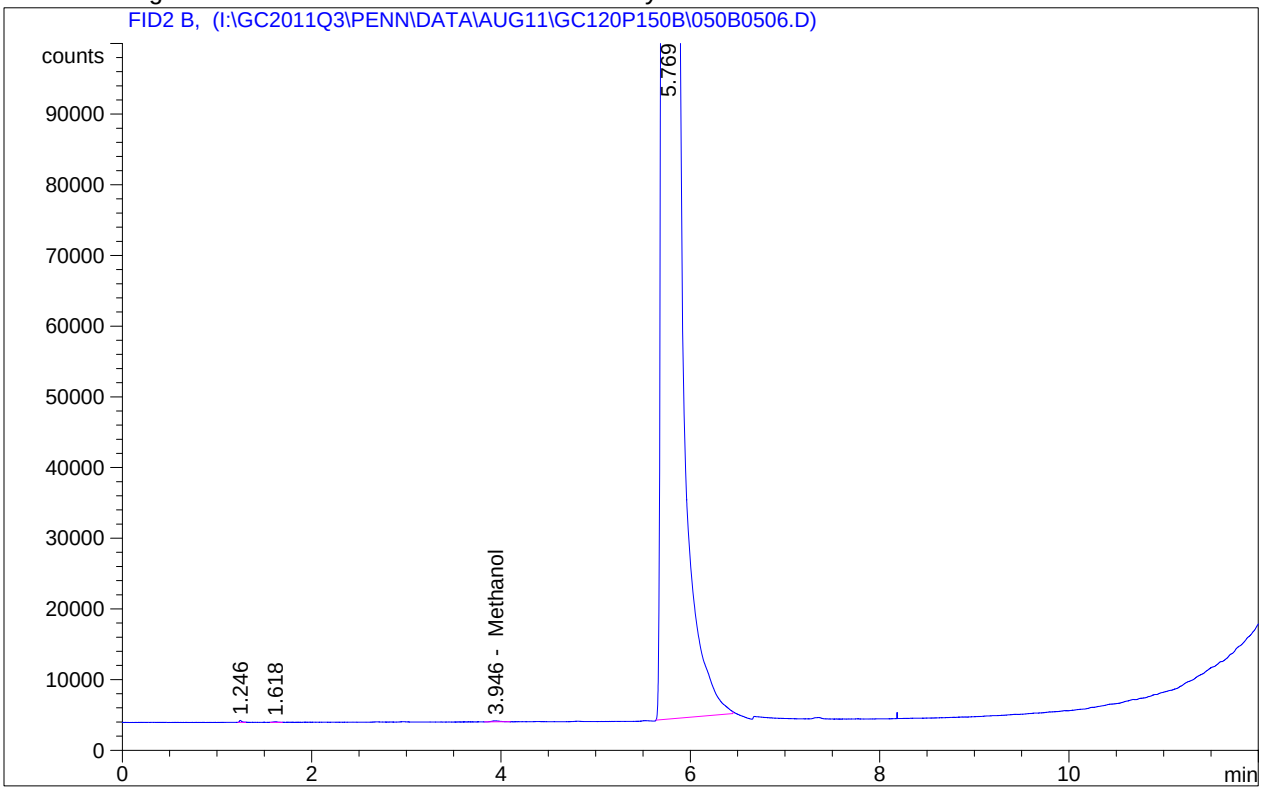
Totals : 1.59696

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0506.D
Sample Name: gc120p146#1p

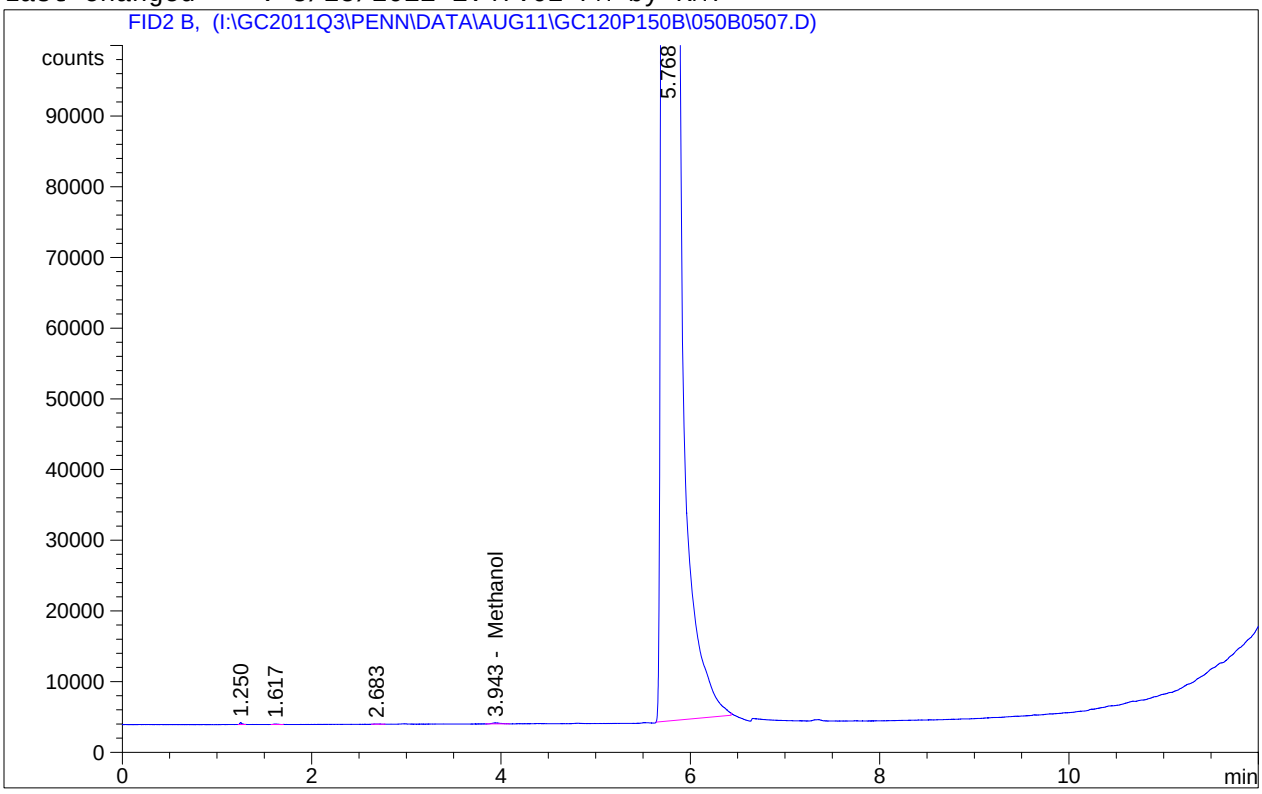
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 50
Injection Date  : 8/17/2011 3:36:09 AM                   Inj :   6
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.946 BB      867.97815 1.87575e-3    1.62811    Methanol

Totals :                                1.62811


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0507.D
Sample Name: gc120p146#1p

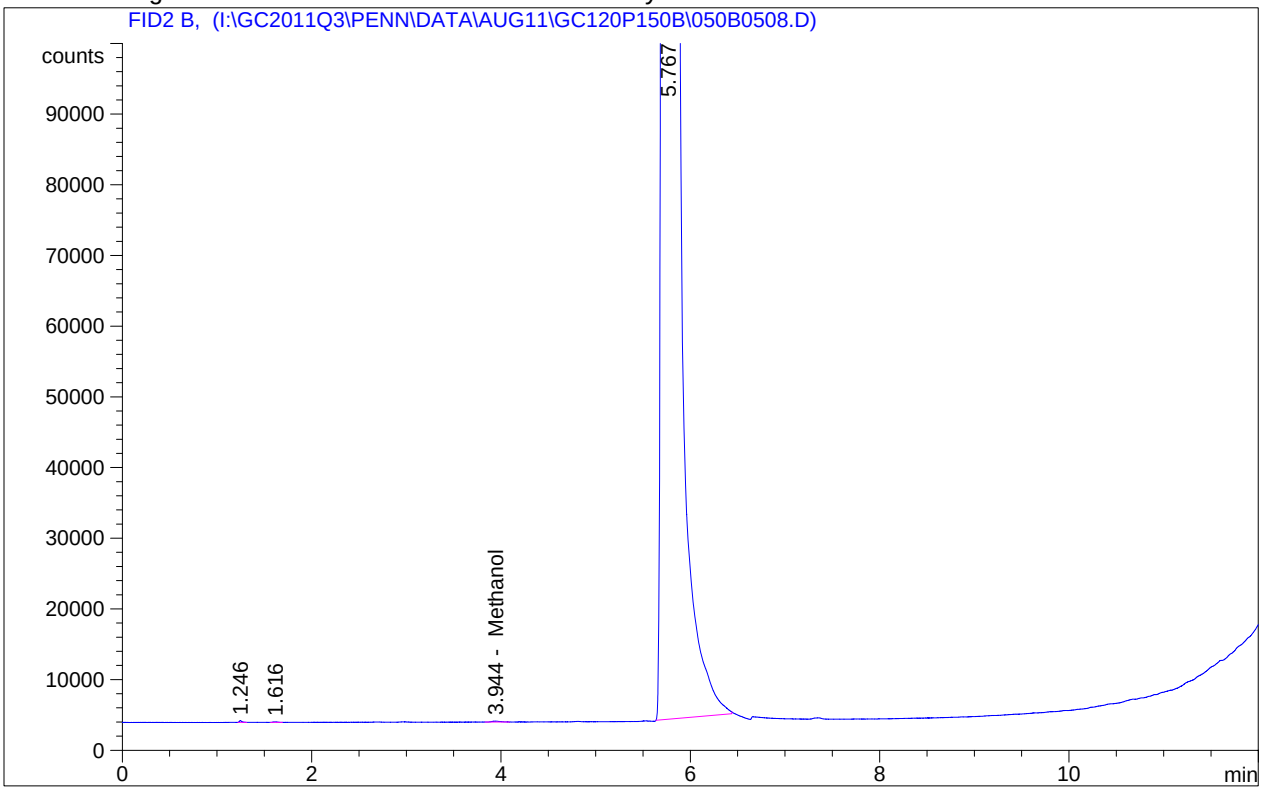
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 50
Injection Date  : 8/17/2011 3:58:48 AM                   Inj :   7
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.943 BB      855.42664 1.87459e-3    1.60357    Methanol

Totals :                                1.60357


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\050B0508.D
Sample Name: gc120p146#1p

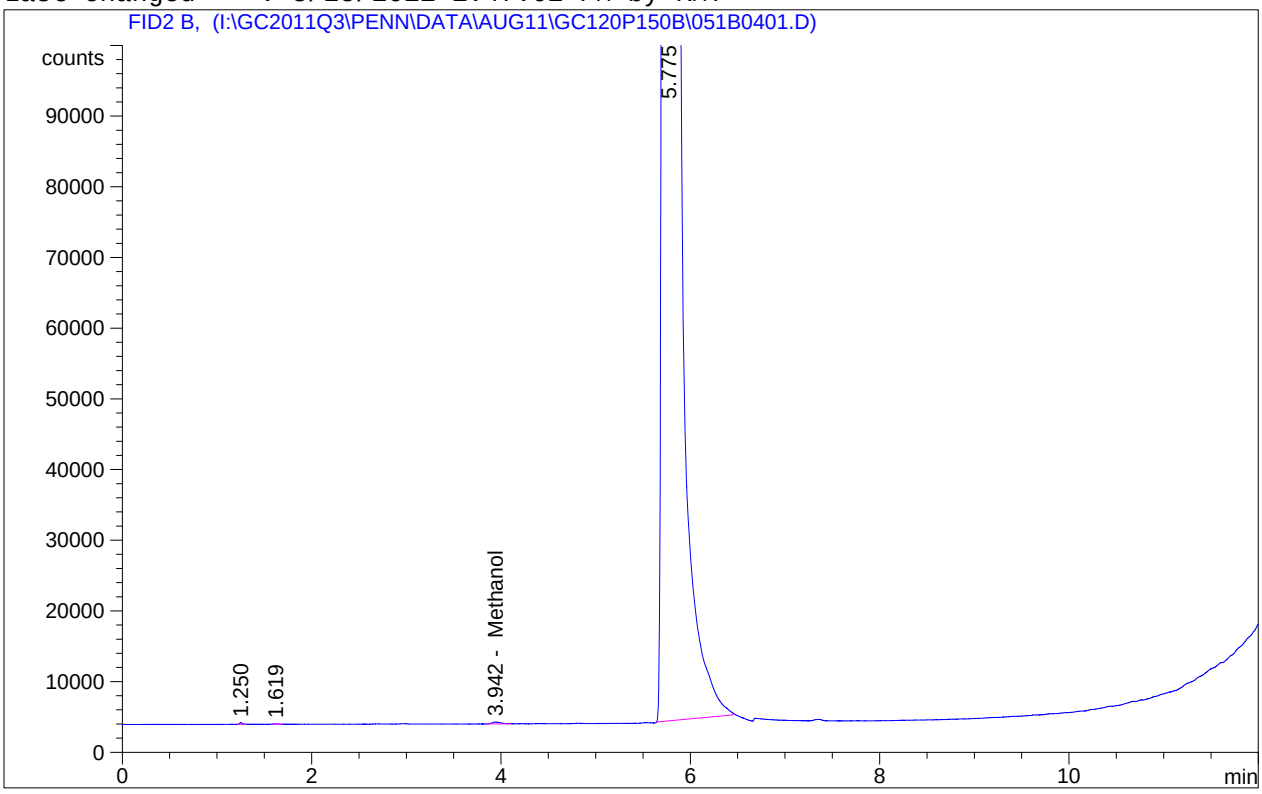
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   5
Acq. Instrument : Penn online                       Location : Vial 50
Injection Date  : 8/17/2011 4:21:19 AM                   Inj :   8
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.944 BB      841.81573 1.87344e-3    1.57710    Methanol

Totals :                                1.57710


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\051B0401.D
Sample Name: gc120p146#2p

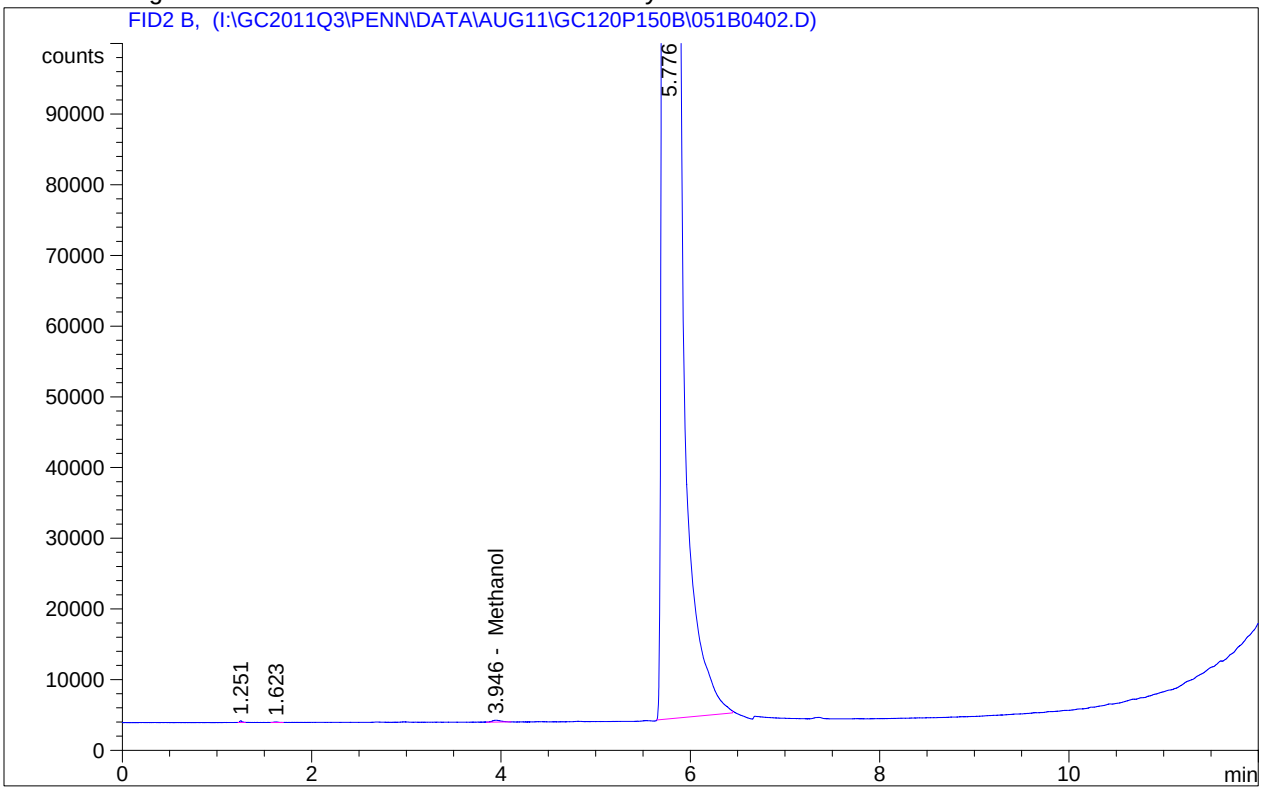
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   4
Acq. Instrument : Penn online                   Location : Vial 51
Injection Date  : 8/17/2011 12:35:24 AM              Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.942 BB     1675.27100 1.91379e-3    3.20612    Methanol

Totals :                                3.20612


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\051B0402.D
Sample Name: gc120p146#2p

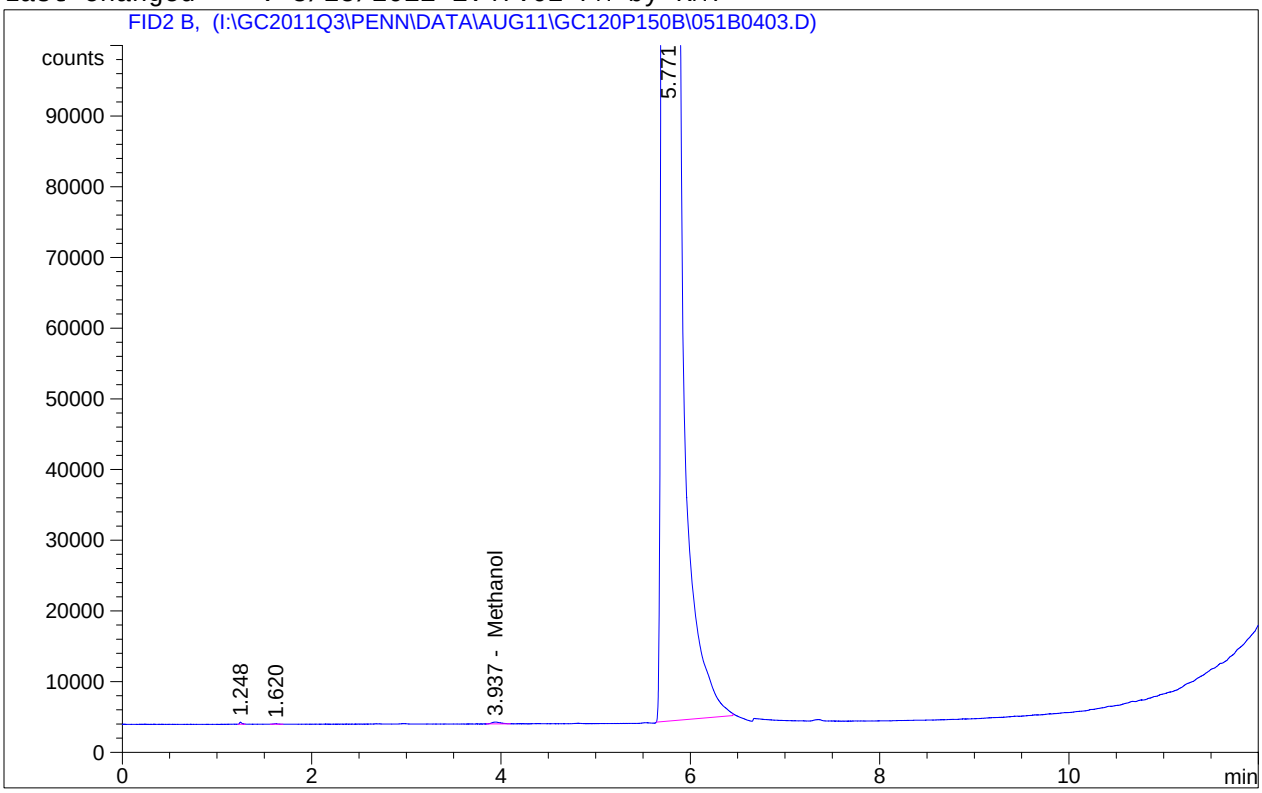
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   4
Acq. Instrument : Penn online                   Location : Vial 51
Injection Date  : 8/17/2011 12:57:55 AM              Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.946 BB     1640.91809 1.91294e-3    3.13897    Methanol

Totals :                                3.13897


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\051B0403.D
Sample Name: gc120p146#2p

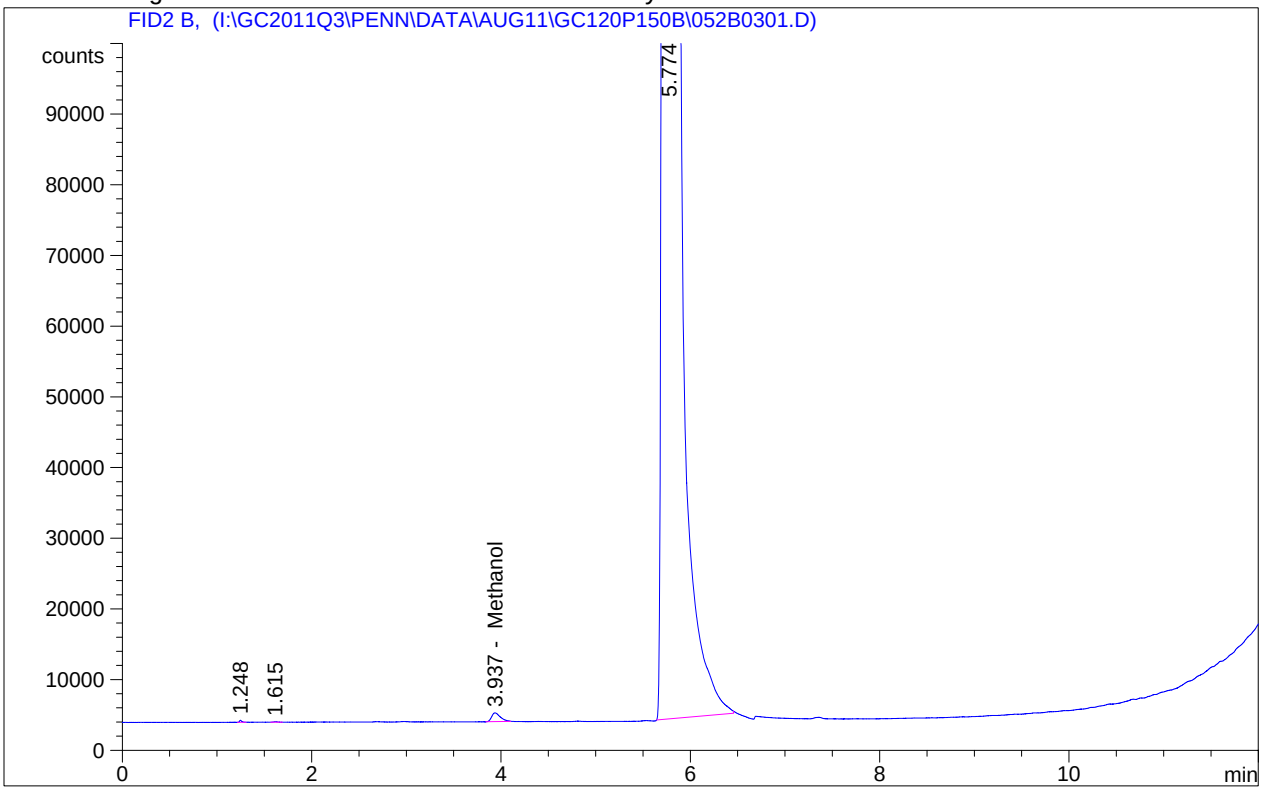
```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   4
Acq. Instrument : Penn online                       Location : Vial 51
Injection Date  : 8/17/2011 1:20:29 AM                   Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.937 BB     1669.10925 1.91364e-3    3.19408    Methanol

Totals :                                3.19408


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B0301.D
Sample Name: gc120p146#3p

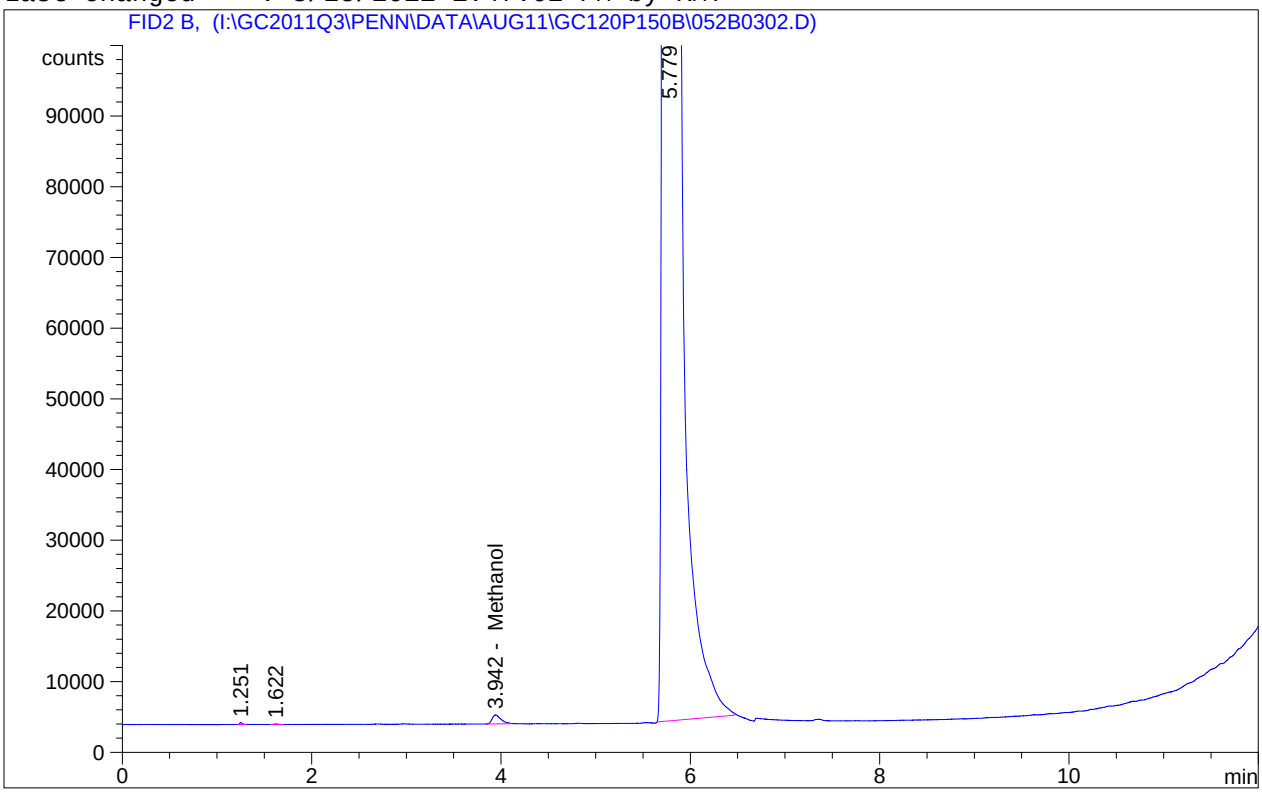
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   3
Acq. Instrument : Penn online                   Location : Vial 52
Injection Date  : 8/16/2011 11:27:29 PM              Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.937 BB     7977.49072 1.94611e-3   15.52506    Methanol

Totals :                                15.52506


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B0302.D
Sample Name: gc120p146#3p

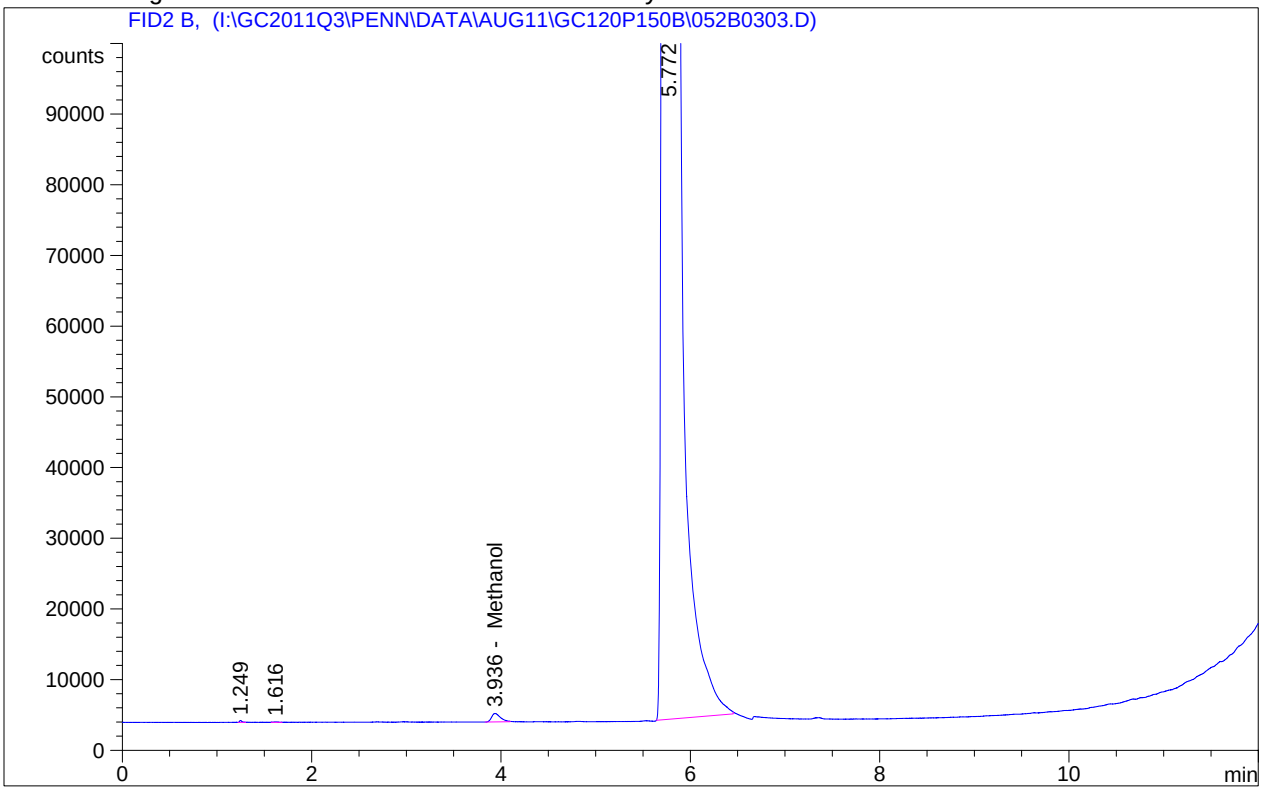
```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   3
Acq. Instrument : Penn online                   Location : Vial 52
Injection Date  : 8/16/2011 11:50:04 PM              Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.942 BB     8037.14502 1.94617e-3   15.64167    Methanol

Totals :                                15.64167


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B0303.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   3
Acq. Instrument : Penn online                       Location : Vial 52
Injection Date  : 8/17/2011 12:12:40 AM                  Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

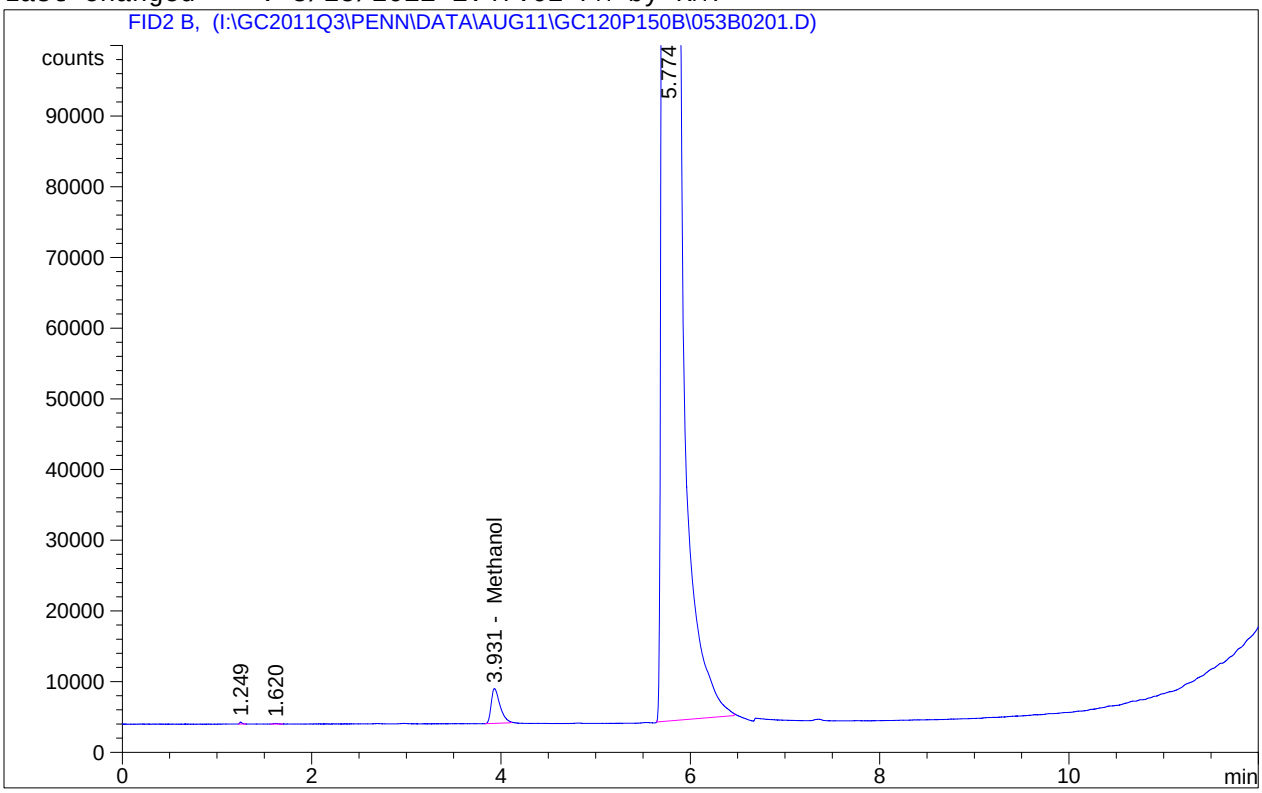



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.936 BB     7684.16113 1.94578e-3   14.95169    Methanol

Totals :                                14.95169


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B0201.D
Sample Name: gc120p146#4p

==========

Acq. Operator : CLD Seq. Line : 2
Acq. Instrument : Penn online Location : Vial 53
Injection Date : 8/16/2011 10:19:28 PM Inj : 1
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



==========

External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.931	BB	3.16619e4	1.95253e-3	61.82098		Methanol

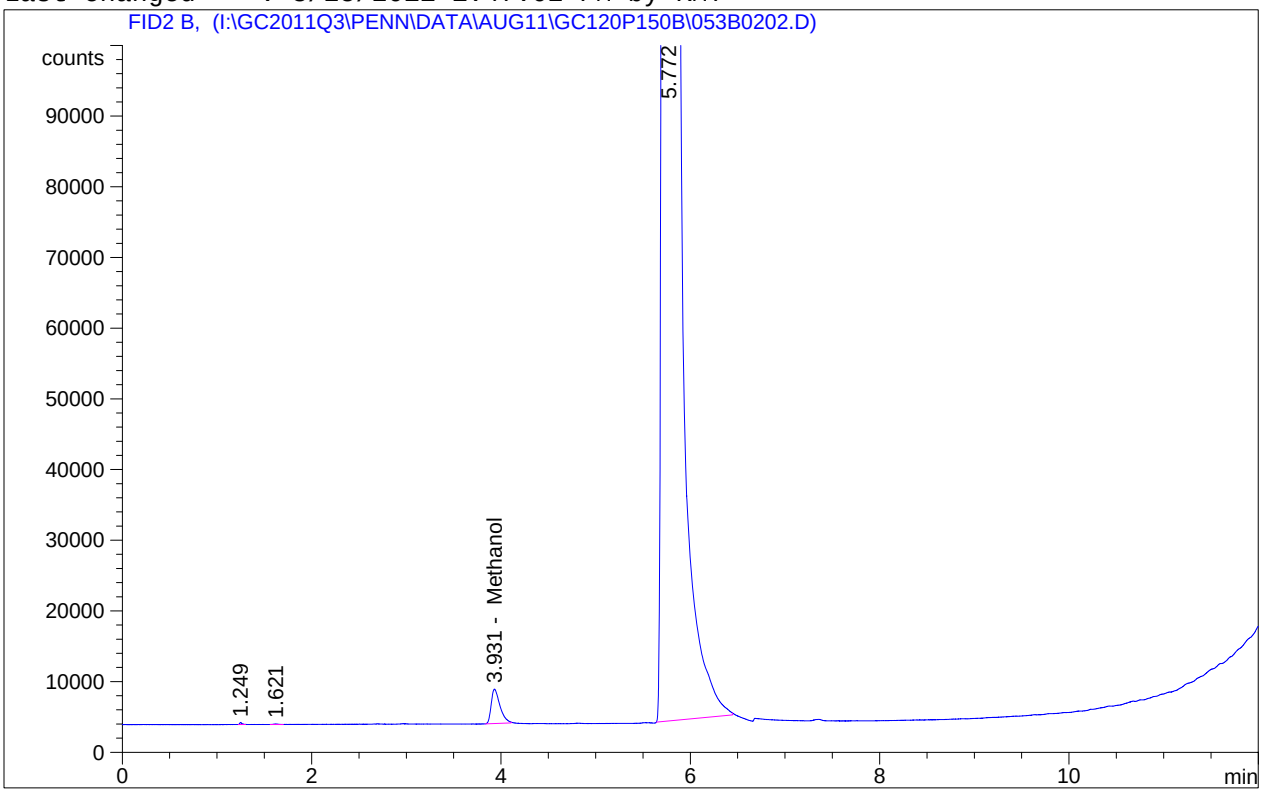
Totals : 61.82098

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B0202.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   2
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/16/2011 10:42:06 PM                  Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

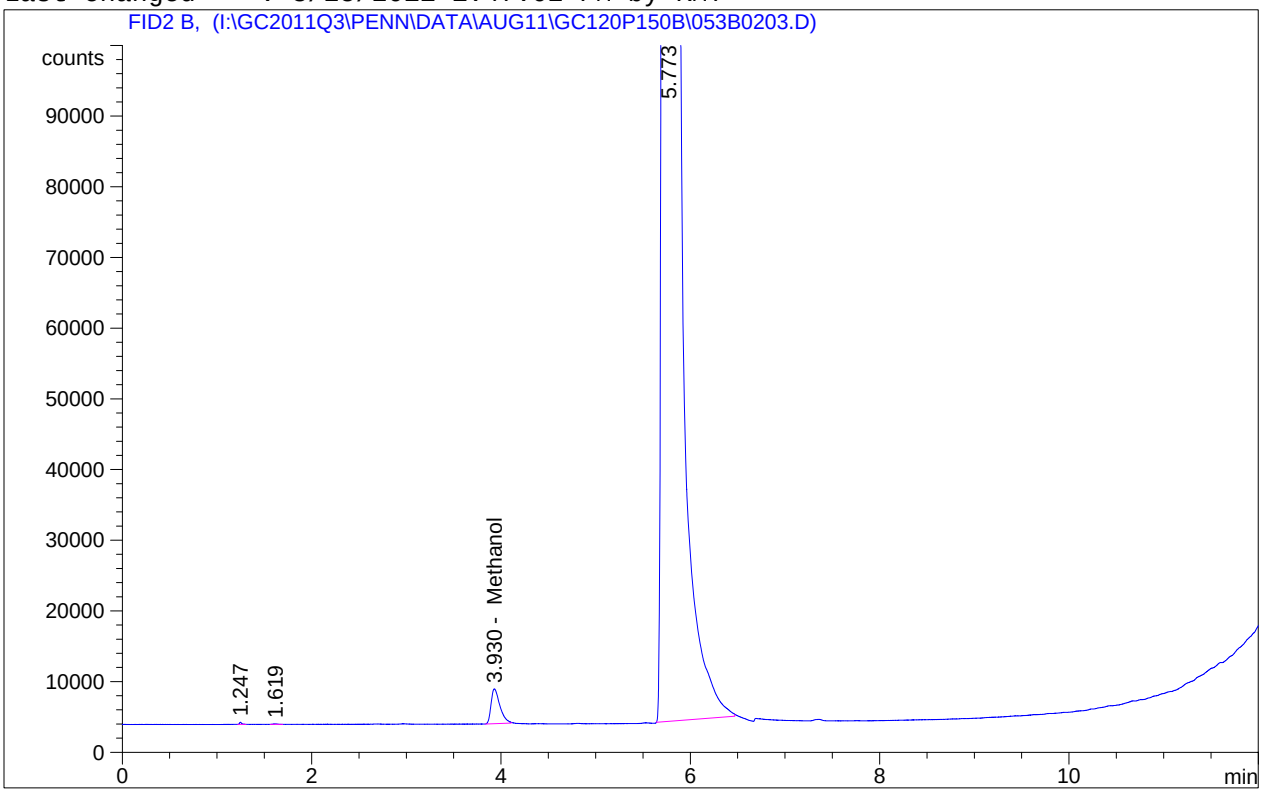



```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.931 BB     3.10041e4  1.95249e-3   60.53520    Methanol

Totals :                                60.53520


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B0203.D
Sample Name: gc120p146#4p

==========

Acq. Operator : CLD Seq. Line : 2
Acq. Instrument : Penn online Location : Vial 53
Injection Date : 8/16/2011 11:04:45 PM Inj : 3
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.930	BB	3.17983e4	1.95254e-3	62.08760		Methanol

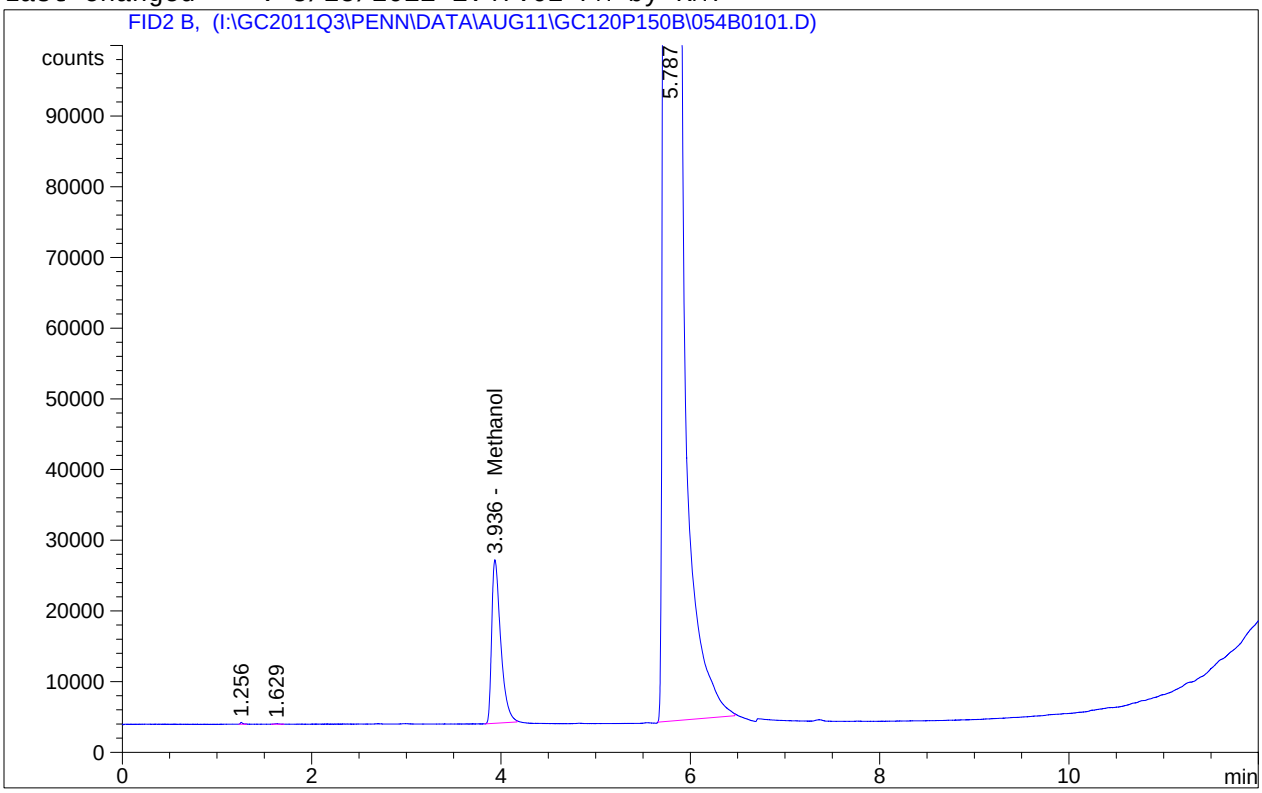
Totals : 62.08760

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\054B0101.D
Sample Name: gc120p146#5p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   1
Acq. Instrument : Penn online                       Location : Vial 54
Injection Date  : 8/16/2011 9:11:26 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.936 BB     1.53158e5  1.95425e-3  299.30890    Methanol

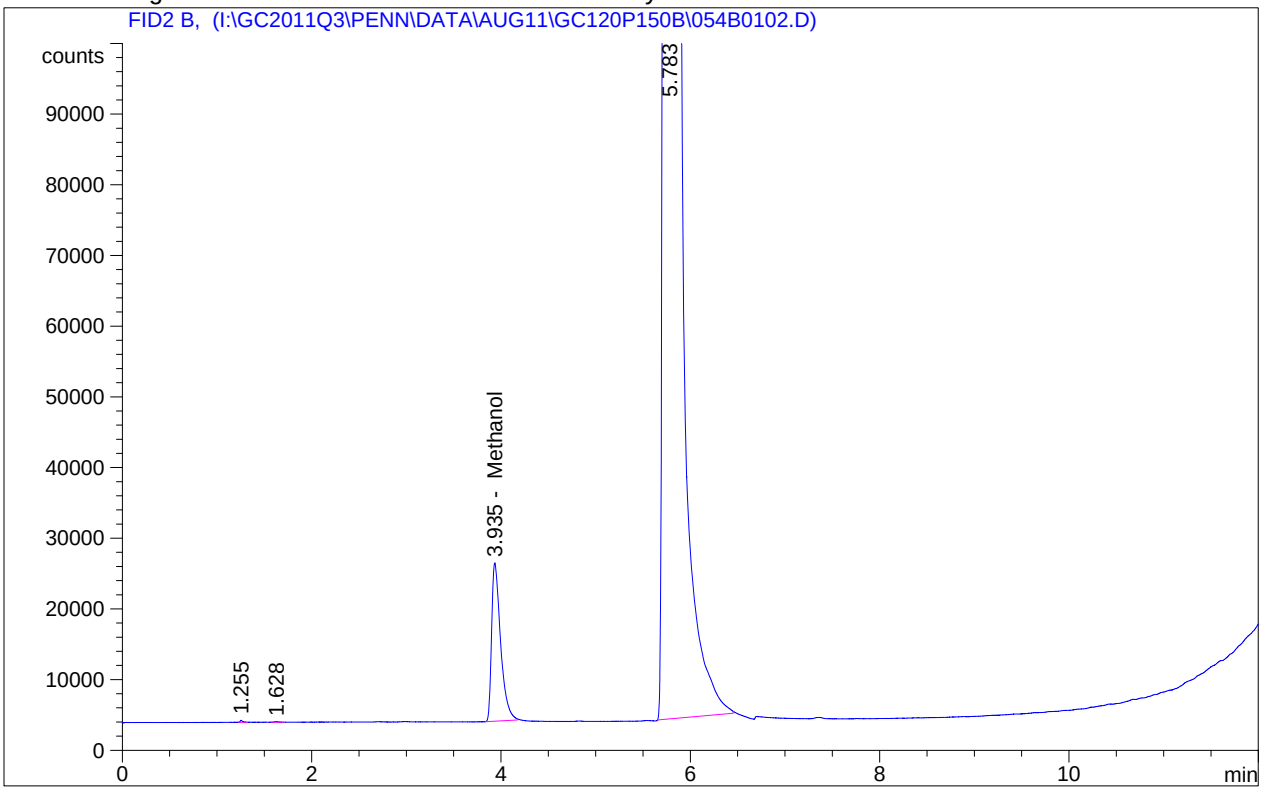
Totals :                               299.30890


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\054B0102.D
Sample Name: gc120p146#5p

==========

Acq. Operator : CLD Seq. Line : 1
Acq. Instrument : Penn online Location : Vial 54
Injection Date : 8/16/2011 9:34:12 PM Inj : 2
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.935	BB	1.47868e5	1.95424e-3	288.96869		Methanol

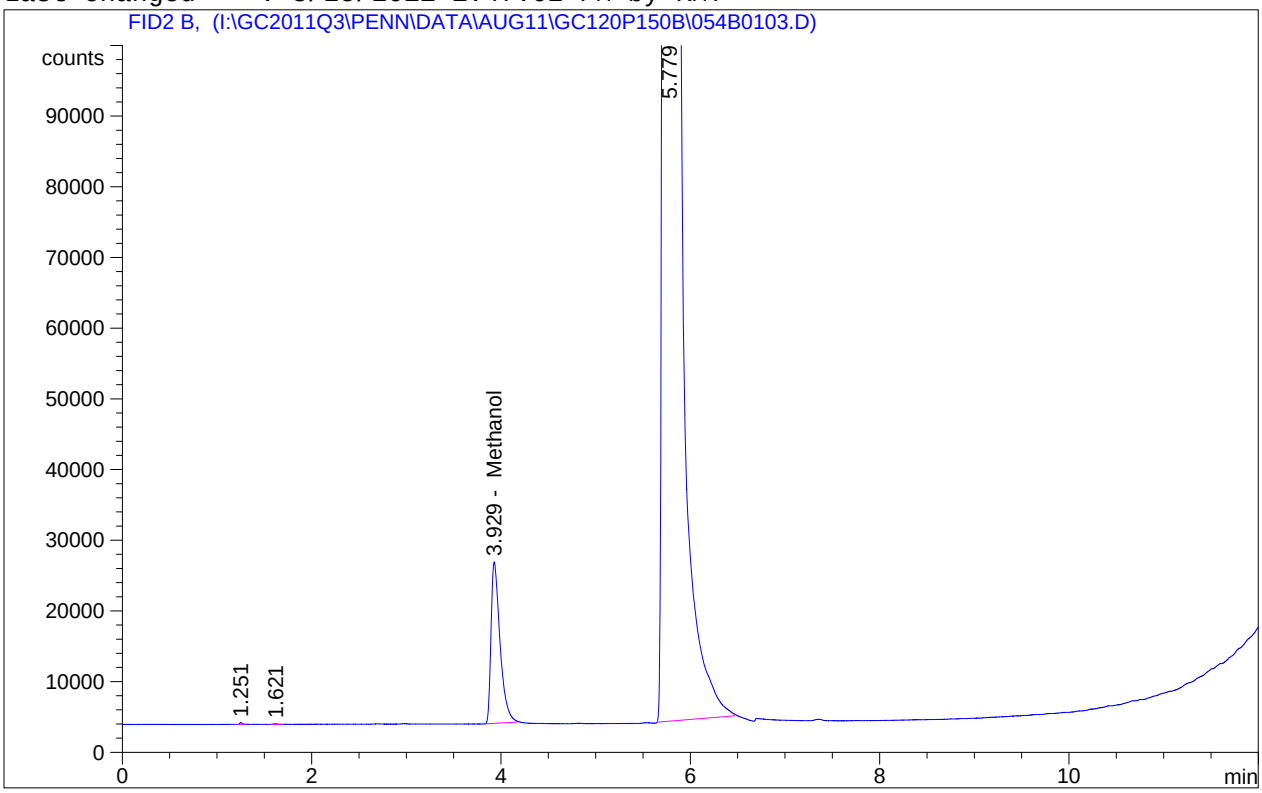
Totals : 288.96869

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\054B0103.D
Sample Name: gc120p146#5p

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :   1
Acq. Instrument : Penn online                   Location : Vial 54
Injection Date  : 8/16/2011 9:56:48 PM               Inj :   3
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.929 BB     1.50905e5  1.95424e-3  294.90618    Methanol

Totals :                               294.90618


==========================================================================
                          *** End of Report ***
```
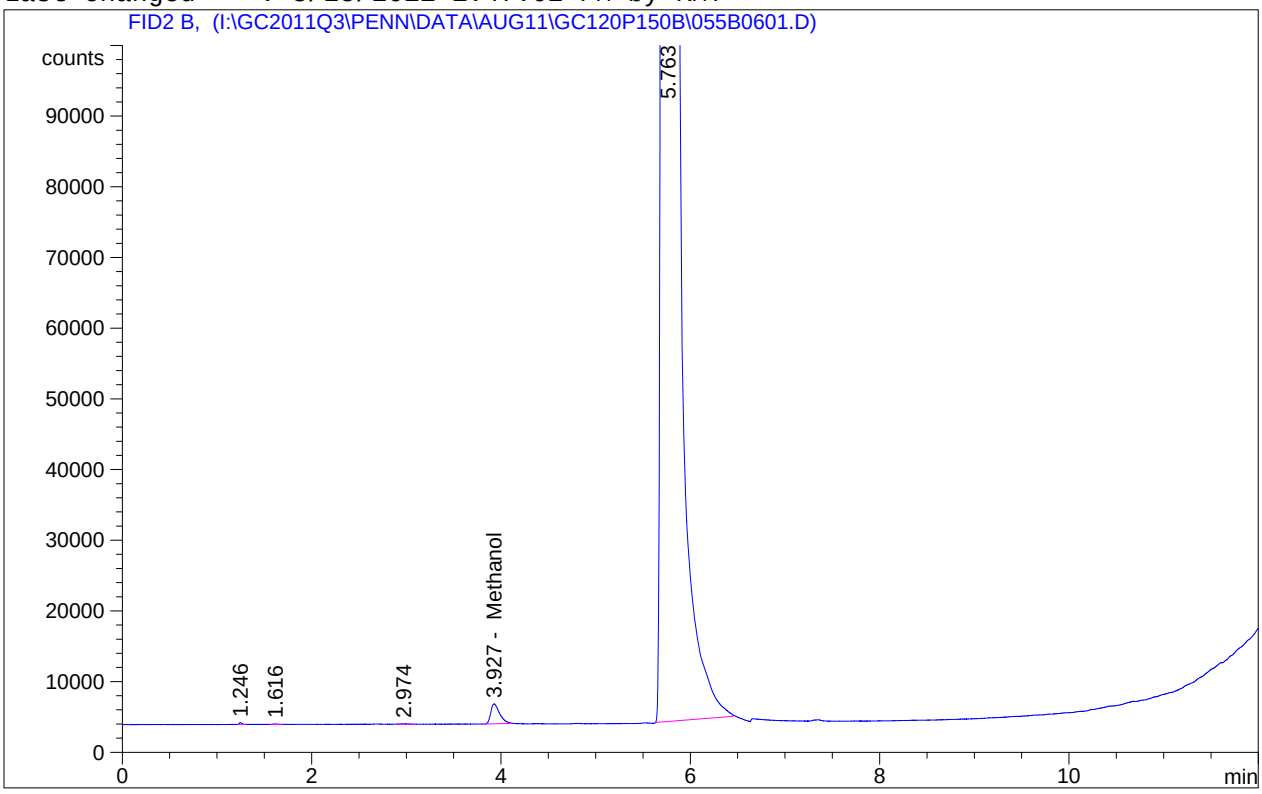

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\055B0601.D
Sample Name: gc120p146#3ssp

==========

Acq. Operator : CLD Seq. Line : 6
Acq. Instrument : Penn online Location : Vial 55
Injection Date : 8/17/2011 4:43:58 AM Inj : 1
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.927	BB	1.82255e4	1.95094e-3	35.55687		Methanol

Tag:
39.353 ug/mL

Totals : 35.55687

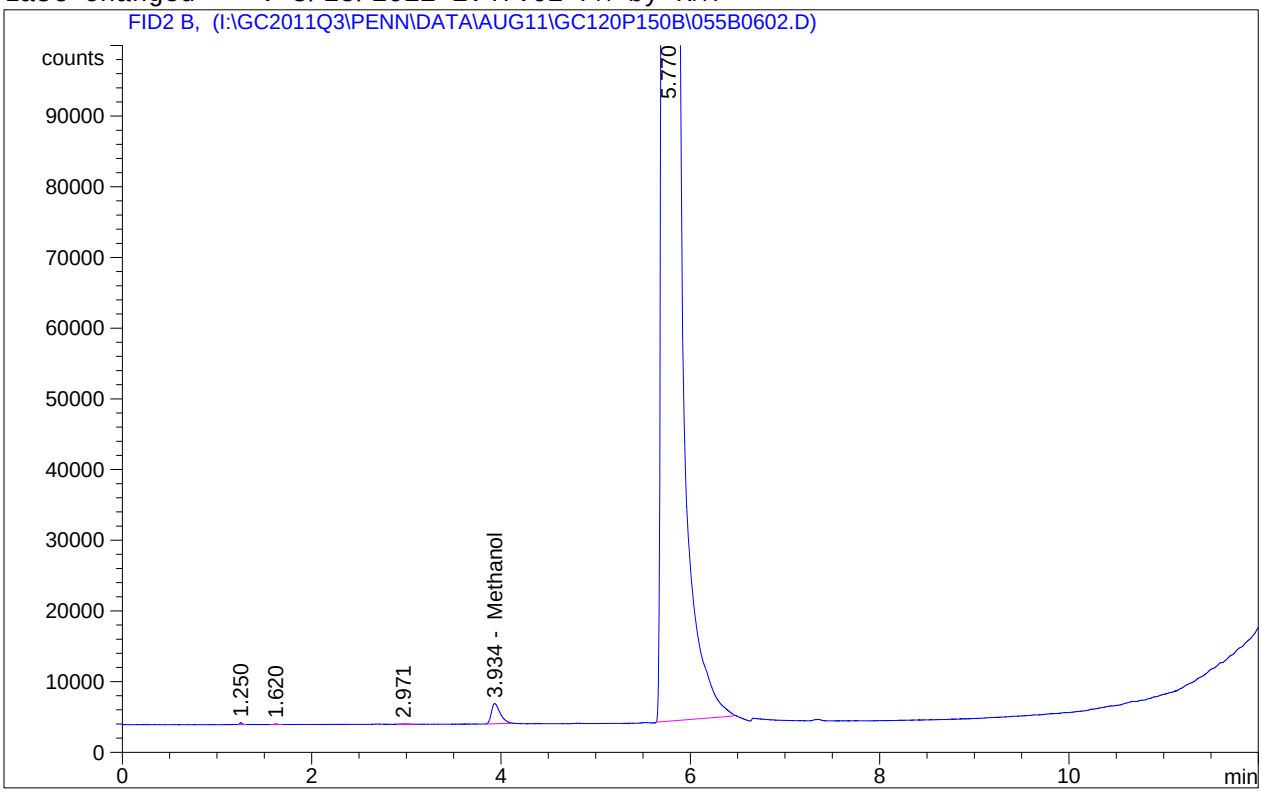
==========

*** End of Report ***

EM-BTRF-001706

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\055B0602.D
Sample Name: gc120p146#3ssp

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :   6
Acq. Instrument : Penn online                       Location : Vial 55
Injection Date  : 8/17/2011 5:06:33 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|------------------
  3.934 BB     1.84900e4  1.95099e-3   36.07385    Methanol

Totals :                                36.07385

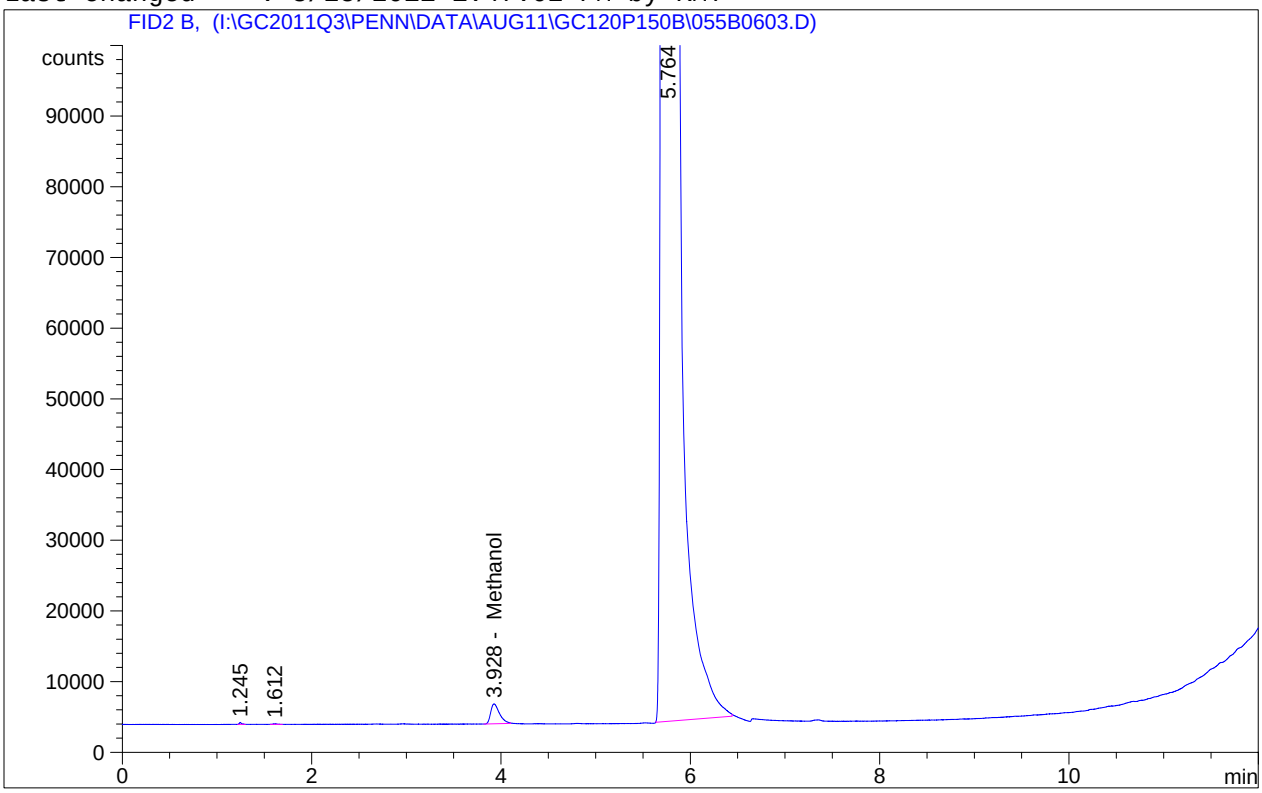
==========================================================================
                          *** End of Report ***
```

Tag:
39.353 ug/mL

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\055B0603.D
Sample Name: gc120p146#3ssp

==========

Acq. Operator : CLD Seq. Line : 6
Acq. Instrument : Penn online Location : Vial 55
Injection Date : 8/17/2011 5:29:12 AM Inj : 3
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/16/2011 5:19:55 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.928	BB	1.82830e4	1.95095e-3	35.66932		Methanol

Totals : 35.66932

Tag:
39.353 ug/mL

==========

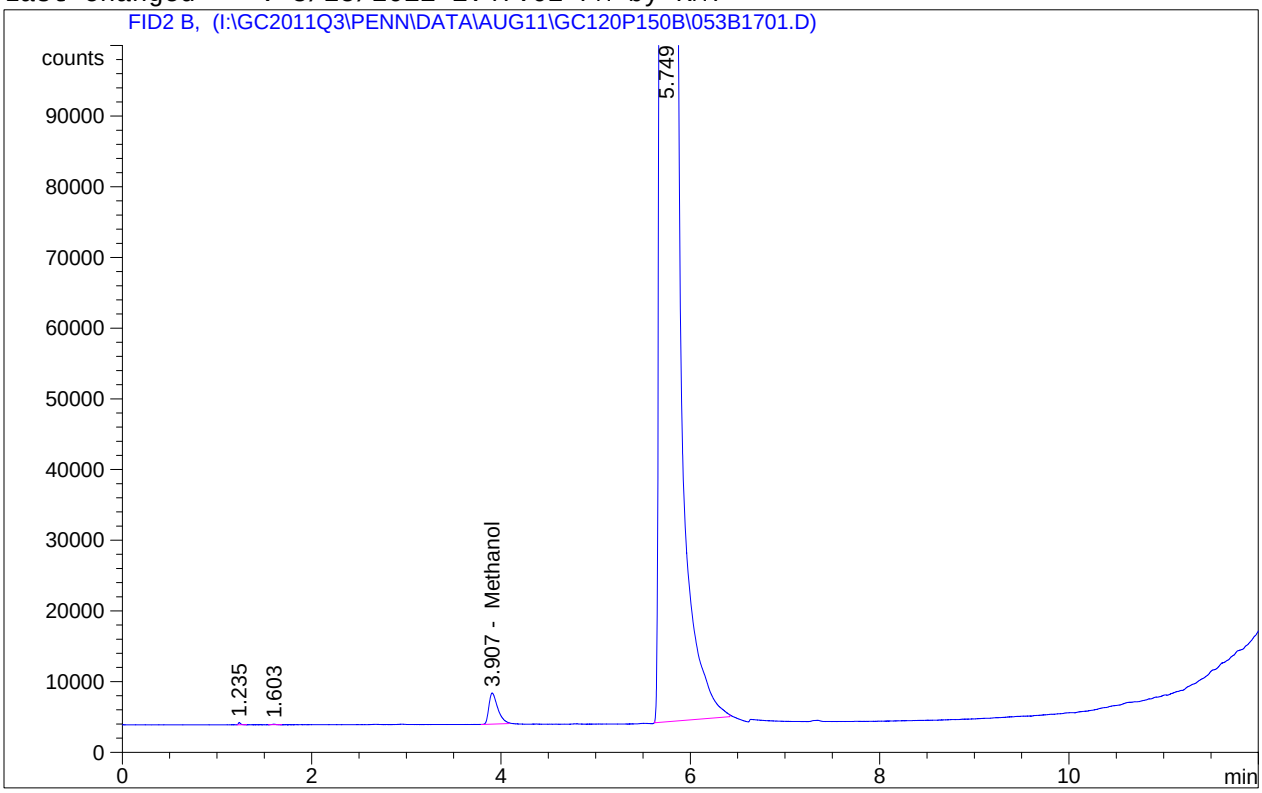
*** End of Report ***

EM-BTRF-001708

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B1701.D
Sample Name: gc120p146#4p

==========

Acq. Operator : CLD Seq. Line : 17
Acq. Instrument : Penn online Location : Vial 53
Injection Date : 8/17/2011 7:26:09 PM Inj : 1
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.907	BB	2.83827e4	1.95228e-3	55.41102		Methanol

Totals : 55.41102

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B1702.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  17
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/17/2011 7:48:53 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
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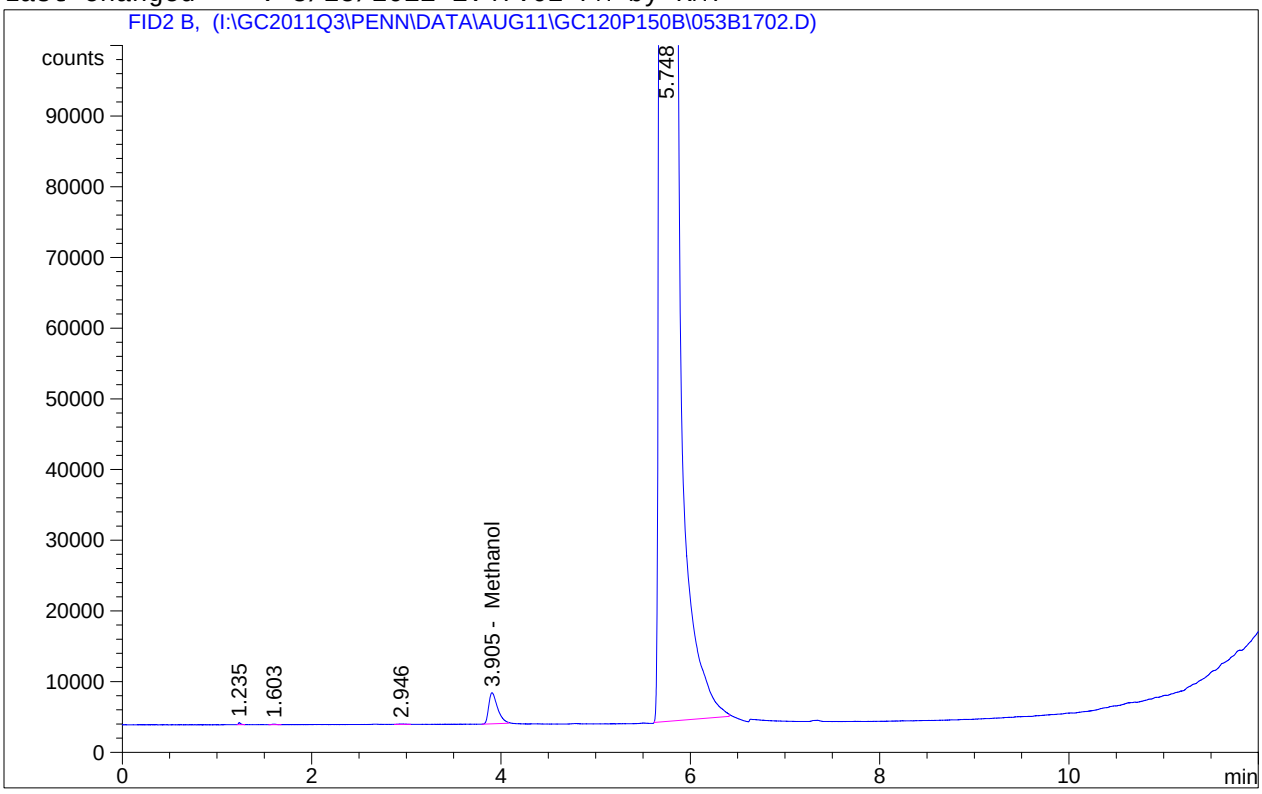


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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

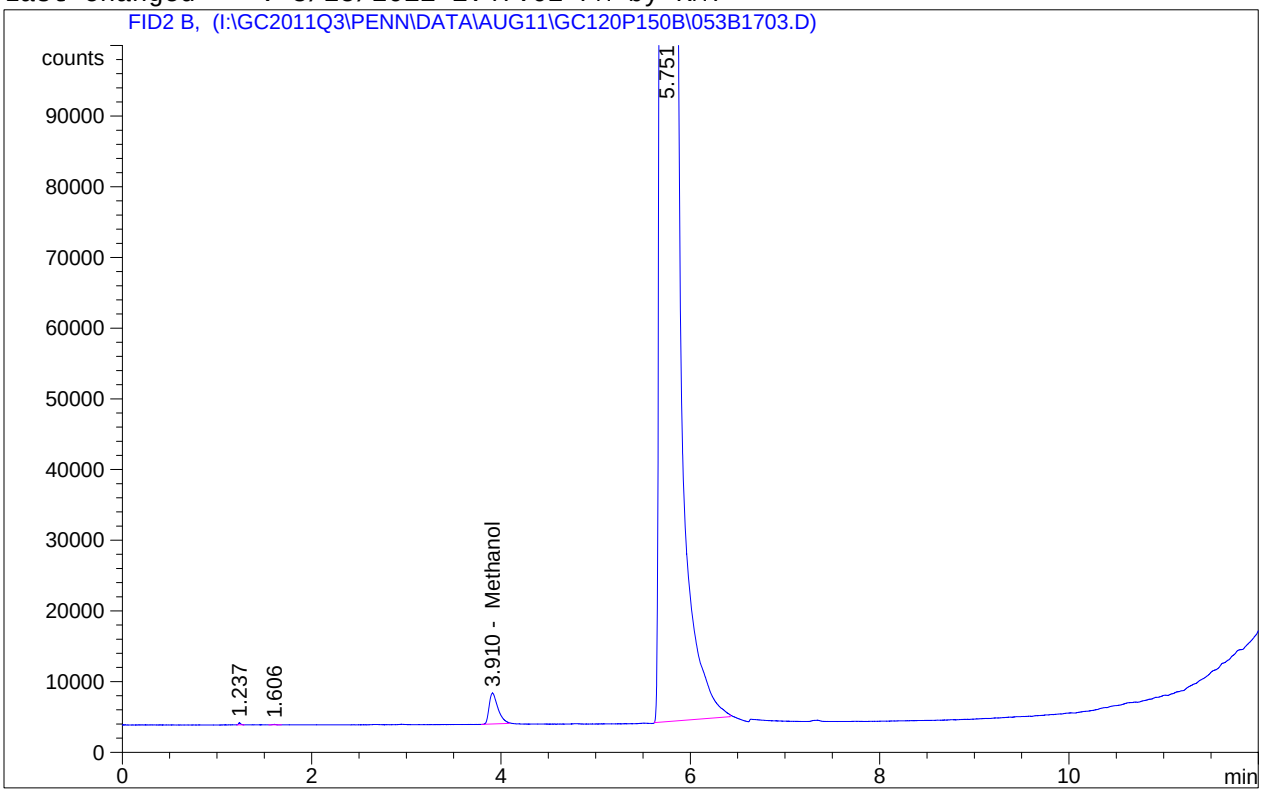
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.905 BB     2.84889e4  1.95229e-3   55.61865    Methanol

Totals :                                55.61865


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B1703.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  17
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/17/2011 8:11:37 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.910 BB     2.82989e4  1.95228e-3   55.24736    Methanol

Totals :                               55.24736


==========================================================================
                          *** End of Report ***
```
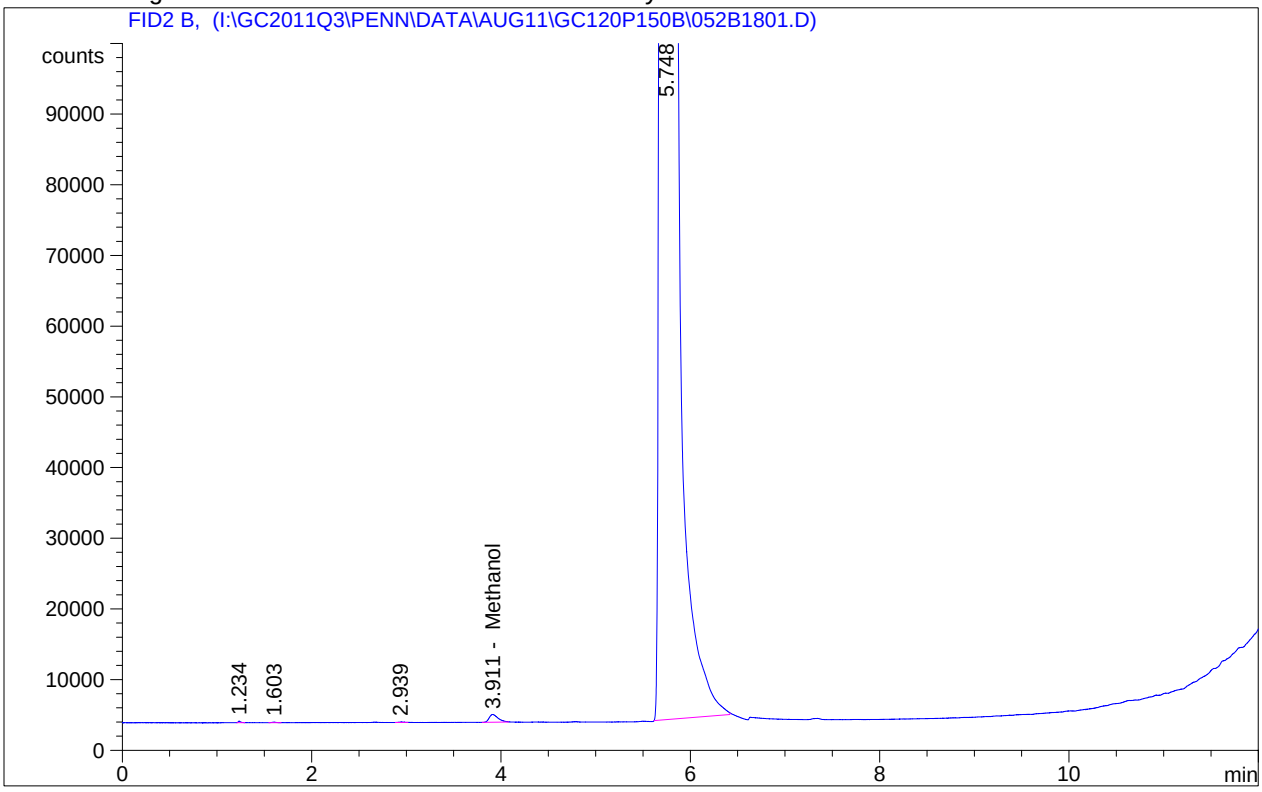

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B1801.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  18
Acq. Instrument : Penn online                       Location : Vial 52
Injection Date  : 8/17/2011 8:34:21 PM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```

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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

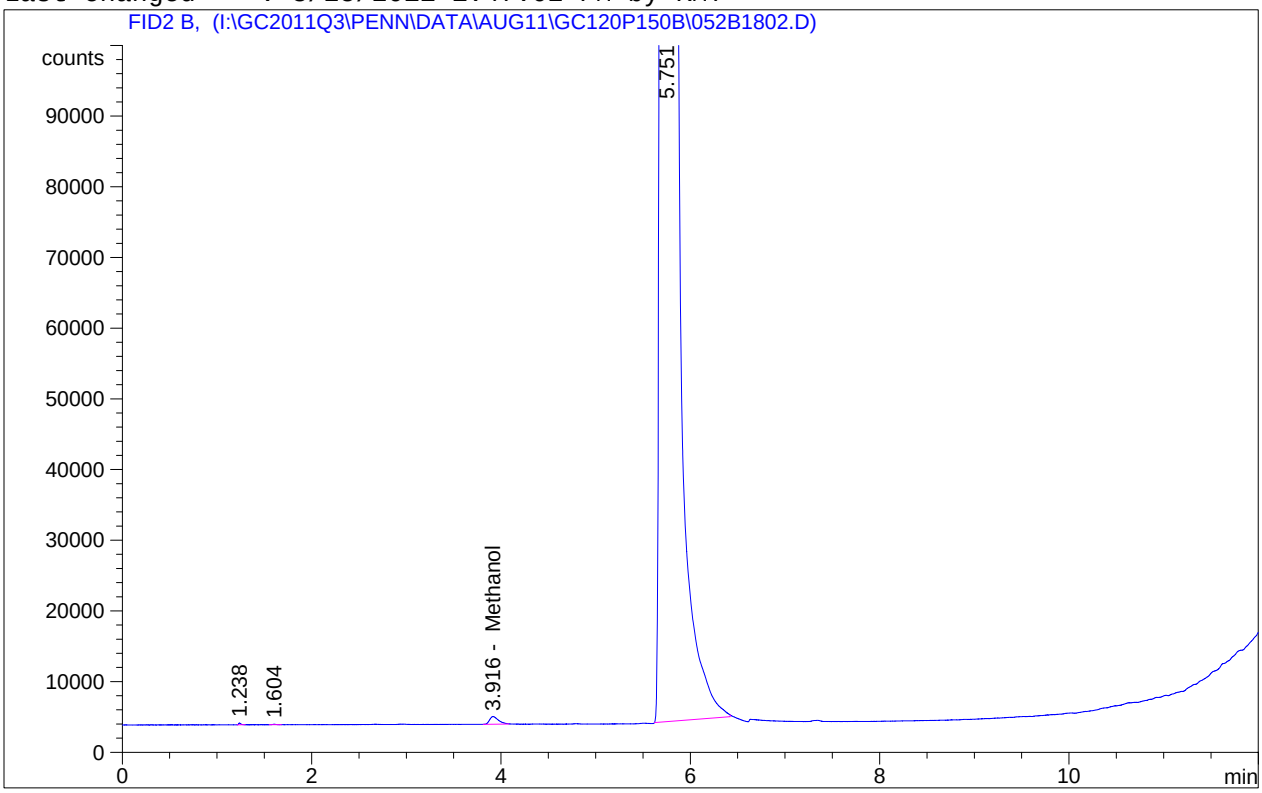
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.911 BB     7095.59473 1.94504e-3   13.80122    Methanol

Totals :                               13.80122


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B1802.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  18
Acq. Instrument : Penn online                       Location : Vial 52
Injection Date  : 8/17/2011 8:57:06 PM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

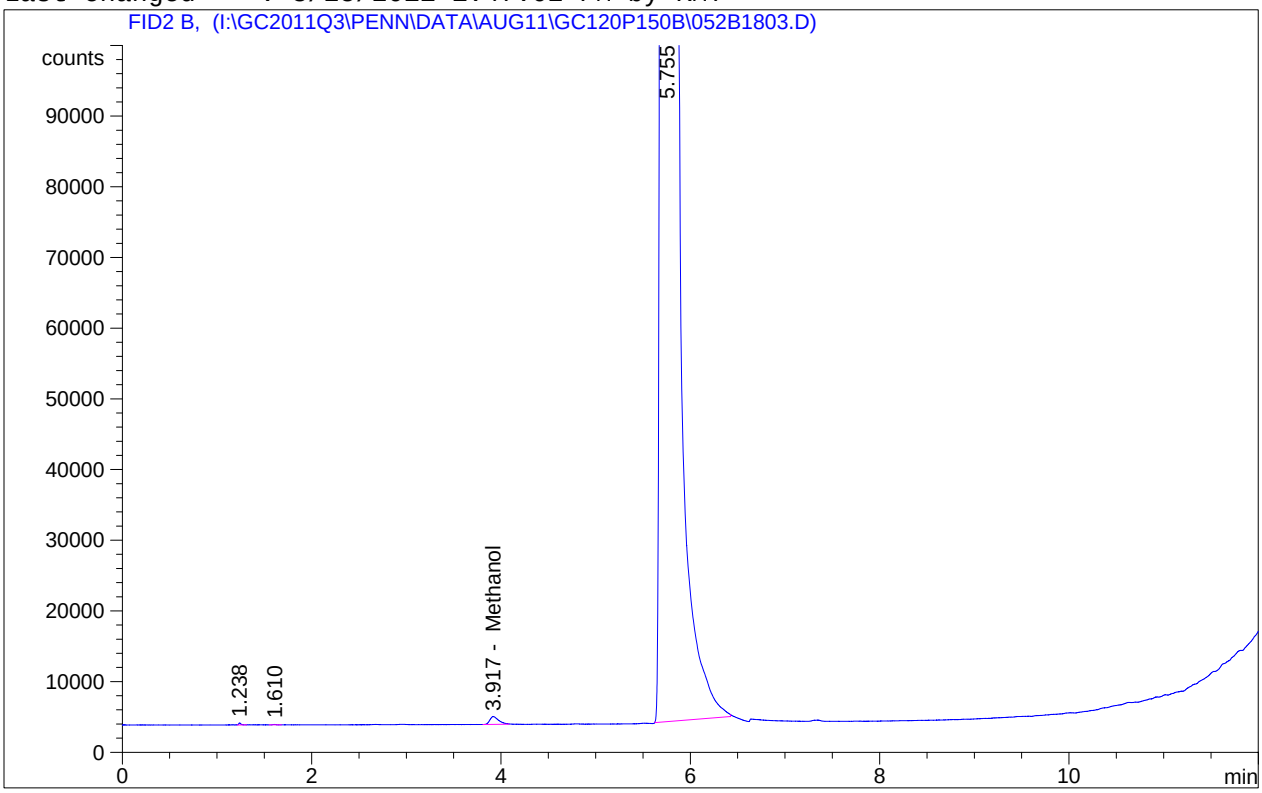
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.916 BB     7057.68262 1.94499e-3   13.72712    Methanol

Totals :                               13.72712


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B1803.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  18
Acq. Instrument : Penn online                       Location : Vial 52
Injection Date  : 8/17/2011 9:19:45 PM                   Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

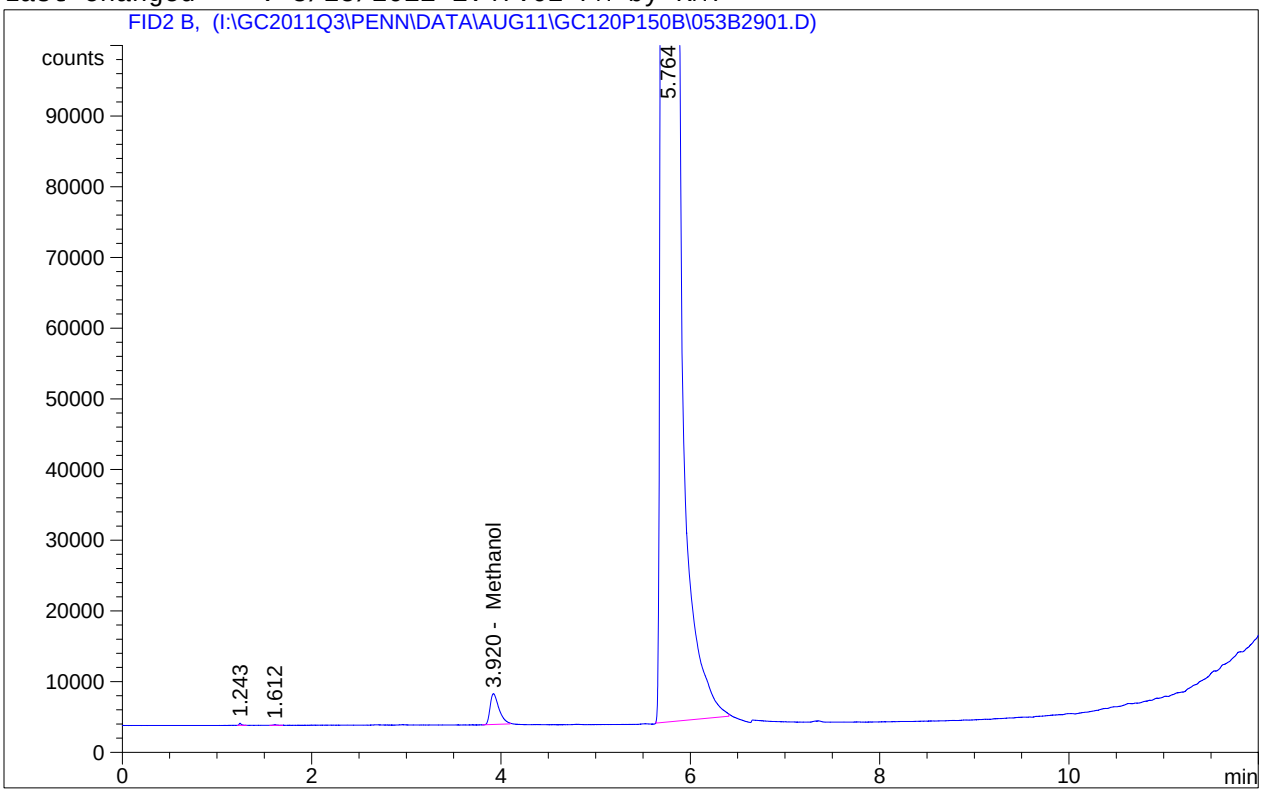
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.917 BB     7060.68213 1.94499e-3   13.73298    Methanol

Totals :                               13.73298


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B2901.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  29
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/18/2011 9:01:46 AM                   Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

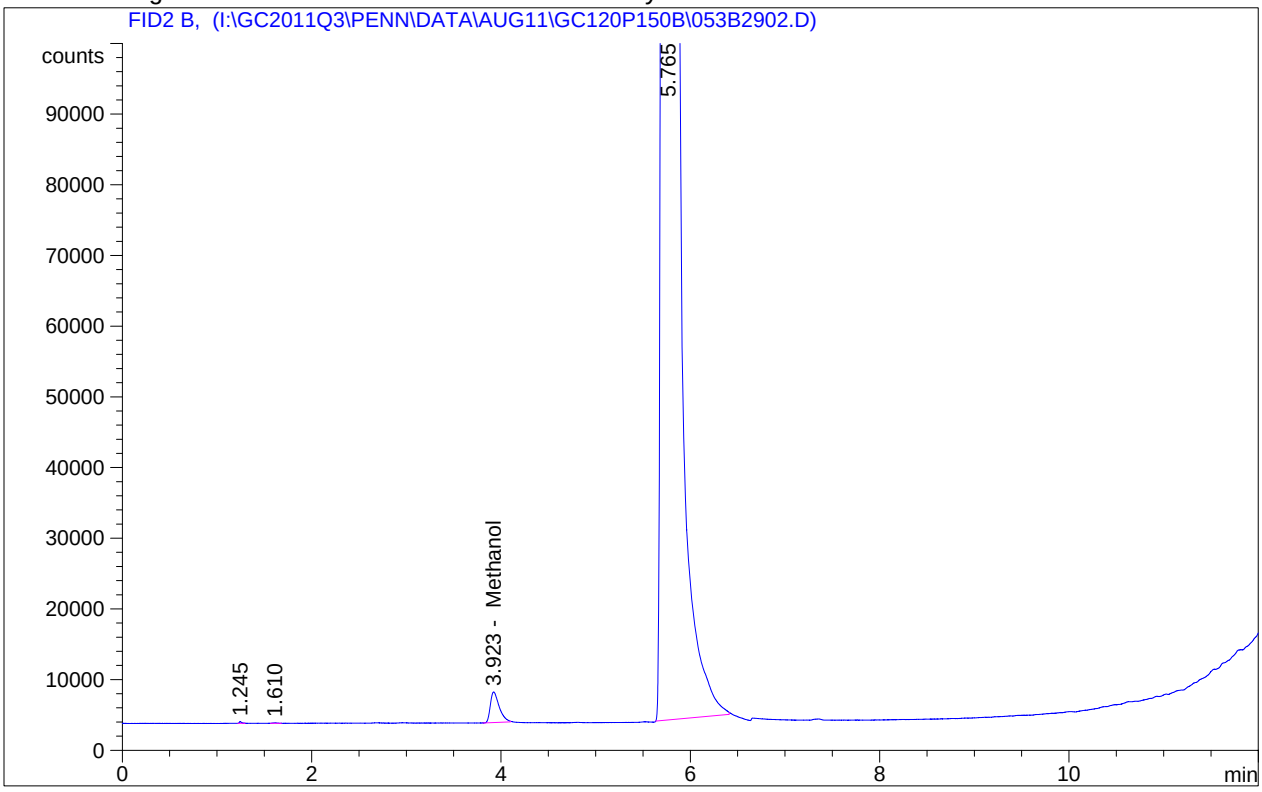
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.920 BB     2.84391e4  1.95229e-3   55.52126    Methanol

Totals :                               55.52126


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B2902.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  29
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/18/2011 9:24:22 AM                   Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

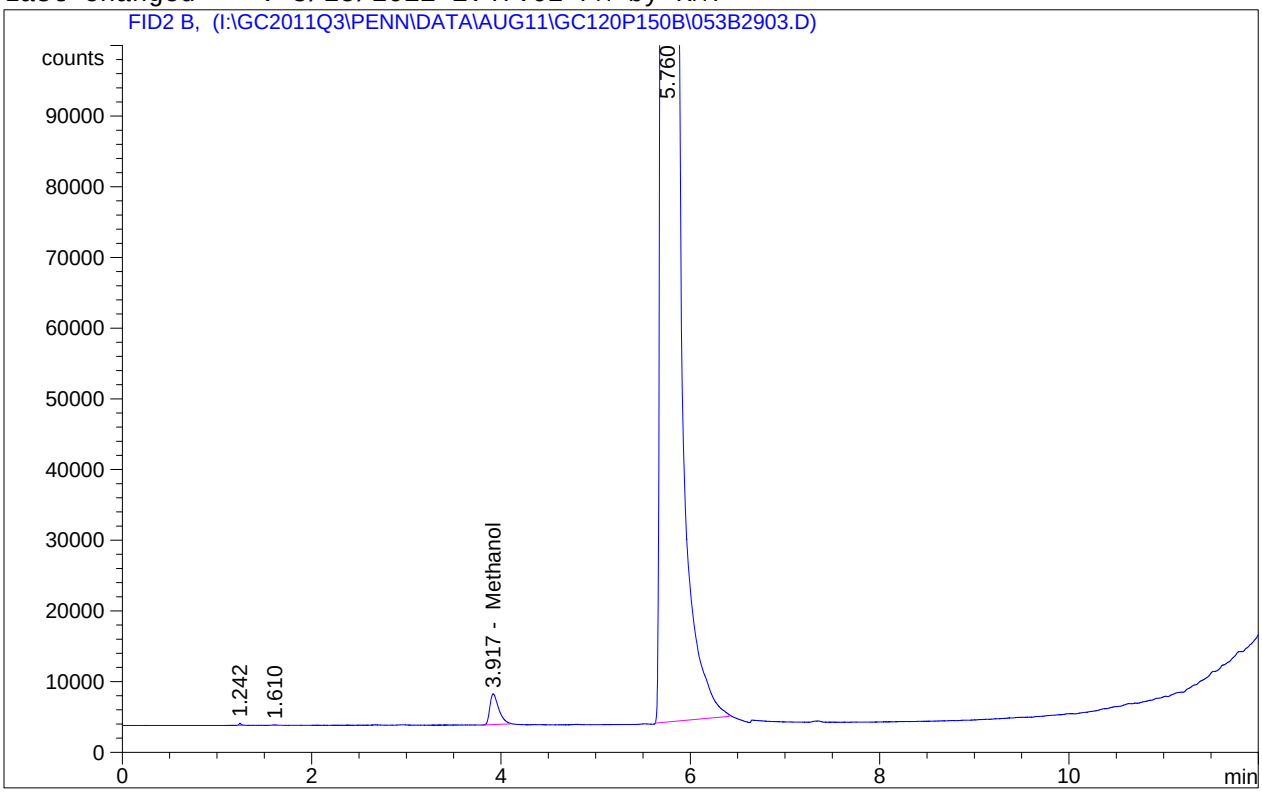
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.923 BB     2.81241e4  1.95226e-3   54.90569    Methanol

Totals :                                54.90569


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B2903.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  29
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/18/2011 9:47:06 AM                   Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/17/2011 2:00:56 PM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

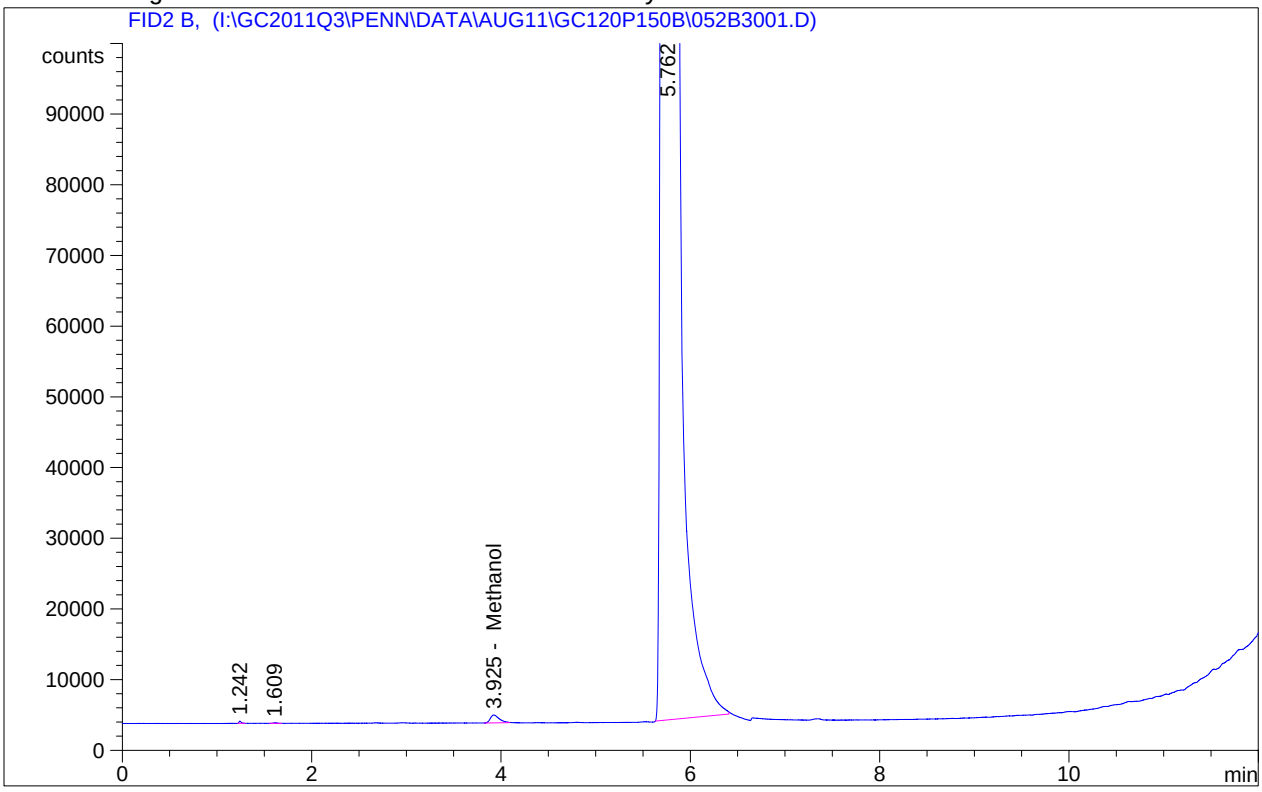
RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.917 BB     2.81714e4  1.95227e-3   54.99800    Methanol

Totals :                               54.99800


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B3001.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  30
Acq. Instrument : Penn online                       Location : Vial 52
Injection Date  : 8/18/2011 10:09:46 AM                  Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.925 BB     7183.35986 1.94516e-3   13.97278    Methanol

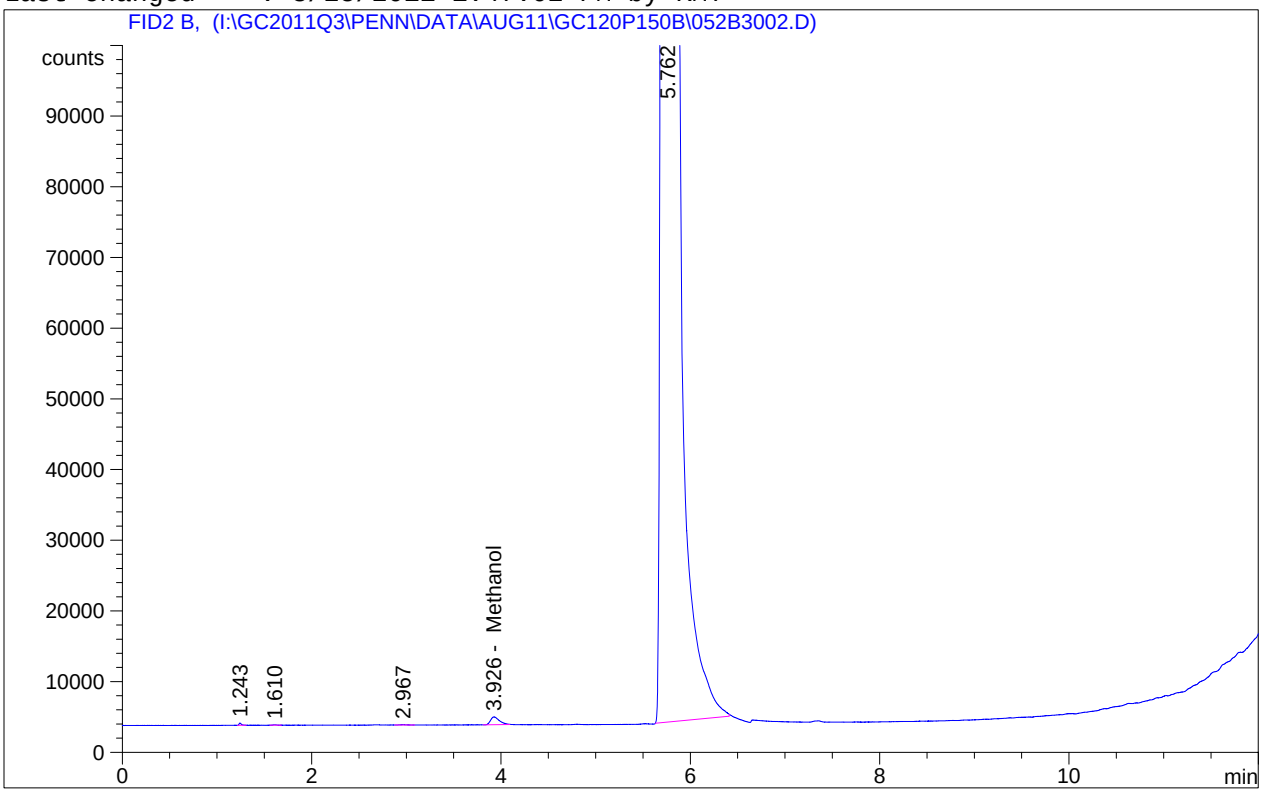
Totals :                                13.97278


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B3002.D
Sample Name: gc120p146#3p

==========

Acq. Operator : CLD Seq. Line : 30
Acq. Instrument : Penn online Location : Vial 52
Injection Date : 8/18/2011 10:32:21 AM Inj : 2
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.926	BB	7164.74365	1.94513e-3	13.93639		Methanol

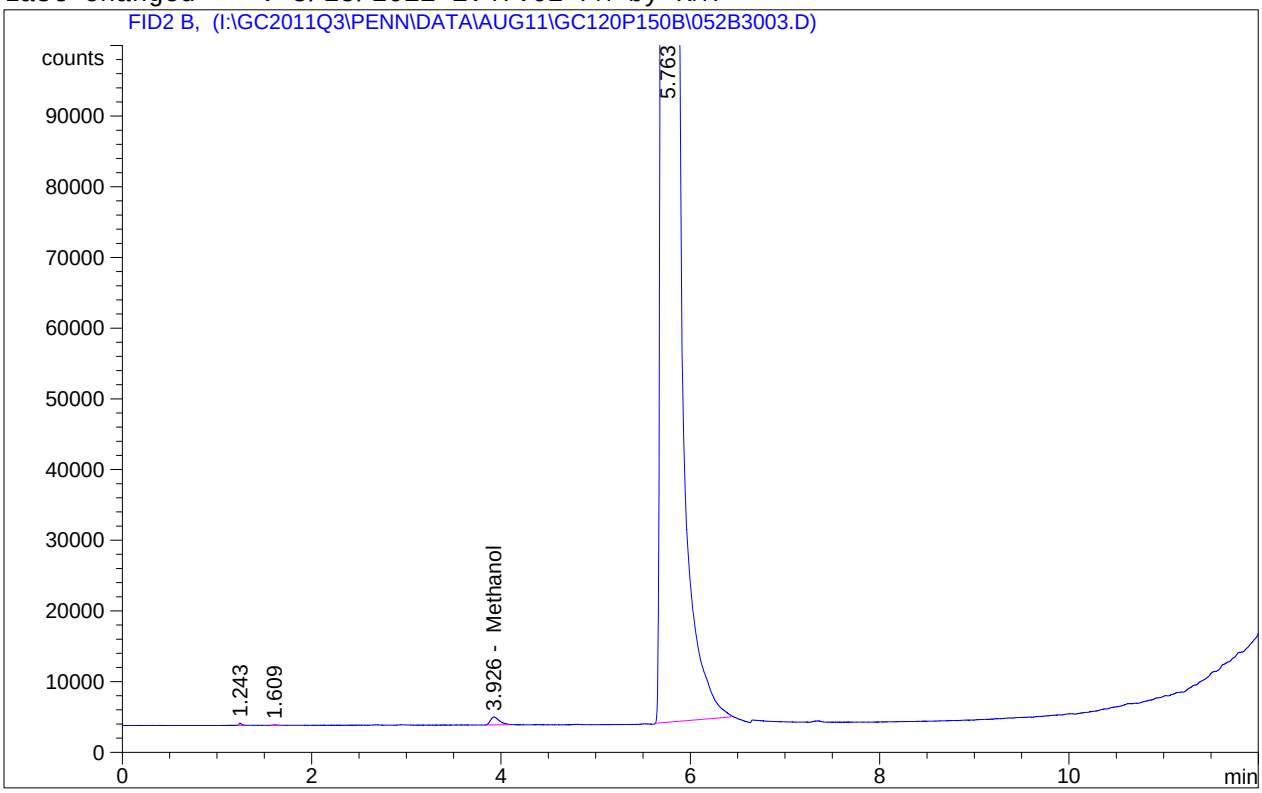
Totals : 13.93639

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B3003.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  30
Acq. Instrument : Penn online                       Location : Vial 52
Injection Date  : 8/18/2011 10:54:56 AM                  Inj :   3
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

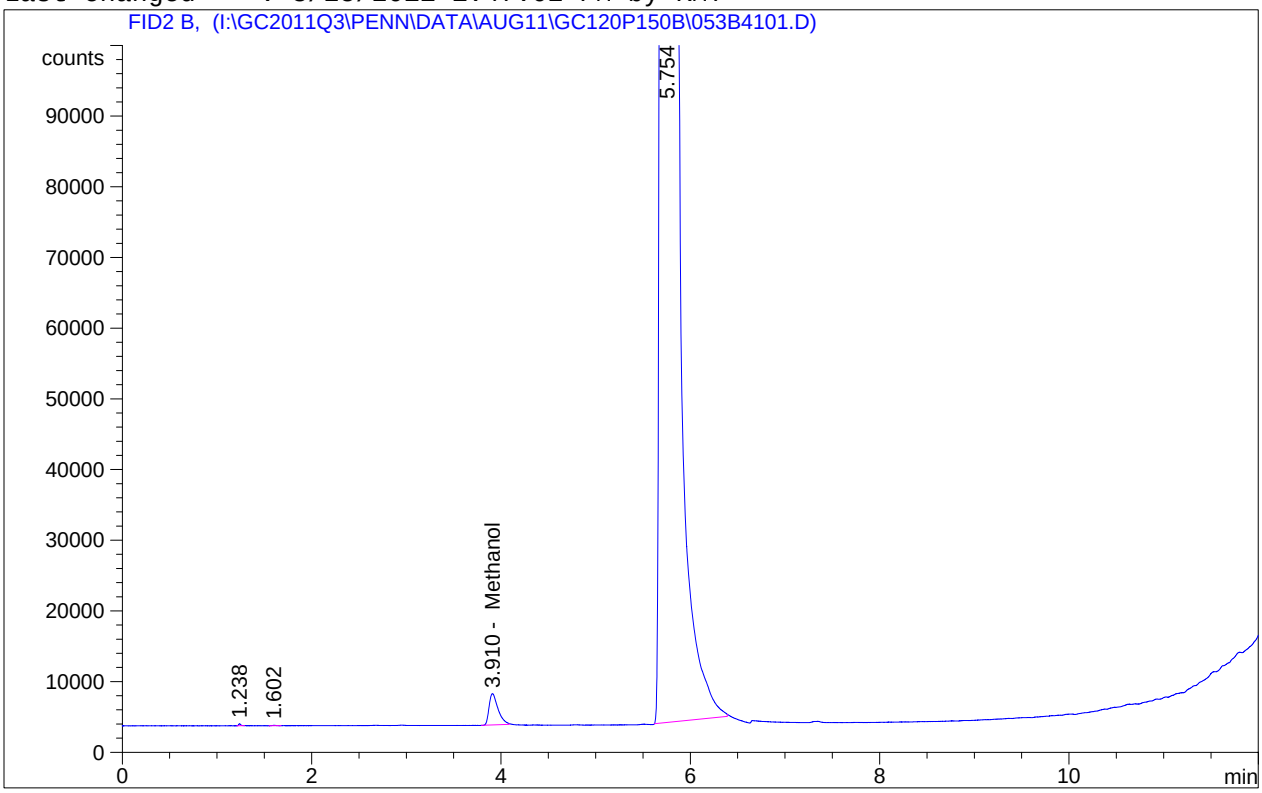
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.926 BB     7261.78027 1.94526e-3   14.12607    Methanol

Totals :                               14.12607


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B4101.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  41
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/18/2011 10:46:59 PM                  Inj :   1
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

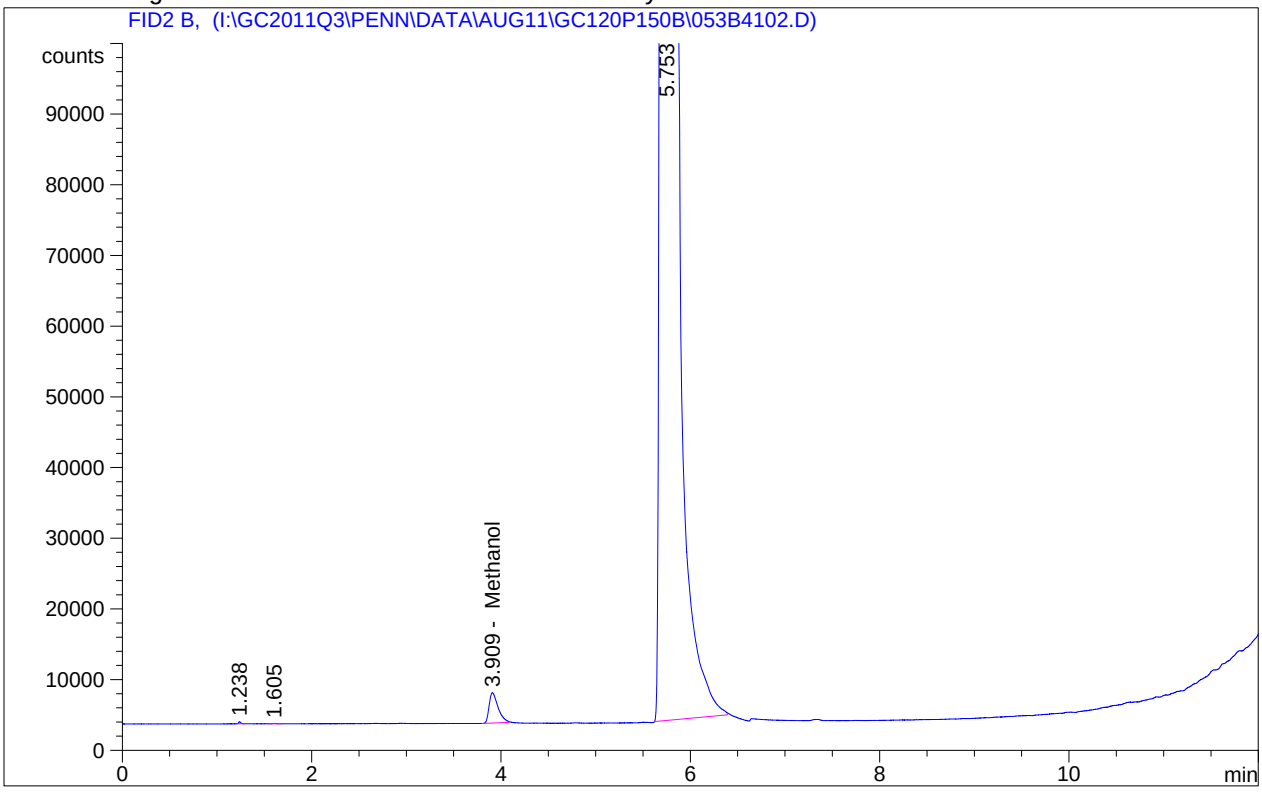
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.910 BB     2.90163e4  1.95234e-3   56.64969    Methanol

Totals :                                56.64969


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B4102.D
Sample Name: gc120p146#4p

```
==========================================================================
Acq. Operator   : CLD                              Seq. Line :  41
Acq. Instrument : Penn online                       Location : Vial 53
Injection Date  : 8/18/2011 11:09:48 PM                  Inj :   2
                                                  Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.909 BB     2.81365e4  1.95226e-3   54.92990    Methanol

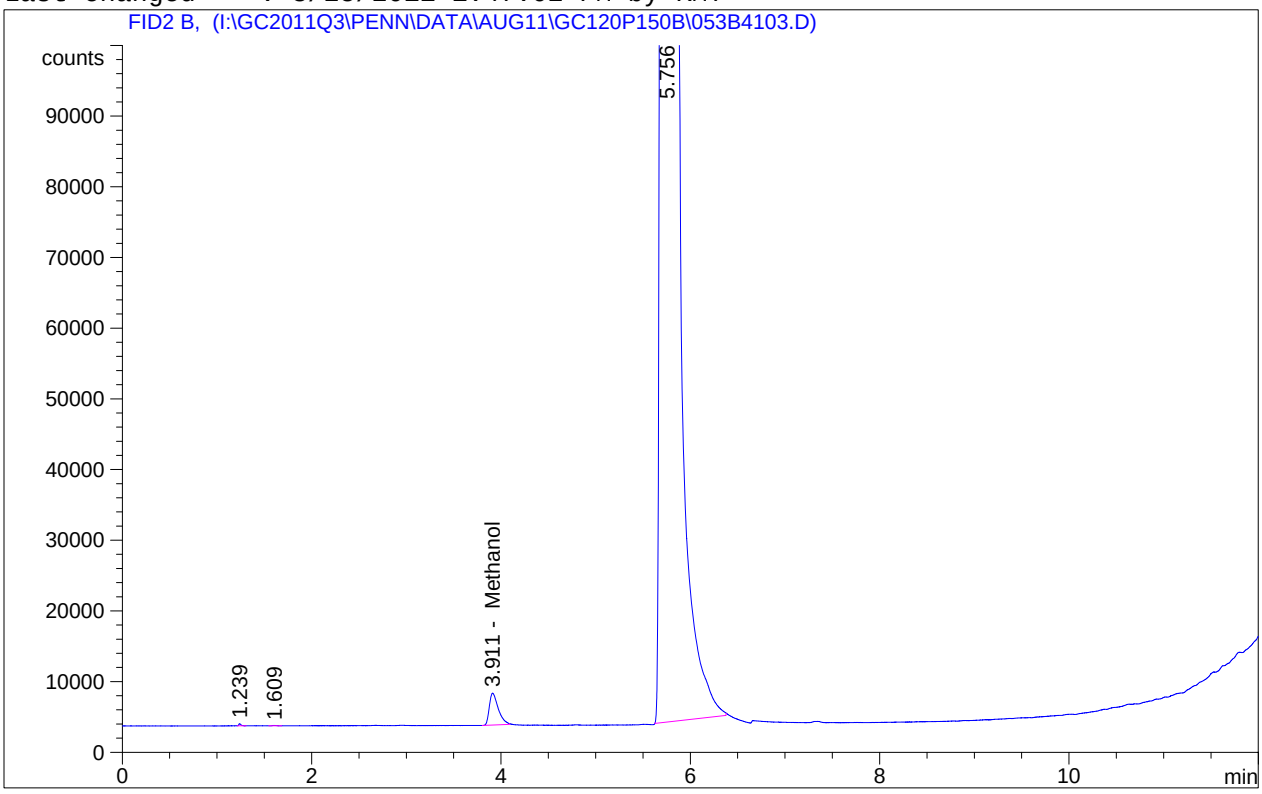
Totals :                               54.92990


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\053B4103.D
Sample Name: gc120p146#4p

==========

Acq. Operator : CLD Seq. Line : 41
Acq. Instrument : Penn online Location : Vial 53
Injection Date : 8/18/2011 11:32:32 PM Inj : 3
Inj Volume : 1 µl
Acq. Method : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed : 8/25/2011 1:47:02 PM by KMT



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, August 25, 2011 1:46:58 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [µg/mL]	Grp	Name
3.911	BB	2.96195e4	1.95239e-3	57.82868		Methanol

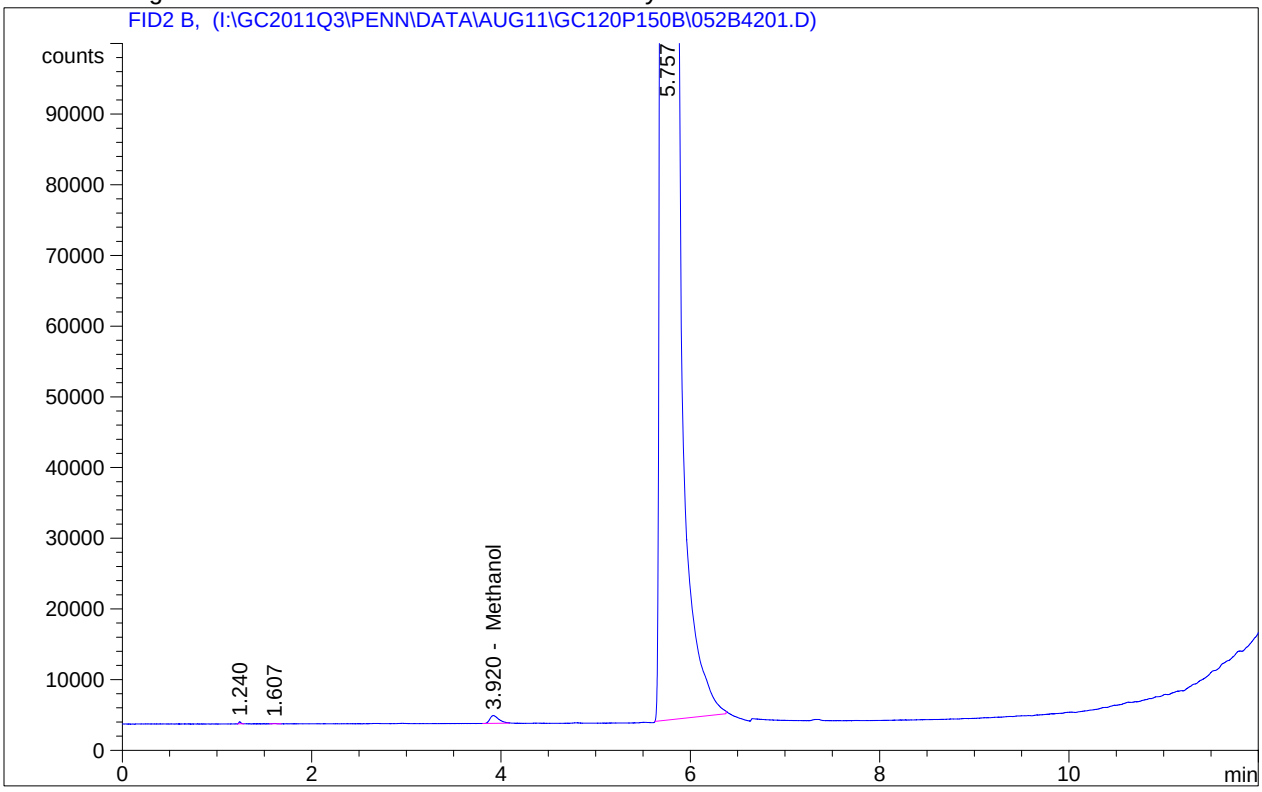
Totals : 57.82868

==========

*** End of Report ***

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B4201.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  42
Acq. Instrument : Penn online                   Location : Vial 52
Injection Date  : 8/18/2011 11:55:12 PM              Inj :   1
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

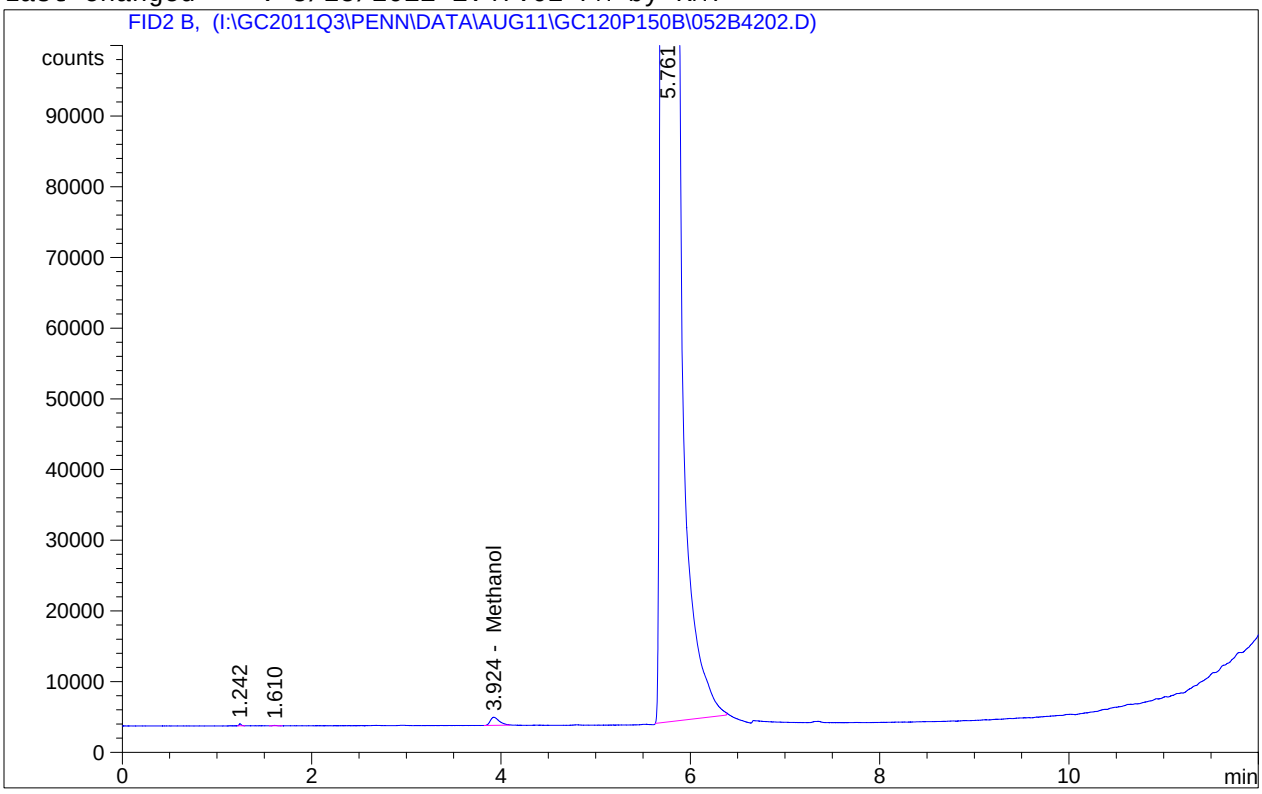
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.920 BB     7224.38379 1.94521e-3   14.05297    Methanol

Totals :                               14.05297


==========================================================================
                          *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B4202.D
Sample Name: gc120p146#3p

```
==================================================================
Acq. Operator   : CLD                          Seq. Line :  42
Acq. Instrument : Penn online                   Location : Vial 52
Injection Date  : 8/19/2011 12:17:47 AM              Inj :   2
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

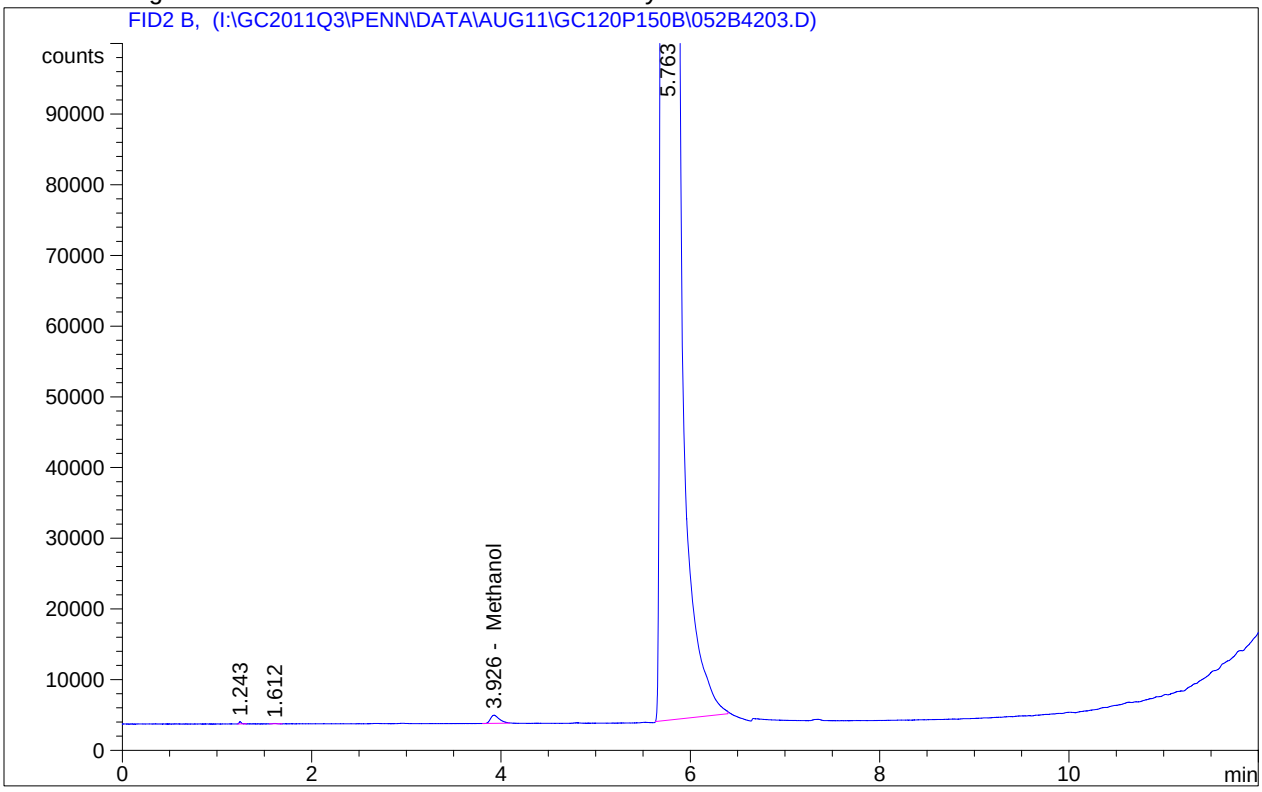
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.924 BB     7500.04248 1.94556e-3   14.59180    Methanol

Totals :                               14.59180


==================================================================
                         *** End of Report ***
```

Data File I:\GC2011Q3\PENN\DATA\AUG11\GC120P150B\052B4203.D
Sample Name: gc120p146#3p

```
==========================================================================
Acq. Operator   : CLD                          Seq. Line :  42
Acq. Instrument : Penn online                   Location : Vial 52
Injection Date  : 8/19/2011 12:40:27 AM              Inj :   3
                                               Inj Volume : 1 µl
Acq. Method     : C:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/18/2011 9:54:04 AM by CLD
Analysis Method : I:\GC2011Q3\PENN\METHODS\GC120P150.M
Last changed    : 8/25/2011 1:47:02 PM by KMT
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, August 25, 2011 1:46:58 PM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         counts*s                [µg/mL]
-------|------|----------|----------|----------|--|-----------------
  3.926 BB     7527.66309 1.94560e-3   14.64579    Methanol

Totals :                               14.64579


==========================================================================
                          *** End of Report ***
```

Injection Source and Location

Injection Source: GC Injector

Injection Location: Dual

GC Injector

Front Injector:

Sample Washes	3
Sample Pumps	9
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
On Column	Off
Nanoliter Adapter	Off
PreInj Solvent A Washes	0
PreInj Solvent B Washes	0
PostInj Solvent A Washes	3
PostInj Solvent B Washes	3
Viscosity Delay	2 seconds
Plunger Speed	Fast
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes

Back Injector:

Sample Washes	3
Sample Pumps	9
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
On Column	Off
Nanoliter Adapter	Off
PreInj Solvent A Washes	0
PreInj Solvent B Washes	0
PostInj Solvent A Washes	3
PostInj Solvent B Washes	3
Viscosity Delay	2 seconds
Plunger Speed	Fast
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes

method: C:\GC2011Q3\PENN\METHODS\GC120P150.M
Modified on: 8/18/2011 at 9:54:04 AM

OVEN\DET

Runtime (min): 13.5

Zone Temperatures:

	State	Setpoint
Inl. A	ON	225 C.
Inl. B	ON	225 C.
Det. A	ON	300 C.
Det. B	ON	300 C.
Aux.	OFF	50 C.

Oven Zone:

Oven max	250 C.
Equib Time	2.00 Min.
Oven State	ON
Cryo State	OFF
Ambient	25 C.
Cryo Blast	OFF

Oven Program:

	Setpoint
Initial Temp.:	40 C.
Initial Time:	1.00 Min.

Level	Rate (C/min.)	Final Temp.(C)	Final Time (min)
1	10.0	90	0.50
2(A)	25.0	240	1.00

InletA Pressure Program Information

Constant Flow:	On
Pressure:	2.0 psi
Temperature:	35 C

Pressure Program:

	Setpoint
Initial Pres.:	0.0 psi
Initial Time:	650.00 min.

Level	Rate (psi/min.)	Final Pres.(psi)	Final Time (min)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00
Total Program Time:	650.00		

GC Pressure Units:psi

Entered Values:

Column Length:	30.00	m.
Column Diameter:	0.530	mm.
Gas:	H2	
Vacuum Comp:	Off	

InletB Pressure Program Information

Constant Flow:	On

EM-BTRF-001728

method: C:\GC2011Q3\PENN\METHODS\GC120P150.M
Modified on: 8/18/2011 at 9:54:04 AM
Pressure: 2.0 psi
Temperature: 35 C.
Pressure Program:

	Setpoint
Initial Pres.:	0.0 psi
Initial Time:	650.00 min.

Level	Rate (psi/min.)	Final Pres.(psi)	Final Time (min)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00

Total Program Time: 650.00

GC Pressure Units:psi

Entered Values:

Column Length:	30.00	m.
Column Diameter:	0.530	mm.
Gas:	H2	
Vacuum Comp:	Off	

Inlet A Packed Column Information

Equation:---

Pressure-Flow Relationship:

	Pres.	Flow(psi) (ml/min)
1	---	0.0
2	---	0.0
3	---	0.0

Last pressure calibration:---

Packed Column Flow Setting (ml/min):0.0

Inlet B Packed Column Information

Equation:---

Pressure-Flow Relationship:

	Pres.	Flow(psi) (ml/min)
1	---	0.0
2	---	0.0
3	---	0.0

Last pressure calibration:---

Packed Column Flow Setting (ml/min):0.0

Purge Valve Settings

Purge A/B

	Init Value	On Time (Min.)	Off Time (Min.)
A (Valve 3)	On	0.00	100.00
B (Valve 4)	On	0.00	100.00

A - Splitless Injection: No
B - Splitless Injection: No

Valves/Relays Information

Initial Setpoints:
5890 Valves:

Valve 1:	Off
Valve 2:	Off

method: C:\GC2011Q3\PENN\METHODS\GC120P150.M
Modified on: 8/18/2011 at 9:54:04 AM

Valve 3 (Purge A):	On
Valve 4 (Purge B):	On

Detector Information

Detector A:

Type	FID
State	ON

Detector B:

Type	FID
State	ON

Signal Information

Save Data:	Both

Signal 1:

Signal	Det. A
Data rate	20.000 Hz.
Peakwidth	0.013 min.
Start Time	0.00 min.
Stop Time	650.00 min.

Signal 2:

Signal	Det. B
Data rate	20.000 Hz.
Peakwidth	0.013 min.
Start Time	0.00 min.
Stop Time	650.00 min.

This Is The Last Page Of This Report.

APPENDIX M: SEMIVOLATILE ORGANICS HAP LAB REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 182129

ExxonMobil DCU ICR - M0010

Lot #: H1G250406

Michael Krall

TRC Environmental Corporation
9225 US Highway 183 South
Austin, TX 78747

TESTAMERICA LABORATORIES, INC.

Kevin S. Woodcock
Project Manager

August 18, 2011

ANALYTICAL METHODS SUMMARY

H1G250406

PARAMETER	ANALYTICAL METHOD
PAHs & Selected SVOCs by HRGC/LRMS	KNOX ID-0016
Semivolatile Organic Compounds by GC/MS	SW846 8270C

References:

KNOX TestAmerica Laboratories Inc., Knoxville Laboratory Standard Operating Procedure

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

H1G250406

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MK5C3	001	EXM-DCU-M0010-R1-COMBINED	07/14/11	
MK5C5	002	EXM-DCU-M0010-R2-COMBINED	07/15/11	
MK5C6	003	EXM-DCU-M0010-R3-COMBINED	07/17/11	
MK5C7	004	EXM-DCU-M0010-RGTBLK-COMBINED	07/17/11	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H1G250406

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Sample RGTBLK-FLT was received, but was not listed on the chain of custody documentation.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

Semivolatiles

The semivolatile organic sampling train components were extracted and analyzed using TestAmerica Knoxville standard operating procedures KNOX-OP-0009 and KNOX-MS-0016, based on the following methods:

- SW-846 3542, "Extraction of Semivolatile Analytes Collected Using Method 0010 (Modified Method 5 Sampling Train)"
- SW-846 8270C, "Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)".

The sampling trains are prepared as one analytical fraction: The particulate filter and front half of the filter holder, nozzle and probe solvent rinses, XAD-2 resin trap and back half of the filter holder, coil condenser and connecting glassware solvent rinses are combined as a single sample.

The combined sample components are spiked with the method 8270C surrogates and Soxhlet extracted with methylene chloride. The extracts are concentrated to 1 mL and analyzed by GCMS.

Sample results were calculated using the following equation:

PROJECT NARRATIVE
H1G250406

$$\text{Result, ug} = (\text{On column concentration, ng/uL}) \times \left(\frac{\text{Volume final extract, uL}}{\text{1 Sample}}\right) \times \left(\frac{\text{1ug}}{\text{1000 ng}}\right) \times \text{DF} \times \text{SF}$$

Where: DF = Bench Dilution Factor
SF = Extraction Split Factor

The dilution factor reported on the sample result form represents a combination of factors (such as dilution, sample weight/volume adjustment, split ratio, etc.) used to adjust the reporting limits and method detection limits.

Samples EXM-DCU-M0010-R1-COMBINED, EXM-DCU-M0010-R2-COMBINED and EXM-DCU-M0010-R3-COMBINED were reported with elevated reporting limits for all analytes. Based on screening results, a dilution was necessary prior to analysis; the reporting limits were adjusted accordingly.

The concentration of naphthalene and/or 2-methylnaphthalene in samples EXM-DCU-M0010-R1-COMBINED EXM-DCU-M0010-R2-COMBINED and EXM-DCU-M0010-R3-COMBINED exceeded the calibration level of the instrument. The samples were analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits.

SIM PAH

The labeled internal standards added prior to extraction serve both as a measure of extraction efficiency and as a measure of cleanup recovery.

Method 0010 Sampling Train Preparation and Analysis

The method 0010 sampling train components were extracted and analyzed for polyaromatic hydrocarbons (PAHs) using TestAmerica Knoxville standard operating procedures KNOX-OP-0009 and KNOX-ID-0016, based on the following methods:

- SW-846 3542, "Extraction of Semivolatile Analytes Collected Using Method 0010 (Modified Method 5 Sampling Train)"
- Method 429 - Determination of Polycyclic Aromatic Hydrocarbon (PAH) emissions from Stationary Sources, California Environmental Protection Agency Air Resources Board, Adopted: September 12, 1989, Amended: July 28, 1997.

The sampling trains are prepared as two analytical fractions and the extracts from these fractions are combined into a single sample for analysis. The first fraction consists of the particulate filter and the XAD-2 resin trap. The second fraction includes the condensate, impinger contents and their related glassware solvent rinses, as well as the front half and back half solvent rinses.

The filters and XAD components are spiked with SIM PAH internal standards and the components are Soxhlet extracted with methylene chloride. The condensates are extracted using a continuous liquid-liquid extractor. The extracts are combined and concentrated to 0.5 mL and analyzed by by SIM-HRGC/LRMS.

PROJECT NARRATIVE
H1G250406

Sample results were calculated using the following equation:

$$\text{Result, ng} = (\text{On column conc, ug/mL}) \times \left(\frac{\text{Nominal Vol final extract, (500 uL)}}{\text{1 Sample}} \right) \times \left(\frac{\text{1 mL}}{\text{1000 uL}} \right) \times \left(\frac{\text{1000 ng}}{\text{1 ug}} \right) \times \text{SF}$$

Where: SF = Extraction Split Factor

*If the entire sample is not extracted, the fractional amount of sample used is entered into the above equation.

Sampling surrogates fluorene-d_{10}, $13C_6$-fluorene & terphenyl-d_{14} are added to the XAD by the laboratory prior to sampling. Their results appear with the "Internal Standard" percent recovery results. However these field surrogates were diluted out in samples EXM-DCU-M0010-R1-COMBINED, EXM-DCU-M0010-R2-COMBINED, and EXM-DCU-M0010-R3-COMBINED.

The dilution factor reported on the sample result form represents a combination of factors (such as dilution, sample weight/volume adjustment, split ratio, etc.) used to adjust the reporting limits and method detection limits.

All QC criteria were met with the following exceptions:

All sample extracts in the batch had internal standard recovery for benzo(a)anthracene-d12 that exceeded QC limits. As indicted by the referenced method, isotope dilution techniques produce results that are independent of internal standard recovery. The affected internal standards are flagged on the final result forms.

Samples EXM-DCU-M0010-R1-COMBINED, EXM-DCU-M0010-R2-COMBINED, and EXM-DCU-M0010-R3-COMBINED were reported with elevated reporting limits for all analytes due to the difficult sample matrix. These extracts were diluted and underwent an additional silica gel clean-up; then the extracts were further diluted and post-spiked with recovery and internal standards and the reporting limits were adjusted accordingly. The sample was analyzed with minimum dilution even though some analytes were outside of the calibration range. Compounds that exceeded calibration range were flagged with an "E" qualifier; please refer to the 8270 analysis for results of these compounds within calibration range.

QC DATA ASSOCIATION SUMMARY

H1G250406

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	
002	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	
003	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	
004	AIR	SW846 8270C		1207013	
	AIR	KNOX ID-0016		1207014	

Sample Data Summary

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001 Work Order #...: MK5C31AA Matrix.....: AIR
Date Sampled...: 07/14/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**580 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**940**	**800**	**ug**	**260**
Benz(a)anthracene	ND	800	ug	250
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	**300 J**	**800**	**ug**	**300**
Benzo(e)pyrene	**73 J**	**800**	**ug**	**67**
Biphenyl	**330 J**	**800**	**ug**	**80**
Chrysene	ND	800	ug	250
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**240 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	ND	800	ug	54
3,3'-Dimethoxybenzidine	**1100 J**	**8000**	**ug**	**1100**
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**1200**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**25000 E**	**800**	**ug**	**230**
Naphthalene	**13000**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**1800**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**370 J**	**800**	**ug**	**280**
o-Toluidine	ND	800	ug	220

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001 Work Order #...: MK5C31AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001	Work Order #...: MK5C32AA	Matrix.....: AIR	
Date Sampled...: 07/14/11	Date Received..: 07/23/11		
Prep Date.....: 07/26/11	Analysis Date..: 08/04/11		
Prep Batch #...: 1207013			
Dilution Factor: 200	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	22000 D	2000	ug	580

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C51AA Matrix.....: AIR
Date Sampled...: 07/15/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**680 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**810**	**800**	**ug**	**260**
Benz(a)anthracene	**450 J**	**800**	**ug**	**250**
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	**580 J**	**800**	**ug**	**300**
Benzo(e)pyrene	**300 J**	**800**	**ug**	**67**
Biphenyl	**460 J**	**800**	**ug**	**80**
Chrysene	**450 J**	**800**	**ug**	**250**
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**270 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	**370 J**	**800**	**ug**	**54**
3,3'-Dimethoxybenzidine	ND	8000	ug	1100
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**1200**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**33000 E**	**800**	**ug**	**230**
Naphthalene	**17000 E**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**1700**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**540 J**	**800**	**ug**	**280**
o-Toluidine	ND	800	ug	220

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C51AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C52AA Matrix.....: AIR
Date Sampled...: 07/15/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 200 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	31000 D	2000	ug	580
Naphthalene	15000 D	2000	ug	620

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C61AA Matrix.....: AIR
Date Sampled...: 07/17/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**730 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**2100**	**800**	**ug**	**260**
Benz(a)anthracene	**260 J**	**800**	**ug**	**250**
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	ND	800	ug	300
Benzo(e)pyrene	ND	800	ug	67
Biphenyl	**640 J**	**800**	**ug**	**80**
Chrysene	ND	800	ug	250
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**510 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	ND	800	ug	54
3,3'-Dimethoxybenzidine	ND	8000	ug	1100
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**2500**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**38000 E**	**800**	**ug**	**230**
Naphthalene	**21000 E**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**4600**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**960**	**800**	**ug**	**280**
o-Toluidine	**420 J**	**800**	**ug**	**220**

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C61AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C62AA Matrix.....: AIR
Date Sampled...: 07/17/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 400 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	37000 D	4000	ug	1200
Naphthalene	20000 D	4000	ug	1200

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-004 Work Order #...: MK5C71AA Matrix.....: AIR
Date Sampled...: 07/17/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 2 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	20	ug	5.4
Acenaphthylene	ND	20	ug	5.6
Aniline	ND	20	ug	17
Anthracene	ND	20	ug	6.4
Benz(a)anthracene	ND	20	ug	6.2
Benzidine	ND	200	ug	120
Benzo(b)fluoranthene	ND	20	ug	8.2
Benzo(k)fluoranthene	ND	20	ug	9.8
Benzo(ghi)perylene	ND	20	ug	6.4
Benzo(a)pyrene	ND	20	ug	7.6
Benzo(e)pyrene	ND	20	ug	1.7
Biphenyl	ND	20	ug	2.0
Chrysene	ND	20	ug	6.2
Cresols (total)	ND	20	ug	16
Dibenz(a,h)anthracene	ND	20	ug	6.0
Dibenzofuran	ND	20	ug	5.6
Dibenzo(a,e)pyrene	ND	20	ug	1.4
3,3'-Dimethoxybenzidine	ND	200	ug	28
p-Dimethylaminoazobenzene	ND	20	ug	4.8
7,12-Dimethylbenz(a)-anthracene	ND	20	ug	7.0
3,3'-Dimethylbenzidine	ND	200	ug	36
alpha,alpha-Dimethylphenethylamine	ND	50	ug	17
2,4-Dimethylphenol	ND	20	ug	13
Fluoranthene	ND	20	ug	7.2
Fluorene	ND	20	ug	6.0
Indeno(1,2,3-cd)pyrene	ND	20	ug	6.2
Isophorone	ND	20	ug	5.6
3-Methylcholanthrene	ND	20	ug	7.6
2-Methylnaphthalene	ND	20	ug	5.8
Naphthalene	ND	20	ug	6.2
Nitrobenzene	ND	20	ug	5.8
Perylene	ND	20	ug	1.5
Phenanthrene	ND	20	ug	6.0
Phenol	ND	20	ug	6.2
1,4-Phenylenediamine	ND	200	ug	50
Pyrene	ND	20	ug	7.0
o-Toluidine	ND	20	ug	5.6

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-004 Work Order #...: MK5C71AA Matrix.....: AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
Phenol-d5	78	(48 - 118)
Nitrobenzene-d5	77	(43 - 110)
2-Fluorobiphenyl	80	(48 - 111)
2,4,6-Tribromophenol	80	(34 - 125)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AA Matrix.....: AIR
MB Lot-Sample #: H1G260000-013

Prep Date.....: 07/26/11
Analysis Date..: 08/04/11 Prep Batch #...: 1207013
Dilution Factor: 2

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	20	ug	SW846 8270C
Acenaphthylene	ND	20	ug	SW846 8270C
Aniline	ND	20	ug	SW846 8270C
Anthracene	ND	20	ug	SW846 8270C
Benz(a)anthracene	ND	20	ug	SW846 8270C
Benzidine	ND	200	ug	SW846 8270C
Benzo(b)fluoranthene	ND	20	ug	SW846 8270C
Benzo(k)fluoranthene	ND	20	ug	SW846 8270C
Benzo(ghi)perylene	ND	20	ug	SW846 8270C
Benzo(a)pyrene	ND	20	ug	SW846 8270C
Benzo(e)pyrene	ND	20	ug	SW846 8270C
Biphenyl	ND	20	ug	SW846 8270C
Chrysene	ND	20	ug	SW846 8270C
Cresols (total)	ND	20	ug	SW846 8270C
Dibenz(a,h)anthracene	ND	20	ug	SW846 8270C
Dibenzofuran	ND	20	ug	SW846 8270C
Dibenzo(a,e)pyrene	ND	20	ug	SW846 8270C
3,3'-Dimethoxybenzidine	ND	200	ug	SW846 8270C
p-Dimethylaminoazobenzene	ND	20	ug	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	20	ug	SW846 8270C
3,3'-Dimethylbenzidine	ND	200	ug	SW846 8270C
alpha,alpha-Dimethylphene	ND	50	ug	SW846 8270C
2,4-Dimethylphenol	ND	20	ug	SW846 8270C
Fluoranthene	ND	20	ug	SW846 8270C
Fluorene	ND	20	ug	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	20	ug	SW846 8270C
Isophorone	ND	20	ug	SW846 8270C
3-Methylcholanthrene	ND	20	ug	SW846 8270C
2-Methylnaphthalene	ND	20	ug	SW846 8270C
Naphthalene	ND	20	ug	SW846 8270C
Nitrobenzene	ND	20	ug	SW846 8270C
Perylene	ND	20	ug	SW846 8270C
Phenanthrene	ND	20	ug	SW846 8270C
Phenol	ND	20	ug	SW846 8270C
1,4-Phenylenediamine	ND	200	ug	SW846 8270C
Pyrene	ND	20	ug	SW846 8270C
o-Toluidine	ND	20	ug	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AA Matrix.....: AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(22 - 105)
Phenol-d5	72	(48 - 118)
Nitrobenzene-d5	76	(43 - 110)
2-Fluorobiphenyl	79	(48 - 111)
2,4,6-Tribromophenol	75	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	87	(63 - 107)			SW846 8270C
	87	(63 - 107)	0.11	(0-36)	SW846 8270C
Acenaphthylene	89	(64 - 112)			SW846 8270C
	90	(64 - 112)	0.56	(0-36)	SW846 8270C
Aniline	86	(48 - 109)			SW846 8270C
	87	(48 - 109)	1.3	(0-50)	SW846 8270C
Anthracene	89	(59 - 114)			SW846 8270C
	92	(59 - 114)	2.8	(0-36)	SW846 8270C
Benz(a)anthracene	96	(50 - 130)			SW846 8270C
	95	(50 - 130)	0.52	(0-50)	SW846 8270C
Benzidine	72	(10 - 150)			SW846 8270C
	75	(10 - 150)	3.4	(0-50)	SW846 8270C
Benzo(b)fluoranthene	107	(63 - 122)			SW846 8270C
	108	(63 - 122)	0.93	(0-50)	SW846 8270C
Benzo(k)fluoranthene	89	(69 - 118)			SW846 8270C
	90	(69 - 118)	1.3	(0-50)	SW846 8270C
Benzo(ghi)perylene	93	(71 - 122)			SW846 8270C
	94	(71 - 122)	1.3	(0-50)	SW846 8270C
Benzo(a)pyrene	88	(67 - 122)			SW846 8270C
	90	(67 - 122)	1.4	(0-50)	SW846 8270C
Benzo(e)pyrene	90	(50 - 130)			SW846 8270C
	90	(50 - 130)	0.11	(0-50)	SW846 8270C
Biphenyl	78	(50 - 130)			SW846 8270C
	79	(50 - 130)	1.4	(0-50)	SW846 8270C
Chrysene	91	(67 - 114)			SW846 8270C
	91	(67 - 114)	0.33	(0-41)	SW846 8270C
Cresols (total)	90	(50 - 130)			SW846 8270C
	94	(50 - 130)	3.8	(0-50)	SW846 8270C
Dibenz(a,h)anthracene	93	(67 - 122)			SW846 8270C
	94	(67 - 122)	0.42	(0-50)	SW846 8270C
Dibenzofuran	90	(60 - 108)			SW846 8270C
	91	(60 - 108)	0.99	(0-37)	SW846 8270C
Dibenzo(a,e)pyrene	86	(50 - 130)			SW846 8270C
	86	(50 - 130)	0.34	(0-50)	SW846 8270C
3,3'-Dimethoxybenzidine	93	(30 - 130)			SW846 8270C
	92	(30 - 130)	1.2	(0-50)	SW846 8270C
p-Dimethylaminoazobenzene	93	(50 - 130)			SW846 8270C
	93	(50 - 130)	0.64	(0-50)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	58	(50 - 130)			SW846 8270C
	60	(50 - 130)	3.9	(0-50)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
3,3'-Dimethylbenzidine	93	(30 - 130)			SW846 8270C
	95	(30 - 130)	2.1	(0-50)	SW846 8270C
alpha,alpha-Dimethylphenet	74	(30 - 130)			SW846 8270C
	77	(30 - 130)	4.4	(0-50)	SW846 8270C
2,4-Dimethylphenol	88	(10 - 125)			SW846 8270C
	88	(10 - 125)	0.68	(0-41)	SW846 8270C
Fluoranthene	95	(55 - 120)			SW846 8270C
	96	(55 - 120)	1.0	(0-34)	SW846 8270C
Fluorene	90	(64 - 114)			SW846 8270C
	92	(64 - 114)	2.3	(0-36)	SW846 8270C
Indeno(1,2,3-cd)pyrene	97	(72 - 126)			SW846 8270C
	99	(72 - 126)	1.3	(0-50)	SW846 8270C
Isophorone	90	(56 - 111)			SW846 8270C
	92	(56 - 111)	2.8	(0-37)	SW846 8270C
3-Methylcholanthrene	81	(50 - 130)			SW846 8270C
	82	(50 - 130)	1.1	(0-30)	SW846 8270C
2-Methylnaphthalene	91	(56 - 111)			SW846 8270C
	93	(56 - 111)	2.0	(0-38)	SW846 8270C
Naphthalene	83	(59 - 104)			SW846 8270C
	85	(59 - 104)	2.0	(0-38)	SW846 8270C
Nitrobenzene	83	(58 - 109)			SW846 8270C
	85	(58 - 109)	2.1	(0-38)	SW846 8270C
Perylene	88	(50 - 130)			SW846 8270C
	89	(50 - 130)	0.78	(0-50)	SW846 8270C
Phenanthrene	86	(58 - 109)			SW846 8270C
	88	(58 - 109)	2.1	(0-35)	SW846 8270C
Phenol	84	(54 - 114)			SW846 8270C
	86	(54 - 114)	2.7	(0-39)	SW846 8270C
1,4-Phenylenediamine	11	(5.0- 130)			SW846 8270C
	13	(5.0- 130)	17	(0-50)	SW846 8270C
Pyrene	97	(76 - 118)			SW846 8270C
	98	(76 - 118)	1.1	(0-41)	SW846 8270C
o-Toluidine	90	(30 - 130)			SW846 8270C
	90	(30 - 130)	0.55	(0-50)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
	61	(22 - 105)
Phenol-d5	80	(48 - 118)
	83	(48 - 118)
Nitrobenzene-d5	81	(43 - 110)
	83	(43 - 110)
2-Fluorobiphenyl	82	(48 - 111)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	84	(48 - 111)
2,4,6-Tribromophenol	95	(34 - 125)
	98	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	100	86.9	ug	87		SW846 8270C
	100	86.8	ug	87	0.11	SW846 8270C
Acenaphthylene	100	89.0	ug	89		SW846 8270C
	100	89.5	ug	90	0.56	SW846 8270C
Aniline	100	85.5	ug	86		SW846 8270C
	100	86.6	ug	87	1.3	SW846 8270C
Anthracene	100	89.2	ug	89		SW846 8270C
	100	91.7	ug	92	2.8	SW846 8270C
Benz(a)anthracene	100	95.7	ug	96		SW846 8270C
	100	95.2	ug	95	0.52	SW846 8270C
Benzidine	200	145	ug	72		SW846 8270C
	200	150	ug	75	3.4	SW846 8270C
Benzo(b)fluoranthene	100	107	ug	107		SW846 8270C
	100	108	ug	108	0.93	SW846 8270C
Benzo(k)fluoranthene	100	88.6	ug	89		SW846 8270C
	100	89.8	ug	90	1.3	SW846 8270C
Benzo(ghi)perylene	100	92.6	ug	93		SW846 8270C
	100	93.8	ug	94	1.3	SW846 8270C
Benzo(a)pyrene	100	88.5	ug	88		SW846 8270C
	100	89.8	ug	90	1.4	SW846 8270C
Benzo(e)pyrene	100	89.9	ug	90		SW846 8270C
	100	90.0	ug	90	0.11	SW846 8270C
Biphenyl	100	78.2	ug	78		SW846 8270C
	100	79.3	ug	79	1.4	SW846 8270C
Chrysene	100	90.7	ug	91		SW846 8270C
	100	91.0	ug	91	0.33	SW846 8270C
Cresols (total)	200	180	ug	90		SW846 8270C
	200	187	ug	94	3.8	SW846 8270C
Dibenz(a,h)anthracene	100	93.2	ug	93		SW846 8270C
	100	93.6	ug	94	0.42	SW846 8270C
Dibenzofuran	100	89.7	ug	90		SW846 8270C
	100	90.6	ug	91	0.99	SW846 8270C
Dibenzo(a,e)pyrene	100	86.1	ug	86		SW846 8270C
	100	85.8	ug	86	0.34	SW846 8270C
3,3'-Dimethoxybenzidine	100	93.3	ug	93		SW846 8270C
	100	92.2	ug	92	1.2	SW846 8270C
p-Dimethylaminoazobenzene	100	92.8	ug	93		SW846 8270C
	100	93.4	ug	93	0.64	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	100	57.8	ug	58		SW846 8270C
	100	60.1	ug	60	3.9	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
3,3'-Dimethylbenzidine	100	93.3	ug	93		SW846 8270C
	100	95.3	ug	95	2.1	SW846 8270C
alpha,alpha-Dimethylphenet	100	74.1	ug	74		SW846 8270C
	100	77.4	ug	77	4.4	SW846 8270C
2,4-Dimethylphenol	100	87.5	ug	88		SW846 8270C
	100	88.1	ug	88	0.68	SW846 8270C
Fluoranthene	100	94.7	ug	95		SW846 8270C
	100	95.7	ug	96	1.0	SW846 8270C
Fluorene	100	89.6	ug	90		SW846 8270C
	100	91.7	ug	92	2.3	SW846 8270C
Indeno(1,2,3-cd)pyrene	100	97.4	ug	97		SW846 8270C
	100	98.7	ug	99	1.3	SW846 8270C
Isophorone	100	89.9	ug	90		SW846 8270C
	100	92.5	ug	92	2.8	SW846 8270C
3-Methylcholanthrene	100	81.4	ug	81		SW846 8270C
	100	82.3	ug	82	1.1	SW846 8270C
2-Methylnaphthalene	100	91.4	ug	91		SW846 8270C
	100	93.2	ug	93	2.0	SW846 8270C
Naphthalene	100	83.1	ug	83		SW846 8270C
	100	84.8	ug	85	2.0	SW846 8270C
Nitrobenzene	100	83.2	ug	83		SW846 8270C
	100	85.0	ug	85	2.1	SW846 8270C
Perylene	100	88.4	ug	88		SW846 8270C
	100	89.1	ug	89	0.78	SW846 8270C
Phenanthrene	100	86.0	ug	86		SW846 8270C
	100	87.8	ug	88	2.1	SW846 8270C
Phenol	100	83.6	ug	84		SW846 8270C
	100	85.9	ug	86	2.7	SW846 8270C
1,4-Phenylenediamine	100	10.8	ug	11		SW846 8270C
	100	12.8	ug	13	17	SW846 8270C
Pyrene	100	97.0	ug	97		SW846 8270C
	100	98.1	ug	98	1.1	SW846 8270C
o-Toluidine	100	89.5	ug	90		SW846 8270C
	100	90.0	ug	90	0.55	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
	61	(22 - 105)
Phenol-d5	80	(48 - 118)
	83	(48 - 118)
Nitrobenzene-d5	81	(43 - 110)
	83	(43 - 110)
2-Fluorobiphenyl	82	(48 - 111)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	84	(48 - 111)
2,4,6-Tribromophenol	95	(34 - 125)
	98	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Sample Data Summary

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-001	Work Order #...:	MK5C33AC	Matrix.....:	AIR
Date Sampled...:	07/14/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2500	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	620000	50000	ng/sample	12000
Acenaphthylene	74000	50000	ng/sample	6000
Anthracene	940000	25000	ng/sample	9500
Benzo(a)anthracene	93000	25000	ng/sample	9500
Benzo(b)fluoranthene	ND	250000	ng/sample	75000
Benzo(k)fluoranthene	ND	250000	ng/sample	110000
Benzo(ghi)perylene	47000	25000	ng/sample	13000
Benzo(a)pyrene	110000	25000	ng/sample	7200
Benzo(e)pyrene	79000	25000	ng/sample	14000
Chrysene	120000	25000	ng/sample	6200
Dibenz(a,h)anthracene	19000 J	25000	ng/sample	9800
Fluoranthene	100000	25000	ng/sample	16000
Fluorene	1400000	25000	ng/sample	10000
Indeno(1,2,3-cd)pyrene	19000 J	25000	ng/sample	6500
2-Methylnaphthalene	15000000 E	120000	ng/sample	52000
Naphthalene	10000000 E	1000000	ng/sample	620000
Perylene	12000 J	25000	ng/sample	7800
Phenanthrene	2200000	75000	ng/sample	60000
Pyrene	370000	150000	ng/sample	90000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	104	(30 - 120)
Naphthalene-d8	99	(30 - 120)
2-Methylnaphthalene-d10	104	(30 - 120)
Acenaphthylene-d8	115	(30 - 120)
Phenanthrene-d10	93	(30 - 120)
Fluoranthene-d10	109	(30 - 120)
Benzo(a)anthracene-d12	136 *	(30 - 120)
Chrysene-d12	92	(30 - 120)
Benzo(b)fluoranthene-d12	112	(30 - 120)
Benzo(k)fluoranthene-d12	89	(30 - 120)
Benzo(a)pyrene-d12	102	(30 - 120)
Perylene-d12	93	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	104	(30 - 120)
Dibenz(ah)anthracene-d14	103	(30 - 120)
Benzo(ghi)perylene-d12	99	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-001	Work Order #...:	MK5C33AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-002	Work Order #...:	MK5C53AC	Matrix.....:	AIR
Date Sampled...:	07/15/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	5000	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	690000	100000	ng/sample	24000
Acenaphthylene	68000 J	100000	ng/sample	12000
Anthracene	740000	50000	ng/sample	19000
Benzo(a)anthracene	340000	50000	ng/sample	19000
Benzo(b)fluoranthene	150000 J	500000	ng/sample	150000
Benzo(k)fluoranthene	ND	500000	ng/sample	220000
Benzo(ghi)perylene	180000	50000	ng/sample	26000
Benzo(a)pyrene	350000	50000	ng/sample	14000
Benzo(e)pyrene	260000	50000	ng/sample	28000
Chrysene	370000	50000	ng/sample	12000
Dibenz(a,h)anthracene	75000	50000	ng/sample	20000
Fluoranthene	120000	50000	ng/sample	32000
Fluorene	1200000	50000	ng/sample	20000
Indeno(1,2,3-cd)pyrene	59000	50000	ng/sample	13000
2-Methylnaphthalene	24000000 E	250000	ng/sample	100000
Naphthalene	14000000 E	2000000	ng/sample	1200000
Perylene	19000 J	50000	ng/sample	16000
Phenanthrene	1900000	150000	ng/sample	120000
Pyrene	500000	300000	ng/sample	180000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	97	(30 - 120)
Naphthalene-d8	95	(30 - 120)
2-Methylnaphthalene-d10	98	(30 - 120)
Acenaphthylene-d8	103	(30 - 120)
Phenanthrene-d10	95	(30 - 120)
Fluoranthene-d10	103	(30 - 120)
Benzo(a)anthracene-d12	131 *	(30 - 120)
Chrysene-d12	95	(30 - 120)
Benzo(b)fluoranthene-d12	109	(30 - 120)
Benzo(k)fluoranthene-d12	89	(30 - 120)
Benzo(a)pyrene-d12	98	(30 - 120)
Perylene-d12	86	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	104	(30 - 120)
Dibenz(ah)anthracene-d14	104	(30 - 120)
Benzo(ghi)perylene-d12	100	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-002	Work Order #...:	MK5C53AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-003	Work Order #...:	MK5C63AC	Matrix.....:	AIR
Date Sampled...:	07/17/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	1000	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	720000	20000	ng/sample	4900
Acenaphthylene	100000	20000	ng/sample	2400
Anthracene	1900000	10000	ng/sample	3800
Benzo(a)anthracene	190000	10000	ng/sample	3800
Benzo(b)fluoranthene	ND	100000	ng/sample	30000
Benzo(k)fluoranthene	ND	100000	ng/sample	43000
Benzo(ghi)perylene	24000	10000	ng/sample	5100
Benzo(a)pyrene	65000	10000	ng/sample	2900
Benzo(e)pyrene	42000	10000	ng/sample	5600
Chrysene	210000	10000	ng/sample	2500
Dibenz(a,h)anthracene	9700 J	10000	ng/sample	3900
Fluoranthene	240000	10000	ng/sample	6400
Fluorene	2600000 E	10000	ng/sample	4100
Indeno(1,2,3-cd)pyrene	8400 J	10000	ng/sample	2600
2-Methylnaphthalene	8800000 E	50000	ng/sample	21000
Naphthalene	5900000 E	400000	ng/sample	250000
Perylene	3200 J	10000	ng/sample	3100
Phenanthrene	3800000 E	30000	ng/sample	24000
Pyrene	820000	60000	ng/sample	36000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	96	(30 - 120)
Naphthalene-d8	98	(30 - 120)
2-Methylnaphthalene-d10	99	(30 - 120)
Acenaphthylene-d8	116	(30 - 120)
Phenanthrene-d10	88	(30 - 120)
Fluoranthene-d10	105	(30 - 120)
Benzo(a)anthracene-d12	134 *	(30 - 120)
Chrysene-d12	87	(30 - 120)
Benzo(b)fluoranthene-d12	111	(30 - 120)
Benzo(k)fluoranthene-d12	87	(30 - 120)
Benzo(a)pyrene-d12	100	(30 - 120)
Perylene-d12	92	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	103	(30 - 120)
Dibenz(ah)anthracene-d14	102	(30 - 120)
Benzo(ghi)perylene-d12	99	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-003	Work Order #...:	MK5C63AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-004	**Work Order #...:**	MK5C71AC	**Matrix.....:**	AIR
Date Sampled...:	07/17/11	**Date Received..:**	07/23/2011		
Prep Date.....:	07/26/11	**Analysis Date..:**	08/03/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	**Method.....:**	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**58**	**40**	ng/sample	9.8
Acenaphthylene	**7.6 J**	**40**	ng/sample	4.8
Anthracene	**170**	**20**	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	**6.5 J**	**20**	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	**32**	**20**	ng/sample	13
Fluorene	**220**	**20**	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	**1400**	**100**	ng/sample	42
Naphthalene	**620 J**	**800**	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	**500**	**60**	ng/sample	48
Pyrene	**120**	**120**	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	99	(50 - 150)
Terphenyl-d14	104	(50 - 150)
13C6-Fluorene	97	(50 - 150)
Anthracene-d10	92	(30 - 120)
Naphthalene-d8	85	(30 - 120)
2-Methylnaphthalene-d10	91	(30 - 120)
Acenaphthylene-d8	105	(30 - 120)
Phenanthrene-d10	82	(30 - 120)
Fluoranthene-d10	95	(30 - 120)
Benzo(a)anthracene-d12	133 *	(30 - 120)
Chrysene-d12	87	(30 - 120)
Benzo(b)fluoranthene-d12	108	(30 - 120)
Benzo(k)fluoranthene-d12	87	(30 - 120)
Benzo(a)pyrene-d12	105	(30 - 120)
Perylene-d12	102	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	108	(30 - 120)
Dibenz(ah)anthracene-d14	106	(30 - 120)
Benzo(ghi)perylene-d12	101	(30 - 120)

NOTE(S):

1 13C6-anthracene recovery = 81 %

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...:	H1G250406				
MB Lot-Sample #:	H1G260000-014	**Work Order #...:**	MK51E1AA	**Matrix.....:**	AIR
Prep Date.....:	07/26/11	**Analysis Date..:**	08/03/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	**Method.....:**	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	40	ng/sample	9.8
Acenaphthylene	ND	40	ng/sample	4.8
Anthracene	ND	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	ND	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	ND	20	ng/sample	13
Fluorene	ND	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	ND	100	ng/sample	42
Naphthalene	ND	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	ND	60	ng/sample	48
Pyrene	ND	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	100	(60 - 140)
Naphthalene-d8	88	(60 - 140)
2-Methylnaphthalene-d10	94	(60 - 140)
Acenaphthylene-d8	109	(60 - 140)
Phenanthrene-d10	87	(60 - 140)
Fluoranthene-d10	100	(60 - 140)
Benzo(a)anthracene-d12	135	(60 - 140)
Chrysene-d12	93	(60 - 140)
Benzo(b)fluoranthene-d12	110	(60 - 140)
Benzo(k)fluoranthene-d12	82	(60 - 140)
Benzo(a)pyrene-d12	105	(60 - 140)
Perylene-d12	101	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	108	(60 - 140)
Dibenz(ah)anthracene-d14	106	(60 - 140)
Benzo(ghi)perylene-d12	101	(60 - 140)

NOTE(S):

1 13C6-anthracene recovery = 85 %

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/03/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	90	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	2.2	(0-25)	KNOX ID-0016
Acenaphthylene	91	(60 - 140)			KNOX ID-0016
	93	(60 - 140)	1.7	(0-25)	KNOX ID-0016
Anthracene	86	(60 - 140)			KNOX ID-0016
	90	(60 - 140)	4.6	(0-25)	KNOX ID-0016
Benzo(a)anthracene	80	(60 - 140)			KNOX ID-0016
	81	(60 - 140)	1.5	(0-25)	KNOX ID-0016
Benzo(b)fluoranthene	82	(60 - 140)			KNOX ID-0016
	83	(60 - 140)	1.9	(0-25)	KNOX ID-0016
Benzo(k)fluoranthene	105	(60 - 140)			KNOX ID-0016
	107	(60 - 140)	1.5	(0-25)	KNOX ID-0016
Benzo(ghi)perylene	96	(60 - 140)			KNOX ID-0016
	97	(60 - 140)	1.2	(0-25)	KNOX ID-0016
Benzo(a)pyrene	96	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	2.1	(0-25)	KNOX ID-0016
Benzo(e)pyrene	89	(60 - 140)			KNOX ID-0016
	90	(60 - 140)	1.8	(0-25)	KNOX ID-0016
Chrysene	103	(60 - 140)			KNOX ID-0016
	104	(60 - 140)	1.2	(0-25)	KNOX ID-0016
Dibenz(a,h)anthracene	95	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	2.9	(0-25)	KNOX ID-0016
Fluoranthene	94	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	0.85	(0-25)	KNOX ID-0016
Fluorene	101	(60 - 140)			KNOX ID-0016
	103	(60 - 140)	2.0	(0-25)	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	91	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	0.87	(0-25)	KNOX ID-0016
2-Methylnaphthalene	105	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	2.6	(0-25)	KNOX ID-0016
Naphthalene	106	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	0.93	(0-25)	KNOX ID-0016
Perylene	86	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	13	(0-25)	KNOX ID-0016
Phenanthrene	104	(60 - 140)			KNOX ID-0016
	104	(60 - 140)	0.76	(0-25)	KNOX ID-0016
Pyrene	91	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	1.3	(0-25)	KNOX ID-0016

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	98	(60 - 140)
	95	(60 - 140)
Naphthalene-d8	90	(60 - 140)
	89	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
	95	(60 - 140)
Acenaphthylene-d8	110	(60 - 140)
	109	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	102	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	138	(60 - 140)
	136	(60 - 140)
Chrysene-d12	94	(60 - 140)
	92	(60 - 140)
Benzo(b)fluoranthene-d12	114	(60 - 140)
	112	(60 - 140)
Benzo(k)fluoranthene-d12	90	(60 - 140)
	89	(60 - 140)
Benzo(a)pyrene-d12	108	(60 - 140)
	105	(60 - 140)
Perylene-d12	102	(60 - 140)
	98	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	111	(60 - 140)
	110	(60 - 140)
Dibenz(ah)anthracene-d14	109	(60 - 140)
	108	(60 - 140)
Benzo(ghi)perylene-d12	104	(60 - 140)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/03/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	250	225	ng/sample	90		KNOX ID-0016
	250	230	ng/sample	92	2.2	KNOX ID-0016
Acenaphthylene	250	228	ng/sample	91		KNOX ID-0016
	250	232	ng/sample	93	1.7	KNOX ID-0016
Anthracene	250	214	ng/sample	86		KNOX ID-0016
	250	224	ng/sample	90	4.6	KNOX ID-0016
Benzo(a)anthracene	250	199	ng/sample	80		KNOX ID-0016
	250	202	ng/sample	81	1.5	KNOX ID-0016
Benzo(b)fluoranthene	250	204	ng/sample	82		KNOX ID-0016
	250	208	ng/sample	83	1.9	KNOX ID-0016
Benzo(k)fluoranthene	250	263	ng/sample	105		KNOX ID-0016
	250	267	ng/sample	107	1.5	KNOX ID-0016
Benzo(ghi)perylene	250	240	ng/sample	96		KNOX ID-0016
	250	243	ng/sample	97	1.2	KNOX ID-0016
Benzo(a)pyrene	250	239	ng/sample	96		KNOX ID-0016
	250	244	ng/sample	98	2.1	KNOX ID-0016
Benzo(e)pyrene	250	222	ng/sample	89		KNOX ID-0016
	250	226	ng/sample	90	1.8	KNOX ID-0016
Chrysene	250	257	ng/sample	103		KNOX ID-0016
	250	260	ng/sample	104	1.2	KNOX ID-0016
Dibenz(a,h)anthracene	250	237	ng/sample	95		KNOX ID-0016
	250	244	ng/sample	98	2.9	KNOX ID-0016
Fluoranthene	250	234	ng/sample	94		KNOX ID-0016
	250	236	ng/sample	94	0.85	KNOX ID-0016
Fluorene	250	253	ng/sample	101		KNOX ID-0016
	250	258	ng/sample	103	2.0	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	250	228	ng/sample	91		KNOX ID-0016
	250	230	ng/sample	92	0.87	KNOX ID-0016
2-Methylnaphthalene	250	263	ng/sample	105		KNOX ID-0016
	250	270	ng/sample	108	2.6	KNOX ID-0016
Naphthalene	2000	2130	ng/sample	106		KNOX ID-0016
	2000	2150	ng/sample	108	0.93	KNOX ID-0016
Perylene	250	216	ng/sample	86		KNOX ID-0016
	250	246	ng/sample	98	13	KNOX ID-0016
Phenanthrene	250	259	ng/sample	104		KNOX ID-0016
	250	261	ng/sample	104	0.76	KNOX ID-0016
Pyrene	250	228	ng/sample	91		KNOX ID-0016
	250	231	ng/sample	92	1.3	KNOX ID-0016

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	98	(60 - 140)
	95	(60 - 140)
Naphthalene-d8	90	(60 - 140)
	89	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
	95	(60 - 140)
Acenaphthylene-d8	110	(60 - 140)
	109	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	102	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	138	(60 - 140)
	136	(60 - 140)
Chrysene-d12	94	(60 - 140)
	92	(60 - 140)
Benzo(b)fluoranthene-d12	114	(60 - 140)
	112	(60 - 140)
Benzo(k)fluoranthene-d12	90	(60 - 140)
	89	(60 - 140)
Benzo(a)pyrene-d12	108	(60 - 140)
	105	(60 - 140)
Perylene-d12	102	(60 - 140)
	98	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	111	(60 - 140)
	110	(60 - 140)
Dibenz(ah)anthracene-d14	109	(60 - 140)
	108	(60 - 140)
Benzo(ghi)perylene-d12	104	(60 - 140)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...:	H1G250406				
MB Lot-Sample #:	H1G260000-014	**Work Order #...:**	MK51E2AA	**Matrix.....:**	AIR
Prep Date.....:	07/26/11	**Analysis Date..:**	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	**Method.....:**	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	40	ng/sample	9.8
Acenaphthylene	ND	40	ng/sample	4.8
Anthracene	ND	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	ND	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	ND	20	ng/sample	13
Fluorene	ND	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	ND	100	ng/sample	42
Naphthalene	ND	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	ND	60	ng/sample	48
Pyrene	ND	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	92	(60 - 140)
Naphthalene-d8	92	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
Acenaphthylene-d8	95	(60 - 140)
Phenanthrene-d10	90	(60 - 140)
Fluoranthene-d10	99	(60 - 140)
Benzo(a)anthracene-d12	128	(60 - 140)
Chrysene-d12	102	(60 - 140)
Benzo(b)fluoranthene-d12	109	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
Benzo(a)pyrene-d12	94	(60 - 140)
Perylene-d12	86	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	99	(60 - 140)
Dibenz(ah)anthracene-d14	98	(60 - 140)
Benzo(ghi)perylene-d12	95	(60 - 140)

NOTE(S):

1 13C6-anthracene recovery = 91 %

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/14/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	98	(60 - 140)			KNOX ID-0016
	101	(60 - 140)	2.4	(0-25)	KNOX ID-0016
Acenaphthylene	95	(60 - 140)			KNOX ID-0016
	96	(60 - 140)	0.84	(0-25)	KNOX ID-0016
Anthracene	92	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	0.87	(0-25)	KNOX ID-0016
Benzo(a)anthracene	82	(60 - 140)			KNOX ID-0016
	83	(60 - 140)	1.4	(0-25)	KNOX ID-0016
Benzo(b)fluoranthene	84	(60 - 140)			KNOX ID-0016
	84	(60 - 140)	0.47	(0-25)	KNOX ID-0016
Benzo(k)fluoranthene	105	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	2.2	(0-25)	KNOX ID-0016
Benzo(ghi)perylene	93	(60 - 140)			KNOX ID-0016
	93	(60 - 140)	0.0	(0-25)	KNOX ID-0016
Benzo(a)pyrene	95	(60 - 140)			KNOX ID-0016
	101	(60 - 140)	5.7	(0-25)	KNOX ID-0016
Benzo(e)pyrene	92	(60 - 140)			KNOX ID-0016
	96	(60 - 140)	4.7	(0-25)	KNOX ID-0016
Chrysene	102	(60 - 140)			KNOX ID-0016
	105	(60 - 140)	2.3	(0-25)	KNOX ID-0016
Dibenz(a,h)anthracene	93	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	1.7	(0-25)	KNOX ID-0016
Fluoranthene	95	(60 - 140)			KNOX ID-0016
	95	(60 - 140)	0.0	(0-25)	KNOX ID-0016
Fluorene	101	(60 - 140)			KNOX ID-0016
	102	(60 - 140)	1.6	(0-25)	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	87	(60 - 140)			KNOX ID-0016
	88	(60 - 140)	0.91	(0-25)	KNOX ID-0016
2-Methylnaphthalene	107	(60 - 140)			KNOX ID-0016
	110	(60 - 140)	2.6	(0-25)	KNOX ID-0016
Naphthalene	109	(60 - 140)			KNOX ID-0016
	111	(60 - 140)	1.8	(0-25)	KNOX ID-0016
Perylene	93	(60 - 140)			KNOX ID-0016
	103	(60 - 140)	10	(0-25)	KNOX ID-0016
Phenanthrene	106	(60 - 140)			KNOX ID-0016
	106	(60 - 140)	0.37	(0-25)	KNOX ID-0016
Pyrene	93	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	0.42	(0-25)	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AE-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	94	(60 - 140)
	91	(60 - 140)
Naphthalene-d8	94	(60 - 140)
	92	(60 - 140)
2-Methylnaphthalene-d10	98	(60 - 140)
	96	(60 - 140)
Acenaphthylene-d8	102	(60 - 140)
	101	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	101	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	139	(60 - 140)
	138	(60 - 140)
Chrysene-d12	104	(60 - 140)
	104	(60 - 140)
Benzo(b)fluoranthene-d12	112	(60 - 140)
	110	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
	93	(60 - 140)
Benzo(a)pyrene-d12	104	(60 - 140)
	100	(60 - 140)
Perylene-d12	100	(60 - 140)
	89	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	110	(60 - 140)
	109	(60 - 140)
Dibenz(ah)anthracene-d14	107	(60 - 140)
	105	(60 - 140)
Benzo(ghi)perylene-d12	102	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/14/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	250	246	ng/sample	98		KNOX ID-0016
	250	252	ng/sample	101	2.4	KNOX ID-0016
Acenaphthylene	250	237	ng/sample	95		KNOX ID-0016
	250	239	ng/sample	96	0.84	KNOX ID-0016
Anthracene	250	229	ng/sample	92		KNOX ID-0016
	250	231	ng/sample	92	0.87	KNOX ID-0016
Benzo(a)anthracene	250	205	ng/sample	82		KNOX ID-0016
	250	208	ng/sample	83	1.4	KNOX ID-0016
Benzo(b)fluoranthene	250	210	ng/sample	84		KNOX ID-0016
	250	209	ng/sample	84	0.47	KNOX ID-0016
Benzo(k)fluoranthene	250	263	ng/sample	105		KNOX ID-0016
	250	269	ng/sample	108	2.2	KNOX ID-0016
Benzo(ghi)perylene	250	232	ng/sample	93		KNOX ID-0016
	250	232	ng/sample	93	0.0	KNOX ID-0016
Benzo(a)pyrene	250	238	ng/sample	95		KNOX ID-0016
	250	252	ng/sample	101	5.7	KNOX ID-0016
Benzo(e)pyrene	250	229	ng/sample	92		KNOX ID-0016
	250	240	ng/sample	96	4.7	KNOX ID-0016
Chrysene	250	256	ng/sample	102		KNOX ID-0016
	250	262	ng/sample	105	2.3	KNOX ID-0016
Dibenz(a,h)anthracene	250	232	ng/sample	93		KNOX ID-0016
	250	236	ng/sample	94	1.7	KNOX ID-0016
Fluoranthene	250	238	ng/sample	95		KNOX ID-0016
	250	238	ng/sample	95	0.0	KNOX ID-0016
Fluorene	250	252	ng/sample	101		KNOX ID-0016
	250	256	ng/sample	102	1.6	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	250	218	ng/sample	87		KNOX ID-0016
	250	220	ng/sample	88	0.91	KNOX ID-0016
2-Methylnaphthalene	250	268	ng/sample	107		KNOX ID-0016
	250	275	ng/sample	110	2.6	KNOX ID-0016
Naphthalene	2000	2180	ng/sample	109		KNOX ID-0016
	2000	2220	ng/sample	111	1.8	KNOX ID-0016
Perylene	250	232	ng/sample	93		KNOX ID-0016
	250	257	ng/sample	103	10	KNOX ID-0016
Phenanthrene	250	265	ng/sample	106		KNOX ID-0016
	250	266	ng/sample	106	0.37	KNOX ID-0016
Pyrene	250	233	ng/sample	93		KNOX ID-0016
	250	234	ng/sample	94	0.42	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51E1AE-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	94	(60 - 140)
	91	(60 - 140)
Naphthalene-d8	94	(60 - 140)
	92	(60 - 140)
2-Methylnaphthalene-d10	98	(60 - 140)
	96	(60 - 140)
Acenaphthylene-d8	102	(60 - 140)
	101	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	101	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	139	(60 - 140)
	138	(60 - 140)
Chrysene-d12	104	(60 - 140)
	104	(60 - 140)
Benzo(b)fluoranthene-d12	112	(60 - 140)
	110	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
	93	(60 - 140)
Benzo(a)pyrene-d12	104	(60 - 140)
	100	(60 - 140)
Perylene-d12	100	(60 - 140)
	89	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	110	(60 - 140)
	109	(60 - 140)
Dibenz(ah)anthracene-d14	107	(60 - 140)
	105	(60 - 140)
Benzo(ghi)perylene-d12	102	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Sample Receipt Documentation

CHAIN OF CUSTODY RECORD

H162307406

Project Name: ExxonMobil DCU ICR

Box No.:

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Test America

Laboratory P.O.:

Shipping Date(s): 7/21/2011

Shipper's Name: Randall Monson

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M0010-R1-FHR 7-14		250 amber glass	Organic	run 1	M 0010	
EXM-DCU-M0010-R1-FIL		petri dish	Filter	run 1	M 0010	
EXM-DCU-M0010-R1-BHR		500 amber glass	Organic	run 1	M 0010	
EXM-DCU-M0010-R1-XAD		xad	XAD	run 1	M 0010	
EXM-DCU-M0010-R1-COND		500 ml glass amber	Aqueous	run 1	M 0010	
EXM-DCU-M0010-R2-FHR 7-15		250 amber glass	Organic	run 2	M 0010	
EXM-DCU-M0010-R2-FIL		petri dish	Filter	run 2	M 0010	
EXM-DCU-M0010-R2-BHR		500 amber glass	Organic	run 2	M 0010	
EXM-DCU-M0010-R2-XAD		xad	XAD	run 2	M 0010	
EXM-DCU-M0010-R2-COND		500 ml glass amber	Aqueous	run 2	M 0010	
EXM-DCU-M0010-R3-FHR 7-17		250 amber glass	Organic	run 3	M 0010	
EXM-DCU-M0010-R3-FIL		petri dish	Filter	run 3	M 0010	
EXM-DCU-M0010-R3-BHR		500 amber glass	Organic	run 3	M 0010	REC. @ 1.6, 2.3°C
EXM-DCU-M0010-R3-XAD		xad	XAD	run 3	M 0010	NO CUSTODY SEALS
EXM-DCU-M0010-R3-COND		500 ml glass amber	Aqueous	run 3	M 0010	2 COOLERS RH 7/25/11
						FED EX # 482705378475
EXM-DCU-M0010-RGTBLK-XAD		250 amber glass	XAD	xad reagent blank	M 0010	795003588103
EXM-DCU-M0010-RGTBLK-rinse		250 amber glass	Orgganic	MeCl2/MeOH reagent blank	M 0010	

Relinquished by: Randall Monson	**Date/Time:** 7-22-11 1230	**Relinquished by:**	**Date/Time:**
Received by: Kyan Henry	**Date/Time:** 7/23/11 0930	**Received by:**	**Date/Time:**
Remarks (*):			

EMSTRL-COC-1.4

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H162S0406

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **1a** Do not match COC ☐ **1b** Incomplete information ☐ **1c** Marking smeared ☐ **1d** Label torn ☐ **1e** No label ☐ **1f** COC not received ☐ **1g** Other:	4a 5a - RECEIVED "... RGTBLK-FILT" NOT ON COC
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C)	✓			☐ **2a** Temp Blank = _____ ☐ **2b** Cooler Temp = _____ ☐ **2c** Cooling initiated for recently collected samples, ice present.	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **3a** Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☑ **4a** Not present ☐ **4b** Not intact ☐ **4c** Other:	
5. Were all of the samples listed on the COC received?	✓			☑ **5a** Samples received-not on COC ☐ **5b** Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ **6a** Leaking ☐ **6b** Broken	
7. Were VOA samples received without headspace?			✓	☐ **7a** Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ **8a** Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ **9a** Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ **10a** Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ **13a** Leaking ☐ **13b** Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **14a** Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ **15a** Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ **15a** Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ **15a** Incomplete information	
18. Is the client and project name/# identified?	✓			☐ **15a** Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 89094 PM Instructions: NA

Sample Receiving Associate: Ryan Henry Date: 7/25/11

QA026R22.doc, 012811

EM-BTRF-001785

Semivolatiles

Raw Sample Data

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001	**Work Order #...:** MK5C31AA	**Matrix.....:** AIR	
Date Sampled...: 07/14/11	**Date Received..:** 07/23/11		
Prep Date.....: 07/26/11	**Analysis Date..:** 08/04/11		
Prep Batch #...: 1207013			
Dilution Factor: 80	**Method.....:** SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**580 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**940**	**800**	**ug**	**260**
Benz(a)anthracene	ND	800	ug	250
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	**300 J**	**800**	**ug**	**300**
Benzo(e)pyrene	**73 J**	**800**	**ug**	**67**
Biphenyl	**330 J**	**800**	**ug**	**80**
Chrysene	ND	800	ug	250
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**240 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	ND	800	ug	54
3,3'-Dimethoxybenzidine	**1100 J**	**8000**	**ug**	**1100**
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**1200**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**25000 E**	**800**	**ug**	**230**
Naphthalene	**13000**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**1800**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**370 J**	**800**	**ug**	**280**
o-Toluidine	ND	800	ug	220

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001 **Work Order #...:** MK5C31AA **Matrix.....:** AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Report Date: 05-Aug-2011 11:03

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Lab Smp Id: MK5C31AA Client Smp ID: EXM-DCU-M0010-R1-CO
Inj Date : 04-AUG-2011 15:18
Operator : 60487 Inst ID: md.i
Smp Info : MK5C31AA,20,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 9
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56355	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	230198	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	147068	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	275387	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	280733	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	265640	20.0000	20.0
$ 7 2-Fluorophenol	112	3.144	3.132	(0.731)	10463	3.36321	~~269(R)~~
$ 8 Phenol-d5	99	3.937	3.937	(0.915)	5805	1.55624	~~124~~
$ 9 Nitrobenzene-d5	82	4.924	4.930	(0.836)	4581	1.24899	~~99.9~~
$ 11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	1113	1.01033	~~80.8~~
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	9906	1.07679	~~86.1~~
$ 179 13C6-naphthalene	134	5.888	5.917	(1.000)	22992	1.83799	~~147~~
15 Phenol (ccc)	94	3.949	3.949	(0.918)	3414	0.89004	71.2

KRM 8/15/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Report Date: 05-Aug-2011 11:03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
16 Aniline	93	3.937	3.978	(0.915)	5120	1.07695	~~86.2~~
23 2-Methylphenol	108	4.571	4.571	(1.063)	3854	1.27136	102
26 3&4 Methylphenol	108	4.754	4.754	(1.105)	2971	0.95053	76.0
M 204 total cresols (methylphenols)	108				6825	2.22188	178
95 o-toluidine	106	4.783	4.789	(1.112)	5884	1.13494	90.8 <MDL
29 Nitrobenzene	77	4.953	4.953	(0.841)	8873	2.46907	~~198~~
30 Isophorone	82	5.412	5.271	(0.919)	6935	1.17342	~~93.9~~
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	5870	1.52015	~~122~~ ok
199 Phentermine	58	5.682	5.664	(0.965)	3402	6.22050	~~498~~
37 Naphthalene	128	5.923	5.923	(1.006)	1799031	163.095	13000
202 1,4-Phenylenediamine	108	6.499	6.504	(1.104)	244	6.26970	~~502~~
41 2-Methylnaphthalene	142	6.945	6.933	(1.180)	2356047	315.779	25300(A) E
188 1,1'-Biphenyl	154	7.732	7.738	(0.911)	48081	4.12590	330
47 Acenaphthylene	152	8.320	8.308	(0.981)	13743	1.09554	87.6
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	60025	7.23152	578
53 Dibenzofuran	168	8.720	8.720	(1.028)	35428	3.06263	245
56 Fluorene	166	9.072	9.078	(1.069)	145789	15.2219	1220
66 Phenanthrene	178	9.912	9.912	(1.002)	333798	22.6258	1810
67 Anthracene	178	9.953	9.953	(1.006)	168404	11.7656	941
70 Fluoranthene (ccc)	202	10.782	10.782	(1.090)	20156	1.32574	106
84 Benzidine	184	10.758	10.870	(1.087)	5257	0.54528	~~43.6~~
71 Pyrene	202	10.941	10.941	(0.918)	74351	4.67669	374
200 3,3'-Dimethoxybenzidine	244	11.857	11.851	(0.995)	5105	13.5261	1080
73 Benzo(a)Anthracene	228	11.910	11.916	(0.999)	20171	1.44912	116
75 Chrysene	228	11.945	11.951	(1.002)	20455	1.37754	110
119 7,12-dimethylbenz(a)anthracen	256	13.226	13.220	(1.109)	495	5.22015	~~418~~
85 Benzo(e)pyrene	252	13.661	13.673	(0.986)	12148	0.91071	72.8
80 Benzo(a)pyrene (ccc)	252	13.743	13.755	(0.992)	15764	3.78422	303
196 Perylene	252	13.914	13.902	(1.005)	216	0.01611	~~1.29~~
120 3-methylcholanthrene	268	14.348	14.366	(1.036)	216	6.69157	~~535~~
82 Dibenz(a,h)anthracene	278	15.500	15.347	(1.119)	7361	0.61802	49.4
83 Benzo(g,h,i)perylene	276	15.641	15.653	(1.129)	7592	0.59101	47.3
201 Dibenzo(a,e)pyrene	302	17.991	17.991	(1.299)	383	4.23653	~~339~~

QC Flag Legend

KRM 8/5/11

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Report Date: 05-Aug-2011 11:03

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c31aa.d
Lab Smp Id: MK5C31AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-R1-CO
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	56355	4.58
2 Naphthalene-d8	216727	108364	433454	230198	6.22
3 Acenaphthene-d10	132541	66270	265082	147068	10.96
4 Phenanthrene-d10	256755	128378	513510	275387	7.26
5 Chrysene-d12	266546	133273	533092	280733	5.32
6 Perylene-d12	235464	117732	470928	265640	12.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

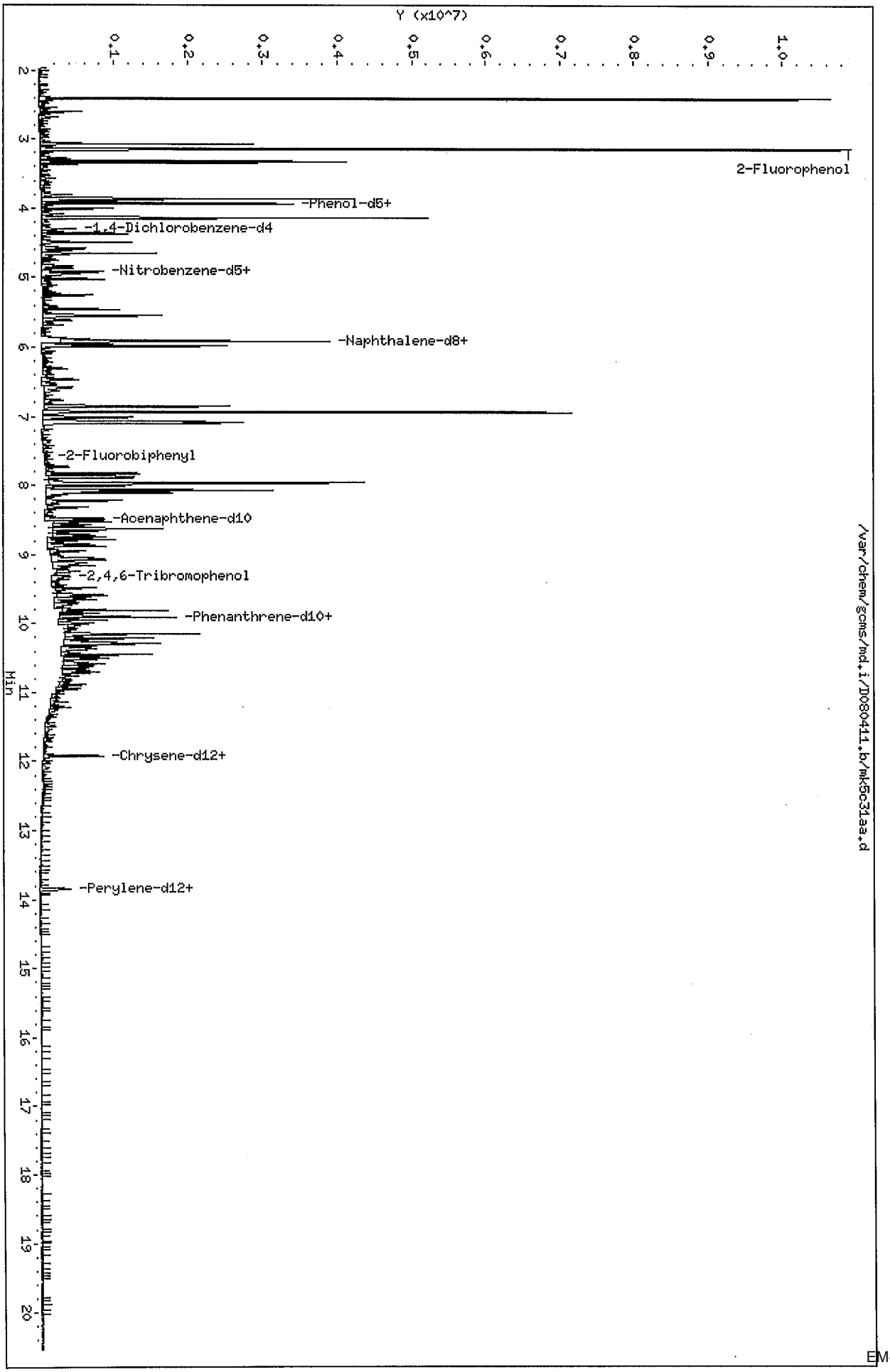
Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Report Date: 05-Aug-2011 11:03

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C31AA Client Smp ID: EXM-DCU-M0010-R1-CO
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	269	179.37*	19-100
$ 8 Phenol-d5	150	124	83.00	15-124
$ 9 Nitrobenzene-d5	100	99.9	99.92	42-104
$ 11 2,4,6-Tribromophen	150	80.8	53.88	33-130
$ 10 2-Fluorobiphenyl	100	86.1	86.14	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	147	73.52	50-150


Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Date : 04-AUG-2011 15:18
Client ID: EXH-DCU-M0010-R1-CO
Sample Info: MK5C31AA,20,0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk5c31aa.d
Y (x10^7)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Min
2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

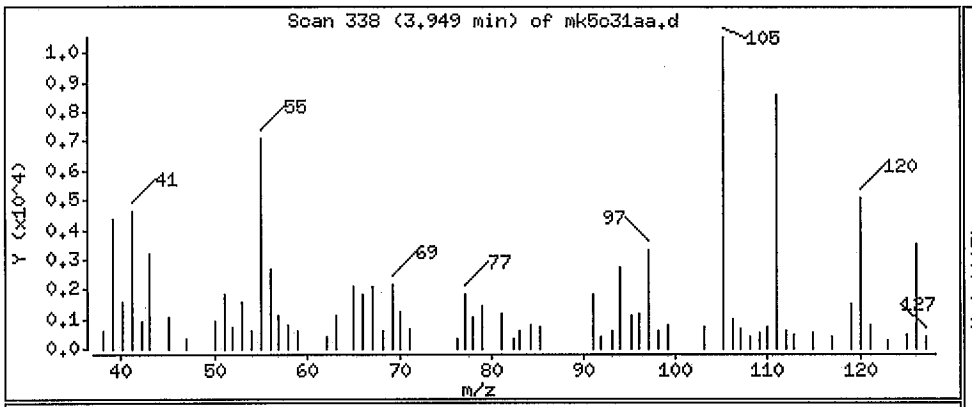
Operator: 60487

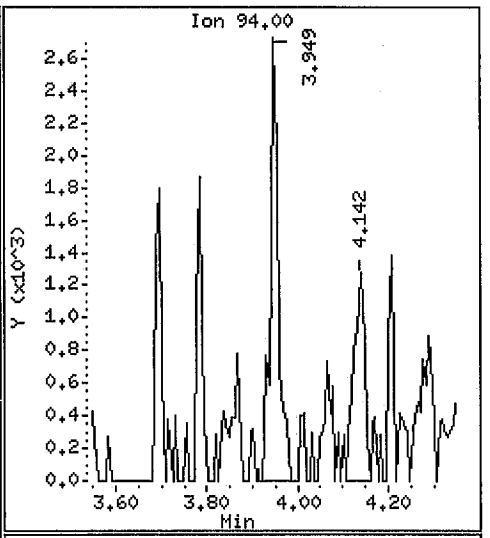
Column phase: Rxi-5 Sil MS

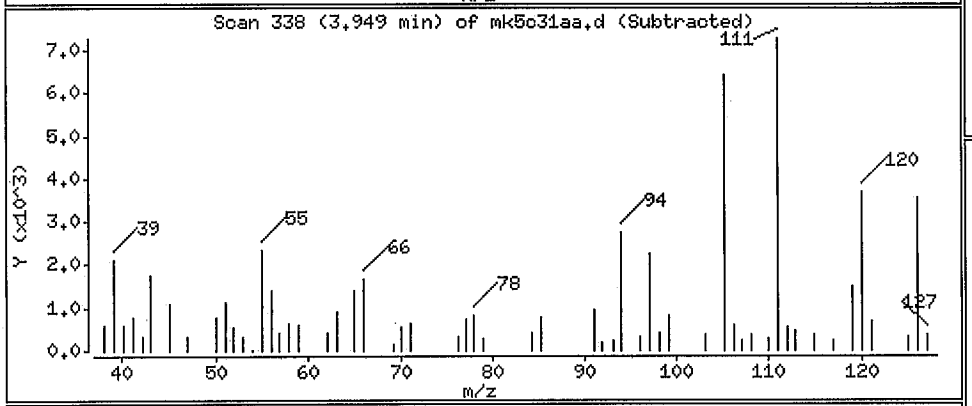
Column diameter: 0.25

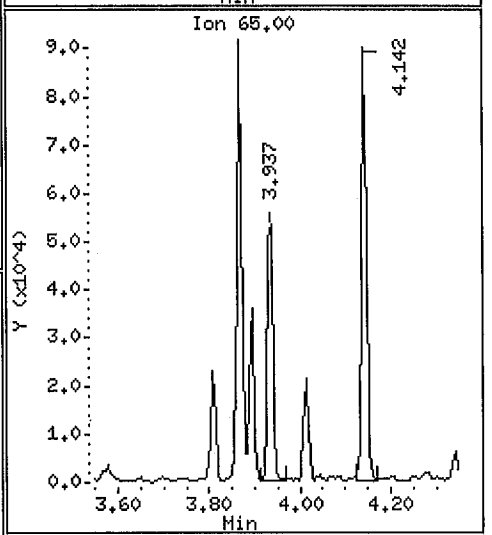
15 Phenol (ccc)

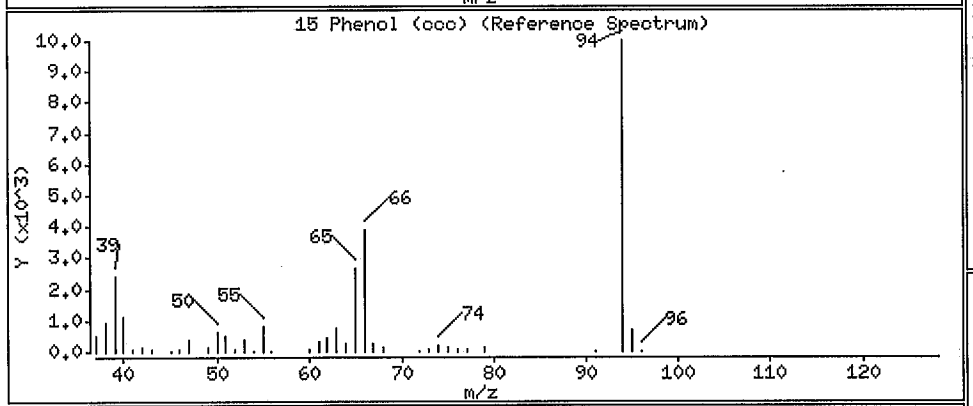
Concentration: 71.2 ug

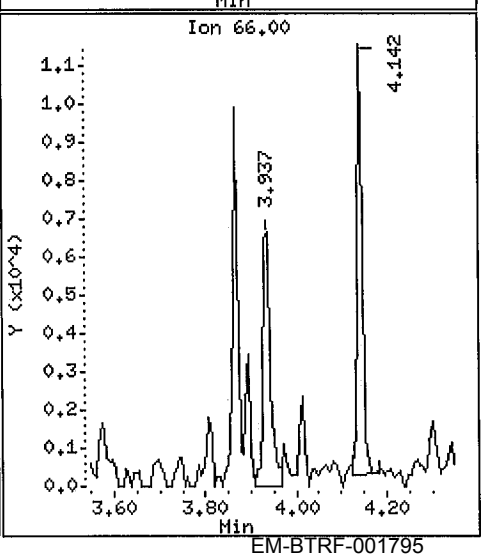


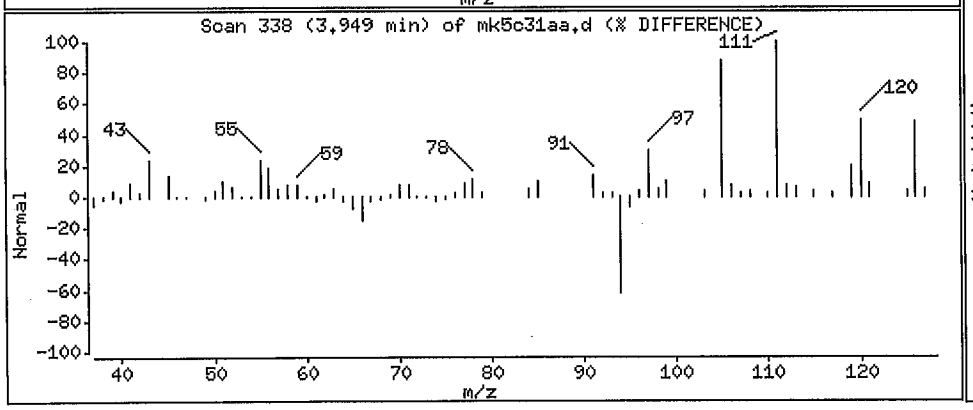












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

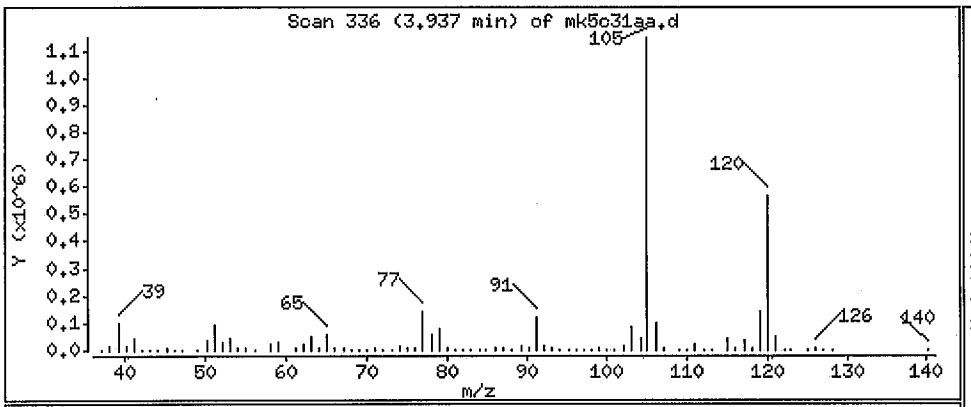
Operator: 60487

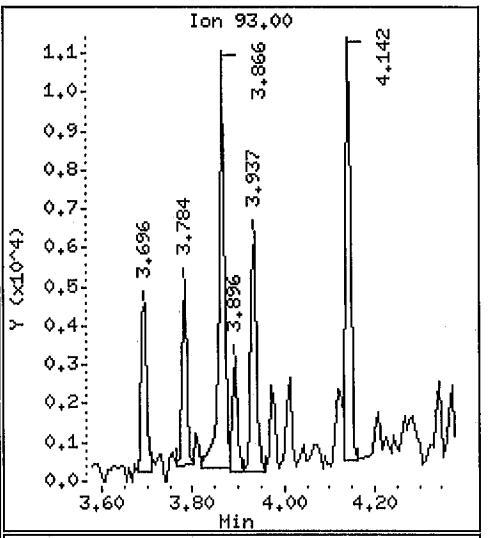
Column phase: Rxi-5 Sil MS

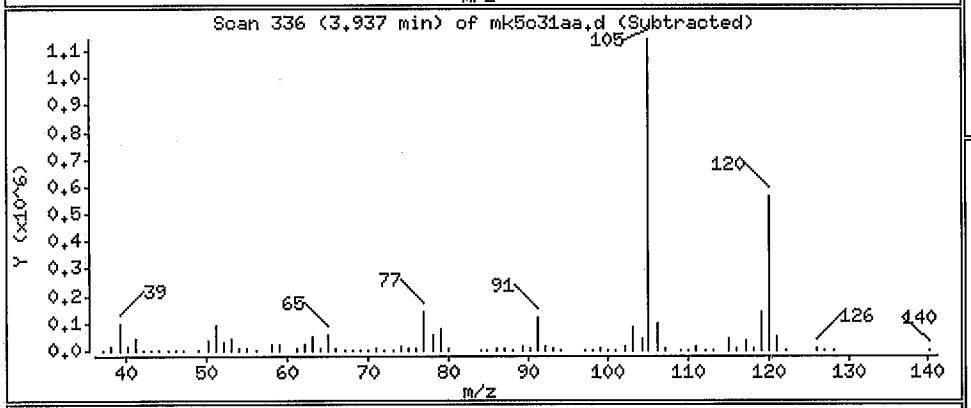
Column diameter: 0.25

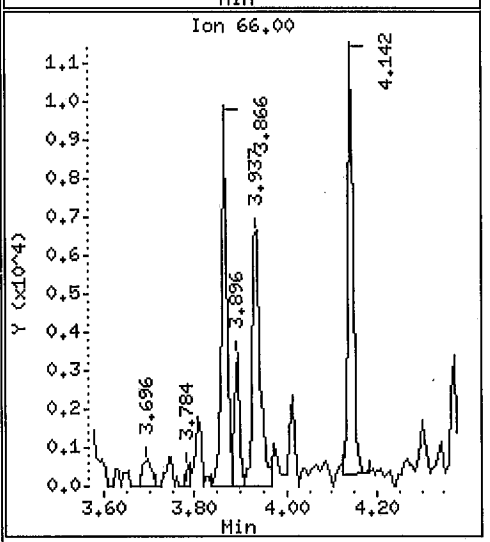
16 Aniline

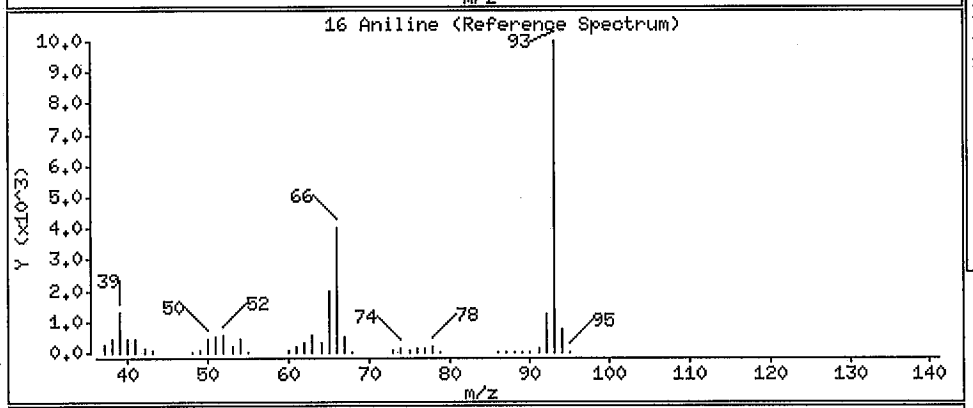
Concentration: 86.2 ug

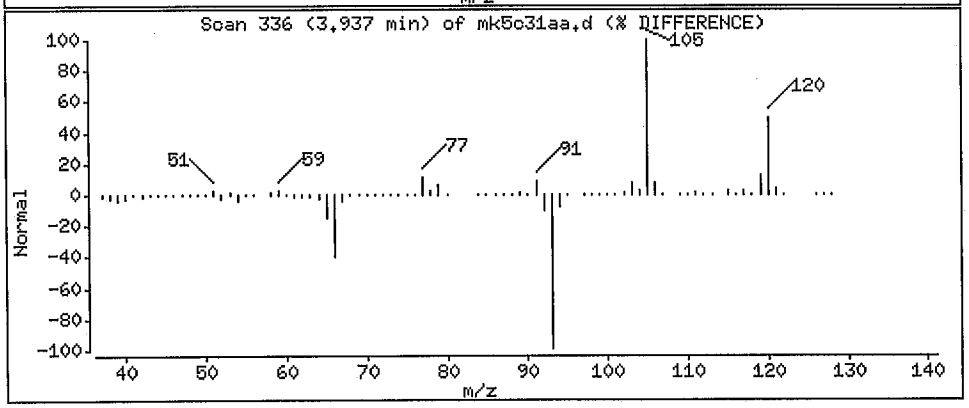












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

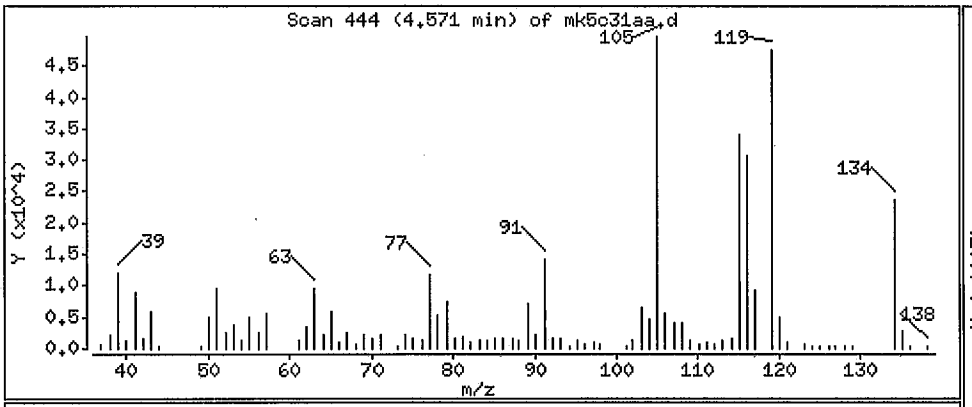
Operator: 60487

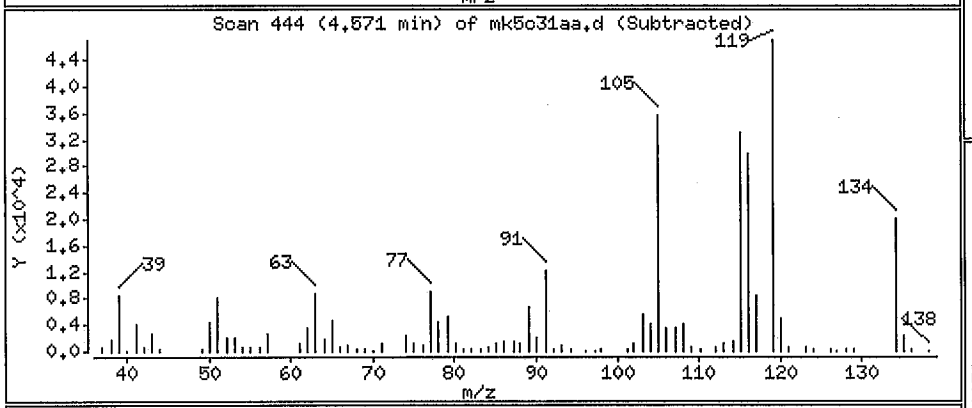
Column phase: Rxi-5 Sil MS

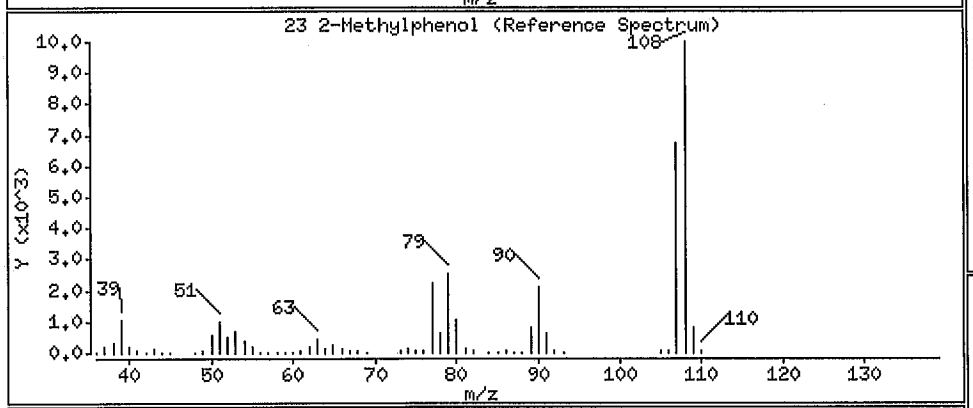
Column diameter: 0.25

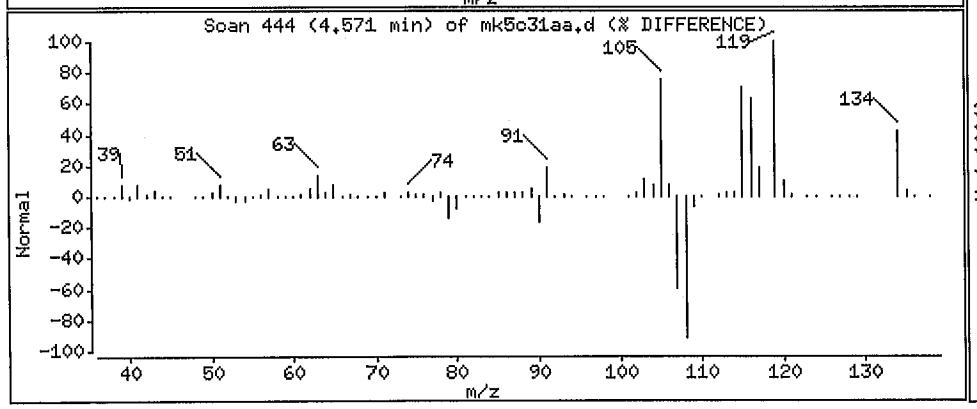
23 2-Methylphenol

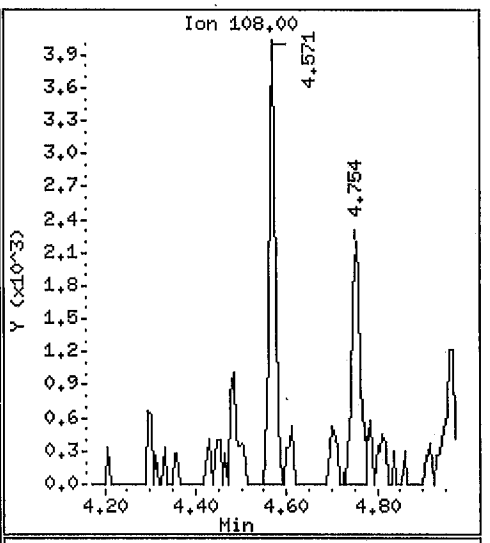
Concentration: 102 ug

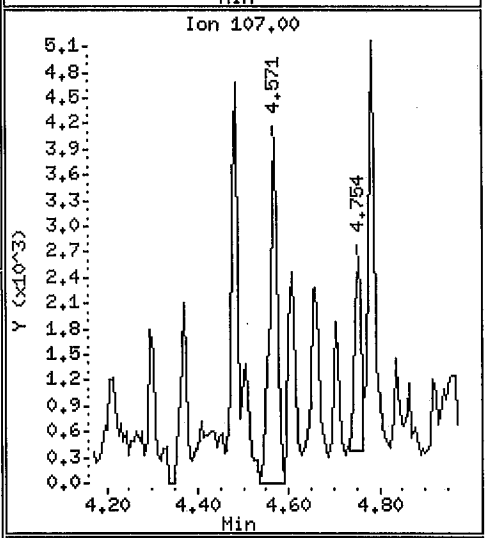


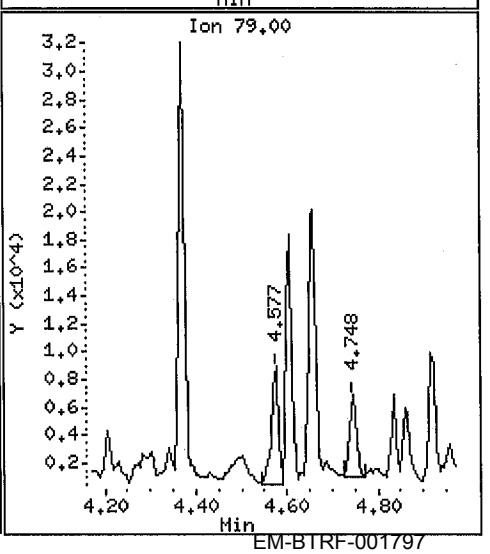












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

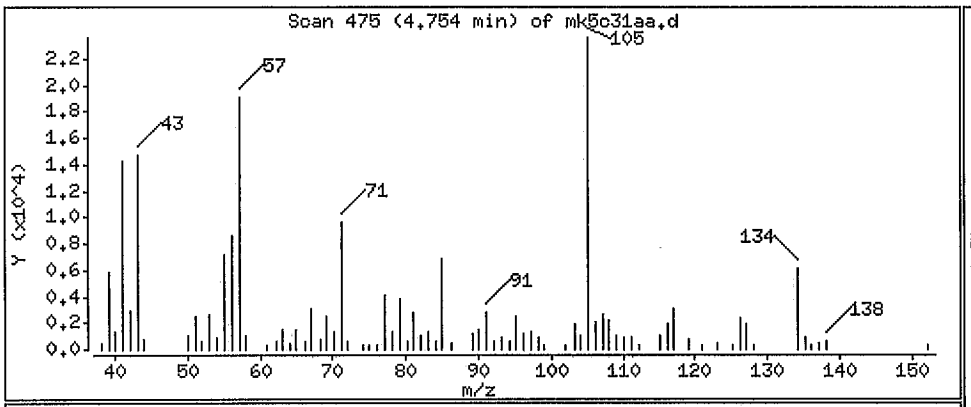
Operator: 60487

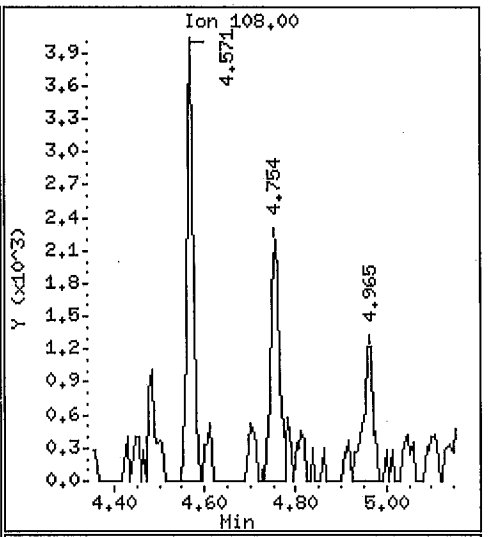
Column phase: Rxi-5 Sil MS

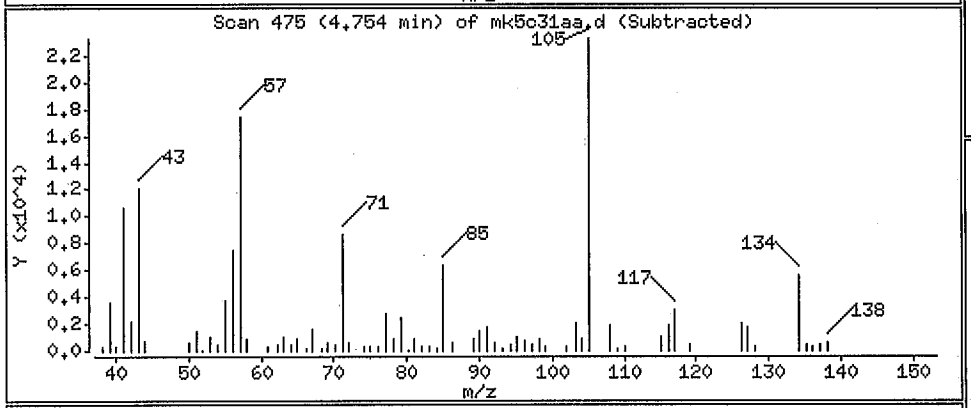
Column diameter: 0.25

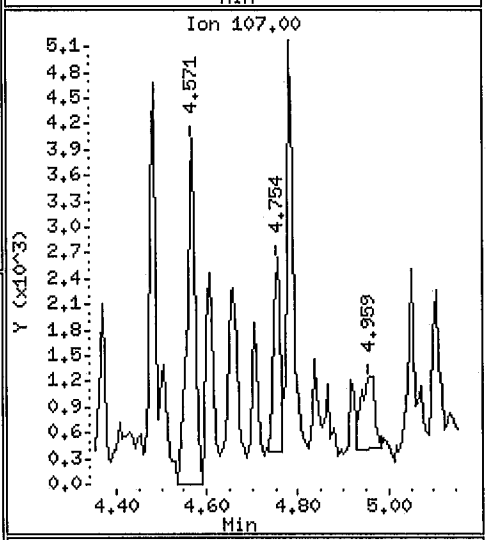
26 3&4 Methylphenol

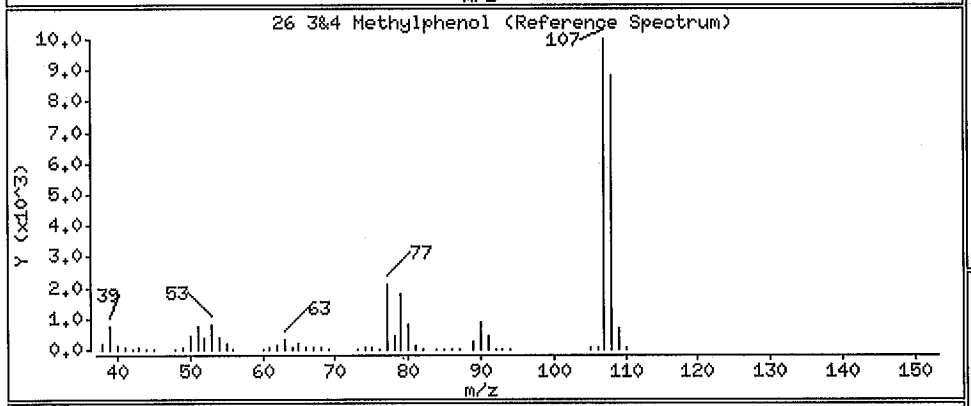
Concentration: 76.0 ug

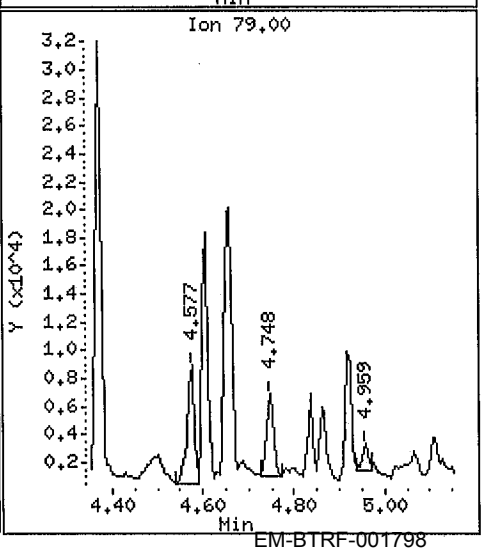


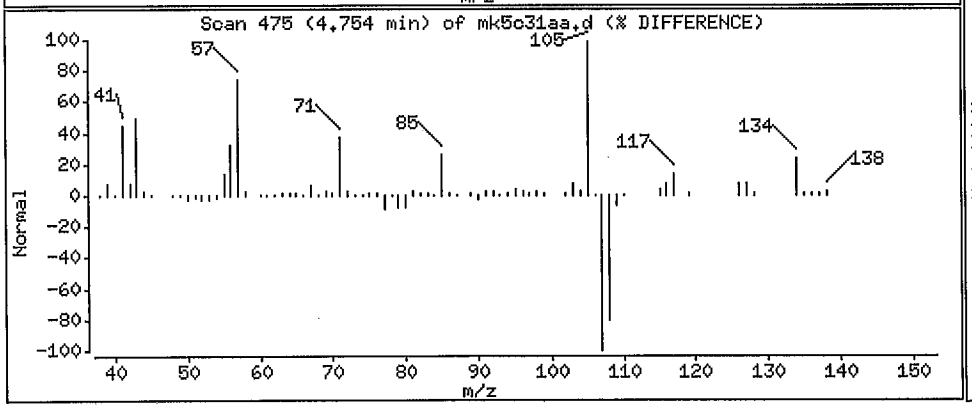












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

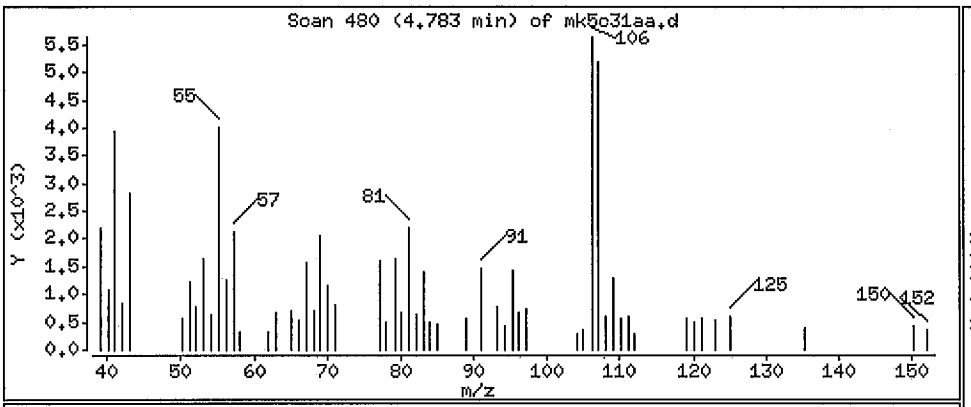
Operator: 60487

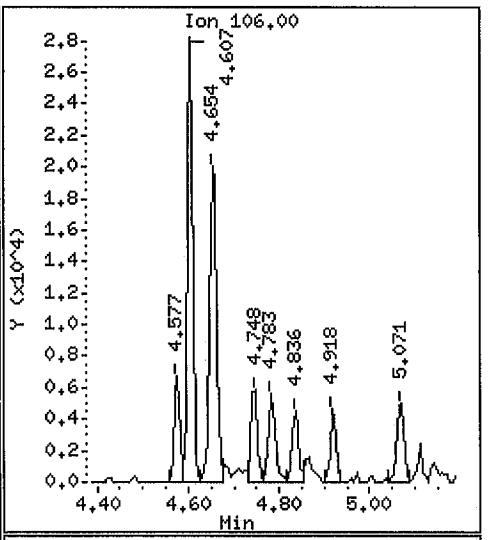
Column phase: Rxi-5 Sil MS

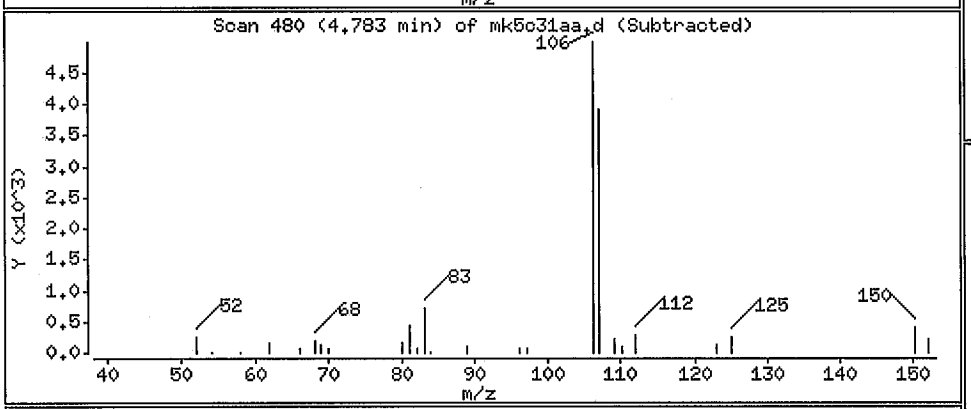
Column diameter: 0.25

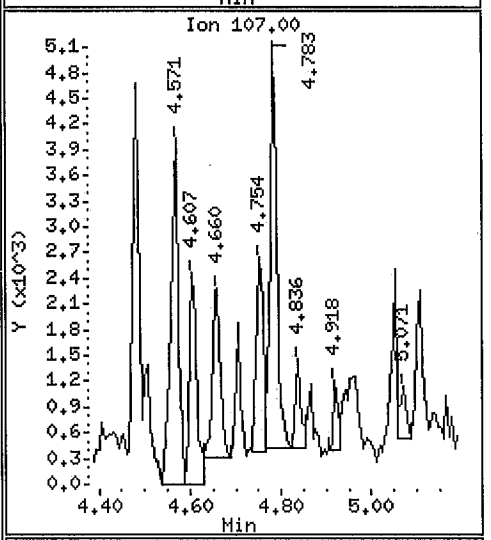
95 o-toluidine

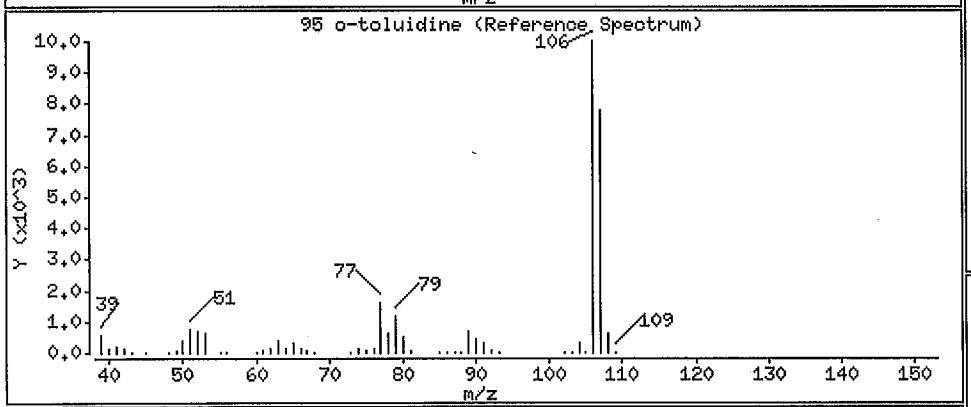
Concentration: 90.8 ug

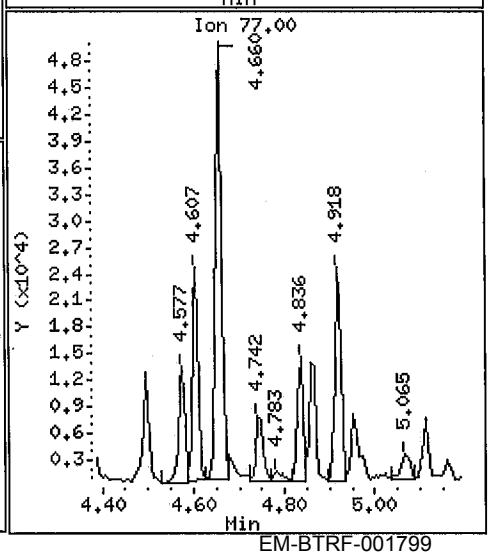


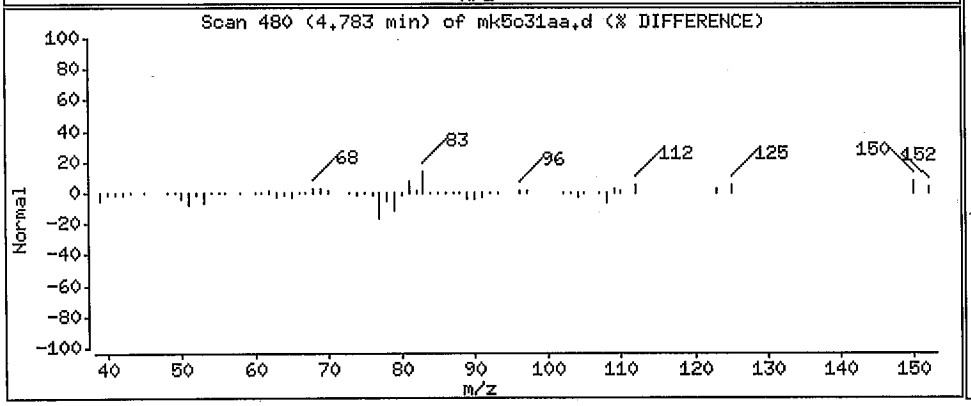












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

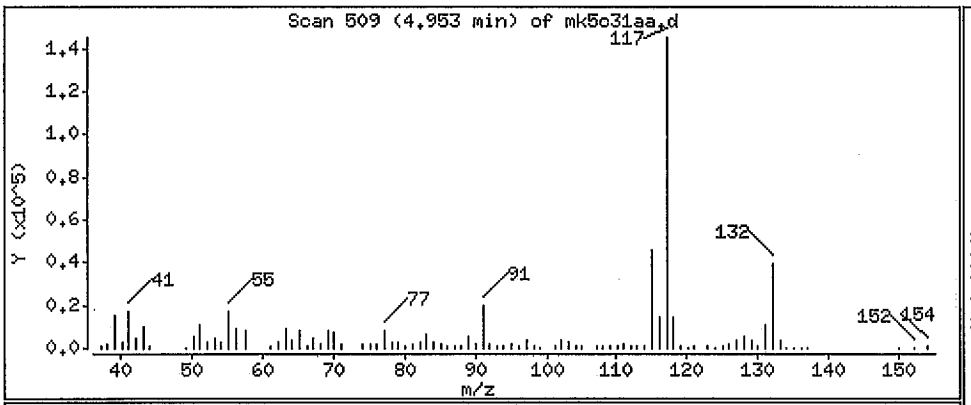
Operator: 60487

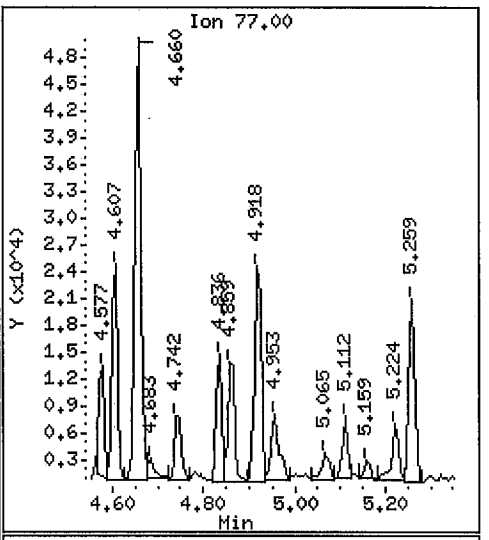
Column phase: Rxi-5 Sil MS

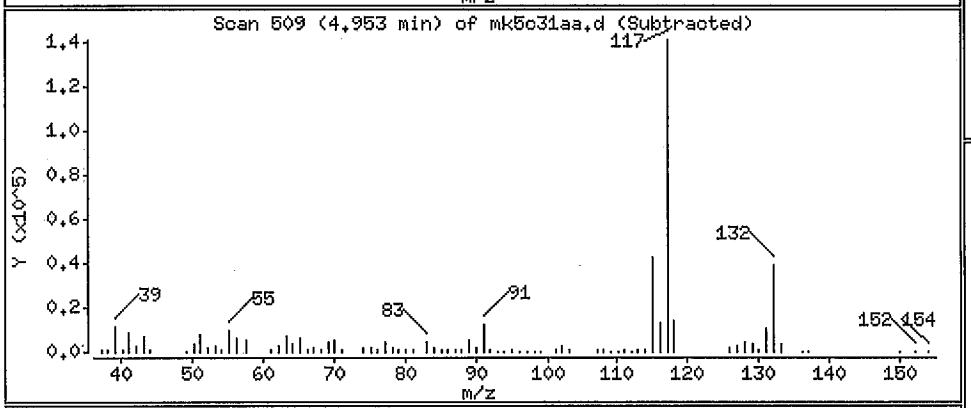
Column diameter: 0.25

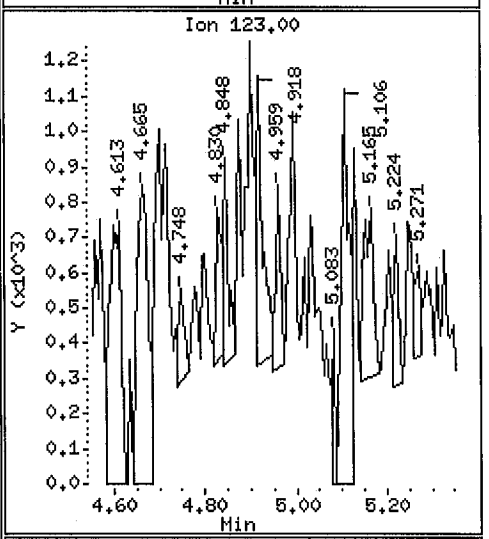
29 Nitrobenzene

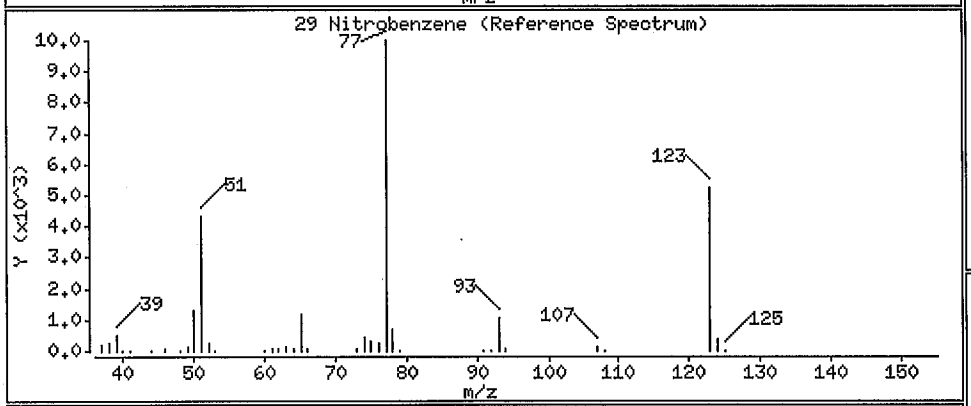
Concentration: 198 ug

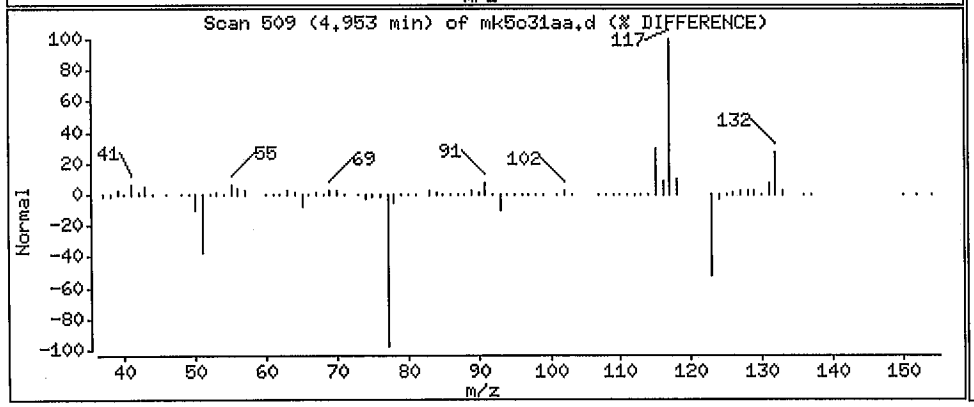


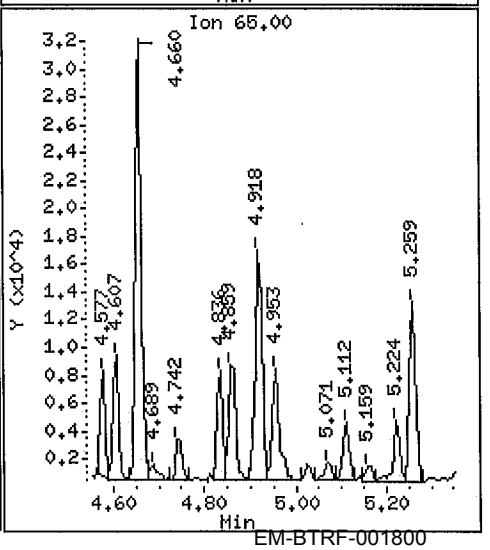












Data File: /var/chem/goms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

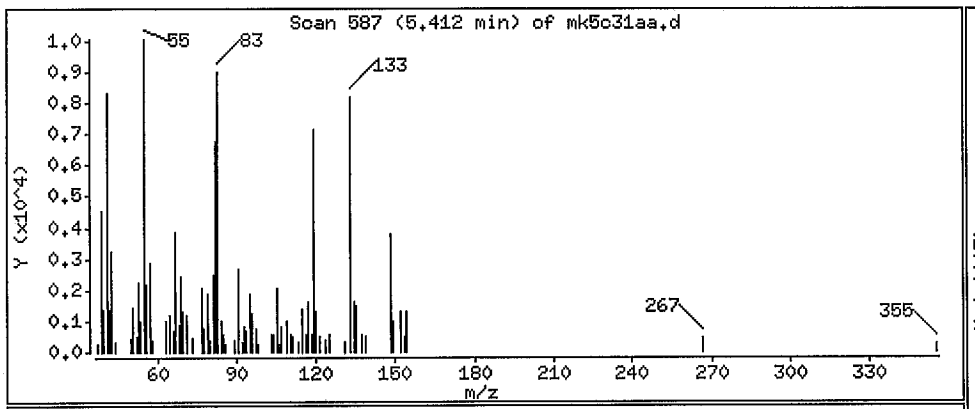
Operator: 60487

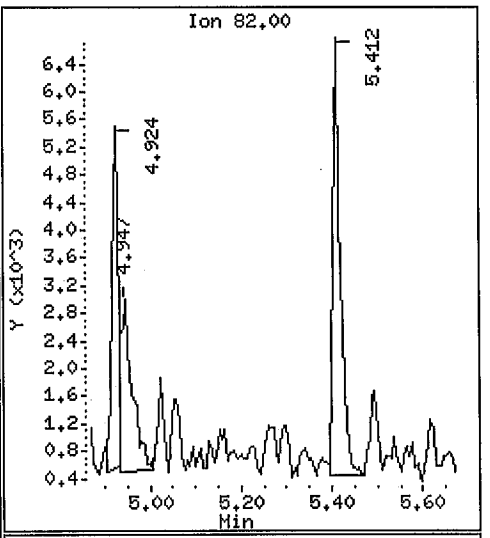
Column phase: Rxi-5 Sil MS

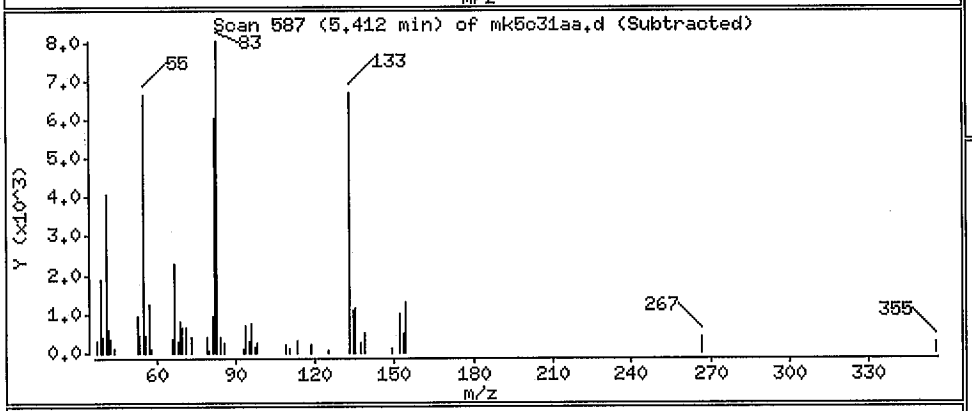
Column diameter: 0.25

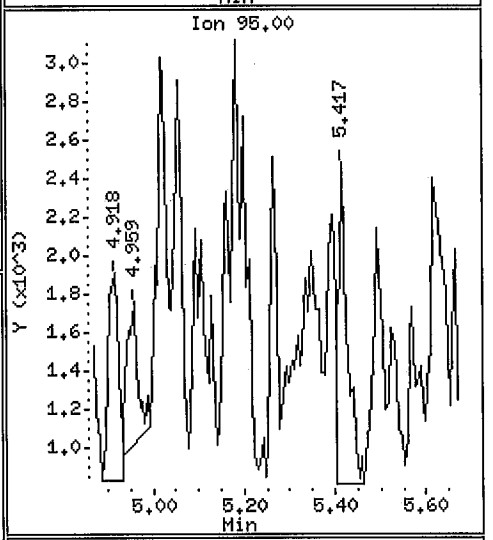
30 Isophorone

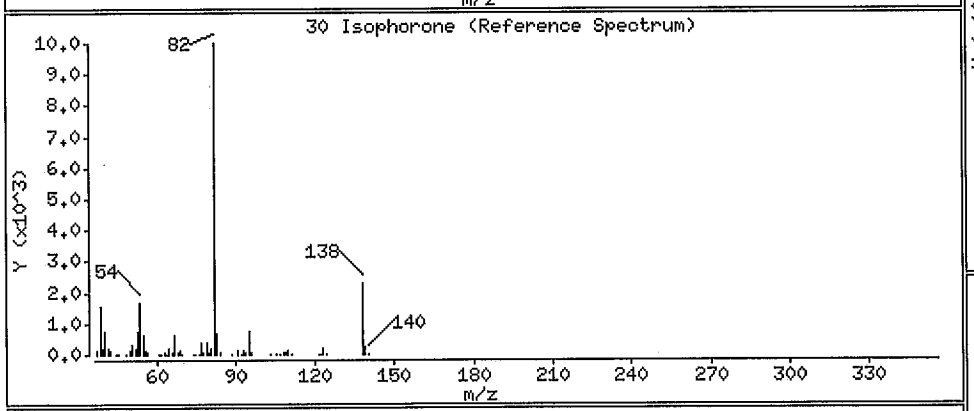
Concentration: 93.9 ug

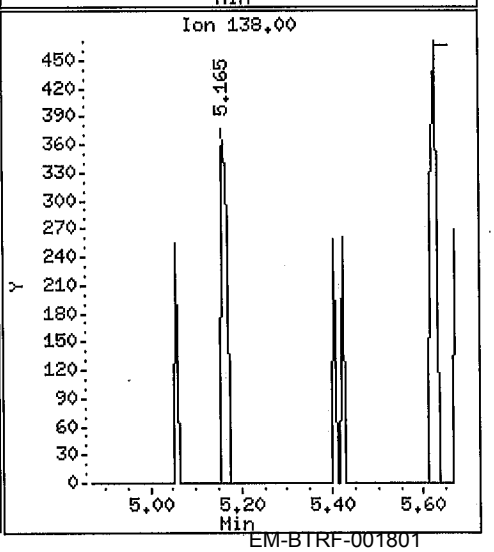


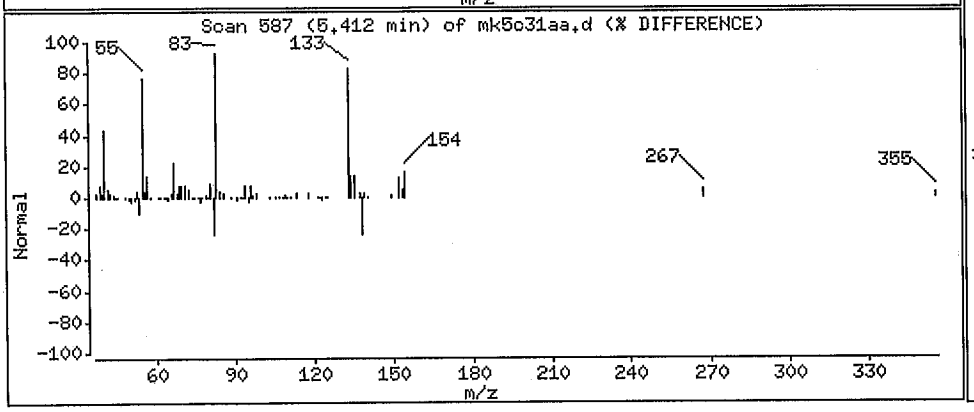












Data File: /var/chem/goms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

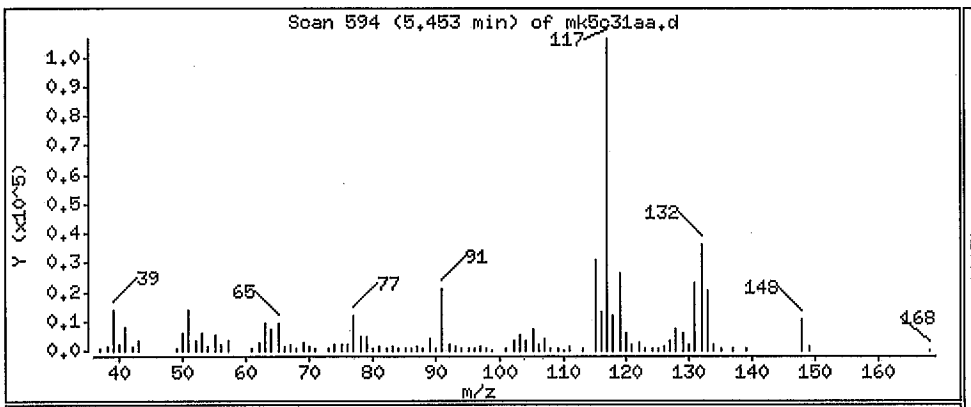
Operator: 60487

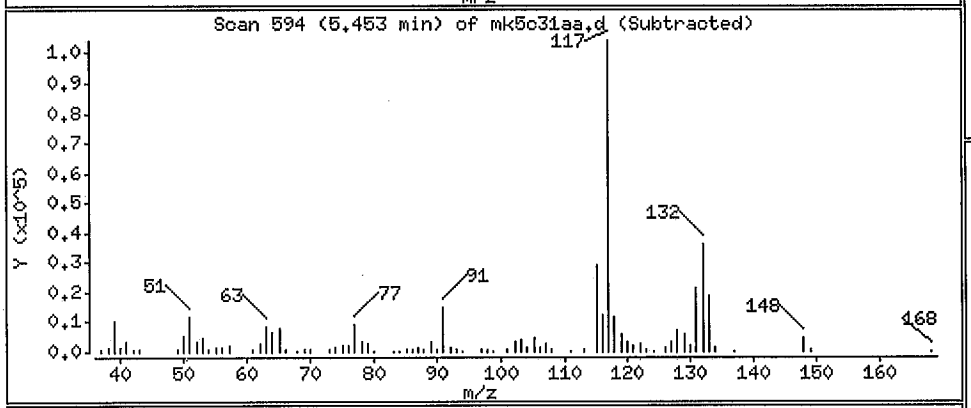
Column phase: Rxi-5 Sil MS

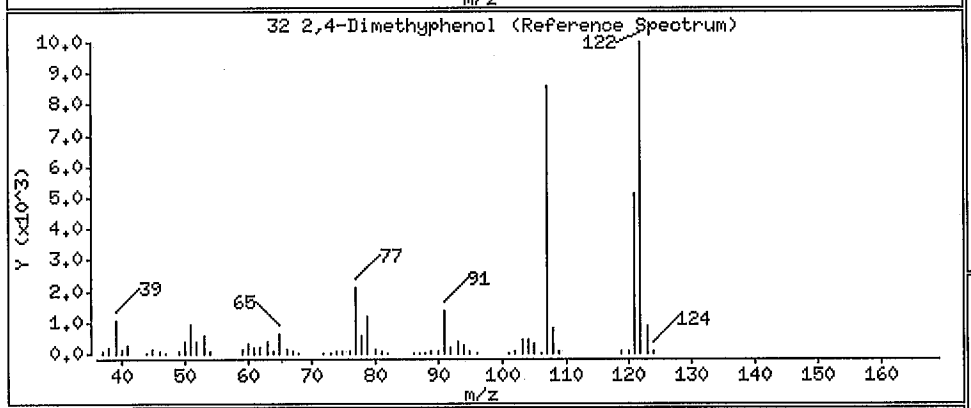
Column diameter: 0.25

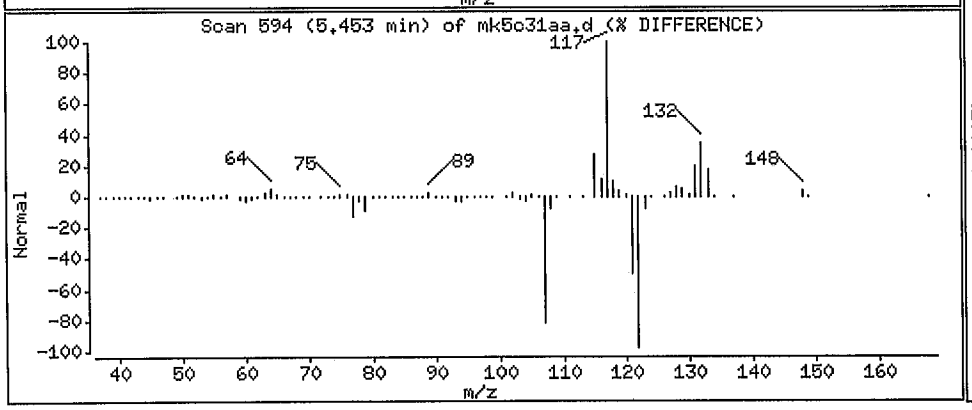
32 2,4-Dimethyphenol

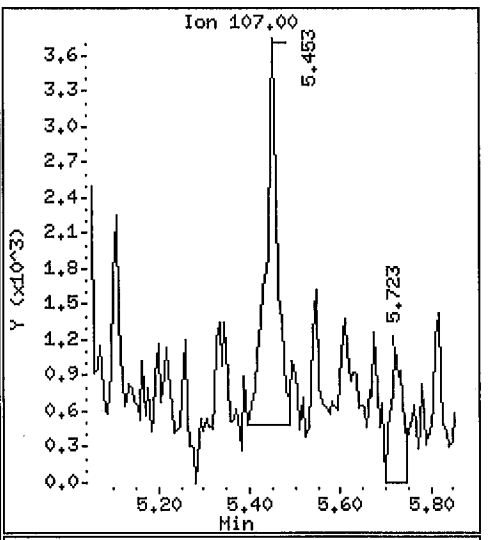
Concentration: 122 ug

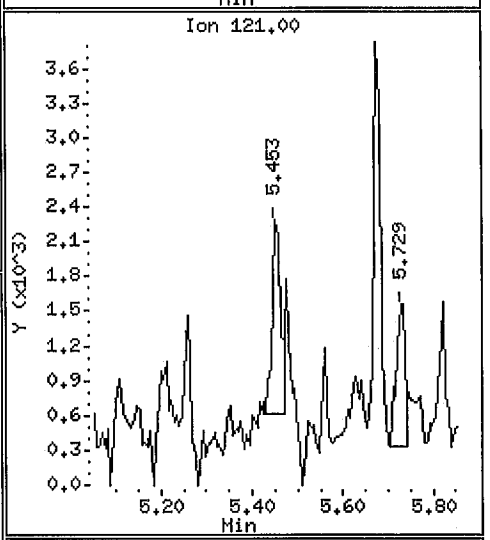


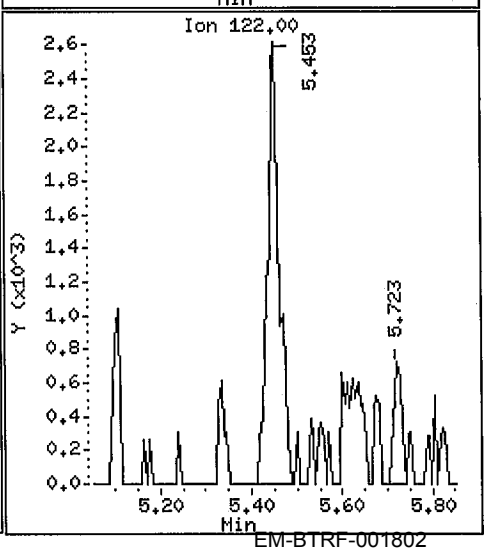












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

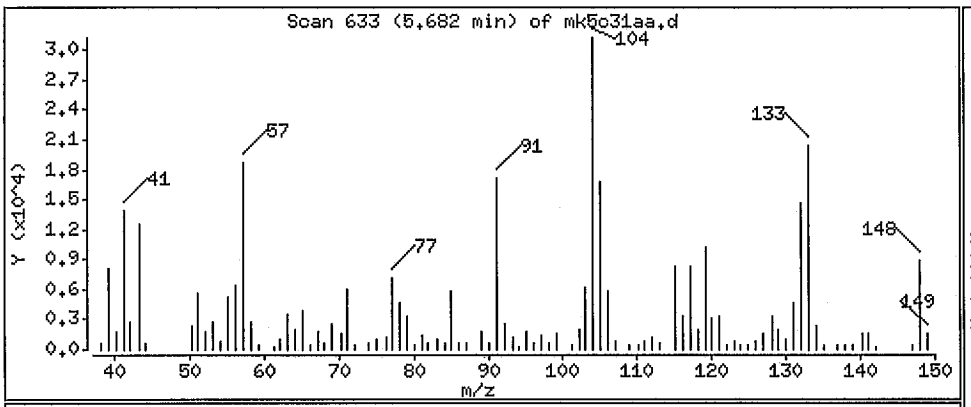
Operator: 60487

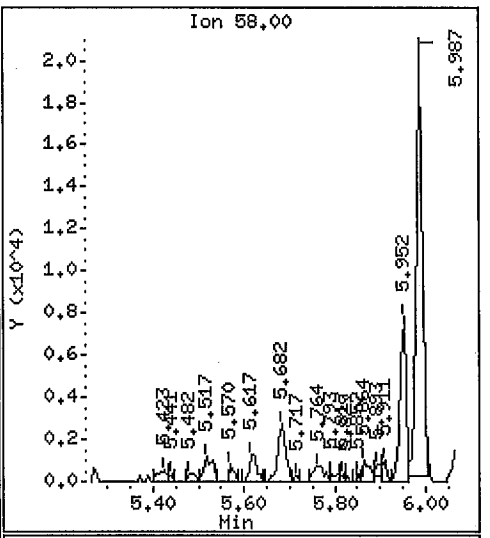
Column phase: Rxi-5 Sil MS

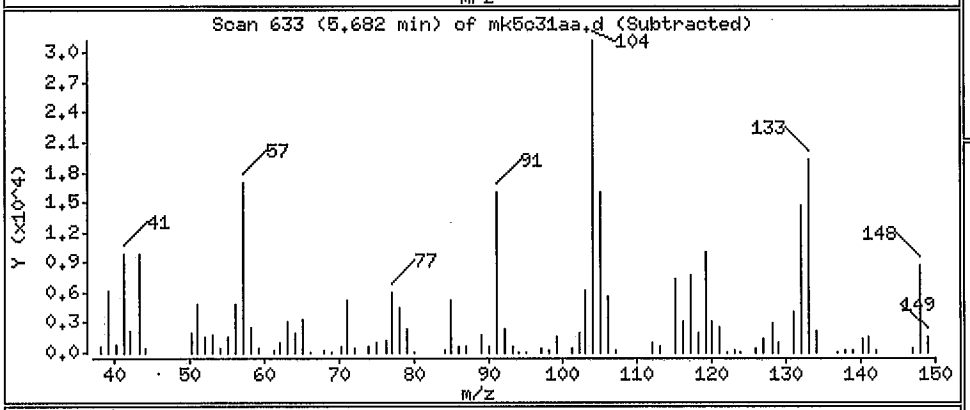
Column diameter: 0.25

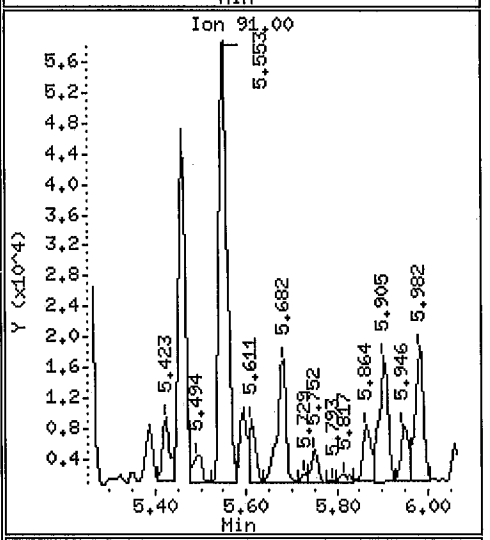
199 Phentermine

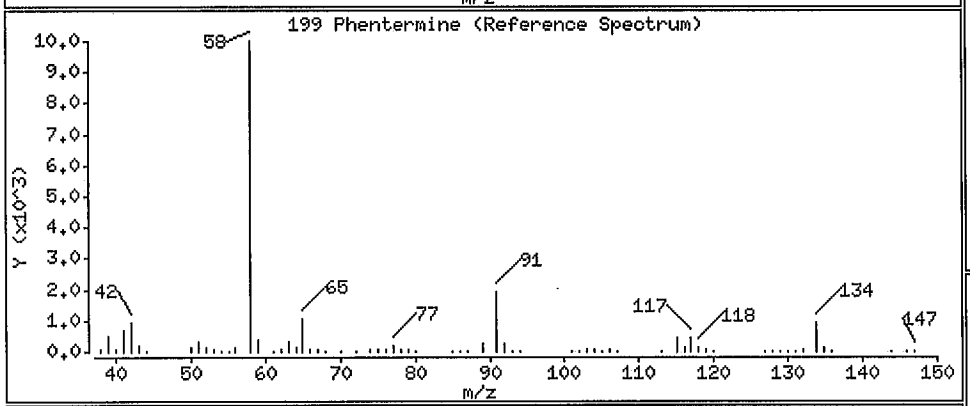
Concentration: 498 ug

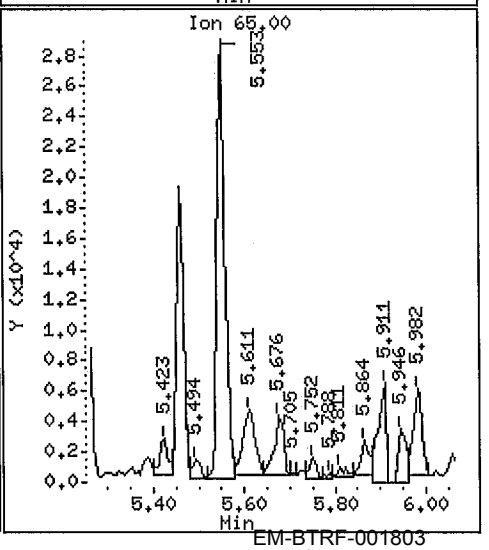


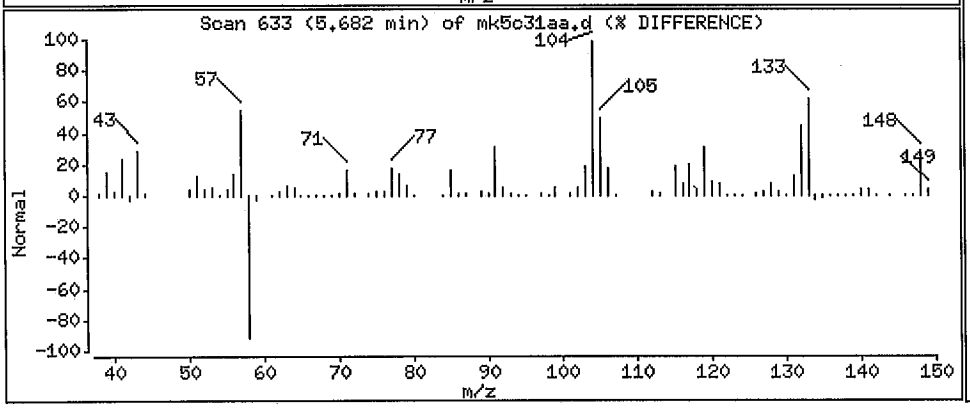












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

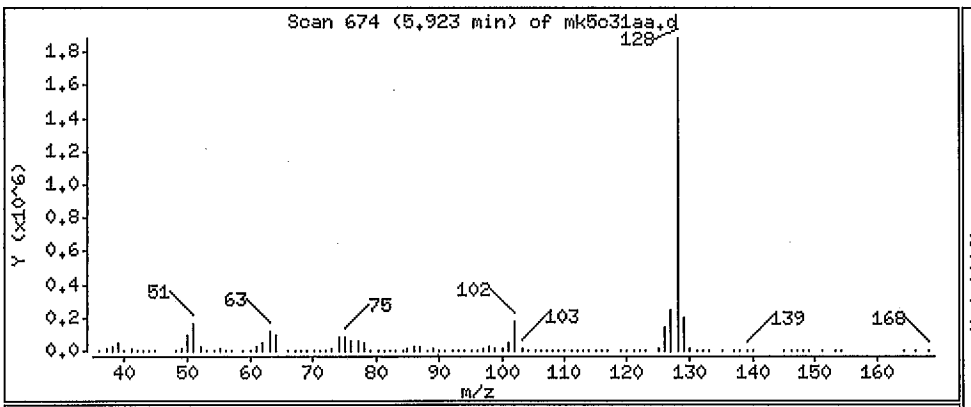
Operator: 60487

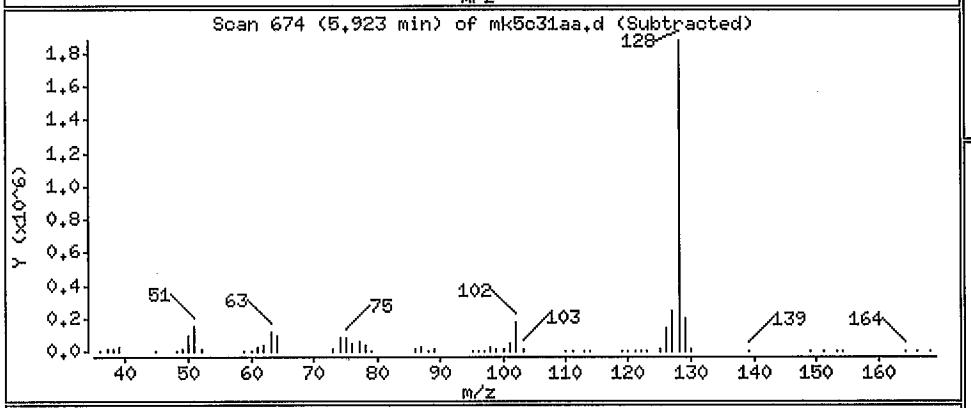
Column phase: Rxi-5 Sil MS

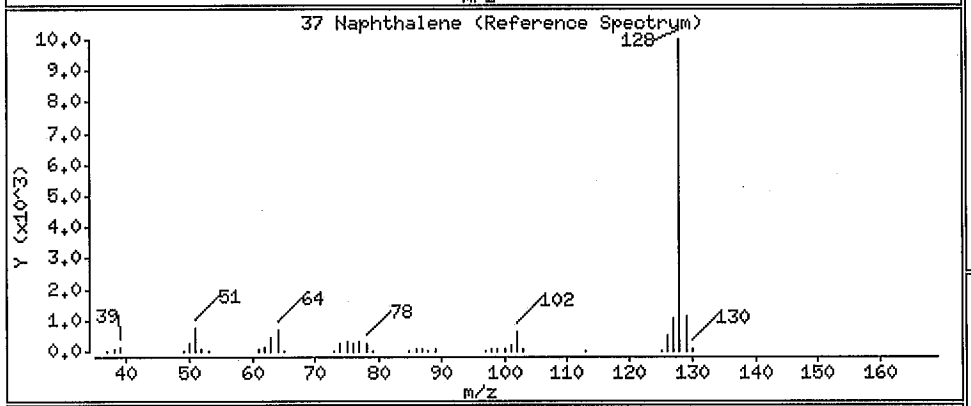
Column diameter: 0.25

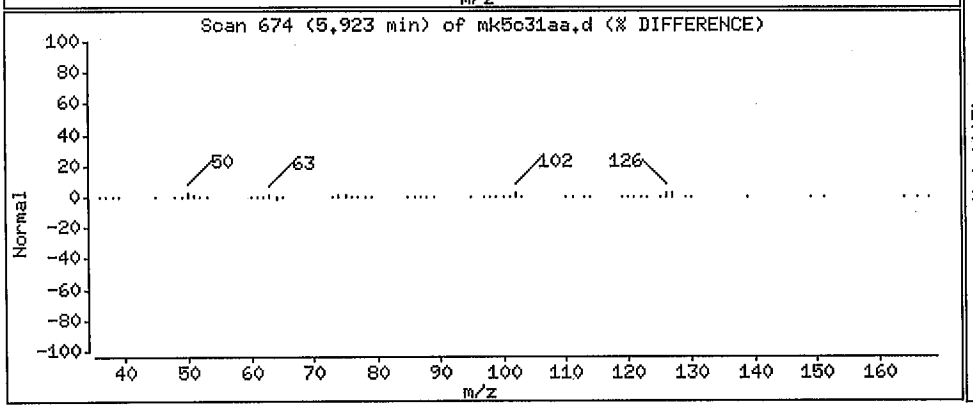
37 Naphthalene

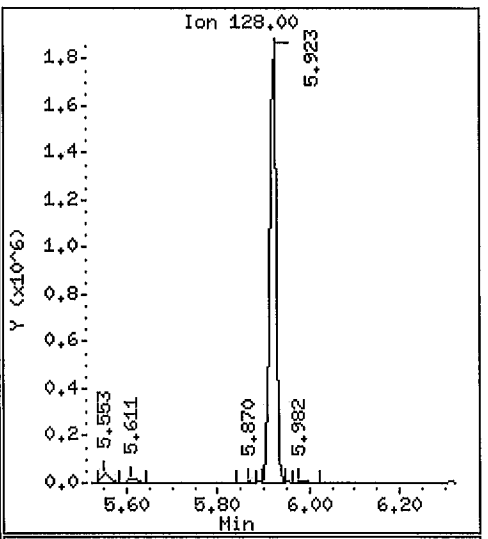
Concentration: 13000 ug

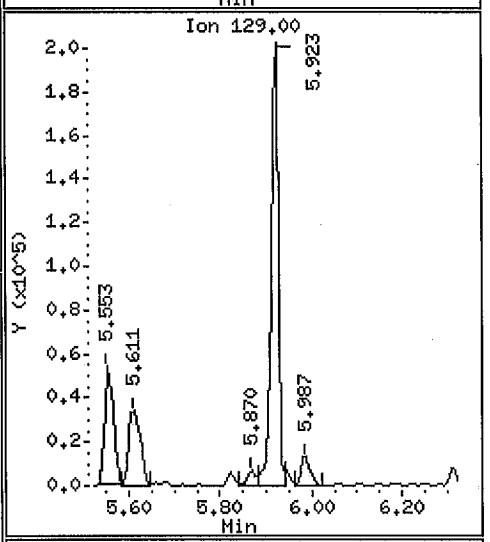


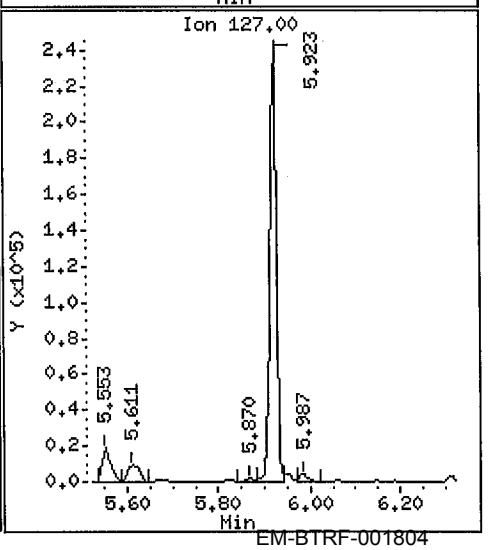












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

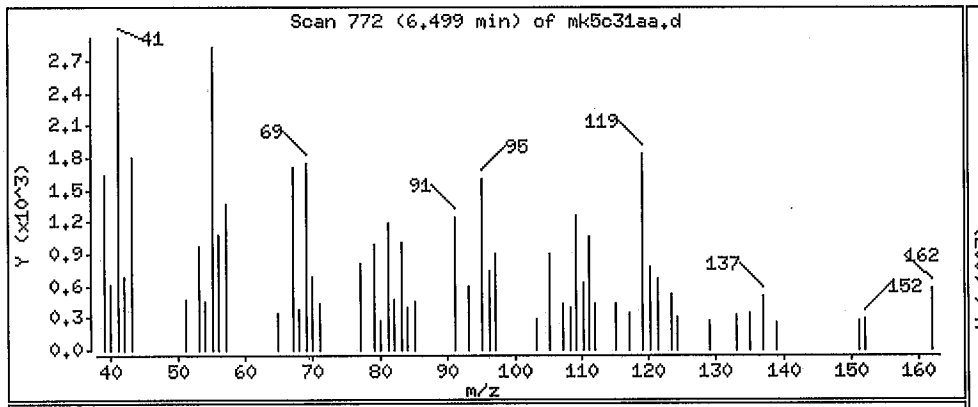
Operator: 60487

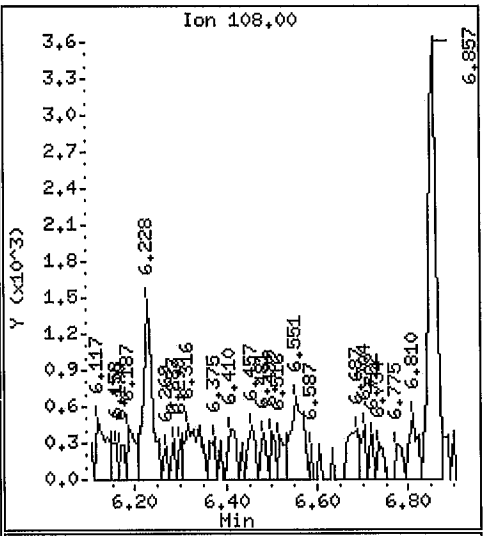
Column phase: Rxi-5 Sil MS

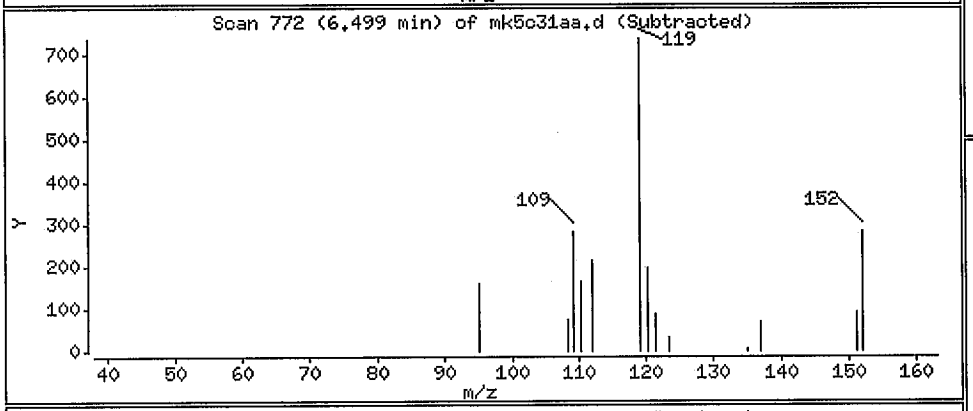
Column diameter: 0.25

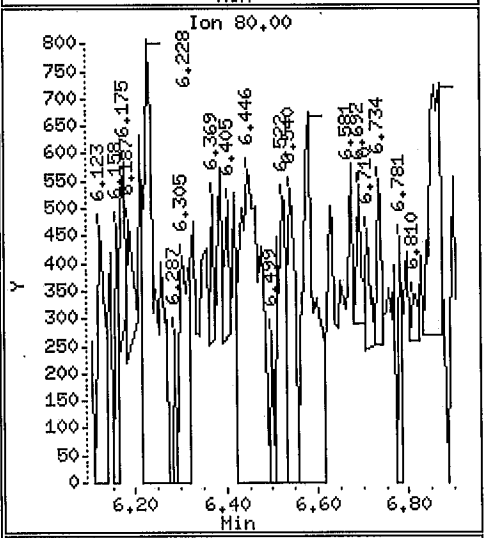
202 1,4-Phenylenediamine

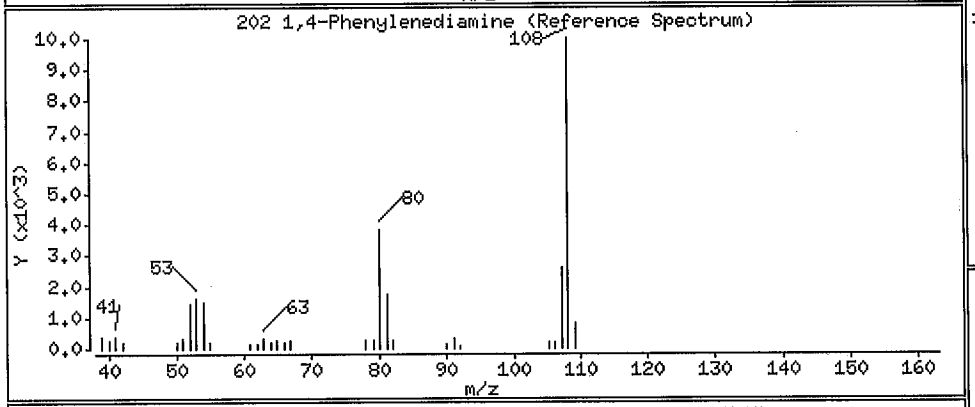
Concentration: 502 ug

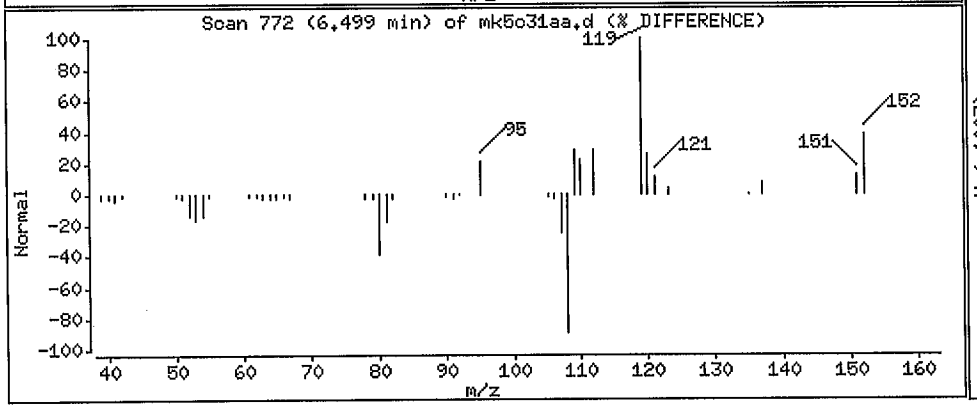


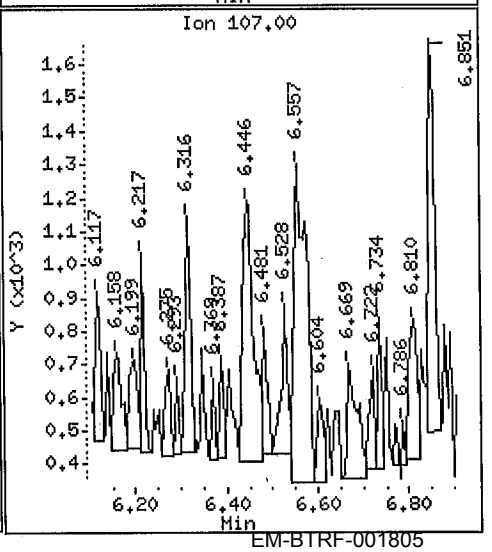












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

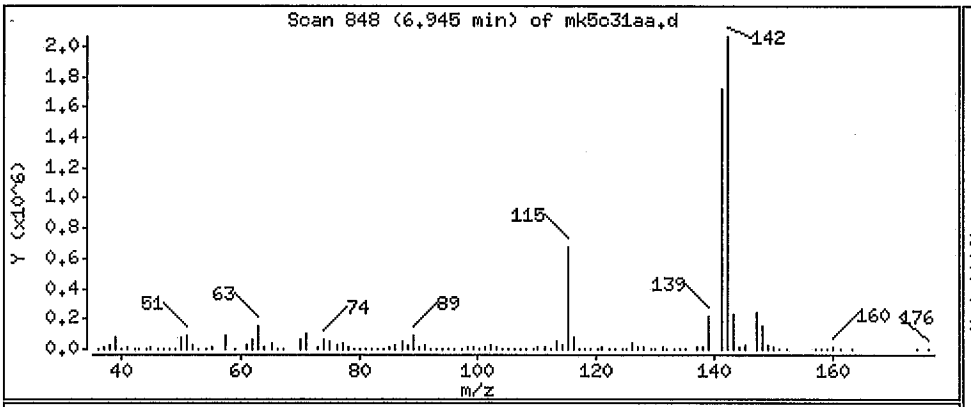
Operator: 60487

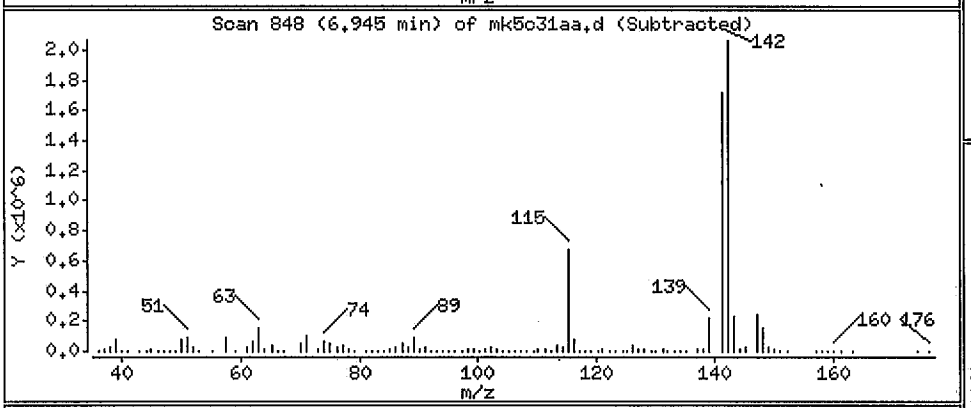
Column phase: Rxi-5 Sil MS

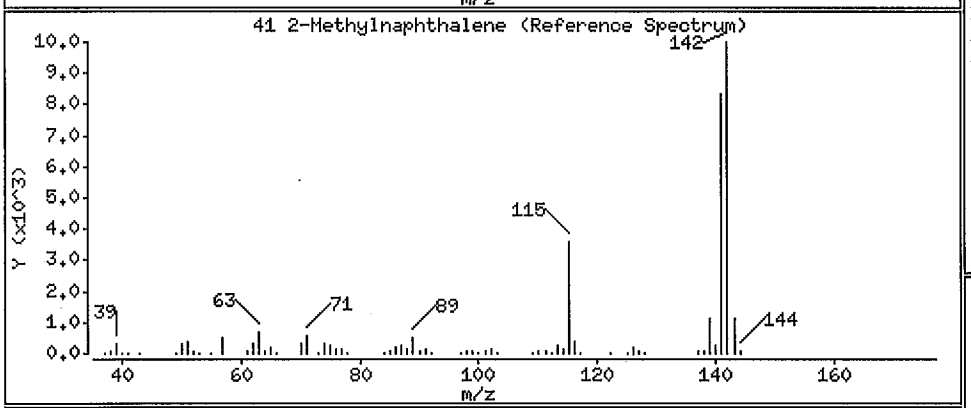
Column diameter: 0.25

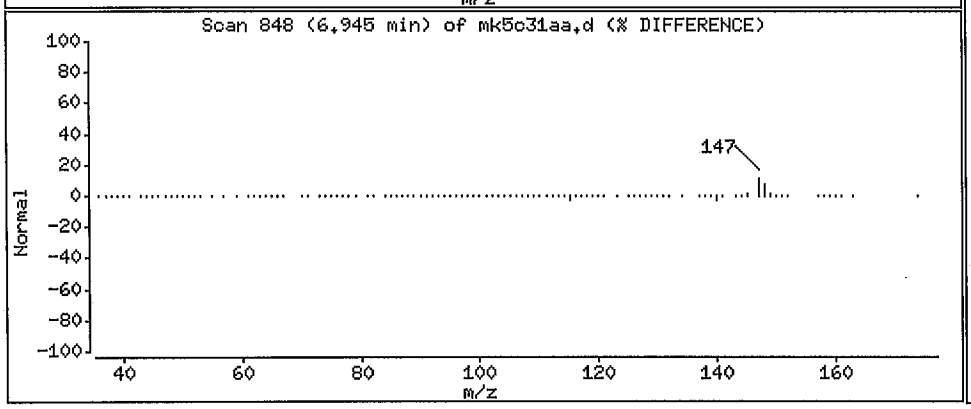
41 2-Methylnaphthalene

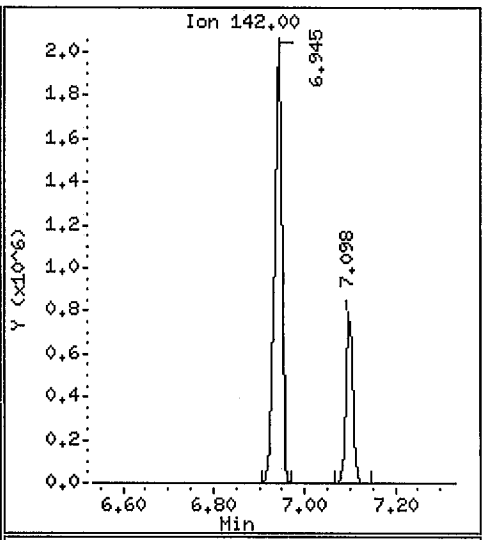
Concentration: 25300 ug

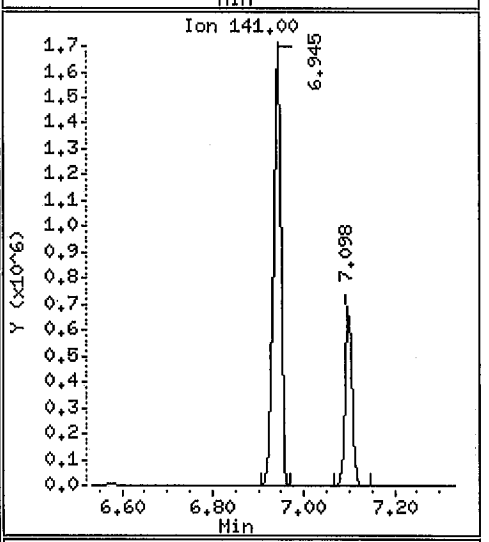


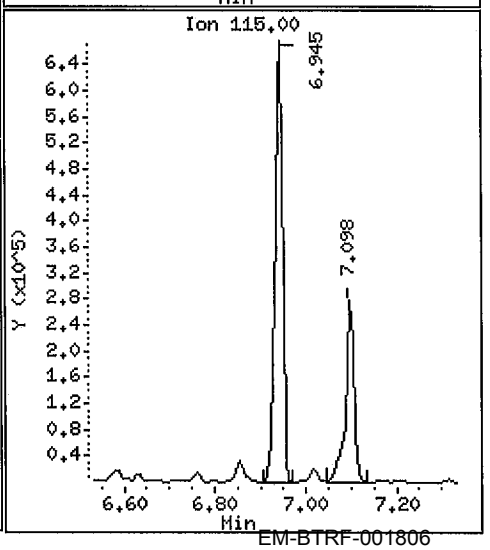












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

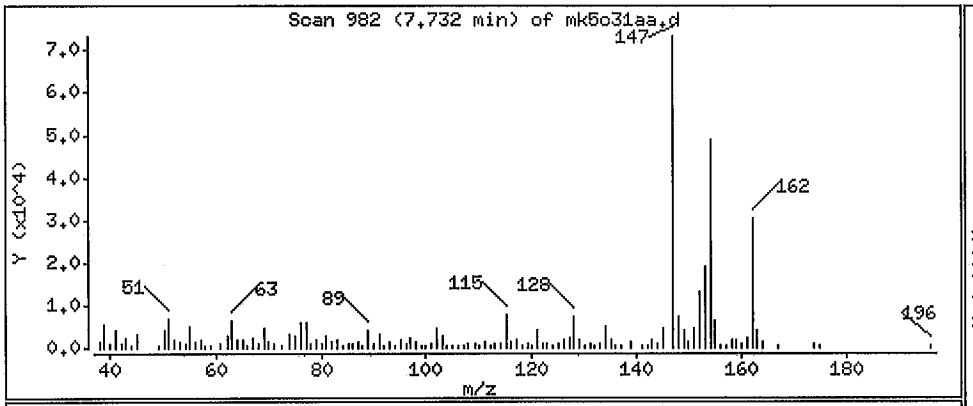
Operator: 60487

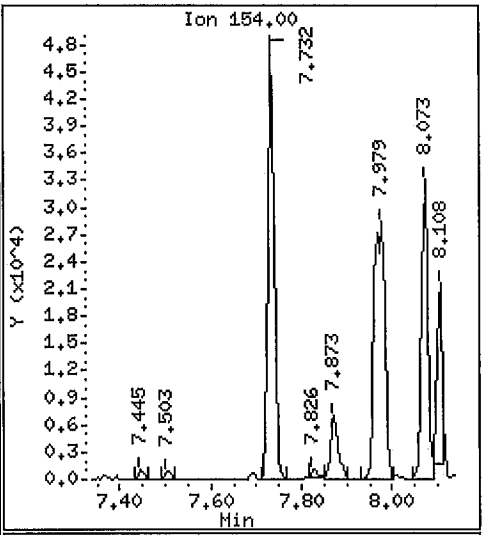
Column phase: Rxi-5 Sil MS

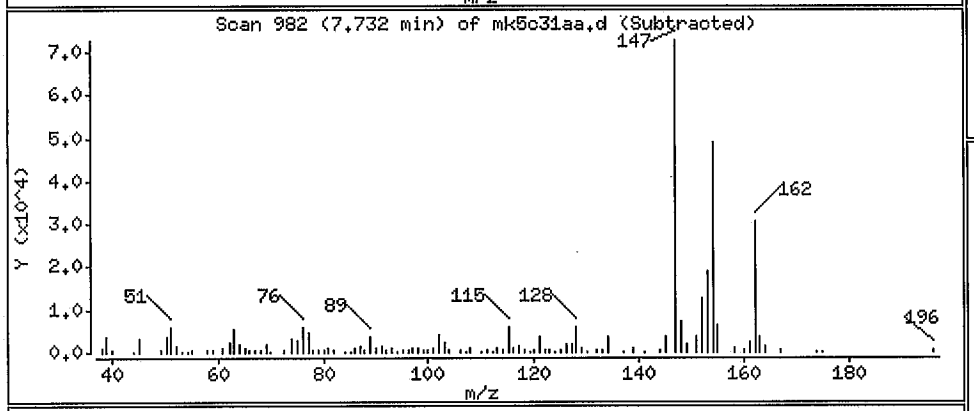
Column diameter: 0.25

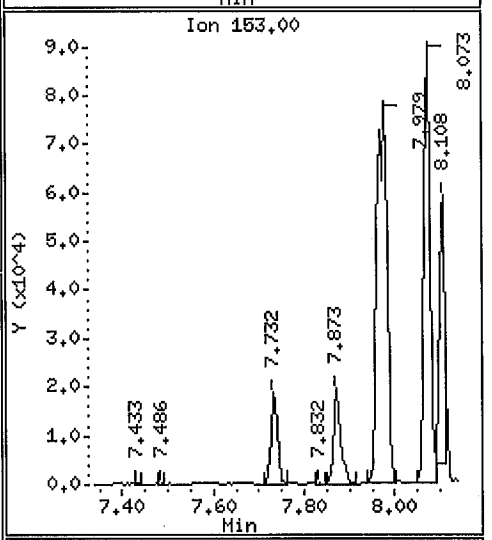
188 1,1'-Biphenyl

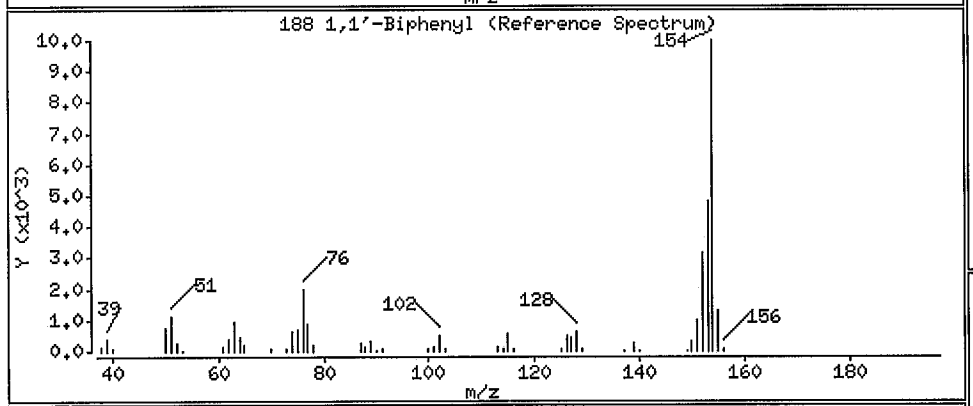
Concentration: 330 ug

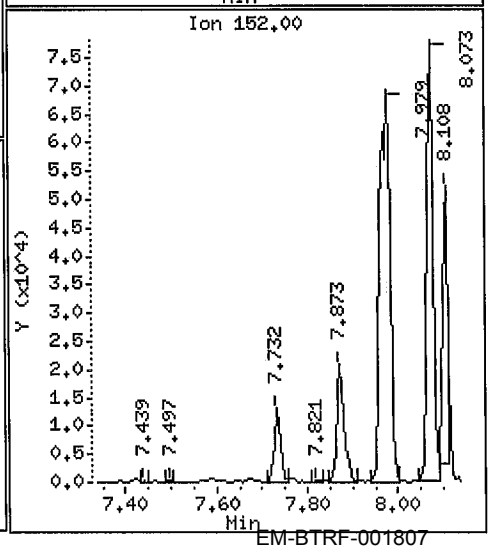


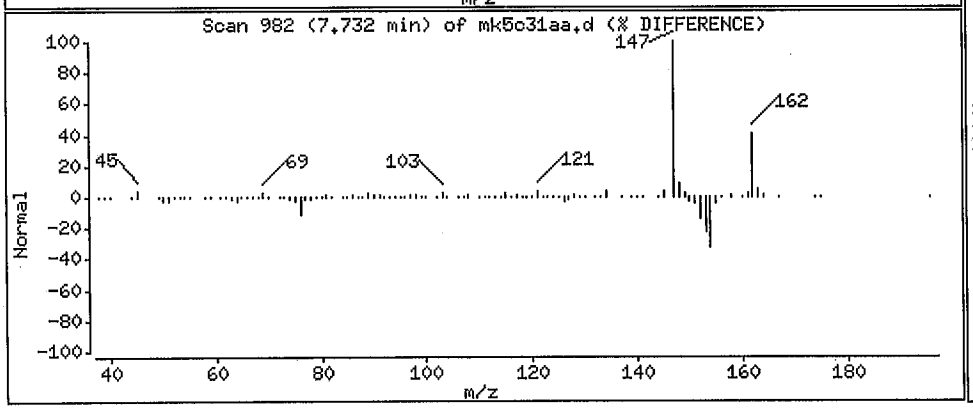












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

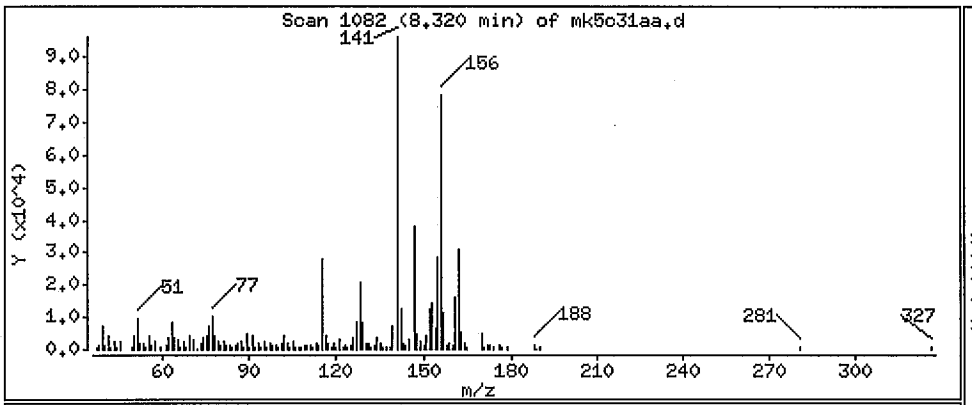
Operator: 60487

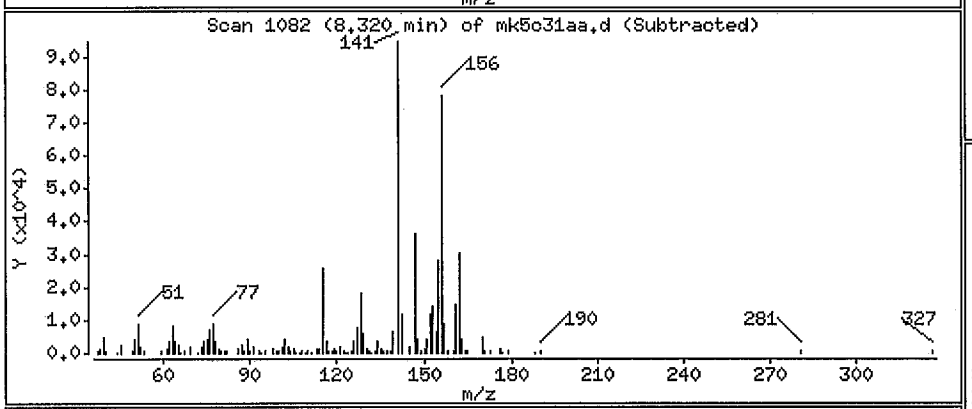
Column phase: Rxi-5 Sil MS

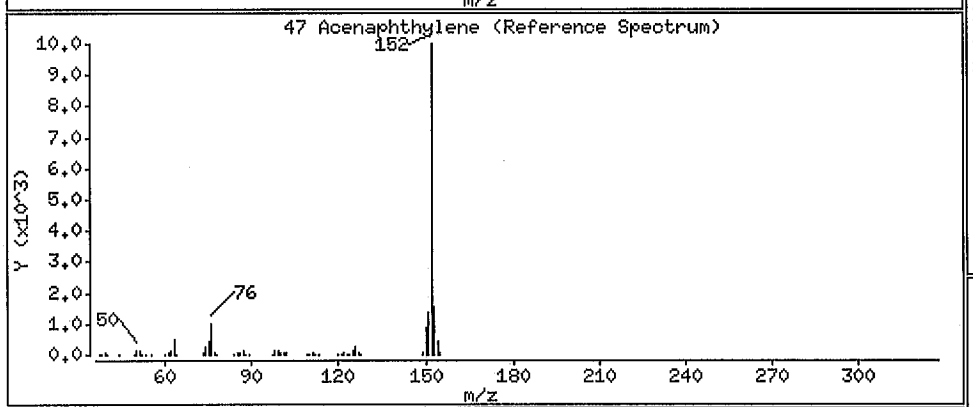
Column diameter: 0.25

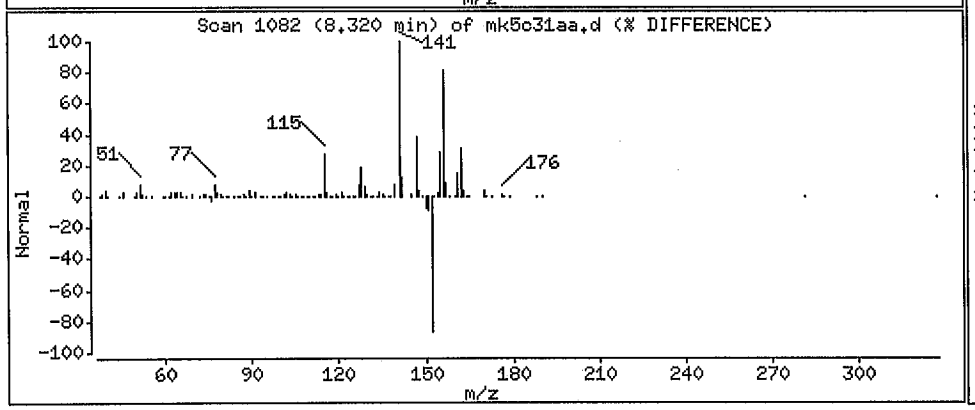
47 Acenaphthylene

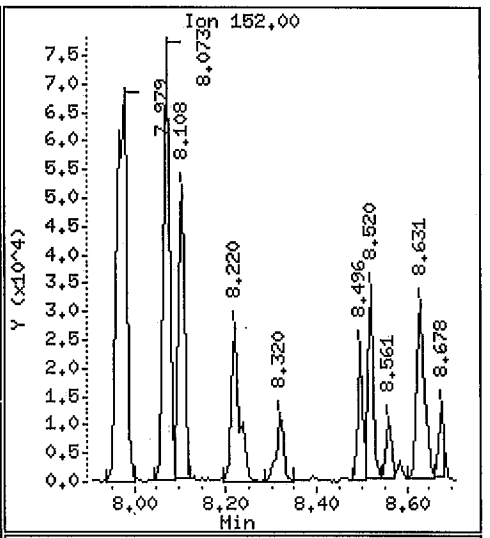
Concentration: 87.6 ug

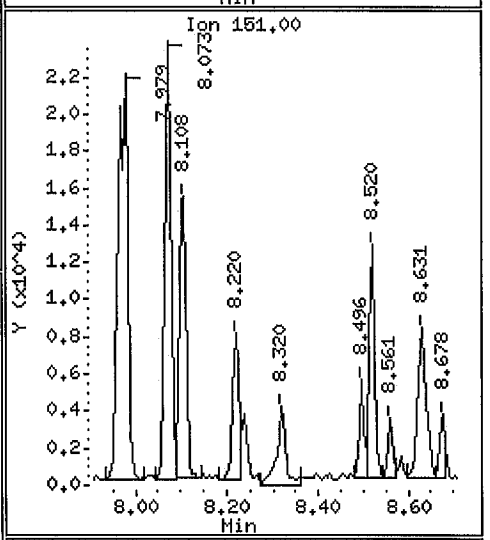


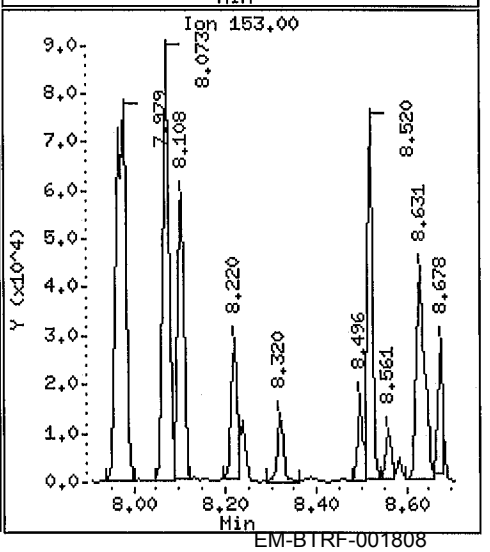












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

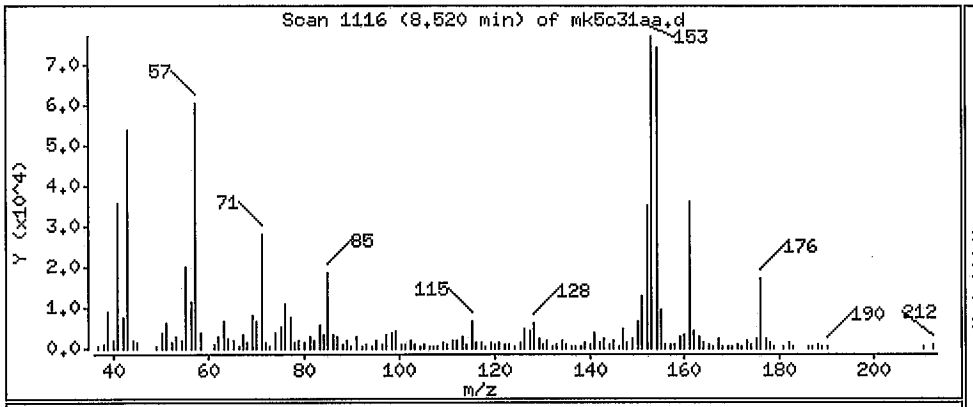
Operator: 60487

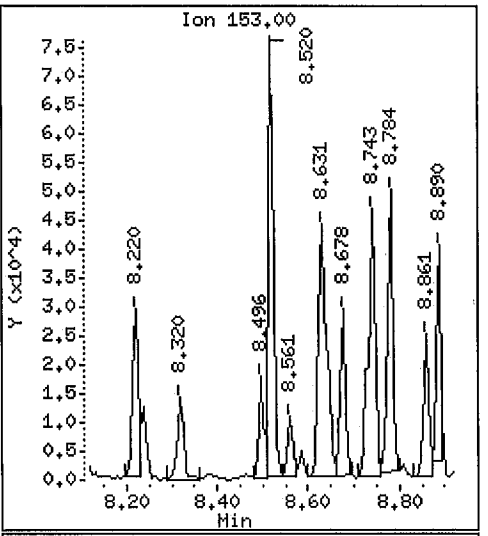
Column phase: Rxi-5 Sil MS

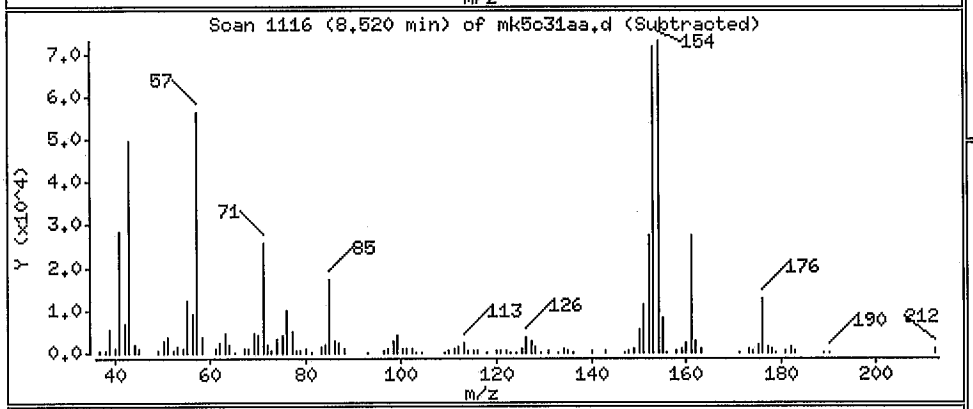
Column diameter: 0.25

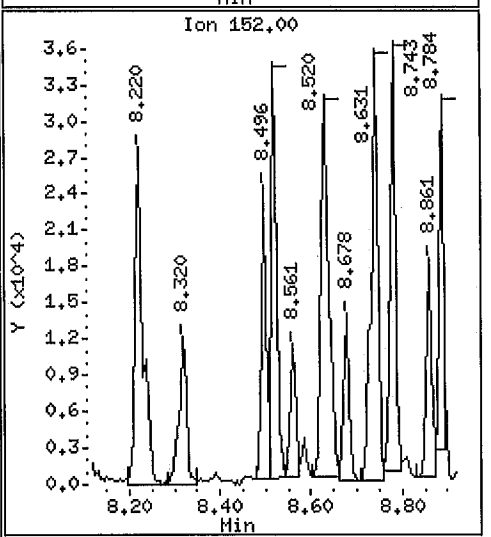
51 Acenaphthene (ccc)

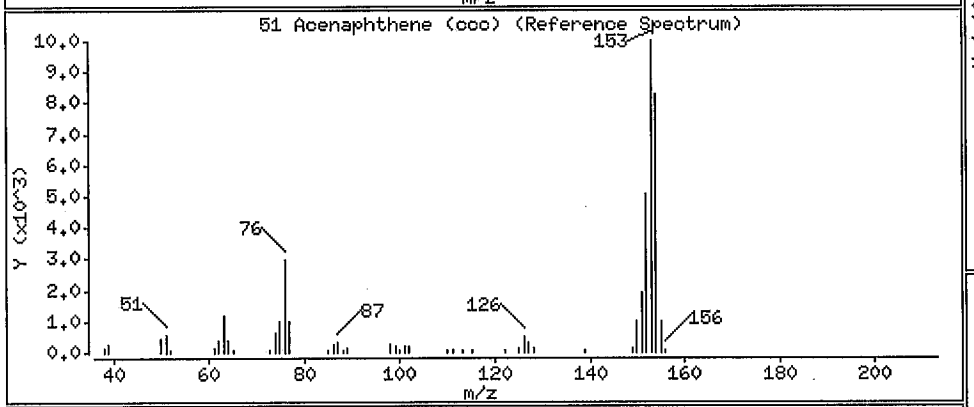
Concentration: 578 ug

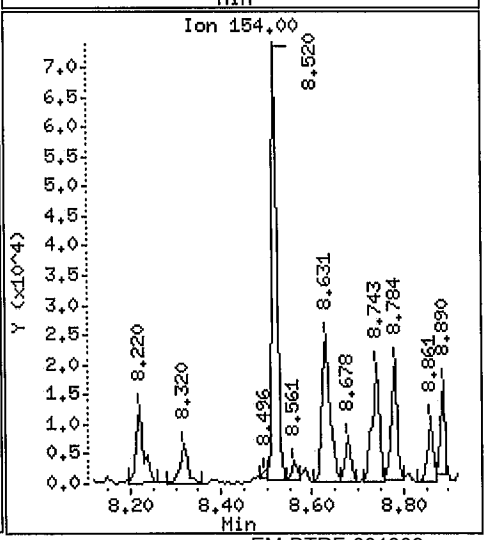


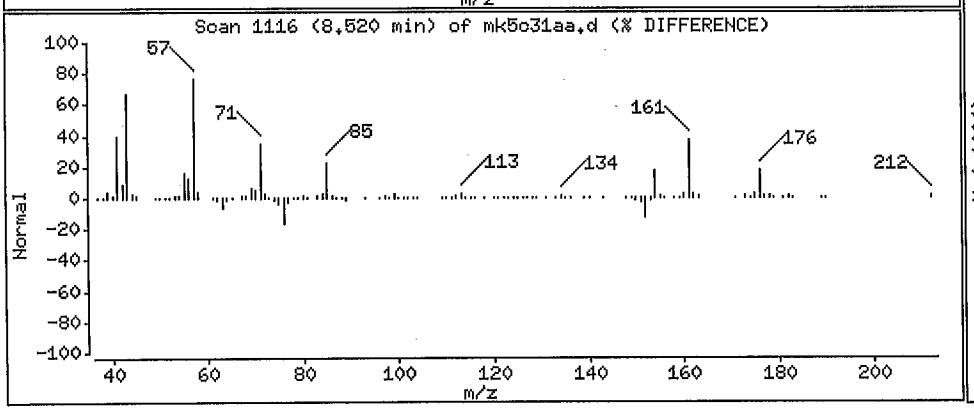












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

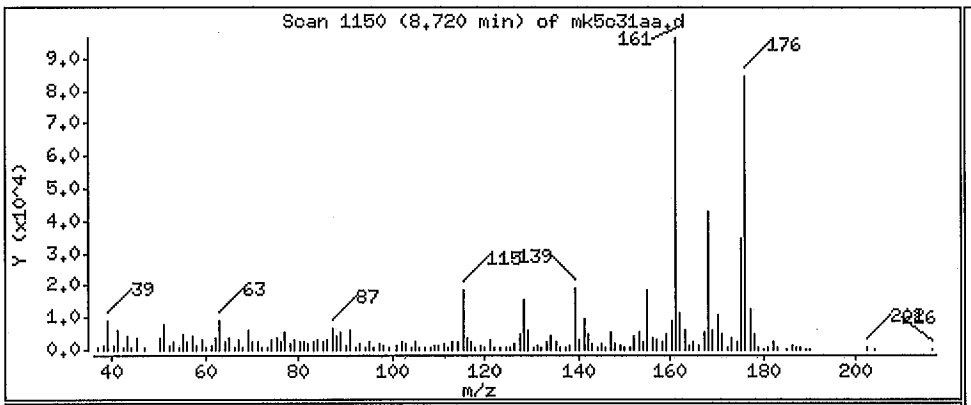
Operator: 60487

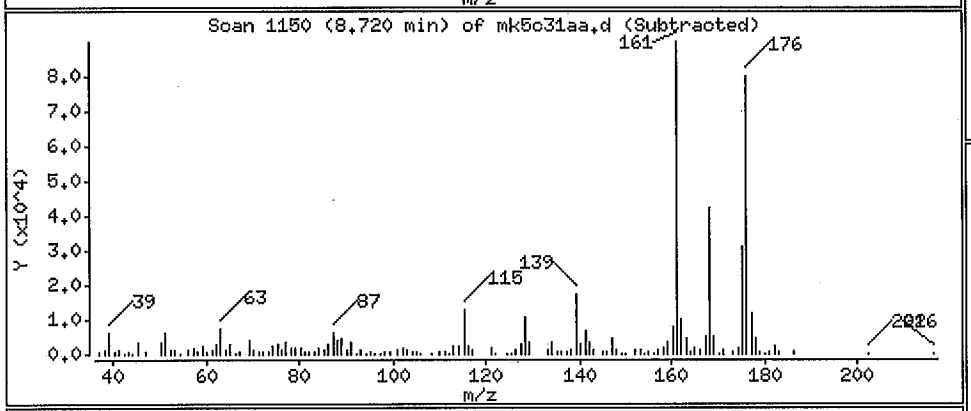
Column phase: Rxi-5 Sil MS

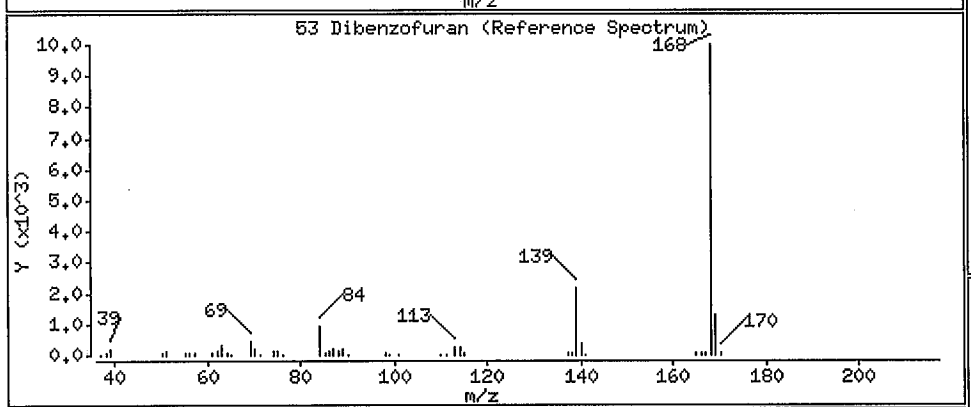
Column diameter: 0.25

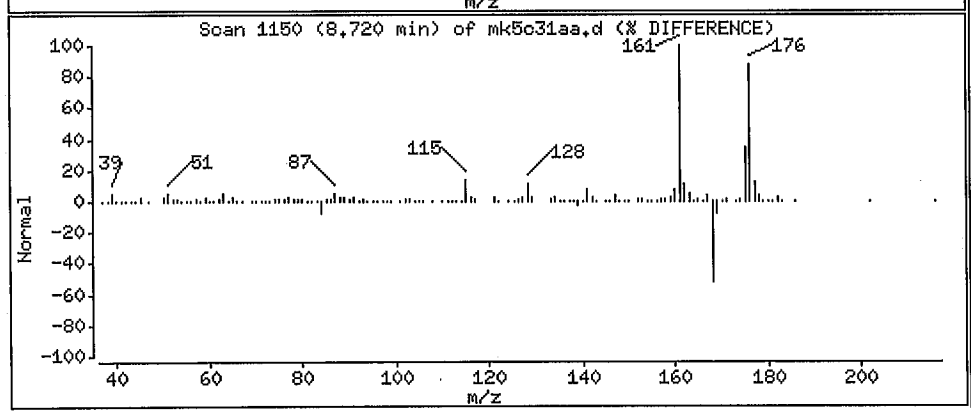
53 Dibenzofuran

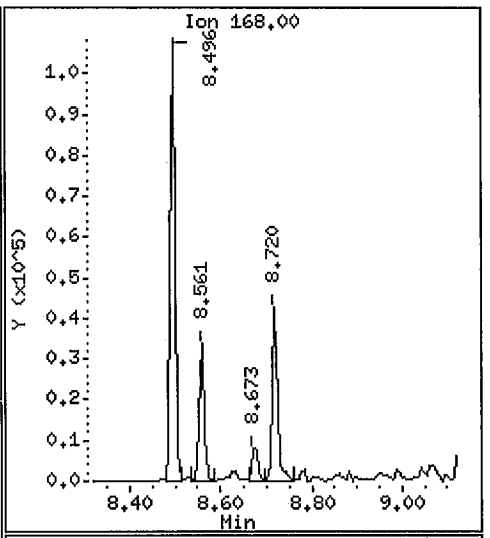
Concentration: 245 ug

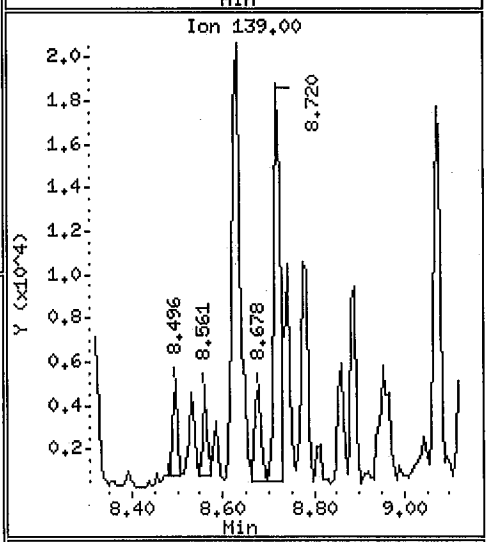


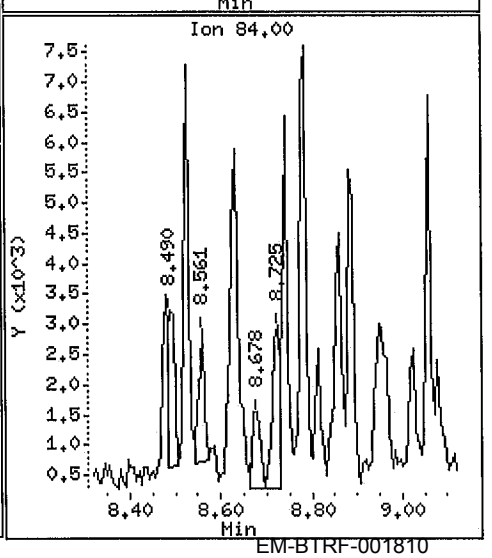












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

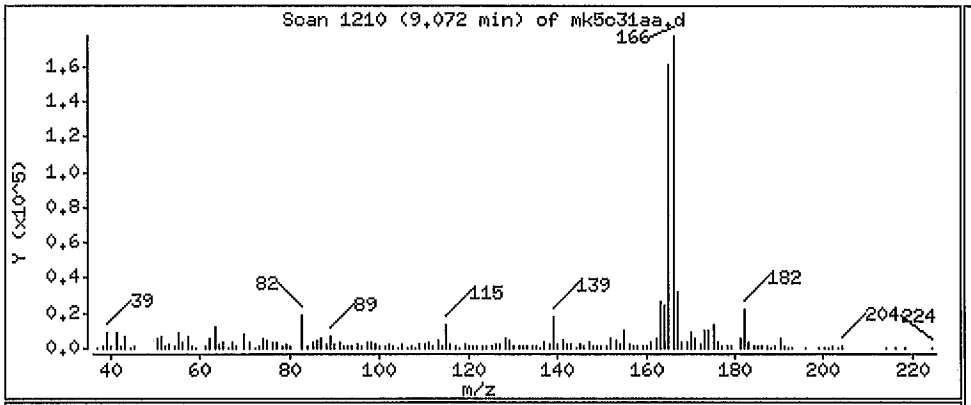
Client ID: EXM-DCU-M0010-R1-C0 Instrument: md.i

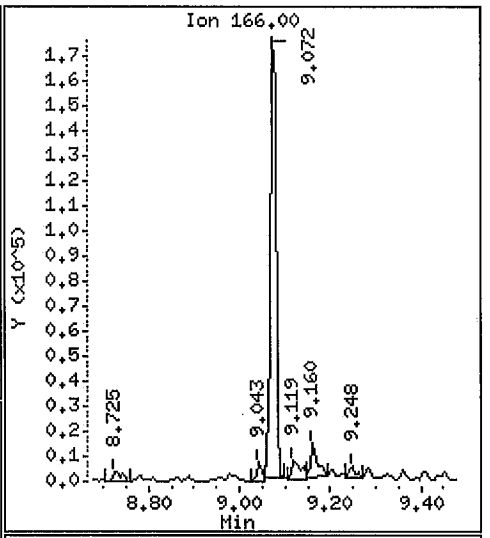
Sample Info: MK5C31AA,20,0,,,

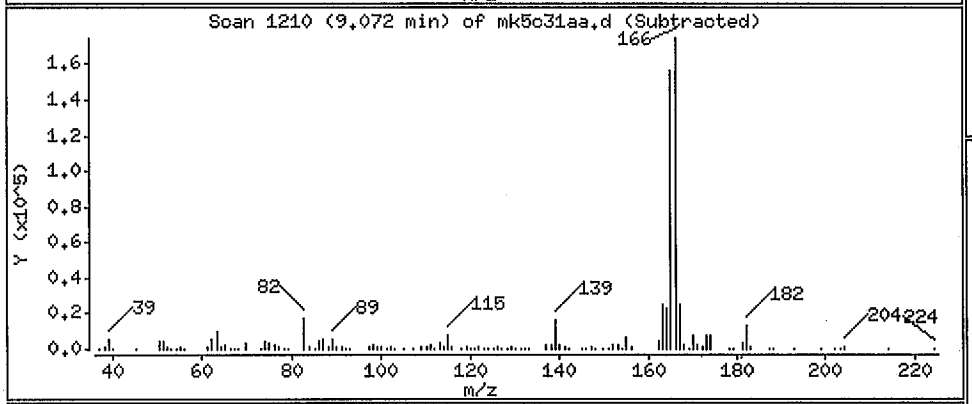
Volume Injected (uL): 1.0 Operator: 60487

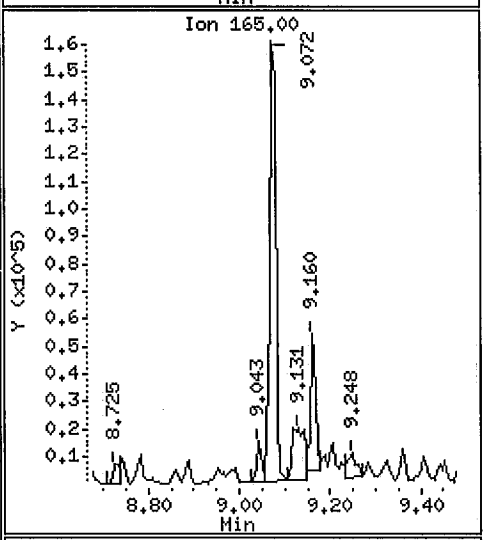
Column phase: Rxi-5 Sil MS Column diameter: 0.25

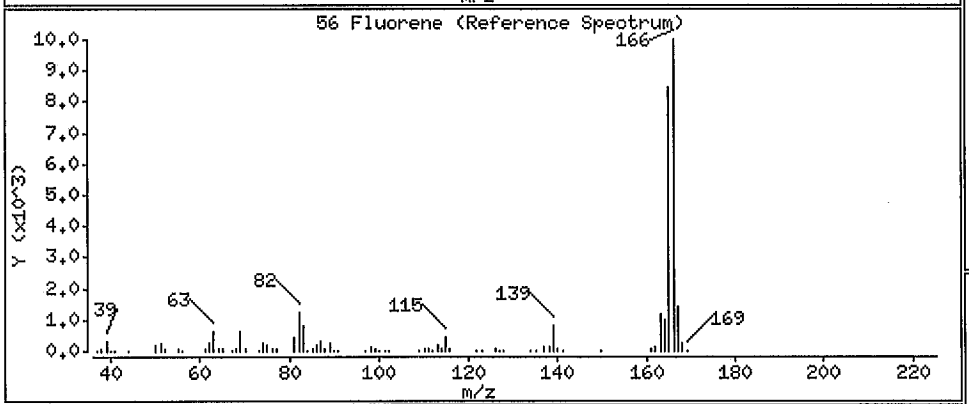
56 Fluorene Concentration: 1220 ug

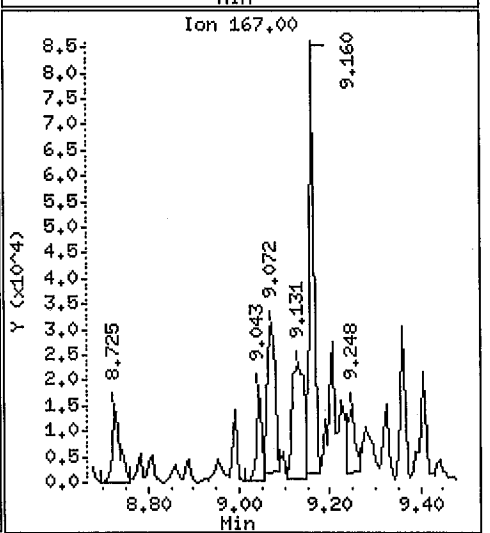


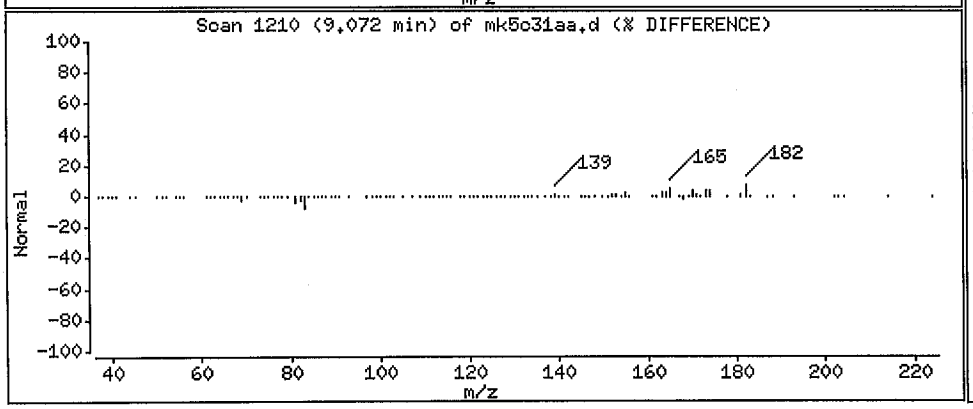












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

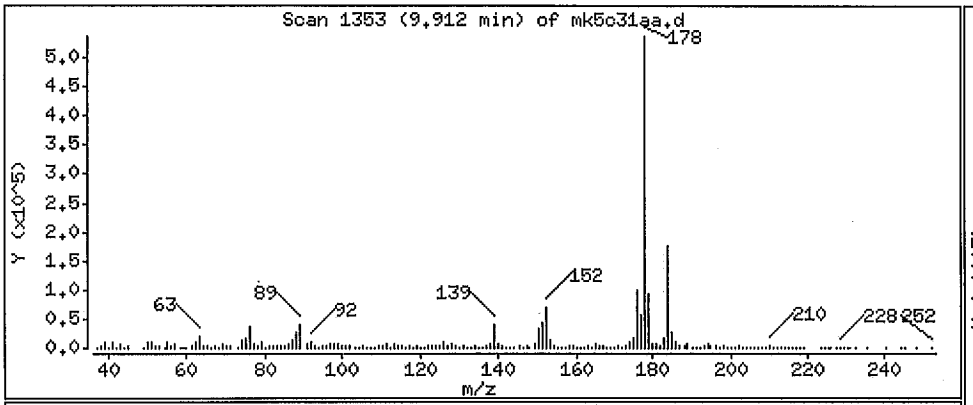
Operator: 60487

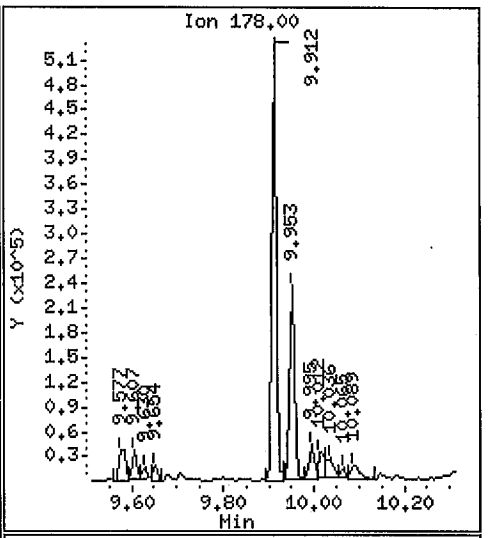
Column phase: Rxi-5 Sil MS

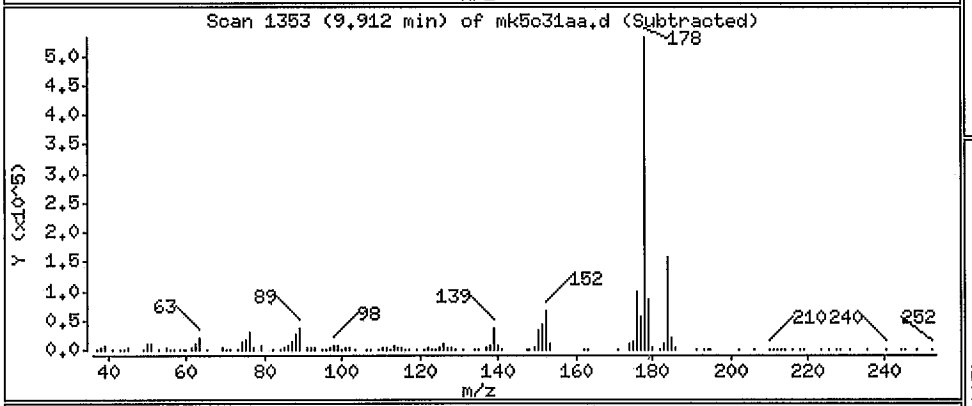
Column diameter: 0.25

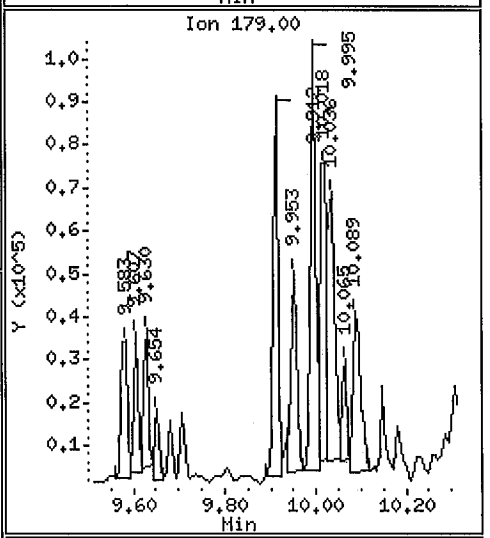
66 Phenanthrene

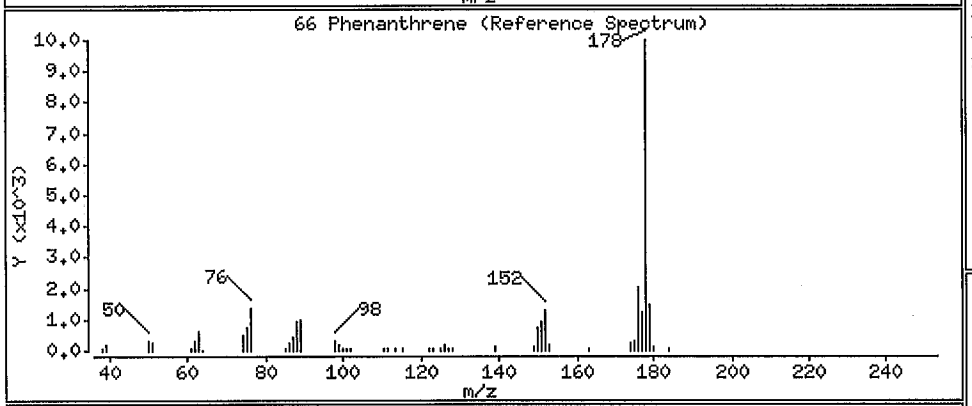
Concentration: 1810 ug

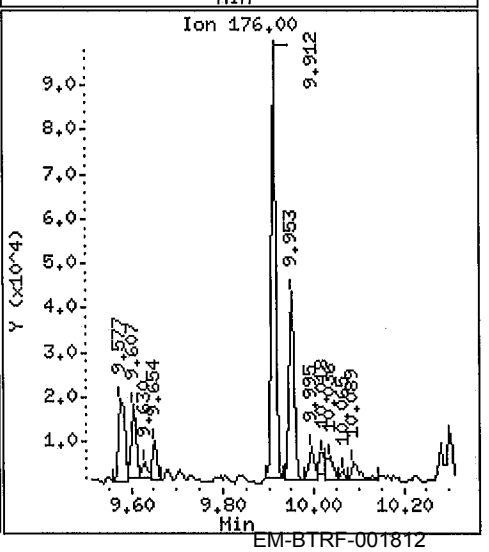


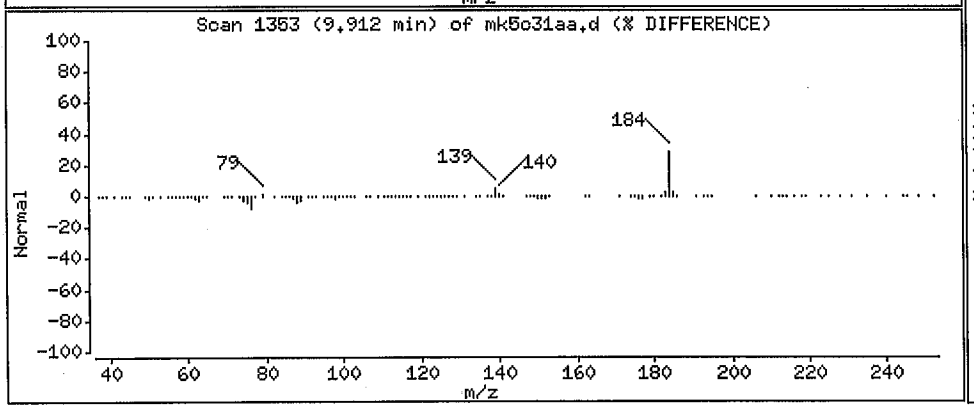












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

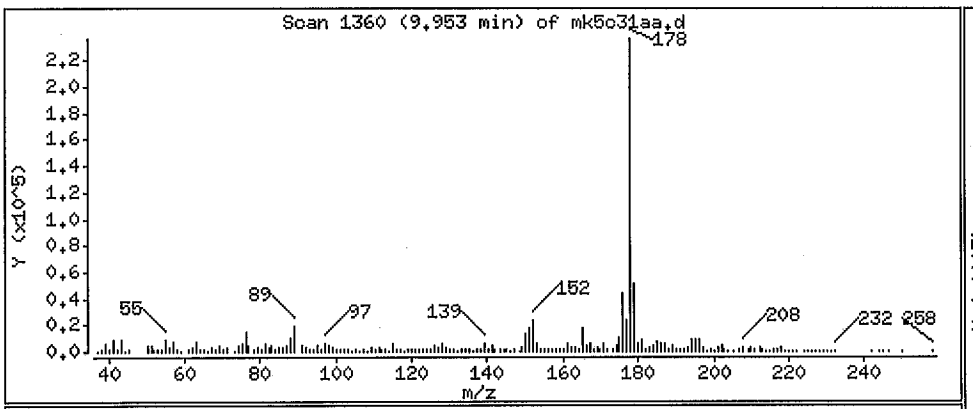
Operator: 60487

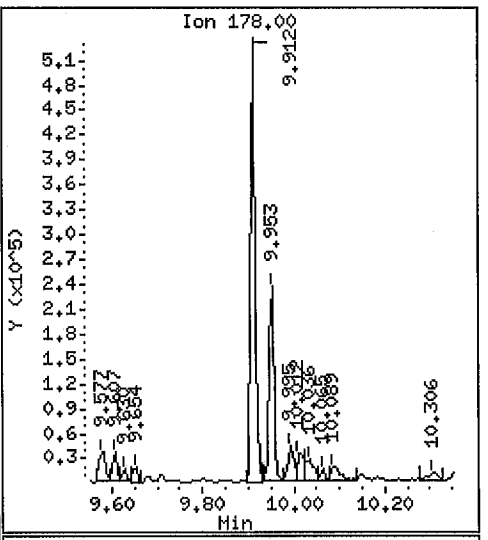
Column phase: Rxi-5 Sil MS

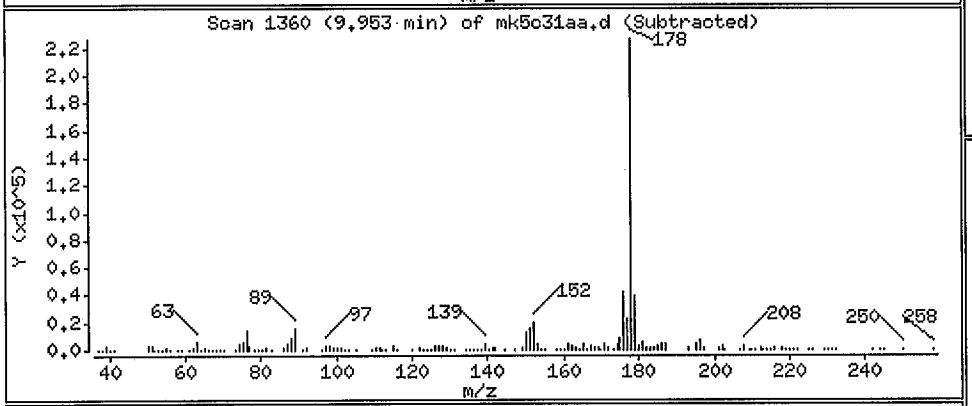
Column diameter: 0.25

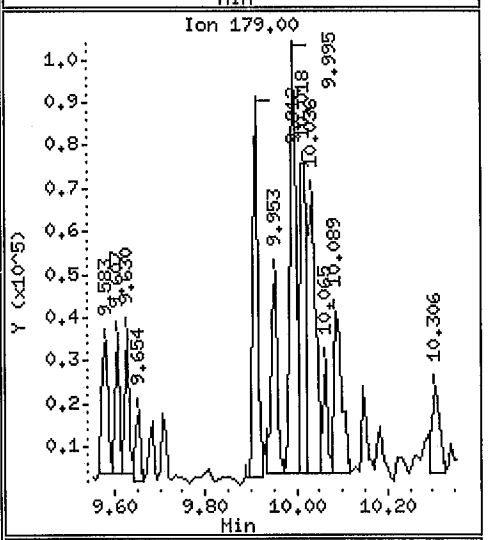
67 Anthracene

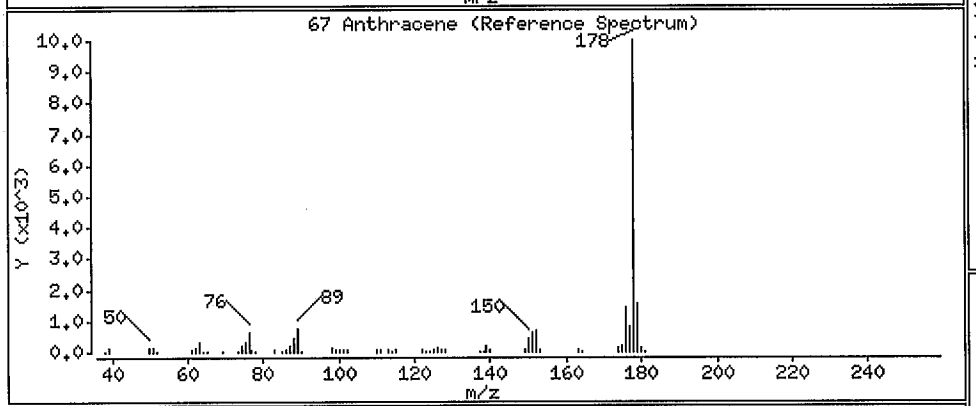
Concentration: 941 ug

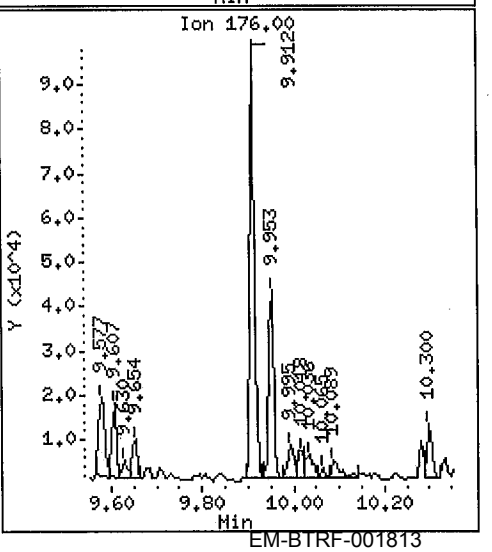


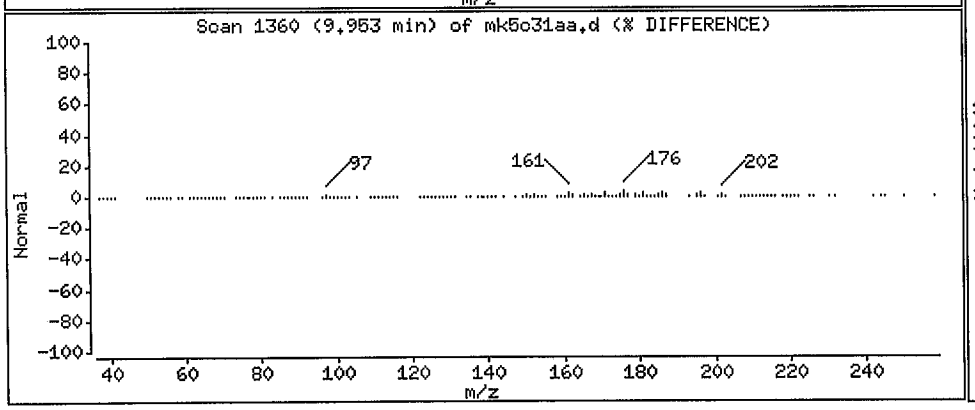












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

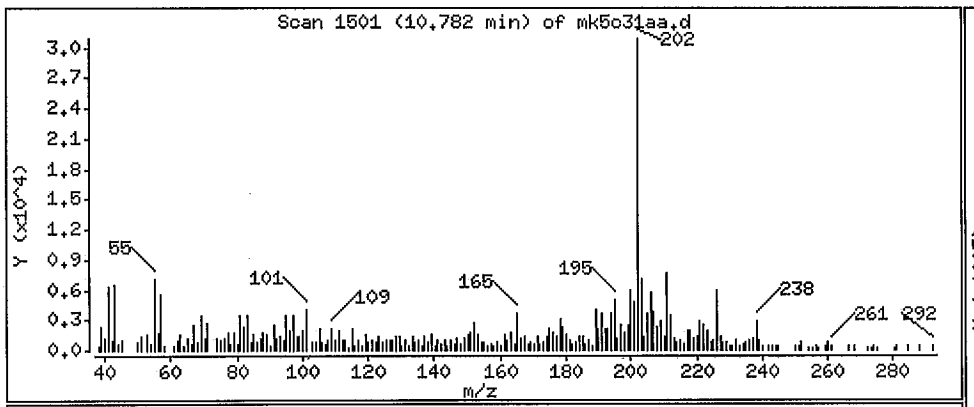
Operator: 60487

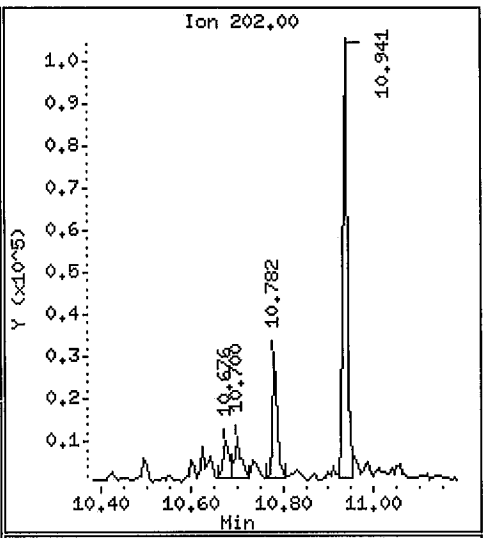
Column phase: Rxi-5 Sil MS

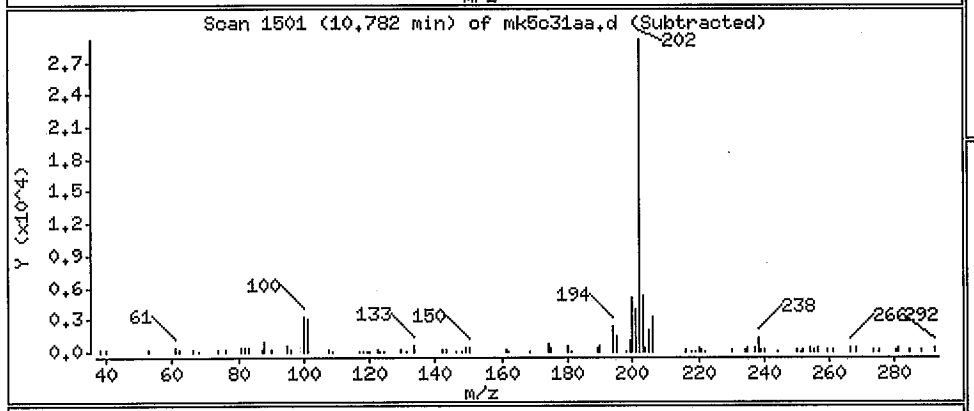
Column diameter: 0.25

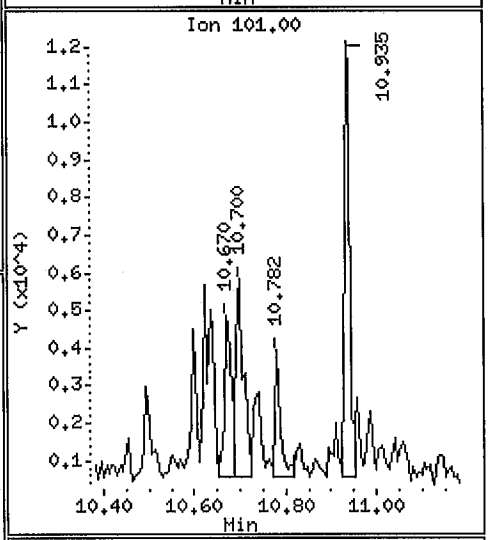
70 Fluoranthene (ccc)

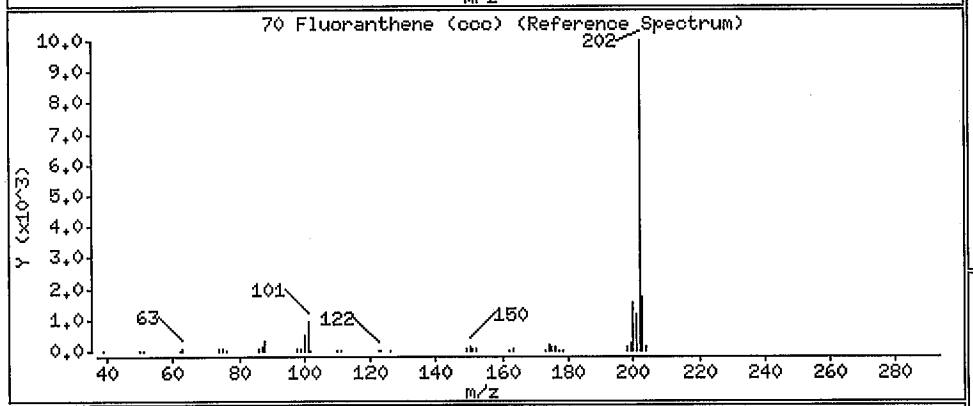
Concentration: 106 ug

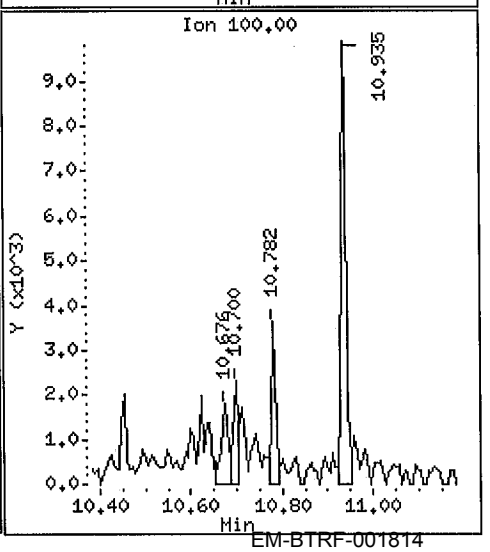


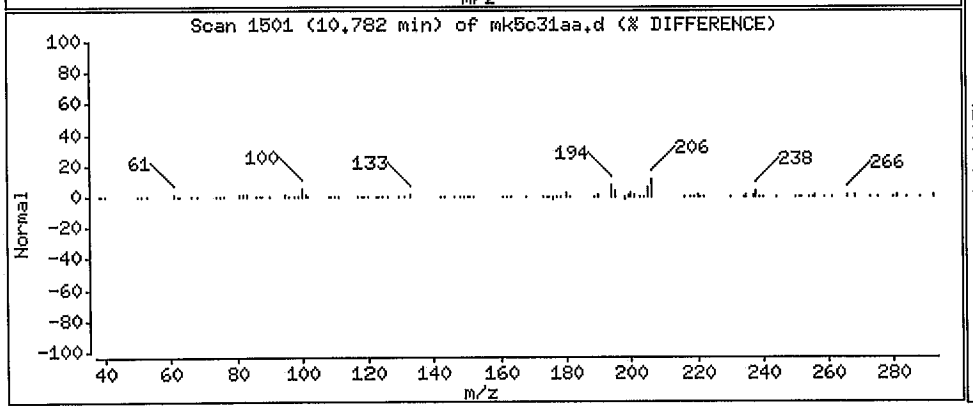












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

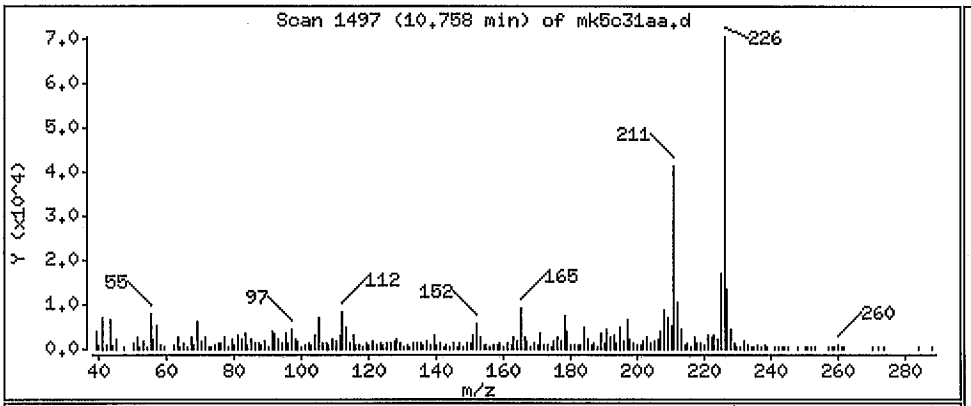
Operator: 60487

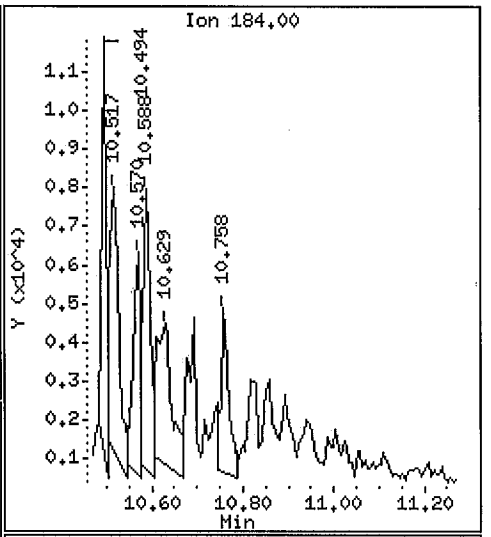
Column phase: Rxi-5 Sil MS

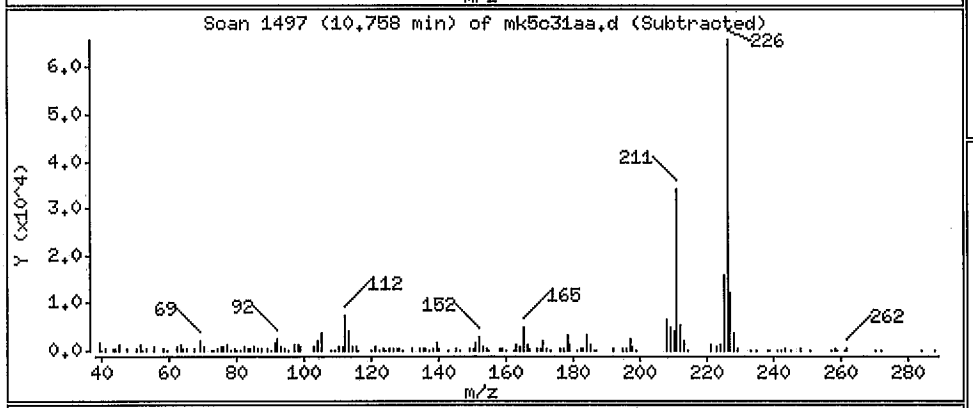
Column diameter: 0.25

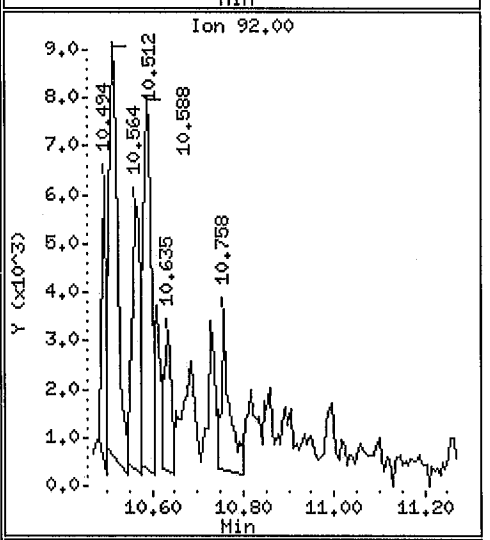
84 Benzidine

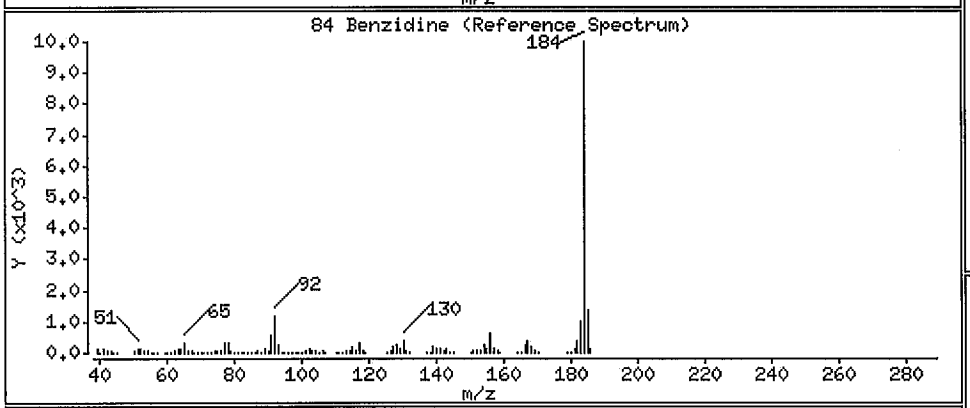
Concentration: 43.6 ug

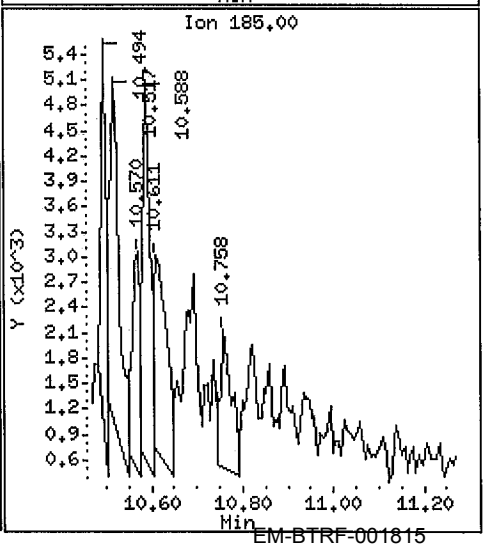


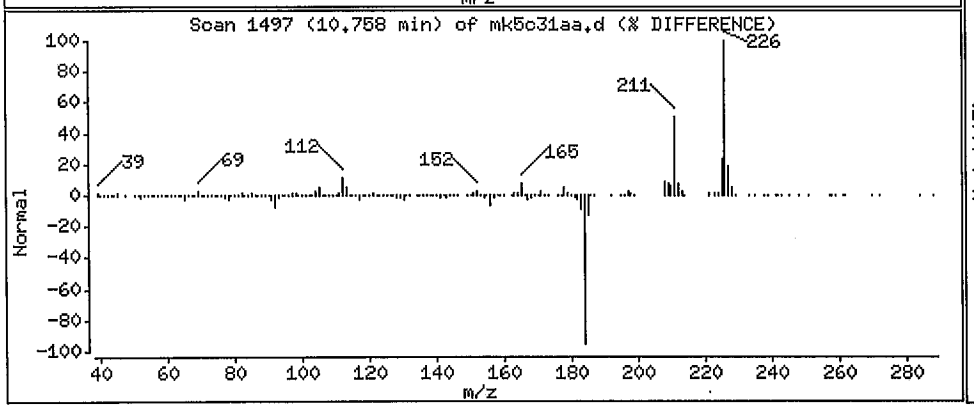












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

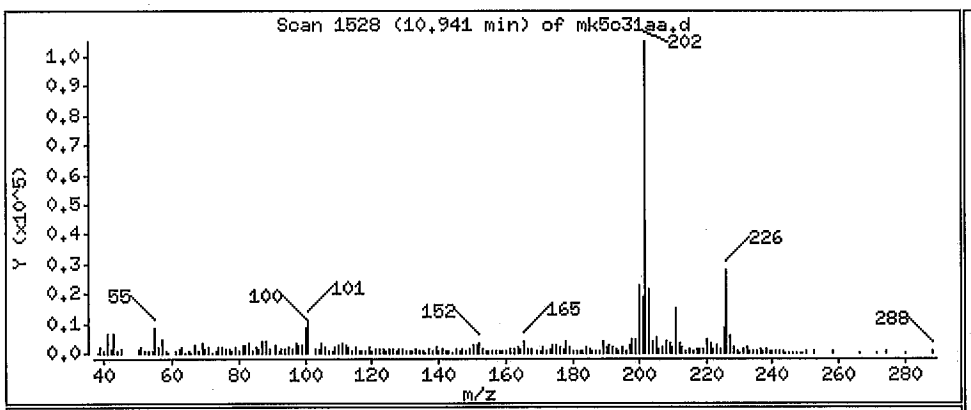
Operator: 60487

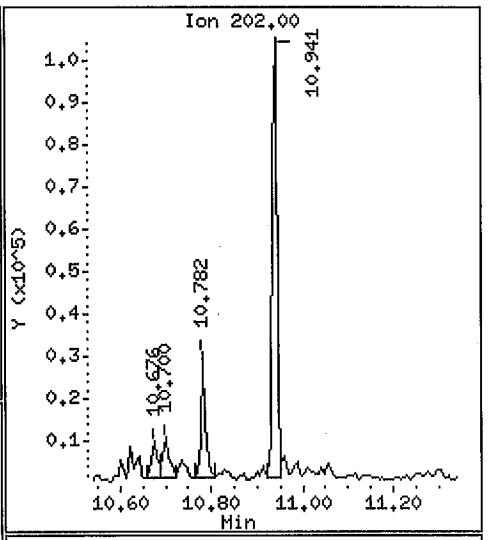
Column phase: Rxi-5 Sil MS

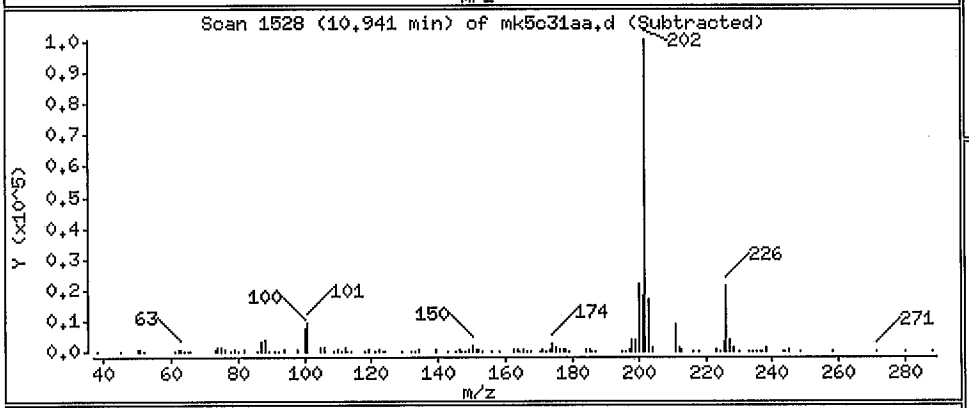
Column diameter: 0.25

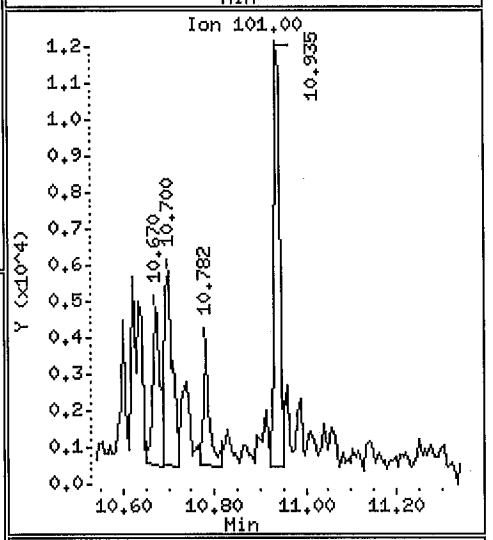
71 Pyrene

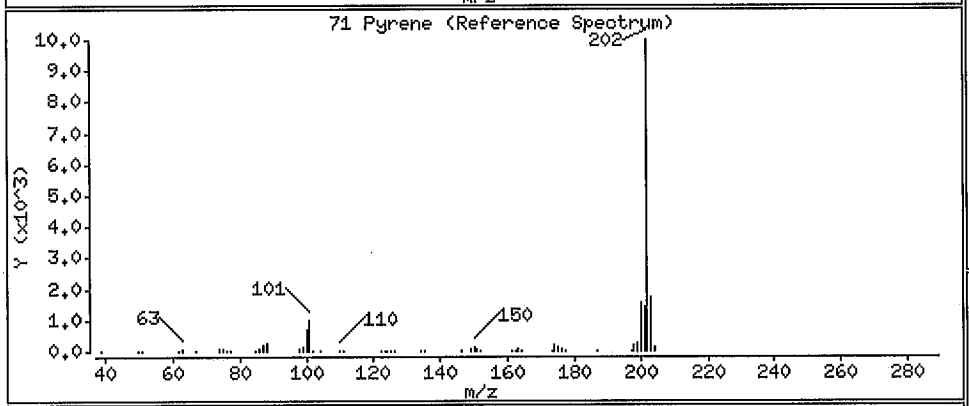
Concentration: 374 ug

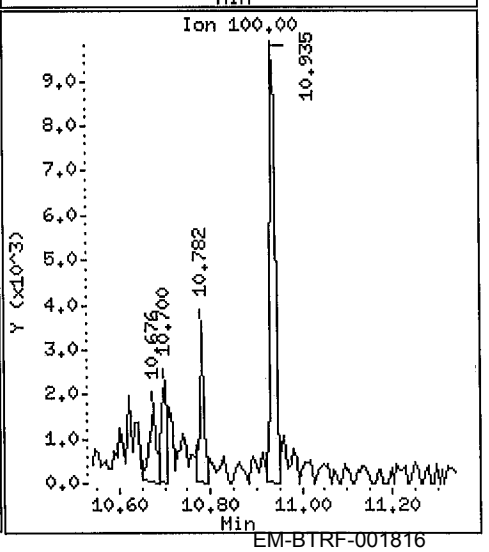


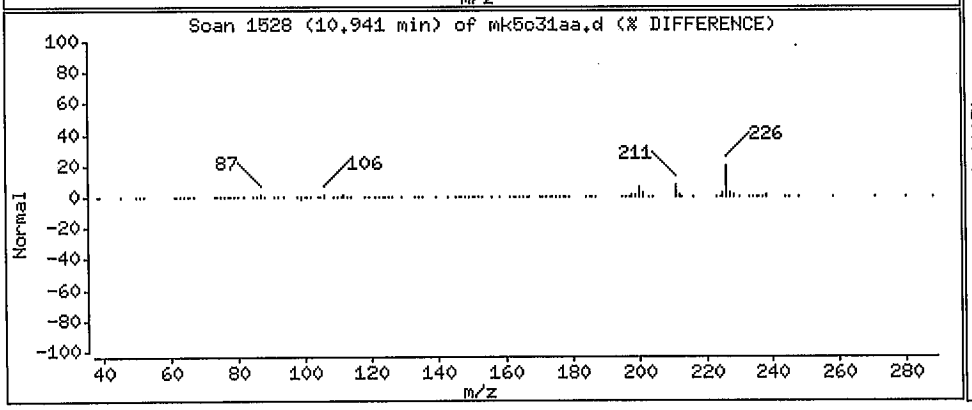












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

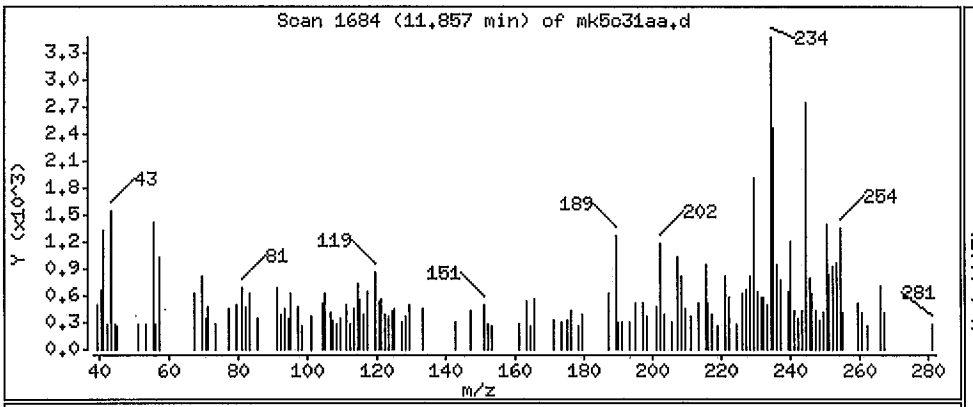
Operator: 60487

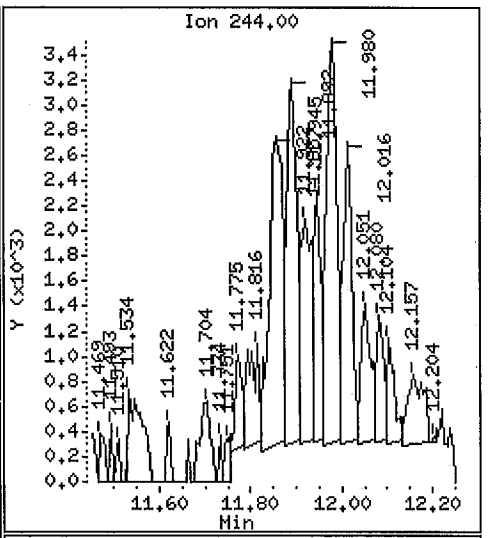
Column phase: Rxi-5 Sil MS

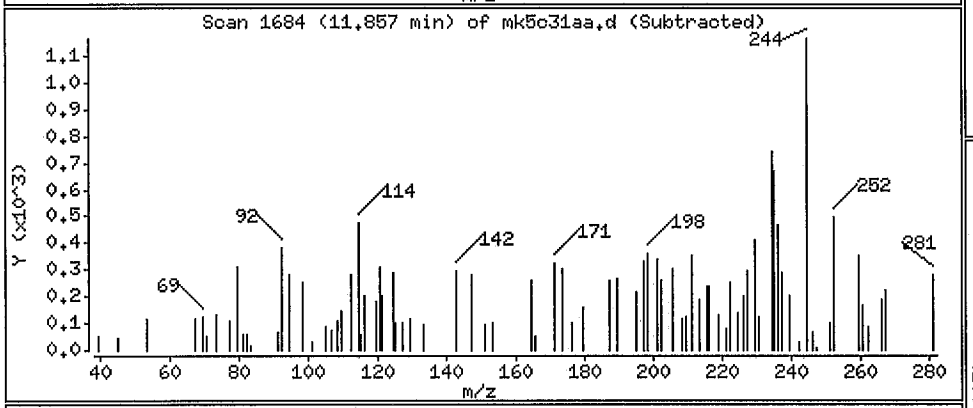
Column diameter: 0.25

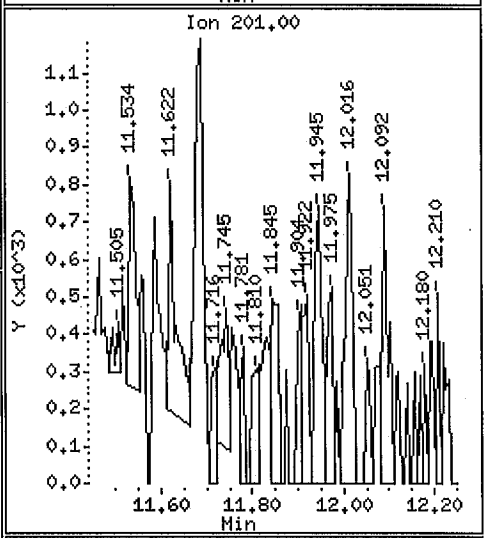
200 3,3'-Dimethoxybenzidine

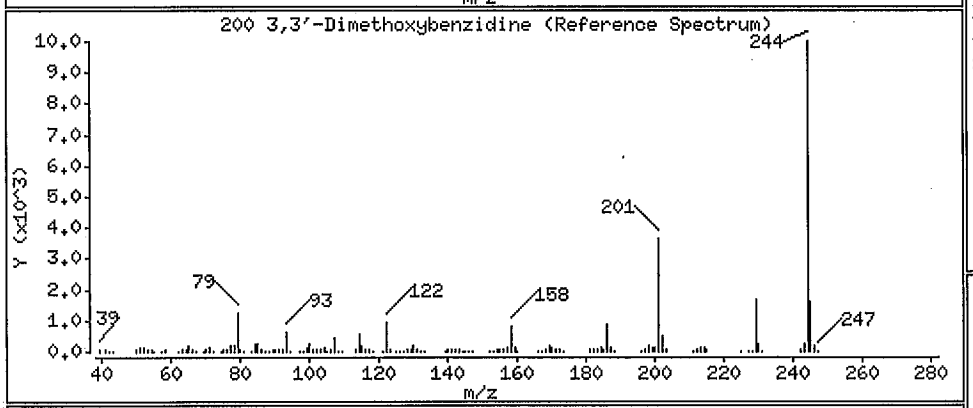
Concentration: 1080 ug

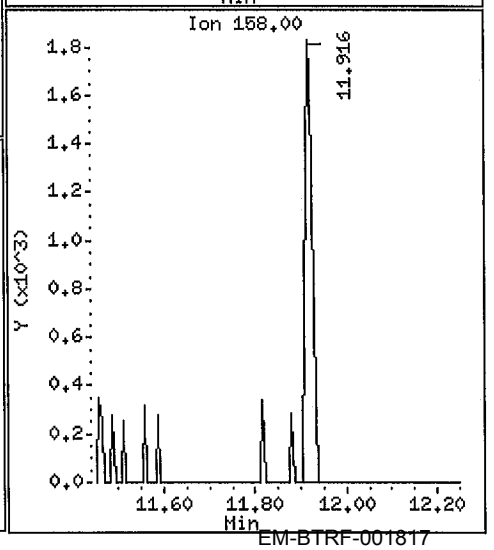


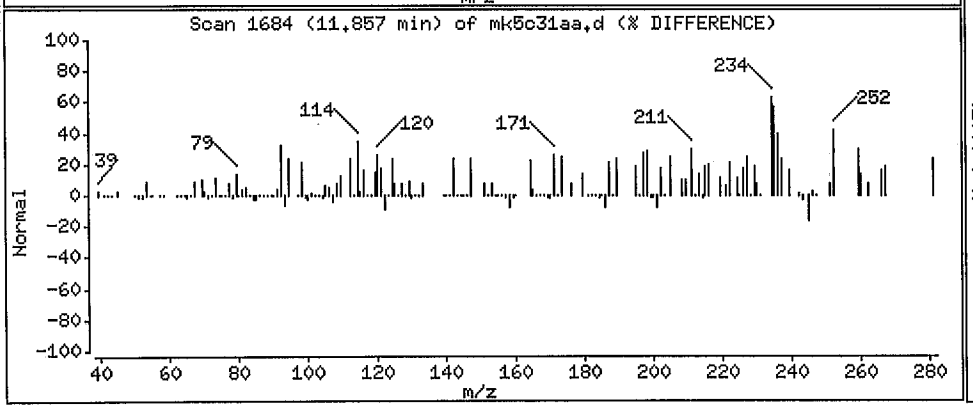












Data File: /var/chem/gcms/md.i/D080411.b/mk5o31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

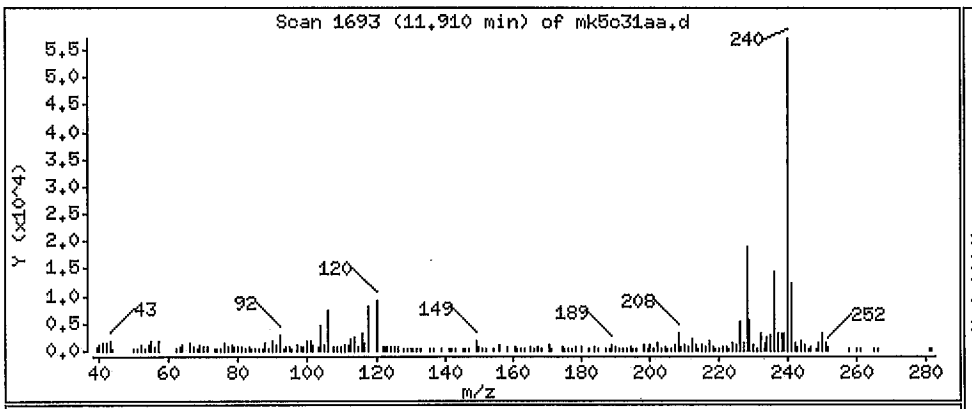
Operator: 60487

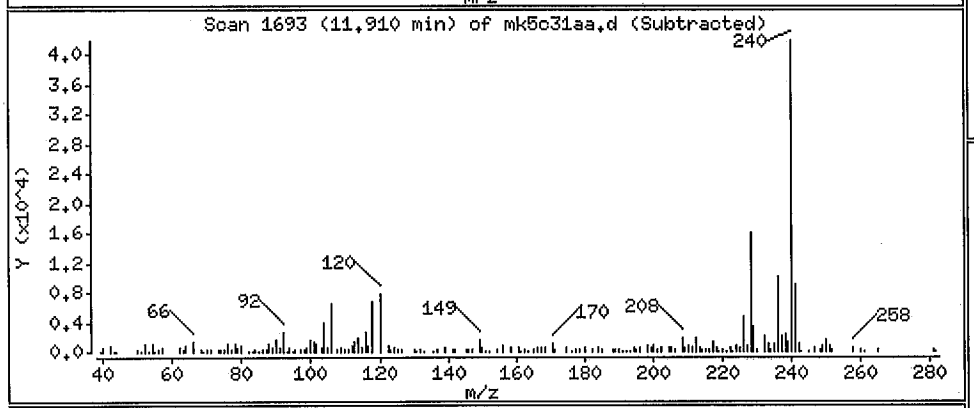
Column phase: Rxi-5 Sil MS

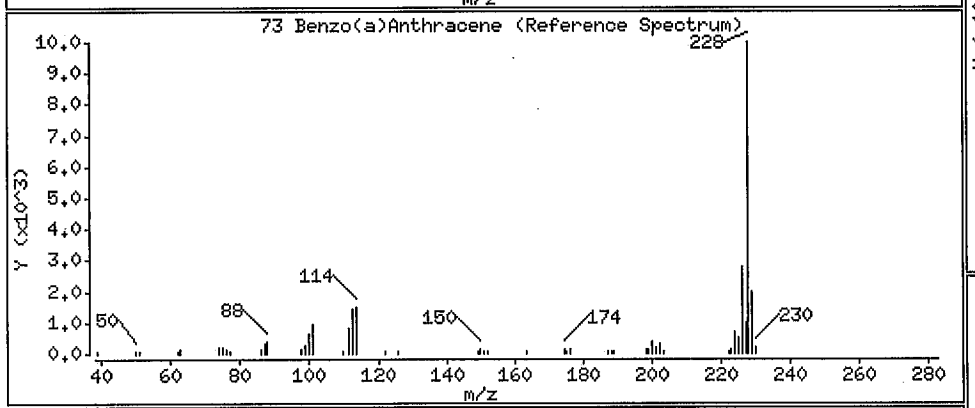
Column diameter: 0.25

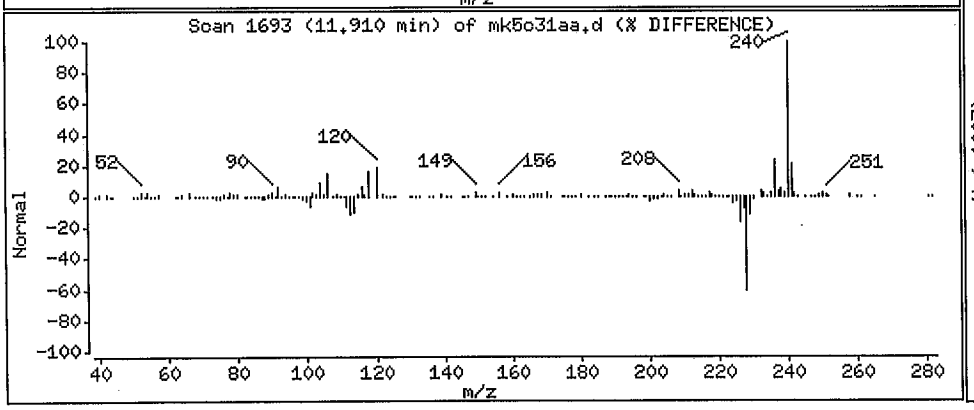
73 Benzo(a)Anthracene

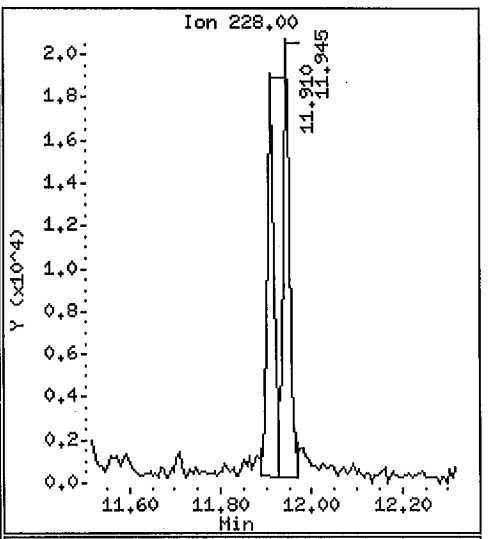
Concentration: 116 ug

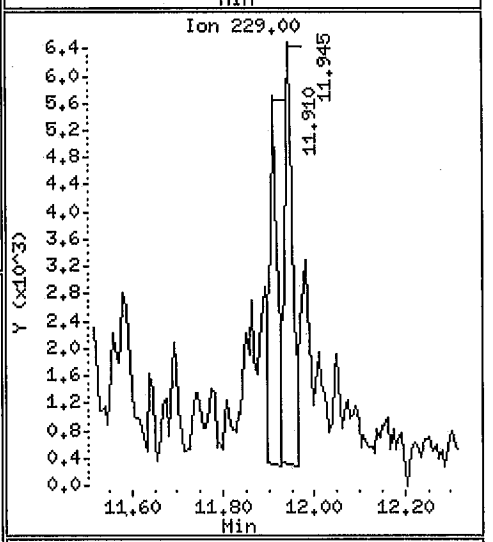


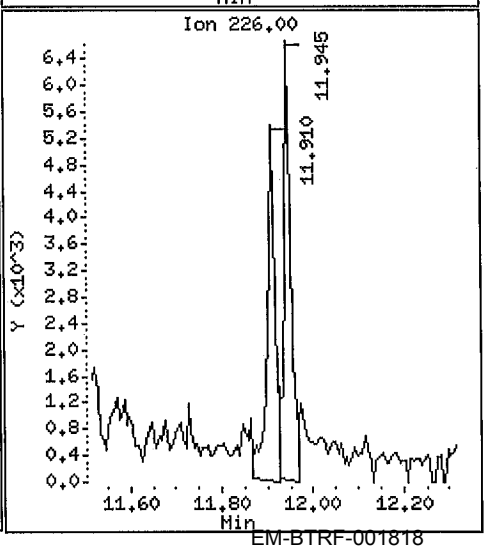












Data File: /var/chem/goms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

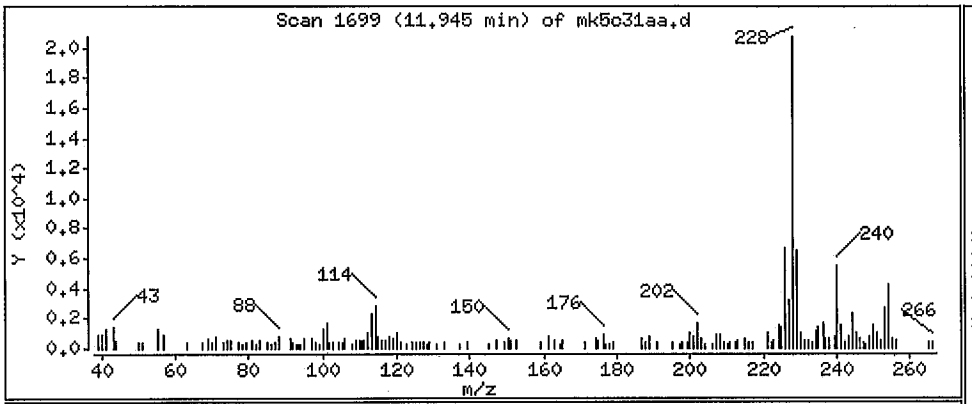
Operator: 60487

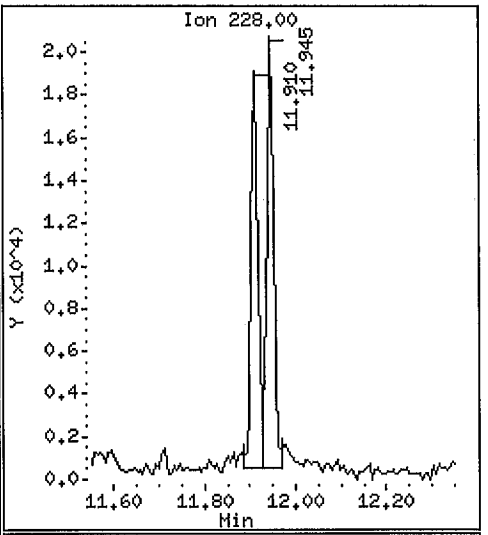
Column phase: Rxi-5 Sil MS

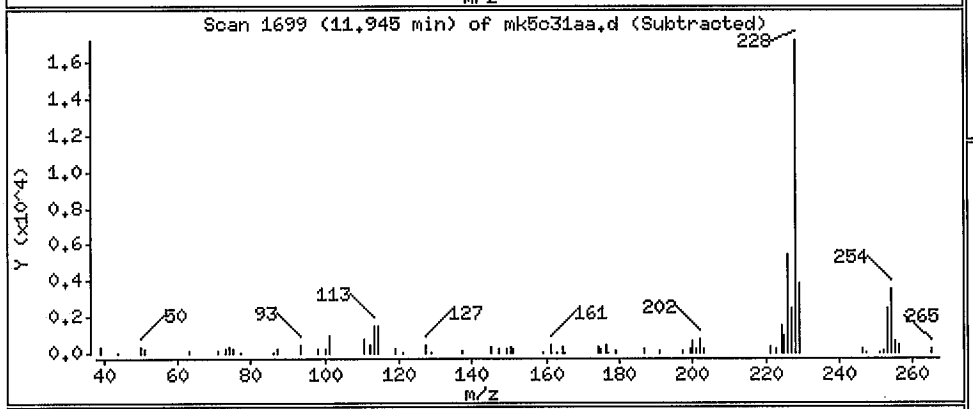
Column diameter: 0.25

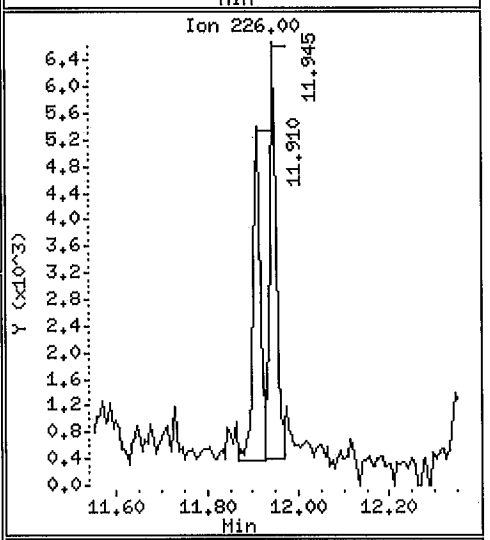
75 Chrysene

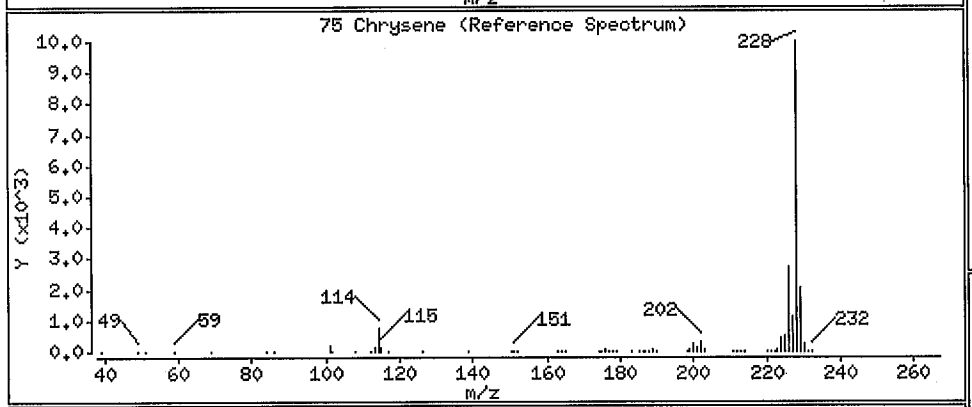
Concentration: 110 ug

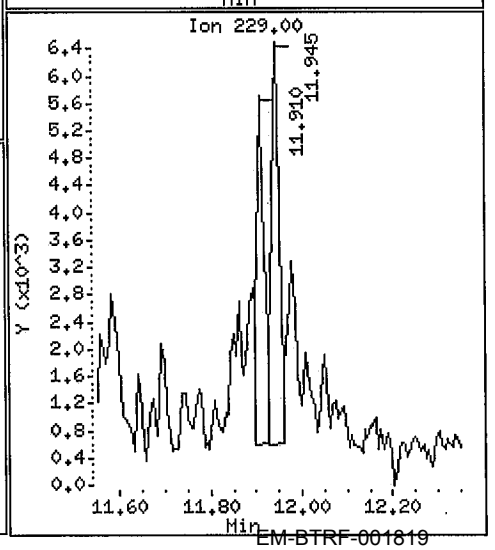


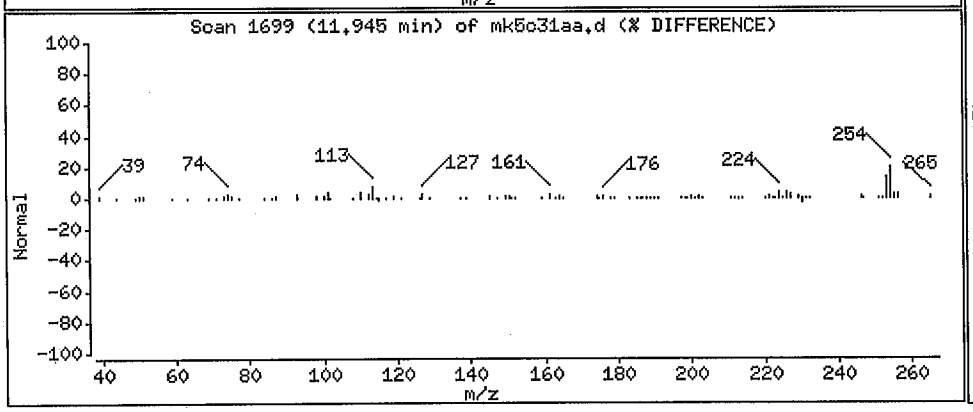












Data File: /var/chem/goms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

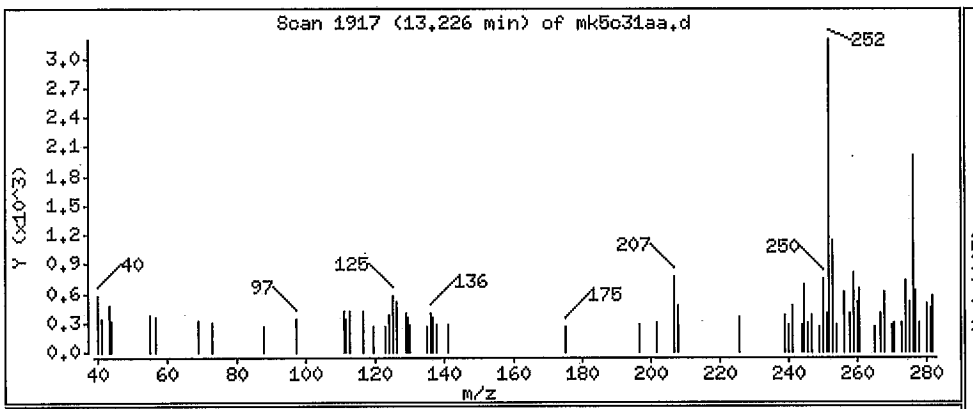
Operator: 60487

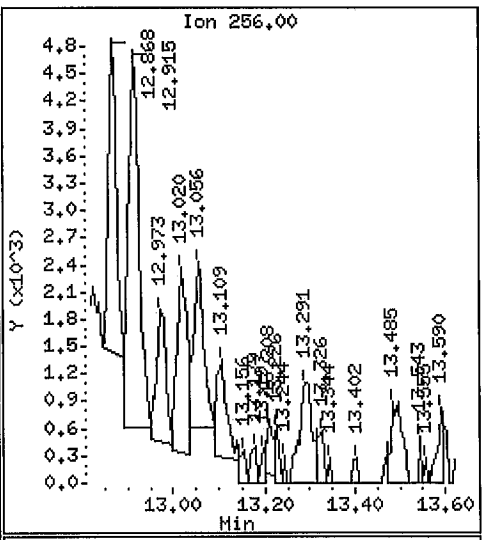
Column phase: Rxi-5 Sil MS

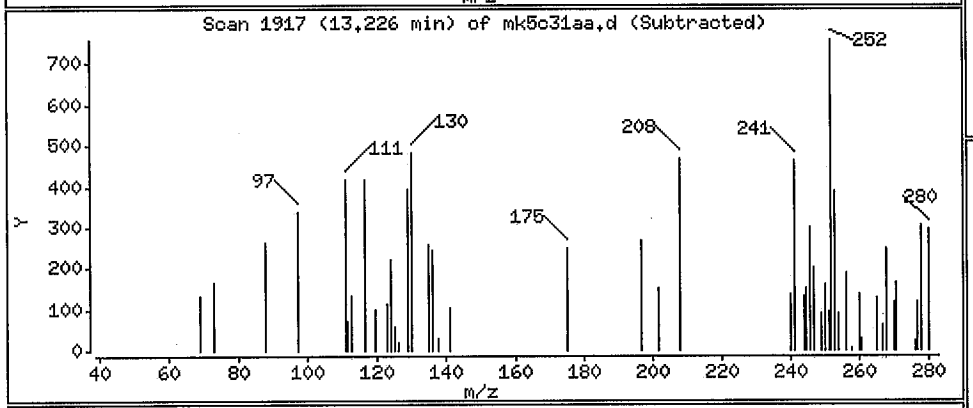
Column diameter: 0.25

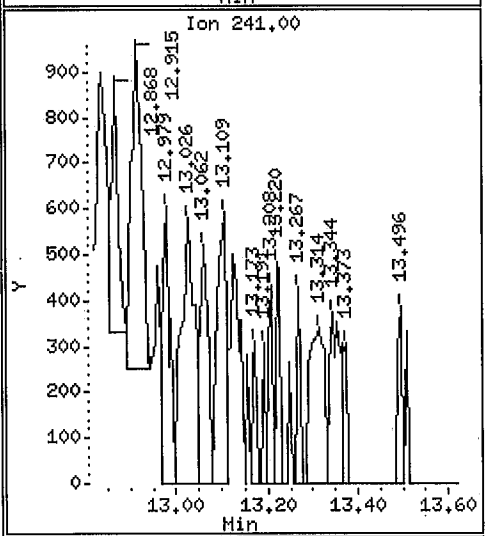
119 7,12-dimethylbenz(a)anthracen

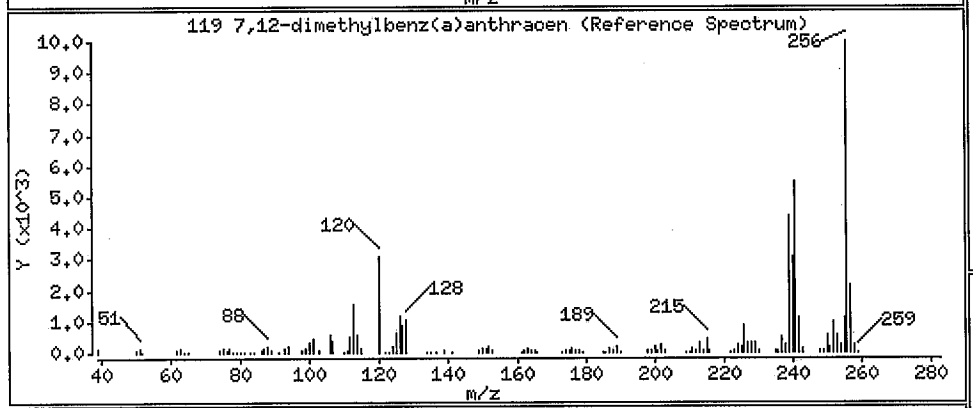
Concentration: 418 ug

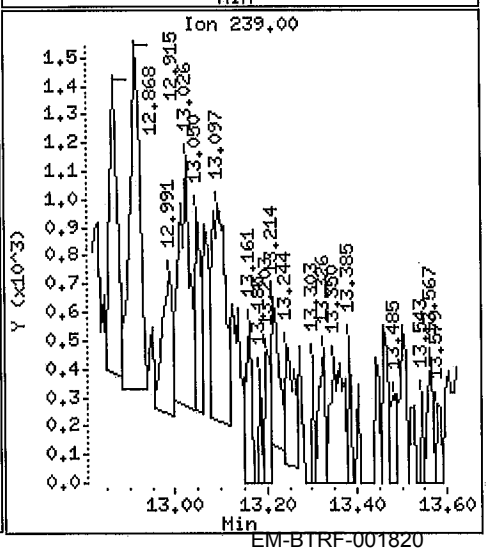


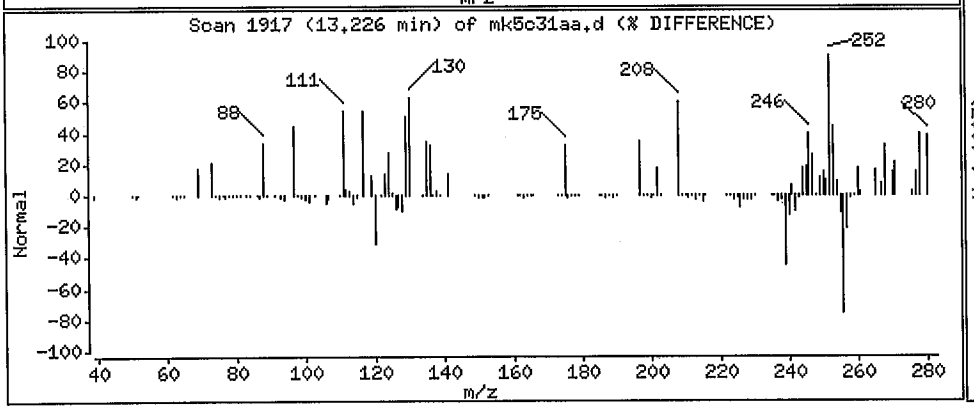












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

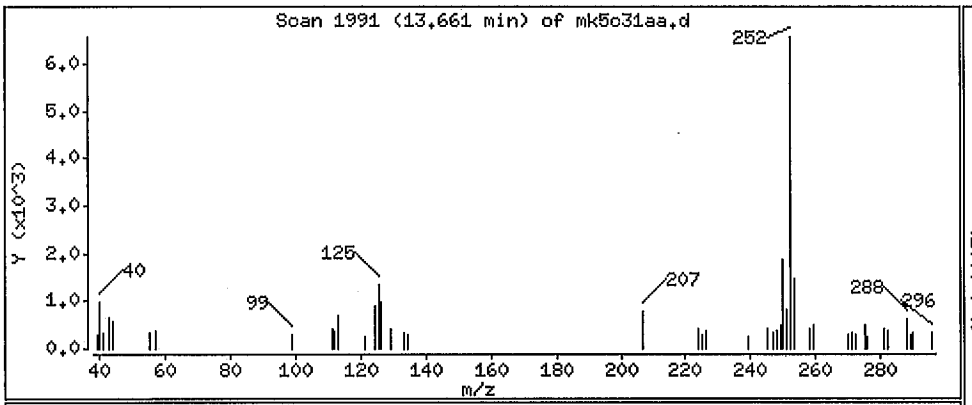
Operator: 60487

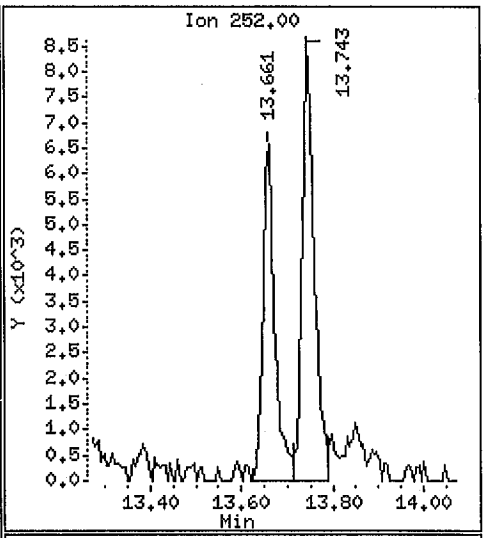
Column phase: Rxi-5 Sil MS

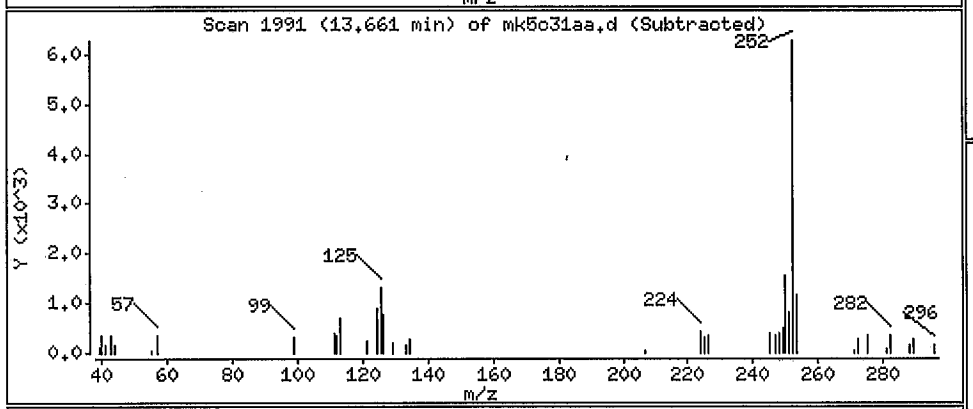
Column diameter: 0.25

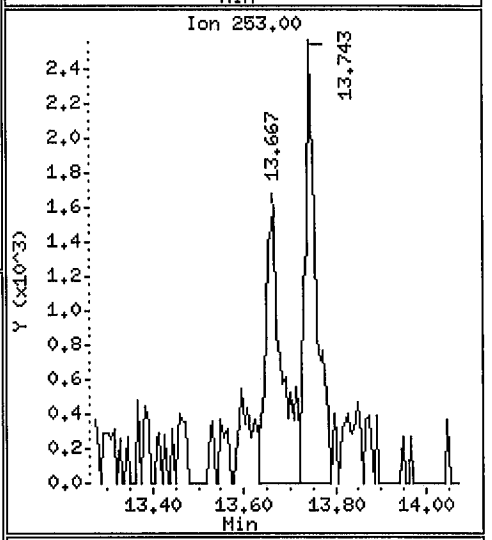
85 Benzo(e)pyrene

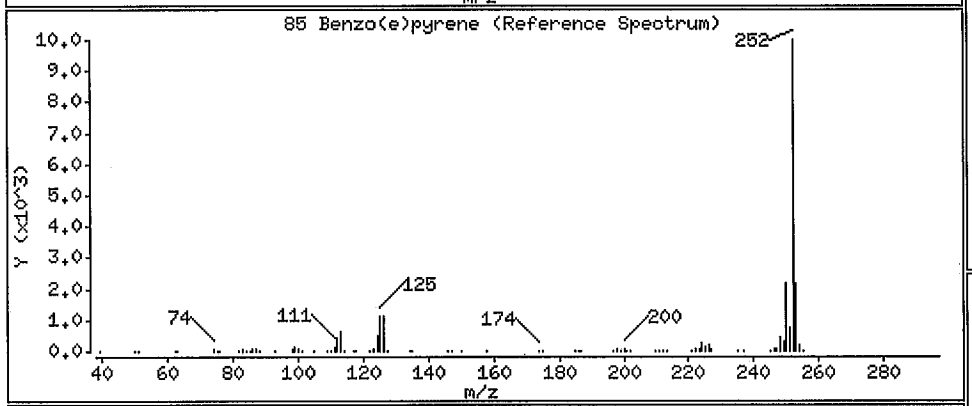
Concentration: 72.8 ug

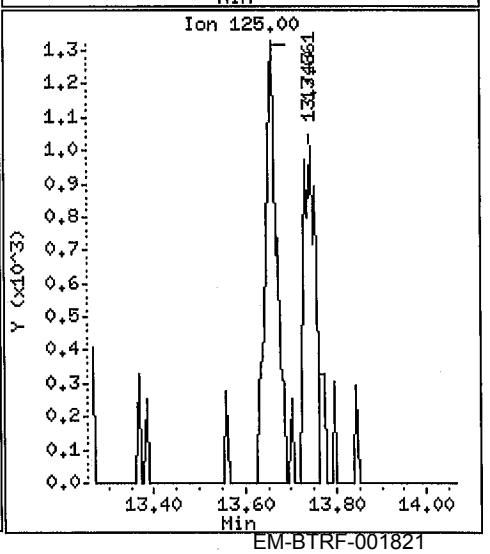


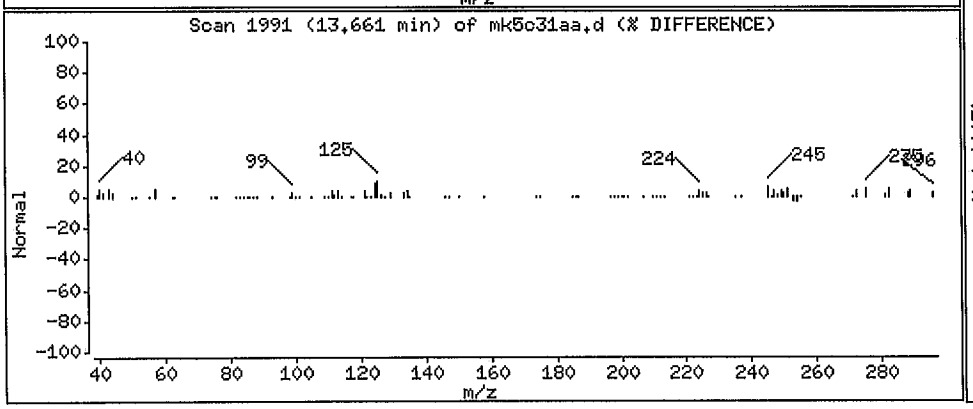












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

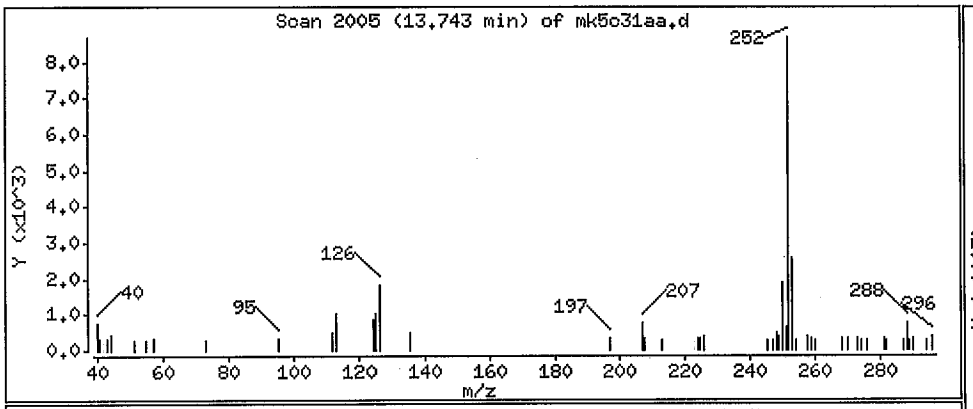
Operator: 60487

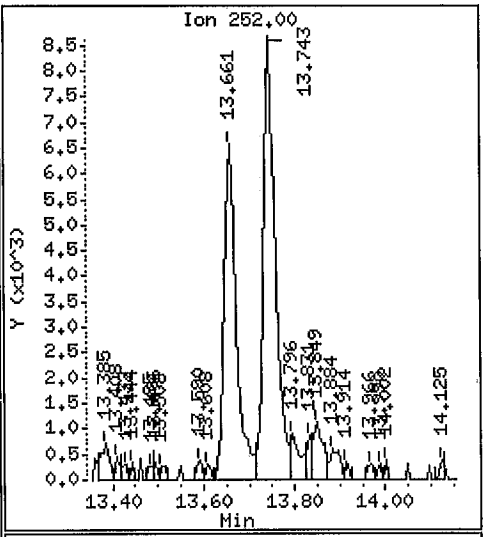
Column phase: Rxi-5 Sil MS

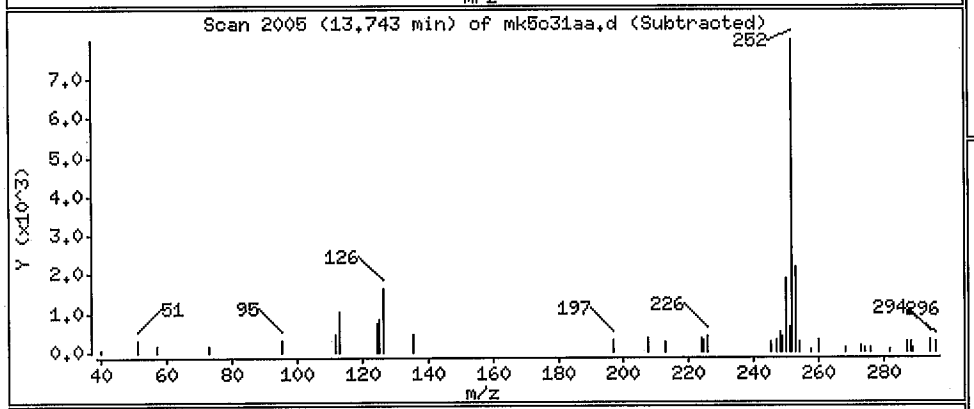
Column diameter: 0.25

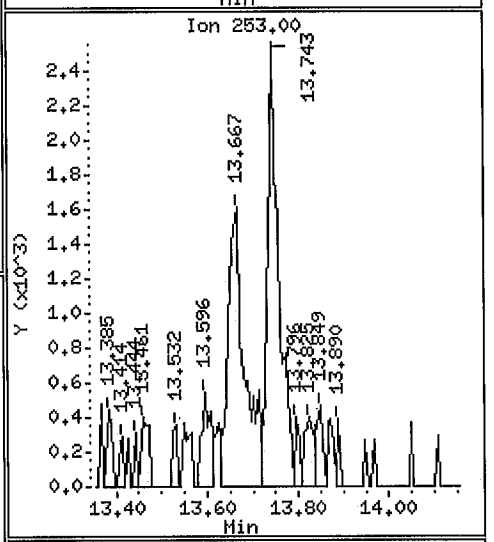
80 Benzo(a)pyrene (ccc)

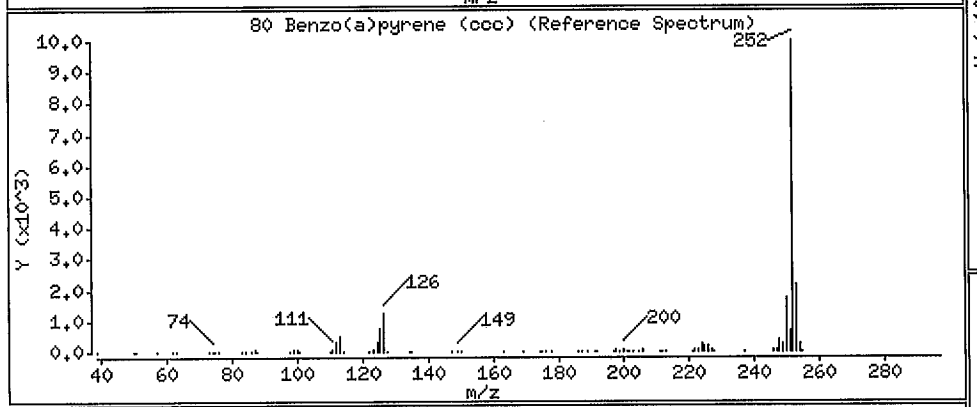
Concentration: 303 ug

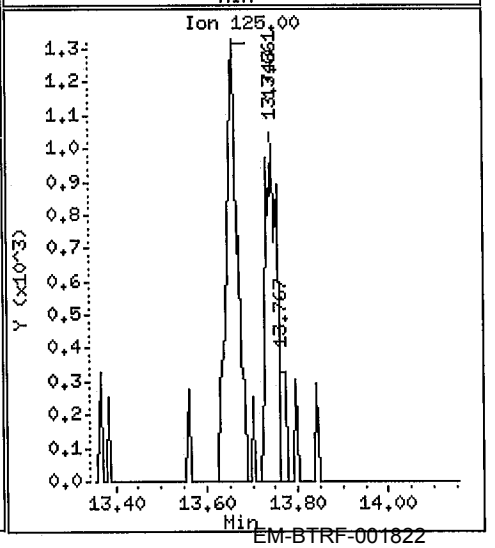


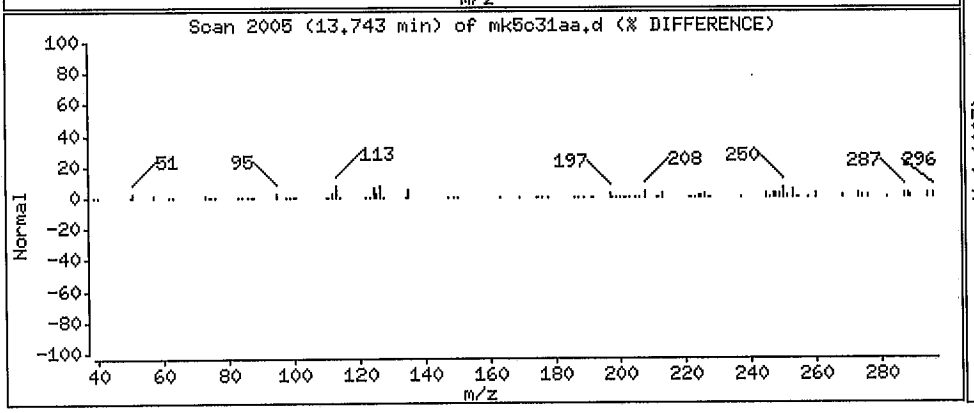












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

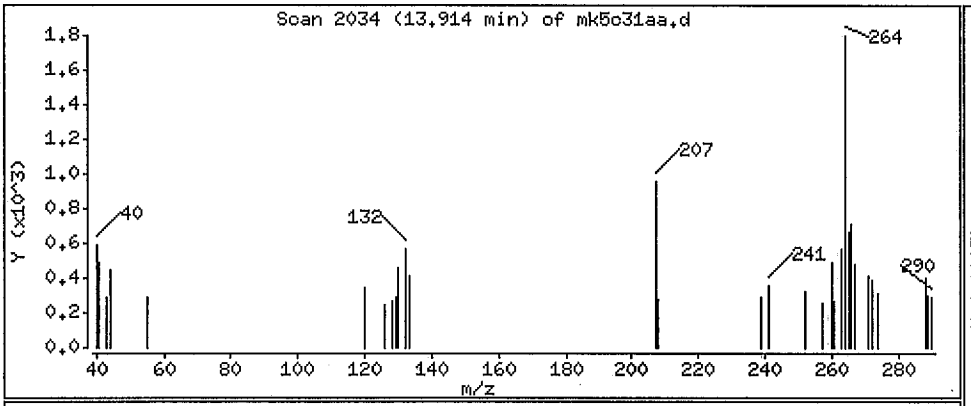
Operator: 60487

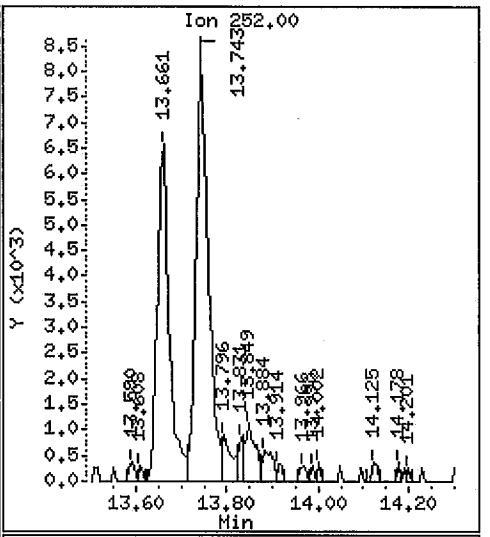
Column phase: Rxi-5 Sil MS

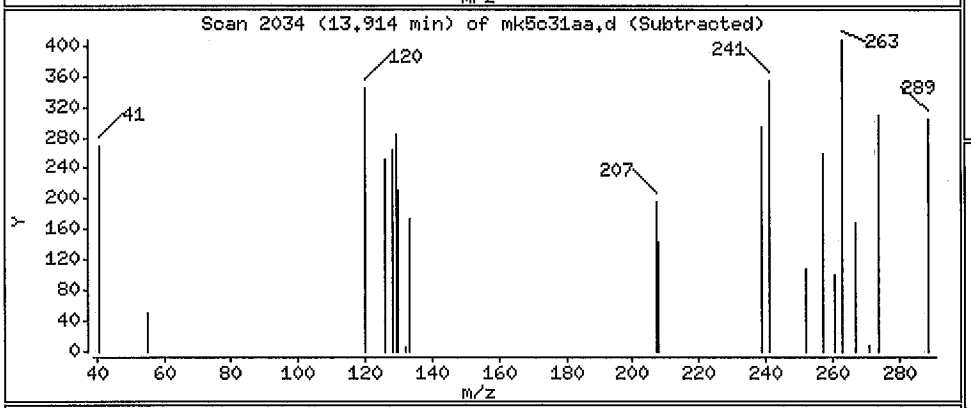
Column diameter: 0.25

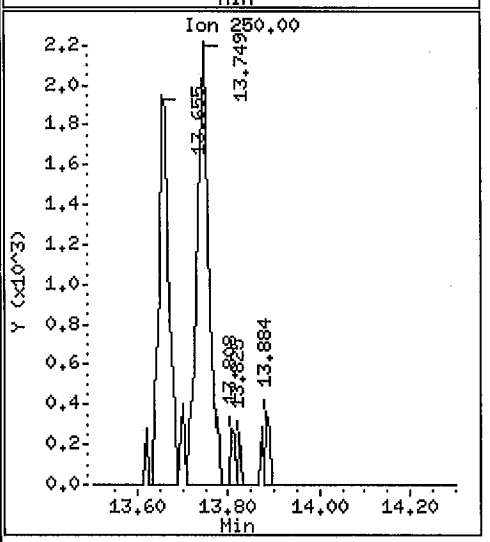
196 Perylene

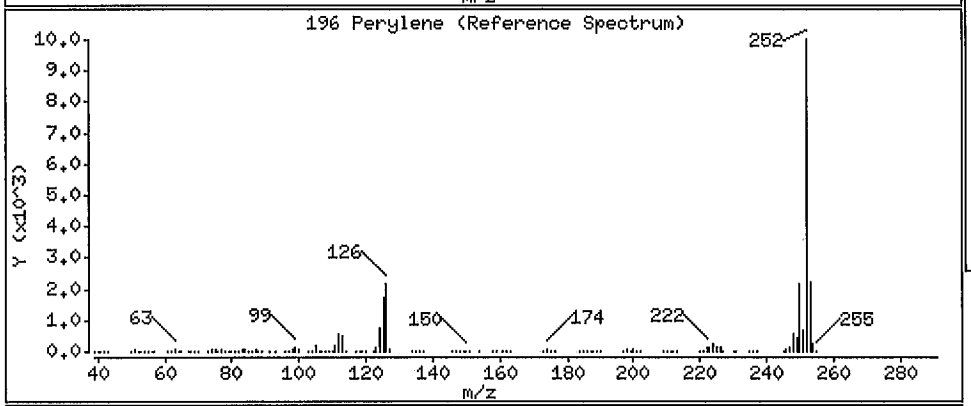
Concentration: 1.29 ug

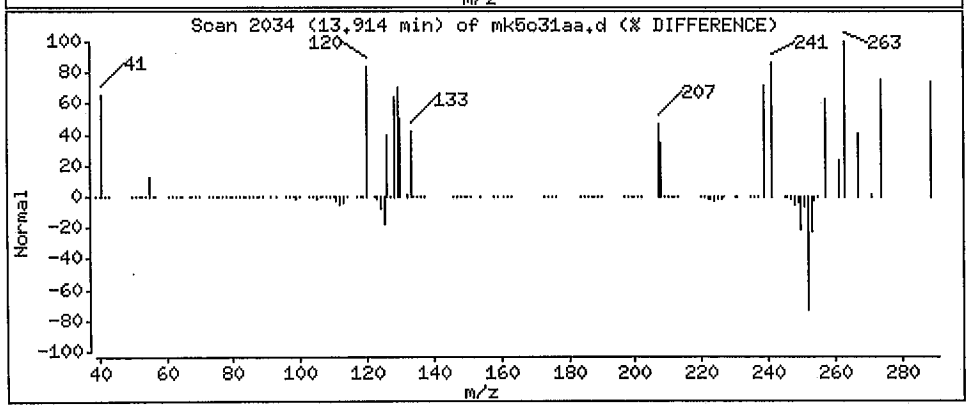












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-C0

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

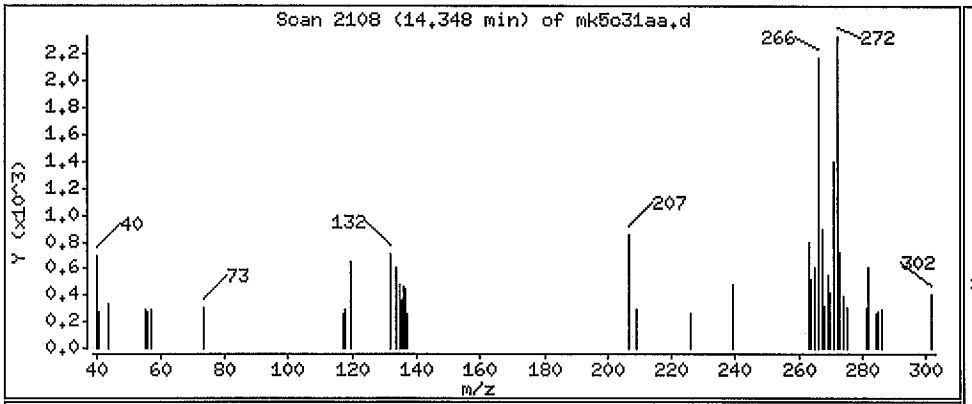
Operator: 60487

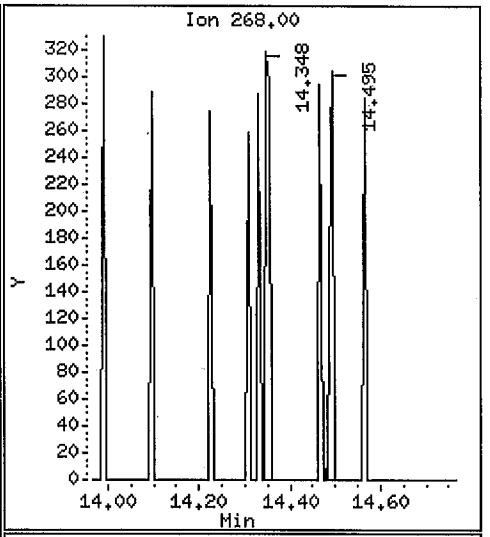
Column phase: Rxi-5 Sil MS

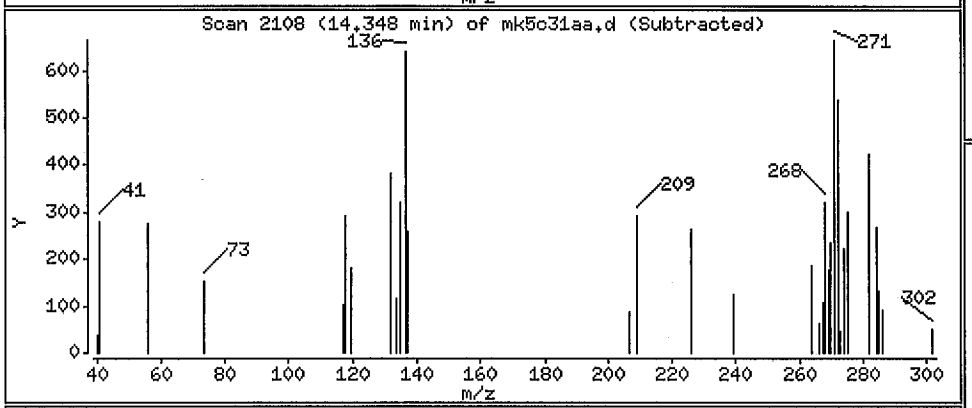
Column diameter: 0.25

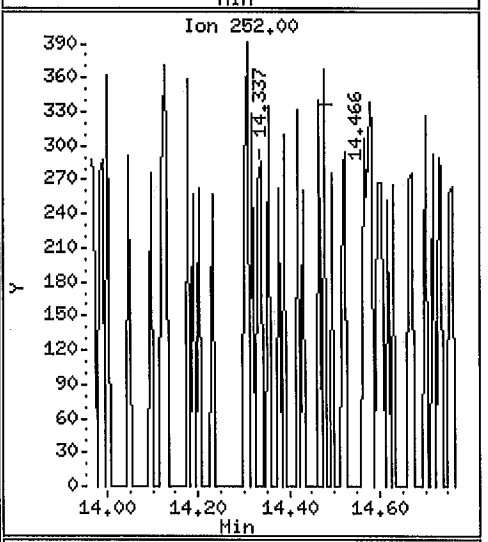
120 3-methylcholanthrene

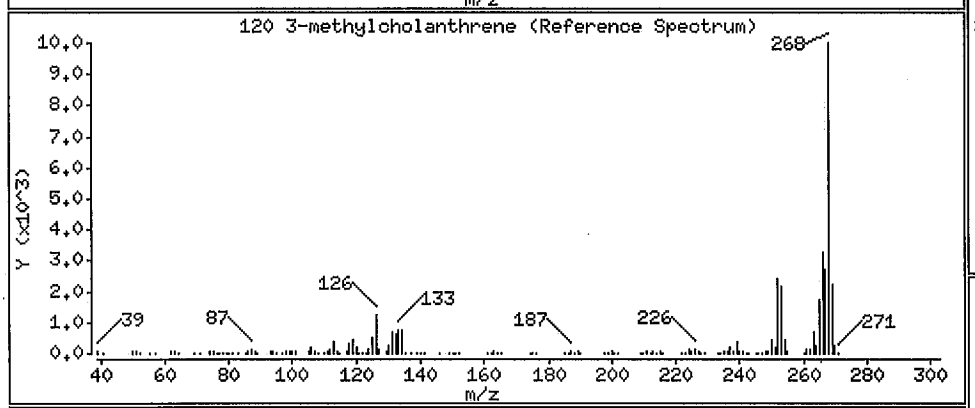
Concentration: 535 ug

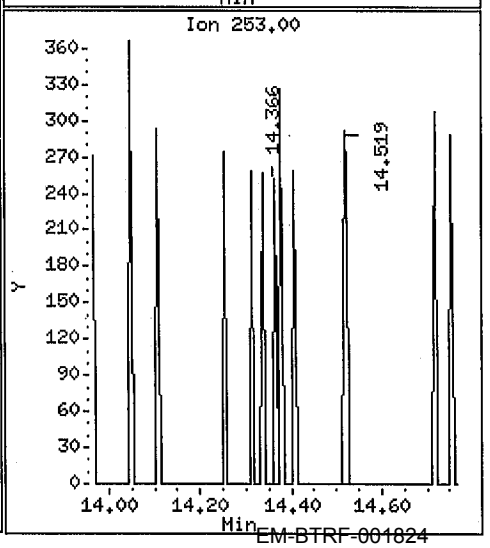


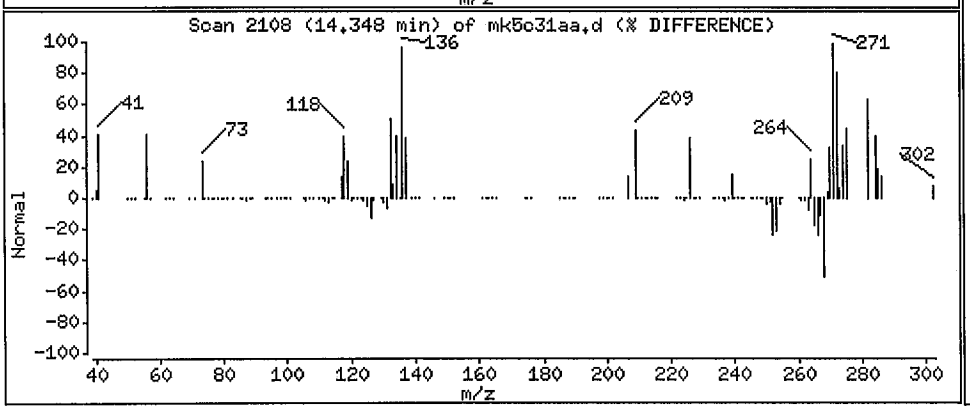












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

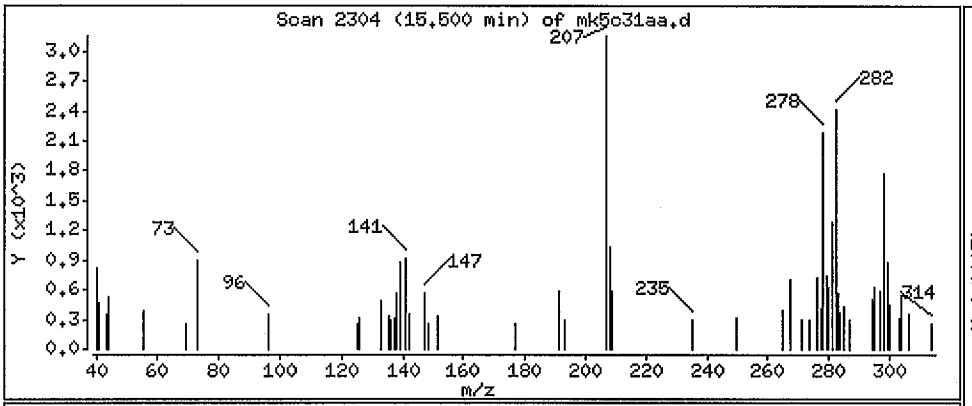
Operator: 60487

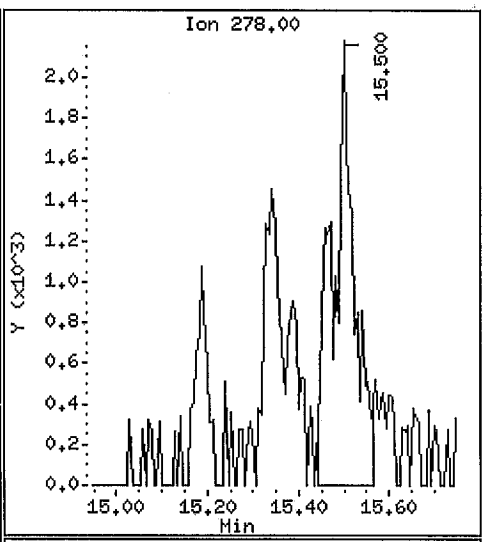
Column phase: Rxi-5 Sil MS

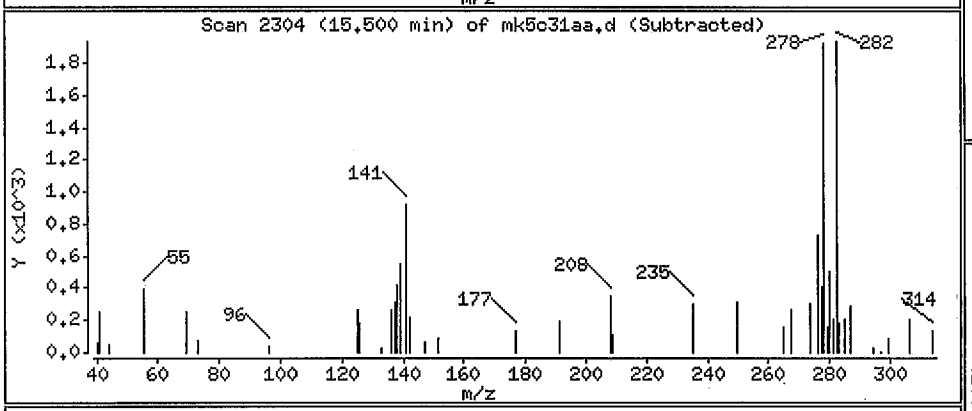
Column diameter: 0.25

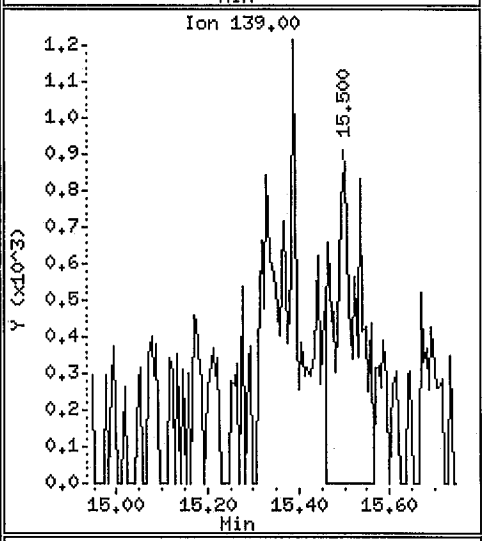
82 Dibenz(a,h)anthracene

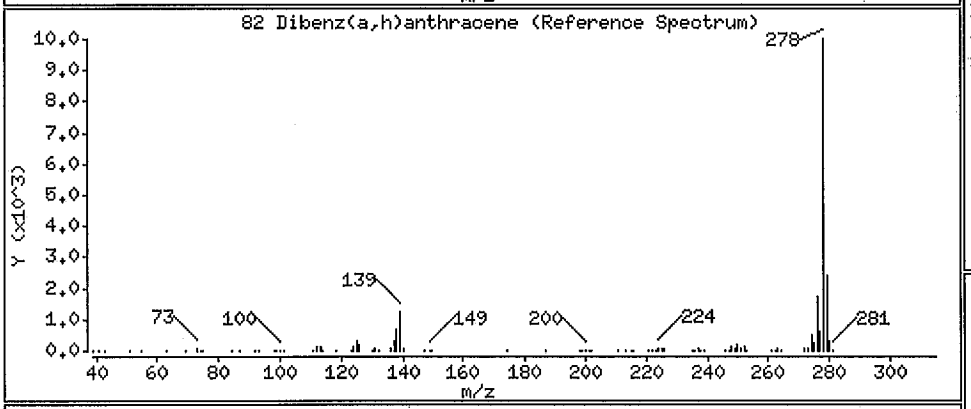
Concentration: 49.4 ug

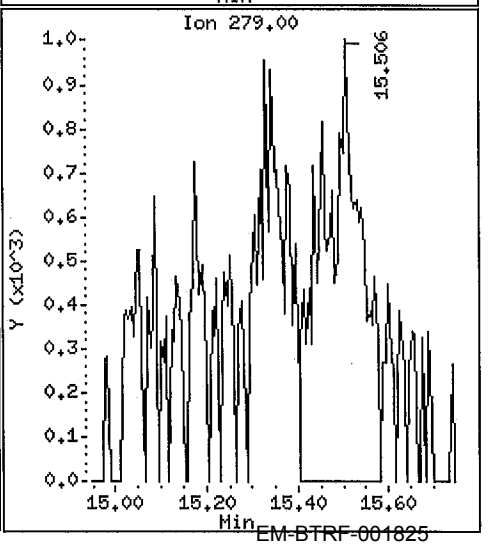


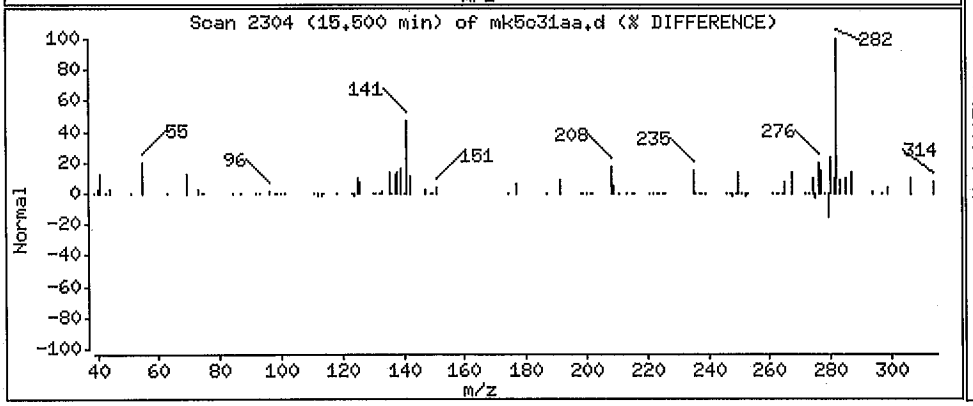












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

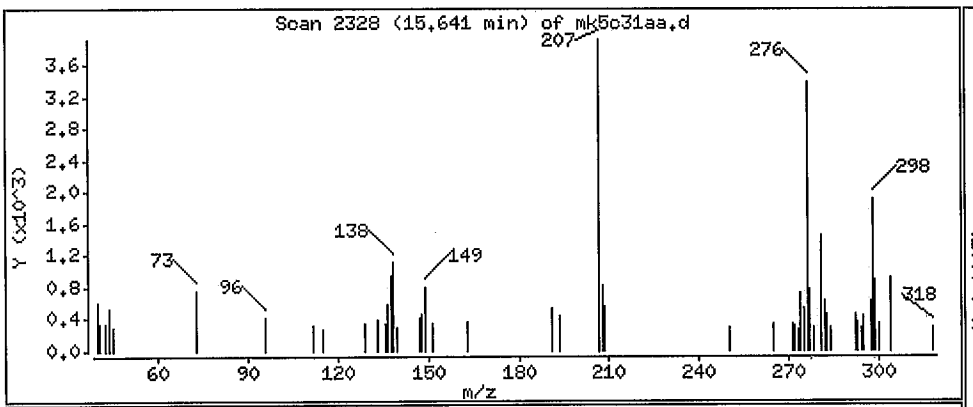
Operator: 60487

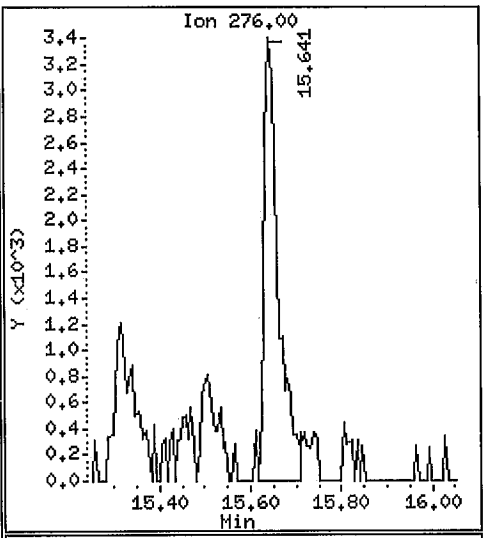
Column phase: Rxi-5 Sil MS

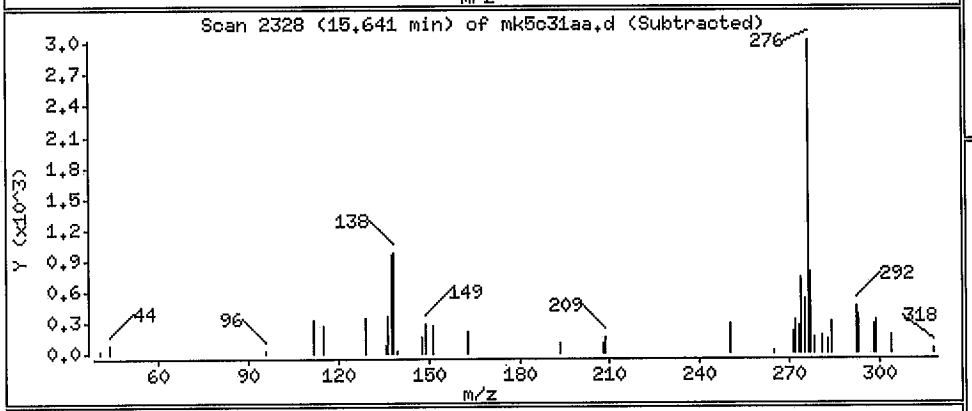
Column diameter: 0.25

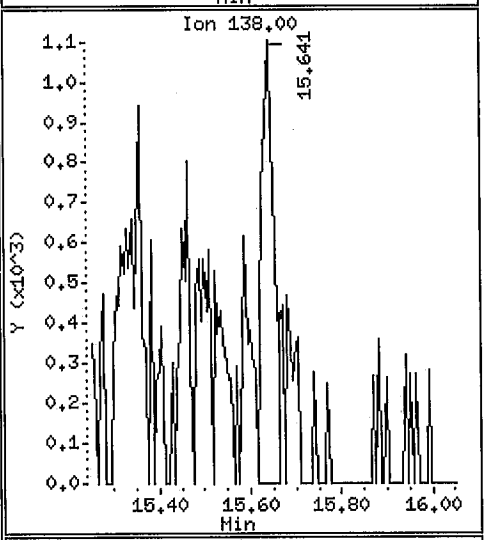
83 Benzo(g,h,i)perylene

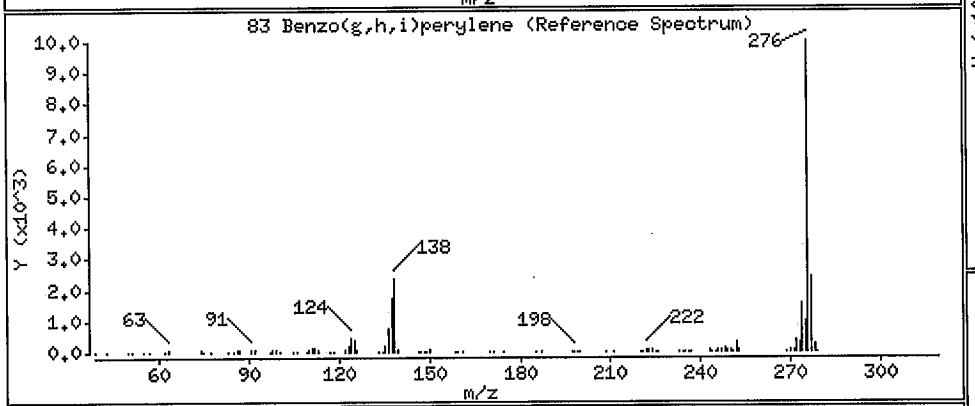
Concentration: 47.3 ug

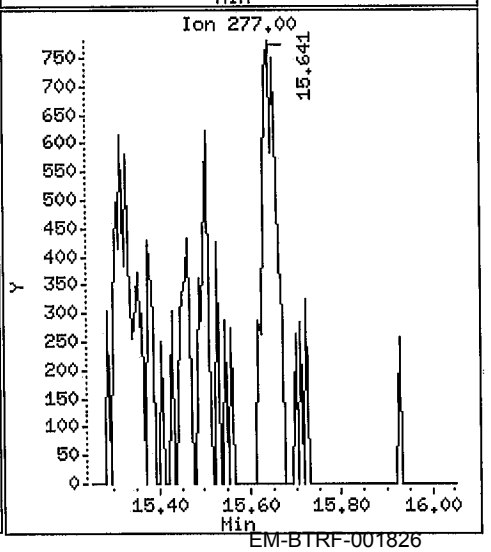


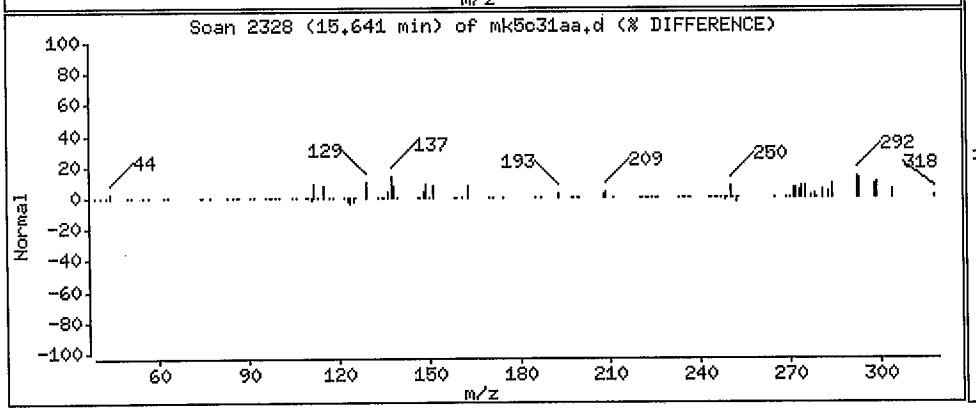












Data File: /var/chem/gcms/md.i/D080411.b/mk5c31aa.d

Date : 04-AUG-2011 15:18

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,20,0,,,

Volume Injected (uL): 1.0

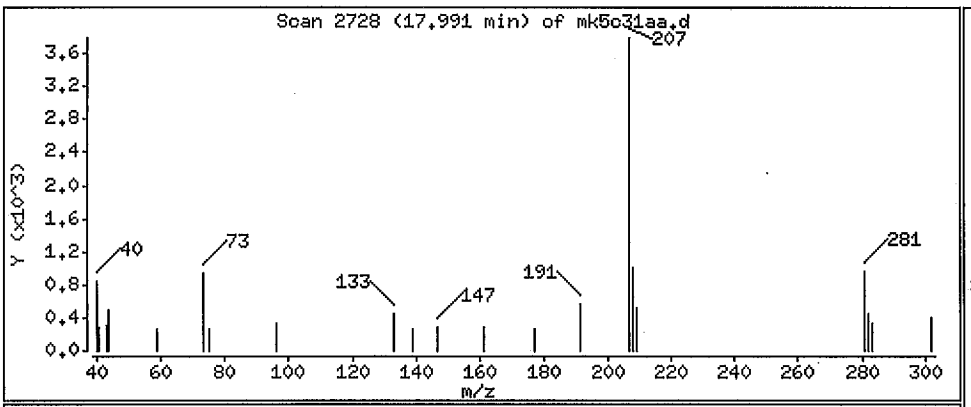
Operator: 60487

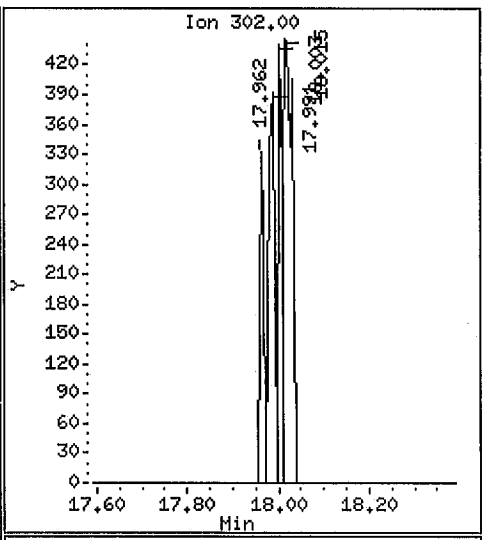
Column phase: Rxi-5 Sil MS

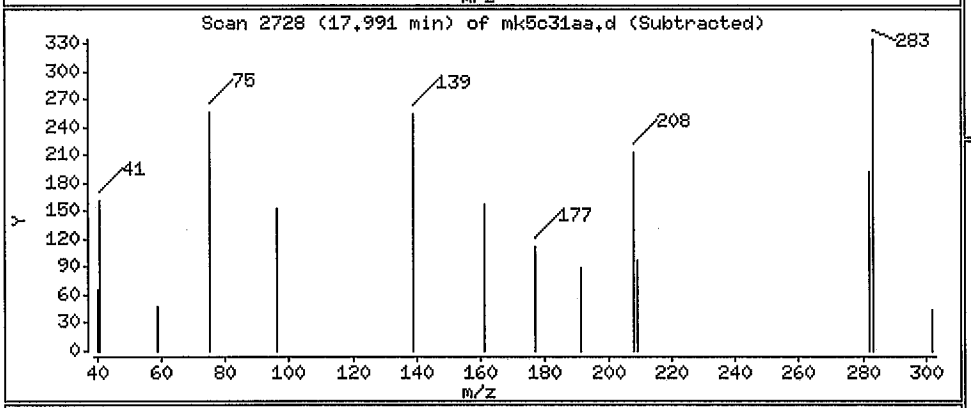
Column diameter: 0.25

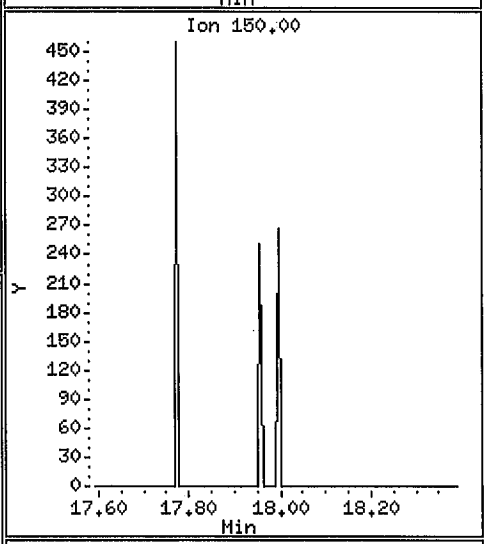
201 Dibenzo(a,e)pyrene

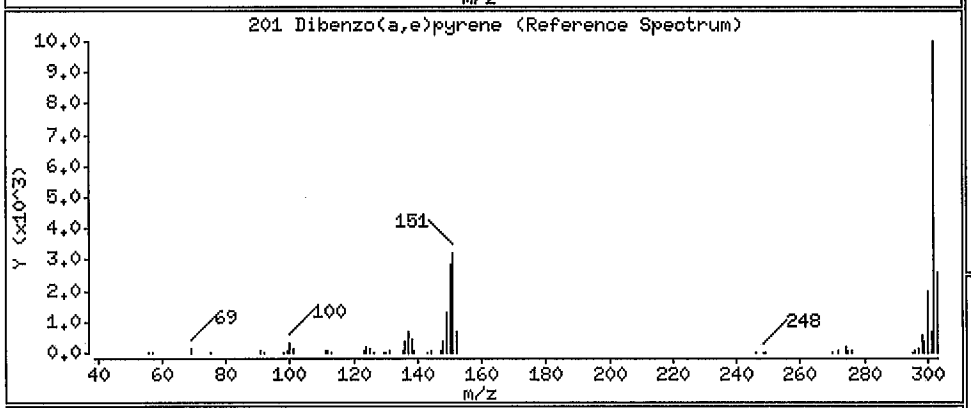
Concentration: 339 ug

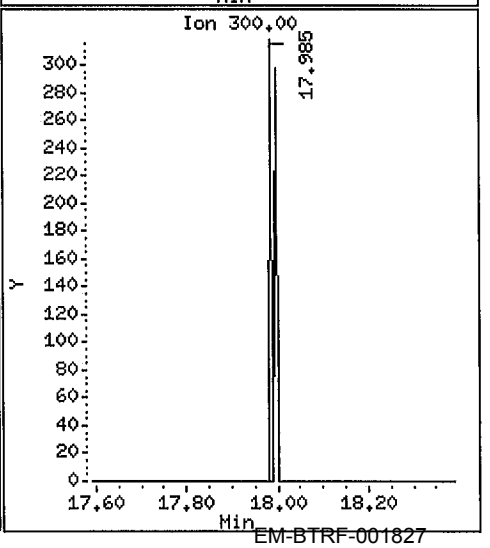


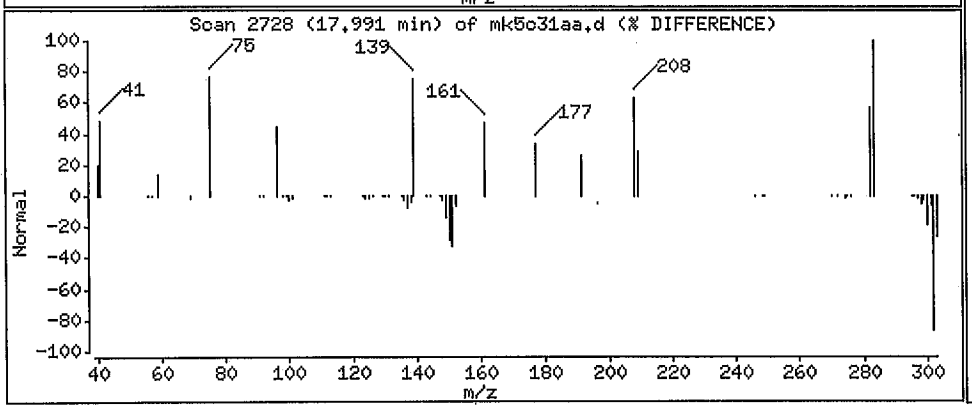












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-001 **Work Order #...:** MK5C32AA **Matrix.....:** AIR
Date Sampled...: 07/14/11 **Date Received..:** 07/23/11
Prep Date.....: 07/26/11 **Analysis Date..:** 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 200 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	**22000 D**	**2000**	**ug**	**580**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Report Date: 05-Aug-2011 11:17

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Lab Smp Id: MK5C31~~AA~~ 2AA Client Smp ID: EXM-DCU-M0010-R1-CO
Inj Date : 04-AUG-2011 19:35
Operator : 60487 2AA KRM 8/5/11 Inst ID: md.i
Smp Info : MK5C31~~AA~~,50,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 18
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	50.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56097	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	226345	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	141024	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	270746	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	273323	20.0000	20.0
* 6 Perylene-d12	264	13.843	13.849	(1.000)	249599	20.0000	20.0
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	821258	111.946	22400 D

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Report Date: 05-Aug-2011 11:16

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Lab Smp Id: MK5C31AA Client Smp ID: EXM-DCU-M0010-R1-CO
Inj Date : 04-AUG-2011 19:35
Operator : 60487 Inst ID: md.i
Smp Info : MK5C31AA,50,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 18
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	50.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56097	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	226345	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	141024	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	270746	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	273323	20.0000	20.0
* 6 Perylene-d12	264	13.843	13.849	(1.000)	249599	20.0000	20.0
$ 7 2-Fluorophenol	112	3.138	3.132	(0.730)	3684	1.18961	~~238~~(R)
$ 8 Phenol-d5	99	3.937	3.937	(0.915)	2097	0.56478	113
$ 9 Nitrobenzene-d5	82	4.924	4.930	(0.836)	2302	0.63830	128(R)
$ 179 13C6-naphthalene	134	5.888	5.917	(1.000)	21139	1.71863	344(R)
16 Aniline	93	3.866	3.978	(0.899)	3423	0.72322	145 NA
95 o-toluidine	106	4.654	4.789	(1.082)	7291	1.41285	282
29 Nitrobenzene	77	4.953	4.953	(0.841)	3738	1.05806	~~212~~

KLM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Report Date: 05-Aug-2011 11:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
32 2,4-Dimethyphenol	107	5.447	5.453	(0.925)	2839	0.74771	~~150~~
199 Phentermine	58	5.676	5.664	(0.964)	638	5.95907	1190
37 Naphthalene	128	5.917	5.923	(1.005)	629620	58.0510	11600 NA
202 1,4-Phenylenediamine	108	6.222	6.504	(1.057)	263	6.27421	~~1250~~
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	821258	111.946	22400 D
188 1,1'-Biphenyl	154	7.732	7.738	(0.911)	16797	1.50317	~~301~~
47 Acenaphthylene	152	8.220	8.308	(0.969)	11310	0.94026	188
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	21259	2.67093	534
53 Dibenzofuran	168	8.720	8.720	(1.028)	11853	1.06862	214
56 Fluorene	166	9.072	9.078	(1.069)	49257	5.36344	1070
66 Phenanthrene	178	9.912	9.912	(1.002)	112833	7.77926	1560
67 Anthracene	178	9.953	9.953	(1.006)	57410	4.07979	816
70 Fluoranthene (ccc)	202	10.941	10.782	(1.106)	26202	1.75290	350
71 Pyrene	202	10.941	10.941	(0.918)	26379	1.70427	341 NA
200 3,3'-Dimethoxybenzidine	244	11.857	11.851	(0.995)	1994	12.7590	2550
73 Benzo(a)Anthracene	228	11.910	11.916	(0.999)	7483	0.55216	110
75 Chrysene	228	11.945	11.951	(1.002)	7359	0.50905	102
119 7,12-dimethylbenz(a)anthracen	256	13.120	13.220	(1.101)	128	5.17183	1030
80 Benzo(a)pyrene (ccc)	252	13.749	13.755	(0.993)	4569	3.06352	613
196 Perylene	252	13.843	13.902	(1.000)	1093	0.08670	~~17.3~~

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Report Date: 05-Aug-2011 11:16

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c32aa.d
Lab Smp Id: MK5C31AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-R1-CO
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	56097	4.11
2 Naphthalene-d8	216727	108364	433454	226345	4.44
3 Acenaphthene-d10	132541	66270	265082	141024	6.40
4 Phenanthrene-d10	256755	128378	513510	270746	5.45
5 Chrysene-d12	266546	133273	533092	273323	2.54
6 Perylene-d12	235464	117732	470928	249599	6.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.84	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

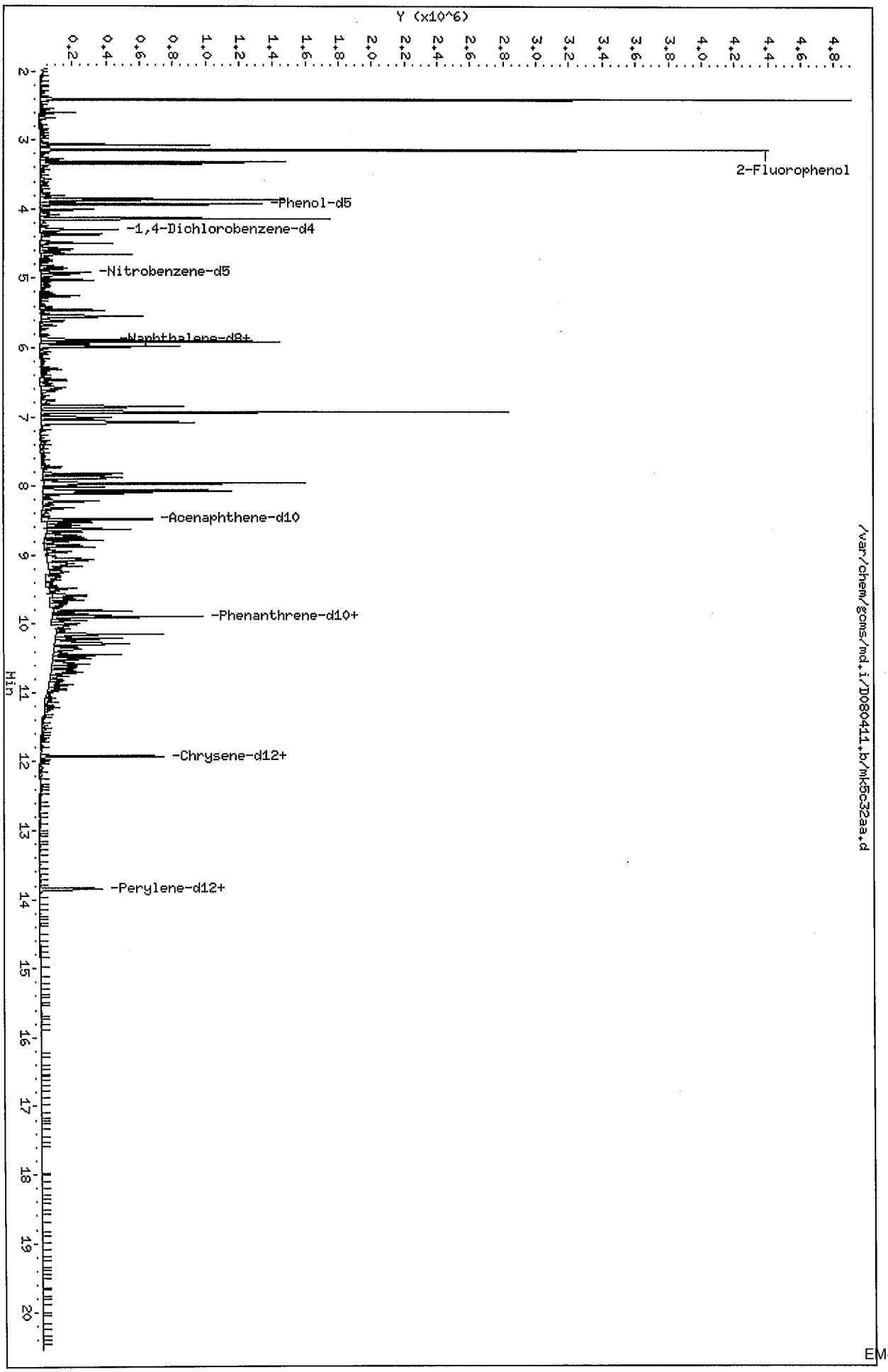
Data File: /var/chem/gcms/md.i/D080411.b/mk5c32aa.d
Report Date: 05-Aug-2011 11:16

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C31AA Client Smp ID: EXM-DCU-M0010-R1-CO
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	238	158.62*	19-100
$ 8 Phenol-d5	150	113	75.30	15-124
$ 9 Nitrobenzene-d5	100	128	127.66*	42-104
$ 11 2,4,6-Tribromophe	150	0.00	*	33-130
$ 10 2-Fluorobiphenyl	100	0.00	*	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	344	171.86*	50-150


Data File: /var/chem/gcms/md_i/D080411_b/mk5c32aa.d
Date : 04-AUG-2011 19:35
Client ID: EXH-DCU-M0010-R1-CO
Sample Info: MK5C31AA,50,0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md_i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md_i/D080411_b/mk5c32aa.d
Y (x10^6)
Min
2-Fluorophenol
-Phenol-d5
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8+
-Acenaphthene-d10
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c32aa.d

Date : 04-AUG-2011 19:35

Client ID: EXM-DCU-M0010-R1-CO

Instrument: md.i

Sample Info: MK5C31AA,50,0,,,

Volume Injected (uL): 1.0

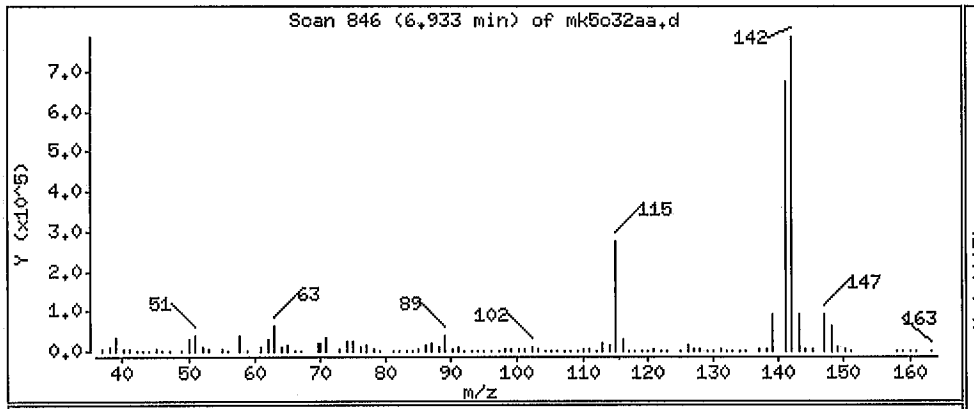
Operator: 60487

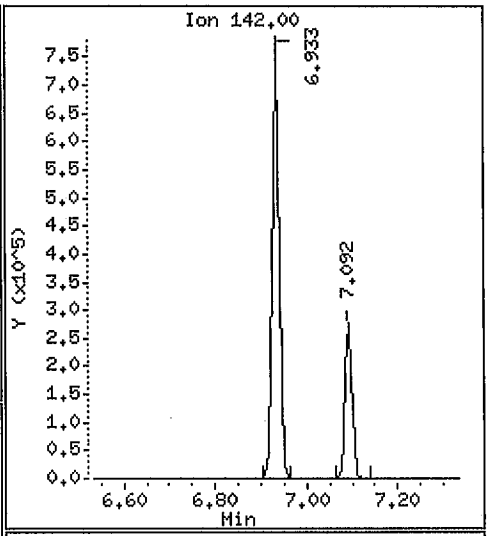
Column phase: Rxi-5 Sil MS

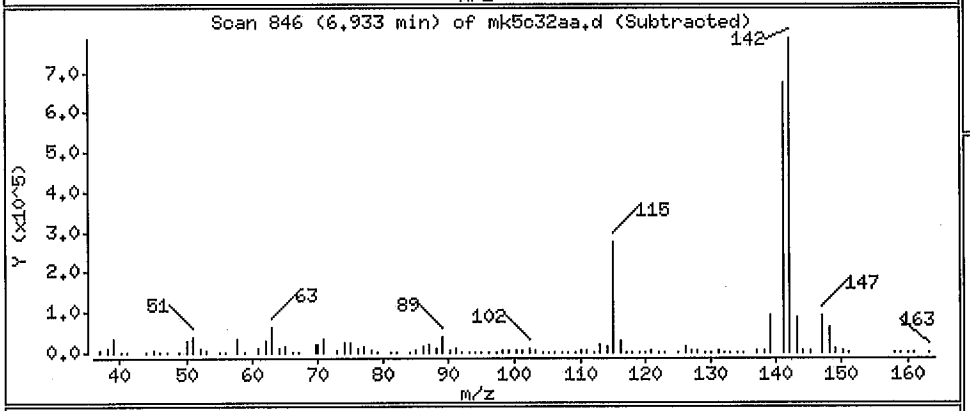
Column diameter: 0.25

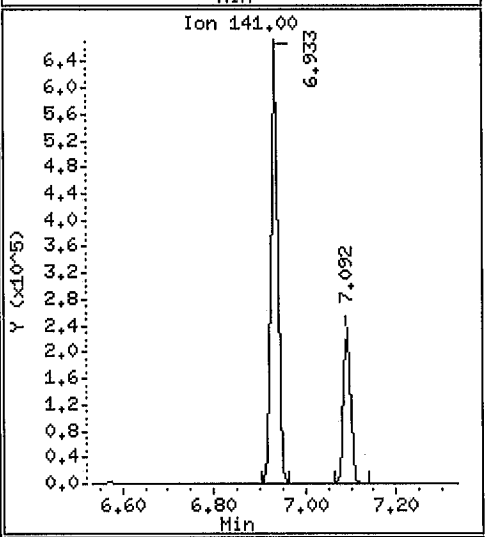
41 2-Methylnaphthalene

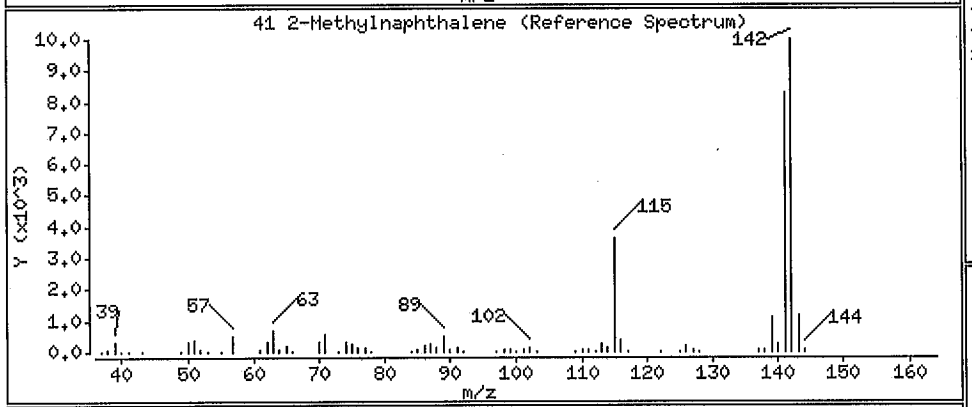
Concentration: 22400 ug

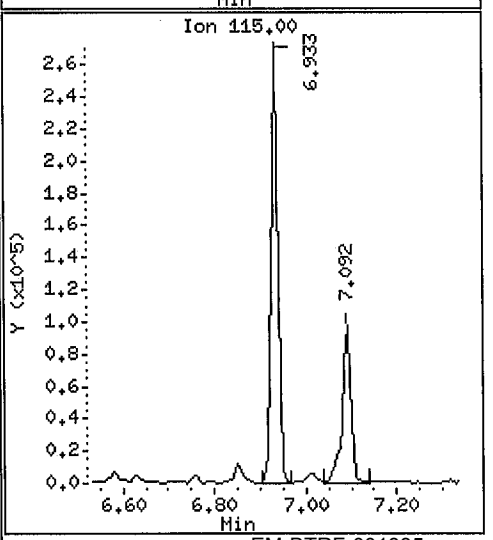


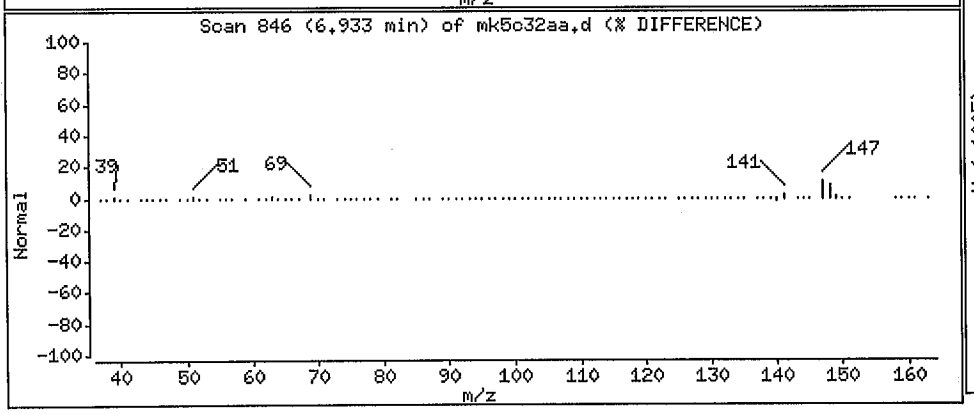












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 **Work Order #...:** MK5C51AA **Matrix.....:** AIR
Date Sampled...: 07/15/11 **Date Received..:** 07/23/11
Prep Date.....: 07/26/11 **Analysis Date..:** 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**680 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**810**	**800**	**ug**	**260**
Benz(a)anthracene	**450 J**	**800**	**ug**	**250**
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	**580 J**	**800**	**ug**	**300**
Benzo(e)pyrene	**300 J**	**800**	**ug**	**67**
Biphenyl	**460 J**	**800**	**ug**	**80**
Chrysene	**450 J**	**800**	**ug**	**250**
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**270 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	**370 J**	**800**	**ug**	**54**
3,3'-Dimethoxybenzidine	ND	8000	ug	1100
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**1200**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**33000 E**	**800**	**ug**	**230**
Naphthalene	**17000 E**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**1700**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**540 J**	**800**	**ug**	**280**
o-Toluidine	ND	800	ug	220

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 **Work Order #...:** MK5C51AA **Matrix.....:** AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Report Date: 05-Aug-2011 11:42

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Lab Smp Id: MK5C51AA Client Smp ID: EXM-DCU-M0010-R2-CO
Inj Date : 04-AUG-2011 15:47
Operator : 60487 Inst ID: md.i
Smp Info : MK5C51AA,20,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 10
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	58375	20.0000	20.0
*	2 Naphthalene-d8	136	5.887	5.888	(1.000)	230234	20.0000	20.0
*	3 Acenaphthene-d10	164	8.484	8.485	(1.000)	148492	20.0000	20.0
*	4 Phenanthrene-d10	188	9.895	9.895	(1.000)	278998	20.0000	20.0
*	5 Chrysene-d12	240	11.922	11.922	(1.000)	280230	20.0000	20.0
*	6 Perylene-d12	264	13.849	13.849	(1.000)	249167	20.0000	20.0
	15 Phenol (ccc)	94	3.948	3.949	(0.918)	3008	0.75689	60.6
	23 2-Methylphenol	108	4.571	4.571	(1.063)	3665	1.16709	93.4
	26 3&4 Methylphenol	108	4.753	4.754	(1.105)	2052	0.63372	50.7
M	204 total cresols (methylphenols)	108				5717	1.80081	144
	95 o-toluidine	106	4.783	4.789	(1.112)	5375	1.00082	80.1
	32 2,4-Dimethyphenol	107	5.447	5.453	(0.925)	5544	1.43529	115
	37 Naphthalene	128	5.923	5.923	(1.006)	2326595	210.890	16900(A)

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Report Date: 05-Aug-2011 11:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
41	2-Methylnaphthalene	142	6.945	6.933	(1.180)	3113380	417.219	33400(A)
188	1,1'-Biphenyl	154	7.732	7.738	(0.911)	67657	5.75008	460
47	Acenaphthylene	152	8.320	8.308	(0.981)	14111	1.11407	89.1
51	Acenaphthene (ccc)	153	8.520	8.520	(1.004)	71540	8.53606	683
53	Dibenzofuran	168	8.719	8.720	(1.028)	39041	3.34254	267
56	Fluorene	166	9.072	9.078	(1.069)	144728	14.9662	1200
66	Phenanthrene	178	9.912	9.912	(1.002)	321091	21.4828	1720
67	Anthracene	178	9.953	9.953	(1.006)	147408	10.1654	813
70	Fluoranthene (ccc)	202	10.782	10.782	(1.090)	27417	1.77991	142
71	Pyrene	202	10.940	10.941	(0.918)	107936	6.80133	544
200	3,3'-Dimethoxybenzidine	244	11.869	11.851	(0.996)	16387	16.3574	~~1310~~
73	Benzo(a)Anthracene	228	11.910	11.916	(0.999)	78644	5.65979	453
75	Chrysene	228	11.945	11.951	(1.002)	82919	5.59416	448
78	Benzo(b)fluoranthene	252	13.226	13.232	(0.955)	25269	2.02128	162
79	Benzo(k)fluoranthene	252	13.255	13.273	(0.957)	11232	0.74560	59.6(M)
85	Benzo(e)pyrene	252	13.661	13.673	(0.986)	46741	3.73567	299
80	Benzo(a)pyrene (ccc)	252	13.749	13.755	(0.993)	63580	7.22330	578
196	Perylene	252	13.890	13.902	(1.003)	3320	0.26363	21.1
81	Indeno(1,2,3-cd)pyrene	276	15.324	15.324	(1.106)	13967	1.02264	81.8
82	Dibenz(a,h)anthracene	278	15.341	15.347	(1.108)	13628	1.21971	97.6
83	Benzo(g,h,i)perylene	276	15.653	15.653	(1.130)	28444	2.36062	189
201	Dibenzo(a,e)pyrene	302	17.985	17.991	(1.299)	4365	4.60759	369

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Report Date: 05-Aug-2011 11:37

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Lab Smp Id: MK5C51AA Client Smp ID: EXM-DCU-M0010-R2-CO
Inj Date : 04-AUG-2011 15:47
Operator : 60487 Inst ID: md.i
Smp Info : MK5C51AA,20,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 10
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	58375	20.0000	20.0
*	2 Naphthalene-d8	136	5.887	5.888	(1.000)	230234	20.0000	20.0
*	3 Acenaphthene-d10	164	8.484	8.485	(1.000)	148492	20.0000	20.0
*	4 Phenanthrene-d10	188	9.895	9.895	(1.000)	278998	20.0000	20.0
*	5 Chrysene-d12	240	11.922	11.922	(1.000)	280230	20.0000	20.0
*	6 Perylene-d12	264	13.849	13.849	(1.000)	249167	20.0000	20.0
$	7 2-Fluorophenol	112	3.138	3.132	(0.730)	7143	2.21639	~~177 (R)~~
$	8 Phenol-d5	99	3.937	3.937	(0.915)	6282	1.62582	~~130~~
$	9 Nitrobenzene-d5	82	4.924	4.930	(0.836)	4876	1.32926	~~106 (R)~~
$	11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	1270	1.13738	~~91.0~~
$	10 2-Fluorobiphenyl	172	7.585	7.591	(0.894)	9684	1.04260	~~83.4~~
$	179 13C6-naphthalene	134	5.887	5.917	(1.000)	22675	1.81239	~~145~~
	15 Phenol (ccc)	94	3.948	3.949	(0.918)	3008	0.75688	60.6

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Report Date: 05-Aug-2011 11:37

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
16 Aniline	93	3.937	3.978	(0.915)	6564	1.33273	~~107~~
23 2-Methylphenol	108	4.571	4.571	(1.063)	3665	1.16727	93.4
26 3&4 Methylphenol	108	4.753	4.754	(1.105)	2052	0.63381	50.7
M 204 total cresols (methylphenols)	108				5717	1.80108	144
95 o-toluidine	106	4.783	4.789	(1.112)	5375	1.00095	80.1
29 Nitrobenzene ,	77	4.953	4.953	(0.841)	12252	3.40863	~~273~~
30 Isophorone	82	4.924	5.271	(0.836)	3823	0.64689	~~51.8~~
32 2,4-Dimethyphenol	107	5.447	5.453	(0.925)	5544	1.43554	115
199 Phentermine	58	5.682	5.664	(0.965)	554	5.95000	~~476~~
37 Naphthalene	128	5.923	5.923	(1.006)	2326595	210.889	16900(A) E
202 1,4-Phenylenediamine	108	6.551	6.504	(1.113)	1040	6.42026	~~514~~
41 2-Methylnaphthalene	142	6.945	6.933	(1.180)	3113380	417.218	33400(A) E
188 1,1'-Biphenyl	154	7.732	7.738	(0.911)	67657	5.75010	460
47 Acenaphthylene	152	8.320	8.308	(0.981)	14111	1.11409	89.1
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	71540	8.53614	683
53 Dibenzofuran	168	8.719	8.720	(1.028)	39041	3.34258	267
56 Fluorene	166	9.072	9.078	(1.069)	144728	14.9662	1200
66 Phenanthrene	178	9.912	9.912	(1.002)	321091	21.4828	1720
67 Anthracene	178	9.953	9.953	(1.006)	147408	10.1654	813
70 Fluoranthene (ccc)	202	10.782	10.782	(1.090)	27417	1.77995	142
84 Benzidine	184	10.629	10.870	(1.074)	5904	0.60437	~~48.3~~
71 Pyrene	202	10.940	10.941	(0.918)	107936	6.80136	544
200 3,3'-Dimethoxybenzidine	244	11.869	11.851	(0.996)	16387	16.3575	~~1310~~
73 Benzo(a)Anthracene	228	11.910	11.916	(0.999)	78644	5.65981	453
75 Chrysene	228	11.945	11.951	(1.002)	82919	5.59421	448
119 7,12-dimethylbenz(a)anthracen	256	13.214	13.220	(1.108)	2288	5.45895	~~437~~
78 Benzo(b)fluoranthene	252	13.226	13.232	(0.955)	25269	2.02133	162
79 Benzo(k)fluoranthene	252	13.226	13.273	(0.955)	34640	2.29941	184 (2)
85 Benzo(e)pyrene	252	13.661	13.673	(0.986)	46741	3.73572	299
80 Benzo(a)pyrene (ccc)	252	13.749	13.755	(0.993)	63580	7.22337	578
196 Perylene	252	13.890	13.902	(1.003)	3320	0.26369	21.1
120 3-methylcholanthrene	268	14.366	14.366	(1.037)	887	6.77633	~~542~~
81 Indeno(1,2,3-cd)pyrene	276	15.324	15.324	(1.106)	13967	1.02271	81.8
82 Dibenz(a,h)anthracene	278	15.341	15.347	(1.108)	13628	1.21978	97.6
83 Benzo(g,h,i)perylene	276	15.653	15.653	(1.130)	28444	2.36067	189
201 Dibenzo(a,e)pyrene	302	17.985	17.991	(1.299)	4365	4.60767	369

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Report Date: 05-Aug-2011 11:37

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c51aa.d
Lab Smp Id: MK5C51AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-R2-CO
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	58375	8.33
2 Naphthalene-d8	216727	108364	433454	230234	6.23
3 Acenaphthene-d10	132541	66270	265082	148492	12.03
4 Phenanthrene-d10	256755	128378	513510	278998	8.66
5 Chrysene-d12	266546	133273	533092	280230	5.13
6 Perylene-d12	235464	117732	470928	249167	5.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Report Date: 05-Aug-2011 11:37

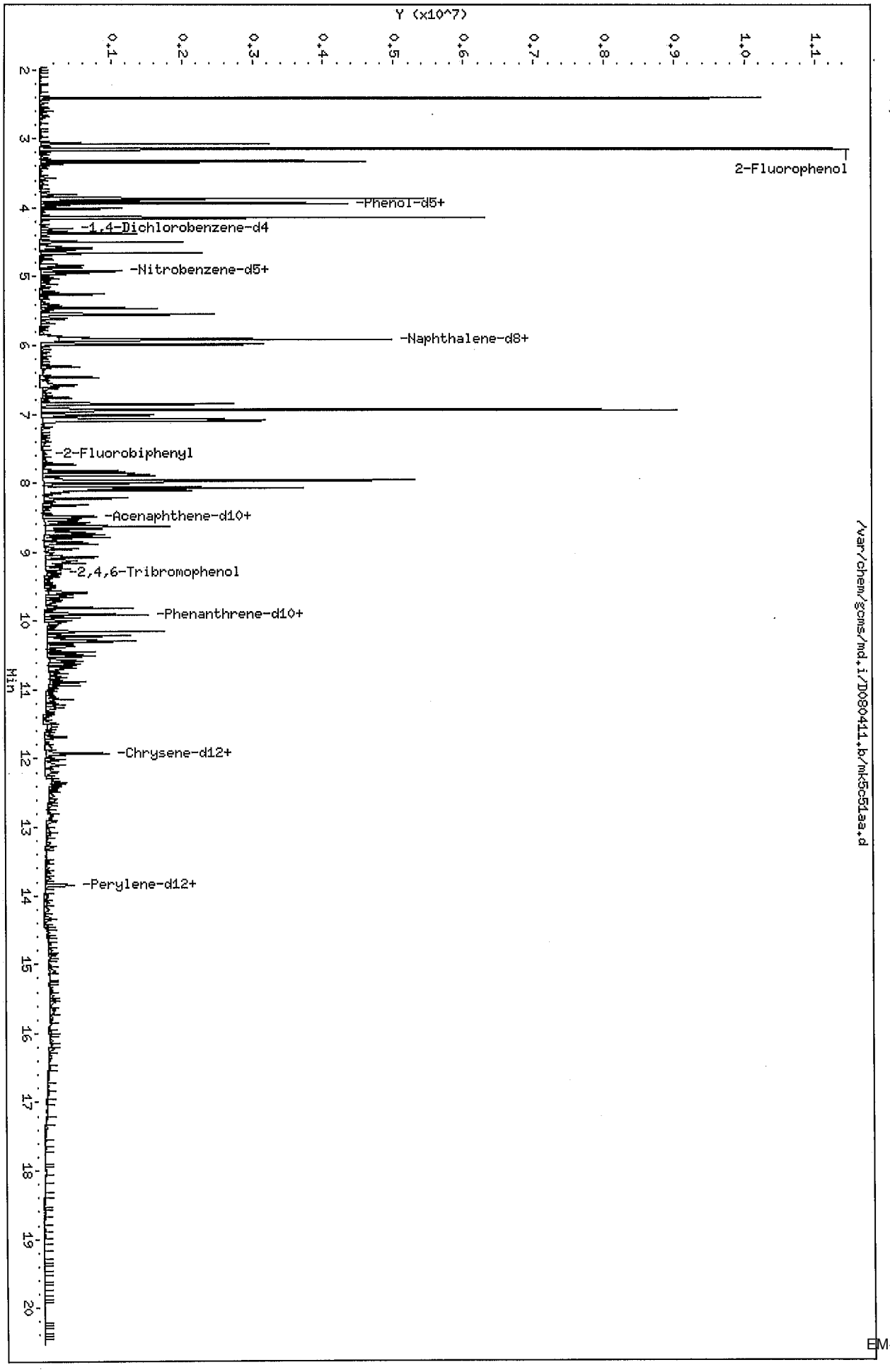
TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C51AA Client Smp ID: EXM-DCU-M0010-R2-CO
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	177	118.21*	19-100
$ 8 Phenol-d5	150	130	86.71	15-124
$ 9 Nitrobenzene-d5	100	106	106.34*	42-104
$ 11 2,4,6-Tribromophen	150	91.0	60.66	33-130
$ 10 2-Fluorobiphenyl	100	83.4	83.41	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	145	72.50	50-150

08081


Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Date : 04-AUG-2011 15:47
Client ID: EXM-DCU-H0010-R2-CO
Sample Info: MK5C51AA,20,0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk5c51aa.d
Y (x10^7)
Min
2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10+
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

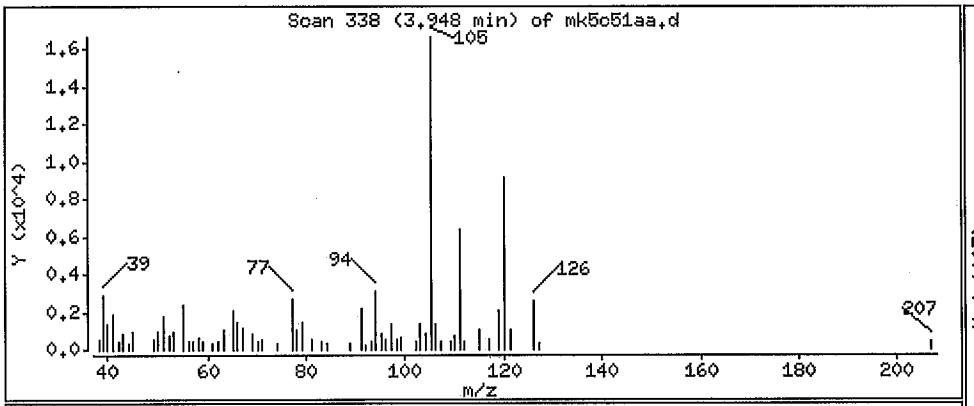
Operator: 60487

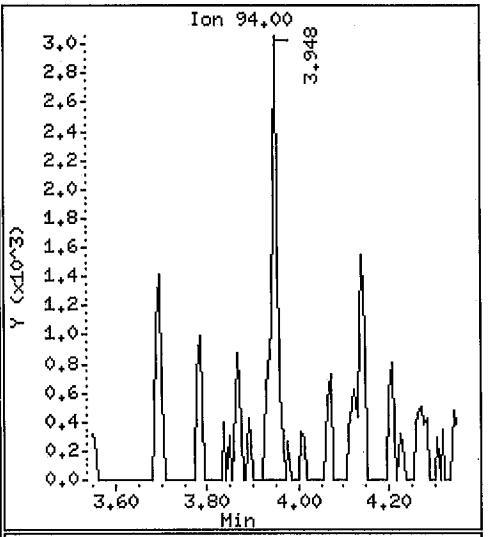
Column phase: Rxi-5 Sil MS

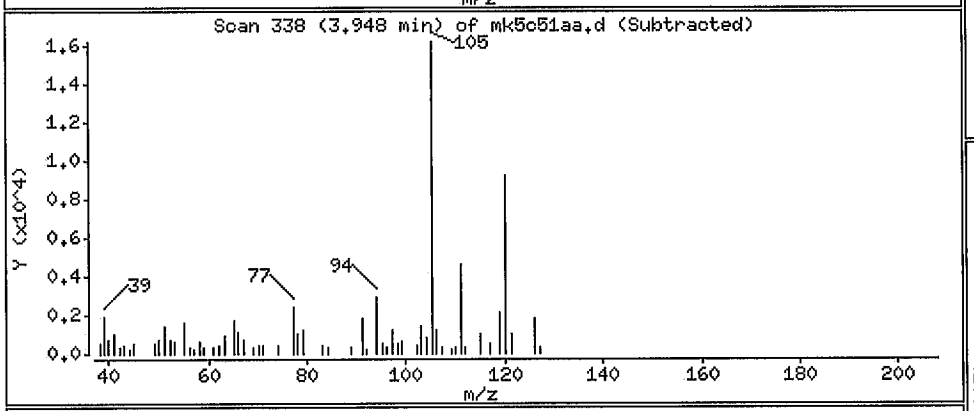
Column diameter: 0.25

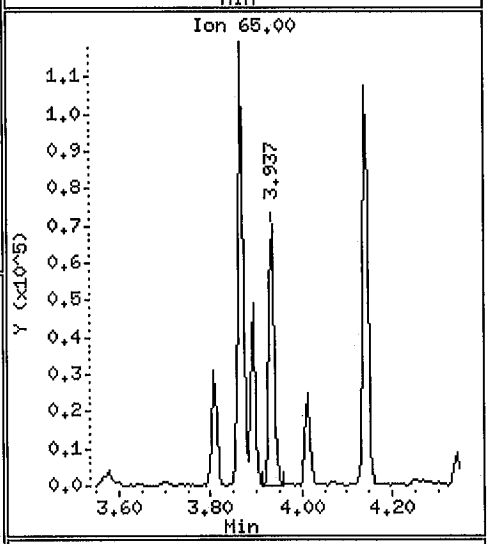
15 Phenol (cco)

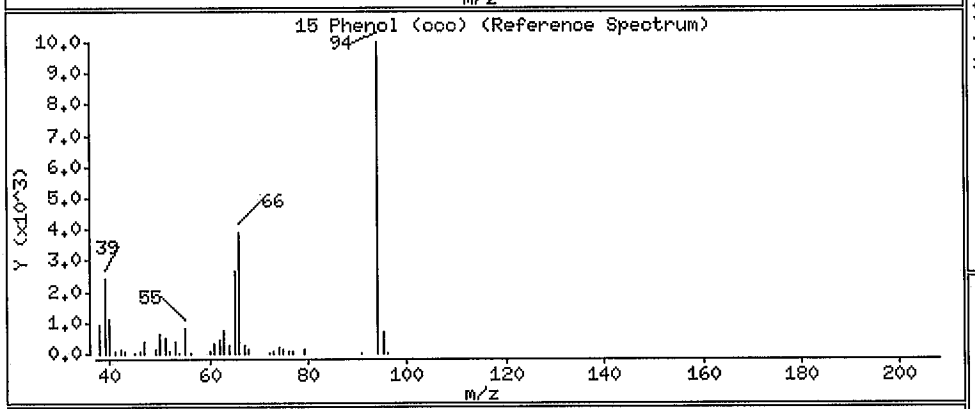
Concentration: 60.6 ug

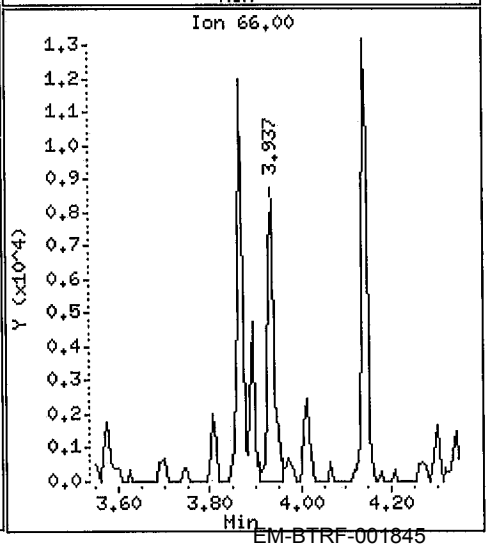


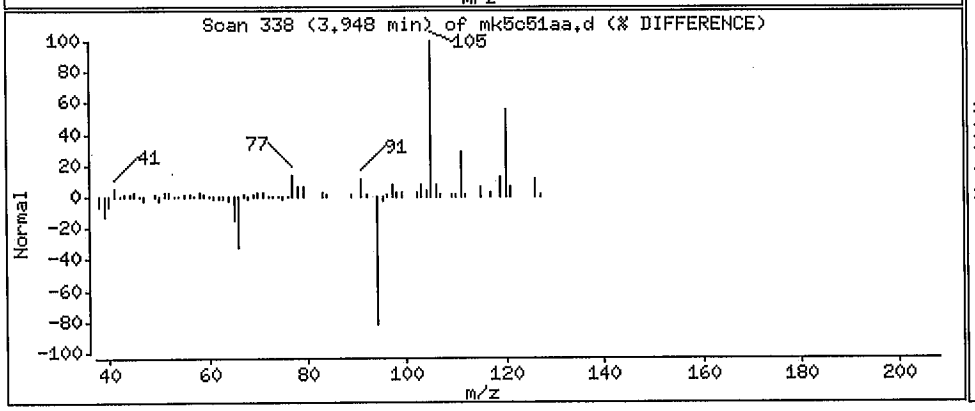












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

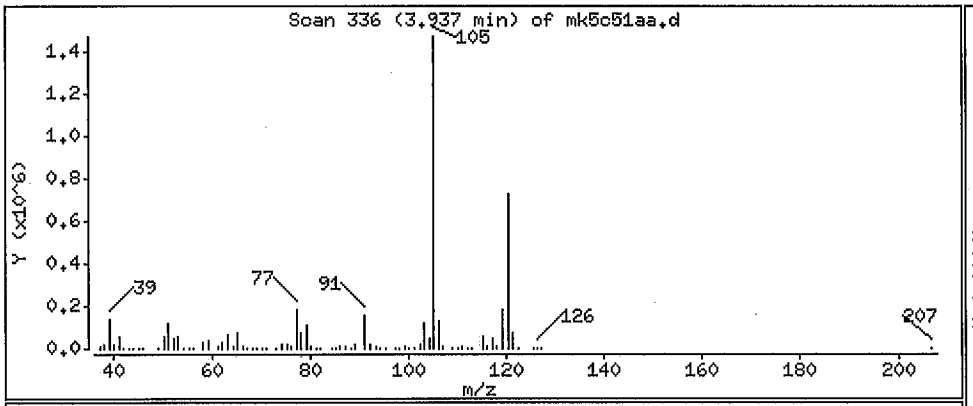
Operator: 60487

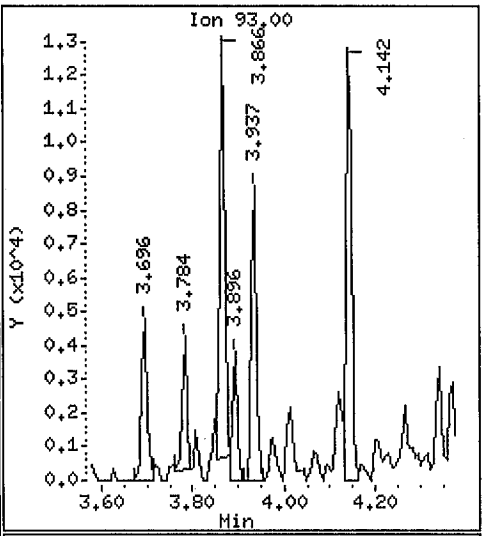
Column phase: Rxi-5 Sil MS

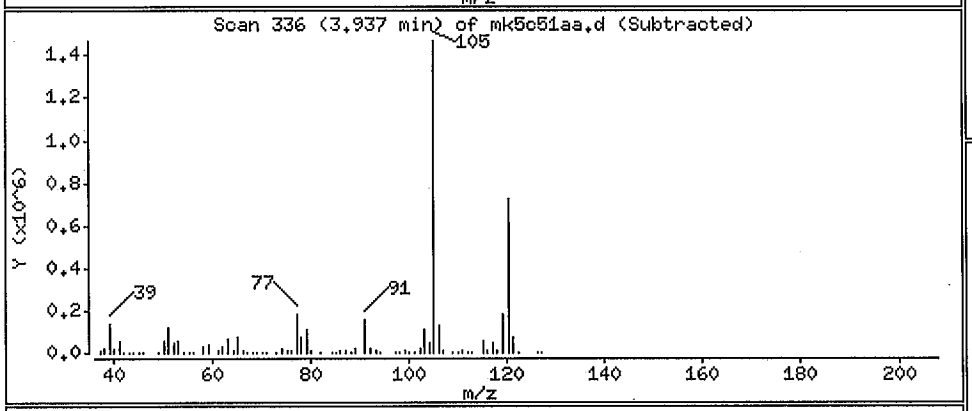
Column diameter: 0.25

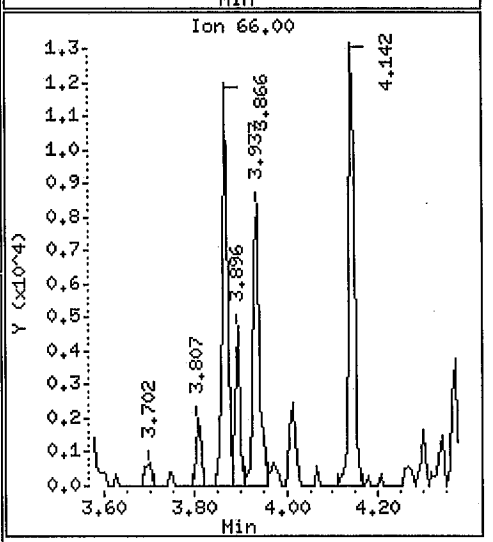
16 Aniline

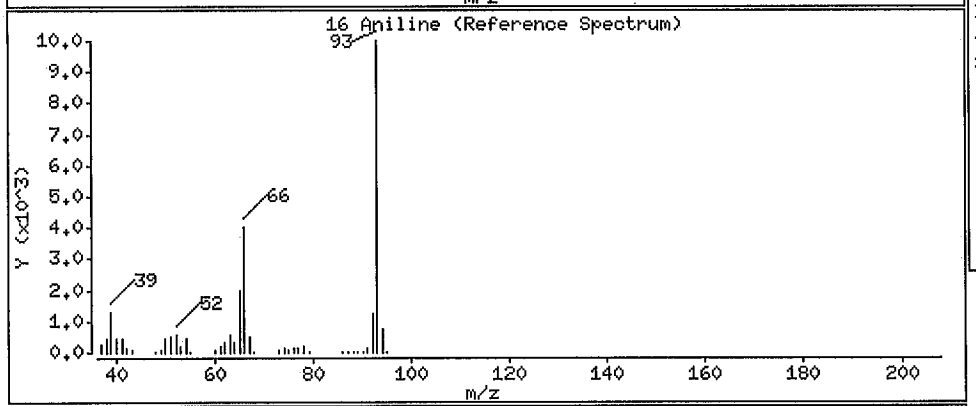
Concentration: 107 ug

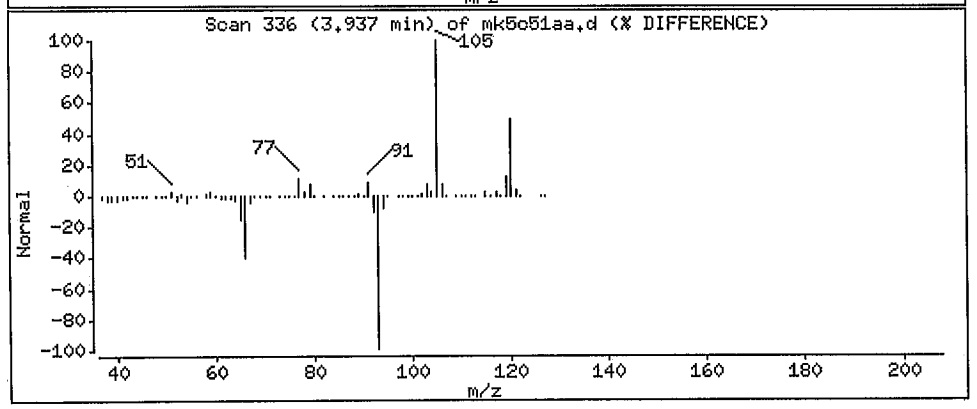












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

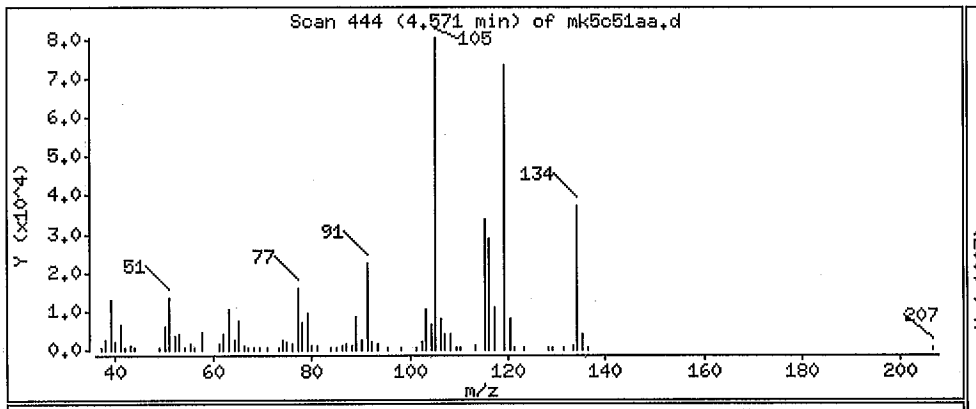
Operator: 60487

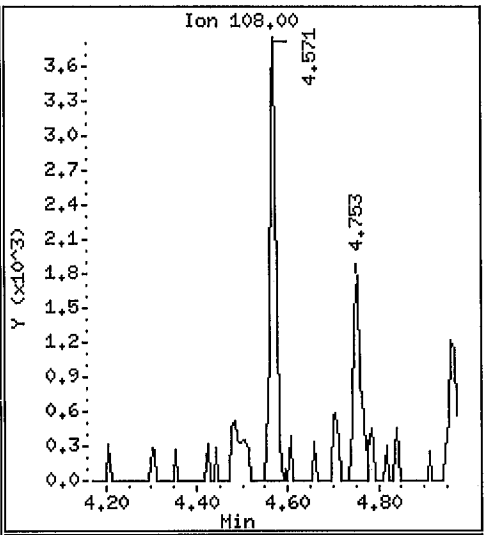
Column phase: Rxi-5 Sil MS

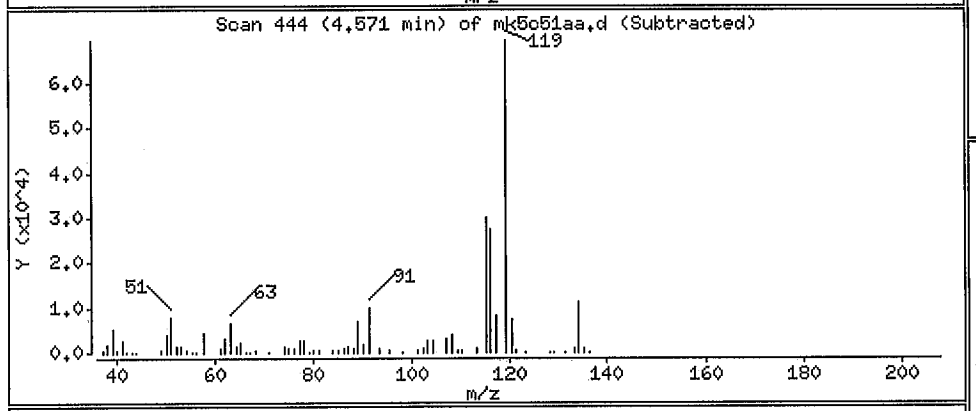
Column diameter: 0.25

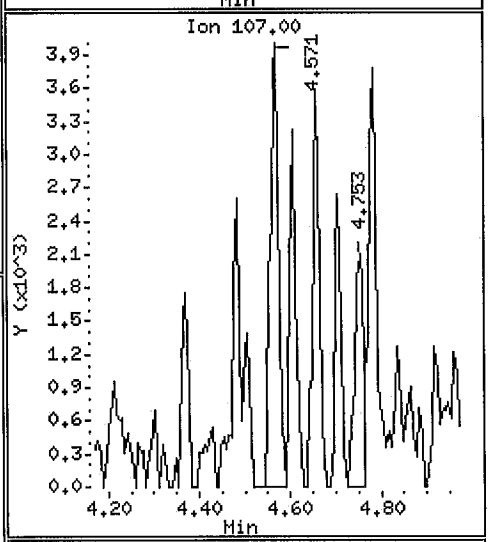
23 2-Methylphenol

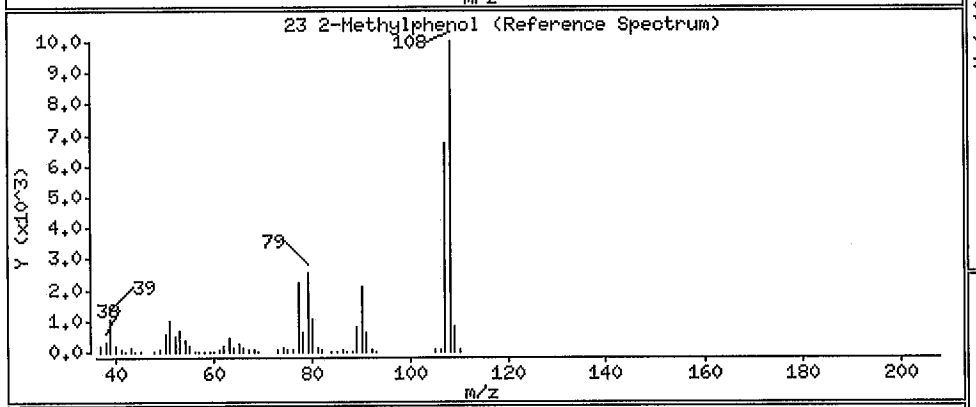
Concentration: 93.4 ug

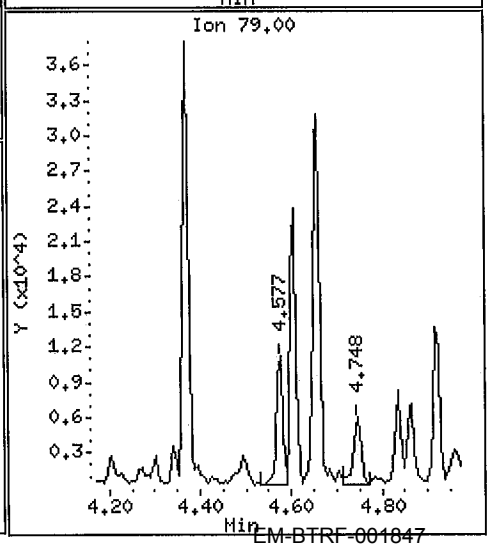


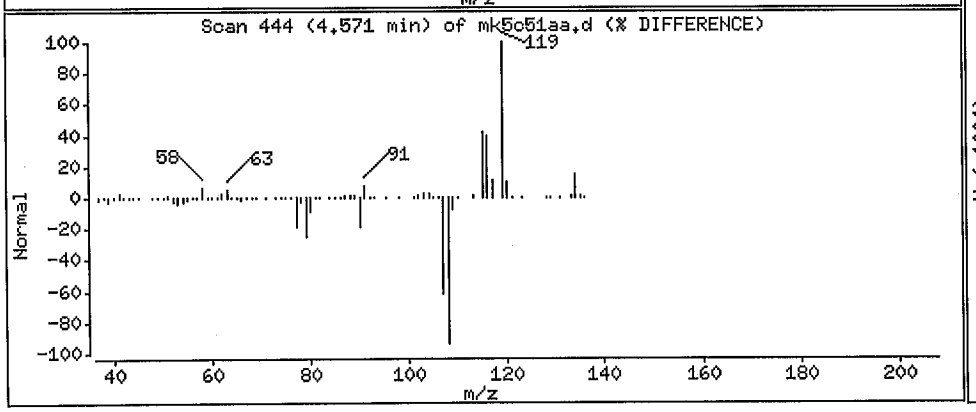












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

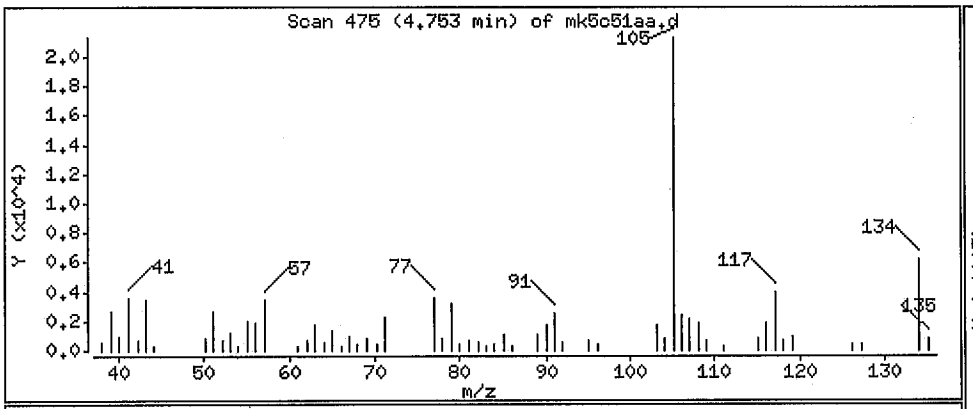
Operator: 60487

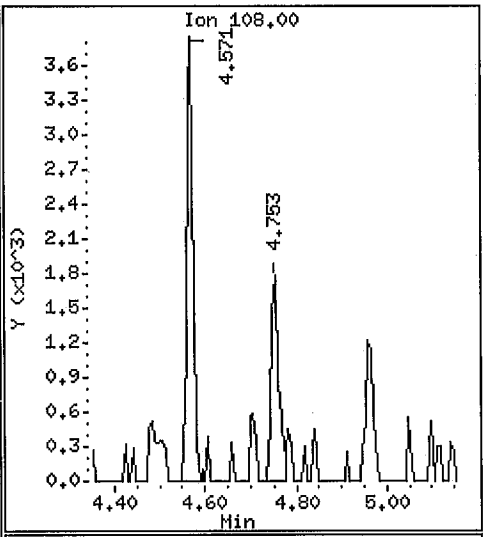
Column phase: Rxi-5 Sil MS

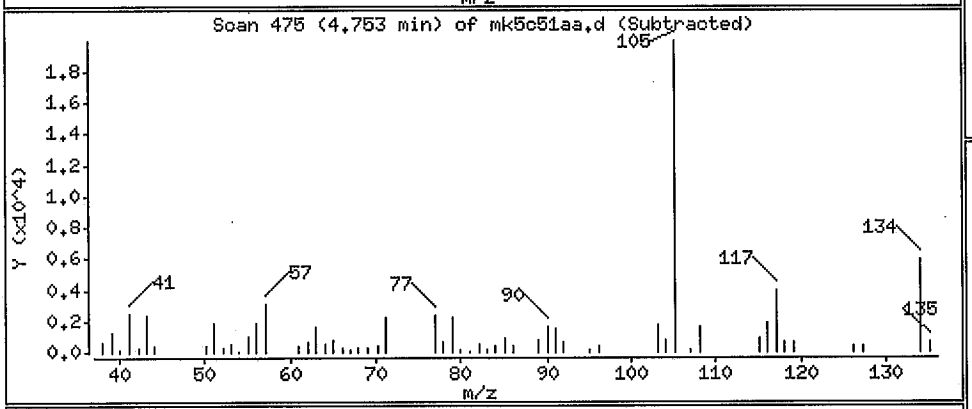
Column diameter: 0.25

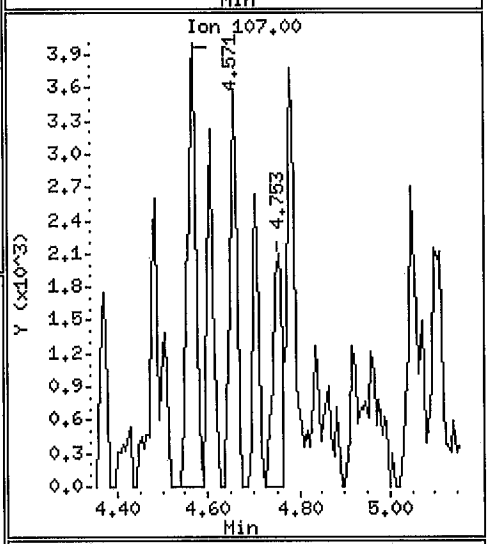
26 3&4 Methylphenol

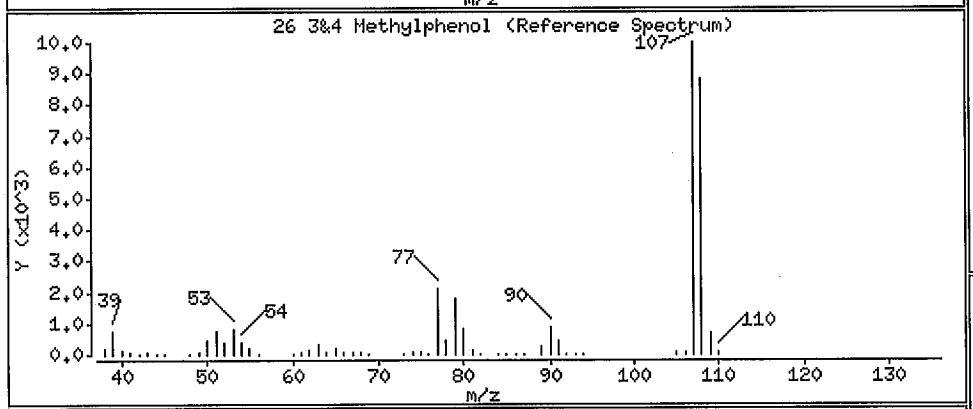
Concentration: 50.7 ug

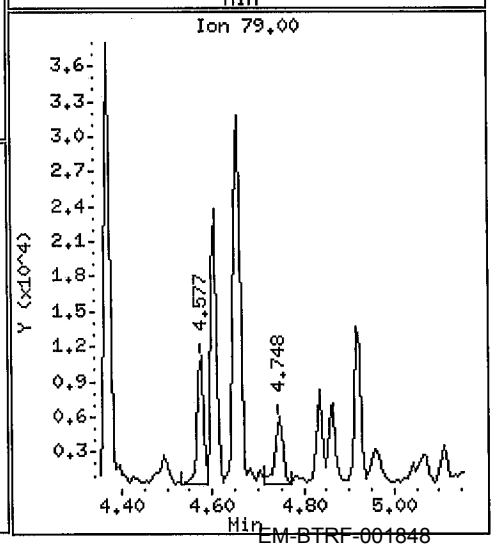


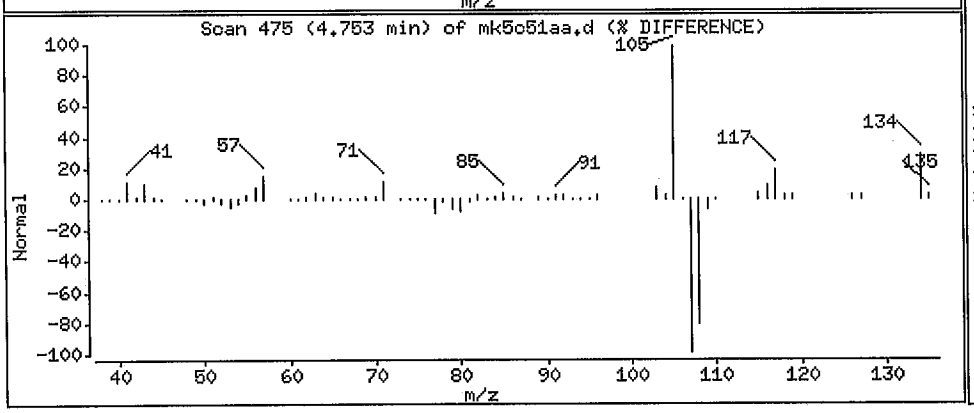












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

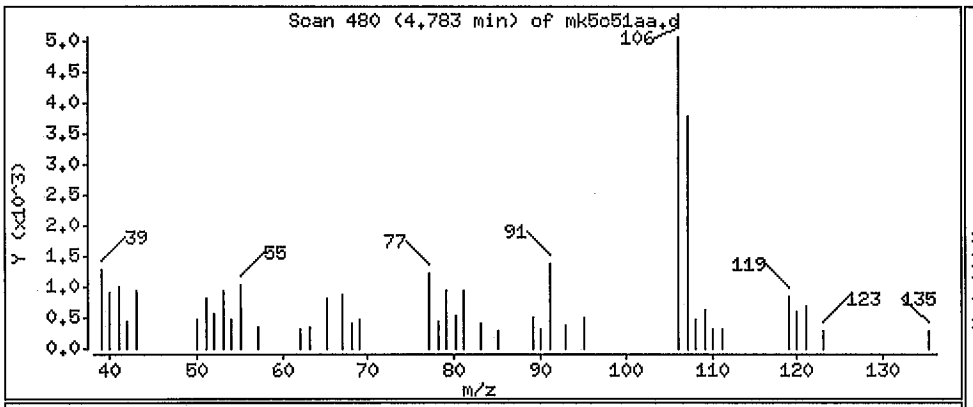
Operator: 60487

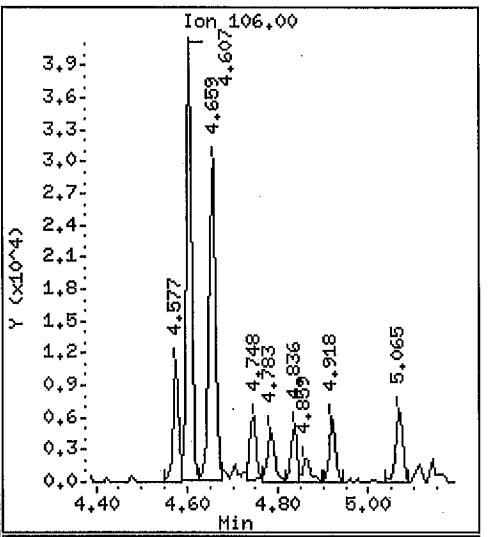
Column phase: Rxi-5 Sil MS

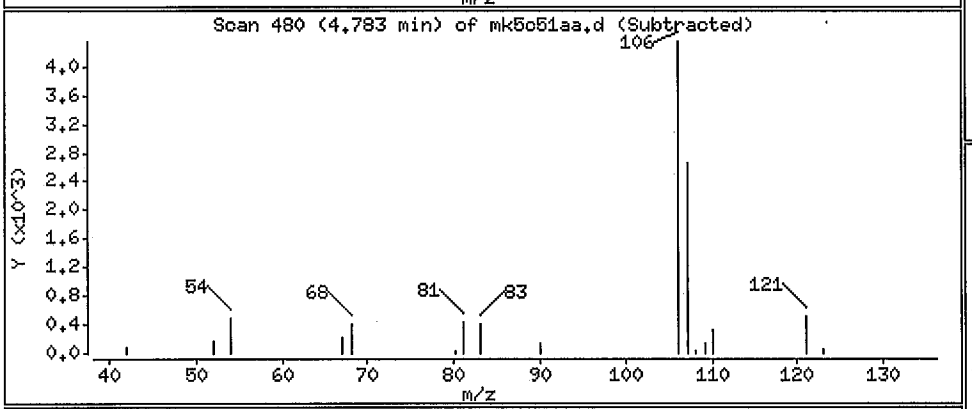
Column diameter: 0.25

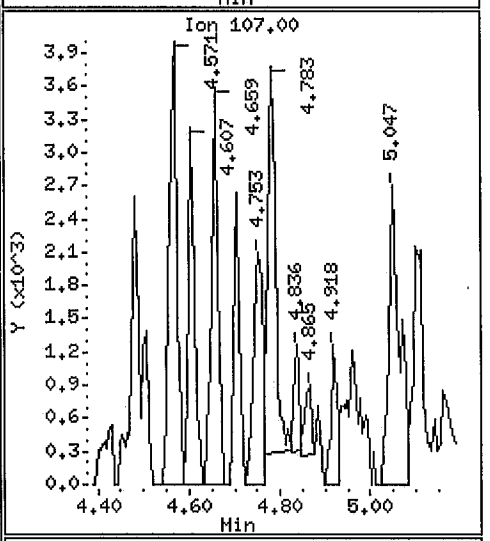
95 o-toluidine

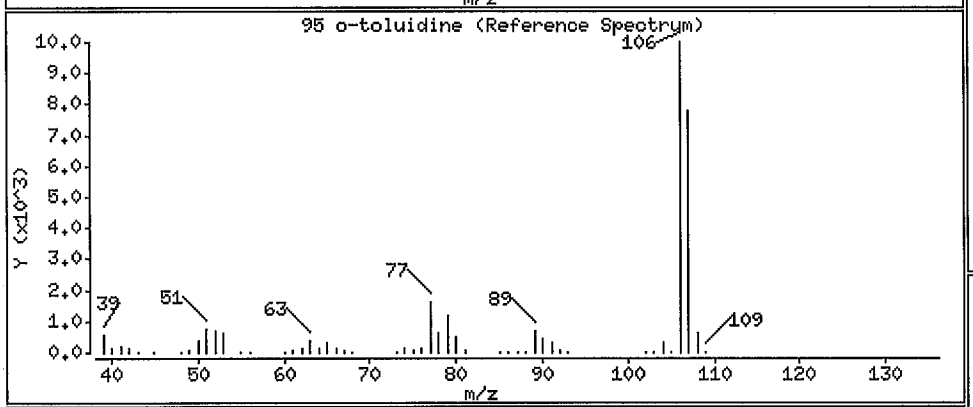
Concentration: 80.1 ug

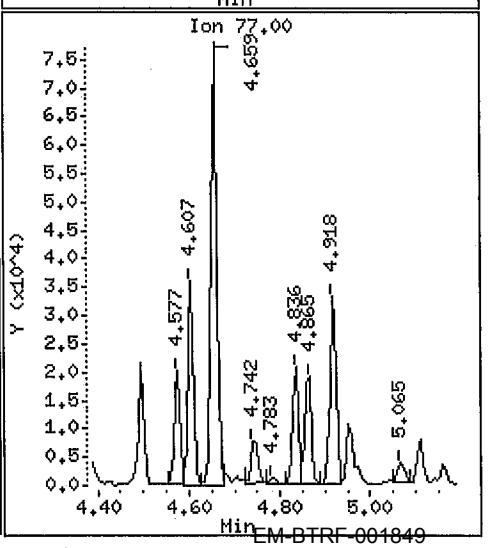


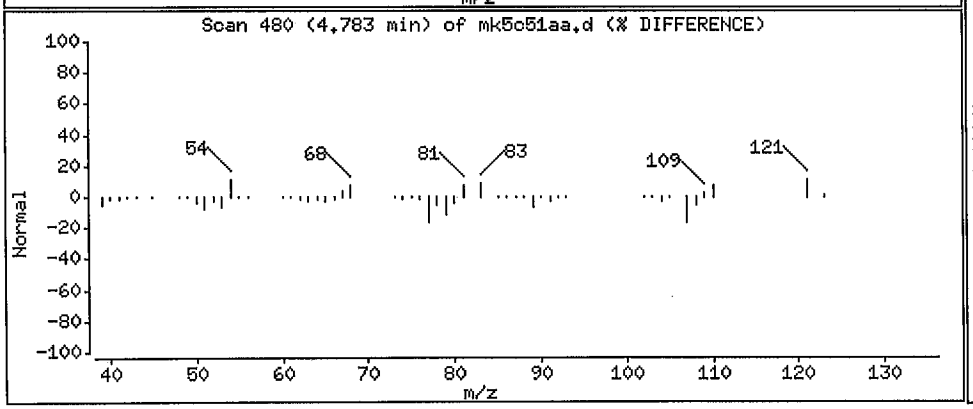












Data File: /var/ohem/goms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

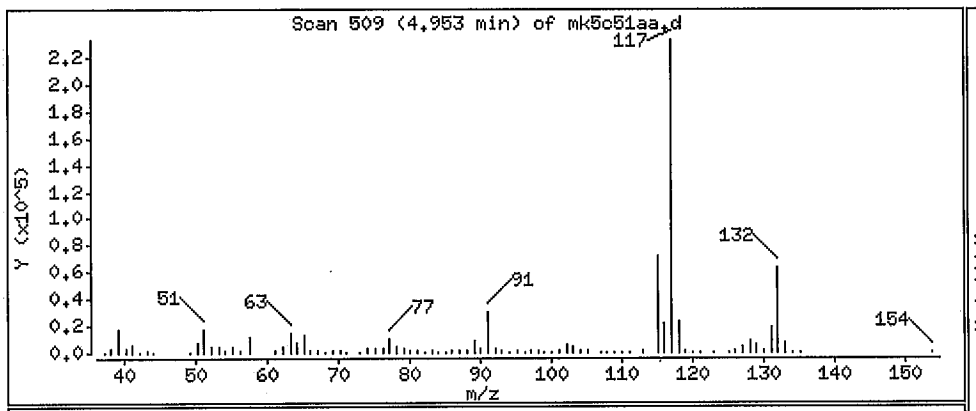
Operator: 60487

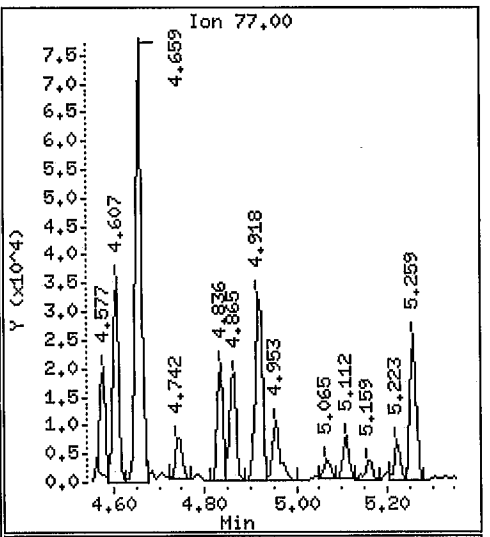
Column phase: Rxi-5 Sil MS

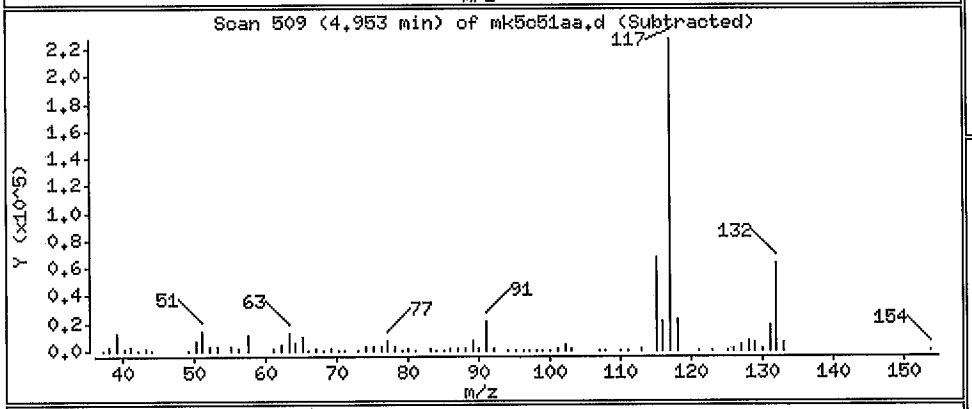
Column diameter: 0.25

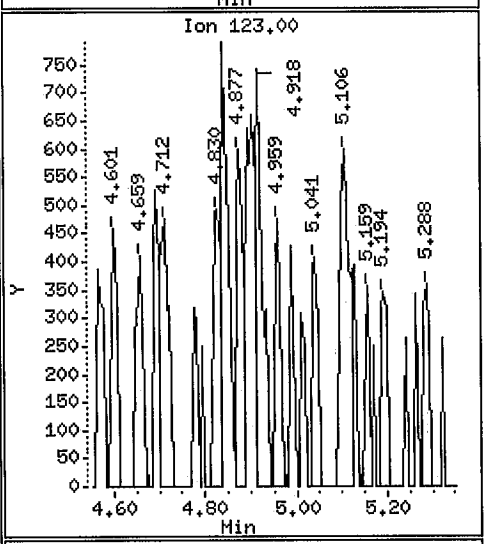
29 Nitrobenzene

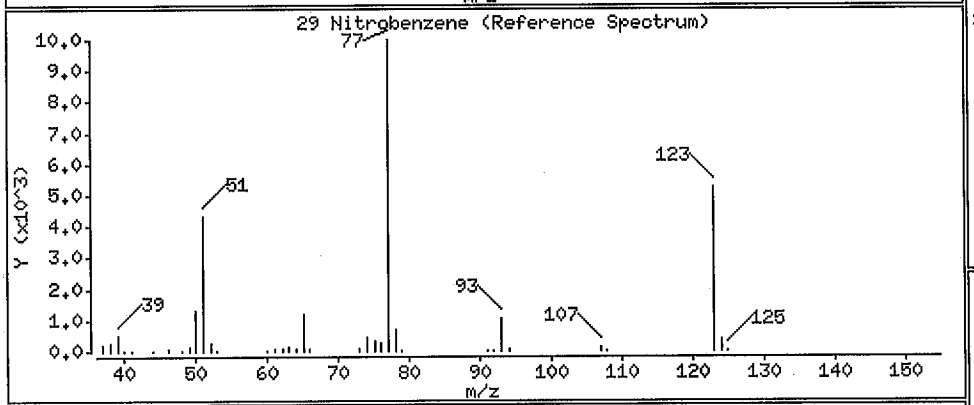
Concentration: 273 ug

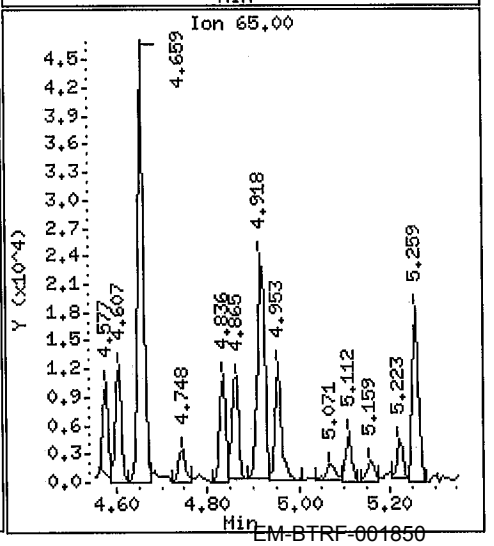


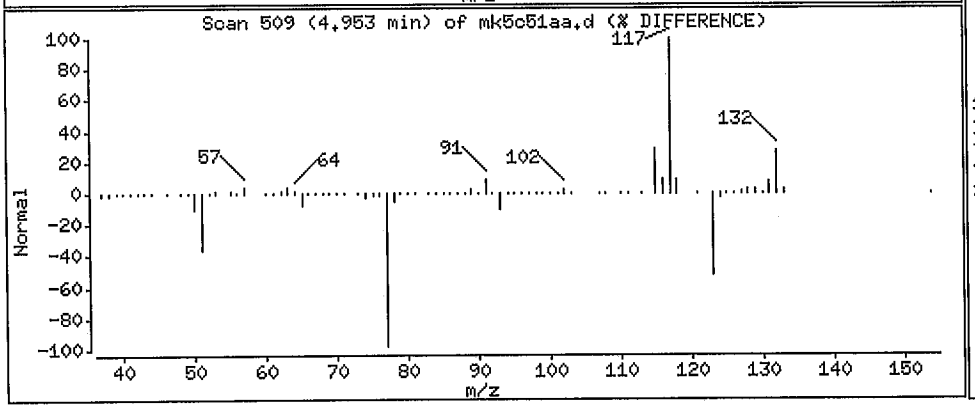












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

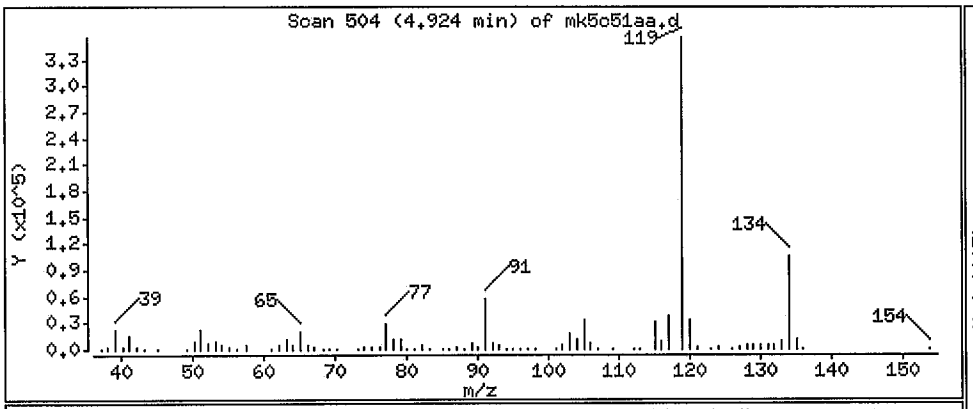
Operator: 60487

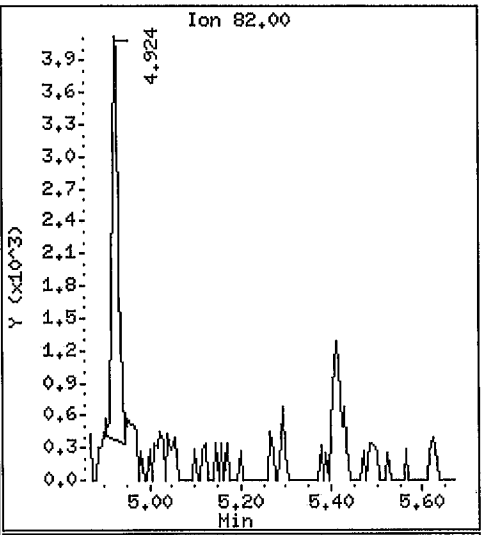
Column phase: Rxi-5 Sil MS

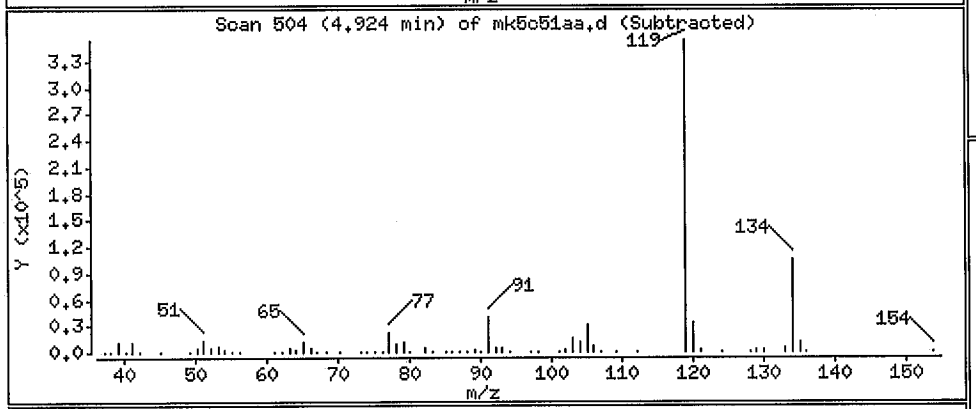
Column diameter: 0.25

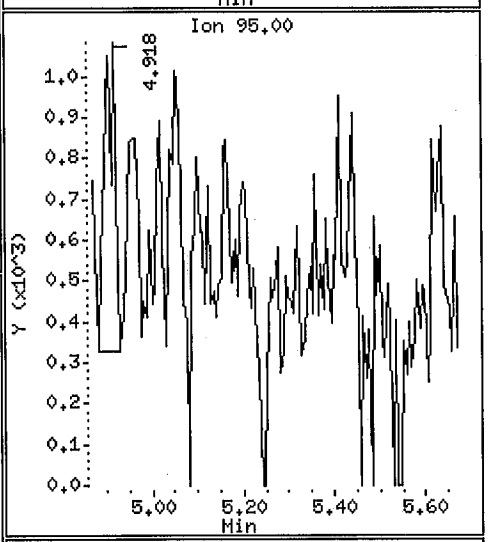
30 Isophorone

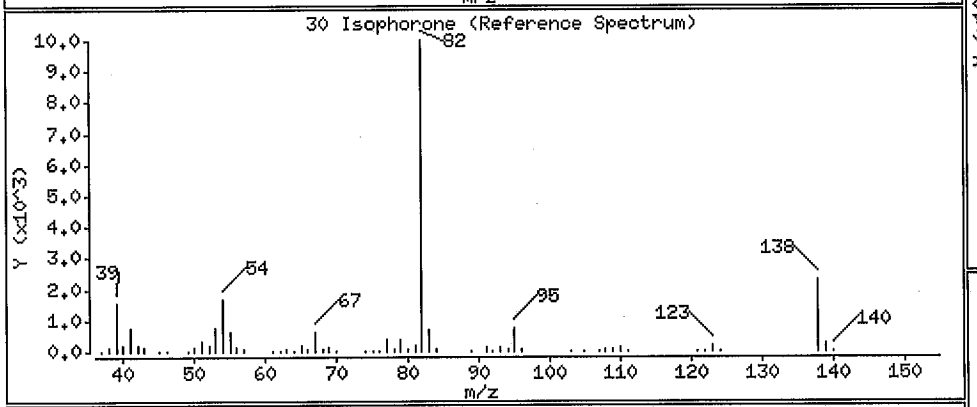
Concentration: 51.8 ug

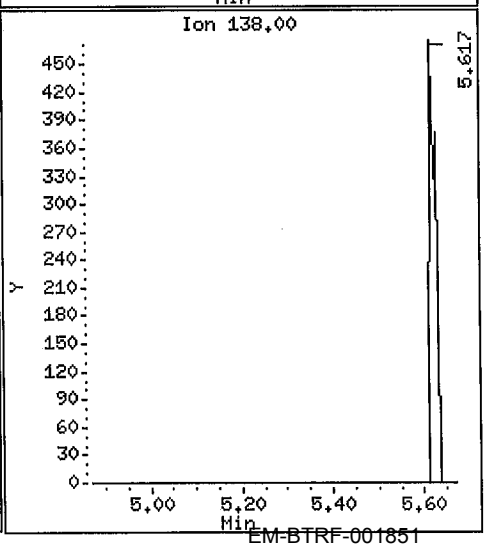


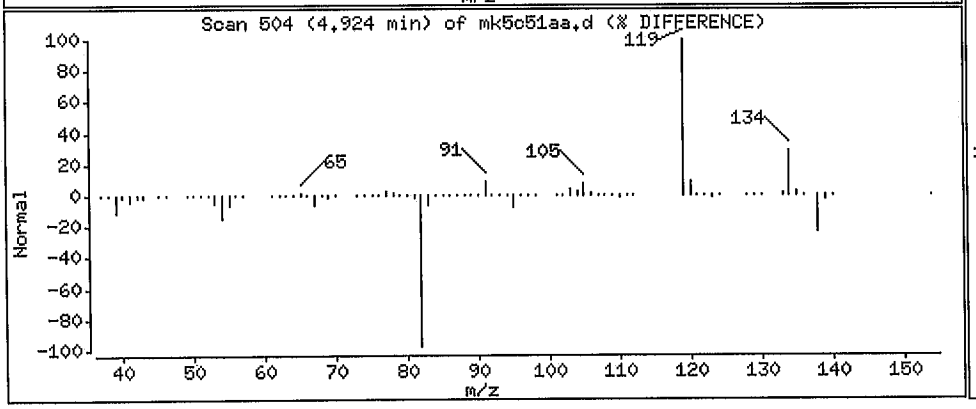












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

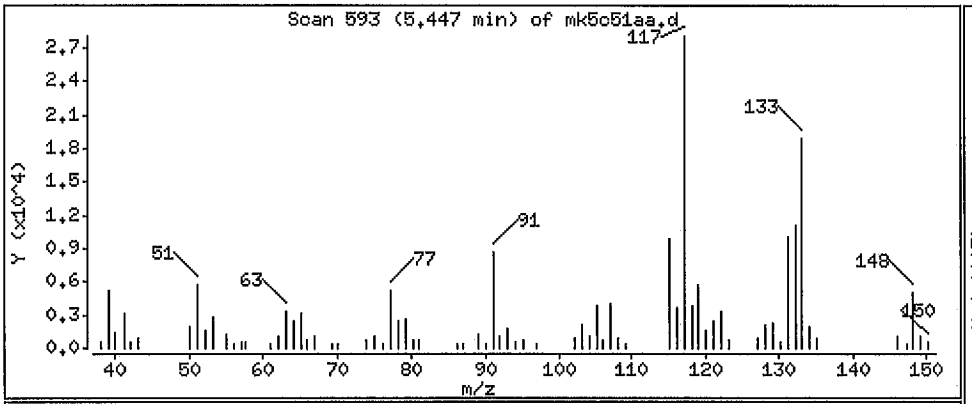
Operator: 60487

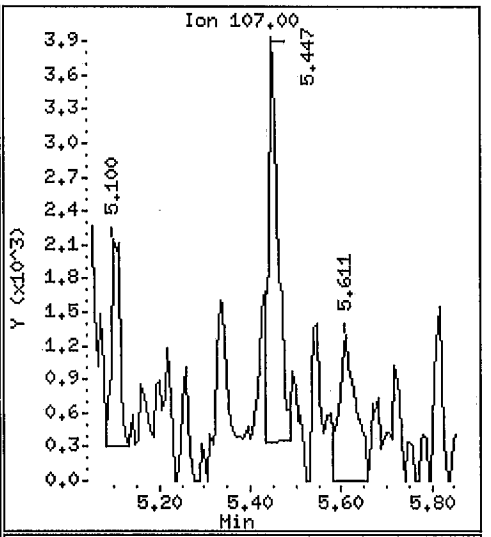
Column phase: Rxi-5 Sil MS

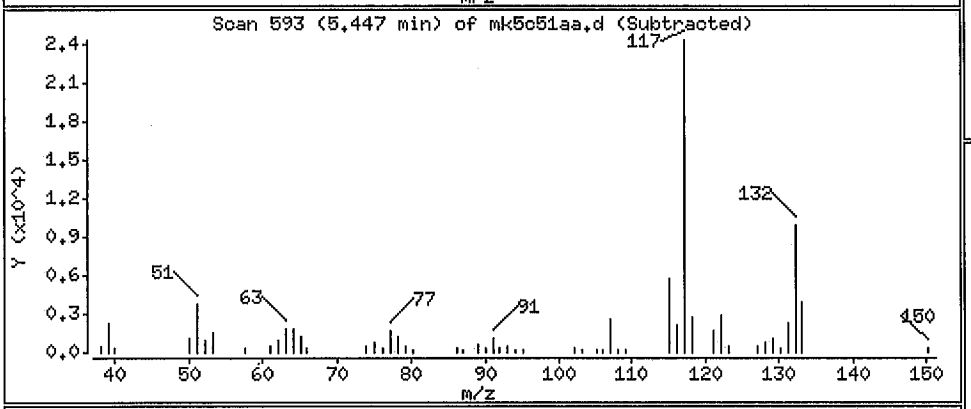
Column diameter: 0.25

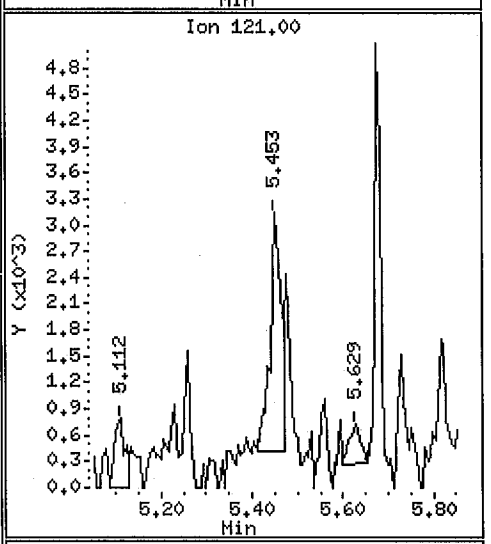
32 2,4-Dimethyphenol

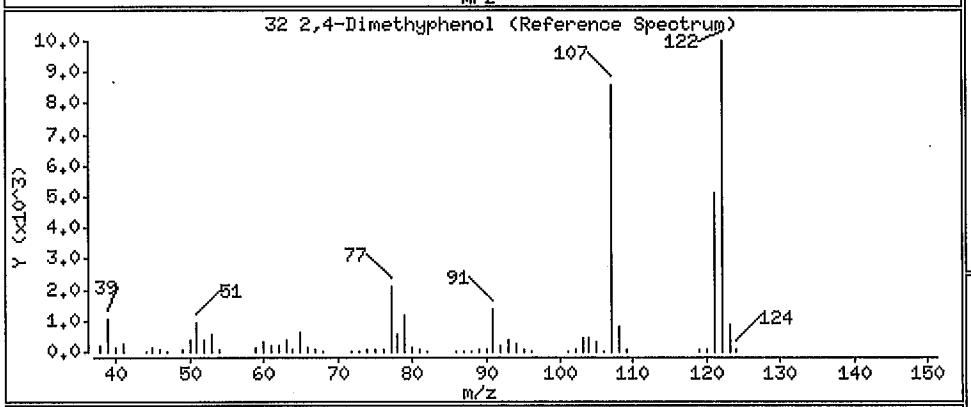
Concentration: 115 ug

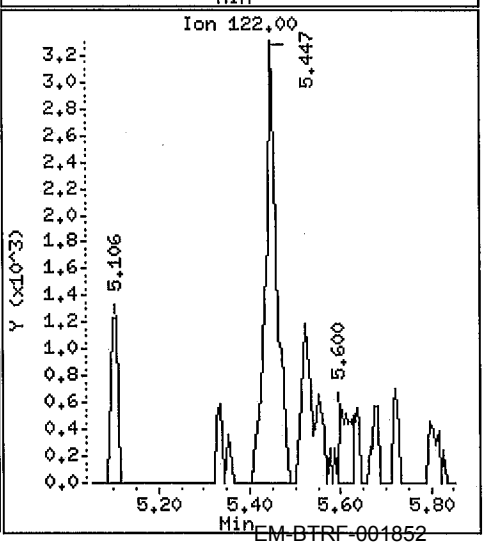


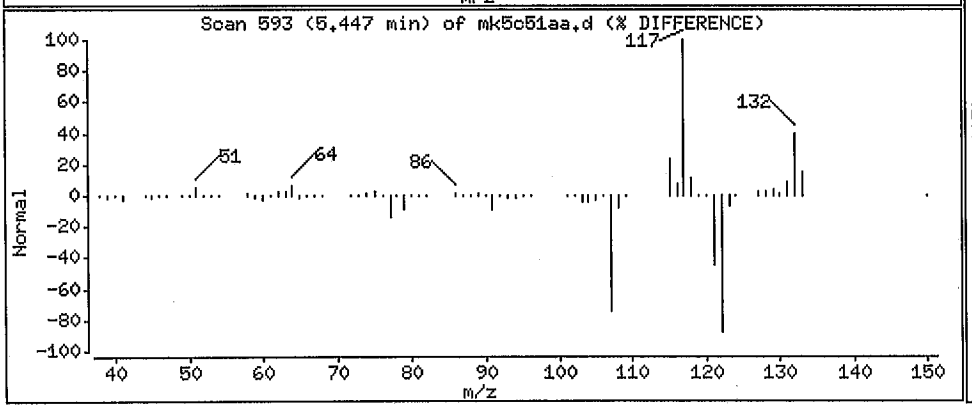












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

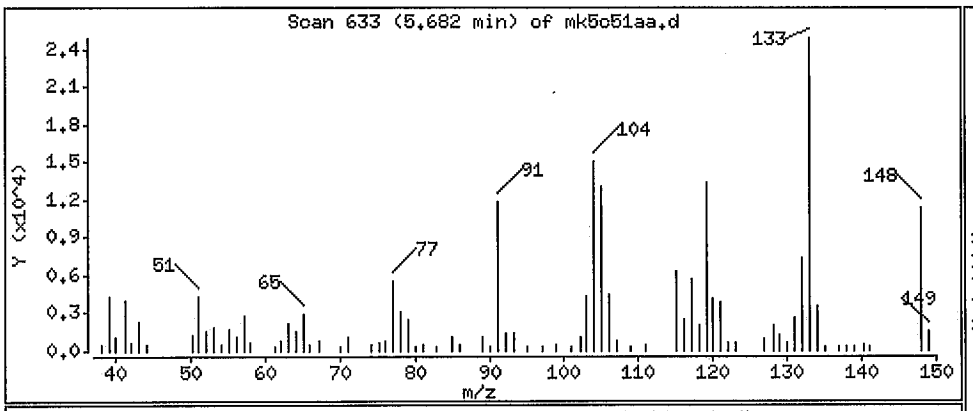
Operator: 60487

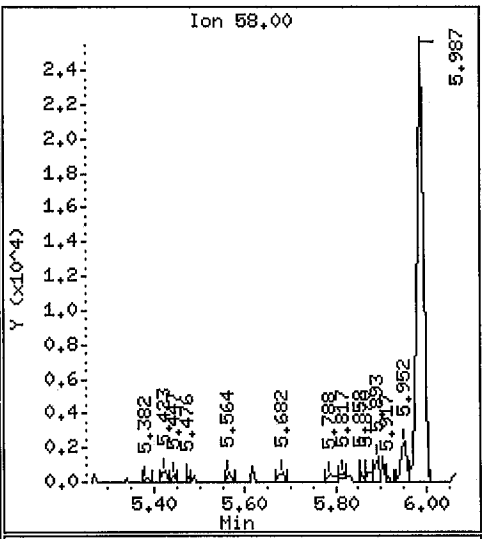
Column phase: Rxi-5 Sil MS

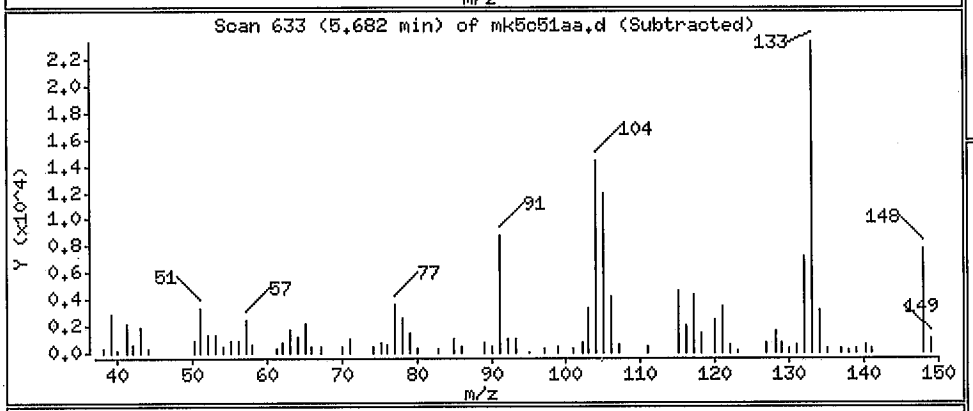
Column diameter: 0.25

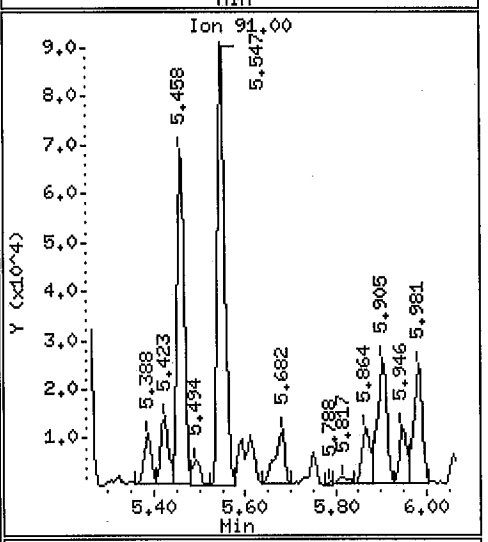
199 Phentermine

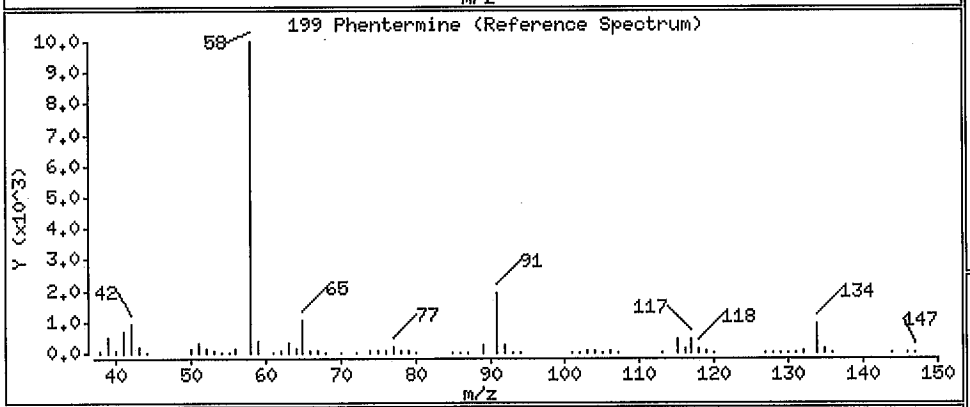
Concentration: 476 ug

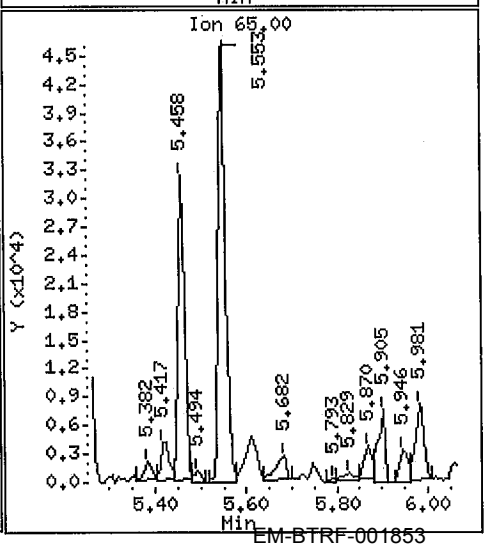


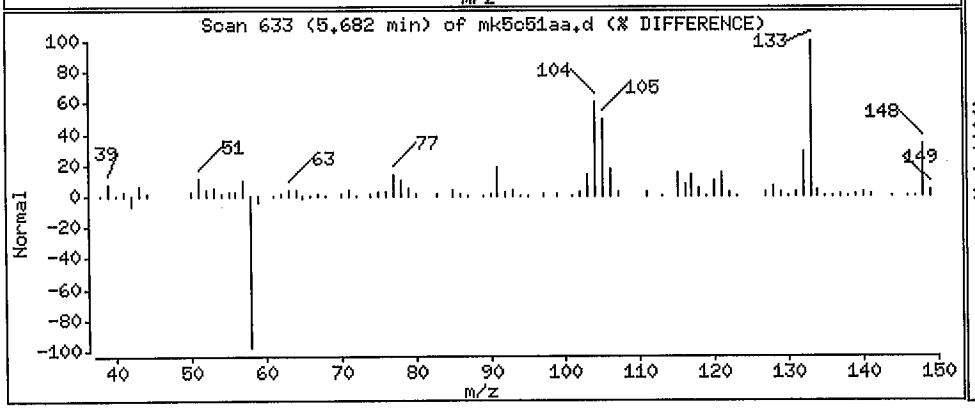












Data File: /var/chem/goms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

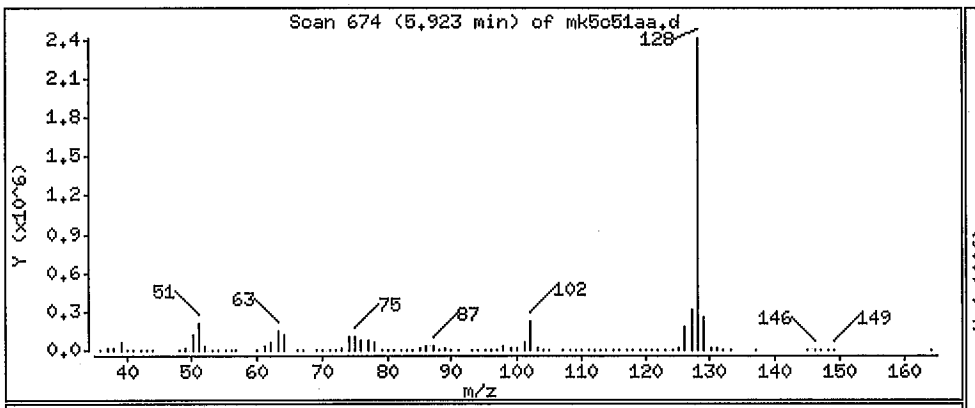
Operator: 60487

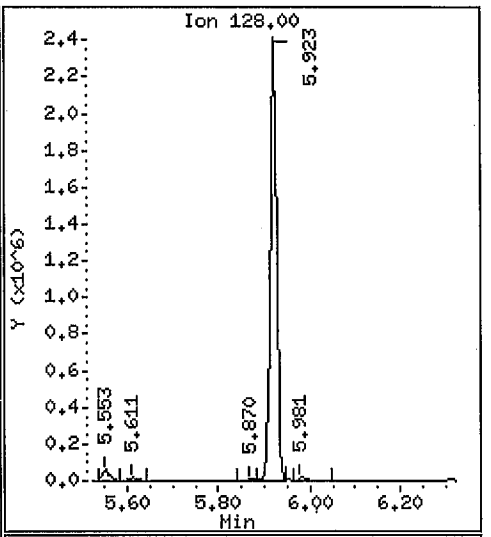
Column phase: Rxi-5 Sil MS

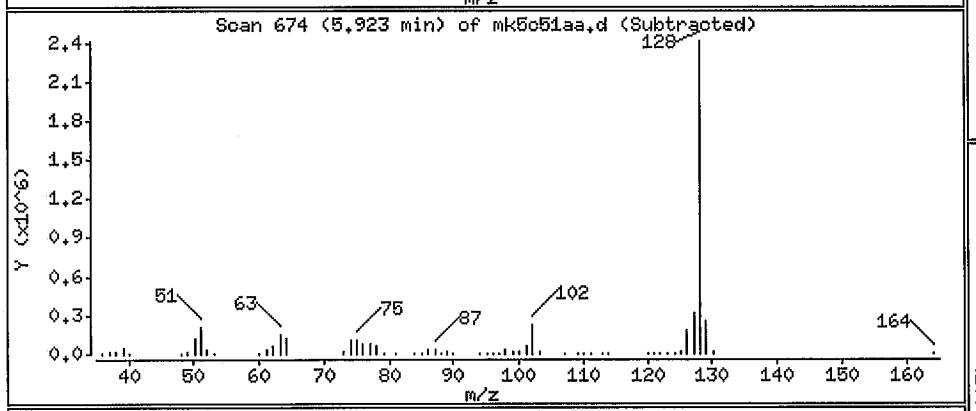
Column diameter: 0.25

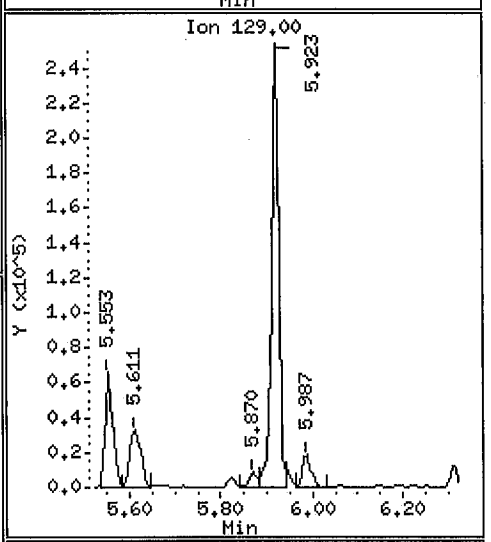
37 Naphthalene

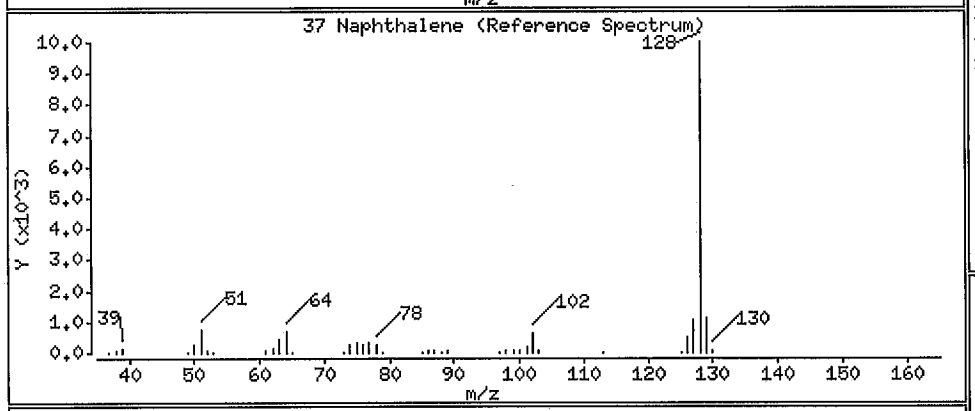
Concentration: 16900 ug

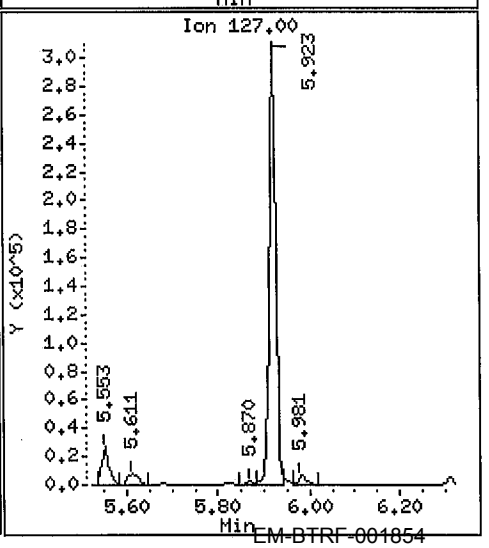


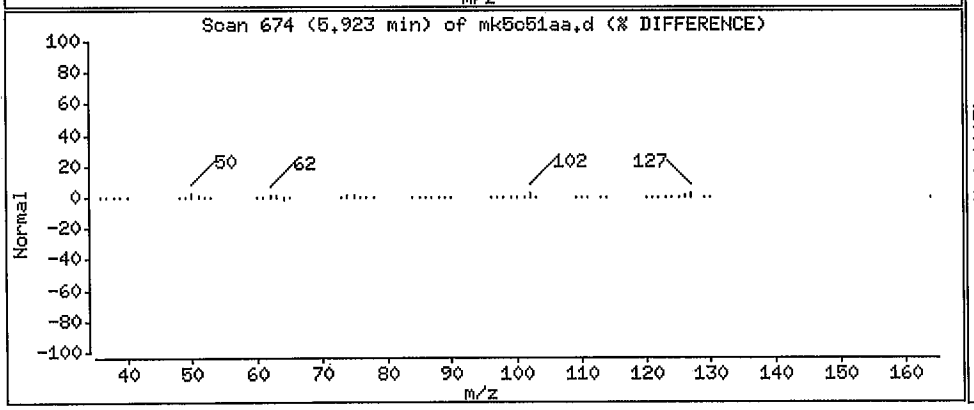












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

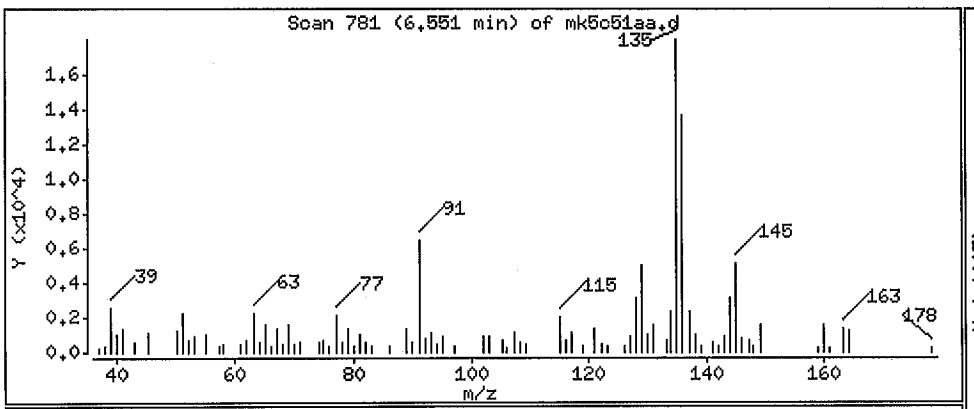
Operator: 60487

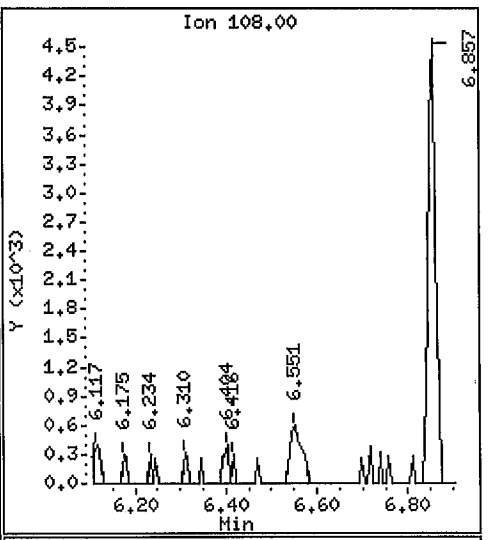
Column phase: Rxi-5 Sil MS

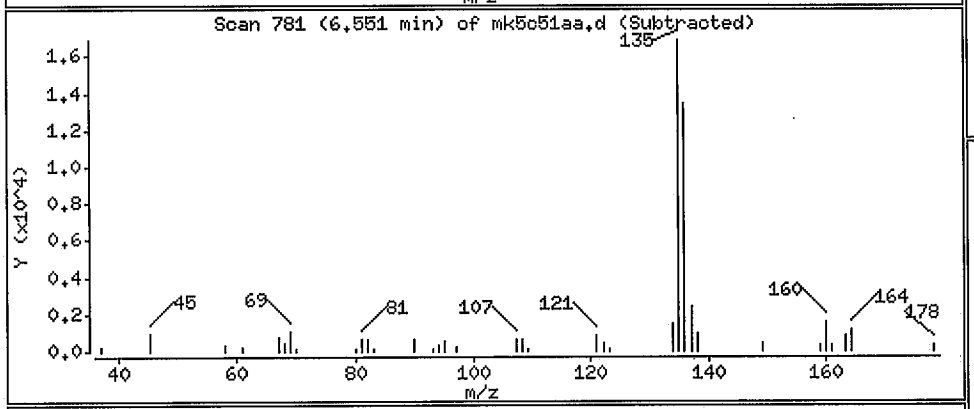
Column diameter: 0.25

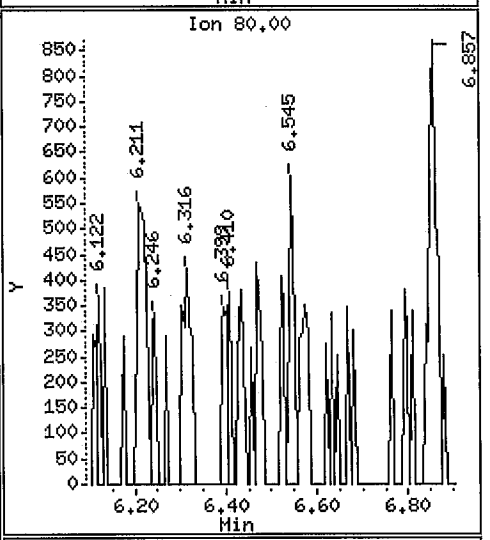
202 1,4-Phenylenediamine

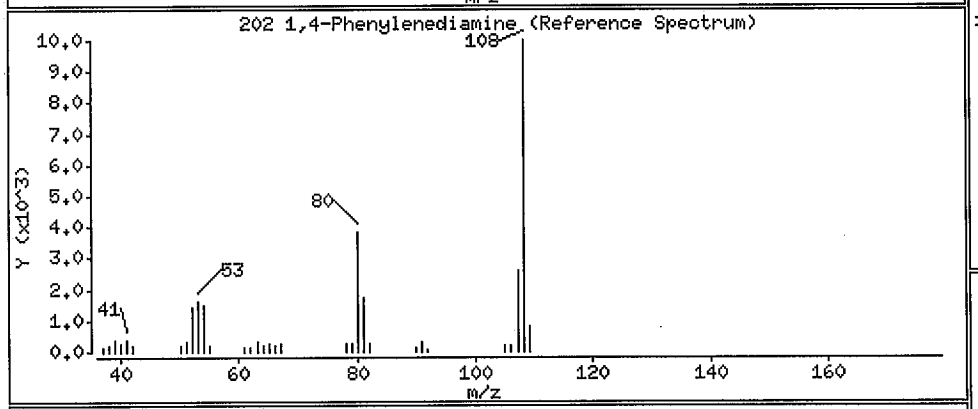
Concentration: 514 ug

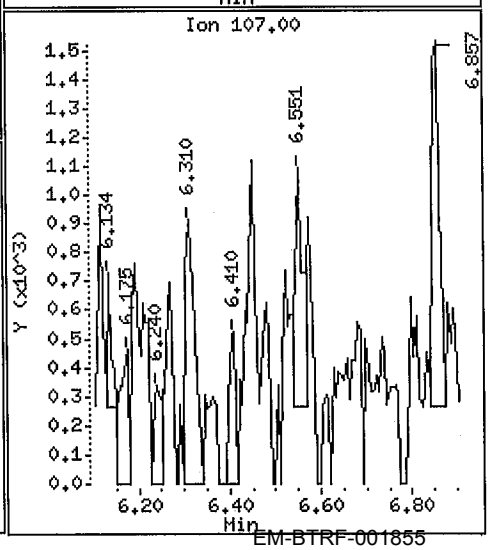


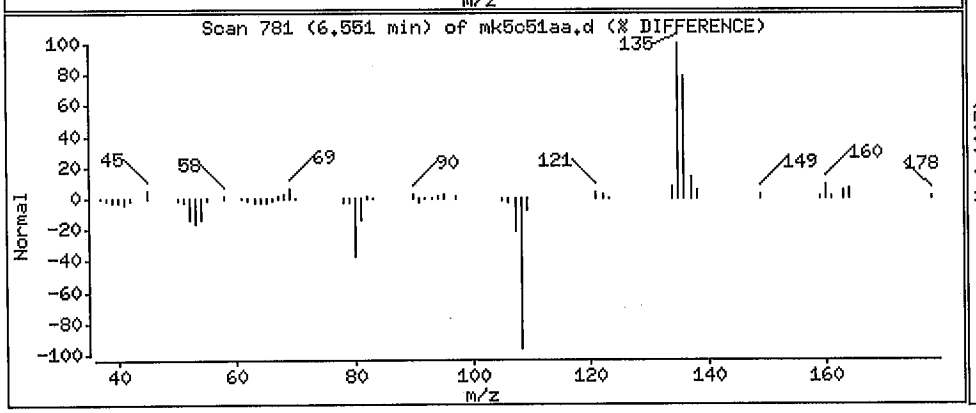












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

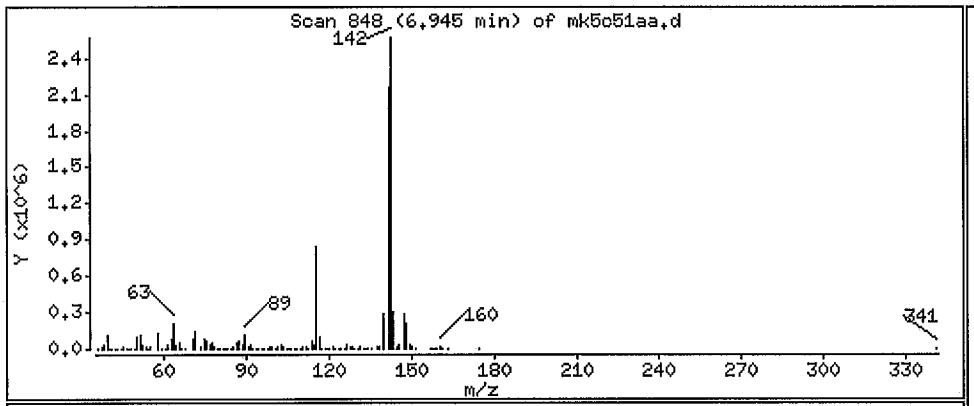
Operator: 60487

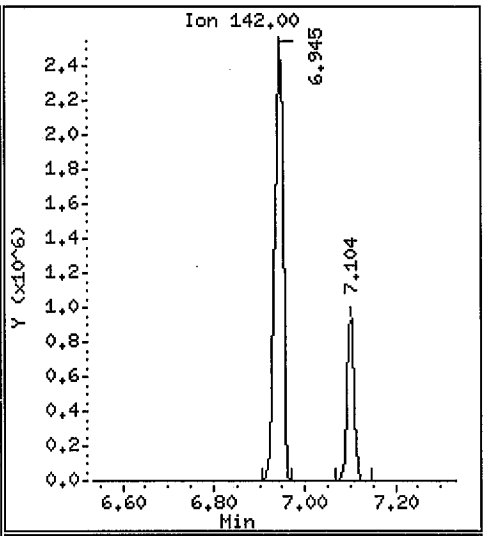
Column phase: Rxi-5 Sil MS

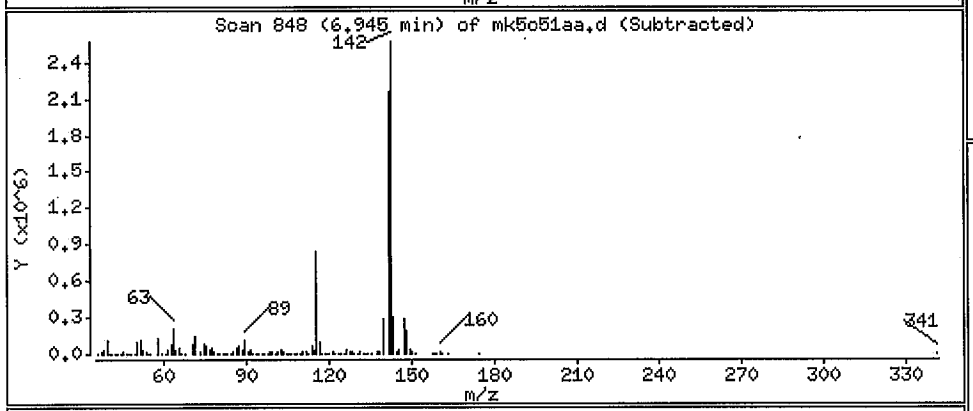
Column diameter: 0.25

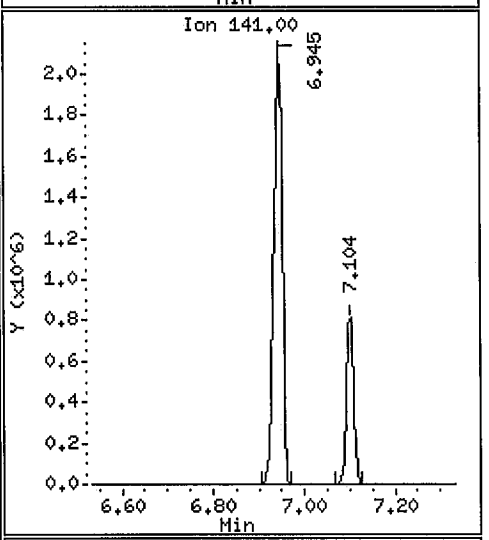
41 2-Methylnaphthalene

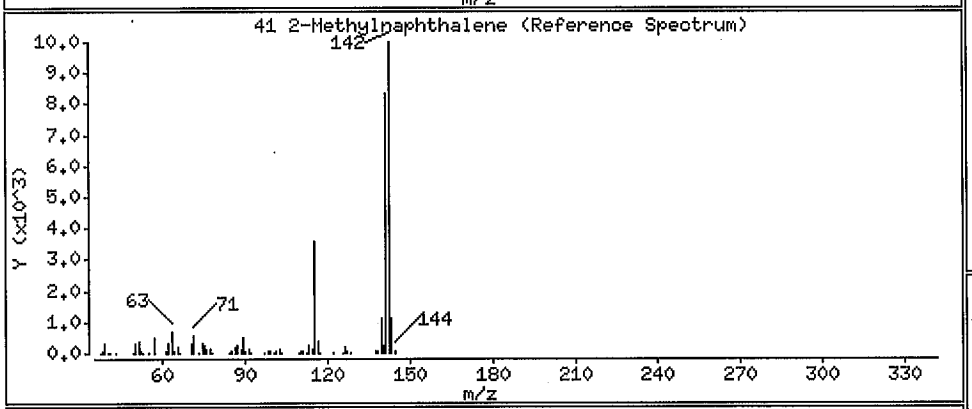
Concentration: 33400 ug

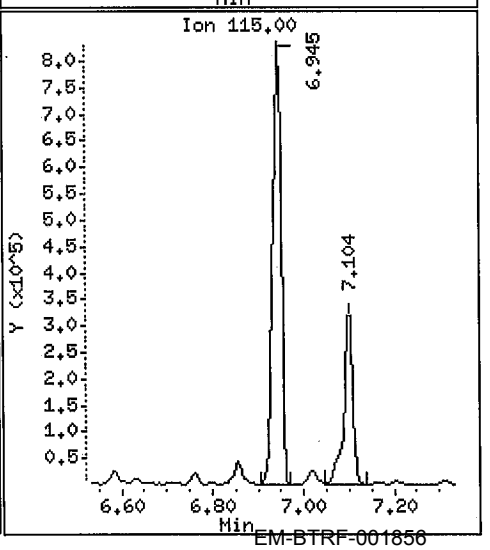


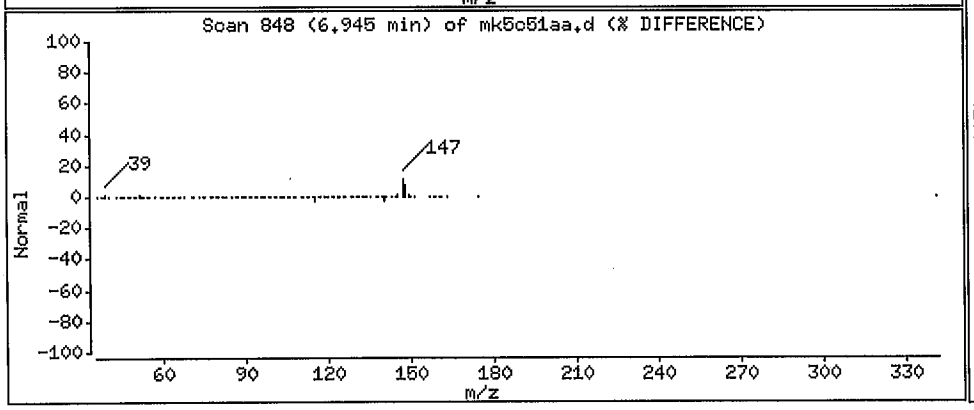












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

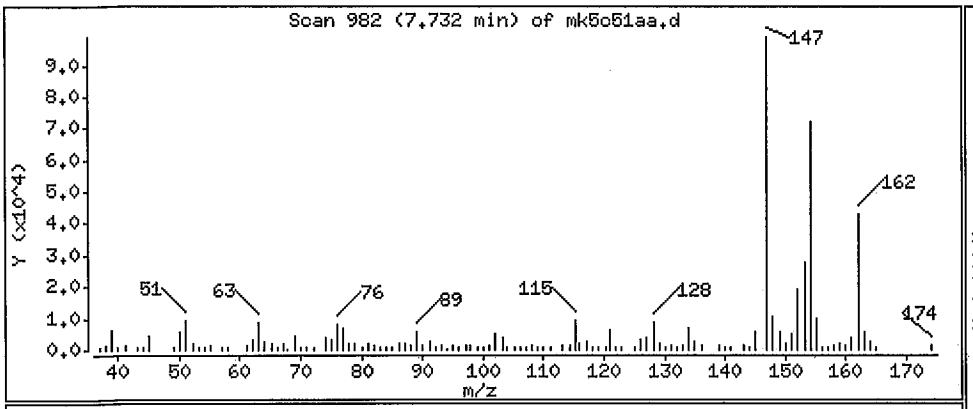
Client ID: EXM-DCU-M0010-R2-C0 Instrument: md.i

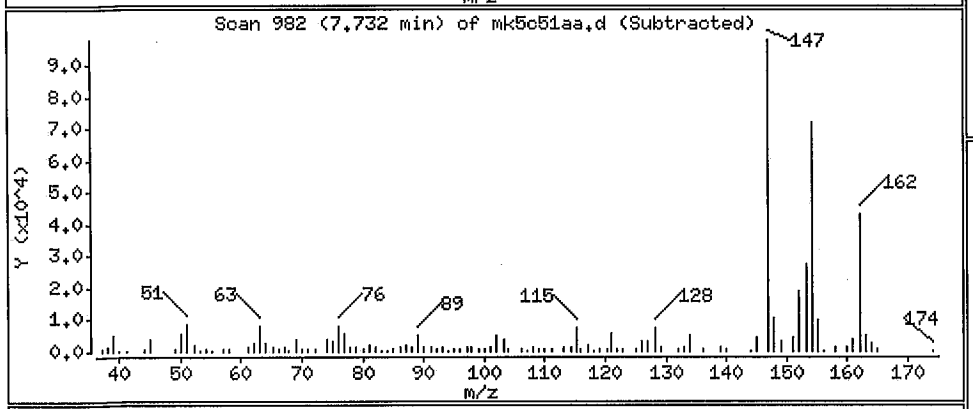
Sample Info: MK5C51AA,20,0,,,

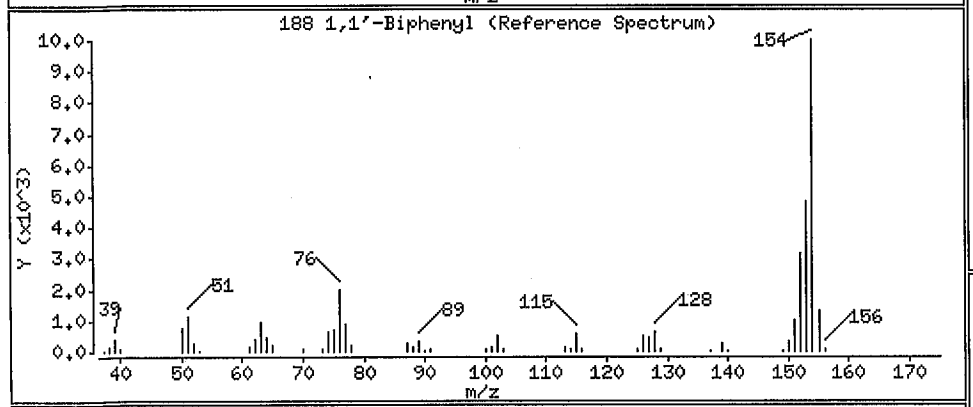
Volume Injected (uL): 1.0 Operator: 60487

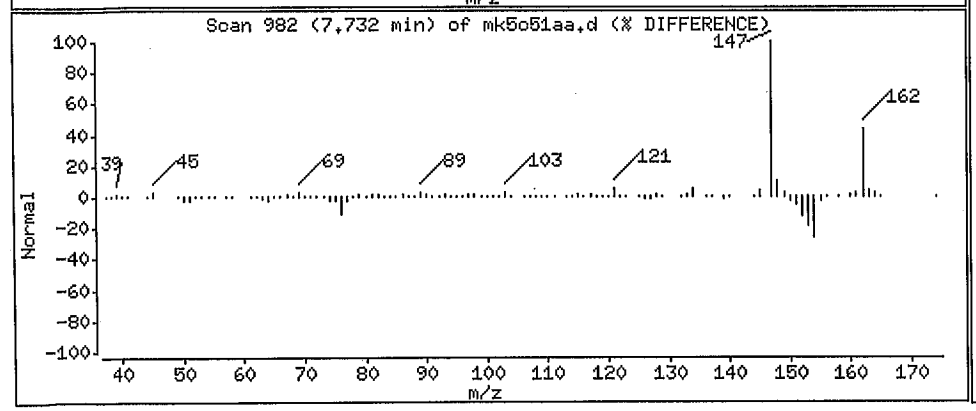
Column phase: Rxi-5 Sil MS Column diameter: 0.25

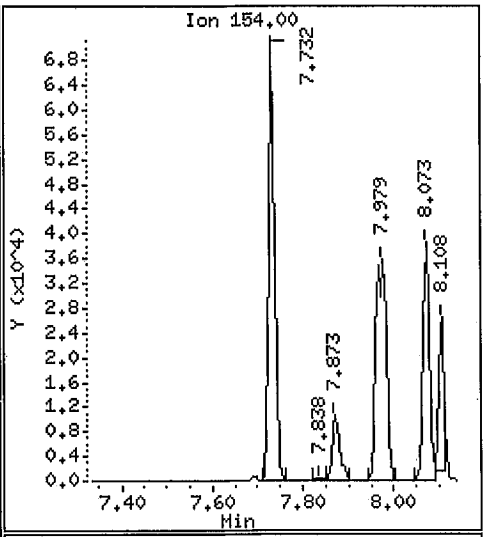
188 1,1'-Biphenyl Concentration: 460 ug

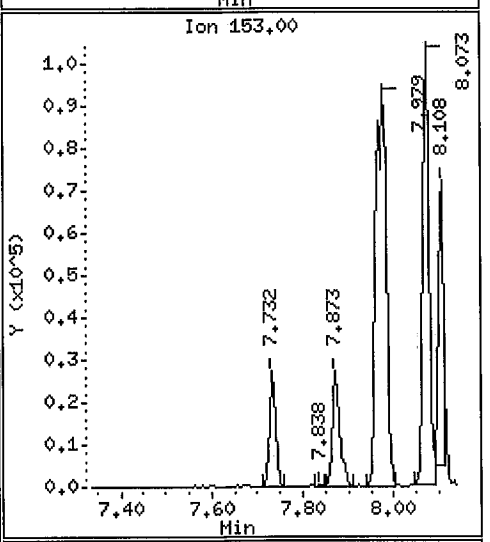


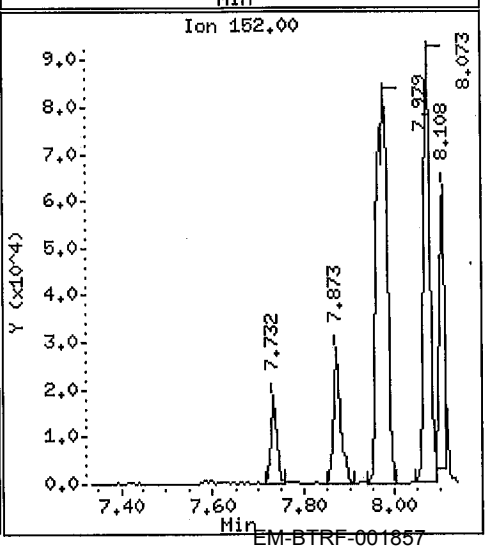












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

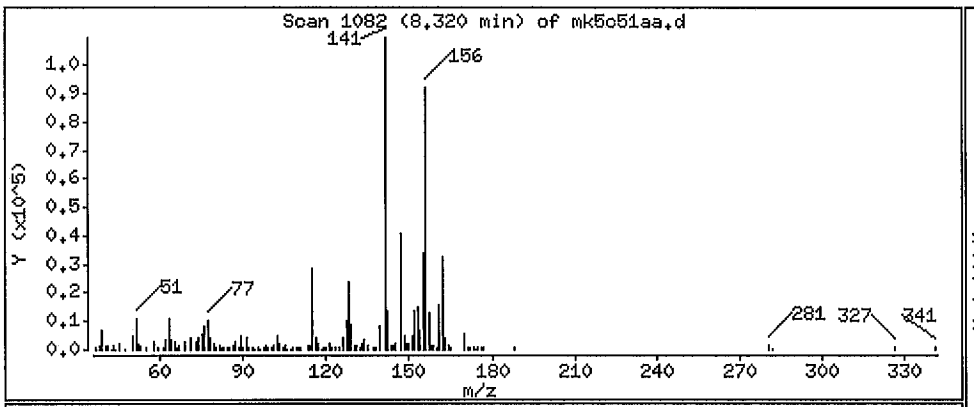
Operator: 60487

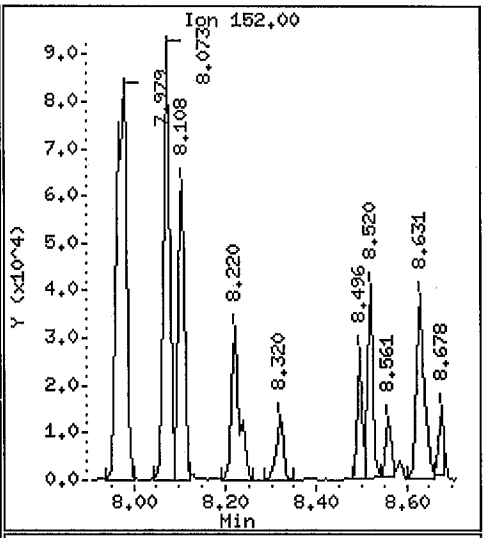
Column phase: Rxi-5 Sil MS

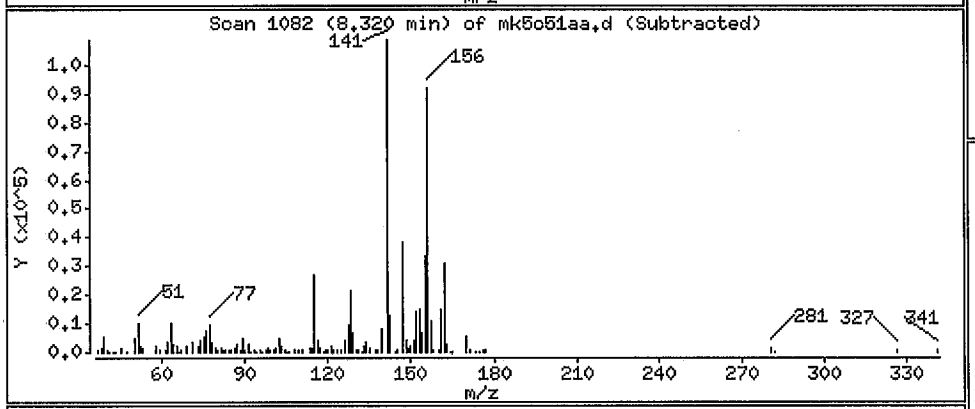
Column diameter: 0.25

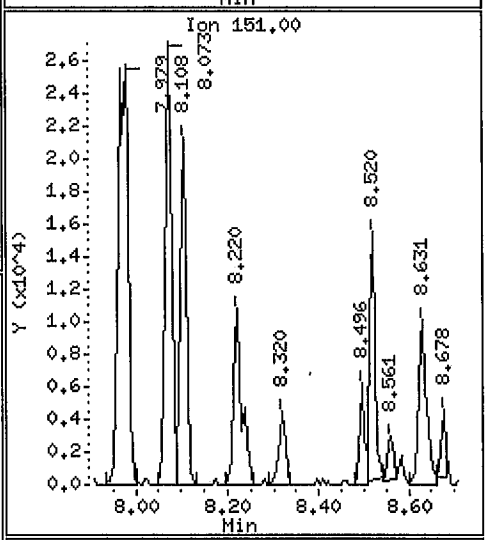
47 Acenaphthylene

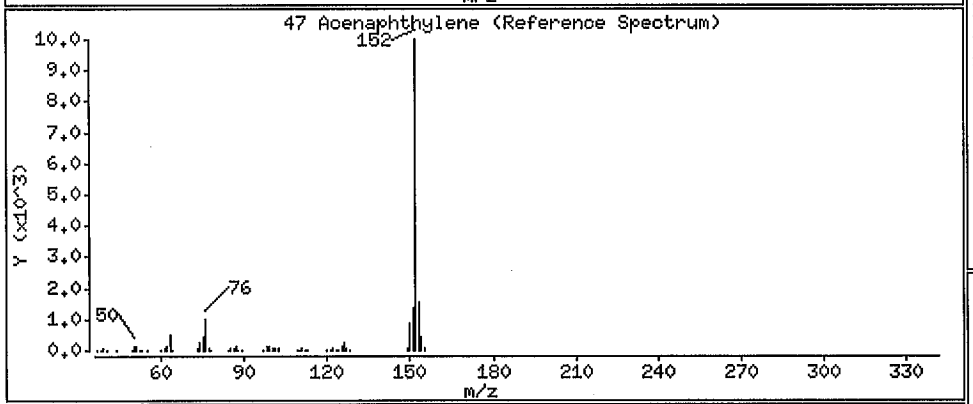
Concentration: 89.1 ug

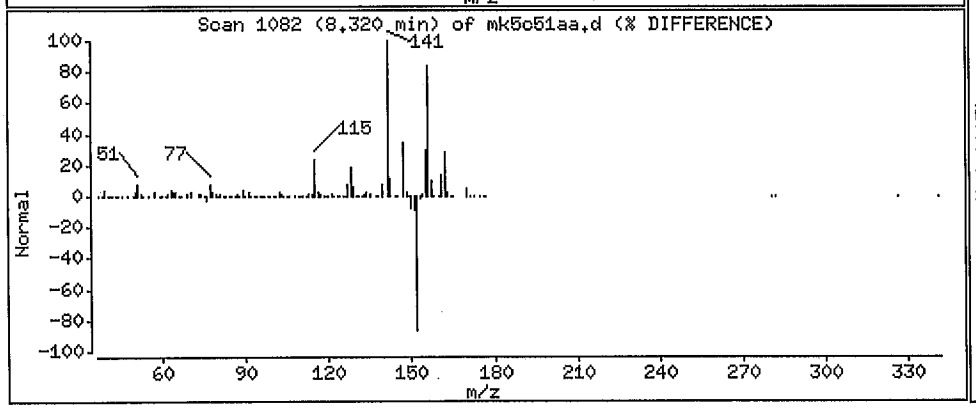


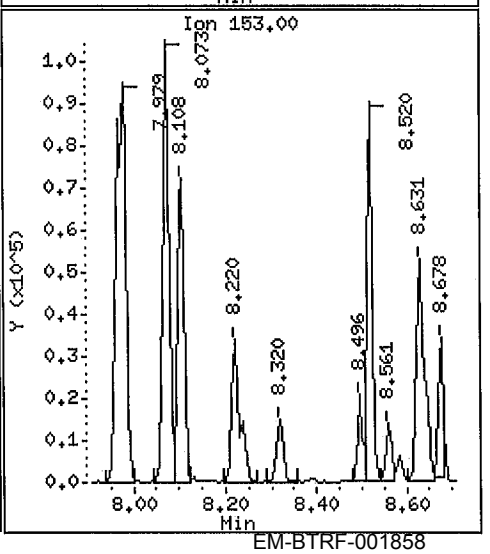












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

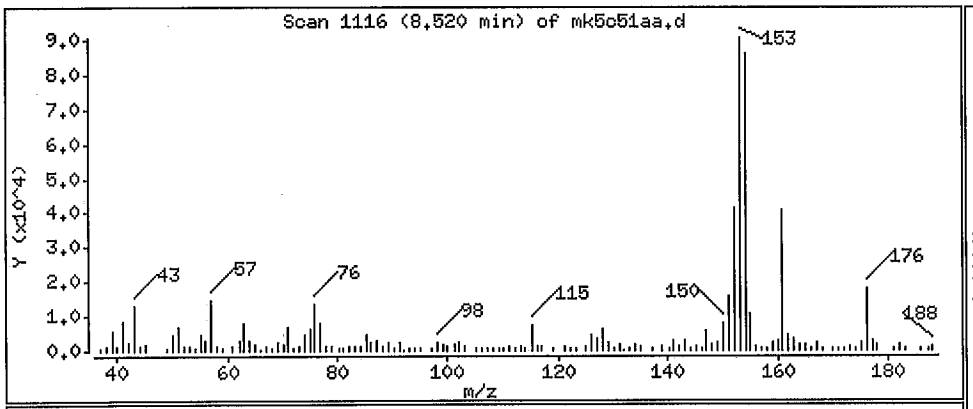
Operator: 60487

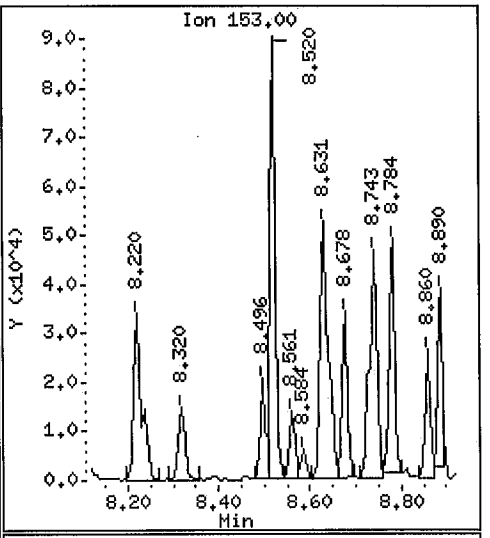
Column phase: Rxi-5 Sil MS

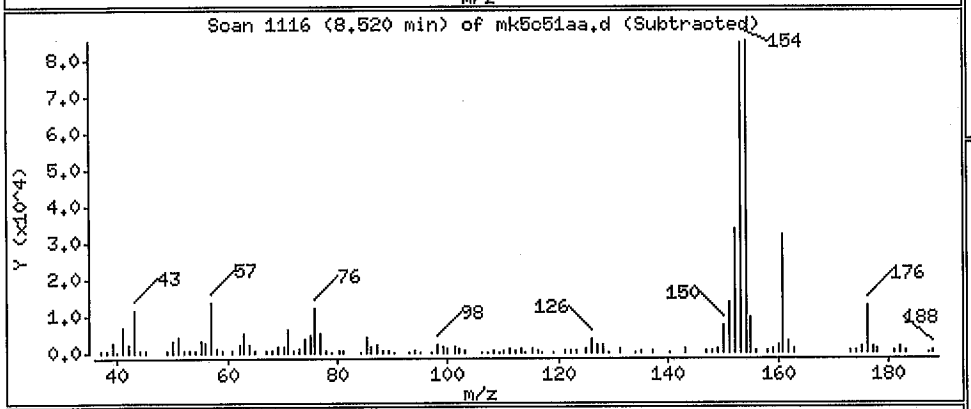
Column diameter: 0.25

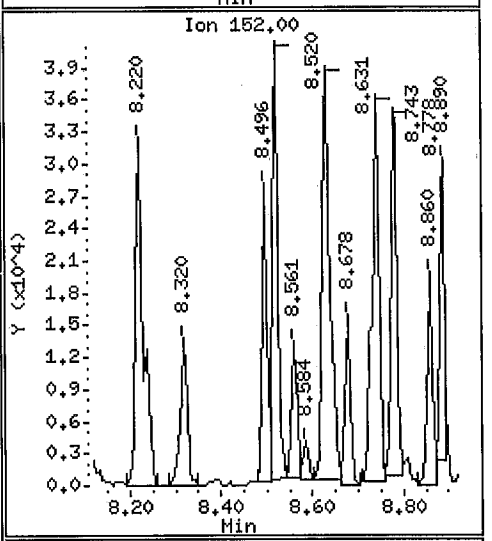
51 Acenaphthene (ccc)

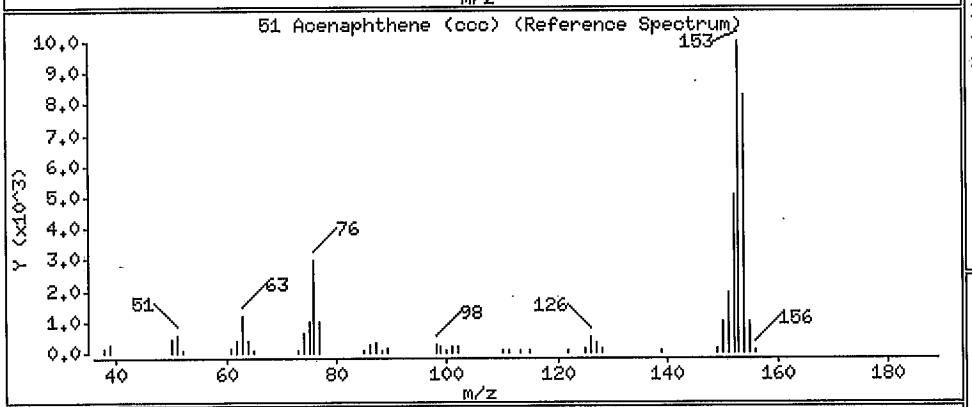
Concentration: 683 ug

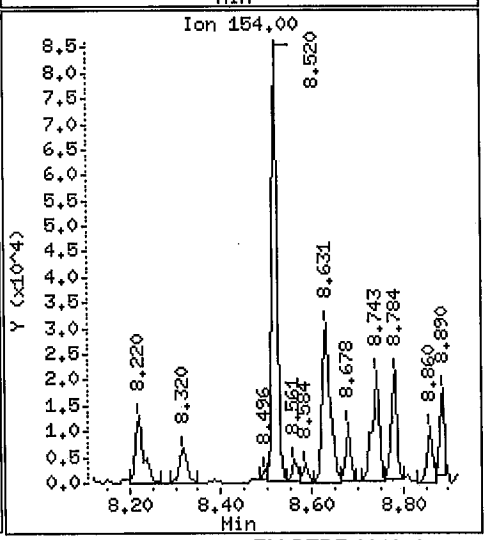


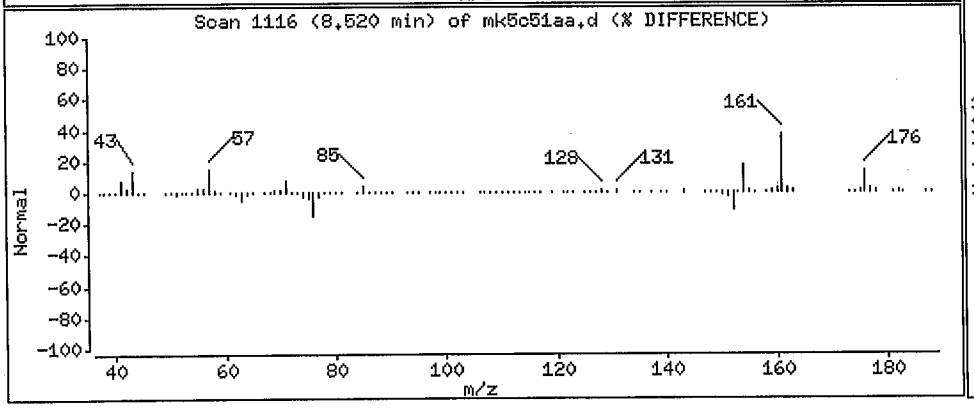












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

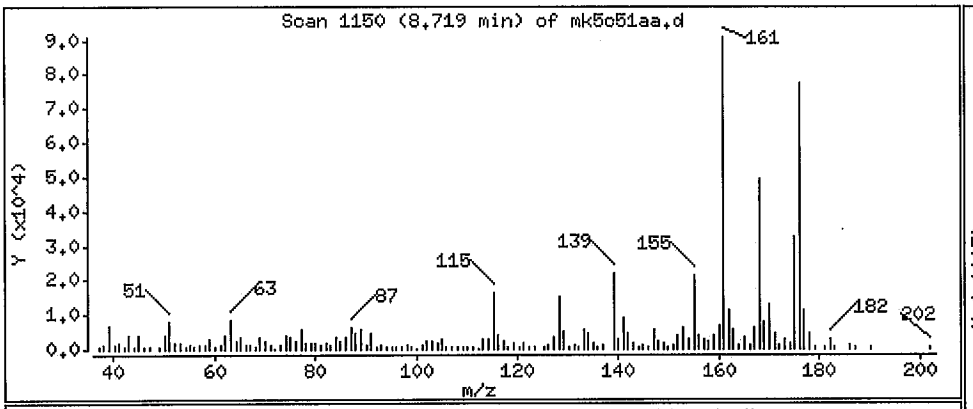
Operator: 60487

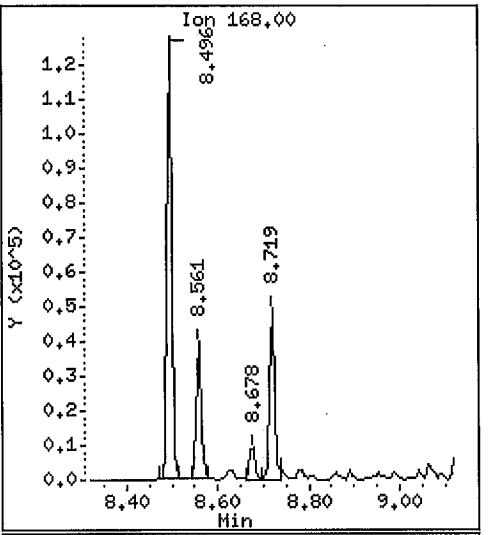
Column phase: Rxi-5 Sil MS

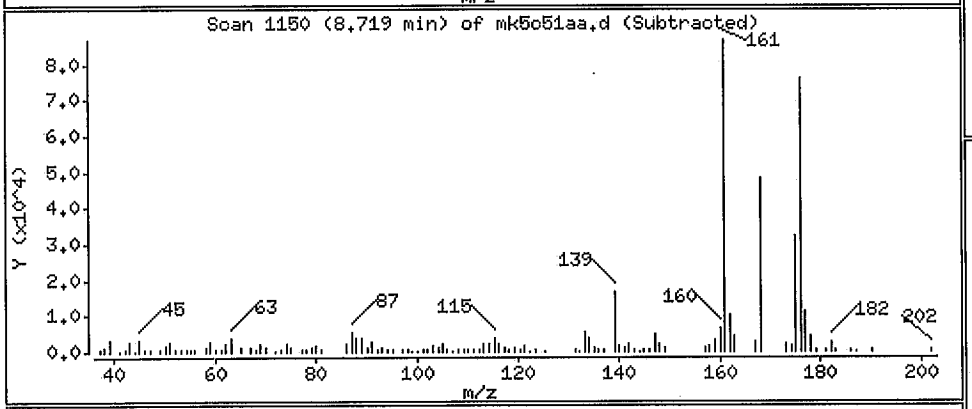
Column diameter: 0.25

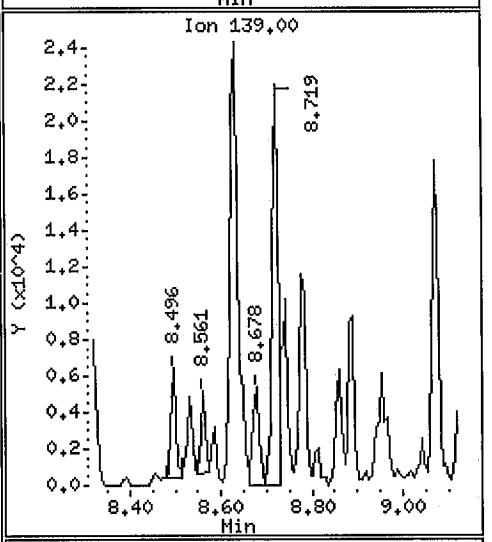
53 Dibenzofuran

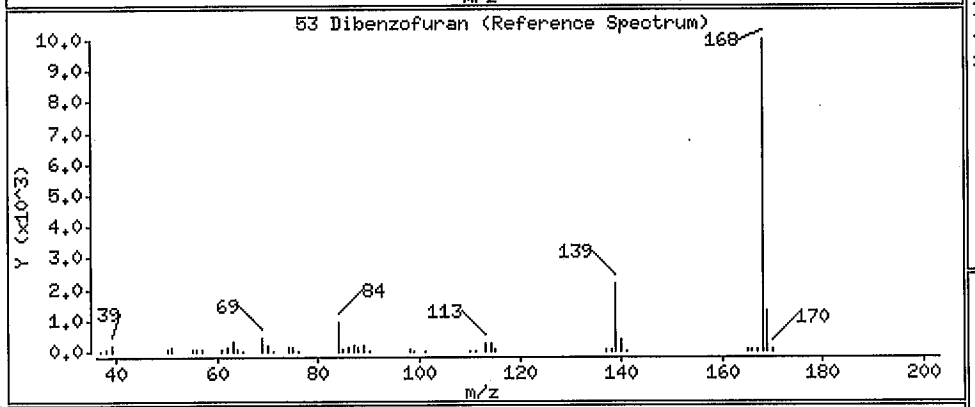
Concentration: 267 ug

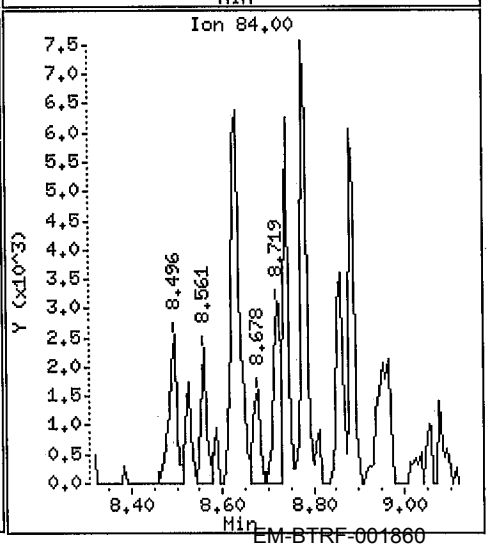


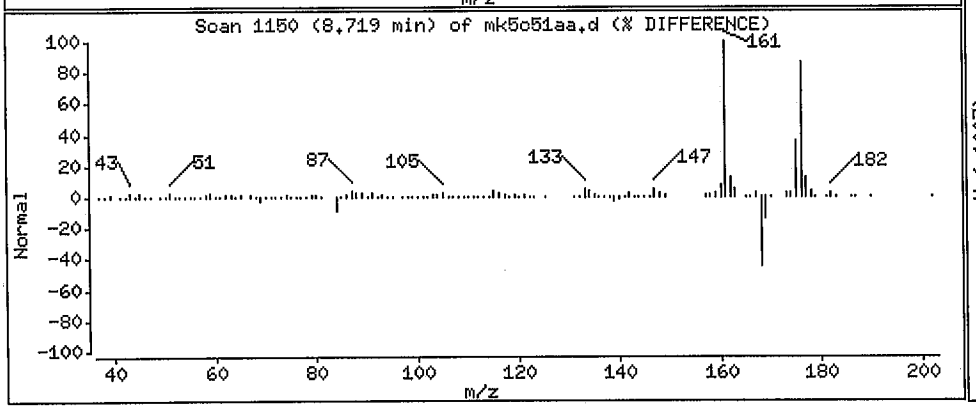












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

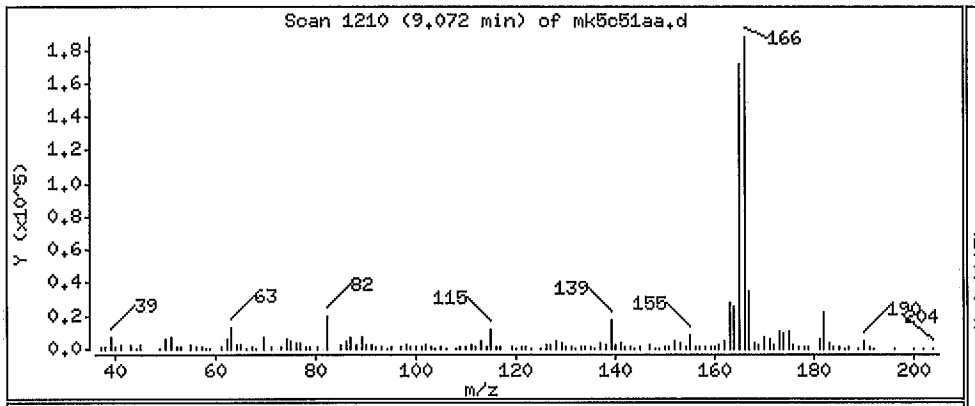
Operator: 60487

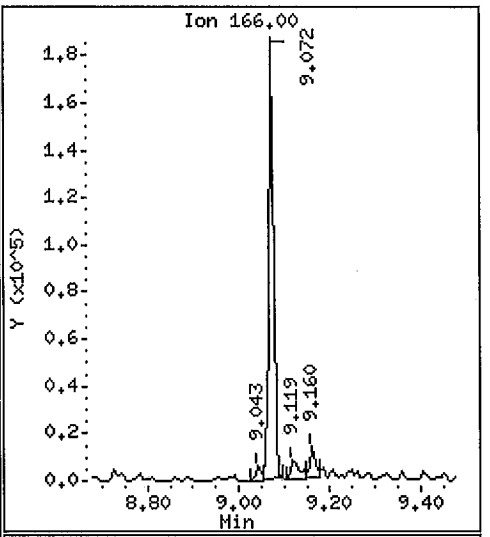
Column phase: Rxi-5 Sil MS

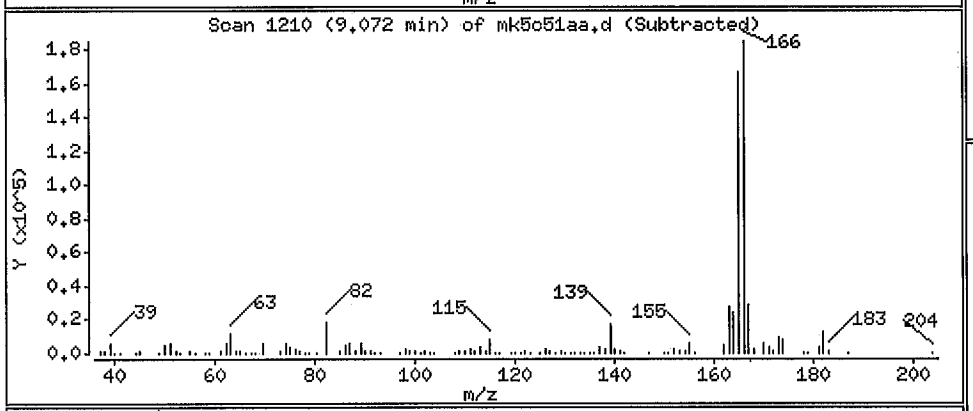
Column diameter: 0.25

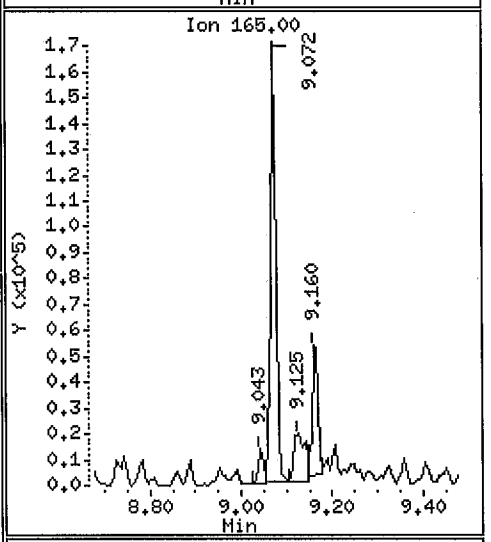
56 Fluorene

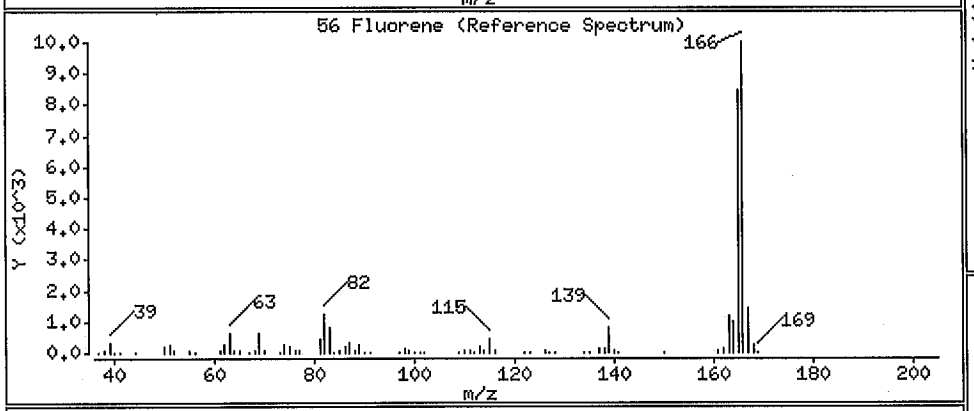
Concentration: 1200 ug

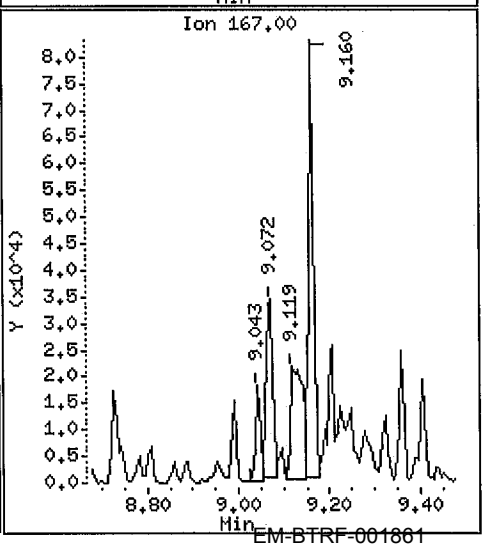


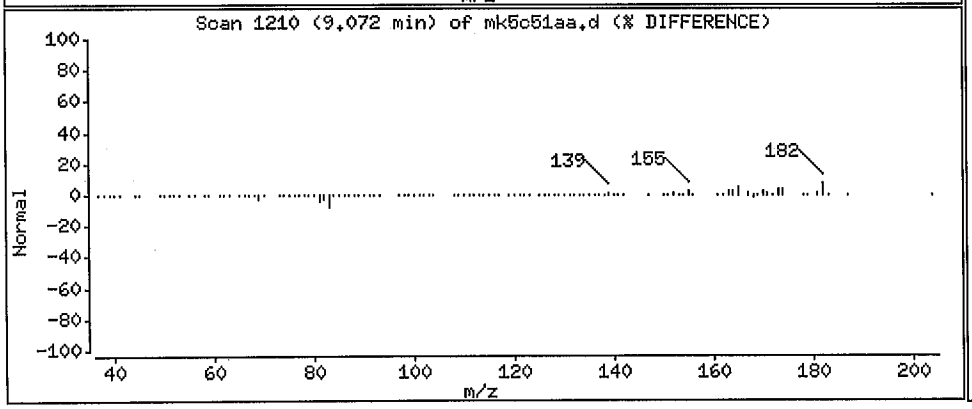












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

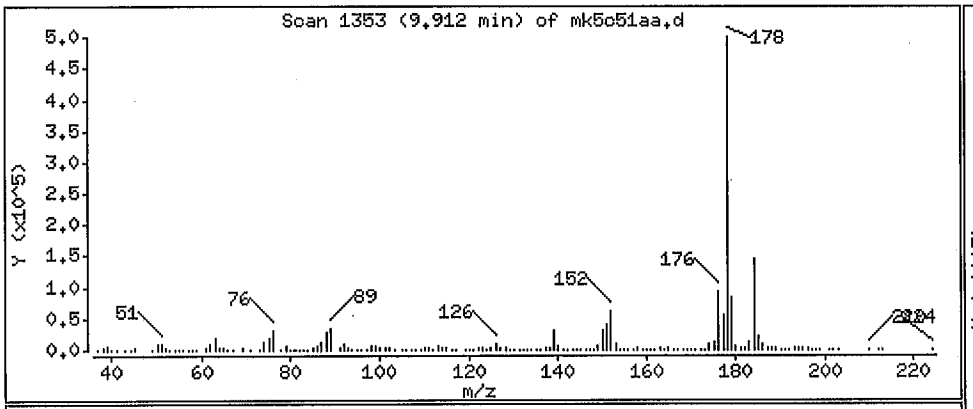
Operator: 60487

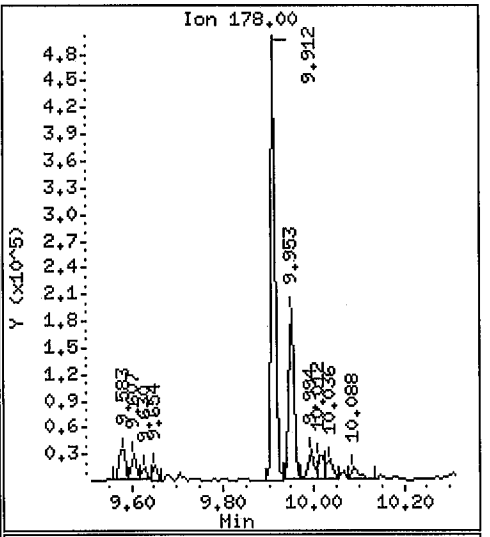
Column phase: Rxi-5 Sil MS

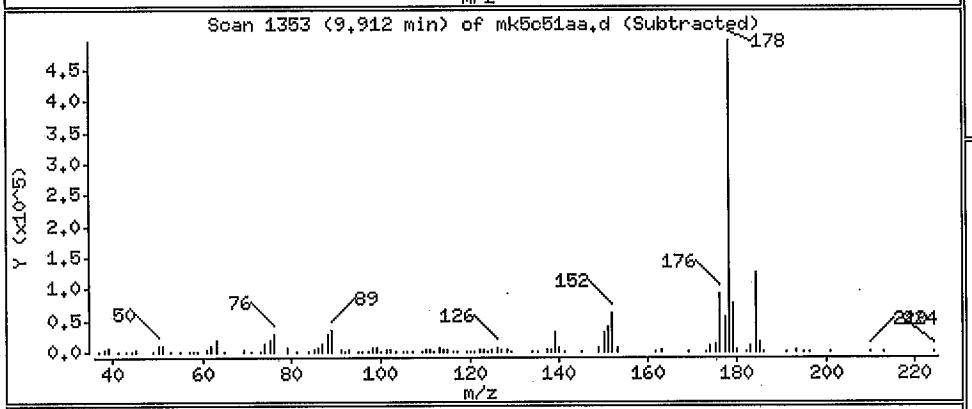
Column diameter: 0.25

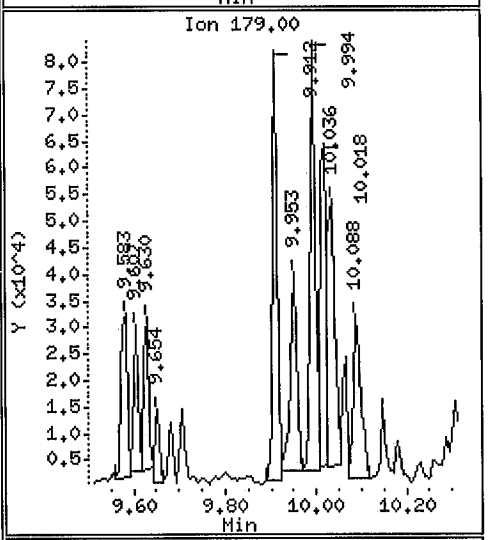
66 Phenanthrene

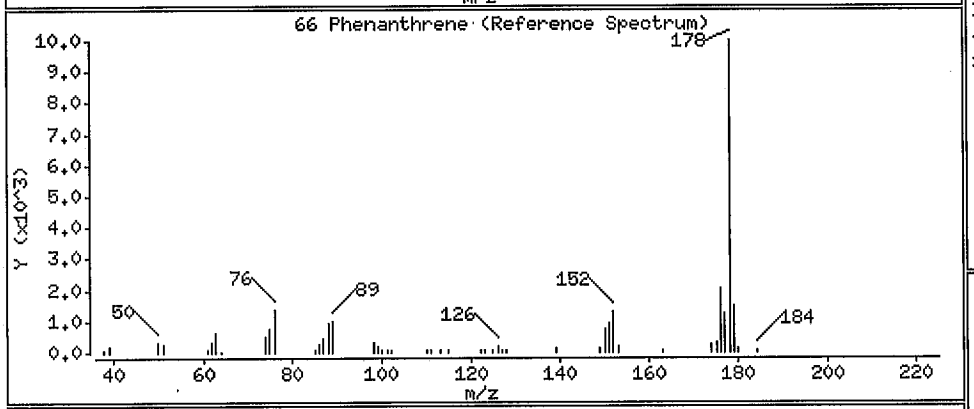
Concentration: 1720 ug

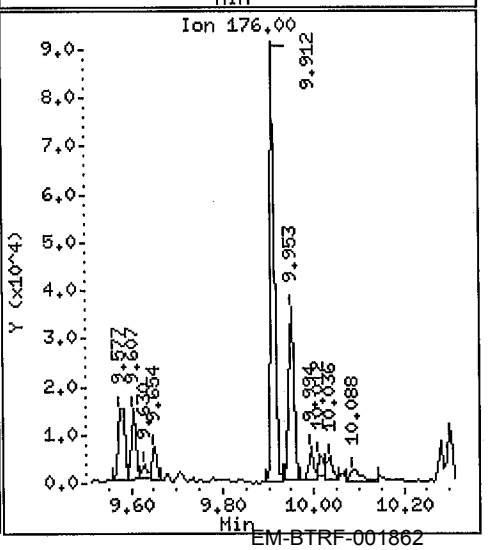


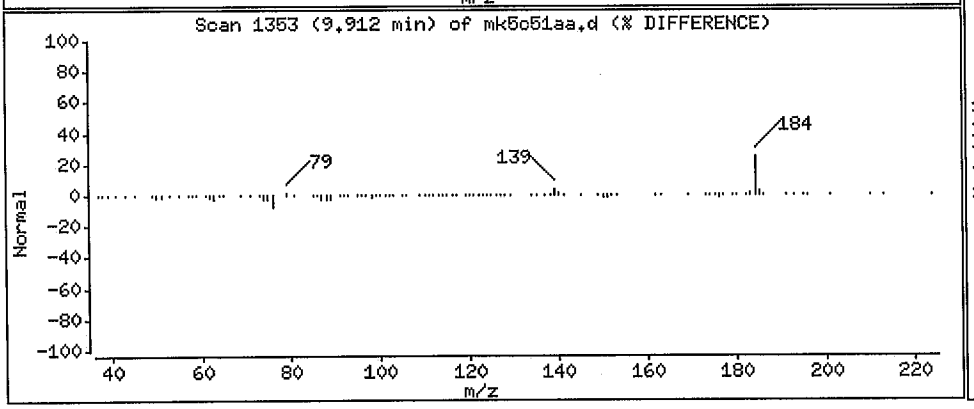












Data File: /var/ohem/goms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

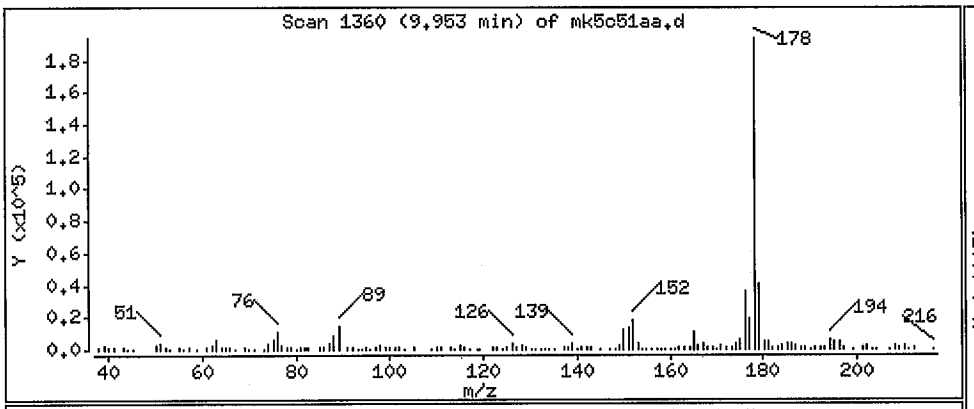
Operator: 60487

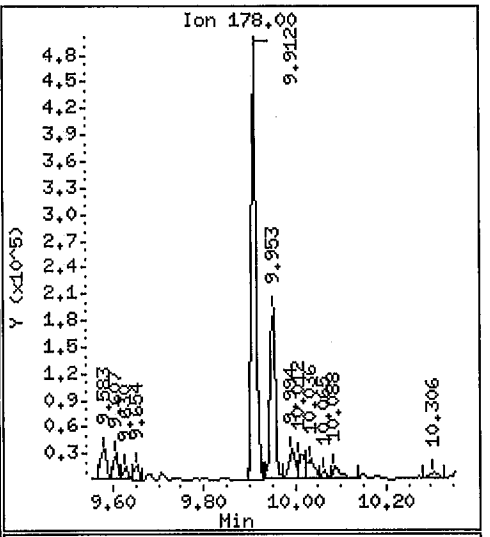
Column phase: Rxi-5 Sil MS

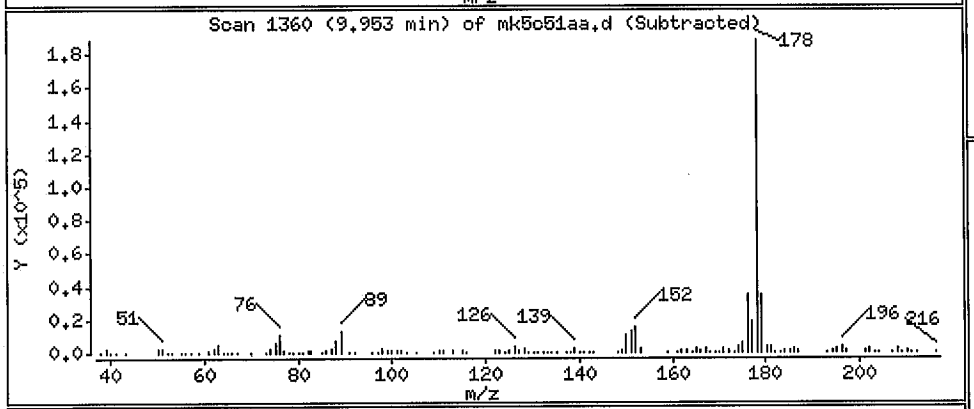
Column diameter: 0.25

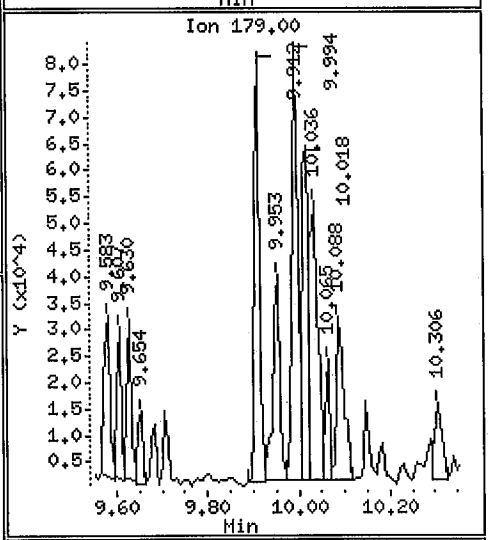
67 Anthracene

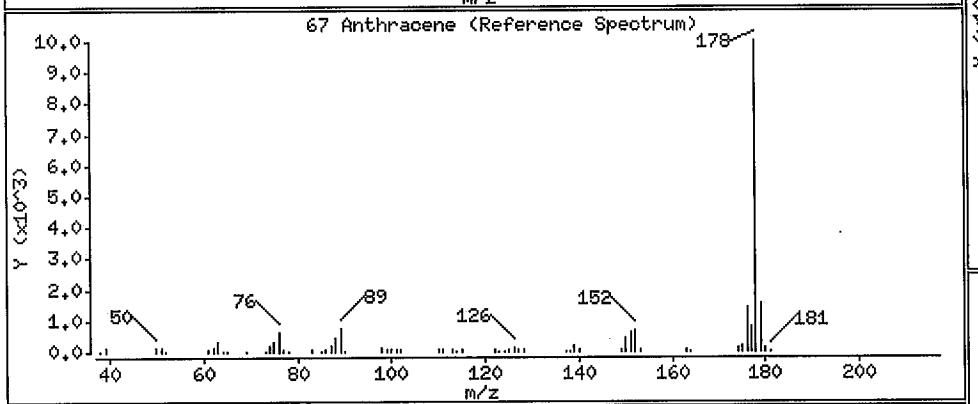
Concentration: 813 ug

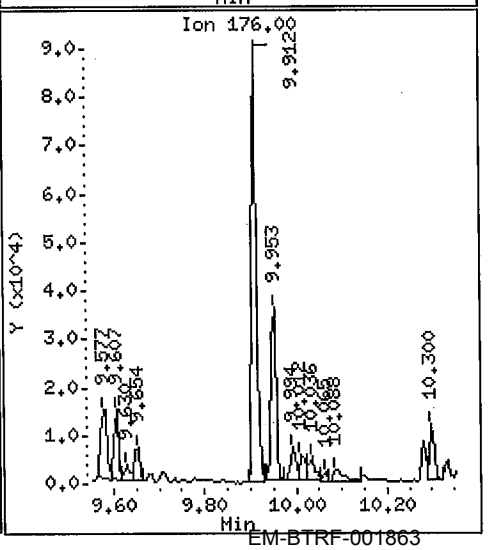


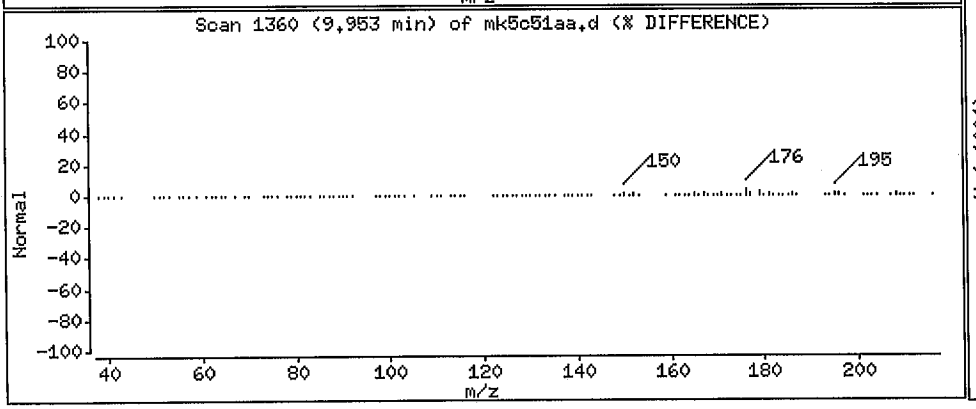












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

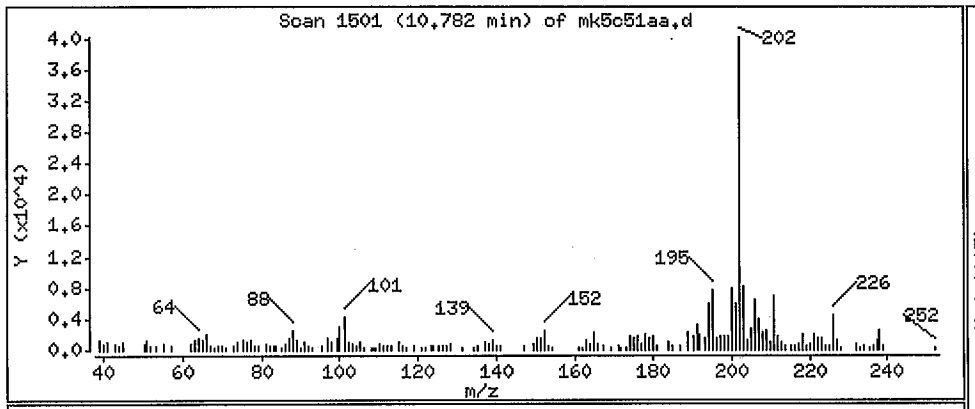
Operator: 60487

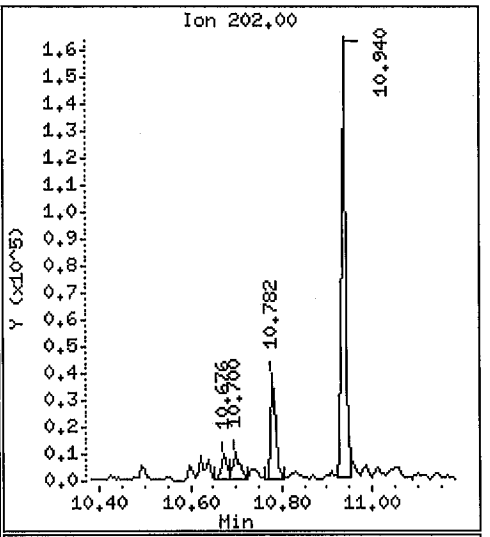
Column phase: Rxi-5 Sil MS

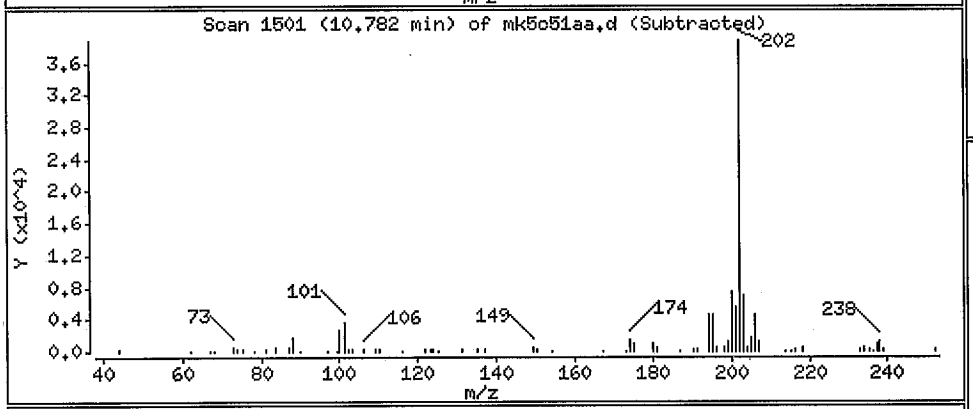
Column diameter: 0.25

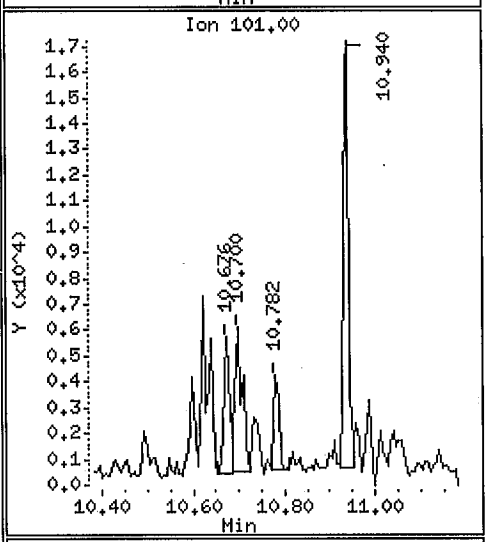
70 Fluoranthene (ccc)

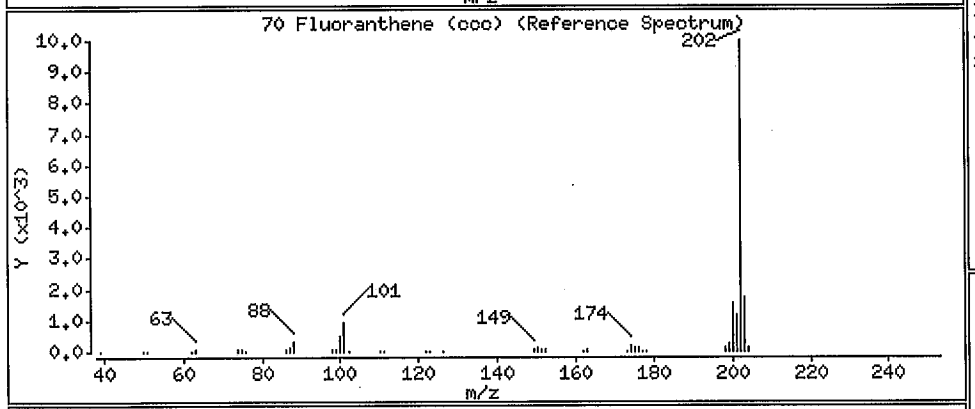
Concentration: 142 ug

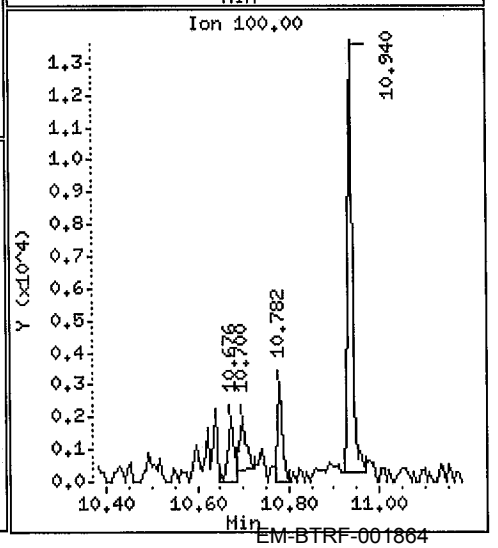


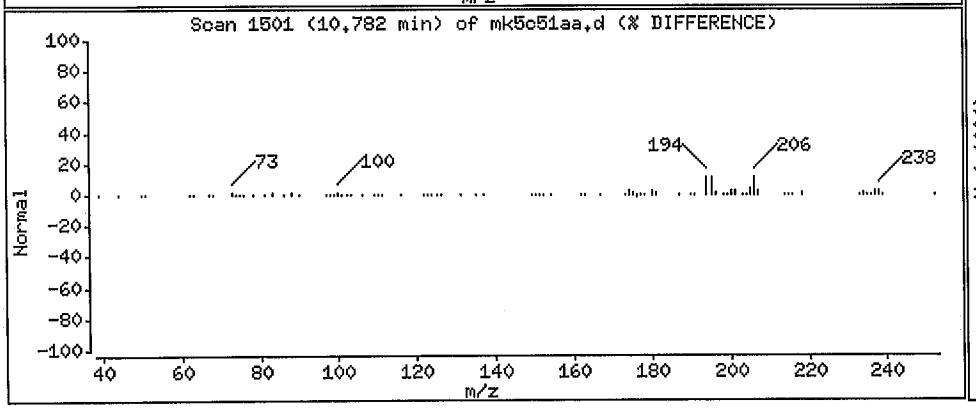












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

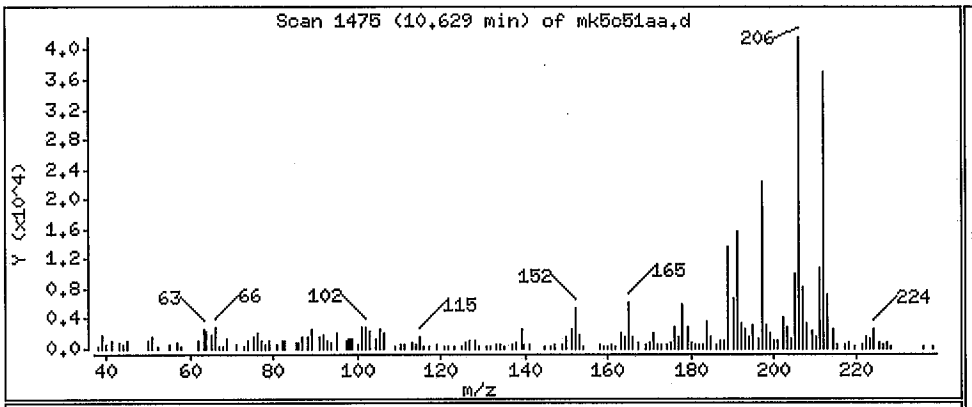
Operator: 60487

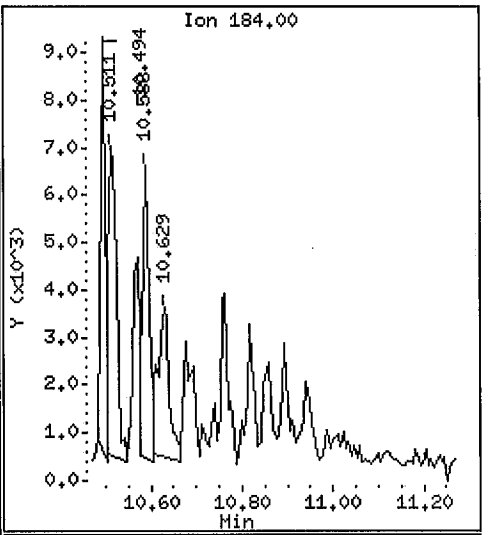
Column phase: Rxi-5 Sil MS

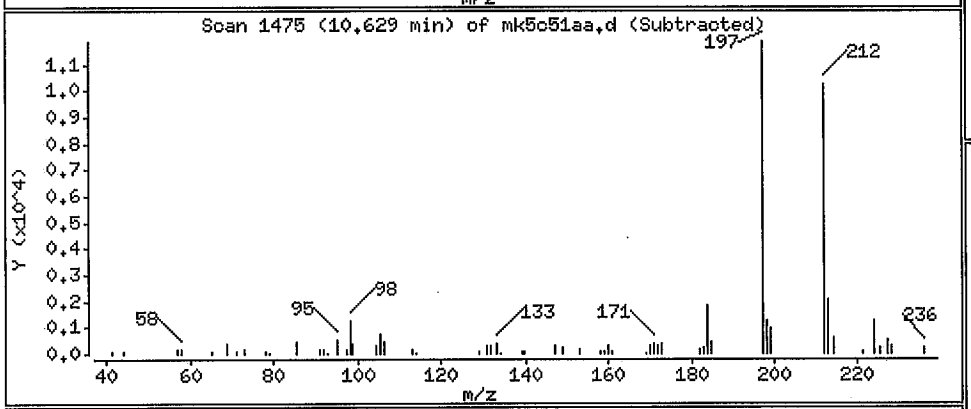
Column diameter: 0.25

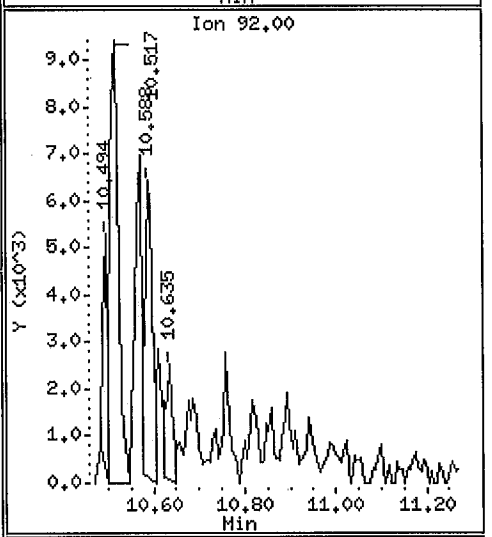
84 Benzidine

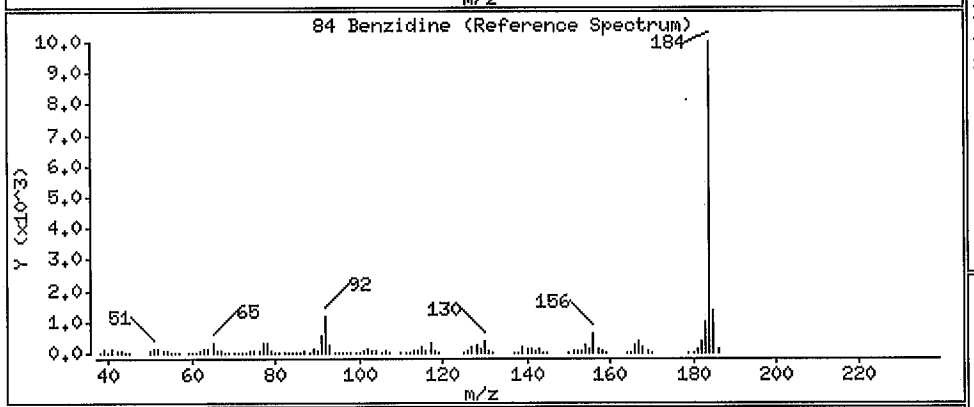
Concentration: 48.3 ug

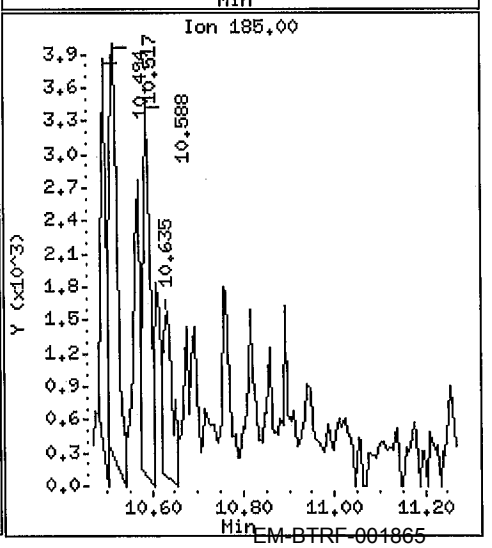


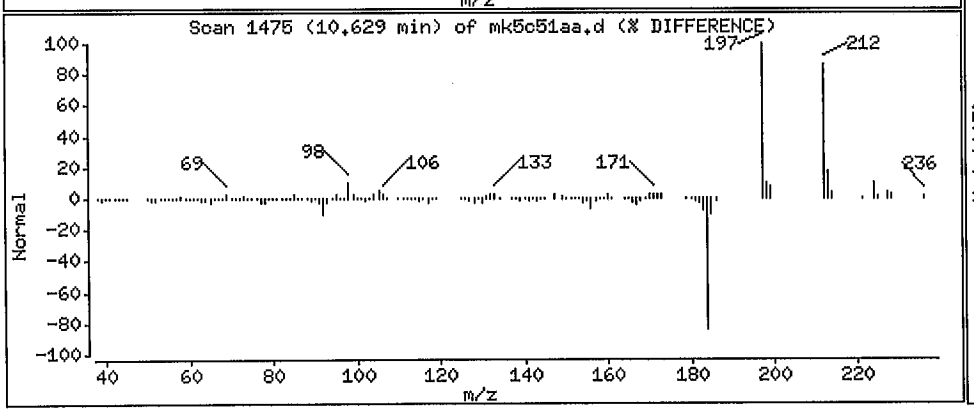












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

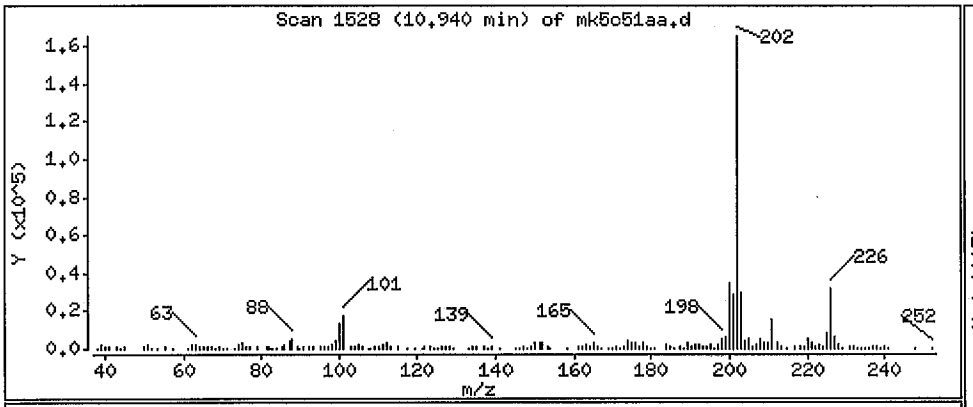
Operator: 60487

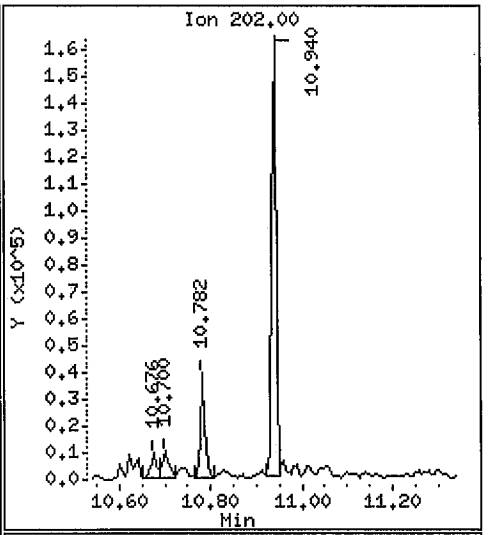
Column phase: Rxi-5 Sil MS

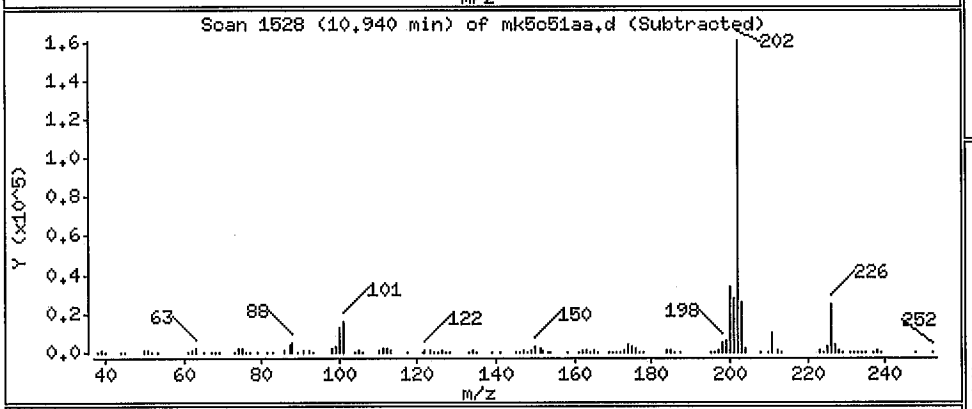
Column diameter: 0.25

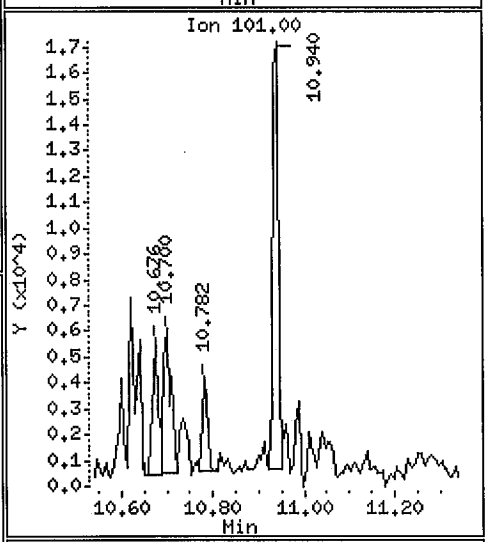
71 Pyrene

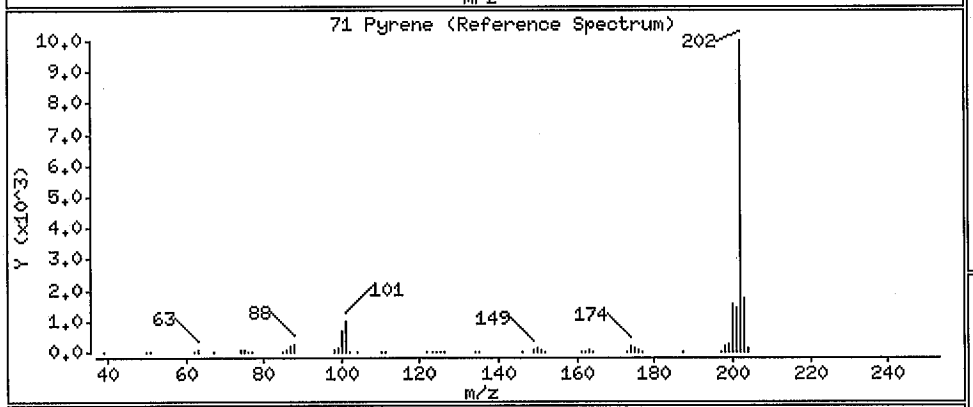
Concentration: 544 ug

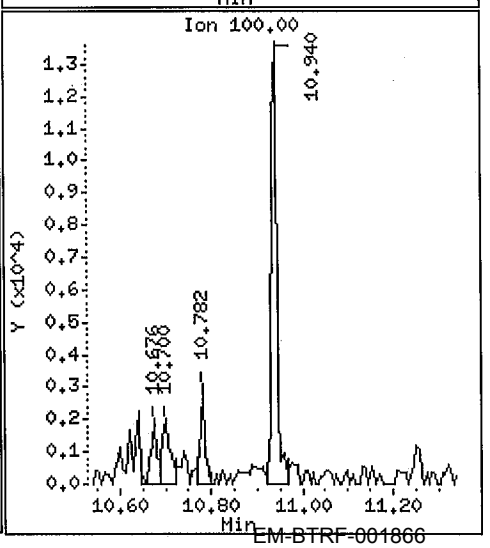


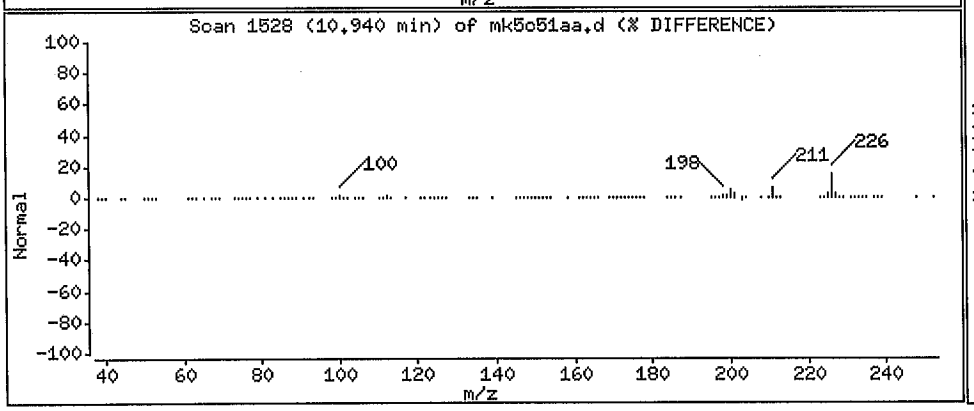












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

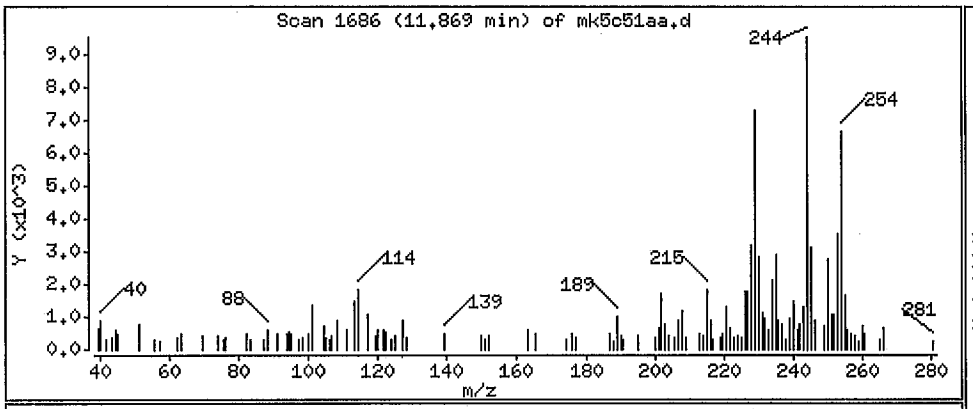
Operator: 60487

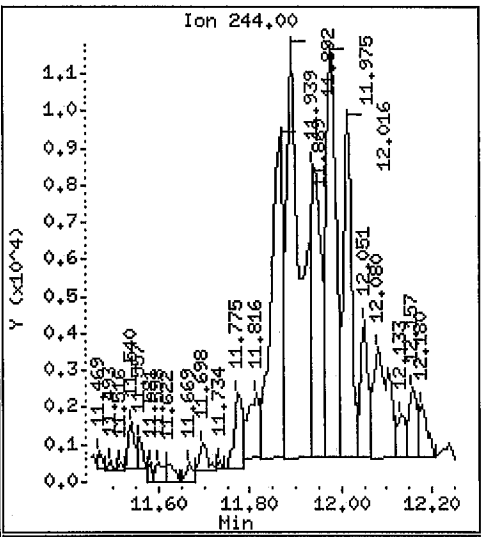
Column phase: Rxi-5 Sil MS

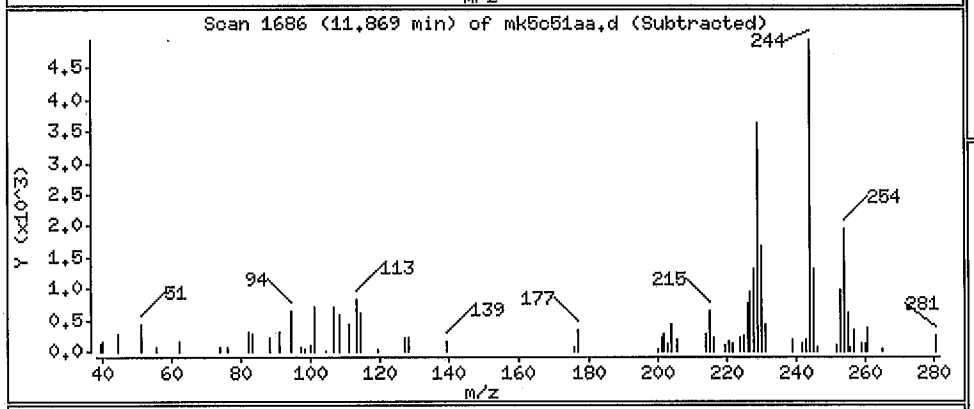
Column diameter: 0.25

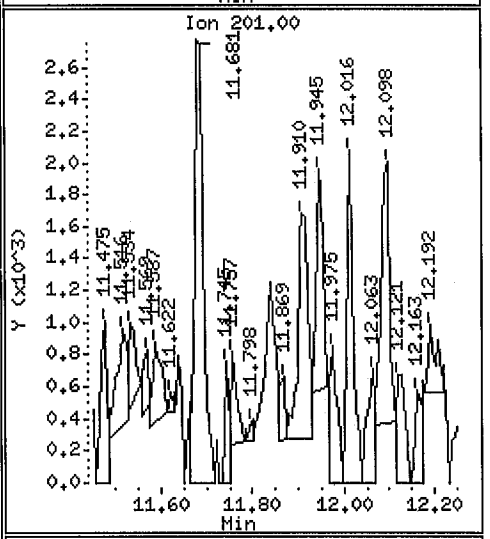
200 3,3'-Dimethoxybenzidine

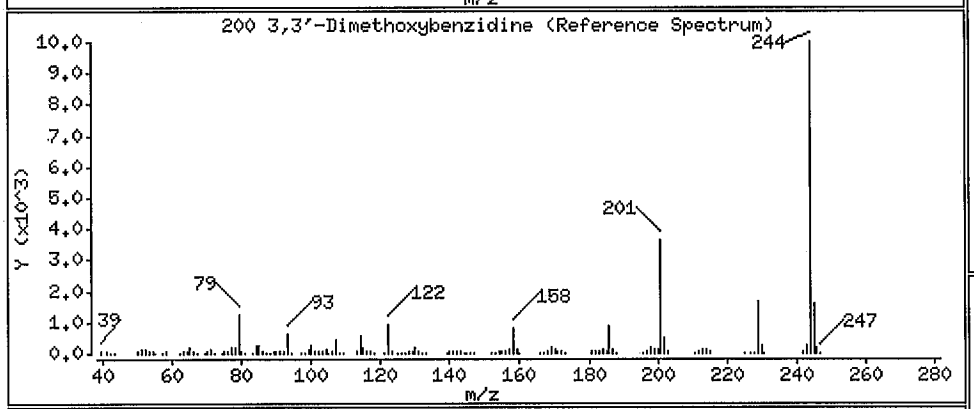
Concentration: 1310 ug

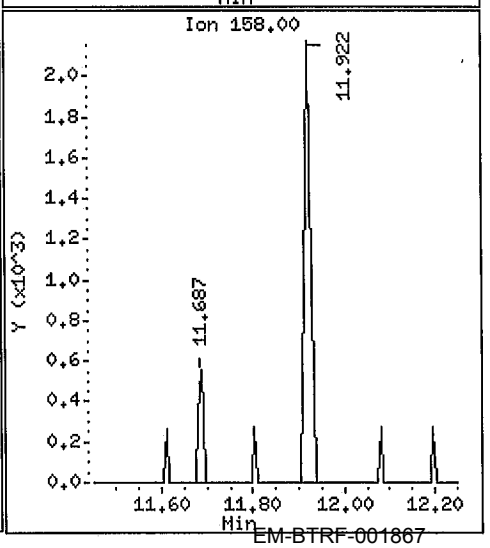


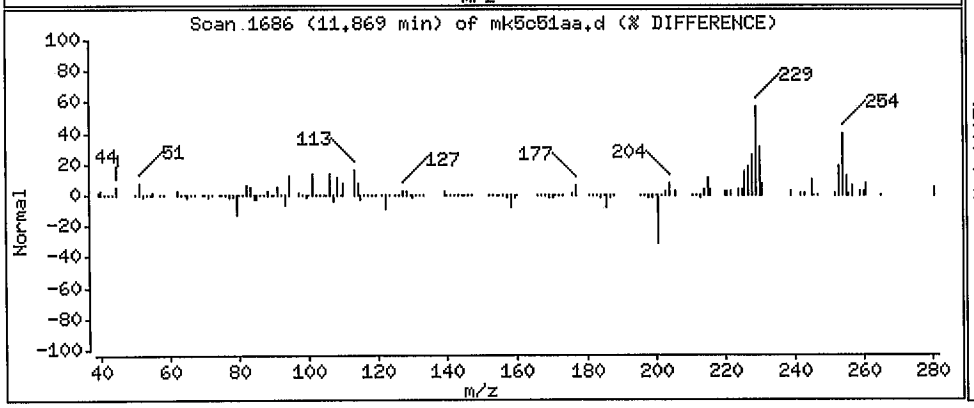












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

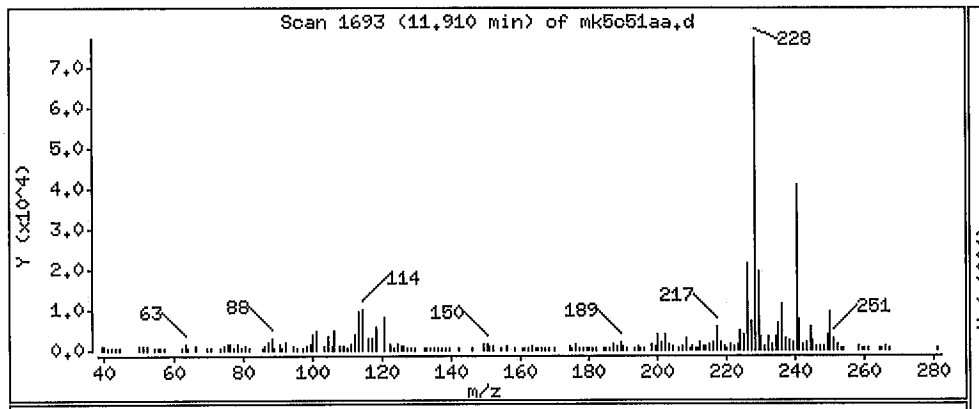
Operator: 60487

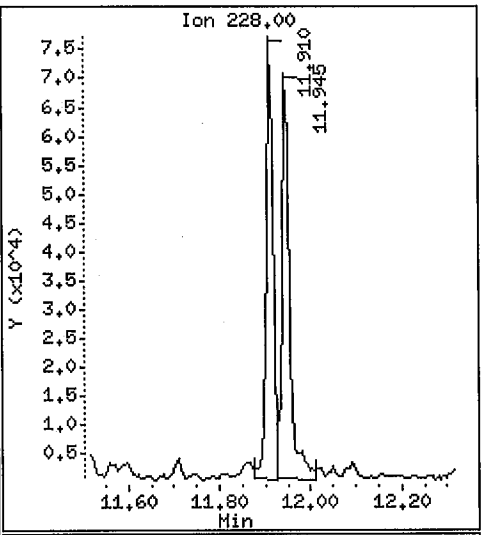
Column phase: Rxi-5 Sil MS

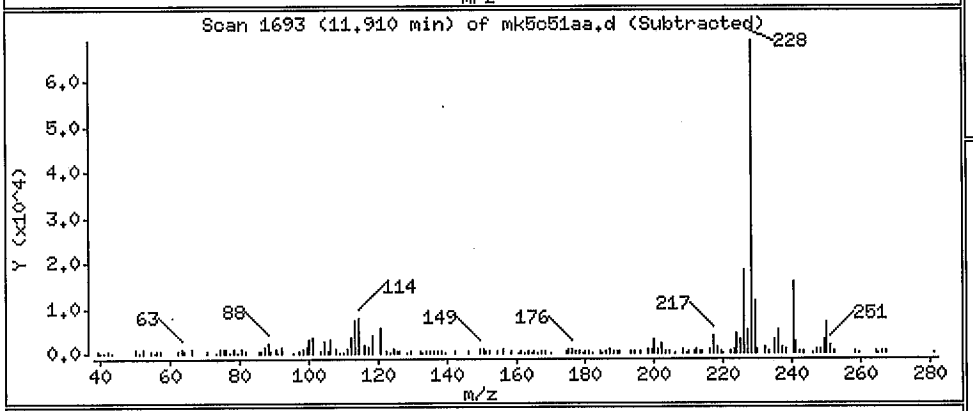
Column diameter: 0.25

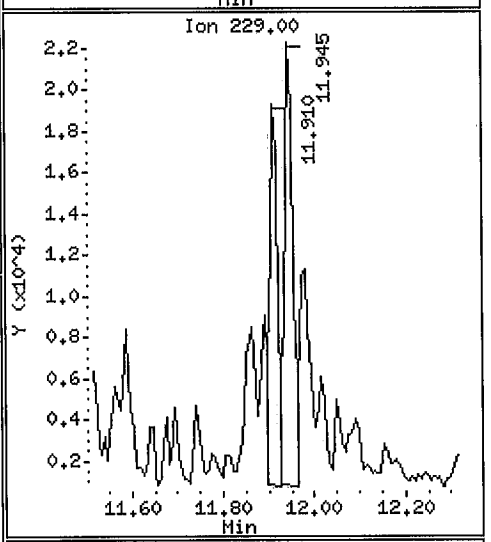
73 Benzo(a)Anthracene

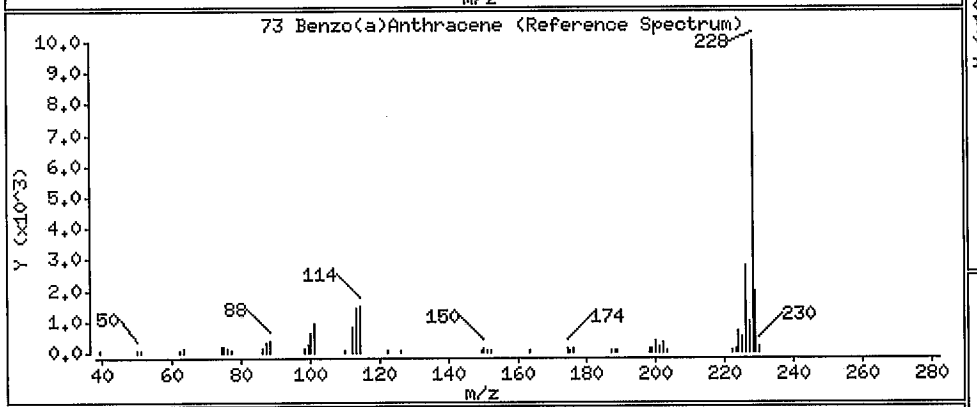
Concentration: 453 ug

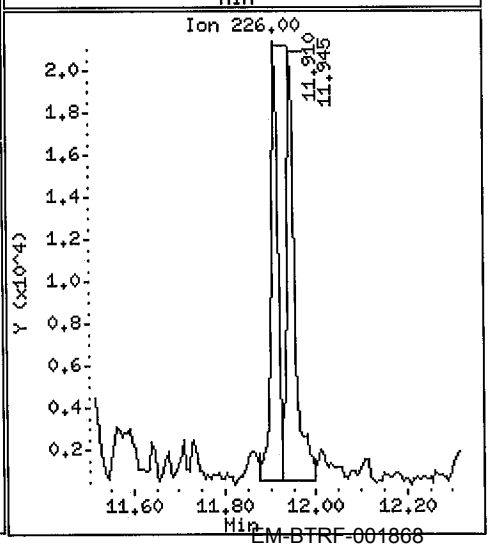


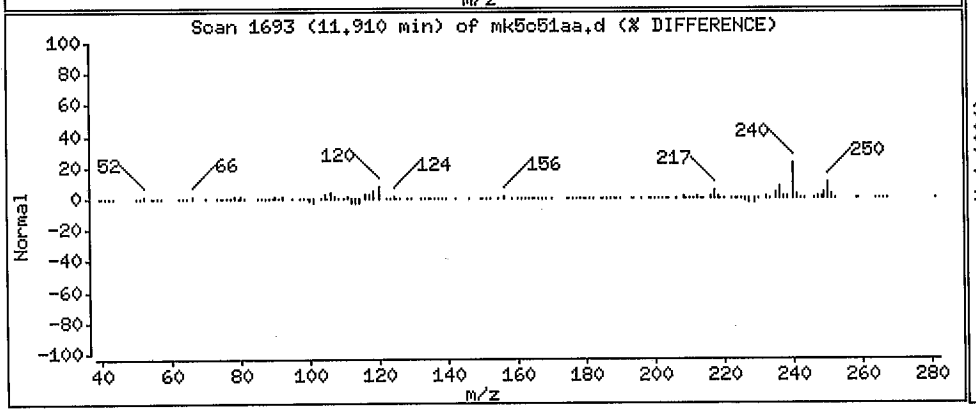












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

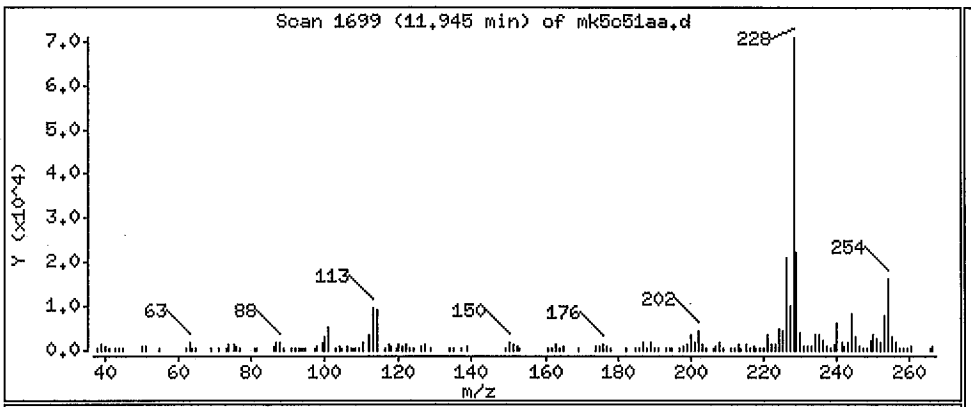
Operator: 60487

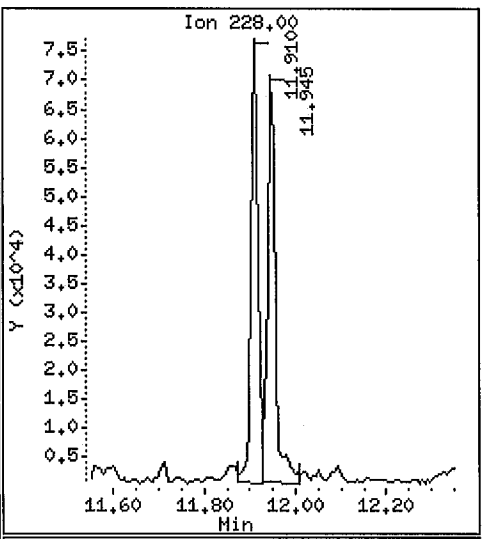
Column phase: Rxi-5 Sil MS

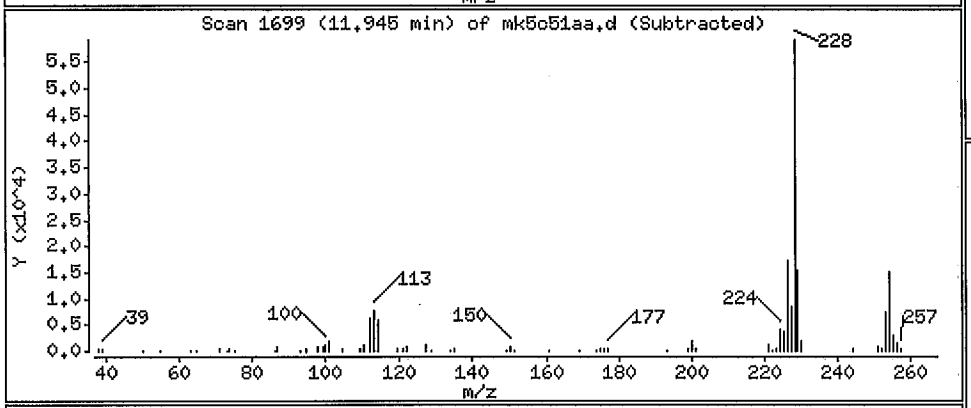
Column diameter: 0.25

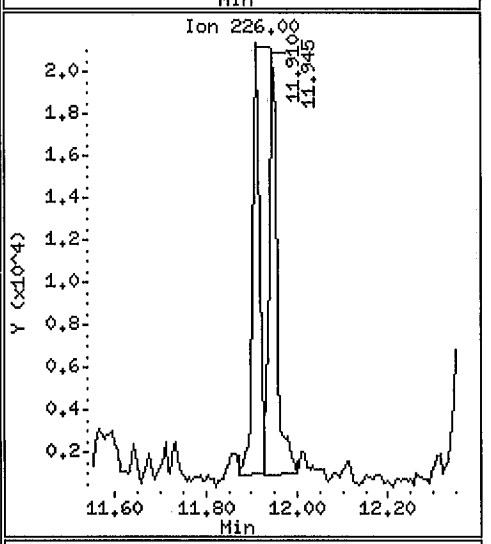
75 Chrysene

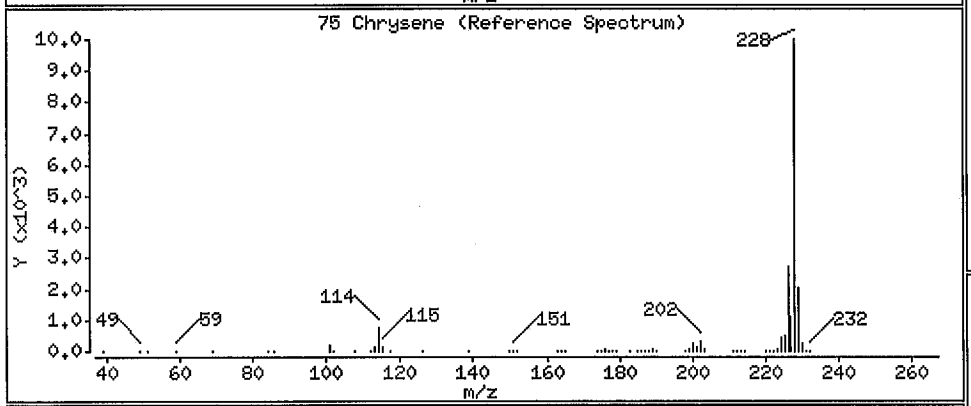
Concentration: 448 ug

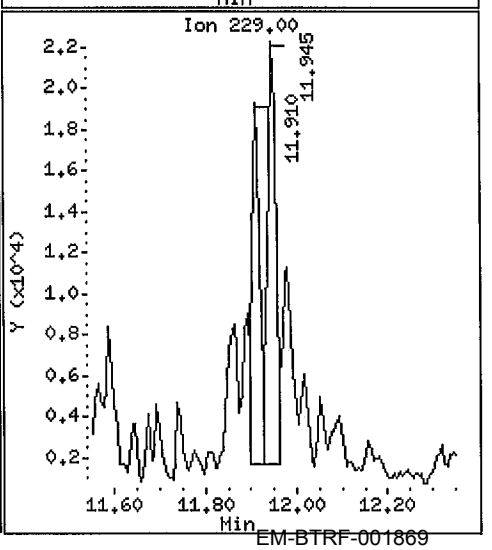


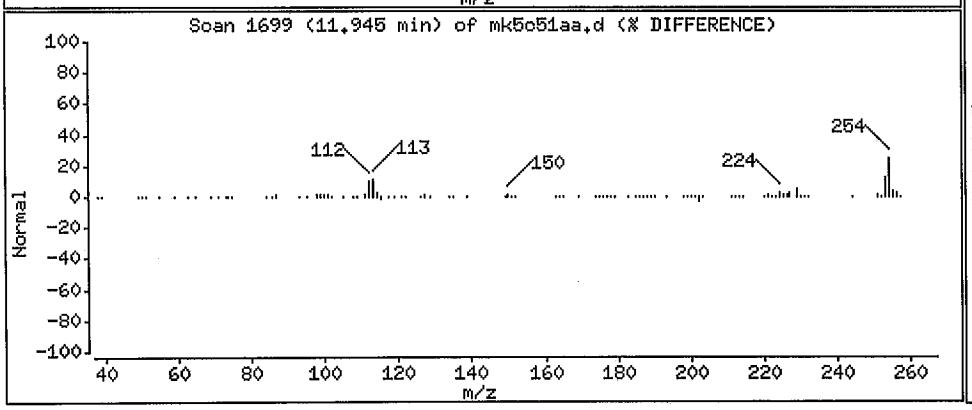












Data File: /var/chem/goms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

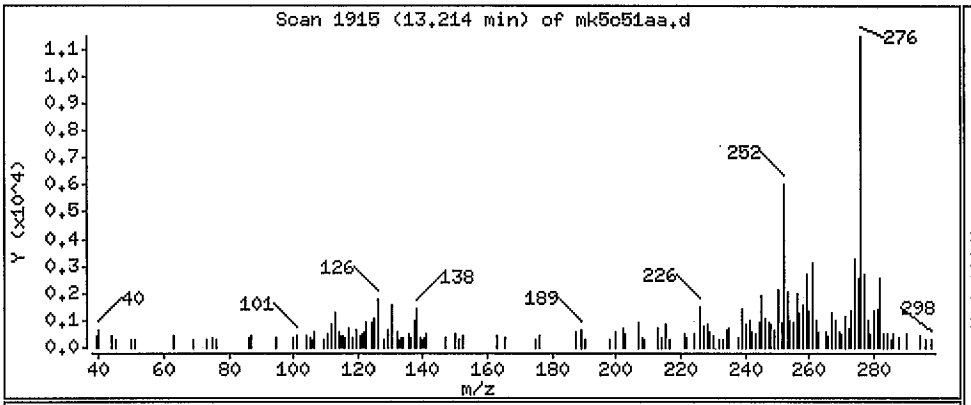
Operator: 60487

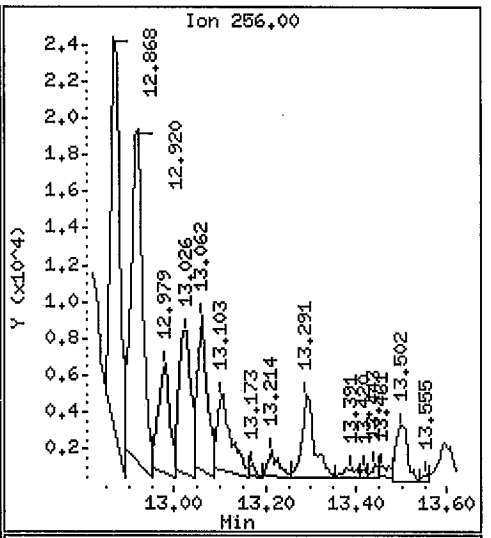
Column phase: Rxi-5 Sil MS

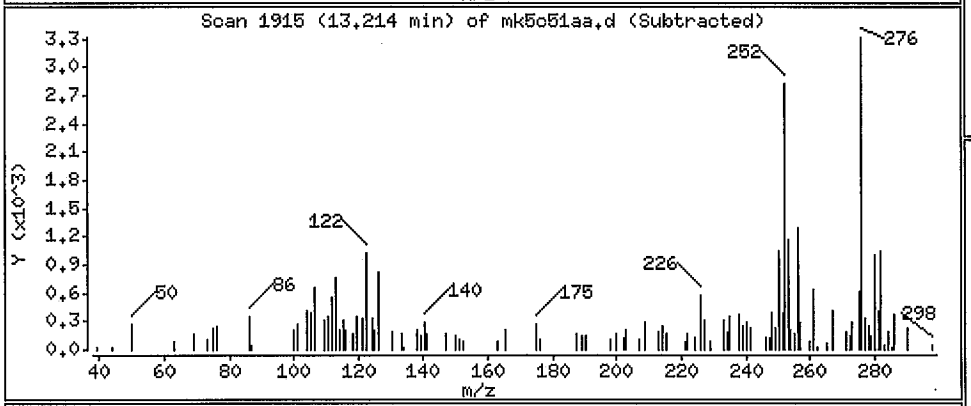
Column diameter: 0.25

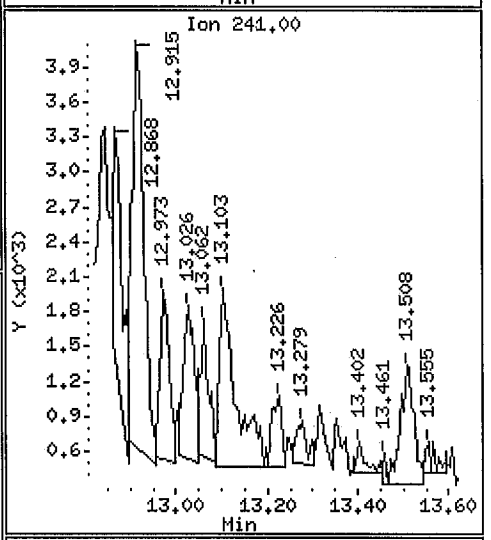
119 7,12-dimethylbenz(a)anthracen

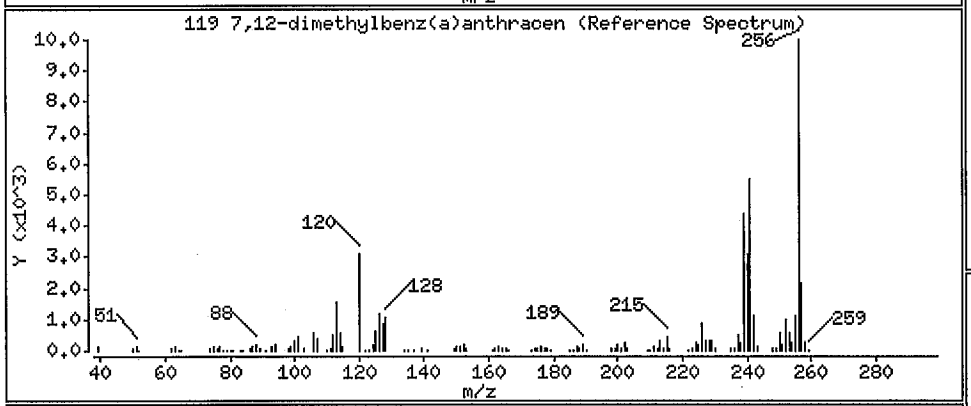
Concentration: 437 ug

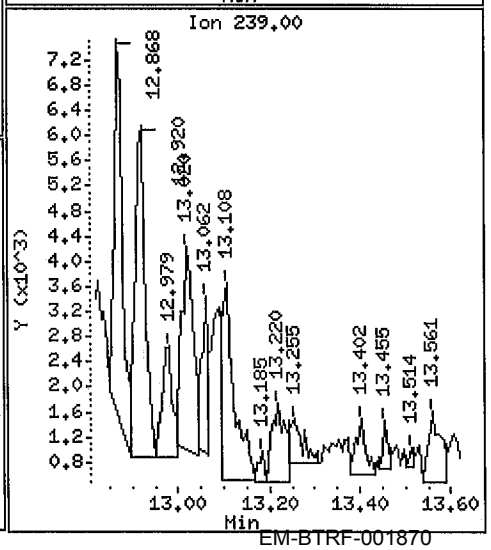


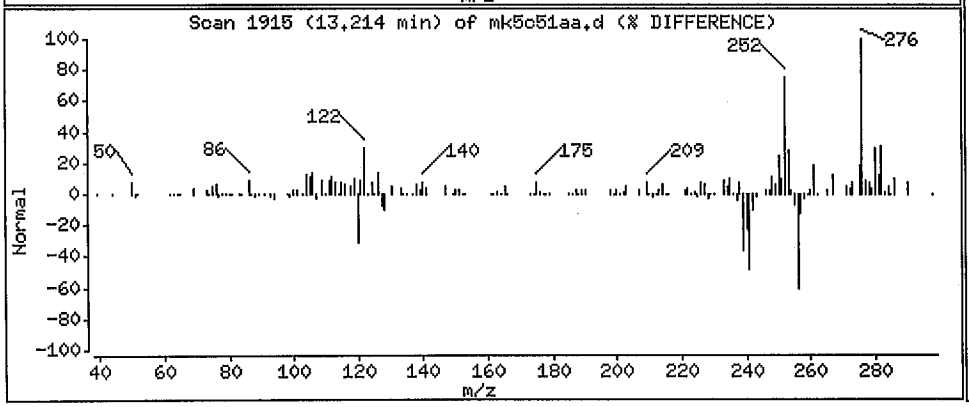












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

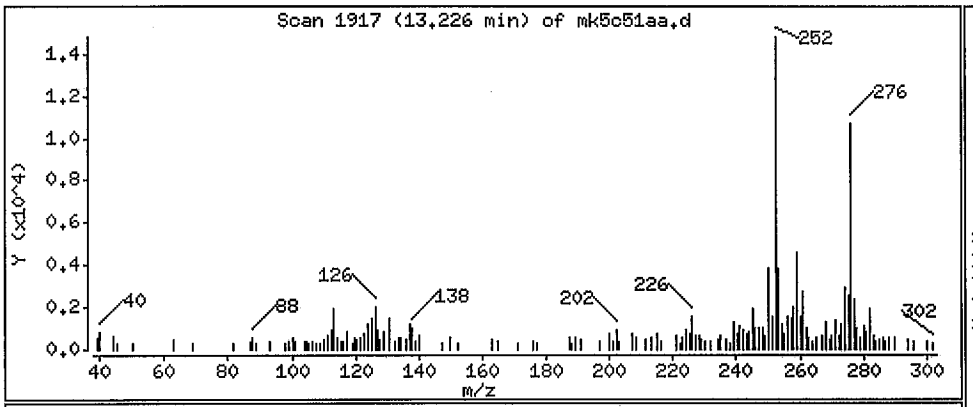
Operator: 60487

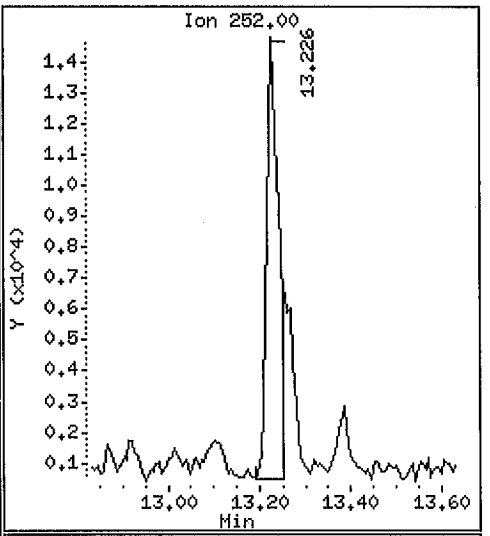
Column phase: Rxi-5 Sil MS

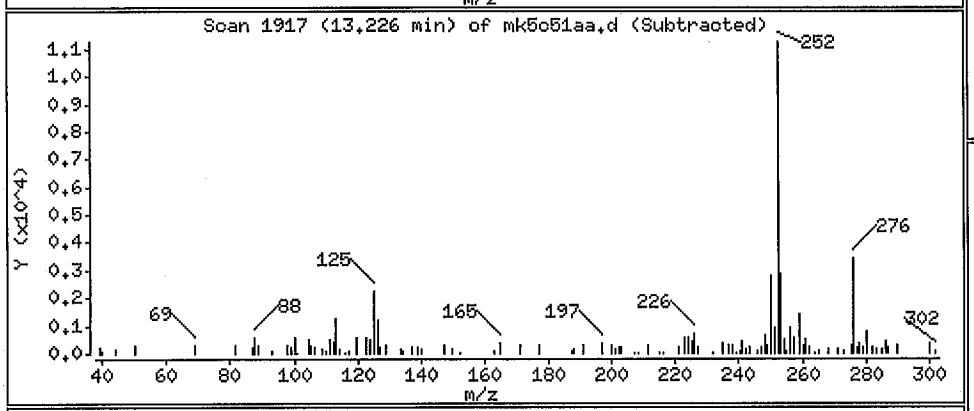
Column diameter: 0.25

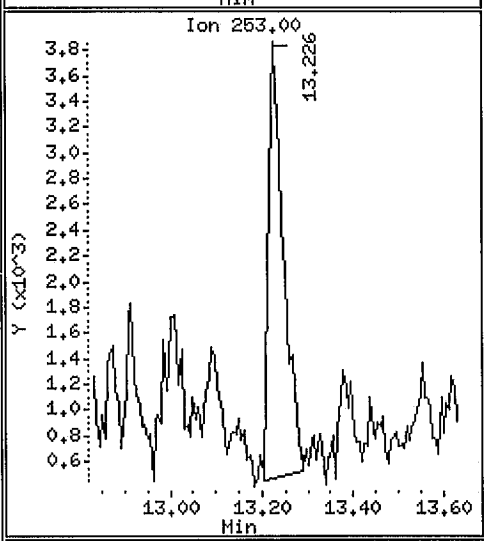
78 Benzo(b)fluoranthene

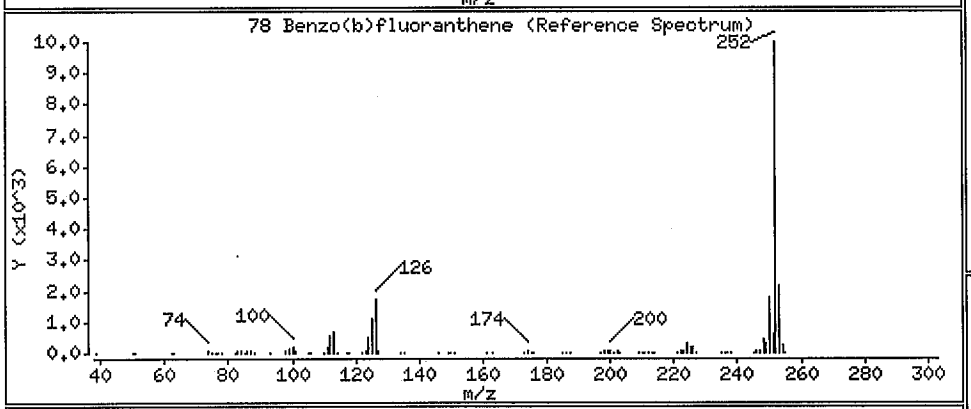
Concentration: 162 ug

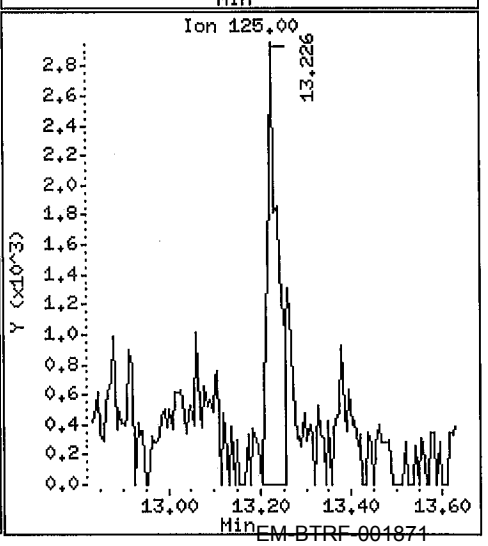


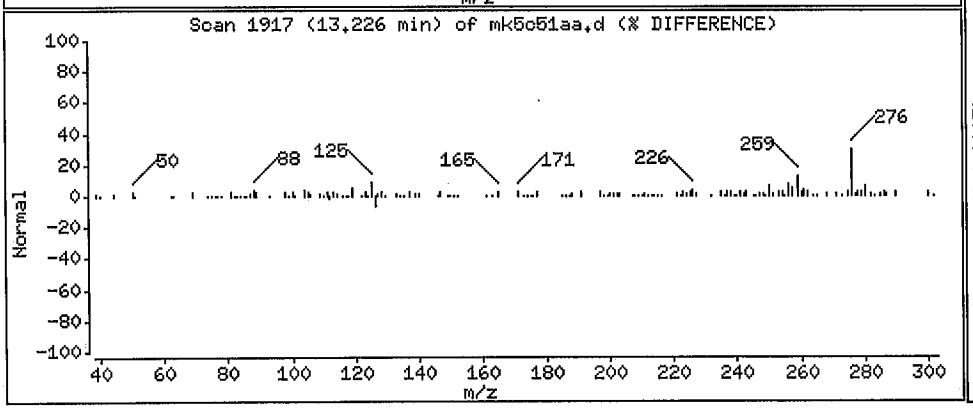












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

Operator: 60487

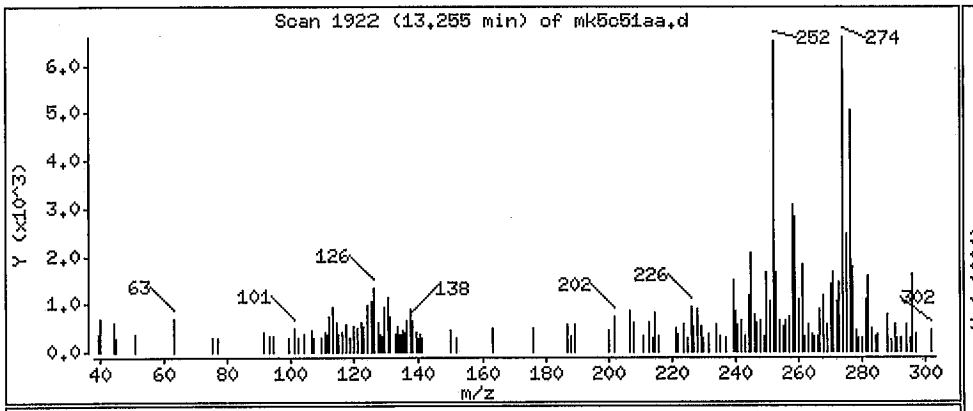
Column phase: Rxi-5 Sil MS

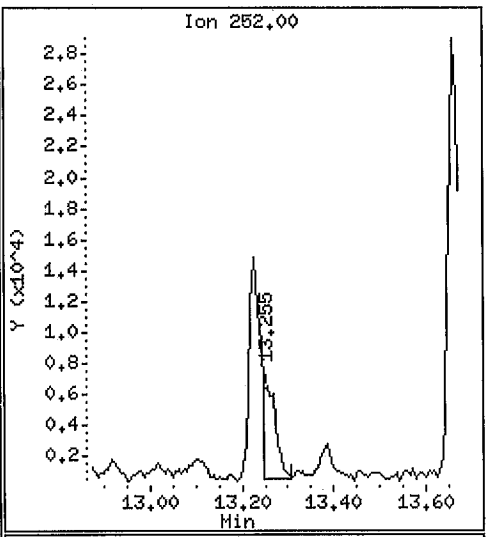
Column diameter: 0.25

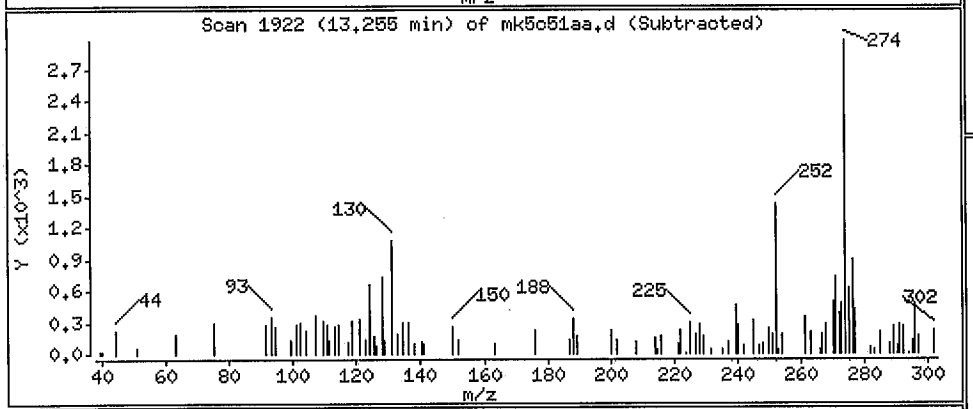
79 Benzo(k)fluoranthene

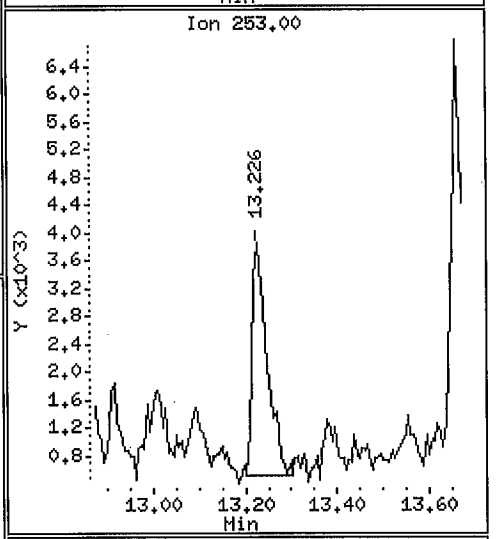
Concentration: 59.6 ug

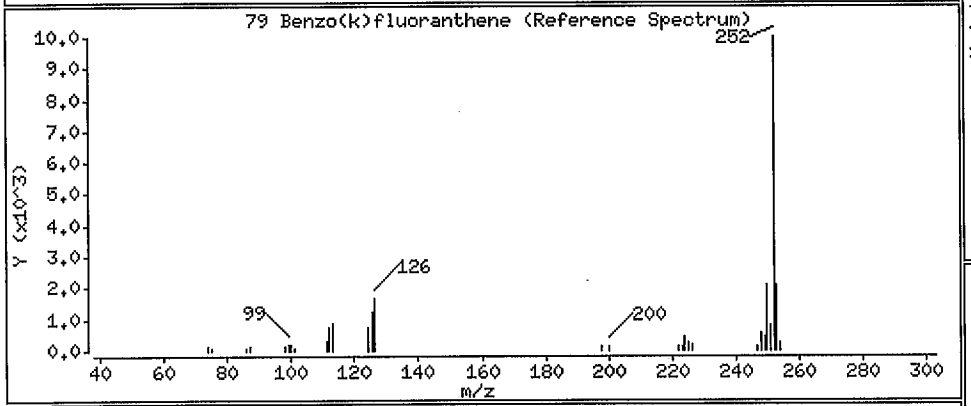
(2) Ken 8/5/11

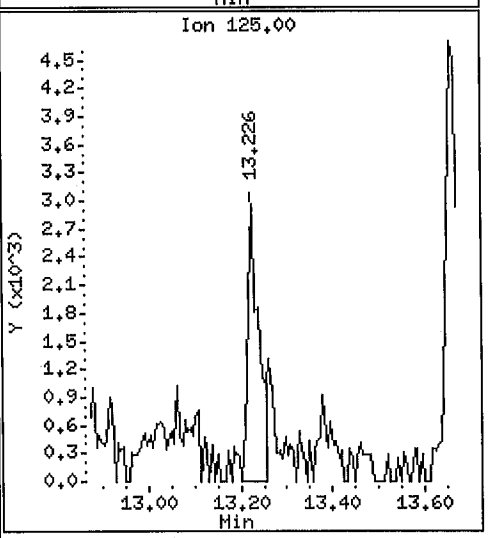


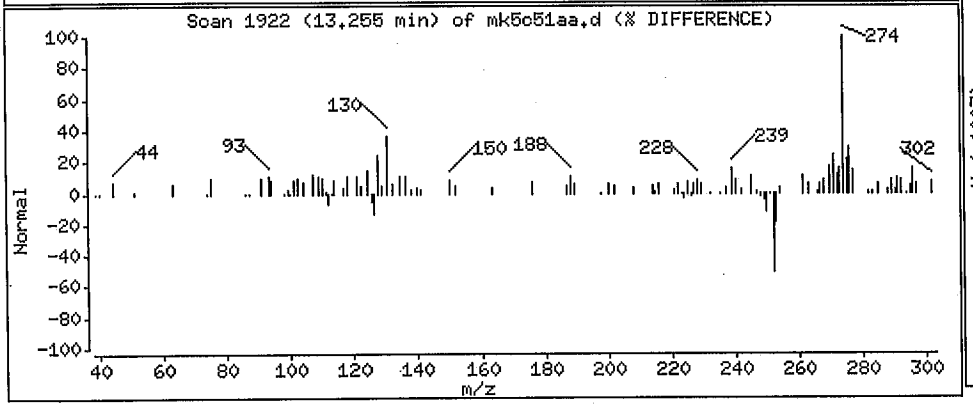












Data File: /var/chem/goms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

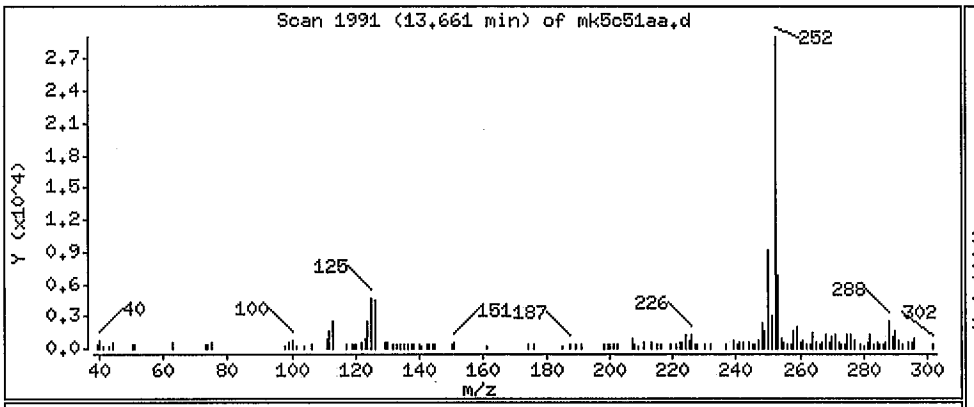
Operator: 60487

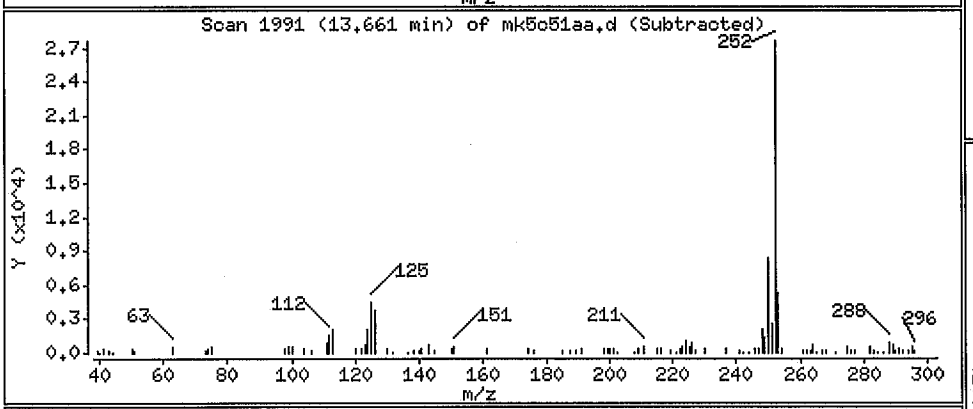
Column phase: Rxi-5 Sil MS

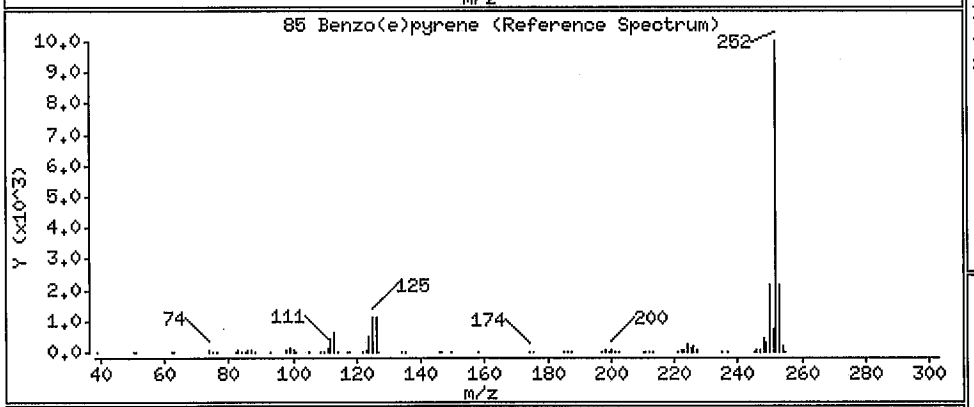
Column diameter: 0.25

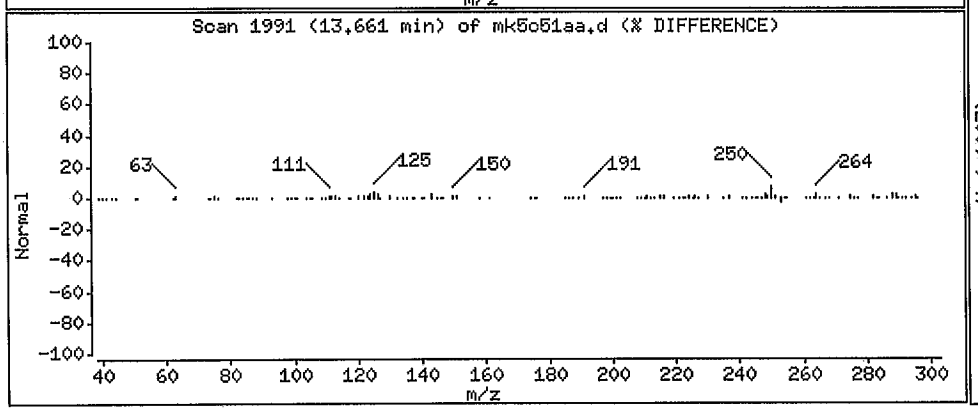
85 Benzo(e)pyrene

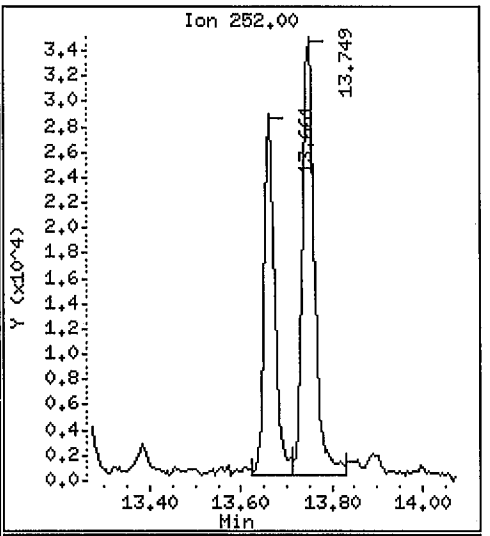
Concentration: 299 ug

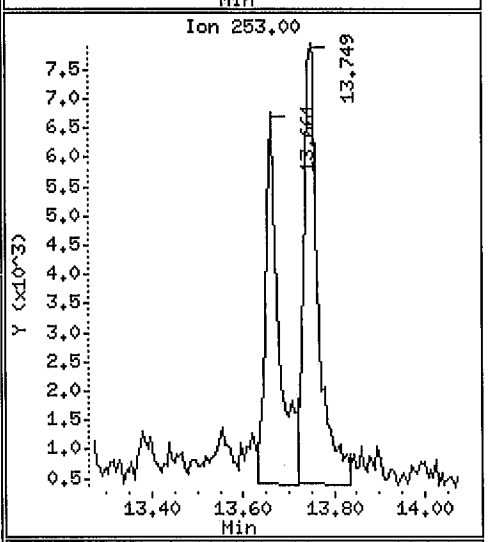


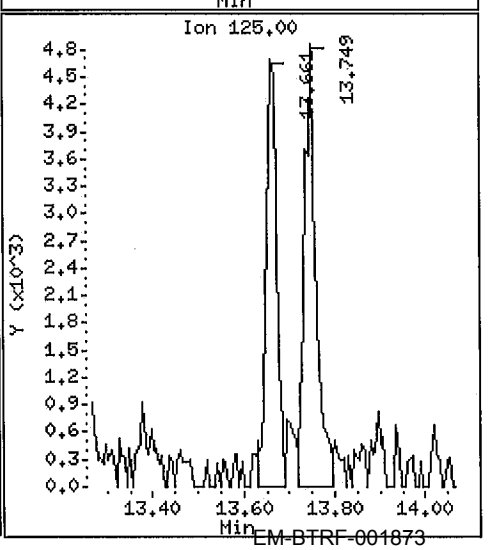












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

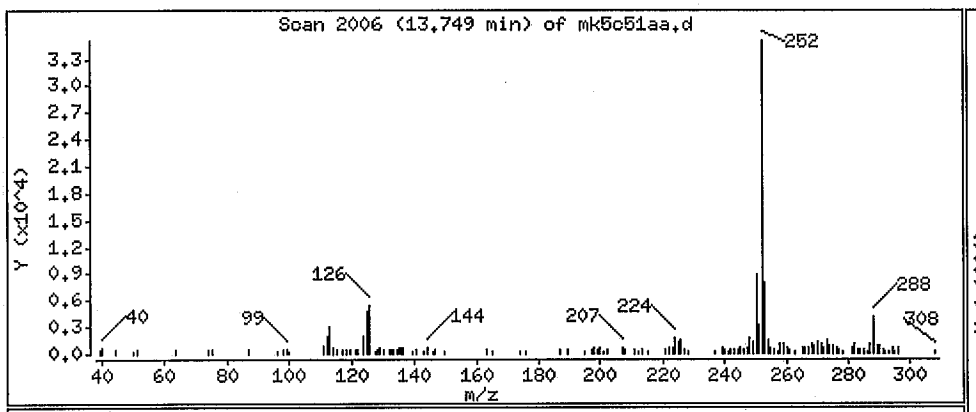
Operator: 60487

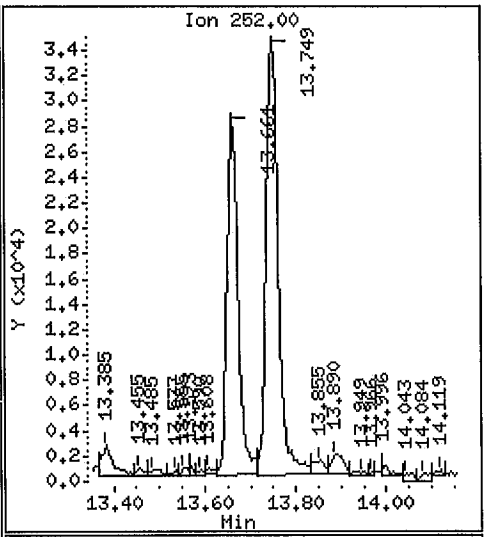
Column phase: Rxi-5 Sil MS

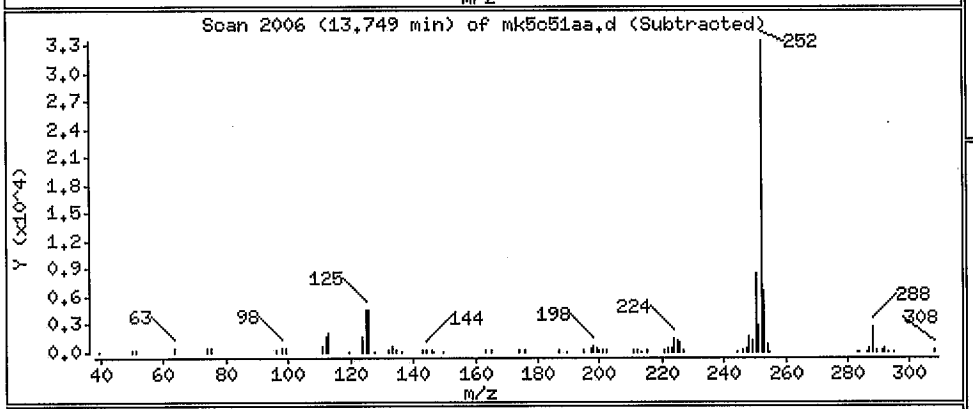
Column diameter: 0.25

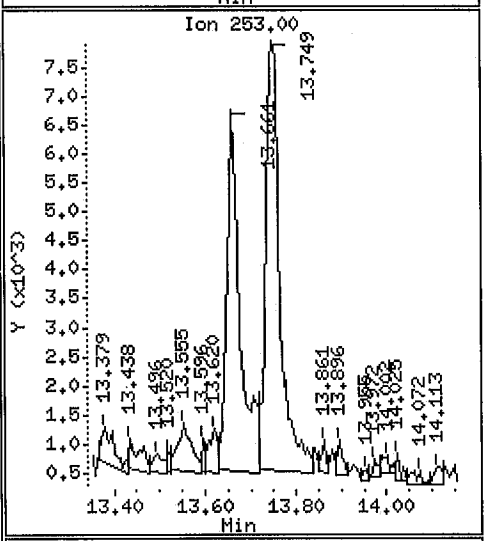
80 Benzo(a)pyrene (cco)

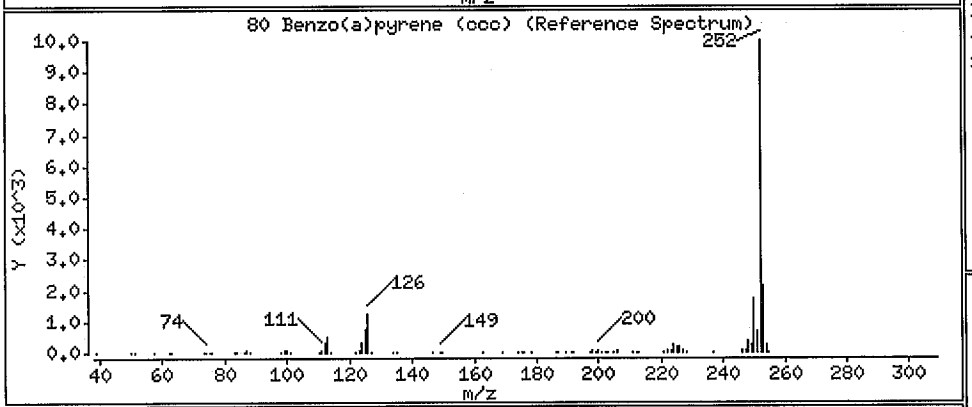
Concentration: 578 ug

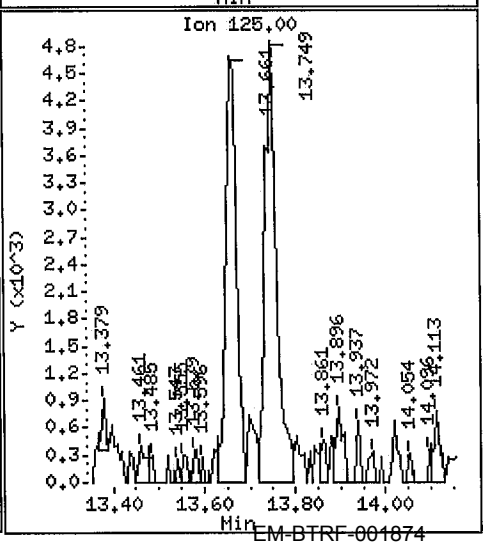


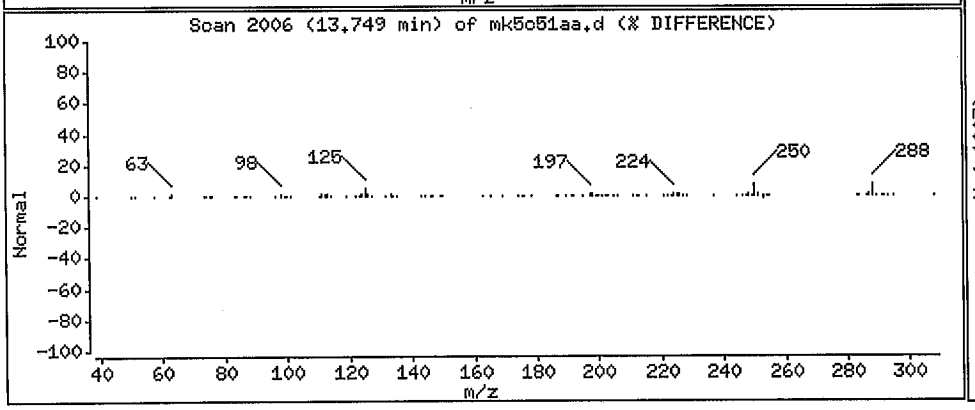












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

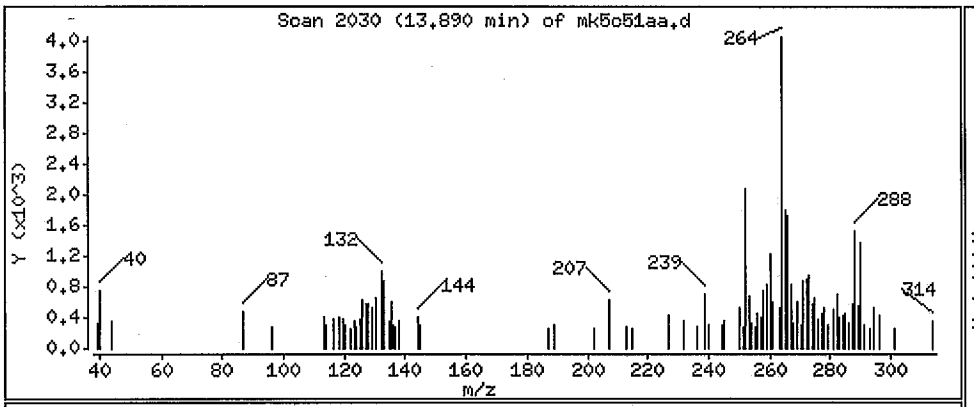
Operator: 60487

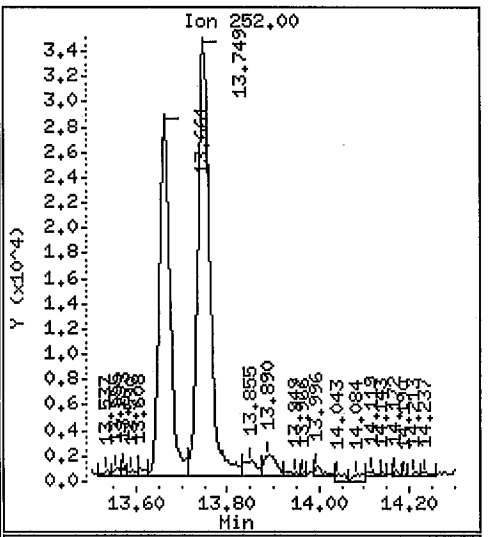
Column phase: Rxi-5 Sil MS

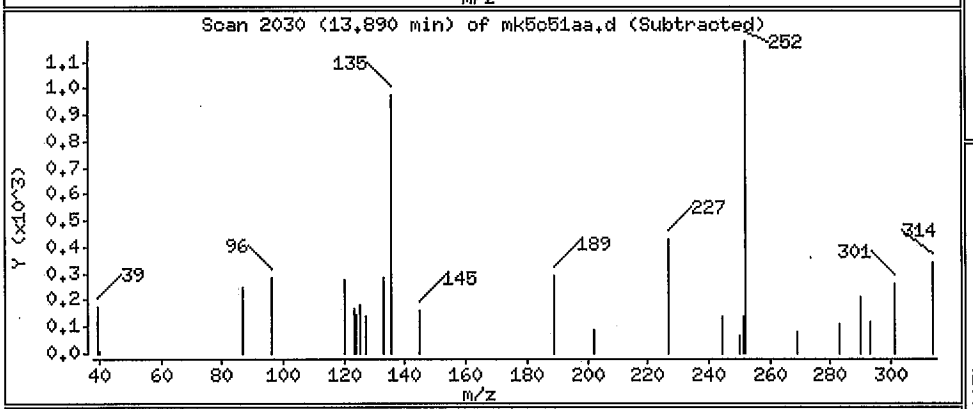
Column diameter: 0.25

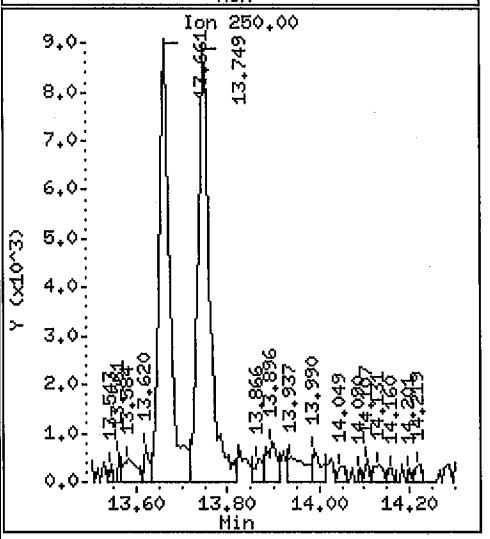
196 Perylene

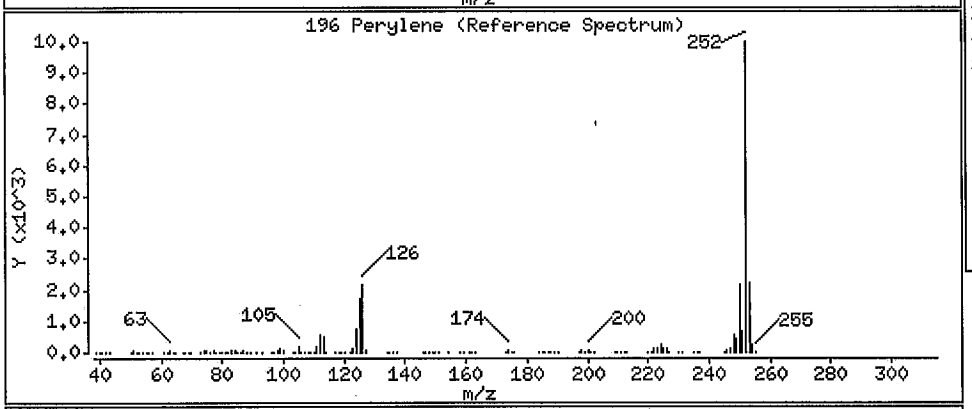
Concentration: 21.1 ug

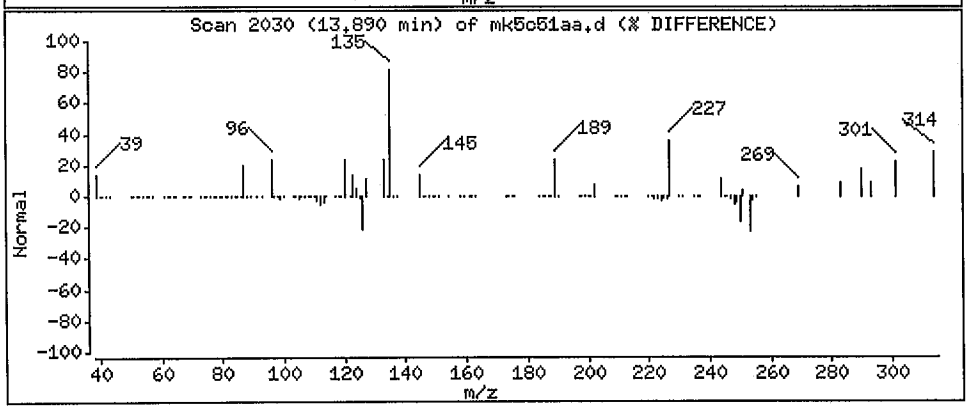












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

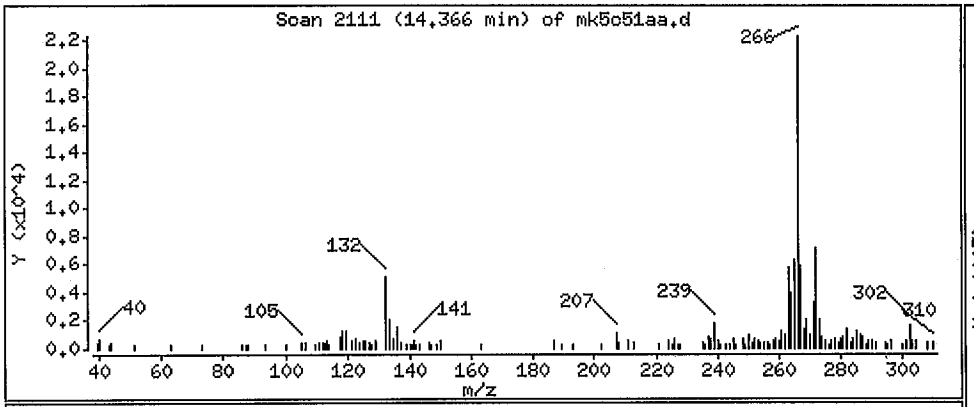
Operator: 60487

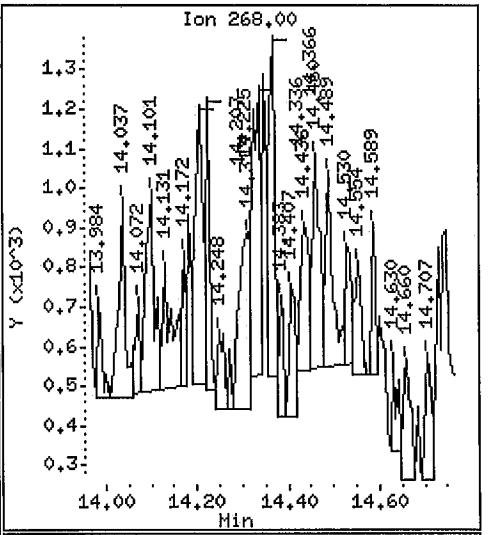
Column phase: Rxi-5 Sil MS

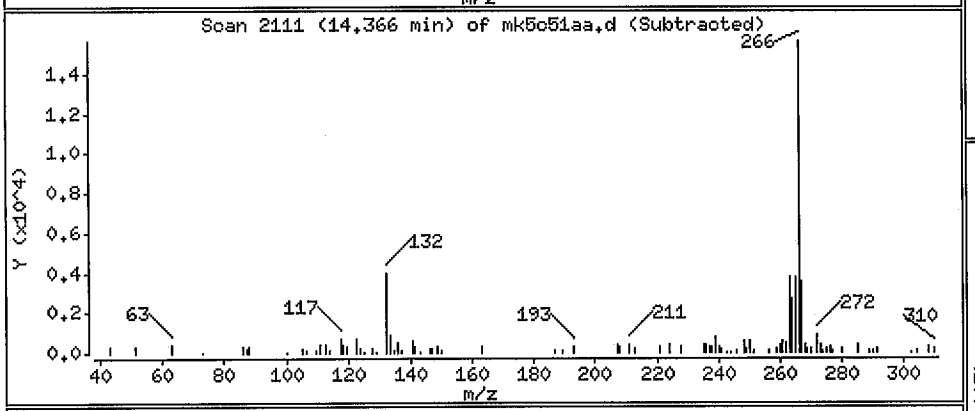
Column diameter: 0.25

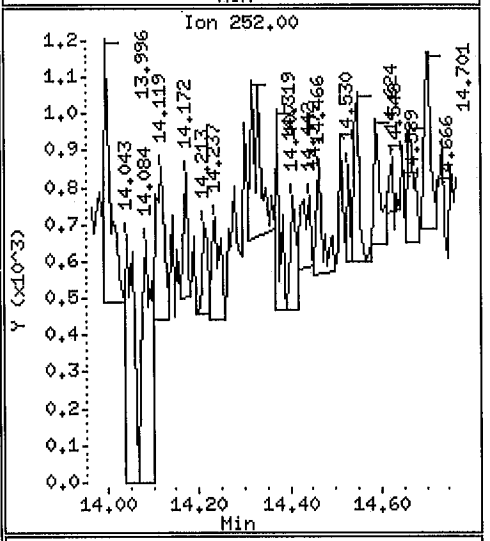
120 3-methylcholanthrene

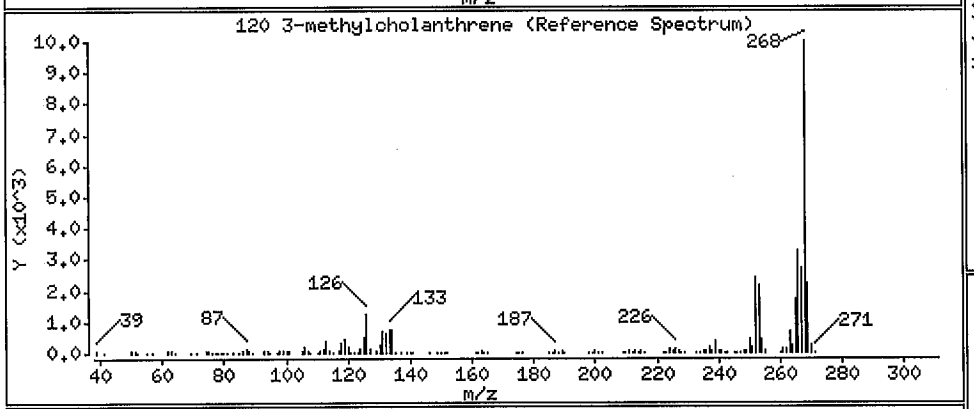
Concentration: 542 ug

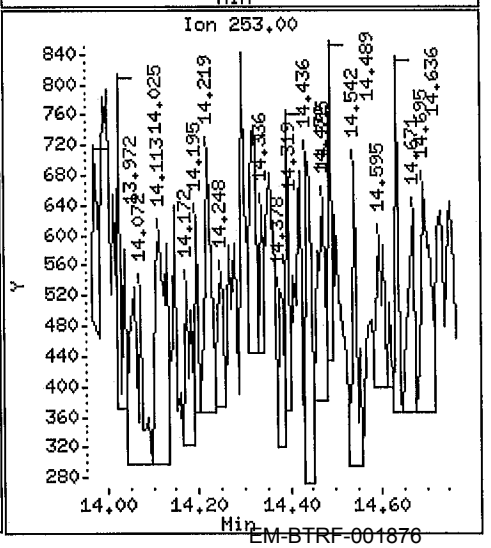


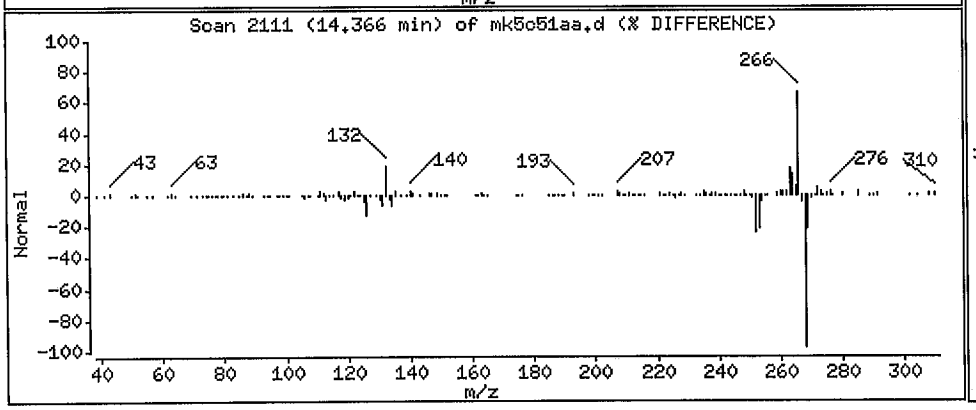












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

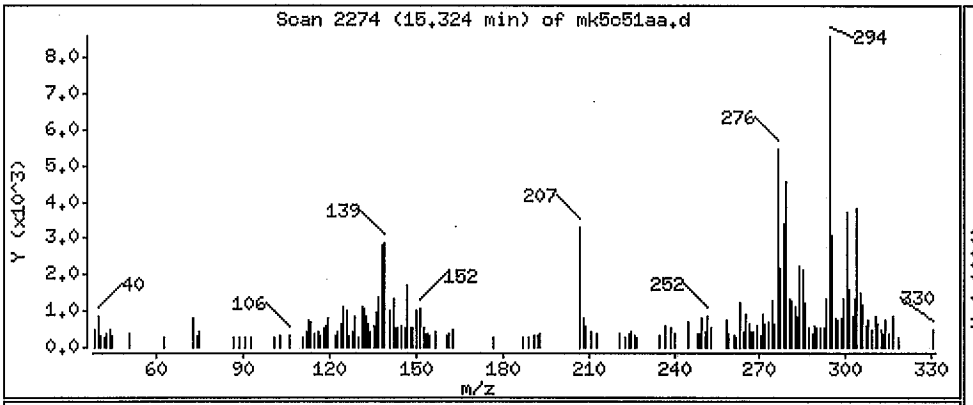
Operator: 60487

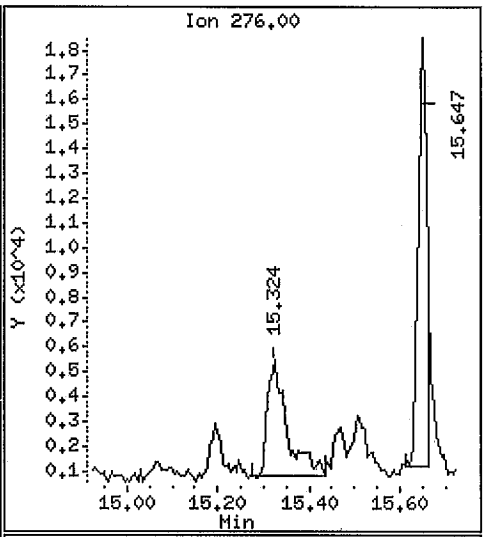
Column phase: Rxi-5 Sil MS

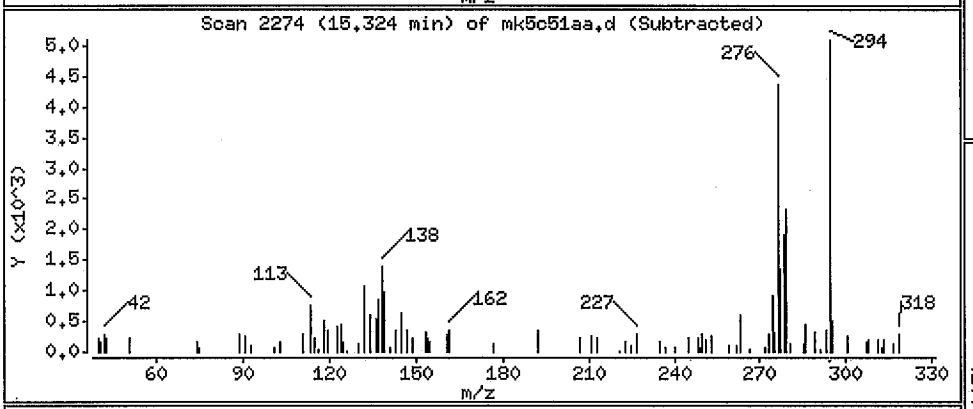
Column diameter: 0.25

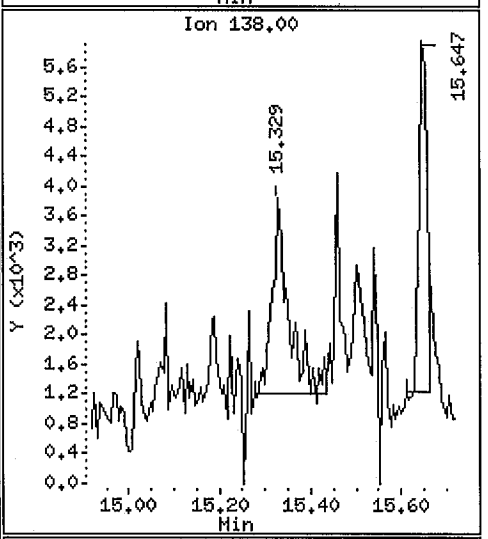
81 Indeno(1,2,3-cd)pyrene

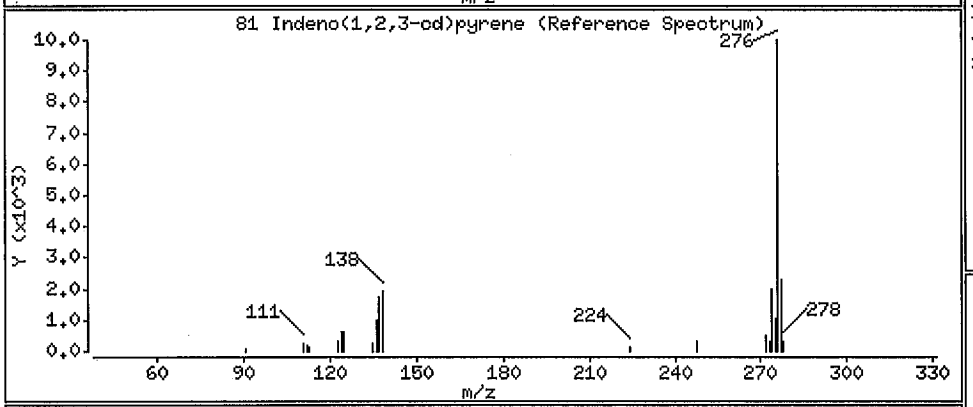
Concentration: 81.8 ug

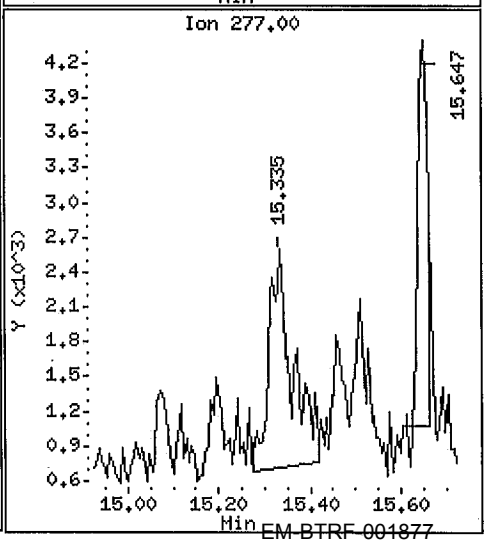


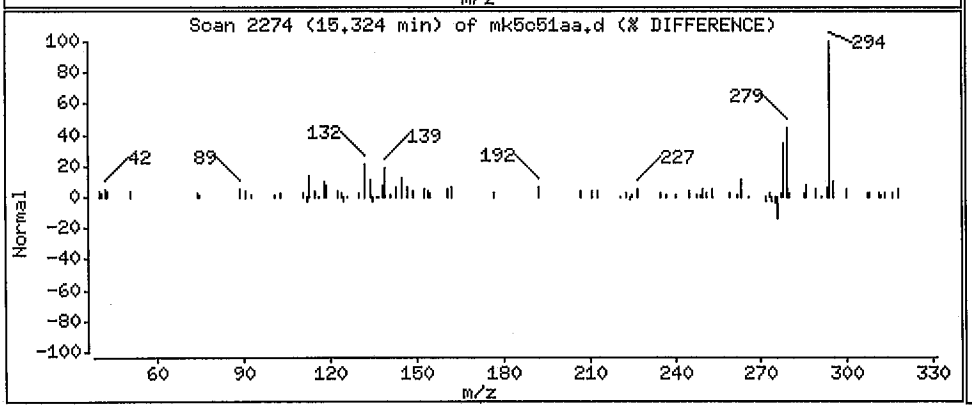












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

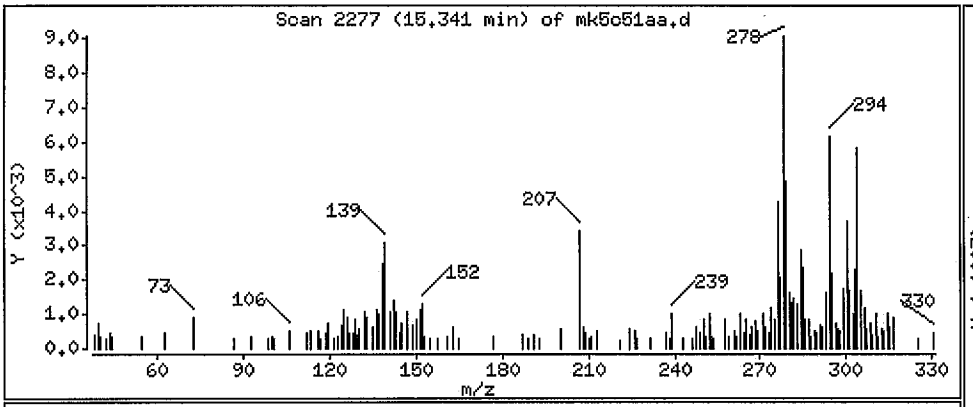
Operator: 60487

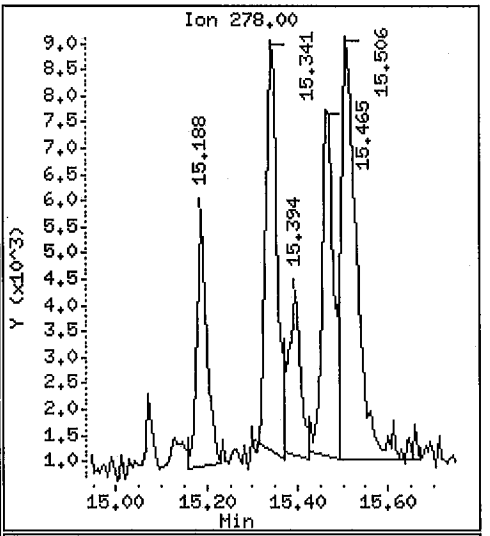
Column phase: Rxi-5 Sil MS

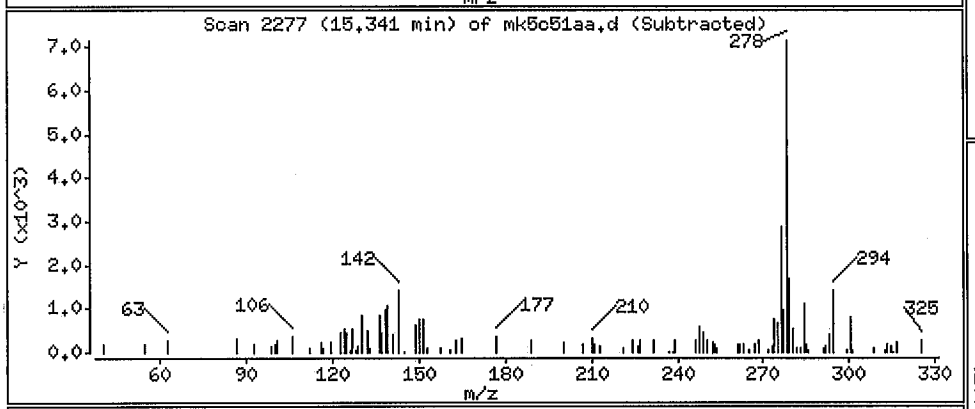
Column diameter: 0.25

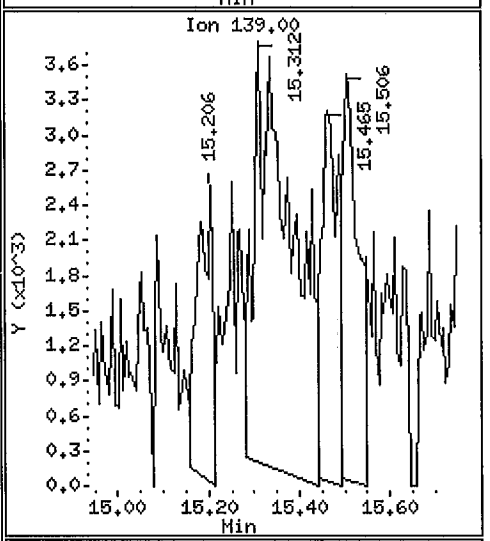
82 Dibenz(a,h)anthracene

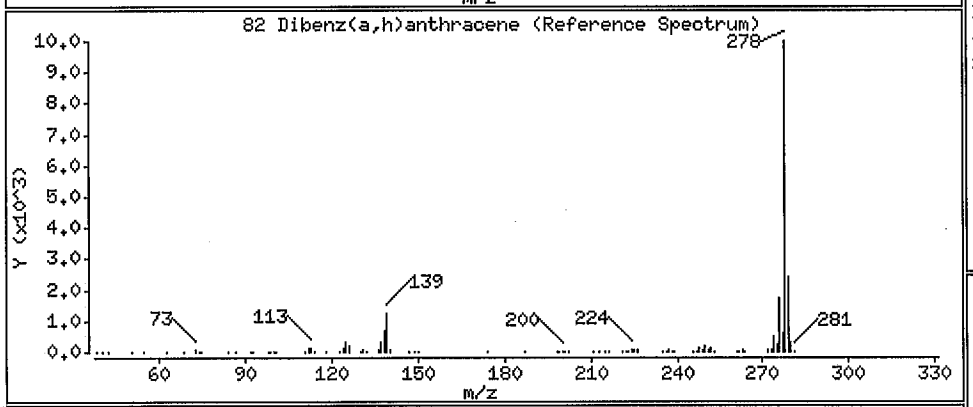
Concentration: 97.6 ug

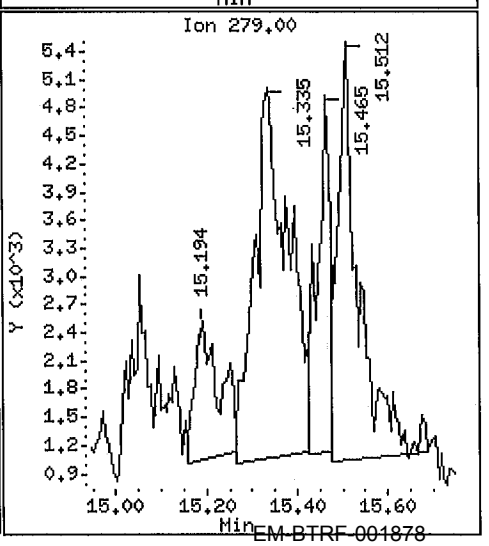


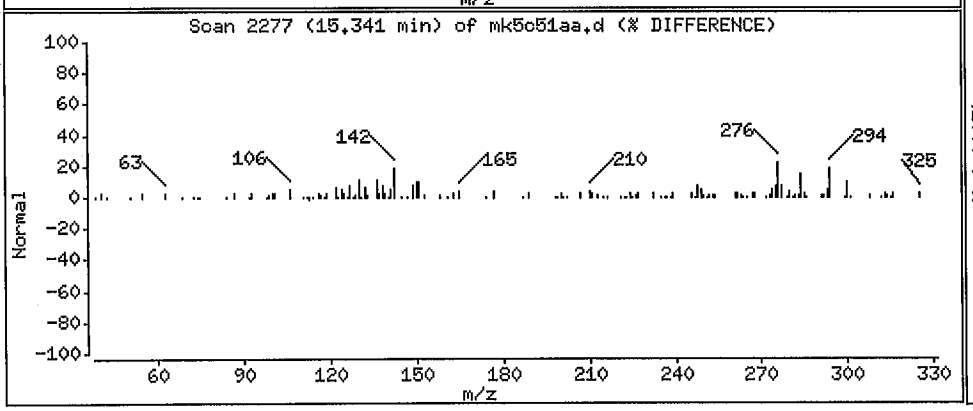












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

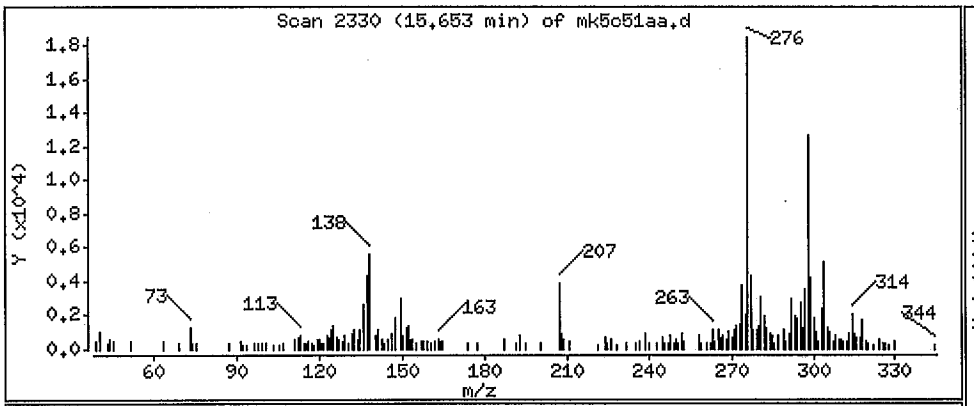
Operator: 60487

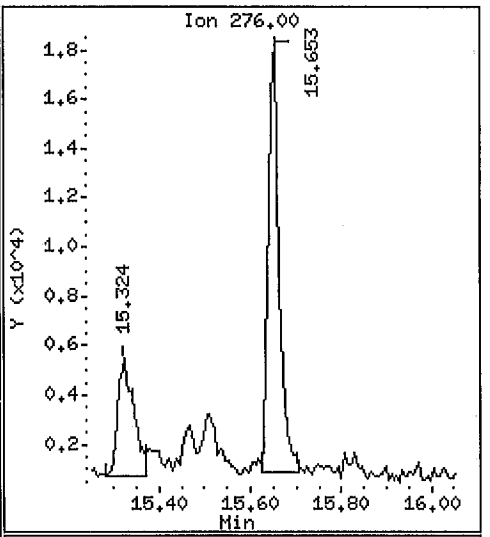
Column phase: Rxi-5 Sil MS

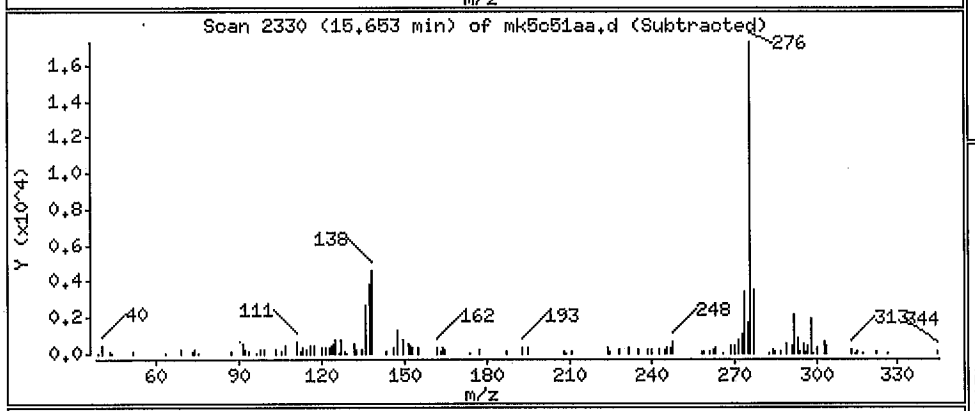
Column diameter: 0.25

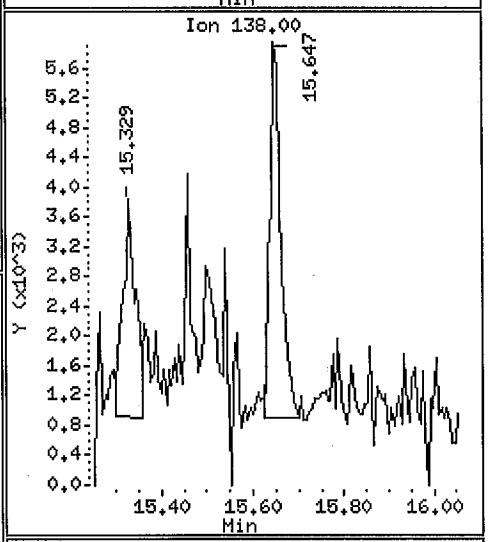
83 Benzo(g,h,i)perylene

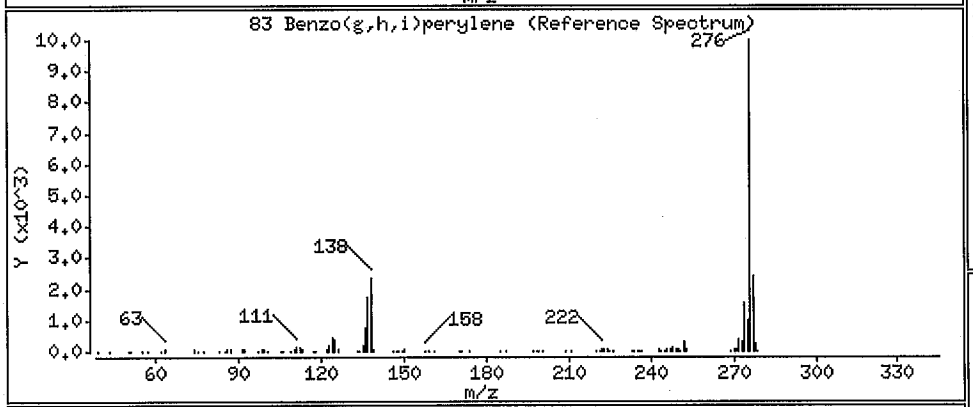
Concentration: 189 ug

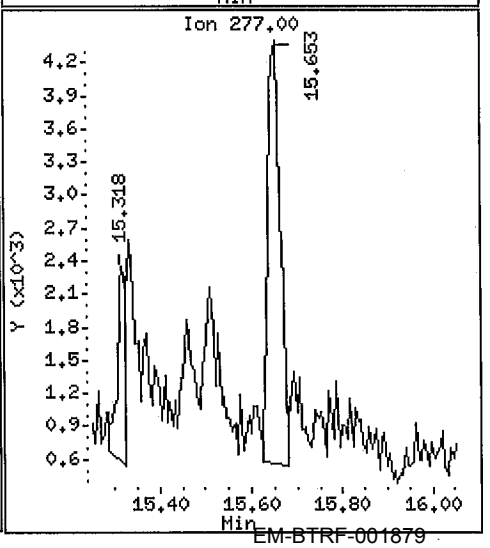


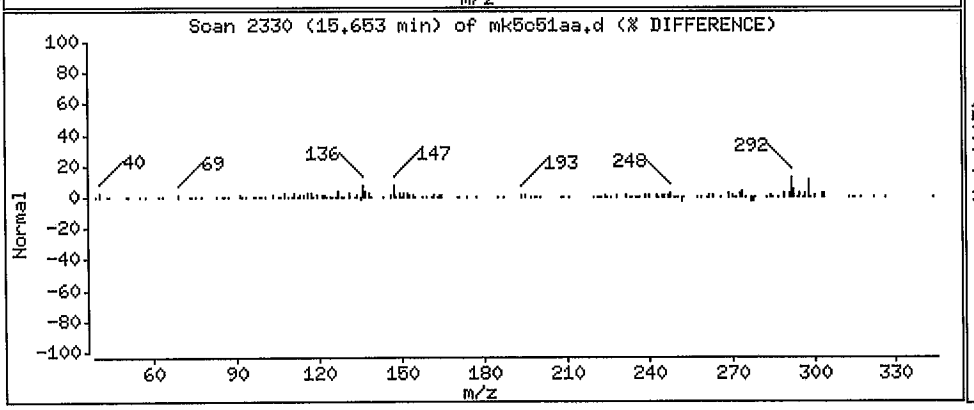












Data File: /var/chem/gcms/md.i/D080411.b/mk5c51aa.d

Date : 04-AUG-2011 15:47

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C51AA,20,0,,,

Volume Injected (uL): 1.0

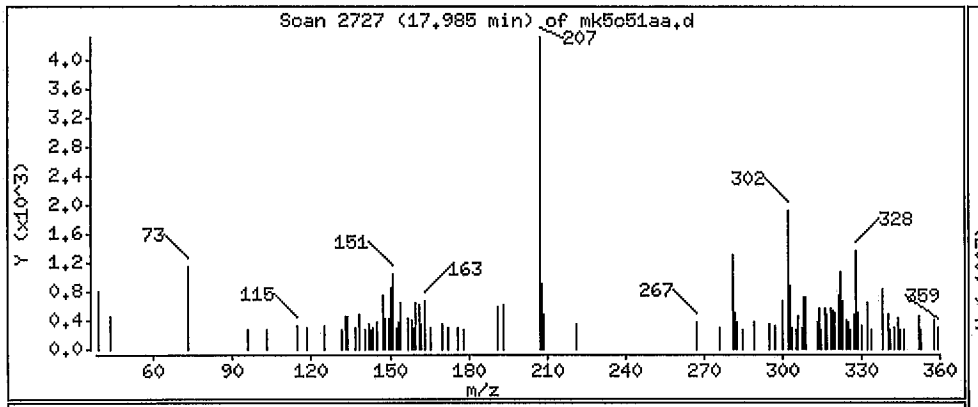
Operator: 60487

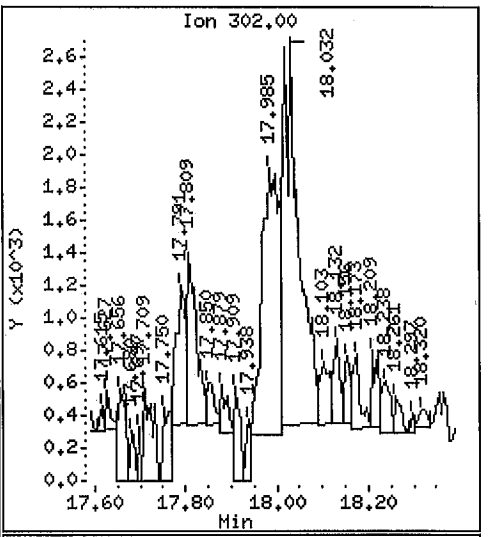
Column phase: Rxi-5 Sil MS

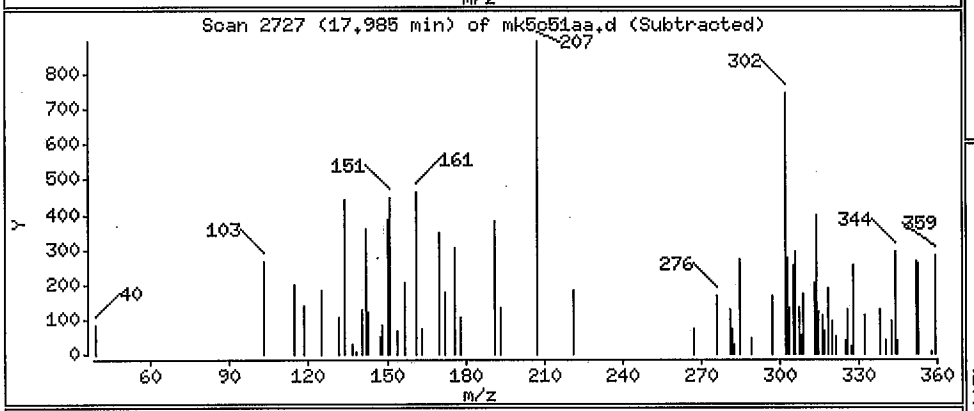
Column diameter: 0.25

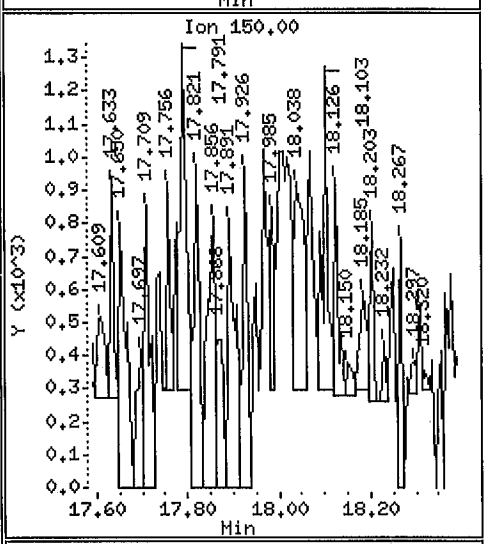
201 Dibenzo(a,e)pyrene

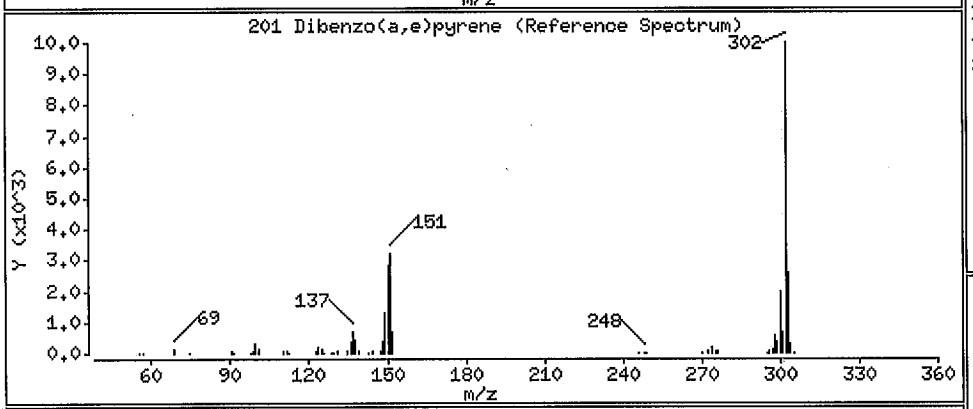
Concentration: 369 ug

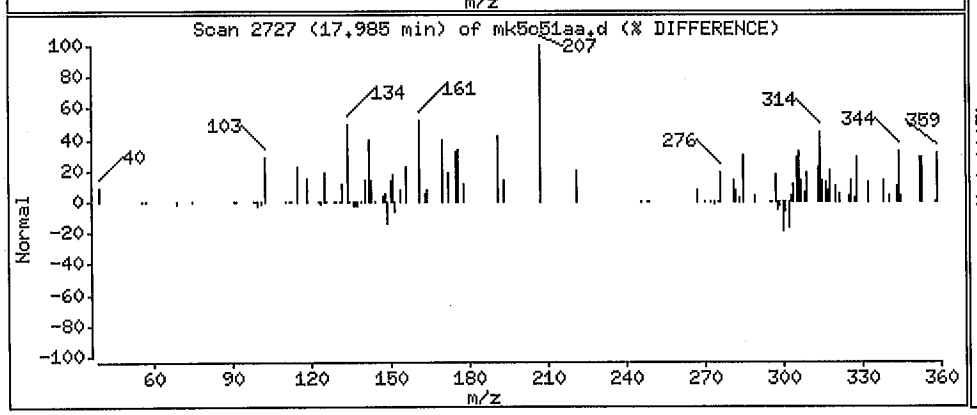


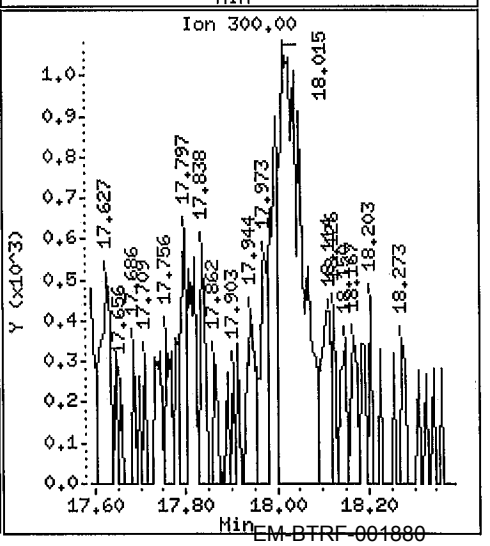












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 **Work Order #...:** MK5C52AA **Matrix.....:** AIR
Date Sampled...: 07/15/11 **Date Received..:** 07/23/11
Prep Date.....: 07/26/11 **Analysis Date..:** 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 200 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	**31000 D**	**2000**	**ug**	**580**
Naphthalene	**15000 D**	**2000**	**ug**	**620**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Report Date: 05-Aug-2011 11:45

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Lab Smp Id: MK5C52AA Client Smp ID: EXM-DCU-M0010-R2-CO
Inj Date : 04-AUG-2011 20:03
Operator : 60487 Inst ID: md.i
Smp Info : MK5C52AA,50,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 19
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	50.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	58473	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.888	(1.000)	234548	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.485	(1.000)	146109	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	276759	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	286071	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	257799	20.0000	20.0
$ 7 2-Fluorophenol	112	3.138	3.132	(0.730)	2365	0.73290	~~146~~
$ 8 Phenol-d5	99	3.937	3.937	(0.915)	2136	0.55186	110
$ 179 13C6-naphthalene	134	5.887	5.917	(1.000)	22955	1.80100	360(R)
16 Aniline	93	3.866	3.978	(0.899)	4628	0.93825	188
95 o-toluidine	106	4.654	4.789	(1.082)	12832	2.38533	477 N/A
29 Nitrobenzene	77	4.953	4.953	(0.841)	5144	1.40493	281
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	3040	0.77272	~~154~~

EMSL-RF-001882

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Report Date: 05-Aug-2011 11:45

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
199 Phentermine	58	5.564	5.664	(0.945)	134	5.90991	~~1180~~ NA
37 Naphthalene	128	5.917	5.923	(1.005)	862713	76.7605	15400 D
41 2-Methylnaphthalene	142	6.939	6.933	(1.179)	1162374	152.903	30600 D
188 1,1'-Biphenyl	154	7.732	7.738	(0.911)	24590	2.12397	~~425~~
47 Acenaphthylene	152	8.220	8.308	(0.969)	14223	1.14129	228
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	26351	3.19546	639
53 Dibenzofuran	168	8.719	8.720	(1.028)	14323	1.24632	249
56 Fluorene	166	9.072	9.078	(1.069)	55444	5.82692	1160
66 Phenanthrene	178	9.912	9.912	(1.002)	119607	8.06712	1610
67 Anthracene	178	9.953	9.953	(1.006)	53435	3.71475	743
70 Fluoranthene (ccc)	202	10.782	10.782	(1.090)	9479	0.62038	124
71 Pyrene	202	10.940	10.941	(0.918)	40380	2.49252	498
200 3,3'-Dimethoxybenzidine	244	11.863	11.851	(0.995)	6875	13.9380	2790
73 Benzo(a)Anthracene	228	11.910	11.916	(0.999)	30633	2.15962	432
75 Chrysene	228	11.945	11.951	(1.002)	31964	2.11249	422
119 7,12-dimethylbenz(a)anthracen	256	13.214	13.220	(1.108)	1497	5.34957	1070
78 Benzo(b)fluoranthene	252	13.232	13.232	(0.955)	9564	0.73943	148
79 Benzo(k)fluoranthene	252	13.232	13.273	(0.955)	13630	0.87451	175
85 Benzo(e)pyrene	252	13.661	13.673	(0.986)	17272	1.33421	267 NA
80 Benzo(a)pyrene (ccc)	252	13.749	13.755	(0.993)	21740	4.22305	845
196 Perylene	252	13.908	13.902	(1.004)	1067	0.08192	16.4
120 3-methylcholanthrene	268	14.366	14.366	(1.037)	807	6.76303	1350
81 Indeno(1,2,3-cd)pyrene	276	15.318	15.324	(1.106)	7225	0.51134	102
82 Dibenz(a,h)anthracene	278	15.506	15.347	(1.120)	9266	0.80161	160
83 Benzo(g,h,i)perylene	276	15.647	15.653	(1.130)	11136	0.89329	179
201 Dibenzo(a,e)pyrene	302	17.997	17.991	(1.300)	748	4.27015	~~854~~

KRM 8/15/11

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Report Date: 05-Aug-2011 11:45

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c52aa.d
Lab Smp Id: MK5C52AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-R2-CO
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	58473	8.51
2 Naphthalene-d8	216727	108364	433454	234548	8.22
3 Acenaphthene-d10	132541	66270	265082	146109	10.24
4 Phenanthrene-d10	256755	128378	513510	276759	7.79
5 Chrysene-d12	266546	133273	533092	286071	7.33
6 Perylene-d12	235464	117732	470928	257799	9.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

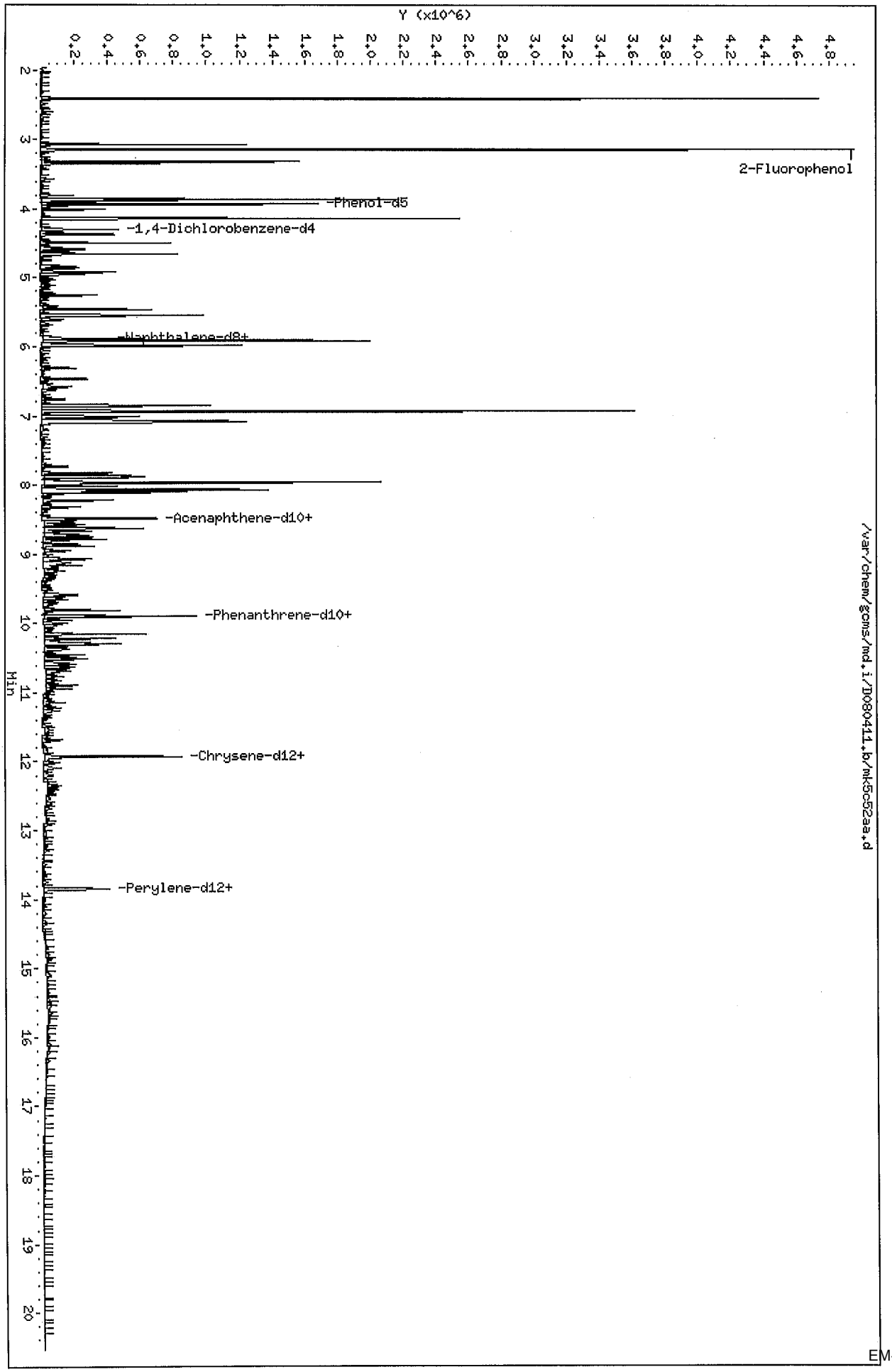
Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Report Date: 05-Aug-2011 11:45

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C52AA Client Smp ID: EXM-DCU-M0010-R2-CO
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	146	97.72	19-100
$ 8 Phenol-d5	150	110	73.58	15-124
$ 9 Nitrobenzene-d5	100	0.00	*	42-104
$ 11 2,4,6-Tribromophe	150	0.00	*	33-130
$ 10 2-Fluorobiphenyl	100	0.00	*	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	360	180.10*	50-150


Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Date : 04-AUG-2011 20:03
Client ID: EXM-DCU-M0010-R2-CO
Sample Info: MK5C52AA,50,0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk5c52aa.d
Y (x10^6)
Min
2-Fluorophenol
-Phenol-d5
-1,4-Dichlorobenzene-d4
-Naphthalene-d8+
-Acenaphthene-d10+
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d

Date : 04-AUG-2011 20:03

Client ID: EXM-DCU-M0010-R2-CO

Instrument: md.i

Sample Info: MK5C52AA,50,0,,,

Volume Injected (uL): 1.0

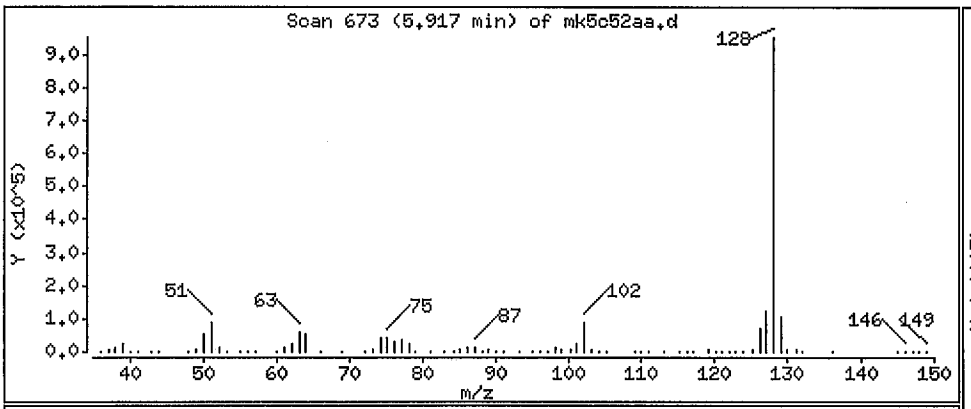
Operator: 60487

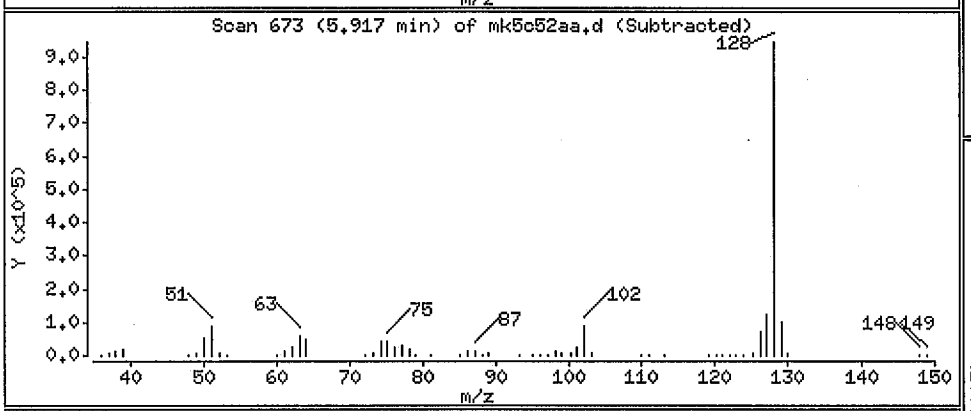
Column phase: Rxi-5 Sil MS

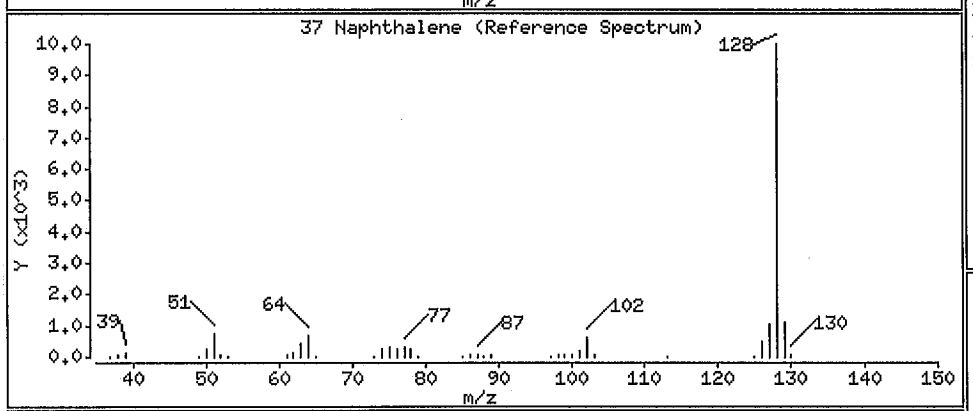
Column diameter: 0.25

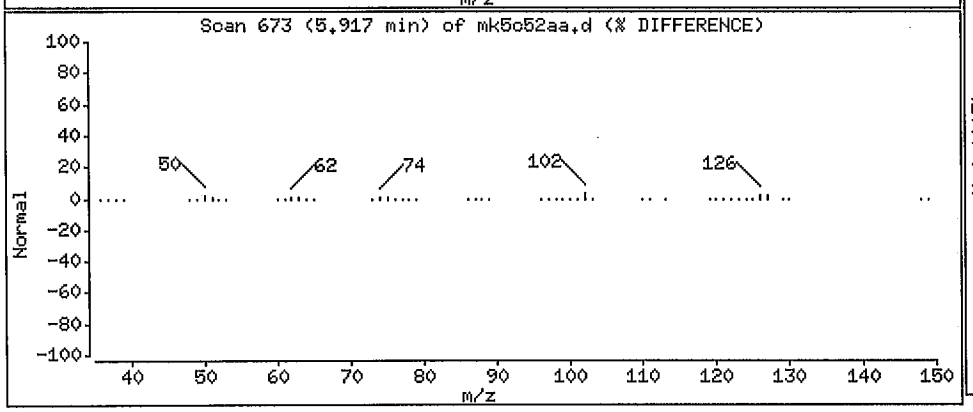
37 Naphthalene

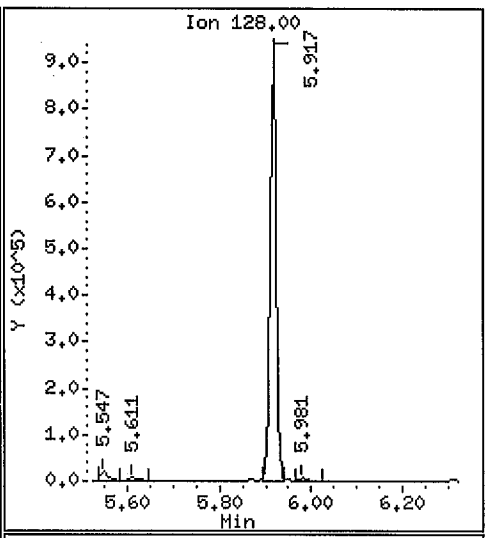
Concentration: 15400 ug

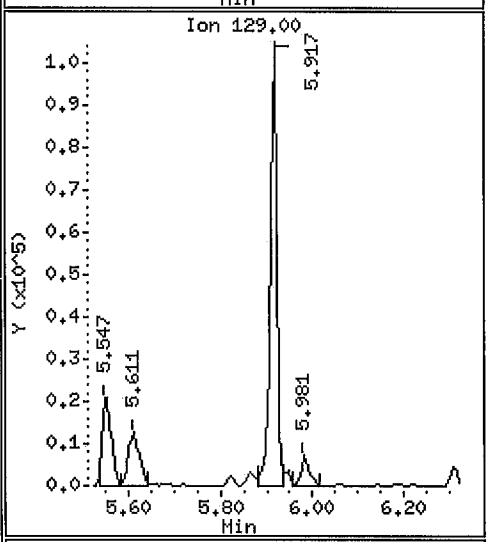


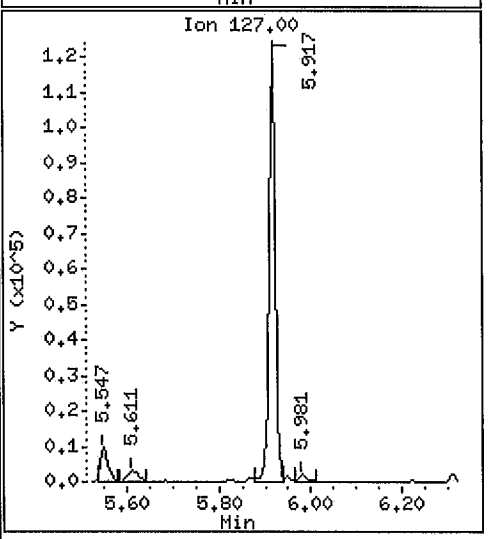












Data File: /var/chem/gcms/md.i/D080411.b/mk5c52aa.d

Date : 04-AUG-2011 20:03

Client ID: EXM-DCU-M0010-R2-C0

Instrument: md.i

Sample Info: MK5C52AA,50,0,,,

Volume Injected (uL): 1.0

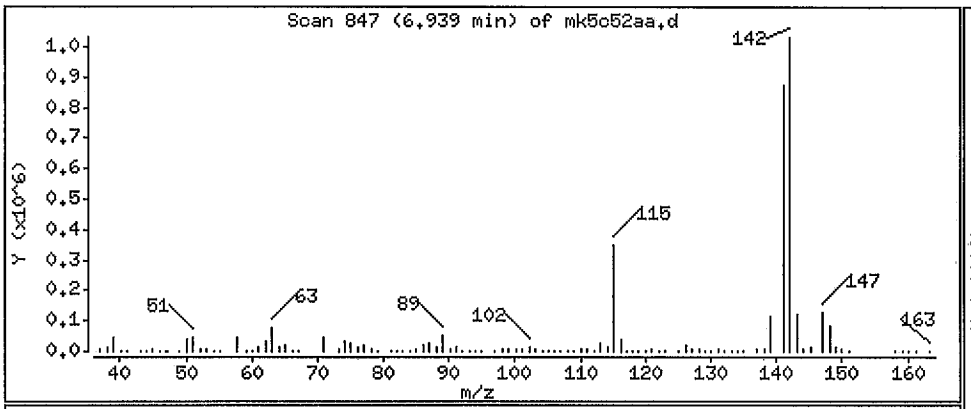
Operator: 60487

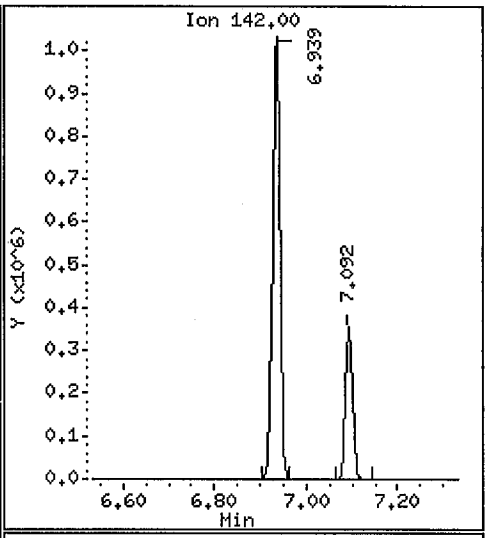
Column phase: Rxi-5 Sil MS

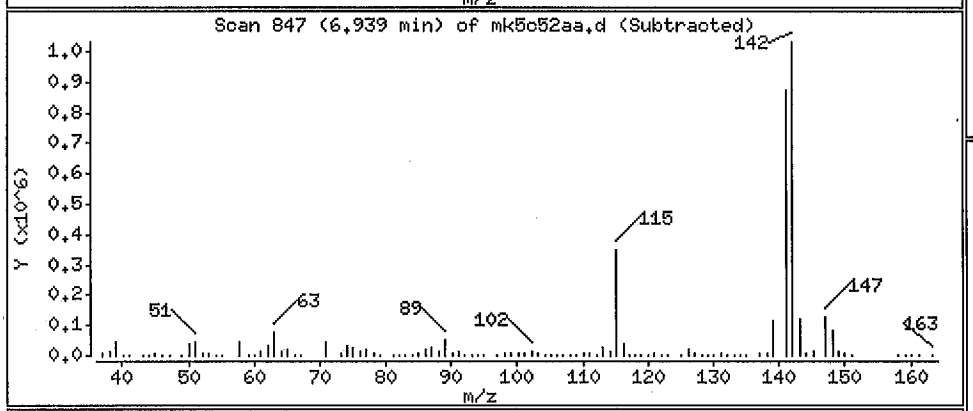
Column diameter: 0.25

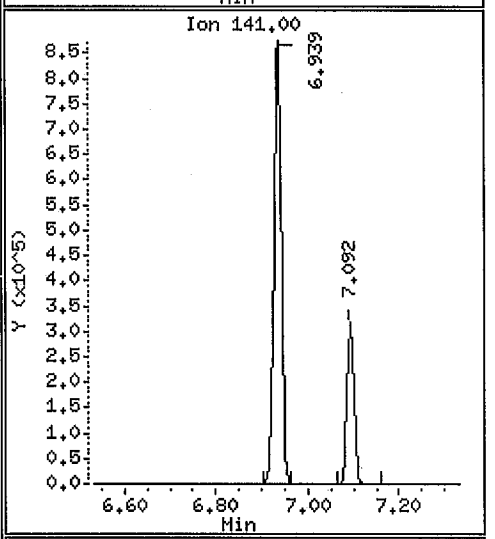
41 2-Methylnaphthalene

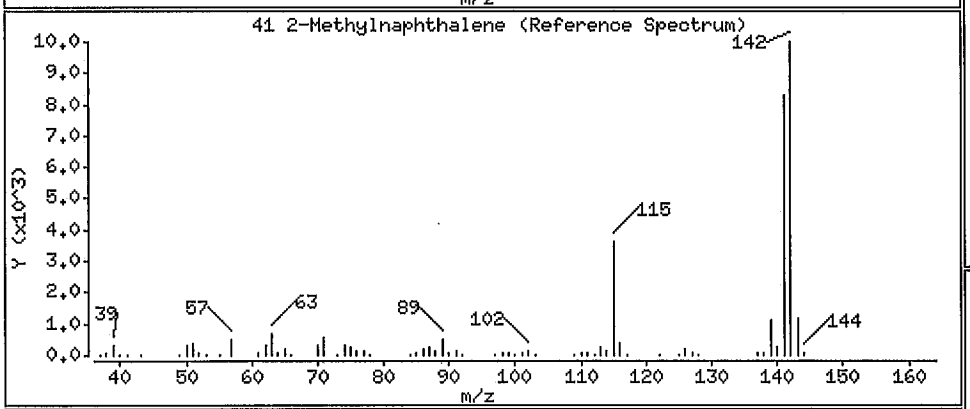
Concentration: 30600 ug

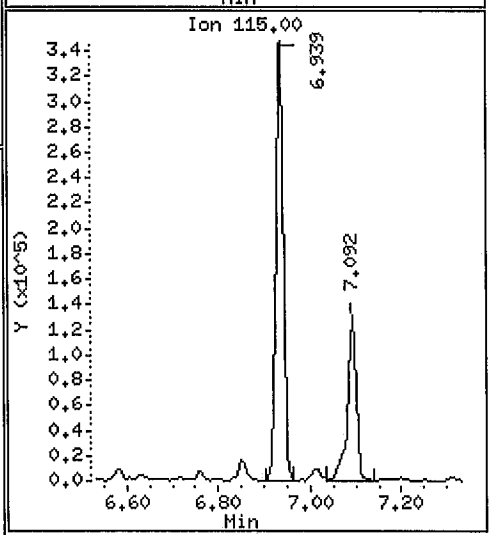


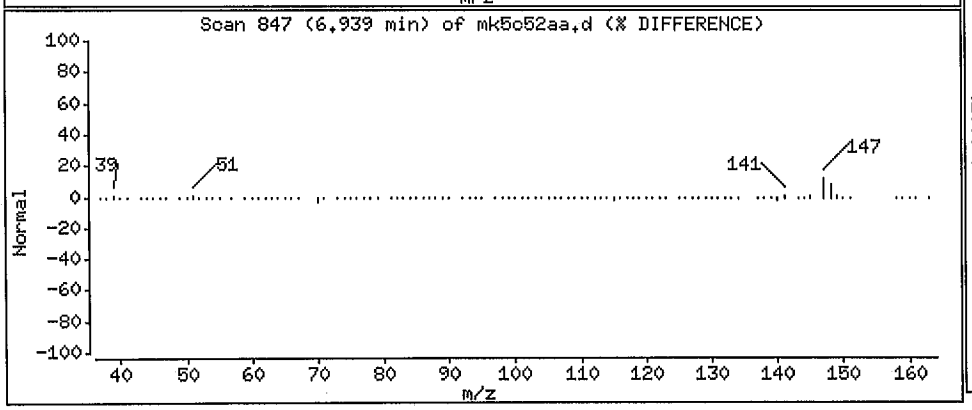












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C61AA Matrix.....: AIR
Date Sampled...: 07/17/11 Date Received..: 07/23/11
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 80 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	**730 J**	**800**	**ug**	**220**
Acenaphthylene	ND	800	ug	220
Aniline	ND	800	ug	690
Anthracene	**2100**	**800**	**ug**	**260**
Benz(a)anthracene	**260 J**	**800**	**ug**	**250**
Benzidine	ND	8000	ug	4800
Benzo(b)fluoranthene	ND	800	ug	330
Benzo(k)fluoranthene	ND	800	ug	390
Benzo(ghi)perylene	ND	800	ug	260
Benzo(a)pyrene	ND	800	ug	300
Benzo(e)pyrene	ND	800	ug	67
Biphenyl	**640 J**	**800**	**ug**	**80**
Chrysene	ND	800	ug	250
Cresols (total)	ND	800	ug	650
Dibenz(a,h)anthracene	ND	800	ug	240
Dibenzofuran	**510 J**	**800**	**ug**	**220**
Dibenzo(a,e)pyrene	ND	800	ug	54
3,3'-Dimethoxybenzidine	ND	8000	ug	1100
p-Dimethylaminoazobenzene	ND	800	ug	190
7,12-Dimethylbenz(a)-anthracene	ND	800	ug	280
3,3'-Dimethylbenzidine	ND	8000	ug	1400
alpha,alpha-Dimethylphenethylamine	ND	2000	ug	660
2,4-Dimethylphenol	ND	800	ug	530
Fluoranthene	ND	800	ug	290
Fluorene	**2500**	**800**	**ug**	**240**
Indeno(1,2,3-cd)pyrene	ND	800	ug	250
Isophorone	ND	800	ug	220
3-Methylcholanthrene	ND	800	ug	300
2-Methylnaphthalene	**38000 E**	**800**	**ug**	**230**
Naphthalene	**21000 E**	**800**	**ug**	**250**
Nitrobenzene	ND	800	ug	230
Perylene	ND	800	ug	62
Phenanthrene	**4600**	**800**	**ug**	**240**
Phenol	ND	800	ug	250
1,4-Phenylenediamine	ND	8000	ug	2000
Pyrene	**960**	**800**	**ug**	**280**
o-Toluidine	**420 J**	**800**	**ug**	**220**

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 **Work Order #...:** MK5C61AA **Matrix.....:** AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Report Date: 05-Aug-2011 13:03

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Lab Smp Id: MK5C61AA Client Smp ID: EXM-DCU-M0010-R3-CO
Inj Date : 04-AUG-2011 16:16
Operator : 60487 Inst ID: md.i
Smp Info : MK5C61AA,20,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 11
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

08/08/11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	57531	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.888	(1.000)	230301	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.485	(1.000)	150038	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	278728	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	283396	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	262203	20.0000	20.0
15 Phenol (ccc)	94	3.948	3.949	(0.918)	7043	1.79820	144
16 Aniline	93	3.972	3.978	(0.923)	12988	2.67570	214
23 2-Methylphenol	108	4.565	4.571	(1.061)	10791	3.48671	279
26 3&4 Methylphenol	108	4.753	4.754	(1.105)	6993	2.19134	175
M 204 total cresols (methylphenols)	108				17784	5.67805	454
95 o-toluidine	106	4.783	4.789	(1.112)	27857	5.26306	421
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	11802	3.05453	244

Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Report Date: 05-Aug-2011 13:03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
199	Phentermine	58	5.682	5.664	(0.965)	1999	6.08713	487
37	Naphthalene	128	5.923	5.923	(1.006)	2930920	265.590	21200(A)
202	1,4-Phenylenediamine	108	6.557	6.504	(1.114)	462	6.31078	~~505~~
41	2-Methylnaphthalene	142	6.945	6.933	(1.180)	3548209	475.352	38000(A)
188	1,1'-Biphenyl	154	7.732	7.738	(0.911)	94960	7.98737	639
47	Acenaphthylene	152	8.320	8.308	(0.981)	19636	1.53429	123
51	Acenaphthene (ccc)	153	8.520	8.520	(1.004)	77691	9.17447	734
53	Dibenzofuran	168	8.719	8.720	(1.028)	75793	6.42224	514
56	Fluorene	166	9.078	9.078	(1.070)	300481	30.7524	2460
66	Phenanthrene	178	9.912	9.912	(1.002)	863861	57.8531	4630
67	Anthracene	178	9.953	9.953	(1.006)	381748	26.3513	2110
70	Fluoranthene (ccc)	202	10.782	10.782	(1.090)	51862	3.37014	270
71	Pyrene	202	10.940	10.941	(0.918)	191639	11.9408	955
200	3,3'-Dimethoxybenzidine	244	11.863	11.851	(0.995)	7012	13.9878	~~1120~~
73	Benzo(a)Anthracene	228	11.910	11.916	(0.999)	45234	3.21900	258
75	Chrysene	228	11.945	11.951	(1.002)	40978	2.73371	219
85	Benzo(e)pyrene	252	13.655	13.673	(0.986)	7250	0.55063	44.0
80	Benzo(a)pyrene (ccc)	252	13.743	13.755	(0.992)	10321	3.43331	275
196	Perylene	252	13.884	13.902	(1.003)	392	0.02958	2.37
201	Dibenzo(a,e)pyrene	302	18.003	17.991	(1.300)	846	4.27766	~~342~~

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Report Date: 05-Aug-2011 12:58

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Lab Smp Id: MK5C61AA Client Smp ID: EXM-DCU-M0010-R3-CO
Inj Date : 04-AUG-2011 16:16
Operator : 60487 Inst ID: md.i
Smp Info : MK5C61AA,20,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 11
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	57531	20.0000	20.0
*	2 Naphthalene-d8	136	5.887	5.888	(1.000)	230301	20.0000	20.0
*	3 Acenaphthene-d10	164	8.484	8.485	(1.000)	150038	20.0000	20.0
*	4 Phenanthrene-d10	188	9.895	9.895	(1.000)	278728	20.0000	20.0
*	5 Chrysene-d12	240	11.922	11.922	(1.000)	283396	20.0000	20.0
*	6 Perylene-d12	264	13.849	13.849	(1.000)	262203	20.0000	20.0
$	7 2-Fluorophenol	112	3.138	3.132	(0.730)	4533	1.42722	~~114~~
$	8 Phenol-d5	99	3.937	3.937	(0.915)	6112	1.60494	~~128~~
$	9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	4080	1.11191	~~89.0~~
$	11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	1018	0.91293	~~73.0~~
$	10 2-Fluorobiphenyl	172	7.585	7.591	(0.894)	9819	1.04624	~~83.7~~
$	179 13C6-naphthalene	134	5.887	5.917	(1.000)	21781	1.74044	~~139~~
	15 Phenol (ccc)	94	3.948	3.949	(0.918)	7043	1.79827	144

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Report Date: 05-Aug-2011 12:58

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
16 Aniline	93	3.972	3.978	(0.923)	12988	2.67584	214
23 2-Methylphenol	108	4.565	4.571	(1.061)	10791	3.48684	279
26 3&4 Methylphenol	108	4.753	4.754	(1.105)	6993	2.19134	175
M 204 total cresols (methylphenols)	108				17784	5.67818	454
95 o-toluidine	106	4.783	4.789	(1.112)	27857	5.26315	421
29 Nitrobenzene	77	4.953	4.953	(0.841)	4109	1.14299	~~91.4~~
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	11802	3.05466	244
199 Phentermine	58	5.682	5.664	(0.965)	1999	6.08713	487
37 Naphthalene	128	5.923	5.923	(1.006)	2930920	265.589	21200(A) E
202 1,4-Phenylenediamine	108	6.557	6.504	(1.114)	462	6.31096	~~505~~
41 2-Methylnaphthalene	142	6.945	6.933	(1.180)	3548209	475.351	38000(A) E
188 1,1'-Biphenyl	154	7.732	7.738	(0.911)	94960	7.98739	639
47 Acenaphthylene	152	8.320	8.308	(0.981)	19636	1.53429	123
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	77691	9.17450	734
53 Dibenzofuran	168	8.719	8.720	(1.028)	75793	6.42228	514
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66 Phenanthrene	178	9.912	9.912	(1.002)	863861	57.8530	4630
67 Anthracene	178	9.953	9.953	(1.006)	381748	26.3513	2110
70 Fluoranthene (ccc)	202	10.782	10.782	(1.090)	51862	3.37017	270
84 Benzidine	184	10.817	10.870	(1.093)	5935	0.60818	~~48.6~~
71 Pyrene	202	10.940	10.941	(0.918)	191639	11.9408	955
200 3,3'-Dimethoxybenzidine	244	11.863	11.851	(0.995)	7012	13.9879	~~1120~~
73 Benzo(a)Anthracene	228	11.910	11.916	(0.999)	45234	3.21904	258
75 Chrysene	228	11.945	11.951	(1.002)	40978	2.73376	219
119 7,12-dimethylbenz(a)anthracen	256	13.214	13.220	(1.108)	230	5.18460	~~415~~
78 Benzo(b)fluoranthene	252	13.226	13.232	(0.955)	6929	0.52677	42.1 (2)
85 Benzo(e)pyrene	252	13.655	13.673	(0.986)	7250	0.55067	44.0
80 Benzo(a)pyrene (ccc)	252	13.743	13.755	(0.992)	10321	3.43336	275
196 Perylene	252	13.884	13.902	(1.003)	392	0.02963	2.37
201 Dibenzo(a,e)pyrene	302	18.003	17.991	(1.300)	846	4.27767	~~342~~

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Report Date: 05-Aug-2011 12:58

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c61aa.d
Lab Smp Id: MK5C61AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-R3-CO
Level: LOW
Sample Type: AIR
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	57531	6.77
2 Naphthalene-d8	216727	108364	433454	230301	6.26
3 Acenaphthene-d10	132541	66270	265082	150038	13.20
4 Phenanthrene-d10	256755	128378	513510	278728	8.56
5 Chrysene-d12	266546	133273	533092	283396	6.32
6 Perylene-d12	235464	117732	470928	262203	11.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

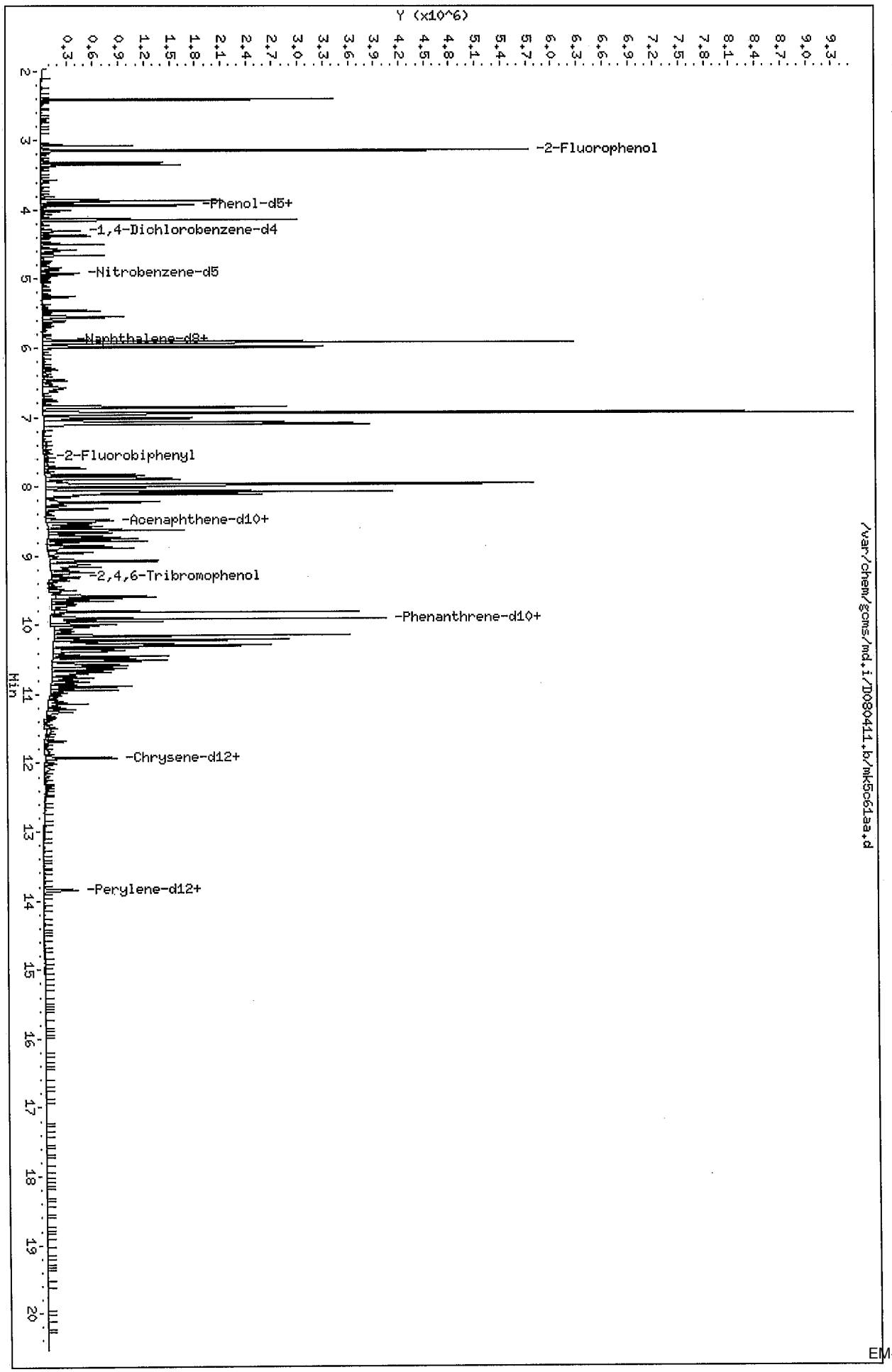
Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Report Date: 05-Aug-2011 12:58

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C61AA Client Smp ID: EXM-DCU-M0010-R3-CO
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	114	76.12	19-100
$ 8 Phenol-d5	150	128	85.60	15-124
$ 9 Nitrobenzene-d5	100	89.0	88.95	42-104
$ 11 2,4,6-Tribromophen	150	73.0	48.69	33-130
$ 10 2-Fluorobiphenyl	100	83.7	83.70	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	139	69.62	50-150


Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Date : 04-AUG-2011 16:16
Client ID: EXH-DCU-M0010-R3-CO
Sample Info: MK5C61AA,20,0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk5c61aa.d
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10+
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

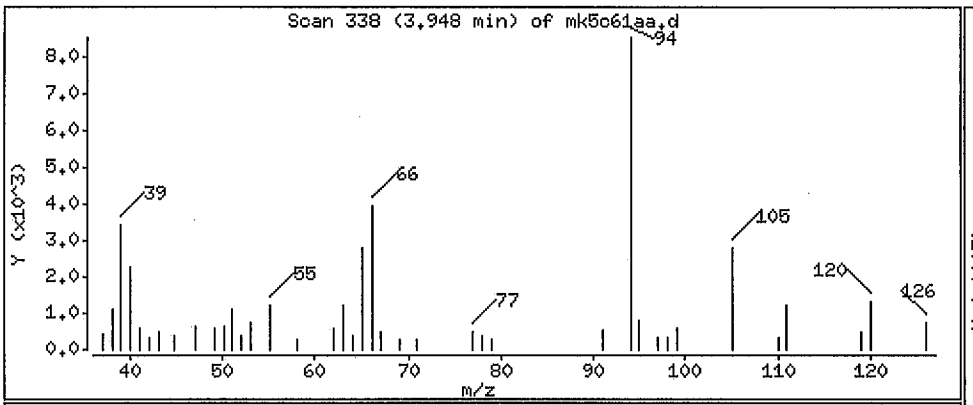
Operator: 60487

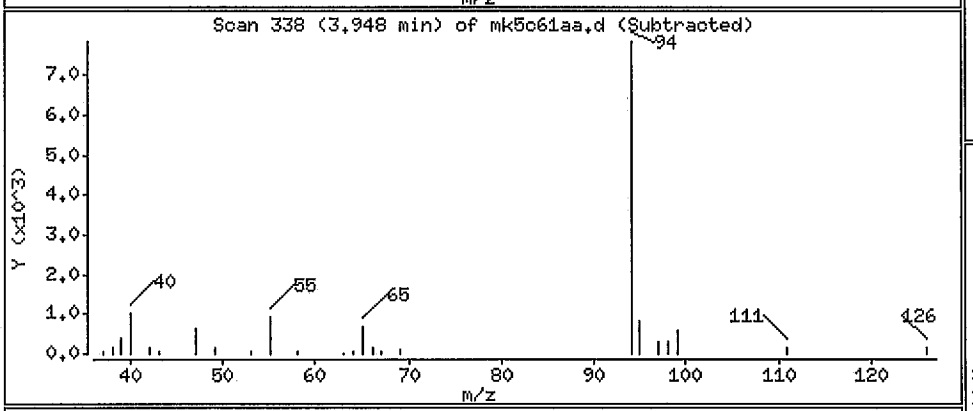
Column phase: Rxi-5 Sil MS

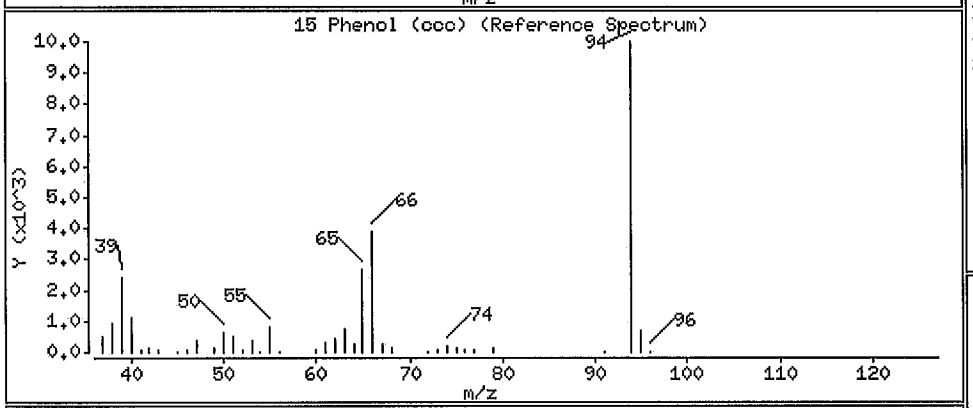
Column diameter: 0.25

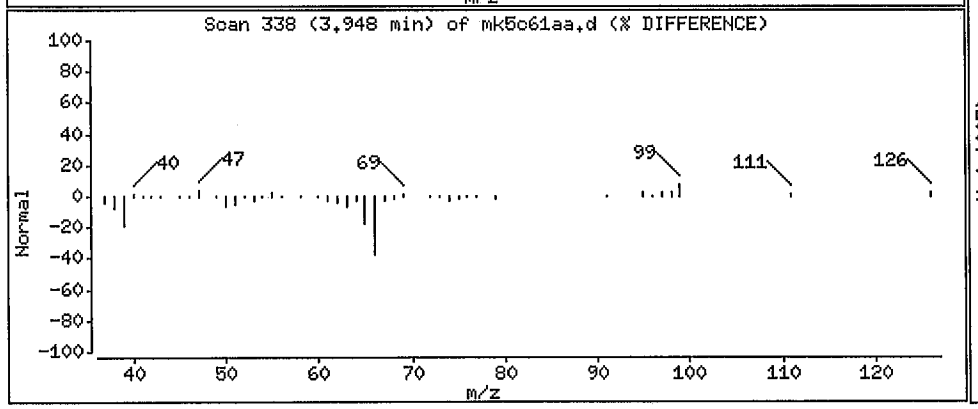
15 Phenol (ccc)

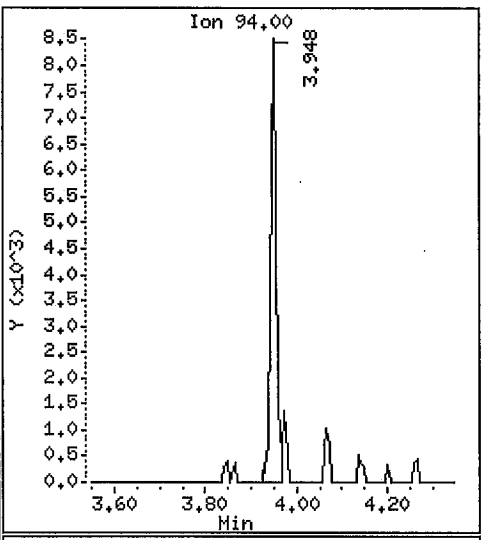
Concentration: 144 ug

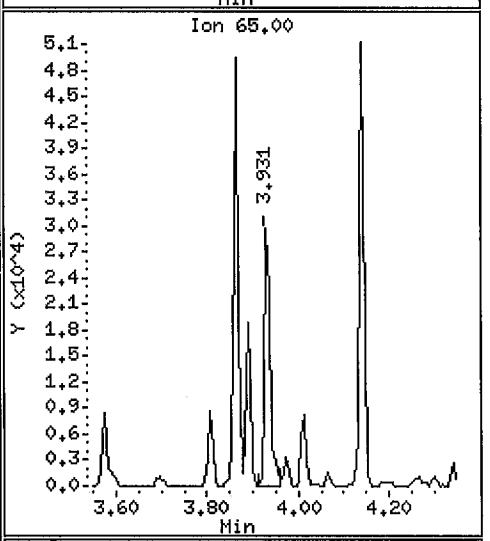


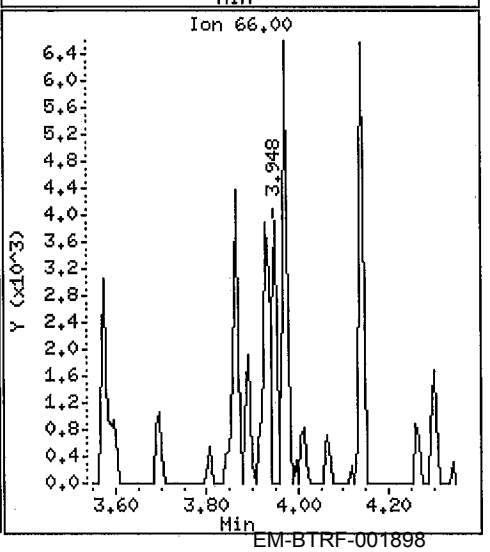












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

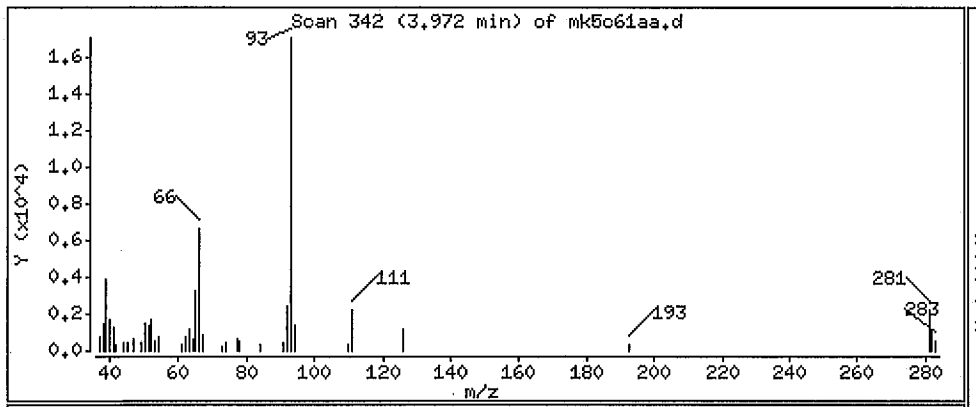
Operator: 60487

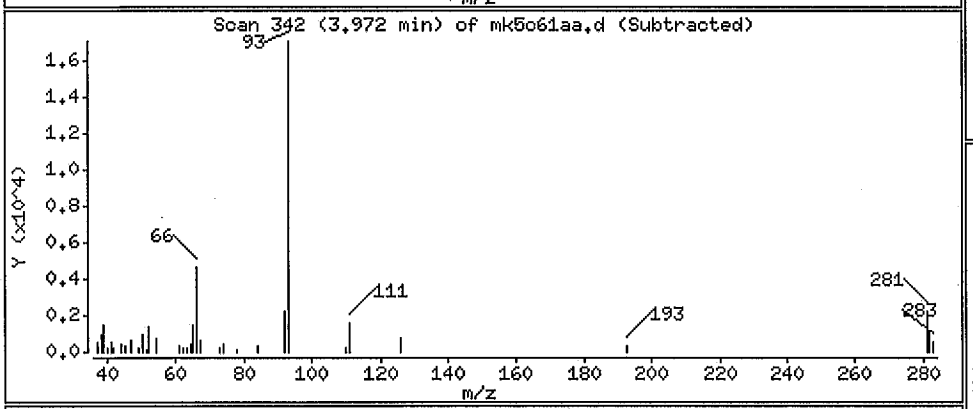
Column phase: Rxi-5 Sil MS

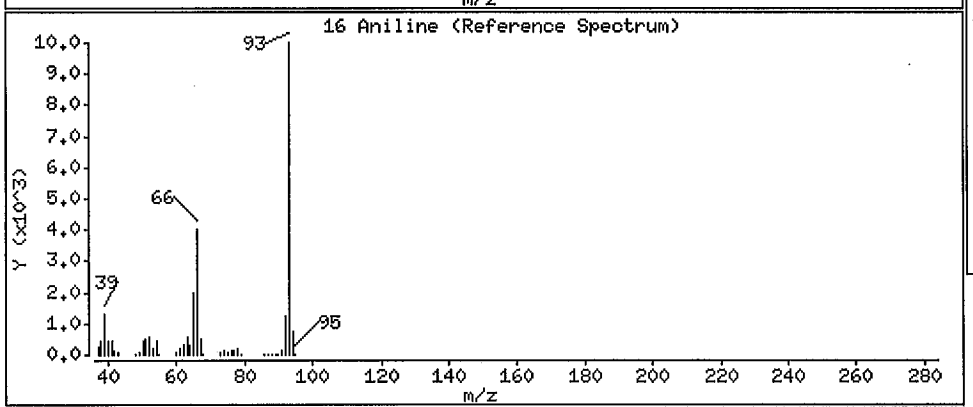
Column diameter: 0.25

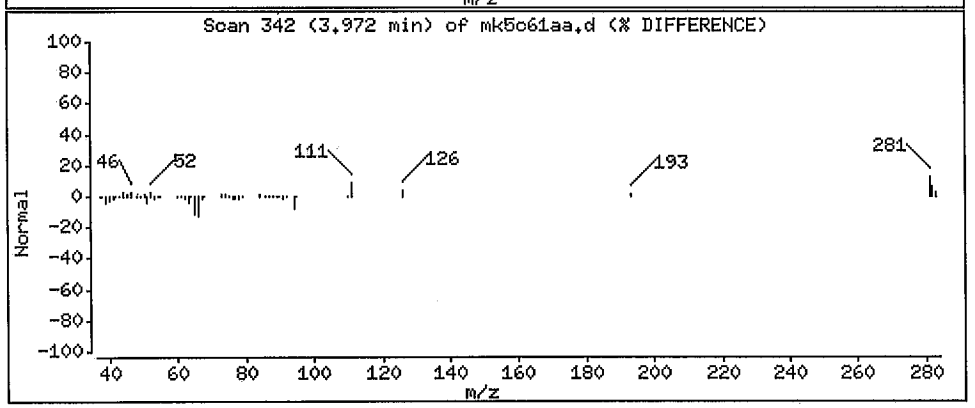
16 Aniline

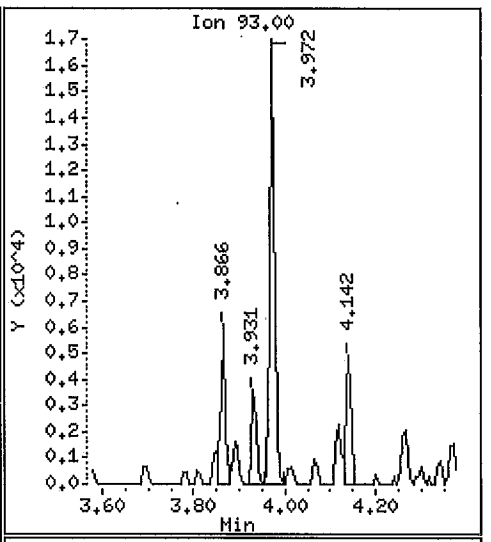
Concentration: 214 ug

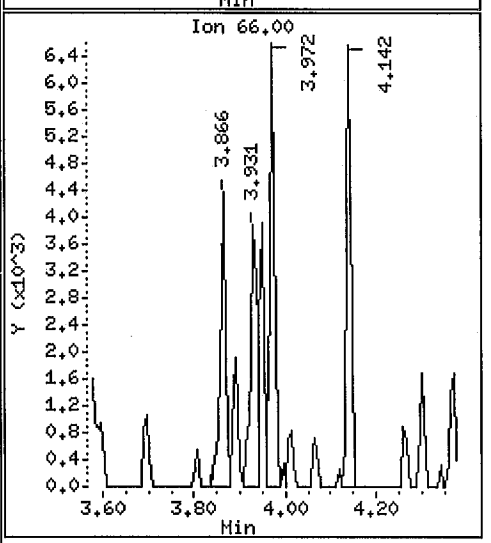












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

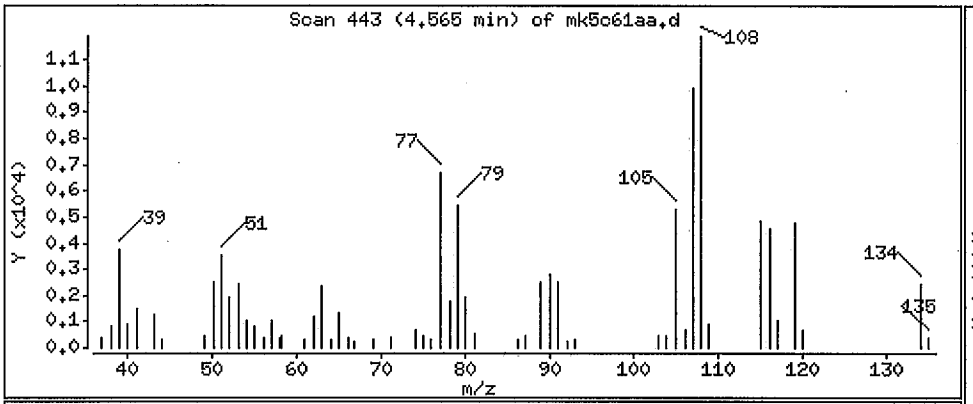
Operator: 60487

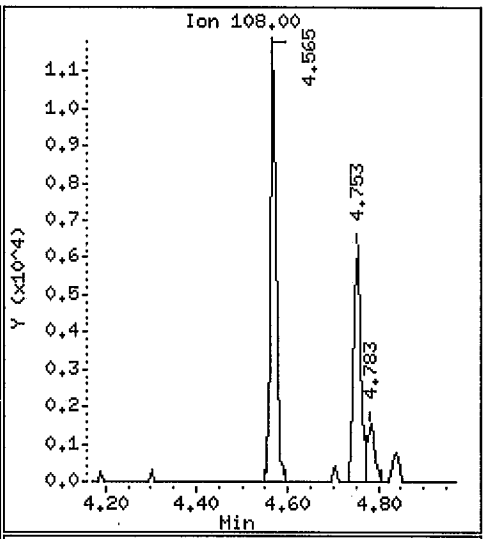
Column phase: Rxi-5 Sil MS

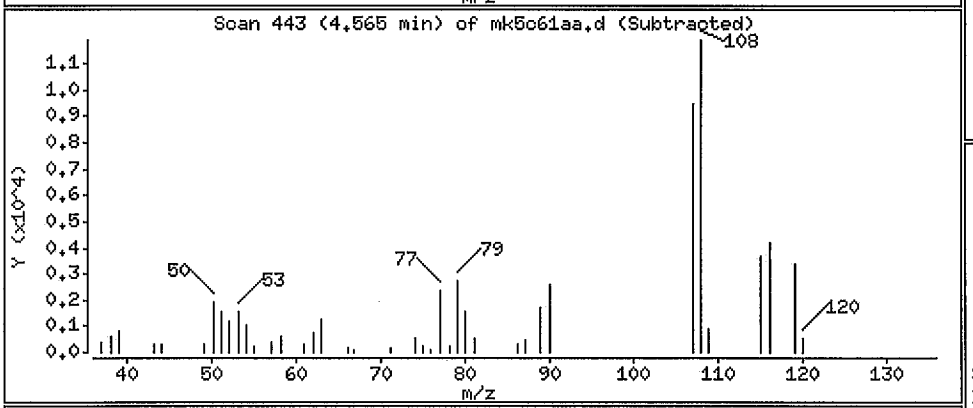
Column diameter: 0.25

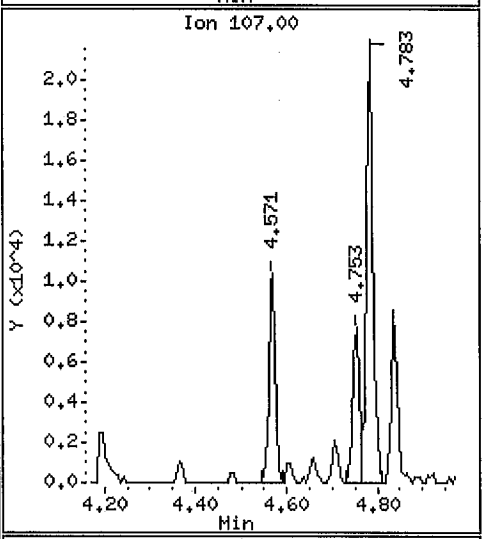
23 2-Methylphenol

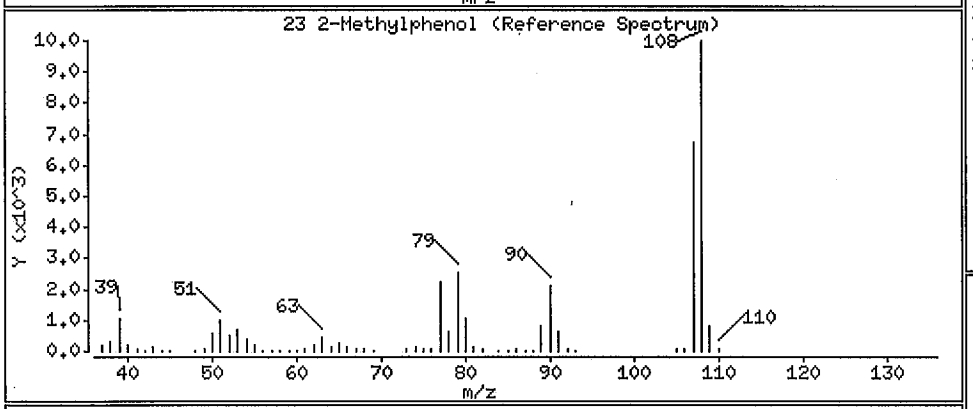
Concentration: 279 ug

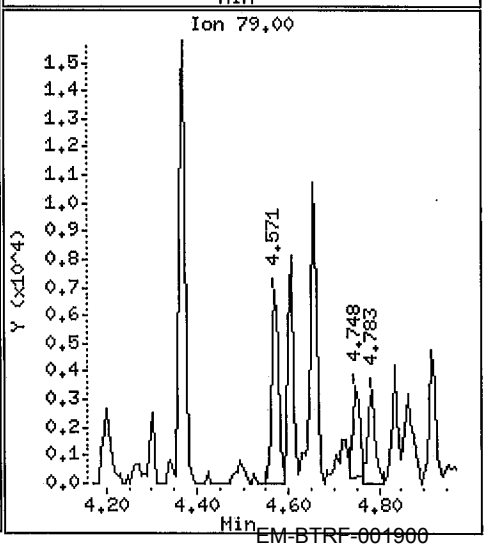


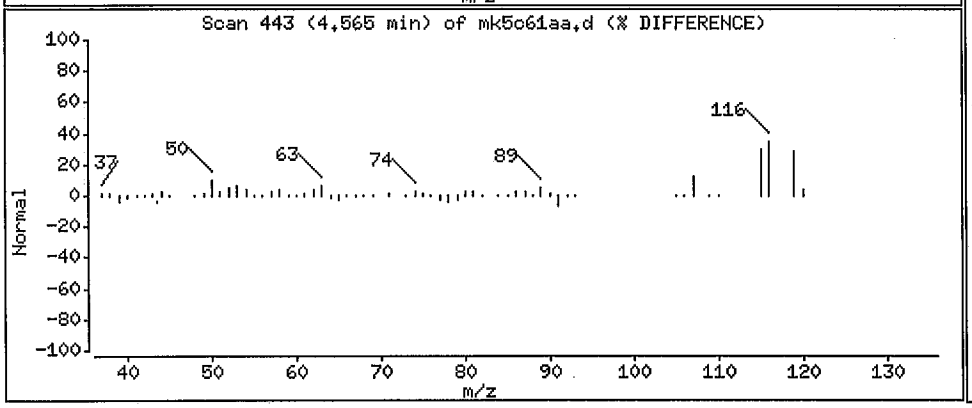












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

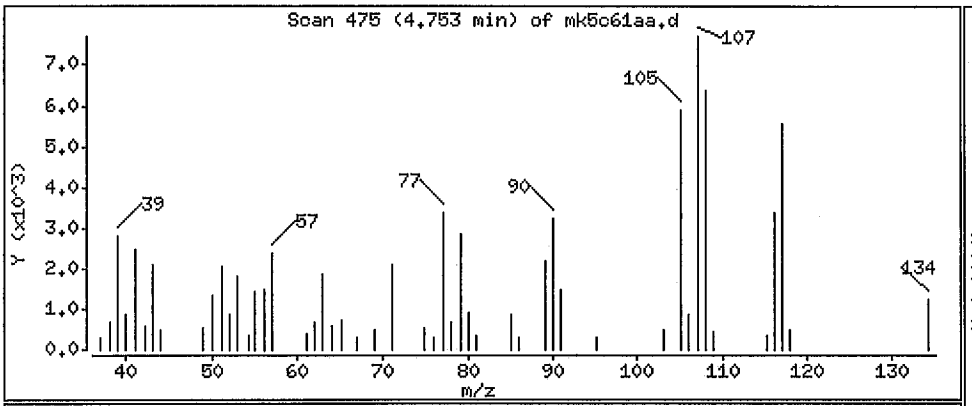
Operator: 60487

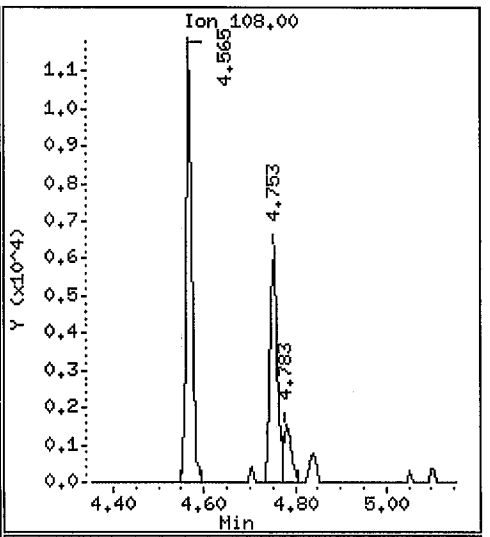
Column phase: Rxi-5 Sil MS

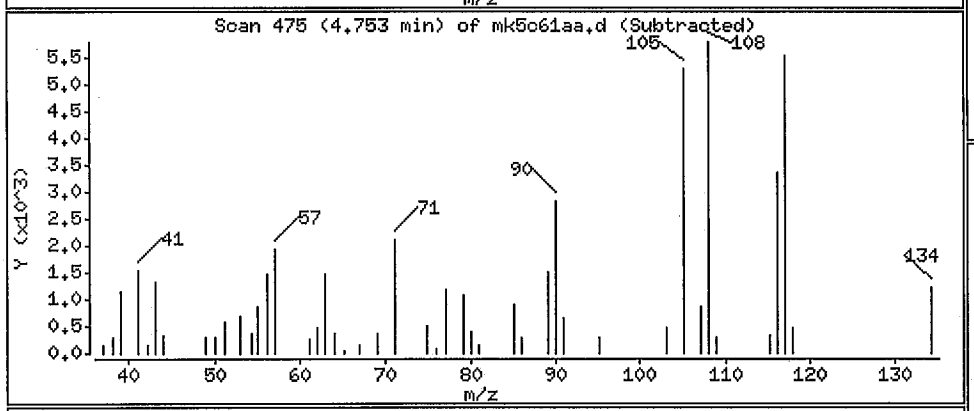
Column diameter: 0.25

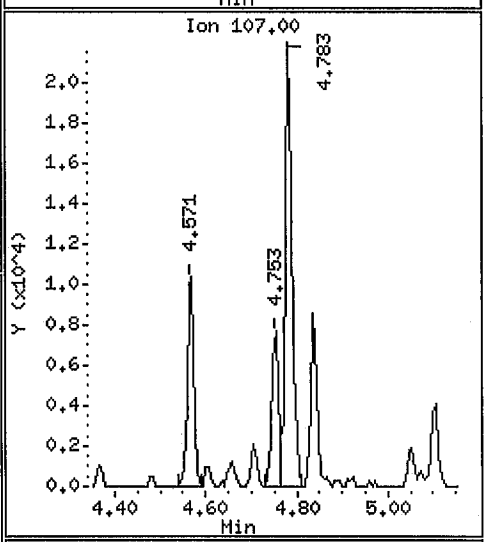
26 3&4 Methylphenol

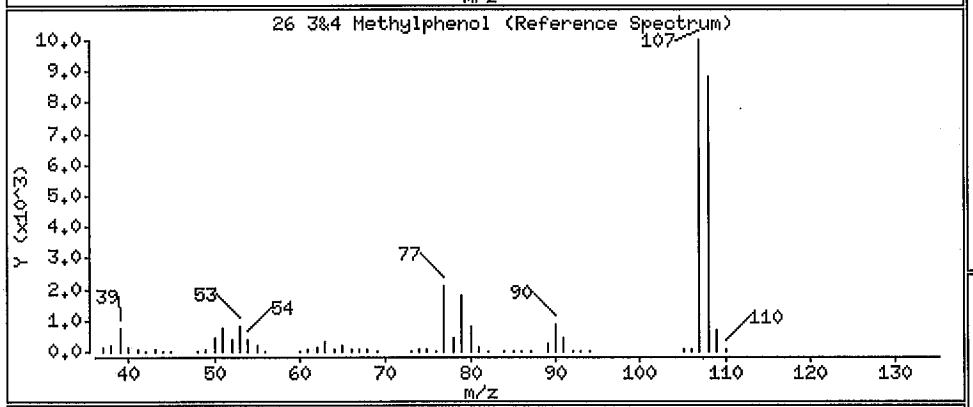
Concentration: 175 ug

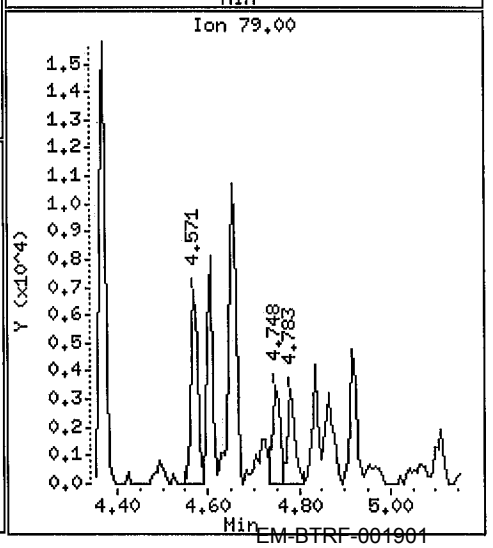


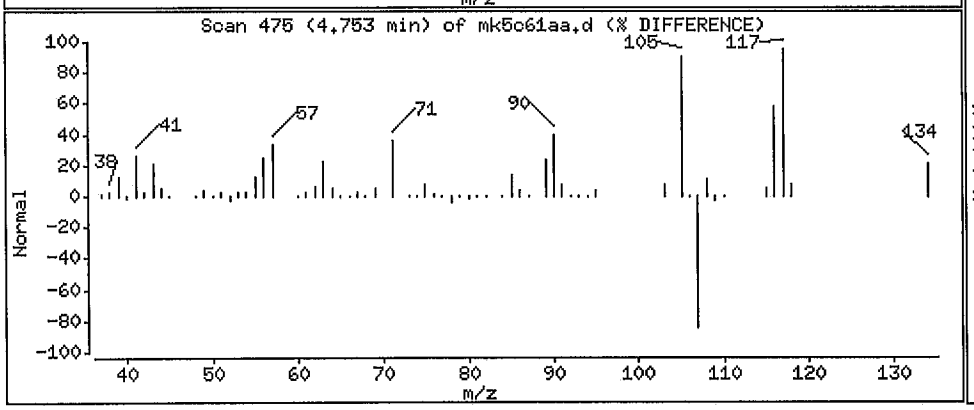












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

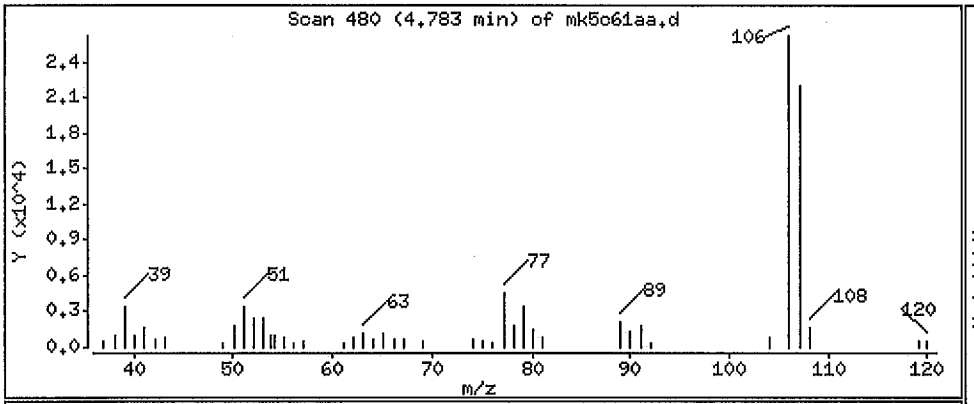
Operator: 60487

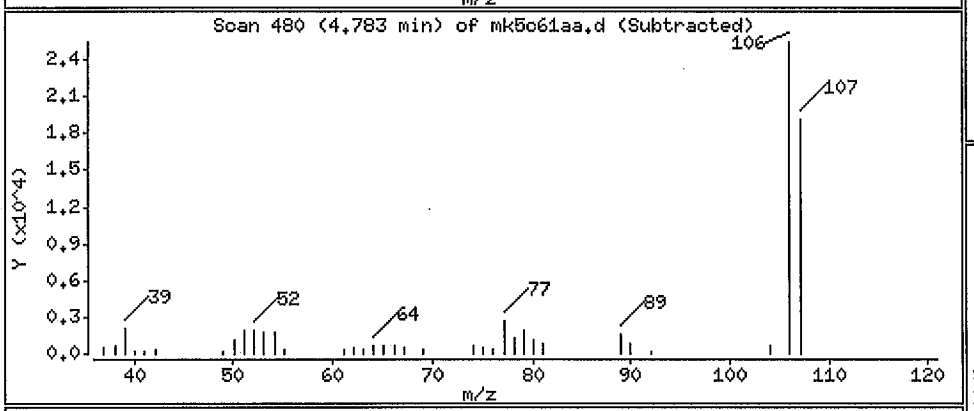
Column phase: Rxi-5 Sil MS

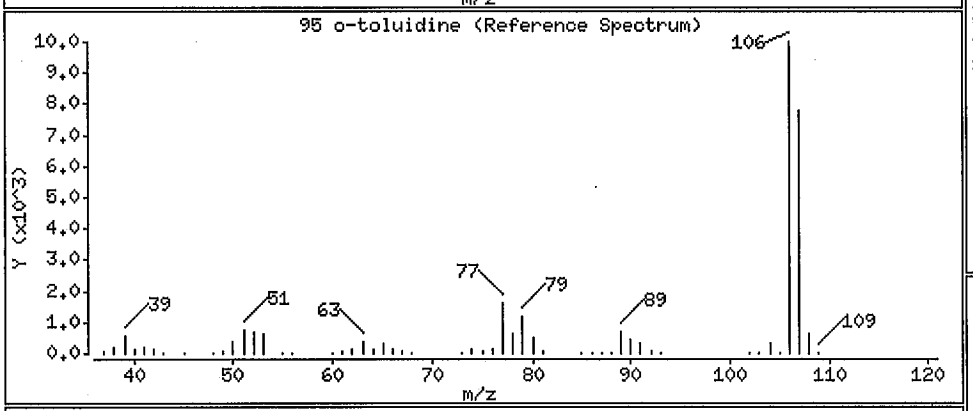
Column diameter: 0.25

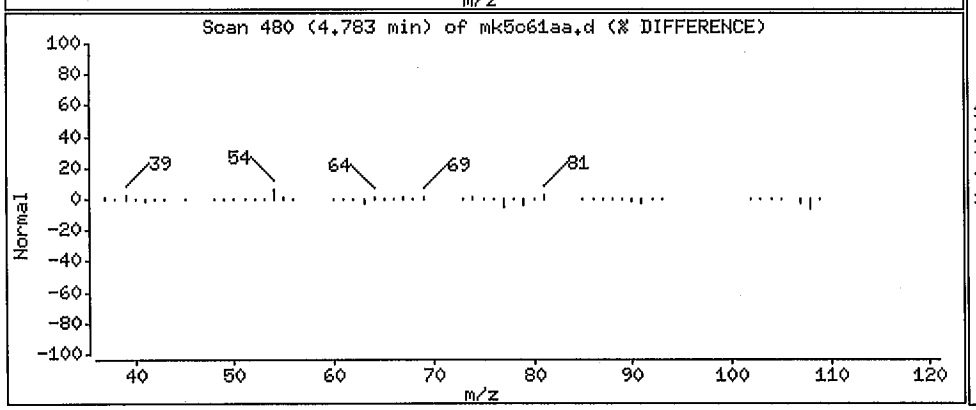
95 o-toluidine

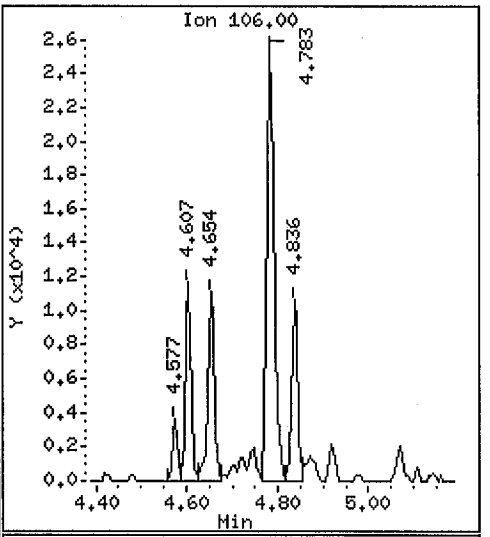
Concentration: 421 ug

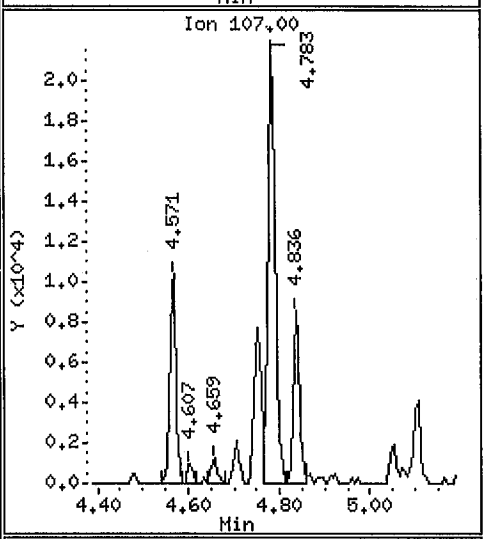


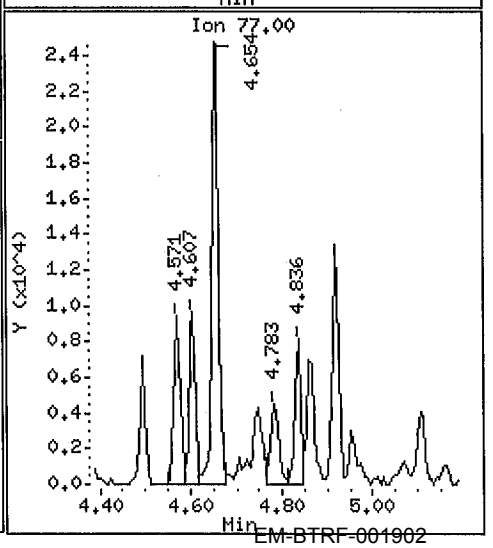












Data File: /var/chem/goms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

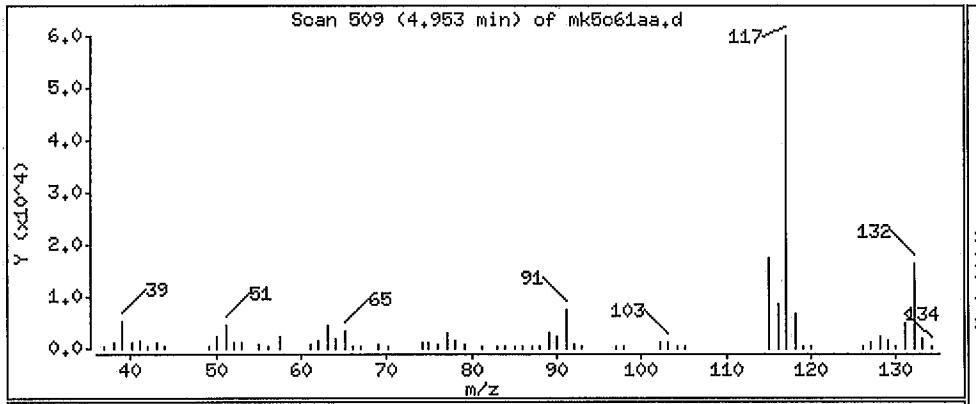
Operator: 60487

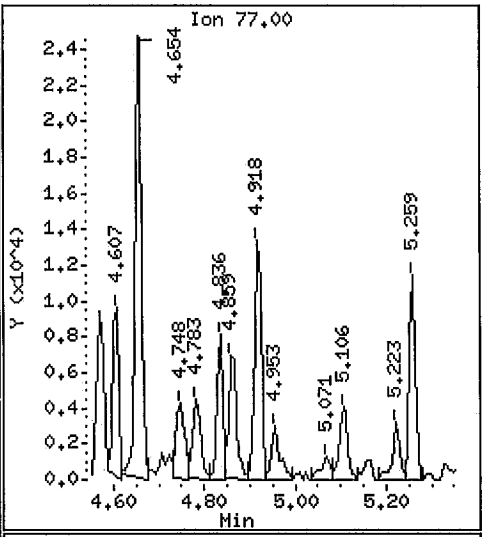
Column phase: Rxi-5 Sil MS

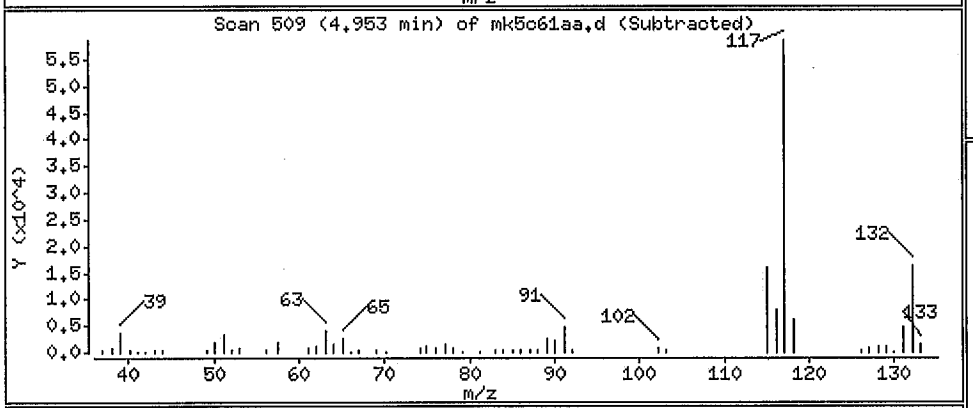
Column diameter: 0.25

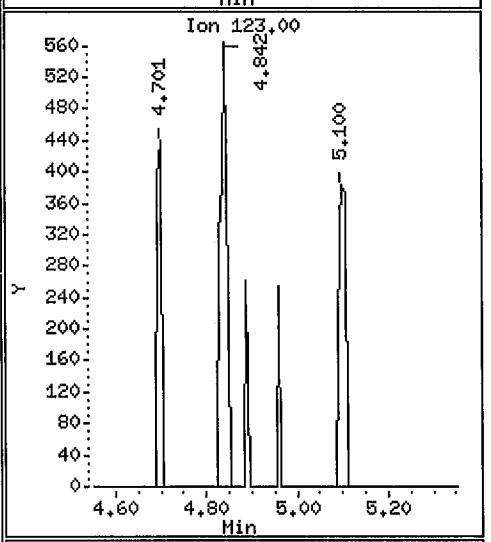
29 Nitrobenzene

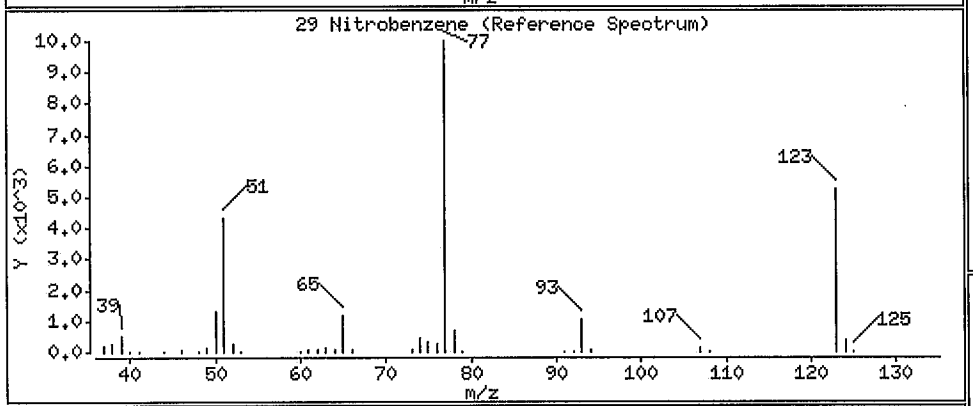
Concentration: 91.4 ug

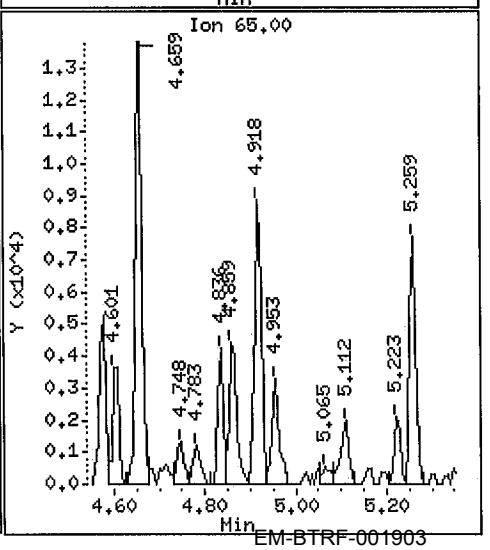


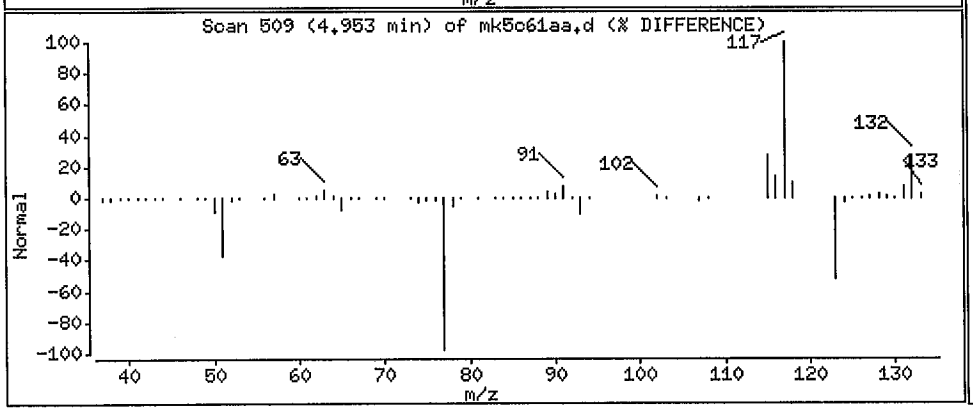












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

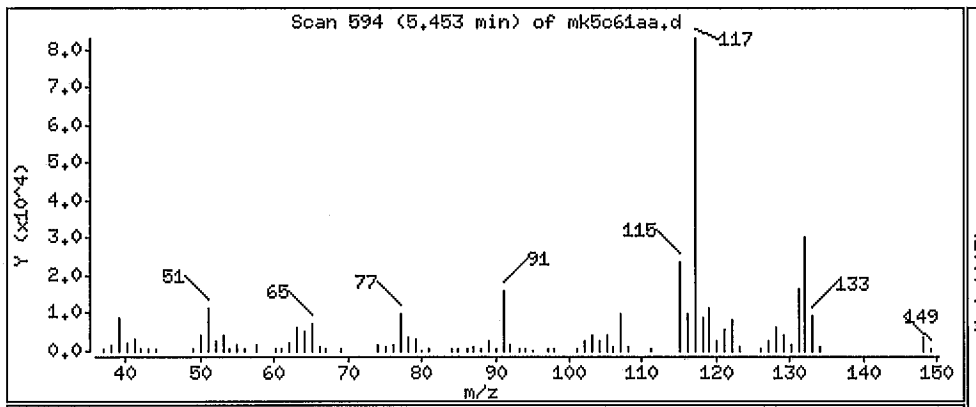
Operator: 60487

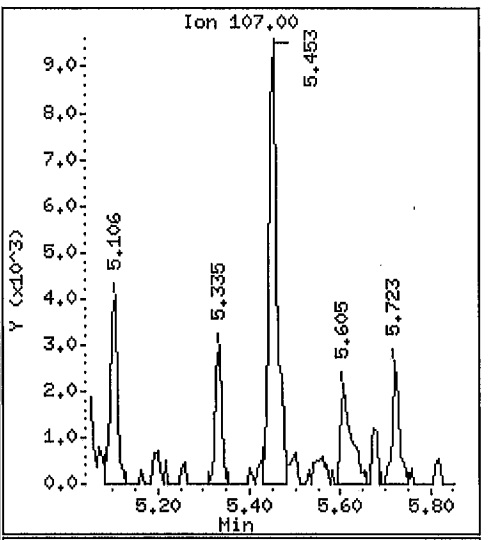
Column phase: Rxi-5 Sil MS

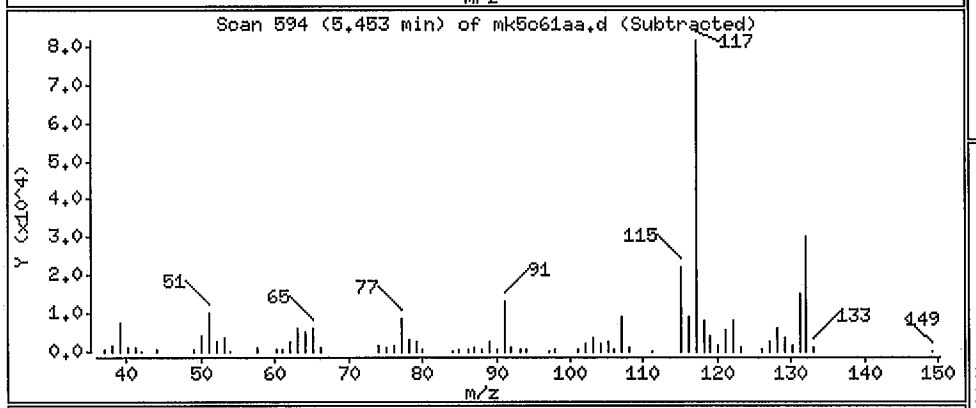
Column diameter: 0.25

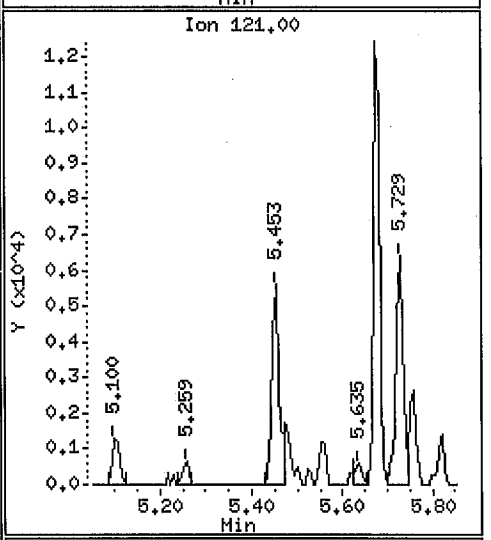
32 2,4-Dimethyphenol

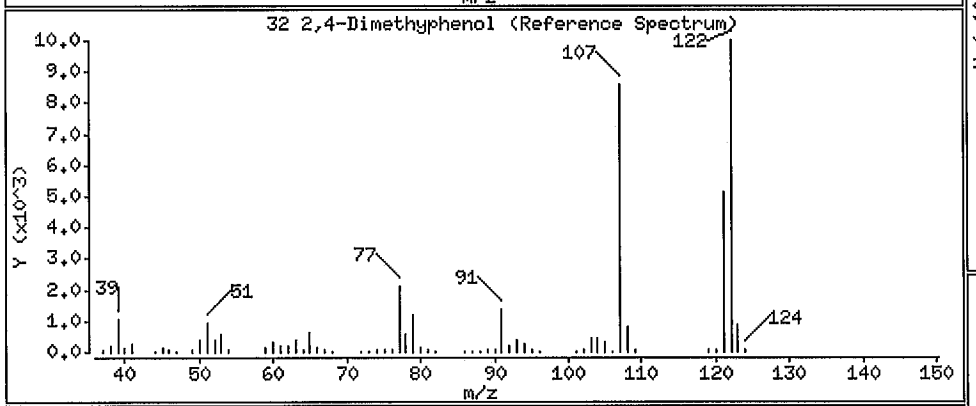
Concentration: 244 ug (MDL

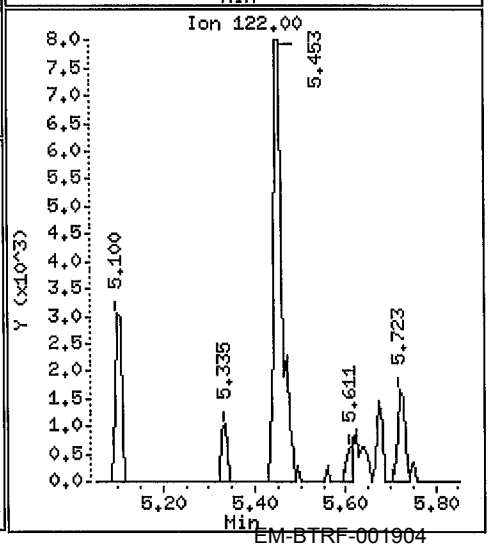


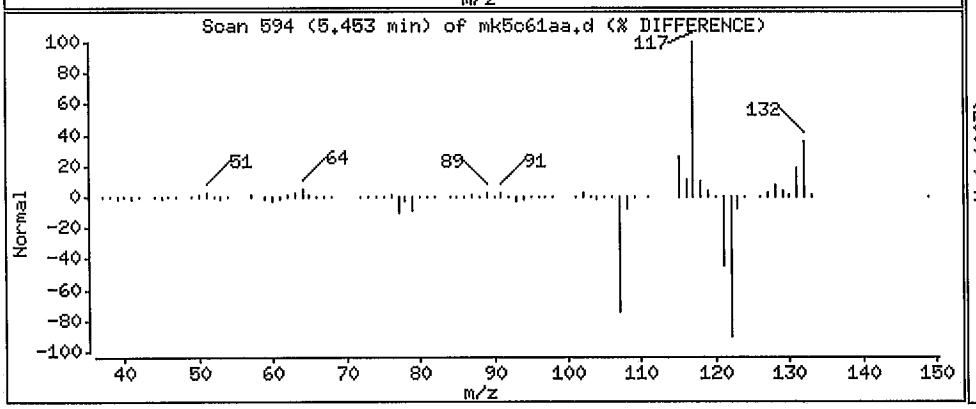












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

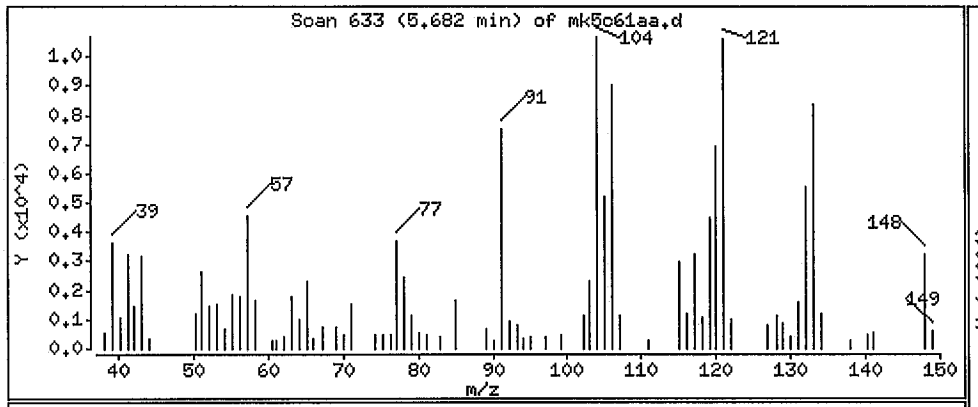
Client ID: EXM-DCU-M0010-R3-C0 Instrument: md.i

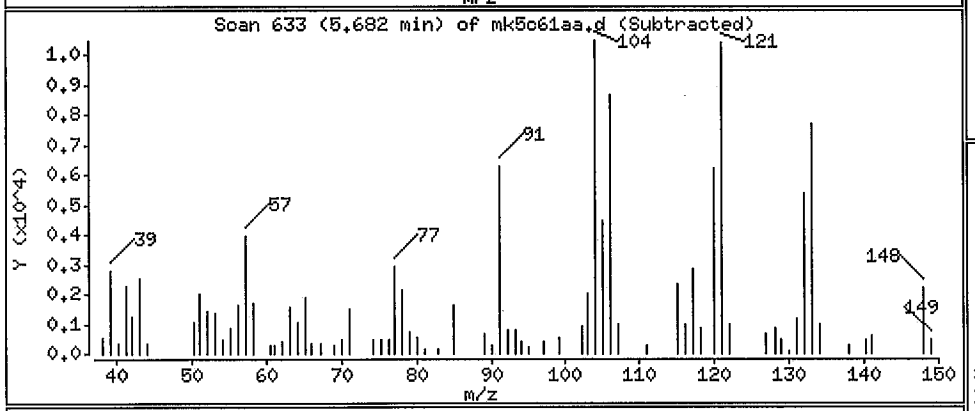
Sample Info: MK5C61AA,20,0,,,

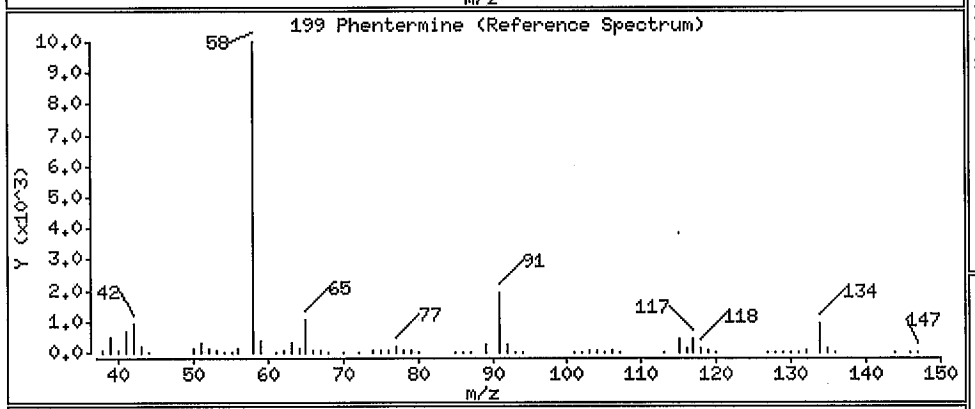
Volume Injected (uL): 1.0 Operator: 60487

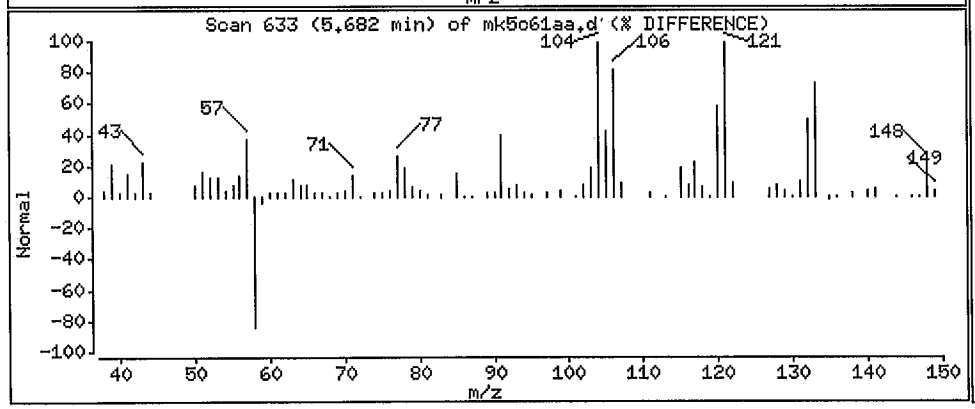
Column phase: Rxi-5 Sil MS Column diameter: 0.25

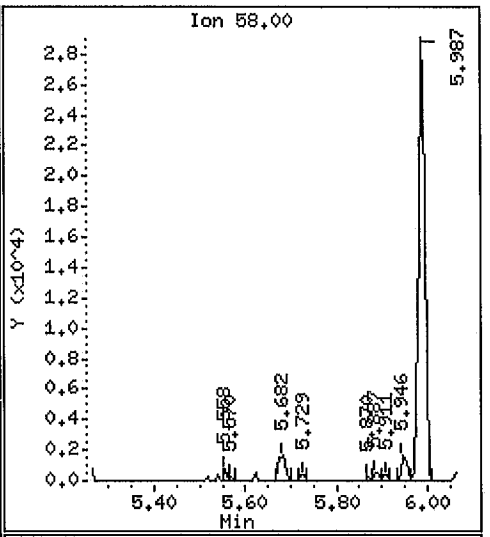
199 Phentermine Concentration: 487 ug

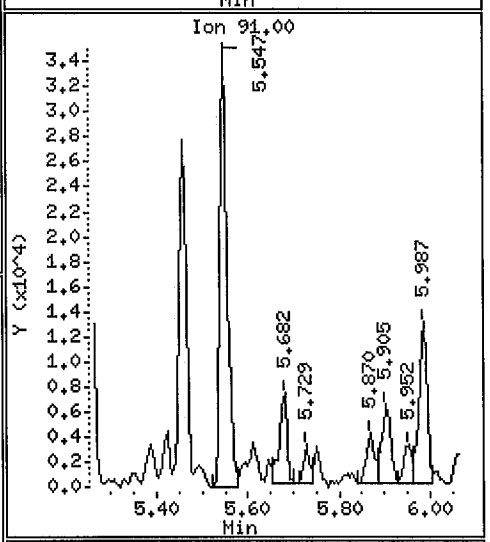


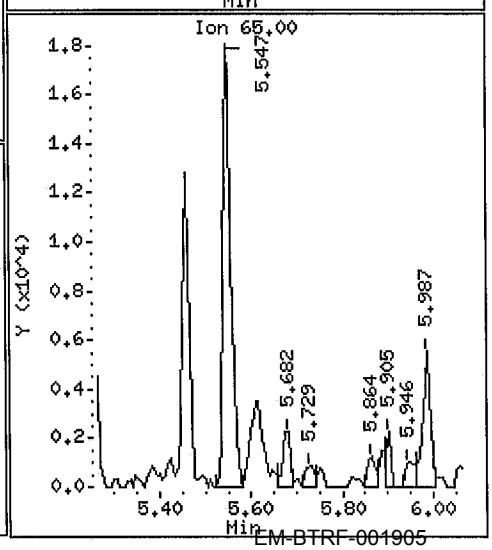












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

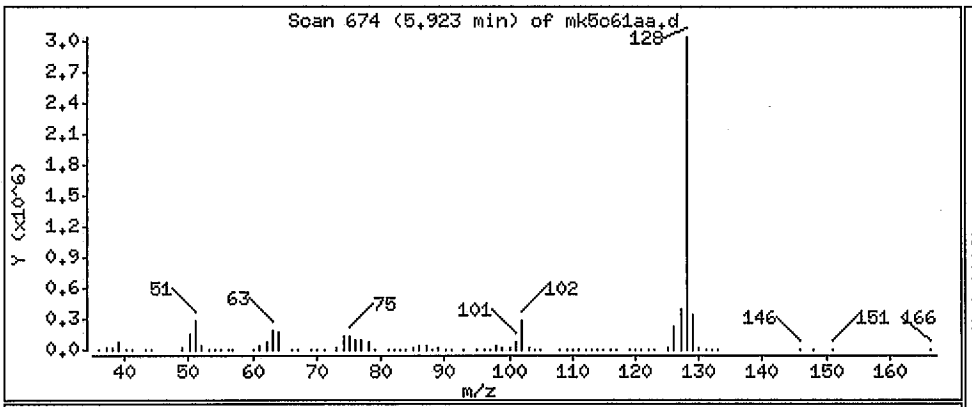
Operator: 60487

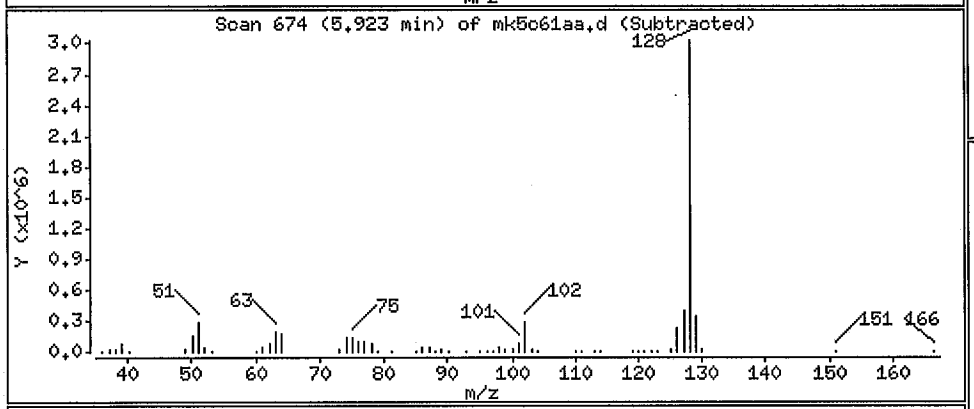
Column phase: Rxi-5 Sil MS

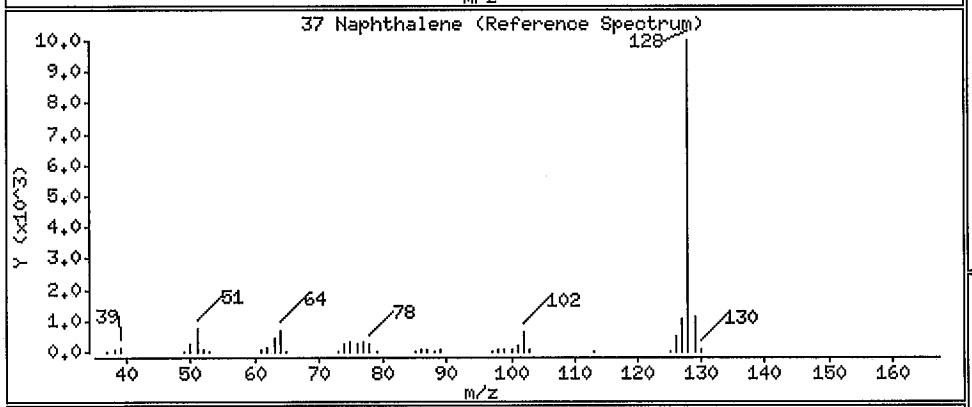
Column diameter: 0.25

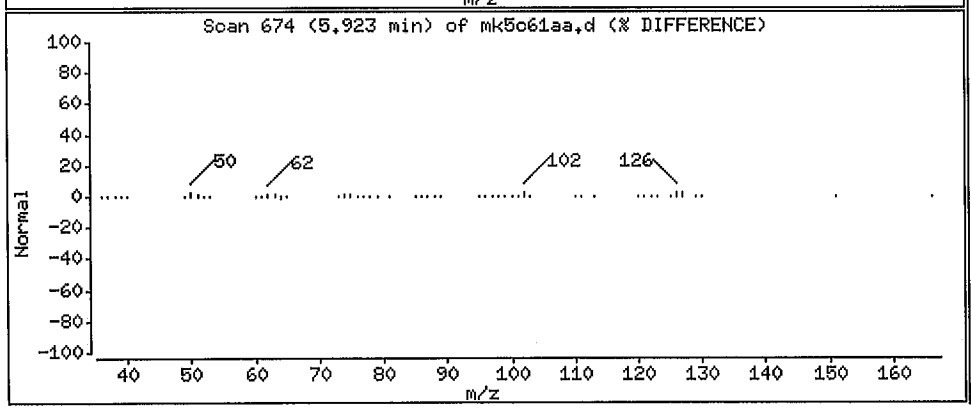
37 Naphthalene

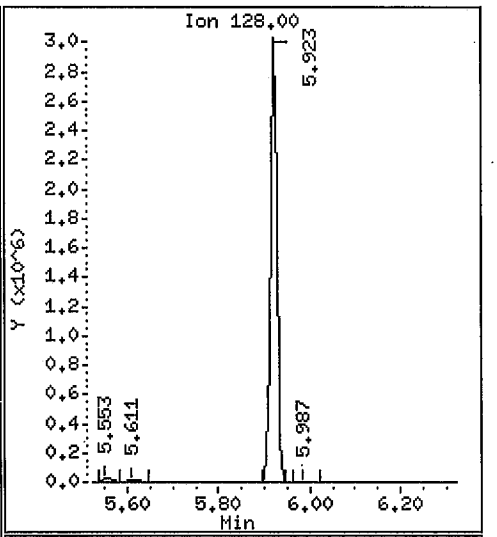
Concentration: 21200 ug

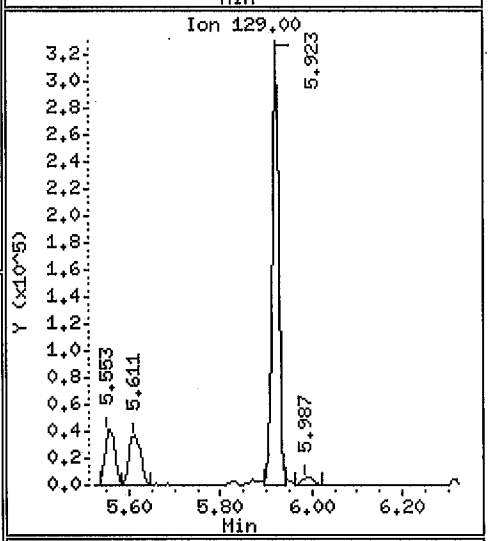


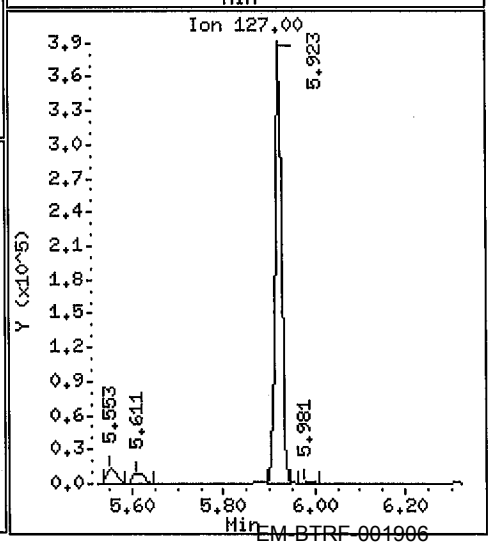












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

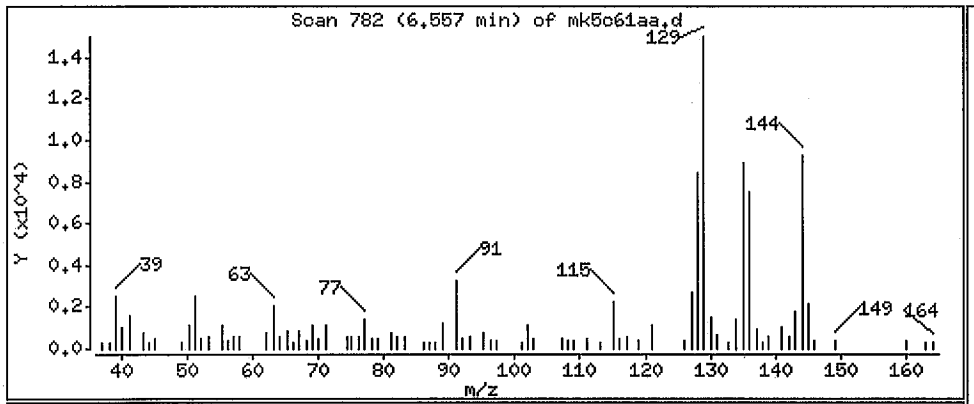
Client ID: EXM-DCU-M0010-R3-C0 Instrument: md.i

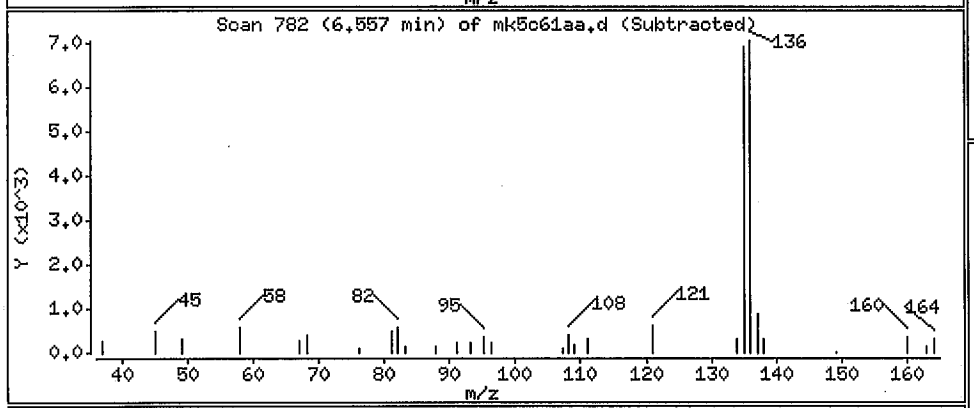
Sample Info: MK5C61AA,20,0,,,

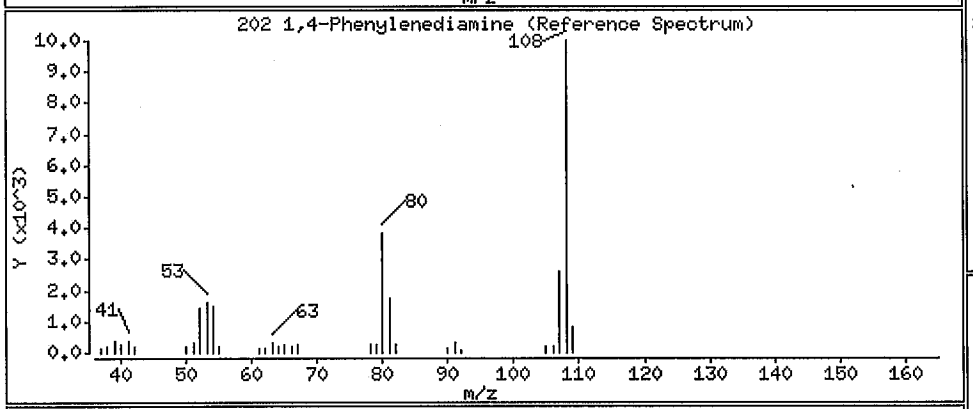
Volume Injected (uL): 1.0 Operator: 60487

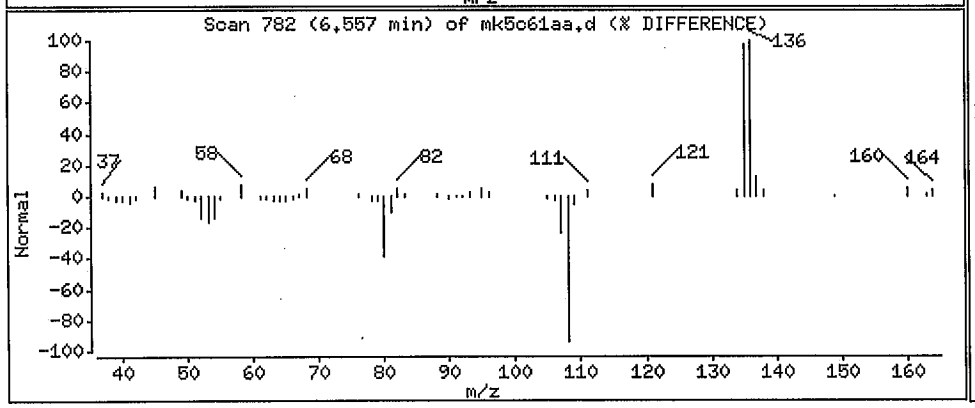
Column phase: Rxi-5 Sil MS Column diameter: 0.25

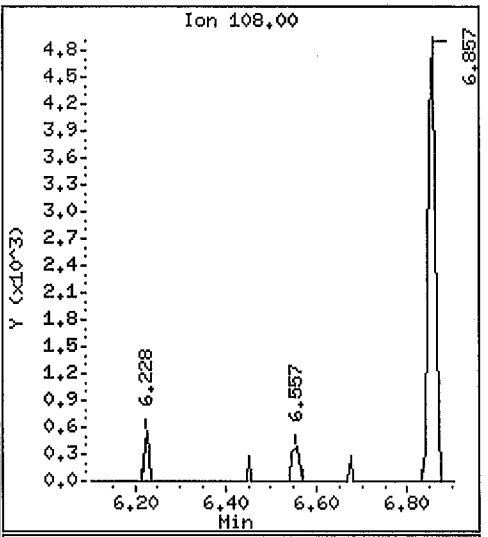
202 1,4-Phenylenediamine Concentration: 505 ug

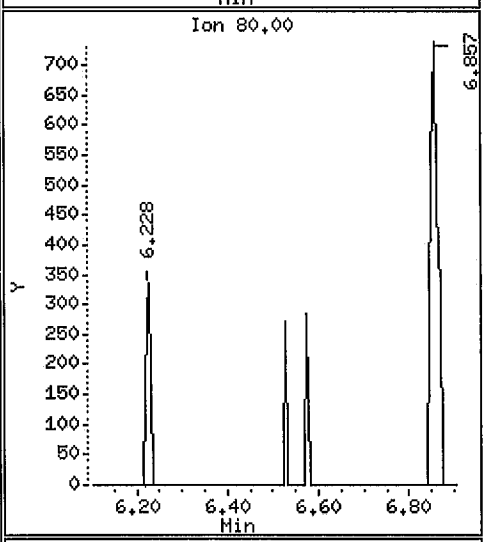


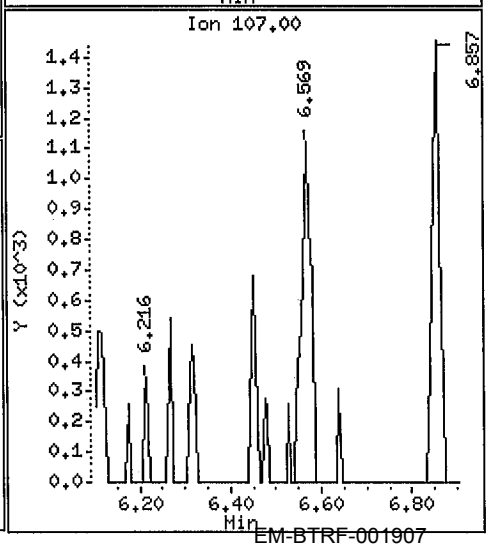












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

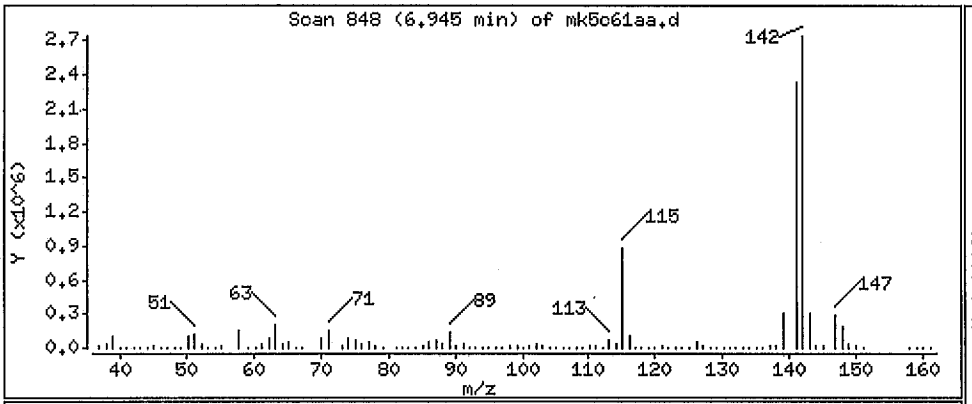
Operator: 60487

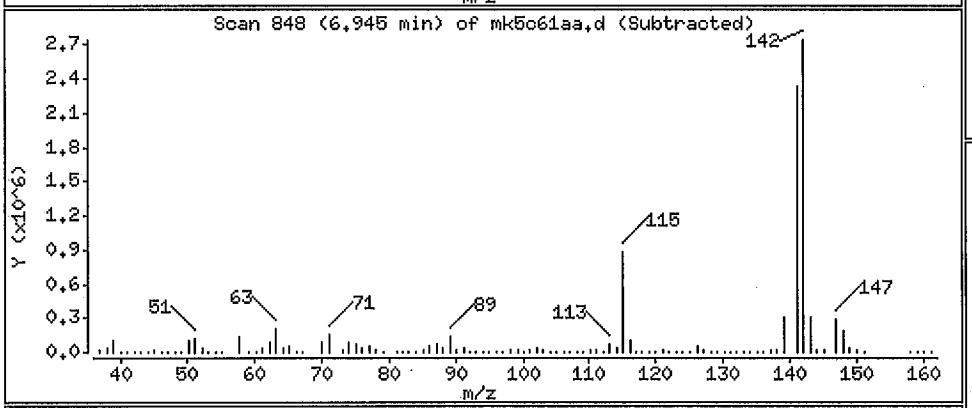
Column phase: Rxi-5 Sil MS

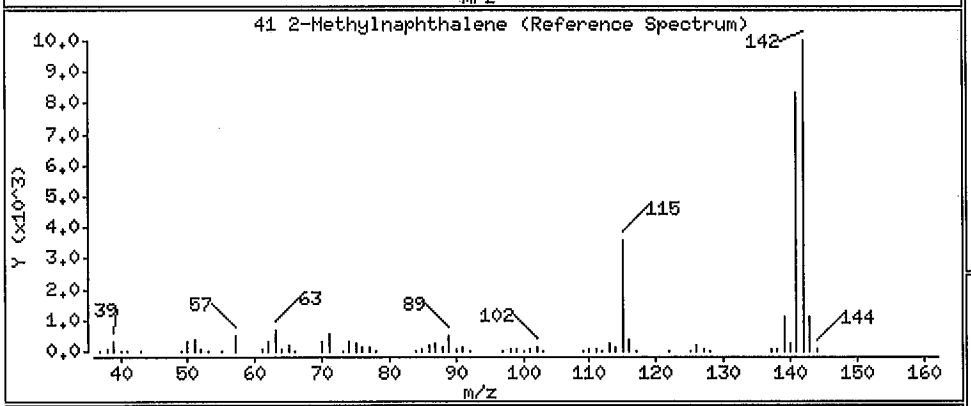
Column diameter: 0.25

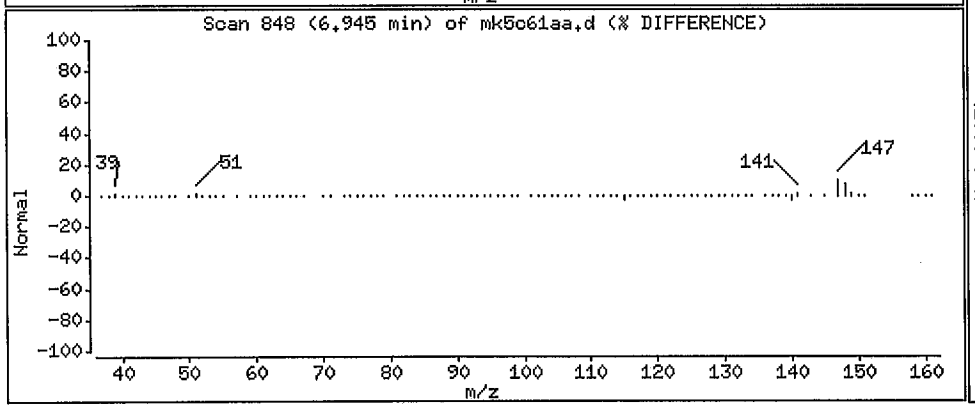
41 2-Methylnaphthalene

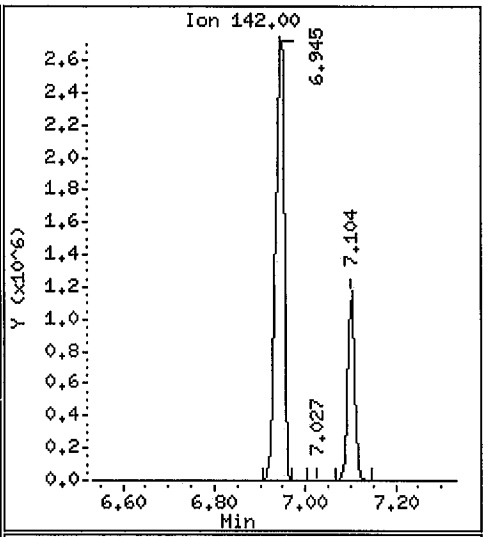
Concentration: 38000 ug

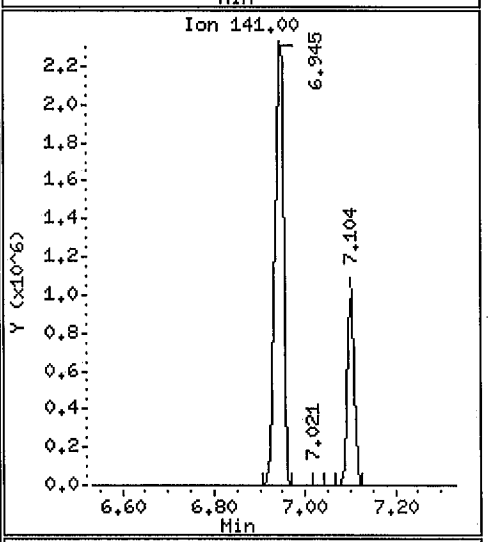


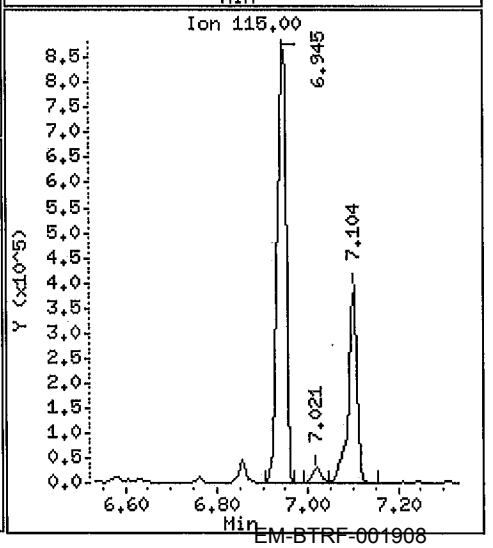












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

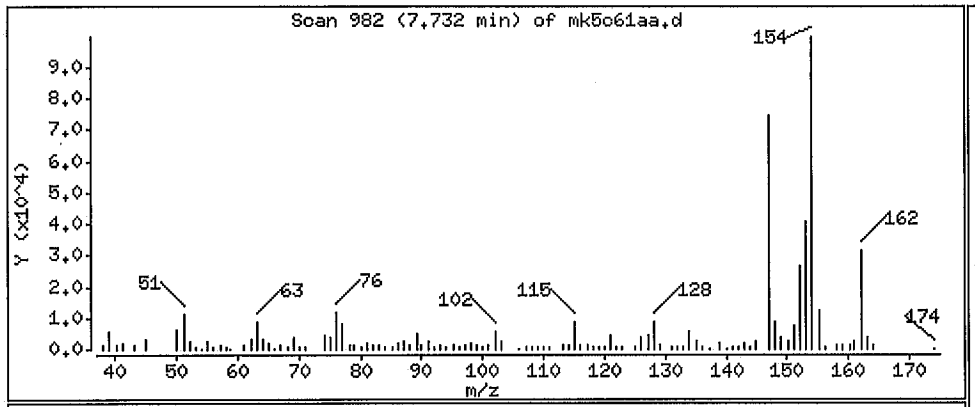
Operator: 60487

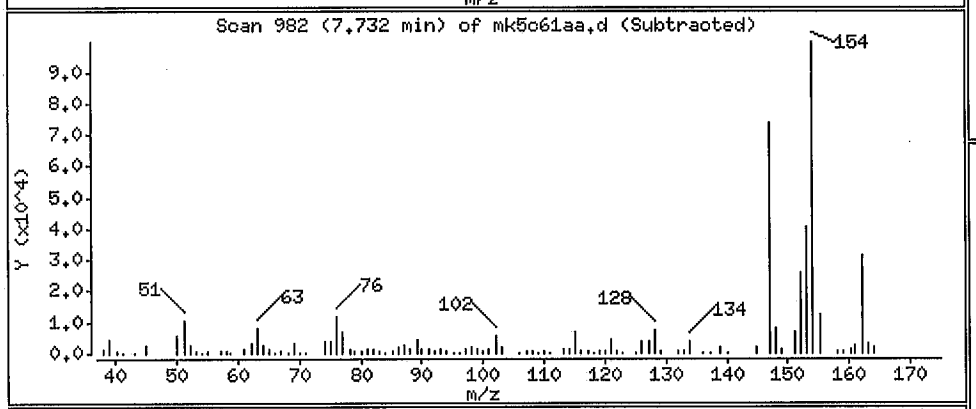
Column phase: Rxi-5 Sil MS

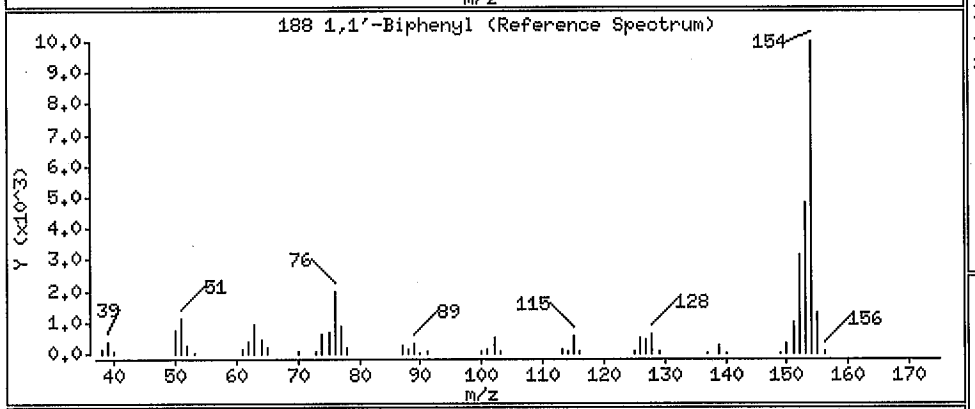
Column diameter: 0.25

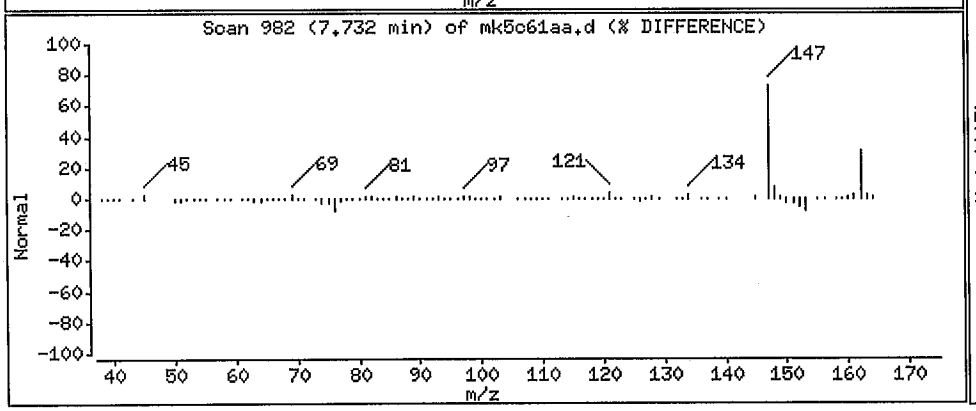
188 1,1'-Biphenyl

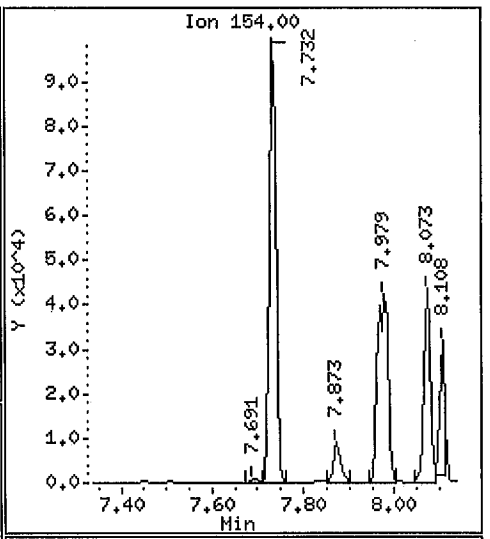
Concentration: 639 ug

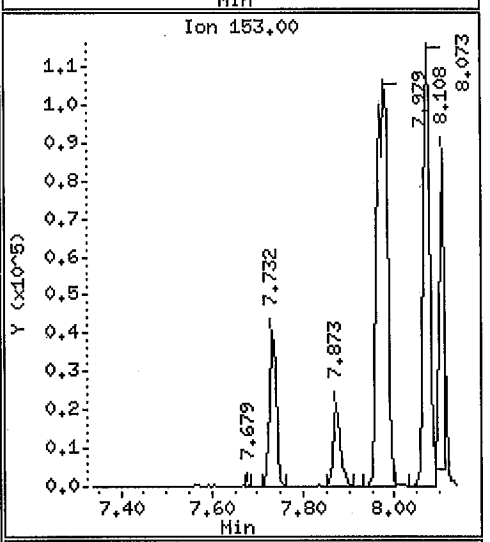


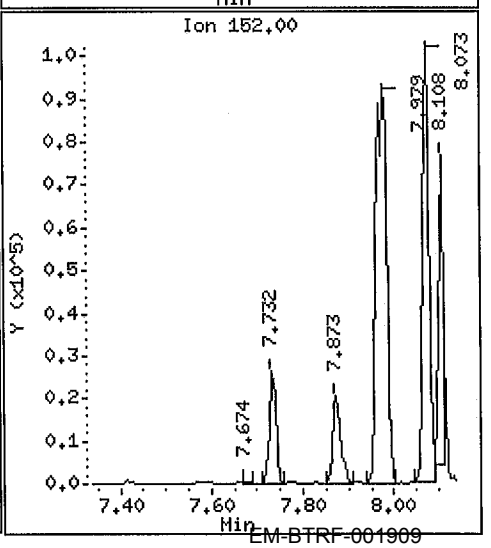












Data File: /var/ohem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

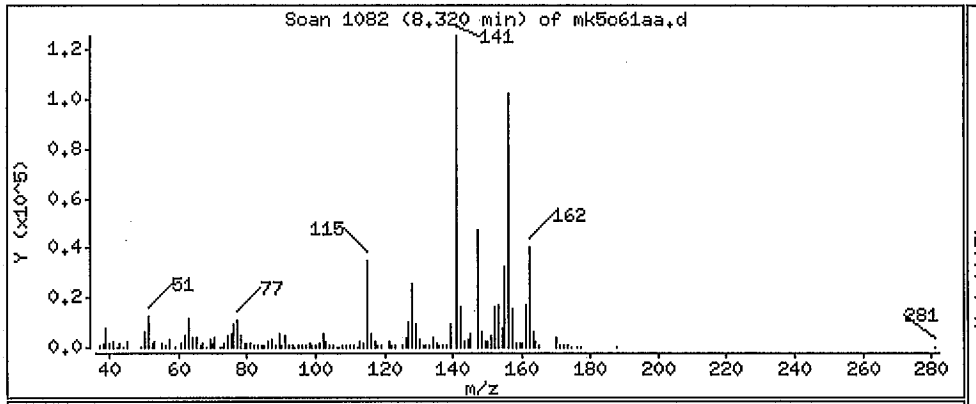
Operator: 60487

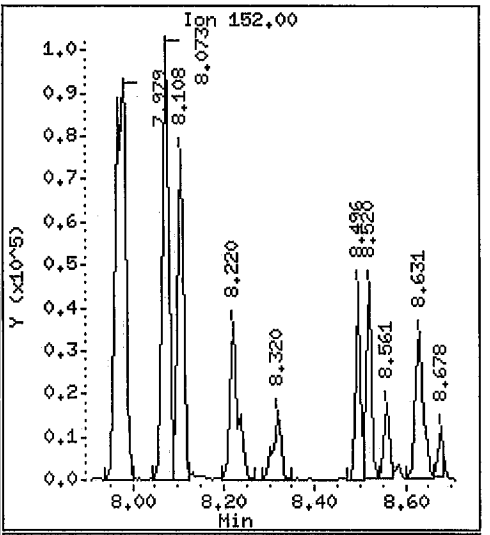
Column phase: Rxi-5 Sil MS

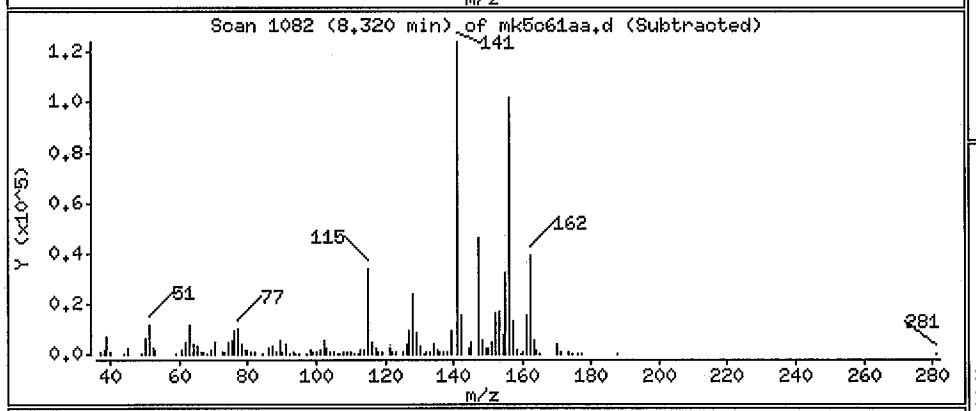
Column diameter: 0.25

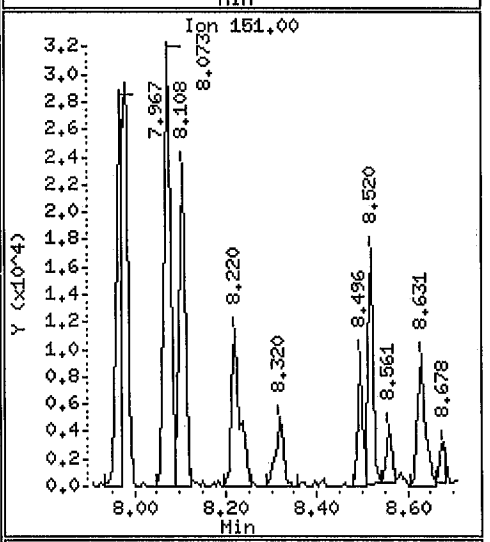
47 Acenaphthylene

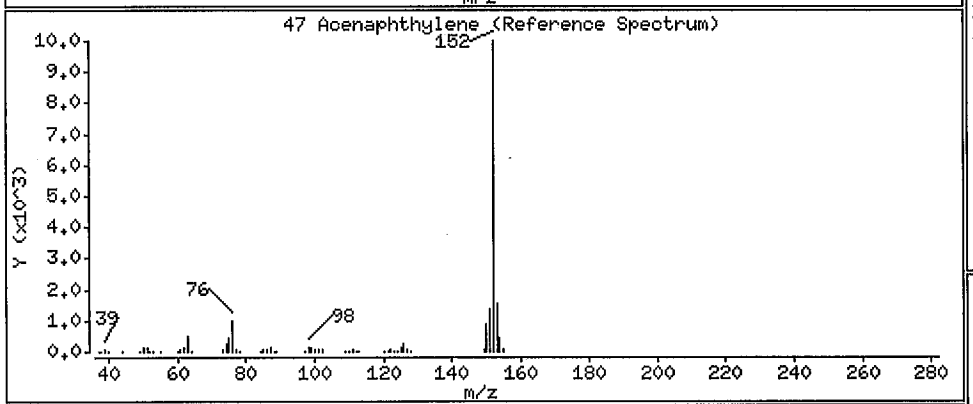
Concentration: 123 ug

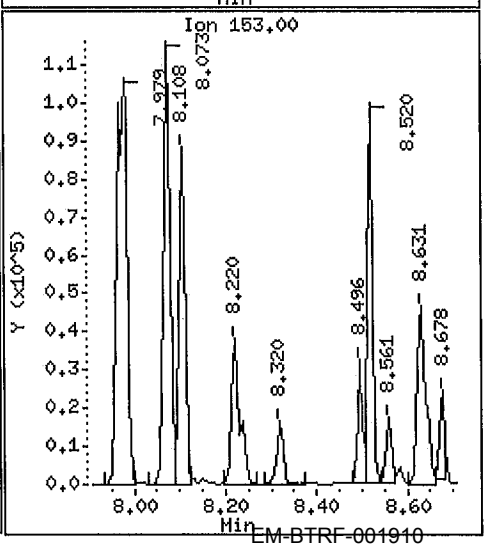


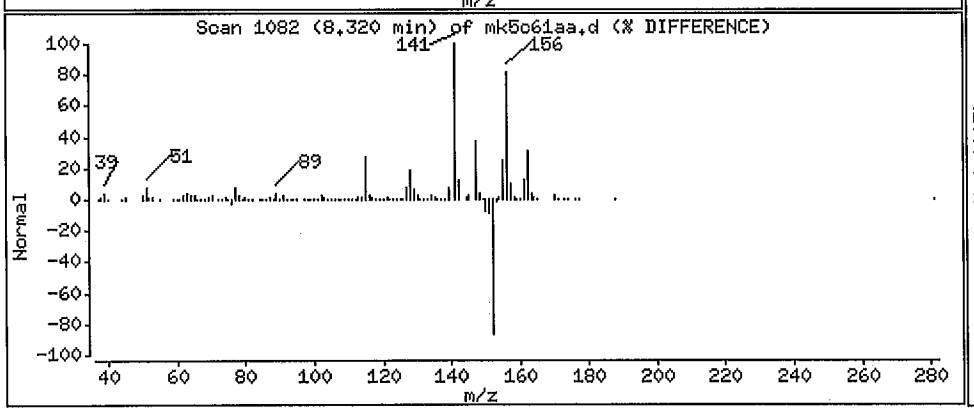












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

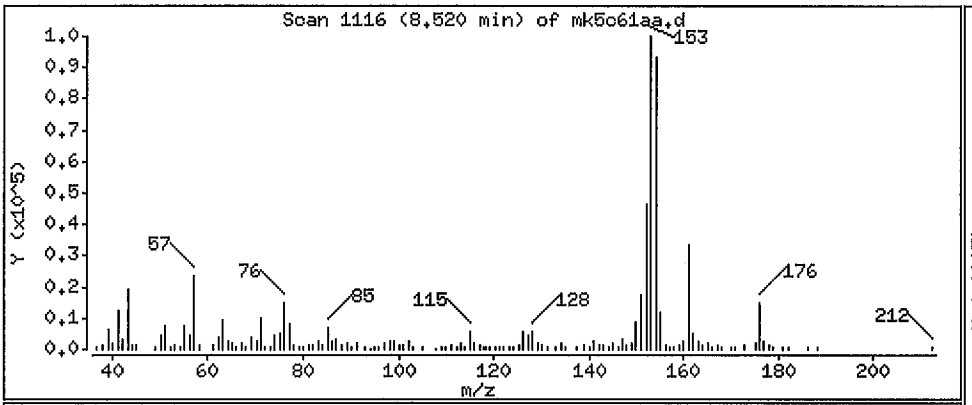
Operator: 60487

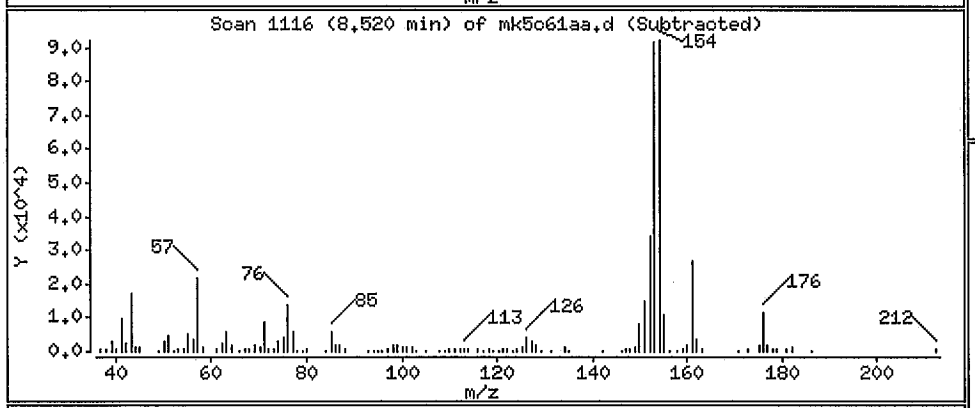
Column phase: Rxi-5 Sil MS

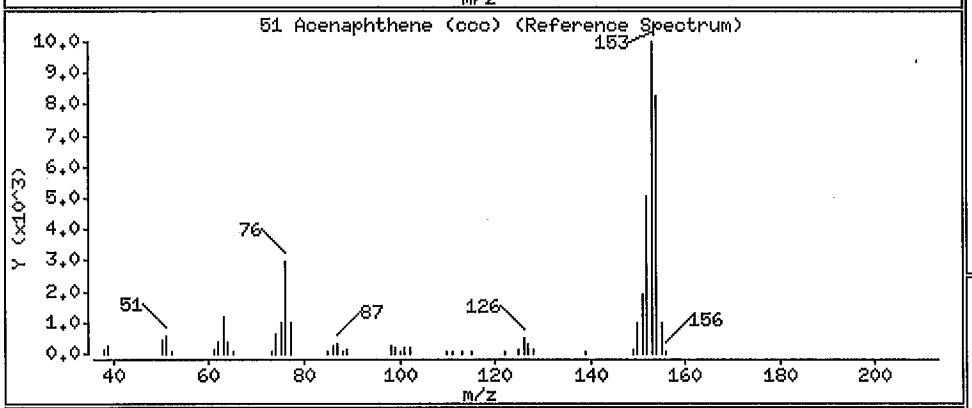
Column diameter: 0.25

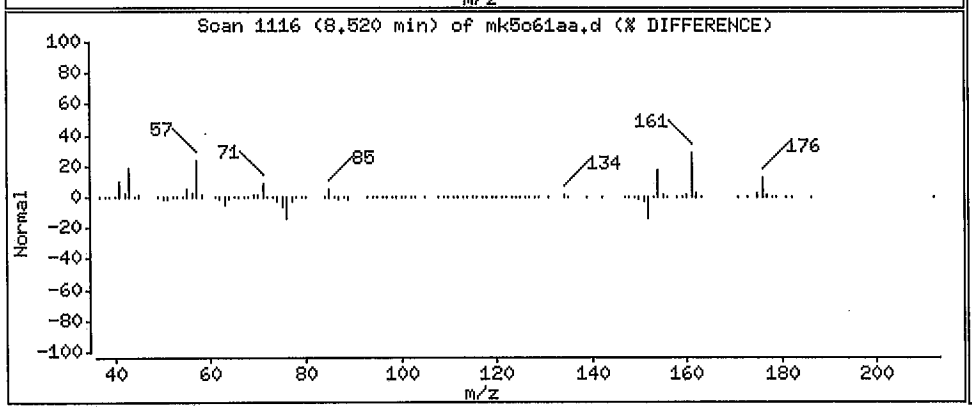
51 Acenaphthene (ccc)

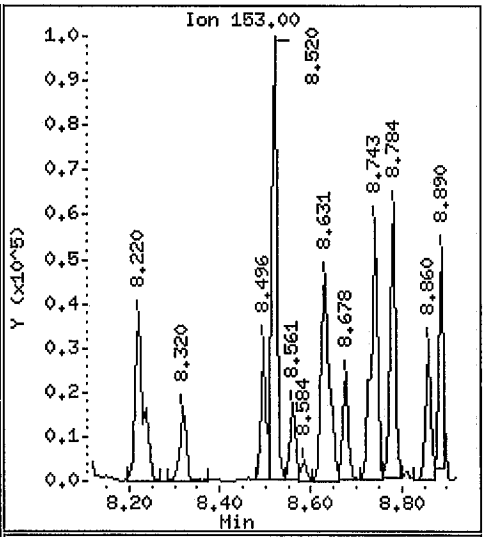
Concentration: 734 ug

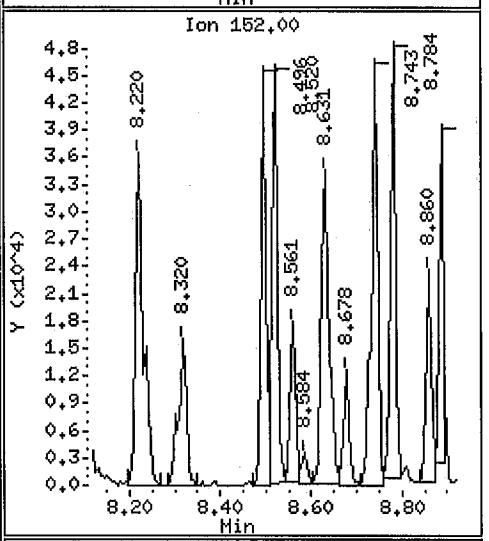


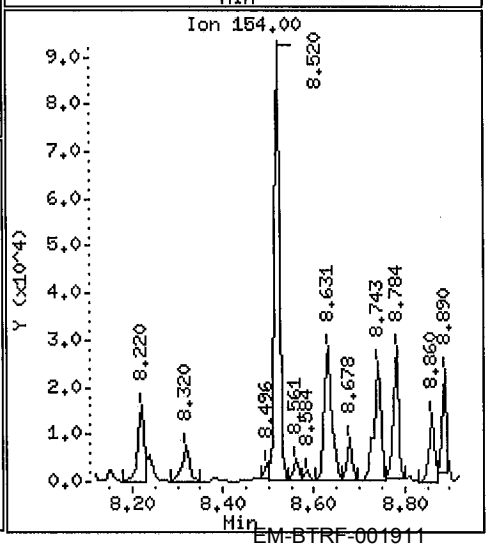












Data File: /var/chem/goms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

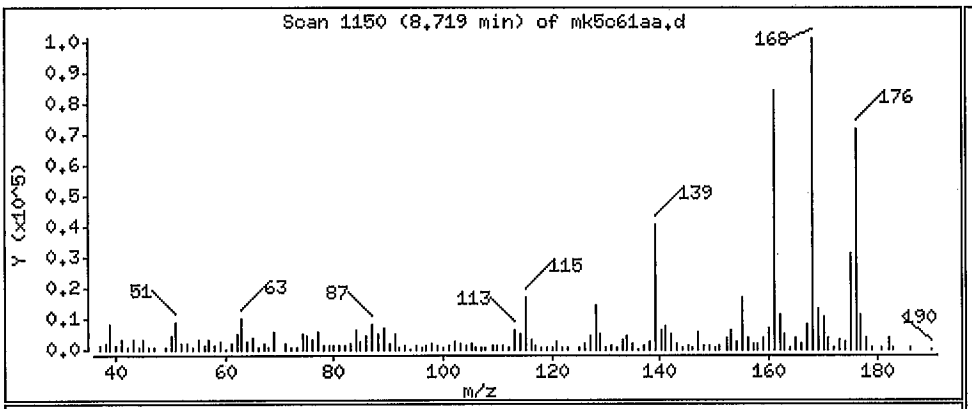
Operator: 60487

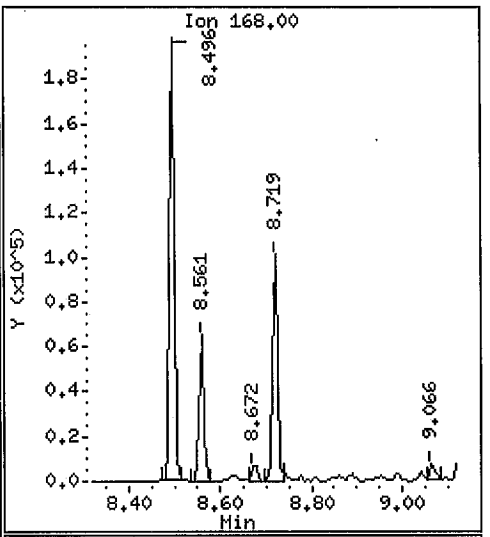
Column phase: Rxi-5 Sil MS

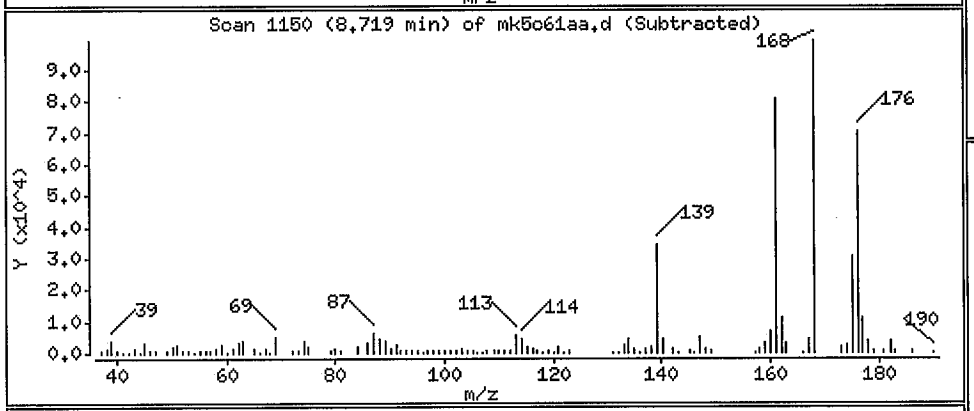
Column diameter: 0.25

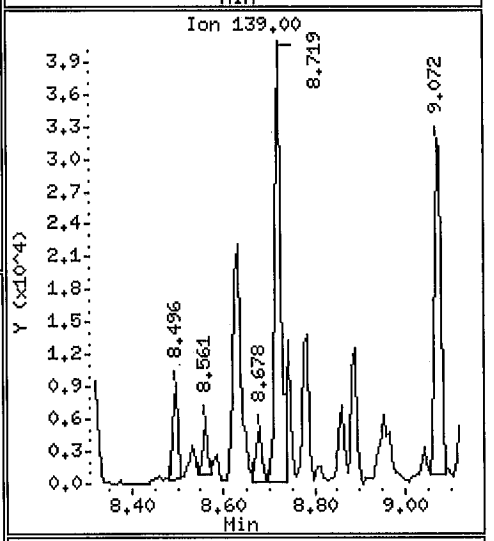
53 Dibenzofuran

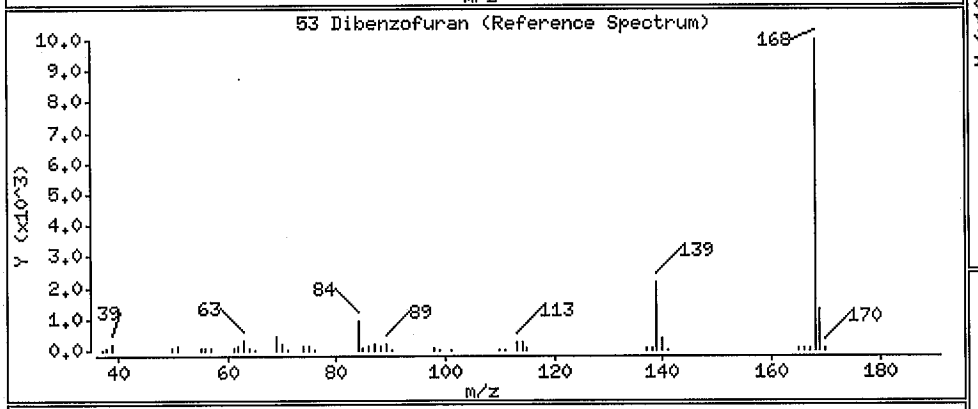
Concentration: 514 ug

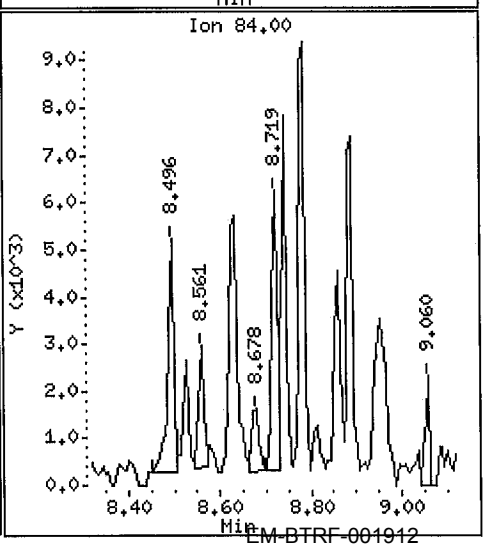


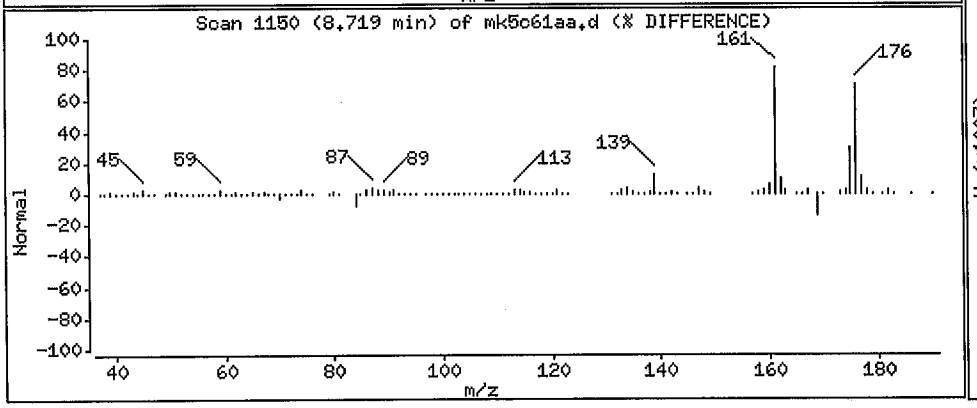












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

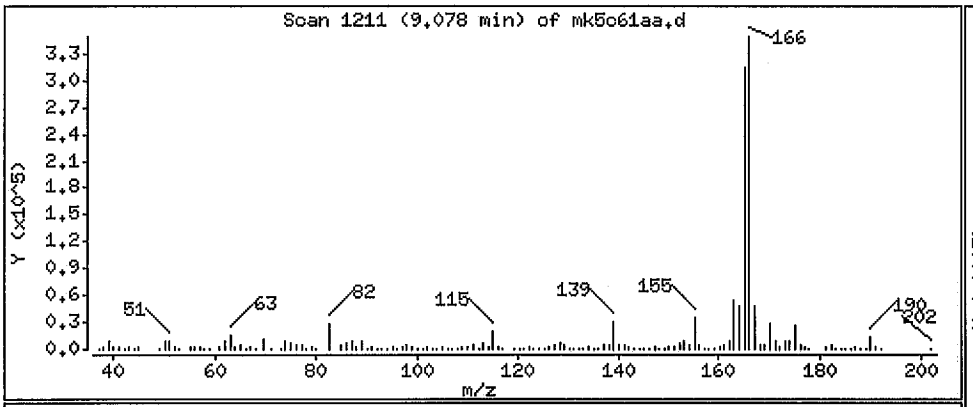
Client ID: EXM-DCU-M0010-R3-C0 Instrument: md.i

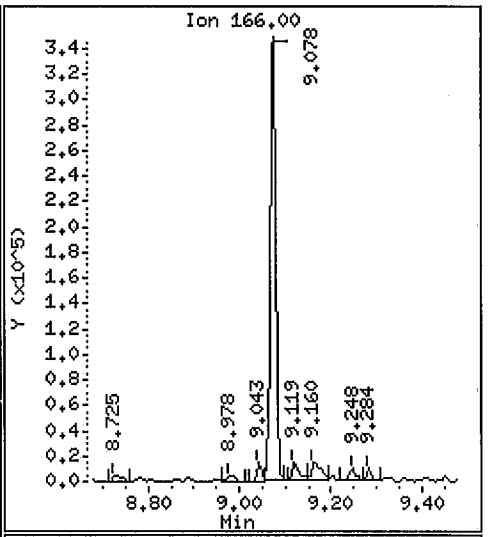
Sample Info: MK5C61AA,20,0,,,

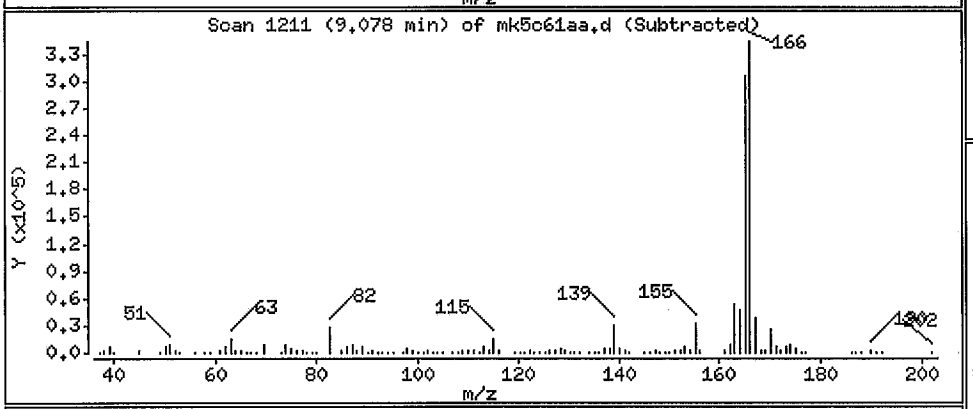
Volume Injected (uL): 1.0 Operator: 60487

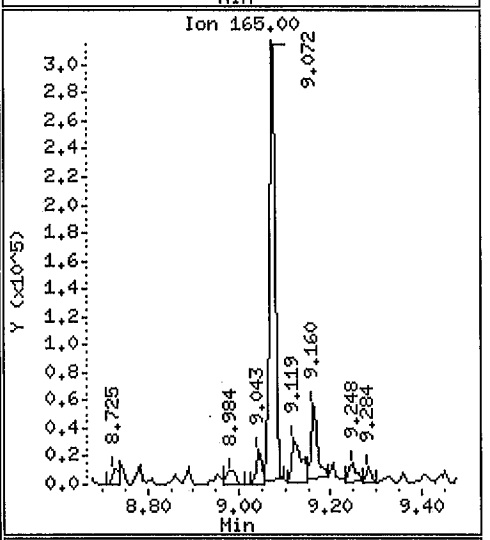
Column phase: Rxi-5 Sil MS Column diameter: 0.25

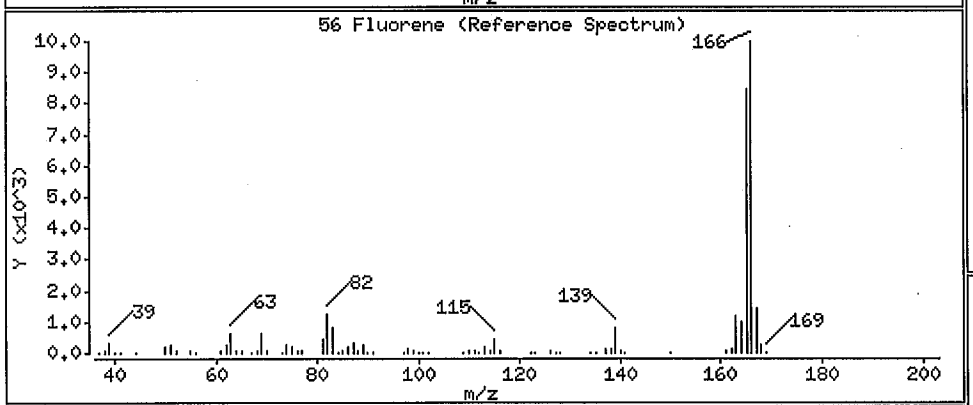
56 Fluorene Concentration: 2460 ug

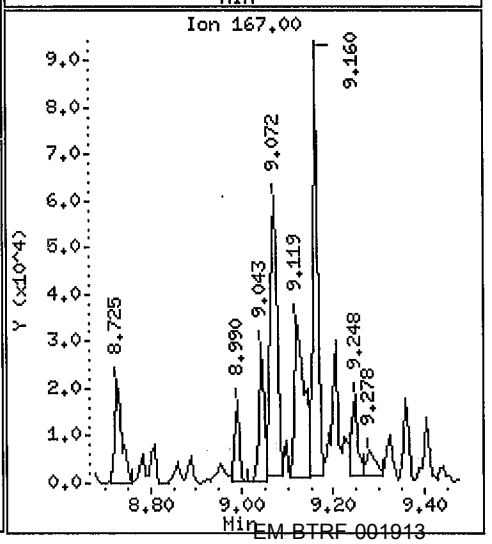


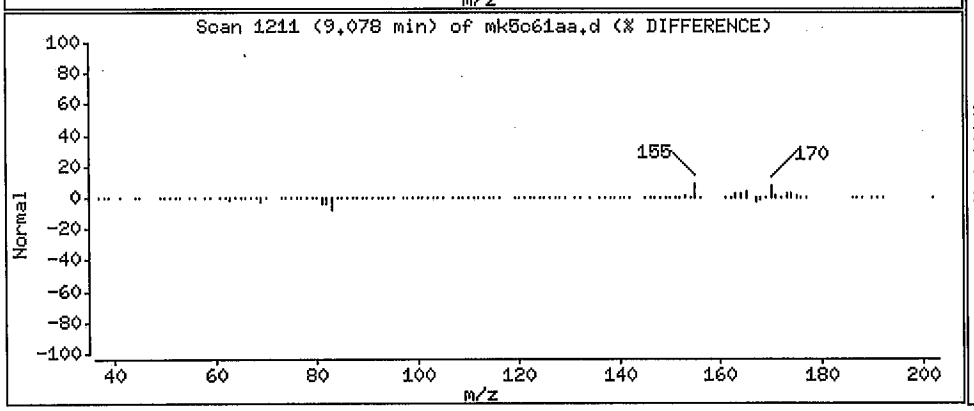












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

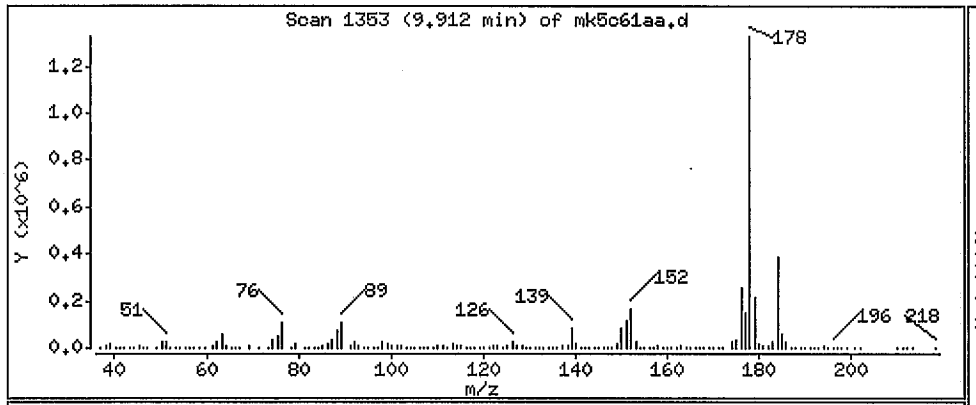
Operator: 60487

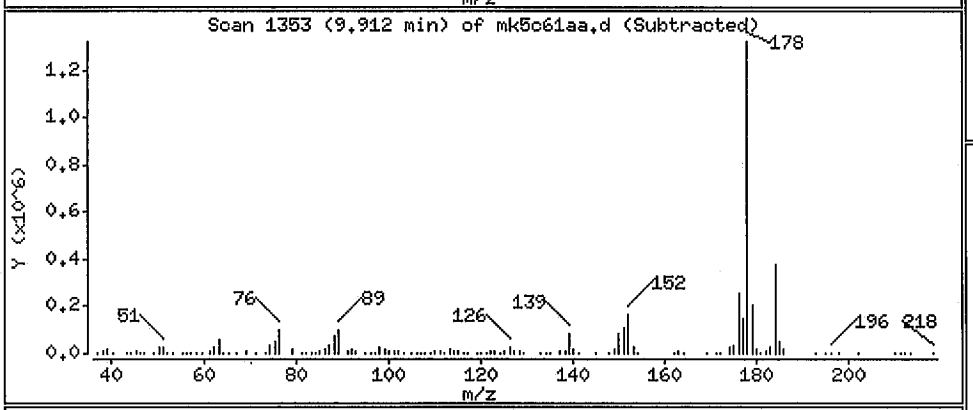
Column phase: Rxi-5 Sil MS

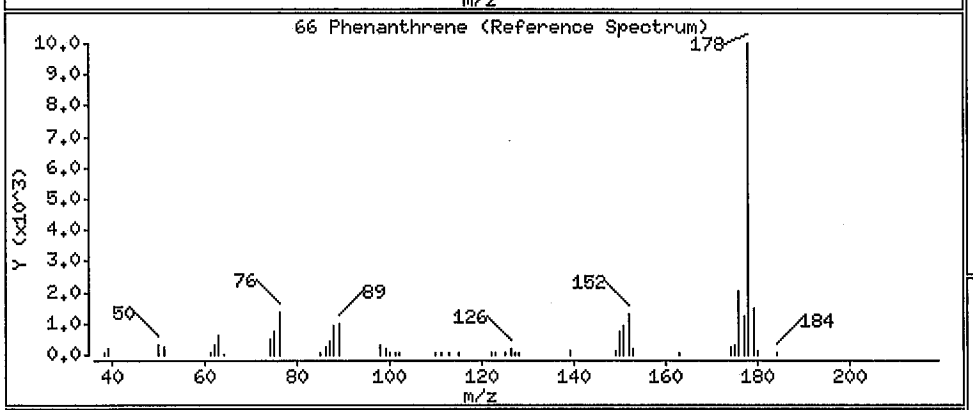
Column diameter: 0.25

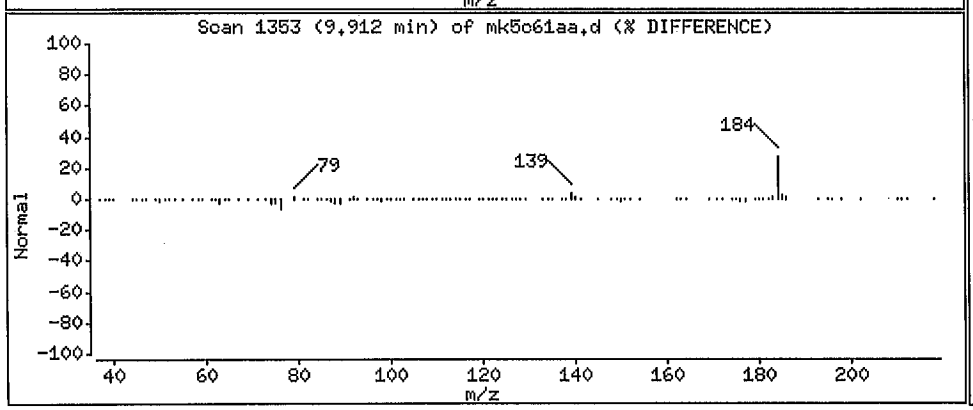
66 Phenanthrene

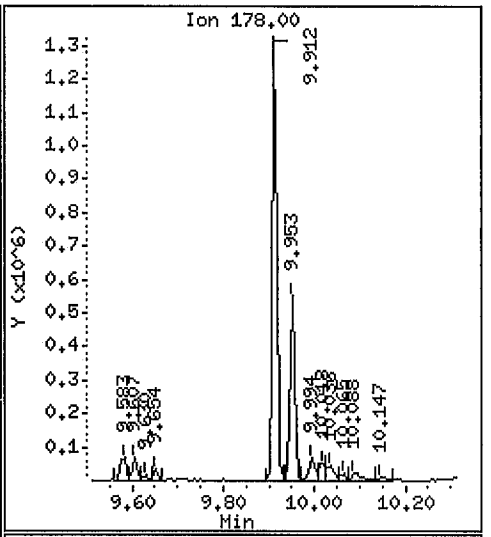
Concentration: 4630 ug

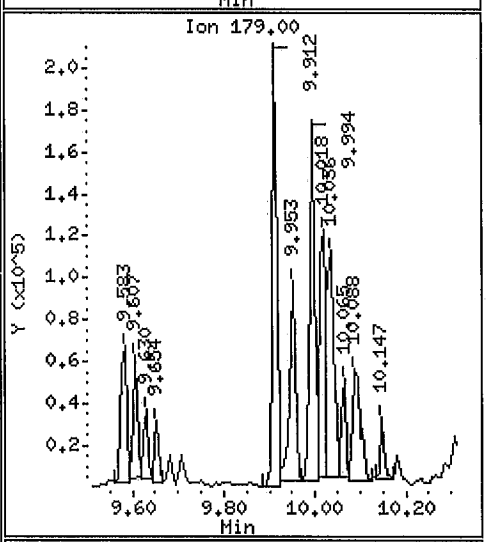


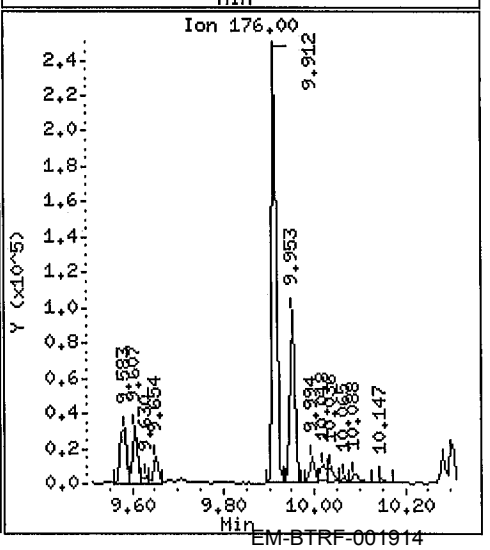












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

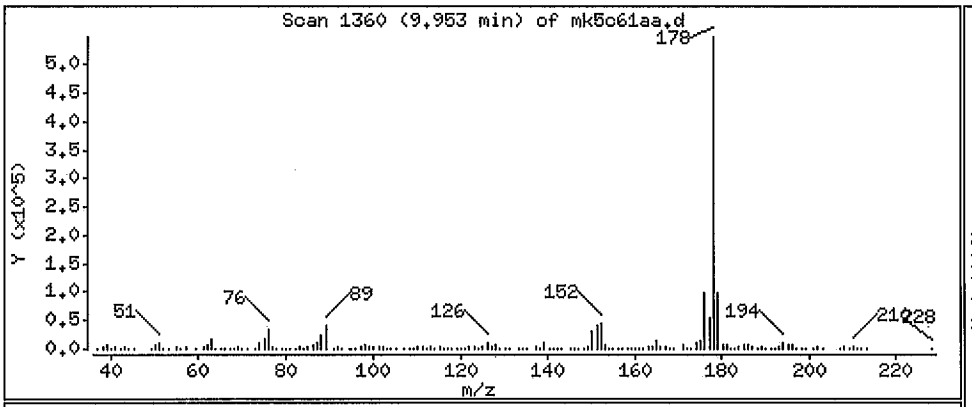
Operator: 60487

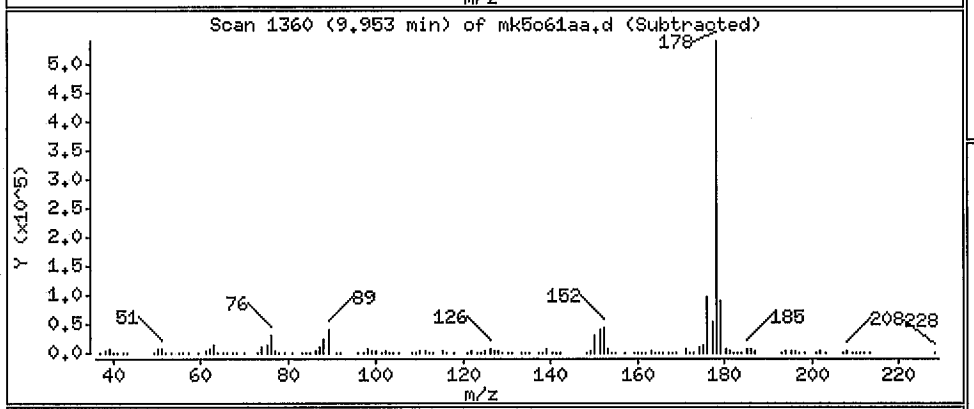
Column phase: Rxi-5 Sil MS

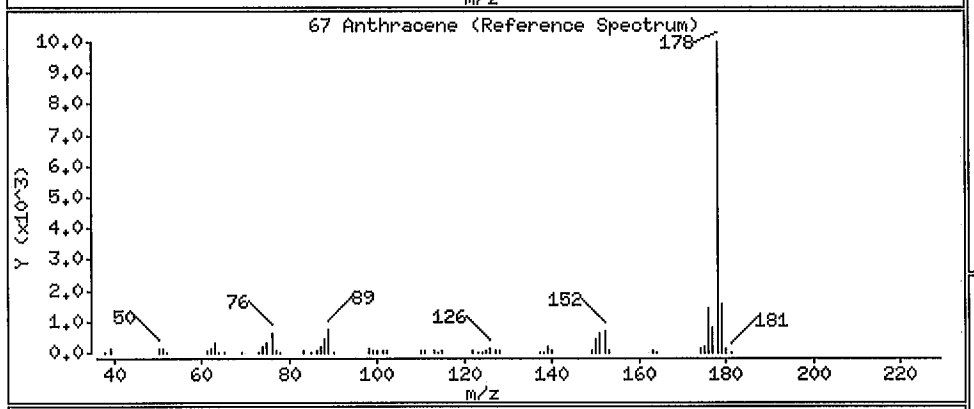
Column diameter: 0.25

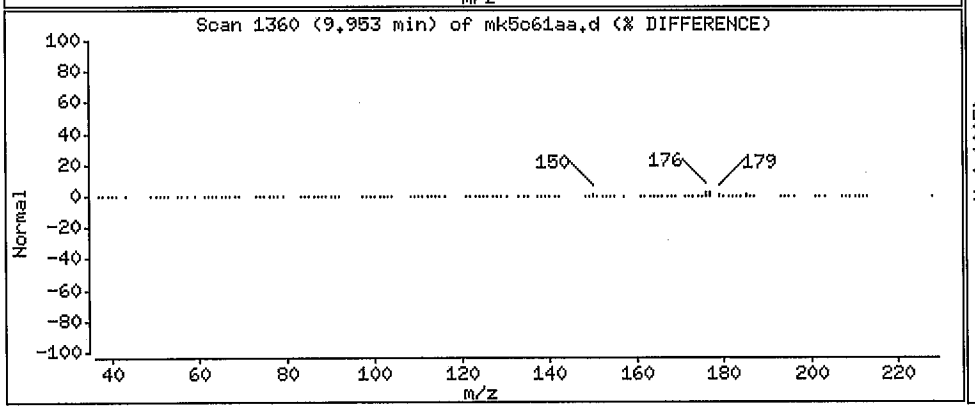
67 Anthracene

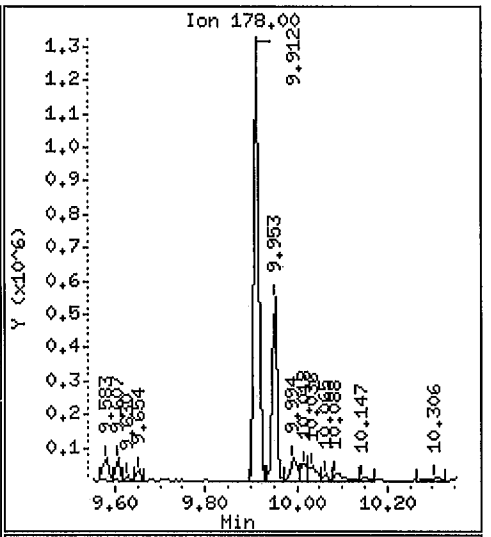
Concentration: 2110 ug

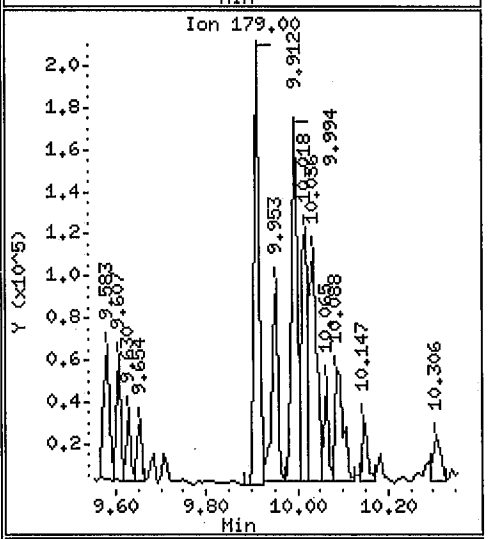


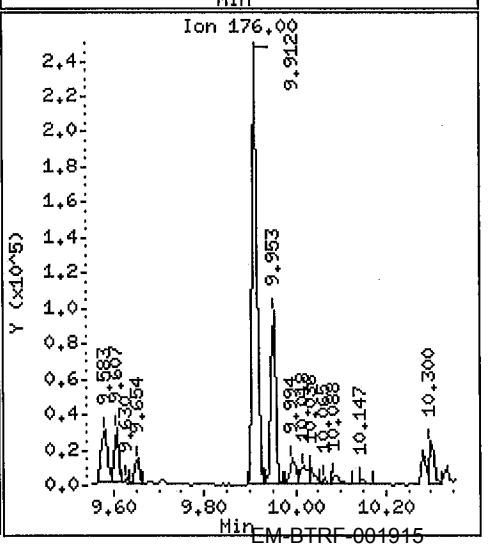












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

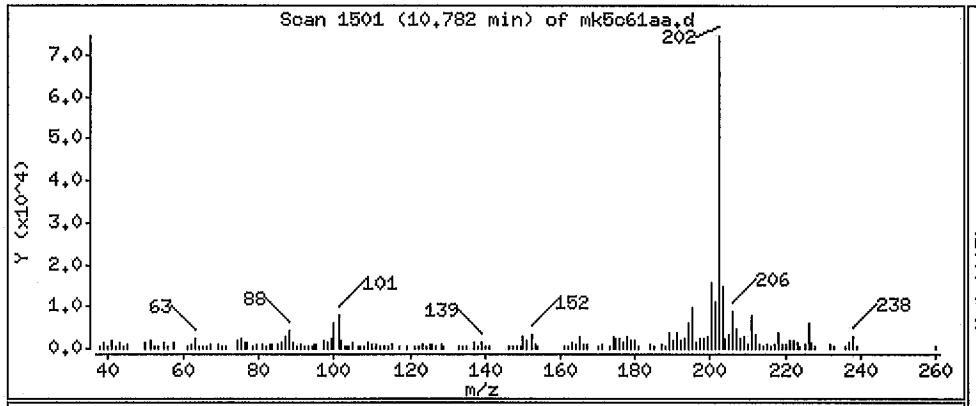
Operator: 60487

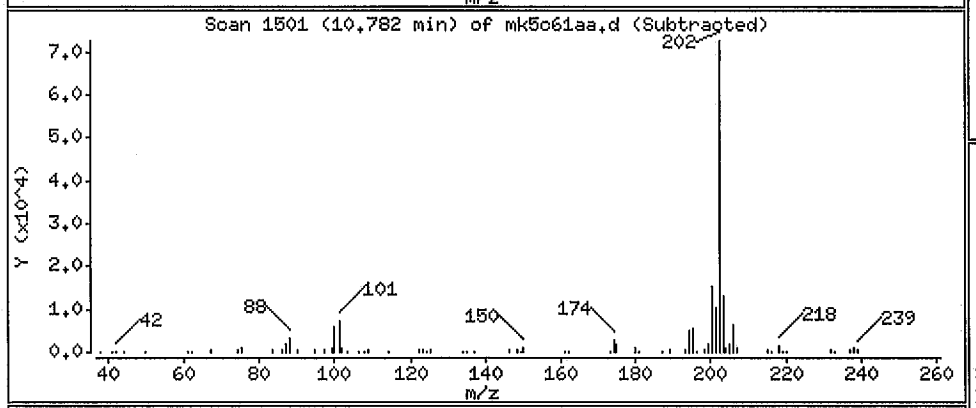
Column phase: Rxi-5 Sil MS

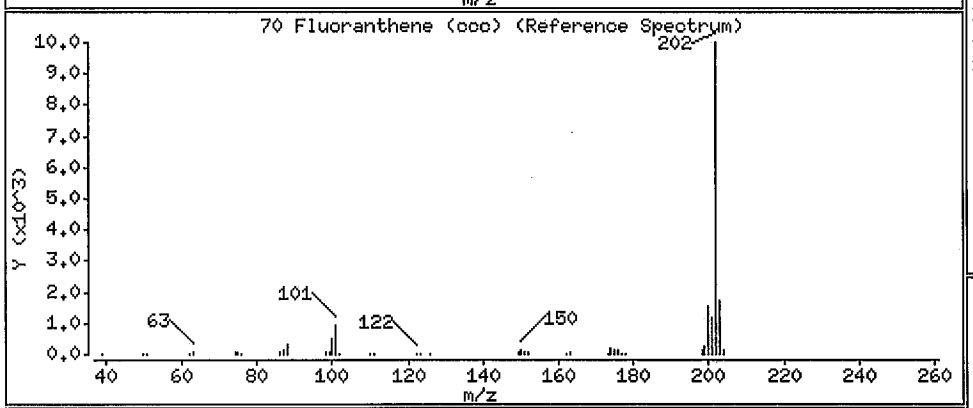
Column diameter: 0.25

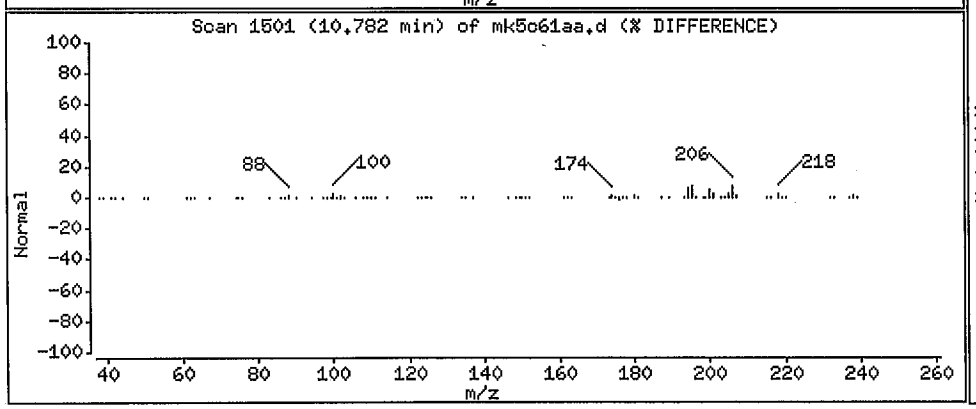
70 Fluoranthene (ccc)

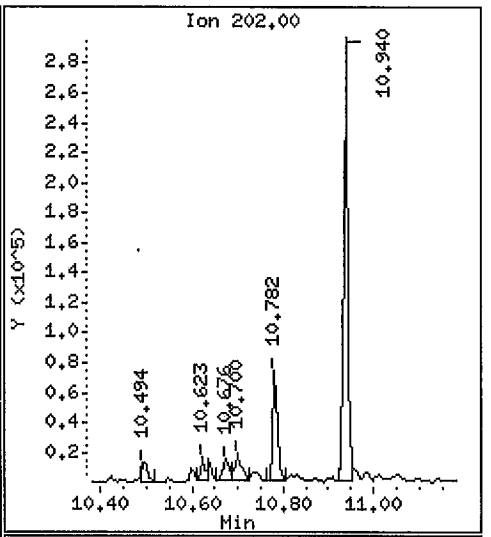
Concentration: 270 ug

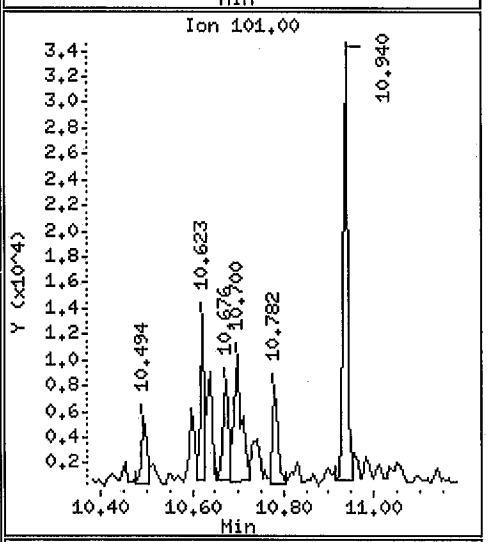


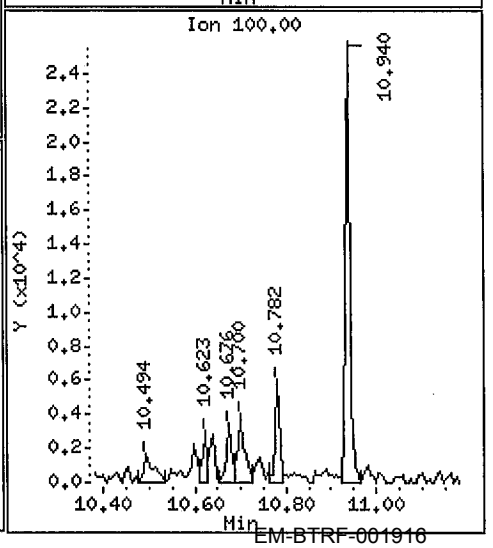












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

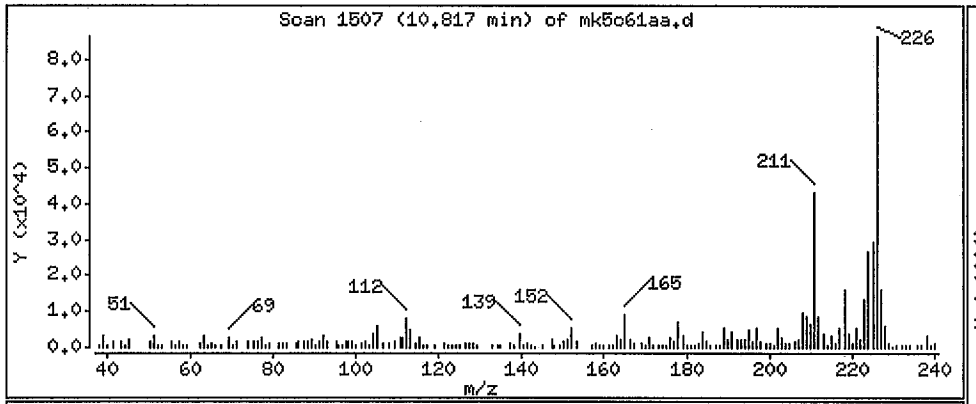
Operator: 60487

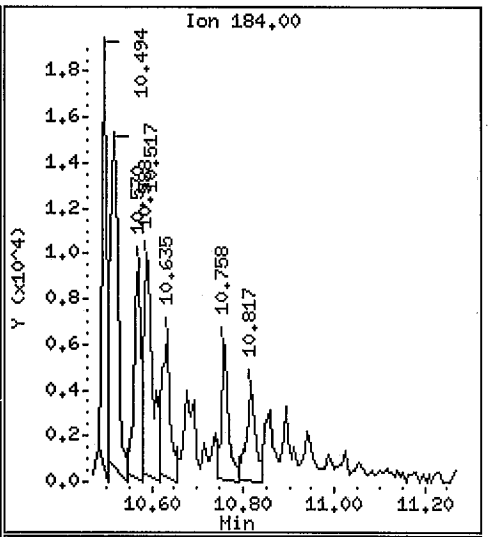
Column phase: Rxi-5 Sil MS

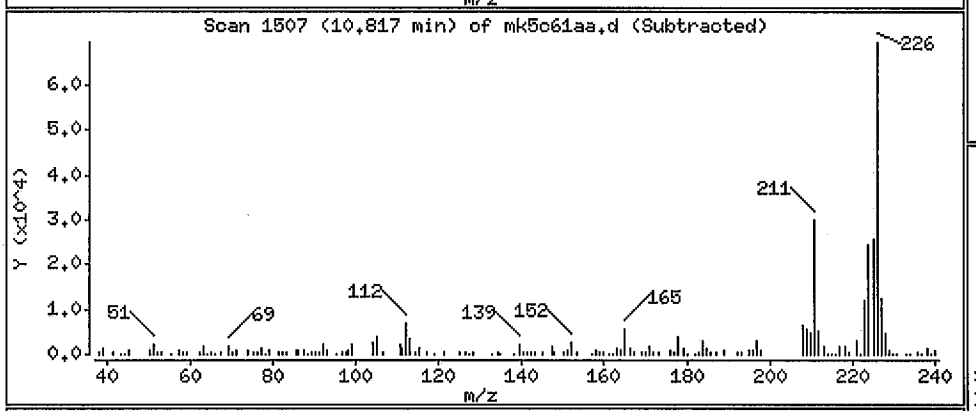
Column diameter: 0.25

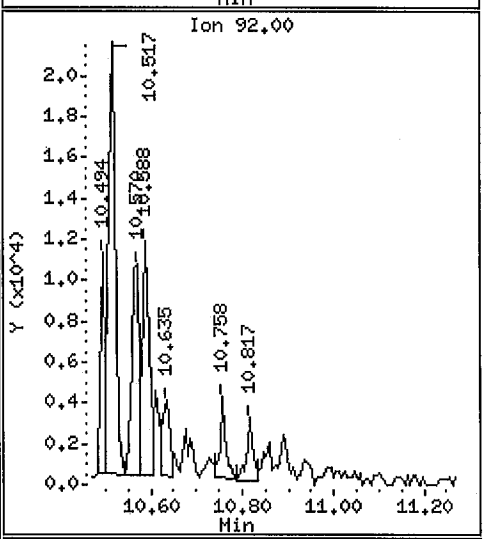
84 Benzidine

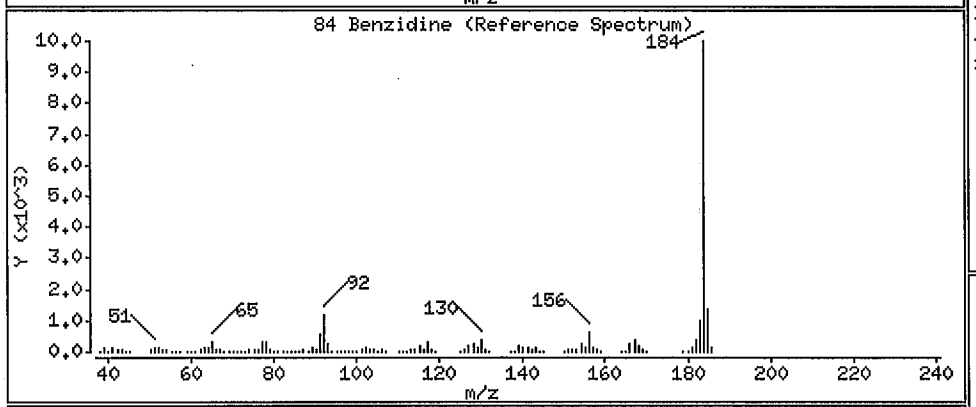
Concentration: 48.6 ug

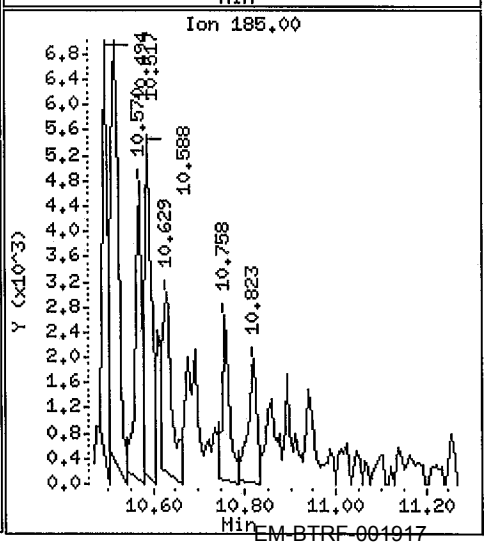


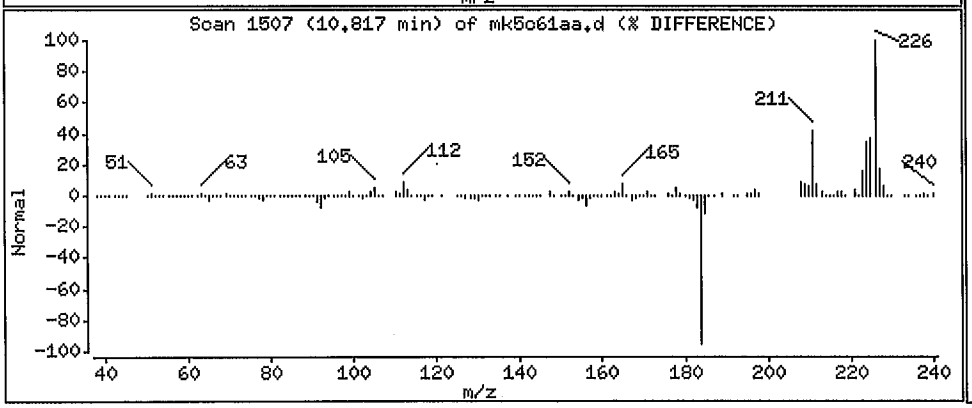












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

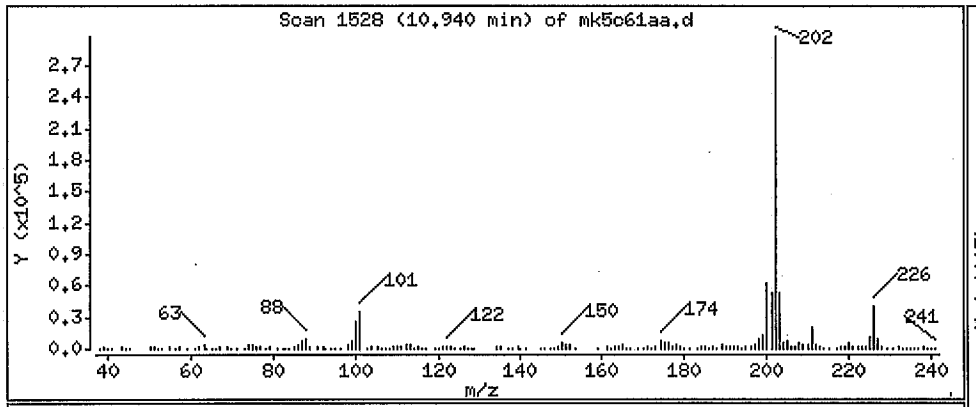
Operator: 60487

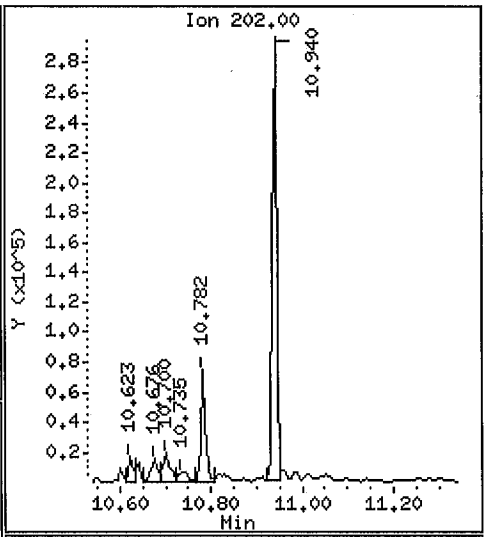
Column phase: Rxi-5 Sil MS

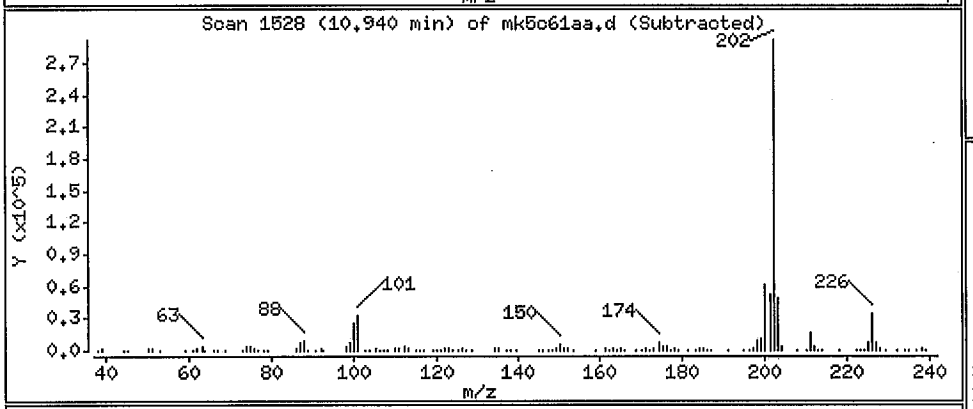
Column diameter: 0.25

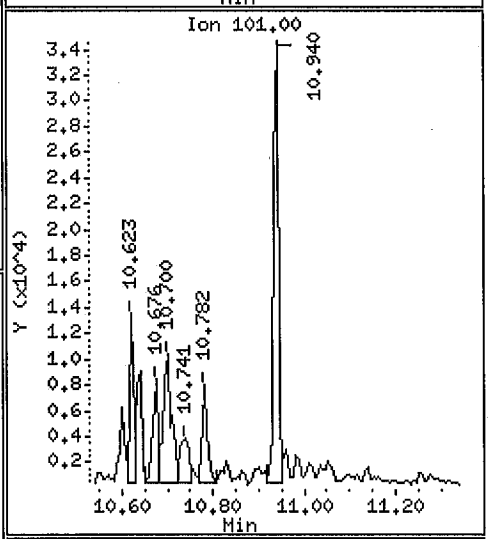
71 Pyrene

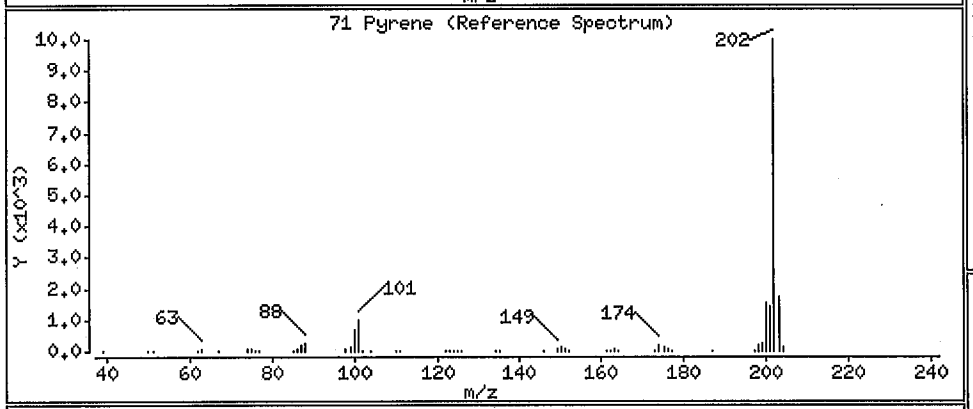
Concentration: 955 ug

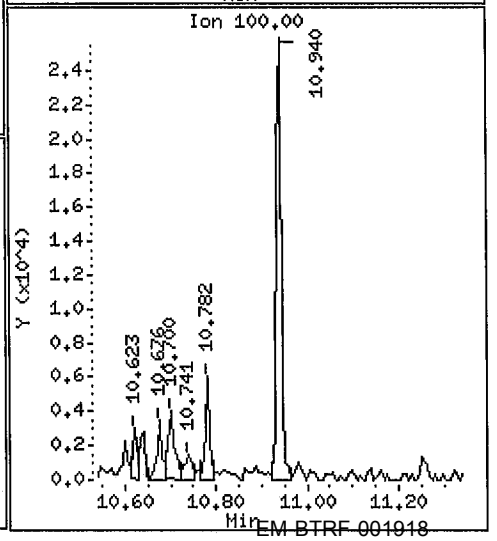


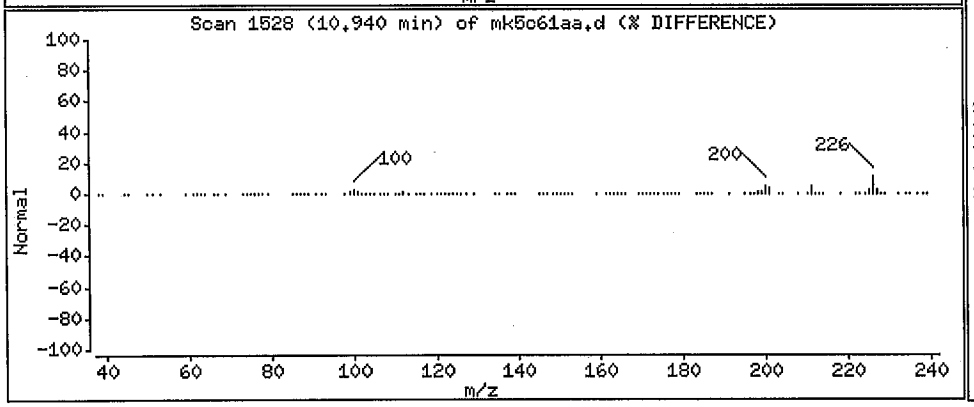












Data File: /var/chem/goms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

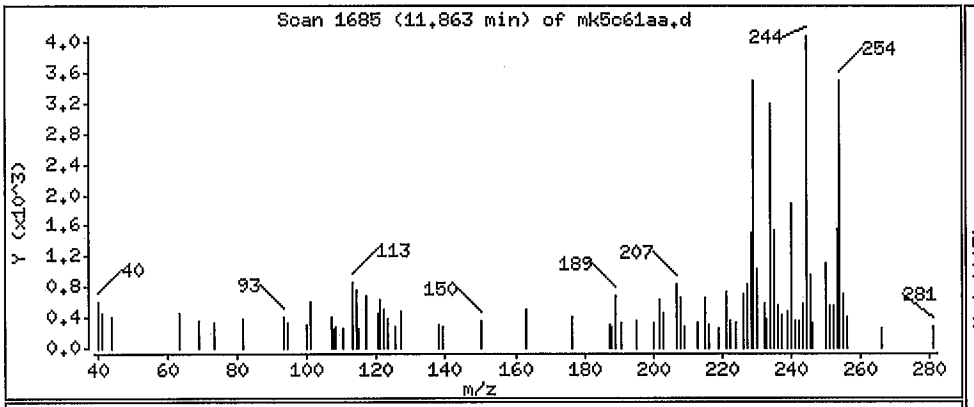
Operator: 60487

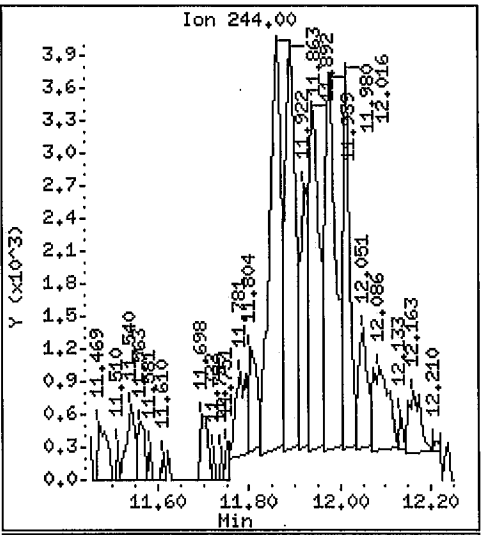
Column phase: Rxi-5 Sil MS

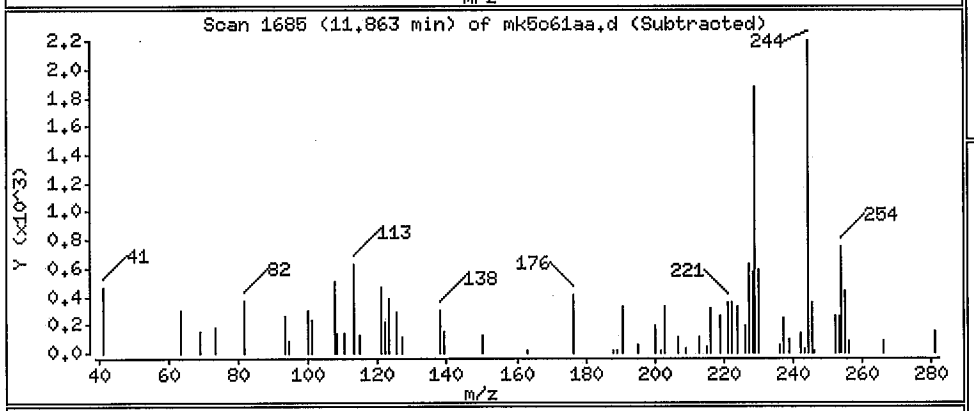
Column diameter: 0.25

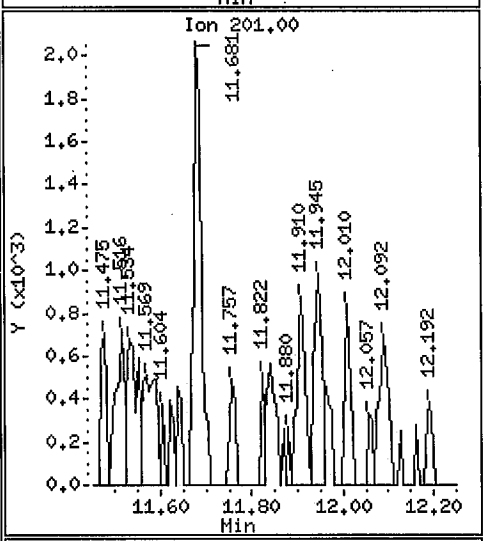
200 3,3'-Dimethoxybenzidine

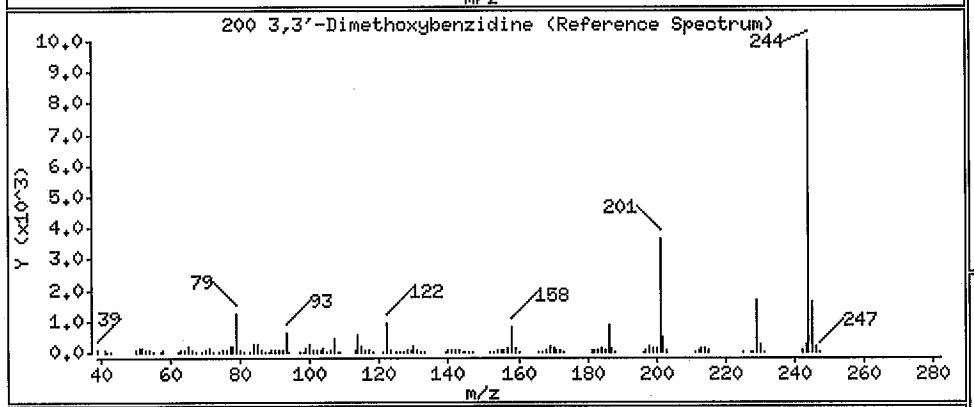
Concentration: 1120 ug

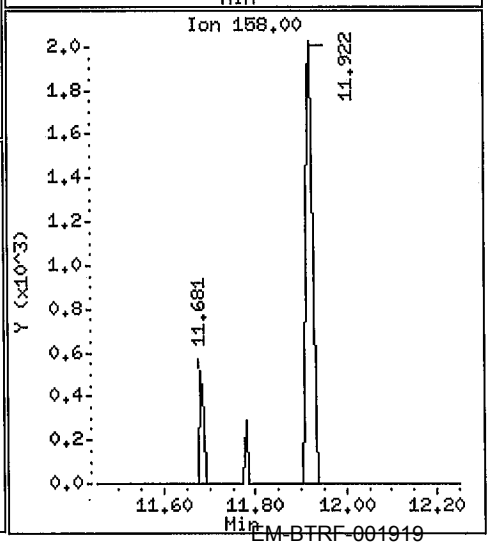


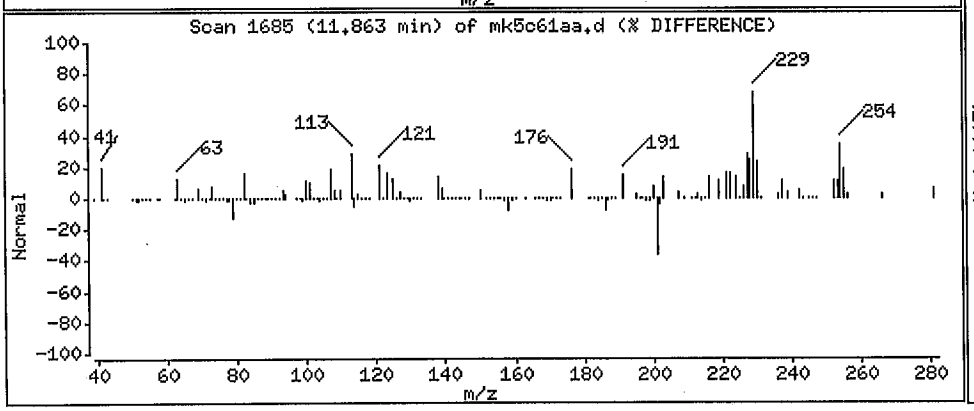












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

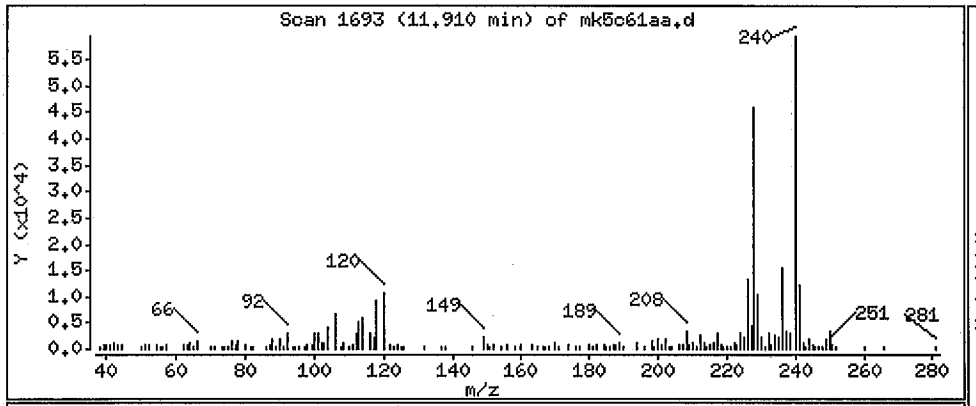
Operator: 60487

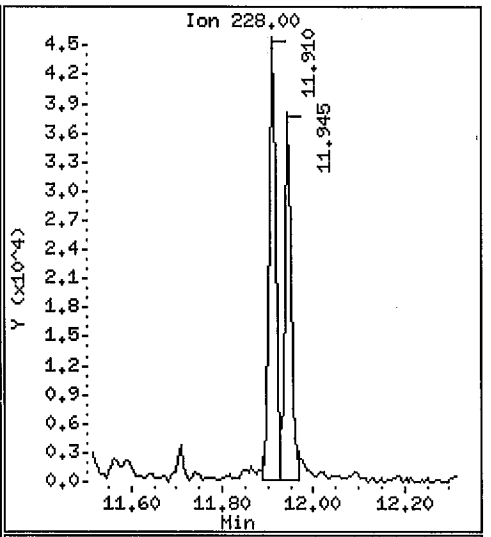
Column phase: Rxi-5 Sil MS

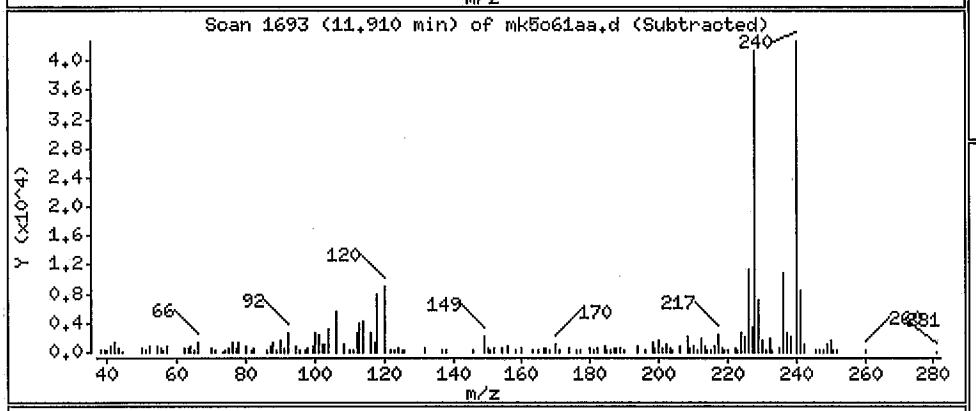
Column diameter: 0.25

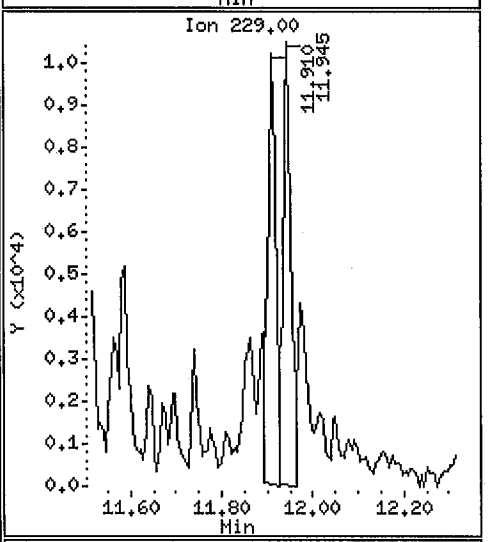
73 Benzo(a)Anthracene

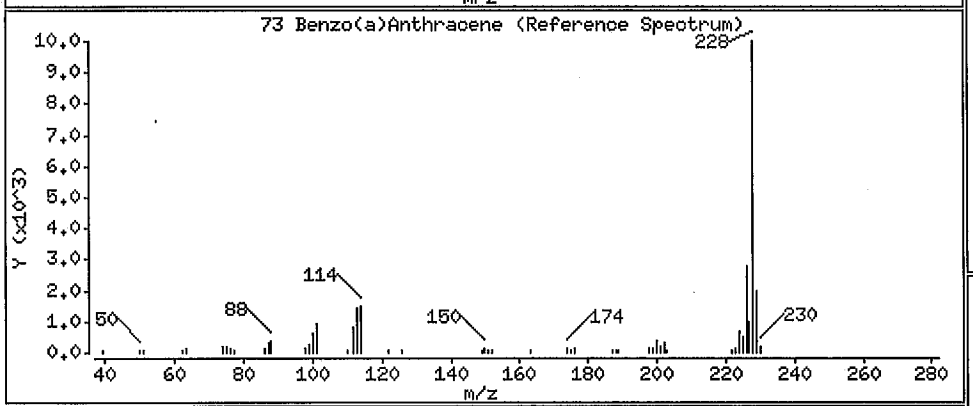
Concentration: 258 ug

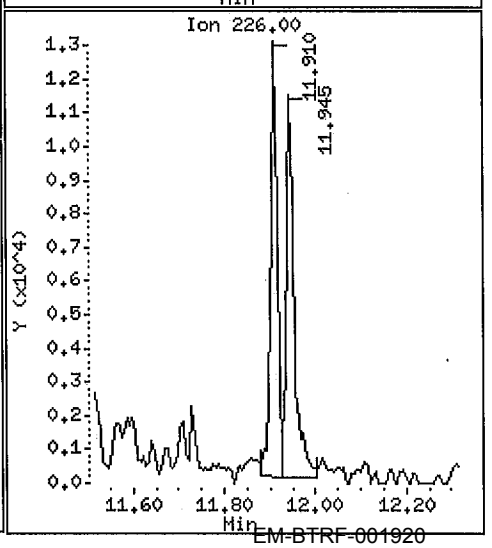


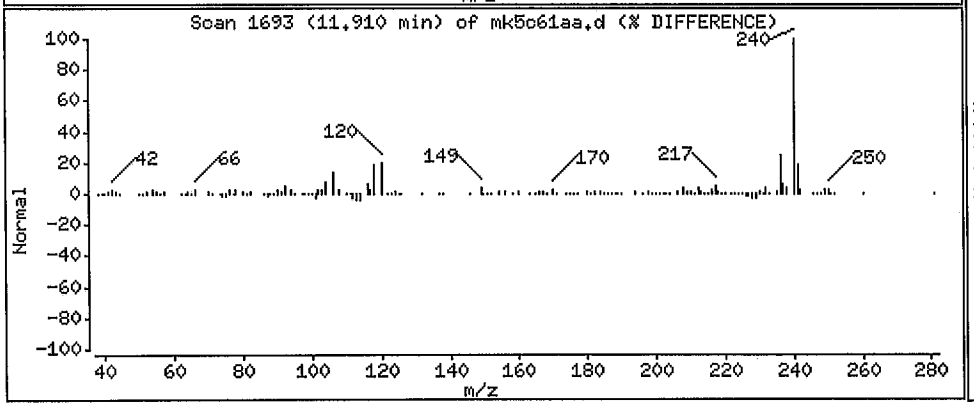












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

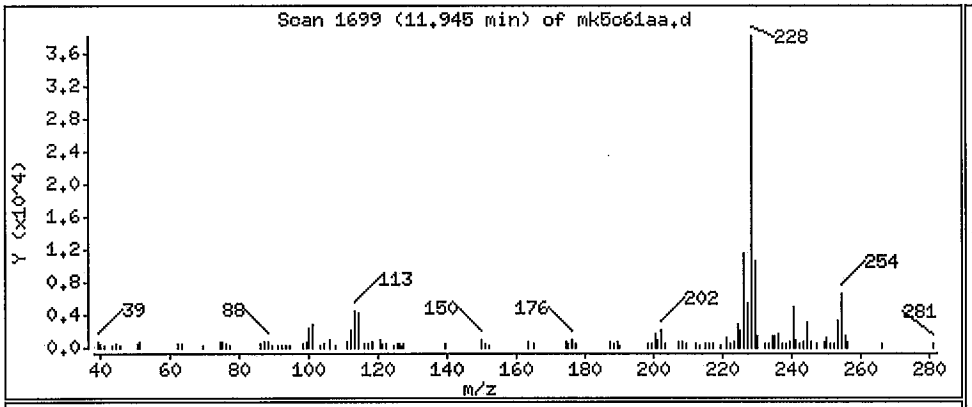
Operator: 60487

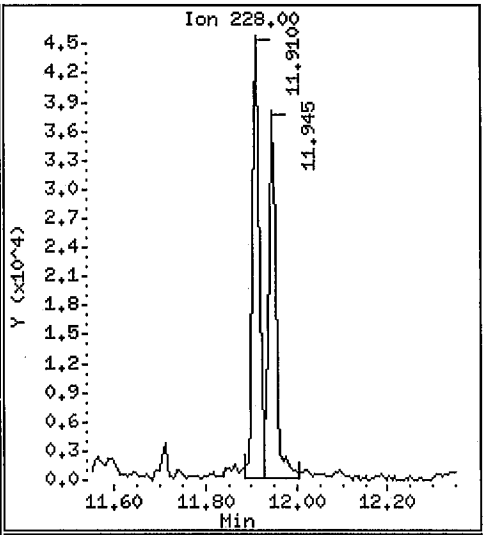
Column phase: Rxi-5 Sil MS

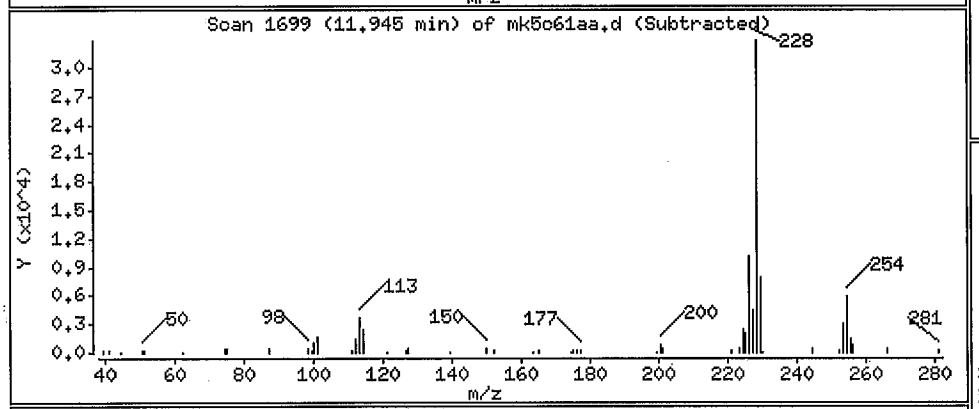
Column diameter: 0.25

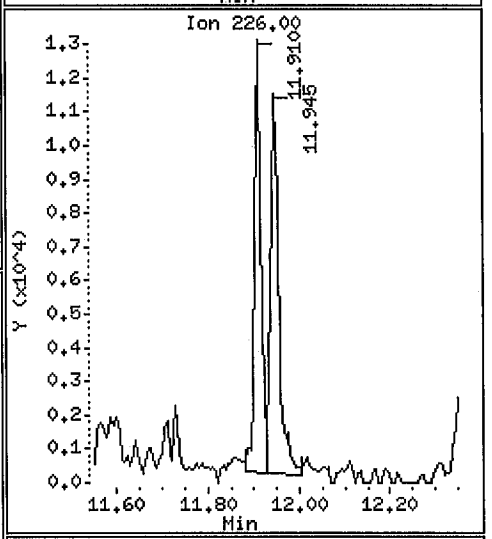
75 Chrysene

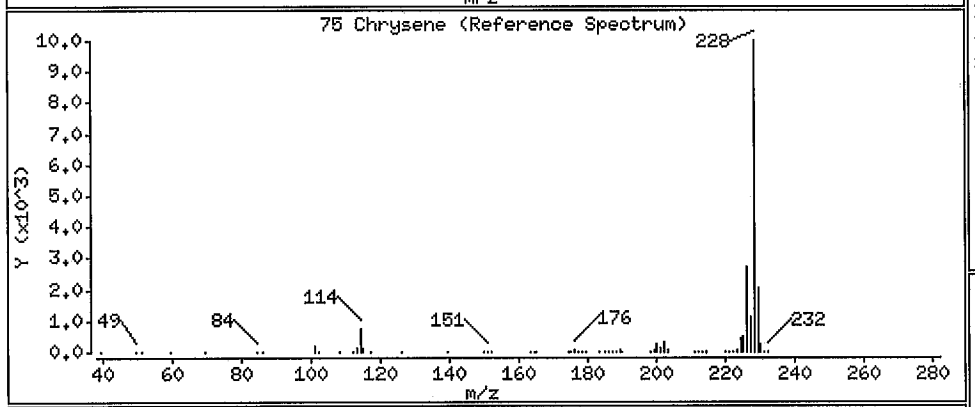
Concentration: 219 ug

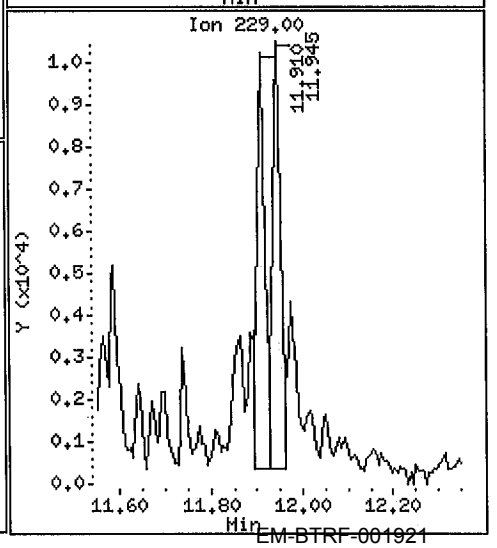


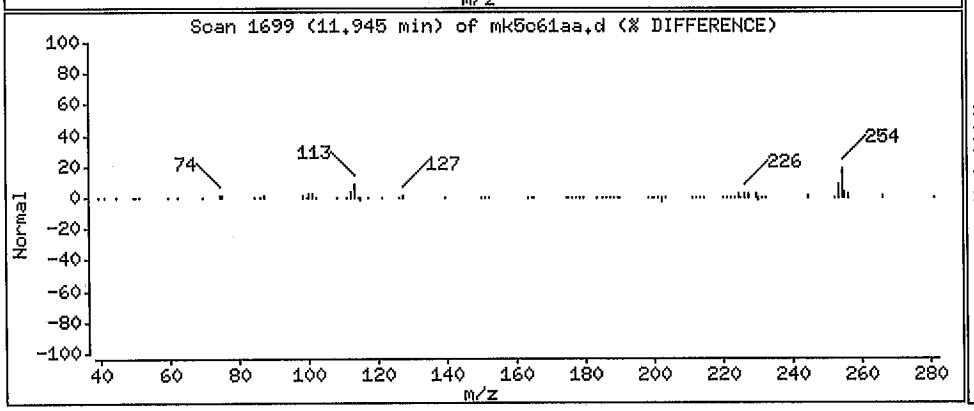












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

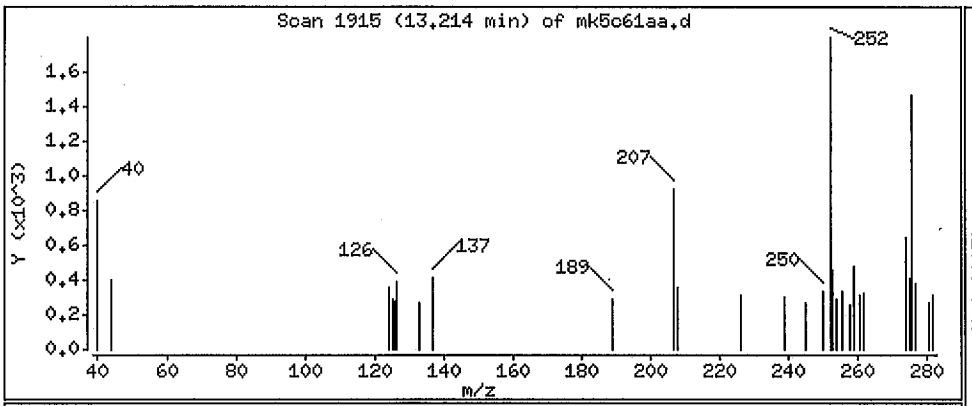
Operator: 60487

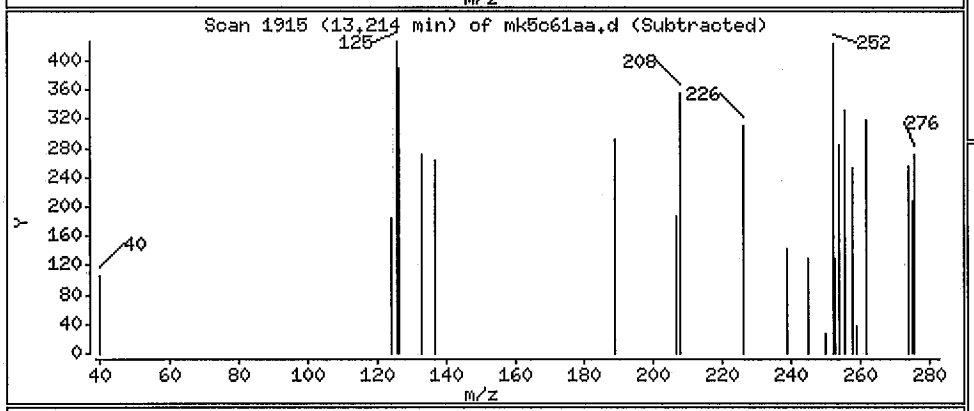
Column phase: Rxi-5 Sil MS

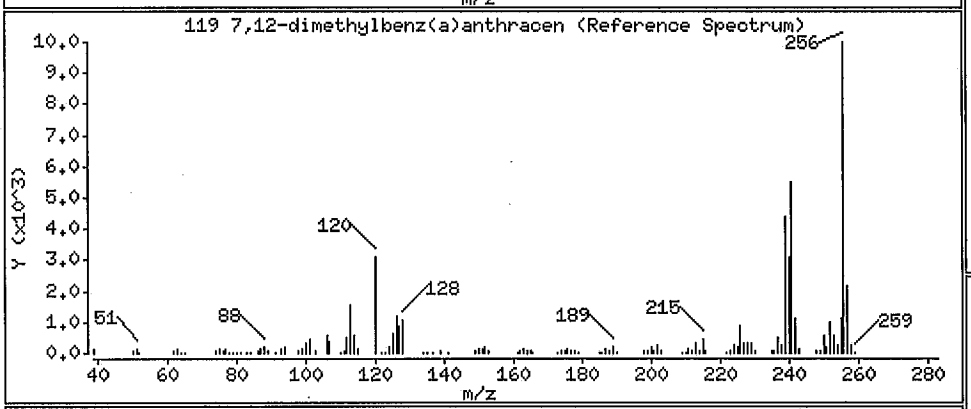
Column diameter: 0.25

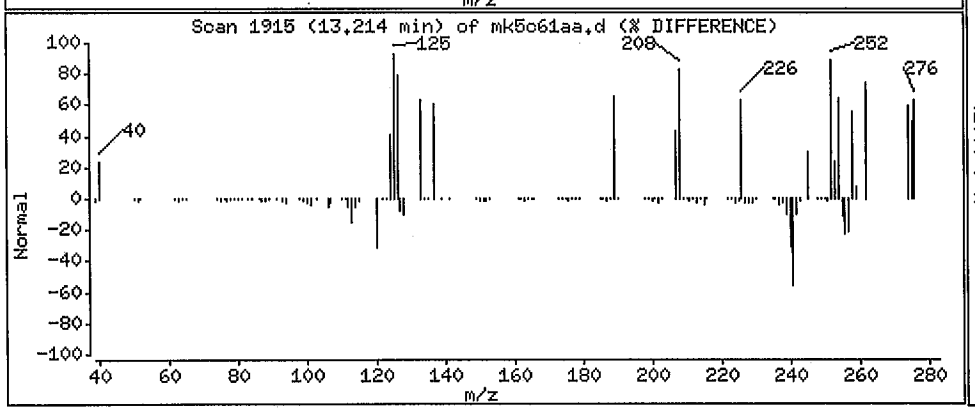
119 7,12-dimethylbenz(a)anthracen

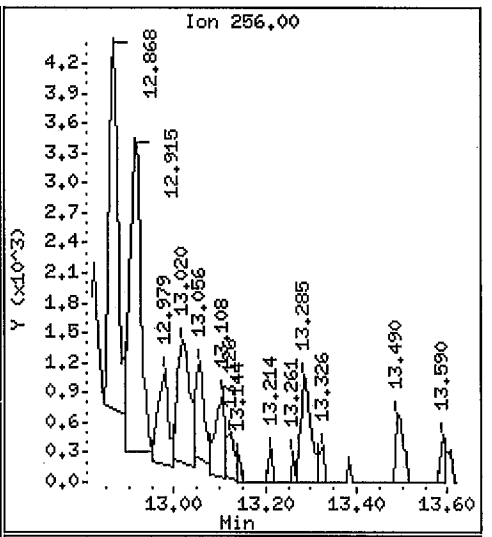
Concentration: 415 ug

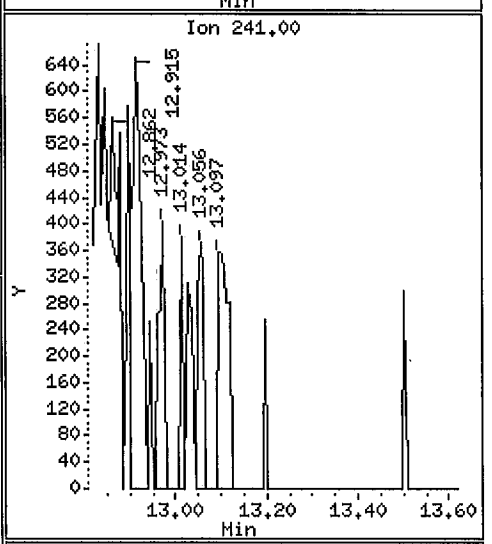


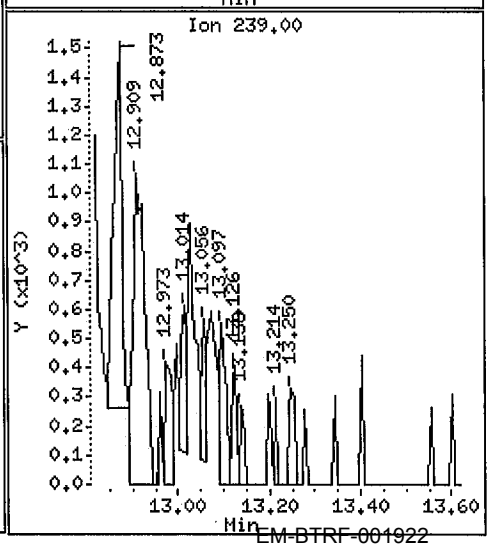












Data File: /var/chem/goms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

Operator: 60487

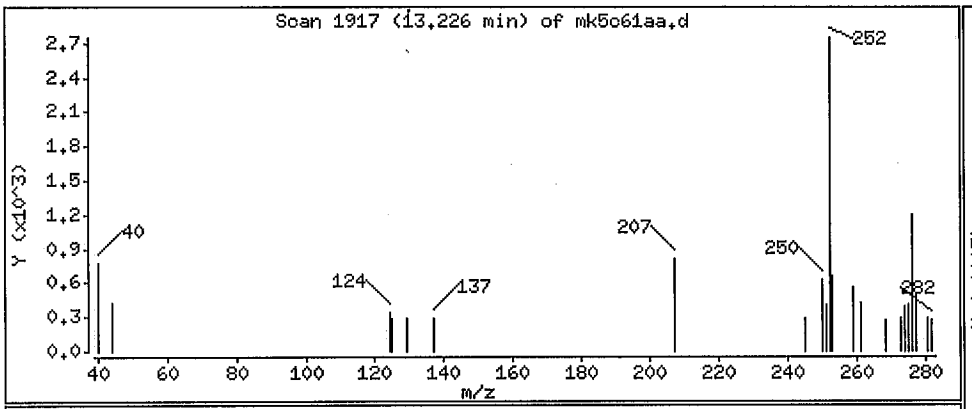
Column phase: Rxi-5 Sil MS

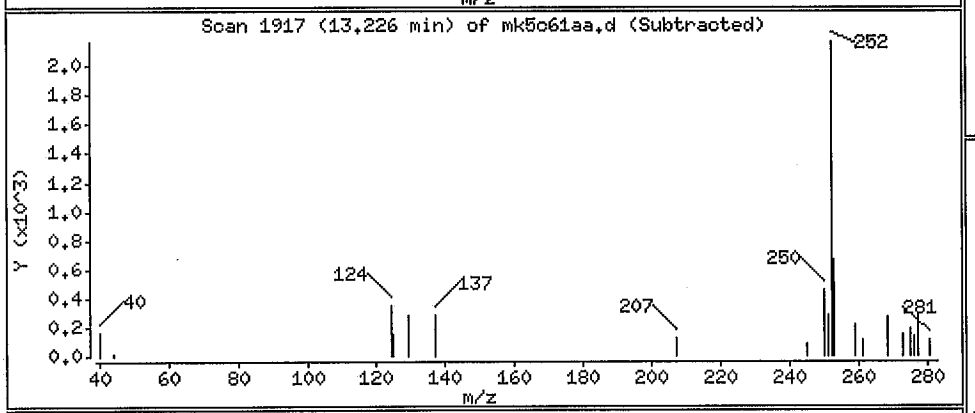
Column diameter: 0.25

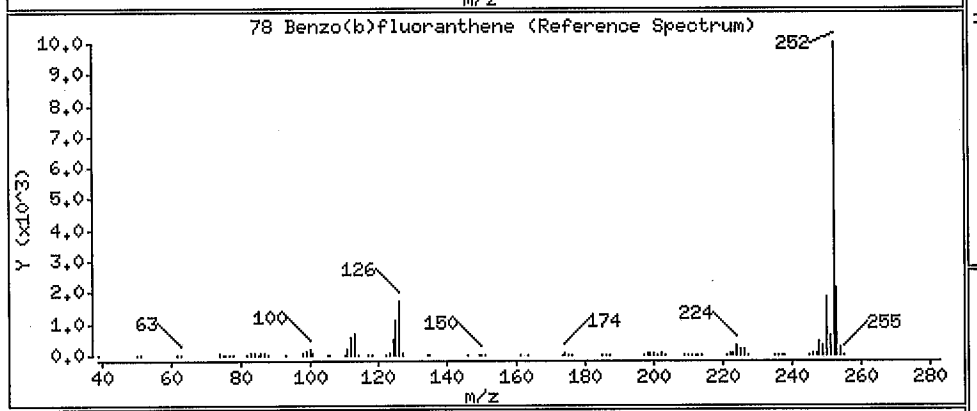
78 Benzo(b)fluoranthene

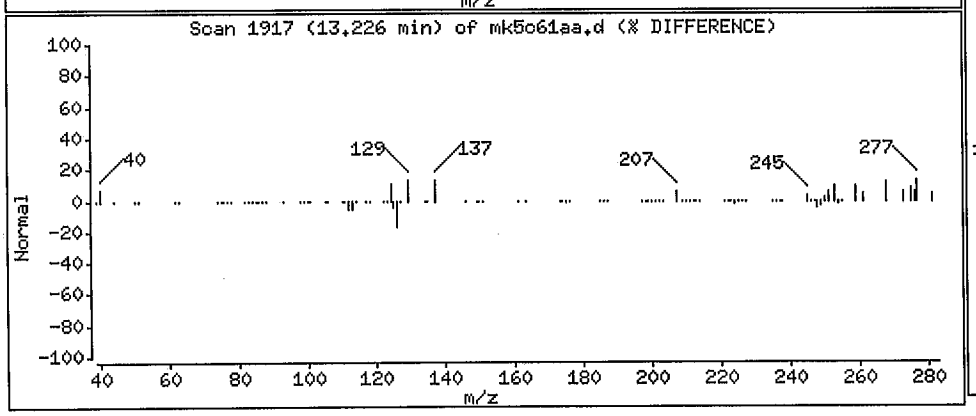
Concentration: 32.6 ug

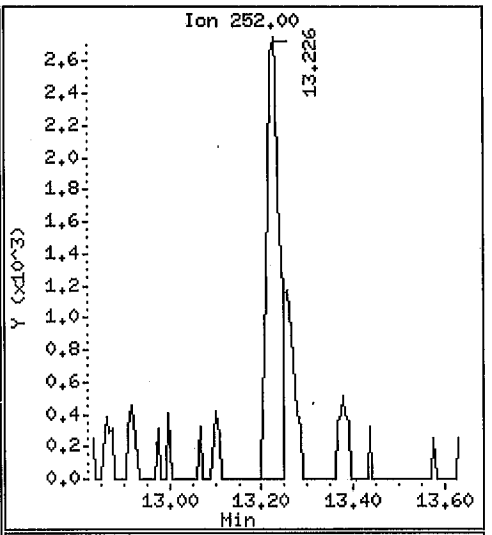
(2) Kem 8/5/11

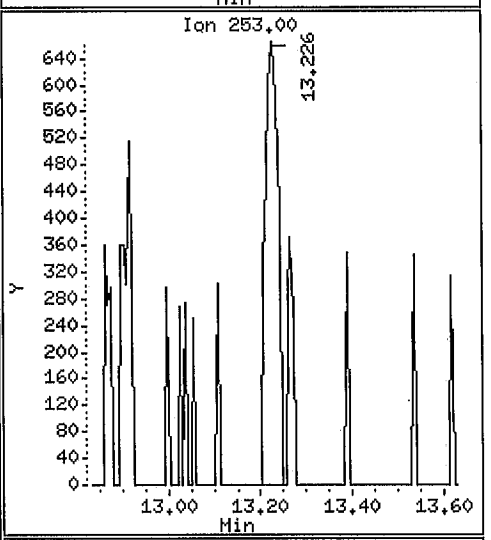


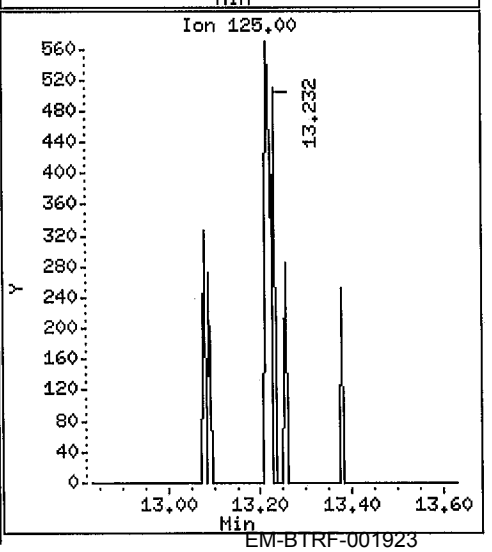












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

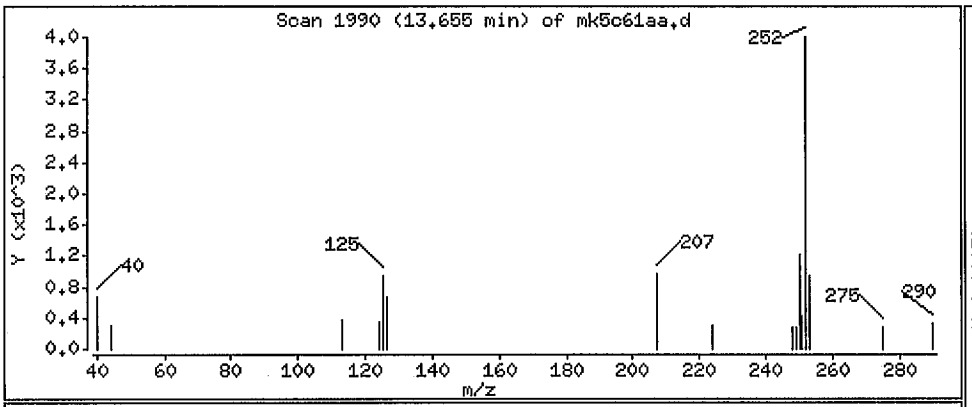
Operator: 60487

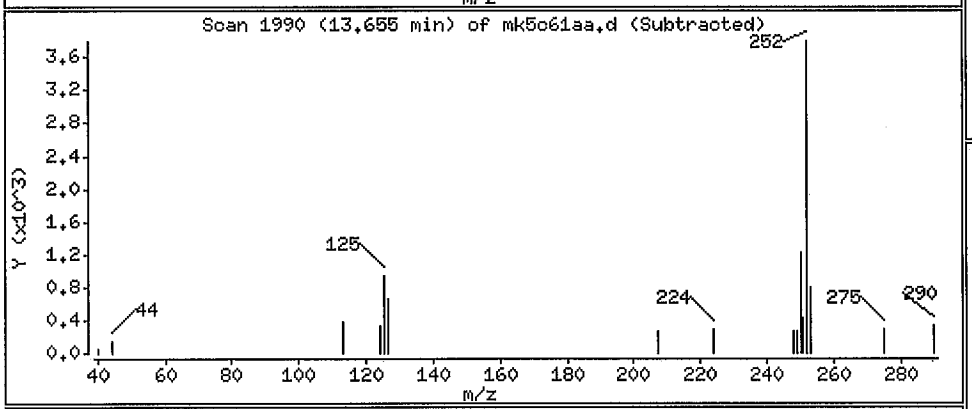
Column phase: Rxi-5 Sil MS

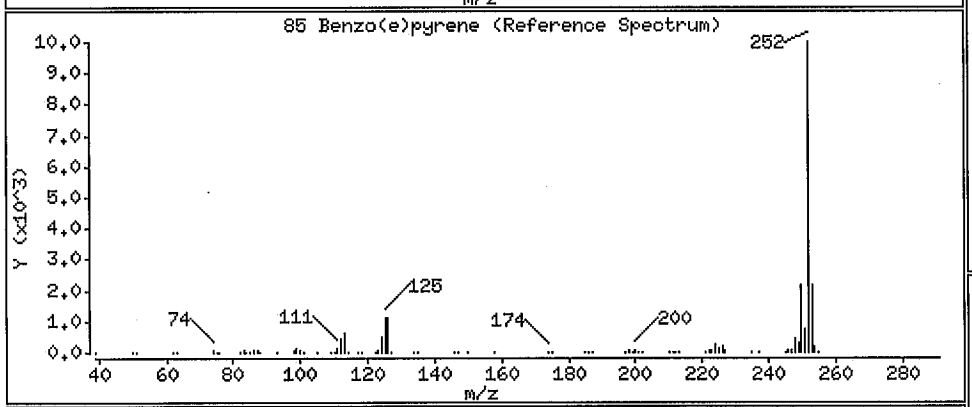
Column diameter: 0.25

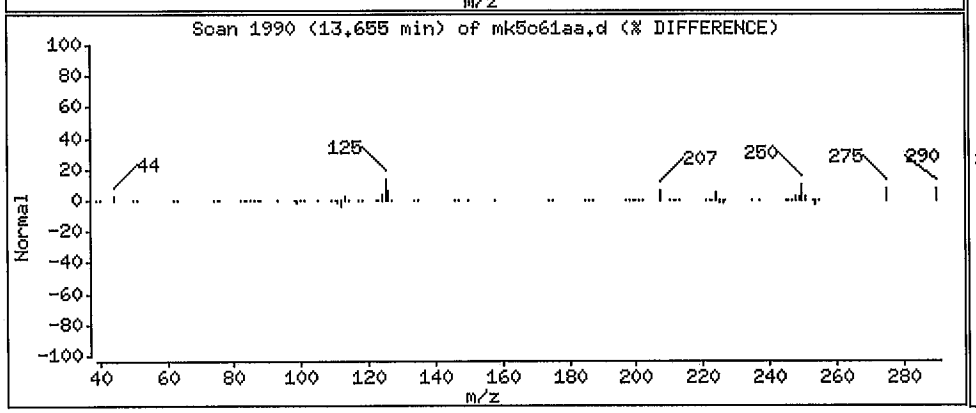
85 Benzo(e)pyrene

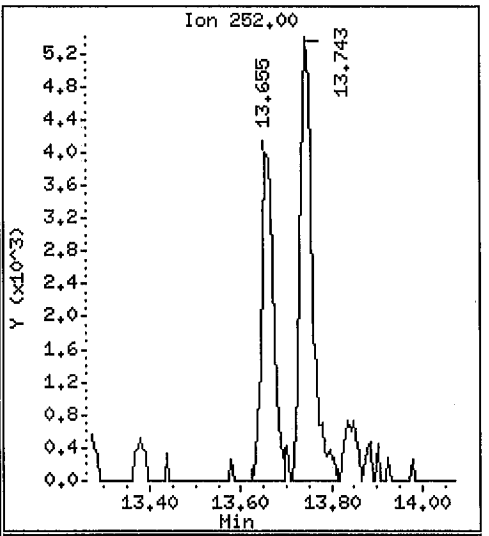
Concentration: 44.0 ug

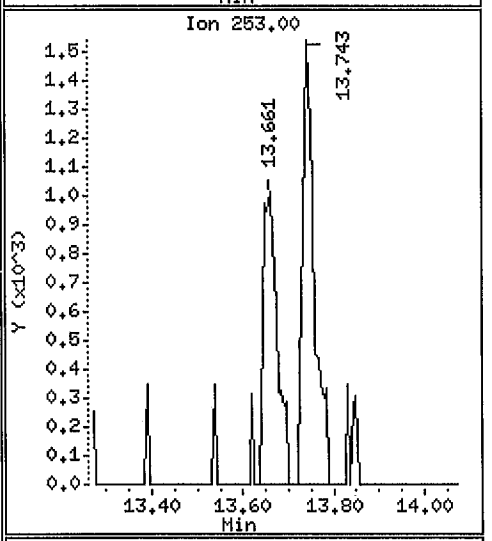


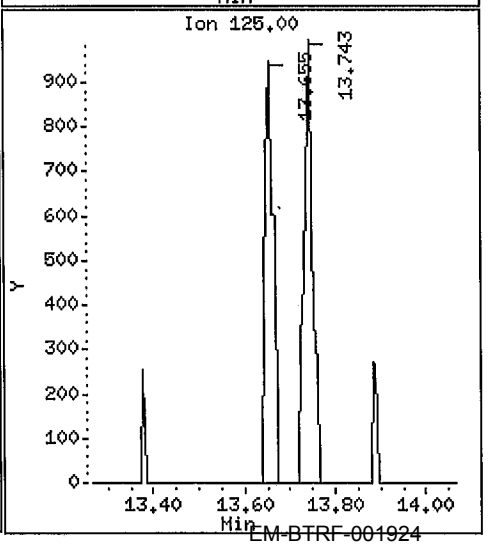












Data File: /var/chem/goms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

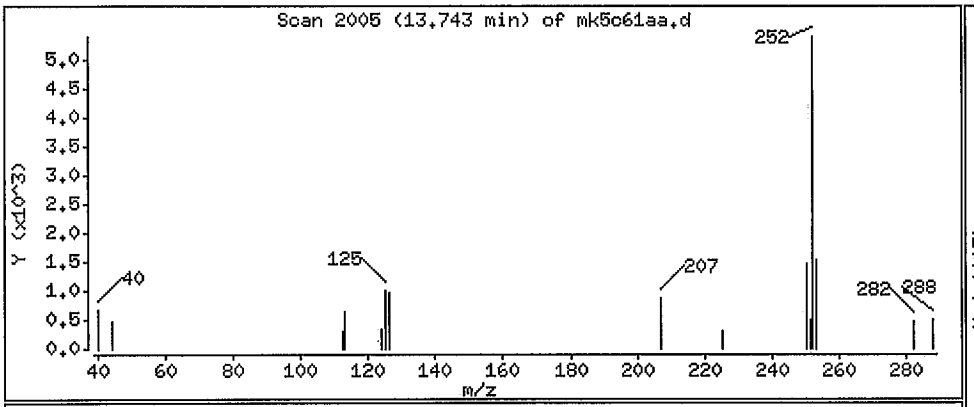
Operator: 60487

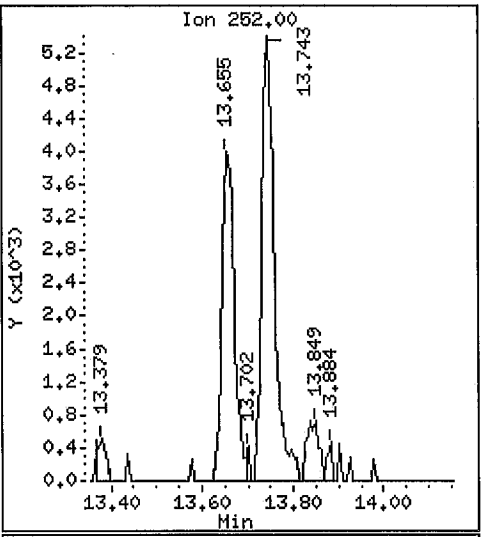
Column phase: Rxi-5 Sil MS

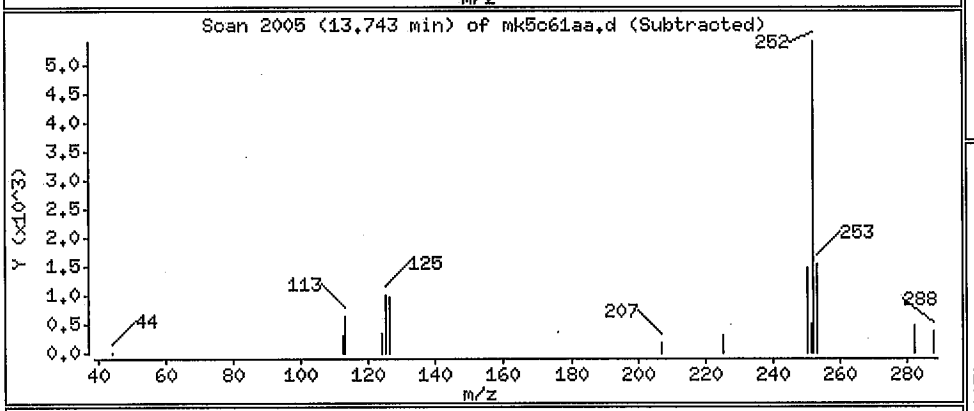
Column diameter: 0.25

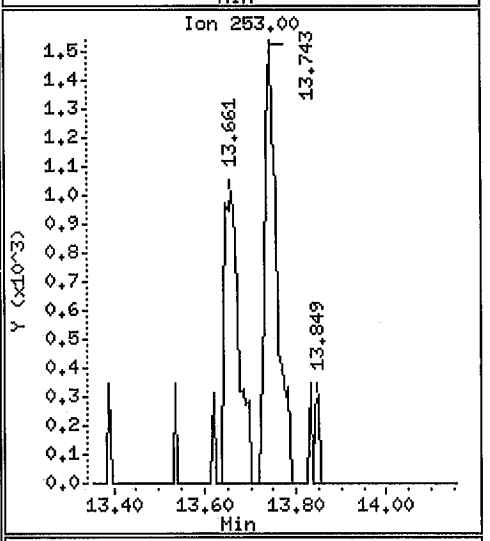
80 Benzo(a)pyrene (ooo)

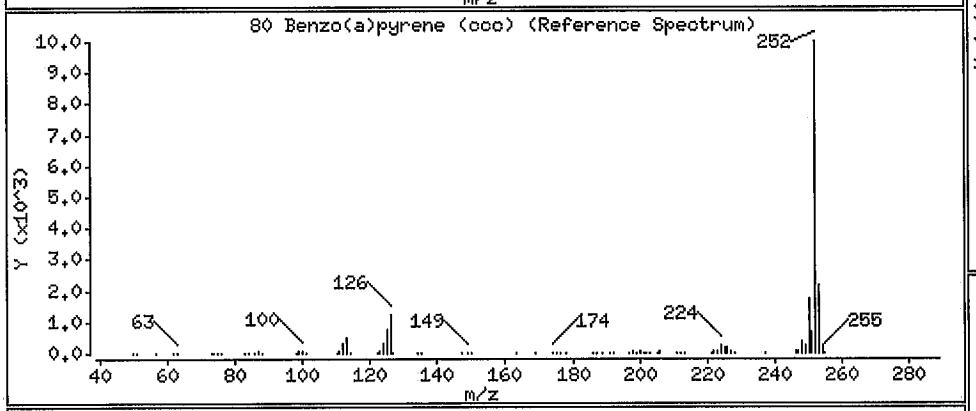
Concentration: 275 ug

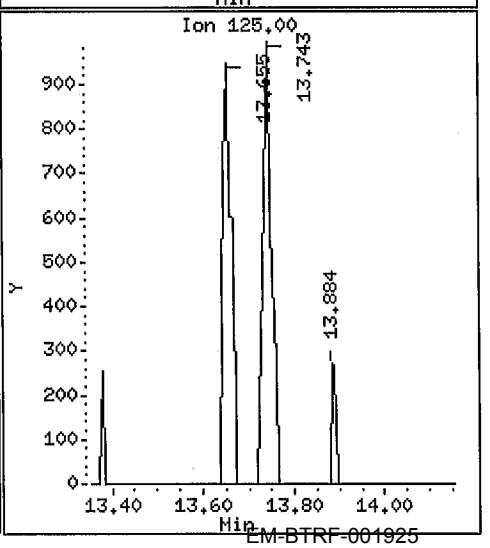


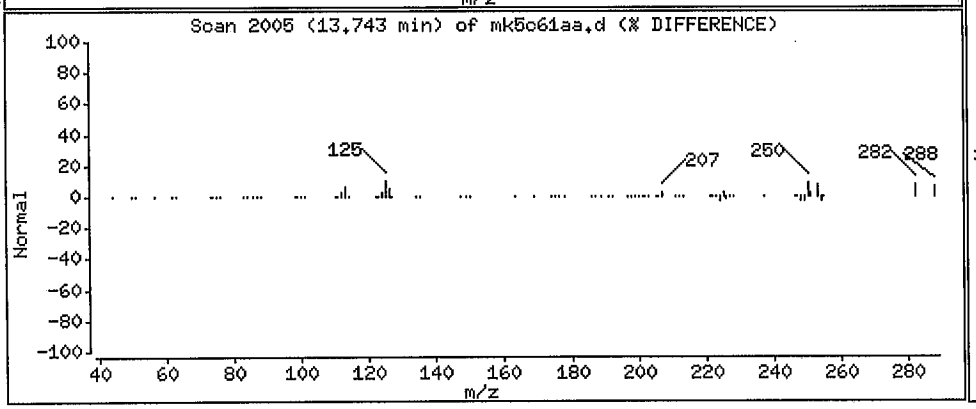












Data File: /var/chem/gcms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

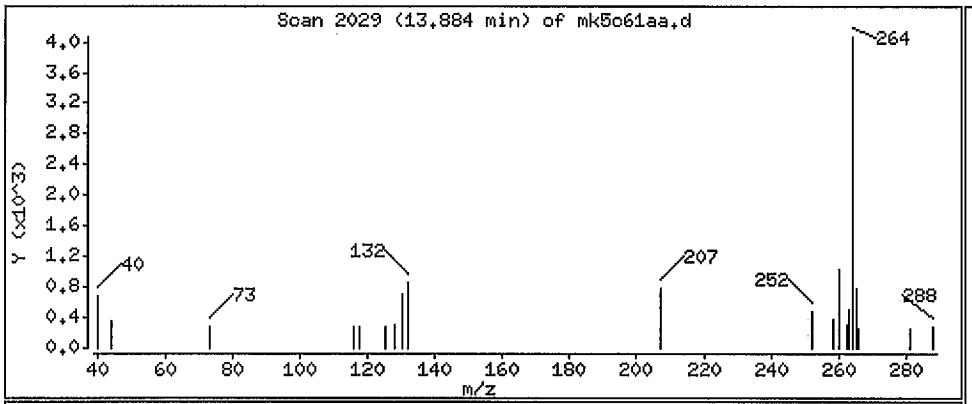
Client ID: EXM-DCU-M0010-R3-C0 Instrument: md.i

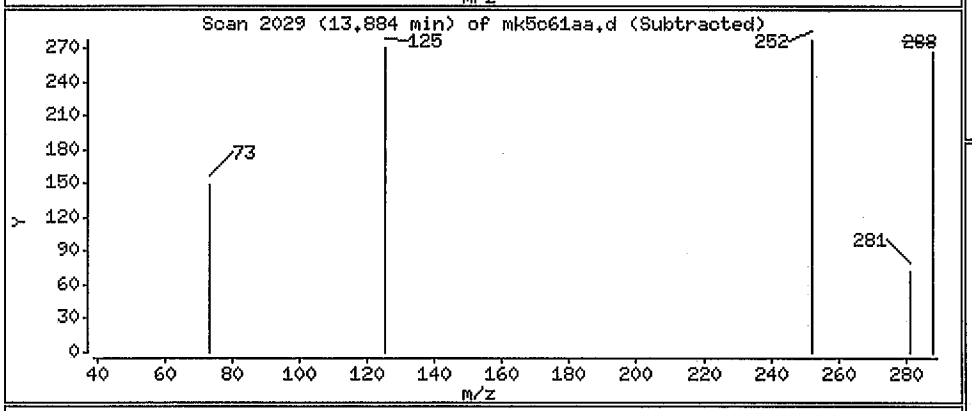
Sample Info: MK5C61AA,20,0,,,

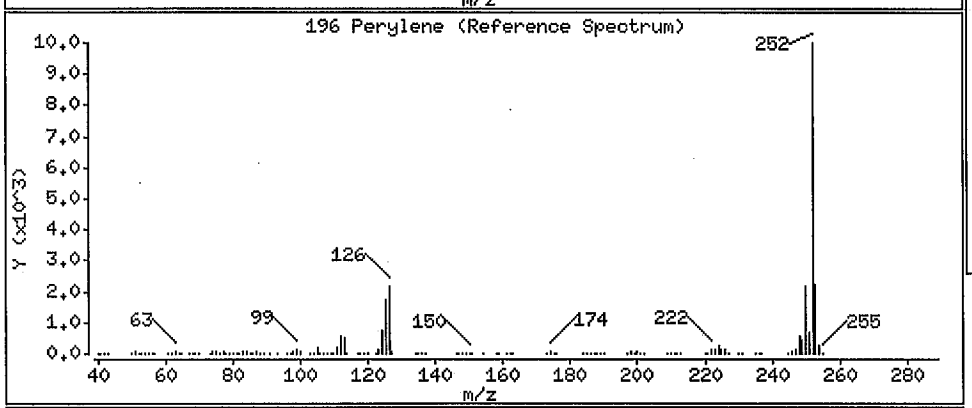
Volume Injected (uL): 1.0 Operator: 60487

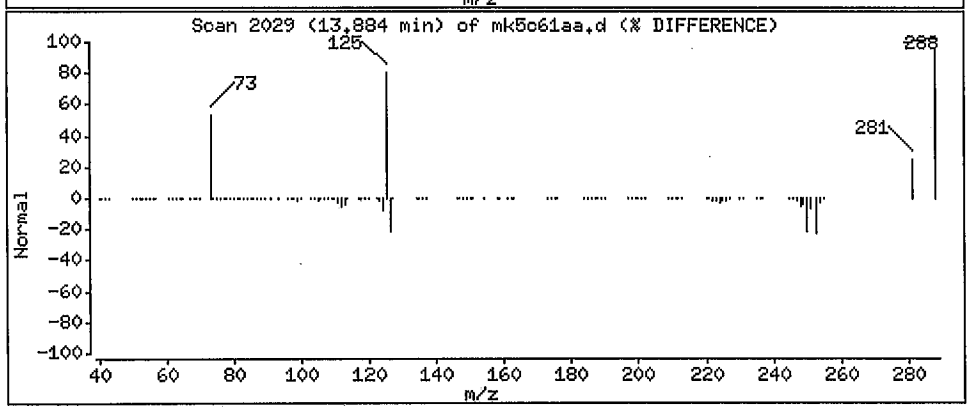
Column phase: Rxi-5 Sil MS Column diameter: 0.25

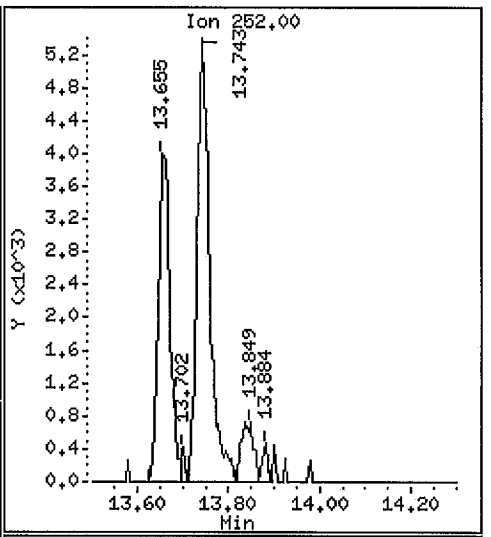
196 Perylene Concentration: 2.37 ug

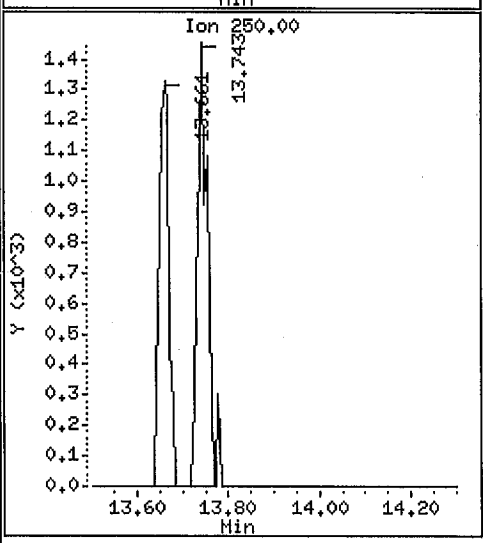












Data File: /var/chem/goms/md.i/D080411.b/mk5c61aa.d

Date : 04-AUG-2011 16:16

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C61AA,20,0,,,

Volume Injected (uL): 1.0

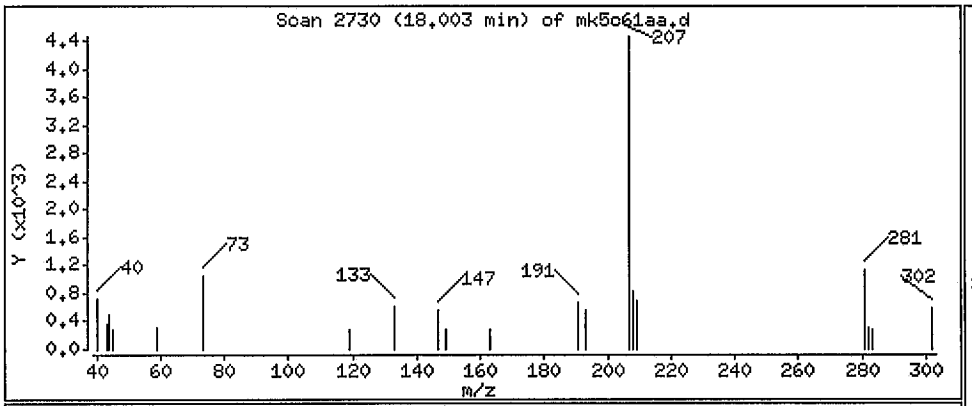
Operator: 60487

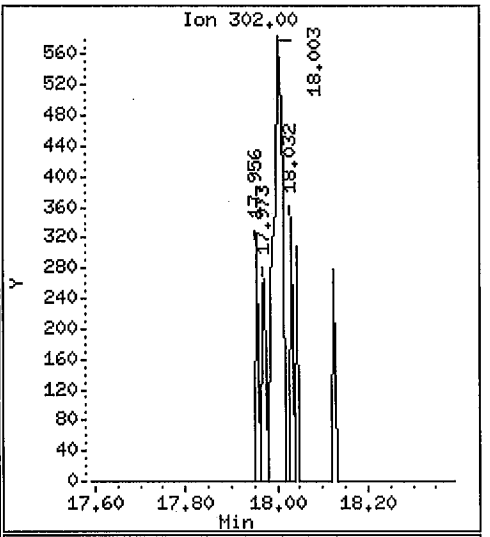
Column phase: Rxi-5 Sil MS

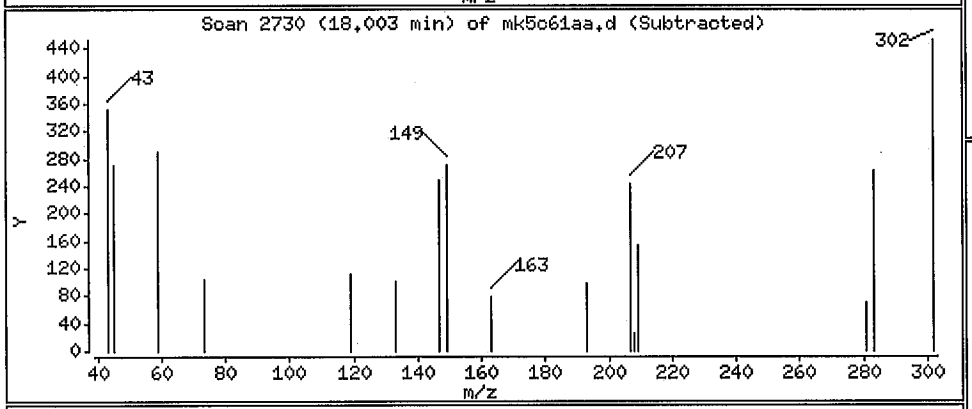
Column diameter: 0.25

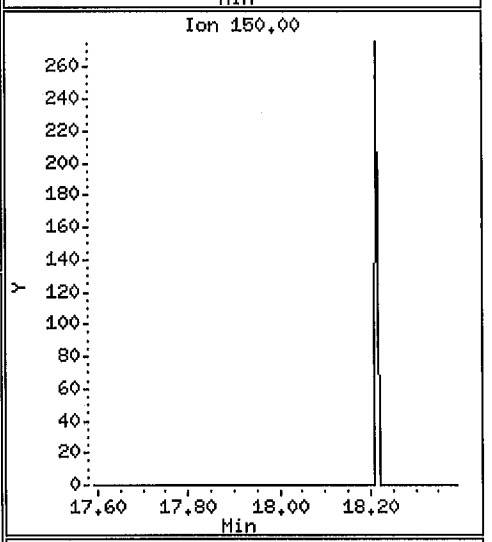
201 Dibenzo(a,e)pyrene

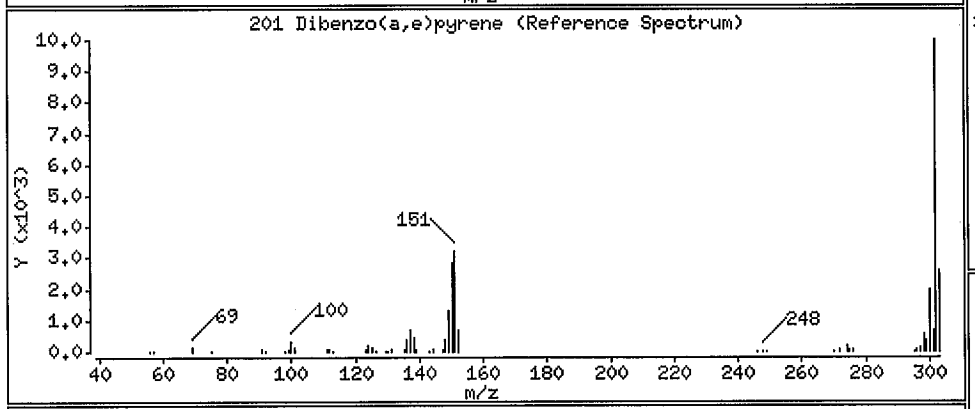
Concentration: 342 ug

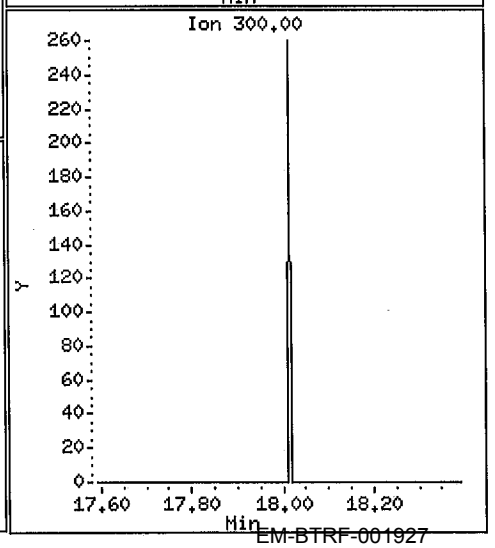


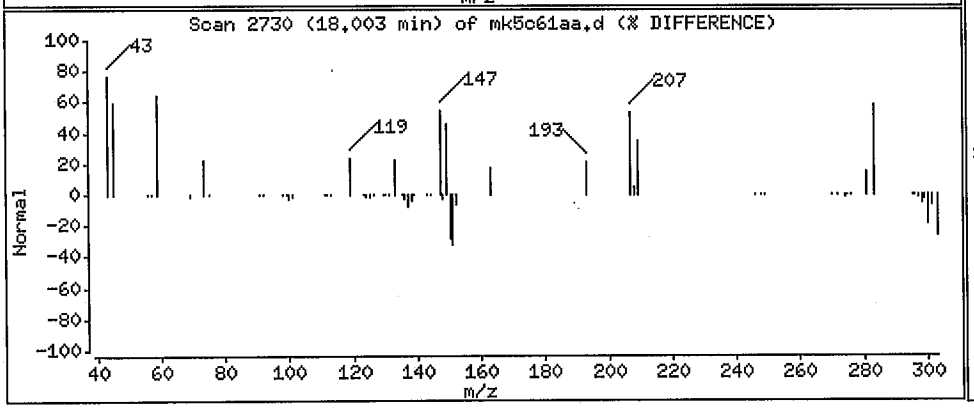












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 **Work Order #...:** MK5C62AA **Matrix.....:** AIR
Date Sampled...: 07/17/11 **Date Received..:** 07/23/11
Prep Date.....: 07/26/11 **Analysis Date..:** 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 400 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Methylnaphthalene	**37000 D**	**4000**	**ug**	**1200**
Naphthalene	**20000 D**	**4000**	**ug**	**1200**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	NC,DIL	(22 - 105)
Phenol-d5	NC,DIL	(48 - 118)
Nitrobenzene-d5	NC,DIL	(43 - 110)
2-Fluorobiphenyl	NC,DIL	(48 - 111)
2,4,6-Tribromophenol	NC,DIL	(34 - 125)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

D Result was obtained from the analysis of a dilution.

Data File: /var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Report Date: 05-Aug-2011 13:07

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Lab Smp Id: MK5C62AA Client Smp ID: EXM-DCU-M0010-R3-CO
Inj Date : 04-AUG-2011 20:32
Operator : 60487 Inst ID: md.i
Smp Info : MK5C62AA,100,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 20
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	100.00000	Dilution Factor
Vt	2000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	54791	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	223218	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	137418	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	260919	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	271229	20.0000	20.0
* 6	Perylene-d12	264	13.849	13.849	(1.000)	239323	20.0000	20.0
$ 179	13C6-naphthalene	134	5.888	5.917	(1.000)	20879	1.72130	~~688~~ (?)
16	Aniline	93	3.972	3.978	(0.924)	2337	0.50569	202
23	2-Methylphenol	108	4.566	4.571	(1.061)	1614	0.54765	219
26	3&4 Methylphenol	108	4.566	4.754	(1.061)	1614	0.53112	212
M 204	total cresols (methylphenols)	108				3228	1.07877	432 NA
95	o-toluidine	106	4.783	4.789	(1.112)	4583	0.90932	364
32	2,4-Dimethyphenol	107	5.453	5.453	(0.926)	2044	0.54584	~~218~~

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Report Date: 05-Aug-2011 13:07

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
199 Phentermine	58	5.888	5.664	(1.000)	387	5.93527	~~2370~~ NA
37 Naphthalene	128	5.917	5.923	(1.005)	548399	51.2709	20500 D
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	667865	92.3126	36900 D
188 1,1'-Biphenyl	154	7.732	7.738	(0.911)	17427	1.60054	~~640~~
47 Acenaphthylene	152	8.220	8.308	(0.969)	6700	0.57160	229
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	14801	1.90845	763
53 Dibenzofuran	168	8.720	8.720	(1.028)	14158	1.30991	524
56 Fluorene	166	9.072	9.078	(1.069)	56789	6.34585	2540
66 Phenanthrene	178	9.912	9.912	(1.002)	154365	11.0435	4420
67 Anthracene	178	9.953	9.953	(1.006)	69375	5.11573	2050
70 Fluoranthene (ccc)	202	10.782	10.782	(1.090)	9917	0.68846	275 NA
71 Pyrene	202	10.941	10.941	(0.918)	35428	2.30652	923
200 3,3'-Dimethoxybenzidine	244	11.863	11.851	(0.995)	769	12.4446	4980
73 Benzo(a)Anthracene	228	11.910	11.916	(0.999)	8152	0.60618	242
75 Chrysene	228	11.945	11.951	(1.002)	7574	0.52798	211
196 Perylene	252	13.855	13.902	(1.000)	795	0.06577	26.3

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

KRM ~~5/8~~ 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Report Date: 05-Aug-2011 13:07

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c62aa.d
Lab Smp Id: MK5C62AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-R3-CO
Level: LOW
Sample Type: AIR
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	54791	1.68
2 Naphthalene-d8	216727	108364	433454	223218	3.00
3 Acenaphthene-d10	132541	66270	265082	137418	3.68
4 Phenanthrene-d10	256755	128378	513510	260919	1.62
5 Chrysene-d12	266546	133273	533092	271229	1.76
6 Perylene-d12	235464	117732	470928	239323	1.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

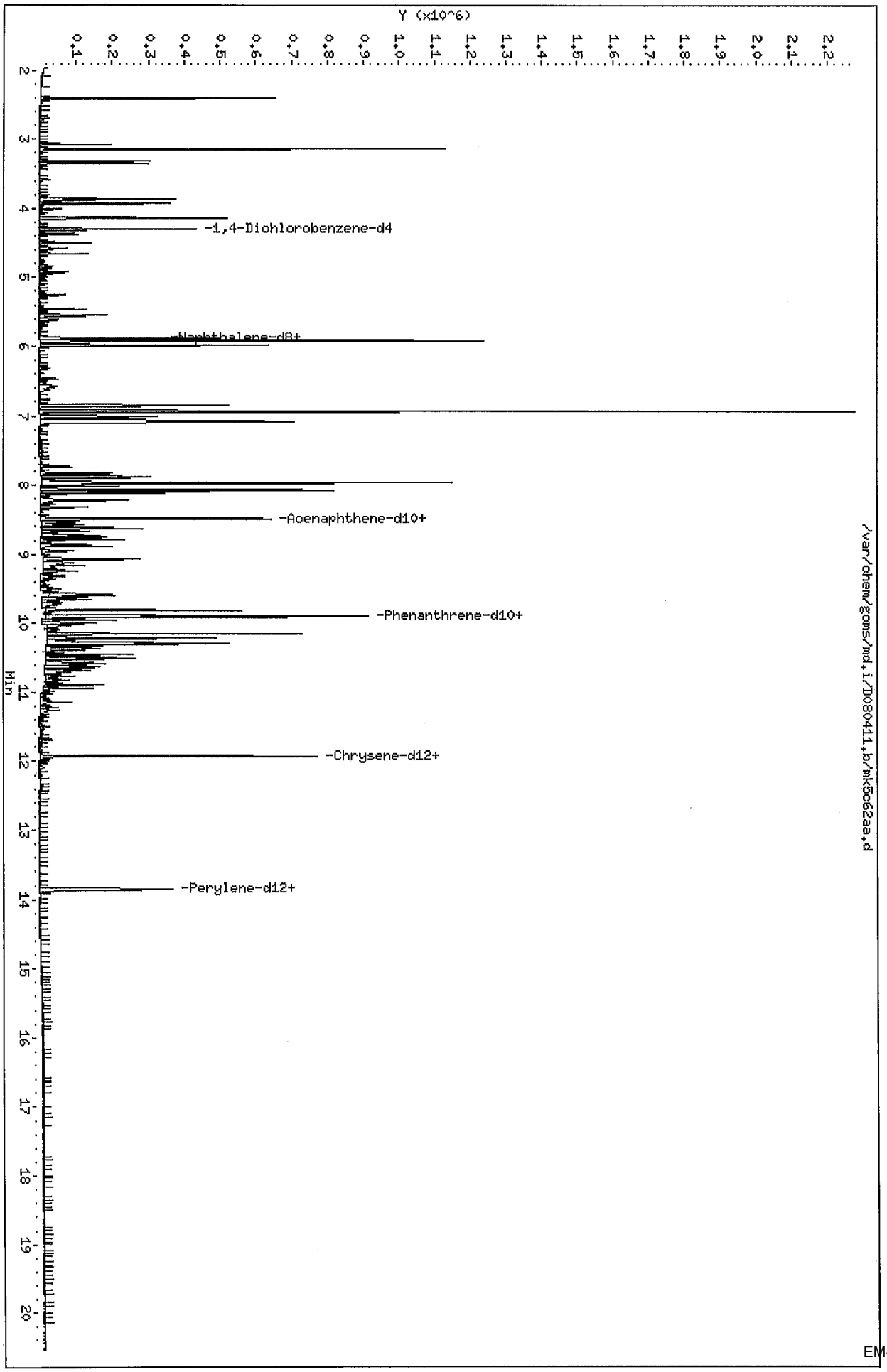
Data File: /var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Report Date: 05-Aug-2011 13:07

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C62AA Client Smp ID: EXM-DCU-M0010-R3-CO
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	0.00	*	19-100
$ 8 Phenol-d5	150	0.00	*	15-124
$ 9 Nitrobenzene-d5	100	0.00	*	42-104
$ 11 2,4,6-Tribromophe	150	0.00	*	33-130
$ 10 2-Fluorobiphenyl	100	0.00	*	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	688	344.26*	50-150


Data File: /var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Date : 04-AUG-2011 20:32
Client ID: EXH-DCU-H0010-R3-CO
Sample Info: MK5C620A,100.0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk5c62aa.d
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8+
-Acenaphthene-d10+
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c62aa.d

Date : 04-AUG-2011 20:32

Client ID: EXM-DCU-M0010-R3-C0

Instrument: md.i

Sample Info: MK5C62AA,100,0,,,

Volume Injected (uL): 1.0

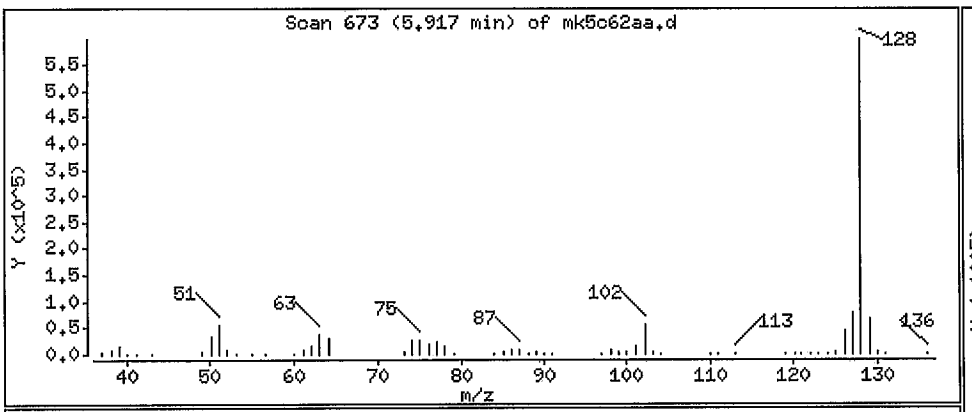
Operator: 60487

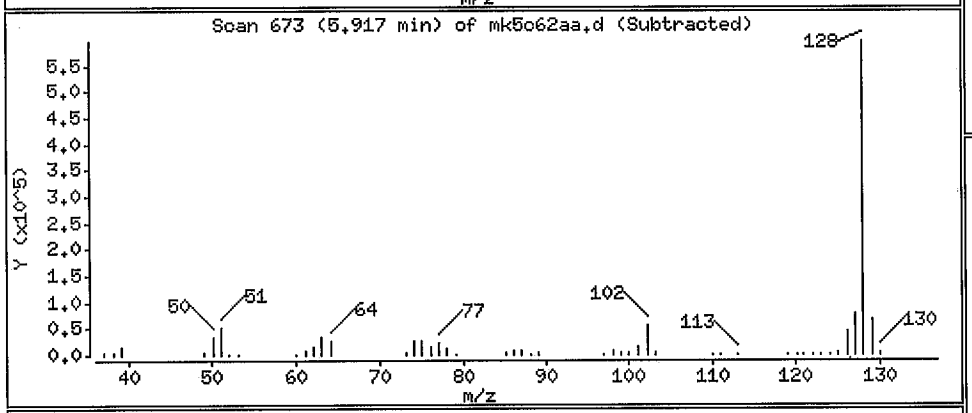
Column phase: Rxi-5 Sil MS

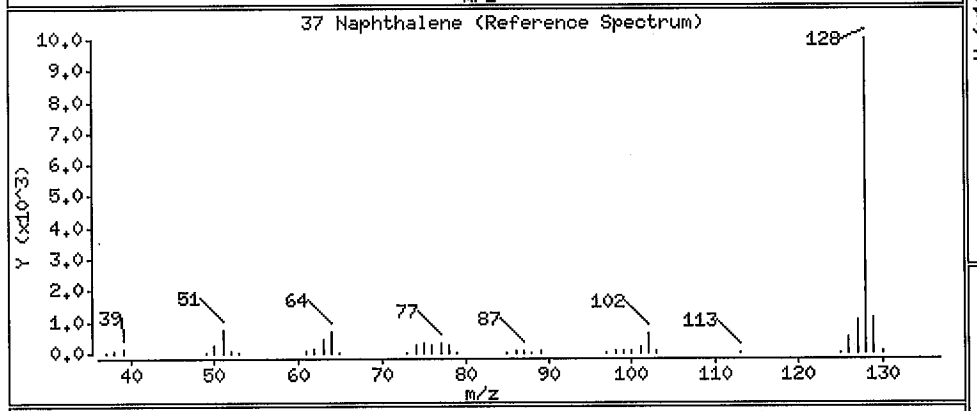
Column diameter: 0.25

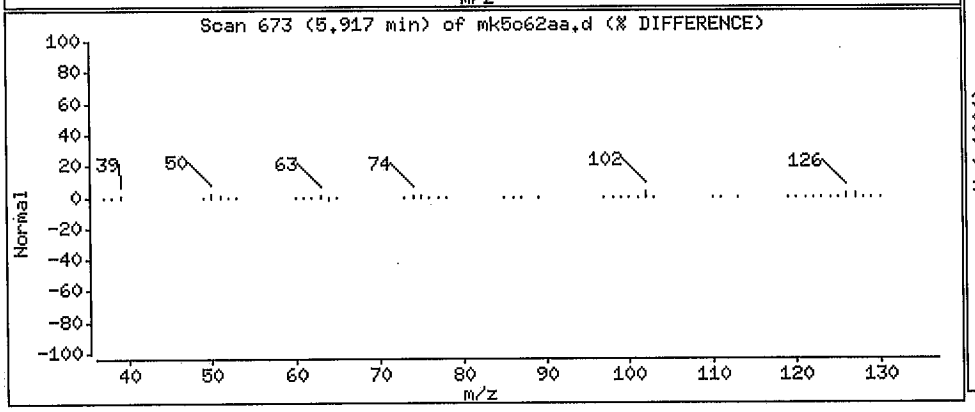
37 Naphthalene

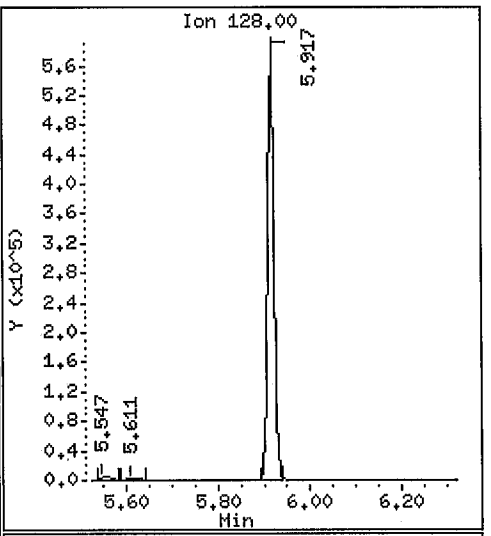
Concentration: 20500 ug

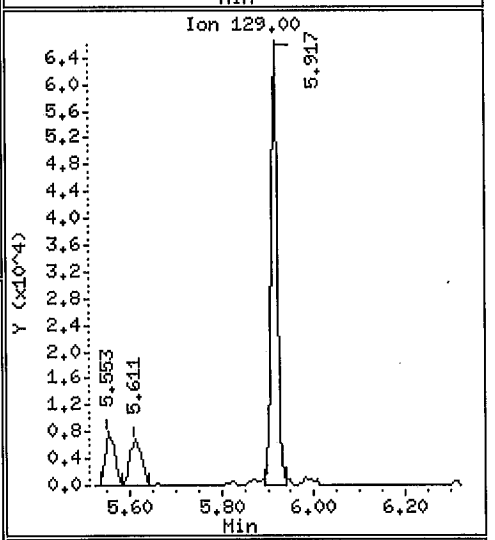


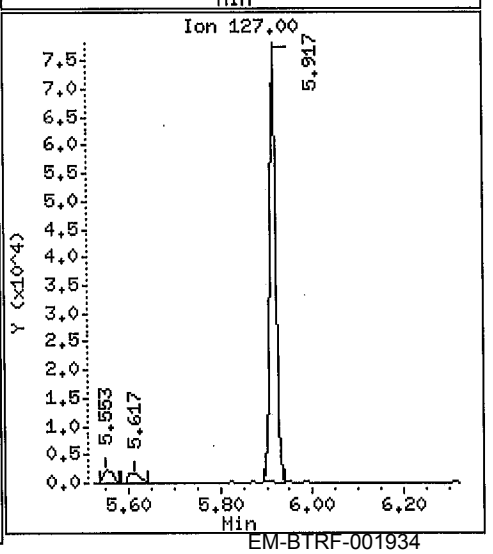












Data File: /var/chem/goms/md.i/D080411.b/mk5c62aa.d

Date : 04-AUG-2011 20:32

Client ID: EXM-DCU-M0010-R3-CO

Instrument: md.i

Sample Info: MK5C62AA,100,0,,,

Volume Injected (uL): 1.0

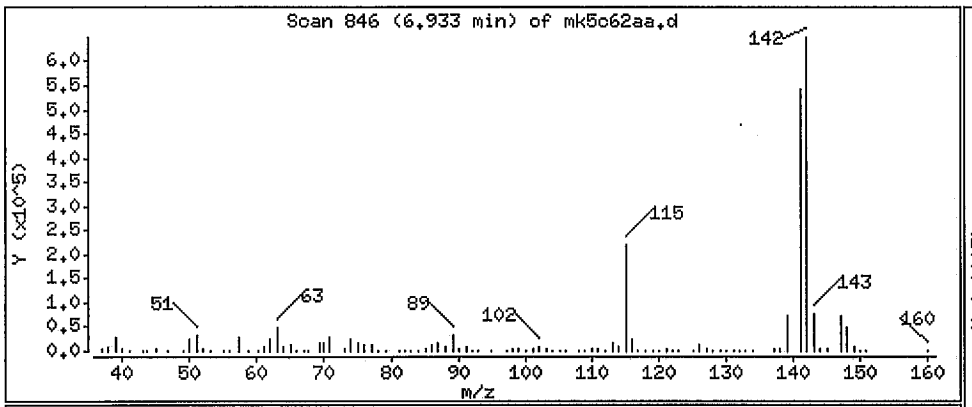
Operator: 60487

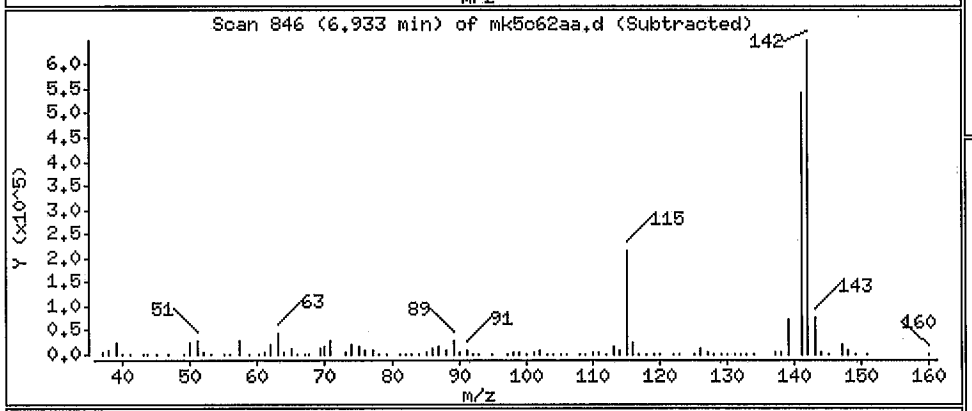
Column phase: Rxi-5 Sil MS

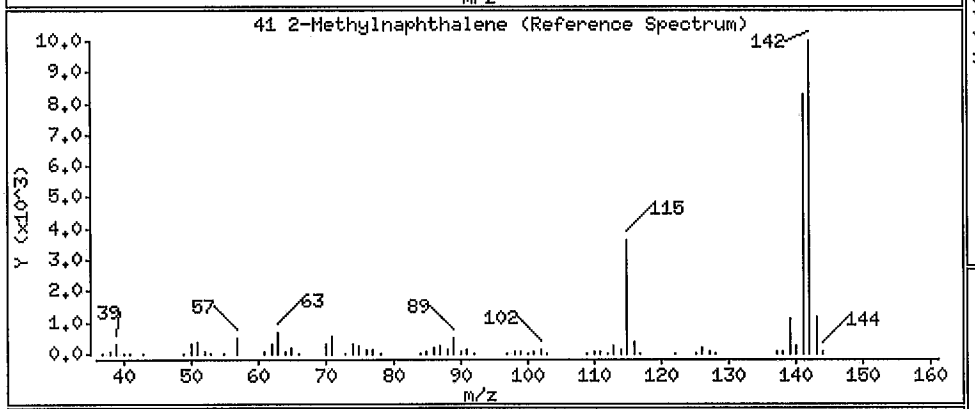
Column diameter: 0.25

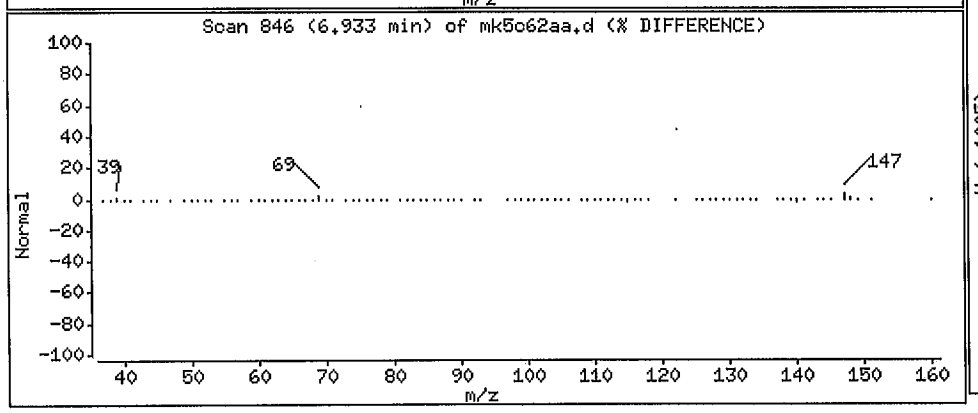
41 2-Methylnaphthalene

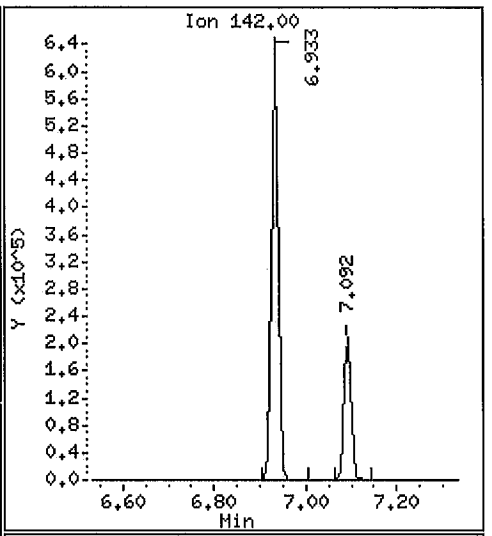
Concentration: 36900 ug

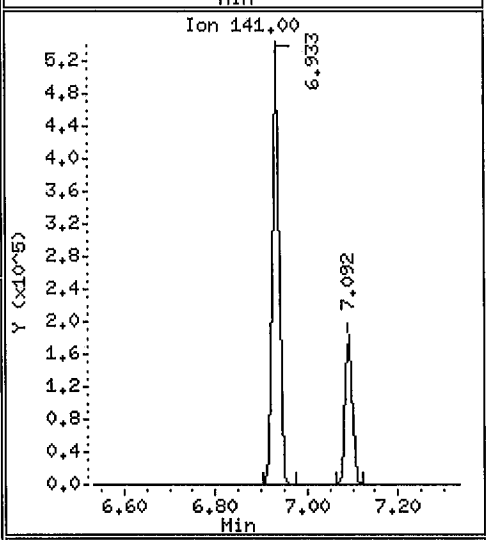


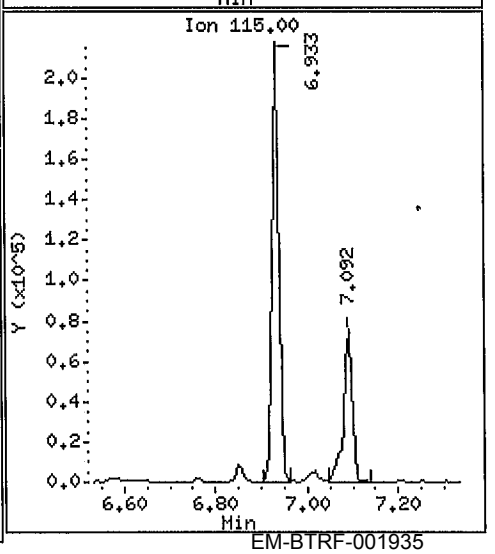












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-004 **Work Order #...:** MK5C71AA **Matrix.....:** AIR
Date Sampled...: 07/17/11 **Date Received..:** 07/23/11
Prep Date.....: 07/26/11 **Analysis Date..:** 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 2 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	20	ug	5.4
Acenaphthylene	ND	20	ug	5.6
Aniline	ND	20	ug	17
Anthracene	ND	20	ug	6.4
Benz(a)anthracene	ND	20	ug	6.2
Benzidine	ND	200	ug	120
Benzo(b)fluoranthene	ND	20	ug	8.2
Benzo(k)fluoranthene	ND	20	ug	9.8
Benzo(ghi)perylene	ND	20	ug	6.4
Benzo(a)pyrene	ND	20	ug	7.6
Benzo(e)pyrene	ND	20	ug	1.7
Biphenyl	ND	20	ug	2.0
Chrysene	ND	20	ug	6.2
Cresols (total)	ND	20	ug	16
Dibenz(a,h)anthracene	ND	20	ug	6.0
Dibenzofuran	ND	20	ug	5.6
Dibenzo(a,e)pyrene	ND	20	ug	1.4
3,3'-Dimethoxybenzidine	ND	200	ug	28
p-Dimethylaminoazobenzene	ND	20	ug	4.8
7,12-Dimethylbenz(a)-anthracene	ND	20	ug	7.0
3,3'-Dimethylbenzidine	ND	200	ug	36
alpha,alpha-Dimethylphenethylamine	ND	50	ug	17
2,4-Dimethylphenol	ND	20	ug	13
Fluoranthene	ND	20	ug	7.2
Fluorene	ND	20	ug	6.0
Indeno(1,2,3-cd)pyrene	ND	20	ug	6.2
Isophorone	ND	20	ug	5.6
3-Methylcholanthrene	ND	20	ug	7.6
2-Methylnaphthalene	ND	20	ug	5.8
Naphthalene	ND	20	ug	6.2
Nitrobenzene	ND	20	ug	5.8
Perylene	ND	20	ug	1.5
Phenanthrene	ND	20	ug	6.0
Phenol	ND	20	ug	6.2
1,4-Phenylenediamine	ND	200	ug	50
Pyrene	ND	20	ug	7.0
o-Toluidine	ND	20	ug	5.6

(Continued on next page)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-004 **Work Order #...:** MK5C71AA **Matrix.....:** AIR

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
Phenol-d5	78	(48 - 118)
Nitrobenzene-d5	77	(43 - 110)
2-Fluorobiphenyl	80	(48 - 111)
2,4,6-Tribromophenol	80	(34 - 125)

Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Report Date: 05-Aug-2011 13:16

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Lab Smp Id: MK5C71AA Client Smp ID: EXM-DCU-M0010-RGTBL
Inj Date : 04-AUG-2011 16:45
Operator : 60487 Inst ID: md.i
Smp Info : MK5C71AA,,0,,,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56055	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	228294	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	135374	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	270662	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	274455	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	250266	20.0000	20.0
$ 7 2-Fluorophenol	112	3.132	3.132	(0.728)	137900	44.5597	89.1
$ 8 Phenol-d5	99	3.937	3.937	(0.915)	216800	58.4268	117
$ 9 Nitrobenzene-d5	82	4.924	4.930	(0.836)	140802	38.7036	77.4
$ 11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	65231	60.1990	120
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	337267	39.8264	79.6
$ 179 13C6-naphthalene	134	5.888	5.917	(1.000)	21089	1.69995	~~3.40(R)~~ NA
199 Phentermine	58	5.811	5.664	(0.987)	195	5.91610	~~11.8~~

KDH 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Report Date: 05-Aug-2011 13:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	4191	0.56648	1.13
188 1,1'-Biphenyl	154	7.586	7.738	(0.894)	543	0.05068	~~0.101~~
196 Perylene	252	13.855	13.902	(1.000)	755	0.05972	~~0.119~~

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

KRM 8/15/11

Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Report Date: 05-Aug-2011 13:16

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk5c71aa.d
Lab Smp Id: MK5C71AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: EXM-DCU-M0010-RGTBL
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	56055	4.03
2 Naphthalene-d8	216727	108364	433454	228294	5.34
3 Acenaphthene-d10	132541	66270	265082	135374	2.14
4 Phenanthrene-d10	256755	128378	513510	270662	5.42
5 Chrysene-d12	266546	133273	533092	274455	2.97
6 Perylene-d12	235464	117732	470928	250266	6.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

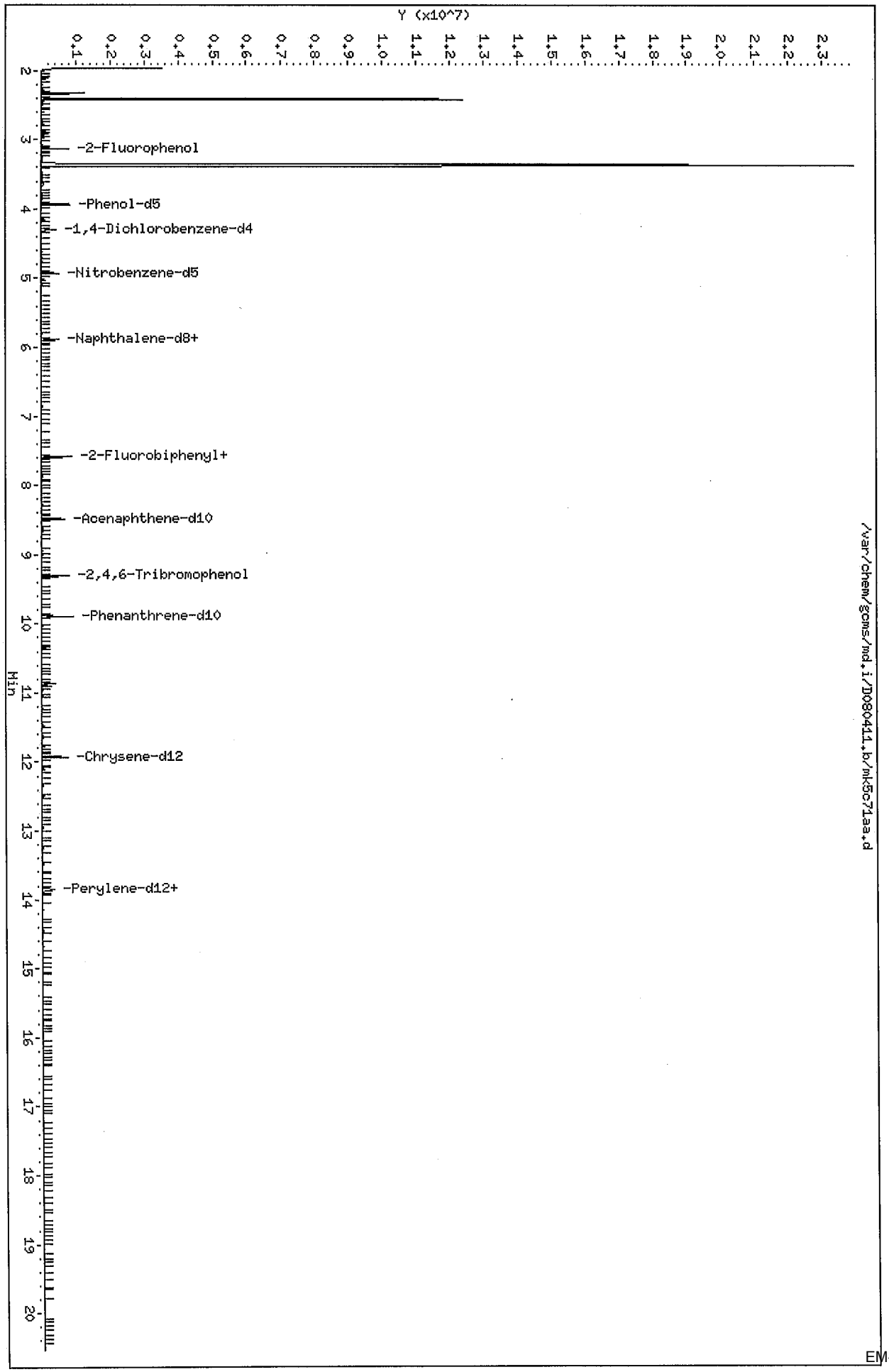
Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Report Date: 05-Aug-2011 13:16

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C71AA Client Smp ID: EXM-DCU-M0010-RGTBL
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	89.1	59.41	19-100
$ 8 Phenol-d5	150	117	77.90	15-124
$ 9 Nitrobenzene-d5	100	77.4	77.41	42-104
$ 11 2,4,6-Tribromophen	150	120	80.27	33-130
$ 10 2-Fluorobiphenyl	100	79.6	79.65	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	3.40	1.70*	50-150


Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Date : 04-AUG-2011 16:45
Client ID: EXH-DCU-M0010-RGTBL
Sample Info: MK5C71AA,,0,,,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk5c71aa.d
Y (x10^7)
Min
-2-Fluorophenol
-Phenol-d5
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8+
-2-Fluorobiphenyl+
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12+

Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d

Date : 04-AUG-2011 16:45

Client ID: EXM-DCU-M0010-RGTBL

Instrument: md.i

Sample Info: MK5C71AA,,0,,,

Volume Injected (uL): 1.0

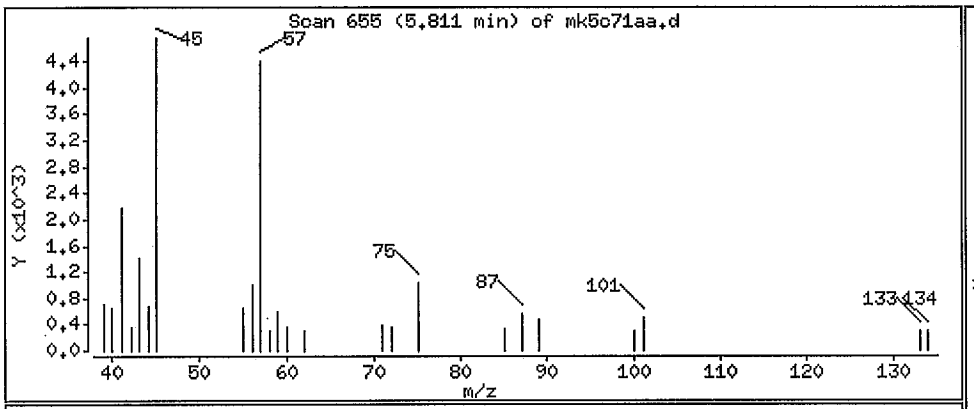
Operator: 60487

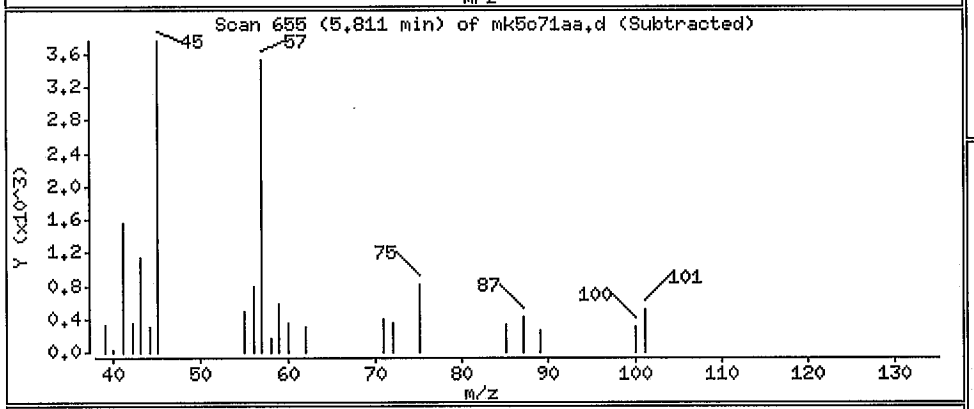
Column phase: Rxi-5 Sil MS

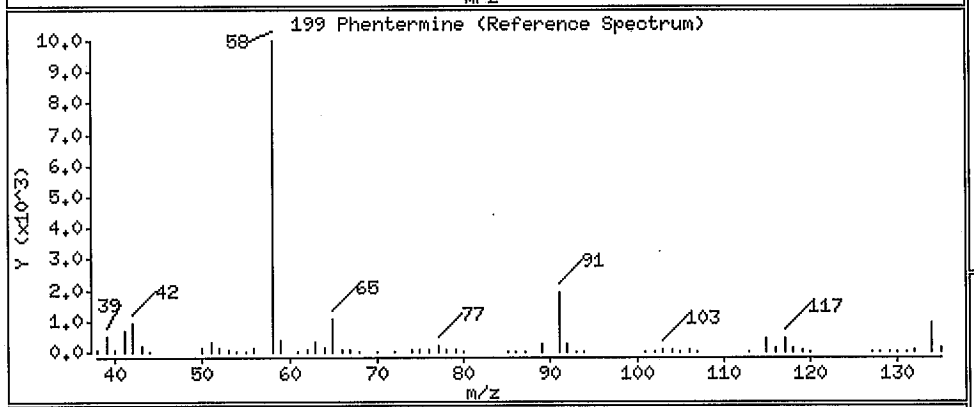
Column diameter: 0.25

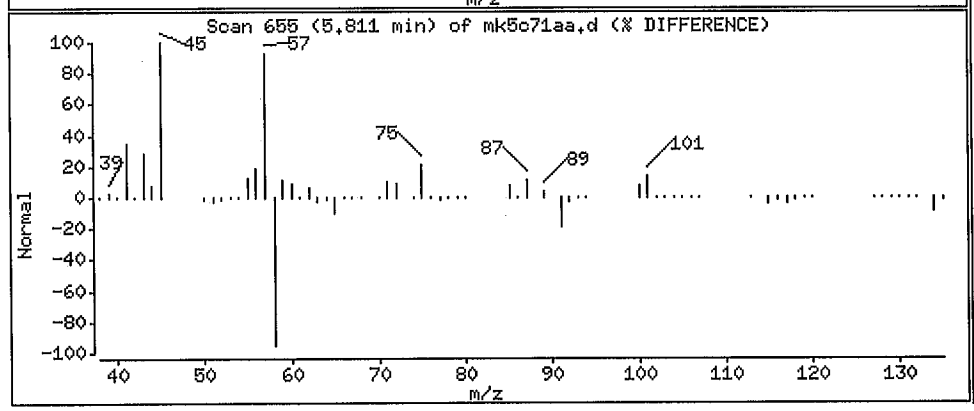
199 Phentermine

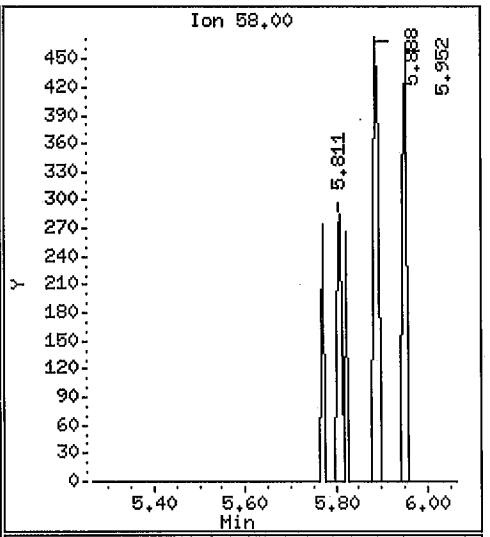
Concentration: 11.8 ug

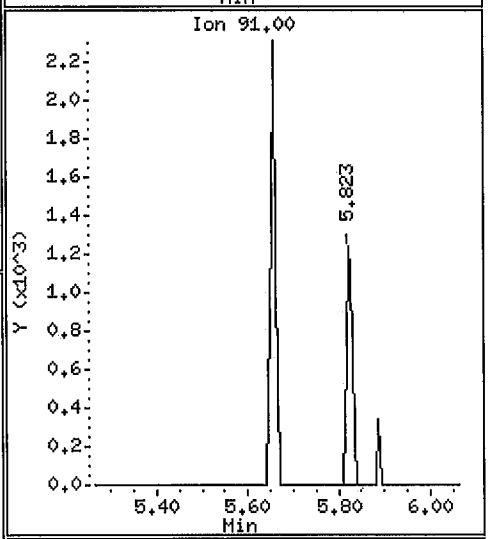


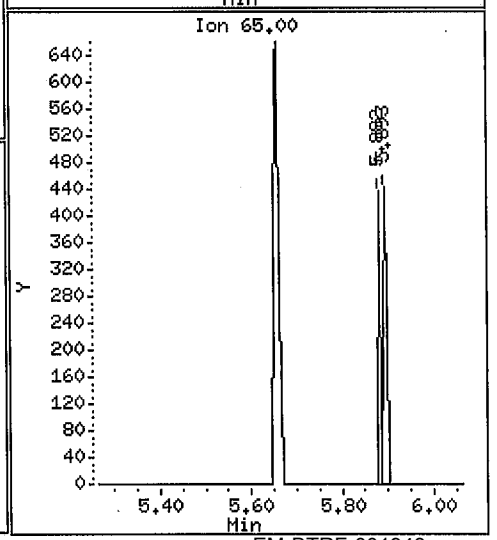












Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d

Date : 04-AUG-2011 16:45

Client ID: EXM-DCU-M0010-RGTBL

Instrument: md.i

Sample Info: MK5C71AA,,0,,,

Volume Injected (uL): 1.0

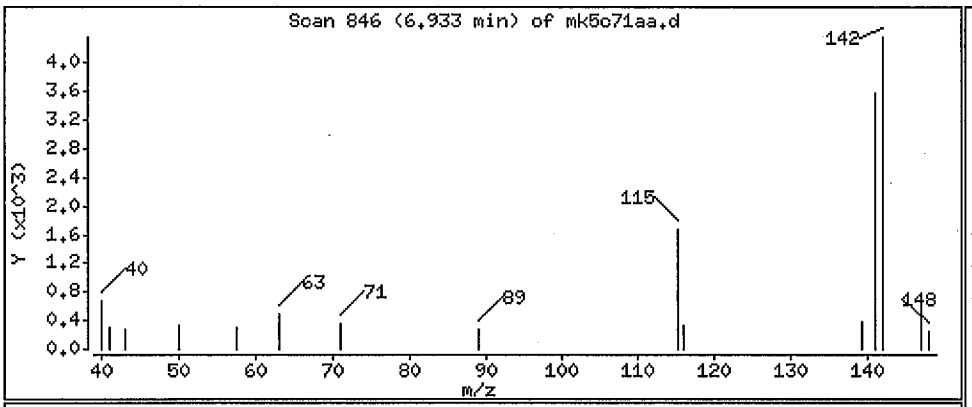
Operator: 60487

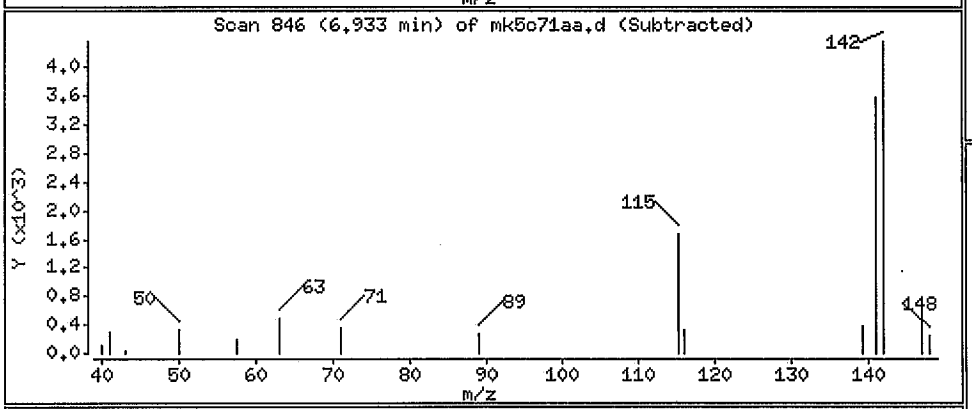
Column phase: Rxi-5 Sil MS

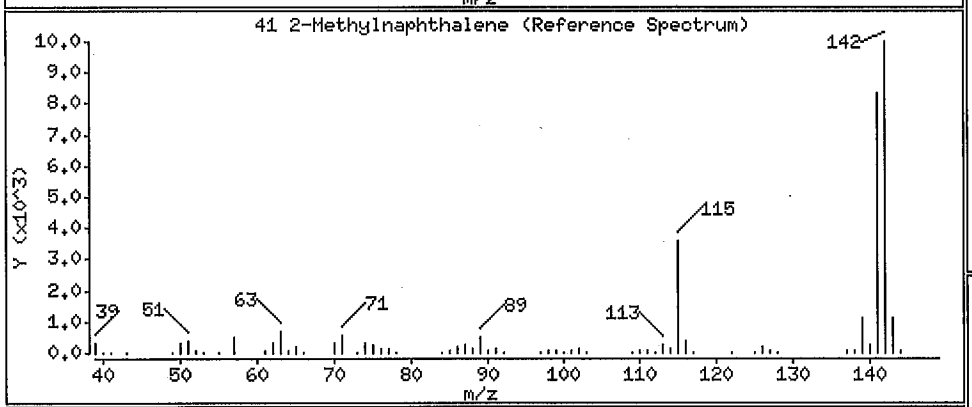
Column diameter: 0.25

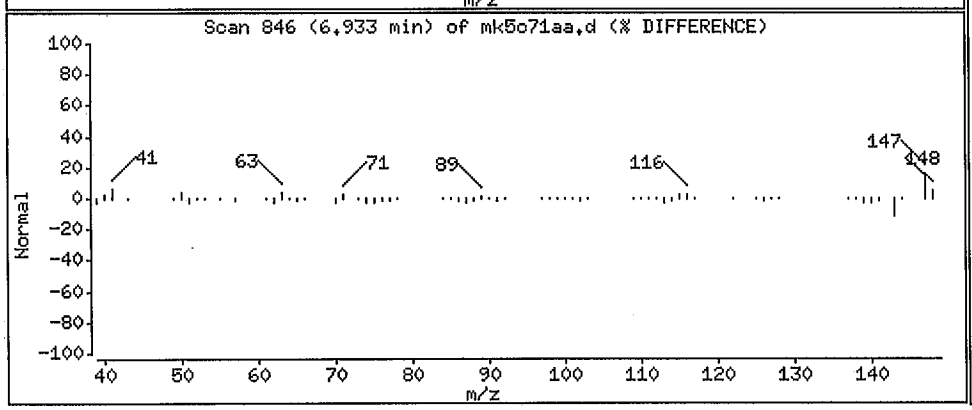
41 2-Methylnaphthalene

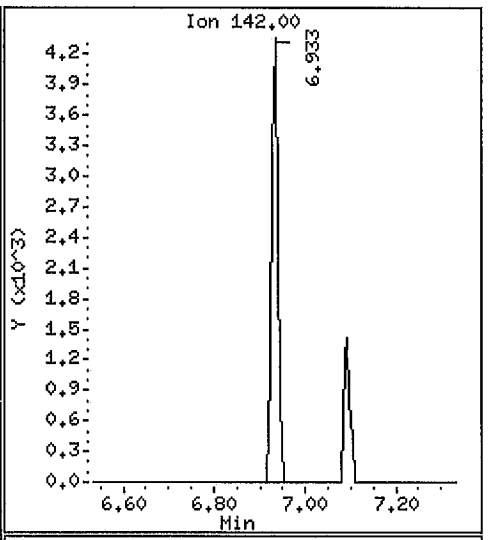
Concentration: 1.13 ug

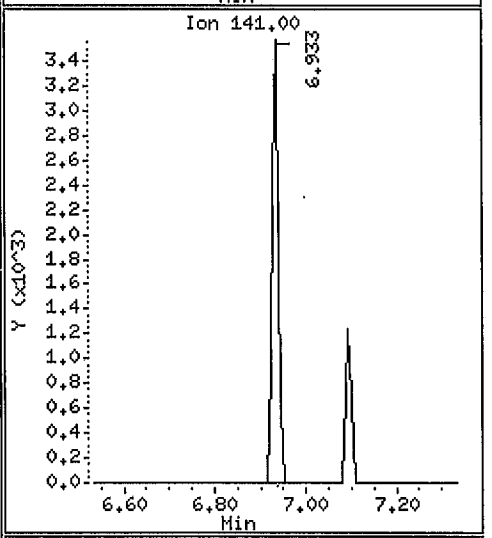


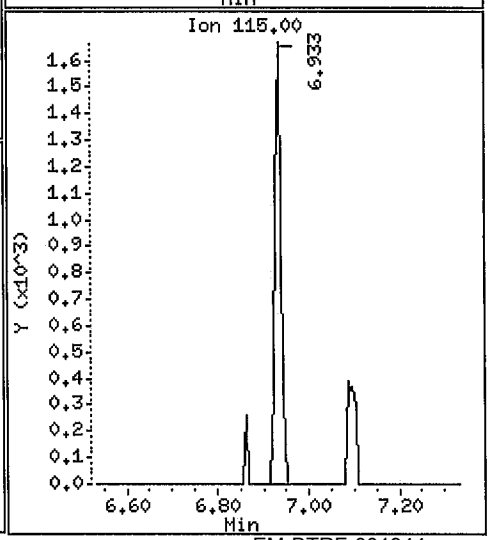












Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d

Date : 04-AUG-2011 16:45

Client ID: EXM-DCU-M0010-RGTBL

Instrument: md.i

Sample Info: MK5C71AA,,0,,,

Volume Injected (uL): 1.0

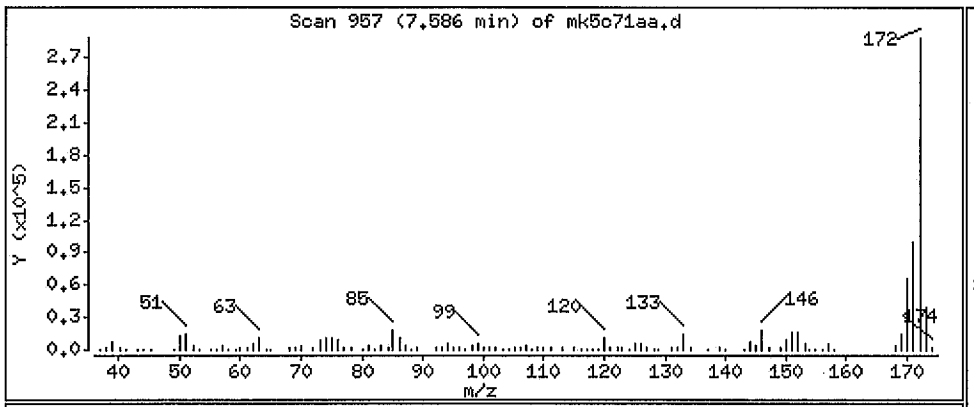
Operator: 60487

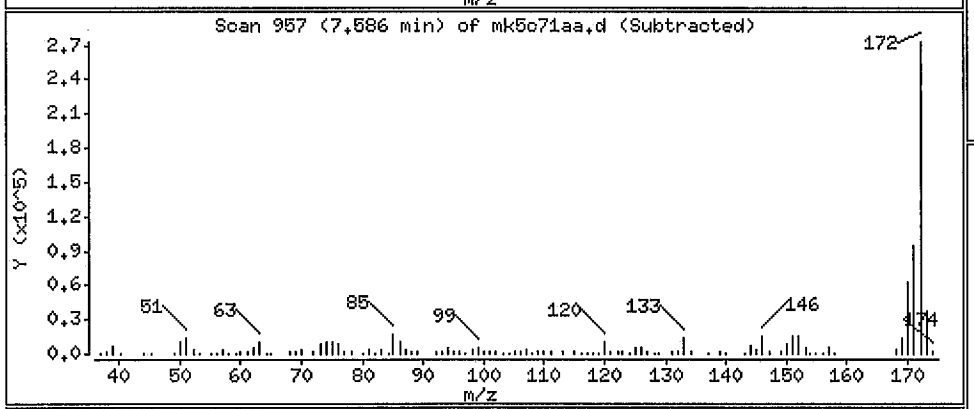
Column phase: Rxi-5 Sil MS

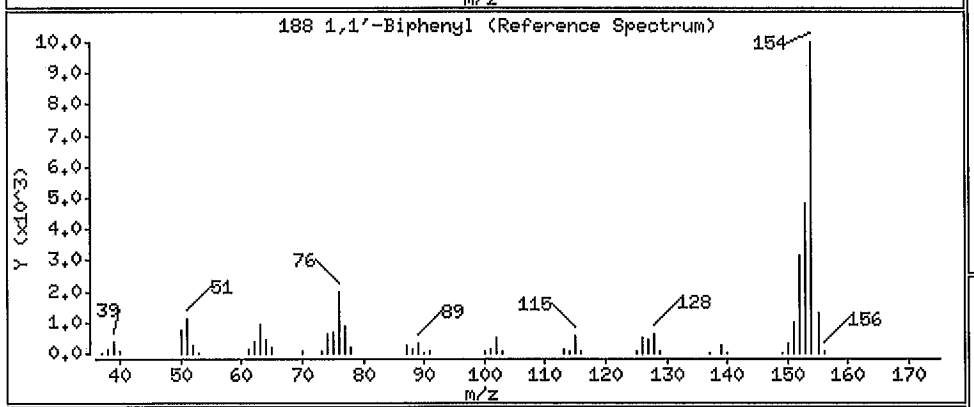
Column diameter: 0.25

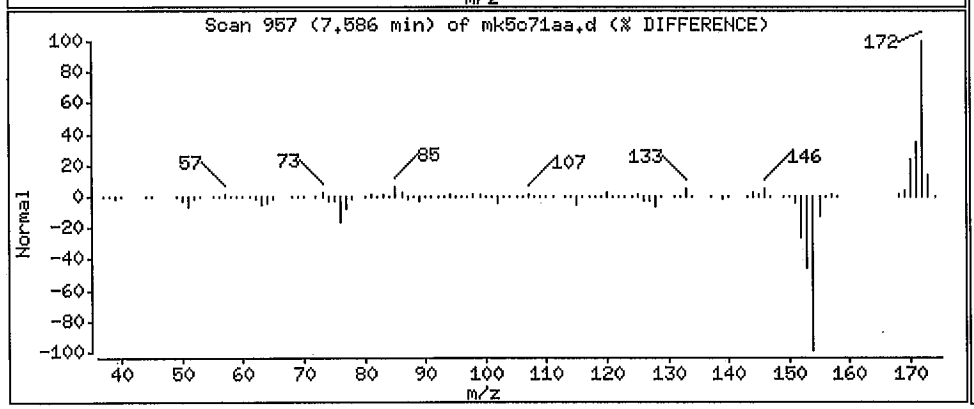
188 1,1'-Biphenyl

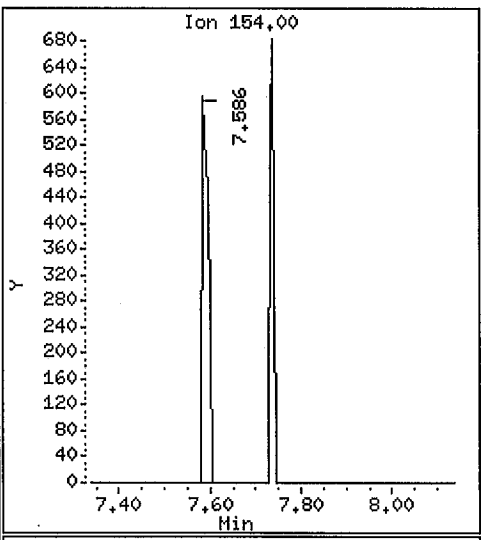
Concentration: 0.101 ug

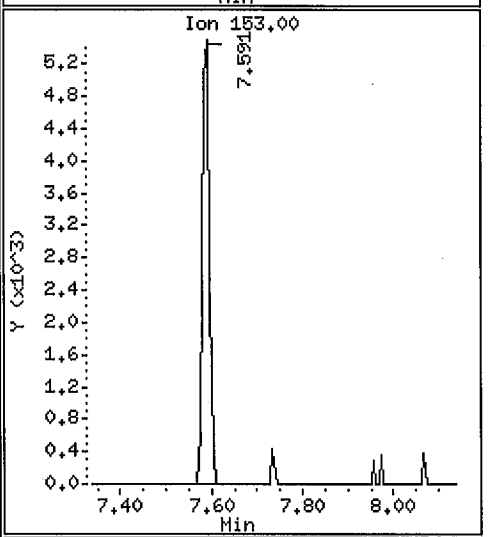


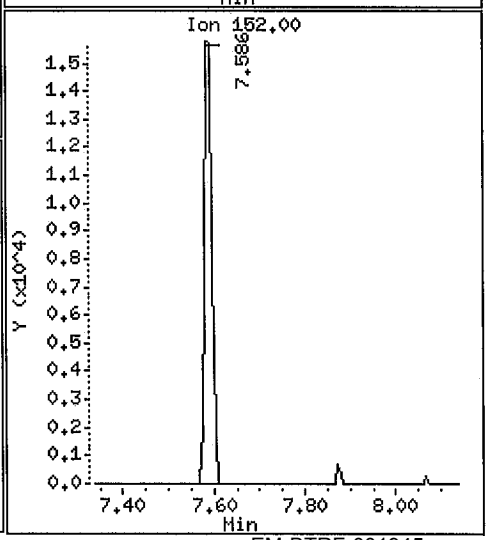












Data File: /var/chem/gcms/md.i/D080411.b/mk5c71aa.d

Date : 04-AUG-2011 16:45

Client ID: EXM-DCU-M0010-RGTBL

Instrument: md.i

Sample Info: MK5C71AA,,0,,,

Volume Injected (uL): 1.0

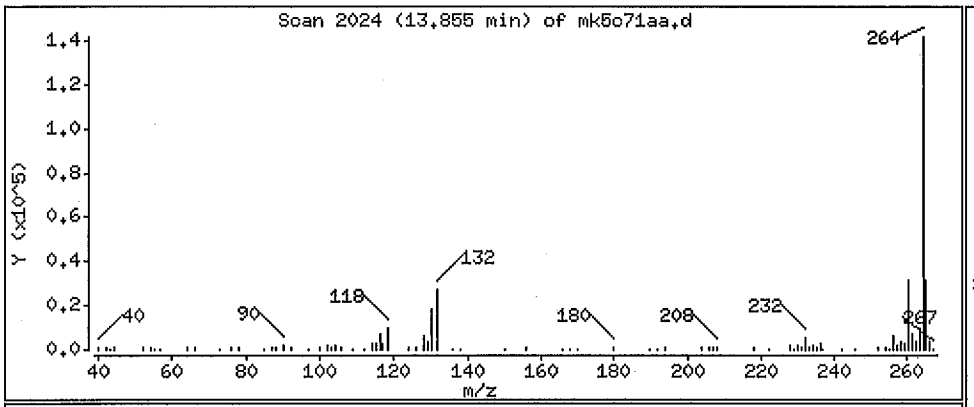
Operator: 60487

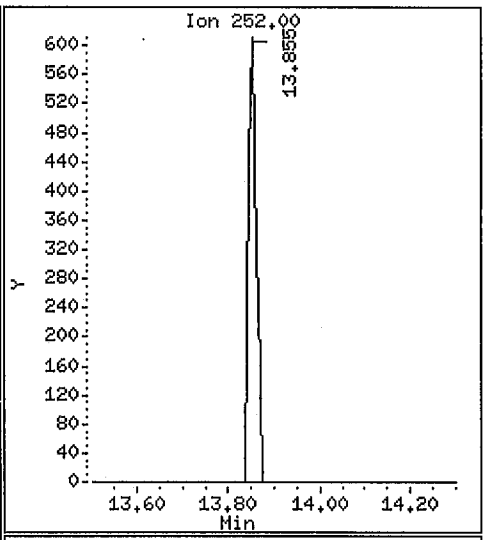
Column phase: Rxi-5 Sil MS

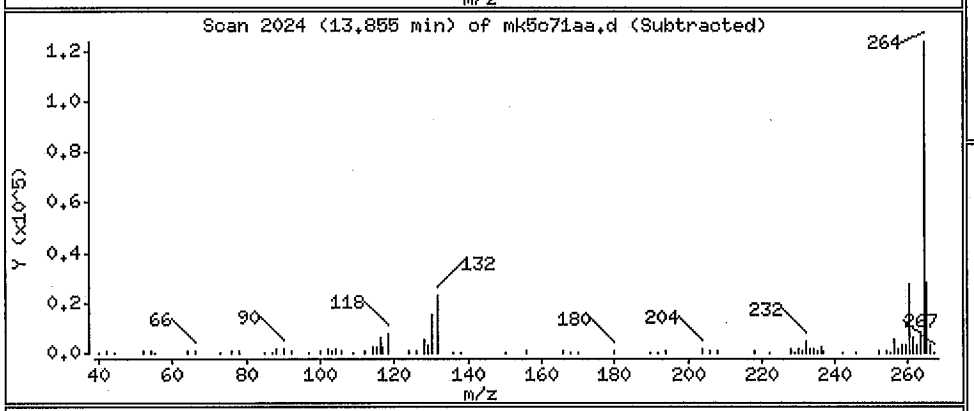
Column diameter: 0.25

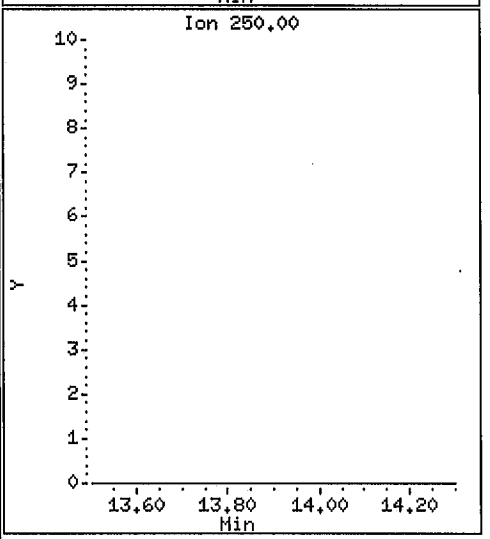
196 Perylene

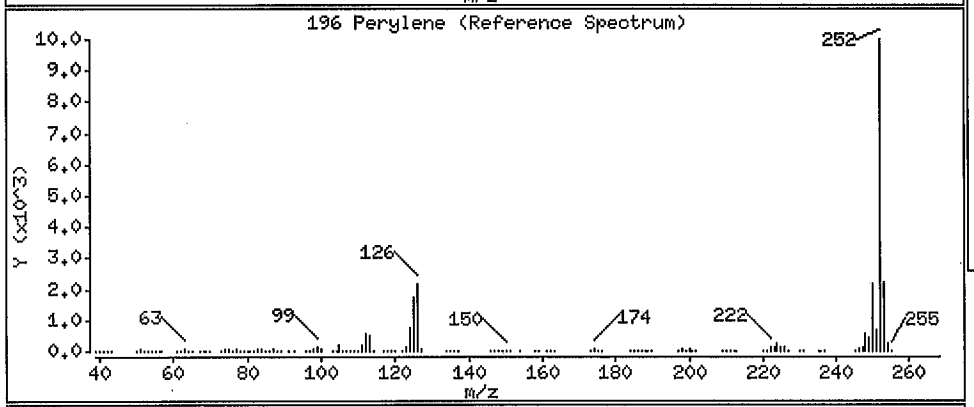
Concentration: 0.119 ug

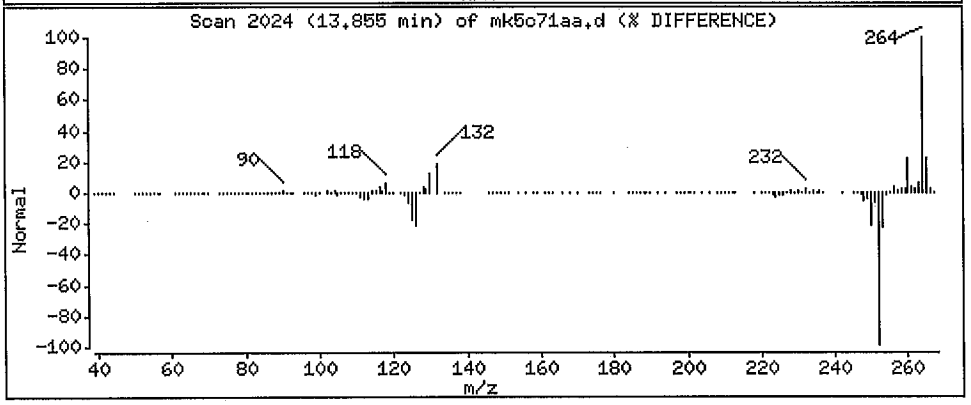












Standards Data

TestAmerica Knoxville Semivolatile GC/MS Initial Calibration Data Review / Narrative Checklist
Method 8270C - KNOX-MS-0016, Rev 10 and Method TO-13A Mod – KNOX-MS-0017, Rev 4

Analysis Date:	7/25-26/11	Instrument:	MD	ICAL Batch/Scan Name:	D072611I	Scanned □

Review Items	*N/A*	*Yes*	*No*	*If No, why is data reportable?*	2nd □
1. Did DFTPP meet tune criteria?		✓			✓
2. Was DDT breakdown ≤20% & benzidine tailing ≤3 and PCP tailing ≤5?		✓			✓
3. Were all standards injected within 12 hr of DFTPP?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Was the high point std. checked for saturation		✓			
6. Were ≥ 5 levels of each compound/surrogate analyzed?		✓			✓
7. Was low level standard at or below RL?		✓			✓
8. Are the average RFs for SPCCs ≥ 0.050? (8270C)		✓			✓
9. Do the RRFs meet minimum criteria? (TO-13A Mod)		✓			✓
10. Are %RSD ≤30% for CCCs? (8270C)		✓			✓
11. Are %RSD≤ 30% for all target analytes? (TO-13A Mod)		✓			✓
12. Was a linear fit or quadratic fit used for analytes >15% RSD?		✓			✓
13. If curves were used, is correlation coefficient ≥0.990?		✓			✓
14. At least 6 consecutive points used for quadratic curves?		✓			✓
15. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.		✓			✓
16. Is the "Y" intercept less than ½ the RL for each curve?		✓			✓
17. RT for each IS ±20 sec avg. RT? (TO-13A)		✓			✓
18. Each analyte ±0.06 RRT of avg. RRT? (TO-13A)		✓			✓
19. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
20. Were all peaks identified automatically? *If not, list analytes:* _____		✓			✓
21. Are ICAL start and end dates/times correct on ICAL summary?		✓			✓
22. Elution order checked on isomeric pairs?					
• 1,4-dichlorobenzene-d4 / 1,2-dichlorobenzene-d4		✓			✓
• aniline / bis(2-chloroethyl)ether		✓			✓
• 1,3- , 1,4- , 1,2-dichlorobenzene		✓			✓
• benzyl alcohol / 2-methylphenol / 4-methylphenol		✓			✓
• 2,4,6- and 2,4,5-trichlorophenol		✓			✓
• phenanthrene / anthracene		✓			✓
• fluoranthene / pyrene		✓			✓
• benzo(a)anthracene / chrysene		✓			✓
• bis(2-ethylhexyl)/di-n-octyl phthalate		✓			✓
• benzo(b)fluoranthene / benzo(k)fluoranthene		✓			✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene		✓			✓
• safrole/1-chloronaphthalene/2- chloronaphthalene		✓			✓
• 1-/2-naphthylamine		✓			✓
23. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓			NCM #: _____	NA
24. Does the ICAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, ICAL summary, curves, followed by Quant reports, chromatograms and manual integrations, in order from low to high standard.		✓			✓
25. Was the 2nd source calibration verification standard within ± 30% recovery and are results in ICAL folder?(~~20%DOD~~)		✓		1,3,5-TNBz @ 45%.	✓

Analyst: KRM	Date: 7/26/11	2nd Level Reviewer: [signature]	Date: 7/27/11
Comments: 1,3,5-Trinitrobenzene 45%		Comments:	

TestAmerica Knoxville Semi-volatile GC/MS Initial Calibration Data Review / Narrative Checklist

Supplemental checklist for Method 8270D - KNOX-MS-0024, Rev 0

Analysis Date:	7/25-26/11	Instrument:	MD	ICAL Batch/Scan Name:	D072611I	Scanned ☐

Review Items	*N/A*	*Yes*	*No*	*If No, why is data reportable?*	2nd ☐
1. Benzidine and PCP tailing ≤2 ?		✓			✓
2. Do the RRFs meet minimum criteria (for points ≥ RL)?		✓			✓
3. Was a linear fit or quadratic fit used for analytes >20% RSD?		✓			✓
4. For linear or quadratic fits, is correlation coefficient ≥ 0.990?		✓			✓
5. Is %RSD ≤20% AND correlation coefficient ≥ 0.990 for 90% of compounds?		✓			✓
6. For analytes changed to linear fit only, does the RL standard requantitated against I-cal ± 30% recovery?		✓			✓
7. Mid-point – benzo(b & k)fluoranthene: height of the valley between must be less than 50% of the average of the two peak heights?		✓			✓

Analyst: KRM	Date: 8/10/11	2nd Level Reviewer :	Date: 8/10/11
Comments:		**Comments:**	

* Such action must be taken in consultation with client. MS060r1.doc, 022111

NOTE: Nonconformance memos are required for **bold** and *italicized* autotext statements: **Bold** = deficiency, *italicized* = anomaly.

TestAmerica Knoxville
Instrument MD Run/Maintenance Log

Preventive Maintenance Performed ☑ **Daily** INJ, GOLD SEAL, SBP7A **Date/Time Verified** ☑

Target Batch	D072511I			Date	7/25/11 KRM 7/26/11
ICAL Batch	↓			Analyst	KRM
IS #1	(8270) 50077	(8270x) 48030		Internal Std ID*	See Log

* was added to all sample extracts at 3 ul per 300 ul unless noted. Instrument injection volume is 1 ul unless otherwise noted.

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
Inst Blk	INST BLK	1149	—	—	—	
Tune	DFDG25	1209	—	EM3057A	—	
8270 ICAL	ICDG258	1221	—	EM3056A	—	200 8270.sub
↓	ICDG255	1246	—	EM3056B	—	120 8270dxnC13.sub
	ICDG254	1311	—	EM3056C	—	60
	ICDG253	1337	—	EM3056D	—	40
	ICDG252	1402	—	EM3056E	—	25
	ICDG251	1428	—	EM3056F	—	10
	ICDG256	1453	—	EM3056G	—	5 ↓
↓	ICDG257	1519	—	EM3056H	—	2 low.sub
2nd Source	ICVDG25	1544	—	EM3077	—	60 8270dxnC13.sub
8270x ICAL	XCDG258	1609	—	EM3029A	—	200 8270x.sub
↓	XCDG255	1634	—	EM3029B	—	120 ↓
	XCDG254	1659	—	EM3029C	—	60
	XCDG253	1724	—	EM3029D	—	40
	XCDG252	1749	—	EM3029E	—	25
	XCDG251	1814	—	EM3029F	—	10
↓	XCDG256	1839	—	EM3029G	—	5
2nd Source	XCVDG25	1904	—	EM3006	—	60 ↓

KRM 7/26/11

Comments: _____

TestAmerica Knoxville
Instrument MD Run/Maintenance Log

Preventive Maintenance Performed ☑ **Daily** INJ **Date/Time Verified** ☑

Target Batch	D072611I			Date	7/26/11
ICAL Batch	↓			Analyst	KRM
IS #1	(PAH Extra) 45320	(A9) 44644		Internal Std ID*	See Log

* was added to all sample extracts at 3 ul per 300 ul unless noted. Instrument injection volume is 1 ul unless otherwise noted.

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
Inst Blk	INST BLK	949	—	—	—	
Tune	DFDG26	1012	—	EM3057A	—	
PAH Extra ICAL	XPDG268	1024	—	EM3039A	—	200 allextra.sub
	XPDG265	1052	—	EM3039B	—	120
	XPDG264	1121	—	EM3039C	—	60
	XPDG263	1150	—	EM3039D	—	40
	XPDG262	1219	—	EM3039E	—	25
	XPDG261	1248	—	EM3039P	—	10
	XPDG266	1316	—	EM3039G	—	5
	XPDG267	1345	—	EM3039M	—	2
2nd Source	XPVDG26	1414	—	EM3040	—	60
A9 ICAL	A9DG268 KRM 7/26/11	1443	—	EM3078A	—	200 appdx9.sub
	A9DG258265	1509	—	EM3078B	—	120
	A9DG264	1534	—	EM3033C	—	60
	A9DG263	1600	—	EM3033D	—	40
	A9DG262	1625	—	EM3033E	—	25
	A9DG261	1651	—	EM3033P	—	10
	A9DG266	1717	—	EM3033G	—	5
	A9DG267	1742	—	EM3033H	—	2
2nd Source	A9VDG26	1807	—	EM3009	—	60
Spike Check	EM3086	1832	—	—	—	

KRM 7/27/11

Comments: _____

Data File: /chem/gcms/md.i/D072511I.b/dfdg25.d

Date : 25-JUL-2011 12:09

Client ID: Tune

Instrument: md.i

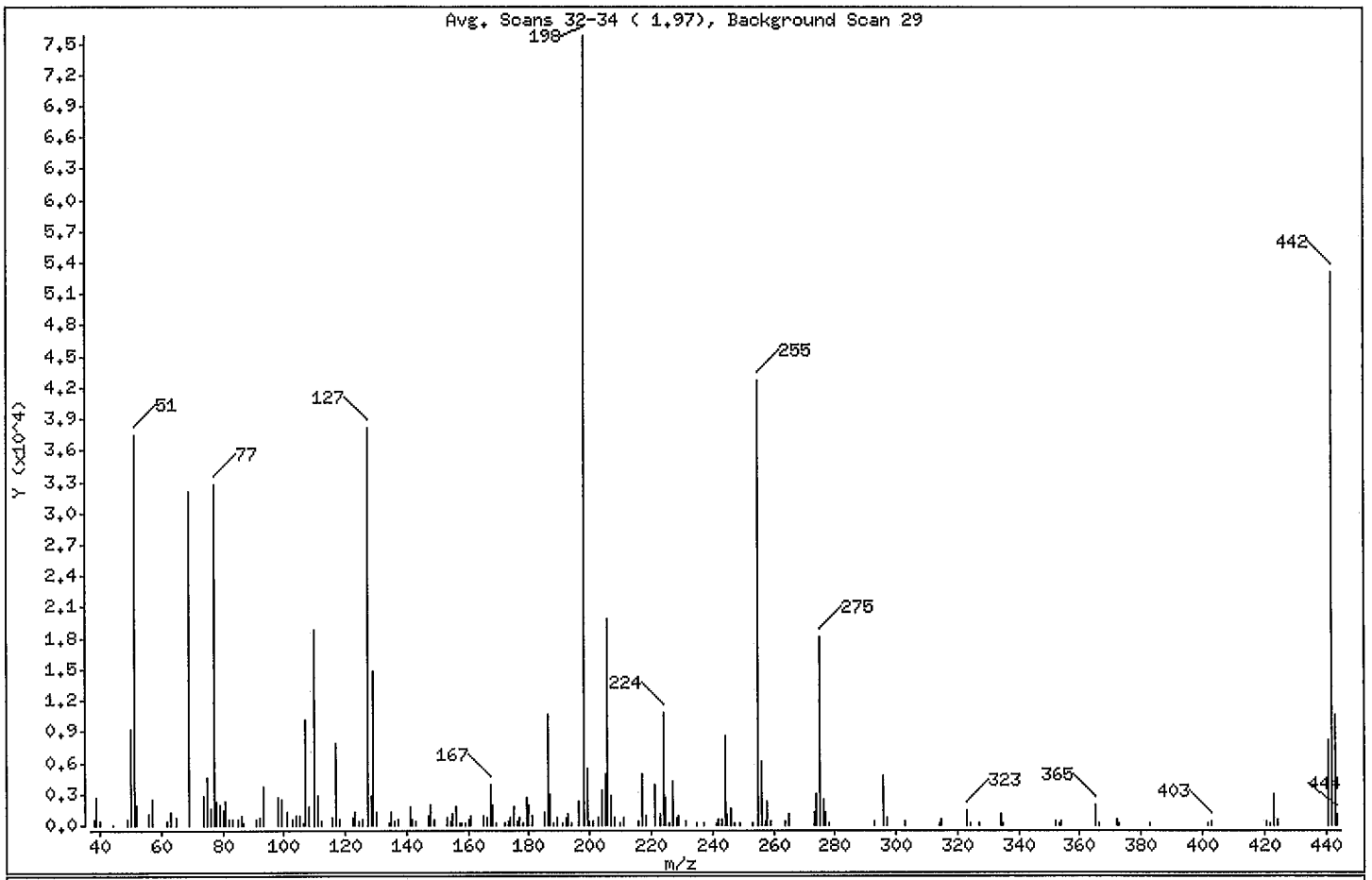
Sample Info: DFDG25,,3,,DFTPP,

Operator: 60841

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	49.42
68	Less than 1.99% of mass 69	0.00 (0.00)
69	Present, but less than mass 198	42.28
70	Less than 1.99% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	50.32
197	Less than 0.99% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.06
275	10.00 - 30.00% of mass 198	23.90
365	1.01 - 100.00% of mass 198	2.51
441	Present, but less than mass 443	10.74
442	50.01 - 110.00% of mass 198	70.18
443	17.00 - 23.00% of mass 442	14.06 (20.03)

Data File: /chem/gcms/md.i/D072511I.b/dfdg25.d

Date : 25-JUL-2011 12:09

Client ID: Tune

Instrument: md.i

Sample Info: DFDG25,,3,,DFTPP,

Operator: 60841

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

Data File: dfdg25.d
Spectrum: Avg. Scans 32-34 (1.97), Background Scan 29
Location of Maximum: 198.00
Number of points: 174

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	519	118.00	544	186.00	10632	255.00	42744
39.00	2551	122.00	710	187.00	2937	256.00	6109
40.00	354	123.00	1183	188.00	235	257.00	330
44.00	81	124.00	432	189.00	621	258.00	2216
49.00	599	125.00	457	191.00	183	259.00	291
50.00	9262	127.00	38128	192.00	713	264.00	379
51.00	37456	128.00	2736	193.00	1027	265.00	996
52.00	1896	129.00	14893	194.00	181	273.00	1182
56.00	1035	130.00	1251	196.00	2345	274.00	2998
57.00	2432	134.00	210	198.00	75784	275.00	18112
62.00	282	135.00	1136	199.00	5347	276.00	2482
63.00	1255	136.00	429	200.00	303	277.00	1222
65.00	666	137.00	598	201.00	317	278.00	208
69.00	32040	141.00	1776	203.00	620	293.00	275
74.00	2812	142.00	510	204.00	3293	296.00	4702
75.00	4516	143.00	400	205.00	4889	297.00	648
76.00	1570	147.00	936	206.00	19792	303.00	379
77.00	32728	148.00	1933	207.00	2766	314.00	201
78.00	2289	149.00	609	208.00	767	315.00	562
79.00	1900	153.00	645	210.00	259	323.00	1356
80.00	1472	154.00	396	211.00	764	324.00	199
81.00	2235	155.00	959	216.00	265	327.00	227
82.00	578	156.00	1656	217.00	4866	334.00	1018
83.00	548	157.00	219	218.00	825	335.00	203
85.00	488	158.00	196	221.00	3844	352.00	385
86.00	818	159.00	180	223.00	1116	353.00	235
87.00	194	160.00	568	224.00	10856	354.00	357
91.00	541	161.00	826	225.00	2583	365.00	1905
92.00	619	165.00	853	226.00	250	366.00	255
93.00	3704	166.00	692	227.00	4109	372.00	604
98.00	2650	167.00	3805	228.00	616	373.00	197
99.00	2366	168.00	1877	229.00	876	383.00	228
101.00	1215	169.00	259	231.00	370	402.00	201
103.00	461	172.00	168	235.00	201	403.00	308
104.00	844	173.00	430	237.00	196	421.00	264

Data File: /chem/gcms/md.i/D072511I.b/dfdg25.d

Date : 25-JUL-2011 12:09

Client ID: Tune

Instrument: md.i

Sample Info: DFDG25,,3,,DFTPP,

Operator: 60841

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

Data File: dfdg25.d
Spectrum: Avg. Scans 32-34 (1.97), Background Scan 29
Location of Maximum: 198.00
Number of points: 174

m/z	Y	m/z	Y	m/z	Y	m/z	Y
105.00	897	174.00	736	241.00	168	422.00	244
106.00	190	175.00	1673	242.00	497	423.00	2956
107.00	10084	176.00	327	243.00	562	424.00	527
108.00	1786	177.00	637	244.00	8468	441.00	8142
110.00	18888	178.00	227	245.00	1114	442.00	53184
111.00	2730	179.00	2696	246.00	1503	443.00	10654
112.00	388	180.00	1891	247.00	180	444.00	1021
116.00	657	181.00	798	249.00	184		
117.00	7758	185.00	1234	253.00	192		

Data File: /chem/gcms/md.i/D072511I.b/dfdg25.d

Date : 25-JUL-2011 12:09

Client ID: Tune

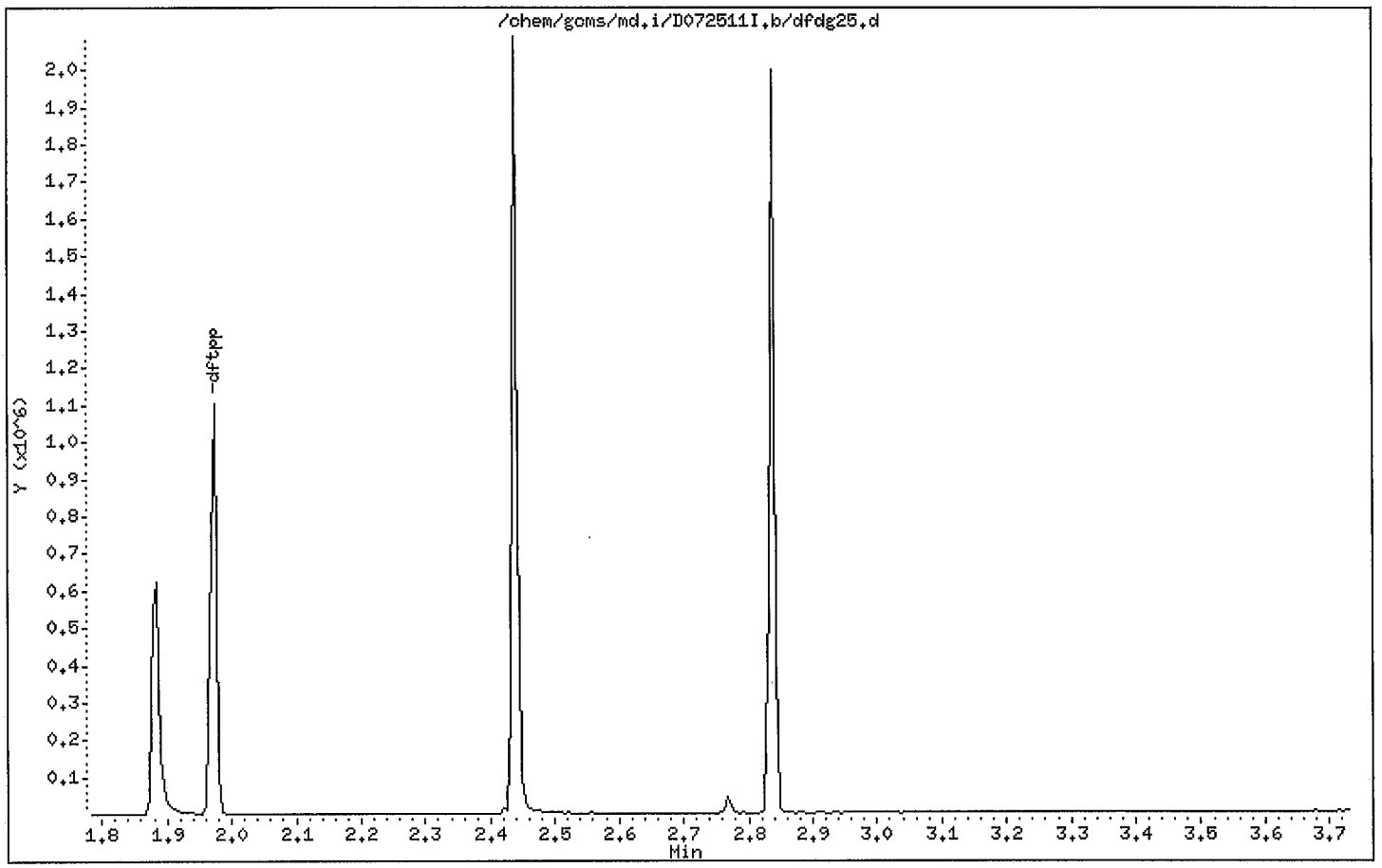
Instrument: md.i

Sample Info: DFDG25,,3,,DFTPP,

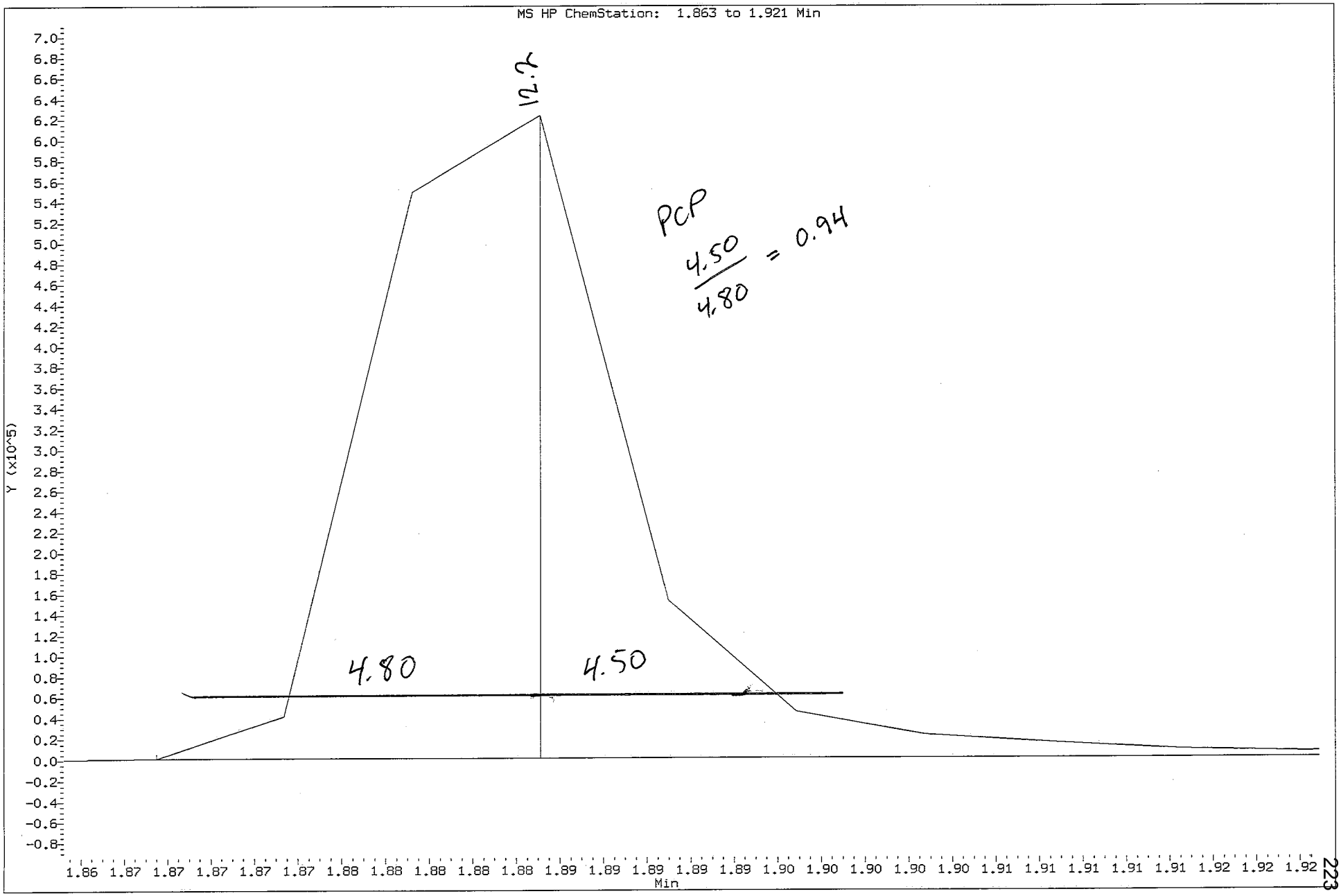
Operator: 60841

Column phase: Rxi-5 Sil MS

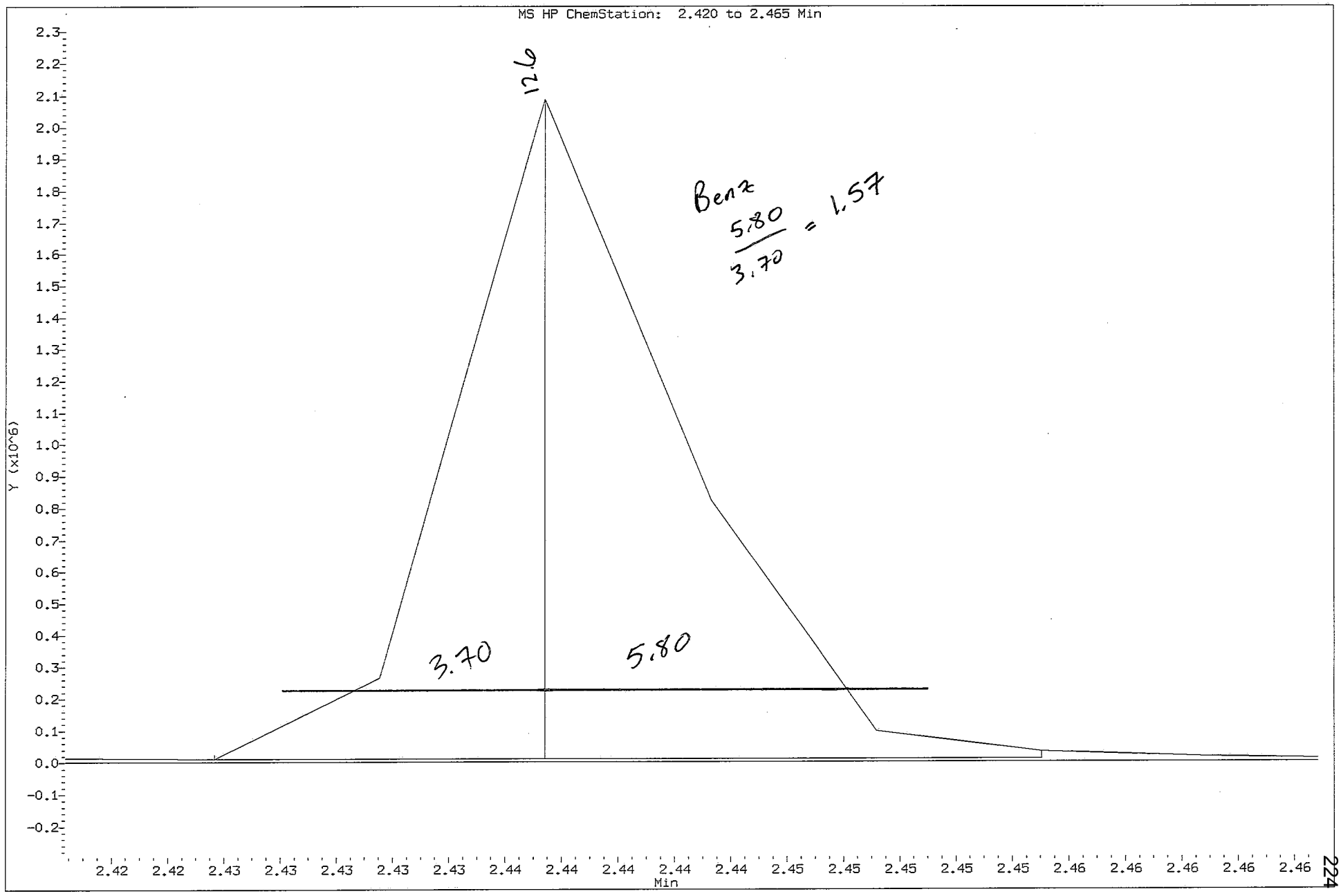
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D072511I.b/dfdg25.d
Injection Date: 25-JUL-2011 12:09
Instrument: md.i
Client Sample ID: Tune



Data File: /var/chem/gcms/md.i/D072511I.b/dfdg25.d
Injection Date: 25-JUL-2011 12:09
Instrument: md.i
Client Sample ID: Tune



EM-BTRF-001957

Data File: /chem/goms/md.i/D072611I.b/dfdg26.d

Date : 26-JUL-2011 10:12

Client ID: Tune

Instrument: md.i

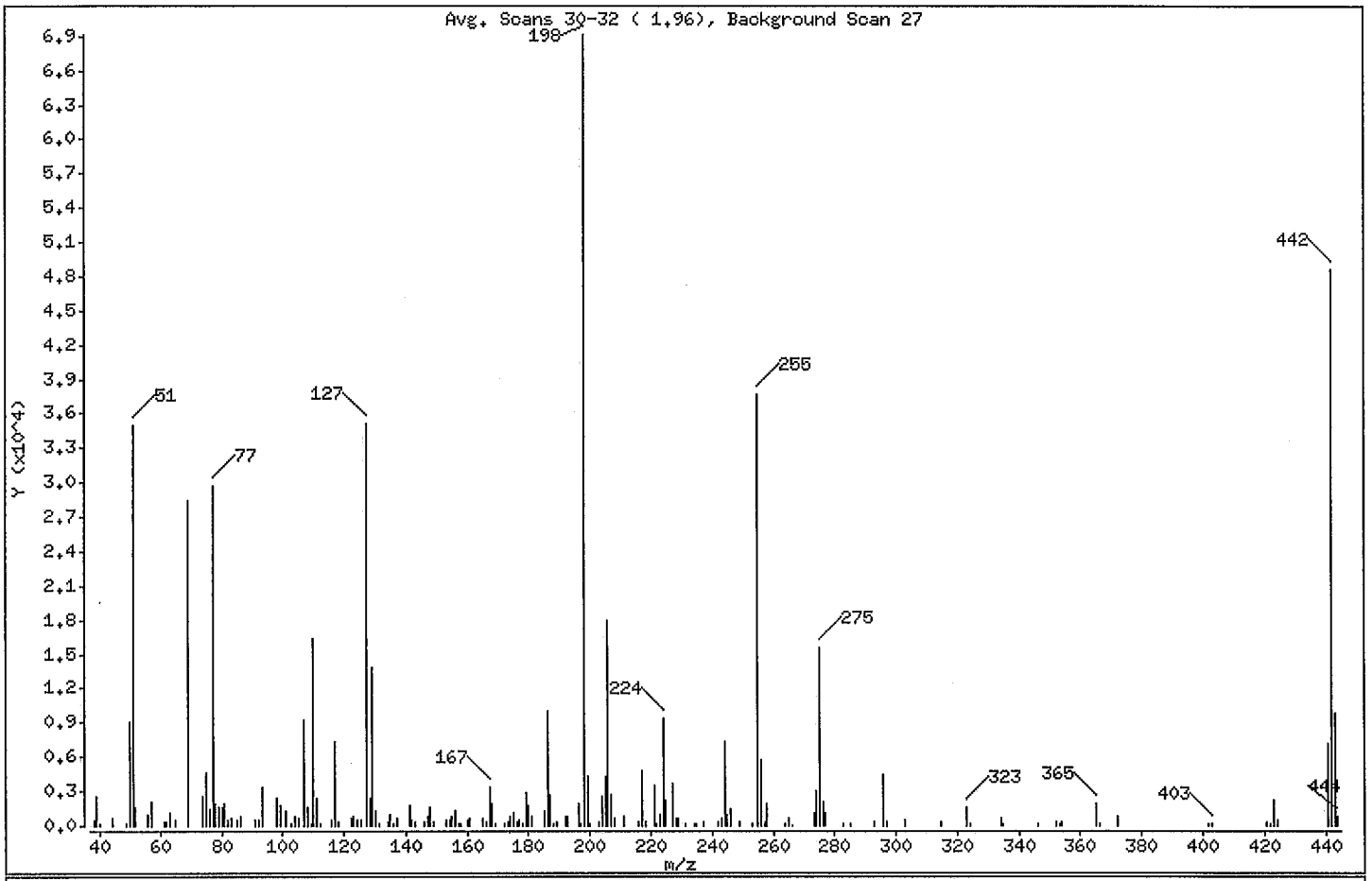
Sample Info: DFDG26,,3,,DFTPP,

Operator: 60841

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	50.58
68	Less than 1.99% of mass 69	0.00 (0.00)
69	Present, but less than mass 198	41.05
70	Less than 1.99% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	50.76
197	Less than 0.99% of mass 198	0.34
199	5.00 - 9.00% of mass 198	6.30
275	10.00 - 30.00% of mass 198	22.60
365	1.01 - 100.00% of mass 198	2.69
441	Present, but less than mass 443	10.38
442	50.01 - 110.00% of mass 198	70.38
443	17.00 - 23.00% of mass 442	14.18 (20.15)

Data File: /chem/gcms/md.i/D072611I.b/dfdg26.d

Date : 26-JUL-2011 10:12

Client ID: Tune

Instrument: md.i

Sample Info: DFDG26,,3,,DFTPP,

Operator: 60841

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

Data File: dfdg26.d
Spectrum: Avg. Scans 30-32 (1.96), Background Scan 27
Location of Maximum: 198.00
Number of points: 169

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	411	117.00	7274	180.00	1804	255.00	37704
39.00	2467	118.00	364	181.00	838	256.00	5771
40.00	184	122.00	600	185.00	1208	257.00	360
44.00	638	123.00	826	186.00	9941	258.00	1931
49.00	215	124.00	431	187.00	2755	264.00	179
50.00	9057	125.00	511	188.00	181	265.00	679
51.00	34968	127.00	35088	189.00	320	266.00	14
52.00	1668	128.00	2452	192.00	781	273.00	1167
56.00	1015	129.00	13862	193.00	817	274.00	2993
57.00	2003	130.00	1205	196.00	1832	275.00	15621
61.00	272	131.00	219	197.00	232	276.00	2068
62.00	354	134.00	244	198.00	69128	277.00	1074
63.00	1165	135.00	978	199.00	4355	283.00	174
65.00	549	136.00	213	200.00	189	285.00	190
69.00	28376	137.00	640	203.00	361	293.00	291
74.00	2477	141.00	1690	204.00	2529	296.00	4372
75.00	4536	142.00	509	205.00	4215	297.00	304
76.00	1437	143.00	330	206.00	18000	303.00	461
77.00	29696	146.00	258	207.00	2670	315.00	315
78.00	1925	147.00	749	208.00	647	323.00	1554
79.00	1590	148.00	1637	211.00	748	324.00	173
80.00	1558	149.00	275	216.00	298	334.00	588
81.00	1943	153.00	543	217.00	4724	335.00	189
82.00	484	154.00	489	218.00	370	346.00	202
83.00	618	155.00	858	221.00	3429	352.00	283
85.00	449	156.00	1286	222.00	211	353.00	196
86.00	842	157.00	166	223.00	947	354.00	243
91.00	491	158.00	189	224.00	9405	365.00	1863
92.00	495	160.00	461	225.00	2302	366.00	199
93.00	3412	161.00	701	227.00	3671	372.00	730
98.00	2389	165.00	714	228.00	626	402.00	171
99.00	1714	166.00	327	229.00	713	403.00	230
101.00	1251	167.00	3361	231.00	208	421.00	292
103.00	234	168.00	1917	234.00	192	422.00	173
104.00	723	169.00	237	235.00	179	423.00	2157

Data File: /chem/gcms/md.i/D072611I.b/dfdg26.d

Date : 26-JUL-2011 10:12

Client ID: Tune

Instrument: md.i

Sample Info: DFDG26,,3,,DFTPP,

Operator: 60841

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

Data File: dfdg26.d
Spectrum: Avg. Scans 30-32 (1.96), Background Scan 27
Location of Maximum: 198.00
Number of points: 169

m/z	Y	m/z	Y	m/z	Y	m/z	Y
105.00	702	172.00	176	237.00	239	424.00	462
107.00	9293	173.00	259	242.00	379	441.00	7177
108.00	1529	174.00	724	243.00	601	442.00	48648
109.00	232	175.00	1154	244.00	7374	443.00	9806
110.00	16400	176.00	267	245.00	898	444.00	843
111.00	2355	177.00	439	246.00	1410		
112.00	170	178.00	202	249.00	249		
116.00	504	179.00	2859	253.00	181		

Data File: /chem/gcms/md.i/D072611I.b/dfdg26.d

Date : 26-JUL-2011 10:12

Client ID: Tune

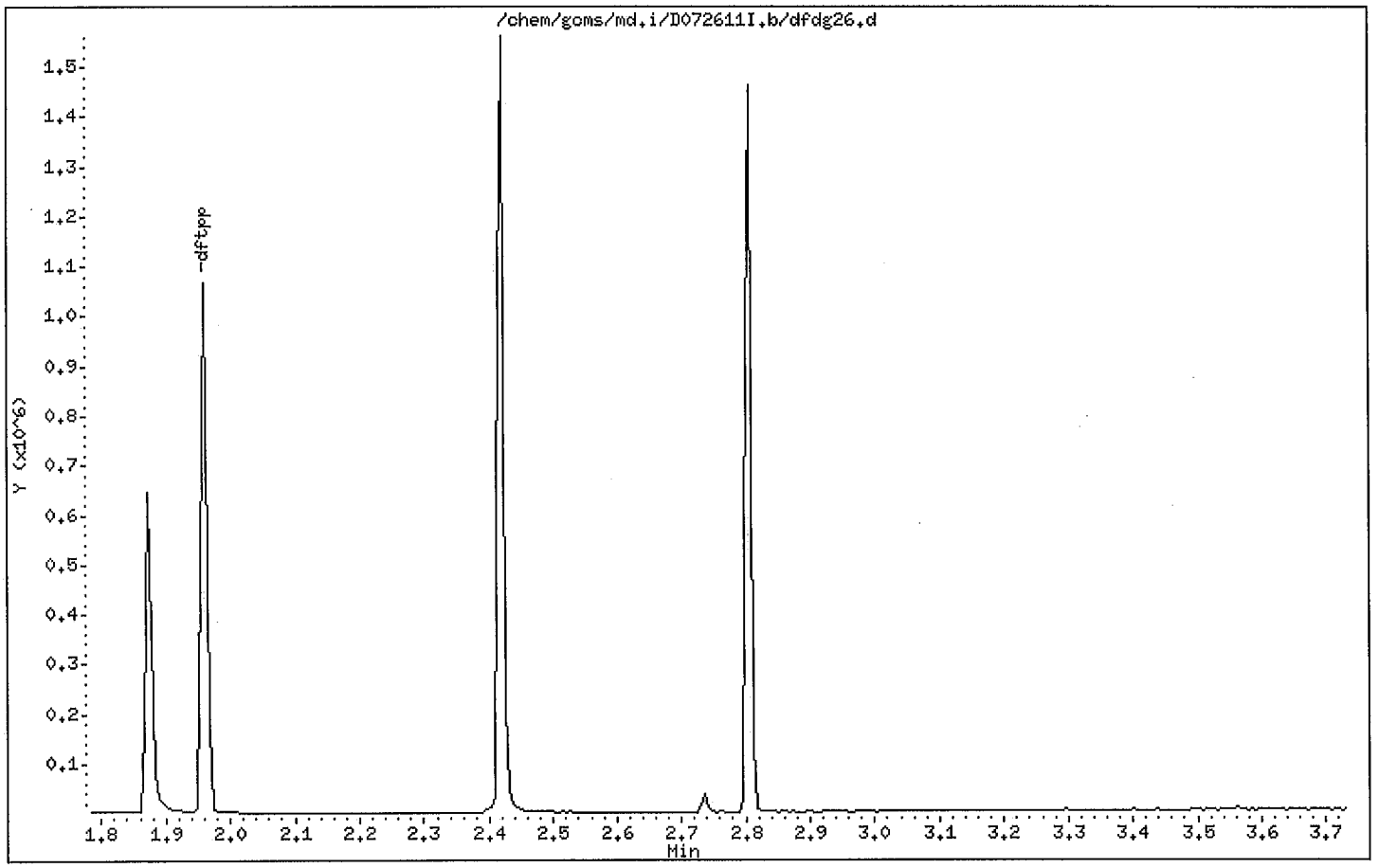
Instrument: md.i

Sample Info: DFDG26,,3,,DFTPP,

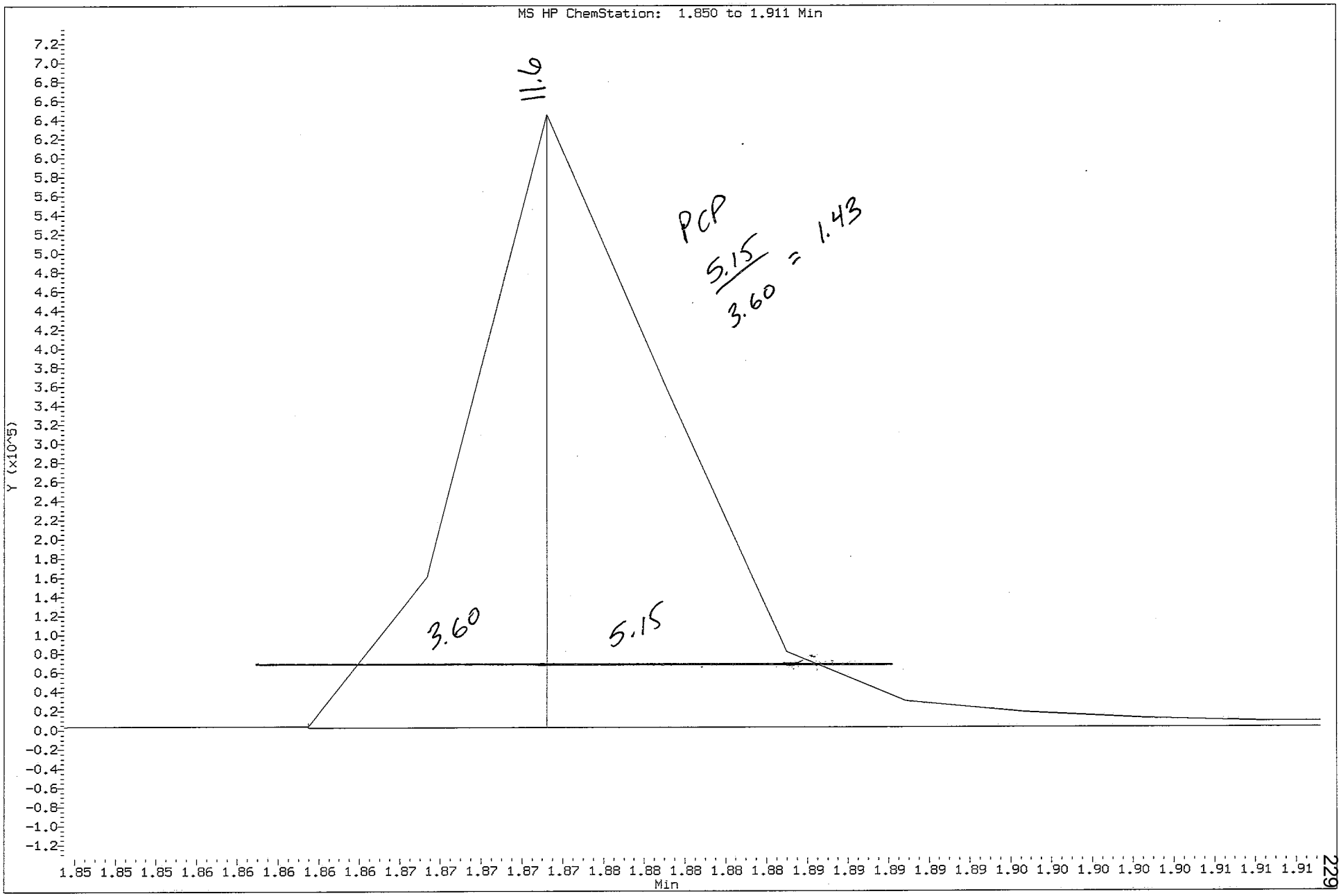
Operator: 60841

Column phase: Rxi-5 Sil MS

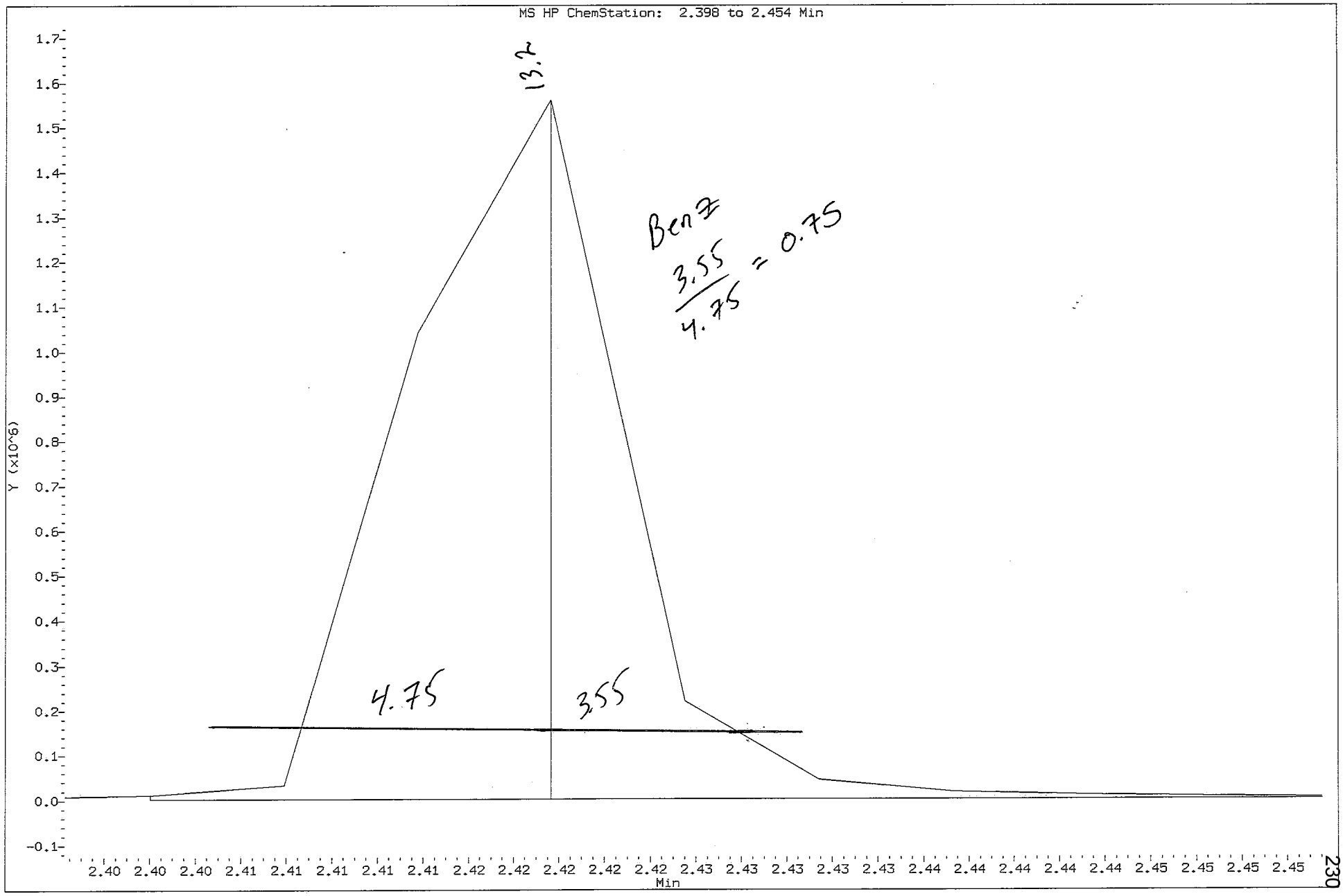
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D072611I.b/dfdg26.d
Injection Date: 26-JUL-2011 10:12
Instrument: md.i
Client Sample ID: Tune



Data File: /var/chem/gcms/md.i/D072611I.b/dfdg26.d
Injection Date: 26-JUL-2011 10:12
Instrument: md.i
Client Sample ID: Tune



Report Date: 27-Jul-2011 08:40

Calibration History

Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Start Cal Date: 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 10.00000		
26-JUL-2011 16:51	appdx9	/chem/gcms/md.i/D072611I.b/a9dg261.d
26-JUL-2011 12:48	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg261.d
25-JUL-2011 18:14	8270x	/chem/gcms/md.i/D072511I.b/xcdg251.d
25-JUL-2011 14:28	8270dxnC13	/chem/gcms/md.i/D072511I.b/icdg251.d
Cal Level: 2 , Cal Amount: 25.00000		
26-JUL-2011 16:25	appdx9	/chem/gcms/md.i/D072611I.b/a9dg262.d
26-JUL-2011 12:19	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg262.d
25-JUL-2011 17:49	8270x	/chem/gcms/md.i/D072511I.b/xcdg252.d
25-JUL-2011 14:02	8270dxnC13	/var/chem/gcms/md.i/D072511I.b/icdg252.d
Cal Level: 3 , Cal Amount: 40.00000		
26-JUL-2011 16:00	appdx9	/chem/gcms/md.i/D072611I.b/a9dg263.d
26-JUL-2011 11:50	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg263.d
25-JUL-2011 17:24	8270x	/chem/gcms/md.i/D072511I.b/xcdg253.d
25-JUL-2011 13:37	8270dxnC13	/var/chem/gcms/md.i/D072511I.b/icdg253.d
Cal Level: 4 , Cal Amount: 60.00000		
26-JUL-2011 15:34	appdx9	/chem/gcms/md.i/D072611I.b/a9dg264.d
26-JUL-2011 11:21	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg264.d
25-JUL-2011 16:59	8270x	/chem/gcms/md.i/D072511I.b/xcdg254.d
25-JUL-2011 13:11	8270dxnC13	/var/chem/gcms/md.i/D072511I.b/icdg254.d
Cal Level: 5 , Cal Amount: 120.00000		
26-JUL-2011 15:09	appdx9	/var/chem/gcms/md.i/D072611I.b/a9dg265.d
26-JUL-2011 10:52	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg265.d
25-JUL-2011 16:34	8270x	/var/chem/gcms/md.i/D072511I.b/xcdg255.d
25-JUL-2011 12:46	8270dxnC13	/var/chem/gcms/md.i/D072511I.b/icdg255.d
Cal Level: 6 , Cal Amount: 5.00000		

26-JUL-2011 17:17	appdx9	/chem/gcms/md.i/D072611I.b/a9dg266.d
26-JUL-2011 13:16	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg266.d
26-JUL-2011 13:16	pahextra	/var/chem/gcms/md.i/D072611I.b/xpdg266.d
25-JUL-2011 18:39	8270x	/chem/gcms/md.i/D072511I.b/xcdg256.d
25-JUL-2011 14:53	8270dxnC13	/chem/gcms/md.i/D072511I.b/icdg256.d

Cal Level: 7 , Cal Amount: 2.00000		
26-JUL-2011 17:42	appdx9	/chem/gcms/md.i/D072611I.b/a9dg267.d
26-JUL-2011 13:45	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg267.d
26-JUL-2011 13:45	pahextra	/chem/gcms/md.i/D072611I.b/xpdg267.d
25-JUL-2011 15:19	low	/var/chem/gcms/md.i/D072511I.b/icdg257.d

Cal Level: 8 , Cal Amount: 200.00000		
26-JUL-2011 14:43	appdx9	/var/chem/gcms/md.i/D072611I.b/a9dg268.d
26-JUL-2011 10:24	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg268.d
25-JUL-2011 16:09	8270x	/var/chem/gcms/md.i/D072511I.b/xcdg258.d
25-JUL-2011 12:21	8270	/var/chem/gcms/md.i/D072511I.b/icdg258.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 60.0		
26-JUL-2011 15:34	appdx9	/chem/gcms/md.i/D072611I.b/a9dg264.d

Ccal Level: 4 , Ccal Amount: 60.0		
26-JUL-2011 11:21	allextra	/var/chem/gcms/md.i/D072611I.b/xpdg264.d

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Calibration File Names:
Level 1: /chem/gcms/md.i/D072611I.b/a9dg261.d
Level 2: /chem/gcms/md.i/D072611I.b/a9dg262.d
Level 3: /chem/gcms/md.i/D072611I.b/a9dg263.d
Level 4: /chem/gcms/md.i/D072611I.b/a9dg264.d
Level 5: /var/chem/gcms/md.i/D072611I.b/a9dg265.d
Level 6: /chem/gcms/md.i/D072611I.b/a9dg266.d
Level 7: /chem/gcms/md.i/D072611I.b/a9dg267.d
Level 8: /var/chem/gcms/md.i/D072611I.b/a9dg268.d

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
175 1,4-Dioxane	0.43539	0.41837	0.43508	0.42988	+++++	0.41893					
	0.43952	+++++					AVRG		0.42953		2.08747
13 N-Nitrosodimethylamine	0.63902	0.55781	0.62631	0.68142	0.61521	0.59701					
	+++++	0.65252					AVRG		0.62419		6.38393
14 Pyridine	1.09226	0.97046	1.06705	1.18238	1.06924	1.09067					
	+++++	1.14975					AVRG		1.08883		6.20046

EM-BTRF-001967

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
15 Phenol (ccc)	1.35208	1.20846	1.35584	1.49055	1.33967	1.32174					
	+++++	1.46281					AVRG		1.36159		6.87115
16 Aniline	1.69633	1.51743	1.68341	1.84290	1.65846	1.60933					
	+++++	1.80436					AVRG		1.68746		6.57128
17 Bis(2-chloroethyl)ether	1.01243	0.93147	1.00577	1.09713	0.99560	1.04737					
	+++++	1.06543					AVRG		1.02217		5.27177
18 2-Chlorophenol	1.18846	1.12249	1.23939	1.33545	1.22018	1.17092					
	+++++	1.29873					AVRG		1.22509		6.01976
19 1,3-Dichlorobenzene	1.41839	1.26410	1.35981	1.49743	1.34907	1.41232					
	+++++	1.43019					AVRG		1.39019		5.32650
20 1,4-Dichlorobenzene (ccc)	1.45934	1.28628	1.39224	1.52614	1.35933	1.45788					
	+++++	1.46021					AVRG		1.42020		5.61807
21 Benzyl alcohol	0.76491	0.72684	0.79780	0.88343	0.82559	0.74982					
	+++++	0.88036					AVRG		0.80411		7.71005

EMBTRF-001968

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	2 Level 7	200 Level 8										
22 1,2-Dichlorobenzene	1.43721	1.23348	1.32910	1.47309	1.29975	1.39964						
	+++++	1.39665					AVRG		1.36699		6.11438	
23 2-Methylphenol	1.04077	0.98465	1.08923	1.18495	1.06497	1.00190						
	+++++	1.16486					AVRG		1.07590		7.11289	
24 2,2'-Oxybis(1-Chloropropane)	2.03667	1.81508	1.91230	2.08589	1.85465	1.99964						
	+++++	1.94916					AVRG		1.95048		5.00397	
25 4-Methylphenol	1.08491	1.01058	1.11563	1.23280	1.09441	1.02192						
	+++++	1.20545					AVRG		1.10939		7.60743	
26 3&4 Methylphenol	1.08491	1.01058	1.11563	1.23280	1.09441	1.02192						
	+++++	1.20545					AVRG		1.10939		7.60743	
M 204 total cresols (methylphenols)	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
27 N-Nitroso-di-n-propylamine###	0.80109	0.75534	0.81010	0.89669	0.81817	0.76549						
	+++++	0.86728					AVRG		0.81631		6.25305	

EMBTRF-001969

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
28 Hexachloroethane	0.53613	0.48704	0.52437	0.56900	0.51567	0.53886					
	+++++	0.56064					AVRG		0.53310		5.18938
29 Nitrobenzene	0.30953	0.28669	0.30705	0.34300	0.31293	0.30163					
	+++++	0.32484					AVRG		0.31224		5.70683
30 Isophorone	0.49590	0.46821	0.51520	0.56941	0.52956	0.46676					
	+++++	0.54937					AVRG		0.51349		7.63377
31 2-Nitrophenol (ccc)	0.14248	0.14196	0.16451	0.18477	0.17326	0.12394					
	+++++	0.18003					AVRG		0.15871		14.39590
32 2,4-Dimethyphenol	0.32672	0.30653	0.33985	0.36758	0.34929	0.29788					
	+++++	0.36093					AVRG		0.33554		7.90010
33 Bis(2-chloroethoxy)methane	0.33127	0.31389	0.33477	0.36106	0.33463	0.32921					
	+++++	0.35258					AVRG		0.33677		4.63067
34 Benzoic acid	9056	28903	56722	94445	180086	+++++					
	+++++	359874					QUAD	0.21747	6.55650	-0.66163	0.99861

EMBTRF-001970

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
35 2,4-Dichlorophenol (ccc)	0.26139	0.24861	0.28046	0.30280	0.28135	0.24053					
	+++++	0.29391					AVRG		0.27272		8.51309
36 1,2,4-Trichlorobenzene	0.30888	0.28891	0.30663	0.33555	0.31083	0.31990					
	+++++	0.32159					AVRG		0.31318		4.64946
37 Naphthalene	0.97385	0.86520	0.93983	1.01657	0.95087	0.97063					
	0.97001	0.97987					AVRG		0.95835		4.57502
38 4-Chloroaniline	0.39068	0.36692	0.39553	0.43711	0.40715	0.36790					
	+++++	0.42236					AVRG		0.39823		6.59487
39 Hexachlorobutadiene (ccc)	0.19182	0.18267	0.18838	0.21186	0.19398	0.20745					
	+++++	0.20207					AVRG		0.19689		5.37231
40 4-Chloro-3-methylphenol (ccc)	0.24431	0.23915	0.26759	0.29588	0.27884	0.21513					
	+++++	0.29075					AVRG		0.26166		11.37949
41 2-Methylnaphthalene	0.65081	0.59291	0.64049	0.69437	0.65197	0.66221					
	0.60796	0.68511					AVRG		0.64823		5.35880

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Report Date : 27-Jul-2011 13:05

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
42 Hexachlorocyclopentadiene####	0.27469	0.27206	0.30914	0.35829	0.33696	0.25875					
	+++++	0.36808					AVRG		0.31114		14.21487
43 2,4,6-Trichlorophenol (ccc)	0.28854	0.29546	0.32611	0.35822	0.34619	0.26541					
	+++++	0.36154					AVRG		0.32021		11.74150
44 2,4,5-Trichlorphenol	0.33211	0.33186	0.36550	0.40415	0.38064	0.30758					
	+++++	0.40058					AVRG		0.36035		10.36390
45 2-Chloronaphthalene	1.03811	0.96790	1.05849	1.14933	1.06999	1.08247					
	+++++	1.10948					AVRG		1.06797		5.34534
46 2-Nitroaniline	15482	41828	72041	120210	219117	5445					
	+++++	394988					LINR	0.15297	0.33700		0.99901
47 Acenaphthylene	1.71102	1.55850	1.72013	1.86456	1.73038	1.68741					
	1.56472	1.81112					AVRG		1.70598		6.23009
48 Dimethyl phthalate	1.37976	1.17069	1.27102	1.37956	1.25034	1.49522					
	+++++	1.29718					AVRG		1.32054		8.05494

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Report Date : 27-Jul-2011 13:05

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INITIAL CALIBRATION DATA

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End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
49 2,6-Dinitrotoluene	0.25761	0.25379	0.28476	0.31074	0.29395	0.23528					
	+++++	0.30429					AVRG		0.27720		10.29336
50 3-Nitroaniline	0.28984	0.28362	0.31843	0.35280	0.33168	+++++					
	+++++	0.34139					AVRG		0.31963		8.74331
51 Acenaphthene (ccc)	1.12104	1.02386	1.10340	1.19822	1.11787	1.14873					
	1.15285	1.16446					AVRG		1.12880		4.60356
52 2,4-Dinitrophenol ##spcc##	4727	16981	34091	65034	127762	+++++					
	+++++	247756					QUAD	0.40503	5.29150	-0.33451	0.99848
53 Dibenzofuran	1.58321	1.42357	1.55037	1.66858	1.53652	1.64295					
	+++++	1.60687					AVRG		1.57316		5.15445
54 4-Nitrophenol ##spcc##	0.13632	0.14644	0.16831	0.19631	0.18909	+++++					
	+++++	0.19827					AVRG		0.17245		15.36743
55 2,4-Dinitrotoluene	0.34244	0.33066	0.36731	0.41363	0.39125	0.28706					
	+++++	0.40713					AVRG		0.36278		12.61294

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Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
56 Fluorene	1.29136	1.16522	1.27538	1.41604	1.30763	1.29611					
	1.30054	1.36748					AVRG		1.30247		5.57365
57 4-Chlorophenyl phenyl ether	0.64847	0.57193	0.61231	0.67014	0.62415	0.63893					
	+++++	0.64117					AVRG		0.62959		4.96994
58 Diethyl phthalate	102902	210858	330085	526305	894596	55462					
	+++++	1598317					LINR	-0.12290	1.32551		0.99843
59 4-Nitroaniline	0.31526	0.29054	0.32710	0.36796	0.34987	+++++					
	+++++	0.35111					AVRG		0.33364		8.46150
60 4,6-Dinitro-2-methylphenol	8068	27872	48383	91603	168139	+++++					
	+++++	320097					LINR	0.37245	0.14267		0.99780
61 N-Ndpa / diphenylamine (ccc)	0.55201	0.54562	0.56647	0.61761	0.58059	0.57872					
	+++++	0.59105					AVRG		0.57601		4.23831
62 1,2-Diphenylhydrazine/azobnz	0.58125	0.56011	0.59210	0.64561	0.58805	0.60006					
	+++++	0.60219					AVRG		0.59563		4.38791

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Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
63 4-Bromophenyl phenyl ether	0.18253	0.16806	0.18445	0.20045	0.18750	0.18515					
	+++++	0.19303					AVRG		0.18588		5.36698
64 Hexachlorobenzene	0.19389	0.18395	0.19237	0.21317	0.19532	0.20859					
	+++++	0.20124					AVRG		0.19836		5.06227
65 Pentachlorophenol (ccc)	11281	34447	63402	108418	193359	+++++					
	+++++	361464					LINR	0.22976	0.15927		0.99814
66 Phenanthrene	1.05786	0.97476	1.03880	1.11882	1.03903	1.14123					
	1.13991	1.06107					AVRG		1.07144		5.41446
67 Anthracene	1.01945	0.97145	1.04642	1.14793	1.07710	1.02649					
	0.92552	1.10165					AVRG		1.03950		6.82904
68 Carbazole	0.93260	0.87598	0.94773	1.04535	0.95432	0.91124					
	+++++	0.97368					AVRG		0.94870		5.60234
69 Di-n-butyl phthalate	0.92401	0.98103	1.08093	1.20616	1.11747	0.85900					
	+++++	1.13310					AVRG		1.04310		11.97250

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Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
70 Fluoranthene (ccc)	1.07833	1.04363	1.14311	1.25462	1.17278	1.04862					
	0.89804	1.19453					AVRG		1.10421		10.09227
71 Pyrene	1.12418	1.05897	1.12996	1.23135	1.13625	1.16325					
	1.01128	1.20581					AVRG		1.13263		6.35652
72 Butyl benzyl phthalate	48034	129480	227133	388334	718821	16243					
	+++++	1262908					LINR	0.16086	0.52629		0.99910
73 Benzo(a)Anthracene	0.97991	0.94766	1.02173	1.10424	1.02344	0.94855					
	0.84651	1.06157					AVRG		0.99170		8.03774
74 3,3'-Dichlorobenzidine	0.28213	0.33176	0.36645	0.42385	0.39568	+++++					
	+++++	0.41682					AVRG		0.36945		14.79836
75 Chrysene	1.05641	0.97251	1.01129	1.11197	1.02309	1.09930					
	1.14801	1.04042					AVRG		1.05787		5.50521
76 Bis(2-ethylhexyl) phthalate	64113	179215	309158	529074	973995	21700					
	+++++	1685389					LINR	0.13316	0.70325		0.99914

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Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
77 Di-n-octyl phthalate (ccc)	71984	243024	454474	837163	1593687	+++++					
	+++++	2878736					QUAD	0.000e+00	0.89382	-0.00934	0.99790
78 Benzo(b)fluoranthene	0.90931	0.93173	1.01664	1.15118	1.09614	0.81625					
	+++++	1.10299					AVRG		1.00346		12.17439
79 Benzo(k)fluoranthene	1.25189	1.12238	1.22701	1.29989	1.17475	1.15259					
	+++++	1.23608					AVRG		1.20923		5.12208
80 Benzo(a)pyrene (ccc)	95297	262635	453830	768797	1429137	32669					
	+++++	2513989					LINR	0.13710	1.13883		0.99938
85 Benzo(e)pyrene	0.89209	0.98939	1.01669	1.10569	1.11659	0.78940					
	+++++	1.12034					AVRG		1.00431		12.56234
81 Indeno(1,2,3-cd)pyrene	1.00424	1.02520	1.14175	1.27382	1.17055	0.83745					
	+++++	1.22088					AVRG		1.09627		13.69017
82 Dibenz(a,h)anthracene	0.84729	0.85090	0.92926	1.03351	0.90895	0.70945					
	+++++	0.99854					AVRG		0.89684		12.03500

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Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
83 Benzo(g,h,i)perylene	0.94743	0.90654	0.97798	1.08412	0.98987	0.82522					
	+++++	1.03905					AVRG		0.96717		8.82301
176 2-Picoline	1.11879	1.09789	1.10800	1.19012	1.18851	1.24339					
	+++++	1.18573					AVRG		1.16178		4.65831
86 N-nitrosomethylethylamine	0.84826	0.82108	0.80877	0.91146	0.89310	0.87558					
	+++++	0.88531					AVRG		0.86337		4.44203
181 Furfural	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
87 Methyl methanosulfonate	0.69793	0.70709	0.67227	0.73507	0.74015	0.72131					
	+++++	0.73702					AVRG		0.71583		3.48543
88 N-nitrosodiethylamine	0.52831	0.52098	0.52996	0.58298	0.58927	0.53025					
	+++++	0.57837					AVRG		0.55145		5.50239
89 Ethyl methanosulfonate	0.83236	0.80957	0.80856	0.88850	0.89409	0.88445					
	+++++	0.87229					AVRG		0.85569		4.41057

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Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
90 Pentachloroethane	0.48979	0.51462	0.49193	0.53137	0.52429	0.52955					
	+++++	0.51847					AVRG		0.51429		3.31387
91 acetophenone	1.64012	1.66268	1.60625	1.76846	1.77077	1.72851					
	+++++	1.75307					AVRG		1.70427		3.93360
92 m-cresol	1.07495	1.08584	1.09742	1.20839	1.24210	0.98007					
	+++++	1.24440					AVRG		1.13331		8.84172
93 n-nitrosopyrrolidine	0.55639	0.58347	0.58568	0.65727	0.66036	0.51242					
	+++++	0.65473					AVRG		0.60147		9.58772
94 n-nitrosomorpholine	0.96855	0.91339	0.89746	0.98691	0.98501	0.94697					
	+++++	0.97598					AVRG		0.95347		3.74079
95 o-toluidine	1.85367	1.83091	1.74036	1.84680	1.96840	1.87558					
	+++++	1.76446					AVRG		1.84002		4.07324
96 n-nitrosopiperidine	0.26725	0.26919	0.27834	0.29914	0.29193	0.26269					
	+++++	0.29156					AVRG		0.28001		5.10080

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
97 2,6-dichlorophenol	0.23250	0.26015	0.27036	0.28968	0.29598	0.22043					
	+++++	0.29036					AVRG		0.26564		11.19292
98 hexachloropropene	0.18380	0.20158	0.20677	0.22306	0.22173	+++++					
	+++++	0.22263					AVRG		0.20993		7.48714
99 N-nitro-di-n-butylamine	0.17386	0.17671	0.18573	0.20117	0.20361	0.15064					
	+++++	0.19960					AVRG		0.18447		10.36371
100 Isosafrole	0.23086	0.24454	0.24453	0.25741	0.25924	0.21778					
	+++++	0.26166					AVRG		0.24515		6.60998
101 1,2,4,5-tetrachlorobenzene	0.33037	0.32186	0.31702	0.34215	0.33206	0.34215					
	+++++	0.33162					AVRG		0.33103		2.83784
102 safrole	0.38675	0.39276	0.39645	0.43857	0.44255	0.31587					
	+++++	0.44204					AVRG		0.40214		11.28265
103 1-chloronaphthalene	1.05671	1.05216	1.00148	1.09381	1.02629	1.09672					
	+++++	1.06824					AVRG		1.05649		3.25757

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
104 m-dinitrobenzene	4574	16021	30691	50246	113041	+++++					
	+++++	164156					LINR	0.30536	0.18022		0.99886
105 pentachlorobenzene	0.49384	0.49149	0.47363	0.50068	0.49428	0.49699					
	+++++	0.49676					AVRG		0.49253		1.79132
106 1-naphthylamine	1.03172	1.10264	1.12813	1.12811	1.20402	0.94313					
	+++++	1.12249					AVRG		1.09432		7.64168
182 2-Chlorobenzalmalononitrile	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
107 2-naphthylamine	1.17234	1.19446	1.12106	1.10556	1.20643	1.04335					
	+++++	0.97654					AVRG		1.11711		7.52171
108 2,3,4,6-tetrachlorophenol	8301	29231	55231	83863	193044	+++++					
	+++++	297593					LINR	0.36656	0.32356		0.99958
109 5-nitro-o-toluidine	0.24241	0.31623	0.32645	0.35527	0.38360	+++++					
	+++++	0.37331					AVRG		0.33288		15.44211

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
110 diphenylamine	0.55004	0.56783	0.56560	0.62821	0.61480	0.55309					
	+++++	0.62929					AVRG		0.58698		6.06378
111 1,3,5-trinitrobenzene	11560	44389	91896	149470	358646	+++++					
	+++++	540041					LINR	0.48137	0.30622		0.99911
112 phenacetin	21494	70266	123029	191497	417279	+++++					
	+++++	626612					LINR	0.24952	0.34639		0.99973
113 4-aminobiphenyl	0.66995	0.73103	0.73727	0.78201	0.72955	0.60468					
	+++++	0.79843					AVRG		0.72184		9.16962
114 pentachloronitrobenzene	0.07440	0.08057	0.07838	0.08857	0.08751	+++++					
	+++++	0.08768					AVRG		0.08285		7.12543
115 Dinoseb	4899	19963	42189	69480	173429	+++++					
	+++++	263707					QUAD	0.51371	6.93000	-0.19601	0.99879
118 N-Nitroquinoline-n-oxide	+++++	+++++	+++++	+++++	+++++	0.02531					
	+++++	+++++					AVRG		0.02531		0.000e+00

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
177 Methapyrilene HCL	+++++	+++++	+++++	+++++	+++++	0.18611					
	+++++	+++++					AVRG		0.18611		0.000e+00
84 Benzidine	+++++	0.64208	0.67578	0.70479	0.78620	+++++					
	+++++	0.69261					AVRG		0.70029		7.63962
116 p-(dimethylamino)azobenzene	0.22990	0.28869	0.29849	0.33111	0.33370	+++++					
	+++++	0.34259					AVRG		0.30408		13.84467
118 2-acetylaminofluorene	21105	89339	173445	275193	647590	+++++					
	+++++	1004618					LINR	0.40642	0.52332		0.99943
117 o-tolidine	+++++	0.58782	0.63508	0.67149	0.78445	+++++					
	+++++	0.70158					AVRG		0.67608		10.94068
119 7,12-dimethylbenz(a)anthracen	35187	110374	197177	303799	669726	+++++					
	+++++	1049627					LINR	0.25771	0.53615		0.99978
120 3-methylcholanthrene	30831	100928	189476	306092	691483	+++++					
	+++++	1104775					LINR	0.33332	0.64849		0.99956

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Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	2 Level 7	200 Level 8										
183 2-chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
184 Benzaldehyde	0.97253	0.90520	0.92350	0.97480	0.92812	0.99159						
	+++++	0.92464					AVRG		0.94577		3.49553	
185 Benzonitrile	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
187 Atrazine	13935	46040	78411	135138	260362	5965						
	+++++	452729					LINR	0.10539	0.20283		0.99971	
188 1,1'-Biphenyl	1.65013	1.54182	1.54714	1.58558	1.51355	1.72932						
	+++++	1.52584					AVRG		1.58477		4.95347	
189 Caprolactam	9107	31827	54789	98982	194813	3639						
	+++++	344255					LINR	0.24602	0.18829		0.99935	
M 86 PAH, Summed Target List	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

Report Date : 27-Jul-2011 13:05

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	2 Level 7	200 Level 8										
190 Tributylphosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
191 Lindane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
192 2,6-Dimethylnaphthalene	0.89698	0.98847	1.00368	1.03599	1.09087	0.89373						
	0.74035	1.05262					AVRG		0.96284		11.82520	
193 2,3,5-Trimethylnaphthalene	0.41832	0.45571	0.46218	0.49514	0.51382	0.41883						
	0.34066	0.50025					AVRG		0.45061		12.64980	
194 Dibenzothiopene	0.82866	0.86491	0.87219	0.91807	0.92711	0.85768						
	0.73230	0.91225					AVRG		0.86415		7.31058	
195 1-Methylphenanthrene	0.63174	0.67341	0.69443	0.73384	0.75929	0.61479						
	0.48768	0.73753					AVRG		0.66659		13.28266	
196 Perylene	0.97605	1.01021	1.02518	1.09390	1.10520	0.93922						
	0.84243	1.09448					AVRG		1.01083		8.98207	

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Report Date : 27-Jul-2011 13:05

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
197 1-methylnaphthalene	0.58085	0.59490	0.60414	0.64492	0.65285	0.59532					
	0.51622	0.64961					AVRG		0.60485		7.53391
199 Phentermine	50058	142951	255847	413565	913462	+++++					
	+++++	1516211					QUAD	0.29487	1.09311	0.00417	0.99951
200 3,3'-Dimethoxybenzidine	6756	31828	72723	138099	367482	+++++					
	+++++	665596					QUAD	0.61222	3.52767	-0.18665	0.99819
201 Dibenzo(a,e)pyrene	37049	129784	263967	434937	995427	9754					
	+++++	1689543					WLINR	0.21016	0.86635		0.99448
202 1,4-Phenylenediamine	23562	69603	130636	210453	460273	+++++					
	+++++	787955					LINR	0.31117	0.45947		0.99973
$ 7 2-Fluorophenol	1.06988	0.98730	1.11994	1.21589	1.10180	1.01703					
	+++++	1.21736					AVRG		1.10417		8.09840
$ 8 Phenol-d5	1.29389	1.18326	1.33759	1.46459	1.32159	1.23958					
	+++++	1.42697					AVRG		1.32392		7.45195

Report Date : 27-Jul-2011 13:05

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	2 Level 7	200 Level 8										
$ 9 Nitrobenzene-d5	0.31228	0.28890	0.32251	0.34853	0.32814	0.28990						
	+++++	0.34071					AVRG		0.31871		7.28767	
$ 10 2-Fluorobiphenyl	1.23665	1.14054	1.21783	1.32209	1.23356	1.31311						
	+++++	1.29403					AVRG		1.25112		5.11528	
$ 11 2,4,6-Tribromophenol	0.06759	0.07466	0.08246	0.09125	0.08496	0.07041						
	+++++	0.08918					AVRG		0.08007		11.58104	
$ 12 Terphenyl-d14	0.74263	0.70344	0.74852	0.82475	0.75575	0.74566						
	+++++	0.79796					AVRG		0.75982		5.23401	
$ 179 13C6-naphthalene	1.12903	1.07092	1.09342	1.10067	1.05693	1.07016						
	+++++	+++++					AVRG		1.08685		2.41366	
$ 173 Pyridine-d5	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 180 Pentachlorophenol C13	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

EM_MBTRF-001987

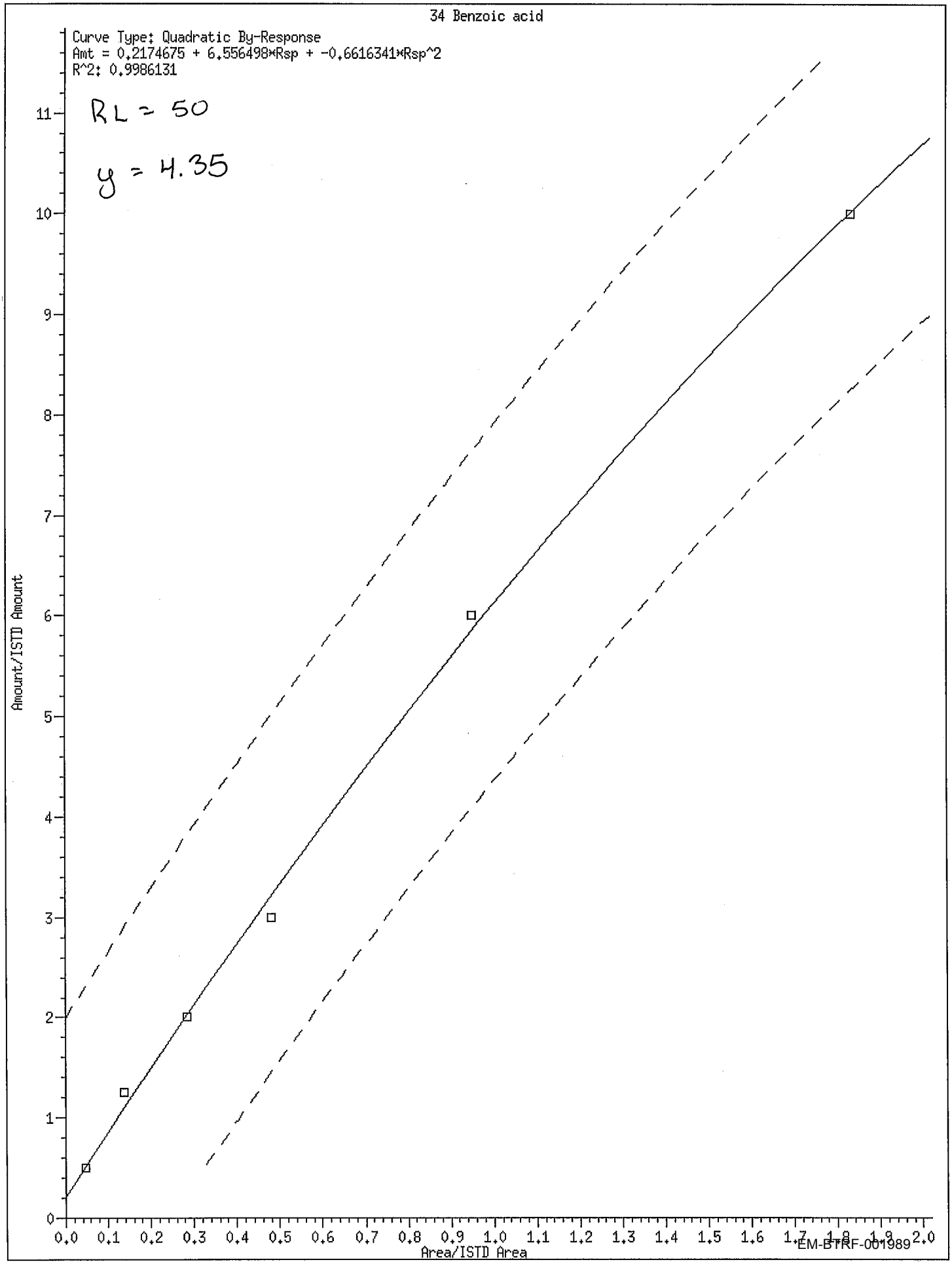
Report Date : 27-Jul-2011 13:05

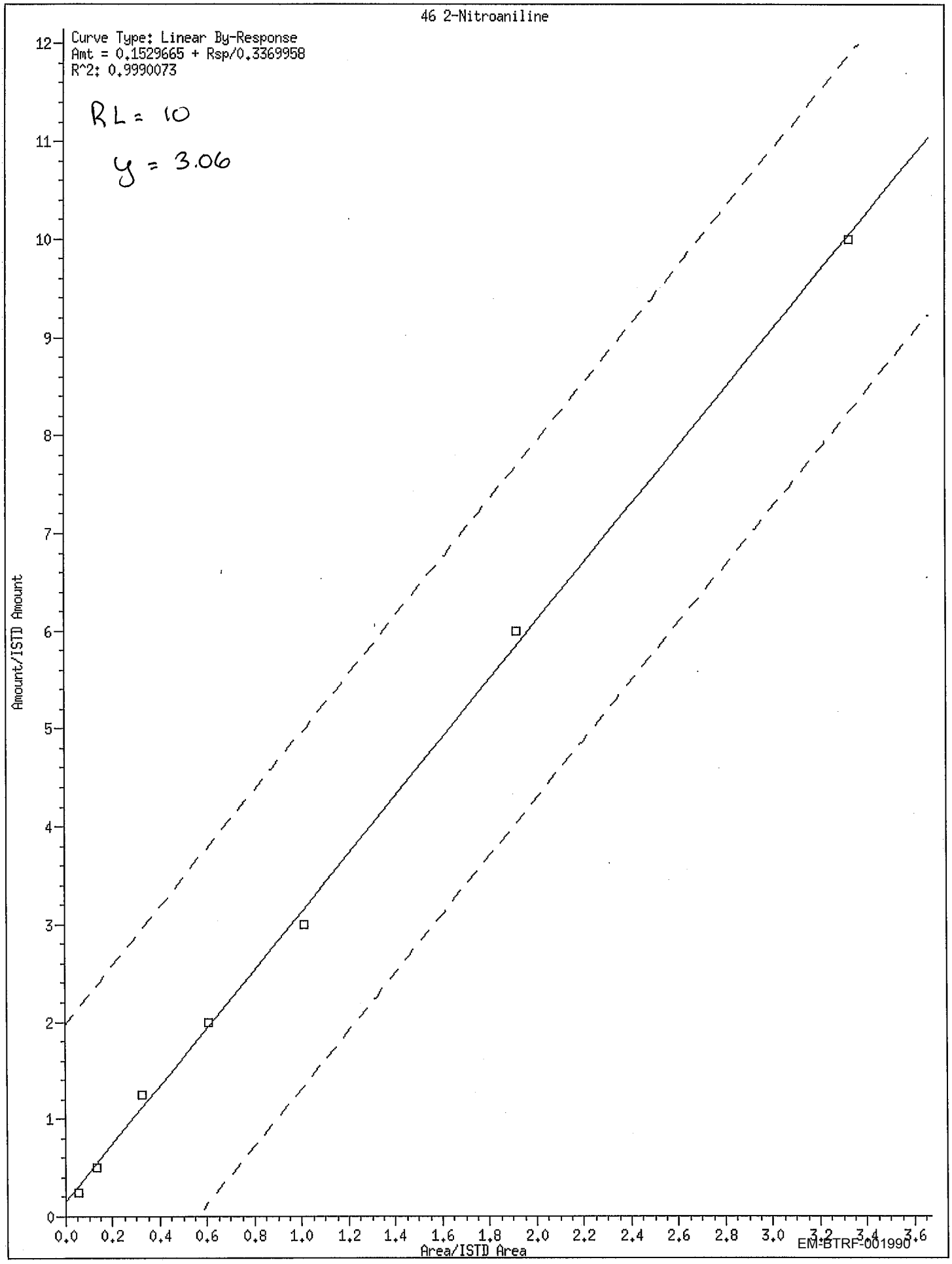
TestAmerica Knoxville

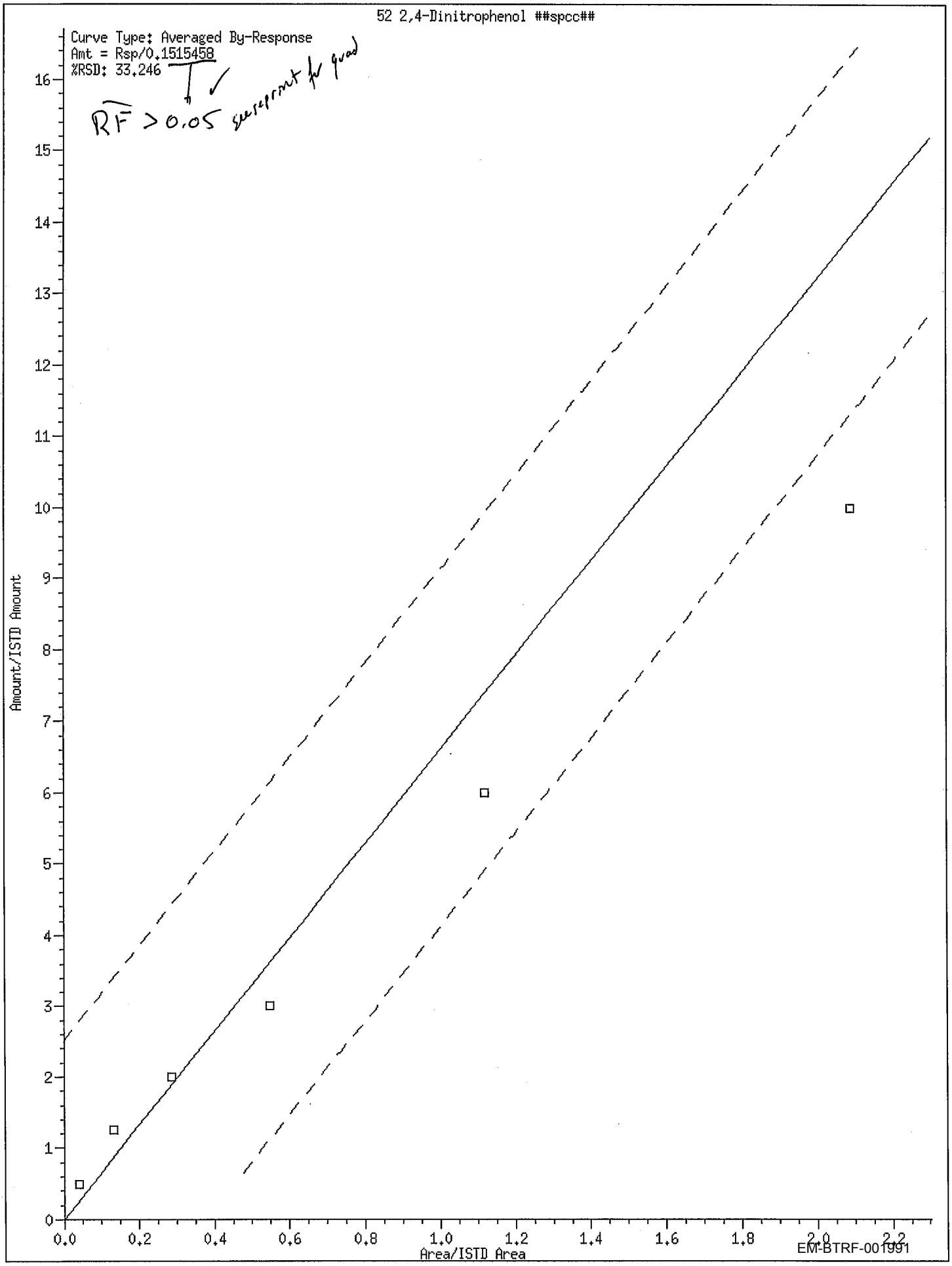
INITIAL CALIBRATION DATA

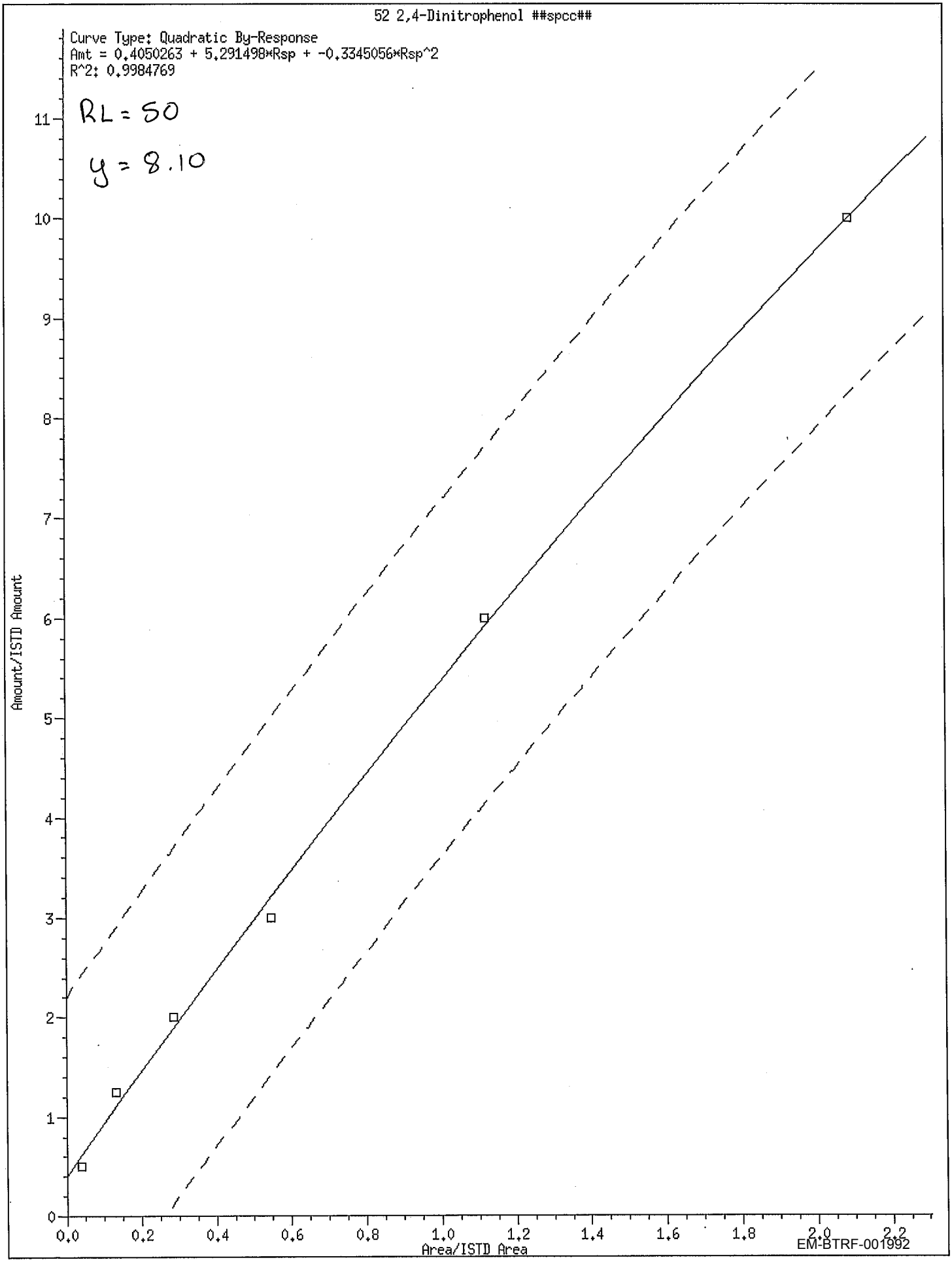
Start Cal Date : 25-JUL-2011 12:21
End Cal Date : 26-JUL-2011 17:42
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Cal Date : 27-Jul-2011 12:34 wilesd

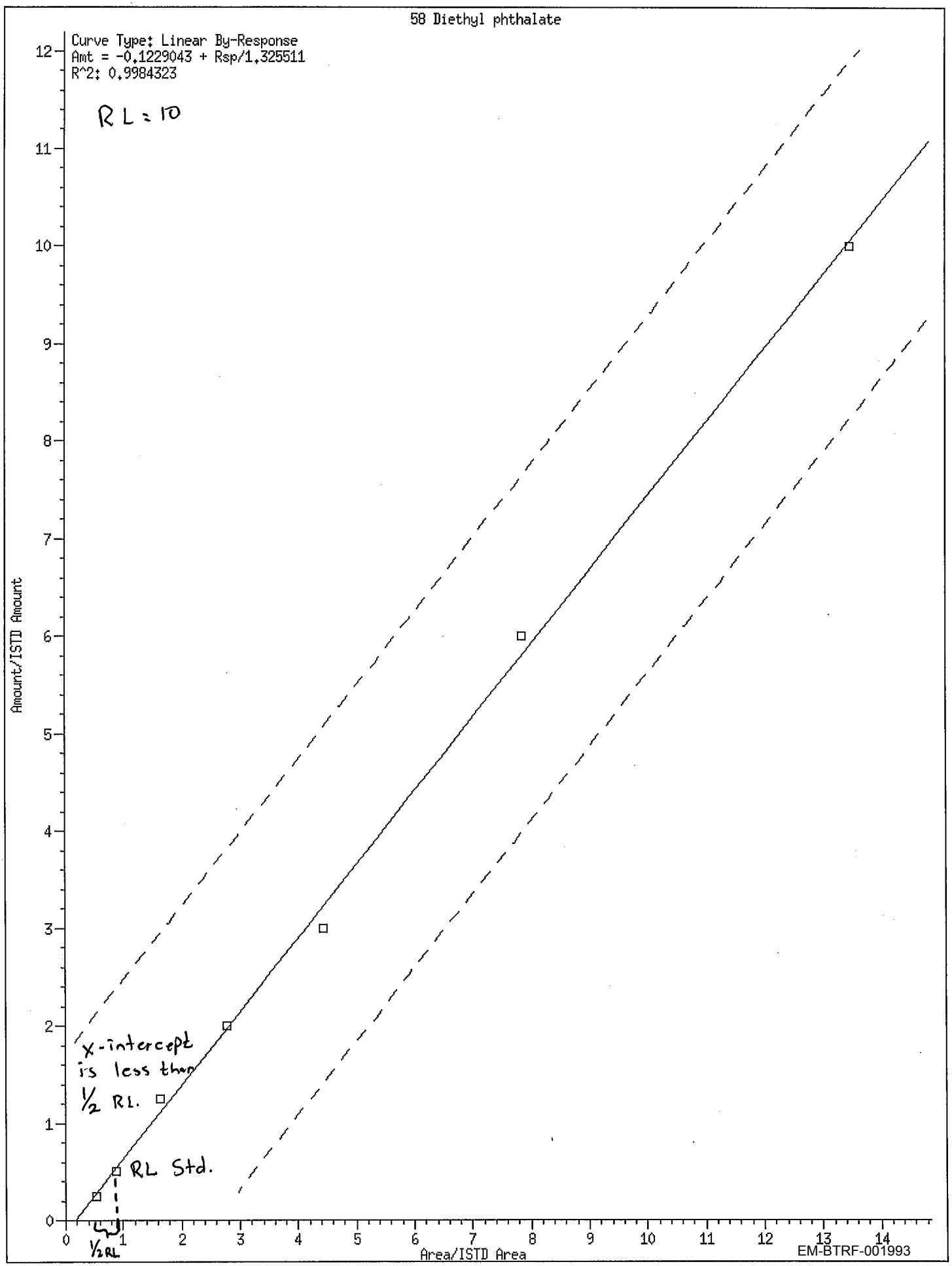
Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

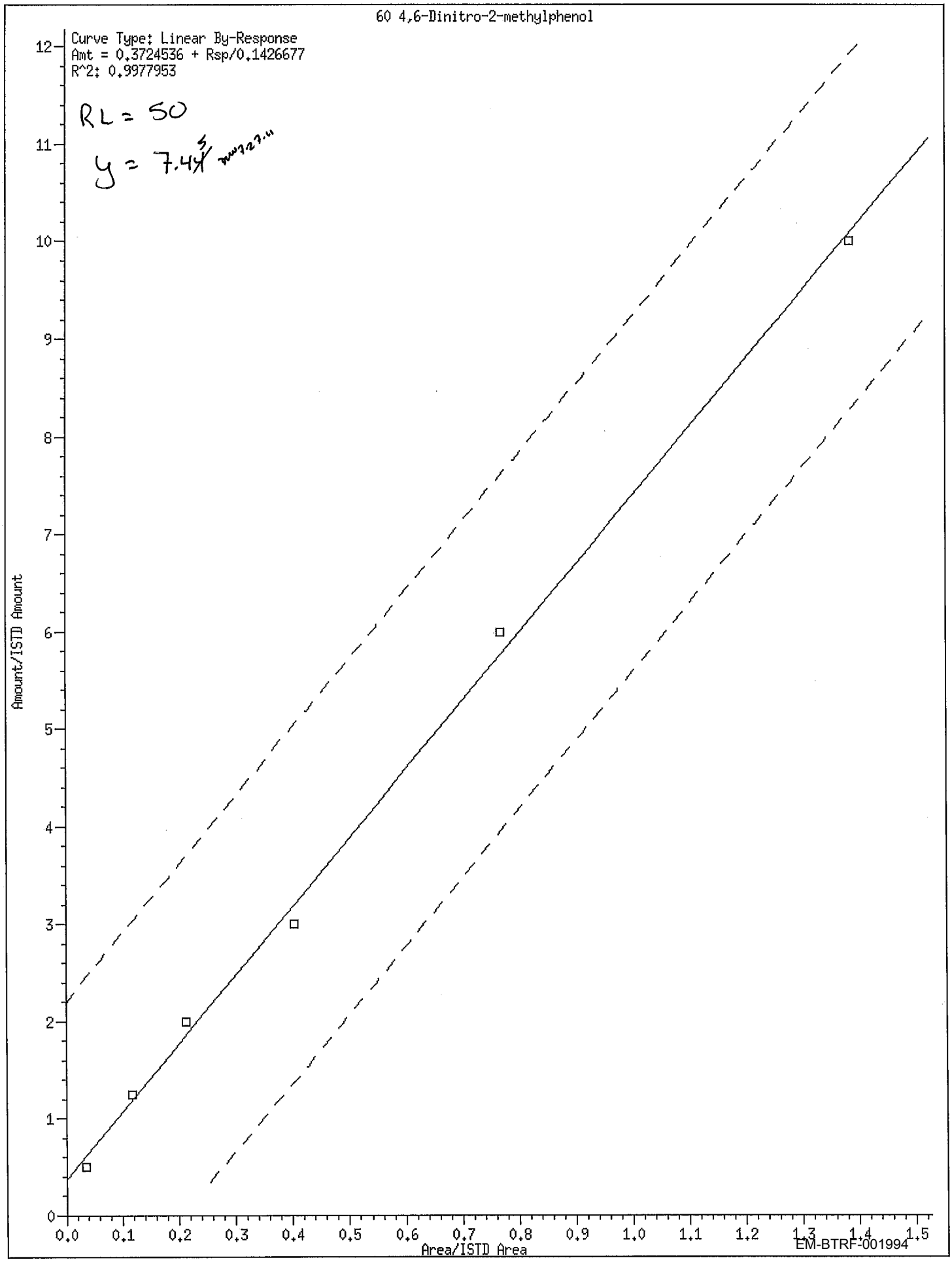

34 Benzoic acid
Curve Type: Quadratic By-Response
Amt = 0.2174675 + 6.556498*Rsp + -0.6616341*Rsp^2
R^2: 0.9986131
RL = 50
y = 4.35
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0

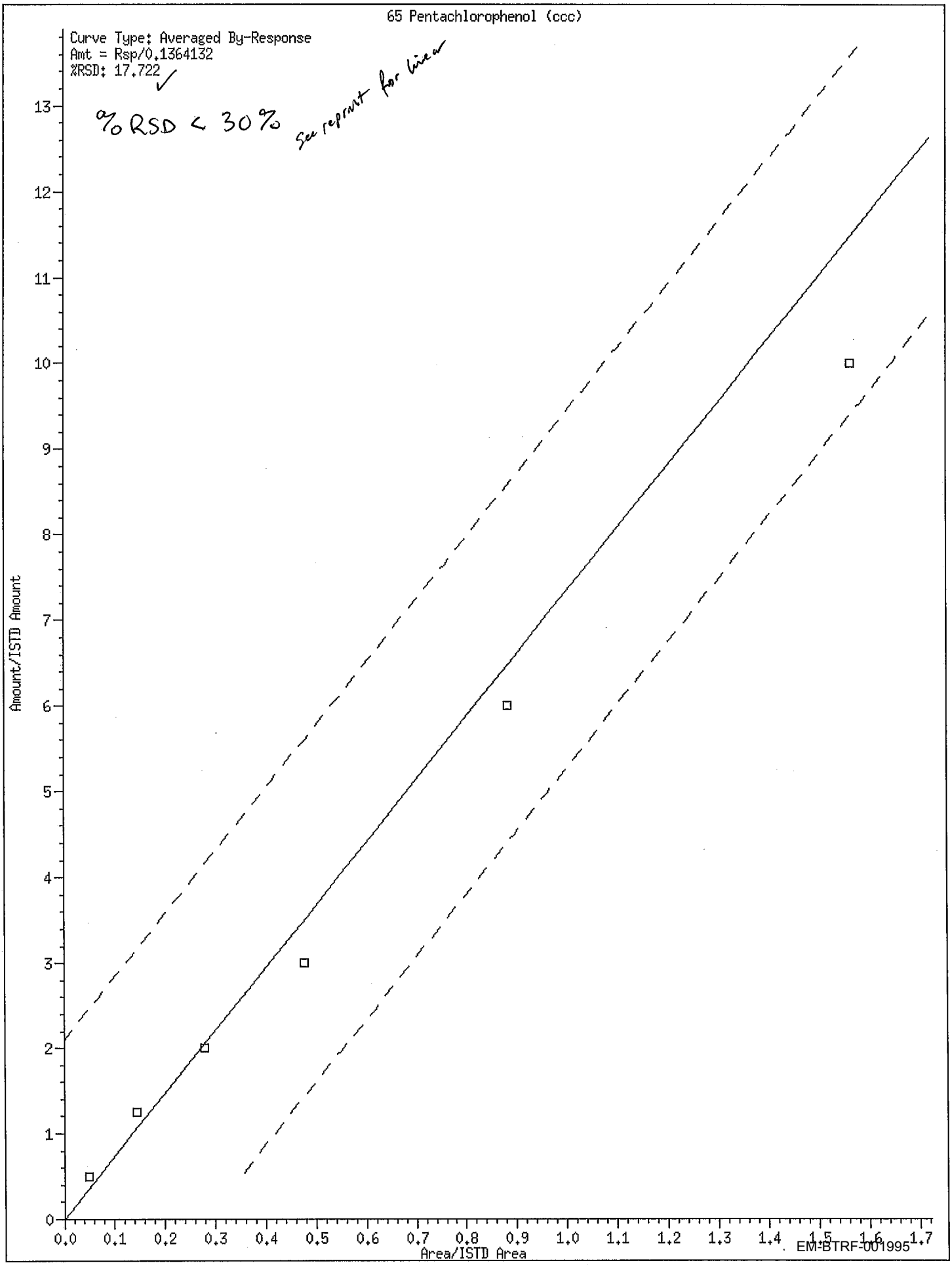

46 2-Nitroaniline
Curve Type: Linear By-Response
Amt = 0.1529665 + Rsp/0.3369958
R^2: 0.9990073
RL = 10
y = 3.06
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6

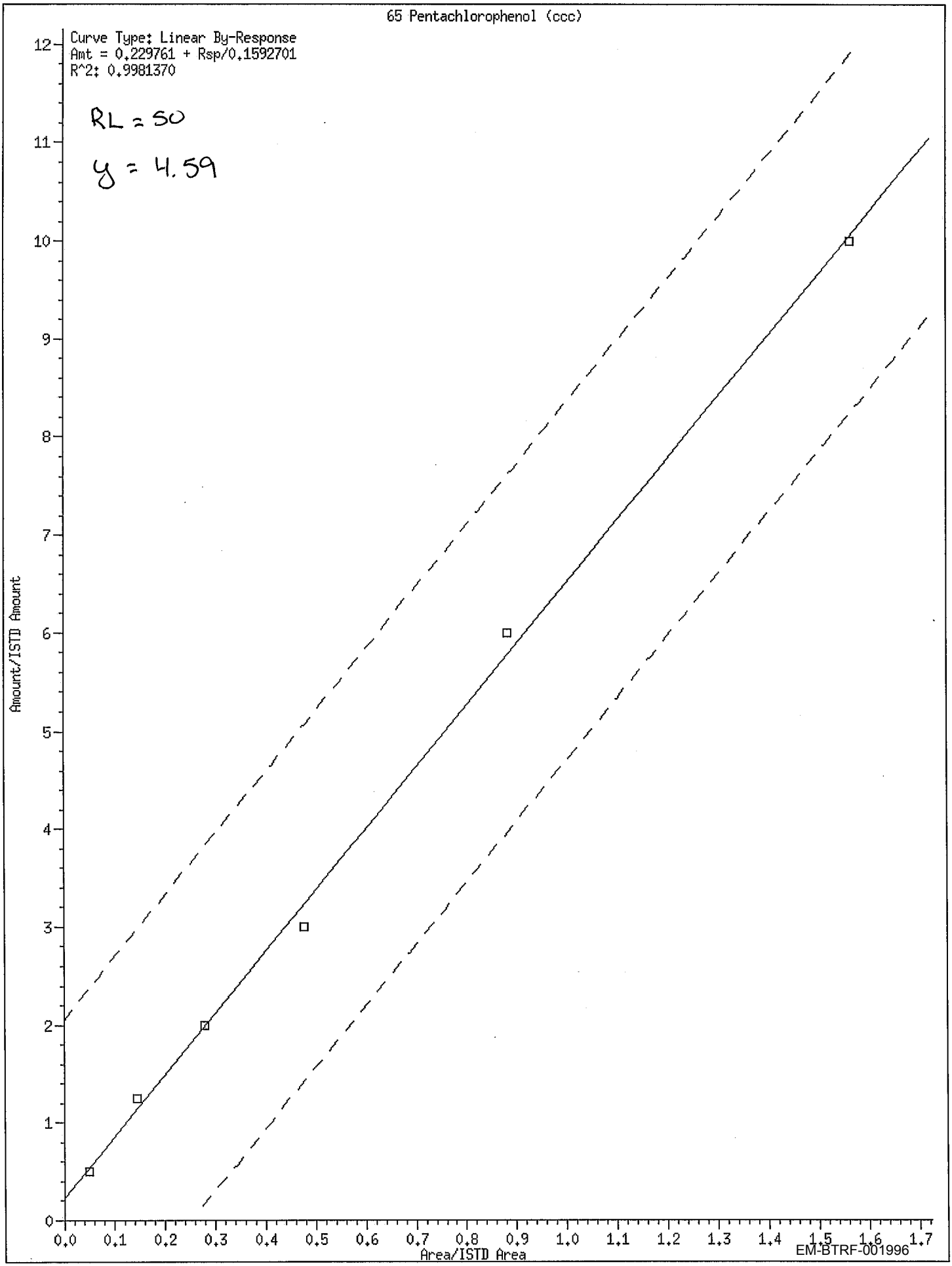

52 2,4-Dinitrophenol ##spcc##
Curve Type: Averaged By-Response
Amt = Rsp/0.1515458
%RSD: 33.246
RF > 0.05 acceptable for quad
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2

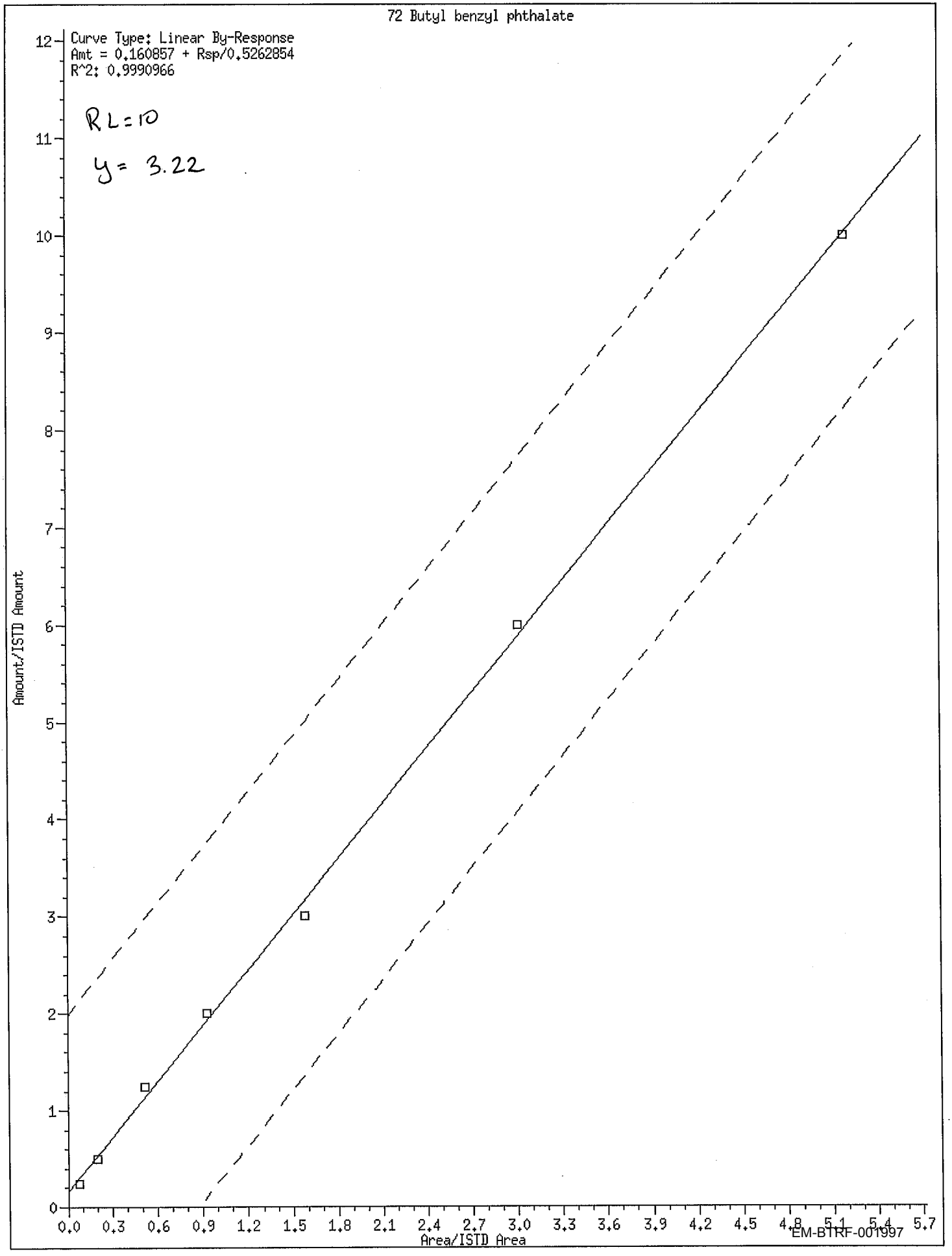

52 2,4-Dinitrophenol ##spcc##
Curve Type: Quadratic By-Response
Amt = 0.4050263 + 5.291498*Rsp + -0.3345056*Rsp^2
R^2: 0.9984769
RL = 50
y = 8.10
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
EM-BTRF-001992

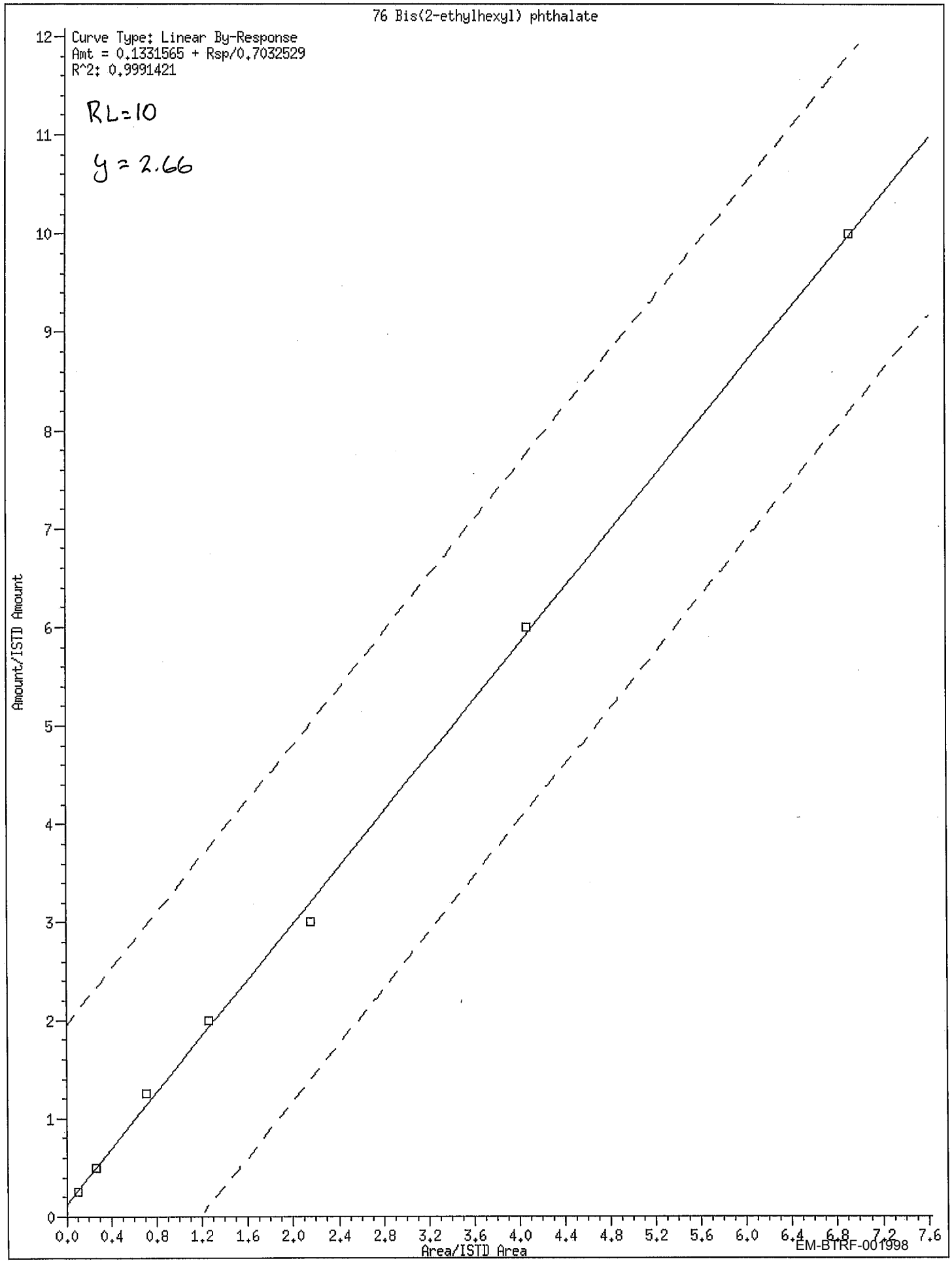

58 Diethyl phthalate
Curve Type: Linear By-Response
Amt = -0.1229043 + Rsp/1.325511
R^2: 0.9984323
RL = 10
Amount/ISTD Amount
Area/ISTD Area
x-intercept is less than ½ RL.
RL Std.
½RL
EM-BTRF-001993

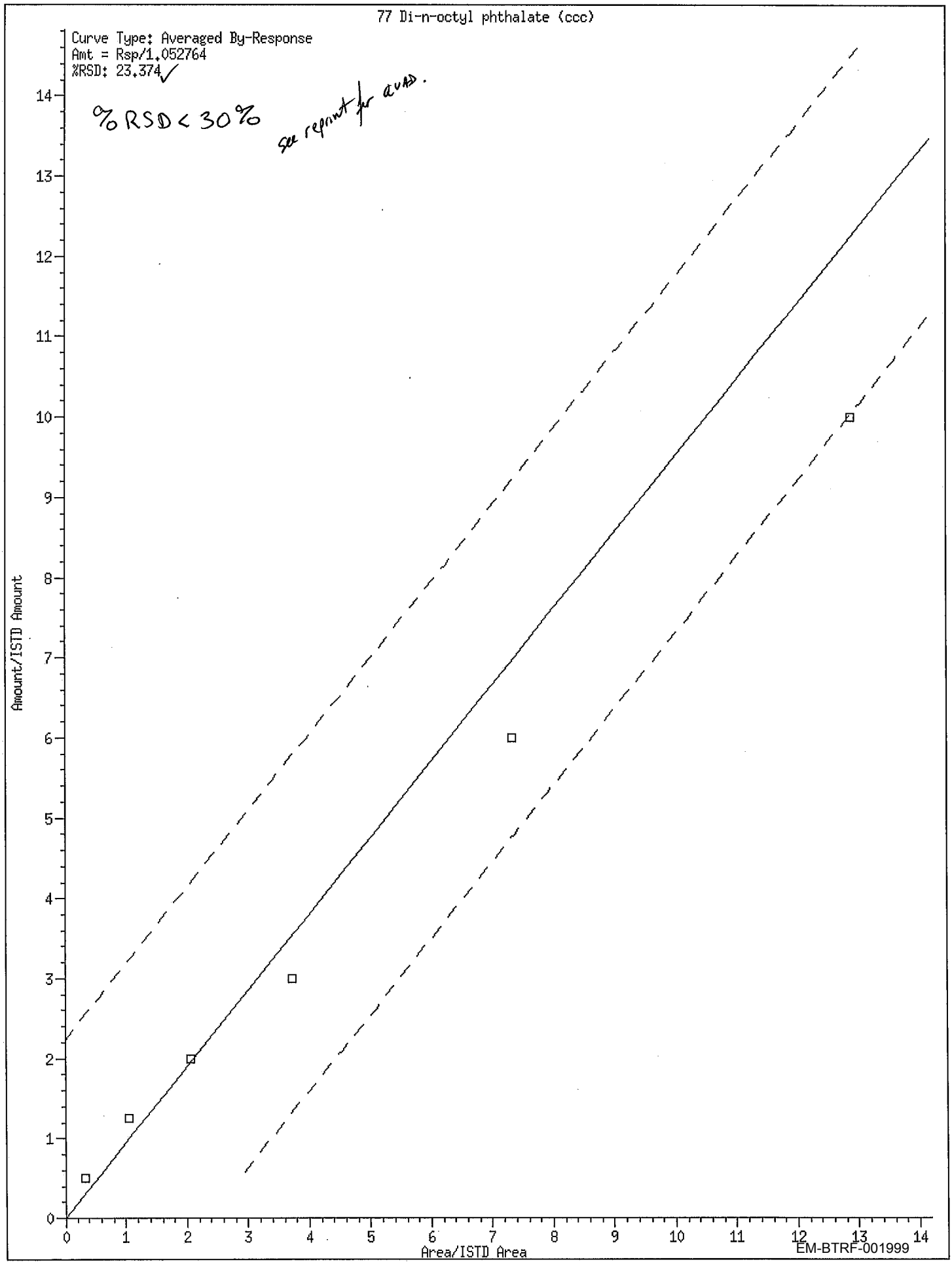

60 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.3724536 + Rsp/0.1426677
R^2: 0.9977953
RL = 50
y = 7.4x
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5

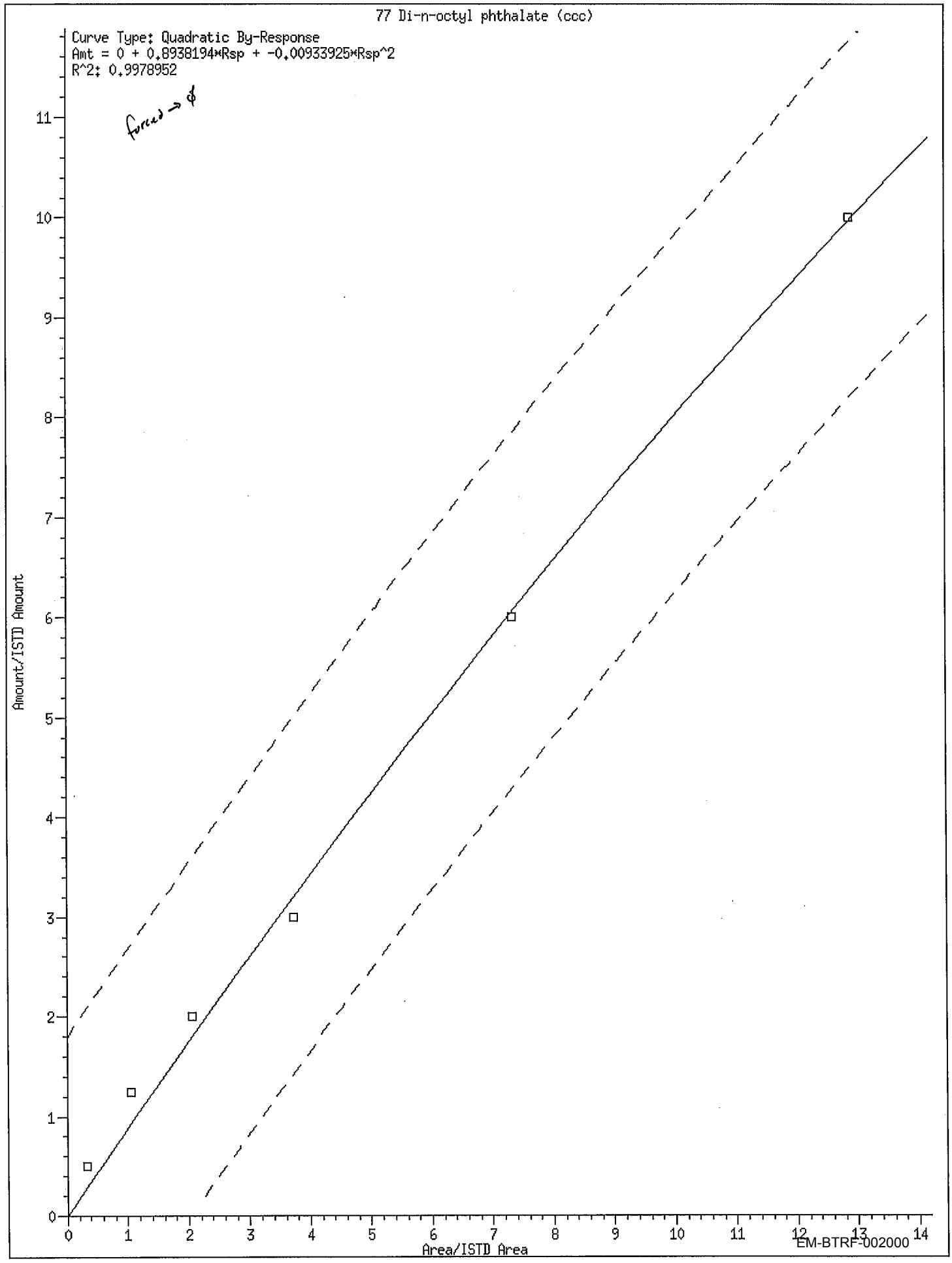

65 Pentachlorophenol (ccc)
Curve Type: Averaged By-Response
Amt = Rsp/0.1364132
%RSD: 17.722
%RSD < 30%
See reprint for linear
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7

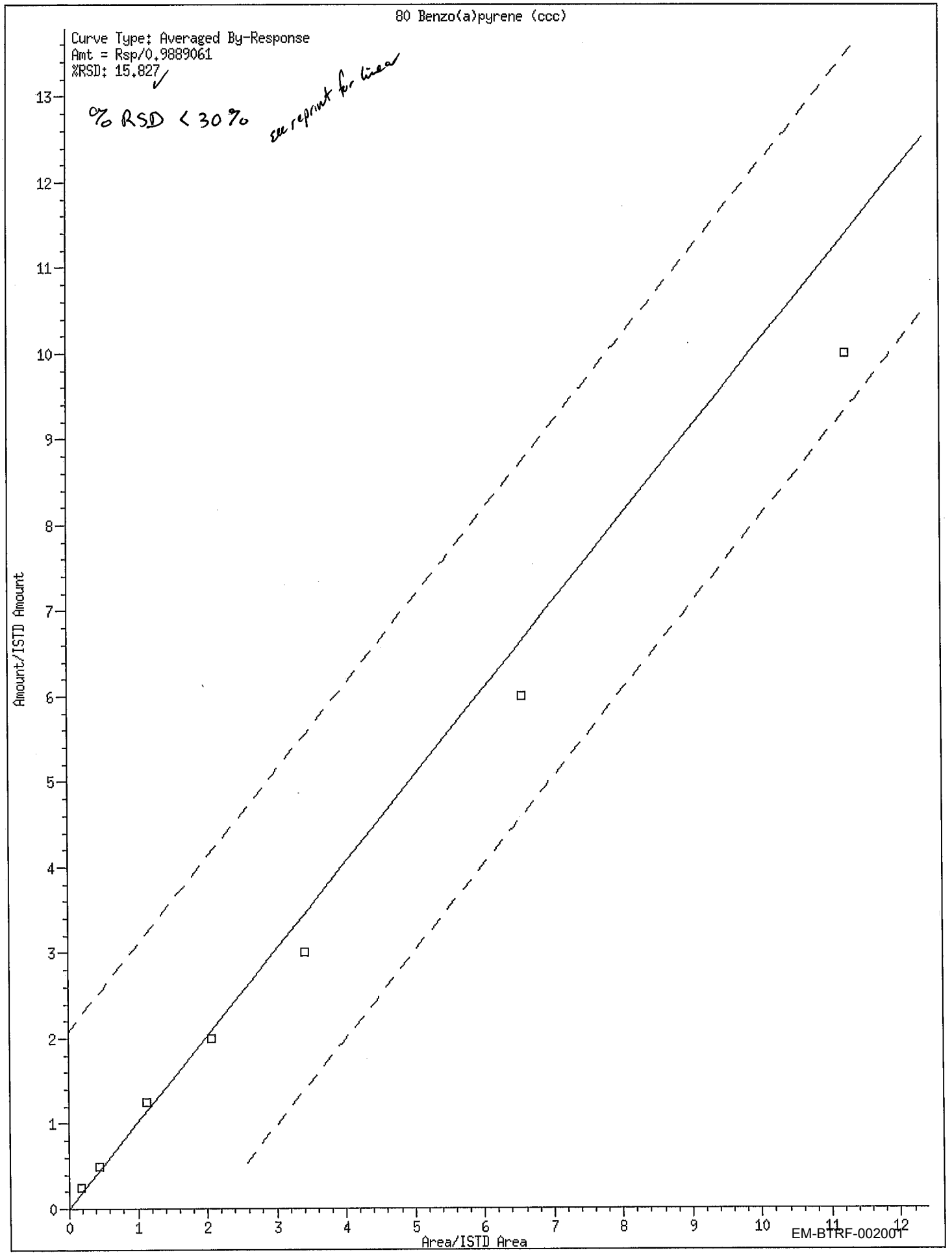

65 Pentachlorophenol (ccc)
Curve Type: Linear By-Response
Amt = 0.229761 + Rsp/0.1592701
R^2: 0.9981370
RL = 50
y = 4.59
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7

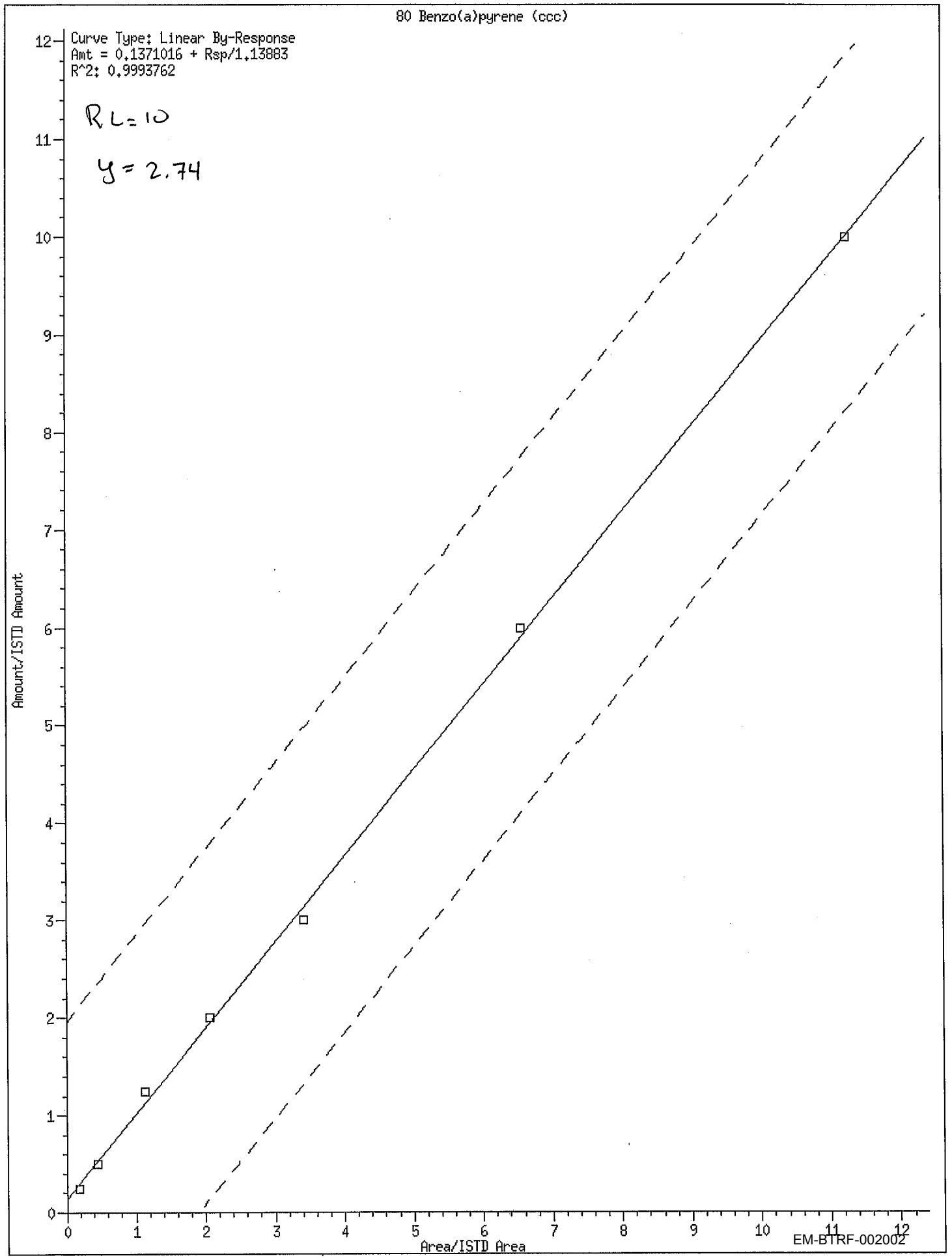

72 Butyl benzyl phthalate
Curve Type: Linear By-Response
Amt = 0.160857 + Rsp/0.5262854
R^2: 0.9990966
RL=10
y= 3.22
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4
5.7


76 Bis(2-ethylhexyl) phthalate
Curve Type: Linear By-Response
Amt = 0.1331565 + Rsp/0.7032529
R^2: 0.9991421
RL=10
y = 2.66
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12
0.0 0.4 0.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6 4.0 4.4 4.8 5.2 5.6 6.0 6.4 6.8 7.2 7.6
EM-BTRF-001998

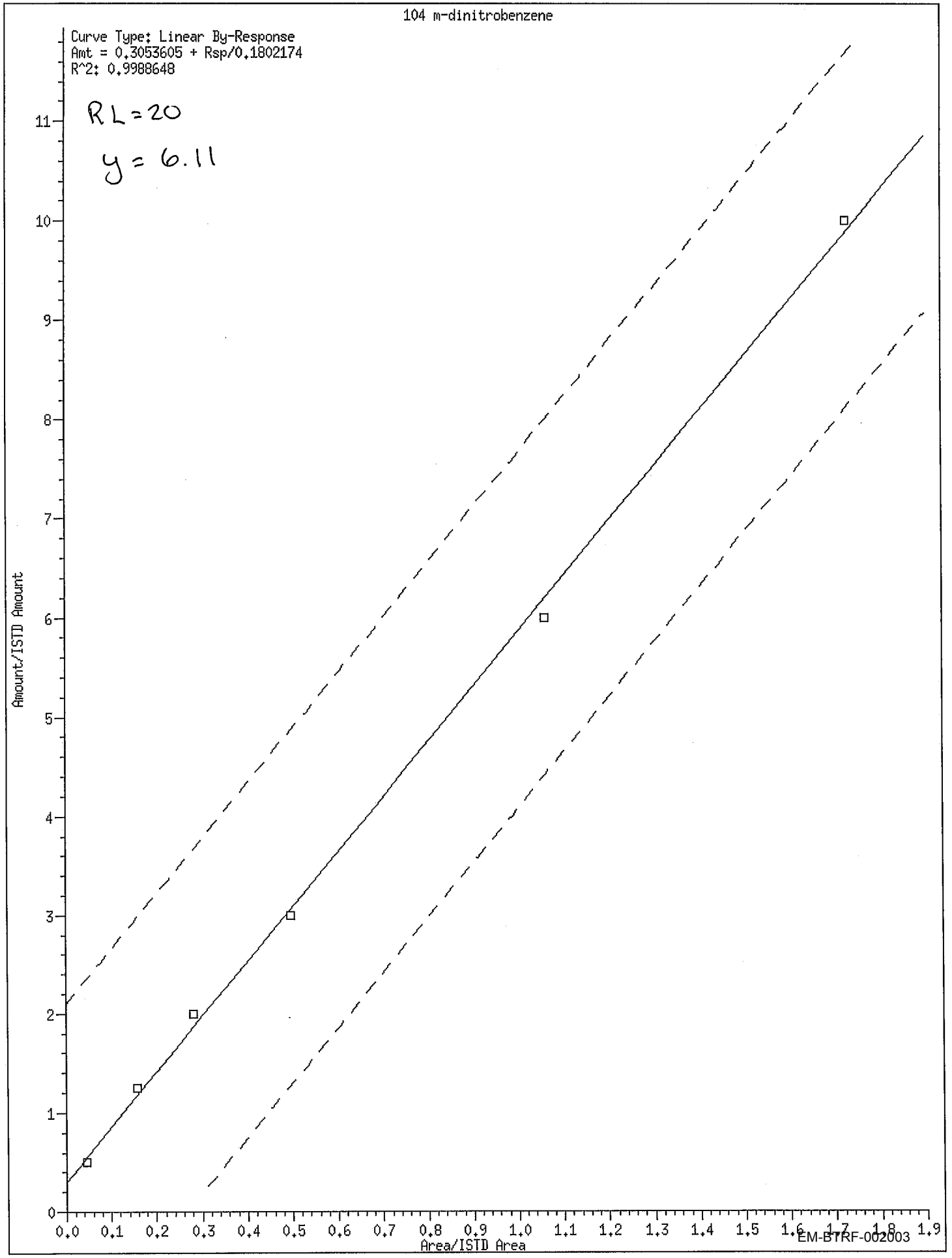

77 Di-n-octyl phthalate (ccc)
Curve Type: Averaged By-Response
Amt = Rsp/1.052764
%RSD: 23.374
%RSD < 30%
see reprint for avgs.
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
EM-BTRF-001999

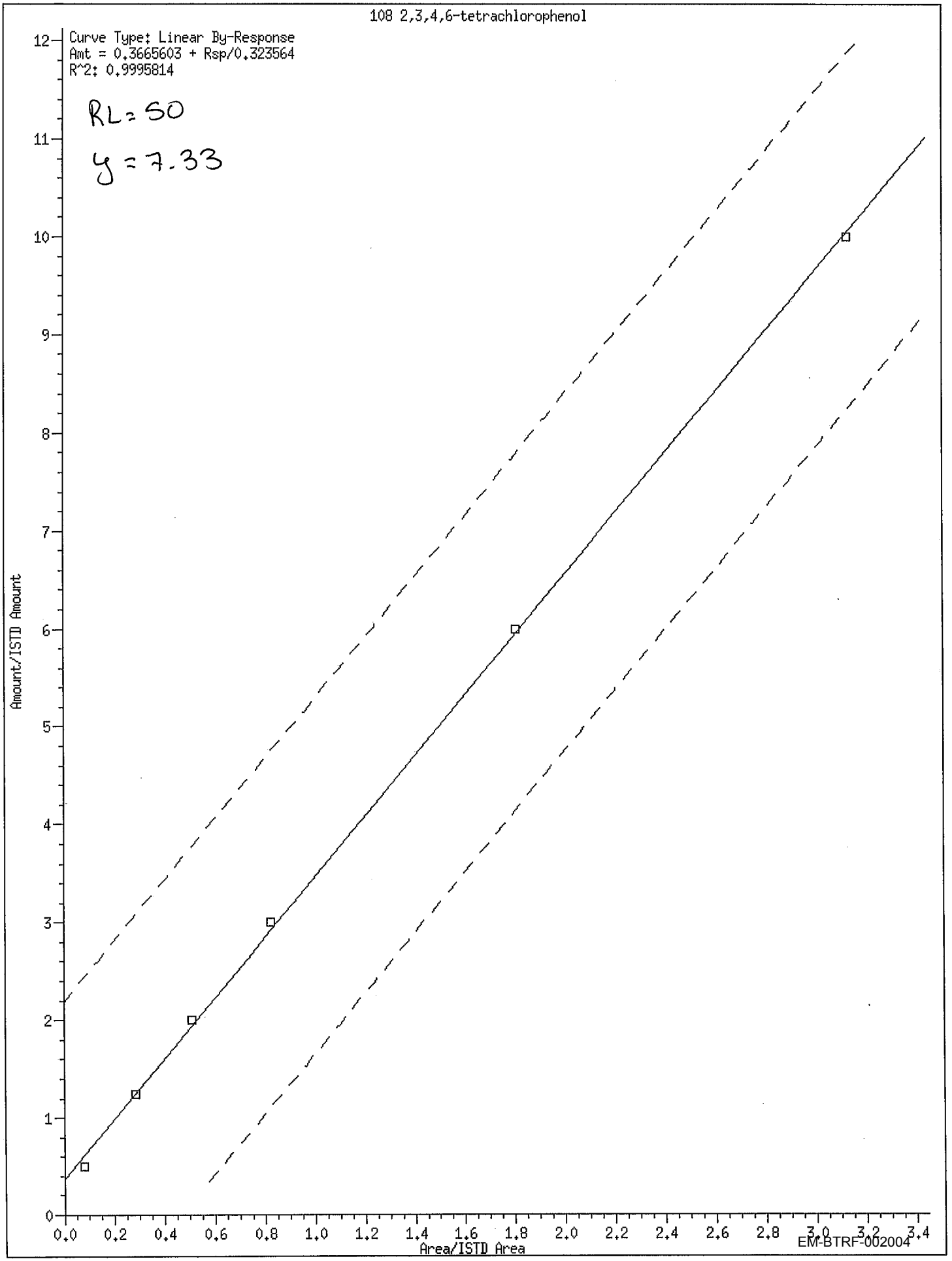

77 Di-n-octyl phthalate (ccc)
Curve Type: Quadratic By-Response
Amt = 0 + 0.8938194*Rsp + -0.00933925*Rsp^2
R^2: 0.9978952
forced → 0
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14

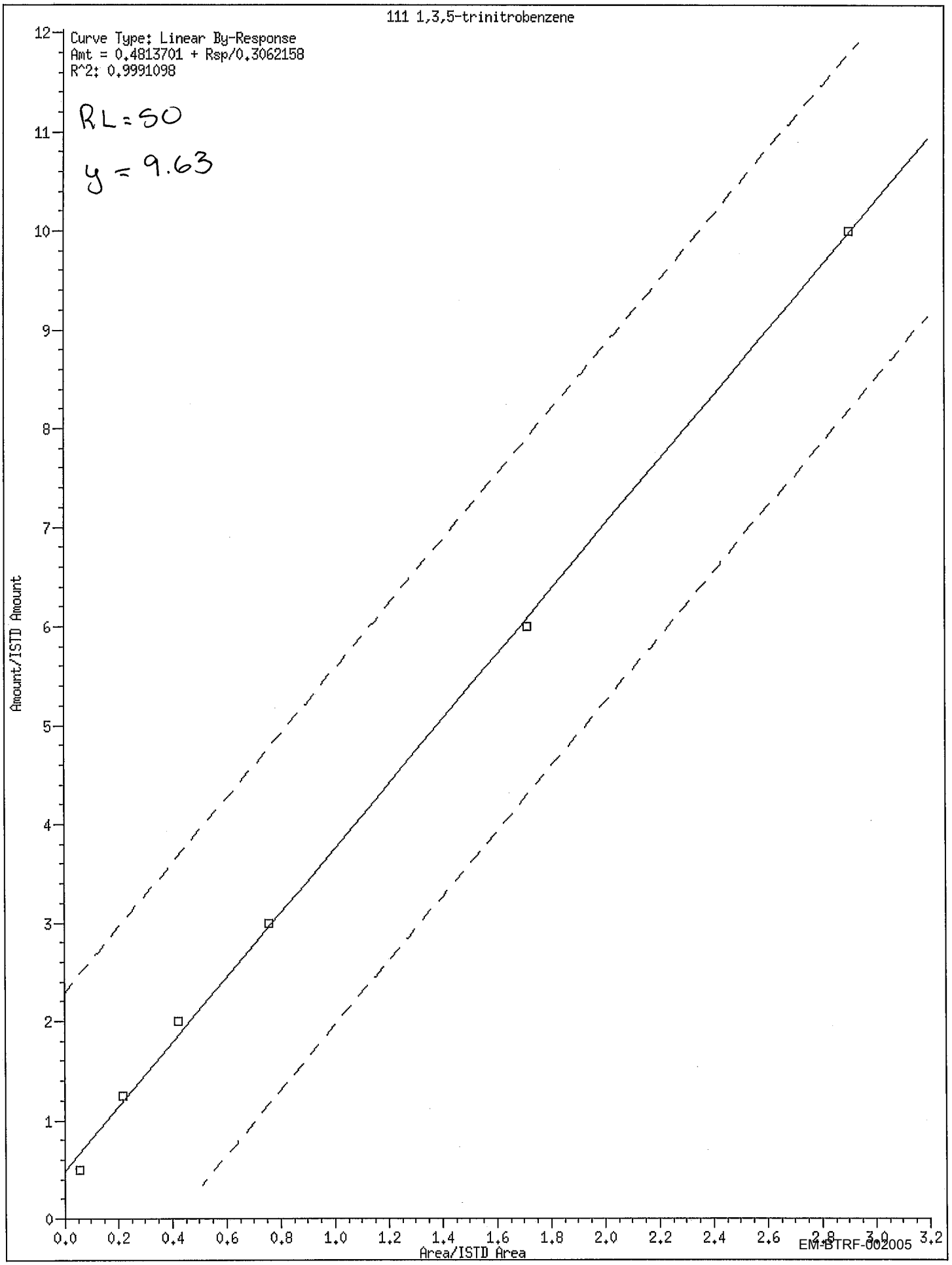

80 Benzo(a)pyrene (ccc)
Curve Type: Averaged By-Response
Amt = Rsp/0.9889061
%RSD: 15.827
% RSD < 30 %
see reprint for linear
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
EM-BTRF-002001

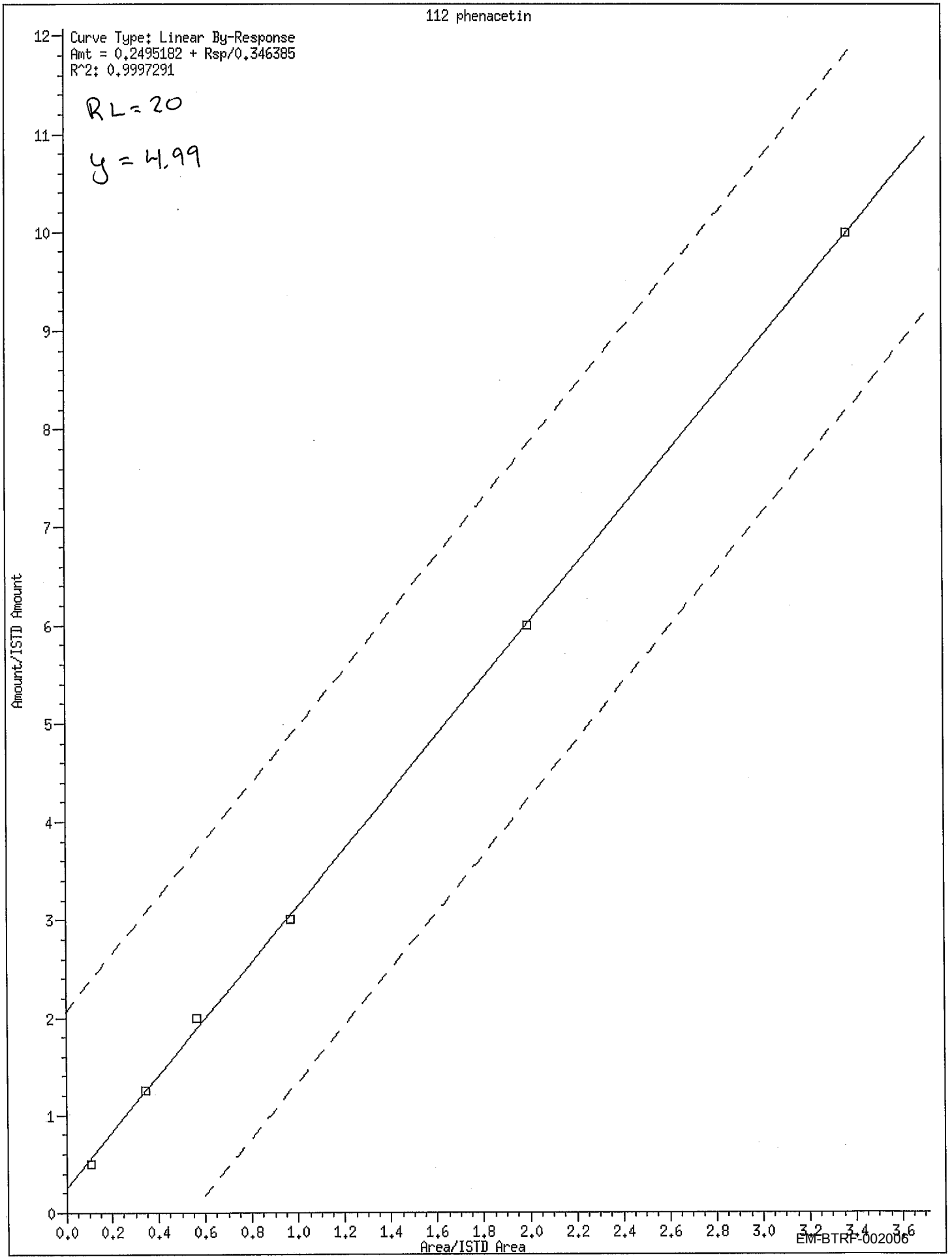


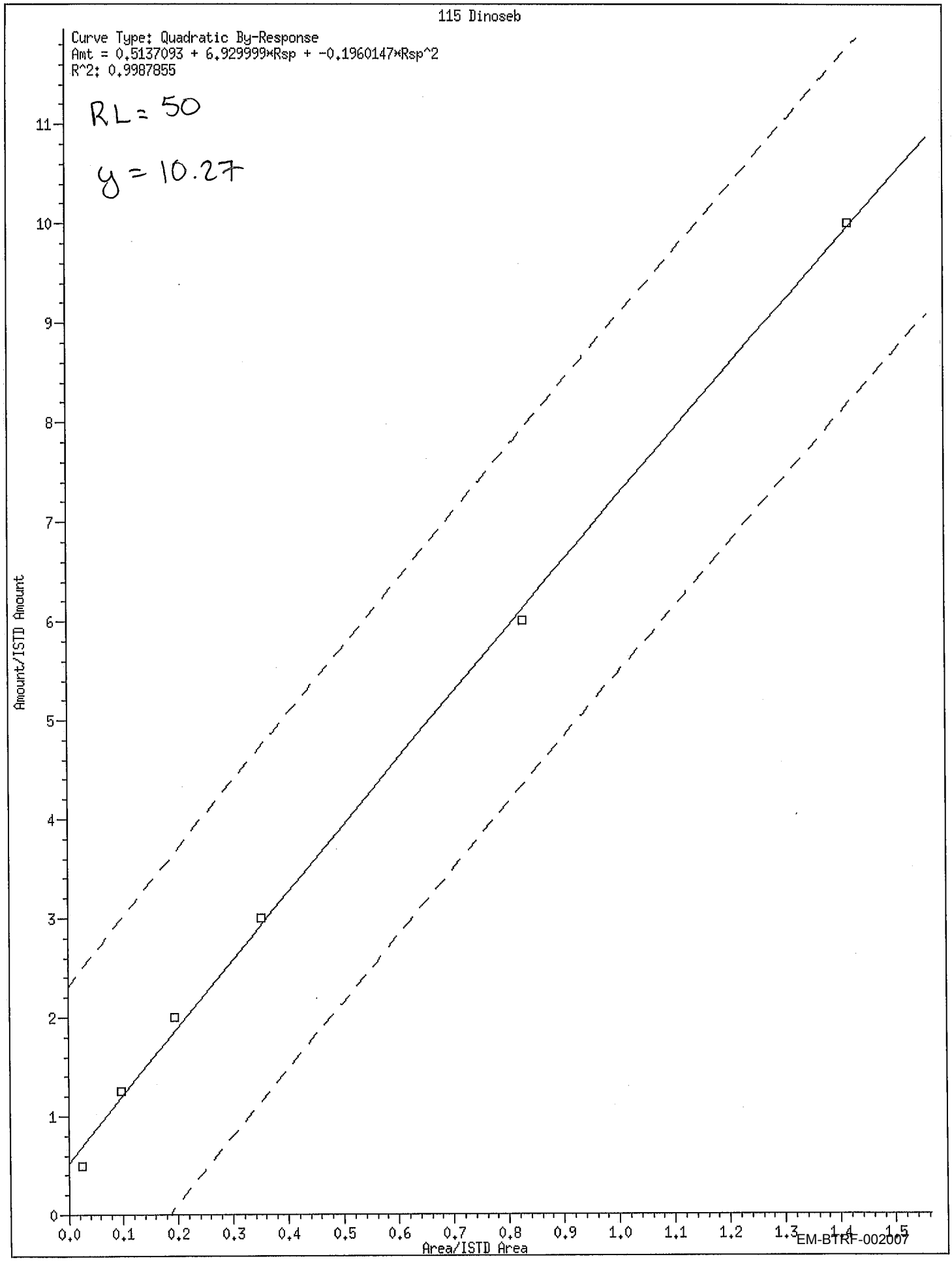
EM-BTRF-002002

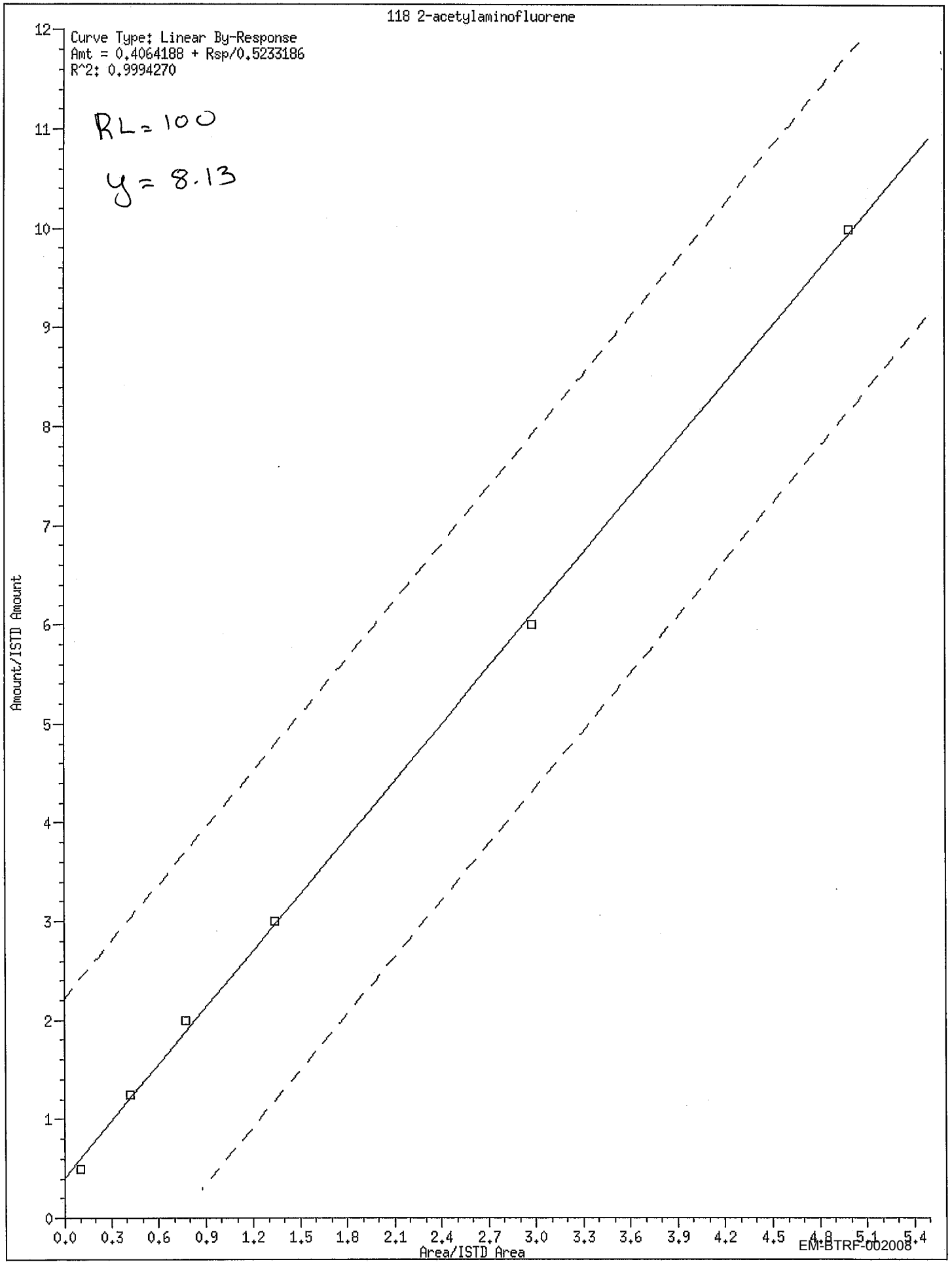

104 m-dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.3053605 + Rsp/0.1802174
R^2: 0.9988648
RL = 20
y = 6.11
Amount/ISTD Amount
Area/ISTD Area
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9
0 1 2 3 4 5 6 7 8 9 10 11
EM-BTRF-002003

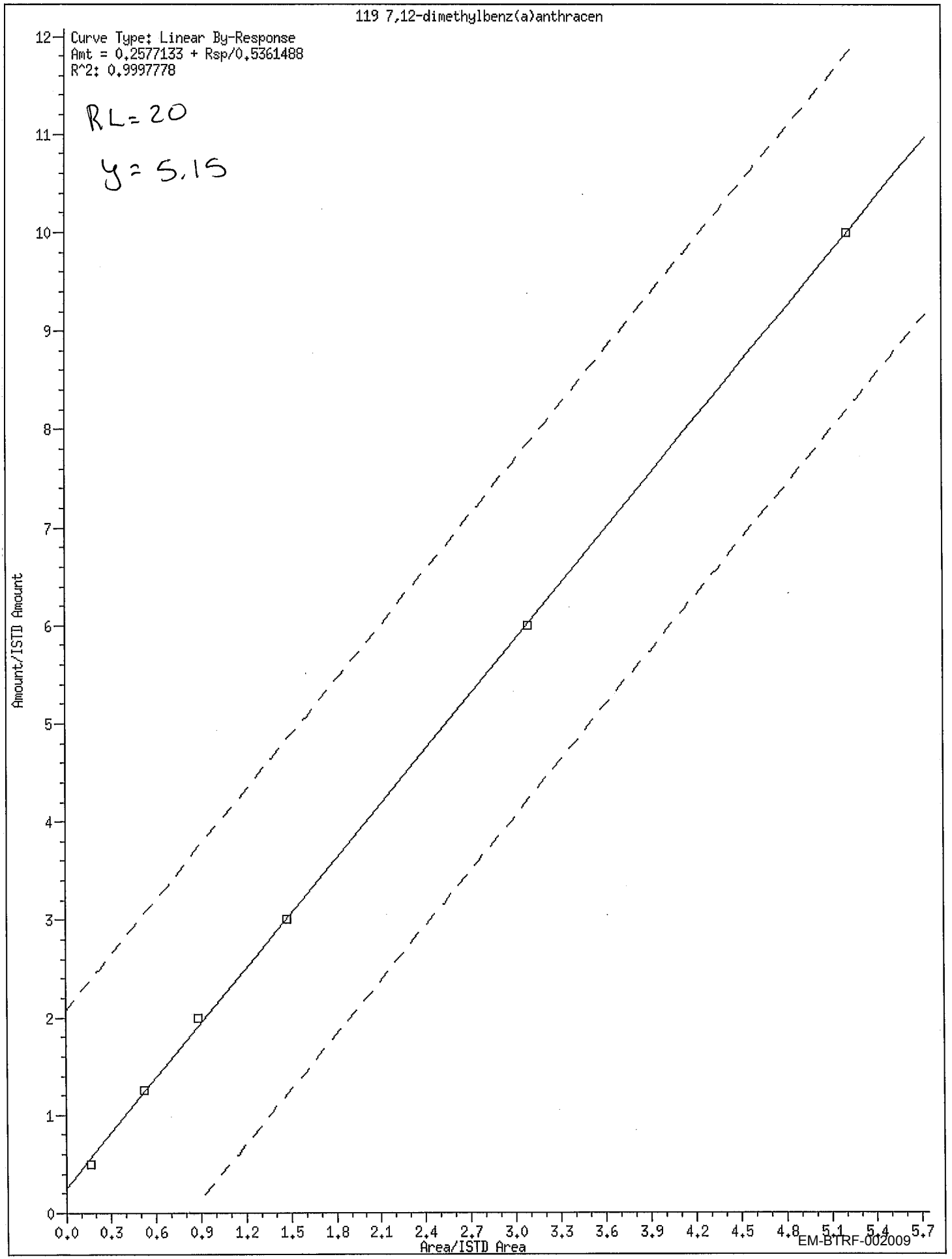

108 2,3,4,6-tetrachlorophenol
Curve Type: Linear By-Response
Amt = 0.3665603 + Rsp/0.323564
R^2: 0.9995814
RL=50
y=7.33
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4

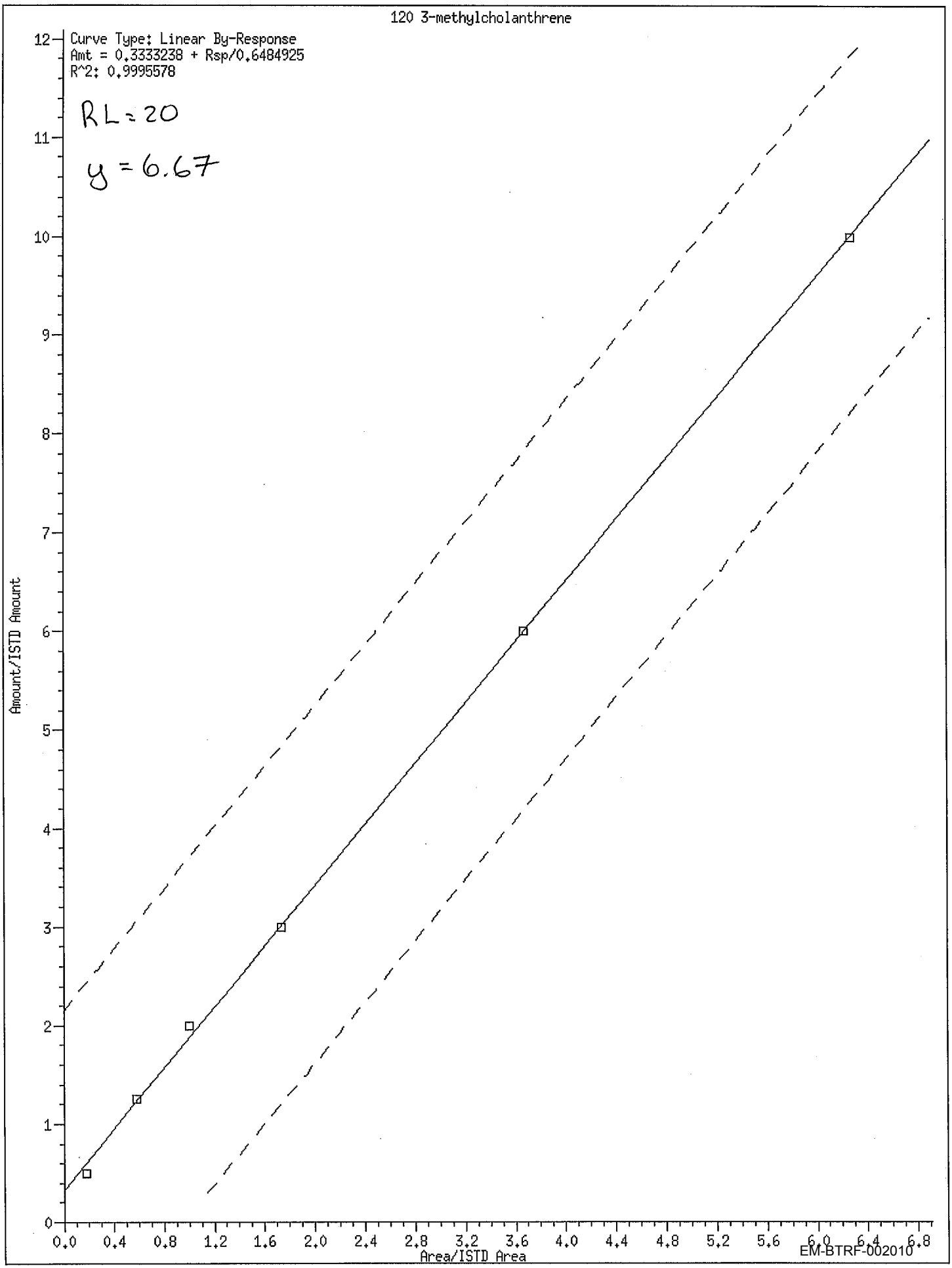

111 1,3,5-trinitrobenzene
Curve Type: Linear By-Response
Amt = 0.4813701 + Rsp/0.3062158
R^2: 0.9991098
RL=50
y=9.63
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2

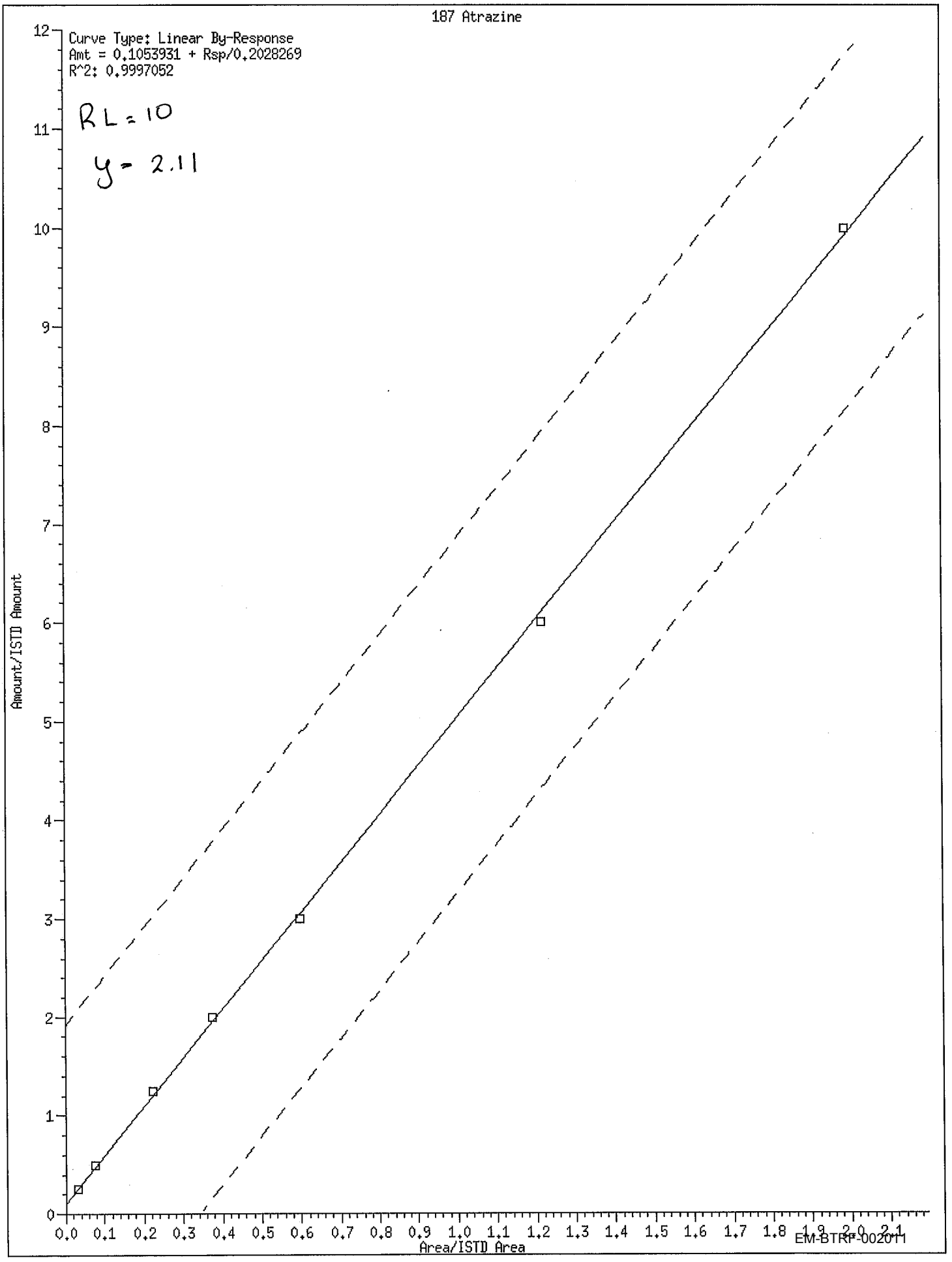

112 phenacetin
Curve Type: Linear By-Response
Amt = 0.2495182 + Rsp/0.346385
R^2: 0.9997291
RL = 20
y = 4.99
Amount/ISTD Amount
Area/ISTD Area
EM-BTRP-002006

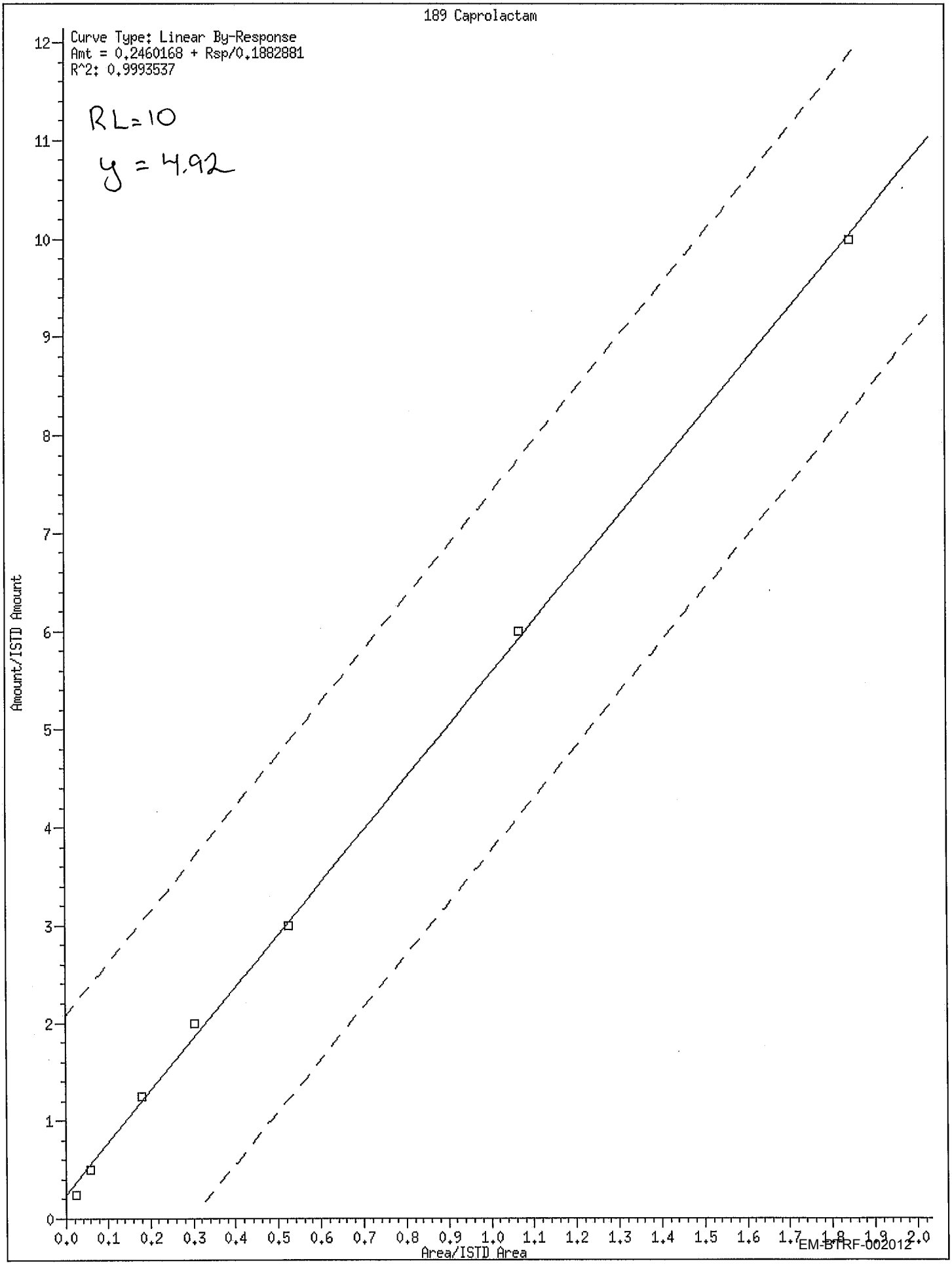

115 Dinoseb
Curve Type: Quadratic By-Response
Amt = 0.5137093 + 6.929999*Rsp + -0.1960147*Rsp^2
R^2: 0.9987855
RL = 50
y = 10.27
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5
EM-BTRF-002007

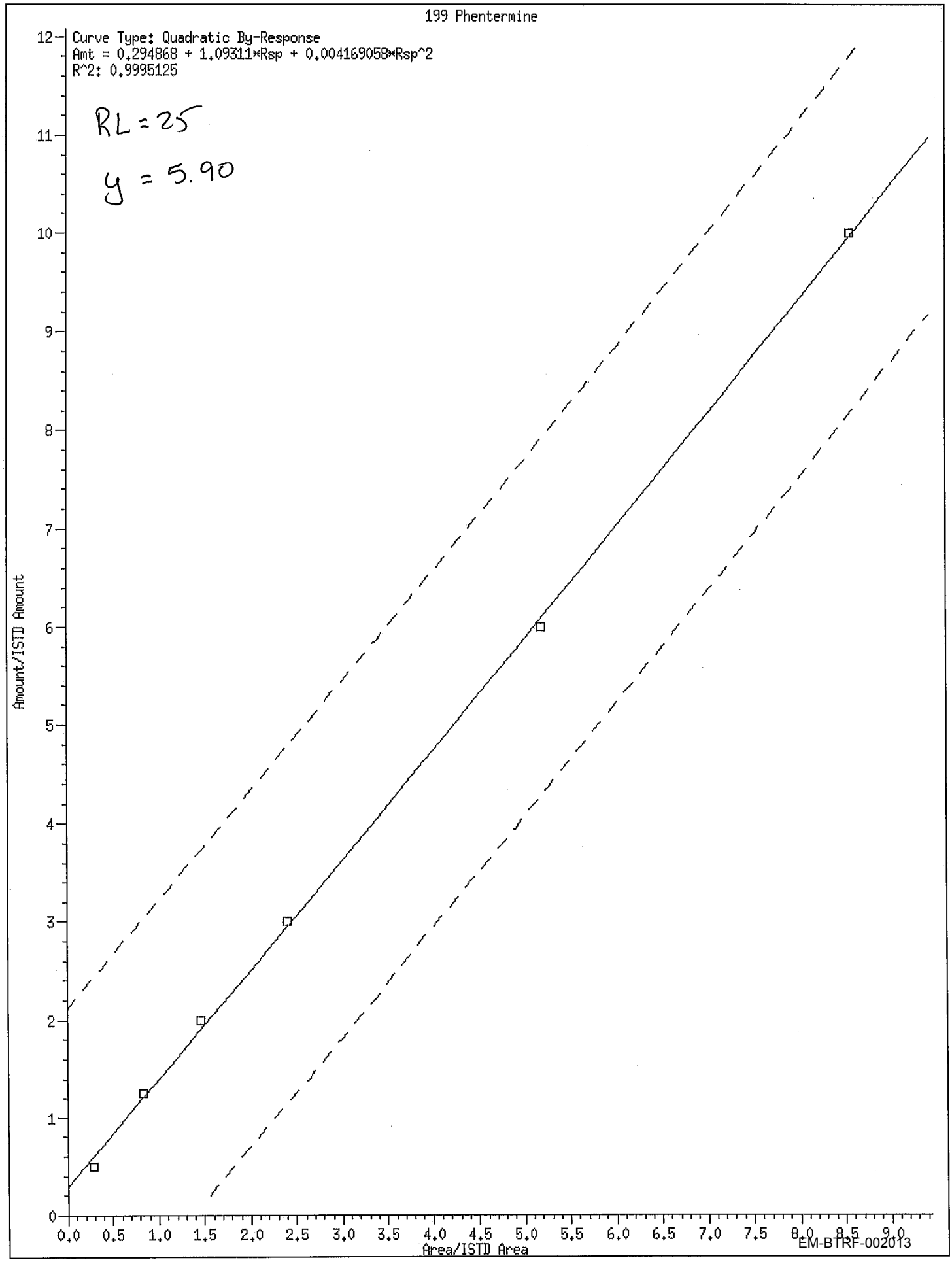

118 2-acetylaminofluorene
Curve Type: Linear By-Response
Amt = 0.4064188 + Rsp/0.5233186
R^2: 0.9994270
RL = 100
y = 8.13
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4

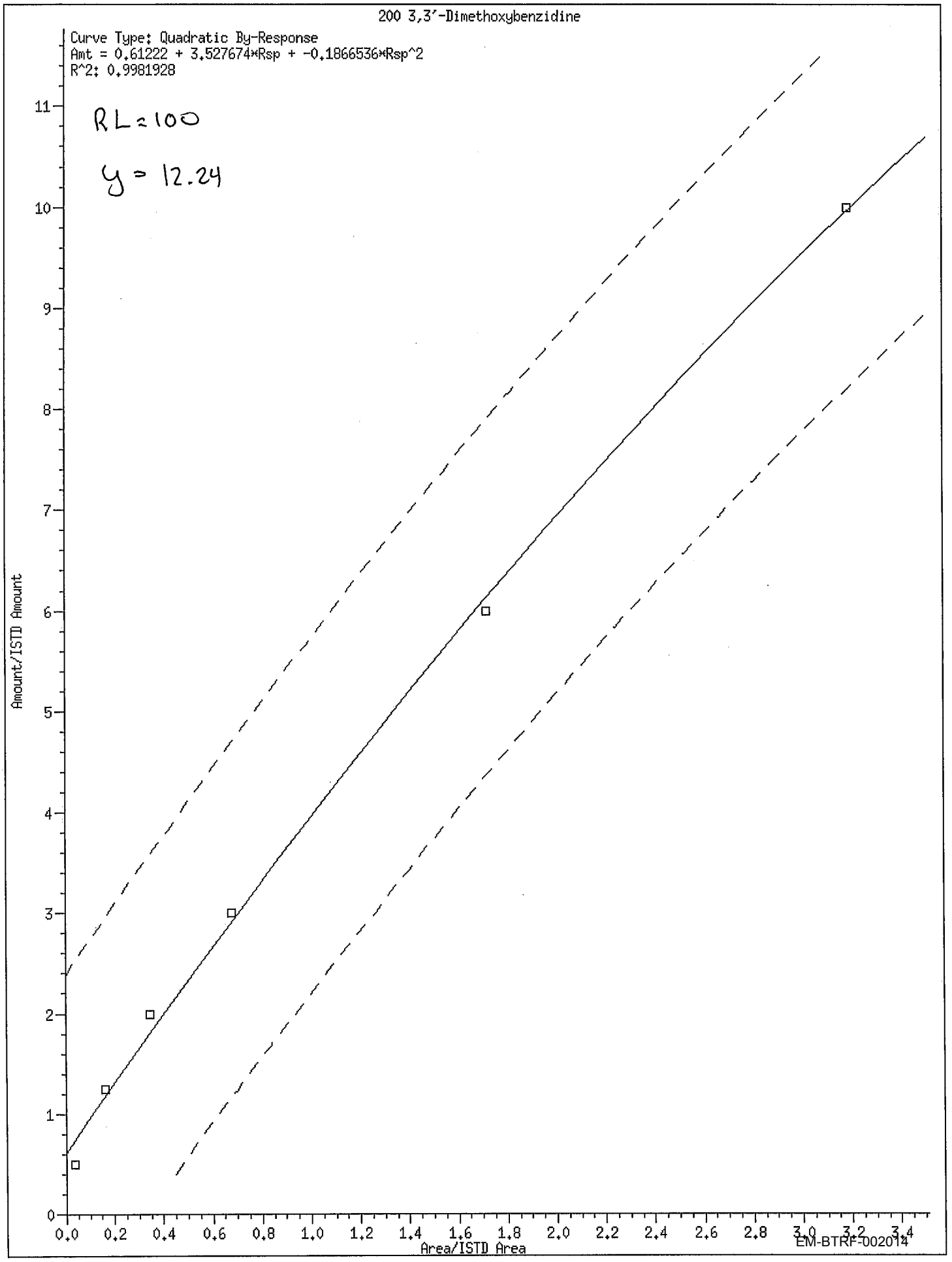

119 7,12-dimethylbenz(a)anthracen
Curve Type: Linear By-Response
Amt = 0.2577133 + Rsp/0.5361488
R^2: 0.9997778
RL=20
y=5.15
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7

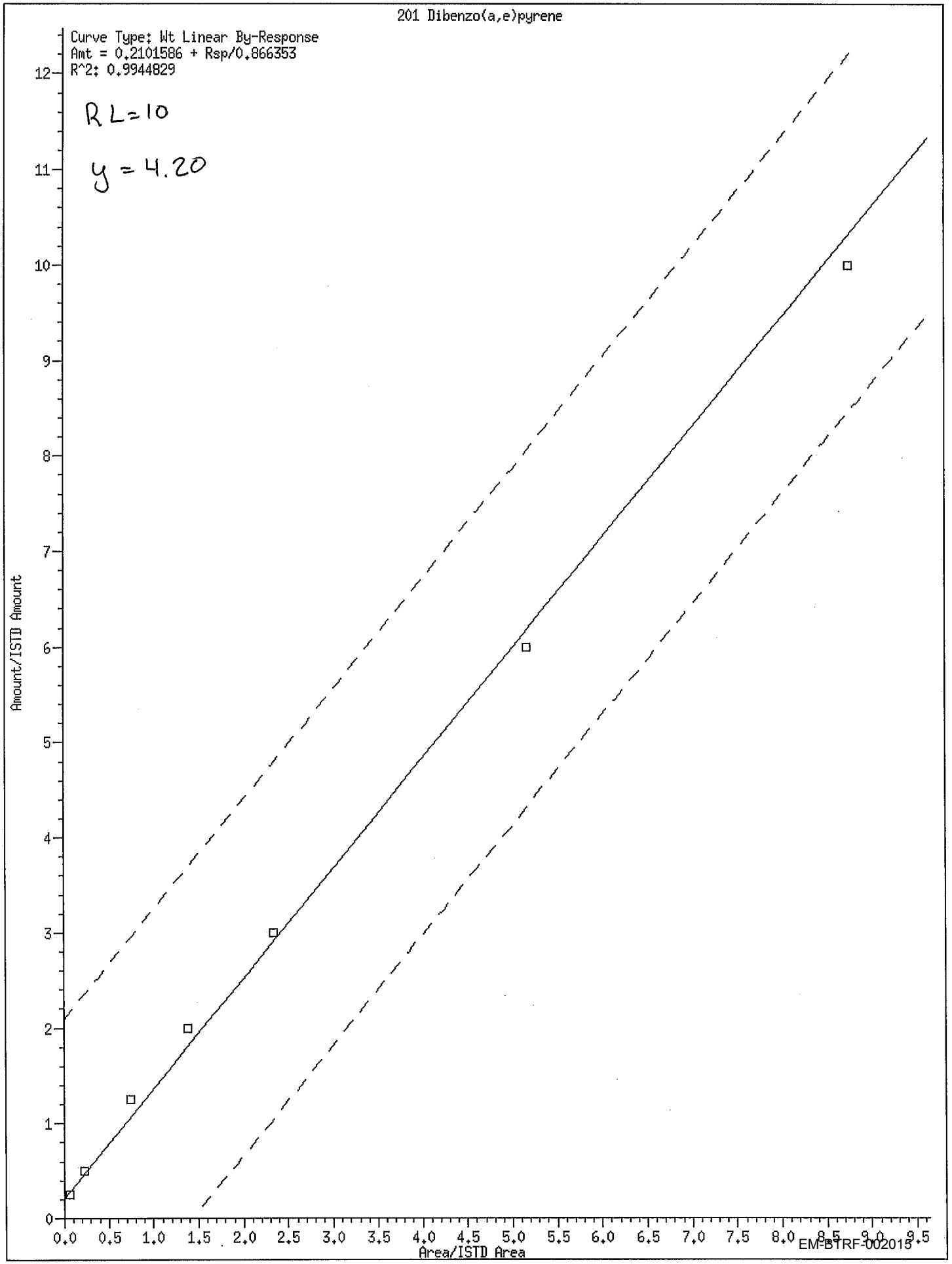

120 3-methylcholanthrene
Curve Type: Linear By-Response
Amt = 0.3333238 + Rsp/0.6484925
R^2: 0.9995578
RL=20
y=6.67
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4
6.8

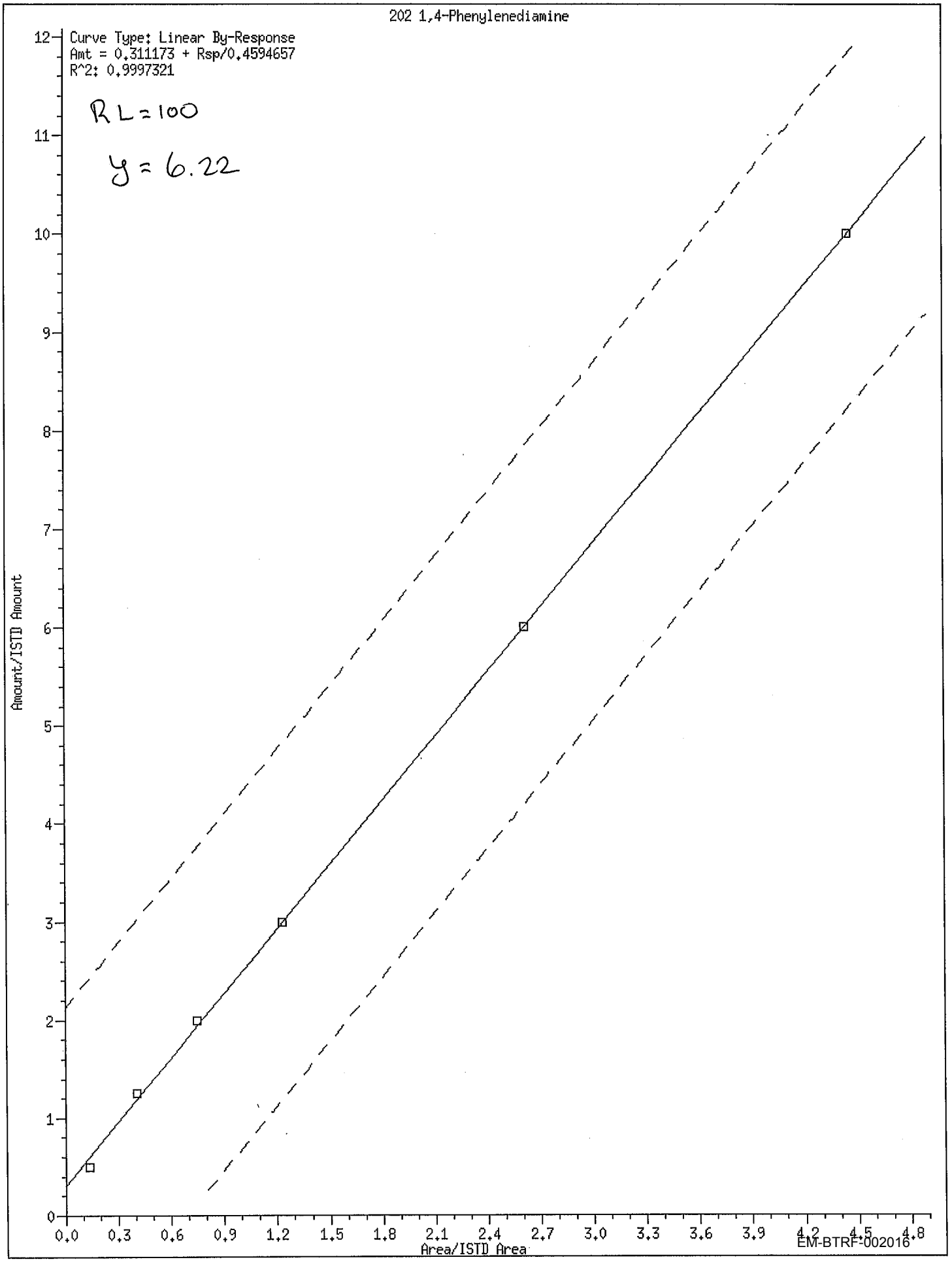

187 Atrazine
Curve Type: Linear By-Response
Amt = 0.1053931 + Rsp/0.2028269
R^2: 0.9997052
RL = 10
y = 2.11
Amount/ISTD Amount
Area/ISTD Area
EM-BTRF-002011


189 Caprolactam
Curve Type: Linear By-Response
Amt = 0.2460168 + Rsp/0.1882881
R^2: 0.9993537
RL=10
y = 4.92
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0


199 Phentermine
Curve Type: Quadratic By-Response
Amt = 0.294868 + 1.09311*Rsp + 0.004169058*Rsp^2
R^2: 0.9995125
RL = 25
y = 5.90
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0
EM-BTRF-002013


200 3,3'-Dimethoxybenzidine
Curve Type: Quadratic By-Response
Amt = 0.61222 + 3.527674*Rsp + -0.1866536*Rsp^2
R^2: 0.9981928
RL=100
y = 12.24
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4


201 Dibenzo(a,e)pyrene
Curve Type: Wt Linear By-Response
Amt = 0.2101586 + Rsp/0.866353
R^2: 0.9944829
RL=10
y = 4.20
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5


202 1,4-Phenylenediamine
Curve Type: Linear By-Response
Amt = 0.311173 + Rsp/0.4594657
R^2: 0.9997321
RL=100
y=6.22
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8

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INITIAL CALIBRATION RT and RRT REPORT

for TO 13

STD 1 = /var/chem/gcms/md.i/D072511I.b/icdg258.d
STD 2 = /var/chem/gcms/md.i/D072511I.b/icdg255.d
STD 3 = /var/chem/gcms/md.i/D072511I.b/icdg254.d
STD 4 = /var/chem/gcms/md.i/D072511I.b/icdg253.d
STD 5 = /var/chem/gcms/md.i/D072511I.b/icdg252.d
STD 6 = /var/chem/gcms/md.i/D072511I.b/icdg251.d
STD 7 = /var/chem/gcms/md.i/D072511I.b/icdg256.d
STD 8 = /var/chem/gcms/md.i/D072511I.b/icdg257.d

COMPOUND	STD 1	STD 2	STD 3	STD 4	STD 5	STD 6	STD 7	STD 8	MEAN
1,4-Dichlorobenzene-d4	4.307	4.307	4.301	4.301	4.301	4.301	4.301	4.301	4.302
Acenaphthene-d10	8.490	8.484	8.484	8.484	8.484	8.484	8.484	8.484	8.485
Phenanthrene-d10	9.900	9.900	9.894	9.894	9.895	9.895	9.895	9.895	9.896
Chrysene-d12	11.939	11.933	11.933	11.927	11.928	11.928	11.928	11.928	11.930
Naphthalene-d8	5.893	5.893	5.893	5.893	5.888	5.888	5.888	5.888	5.890
Perylene-d12	13.866	13.860	13.861	13.860	13.855	13.855	13.861	13.861	13.860
2-Fluorophenol	0.727	0.727	0.728	0.728	0.728	0.728	0.728	NA	0.728
Phenol-d5	0.915	0.914	0.915	0.914	0.914	0.914	0.914	NA	0.914
2,4,6-Tribromophenol	0.941	0.941	0.941	0.941	0.941	0.941	0.941	NA	0.941
Terphenyl-d14	0.926	0.926	0.926	0.926	0.926	0.926	0.926	NA	0.926
2-Fluorobiphenyl	0.895	0.895	0.895	0.895	0.895	0.895	0.895	NA	0.895
Nitrobenzene-d5	0.837	0.836	0.836	0.836	0.837	0.837	0.837	NA	0.836
Aniline	0.925	0.924	0.925	0.923	0.924	0.924	0.924	NA	0.924
Phenol (ccc)	0.920	0.918	0.918	0.918	0.917	0.917	0.917	NA	0.918
Bis(2-chloroethyl)ether	0.939	0.937	0.937	0.937	0.937	0.937	0.937	NA	0.937
2-Chlorophenol	0.954	0.952	0.954	0.952	0.952	0.952	0.952	NA	0.952
1,3-Dichlorobenzene	0.988	0.988	0.989	0.988	0.988	0.988	0.988	NA	0.988
1,4-Dichlorobenzene (ccc)	1.004	1.004	1.004	1.004	1.004	1.004	1.004	NA	1.004
N-Nitrosodimethylamine	0.514	0.513	0.514	0.514	0.514	0.514	0.514	NA	0.514
Benzyl alcohol	1.034	1.031	1.033	1.031	1.031	1.031	1.031	NA	1.032
1,2-Dichlorobenzene	1.042	1.041	1.042	1.042	1.042	1.042	1.042	NA	1.042
2-Methylphenol	1.063	1.061	1.061	1.061	1.061	1.061	1.061	NA	1.061
2,2'-Oxybis(1-Chloropropane)	1.068	1.068	1.070	1.068	1.068	1.068	1.068	NA	1.068
N-Nitroso-di-n-propylamine##	1.106	1.104	1.104	1.104	1.104	1.104	1.104	NA	1.104
4-Methylphenol	1.106	1.105	1.105	1.105	1.105	1.104	1.105	NA	1.105
Hexachloroethane	1.135	1.134	1.135	1.135	1.135	1.135	1.137	NA	1.135
Nitrobenzene	0.842	0.841	0.840	0.840	0.841	0.841	0.841	NA	0.841
Isophorone	0.897	0.895	0.894	0.894	0.894	0.894	0.895	NA	0.895
2-Nitrophenol (ccc)	0.913	0.912	0.912	0.912	0.913	0.912	0.913	NA	0.912
2,4-Dimethyphenol	0.926	0.925	0.925	0.925	0.925	0.925	0.925	NA	0.925
Bis(2-chloroethoxy)methane	0.947	0.946	0.946	0.945	0.946	0.946	0.946	NA	0.946
Benzoic acid	0.960	0.953	0.948	0.945	0.943	0.939	NA	NA	0.948
2,4-Dichlorophenol (ccc)	0.969	0.969	0.968	0.968	0.969	0.969	0.969	NA	0.969
1,2,4-Trichlorobenzene	0.989	0.988	0.988	0.988	0.989	0.989	0.989	NA	0.988
4-Chloroaniline	1.020	1.019	1.019	1.019	1.019	1.020	1.020	NA	1.019
Hexachlorobutadiene (ccc)	1.041	1.041	1.041	1.041	1.041	1.041	1.042	NA	1.041
4-Chloro-3-methylphenol (ccc	1.144	1.144	1.142	1.142	1.144	1.144	1.145	NA	1.144
2-Methylnaphthalene	1.177	1.177	1.176	1.176	1.178	1.178	1.178	1.178	1.177

Evaluation Criteria
Internal Standard RT shift within 20 seconds of mean RT
Target compound RRT within 0.06 RRT of the RRT mean
Note: IS data is RT, SS and Target Compound Data is RRT.

INITIAL CALIBRATION RT and RRT REPORT

STD 1 = /var/chem/gcms/md.i/D072511I.b/icdg258.d
STD 2 = /var/chem/gcms/md.i/D072511I.b/icdg255.d
STD 3 = /var/chem/gcms/md.i/D072511I.b/icdg254.d
STD 4 = /var/chem/gcms/md.i/D072511I.b/icdg253.d
STD 5 = /var/chem/gcms/md.i/D072511I.b/icdg252.d
STD 6 = /var/chem/gcms/md.i/D072511I.b/icdg251.d
STD 7 = /var/chem/gcms/md.i/D072511I.b/icdg256.d
STD 8 = /var/chem/gcms/md.i/D072511I.b/icdg257.d

COMPOUND	STD 1	STD 2	STD 3	STD 4	STD 5	STD 6	STD 7	STD 8	MEAN
Hexachlorocyclopentadiene###	0.853	0.853	0.853	0.853	0.853	0.853	0.853	NA	0.853
2,4,6-Trichlorophenol (ccc)	0.878	0.878	0.877	0.877	0.877	0.877	0.877	NA	0.877
2,4,5-Trichlorphenol	0.884	0.884	0.884	0.884	0.884	0.884	0.884	NA	0.884
2-Chloronaphthalene	0.913	0.913	0.913	0.913	0.913	0.913	0.913	NA	0.913
2-Nitroaniline	0.933	0.933	0.932	0.932	0.932	0.932	0.932	NA	0.932
2,6-Dinitrotoluene	0.974	0.974	0.973	0.972	0.972	0.972	0.972	NA	0.973
3-Nitroaniline	0.997	0.996	0.996	0.996	0.996	0.996	NA	NA	0.996
2,4-Dinitrophenol ##spcc##	1.011	1.011	1.010	1.010	1.010	1.010	NA	NA	1.010
Dibenzofuran	1.028	1.028	1.028	1.028	1.028	1.028	1.028	NA	1.028
4-Nitrophenol ##spcc##	1.025	1.025	1.024	1.024	1.024	1.024	NA	NA	1.024
2,4-Dinitrotoluene	1.029	1.029	1.028	1.028	1.028	1.028	1.028	NA	1.028
Dimethyl phthalate	0.968	0.967	0.967	0.967	0.967	0.966	0.966	NA	0.967
Diethyl phthalate	1.062	1.062	1.062	1.062	1.062	1.062	1.062	NA	1.062
4-Chlorophenyl phenyl ether	1.072	1.072	1.072	1.072	1.072	1.072	1.072	NA	1.072
4-Nitroaniline	1.075	1.075	1.073	1.073	1.073	1.073	NA	NA	1.074
4,6-Dinitro-2-methylphenol	0.925	0.924	0.924	0.924	0.924	0.924	NA	NA	0.924
N-Ndpa / diphenylamine (ccc)	0.931	0.930	0.931	0.931	0.930	0.930	0.930	NA	0.930
1,2-Diphenylhydrazine/azobnz	0.934	0.934	0.934	0.934	0.934	0.934	0.934	NA	0.934
4-Bromophenyl phenyl ether	0.964	0.964	0.964	0.964	0.964	0.964	0.964	NA	0.964
Hexachlorobenzene	0.970	0.969	0.970	0.969	0.969	0.969	0.969	NA	0.969
Pentachlorophenol (ccc)	0.986	0.986	0.986	0.986	0.986	0.986	NA	NA	0.986
Di-n-butyl phthalate	1.046	1.046	1.046	1.046	1.046	1.046	1.046	NA	1.046
Butyl benzyl phthalate	0.956	0.956	0.956	0.956	0.956	0.956	0.956	NA	0.956
3,3'-Dichlorobenzidine	0.996	0.996	0.996	0.996	0.996	0.996	NA	NA	0.996
Acenaphthene (ccc)	1.005	1.005	1.005	1.005	1.004	1.004	1.004	1.004	1.004
Benzo(a)Anthracene	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999
Benzo(b)fluoranthene	0.956	0.956	0.955	0.955	0.955	0.955	0.955	NA	0.955
Chrysene	1.002	1.002	1.002	1.002	1.002	1.002	1.002	1.002	1.002
Fluorene	1.070	1.071	1.070	1.070	1.070	1.070	1.070	1.070	1.070
Naphthalene	1.006	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005
Benzo(g,h,i)perylene	1.131	1.131	1.130	1.130	1.130	1.129	1.129	NA	1.130
Acenaphthylene	0.979	0.979	0.979	0.979	0.979	0.979	0.978	0.979	0.979
Phenanthrene	1.002	1.002	1.002	1.002	1.002	1.002	1.002	1.002	1.002
Dibenz(a,h)anthracene	1.109	1.108	1.108	1.108	1.108	1.108	1.107	NA	1.108
Anthracene	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.006
Indeno(1,2,3-cd)pyrene	1.107	1.107	1.106	1.106	1.106	1.106	1.106	NA	1.106
Benzo(a)pyrene (ccc)	0.994	0.994	0.993	0.993	0.993	0.993	0.993	NA	0.993
Fluoranthene (ccc)	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090

Evaluation Criteria
Internal Standard RT shift within 20 seconds of mean RT
Target compound RRT within 0.06 RRT of the RRT mean
Note: IS data is RT, SS and Target Compound Data is RRT.

INITIAL CALIBRATION RT and RRT REPORT

STD 1 = /var/chem/gcms/md.i/D072511I.b/icdg258.d
STD 2 = /var/chem/gcms/md.i/D072511I.b/icdg255.d
STD 3 = /var/chem/gcms/md.i/D072511I.b/icdg254.d
STD 4 = /var/chem/gcms/md.i/D072511I.b/icdg253.d
STD 5 = /var/chem/gcms/md.i/D072511I.b/icdg252.d
STD 6 = /var/chem/gcms/md.i/D072511I.b/icdg251.d
STD 7 = /var/chem/gcms/md.i/D072511I.b/icdg256.d
STD 8 = /var/chem/gcms/md.i/D072511I.b/icdg257.d

COMPOUND	STD 1	STD 2	STD 3	STD 4	STD 5	STD 6	STD 7	STD 8	MEAN
Pyrene	0.917	0.917	0.917	0.918	0.917	0.917	0.917	0.917	0.917
Benzo(k)fluoranthene	0.959	0.959	0.958	0.958	0.958	0.958	0.958	NA	0.958
Bis(2-ethylhexyl) phthalate	0.998	0.998	0.998	0.999	0.998	0.998	0.999	NA	0.998
Di-n-octyl phthalate (ccc)	0.914	0.914	0.914	0.913	0.913	0.913	NA	NA	0.914
Pyridine	0.521	0.521	0.522	0.522	0.522	0.522	0.523	NA	0.522
Carbazole	1.019	1.019	1.019	1.019	1.019	1.019	1.019	NA	1.019
3&4 Methylphenol	1.106	1.105	1.105	1.105	1.105	1.104	1.105	NA	1.105
1,4-Dioxane	NA	NA	0.477	0.477	0.477	0.477	0.477	0.477	0.477

Evaluation Criteria
Internal Standard RT shift within 20 seconds of mean RT
Target compound RRT within 0.06 RRT of the RRT mean
Note: IS data is RT, SS and Target Compound Data is RRT.

Data File: /var/chem/gcms/md.i/D072511I.b/icdg257.d
Report Date: 25-Jul-2011 15:42

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icdg257.d
Lab Smp Id: ICDG257 Client Smp ID: STD002
Inj Date : 25-JUL-2011 15:19
Operator : 60841 Inst ID: md.i
Smp Info : ICDG257,,1,7,,STD002
Misc Info : D072511I,8270a9,low.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 15:37 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 15:19 Cal File: icdg257.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: low.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

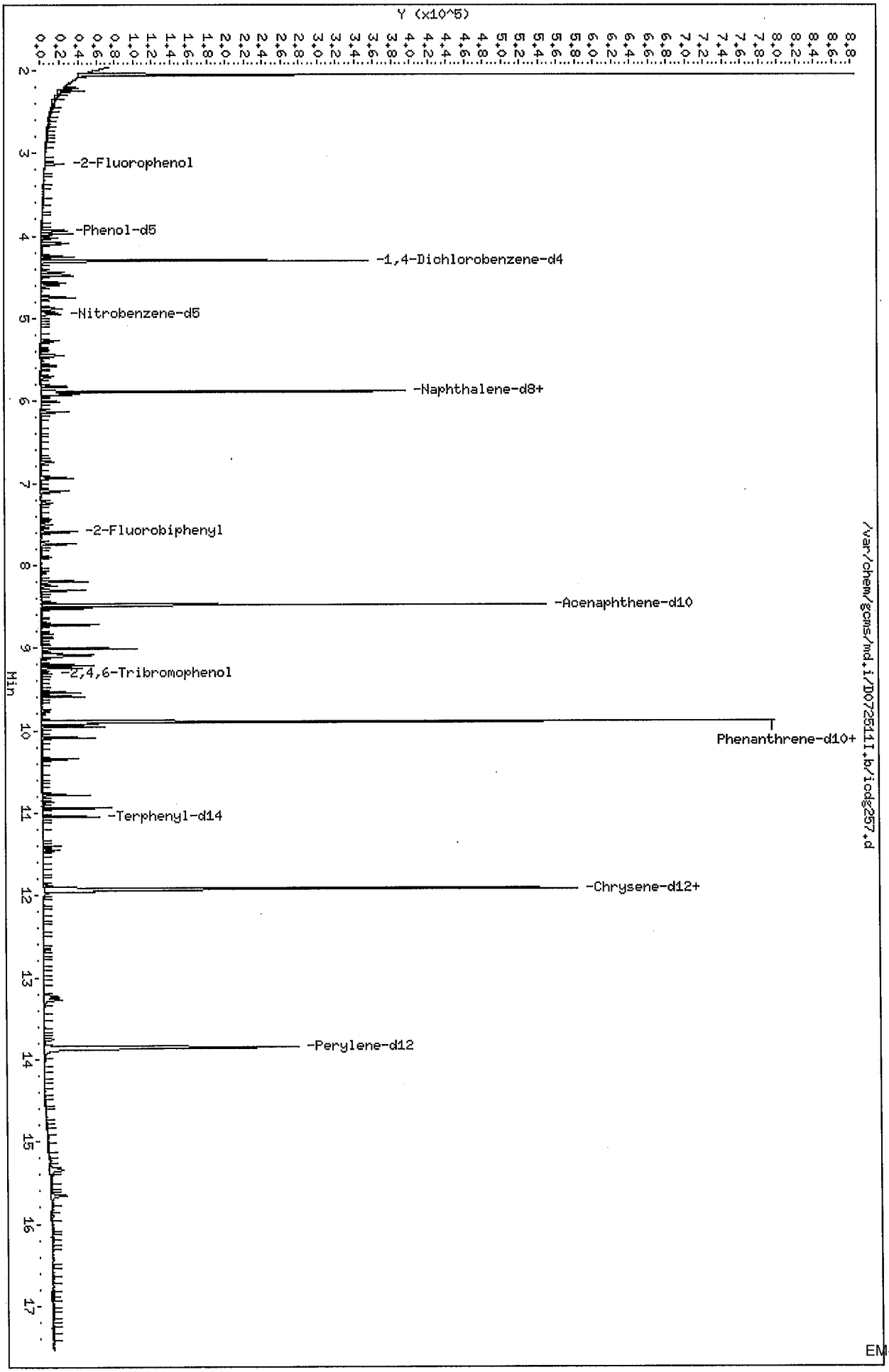
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	46032	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	179782	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	107048	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	209288	20.0000	20.0
* 5	Chrysene-d12	240	11.928	11.928	(1.000)	221888	20.0000	20.0
* 6	Perylene-d12	264	13.861	13.861	(1.000)	192894	20.0000	20.0
$ 7	2-Fluorophenol	112	3.132	3.132	(0.728)	4899	2.00000	1.93
$ 8	Phenol-d5	99	3.931	3.931	(0.914)	5569	2.00000	1.83
$ 9	Nitrobenzene-d5	82	4.930	4.930	(0.837)	5127	2.00000	1.79
$ 10	2-Fluorobiphenyl	172	7.591	7.591	(0.895)	13815	2.00000	2.06
$ 11	2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	1120	2.00000	1.34
$ 12	Terphenyl-d14	244	11.046	11.046	(0.926)	16162	2.00000	1.92
175	1,4-Dioxane	88	2.051	2.051	(0.477)	161856	160.000	164(A)
37	Naphthalene	128	5.917	5.917	(1.005)	17439	2.00000	2.02

Data File: /var/chem/gcms/md.i/D072511I.b/icdg257.d
Report Date: 25-Jul-2011 15:42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	10930	2.00000	1.88
47 Acenaphthylene	152	8.308	8.308	(0.979)	16750	2.00000	1.83
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	12341	2.00000	2.04
56 Fluorene	166	9.078	9.078	(1.070)	13922	2.00000	2.00
66 Phenanthrene	178	9.912	9.912	(1.002)	23857	2.00000	2.13
67 Anthracene	178	9.953	9.953	(1.006)	19370	2.00000	1.78
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	18795	2.00000	1.63
71 Pyrene	202	10.941	10.941	(0.917)	22439	2.00000	1.78
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	5025	2.00000	1.02
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	18783	2.00000	1.71
75 Chrysene	228	11.951	11.951	(1.002)	25473	2.00000	2.17
76 Bis(2-ethylhexyl) phthalate	149	11.910	11.910	(0.999)	6026	2.00000	0.900
78 Benzo(b)fluoranthene	252	13.232	13.232	(0.955)	11546	2.00000	1.19
79 Benzo(k)fluoranthene	252	13.267	13.267	(0.957)	19219	2.00000	1.65
80 Benzo(a)pyrene (ccc)	252	13.755	13.755	(0.992)	10018	2.00000	1.05
82 Dibenz(a,h)anthracene	278	15.353	15.353	(1.108)	10397	2.00000	1.20
81 Indeno(1,2,3-cd)pyrene	276	15.318	15.318	(1.105)	11876	2.00000	1.12
83 Benzo(g,h,i)perylene	276	15.653	15.653	(1.129)	13036	2.00000	1.40

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.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Date : 25-JUL-2011 15:19
Client ID: STD002
Sample Info: ICDG257,1,7,,STD002
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md_i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
/var/chem/gcms/md_i/D0725111.b/icdg257.d
-2-Fluorophenol
-Phenol-d5
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
Phenanthrene-d10+
-Terphenyl-d14
-Chrysene-d12+
-Perylene-d12

Data File: /chem/gcms/md.i/D072511I.b/icdg256.d
Report Date: 25-Jul-2011 15:11

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072511I.b/icdg256.d
Lab Smp Id: ICDG256 Client Smp ID: STD005
Inj Date : 25-JUL-2011 14:53
Operator : 60841 Inst ID: md.i
Smp Info : ICDG256,,1,6,,STD005
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 15:11 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 14:53 Cal File: icdg256.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

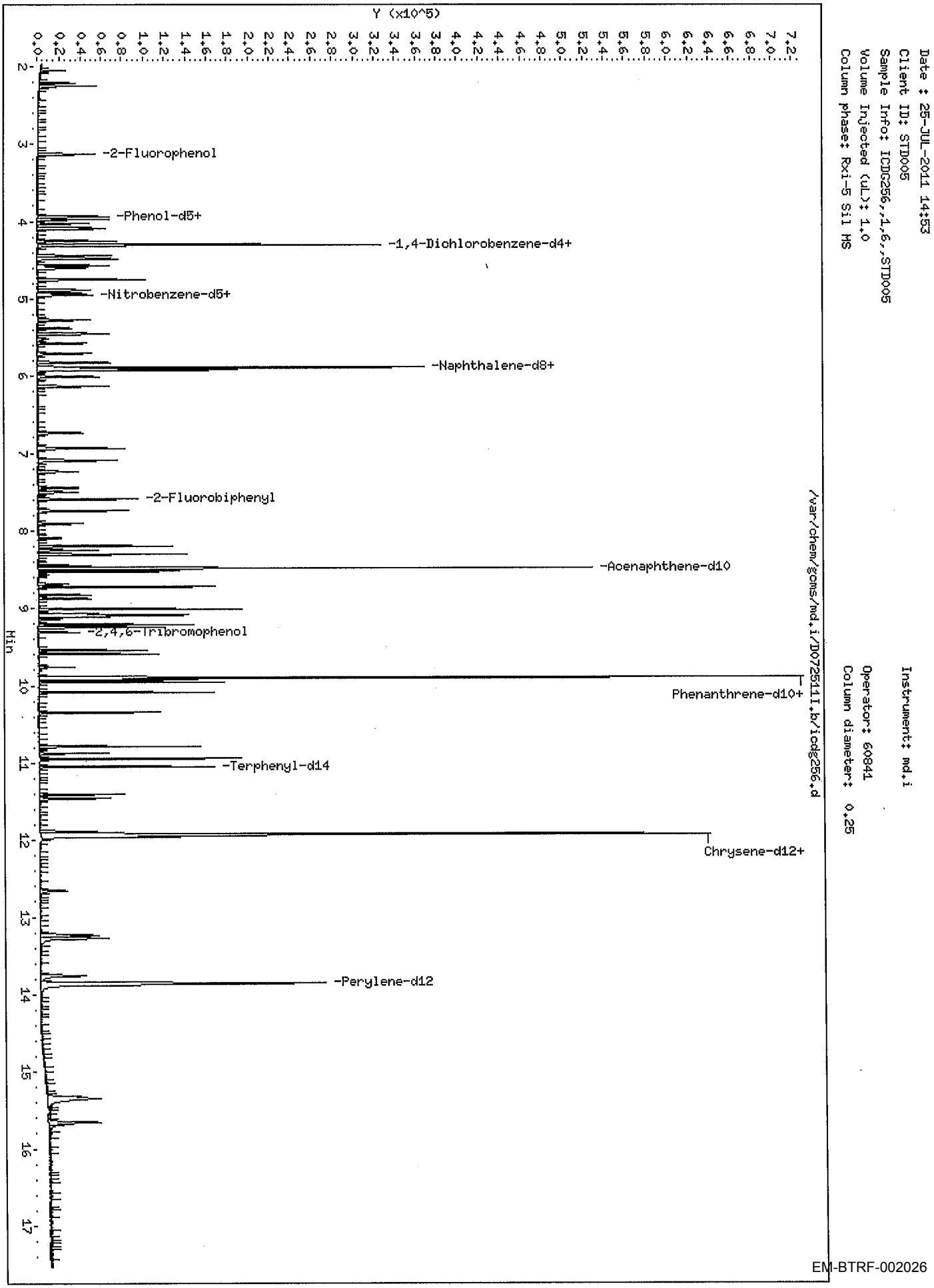
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	44160	20.0000	20.0
*	2 Naphthalene-d8	136	5.888	5.888	(1.000)	172766	20.0000	20.0
*	3 Acenaphthene-d10	164	8.485	8.485	(1.000)	103297	20.0000	20.0
*	4 Phenanthrene-d10	188	9.895	9.895	(1.000)	196861	20.0000	20.0
*	5 Chrysene-d12	240	11.928	11.928	(1.000)	214162	20.0000	20.0
*	6 Perylene-d12	264	13.861	13.861	(1.000)	184125	20.0000	20.0
$	7 2-Fluorophenol	112	3.132	3.132	(0.728)	11228	5.00000	4.60
$	8 Phenol-d5	99	3.931	3.931	(0.914)	13685	5.00000	4.68
$	9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	12521	5.00000	4.55
$	10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	33910	5.00000	5.25
$	11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	3465	5.00000	4.40
$	12 Terphenyl-d14	244	11.046	11.046	(0.926)	39923	5.00000	4.91
$	179 13C6-naphthalene	134	5.917	5.917	(1.005)	46222	5.00000	4.92
	175 1,4-Dioxane	88	2.051	2.051	(0.477)	4625	5.00000	4.90

Data File: /chem/gcms/md.i/D072511I.b/icdg256.d
Report Date: 25-Jul-2011 15:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	6591	5.00000	4.78
14 Pyridine	79	2.251	2.251	(0.523)	12041	5.00000	5.01
15 Phenol (ccc)	94	3.943	3.943	(0.917)	14592	5.00000	4.85
16 Aniline	93	3.972	3.972	(0.924)	17767	5.00000	4.77
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	11563	5.00000	5.12
18 2-Chlorophenol	128	4.095	4.095	(0.952)	12927	5.00000	4.78
19 1,3-Dichlorobenzene	146	4.248	4.248	(0.988)	15592	5.00000	5.08
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	16095	5.00000	5.13
21 Benzyl alcohol	108	4.436	4.436	(1.031)	8278	5.00000	4.66
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	15452	5.00000	5.12
23 2-Methylphenol	108	4.566	4.566	(1.061)	11061	5.00000	4.66
24 2,2'-Oxybis(1-Chloropropane)	45	4.595	4.595	(1.068)	22076	5.00000	5.13
25 4-Methylphenol	108	4.754	4.754	(1.105)	11282	5.00000	4.60
26 3&4 Methylphenol	108	4.754	4.754	(1.105)	11282	5.00000	4.60
27 N-Nitroso-di-n-propylamine###	70	4.748	4.748	(1.104)	8451	5.00000	4.69
28 Hexachloroethane	117	4.889	4.889	(1.137)	5949	5.00000	5.05
29 Nitrobenzene	77	4.953	4.953	(0.841)	13028	5.00000	4.83
30 Isophorone	82	5.271	5.271	(0.895)	20160	5.00000	4.54
31 2-Nitrophenol (ccc)	139	5.376	5.376	(0.913)	5353	5.00000	3.90
32 2,4-Dimethyphenol	107	5.447	5.447	(0.925)	12866	5.00000	4.44
33 Bis(2-chloroethoxy)methane	93	5.570	5.570	(0.946)	14219	5.00000	4.89
34 Benzoic acid	122	5.517	5.517	(0.937)	2735	5.00000	2.10
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.969)	10389	5.00000	4.41
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.989)	13817	5.00000	5.11
37 Naphthalene	128	5.917	5.917	(1.005)	41923	5.00000	5.07
38 4-Chloroaniline	127	6.005	6.005	(1.020)	15890	5.00000	4.62
39 Hexachlorobutadiene (ccc)	225	6.134	6.134	(1.042)	8960	5.00000	5.27
40 4-Chloro-3-methylphenol (ccc)	107	6.739	6.739	(1.145)	9292	5.00000	4.11
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	28602	5.00000	5.06
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	6682	5.00000	4.16
43 2,4,6-Trichlorophenol (ccc)	196	7.445	7.445	(0.877)	6854	5.00000	4.14
44 2,4,5-Trichlorphenol	196	7.503	7.503	(0.884)	7943	5.00000	4.27
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	27954	5.00000	5.07
46 2-Nitroaniline	65	7.909	7.909	(0.932)	5445	5.00000	3.63
47 Acenaphthylene	152	8.302	8.302	(0.979)	43576	5.00000	4.89
48 Dimethyl phthalate	163	8.197	8.197	(0.966)	38613	5.00000	5.66
49 2,6-Dinitrotoluene	165	8.249	8.249	(0.972)	6076	5.00000	4.24
50 3-Nitroaniline	138	8.449	8.449	(0.996)	6762	5.00000	4.10
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	29665	5.00000	5.10
52 2,4-Dinitrophenol ##spcc##	184	8.573	8.573	(1.010)	1317	5.00000	1.54
53 Dibenzofuran	168	8.720	8.720	(1.028)	42428	5.00000	5.22
54 4-Nitrophenol ##spcc##	109	8.684	8.684	(1.024)	2734	5.00000	3.07
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	7413	5.00000	3.96
56 Fluorene	166	9.078	9.078	(1.070)	33471	5.00000	4.97
57 4-Chlorophenyl phenyl ether	204	9.096	9.096	(1.072)	16500	5.00000	5.07
58 Diethyl phthalate	149	9.007	9.007	(1.062)	55462	5.00000	6.99
59 4-Nitroaniline	138	9.101	9.101	(1.073)	7271	5.00000	4.22

Data File: /chem/gcms/md.i/D072511I.b/icdg256.d
Report Date: 25-Jul-2011 15:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.143	9.143	(0.924)	2585	5.00000	2.34
61 N-Ndpa / diphenylamine (ccc)	169	9.207	9.207	(0.931)	28482	5.00000	5.02
62 1,2-Diphenylhydrazine/azobnz	77	9.242	9.242	(0.934)	29532	5.00000	5.04
63 4-Bromophenyl phenyl ether	248	9.536	9.536	(0.964)	9112	5.00000	4.98
64 Hexachlorobenzene	284	9.589	9.589	(0.969)	10266	5.00000	5.26
65 Pentachlorophenol (ccc)	266	9.760	9.760	(0.986)	3621	5.00000	2.70
66 Phenanthrene	178	9.912	9.912	(1.002)	56166	5.00000	5.37
67 Anthracene	178	9.953	9.953	(1.006)	50519	5.00000	4.86
68 Carbazole	167	10.083	10.083	(1.019)	44847	5.00000	4.80
69 Di-n-butyl phthalate	149	10.347	10.347	(1.046)	42276	5.00000	4.12
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	51608	5.00000	4.62
71 Pyrene	202	10.941	10.941	(0.917)	62281	5.00000	5.06
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	16243	5.00000	3.40
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	50786	5.00000	4.68
74 3,3'-Dichlorobenzidine	252	11.881	11.881	(0.996)	12427	5.00000	3.14
75 Chrysene	228	11.951	11.951	(1.002)	58857	5.00000	5.26
76 Bis(2-ethylhexyl) phthalate	149	11.916	11.916	(0.999)	21700	5.00000	3.36
77 Di-n-octyl phthalate (ccc)	149	12.656	12.656	(0.913)	19483	5.00000	2.01
78 Benzo(b)fluoranthene	252	13.232	13.232	(0.955)	37573	5.00000	4.07
79 Benzo(k)fluoranthene	252	13.273	13.273	(0.958)	53055	5.00000	4.76
80 Benzo(a)pyrene (ccc)	252	13.761	13.761	(0.993)	32669	5.00000	3.59
81 Indeno(1,2,3-cd)pyrene	276	15.324	15.324	(1.106)	38549	5.00000	3.82
82 Dibenz(a,h)anthracene	278	15.347	15.347	(1.107)	32657	5.00000	3.96
83 Benzo(g,h,i)perylene	276	15.653	15.653	(1.129)	37986	5.00000	4.27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Date : 25-JUL-2011 14:53
Client ID: STD005
Sample Info: ICDG256,1,6,,STD005
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md.i/D0725111.b/icdg256.d

Data File: /chem/gcms/md.i/D072511I.b/icdg251.d
Report Date: 25-Jul-2011 14:46

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072511I.b/icdg251.d
Lab Smp Id: ICDG251 Client Smp ID: STD010
Inj Date : 25-JUL-2011 14:28
Operator : 60841 Inst ID: md.i
Smp Info : ICDG251,,1,1,,STD010
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 14:46 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 14:28 Cal File: icdg251.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

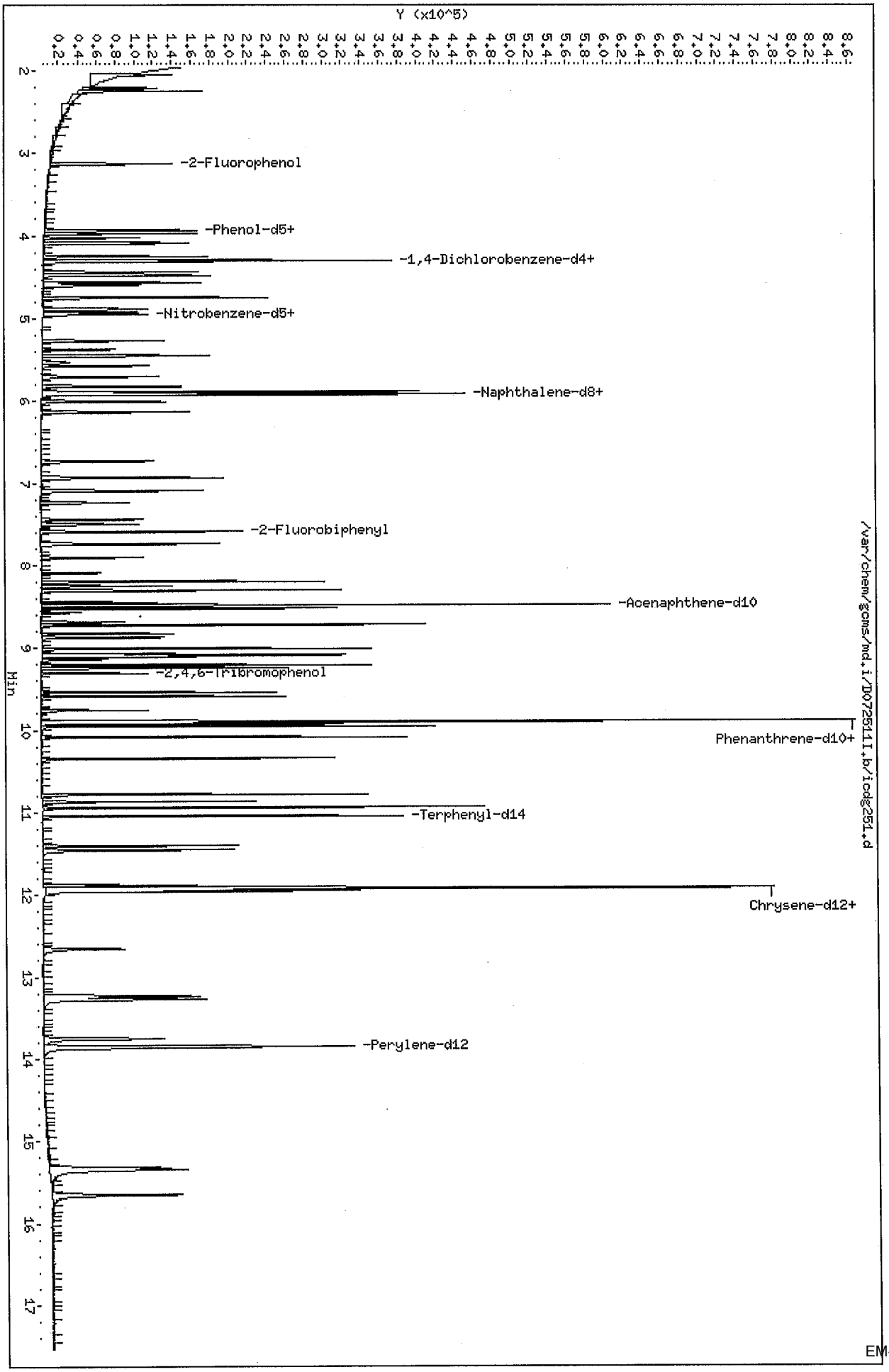
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	48981	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	191701	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	116990	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	229569	20.0000	20.0
* 5	Chrysene-d12	240	11.928	11.928	(1.000)	245479	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	211613	20.0000	20.0
$ 7	2-Fluorophenol	112	3.132	3.132	(0.728)	26202	10.0000	9.56
$ 8	Phenol-d5	99	3.931	3.931	(0.914)	31688	10.0000	9.67
$ 9	Nitrobenzene-d5	82	4.930	4.930	(0.837)	29932	10.0000	9.65
$ 10	2-Fluorobiphenyl	172	7.591	7.591	(0.895)	72338	10.0000	9.97
$ 11	2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	7758	10.0000	8.28
$ 12	Terphenyl-d14	244	11.046	11.046	(0.926)	91150	10.0000	9.74
$ 179	13C6-naphthalene	134	5.917	5.917	(1.005)	108218	10.0000	10.4
175	1,4-Dioxane	88	2.051	2.051	(0.477)	10663	10.0000	10.1

Data File: /chem/gcms/md.i/D072511I.b/icdg251.d
Report Date: 25-Jul-2011 14:46

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	15650	10.0000	10.2
14 Pyridine	79	2.245	2.245	(0.522)	26750	10.0000	10.0
15 Phenol (ccc)	94	3.943	3.943	(0.917)	33113	10.0000	9.88
16 Aniline	93	3.972	3.972	(0.924)	41544	10.0000	9.98
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	24795	10.0000	9.94
18 2-Chlorophenol	128	4.095	4.095	(0.952)	29106	10.0000	9.63
19 1,3-Dichlorobenzene	146	4.248	4.248	(0.988)	34737	10.0000	10.2
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	35740	10.0000	10.3
21 Benzyl alcohol	108	4.436	4.436	(1.031)	18733	10.0000	9.41
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	35198	10.0000	10.6
23 2-Methylphenol	108	4.566	4.566	(1.061)	25489	10.0000	9.56
24 2,2'-Oxybis(1-Chloropropane)	45	4.595	4.595	(1.068)	49879	10.0000	10.5
25 4-Methylphenol	108	4.748	4.748	(1.104)	26570	10.0000	9.65
26 3&4 Methylphenol	108	4.748	4.748	(1.104)	26570	10.0000	9.65
27 N-Nitroso-di-n-propylamine###	70	4.748	4.748	(1.104)	19619	10.0000	9.71
28 Hexachloroethane	117	4.883	4.883	(1.135)	13130	10.0000	10.1
29 Nitrobenzene	77	4.953	4.953	(0.841)	29669	10.0000	9.86
30 Isophorone	82	5.265	5.265	(0.894)	47532	10.0000	9.51
31 2-Nitrophenol (ccc)	139	5.370	5.370	(0.912)	13657	10.0000	8.66
32 2,4-Dimethyphenol	107	5.447	5.447	(0.925)	31316	10.0000	9.56
33 Bis(2-chloroethoxy)methane	93	5.570	5.570	(0.946)	31752	10.0000	9.80
34 Benzoic acid	122	5.529	5.529	(0.939)	9056	10.0000	6.27
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.969)	25054	10.0000	9.40
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.989)	29606	10.0000	9.90
37 Naphthalene	128	5.917	5.917	(1.005)	93344	10.0000	10.2
38 4-Chloroaniline	127	6.005	6.005	(1.020)	37447	10.0000	9.69
39 Hexachlorobutadiene (ccc)	225	6.128	6.128	(1.041)	18386	10.0000	9.83
40 4-Chloro-3-methylphenol (ccc)	107	6.734	6.734	(1.144)	23417	10.0000	9.07
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	62380	10.0000	9.97
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	16068	10.0000	8.59
43 2,4,6-Trichlorophenol (ccc)	196	7.445	7.445	(0.877)	16878	10.0000	8.76
44 2,4,5-Trichlorphenol	196	7.503	7.503	(0.884)	19427	10.0000	9.00
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	60724	10.0000	9.74
46 2-Nitroaniline	65	7.909	7.909	(0.932)	15482	10.0000	8.72
47 Acenaphthylene	152	8.308	8.308	(0.979)	100086	10.0000	9.88
48 Dimethyl phthalate	163	8.197	8.197	(0.966)	80709	10.0000	10.7
49 2,6-Dinitrotoluene	165	8.250	8.250	(0.972)	15069	10.0000	9.06
50 3-Nitroaniline	138	8.449	8.449	(0.996)	16954	10.0000	9.07
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	65575	10.0000	10.0
52 2,4-Dinitrophenol ##spcc##	184	8.573	8.573	(1.010)	4727	10.0000	4.88
53 Dibenzofuran	168	8.720	8.720	(1.028)	92610	10.0000	10.1
54 4-Nitrophenol ##spcc##	109	8.684	8.684	(1.024)	7974	10.0000	7.90
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	20031	10.0000	9.12
56 Fluorene	166	9.078	9.078	(1.070)	75538	10.0000	9.90
57 4-Chlorophenyl phenyl ether	204	9.096	9.096	(1.072)	37932	10.0000	10.3
58 Diethyl phthalate	149	9.007	9.007	(1.062)	102902	10.0000	12.3
59 4-Nitroaniline	138	9.101	9.101	(1.073)	18441	10.0000	9.45

Data File: /chem/gcms/md.i/D072511I.b/icdg251.d
Report Date: 25-Jul-2011 14:46

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.143	9.143	(0.924)	8068	10.0000	6.26
61 N-Ndpa / diphenylamine (ccc)	169	9.207	9.207	(0.931)	63362	10.0000	9.59
62 1,2-Diphenylhydrazine/azobnz	77	9.242	9.242	(0.934)	66719	10.0000	9.77
63 4-Bromophenyl phenyl ether	248	9.536	9.536	(0.964)	20952	10.0000	9.81
64 Hexachlorobenzene	284	9.589	9.589	(0.969)	22256	10.0000	9.86
65 Pentachlorophenol (ccc)	266	9.760	9.760	(0.986)	11281	10.0000	7.20
66 Phenanthrene	178	9.912	9.912	(1.002)	121426	10.0000	10.1
67 Anthracene	178	9.953	9.953	(1.006)	117017	10.0000	9.61
68 Carbazole	167	10.083	10.083	(1.019)	107048	10.0000	9.77
69 Di-n-butyl phthalate	149	10.347	10.347	(1.046)	106062	10.0000	8.60
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	123775	10.0000	9.39
71 Pyrene	202	10.941	10.941	(0.917)	137981	10.0000	9.79
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	48034	10.0000	8.33
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	120274	10.0000	9.58
74 3,3'-Dichlorobenzidine	252	11.881	11.881	(0.996)	34629	10.0000	7.64
75 Chrysene	228	11.951	11.951	(1.002)	129663	10.0000	10.2
76 Bis(2-ethylhexyl) phthalate	149	11.910	11.910	(0.999)	64113	10.0000	8.21
77 Di-n-octyl phthalate (ccc)	149	12.656	12.656	(0.913)	71984	10.0000	6.46
78 Benzo(b)fluoranthene	252	13.232	13.232	(0.955)	96211	10.0000	8.79
79 Benzo(k)fluoranthene	252	13.273	13.273	(0.958)	132458	10.0000	10.3
80 Benzo(a)pyrene (ccc)	252	13.755	13.755	(0.993)	95297	10.0000	8.70
81 Indeno(1,2,3-cd)pyrene	276	15.318	15.318	(1.106)	106255	10.0000	8.81
82 Dibenz(a,h)anthracene	278	15.347	15.347	(1.108)	89649	10.0000	9.13
83 Benzo(g,h,i)perylene	276	15.647	15.647	(1.129)	100244	10.0000	9.56


Data File: /var/chem/gcms/md.i/D072511I.b/icdg251.d
Date : 25-JUL-2011 14:28
Client ID: STD010
Sample Info: ICDG251,1.1,STD010
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
/var/chem/gcms/md.i/D072511I.b/icdg251.d
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12

Data File: /var/chem/gcms/md.i/D072511I.b/icdg252.d
Report Date: 25-Jul-2011 14:24

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icdg252.d
Lab Smp Id: ICDG252 Client Smp ID: STD025
Inj Date : 25-JUL-2011 14:02
Operator : 60841 Inst ID: md.i
Smp Info : ICDG252,,1,2,,STD025
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 14:24 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 14:02 Cal File: icdg252.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	54061	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	211682	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	128067	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	236358	20.0000	20.0
* 5	Chrysene-d12	240	11.928	11.928	(1.000)	253168	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	229844	20.0000	20.0
$ 7	2-Fluorophenol	112	3.132	3.132	(0.728)	66718	25.0000	21.9
$ 8	Phenol-d5	99	3.931	3.931	(0.914)	79960	25.0000	22.0
$ 9	Nitrobenzene-d5	82	4.930	4.930	(0.837)	76444	25.0000	22.2
$ 10	2-Fluorobiphenyl	172	7.591	7.591	(0.895)	182582	25.0000	23.0
$ 11	2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	22058	25.0000	22.1
$ 12	Terphenyl-d14	244	11.046	11.046	(0.926)	222612	25.0000	23.0
$ 179	13C6-naphthalene	134	5.917	5.917	(1.005)	283367	25.0000	24.8
175	1,4-Dioxane	88	2.051	2.051	(0.477)	28272	25.0000	24.4

Data File: /var/chem/gcms/md.i/D072511I.b/icdg252.d
Report Date: 25-Jul-2011 14:24

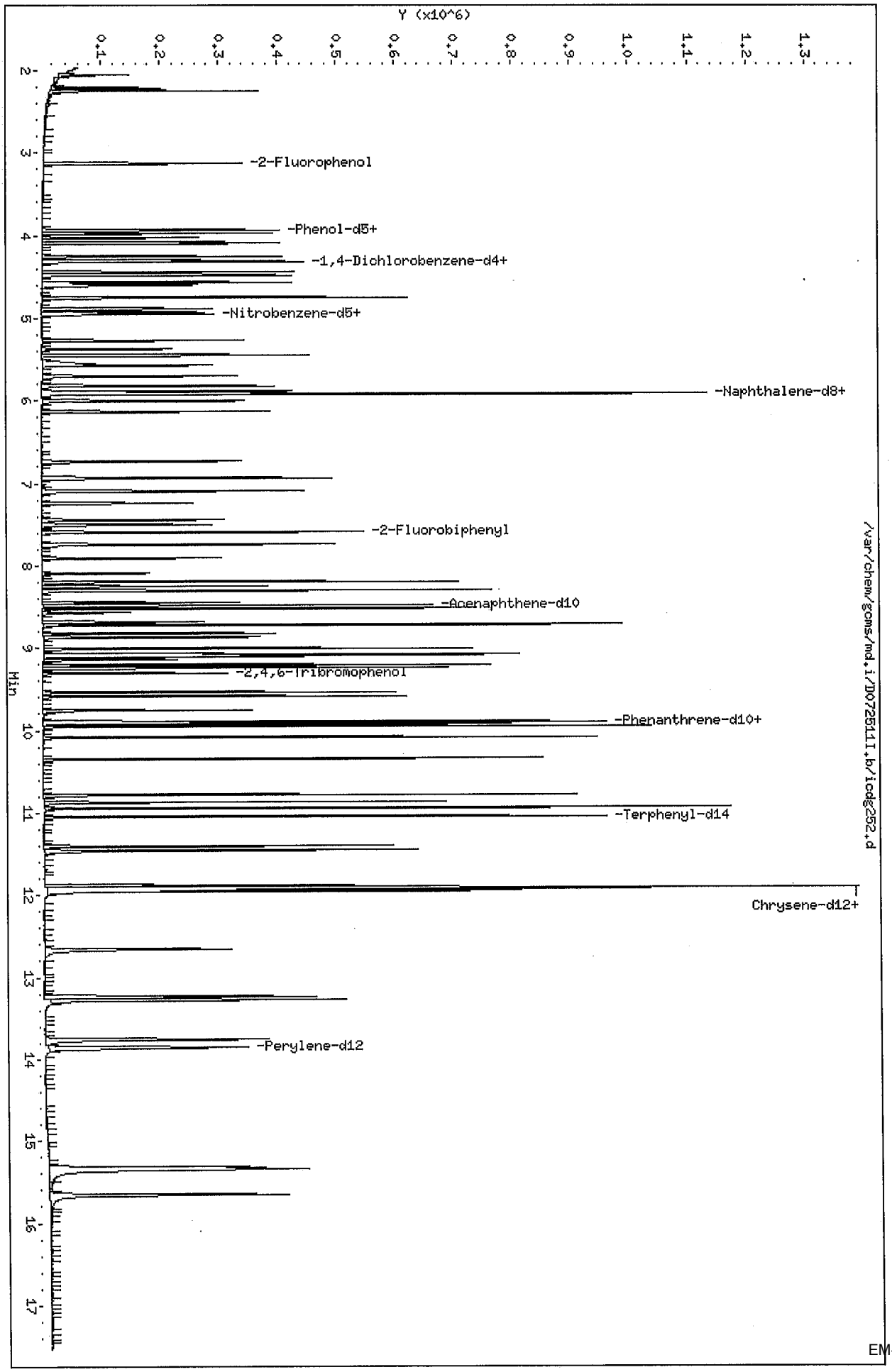
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	37695	25.0000	22.2
14 Pyridine	79	2.245	2.245	(0.522)	65580	25.0000	22.3
15 Phenol (ccc)	94	3.943	3.943	(0.917)	81663	25.0000	22.0
16 Aniline	93	3.972	3.972	(0.924)	102542	25.0000	22.3
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	62945	25.0000	22.8
18 2-Chlorophenol	128	4.095	4.095	(0.952)	75854	25.0000	22.6
19 1,3-Dichlorobenzene	146	4.248	4.248	(0.988)	85423	25.0000	22.9
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	86922	25.0000	22.9
21 Benzyl alcohol	108	4.436	4.436	(1.031)	49117	25.0000	22.1
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	83354	25.0000	22.9
23 2-Methylphenol	108	4.566	4.566	(1.061)	66539	25.0000	22.4
24 2,2'-Oxybis(1-Chloropropane)	45	4.595	4.595	(1.068)	122656	25.0000	23.6
25 4-Methylphenol	108	4.754	4.754	(1.105)	68291	25.0000	22.3
26 3&4 Methylphenol	108	4.754	4.754	(1.105)	68291	25.0000	22.3
27 N-Nitroso-di-n-propylamine###	70	4.748	4.748	(1.104)	51043	25.0000	22.8
28 Hexachloroethane	117	4.883	4.883	(1.135)	32912	25.0000	22.9
29 Nitrobenzene	77	4.953	4.953	(0.841)	75858	25.0000	22.8
30 Isophorone	82	5.265	5.265	(0.894)	123889	25.0000	22.2
31 2-Nitrophenol (ccc)	139	5.376	5.376	(0.913)	37563	25.0000	21.0
32 2,4-Dimethyphenol	107	5.447	5.447	(0.925)	81109	25.0000	22.2
33 Bis(2-chloroethoxy)methane	93	5.570	5.570	(0.946)	83057	25.0000	23.1
34 Benzoic acid	122	5.553	5.553	(0.943)	28903	25.0000	18.1(H)
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.969)	65782	25.0000	22.1
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.989)	76446	25.0000	23.1
37 Naphthalene	128	5.917	5.917	(1.005)	228933	25.0000	22.8
38 4-Chloroaniline	127	5.999	5.999	(1.019)	97087	25.0000	22.6
39 Hexachlorobutadiene (ccc)	225	6.128	6.128	(1.041)	48335	25.0000	23.3
40 4-Chloro-3-methylphenol (ccc)	107	6.734	6.734	(1.144)	63280	25.0000	21.8
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	156886	25.0000	22.7
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	43552	25.0000	20.7
43 2,4,6-Trichlorophenol (ccc)	196	7.445	7.445	(0.877)	47298	25.0000	21.9
44 2,4,5-Trichlorphenol	196	7.503	7.503	(0.884)	53126	25.0000	22.0
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	154945	25.0000	22.6
46 2-Nitroaniline	65	7.909	7.909	(0.932)	41828	25.0000	21.0
47 Acenaphthylene	152	8.308	8.308	(0.979)	249490	25.0000	22.4
48 Dimethyl phthalate	163	8.203	8.203	(0.967)	187408	25.0000	23.0
49 2,6-Dinitrotoluene	165	8.249	8.249	(0.972)	40628	25.0000	21.9
50 3-Nitroaniline	138	8.449	8.449	(0.996)	45403	25.0000	21.8
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	163904	25.0000	22.8
52 2,4-Dinitrophenol ##spcc##	184	8.573	8.573	(1.010)	16981	25.0000	16.0
53 Dibenzofuran	168	8.720	8.720	(1.028)	227891	25.0000	22.8
54 4-Nitrophenol ##spcc##	109	8.684	8.684	(1.024)	23442	25.0000	20.4
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	52934	25.0000	21.6
56 Fluorene	166	9.078	9.078	(1.070)	186532	25.0000	22.3
57 4-Chlorophenyl phenyl ether	204	9.096	9.096	(1.072)	91557	25.0000	22.9
58 Diethyl phthalate	149	9.007	9.007	(1.062)	210858	25.0000	24.0
59 4-Nitroaniline	138	9.107	9.107	(1.073)	46510	25.0000	21.5

Data File: /var/chem/gcms/md.i/D072511I.b/icdg252.d
Report Date: 25-Jul-2011 14:24

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.143	9.143	(0.924)	27872	25.0000	19.6
61 N-Ndpa / diphenylamine (ccc)	169	9.207	9.207	(0.931)	161201	25.0000	23.5
62 1,2-Diphenylhydrazine/azobnz	77	9.242	9.242	(0.934)	165484	25.0000	23.4
63 4-Bromophenyl phenyl ether	248	9.536	9.536	(0.964)	49654	25.0000	22.5
64 Hexachlorobenzene	284	9.589	9.589	(0.969)	54349	25.0000	23.3
65 Pentachlorophenol (ccc)	266	9.760	9.760	(0.986)	34447	25.0000	20.2
66 Phenanthrene	178	9.912	9.912	(1.002)	287991	25.0000	23.3
67 Anthracene	178	9.953	9.953	(1.006)	287011	25.0000	22.7
68 Carbazole	167	10.083	10.083	(1.019)	258805	25.0000	22.8
69 Di-n-butyl phthalate	149	10.347	10.347	(1.046)	289844	25.0000	22.2
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	308337	25.0000	22.4
71 Pyrene	202	10.941	10.941	(0.917)	335121	25.0000	23.0
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	129480	25.0000	21.1
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	299896	25.0000	23.0
74 3,3'-Dichlorobenzidine	252	11.881	11.881	(0.996)	104988	25.0000	21.4
75 Chrysene	228	11.951	11.951	(1.002)	307759	25.0000	23.6
76 Bis(2-ethylhexyl) phthalate	149	11.910	11.910	(0.999)	179215	25.0000	21.5
77 Di-n-octyl phthalate (ccc)	149	12.656	12.656	(0.913)	243024	25.0000	18.8
78 Benzo(b)fluoranthene	252	13.232	13.232	(0.955)	267692	25.0000	22.0
79 Benzo(k)fluoranthene	252	13.273	13.273	(0.958)	322464	25.0000	23.2
80 Benzo(a)pyrene (ccc)	252	13.761	13.761	(0.993)	262635	25.0000	21.5
81 Indeno(1,2,3-cd)pyrene	276	15.324	15.324	(1.106)	294545	25.0000	22.0
82 Dibenz(a,h)anthracene	278	15.347	15.347	(1.108)	244467	25.0000	22.5
83 Benzo(g,h,i)perylene	276	15.653	15.653	(1.130)	260454	25.0000	22.7

QC Flag Legend

H - Operator selected an alternate compound hit.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Date : 25-JUL-2011 14:02
Client ID: STD025
Sample Info: ICDG252,,1,2,,STD025
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md.i/D072511I.b/icdg252.d

Data File: /var/chem/gcms/md.i/D072511I.b/icdg253.d
Report Date: 25-Jul-2011 14:22

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icdg253.d
Lab Smp Id: ICDG253 Client Smp ID: STD040
Inj Date : 25-JUL-2011 13:37
Operator : 60841 Inst ID: md.i
Smp Info : ICDG253,,1,3,,STD040
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 14:22 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 13:37 Cal File: icdg253.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	50909	20.0000	20.0
*	2 Naphthalene-d8	136	5.893	5.893	(1.000)	199442	20.0000	20.0
*	3 Acenaphthene-d10	164	8.484	8.484	(1.000)	118840	20.0000	20.0
*	4 Phenanthrene-d10	188	9.894	9.894	(1.000)	226196	20.0000	20.0
*	5 Chrysene-d12	240	11.927	11.927	(1.000)	243832	20.0000	20.0
*	6 Perylene-d12	264	13.860	13.860	(1.000)	219402	20.0000	20.0
$	7 2-Fluorophenol	112	3.132	3.132	(0.728)	114030	40.0000	39.7
$	8 Phenol-d5	99	3.931	3.931	(0.914)	136191	40.0000	39.7
$	9 Nitrobenzene-d5	82	4.930	4.930	(0.836)	128643	40.0000	39.6
$	10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	289454	40.0000	39.2
$	11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	37302	40.0000	39.0
$	12 Terphenyl-d14	244	11.046	11.046	(0.926)	365028	40.0000	39.1
$	179 13C6-naphthalene	134	5.917	5.917	(1.004)	436148	40.0000	40.5
	175 1,4-Dioxane	88	2.051	2.051	(0.477)	110748	100.000	102

Data File: /var/chem/gcms/md.i/D072511I.b/icdg253.d
Report Date: 25-Jul-2011 14:22

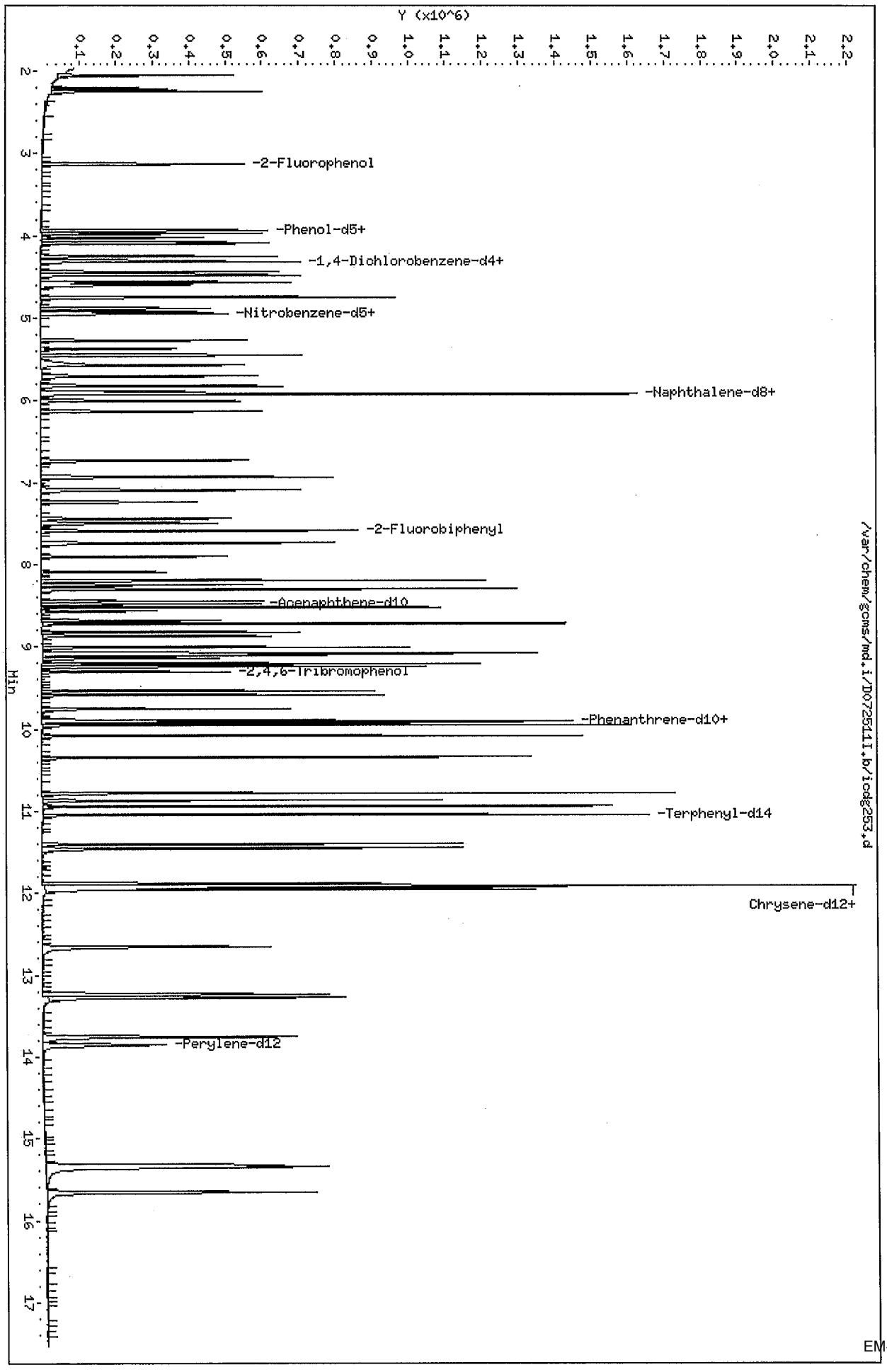
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	63770	40.0000	40.0
14 Pyridine	79	2.244	2.244	(0.522)	108645	40.0000	39.2
15 Phenol (ccc)	94	3.948	3.948	(0.918)	138049	40.0000	39.5
16 Aniline	93	3.972	3.972	(0.923)	171401	40.0000	39.6
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	102405	40.0000	39.5
18 2-Chlorophenol	128	4.095	4.095	(0.952)	126192	40.0000	39.9
19 1,3-Dichlorobenzene	146	4.248	4.248	(0.988)	138453	40.0000	39.4
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	141755	40.0000	39.6
21 Benzyl alcohol	108	4.436	4.436	(1.031)	81230	40.0000	38.8
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	135326	40.0000	39.5
23 2-Methylphenol	108	4.565	4.565	(1.061)	110903	40.0000	39.7
24 2,2'-Oxybis(1-Chloropropane)	45	4.595	4.595	(1.068)	194707	40.0000	39.8
25 4-Methylphenol	108	4.753	4.753	(1.105)	113591	40.0000	39.4
26 3&4 Methylphenol	108	4.753	4.753	(1.105)	113591	40.0000	39.4
27 N-Nitroso-di-n-propylamine###	70	4.747	4.747	(1.104)	82483	40.0000	39.1
28 Hexachloroethane	117	4.883	4.883	(1.135)	53390	40.0000	39.5
29 Nitrobenzene	77	4.953	4.953	(0.840)	122476	40.0000	39.0
30 Isophorone	82	5.270	5.270	(0.894)	205507	40.0000	39.2
31 2-Nitrophenol (ccc)	139	5.376	5.376	(0.912)	65620	40.0000	39.0
32 2,4-Dimethyphenol	107	5.453	5.453	(0.925)	135562	40.0000	39.4
33 Bis(2-chloroethoxy)methane	93	5.570	5.570	(0.945)	133536	40.0000	39.4
34 Benzoic acid	122	5.570	5.570	(0.945)	56722	40.0000	44.0(H)
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.968)	111873	40.0000	39.9
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.988)	122309	40.0000	39.2
37 Naphthalene	128	5.923	5.923	(1.005)	374884	40.0000	39.6
38 4-Chloroaniline	127	6.005	6.005	(1.019)	157769	40.0000	39.0
39 Hexachlorobutadiene (ccc)	225	6.134	6.134	(1.041)	75141	40.0000	38.5
40 4-Chloro-3-methylphenol (ccc)	107	6.733	6.733	(1.143)	106738	40.0000	39.0
41 2-Methylnaphthalene	142	6.933	6.933	(1.176)	255483	40.0000	39.2
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	73476	40.0000	37.6
43 2,4,6-Trichlorophenol (ccc)	196	7.444	7.444	(0.877)	77511	40.0000	38.6
44 2,4,5-Trichlorphenol	196	7.497	7.497	(0.884)	86871	40.0000	38.8
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	251581	40.0000	39.5
46 2-Nitroaniline	65	7.909	7.909	(0.932)	72041	40.0000	38.9
47 Acenaphthylene	152	8.308	8.308	(0.979)	408840	40.0000	39.6
48 Dimethyl phthalate	163	8.202	8.202	(0.967)	302095	40.0000	39.9(H)
49 2,6-Dinitrotoluene	165	8.249	8.249	(0.972)	67681	40.0000	39.3
50 3-Nitroaniline	138	8.449	8.449	(0.996)	75684	40.0000	39.1
51 Acenaphthene (ccc)	153	8.525	8.525	(1.005)	262256	40.0000	39.4
52 2,4-Dinitrophenol ##spcc##	184	8.572	8.572	(1.010)	34091	40.0000	34.6
53 Dibenzofuran	168	8.719	8.719	(1.028)	368493	40.0000	39.8
54 4-Nitrophenol ##spcc##	109	8.684	8.684	(1.024)	40004	40.0000	37.5
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	87303	40.0000	38.5
56 Fluorene	166	9.078	9.078	(1.070)	303132	40.0000	39.0
57 4-Chlorophenyl phenyl ether	204	9.095	9.095	(1.072)	145534	40.0000	39.2
58 Diethyl phthalate	149	9.007	9.007	(1.062)	330085	40.0000	40.6
59 4-Nitroaniline	138	9.107	9.107	(1.073)	77744	40.0000	38.8

Data File: /var/chem/gcms/md.i/D072511I.b/icdg253.d
Report Date: 25-Jul-2011 14:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.142	9.142	(0.924)	48383	40.0000	35.5
61 N-Ndpa / diphenylamine (ccc)	169	9.213	9.213	(0.931)	256268	40.0000	39.0
62 1,2-Diphenylhydrazine/azobnz	77	9.242	9.242	(0.934)	267862	40.0000	39.6
63 4-Bromophenyl phenyl ether	248	9.542	9.542	(0.964)	83444	40.0000	39.5
64 Hexachlorobenzene	284	9.589	9.589	(0.969)	87028	40.0000	39.0
65 Pentachlorophenol (ccc)	266	9.759	9.759	(0.986)	63402	40.0000	38.9
66 Phenanthrene	178	9.912	9.912	(1.002)	469947	40.0000	39.7
67 Anthracene	178	9.953	9.953	(1.006)	473393	40.0000	39.2
68 Carbazole	167	10.082	10.082	(1.019)	428746	40.0000	39.5
69 Di-n-butyl phthalate	149	10.347	10.347	(1.046)	489002	40.0000	39.2
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	517134	40.0000	39.4
71 Pyrene	202	10.946	10.946	(0.918)	551039	40.0000	39.2
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	227133	40.0000	38.4
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	498260	40.0000	39.6
74 3,3'-Dichlorobenzidine	252	11.880	11.880	(0.996)	178706	40.0000	37.9
75 Chrysene	228	11.957	11.957	(1.002)	493171	40.0000	39.2
76 Bis(2-ethylhexyl) phthalate	149	11.916	11.916	(0.999)	309158	40.0000	38.5
77 Di-n-octyl phthalate (ccc)	149	12.656	12.656	(0.913)	454474	40.0000	36.8
78 Benzo(b)fluoranthene	252	13.238	13.238	(0.955)	446105	40.0000	38.4
79 Benzo(k)fluoranthene	252	13.279	13.279	(0.958)	538417	40.0000	40.5
80 Benzo(a)pyrene (ccc)	252	13.761	13.761	(0.993)	453830	40.0000	38.9
81 Indeno(1,2,3-cd)pyrene	276	15.329	15.329	(1.106)	501005	40.0000	39.2
82 Dibenz(a,h)anthracene	278	15.353	15.353	(1.108)	407765	40.0000	39.4
83 Benzo(g,h,i)perylene	276	15.658	15.658	(1.130)	429141	40.0000	39.1

QC Flag Legend

H - Operator selected an alternate compound hit.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Date : 25-JUL-2011 13:37
Client ID: STD040
Sample Info: ICDG253,1,3,STD040
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md.i/D072511I.b/icdg253.d

Data File: /var/chem/gcms/md.i/D072511I.b/icdg254.d
Report Date: 25-Jul-2011 13:33

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icdg254.d
Lab Smp Id: ICDG254 Client Smp ID: STD060
Inj Date : 25-JUL-2011 13:11
Operator : 60841 Inst ID: md.i
Smp Info : ICDG254,,1,4,,STD060
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 13:33 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 13:11 Cal File: icdg254.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

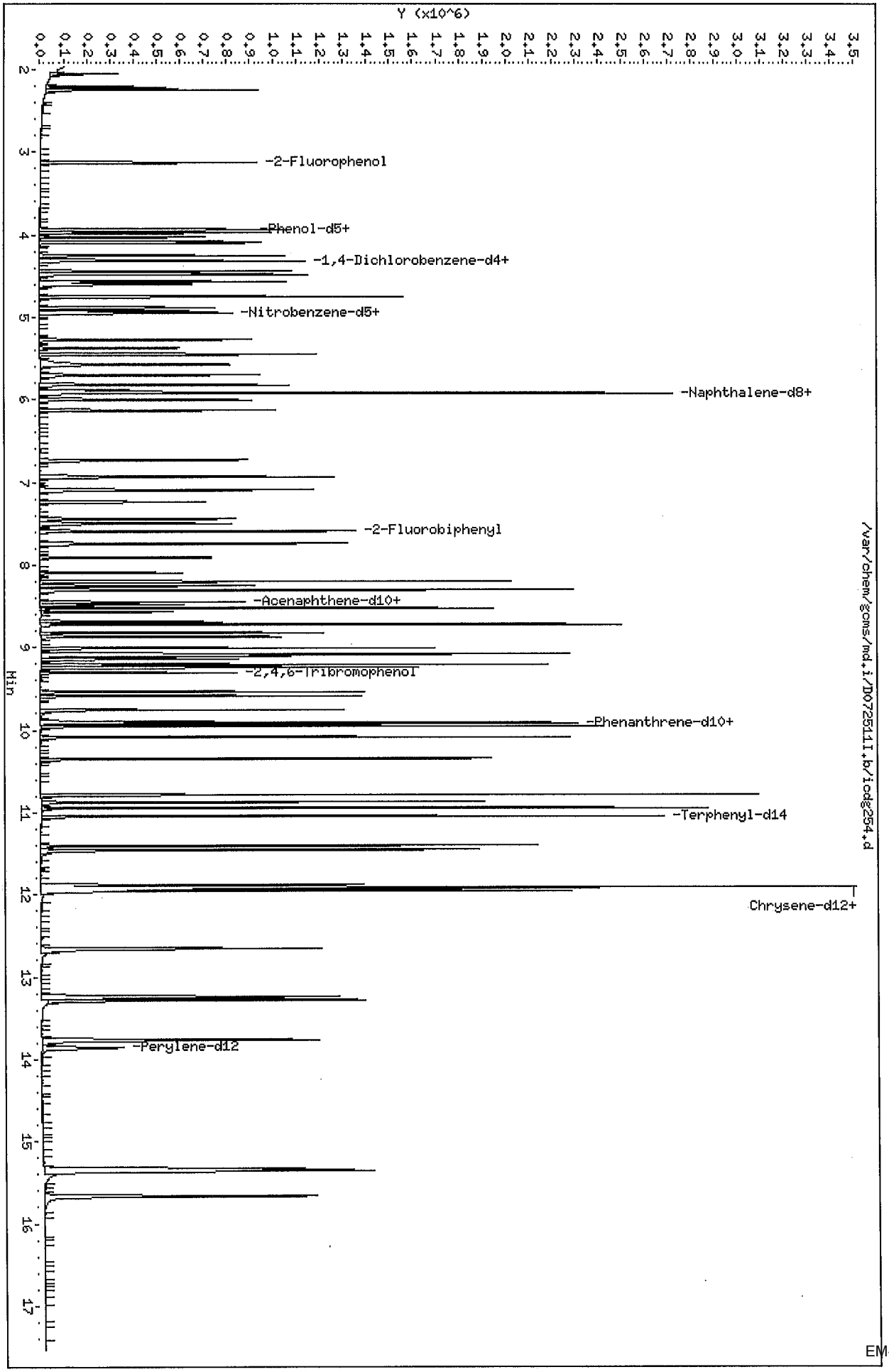
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	50077	20.0000	20.0
* 2	Naphthalene-d8	136	5.893	5.893	(1.000)	196721	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	118482	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	226546	20.0000	20.0
* 5	Chrysene-d12	240	11.933	11.933	(1.000)	244525	20.0000	20.0
* 6	Perylene-d12	264	13.861	13.861	(1.000)	224450	20.0000	20.0
$ 7	2-Fluorophenol	112	3.132	3.132	(0.728)	182665	60.0000	61.9
$ 8	Phenol-d5	99	3.937	3.937	(0.915)	220027	60.0000	62.6
$ 9	Nitrobenzene-d5	82	4.930	4.930	(0.836)	205689	60.0000	61.7
$ 10	2-Fluorobiphenyl	172	7.591	7.591	(0.895)	469932	60.0000	61.8
$ 11	2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	62015	60.0000	61.9
$ 12	Terphenyl-d14	244	11.046	11.046	(0.926)	605018	60.0000	62.4
$ 179	13C6-naphthalene	134	5.923	5.923	(1.005)	649572	60.0000	61.2
175	1,4-Dioxane	88	2.051	2.051	(0.477)	64581	60.0000	60.0

Data File: /var/chem/gcms/md.i/D072511I.b/icdg254.d
Report Date: 25-Jul-2011 13:33

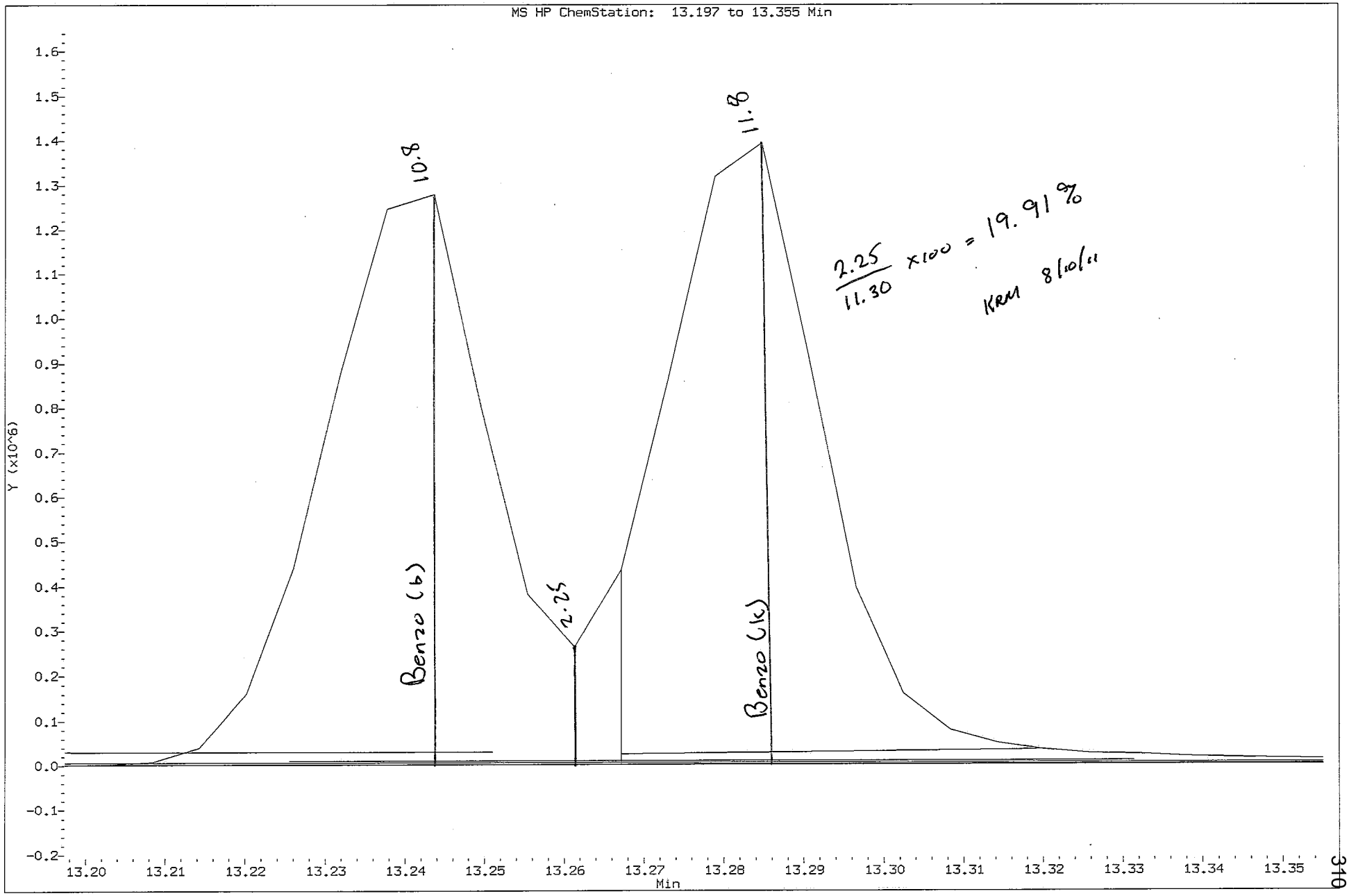
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	102370	60.0000	62.9
14 Pyridine	79	2.245	2.245	(0.522)	177630	60.0000	62.6
15 Phenol (ccc)	94	3.949	3.949	(0.918)	223927	60.0000	62.5
16 Aniline	93	3.978	3.978	(0.925)	276860	60.0000	62.5
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	164823	60.0000	62.5
18 2-Chlorophenol	128	4.101	4.101	(0.954)	200626	60.0000	62.4
19 1,3-Dichlorobenzene	146	4.254	4.254	(0.989)	224961	60.0000	63.0
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	229273	60.0000	63.2
21 Benzyl alcohol	108	4.442	4.442	(1.033)	132718	60.0000	61.4
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	221304	60.0000	63.6
23 2-Methylphenol	108	4.565	4.565	(1.061)	178016	60.0000	62.5
24 2,2'-Oxybis(1-Chloropropane)	45	4.601	4.601	(1.070)	313365	60.0000	63.7
25 4-Methylphenol	108	4.753	4.753	(1.105)	185205	60.0000	62.8
26 3&4 Methylphenol	108	4.753	4.753	(1.105)	185205	60.0000	62.8
27 N-Nitroso-di-n-propylamine###	70	4.748	4.748	(1.104)	134711	60.0000	62.5
28 Hexachloroethane	117	4.883	4.883	(1.135)	85482	60.0000	62.2
29 Nitrobenzene	77	4.953	4.953	(0.840)	202425	60.0000	63.0
30 Isophorone	82	5.271	5.271	(0.894)	336043	60.0000	62.2
31 2-Nitrophenol (ccc)	139	5.376	5.376	(0.912)	109042	60.0000	61.8
32 2,4-Dimethyphenol	107	5.453	5.453	(0.925)	216931	60.0000	61.4
33 Bis(2-chloroethoxy)methane	93	5.576	5.576	(0.946)	213083	60.0000	62.0
34 Benzoic acid	122	5.588	5.588	(0.948)	94445	60.0000	57.4
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.968)	178701	60.0000	62.1
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.988)	198027	60.0000	62.4
37 Naphthalene	128	5.923	5.923	(1.005)	599944	60.0000	62.1
38 4-Chloroaniline	127	6.005	6.005	(1.019)	257968	60.0000	62.1
39 Hexachlorobutadiene (ccc)	225	6.134	6.134	(1.041)	125034	60.0000	62.7
40 4-Chloro-3-methylphenol (ccc)	107	6.734	6.734	(1.143)	174616	60.0000	61.5
41 2-Methylnaphthalene	142	6.933	6.933	(1.176)	409793	60.0000	61.5
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	127352	60.0000	60.6
43 2,4,6-Trichlorophenol (ccc)	196	7.444	7.444	(0.877)	127328	60.0000	60.5
44 2,4,5-Trichlorphenol	196	7.497	7.497	(0.884)	143654	60.0000	61.4
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	408525	60.0000	62.1
46 2-Nitroaniline	65	7.909	7.909	(0.932)	120210	60.0000	61.4
47 Acenaphthylene	152	8.308	8.308	(0.979)	662750	60.0000	62.1
48 Dimethyl phthalate	163	8.202	8.202	(0.967)	490358	60.0000	63.2
49 2,6-Dinitrotoluene	165	8.255	8.255	(0.973)	110450	60.0000	61.5
50 3-Nitroaniline	138	8.455	8.455	(0.997)	125402	60.0000	61.9
51 Acenaphthene (ccc)	153	8.526	8.526	(1.005)	425902	60.0000	62.0
52 2,4-Dinitrophenol ##spcc##	184	8.573	8.573	(1.010)	65034	60.0000	56.9
53 Dibenzofuran	168	8.725	8.725	(1.028)	593090	60.0000	62.4
54 4-Nitrophenol ##spcc##	109	8.690	8.690	(1.024)	69776	60.0000	60.5
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	147023	60.0000	61.4
56 Fluorene	166	9.078	9.078	(1.070)	503324	60.0000	62.3
57 4-Chlorophenyl phenyl ether	204	9.096	9.096	(1.072)	238198	60.0000	62.3
58 Diethyl phthalate	149	9.013	9.013	(1.062)	526305	60.0000	64.4
59 4-Nitroaniline	138	9.107	9.107	(1.073)	130789	60.0000	62.0

Data File: /var/chem/gcms/md.i/D072511I.b/icdg254.d
Report Date: 25-Jul-2011 13:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60	4,6-Dinitro-2-methylphenol	198	9.143	9.143	(0.924)	91603	60.0000	60.4
61	N-Ndpa / diphenylamine (ccc)	169	9.213	9.213	(0.931)	419753	60.0000	62.1
62	1,2-Diphenylhydrazine/azobnz	77	9.242	9.242	(0.934)	438779	60.0000	63.3
63	4-Bromophenyl phenyl ether	248	9.542	9.542	(0.964)	136231	60.0000	62.1
64	Hexachlorobenzene	284	9.595	9.595	(0.970)	144881	60.0000	62.9
65	Pentachlorophenol (ccc)	266	9.759	9.759	(0.986)	108418	60.0000	62.0
66	Phenanthrene	178	9.918	9.918	(1.002)	760392	60.0000	62.6
67	Anthracene	178	9.953	9.953	(1.006)	780176	60.0000	62.1
68	Carbazole	167	10.083	10.083	(1.019)	710460	60.0000	63.3
69	Di-n-butyl phthalate	149	10.347	10.347	(1.046)	819753	60.0000	62.8
70	Fluoranthene (ccc)	202	10.788	10.788	(1.090)	852688	60.0000	62.4
71	Pyrene	202	10.946	10.946	(0.917)	903289	60.0000	62.0
72	Butyl benzyl phthalate	149	11.405	11.405	(0.956)	388334	60.0000	61.4
73	Benzo(a)Anthracene	228	11.922	11.922	(0.999)	810041	60.0000	62.3
74	3,3'-Dichlorobenzidine	252	11.886	11.886	(0.996)	310929	60.0000	61.7
75	Chrysene	228	11.957	11.957	(1.002)	815715	60.0000	63.0
76	Bis(2-ethylhexyl) phthalate	149	11.916	11.916	(0.999)	529074	60.0000	62.0
77	Di-n-octyl phthalate (ccc)	149	12.662	12.662	(0.914)	837163	60.0000	59.8
78	Benzo(b)fluoranthene	252	13.244	13.244	(0.955)	775148	60.0000	62.0
79	Benzo(k)fluoranthene	252	13.285	13.285	(0.958)	875284	60.0000	63.2
80	Benzo(a)pyrene (ccc)	252	13.767	13.767	(0.993)	768797	60.0000	61.2
81	Indeno(1,2,3-cd)pyrene	276	15.335	15.335	(1.106)	857727	60.0000	62.7
82	Dibenz(a,h)anthracene	278	15.359	15.359	(1.108)	695917	60.0000	63.7
83	Benzo(g,h,i)perylene	276	15.664	15.664	(1.130)	729993	60.0000	62.9


Data File: /var/chem/gcms/md.i/D0725111.b/icdg254.d
Date : 25-JUL-2011 13:11
Client ID: STD060
Sample Info: ICDG254,1,4,STD060
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10+
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md.i/D0725111.b/icdg254.d

Data File: /var/chem/gcms/md.i/D072511I.b/icdg254.d
Injection Date: 25-JUL-2011 13:11
Instrument: md.i
Client Sample ID: STD060



Data File: /var/chem/gcms/md.i/D072511I.b/icdg255.d
Report Date: 25-Jul-2011 13:34

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icdg255.d
Lab Smp Id: ICDG255 Client Smp ID: STD120
Inj Date : 25-JUL-2011 12:46
Operator : 60841 Inst ID: md.i
Smp Info : ICDG255,,1,5,,STD120
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 13:34 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 12:46 Cal File: icdg255.d
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

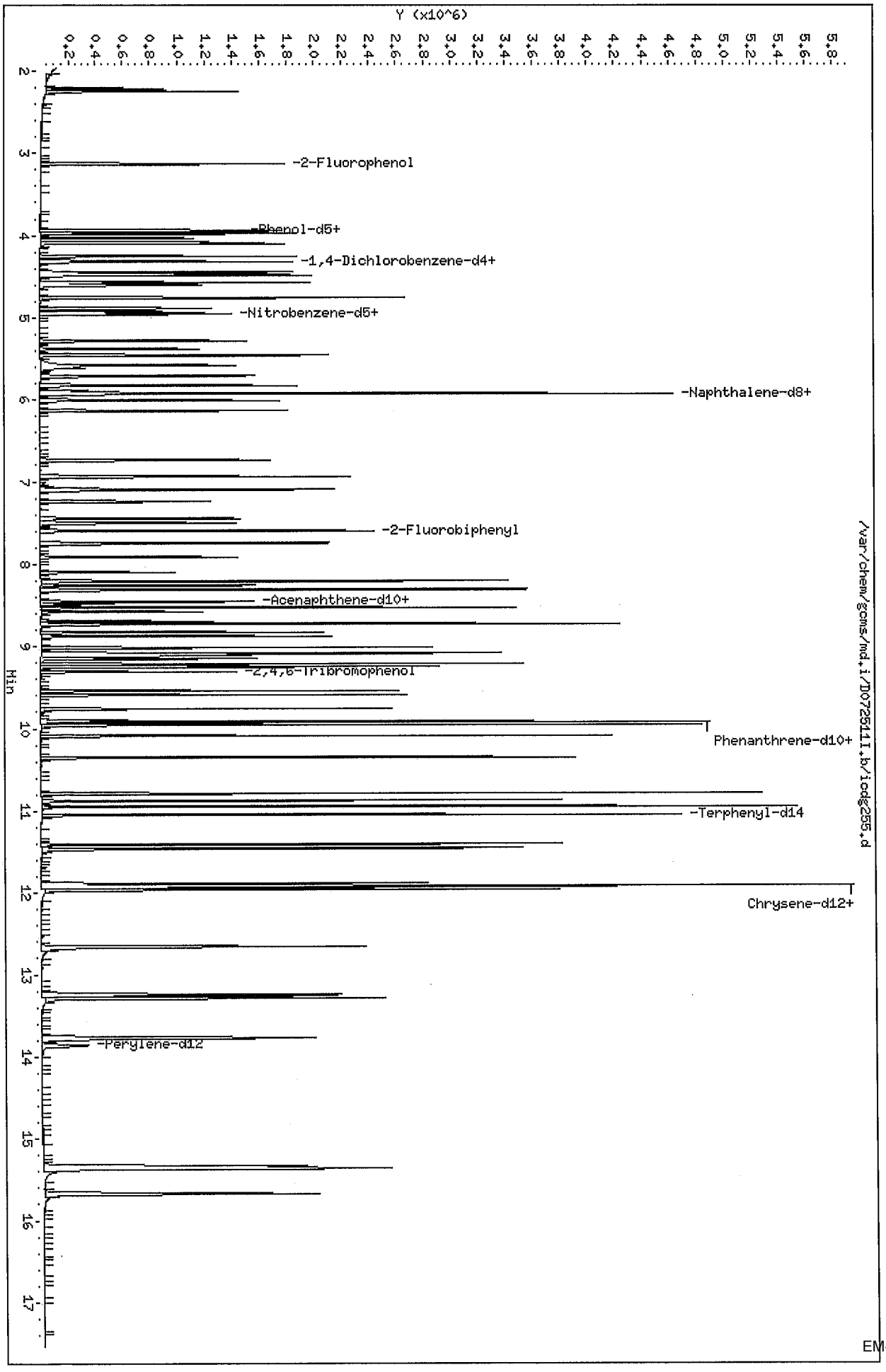
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.307	4.307	(1.000)	49472	20.0000	20.0
* 2	Naphthalene-d8	136	5.893	5.893	(1.000)	189185	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	114027	20.0000	20.0
* 4	Phenanthrene-d10	188	9.900	9.900	(1.000)	218755	20.0000	20.0
* 5	Chrysene-d12	240	11.933	11.933	(1.000)	238477	20.0000	20.0
* 6	Perylene-d12	264	13.861	13.861	(1.000)	217409	20.0000	20.0
$ 7	2-Fluorophenol	112	3.132	3.132	(0.727)	327049	120.000	112
$ 8	Phenol-d5	99	3.937	3.937	(0.914)	392291	120.000	113
$ 9	Nitrobenzene-d5	82	4.930	4.930	(0.836)	372473	120.000	116
$ 10	2-Fluorobiphenyl	172	7.597	7.597	(0.895)	843953	120.000	115
$ 11	2,4,6-Tribromophenol	330	9.313	9.313	(0.941)	111508	120.000	115
$ 12	Terphenyl-d14	244	11.046	11.046	(0.926)	1081367	120.000	114
$ 179	13C6-naphthalene	134	5.923	5.923	(1.005)	1199728	120.000	118
175	1,4-Dioxane	88	2.056	2.056	(0.477)	3092	2.00000	2.91

Data File: /var/chem/gcms/md.i/D072511I.b/icdg255.d
Report Date: 25-Jul-2011 13:34

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.513)	182613	120.000	114
14 Pyridine	79	2.244	2.244	(0.521)	317384	120.000	113
15 Phenol (ccc)	94	3.954	3.954	(0.918)	397657	120.000	112
16 Aniline	93	3.978	3.978	(0.924)	492285	120.000	112
17 Bis(2-chloroethyl)ether	93	4.037	4.037	(0.937)	295525	120.000	113
18 2-Chlorophenol	128	4.101	4.101	(0.952)	362188	120.000	114
19 1,3-Dichlorobenzene	146	4.254	4.254	(0.988)	400448	120.000	114
20 1,4-Dichlorobenzene (ccc)	146	4.324	4.324	(1.004)	403493	120.000	113
21 Benzyl alcohol	108	4.442	4.442	(1.031)	245062	120.000	115
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.041)	385806	120.000	112
23 2-Methylphenol	108	4.571	4.571	(1.061)	316117	120.000	112
24 2,2'-Oxybis(1-Chloropropane)	45	4.601	4.601	(1.068)	550520	120.000	113
25 4-Methylphenol	108	4.759	4.759	(1.105)	324855	120.000	112
26 3&4 Methylphenol	108	4.759	4.759	(1.105)	324855	120.000	112
27 N-Nitroso-di-n-propylamine###	70	4.753	4.753	(1.104)	242860	120.000	114
28 Hexachloroethane	117	4.883	4.883	(1.134)	153068	120.000	113
29 Nitrobenzene	77	4.959	4.959	(0.841)	355210	120.000	115
30 Isophorone	82	5.276	5.276	(0.895)	601114	120.000	116
31 2-Nitrophenol (ccc)	139	5.376	5.376	(0.912)	196668	120.000	116
32 2,4-Dimethyphenol	107	5.453	5.453	(0.925)	396488	120.000	117
33 Bis(2-chloroethoxy)methane	93	5.576	5.576	(0.946)	379841	120.000	115
34 Benzoic acid	122	5.617	5.617	(0.953)	180086	120.000	114
35 2,4-Dichlorophenol (ccc)	162	5.711	5.711	(0.969)	319363	120.000	115
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.988)	352828	120.000	116
37 Naphthalene	128	5.923	5.923	(1.005)	1079347	120.000	116
38 4-Chloroaniline	127	6.005	6.005	(1.019)	462160	120.000	116
39 Hexachlorobutadiene (ccc)	225	6.134	6.134	(1.041)	220189	120.000	115
40 4-Chloro-3-methylphenol (ccc)	107	6.739	6.739	(1.144)	316514	120.000	116
41 2-Methylnaphthalene	142	6.939	6.939	(1.177)	740055	120.000	116
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	230538	120.000	114
43 2,4,6-Trichlorophenol (ccc)	196	7.450	7.450	(0.878)	236849	120.000	117
44 2,4,5-Trichlorphenol	196	7.503	7.503	(0.884)	260419	120.000	116
45 2-Chloronaphthalene	162	7.750	7.750	(0.913)	732046	120.000	116
46 2-Nitroaniline	65	7.914	7.914	(0.933)	219117	120.000	116
47 Acenaphthylene	152	8.308	8.308	(0.979)	1183863	120.000	115
48 Dimethyl phthalate	163	8.208	8.208	(0.967)	855438	120.000	115
49 2,6-Dinitrotoluene	165	8.261	8.261	(0.974)	201106	120.000	116
50 3-Nitroaniline	138	8.455	8.455	(0.997)	226923	120.000	116
51 Acenaphthene (ccc)	153	8.525	8.525	(1.005)	764807	120.000	116
52 2,4-Dinitrophenol ##spcc##	184	8.578	8.578	(1.011)	127762	120.000	116
53 Dibenzofuran	168	8.725	8.725	(1.028)	1051230	120.000	115
54 4-Nitrophenol ##spcc##	109	8.696	8.696	(1.025)	129368	120.000	117
55 2,4-Dinitrotoluene	165	8.731	8.731	(1.029)	267675	120.000	116
56 Fluorene	166	9.084	9.084	(1.071)	894632	120.000	115
57 4-Chlorophenyl phenyl ether	204	9.095	9.095	(1.072)	427021	120.000	116
58 Diethyl phthalate	149	9.013	9.013	(1.062)	894596	120.000	114
59 4-Nitroaniline	138	9.119	9.119	(1.075)	239367	120.000	118

Data File: /var/chem/gcms/md.i/D072511I.b/icdg255.d
Report Date: 25-Jul-2011 13:34

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.148	9.148	(0.924)	168139	120.000	115
61 N-Ndpa / diphenylamine (ccc)	169	9.213	9.213	(0.931)	762038	120.000	117
62 1,2-Diphenylhydrazine/azobnz	77	9.248	9.248	(0.934)	771833	120.000	115
63 4-Bromophenyl phenyl ether	248	9.542	9.542	(0.964)	246096	120.000	116
64 Hexachlorobenzene	284	9.595	9.595	(0.969)	256365	120.000	115
65 Pentachlorophenol (ccc)	266	9.759	9.759	(0.986)	193359	120.000	114
66 Phenanthrene	178	9.918	9.918	(1.002)	1363760	120.000	116
67 Anthracene	178	9.959	9.959	(1.006)	1413724	120.000	116
68 Carbazole	167	10.088	10.088	(1.019)	1252574	120.000	116
69 Di-n-butyl phthalate	149	10.353	10.353	(1.046)	1466717	120.000	116
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	1539312	120.000	116
71 Pyrene	202	10.946	10.946	(0.917)	1625817	120.000	114
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	718821	120.000	116
73 Benzo(a)Anthracene	228	11.922	11.922	(0.999)	1464396	120.000	116
74 3,3'-Dichlorobenzidine	252	11.886	11.886	(0.996)	566168	120.000	115
75 Chrysene	228	11.963	11.963	(1.002)	1463901	120.000	116
76 Bis(2-ethylhexyl) phthalate	149	11.916	11.916	(0.999)	973995	120.000	117
77 Di-n-octyl phthalate (ccc)	149	12.662	12.662	(0.914)	1593687	120.000	117
78 Benzo(b)fluoranthene	252	13.249	13.249	(0.956)	1429861	120.000	118
79 Benzo(k)fluoranthene	252	13.291	13.291	(0.959)	1532412	120.000	114
80 Benzo(a)pyrene (ccc)	252	13.778	13.778	(0.994)	1429137	120.000	118
81 Indeno(1,2,3-cd)pyrene	276	15.341	15.341	(1.107)	1526935	120.000	115
82 Dibenz(a,h)anthracene	278	15.365	15.365	(1.109)	1185679	120.000	114
83 Benzo(g,h,i)perylene	276	15.676	15.676	(1.131)	1291237	120.000	115


Data File: /var/chem/gcms/md.i/D0725111.b/icdg255.d
Date : 25-JUL-2011 12:46
Client ID: STD120
Sample Info: ICDG255,1,5,STD120
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
/var/chem/gcms/md.i/D0725111.b/icdg255.d
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10+
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Terphenyl-d14
-Chrysene-d12+
-Perylene-d12

Data File: /var/chem/gcms/md.i/D072511I.b/icdg258.d
Report Date: 25-Jul-2011 13:34

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icdg258.d
Lab Smp Id: ICDG258 Client Smp ID: STD200
Inj Date : 25-JUL-2011 12:21
Operator : 60841 Inst ID: md.i
Smp Info : ICDG258,,1,8,,STD200
Misc Info : D072511I,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 13:34 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 12:21 Cal File: icdg258.d
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/uL)	ON-COL (ng/uL)
*	1 1,4-Dichlorobenzene-d4	152	4.307	4.307	(1.000)	49747	20.0000	20.0
*	2 Naphthalene-d8	136	5.893	5.893	(1.000)	196047	20.0000	20.0
*	3 Acenaphthene-d10	164	8.490	8.490	(1.000)	118402	20.0000	20.0
*	4 Phenanthrene-d10	188	9.900	9.900	(1.000)	230794	20.0000	20.0
*	5 Chrysene-d12	240	11.939	11.939	(1.000)	243093	20.0000	20.0
*	6 Perylene-d12	264	13.866	13.866	(1.000)	223218	20.0000	20.0
$	7 2-Fluorophenol	112	3.132	3.132	(0.727)	605599	200.000	207(A)
$	8 Phenol-d5	99	3.943	3.943	(0.915)	709874	200.000	203(A)
$	9 Nitrobenzene-d5	82	4.936	4.936	(0.837)	667955	200.000	201(A)
$	10 2-Fluorobiphenyl	172	7.597	7.597	(0.895)	1532160	200.000	202(A)
$	11 2,4,6-Tribromophenol	330	9.319	9.319	(0.941)	205814	200.000	202(A)
$	12 Terphenyl-d14	244	11.052	11.052	(0.926)	1939785	200.000	201(A)
	175 1,4-Dioxane	88	2.045	2.045	(0.475)	657	200.000	0.615
	13 N-Nitrosodimethylamine	74	2.215	2.215	(0.514)	324607	200.000	201(A)

Data File: /var/chem/gcms/md.i/D072511I.b/icdg258.d
Report Date: 25-Jul-2011 13:34

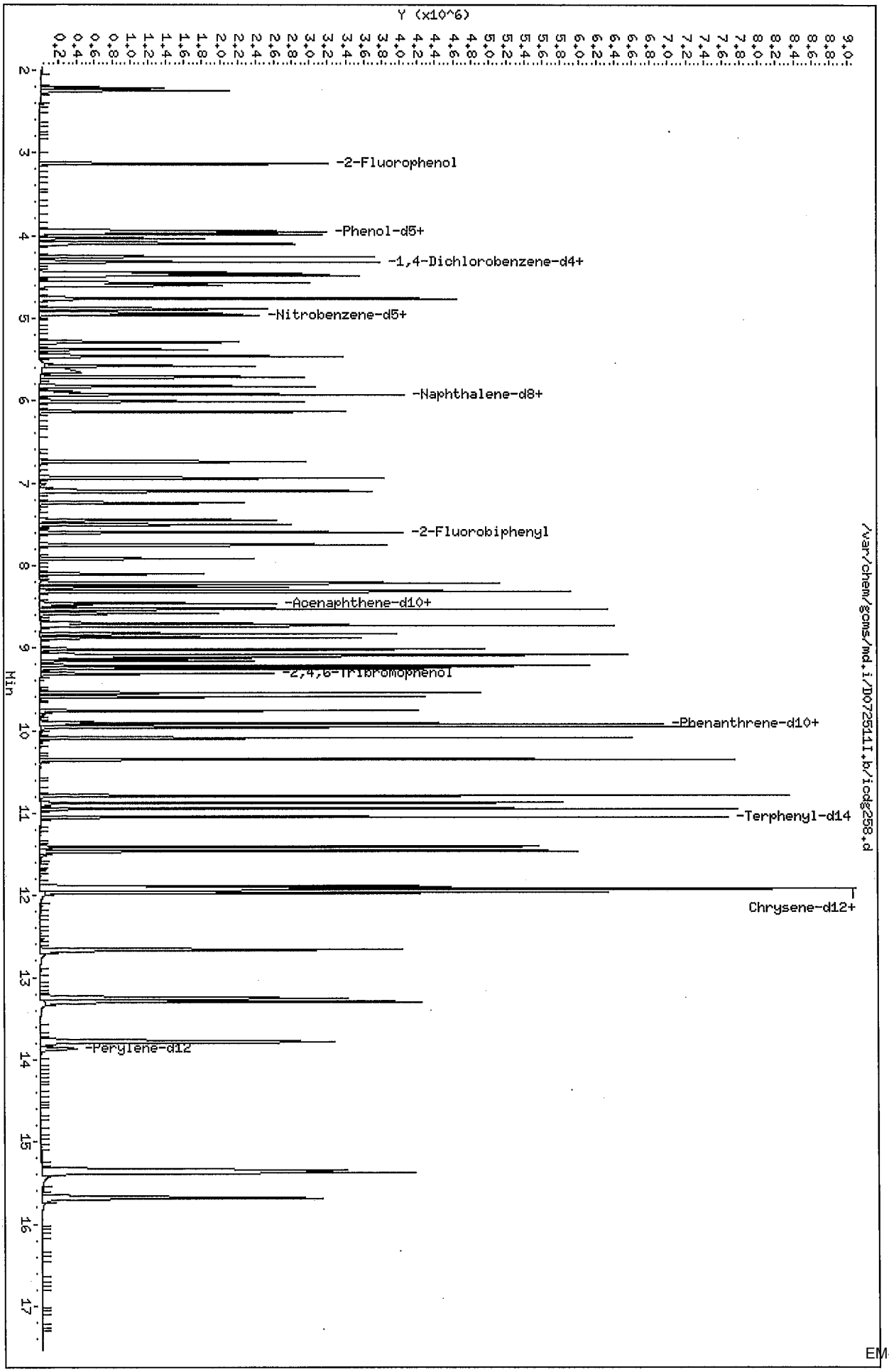
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
14 Pyridine	79	2.245	2.245	(0.521)	571966	200.000	203(A)
15 Phenol (ccc)	94	3.960	3.960	(0.920)	727702	200.000	204(A)
16 Aniline	93	3.984	3.984	(0.925)	897613	200.000	204(A)
17 Bis(2-chloroethyl)ether	93	4.043	4.043	(0.939)	530017	200.000	202(A)
18 2-Chlorophenol	128	4.107	4.107	(0.954)	646079	200.000	202(A)
19 1,3-Dichlorobenzene	146	4.254	4.254	(0.988)	711477	200.000	201(A)
20 1,4-Dichlorobenzene (ccc)	146	4.325	4.325	(1.004)	726412	200.000	202(A)
21 Benzyl alcohol	108	4.454	4.454	(1.034)	437953	200.000	204(A)
22 1,2-Dichlorobenzene	146	4.489	4.489	(1.042)	694792	200.000	201(A)
23 2-Methylphenol	108	4.577	4.577	(1.063)	579484	200.000	205(A)
24 2,2'-Oxybis(1-Chloropropane)	45	4.601	4.601	(1.068)	969649	200.000	198(A)
25 4-Methylphenol	108	4.765	4.765	(1.106)	599676	200.000	205(A)
26 3&4 Methylphenol	108	4.765	4.765	(1.106)	599676	200.000	205(A)
27 N-Nitroso-di-n-propylamine###	70	4.765	4.765	(1.106)	431445	200.000	202(A)
28 Hexachloroethane	117	4.889	4.889	(1.135)	278903	200.000	204(A)
29 Nitrobenzene	77	4.965	4.965	(0.842)	636839	200.000	199(A)
30 Isophorone	82	5.288	5.288	(0.897)	1077020	200.000	200(A)
31 2-Nitrophenol (ccc)	139	5.382	5.382	(0.913)	352949	200.000	201(A)
32 2,4-Dimethyphenol	107	5.458	5.458	(0.926)	707583	200.000	201(A)
33 Bis(2-chloroethoxy)methane	93	5.582	5.582	(0.947)	691220	200.000	202(A)
34 Benzoic acid	122	5.658	5.658	(0.960)	359874	200.000	219(A)
35 2,4-Dichlorophenol (ccc)	162	5.711	5.711	(0.969)	576205	200.000	201(A)
36 1,2,4-Trichlorobenzene	180	5.829	5.829	(0.989)	630467	200.000	199(A)
37 Naphthalene	128	5.929	5.929	(1.006)	1921010	200.000	199(A)
38 4-Chloroaniline	127	6.011	6.011	(1.020)	828016	200.000	200(A)
39 Hexachlorobutadiene (ccc)	225	6.134	6.134	(1.041)	396144	200.000	199(A)
40 4-Chloro-3-methylphenol (ccc)	107	6.745	6.745	(1.145)	570005	200.000	202(A)
41 2-Methylnaphthalene	142	6.939	6.939	(1.177)	1343128	200.000	202(A)
42 Hexachlorocyclopentadiene####	237	7.245	7.245	(0.853)	435812	200.000	208(A)
43 2,4,6-Trichlorophenol (ccc)	196	7.450	7.450	(0.878)	428067	200.000	204(A)
44 2,4,5-Trichlorphenol	196	7.503	7.503	(0.884)	474289	200.000	203(A)
45 2-Chloronaphthalene	162	7.750	7.750	(0.913)	1313651	200.000	200(A)
46 2-Nitroaniline	65	7.920	7.920	(0.933)	394988	200.000	202(A)
47 Acenaphthylene	152	8.314	8.314	(0.979)	2144404	200.000	201(A)
48 Dimethyl phthalate	163	8.220	8.220	(0.968)	1535885	200.000	198(A)
49 2,6-Dinitrotoluene	165	8.267	8.267	(0.974)	360290	200.000	201(A)
50 3-Nitroaniline	138	8.467	8.467	(0.997)	404213	200.000	200(A)
51 Acenaphthene (ccc)	153	8.531	8.531	(1.005)	1378749	200.000	201(A)
52 2,4-Dinitrophenol ##spcc##	184	8.584	8.584	(1.011)	247756	200.000	217(A)
53 Dibenzofuran	168	8.731	8.731	(1.028)	1902569	200.000	200(A)
54 4-Nitrophenol ##spcc##	109	8.702	8.702	(1.025)	234751	200.000	204(A)
55 2,4-Dinitrotoluene	165	8.737	8.737	(1.029)	482047	200.000	202(A)
56 Fluorene	166	9.084	9.084	(1.070)	1619121	200.000	200(A)
57 4-Chlorophenyl phenyl ether	204	9.101	9.101	(1.072)	759153	200.000	199(A)
58 Diethyl phthalate	149	9.019	9.019	(1.062)	1598317	200.000	196(A)
59 4-Nitroaniline	138	9.131	9.131	(1.075)	415716	200.000	197(A)
60 4,6-Dinitro-2-methylphenol	198	9.160	9.160	(0.925)	320097	200.000	207(A)

Data File: /var/chem/gcms/md.i/D072511I.b/icdg258.d
Report Date: 25-Jul-2011 13:34

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
61 N-Ndpa / diphenylamine (ccc)	169	9.219	9.219	(0.931)	1364100	200.000	198(A)
62 1,2-Diphenylhydrazine/azobnz	77	9.248	9.248	(0.934)	1389825	200.000	197(A)
63 4-Bromophenyl phenyl ether	248	9.542	9.542	(0.964)	445506	200.000	199(A)
64 Hexachlorobenzene	284	9.601	9.601	(0.970)	464455	200.000	198(A)
65 Pentachlorophenol (ccc)	266	9.765	9.765	(0.986)	361464	200.000	203(A)
66 Phenanthrene	178	9.924	9.924	(1.002)	2448878	200.000	198(A)
67 Anthracene	178	9.959	9.959	(1.006)	2542533	200.000	199(A)
68 Carbazole	167	10.088	10.088	(1.019)	2247206	200.000	196(A)
69 Di-n-butyl phthalate	149	10.353	10.353	(1.046)	2615129	200.000	197(A)
70 Fluoranthene (ccc)	202	10.794	10.794	(1.090)	2756905	200.000	198(A)
71 Pyrene	202	10.952	10.952	(0.917)	2931244	200.000	202(A)
72 Butyl benzyl phthalate	149	11.410	11.410	(0.956)	1262908	200.000	201(A)
73 Benzo(a)Anthracene	228	11.928	11.928	(0.999)	2580600	200.000	200(A)
74 3,3'-Dichlorobenzidine	252	11.892	11.892	(0.996)	1013253	200.000	202(A)
75 Chrysene	228	11.969	11.969	(1.002)	2529185	200.000	196(A)
76 Bis(2-ethylhexyl) phthalate	149	11.916	11.916	(0.998)	1685389	200.000	198(A)
77 Di-n-octyl phthalate (ccc)	149	12.668	12.668	(0.914)	2878736	200.000	206(A)
78 Benzo(b)fluoranthene	252	13.255	13.255	(0.956)	2462067	200.000	198(A)
79 Benzo(k)fluoranthene	252	13.302	13.302	(0.959)	2759143	200.000	200(A)
80 Benzo(a)pyrene (ccc)	252	13.790	13.790	(0.994)	2513989	200.000	201(A)
81 Indeno(1,2,3-cd)pyrene	276	15.353	15.353	(1.107)	2725233	200.000	200(A)
82 Dibenz(a,h)anthracene	278	15.376	15.376	(1.109)	2228916	200.000	204(A)
83 Benzo(g,h,i)perylene	276	15.688	15.688	(1.131)	2319346	200.000	200(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.


Data File: /var/chem/gcms/md_i/D072511I_b/icdg258_d
Date : 25-JUL-2011 12:21
Client ID: STD200
Sample Info: ICDG258,1.8,,STD200
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md_i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10+
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md_i/D072511I_b/icdg258_d

Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Report Date: 25-Jul-2011 17:08

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Lab Smp Id: ICVDG25 Client Smp ID: 2ND SOURCE
Inj Date : 25-JUL-2011 15:44
Operator : 60841 Inst ID: md.i
Smp Info : ICVDG25,,3,,,2ND SOURCE
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 16:52 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 15:19 Cal File: icdg257.d
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	51393	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.887	(1.000)	202378	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.484	(1.000)	122969	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	234541	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	257596	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	228771	20.0000	20.0
175 1,4-Dioxane	88	2.051	2.051	(0.477)	66317	60.0839	2000
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	104707	65.2811	2180
14 Pyridine	79	2.245	2.251	(0.522)	190032	67.9192	2260
15 Phenol (ccc)	94	3.943	3.943	(0.917)	221556	63.3232	2110
16 Aniline	93	3.972	3.972	(0.924)	276336	63.7280	2120
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	165199	62.8942	2100
18 2-Chlorophenol	128	4.096	4.095	(0.952)	203715	64.7115	2160
19 1,3-Dichlorobenzene	146	4.248	4.248	(0.988)	225472	63.1169	2100

Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Report Date: 25-Jul-2011 17:08

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/Kg)
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	231309	63.3823	2110
21 Benzyl alcohol	108	4.436	4.436	(1.031)	123128	59.5895	1990
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	221561	63.0746	2100
23 2-Methylphenol	108	4.566	4.566	(1.061)	179345	64.8697	2160
24 2,2'-Oxybis(1-Chloropropane)	45	4.595	4.595	(1.068)	305842	61.0212	2030
25 4-Methylphenol	108	4.754	4.754	(1.105)	190035	66.6618	2220
26 3&4 Methylphenol	108	4.754	4.754	(1.105)	190035	66.6618	2220
27 N-Nitroso-di-n-propylamine###	70	4.748	4.748	(1.104)	137393	65.4992	2180
28 Hexachloroethane	117	4.883	4.889	(1.135)	88979	64.9537	2160
29 Nitrobenzene	77	4.953	4.953	(0.841)	194678	61.6165	2050
30 Isophorone	82	5.271	5.271	(0.895)	345333	66.4623	2220
31 2-Nitrophenol (ccc)	139	5.371	5.376	(0.912)	105592	65.7511	2190
32 2,4-Dimethyphenol	107	5.453	5.447	(0.926)	208415	61.3834	2050
33 Bis(2-chloroethoxy)methane	93	5.570	5.570	(0.946)	210245	61.6958	2060
34 Benzoic acid	122	5.588	5.517	(0.949)	90972	60.6204	2020(H)
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.969)	178944	64.8431	2160
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.989)	211426	66.7155	2220
37 Naphthalene	128	5.917	5.917	(1.005)	601999	62.0778	2070
38 4-Chloroaniline	127	6.005	6.005	(1.020)	258689	64.1957	2140
39 Hexachlorobutadiene (ccc)	225	6.128	6.134	(1.041)	111352	55.8911	1860
40 4-Chloro-3-methylphenol (ccc)	107	6.734	6.739	(1.144)	176723	66.7444	2220
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	422295	64.3805	2150
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	122667	64.1223	2140
43 2,4,6-Trichlorophenol (ccc)	196	7.445	7.445	(0.877)	127756	64.8906	2160
44 2,4,5-Trichlorphenol	196	7.497	7.503	(0.884)	140932	63.6099	2120
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	399885	60.8992	2030
46 2-Nitroaniline	65	7.909	7.909	(0.932)	115671	58.8851	1960
47 Acenaphthylene	152	8.308	8.308	(0.979)	643031	61.3045	2040
48 Dimethyl phthalate	163	8.203	8.197	(0.967)	474273	58.4133	1950
49 2,6-Dinitrotoluene	165	8.255	8.249	(0.973)	106604	62.5476	2080
50 3-Nitroaniline	138	8.449	8.449	(0.996)	122922	62.5492	2080
51 Acenaphthene (ccc)	153	8.526	8.520	(1.005)	424729	61.1967	2040
52 2,4-Dinitrophenol ##spcc##	184	8.573	8.573	(1.010)	47185	47.7240	1590
53 Dibenzofuran	168	8.720	8.720	(1.028)	584964	60.4772	2020
54 4-Nitrophenol ##spcc##	109	8.690	8.684	(1.024)	67577	63.7322	2120
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	147637	66.1887	2210
56 Fluorene	166	9.078	9.078	(1.070)	505685	63.1462	2100
57 4-Chlorophenyl phenyl ether	204	9.096	9.096	(1.072)	239932	61.9823	2070
58 Diethyl phthalate	149	9.013	9.007	(1.062)	488643	57.4993	1920
59 4-Nitroaniline	138	9.107	9.101	(1.073)	126656	61.7428	2060
60 4,6-Dinitro-2-methylphenol	198	9.143	9.143	(0.924)	77194	53.5882	1790
61 N-Ndpa / diphenylamine (ccc)	169	9.213	9.207	(0.931)	419299	62.0734	2070
62 1,2-Diphenylhydrazine/azobnz	77	9.243	9.242	(0.934)	440318	63.0383	2100
63 4-Bromophenyl phenyl ether	248	9.542	9.536	(0.964)	134056	61.4981	2050
64 Hexachlorobenzene	284	9.595	9.589	(0.970)	142866	61.4152	2050
65 Pentachlorophenol (ccc)	266	9.760	9.760	(0.986)	94215	55.0378	1830
66 Phenanthrene	178	9.918	9.912	(1.002)	755708	60.1449	2000

Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Report Date: 25-Jul-2011 17:08

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/Kg)
67 Anthracene	178	9.953	9.953	(1.006)	760968	62.4242	2080
68 Carbazole	167	10.083	10.083	(1.019)	712799	64.0692	2140
69 Di-n-butyl phthalate	149	10.347	10.347	(1.046)	796941	65.1495	2170
70 Fluoranthene (ccc)	202	10.788	10.788	(1.090)	856681	66.1576	2200
71 Pyrene	202	10.946	10.941	(0.918)	889764	60.9927	2030
72 Butyl benzyl phthalate	149	11.405	11.405	(0.956)	362253	56.6590	1890
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	817057	63.9680	2130
74 3,3'-Dichlorobenzidine	252	11.881	11.881	(0.996)	307973	64.7214	2160
75 Chrysene	228	11.957	11.951	(1.002)	821443	60.2884	2010
76 Bis(2-ethylhexyl) phthalate	149	11.916	11.910	(0.999)	522761	60.3773	2010
77 Di-n-octyl phthalate (ccc)	149	12.656	12.656	(0.913)	802641	60.4199	2010
78 Benzo(b)fluoranthene	252	13.238	13.232	(0.955)	778179	67.7965	2260
79 Benzo(k)fluoranthene	252	13.279	13.267	(0.958)	859331	62.1272	2070
80 Benzo(a)pyrene (ccc)	252	13.767	13.755	(0.993)	761853	61.2266	2040
81 Indeno(1,2,3-cd)pyrene	276	15.330	15.318	(1.106)	820369	65.4214	2180
82 Dibenz(a,h)anthracene	278	15.359	15.353	(1.108)	667413	65.0589	2170
83 Benzo(g,h,i)perylene	276	15.665	15.653	(1.130)	695755	62.8900	2100

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Report Date: 25-Jul-2011 17:08

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: icvdg25.d
Lab Smp Id: ICVDG25
Analysis Type: SV
Quant Type: ISTD
Operator: 60841
Method File: /var/chem/gcms/md.i/D072511I.b/8270a9.m
Misc Info: D072511I,8270a9,8270dxnC13.sub

Calibration Date: 25-JUL-2011
Calibration Time: 13:11
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	50077	25038	100154	51393	2.63
2 Naphthalene-d8	196721	98360	393442	202378	2.88
3 Acenaphthene-d10	118482	59241	236964	122969	3.79
4 Phenanthrene-d10	226546	113273	453092	234541	3.53
5 Chrysene-d12	244525	122262	489050	257596	5.35
6 Perylene-d12	224450	112225	448900	228771	1.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	-0.10
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.93	11.43	12.43	11.93	-0.05
6 Perylene-d12	13.86	13.36	14.36	13.86	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Report Date: 25-Jul-2011 17:08

TestAmerica Knoxville

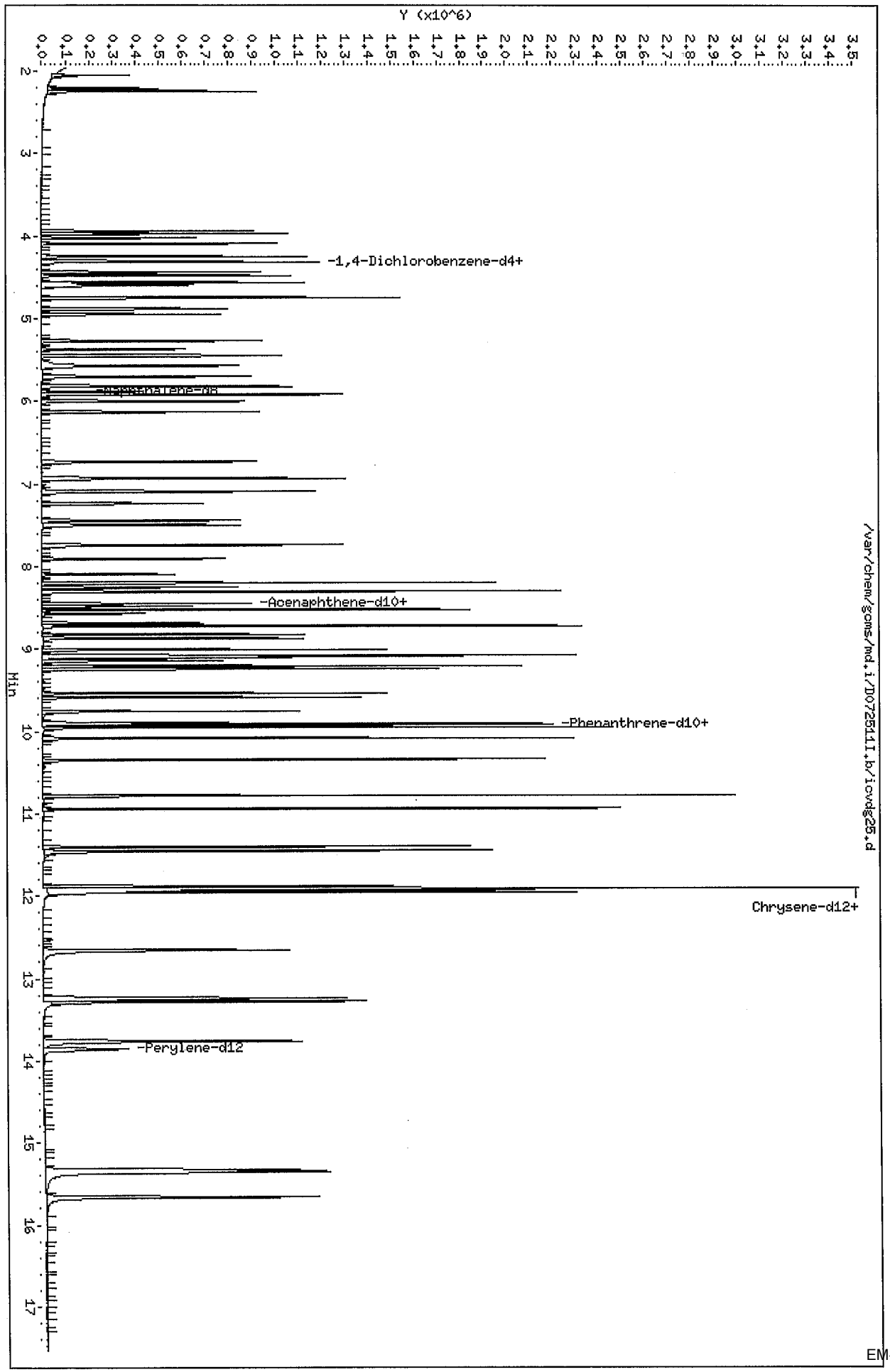
RECOVERY REPORT

Client Name:
Client SDG: D072511I
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: ICVDG25
Client Smp ID: 2ND SOURCE
Level: LOW
Operator: 60841
Data Type: MS DATA
SampleType: BLANK
SpikeList File: 8270ss.spk
Quant Type: ISTD
Sublist File: 8270dxnC13.sub
Method File: /var/chem/gcms/md.i/D072511I.b/8270a9.m
Misc Info: D072511I,8270a9,8270dxnC13.sub

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 7	2-Fluorophenol	2000	0.00	*	70-130
$ 8	Phenol-d5	2000	0.00	*	70-130
$ 9	Nitrobenzene-d5	2000	0.00	*	70-130
$ 10	2-Fluorobiphenyl	2000	0.00	*	70-130
$ 11	2,4,6-Tribromophe	2000	0.00	*	70-130
$ 12	Terphenyl-d14	2000	0.00	*	70-130
175	1,4-Dioxane	2000	2000	100.14	70-130
13	N-Nitrosodimethyla	2000	2180	108.80	70-130
14	Pyridine	2000	2260	113.20	70-130
15	Phenol (ccc)	2000	2110	105.54	70-130
16	Aniline	2000	2120	106.21	70-130
17	Bis(2-chloroethyl)	2000	2100	104.82	70-130
18	2-Chlorophenol	2000	2160	107.85	70-130
19	1,3-Dichlorobenzen	2000	2100	105.19	70-130
20	1,4-Dichlorobenzen	2000	2110	105.64	70-130
21	Benzyl alcohol	2000	1990	99.32	70-130
22	1,2-Dichlorobenzen	2000	2100	105.12	70-130
23	2-Methylphenol	2000	2160	108.12	70-130
24	2,2'-Oxybis(1-Chlo	2000	2030	101.70	70-130
25	4-Methylphenol	2000	2220	111.10	70-130
26	3&4 Methylphenol	2000	2220	111.10	70-130
27	N-Nitroso-di-n-pro	2000	2180	109.17	70-130
28	Hexachloroethane	2000	2160	108.26	70-130
29	Nitrobenzene	2000	2050	102.69	70-130
30	Isophorone	2000	2220	110.77	70-130
31	2-Nitrophenol (ccc	2000	2190	109.59	70-130
32	2,4-Dimethyphenol	2000	2050	102.31	70-130
33	Bis(2-chloroethoxy	2000	2060	102.83	70-130
34	Benzoic acid	2000	2020	101.03	70-130
35	2,4-Dichlorophenol	2000	2160	108.07	70-130
36	1,2,4-Trichloroben	2000	2220	111.19	70-130
37	Naphthalene	2000	2070	103.46	70-130
38	4-Chloroaniline	2000	2140	106.99	70-130

Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Report Date: 25-Jul-2011 17:08

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
39 Hexachlorobutadien	2000	1860	93.15	70-130
40 4-Chloro-3-methylp	2000	2220	111.24	70-130
41 2-Methylnaphthalen	2000	2150	107.30	70-130
42 Hexachlorocyclopen	2000	2140	106.87	70-130
43 2,4,6-Trichlorophe	2000	2160	108.15	70-130
44 2,4,5-Trichlorphen	2000	2120	106.02	70-130
45 2-Chloronaphthalen	2000	2030	101.50	70-130
46 2-Nitroaniline	2000	1960	98.14	70-130
47 Acenaphthylene	2000	2040	102.17	70-130
48 Dimethyl phthalate	2000	1950	97.36	70-130
49 2,6-Dinitrotoluene	2000	2080	104.25	70-130
50 3-Nitroaniline	2000	2080	104.25	70-130
51 Acenaphthene (ccc)	2000	2040	101.99	70-130
52 2,4-Dinitrophenol	2000	1590	79.54	70-130
53 Dibenzofuran	2000	2020	100.80	70-130
54 4-Nitrophenol ##sp	2000	2120	106.22	70-130
55 2,4-Dinitrotoluene	2000	2210	110.31	70-130
56 Fluorene	2000	2100	105.24	70-130
57 4-Chlorophenyl phe	2000	2070	103.30	70-130
58 Diethyl phthalate	2000	1920	95.83	70-130
59 4-Nitroaniline	2000	2060	102.90	70-130
60 4,6-Dinitro-2-meth	2000	1790	89.31	70-130
61 N-Ndpa / diphenyla	2000	2070	103.46	70-130
62 1,2-Diphenylhydraz	2000	2100	105.06	70-130
63 4-Bromophenyl phen	2000	2050	102.50	70-130
64 Hexachlorobenzene	2000	2050	102.36	70-130
65 Pentachlorophenol	2000	1830	91.73	70-130
66 Phenanthrene	2000	2000	100.24	70-130
67 Anthracene	2000	2080	104.04	70-130
68 Carbazole	2000	2140	106.78	70-130
69 Di-n-butyl phthala	2000	2170	108.58	70-130
70 Fluoranthene (ccc)	2000	2200	110.26	70-130
71 Pyrene	2000	2030	101.65	70-130
72 Butyl benzyl phtha	2000	1890	94.43	70-130
73 Benzo(a)Anthracene	2000	2130	106.61	70-130
74 3,3'-Dichlorobenzi	2000	2160	107.87	70-130
75 Chrysene	2000	2010	100.48	70-130
76 Bis(2-ethylhexyl)	2000	2010	100.63	70-130
77 Di-n-octyl phthala	2000	2010	100.70	70-130
78 Benzo(b)fluoranthe	2000	2260	112.99	70-130
79 Benzo(k)fluoranthe	2000	2070	103.55	70-130
80 Benzo(a)pyrene (cc	2000	2040	102.04	70-130
85 Benzo(e)pyrene	~~2000~~ NA	0.00	*	70-130
81 Indeno(1,2,3-cd)py	2000	2180	109.04	70-130
82 Dibenz(a,h)anthrac	2000	2170	108.43	70-130
83 Benzo(g,h,i)peryle	2000	2100	104.82	70-130


Data File: /var/chem/gcms/md.i/D072511I.b/icvdg25.d
Date : 25-JUL-2011 15:44
Client ID: 2ND SOURCE
Sample Info: ICVDG25,,3,,,2ND SOURCE
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
/var/chem/gcms/md.i/D072511I.b/icvdg25.d
-1,4-Dichlorobenzene-d4+
-Naphthalene-d8
-Acenaphthene-d10+
-Phenanthrene-d10+
Chrysene-d12+
-Perylene-d12
Min

Data File: /chem/gcms/md.i/D072511I.b/icdg251.d
Report Date: 10-Aug-2011 15:46

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: ICDG251
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270dxnC13.sub
Method File: /var/chem/gcms/md.i/D072511I.b/8270a9.m
Misc Info: D072511I,8270a9,8270dxnC13.sub

Client SDG: D072511I
Fraction: SV
Client Smp ID: STD010
Operator: 60841
SampleType: BLANK
Quant Type: ISTD

8270 Feedback for linear/good cmpds JW 8.10.11

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS 70-130
13 N-Nitrosodimethyla	333	341	102.38	35-150
14 Pyridine	333	334	100.32	35-150
15 Phenol (ccc)	333	331	99.30	59-117
16 Aniline	333	335	100.53	35-150
17 Bis(2-chloroethyl)	333	330	99.05	35-150
18 2-Chlorophenol	333	323	97.01	63-114
19 1,3-Dichlorobenzen	333	340	102.03	35-150
20 1,4-Dichlorobenzen	333	342	102.76	65-111
21 Benzyl alcohol	333	317	95.13	35-150
22 1,2-Dichlorobenzen	333	350	105.14	35-150
23 2-Methylphenol	333	322	96.73	35-150
24 2,2'-Oxybis(1-Chlo	333	348	104.42	35-150
25 4-Methylphenol	333	326	97.79	35-150
26 3&4 Methylphenol	333	326	97.79	35-150
27 N-Nitroso-di-n-pro	333	327	98.14	62-114
28 Hexachloroethane	333	335	100.57	35-150
29 Nitrobenzene	333	330	99.13	35-150
30 Isophorone	333	322	96.57	35-150
31 2-Nitrophenol (ccc	333	299	89.78	35-150
32 2,4-Dimethyphenol	333	324	97.37	35-150
33 Bis(2-chloroethoxy	333	328	98.36	35-150
34 Benzoic acid	333	350	105.14	35-150
35 2,4-Dichlorophenol	333	319	95.84	35-150
36 1,2,4-Trichloroben	333	329	98.62	66-113
37 Naphthalene	333	339	101.62*	60-100
38 4-Chloroaniline	333	327	98.10	35-150
39 Hexachlorobutadien	333	325	97.43	35-150
40 4-Chloro-3-methylp	333	311	93.37	71-118
41 2-Methylnaphthalen	333	335	100.40	35-150
42 Hexachlorocyclopen	333	294	88.29	35-150
43 2,4,6-Trichlorophe	333	300	90.11	35-150
44 2,4,5-Trichlorphen	333	307	92.17	35-150
45 2-Chloronaphthalen	333	324	97.20	35-150

JW 8-10-11

Data File: /chem/gcms/md.i/D072511I.b/icdg251.d
Report Date: 10-Aug-2011 15:46

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
46 2-Nitroaniline	333	364	109.13	35-150
47 Acenaphthylene	333	334	100.30	60-106
48 Dimethyl phthalate	333	348	104.48	35-150
49 2,6-Dinitrotoluene	333	310	92.93	35-150
50 3-Nitroaniline	333	302	90.68	35-150
51 Acenaphthene (ccc)	333	331	99.31	65-107
52 2,4-Dinitrophenol	333	412	123.66	35-150
53 Dibenzofuran	333	335	100.64	35-150
54 4-Nitrophenol ##sp	333	263	79.05	61-128
55 2,4-Dinitrotoluene	333	315	94.39	72-131
56 Fluorene	333	330	99.15	60-113
57 4-Chlorophenyl phe	333	343	103.00	35-150
58 Diethyl phthalate	333	360	108.13	35-150
59 4-Nitroaniline	333	315	94.49	35-150
60 4,6-Dinitro-2-meth	333	412	123.76	35-150
61 N-Ndpa / diphenyla	333	319	95.83	35-150
62 1,2-Diphenylhydraz	333	325	97.59	35-150
63 4-Bromophenyl phen	333	327	98.20	35-150
64 Hexachlorobenzene	333	326	97.75	35-150
65 Pentachlorophenol	333	359	107.66	71-122
66 Phenanthrene	333	329	98.73	65-108
67 Anthracene	333	327	98.07	67-114
68 Carbazole	333	328	98.30	35-150
69 Di-n-butyl phthala	333	295	88.58	35-150
70 Fluoranthene (ccc)	333	326	97.66	65-115
71 Pyrene	333	331	99.25	67-114
72 Butyl benzyl phtha	333	355	106.53	35-150
73 Benzo(a)Anthracene	333	329	98.81	70-114
74 3,3'-Dichlorobenzi	333	254	76.37	35-150
75 Chrysene	333	333	99.86	68-111
76 Bis(2-ethylhexyl)	333	336	100.91	35-150
77 Di-n-octyl phthala	333	202	60.59	35-150
78 Benzo(b)fluoranthe	333	302	90.62	60-120
79 Benzo(k)fluoranthe	333	345	103.53	61-119
80 Benzo(a)pyrene (cc	333	355	106.51	67-111
81 Indeno(1,2,3-cd)py	333	305	91.60	67-120
82 Dibenz(a,h)anthrac	333	315	94.47	71-120
83 Benzo(g,h,i)peryle	333	326	97.96	63-120

70-130

Quad OK

8.10.11

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	2500	323	12.92*	44-93
$ 8 Phenol-d5	2500	326	13.03*	47-98

NK

Data File: /chem/gcms/md.i/D072511I.b/xcdg256.d
Report Date: 25-Jul-2011 18:58

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

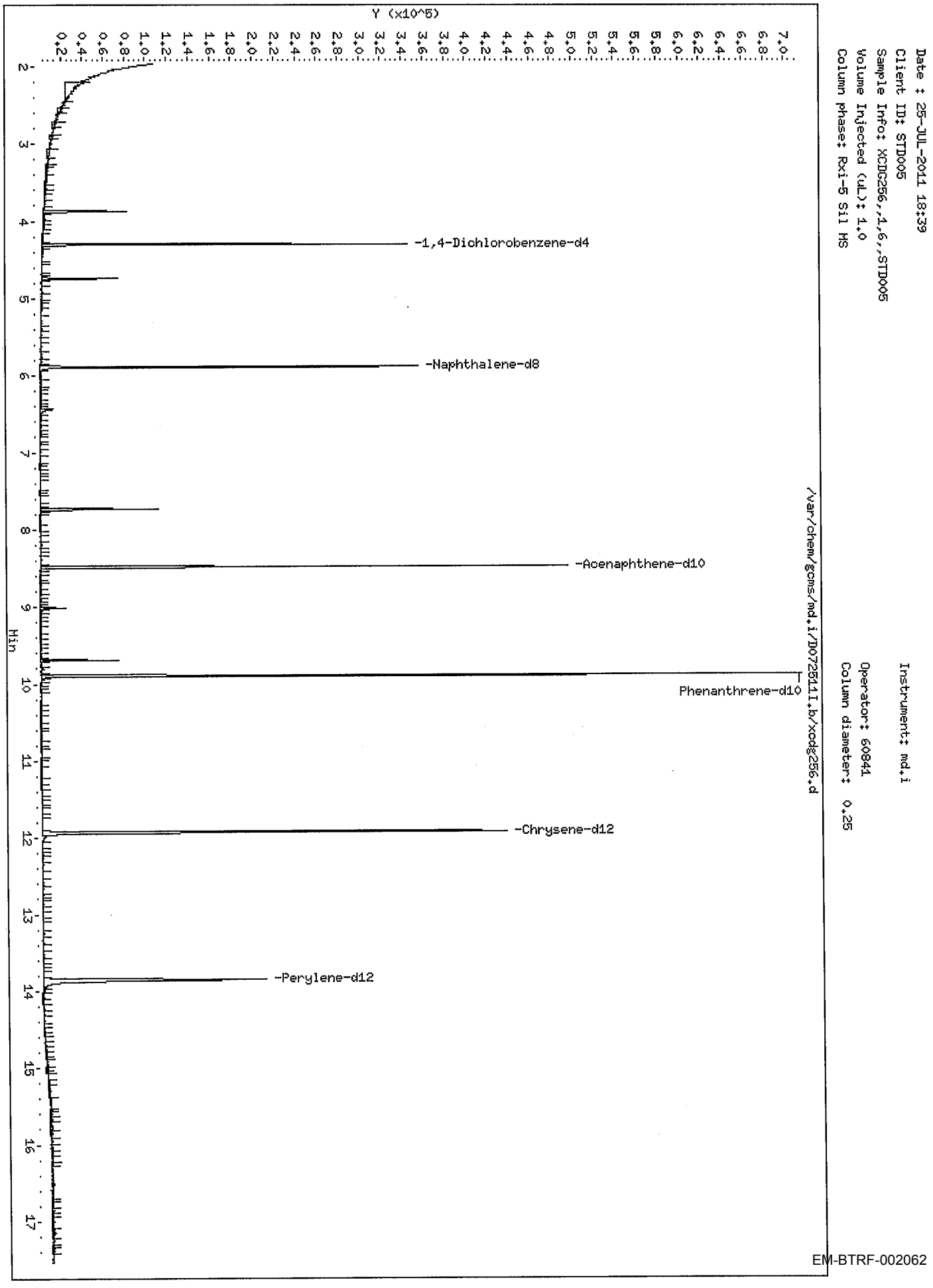
Data file : /chem/gcms/md.i/D072511I.b/xcdg256.d
Lab Smp Id: XCDG256 Client Smp ID: STD005
Inj Date : 25-JUL-2011 18:39
Operator : 60841 Inst ID: md.i
Smp Info : XCDG256,,1,6,,STD005
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 18:58 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 18:39 Cal File: xcdg256.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	42663	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.887	(1.000)	162657	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	94090	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	192814	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	179918	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	143582	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	10576	5.00000	5.24
189 Caprolactam	55	6.434	6.434	(1.093)	3639	5.00000	3.01
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	40678	5.00000	5.46
187 Atrazine	200	9.689	9:689	(0.979)	5965	5.00000	3.48


Data File: /var/chem/gcms/md.i/D072511I.b/xcdg256.d
Date : 25-JUL-2011 18:39
Client ID: STD005
Sample Info: XCDG256,1,6,,STD005
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072511I.b/xcdg256.d

Data File: /chem/gcms/md.i/D072511I.b/xcdg251.d
Report Date: 25-Jul-2011 18:32

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

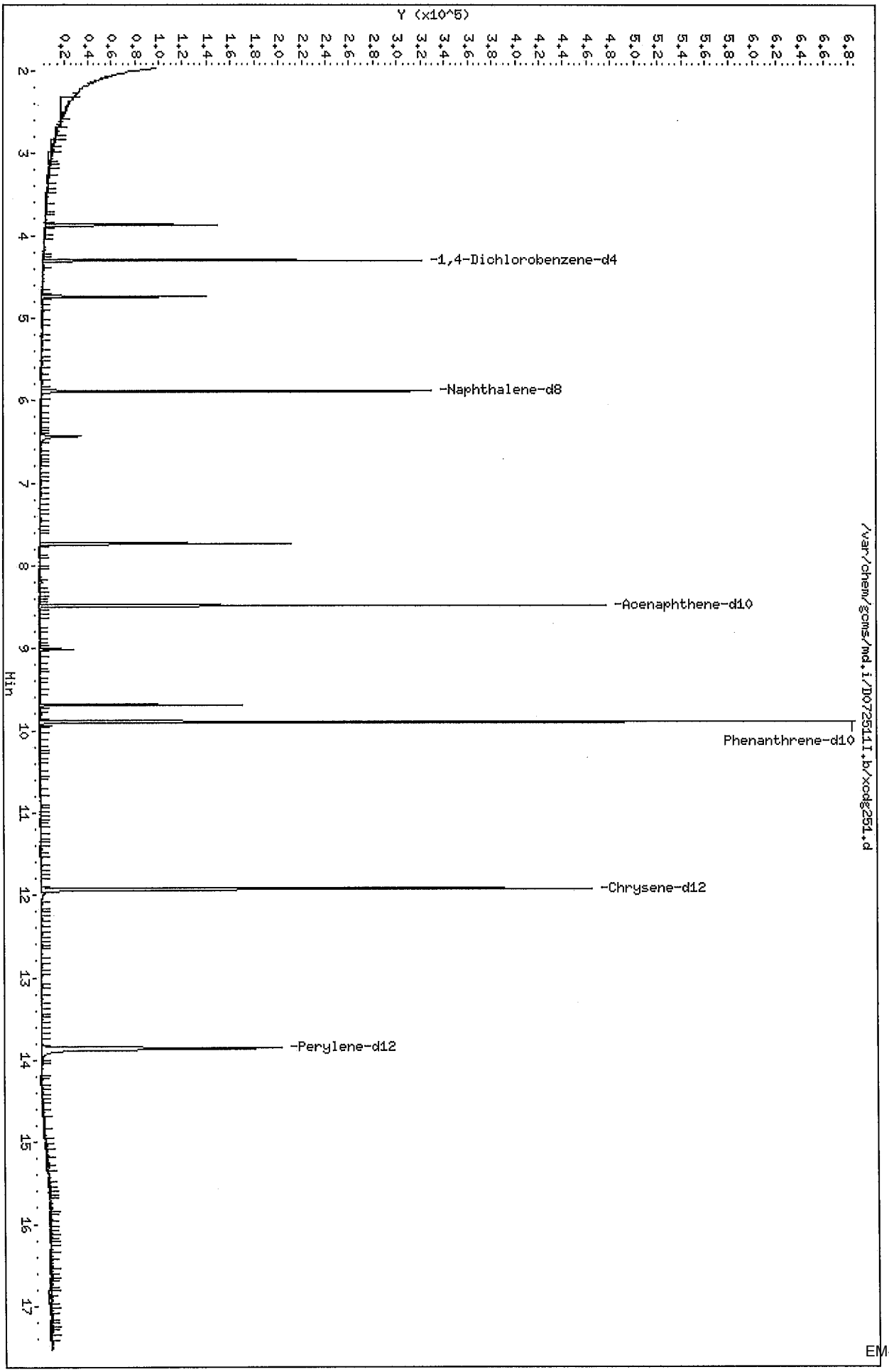
Data file : /chem/gcms/md.i/D072511I.b/xcdg251.d
Lab Smp Id: XCDG251 Client Smp ID: STD010
Inj Date : 25-JUL-2011 18:14
Operator : 60841 Inst ID: md.i
Smp Info : XCDG251,,1,1,,STD010
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 18:32 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 18:14 Cal File: xcdg251.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	41607	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	156953	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	90440	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	184649	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	179557	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	142534	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	20232	10.0000	10.4
189 Caprolactam	55	6.434	6.434	(1.093)	9107	10.0000	7.33
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	74619	10.0000	10.6
187 Atrazine	200	9.689	9.689	(0.979)	13935	10.0000	8.09


Data File: /var/chem/gcms/md.i/D072511I.b/xcdg254.d
Date : 25-JUL-2011 18:14
Client ID: STD010
Sample Info: XCDG254,,1,1,,STD010
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072511I.b/xcdg254.d

Data File: /chem/gcms/md.i/D072511I.b/xcdg252.d
Report Date: 25-Jul-2011 18:07

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

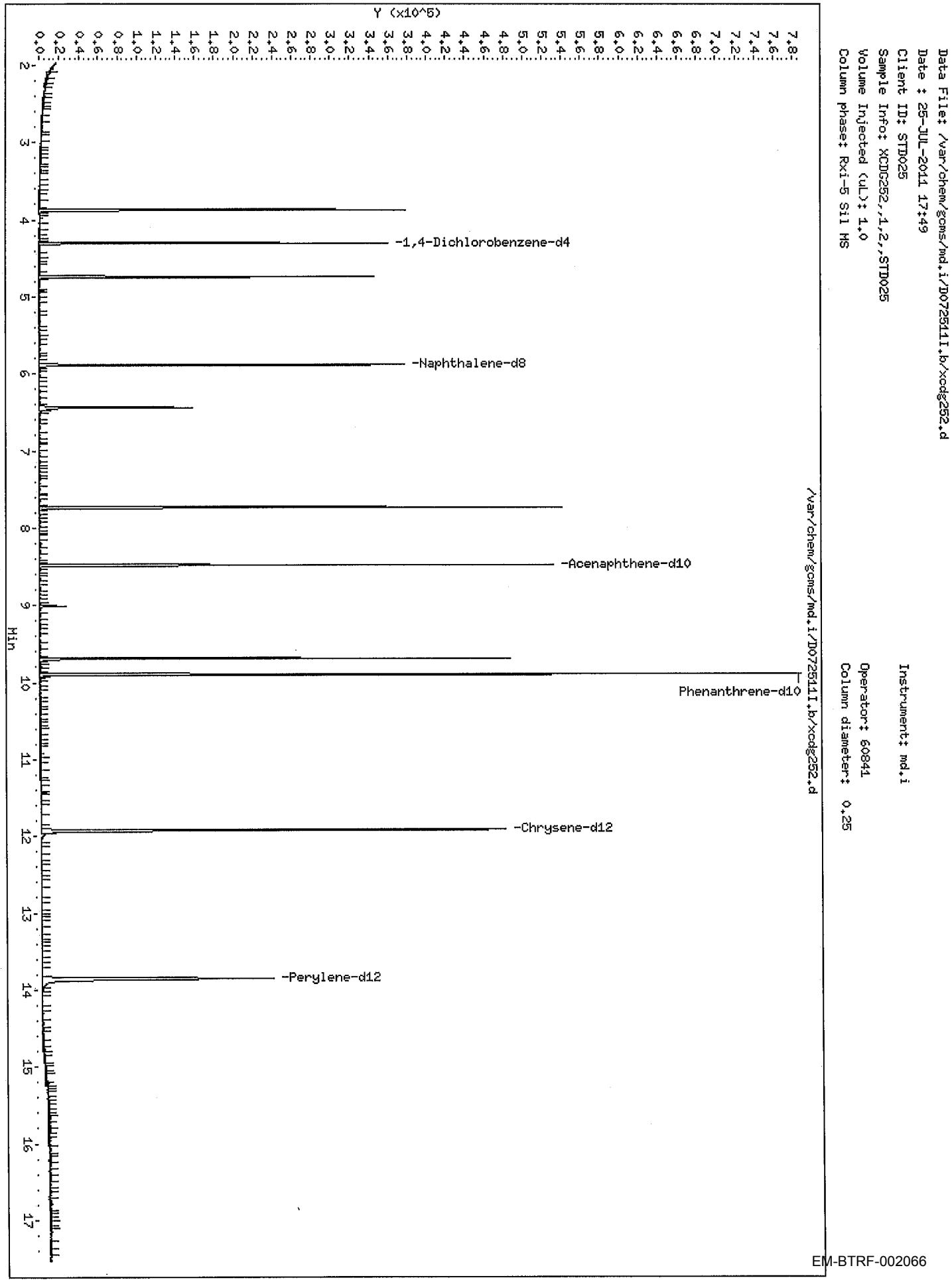
Data file : /chem/gcms/md.i/D072511I.b/xcdg252.d
Lab Smp Id: XCDG252 Client Smp ID: STD025
Inj Date : 25-JUL-2011 17:49
Operator : 60841 Inst ID: md.i
Smp Info : XCDG252,,1,2,,STD025
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 18:07 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 17:49 Cal File: xcdg252.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	46456	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.887	(1.000)	177465	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	102228	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	205857	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	198337	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.855	(1.000)	161867	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	52565	25.0000	24.3
189 Caprolactam	55	6.440	6.440	(1.094)	31827	25.0000	21.5
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	197021	25.0000	25.0
187 Atrazine	200	9.695	9.695	(0.980)	46040	25.0000	23.1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Date : 25-JUL-2011 17:49
Client ID: STD025
Sample Info: XCDG252,1,2,STD025
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072511I.b/xcdg252.d

Data File: /chem/gcms/md.i/D072511I.b/xcdg253.d
Report Date: 25-Jul-2011 17:42

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Semivolatile Organic Compounds by GC/MS

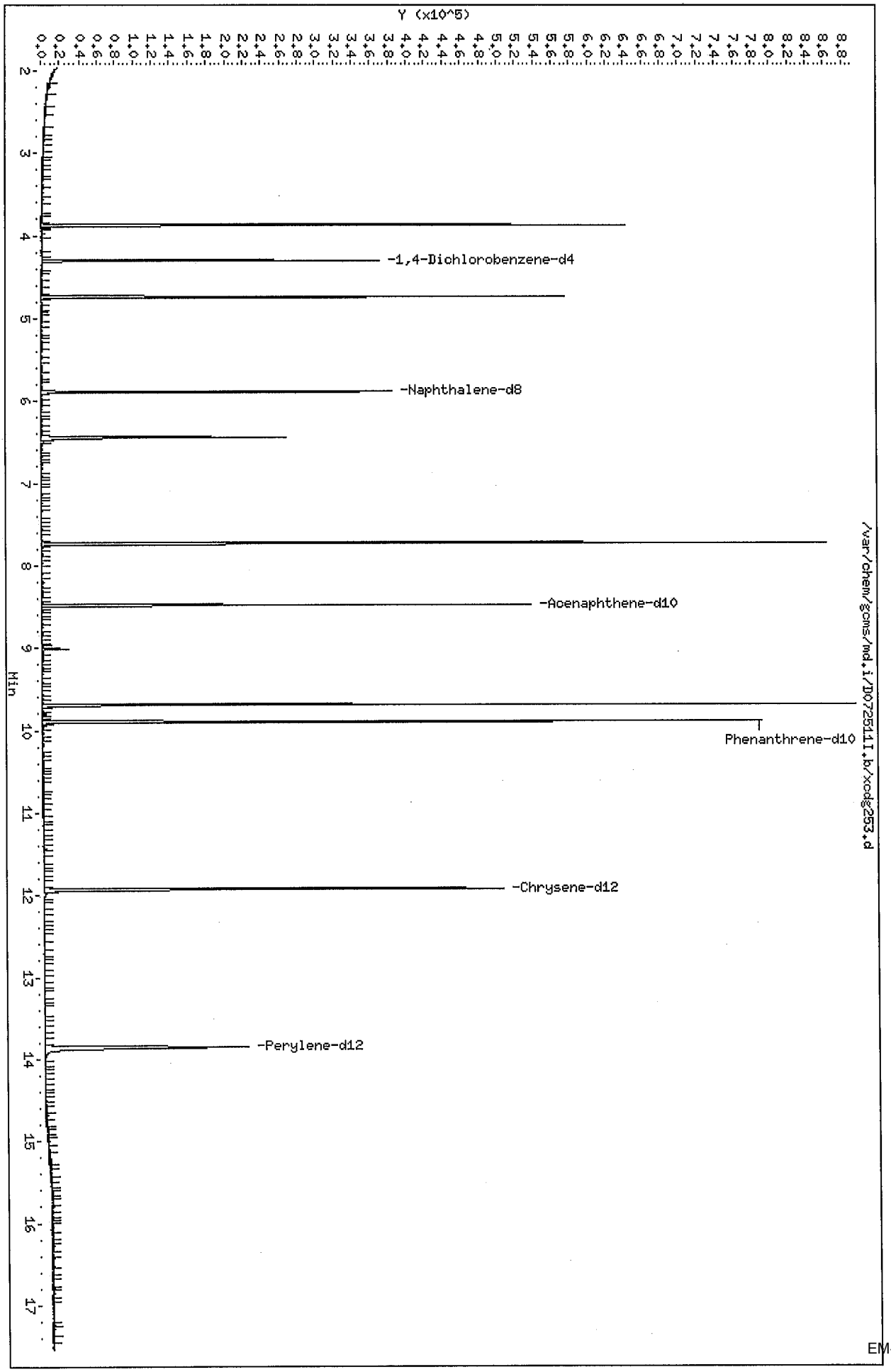
Data file : /chem/gcms/md.i/D072511I.b/xcdg253.d
Lab Smp Id: XCDG253 Client Smp ID: STD040
Inj Date : 25-JUL-2011 17:24
Operator : 60841 Inst ID: md.i
Smp Info : XCDG253,,1,3,,STD040
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 17:42 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 17:24 Cal File: xcdg253.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	47015	20.0000	20.0
*	2 Naphthalene-d8	136	5.888	5.888	(1.000)	179924	20.0000	20.0
*	3 Acenaphthene-d10	164	8.485	8.485	(1.000)	102771	20.0000	20.0
*	4 Phenanthrene-d10	188	9.895	9.895	(1.000)	207702	20.0000	20.0
*	5 Chrysene-d12	240	11.928	11.928	(1.000)	198588	20.0000	20.0
*	6 Perylene-d12	264	13.855	13.855	(1.000)	159970	20.0000	20.0
	184 Benzaldehyde	105	3.872	3.872	(0.900)	86837	40.0000	39.4
	189 Caprolactam	55	6.446	6.446	(1.095)	54789	40.0000	35.3
	188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	318002	40.0000	40.1
	187 Atrazine	200	9.695	9.695	(0.980)	78411	40.0000	38.2


Data File: /var/chem/gcms/md.i/D072511I.b/xcdg253.d
Date : 25-JUL-2011 17:24
Client ID: STD040
Sample Info: XCDG253,,1,3,,STD040
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
/var/chem/gcms/md.i/D072511I.b/xcdg253.d
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
Min

Data File: /chem/gcms/md.i/D072511I.b/xcdg254.d
Report Date: 25-Jul-2011 17:17

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

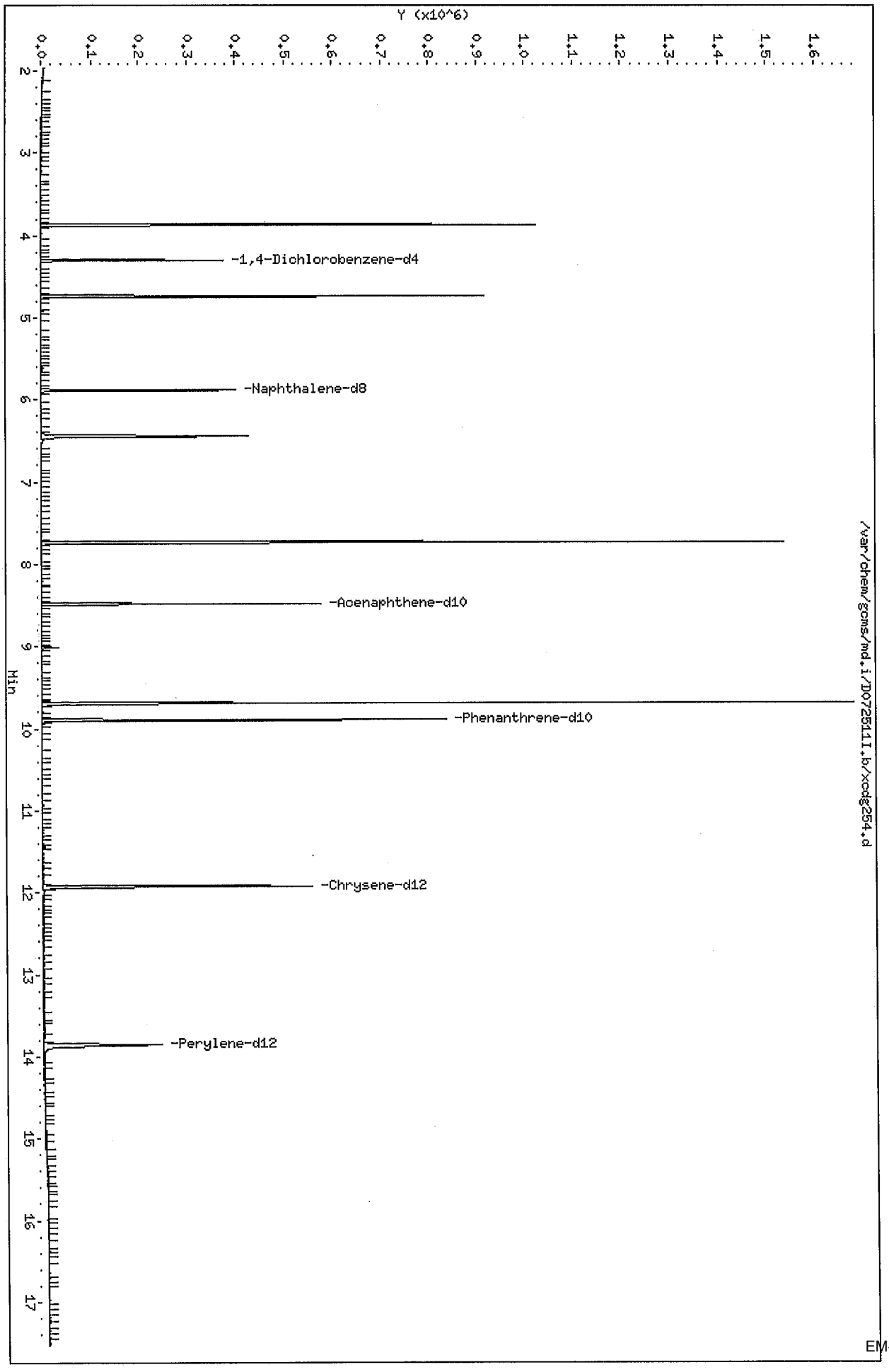
Data file : /chem/gcms/md.i/D072511I.b/xcdg254.d
Lab Smp Id: XCDG254 Client Smp ID: STD060
Inj Date : 25-JUL-2011 16:59
Operator : 60841 Inst ID: md.i
Smp Info : XCDG254,,1,4,,STD060
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 17:17 chemist Quant Type: ISTD
Cal Date : 25-JUL-2011 16:59 Cal File: xcdg254.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	48030	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.887	(1.000)	188212	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.484	(1.000)	110590	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	226068	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	213772	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	168516	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	140459	60.0000	62.0
189 Caprolactam	55	6.451	6.451	(1.096)	98982	60.0000	58.6
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	526047	60.0000	61.7
187 Atrazine	200	9.695	9.695	(0.980)	135138	60.0000	59.6


Data File: /var/chem/gcms/md.i/D072511I.b/xcdg254.d
Date : 25-JUL-2011 16:59
Client ID: STD060
Sample Info: XCDC254,,1,4,,STD060
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072511I.b/xcdg254.d

Data File: /var/chem/gcms/md.i/D072511I.b/xcdg255.d
Report Date: 25-Jul-2011 17:25

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

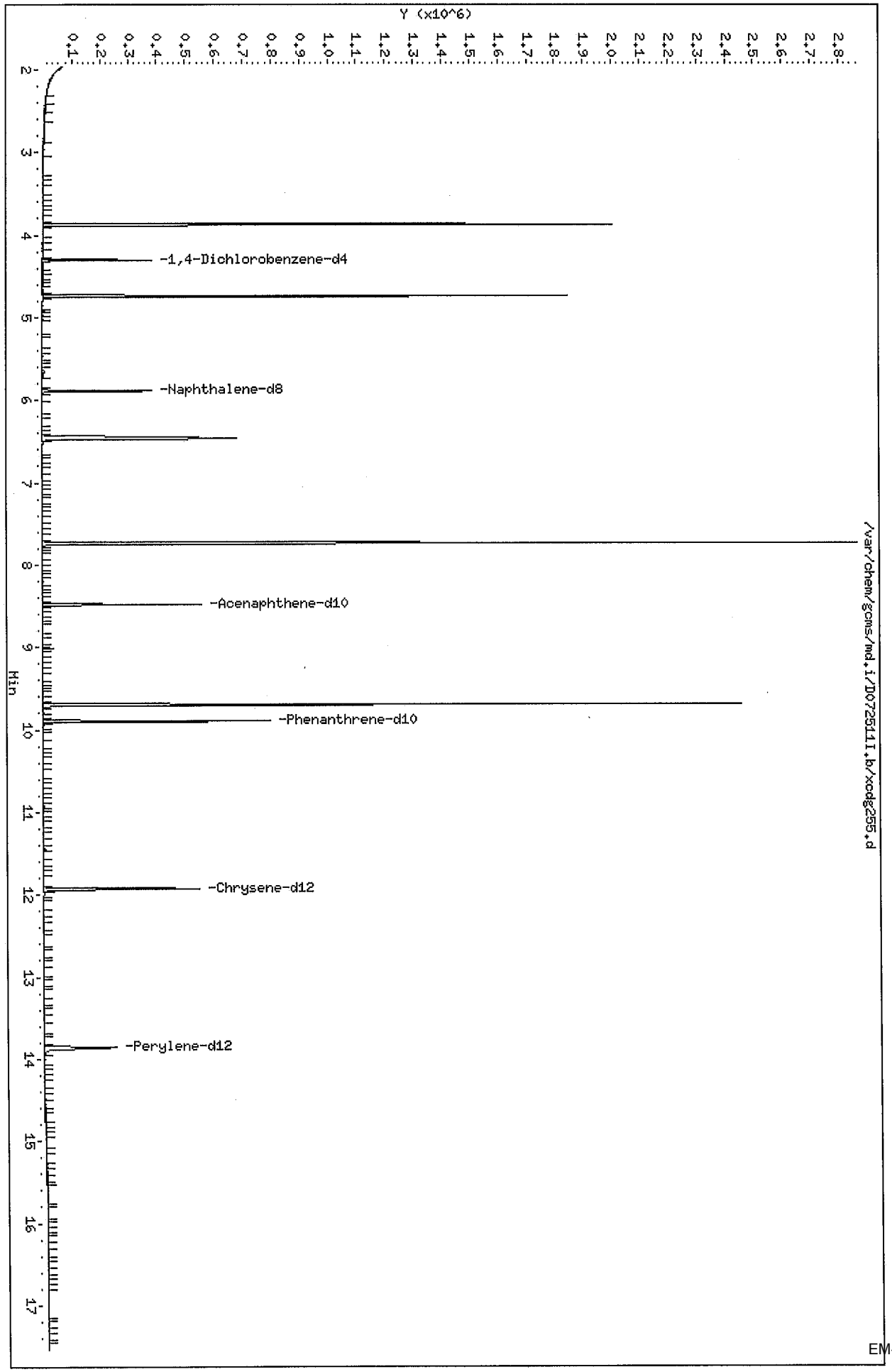
Data file : /var/chem/gcms/md.i/D072511I.b/xcdg255.d
Lab Smp Id: XCDG255 Client Smp ID: STD120
Inj Date : 25-JUL-2011 16:34
Operator : 60841 Inst ID: md.i
Smp Info : XCDG255,,1,5,,STD120
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 17:24 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 16:34 Cal File: xcdg255.d
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	48536	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.887	(1.000)	182312	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.484	(1.000)	108232	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	213920	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	204979	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	167539	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	270282	120.000	118
189 Caprolactam	55	6.463	6.463	(1.098)	194813	120.000	119
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	982887	120.000	118
187 Atrazine	200	9.701	9.701	(0.980)	260362	120.000	121


Data File: /var/chem/gcms/md.i/D0725111.b/xcdg255.d
Date : 25-JUL-2011 16:34
Client ID: STD120
Sample Info: XCDG255,,1,5,STD120
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
/var/chem/gcms/md.i/D0725111.b/xcdg255.d
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12

Data File: /var/chem/gcms/md.i/D072511I.b/xcdg258.d
Report Date: 25-Jul-2011 17:25

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/xcdg258.d
Lab Smp Id: XCDG258 Client Smp ID: STD200
Inj Date : 25-JUL-2011 16:09
Operator : 60841 Inst ID: md.i
Smp Info : XCDG258,,1,8,,STD200
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 17:25 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 16:09 Cal File: xcdg258.d
Als bottle: 12 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

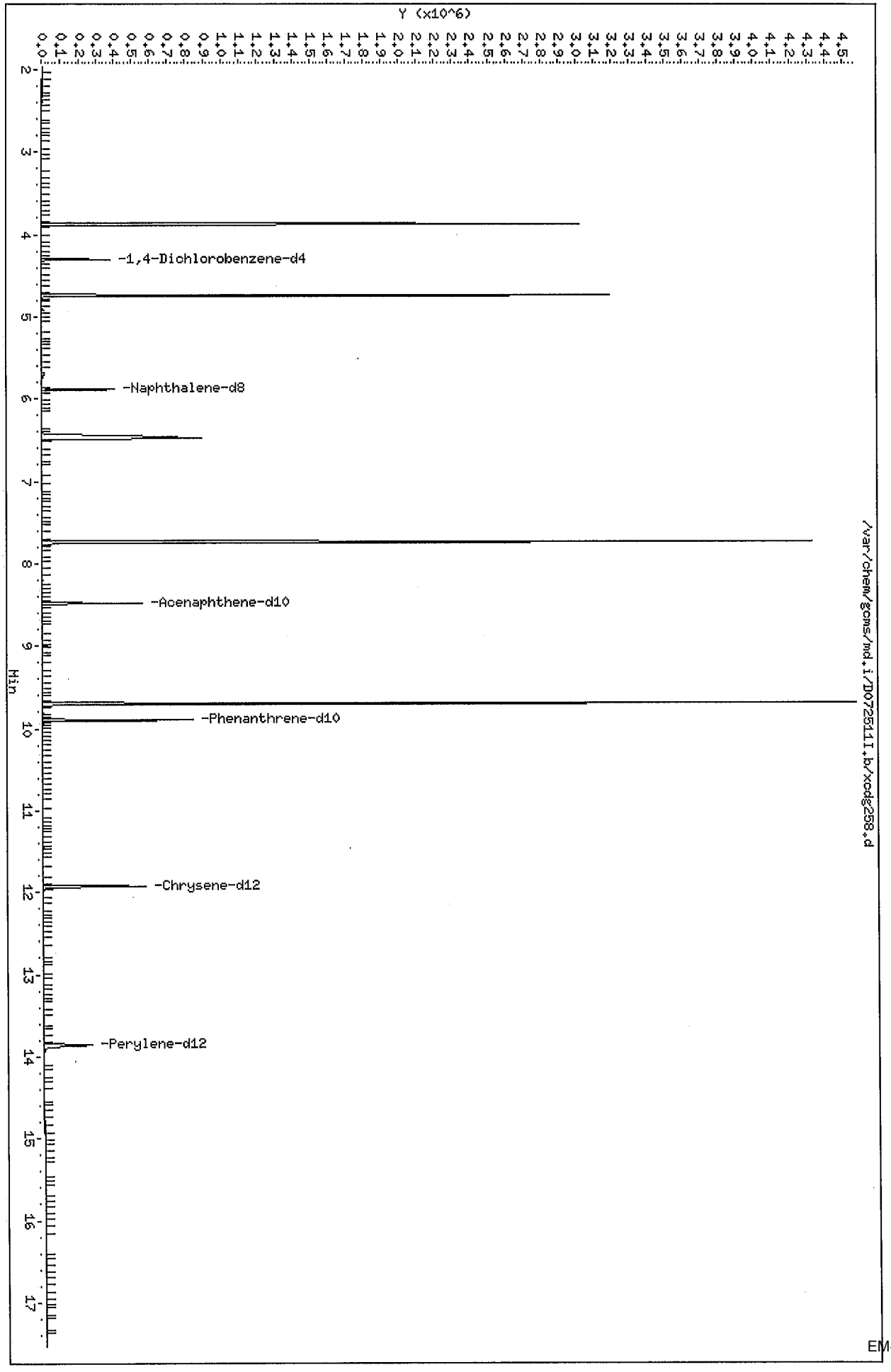
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	49238	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	186321	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	109756	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	227167	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	214896	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	177211	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	455275	200.000	196
189 Caprolactam	55	6.475	6.475	(1.100)	344255	200.000	206(A)
188 1,1'-Biphenyl	154	7.744	7.744	(0.913)	1674703	200.000	198
187 Atrazine	200	9.701	9.701	(0.980)	452729	200.000	199

Data File: /var/chem/gcms/md.i/D072511I.b/xcdg258.d
Report Date: 25-Jul-2011 17:25

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.


Data File: /var/chem/gcms/md.i/D072511I.b/xcdg258.d
Date : 25-JUL-2011 16:09
Client ID: STD200
Sample Info: XCDG258,1,8,,STD200
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
/var/chem/gcms/md.i/D072511I.b/xcdg258.d
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12

Data File: /var/chem/gcms/md.i/D072511I.b/xcvdg25.d
Report Date: 26-Jul-2011 08:34

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072511I.b/xcvdg25.d
Lab Smp Id: XCVDG25 Client Smp ID: 2ND SOURCE
Inj Date : 25-JUL-2011 19:04
Operator : 60841 Inst ID: md.i
Smp Info : XCVDG25,,3,,,2ND SOURCE
Misc Info : D072511I,8270a9,8270x.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072511I.b/8270a9.m
Meth Date : 25-Jul-2011 19:00 mcgeek Quant Type: ISTD
Cal Date : 25-JUL-2011 18:39 Cal File: xcdg256.d
Als bottle: 19 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270x.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	49540	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.887	(1.000)	188164	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	113195	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	229207	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	222090	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.861	(1.000)	186566	20.0000	20.0
184 Benzaldehyde	105	3.872	3.872	(0.900)	135615	57.8894	1930
189 Caprolactam	55	6.446	6.434	(1.095)	89091	55.2130	1840
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	488491	54.4619	1820
187 Atrazine	200	9.695	9.689	(0.980)	134973	60.1743	2000

Data File: /var/chem/gcms/md.i/D072511I.b/xcvdg25.d
Report Date: 26-Jul-2011 08:34

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: xcvdg25.d
Lab Smp Id: XCVDG25
Analysis Type: SV
Quant Type: ISTD
Operator: 60841
Calibration Date: 25-JUL-2011
Calibration Time: 16:59
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: SOIL
Method File: /var/chem/gcms/md.i/D072511I.b/8270a9.m
Misc Info: D072511I,8270a9,8270x.sub

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	48030	24015	96060	49540	3.14
2 Naphthalene-d8	188212	94106	376424	188164	-0.03
3 Acenaphthene-d10	110590	55295	221180	113195	2.36
4 Phenanthrene-d10	226068	113034	452136	229207	1.39
5 Chrysene-d12	213772	106886	427544	222090	3.89
6 Perylene-d12	168516	84258	337032	186566	10.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.93	11.43	12.43	11.93	0.00
6 Perylene-d12	13.86	13.36	14.36	13.86	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

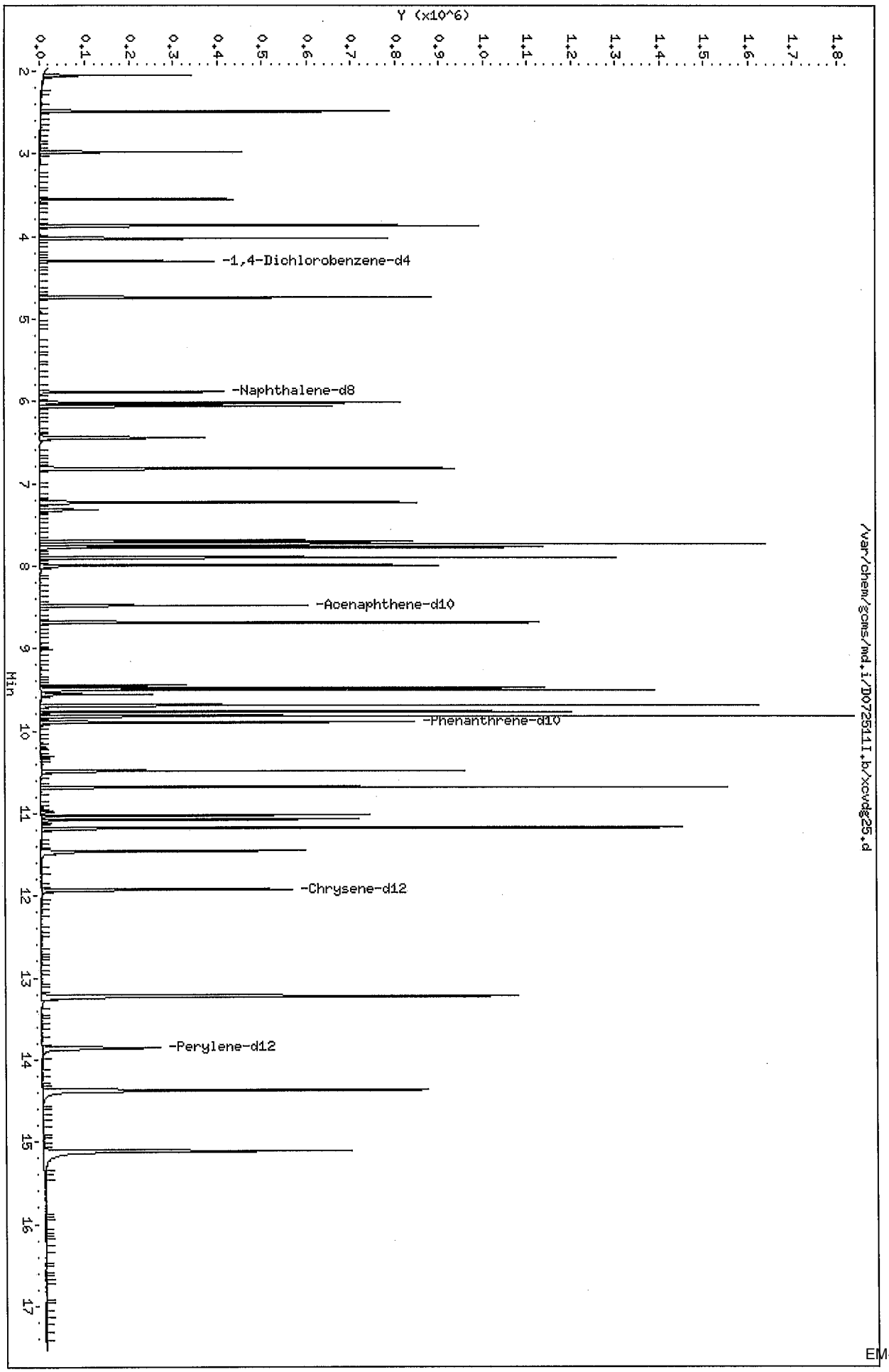
Data File: /var/chem/gcms/md.i/D072511I.b/xcvdg25.d
Report Date: 26-Jul-2011 08:34

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Client SDG: D072511I
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: XCVDG25
Client Smp ID: 2ND SOURCE
Level: LOW
Operator: 60841
Data Type: MS DATA
SampleType: BLANK
SpikeList File: 8270xlcs.spk
Quant Type: ISTD
Sublist File: 8270x.sub
Method File: /var/chem/gcms/md.i/D072511I.b/8270a9.m
Misc Info: D072511I,8270a9,8270x.sub

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
184 Benzaldehyde	2000	1930	96.48	70-130
189 Caprolactam	2000	1840	92.02	70-130
188 1,1'-Biphenyl	2000	1820	90.77	70-130
187 Atrazine	2000	2000	100.29	70-130


Data File: /var/chem/gcms/md.i/D072511I.b/xcvdg25.d
Date : 25-JUL-2011 19:04
Client ID: 2ND SOURCE
Sample Info: XCVD025,3,,,2ND SOURCE
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
Min
/var/chem/gcms/md.i/D072511I.b/xcvdg25.d

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg267.d
Report Date: 26-Jul-2011 14:38

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

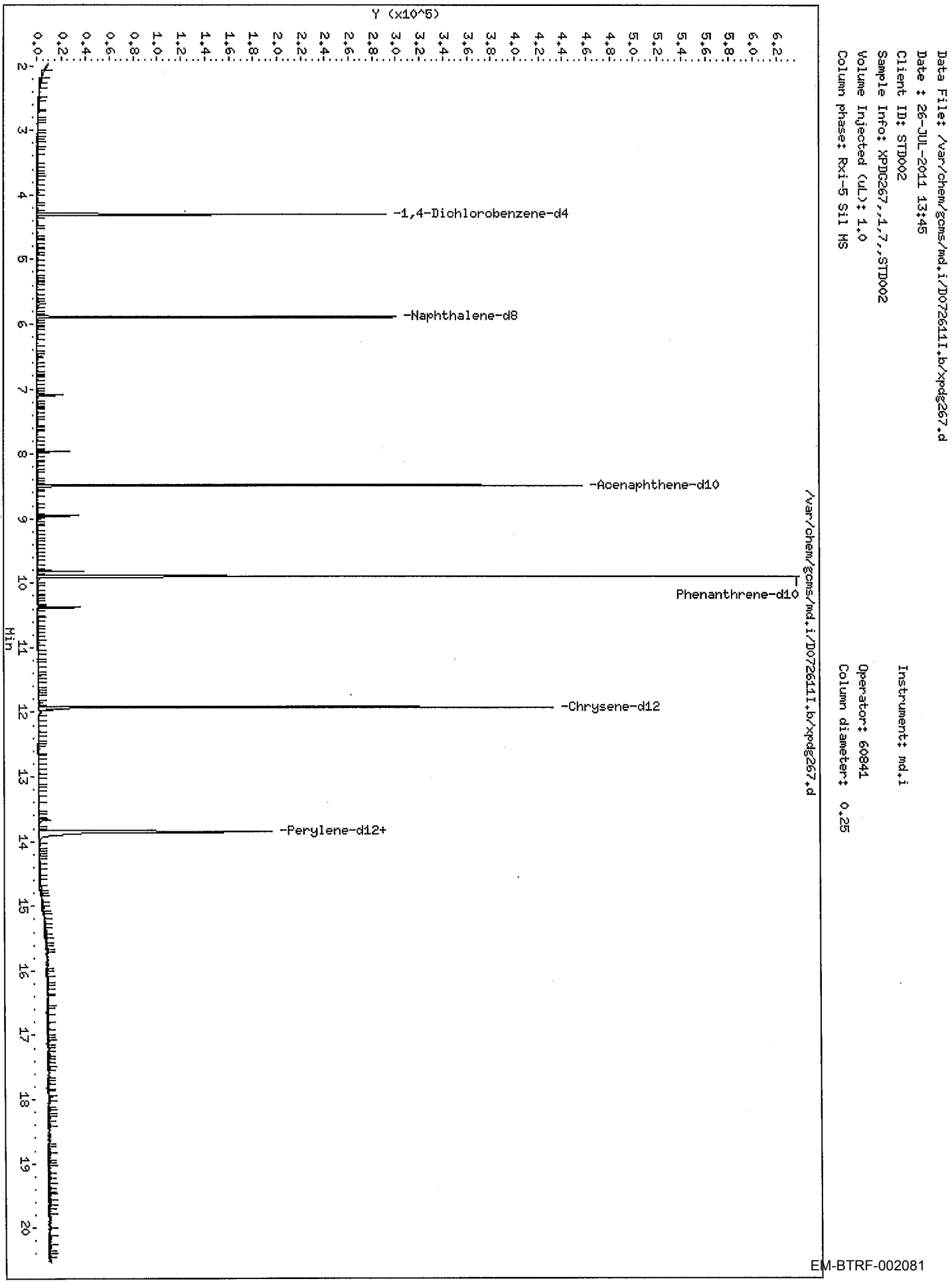
Data file : /var/chem/gcms/md.i/D072611I.b/xpdg267.d
Lab Smp Id: XPDG267 Client Smp ID: STD002
Inj Date : 26-JUL-2011 13:45
Operator : 60841 Inst ID: md.i
Smp Info : XPDG267,,1,7,,STD002
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:38 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 13:45 Cal File: xpdg267.d
Als bottle: 10 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	41591	20.0000	20.0
* 2	Naphthalene-d8	136	5.893	5.893	(1.000)	151215	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	88958	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	173782	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	164289	20.0000	20.0
* 6	Perylene-d12	264	13.849	13.849	(1.000)	136723	20.0000	20.0
197	1-methylnaphthalene	142	7.098	7.098	(1.204)	7806	2.00000	1.71
192	2,6-Dimethylnaphthalene	156	7.962	7.962	(0.938)	6586	2.00000	1.54
193	2,3,5-Trimethylnaphthalene	170	8.955	8.955	(0.905)	5920	2.00000	1.51
194	Dibenzothiopene	184	9.812	9.812	(0.992)	12726	2.00000	1.69
195	1-Methylphenanthrene	192	10.376	10.376	(1.049)	8475	2.00000	1.46
85	Benzo(e)pyrene	252	13.661	13.661	(0.986)	7905	2.00000	1.15
196	Perylene	252	13.896	13.896	(1.003)	11518	2.00000	1.67


Data File: /var/chem/gcms/md.i/D0726411.b/xpdg267.d
Date : 26-JUL-2011 13:45
Client ID: STD002
Sample Info: XPDG267,1.7,,STD002
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12+
/var/chem/gcms/md.i/D0726411.b/xpdg267.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg266.d
Report Date: 26-Jul-2011 14:36

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg266.d
Lab Smp Id: XPDG266 Client Smp ID: STD005
Inj Date : 26-JUL-2011 13:16
Operator : 60841 Inst ID: md.i
Smp Info : XPDG266,,1,6,,STD005
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:36 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 13:16 Cal File: xpdg266.d
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

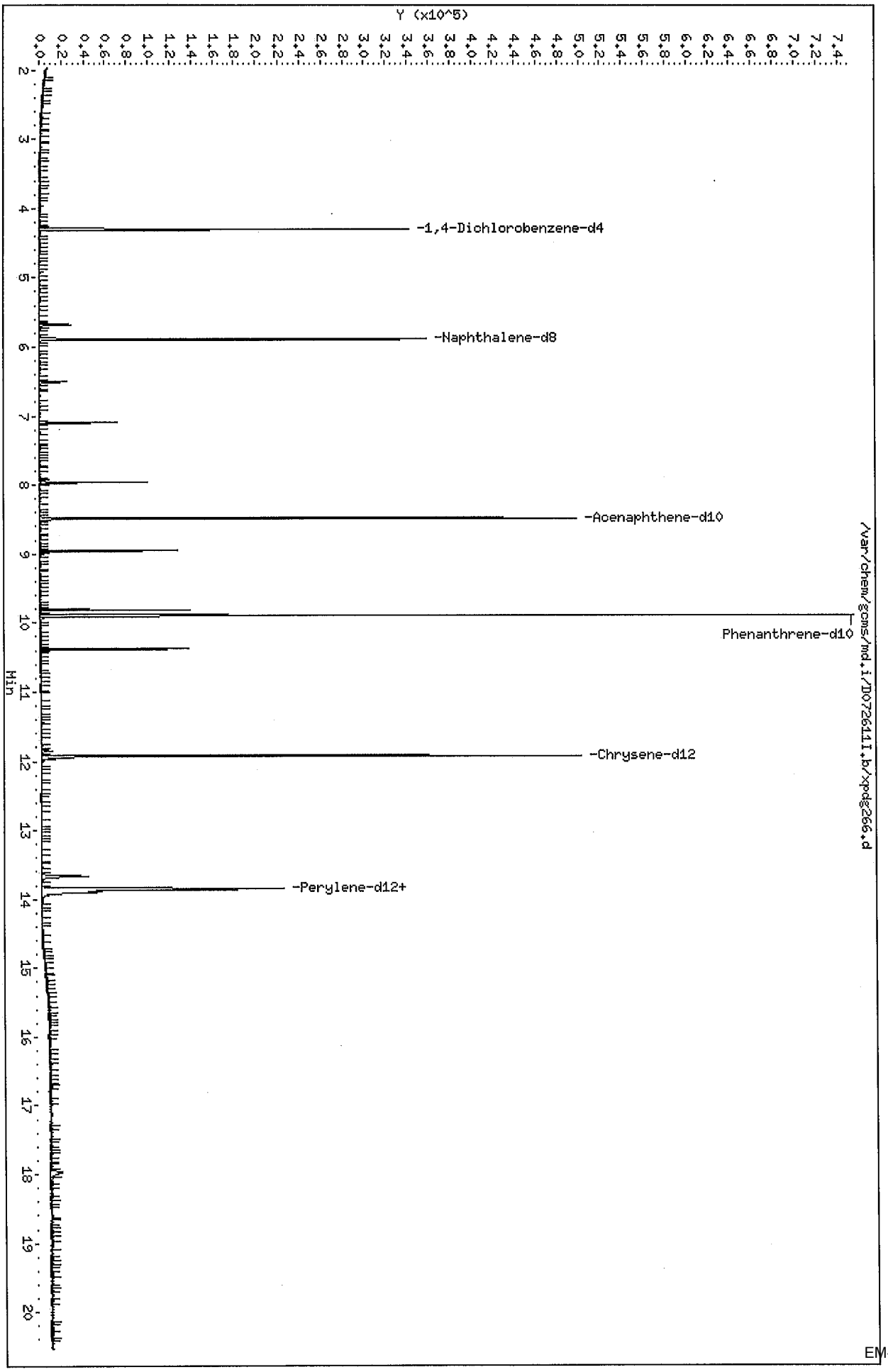
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	46595	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.887	(1.000)	170462	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	98030	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	195957	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	190918	20.0000	20.0
* 6	Perylene-d12	264	13.849	13.849	(1.000)	162701	20.0000	20.0
199	Phentermine	58	5.676	5.676	(0.964)	21491	5.00000	3.52
202	1,4-Phenylenediamine	108	6.504	6.504	(1.105)	9466	5.00000	3.13
197	1-methylnaphthalene	142	7.098	7.098	(1.206)	25370	5.00000	4.92
192	2,6-Dimethylnaphthalene	156	7.961	7.961	(0.938)	21903	5.00000	4.64
193	2,3,5-Trimethylnaphthalene	170	8.954	8.954	(0.905)	20518	5.00000	4.65
194	Dibenzothiopene	184	9.812	9.812	(0.992)	42017	5.00000	4.96
195	1-Methylphenanthrene	192	10.376	10.376	(1.049)	30118	5.00000	4.61
200	3,3'-Dimethoxybenzidine	244	11.845	11.845	(0.994)	2579	5.00000	1.50

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg266.d
Report Date: 26-Jul-2011 14:36

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
85 Benzo(e)pyrene	252	13.661	13.661	(0.986)	32109	5.00000	3.93
196 Perylene	252	13.896	13.896	(1.003)	38203	5.00000	4.65
201 Dibenzo(a,e)pyrene	302	17.968	17.968	(1.297)	9754	5.00000	1.87


Data File: /var/chem/gcms/md.i/D072611I.b/xpdg266.d
Date : 26-JUL-2011 13:16
Client ID: STD005
Sample Info: XPDG266,,1.6,,STD005
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12+
/var/chem/gcms/md.i/D072611I.b/xpdg266.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg261.d
Report Date: 26-Jul-2011 14:35

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg261.d
Lab Smp Id: XPDG261 Client Smp ID: STD010
Inj Date : 26-JUL-2011 12:48
Operator : 60841 Inst ID: md.i
Smp Info : XPDG261,,1,1,,STD010
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:35 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 12:48 Cal File: xpdg261.d
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

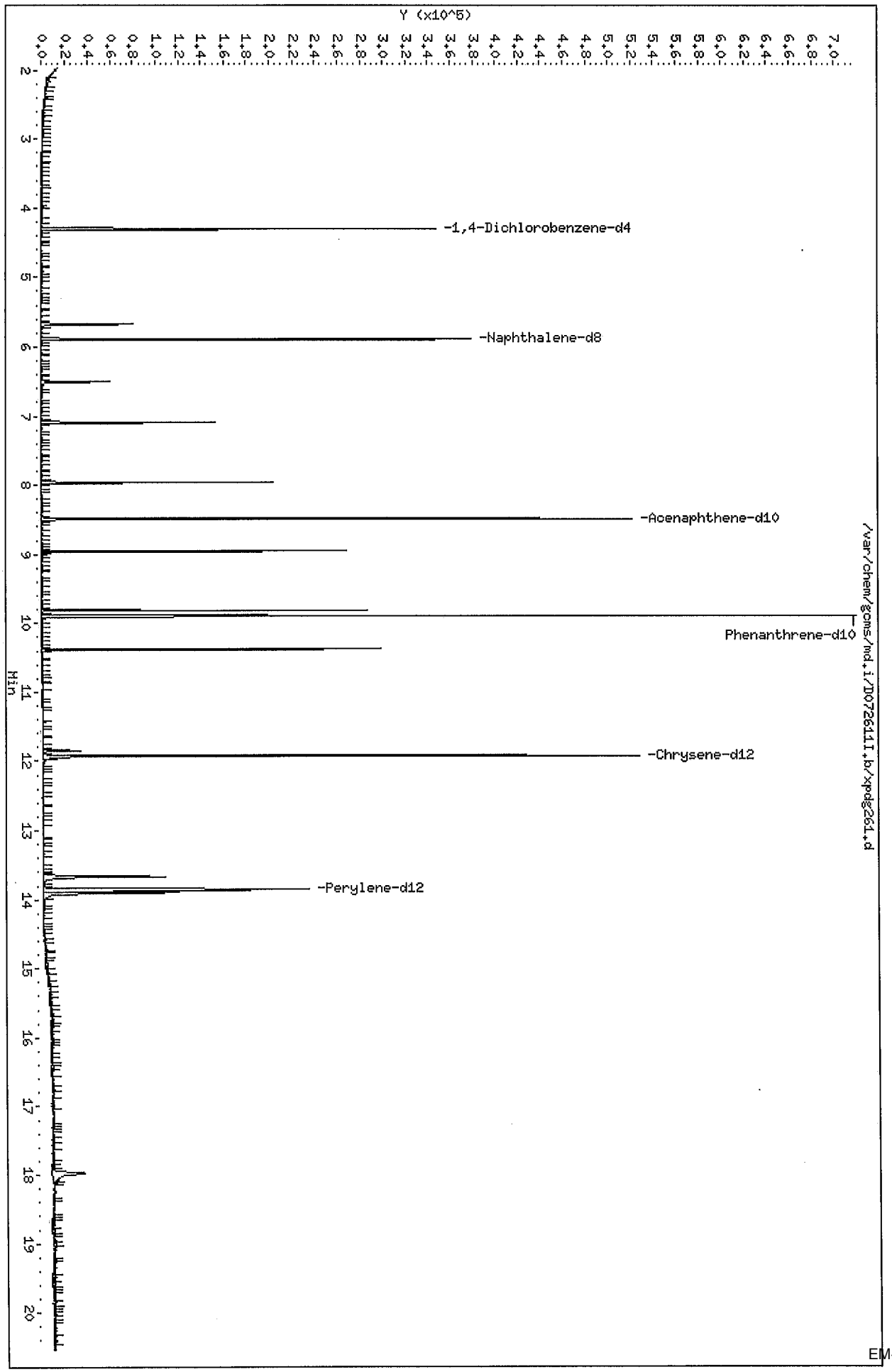
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45912	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	175398	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	102303	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	200033	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	197882	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	169282	20.0000	20.0
199 Phentermine	58	5.670	5.670	(0.963)	50058	10.0000	7.98
202 1,4-Phenylenediamine	108	6.504	6.504	(1.105)	23562	10.0000	7.57
197 1-methylnaphthalene	142	7.092	7.092	(1.205)	50940	10.0000	9.60
192 2,6-Dimethylnaphthalene	156	7.962	7.962	(0.938)	45882	10.0000	9.32
193 2,3,5-Trimethylnaphthalene	170	8.955	8.955	(0.905)	41839	10.0000	9.28
194 Dibenzothiopene	184	9.812	9.812	(0.992)	82880	10.0000	9.59
195 1-Methylphenanthrene	192	10.376	10.376	(1.049)	63184	10.0000	9.48
200 3,3'-Dimethoxybenzidine	244	11.845	11.845	(0.994)	6756	10.0000	3.80

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg261.d
Report Date: 26-Jul-2011 14:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
85 Benzo(e)pyrene	252	13.661	13.661	(0.986)	75507	10.0000	9.98
196 Perylene	252	13.896	13.896	(1.003)	82614	10.0000	9.66
201 Dibenzo(a,e)pyrene	302	17.974	17.974	(1.298)	37049	10.0000	7.10


Data File: /var/chem/gcms/md.i/D072611I.b/xpdg261.d
Date : 26-JUL-2011 12:48
Client ID: STD010
Sample Info: XPDG261,,1,1,,STD010
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/xpdg261.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg262.d
Report Date: 26-Jul-2011 14:34

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg262.d
Lab Smp Id: XPDG262 Client Smp ID: STD025
Inj Date : 26-JUL-2011 12:19
Operator : 60841 Inst ID: md.i
Smp Info : XPDG262,,1,2,,STD025
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:34 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 12:19 Cal File: xpdg262.d
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

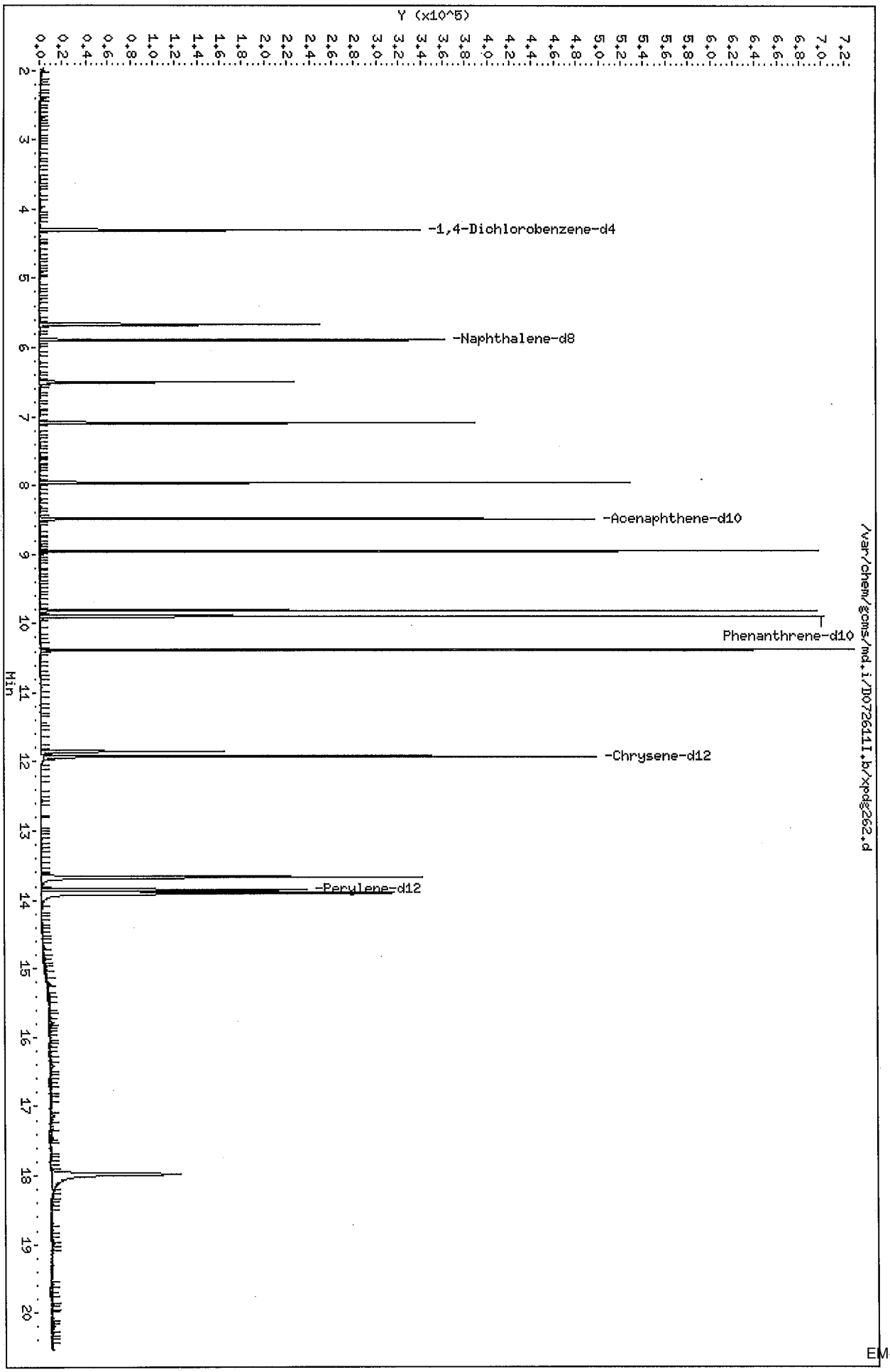
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45742	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.887	(1.000)	170422	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	95785	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	190814	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	194053	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	175418	20.0000	20.0
199	Phentermine	58	5.664	5.664	(0.962)	142951	25.0000	23.4
202	1,4-Phenylenediamine	108	6.498	6.498	(1.104)	69603	25.0000	23.0
197	1-methylnaphthalene	142	7.092	7.092	(1.205)	126731	25.0000	24.6
192	2,6-Dimethylnaphthalene	156	7.962	7.962	(0.938)	118351	25.0000	25.7
193	2,3,5-Trimethylnaphthalene	170	8.954	8.954	(0.905)	108694	25.0000	25.3
194	Dibenzothiopene	184	9.812	9.812	(0.992)	206295	25.0000	25.0
195	1-Methylphenanthrene	192	10.376	10.376	(1.049)	160621	25.0000	25.2
200	3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	31828	25.0000	18.2

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg262.d
Report Date: 26-Jul-2011 14:34

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
85 Benzo(e)pyrene	252	13.667	13.667	(0.986)	216945	25.0000	27.3
196 Perylene	252	13.902	13.902	(1.003)	221511	25.0000	25.0
201 Dibenzo(a,e)pyrene	302	17.979	17.979	(1.298)	129784	25.0000	24.0


Data File: /var/chem/gcms/md.i/D0726411.b/xpdg262.d
Date : 26-JUL-2011 12:19
Client ID: STD025
Sample Info: XPDG262,1.2,,STD025
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726411.b/xpdg262.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg263.d
Report Date: 26-Jul-2011 14:34

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg263.d
Lab Smp Id: XPDG263 Client Smp ID: STD040
Inj Date : 26-JUL-2011 11:50
Operator : 60841 Inst ID: md.i
Smp Info : XPDG263,,1,3,,STD040
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:34 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 11:50 Cal File: xpdg263.d
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

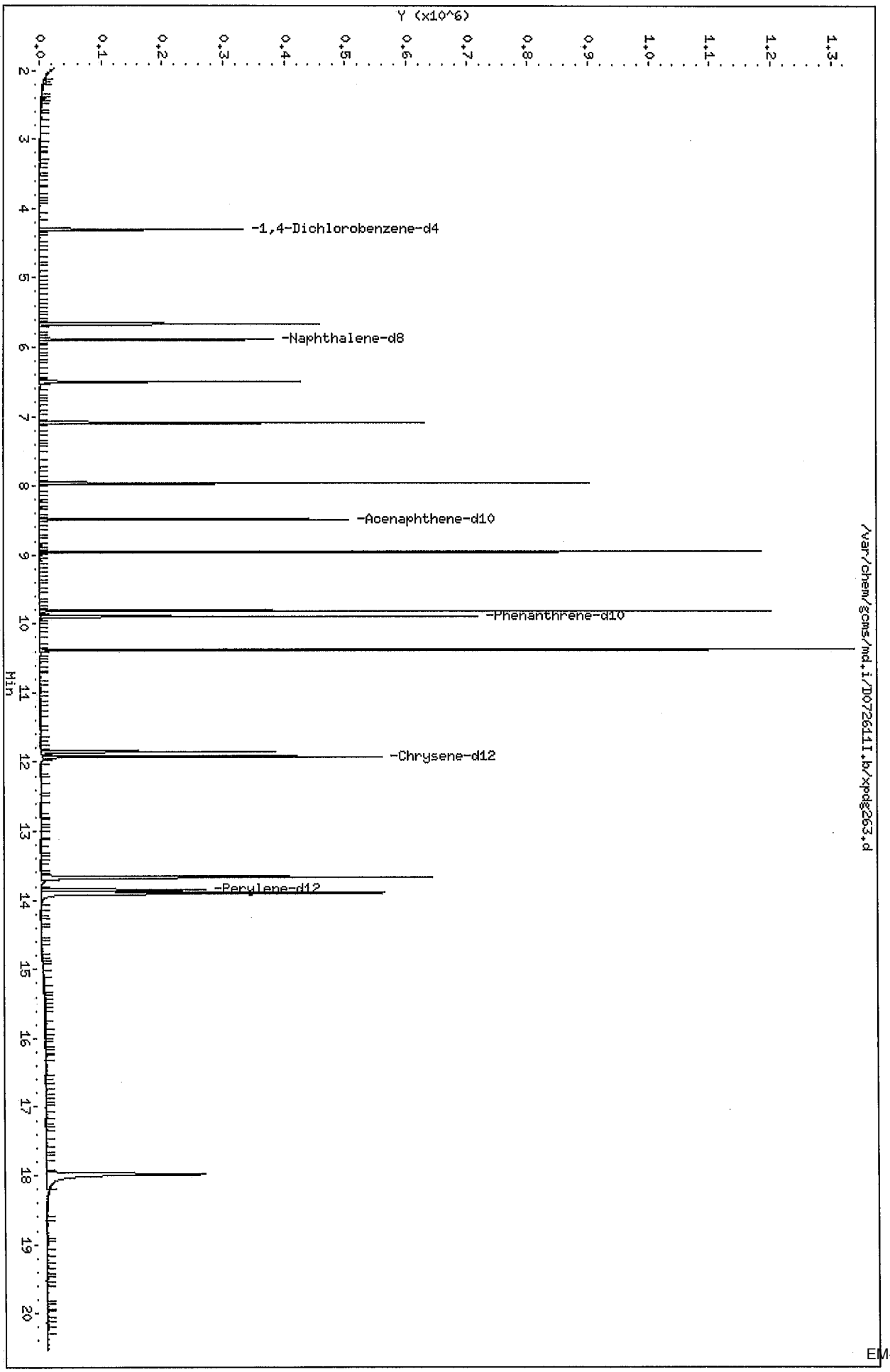
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45135	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	174735	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	102671	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	200284	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	209733	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	191281	20.0000	20.0
199	Phentermine	58	5.664	5.664	(0.962)	255847	40.0000	40.9
202	1,4-Phenylenediamine	108	6.499	6.499	(1.104)	130636	40.0000	42.1
197	1-methylnaphthalene	142	7.092	7.092	(1.205)	211129	40.0000	40.0
192	2,6-Dimethylnaphthalene	156	7.962	7.962	(0.938)	206098	40.0000	41.7
193	2,3,5-Trimethylnaphthalene	170	8.955	8.955	(0.905)	185134	40.0000	41.0
194	Dibenzothiopene	184	9.812	9.812	(0.992)	349372	40.0000	40.4
195	1-Methylphenanthrene	192	10.376	10.376	(1.049)	278168	40.0000	41.7
200	3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	72723	40.0000	38.6

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg263.d
Report Date: 26-Jul-2011 14:34

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
85 Benzo(e)pyrene	252	13.667	13.667	(0.986)	388947	40.0000	44.7
196 Perylene	252	13.902	13.902	(1.003)	392194	40.0000	40.6
201 Dibenzo(a,e)pyrene	302	17.985	17.985	(1.298)	263967	40.0000	44.7

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg263.d
Date : 26-JUL-2011 11:50
Client ID: STD040
Sample Info: XPDG263,1.3,,STD040
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS

Instrument: md.i
Operator: 60841
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D072611I.b/xpdg264.d
Report Date: 26-Jul-2011 14:33

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg264.d
Lab Smp Id: XPDG264 Client Smp ID: STD060
Inj Date : 26-JUL-2011 11:21
Operator : 60841 Inst ID: md.i
Smp Info : XPDG264,,1,4,,STD060
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:33 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 11:21 Cal File: xpdg264.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

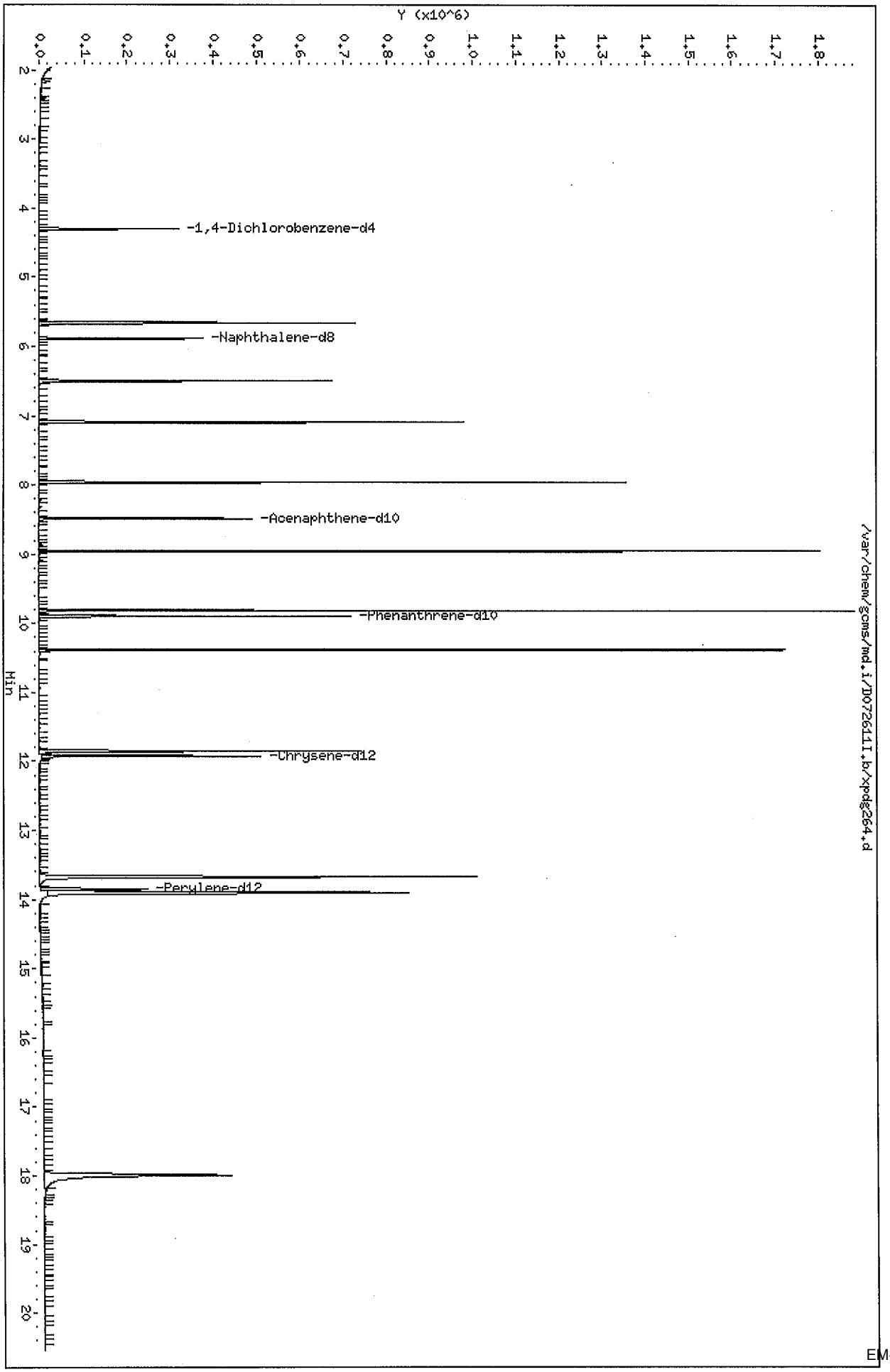
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.307	4.307	(1.000)	45320	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	171005	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	99776	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	194354	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	203342	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	185554	20.0000	20.0
199	Phentermine	58	5.664	5.664	(0.962)	413565	60.0000	67.6
202	1,4-Phenylenediamine	108	6.499	6.499	(1.104)	210453	60.0000	69.4
197	1-methylnaphthalene	142	7.092	7.092	(1.205)	330856	60.0000	64.0
192	2,6-Dimethylnaphthalene	156	7.962	7.962	(0.938)	310100	60.0000	64.6
193	2,3,5-Trimethylnaphthalene	170	8.955	8.955	(0.905)	288695	60.0000	65.9
194	Dibenzothiopene	184	9.812	9.812	(0.992)	535291	60.0000	63.7
195	1-Methylphenanthrene	192	10.382	10.382	(1.049)	427873	60.0000	66.0
200	3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	138099	60.0000	75.5

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg264.d
Report Date: 26-Jul-2011 14:33

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
85 Benzo(e)pyrene	252	13.673	13.673	(0.987)	615497	60.0000	88.4
196 Perylene	252	13.908	13.908	(1.004)	608935	60.0000	64.9
201 Dibenzo(a,e)pyrene	302	17.991	17.991	(1.299)	434937	60.0000	76.0


Data File: /var/chem/gcms/md.i/D072611I.b/xpdg264.d
Date : 26-JUL-2011 11:21
Client ID: STD060
Sample Info: XPDG264,1,4,STD060
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/xpdg264.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg265.d
Report Date: 26-Jul-2011 14:33

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg265.d
Lab Smp Id: XPDG265 Client Smp ID: STD120
Inj Date : 26-JUL-2011 10:52
Operator : 60841 Inst ID: md.i
Smp Info : XPDG265,,1,5,,STD120
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:33 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 10:52 Cal File: xpdg265.d
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

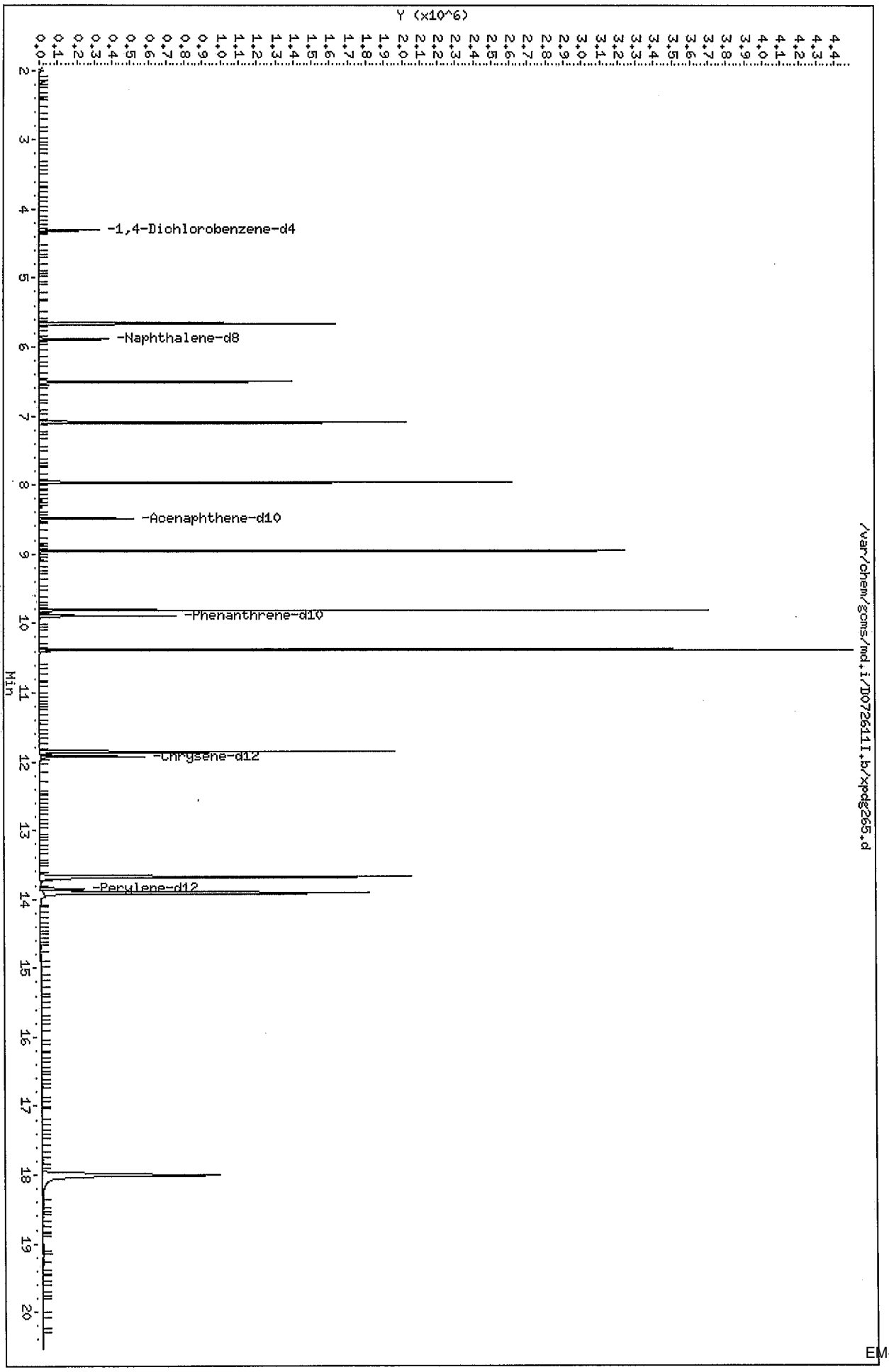
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.307	4.307	(1.000)	47066	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.887	(1.000)	175813	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	101908	20.0000	20.0
* 4	Phenanthrene-d10	188	9.894	9.894	(1.000)	199774	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	213626	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	192639	20.0000	20.0
199	Phentermine	58	5.664	5.664	(0.962)	913462	120.000	145
202	1,4-Phenylenediamine	108	6.504	6.504	(1.105)	460273	120.000	148
197	1-methylnaphthalene	142	7.098	7.098	(1.206)	688681	120.000	130
192	2,6-Dimethylnaphthalene	156	7.967	7.967	(0.939)	667012	120.000	136
193	2,3,5-Trimethylnaphthalene	170	8.954	8.954	(0.905)	615885	120.000	137
194	Dibenzothiopene	184	9.812	9.812	(0.992)	1111274	120.000	129
195	1-Methylphenanthrene	192	10.382	10.382	(1.049)	910114	120.000	137
200	3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	367482	120.000	191

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg265.d
Report Date: 26-Jul-2011 14:33

						AMOUNTS	
	QUANT SIG					CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng/uL)	(ng/uL)
85 Benzo(e)pyrene	252	13.678	13.678	(0.987)	1290598	120.000	147
196 Perylene	252	13.908	13.908	(1.004)	1277425	120.000	131
201 Dibenzo(a,e)pyrene	302	18.009	18.009	(1.300)	995427	120.000	168


Data File: /var/chem/gcms/md.i/D072611I.b/xpdg265.d
Date : 26-JUL-2011 10:52
Client ID: STD120
Sample Info: XPDG265,,1.5,,STD120
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/xpdg265.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg268.d
Report Date: 26-Jul-2011 14:33

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpdg268.d
Lab Smp Id: XPDG268 Client Smp ID: STD200
Inj Date : 26-JUL-2011 10:24
Operator : 60841 Inst ID: md.i
Smp Info : XPDG268,,1,8,,STD200
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:33 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 10:24 Cal File: xpdg268.d
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

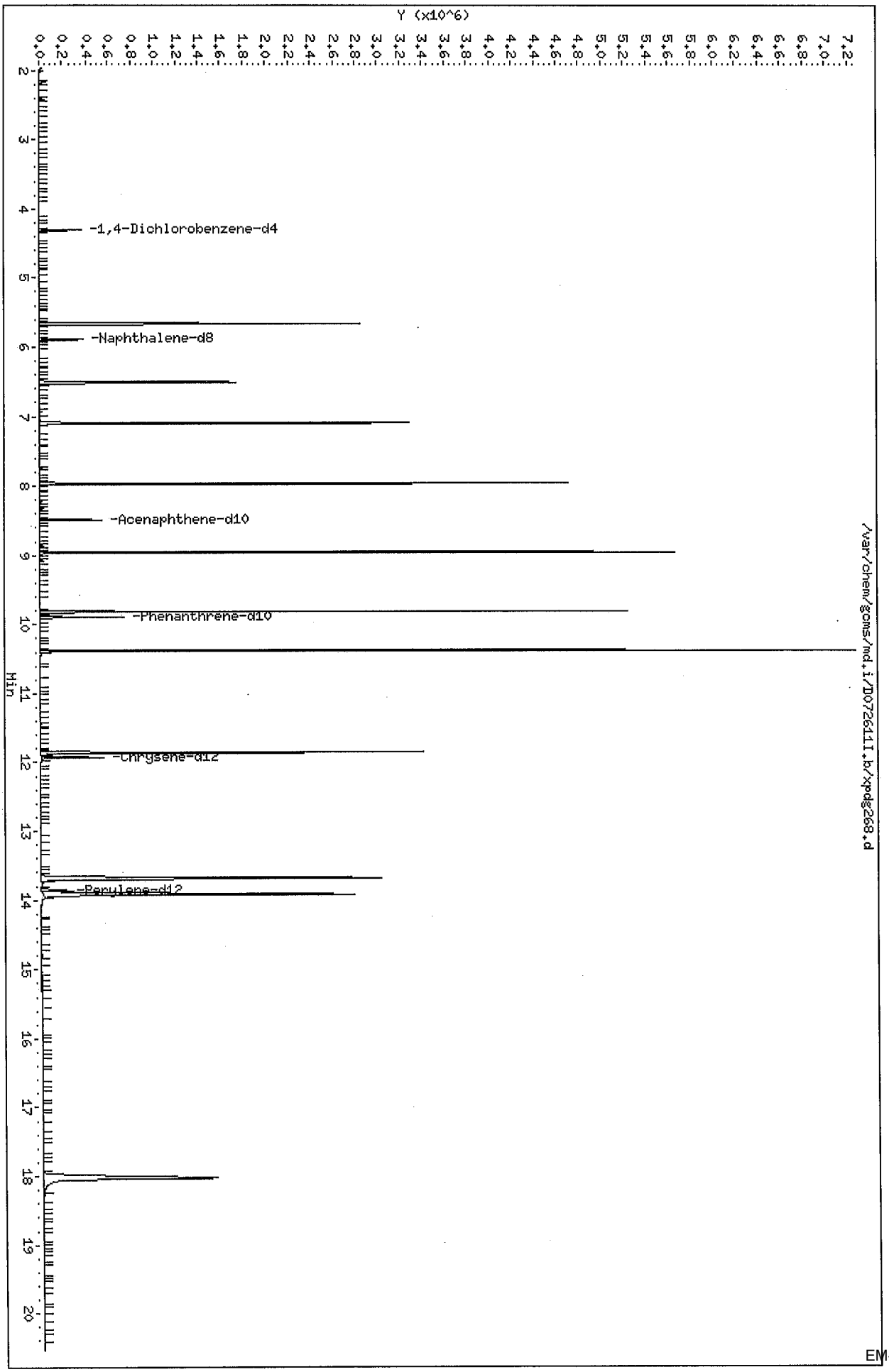
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.307	4.307	(1.000)	47611	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.887	(1.000)	176831	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	105135	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	203778	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	208580	20.0000	20.0
* 6	Perylene-d12	264	13.861	13.861	(1.000)	192837	20.0000	20.0
199	Phentermine	58	5.664	5.664	(0.962)	1516211	200.000	240(A)
202	1,4-Phenylenediamine	108	6.510	6.510	(1.106)	787955	200.000	251(A)
197	1-methylnaphthalene	142	7.098	7.098	(1.206)	1148719	200.000	215(A)
192	2,6-Dimethylnaphthalene	156	7.967	7.967	(0.939)	1106673	200.000	219(A)
193	2,3,5-Trimethylnaphthalene	170	8.960	8.960	(0.906)	1019397	200.000	222(A)
194	Dibenzothiopene	184	9.818	9.818	(0.992)	1858971	200.000	211(A)
195	1-Methylphenanthrene	192	10.382	10.382	(1.049)	1502921	200.000	221(A)
200	3,3'-Dimethoxybenzidine	244	11.857	11.857	(0.995)	665596	200.000	355(A)

Data File: /var/chem/gcms/md.i/D072611I.b/xpdg268.d
Report Date: 26-Jul-2011 14:33

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
85 Benzo(e)pyrene	252	13.690	13.690	(0.988)	2160425	200.000	246(A)
196 Perylene	252	13.919	13.919	(1.004)	2110555	200.000	217(A)
201 Dibenzo(a,e)pyrene	302	18.026	18.026	(1.301)	1689543	200.000	284(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.


Data File: /var/chem/gcms/md.i/D072611I.b/xpdg268.d
Date : 26-JUL-2011 10:24
Client ID: STD200
Sample Info: XPDG268,1.8,,STD200
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/xpdg268.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Report Date: 26-Jul-2011 14:50

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Lab Smp Id: XPVDG26 Client Smp ID: 2ND SOURCE
Inj Date : 26-JUL-2011 14:14
Operator : 60841 Inst ID: md.i
Smp Info : XPVDG26,,3,,,2ND SOURCE
Misc Info : D072611I,8270a9,pahextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 14:45 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 13:45 Cal File: xpdg267.d
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pahextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	46663	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.893	(1.000)	180294	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.484	(1.000)	106683	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	210642	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	225651	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.849	(1.000)	208690	20.0000	20.0
199 Phentermine	58	5.664	5.682	(0.962)	407919	55.7879	1860
197 1-methylnaphthalene	142	7.092	7.098	(1.205)	363847	66.7293	2220
192 2,6-Dimethylnaphthalene	156	7.961	7.962	(0.938)	344779	67.1309	2240
193 2,3,5-Trimethylnaphthalene	170	8.954	8.955	(0.905)	327242	68.9528	2300
194 Dibenzothiopene	184	9.812	9.812	(0.992)	602921	66.2458	2210
195 1-Methylphenanthrene	192	10.382	10.376	(1.049)	488400	69.5671	2320
200 3,3'-Dimethoxybenzidine	244	11.851	11.845	(0.994)	124498	50.0344	1670
85 Benzo(e)pyrene	252	13.672	13.661	(0.987)	652160	62.2318	2070

Data File: /var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Report Date: 26-Jul-2011 14:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/Kg)
196 Perylene	252	13.902	13.896	(1.003)	675484	64.0417	2130
201 Dibenzo(a,e)pyrene	302	17.997	17.962	(1.299)	497332	59.2179	1970

Data File: /var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Report Date: 26-Jul-2011 14:50

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: xpvdg26.d
Lab Smp Id: XPVDG26
Analysis Type: SV
Quant Type: ISTD
Operator: 60841
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,pahextra.sub

Calibration Date: 26-JUL-2011
Calibration Time: 11:21
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	45320	22660	90640	46663	2.96
2 Naphthalene-d8	171005	85502	342010	180294	5.43
3 Acenaphthene-d10	99776	49888	199552	106683	6.92
4 Phenanthrene-d10	194354	97177	388708	210642	8.38
5 Chrysene-d12	203342	101671	406684	225651	10.97
6 Perylene-d12	185554	92777	371108	208690	12.47

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.31	3.81	4.81	4.30	-0.14
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

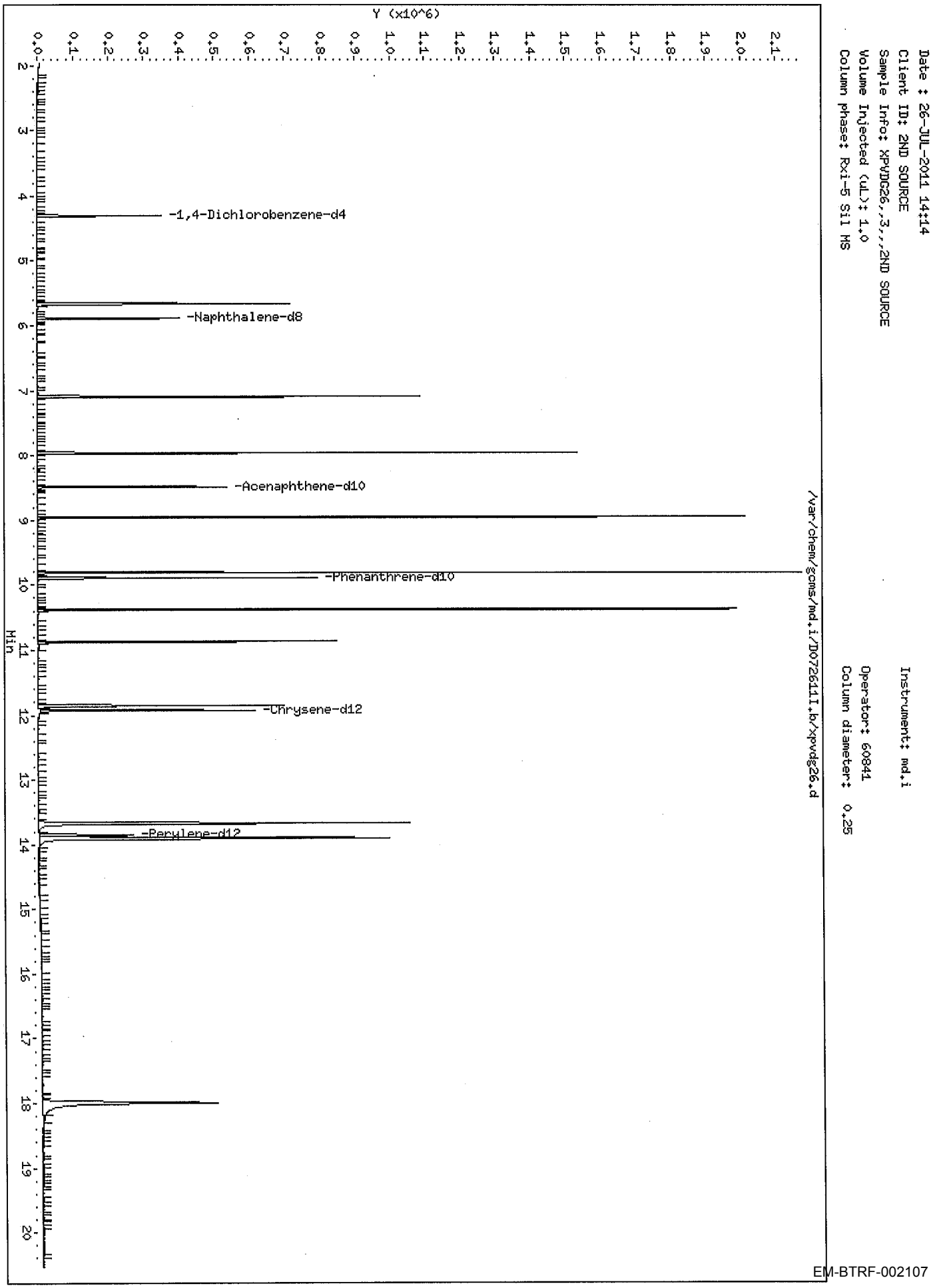
Data File: /var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Report Date: 26-Jul-2011 14:50

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Client SDG: D072611I
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: XPVDG26
Client Smp ID: 2ND SOURCE
Level: LOW
Operator: 60841
Data Type: MS DATA
SampleType: BLANK
SpikeList File: pahextra.spk
Quant Type: ISTD
Sublist File: pahextra.sub
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,pahextra.sub

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
197 1-methylnaphthalen	2000	2220	111.22	70-130
192 2,6-Dimethylnaphth	2000	2240	111.88	70-130
193 2,3,5-Trimethylnap	2000	2300	114.92	70-130
194 Dibenzothiopene	2000	2210	110.41	70-130
195 1-Methylphenanthre	2000	2320	115.95	70-130
85 Benzo(e)pyrene	2000	2070	103.72	70-130
196 Perylene	2000	2130	106.74	70-130
199 Phentermine	2000	1860	92.98	70-130
202 1,4-Phenylenediam	~~2000~~ NR	0.00	*	70-130
200 3,3'-Dimethoxybenz	2000	1670	83.39	70-130
201 Dibenzo(a,e)pyrene	2000	1970	98.70	70-130


Data File: /var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Date : 26-JUL-2011 14:14
Client ID: 2ND SOURCE
Sample Info: XPVDG26,,3,,,2ND SOURCE
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/xpvdg26.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 08:49

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Lab Smp Id: A9VDG26 Client Smp ID: 2ND SOURCE
Inj Date : 26-JUL-2011 18:07
Operator : 60841 Inst ID: md.i
Smp Info : A9VDG26,,3,,,2ND SOURCE
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 27-Jul-2011 08:43 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pahextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56568	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.888	(1.000)	221010	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.485	(1.000)	126694	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	251289	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.922	(1.000)	260162	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.855	(1.000)	228234	20.0000	20.0
202 1,4-Phenylenediamine	108	6.504	6.504	(1.105)	245175	54.5117	1820

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 08:49

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: a9vdg26.d
Lab Smp Id: A9VDG26
Analysis Type: SV
Quant Type: ISTD
Operator: 60841
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,appdx9.sub

Calibration Date: 26-JUL-2011
Calibration Time: 15:34
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	44644	22322	89288	56568	26.71
2 Naphthalene-d8	172857	86428	345714	221010	27.86
3 Acenaphthene-d10	101300	50650	202600	126694	25.07
4 Phenanthrene-d10	197263	98632	394526	251289	27.39
5 Chrysene-d12	205125	102562	410250	260162	26.83
6 Perylene-d12	176143	88072	352286	228234	29.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.93	0.05
6 Perylene-d12	13.85	13.35	14.35	13.85	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

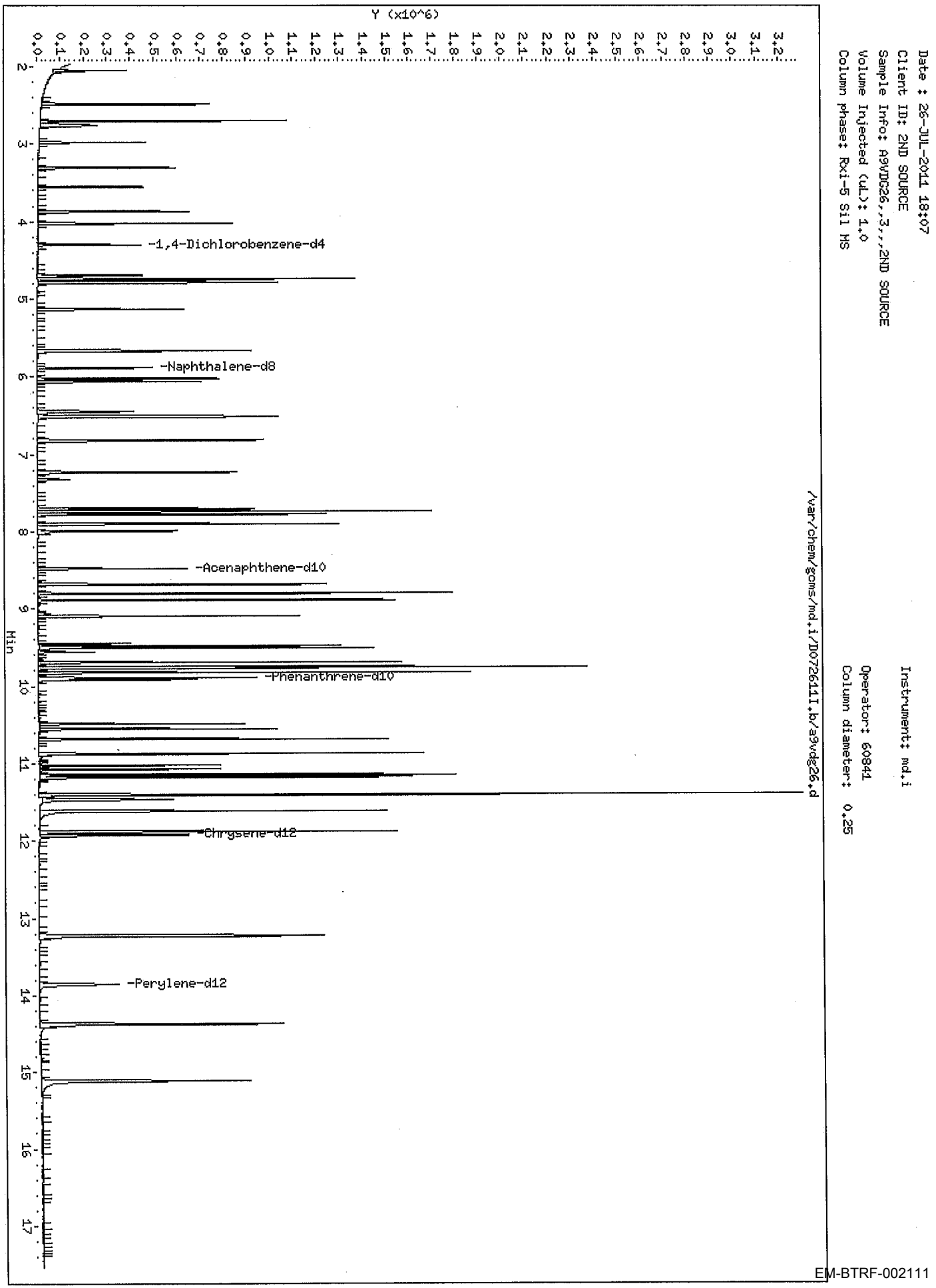
Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 08:49

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Client SDG: D072611I
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: A9VDG26
Client Smp ID: 2ND SOURCE
Level: LOW
Operator: 60841
Data Type: MS DATA
SampleType: BLANK
SpikeList File: pahextra.spk
Quant Type: ISTD
Sublist File: pahextra.sub
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,appdx9.sub

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
197 1-methylnaphthale	~~2000~~	0.00	*	70-130
192 2,6-Dimethylnapht	2000	0.00	*	70-130
193 2,3,5-Trimethylna	2000	0.00	*	70-130
194 Dibenzothiopene	2000	0.00	*	70-130
195 1-Methylphenanthr	2000	0.00	*	70-130
85 Benzo(e)pyrene	2000	0.00	*	70-130
196 Perylene	2000	0.00	*	70-130
199 Phentermine	~~2000~~	0.00	*	70-130
202 1,4-Phenylenediami	2000	1820	90.85	70-130
200 3,3'-Dimethoxyben	~~2000~~	0.00	*	70-130
201 Dibenzo(a,e)pyrene	~~2000~~	0.00	*	70-130


Data File: /var/chem/gcms/md.i/D0726111.b/a9vdg26.d
Date : 26-JUL-2011 18:07
Client ID: 2ND SOURCE
Sample Info: A9VDG26,,3,,,2ND SOURCE
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
/var/chem/gcms/md.i/D0726111.b/a9vdg26.d
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12

Data File: /chem/gcms/md.i/D072611I.b/a9dg267.d
Report Date: 26-Jul-2011 18:00

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072611I.b/a9dg267.d
Lab Smp Id: A9DG267 Client Smp ID: STD002
Inj Date : 26-JUL-2011 17:42
Operator : 60841 Inst ID: md.i
Smp Info : A9DG267,,1,7,,STD002
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 18:00 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

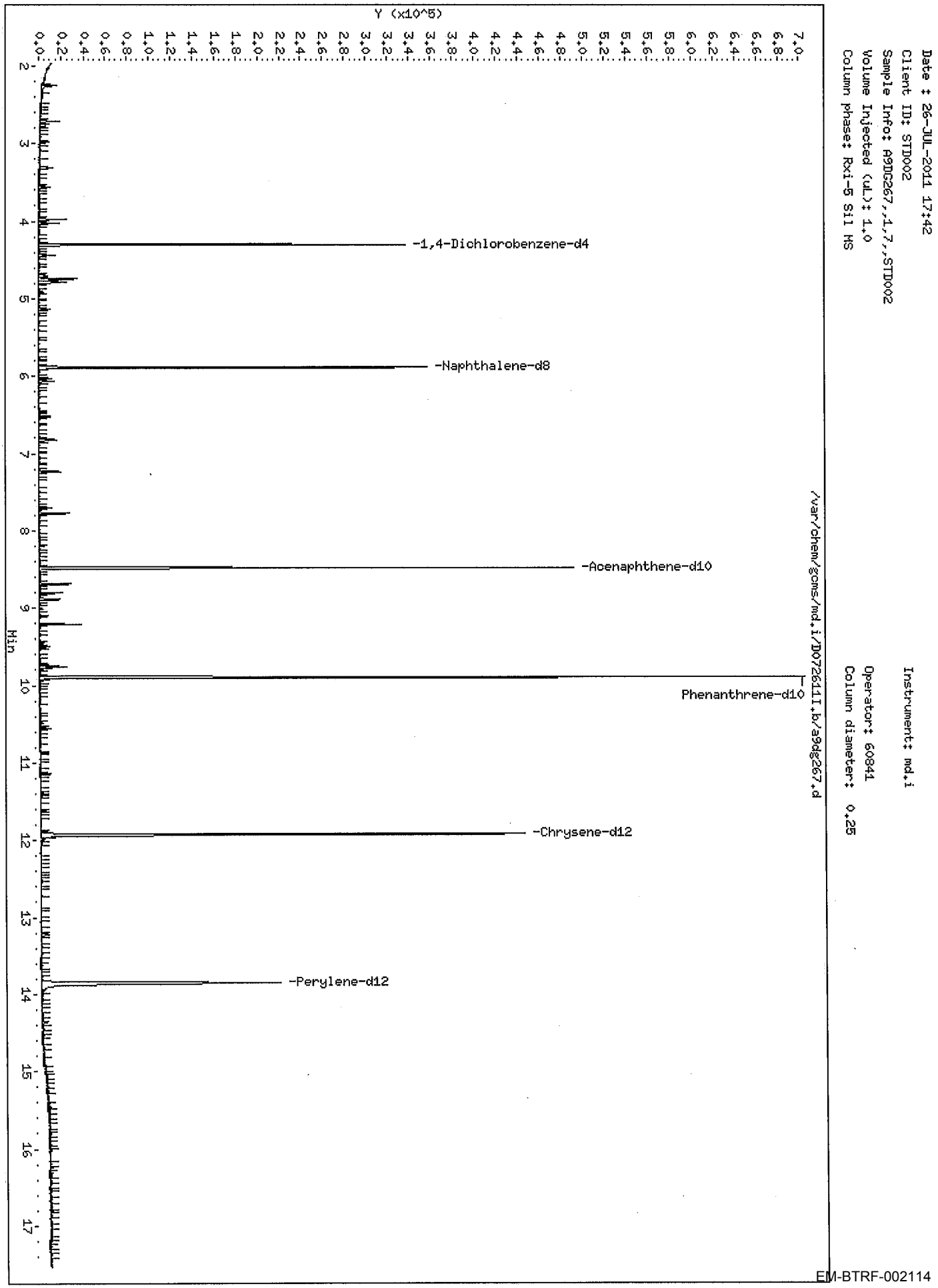
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	43350	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	168416	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	94140	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	192408	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	184616	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	150444	20.0000	20.0
176	2-Picoline	93	2.715	2.715	(0.631)	4256	2.00000	1.69
86	N-nitrosomethylethylamine	42	2.768	2.768	(0.643)	3456	2.00000	1.85
87	Methyl methanosulfonate	80	2.979	2.979	(0.693)	2960	2.00000	1.91
88	N-nitrosodiethylamine	102	3.308	3.308	(0.769)	1790	2.00000	1.50
89	Ethyl methanosulfonate	79	3.555	3.555	(0.826)	3232	2.00000	1.74
90	Pentachloroethane	167	4.031	4.031	(0.937)	1874	2.00000	1.68
91	acetophenone	105	4.742	4.742	(1.102)	6146	2.00000	1.66
92	m-cresol	108	4.754	4.754	(1.105)	2858	2.00000	1.16

Data File: /chem/gcms/md.i/D072611I.b/a9dg267.d
Report Date: 26-Jul-2011 18:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.707	4.707	(1.094)	1556	2.00000	1.19
94	n-nitrosomorpholine	56	4.748	4.748	(1.104)	3597	2.00000	1.74
95	o-toluidine	106	4.783	4.783	(1.112)	6959	2.00000	1.74
96	n-nitrosopiperidine	42	5.141	5.141	(0.873)	3332	2.00000	1.41
97	2,6-dichlorophenol	162	6.023	6.023	(1.023)	2377	2.00000	1.06
98	hexachloropropene	213	6.064	6.064	(1.030)	2692	2.00000	1.52
99	N-nitro-di-n-butylamine	84	6.522	6.522	(1.108)	1936	2.00000	1.25
100	Isosafrole	162	6.822	6.822	(1.159)	2845	2.00000	1.38
101	1,2,4,5-tetrachlorobenzene	216	7.233	7.233	(1.229)	5134	2.00000	1.84
102	safrole	162	7.697	7.697	(0.907)	2456	2.00000	1.30
103	1-chloronaphthalene	162	7.774	7.774	(0.916)	9184	2.00000	1.85
104	m-dinitrobenzene	168	8.203	8.203	(0.967)	390	2.00000	0.570
105	pentachlorobenzene	250	8.690	8.690	(1.024)	4641	2.00000	2.00
106	1-naphthylamine	143	8.802	8.802	(1.037)	6386	2.00000	1.24
107	2-naphthylamine	143	8.890	8.890	(1.048)	7113	2.00000	1.32
109	5-nitro-o-toluidine	152	9.096	9.096	(1.072)	883	2.00000	0.564
110	diphenylamine	169	9.207	9.207	(0.931)	7808	2.00000	1.38
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	1085	2.00000	0.509
112	phenacetin	108	9.501	9.501	(0.960)	1706	2.00000	0.602
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	7283	2.00000	1.05
177	Methapyrilene HCL	97	10.553	10.553	(1.066)	1890	2.00000	1.06
84	Benzidine	184	10.870	10.870	(1.099)	3189	2.00000	0.473
116	p-(dimethylamino)azobenzene	120	11.146	11.146	(1.126)	1996	2.00000	0.682
117	o-tolidine	212	11.399	11.399	(1.152)	2864	2.00000	0.440
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.109)	2606	2.00000	0.621
118	2-acetylaminofluorene	181	11.604	11.604	(0.973)	1368	2.00000	0.375
120	3-methylcholanthrene	268	14.360	14.360	(1.036)	2029	2.00000	0.514


Data File: /var/chem/gcms/md.i/D0726111.b/a9dg267.d
Date : 26-JUL-2011 17:42
Client ID: STD002
Sample Info: A9DG267,1,7,,STD002
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
Min
/var/chem/gcms/md.i/D0726111.b/a9dg267.d

Data File: /chem/gcms/md.i/D072611I.b/a9dg266.d
Report Date: 26-Jul-2011 17:35

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072611I.b/a9dg266.d
Lab Smp Id: A9DG266 Client Smp ID: STD005
Inj Date : 26-JUL-2011 17:17
Operator : 60841 Inst ID: md.i
Smp Info : A9DG266,,1,6,,STD005
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 17:35 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 17:17 Cal File: a9dg266.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

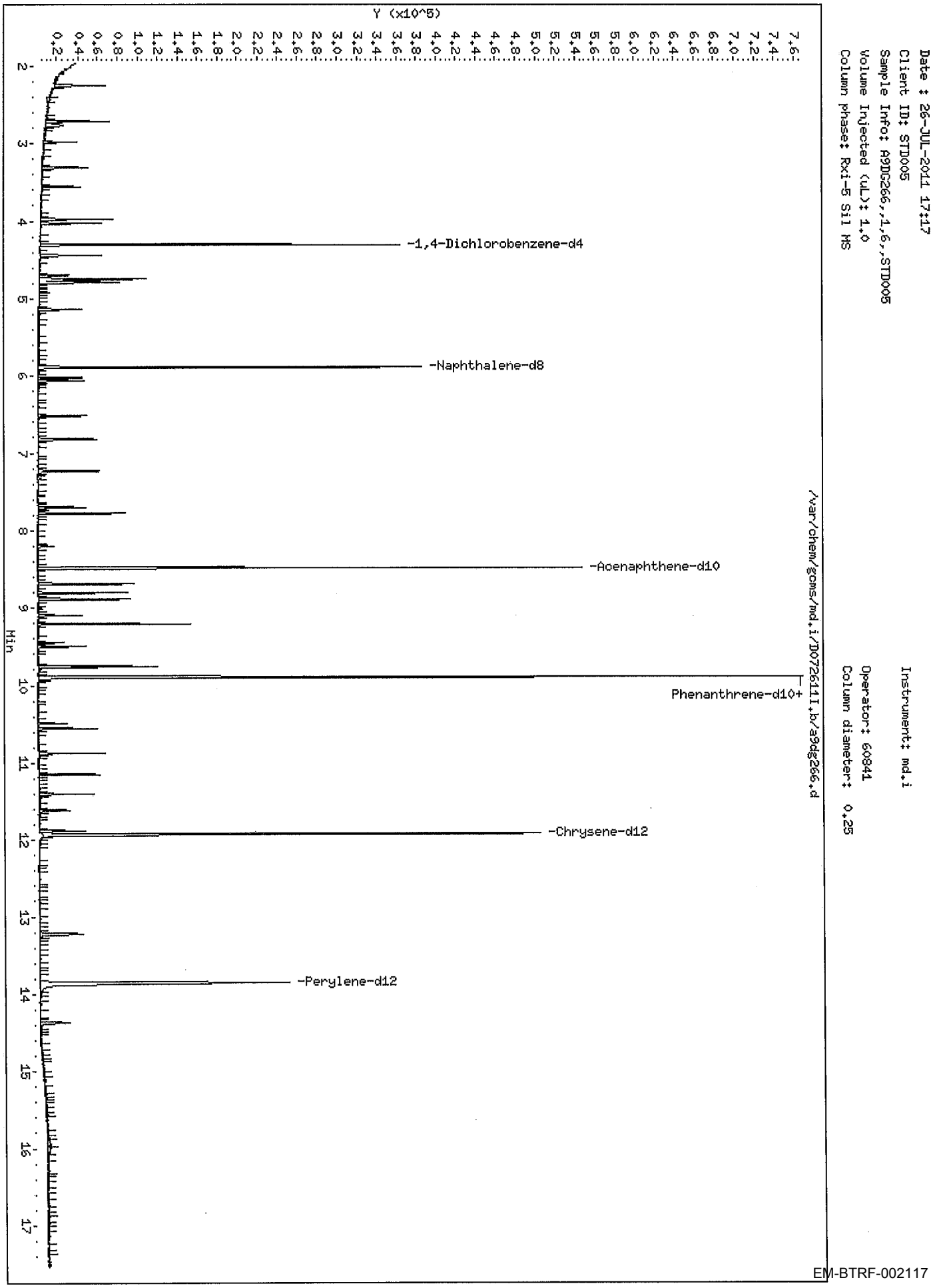
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45556	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	176636	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	102980	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	203533	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.928	(1.000)	207612	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.855	(1.000)	168967	20.0000	20.0
176 2-Picoline	93	2.709	2.709	(0.630)	14161	5.00000	5.35
86 N-nitrosomethylethylamine	42	2.768	2.768	(0.643)	9972	5.00000	5.07
87 Methyl methanosulfonate	80	2.979	2.979	(0.693)	8215	5.00000	5.04
88 N-nitrosodiethylamine	102	3.308	3.308	(0.769)	6039	5.00000	4.81
89 Ethyl methanosulfonate	79	3.555	3.555	(0.826)	10073	5.00000	5.17
90 Pentachloroethane	167	4.025	4.025	(0.936)	6031	5.00000	5.15
91 acetophenone	105	4.742	4.742	(1.102)	19686	5.00000	5.07
92 m-cresol	108	4.754	4.754	(1.105)	11162	5.00000	4.32

Data File: /chem/gcms/md.i/D072611I.b/a9dg266.d
Report Date: 26-Jul-2011 17:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.701	4.701	(1.093)	5836	5.00000	4.26
94	n-nitrosomorpholine	56	4.742	4.742	(1.102)	10785	5.00000	4.96
95	o-toluidine	106	4.783	4.783	(1.112)	21361	5.00000	5.10
96	n-nitrosopiperidine	42	5.135	5.135	(0.872)	11600	5.00000	4.69
97	2,6-dichlorophenol	162	6.023	6.023	(1.023)	9734	5.00000	4.15
98	hexachloropropene	213	6.064	6.064	(1.030)	7843	5.00000	4.23
99	N-nitro-di-n-butylamine	84	6.516	6.516	(1.107)	6652	5.00000	4.08
100	Isosafrole	162	6.822	6.822	(1.159)	9617	5.00000	4.44
101	1,2,4,5-tetrachlorobenzene	216	7.227	7.227	(1.228)	15109	5.00000	5.17
102	safrole	162	7.697	7.697	(0.907)	8132	5.00000	3.93
103	1-chloronaphthalene	162	7.774	7.774	(0.916)	28235	5.00000	5.19
104	m-dinitrobenzene	168	8.203	8.203	(0.967)	1693	5.00000	2.26
105	pentachlorobenzene	250	8.684	8.684	(1.024)	12795	5.00000	5.04
106	1-naphthylamine	143	8.802	8.802	(1.037)	24281	5.00000	4.31
107	2-naphthylamine	143	8.884	8.884	(1.047)	26861	5.00000	4.57
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	3259	5.00000	2.47
109	5-nitro-o-toluidine	152	9.096	9.096	(1.072)	4923	5.00000	2.87
110	diphenylamine	169	9.207	9.207	(0.931)	28143	5.00000	4.71
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	4518	5.00000	2.00
112	phenacetin	108	9.501	9.501	(0.960)	8105	5.00000	2.71
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	30768	5.00000	4.19
114	pentachloronitrobenzene	237	9.765	9.765	(0.987)	3280	5.00000	3.89
115	Dinoseb	211	9.912	9.912	(1.002)	1566	5.00000	1.48
178	N-Nitroquinoline-n-oxide	174	10.488	10.488	(1.060)	1288	5.00000	5.00
177	Methapyrilene HCL	97	10.547	10.547	(1.066)	9470	5.00000	5.00
84	Benzidine	184	10.870	10.870	(1.099)	19466	5.00000	2.73
116	p-(dimethylamino)azobenzene	120	11.146	11.146	(1.126)	8739	5.00000	2.82
117	o-tolidine	212	11.399	11.399	(1.152)	17435	5.00000	2.53
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.108)	14317	5.00000	3.03
118	2-acetylaminofluorene	181	11.610	11.610	(0.973)	7585	5.00000	1.85
120	3-methylcholanthrene	268	14.366	14.366	(1.037)	11225	5.00000	2.53


Data File: /var/chem/gcms/md.i/D072611I.b/a9dg266.d
Date : 26-JUL-2011 17:17
Client ID: STD005
Sample Info: A9DG266,1,6,,STD005
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/a9dg266.d

Data File: /chem/gcms/md.i/D072611I.b/a9dg261.d
Report Date: 26-Jul-2011 17:09

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072611I.b/a9dg261.d
Lab Smp Id: A9DG261 Client Smp ID: STD010
Inj Date : 26-JUL-2011 16:51
Operator : 60841 Inst ID: md.i
Smp Info : A9DG261,,1,1,,STD010
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 17:09 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 16:51 Cal File: a9dg261.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

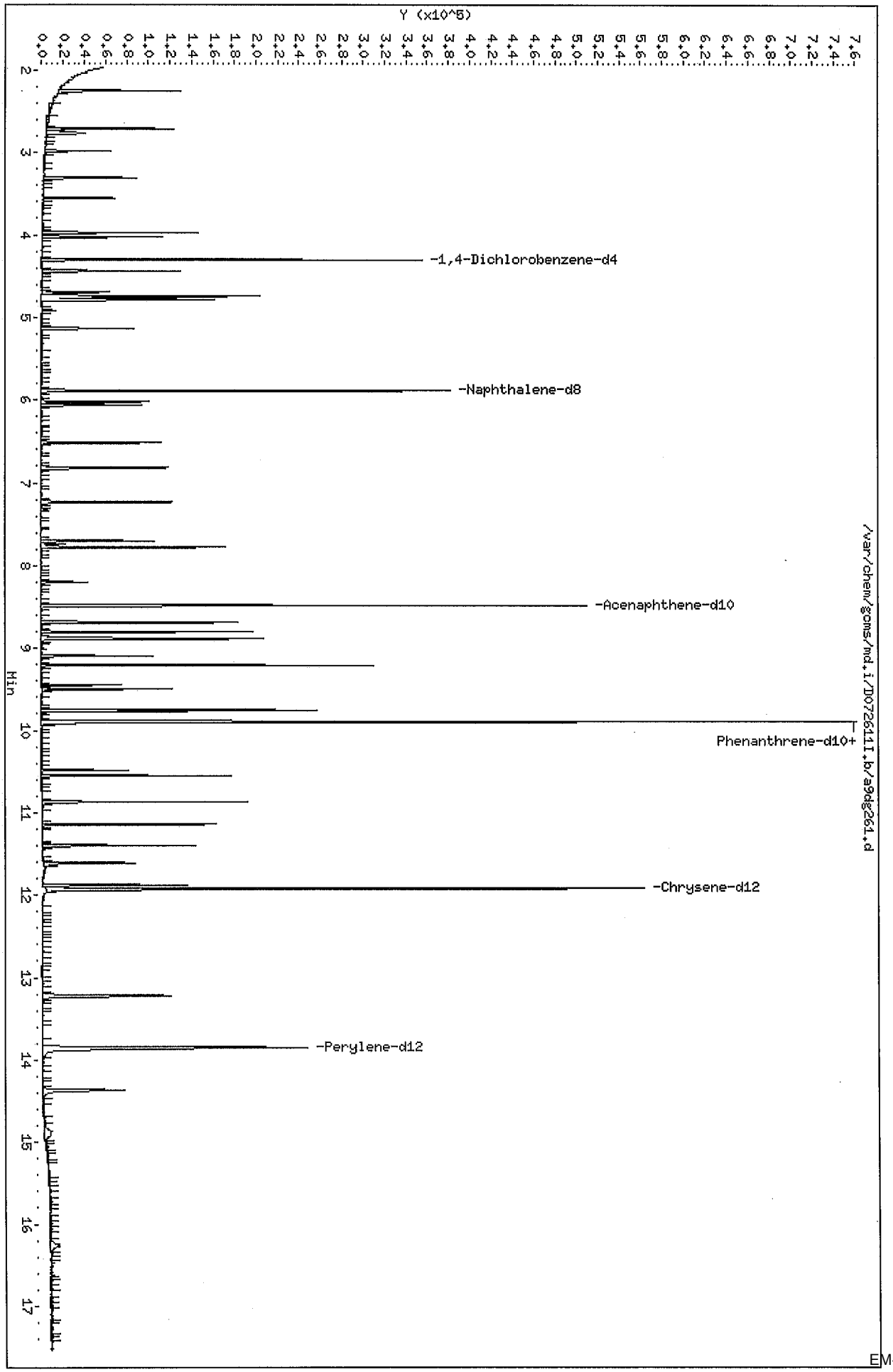
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45526	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	175908	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	101704	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	202389	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	210332	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	170274	20.0000	20.0
176	2-Picoline	93	2.709	2.709	(0.630)	25467	10.0000	9.74
86	N-nitrosomethylethylamine	42	2.768	2.768	(0.643)	19309	10.0000	9.85
87	Methyl methanosulfonate	80	2.979	2.979	(0.693)	15887	10.0000	9.76
88	N-nitrosodiethylamine	102	3.308	3.308	(0.769)	12026	10.0000	9.52
89	Ethyl methanosulfonate	79	3.555	3.555	(0.826)	18947	10.0000	9.78
90	Pentachloroethane	167	4.031	4.031	(0.937)	11149	10.0000	9.57
91	acetophenone	105	4.742	4.742	(1.102)	37334	10.0000	9.65
92	m-cresol	108	4.754	4.754	(1.105)	24469	10.0000	9.28

Data File: /chem/gcms/md.i/D072611I.b/a9dg261.d
Report Date: 26-Jul-2011 17:09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.695	4.695	(1.092)	12665	10.0000	9.03
94	n-nitrosomorpholine	56	4.742	4.742	(1.102)	22047	10.0000	10.1
95	o-toluidine	106	4.783	4.783	(1.112)	42195	10.0000	10.1
96	n-nitrosopiperidine	42	5.135	5.135	(0.872)	23506	10.0000	9.45
97	2,6-dichlorophenol	162	6.017	6.017	(1.022)	20449	10.0000	8.51
98	hexachloropropene	213	6.064	6.064	(1.030)	16166	10.0000	8.76
99	N-nitro-di-n-butylamine	84	6.516	6.516	(1.107)	15292	10.0000	9.14
100	Isosafrole	162	6.822	6.822	(1.159)	20305	10.0000	9.24
101	1,2,4,5-tetrachlorobenzene	216	7.233	7.233	(1.229)	29057	10.0000	10.0
102	safrole	162	7.697	7.697	(0.907)	19667	10.0000	9.28
103	1-chloronaphthalene	162	7.774	7.774	(0.916)	53736	10.0000	10.1
104	m-dinitrobenzene	168	8.203	8.203	(0.967)	4574	10.0000	6.19
105	pentachlorobenzene	250	8.684	8.684	(1.024)	25113	10.0000	10.0
106	1-naphthylamine	143	8.802	8.802	(1.037)	52465	10.0000	9.22
107	2-naphthylamine	143	8.884	8.884	(1.047)	59616	10.0000	10.1
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	8301	10.0000	6.36
109	5-nitro-o-toluidine	152	9.096	9.096	(1.072)	12327	10.0000	7.28
110	diphenylamine	169	9.207	9.207	(0.931)	55661	10.0000	9.28
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	11560	10.0000	5.15
112	phenacetin	108	9.501	9.501	(0.960)	21494	10.0000	7.22
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	67795	10.0000	9.04
114	pentachloronitrobenzene	237	9.765	9.765	(0.987)	7529	10.0000	8.98
115	Dinoseb	211	9.912	9.912	(1.002)	4899	10.0000	4.67
84	Benzidine	184	10.870	10.870	(1.099)	52657	10.0000	7.43
116	p-(dimethylamino)azobenzene	120	11.140	11.140	(1.126)	23265	10.0000	7.56
117	o-tolidine	212	11.399	11.399	(1.152)	45578	10.0000	6.66
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.109)	35187	10.0000	7.36
118	2-acetylaminofluorene	181	11.610	11.610	(0.974)	21105	10.0000	5.07
120	3-methylcholanthrene	268	14.366	14.366	(1.037)	30831	10.0000	6.90


Data File: /var/chem/gcms/md.i/D0726111.b/a9dg261.d
Date : 26-JUL-2011 16:51
Client ID: STD010
Sample Info: A9DG261,,1,1,,STD010
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726111.b/a9dg261.d
Min

Data File: /chem/gcms/md.i/D072611I.b/a9dg262.d
Report Date: 26-Jul-2011 16:44

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072611I.b/a9dg262.d
Lab Smp Id: A9DG262 Client Smp ID: STD025
Inj Date : 26-JUL-2011 16:25
Operator : 60841 Inst ID: md.i
Smp Info : A9DG262,,1,2,,STD025
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 16:44 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 16:25 Cal File: a9dg262.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

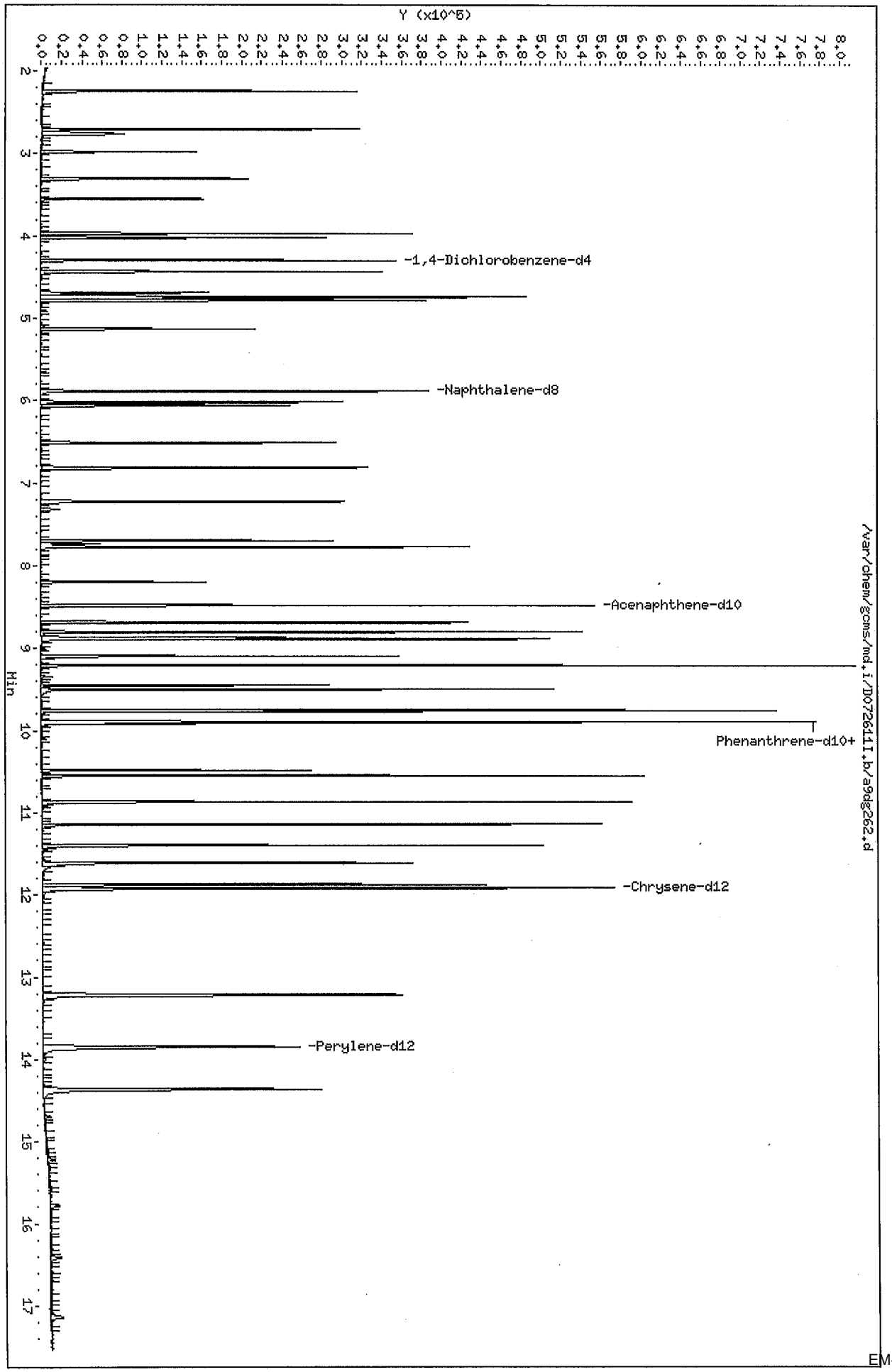
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45732	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.887	(1.000)	176426	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.484	(1.000)	101609	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	204225	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	210084	20.0000	20.0
* 6	Perylene-d12	264	13.849	13.849	(1.000)	172372	20.0000	20.0
176	2-Picoline	93	2.703	2.703	(0.628)	62761	25.0000	23.8
86	N-nitrosomethylethylamine	42	2.762	2.762	(0.642)	46937	25.0000	23.8
87	Methyl methanosulfonate	80	2.979	2.979	(0.693)	40421	25.0000	24.6
88	N-nitrosodiethylamine	102	3.308	3.308	(0.769)	29782	25.0000	23.2
89	Ethyl methanosulfonate	79	3.555	3.555	(0.826)	46279	25.0000	23.7
90	Pentachloroethane	167	4.031	4.031	(0.937)	29418	25.0000	24.9
91	acetophenone	105	4.736	4.736	(1.101)	95047	25.0000	24.3
92	m-cresol	108	4.753	4.753	(1.105)	62072	25.0000	23.1

Data File: /chem/gcms/md.i/D072611I.b/a9dg262.d
Report Date: 26-Jul-2011 16:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.695	4.695	(1.092)	33354	25.0000	23.2
94	n-nitrosomorpholine	56	4.742	4.742	(1.102)	52214	25.0000	24.0
95	o-toluidine	106	4.783	4.783	(1.112)	104664	25.0000	25.0
96	n-nitrosopiperidine	42	5.135	5.135	(0.872)	59365	25.0000	23.5
97	2,6-dichlorophenol	162	6.017	6.017	(1.022)	57372	25.0000	23.1
98	hexachloropropene	213	6.064	6.064	(1.030)	44455	25.0000	23.4
99	N-nitro-di-n-butylamine	84	6.516	6.516	(1.107)	38970	25.0000	22.8
100	Isosafrole	162	6.822	6.822	(1.159)	53930	25.0000	24.1
101	1,2,4,5-tetrachlorobenzene	216	7.233	7.233	(1.229)	70980	25.0000	24.5
102	safrole	162	7.697	7.697	(0.907)	49885	25.0000	23.2
103	1-chloronaphthalene	162	7.773	7.773	(0.916)	133636	25.0000	25.1
104	m-dinitrobenzene	168	8.197	8.197	(0.966)	16021	25.0000	20.2
105	pentachlorobenzene	250	8.690	8.690	(1.024)	62425	25.0000	25.0
106	1-naphthylamine	143	8.802	8.802	(1.037)	140048	25.0000	24.2
107	2-naphthylamine	143	8.884	8.884	(1.047)	151710	25.0000	25.8
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	29231	25.0000	20.9
109	5-nitro-o-toluidine	152	9.095	9.095	(1.072)	40165	25.0000	22.5
110	diphenylamine	169	9.207	9.207	(0.931)	144956	25.0000	23.6
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	44389	25.0000	17.9
112	phenacetin	108	9.501	9.501	(0.960)	70266	25.0000	22.1
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	186618	25.0000	24.2
114	pentachloronitrobenzene	237	9.765	9.765	(0.987)	20569	25.0000	23.8
115	Dinoseb	211	9.912	9.912	(1.002)	19963	25.0000	17.0
84	Benzidine	184	10.870	10.870	(1.099)	163910	25.0000	22.9
116	p-(dimethylamino)azobenzene	120	11.140	11.140	(1.126)	73696	25.0000	22.6
117	o-tolidine	212	11.399	11.399	(1.152)	150060	25.0000	21.7
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.109)	110374	25.0000	22.0
118	2-acetylaminofluorene	181	11.610	11.610	(0.974)	89339	25.0000	19.6
120	3-methylcholanthrene	268	14.366	14.366	(1.037)	100928	25.0000	21.0


Data File: /var/chem/gcms/md.i/D0726111.b/a9dg262.d
Date : 26-JUL-2011 16:25
Client ID: STD025
Sample Info: A9DG262,,1,2,,STD025
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^5)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726111.b/a9dg262.d
Min

Data File: /chem/gcms/md.i/D072611I.b/a9dg263.d
Report Date: 26-Jul-2011 16:18

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Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072611I.b/a9dg263.d
Lab Smp Id: A9DG263 Client Smp ID: STD040
Inj Date : 26-JUL-2011 16:00
Operator : 60841 Inst ID: md.i
Smp Info : A9DG263,,1,3,,STD040
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 16:18 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 16:00 Cal File: a9dg263.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

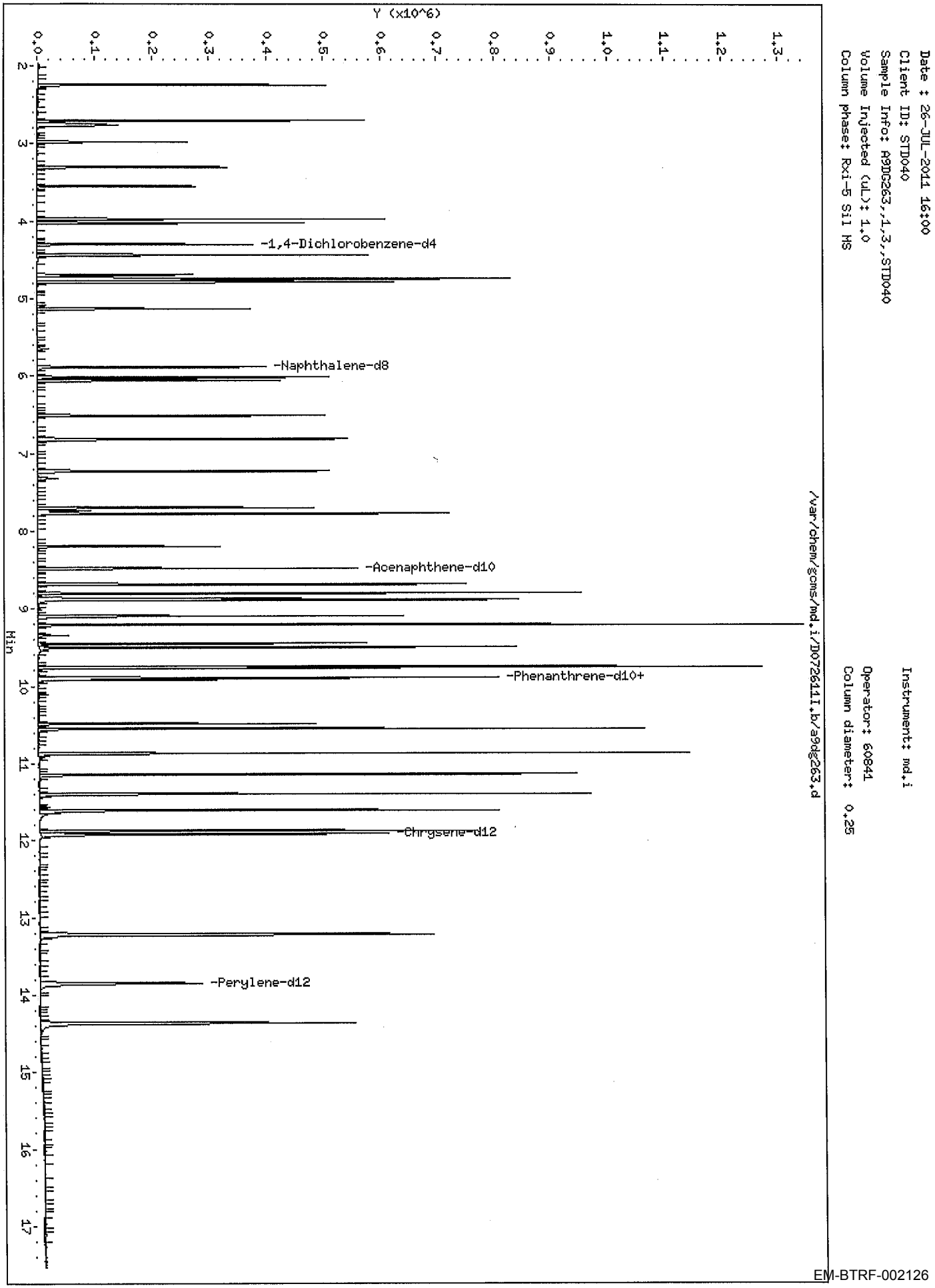
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	48503	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.887	(1.000)	181092	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.484	(1.000)	108439	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	216123	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	222998	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	189292	20.0000	20.0
176 2-Picoline	93	2.703	2.703	(0.628)	107483	40.0000	37.9
86 N-nitrosomethylethylamine	42	2.762	2.762	(0.642)	78456	40.0000	37.0
87 Methyl methanosulfonate	80	2.979	2.979	(0.693)	65214	40.0000	37.3
88 N-nitrosodiethylamine	102	3.308	3.308	(0.769)	51409	40.0000	37.2
89 Ethyl methanosulfonate	79	3.555	3.555	(0.826)	78435	40.0000	37.4
90 Pentachloroethane	167	4.025	4.025	(0.936)	47720	40.0000	38.1
91 acetophenone	105	4.736	4.736	(1.101)	155816	40.0000	37.2
92 m-cresol	108	4.753	4.753	(1.105)	106456	40.0000	36.6

Data File: /chem/gcms/md.i/D072611I.b/a9dg263.d
Report Date: 26-Jul-2011 16:18

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.695	4.695	(1.092)	56814	40.0000	36.6
94	n-nitrosomorpholine	56	4.742	4.742	(1.102)	87059	40.0000	37.3
95	o-toluidine	106	4.783	4.783	(1.112)	168825	40.0000	38.0
96	n-nitrosopiperidine	42	5.135	5.135	(0.872)	100810	40.0000	38.4
97	2,6-dichlorophenol	162	6.017	6.017	(1.022)	97921	40.0000	37.7
98	hexachloropropene	213	6.064	6.064	(1.030)	74888	40.0000	37.8
99	N-nitro-di-n-butylamine	84	6.516	6.516	(1.107)	67268	40.0000	37.6
100	Isosafrole	162	6.816	6.816	(1.158)	88565	40.0000	38.2
101	1,2,4,5-tetrachlorobenzene	216	7.227	7.227	(1.228)	114820	40.0000	38.3
102	safrole	162	7.697	7.697	(0.907)	85981	40.0000	36.9
103	1-chloronaphthalene	162	7.773	7.773	(0.916)	217198	40.0000	38.2
104	m-dinitrobenzene	168	8.197	8.197	(0.966)	30691	40.0000	34.5
105	pentachlorobenzene	250	8.684	8.684	(1.024)	102721	40.0000	38.6
106	1-naphthylamine	143	8.802	8.802	(1.037)	244667	40.0000	39.4
107	2-naphthylamine	143	8.884	8.884	(1.047)	243133	40.0000	39.2
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	55231	40.0000	35.6
109	5-nitro-o-toluidine	152	9.095	9.095	(1.072)	70800	40.0000	36.3
110	diphenylamine	169	9.207	9.207	(0.931)	244478	40.0000	37.1
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	91896	40.0000	32.6
112	phenacetin	108	9.501	9.501	(0.960)	123029	40.0000	35.6
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	318680	40.0000	38.7
114	pentachloronitrobenzene	237	9.771	9.771	(0.988)	33878	40.0000	36.6
115	Dinoseb	211	9.912	9.912	(1.002)	42189	40.0000	31.5
84	Benzidine	184	10.870	10.870	(1.099)	292102	40.0000	37.8
116	p-(dimethylamino)azobenzene	120	11.140	11.140	(1.126)	129023	40.0000	36.6
117	o-tolidine	212	11.399	11.399	(1.152)	274510	40.0000	36.4
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.109)	197177	40.0000	35.8
118	2-acetylaminofluorene	181	11.610	11.610	(0.974)	173445	40.0000	33.9
120	3-methylcholanthrene	268	14.366	14.366	(1.037)	189476	40.0000	34.5


Data File: /var/chem/gcms/md.i/D072611I.b/a9dg263.d
Date : 26-JUL-2011 16:00
Client ID: STD040
Sample Info: A9DG263,1,3,,STD040
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
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Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12

Data File: /chem/gcms/md.i/D072611I.b/a9dg264.d
Report Date: 26-Jul-2011 15:52

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Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D072611I.b/a9dg264.d
Lab Smp Id: A9DG264 Client Smp ID: STD060
Inj Date : 26-JUL-2011 15:34
Operator : 60841 Inst ID: md.i
Smp Info : A9DG264,,1,4,,STD060
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 15:52 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 15:34 Cal File: a9dg264.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

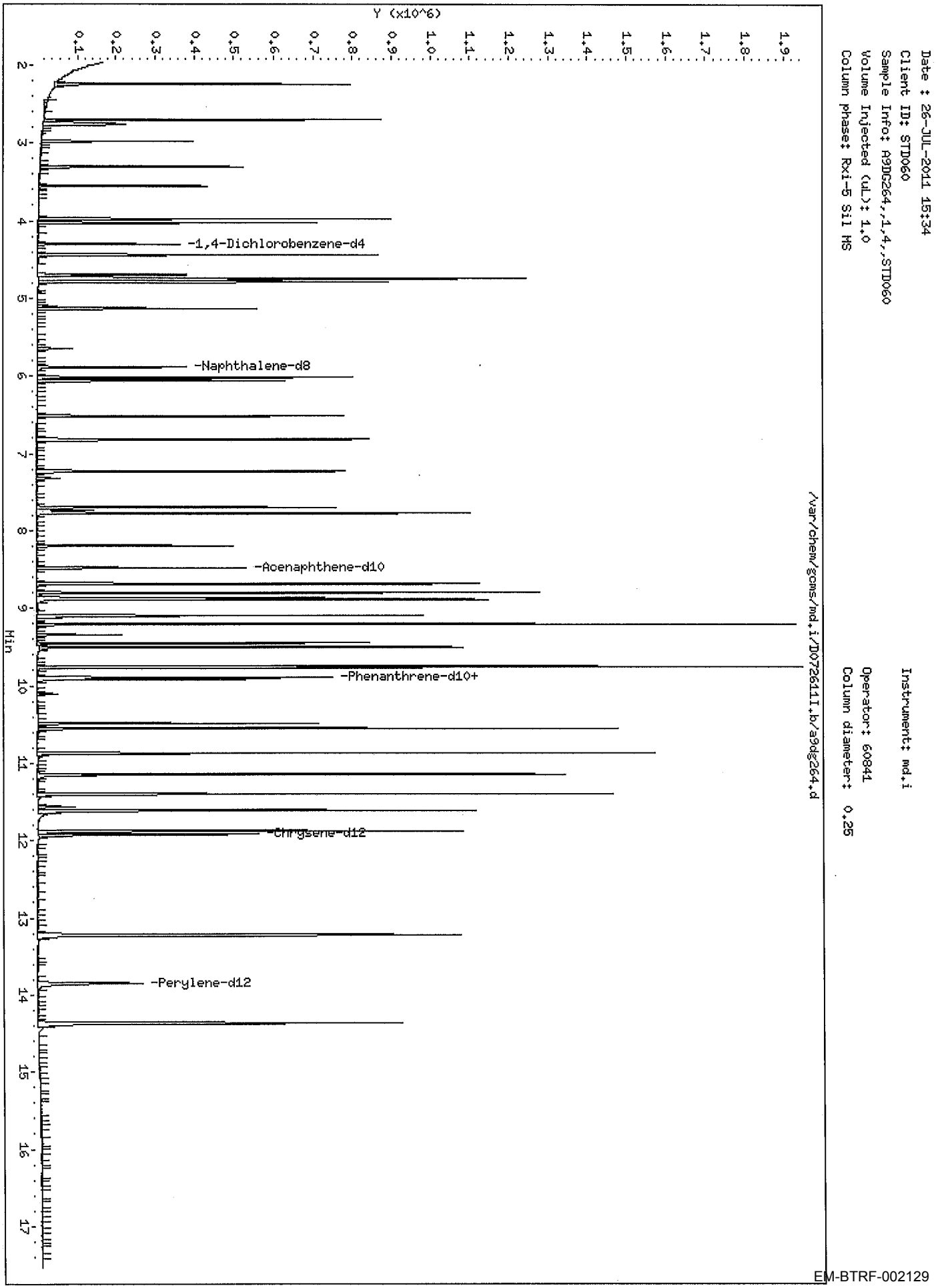
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	44644	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.887	(1.000)	172857	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	101300	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	197263	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	205125	20.0000	20.0
* 6	Perylene-d12	264	13.849	13.849	(1.000)	176143	20.0000	20.0
176	2-Picoline	93	2.703	2.703	(0.628)	159395	60.0000	60.1
86	N-nitrosomethylethylamine	42	2.762	2.762	(0.642)	122074	60.0000	61.0
87	Methyl methanosulfonate	80	2.979	2.979	(0.693)	98449	60.0000	59.8
88	N-nitrosodiethylamine	102	3.308	3.308	(0.769)	78080	60.0000	59.9
89	Ethyl methanosulfonate	79	3.555	3.555	(0.826)	118998	60.0000	60.2
90	Pentachloroethane	167	4.025	4.025	(0.936)	71168	60.0000	60.8
91	acetophenone	105	4.742	4.742	(1.102)	236854	60.0000	60.1
92	m-cresol	108	4.753	4.753	(1.105)	161842	60.0000	58.9

Data File: /chem/gcms/md.i/D072611I.b/a9dg264.d
Report Date: 26-Jul-2011 15:52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.701	4.701	(1.093)	88030	60.0000	60.0
94	n-nitrosomorpholine	56	4.742	4.742	(1.102)	132179	60.0000	60.3
95	o-toluidine	106	4.783	4.783	(1.112)	247346	60.0000	59.6
96	n-nitrosopiperidine	42	5.135	5.135	(0.872)	155123	60.0000	61.0
97	2,6-dichlorophenol	162	6.017	6.017	(1.022)	150218	60.0000	59.5
98	hexachloropropene	213	6.064	6.064	(1.030)	115672	60.0000	60.2
99	N-nitro-di-n-butylamine	84	6.516	6.516	(1.107)	104321	60.0000	59.9
100	Isosafrole	162	6.822	6.822	(1.159)	133484	60.0000	59.5
101	1,2,4,5-tetrachlorobenzene	216	7.227	7.227	(1.228)	177428	60.0000	61.2
102	safrole	162	7.697	7.697	(0.907)	133280	60.0000	59.7
103	1-chloronaphthalene	162	7.774	7.774	(0.916)	332410	60.0000	61.8
104	m-dinitrobenzene	168	8.197	8.197	(0.966)	50246	60.0000	57.8
105	pentachlorobenzene	250	8.684	8.684	(1.024)	152156	60.0000	60.4
106	1-naphthylamine	143	8.802	8.802	(1.037)	342834	60.0000	58.8
107	2-naphthylamine	143	8.890	8.890	(1.048)	335981	60.0000	57.4
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	83863	60.0000	55.8
109	5-nitro-o-toluidine	152	9.096	9.096	(1.072)	107968	60.0000	57.5
110	diphenylamine	169	9.207	9.207	(0.931)	371769	60.0000	60.4
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	149470	60.0000	54.8
112	phenacetin	108	9.507	9.507	(0.961)	191497	60.0000	58.6
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	462783	60.0000	60.9
114	pentachloronitrobenzene	237	9.771	9.771	(0.988)	52412	60.0000	60.4
115	Dinoseb	211	9.918	9.918	(1.002)	69480	60.0000	53.1
84	Benzidine	184	10.870	10.870	(1.099)	417089	60.0000	58.1
116	p-(dimethylamino)azobenzene	120	11.146	11.146	(1.126)	195949	60.0000	59.2
117	o-tolidine	212	11.399	11.399	(1.152)	397383	60.0000	56.0
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.109)	303799	60.0000	58.0
118	2-acetylaminofluorene	181	11.610	11.610	(0.974)	275193	60.0000	55.7
120	3-methylcholanthrene	268	14.366	14.366	(1.037)	306092	60.0000	56.9


Data File: /var/chem/gcms/md.i/D0726111.b/a9dg264.d
Date : 26-JUL-2011 15:34
Client ID: STD060
Sample Info: A9DG264,1,4,,STD060
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726111.b/a9dg264.d
Min

Data File: /var/chem/gcms/md.i/D072611I.b/a9dg265.d
Report Date: 26-Jul-2011 15:58

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Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/a9dg265.d
Lab Smp Id: A9DG265 Client Smp ID: STD120
Inj Date : 26-JUL-2011 15:09
Operator : 60841 Inst ID: md.i
Smp Info : A9DG265,,1,5,,STD120
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 15:58 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 15:09 Cal File: a9dg265.d
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

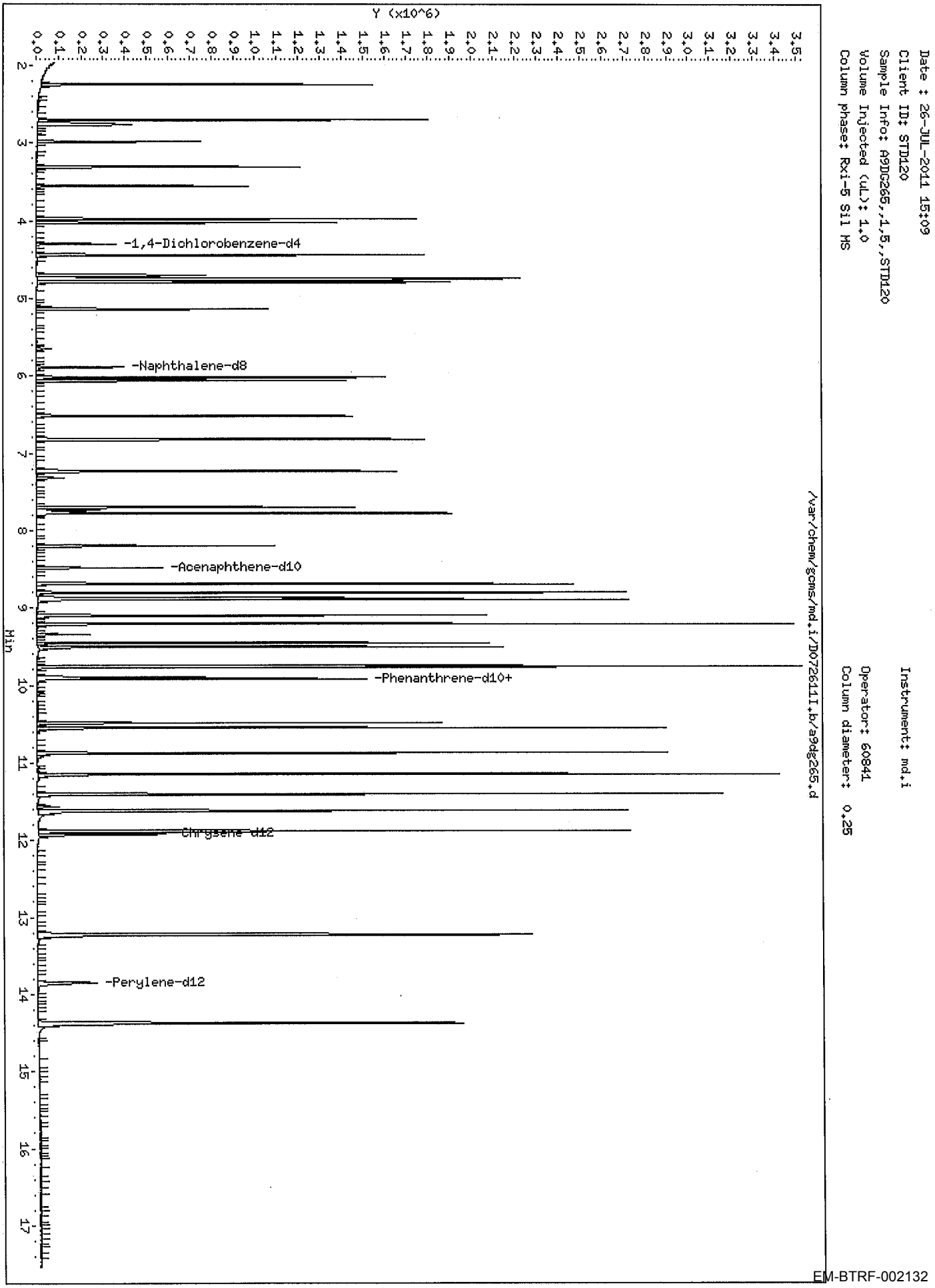
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	45685	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	181133	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	106629	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	209134	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	216927	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.855	(1.000)	188384	20.0000	20.0
176 2-Picoline	93	2.703	2.703	(0.628)	325782	120.000	120
86 N-nitrosomethylethylamine	42	2.768	2.768	(0.643)	244809	120.000	120
87 Methyl methanosulfonate	80	2.985	2.985	(0.694)	202882	120.000	120
88 N-nitrosodiethylamine	102	3.308	3.308	(0.769)	161524	120.000	121
89 Ethyl methanosulfonate	79	3.555	3.555	(0.826)	245078	120.000	121
90 Pentachloroethane	167	4.031	4.031	(0.937)	143714	120.000	120
91 acetophenone	105	4.742	4.742	(1.102)	485386	120.000	120
92 m-cresol	108	4.759	4.759	(1.107)	340473	120.000	121

Data File: /var/chem/gcms/md.i/D072611I.b/a9dg265.d
Report Date: 26-Jul-2011 15:58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.707	4.707	(1.094)	181010	120.000	120
94	n-nitrosomorpholine	56	4.748	4.748	(1.104)	270002	120.000	120
95	o-toluidine	106	4.789	4.789	(1.113)	539558	120.000	127
96	n-nitrosopiperidine	42	5.141	5.141	(0.873)	317267	120.000	119
97	2,6-dichlorophenol	162	6.017	6.017	(1.022)	321670	120.000	122
98	hexachloropropene	213	6.064	6.064	(1.030)	240974	120.000	120
99	N-nitro-di-n-butylamine	84	6.522	6.522	(1.108)	221285	120.000	121
100	Isosafrole	162	6.822	6.822	(1.159)	281745	120.000	120
101	1,2,4,5-tetrachlorobenzene	216	7.233	7.233	(1.229)	360886	120.000	119
102	safrole	162	7.703	7.703	(0.908)	283130	120.000	120
103	1-chloronaphthalene	162	7.779	7.779	(0.917)	656595	120.000	116
104	m-dinitrobenzene	168	8.202	8.202	(0.967)	113041	120.000	124
105	pentachlorobenzene	250	8.690	8.690	(1.024)	316230	120.000	119
106	1-naphthylamine	143	8.802	8.802	(1.037)	770301	120.000	125
107	2-naphthylamine	143	8.890	8.890	(1.048)	771842	120.000	125
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	193044	120.000	122
109	5-nitro-o-toluidine	152	9.101	9.101	(1.073)	245415	120.000	124
110	diphenylamine	169	9.213	9.213	(0.931)	771459	120.000	118
111	1,3,5-trinitrobenzene	75	9.454	9.454	(0.955)	358646	120.000	124
112	phenacetin	108	9.513	9.513	(0.961)	417279	120.000	120
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	915445	120.000	114
114	pentachloronitrobenzene	237	9.771	9.771	(0.988)	109807	120.000	119
115	Dinoseb	211	9.918	9.918	(1.002)	173429	120.000	125
84	Benzidine	184	10.876	10.876	(1.099)	986522	120.000	130
116	p-(dimethylamino)azobenzene	120	11.146	11.146	(1.126)	418730	120.000	119
117	o-tolidine	212	11.399	11.399	(1.152)	984326	120.000	131
119	7,12-dimethylbenz(a)anthracen	256	13.226	13.226	(1.109)	669726	120.000	121
118	2-acetylaminofluorene	181	11.616	11.616	(0.974)	647590	120.000	124
120	3-methylcholanthrene	268	14.378	14.378	(1.038)	691483	120.000	120


Data File: /var/chem/gcms/md.i/D0726111.b/a9dg265.d
Date : 26-JUL-2011 15:09
Client ID: STD120
Sample Info: A9DG265,1,5,,STD120
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726111.b/a9dg265.d

Data File: /var/chem/gcms/md.i/D072611I.b/a9dg268.d
Report Date: 26-Jul-2011 15:58

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/a9dg268.d
Lab Smp Id: A9DG268 Client Smp ID: STD200
Inj Date : 26-JUL-2011 14:43
Operator : 60841 Inst ID: md.i
Smp Info : A9DG268,,1,8,,STD200
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 26-Jul-2011 15:58 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 14:43 Cal File: a9dg268.d
Als bottle: 12 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

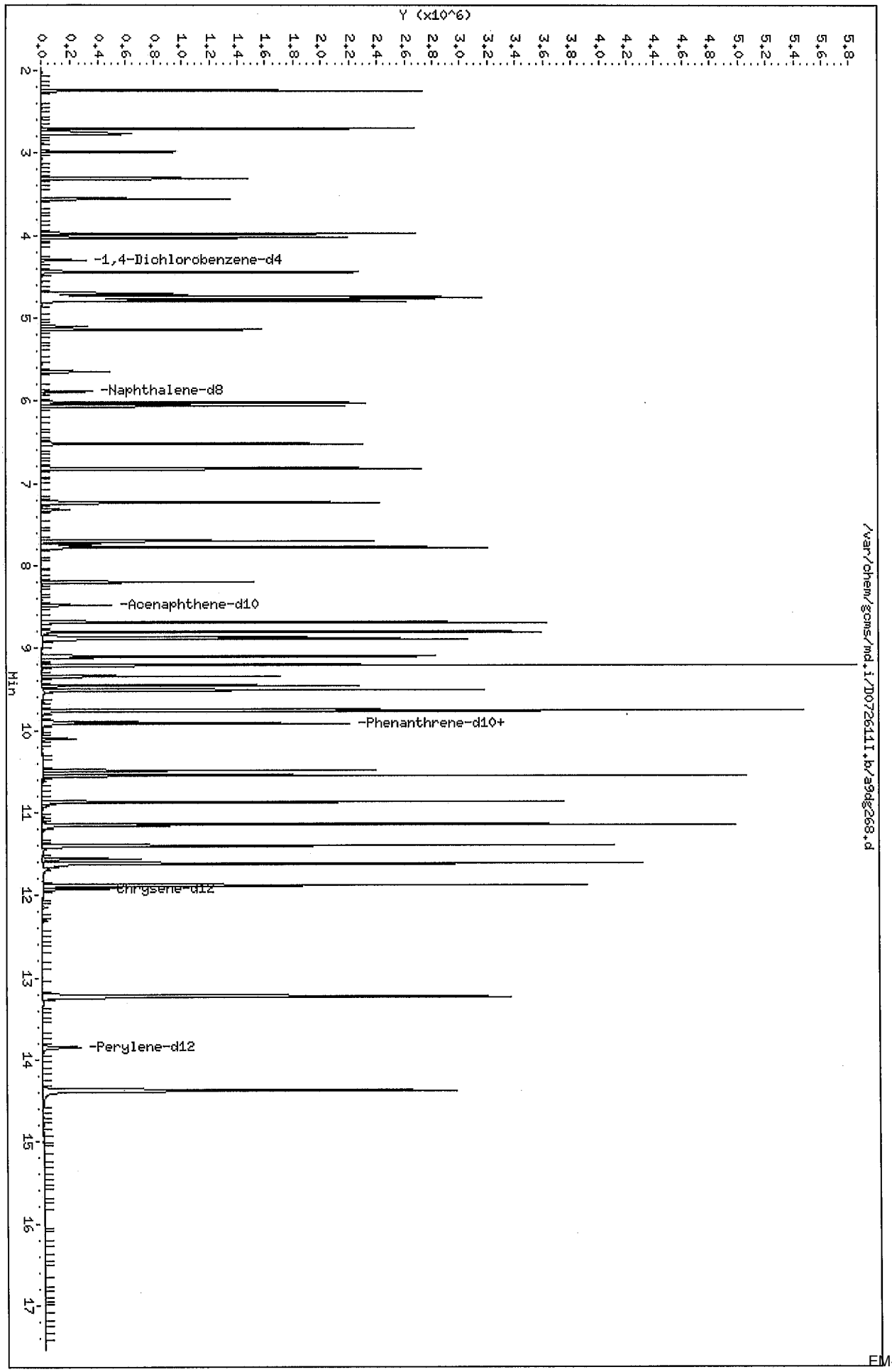
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	41423	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.887	(1.000)	164402	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.484	(1.000)	95001	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	185601	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	200959	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	175910	20.0000	20.0
176 2-Picoline	93	2.703	2.703	(0.628)	491163	200.000	200(A)
86 N-nitrosomethylethylamine	42	2.767	2.767	(0.643)	366721	200.000	197(A)
87 Methyl methanosulfonate	80	2.991	2.991	(0.695)	305297	200.000	200(A)
88 N-nitrosodiethylamine	102	3.314	3.314	(0.770)	239578	200.000	198(A)
89 Ethyl methanosulfonate	79	3.561	3.561	(0.828)	361330	200.000	197(A)
90 Pentachloroethane	167	4.031	4.031	(0.937)	214766	200.000	198(A)
91 acetophenone	105	4.748	4.748	(1.104)	726174	200.000	199(A)
92 m-cresol	108	4.765	4.765	(1.108)	515468	200.000	202(A)

Data File: /var/chem/gcms/md.i/D072611I.b/a9dg268.d
Report Date: 26-Jul-2011 15:58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.712	4.712	(1.096)	271208	200.000	199(A)
94	n-nitrosomorpholine	56	4.753	4.753	(1.105)	404279	200.000	199(A)
95	o-toluidine	106	4.795	4.795	(1.115)	730891	200.000	190(A)
96	n-nitrosopiperidine	42	5.141	5.141	(0.873)	479337	200.000	198(A)
97	2,6-dichlorophenol	162	6.023	6.023	(1.023)	477358	200.000	199(A)
98	hexachloropropene	213	6.064	6.064	(1.030)	366000	200.000	200(A)
99	N-nitro-di-n-butylamine	84	6.522	6.522	(1.108)	328140	200.000	198(A)
100	Isosafrole	162	6.822	6.822	(1.159)	430173	200.000	202(A)
101	1,2,4,5-tetrachlorobenzene	216	7.233	7.233	(1.229)	545188	200.000	198(A)
102	safrole	162	7.703	7.703	(0.908)	419942	200.000	200(A)
103	1-chloronaphthalene	162	7.779	7.779	(0.917)	1014838	200.000	201(A)
104	m-dinitrobenzene	168	8.202	8.202	(0.967)	164156	200.000	201(A)
105	pentachlorobenzene	250	8.690	8.690	(1.024)	471923	200.000	200(A)
106	1-naphthylamine	143	8.808	8.808	(1.038)	1066381	200.000	195(A)
107	2-naphthylamine	143	8.896	8.896	(1.048)	927722	200.000	169(A)
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	297593	200.000	211(A)
109	5-nitro-o-toluidine	152	9.101	9.101	(1.073)	354647	200.000	201(A)
110	diphenylamine	169	9.213	9.213	(0.931)	1167964	200.000	202(A)
111	1,3,5-trinitrobenzene	75	9.454	9.454	(0.955)	540041	200.000	210(A)
112	phenacetin	108	9.513	9.513	(0.961)	626612	200.000	204(A)
113	4-aminobiphenyl	169	9.759	9.759	(0.986)	1481886	200.000	207(A)
114	pentachloronitrobenzene	237	9.771	9.771	(0.988)	162731	200.000	199(A)
115	Dinoseb	211	9.918	9.918	(1.002)	263707	200.000	214(A)
84	Benzidine	184	10.876	10.876	(1.099)	1285495	200.000	190(A)
116	p-(dimethylamino)azobenzene	120	11.146	11.146	(1.126)	635854	200.000	204(A)
117	o-tolidine	212	11.399	11.399	(1.152)	1302145	200.000	195(A)
119	7,12-dimethylbenz(a)anthracen	256	13.232	13.232	(1.110)	1049627	200.000	205(A)
118	2-acetylaminofluorene	181	11.622	11.622	(0.975)	1004618	200.000	208(A)
120	3-methylcholanthrene	268	14.378	14.378	(1.038)	1104775	200.000	207(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.


Data File: /var/chem/gcms/md.i/D0726111.b/a9dg268.d
Date : 26-JUL-2011 14:43
Client ID: STD200
Sample Info: A9DG268,1,8,,STD200
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726111.b/a9dg268.d

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 13:06

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Lab Smp Id: A9VDG26 Client Smp ID: 2ND SOURCE
Inj Date : 26-JUL-2011 18:07
Operator : 60841 Inst ID: md.i
Smp Info : A9VDG26,,3,,,2ND SOURCE
Misc Info : D072611I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 27-Jul-2011 13:05 wilesd Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/Kg)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56568	20.0000	20.0
* 2	Naphthalene-d8	136	5.887	5.888	(1.000)	221010	20.0000	20.0
* 3	Acenaphthene-d10	164	8.484	8.485	(1.000)	126694	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	251289	20.0000	20.0
* 5	Chrysene-d12	240	11.928	11.922	(1.000)	260162	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	228234	20.0000	20.0
176	2-Picoline	93	2.703	2.715	(0.628)	193344	58.8393	1960
86	N-nitrosomethylethylamine	42	2.762	2.768	(0.642)	139427	57.0966	1900
87	Methyl methanosulfonate	80	2.979	2.979	(0.693)	116641	57.6100	1920
88	N-nitrosodiethylamine	102	3.308	3.308	(0.769)	89494	57.3786	1910
89	Ethyl methanosulfonate	79	3.555	3.555	(0.826)	133038	54.9692	1830
90	Pentachloroethane	167	4.025	4.031	(0.936)	78410	53.9044	1800
91	acetophenone	105	4.742	4.742	(1.102)	264821	54.9382	1830
93	n-nitrosopyrrolidine	100	4.701	4.707	(1.093)	99733	58.6249	1950

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 13:06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/Kg)
94	n-nitrosomorpholine	56	4.742	4.748	(1.102)	154105	57.1440	1900
95	o-toluidine	106	4.783	4.783	(1.112)	307322	59.0513	1970
96	n-nitrosopiperidine	42	5.135	5.141	(0.872)	177315	57.3039	1910
97	2,6-dichlorophenol	162	6.023	6.023	(1.023)	163191	55.5937	1850
98	hexachloropropene	213	6.064	6.064	(1.030)	120719	52.0386	1730
99	N-nitro-di-n-butylamine	84	6.516	6.522	(1.107)	126572	62.0899	2070
100	Isosafrole	162	6.822	6.822	(1.159)	161644	59.6695	1990
101	1,2,4,5-tetrachlorobenzene	216	7.227	7.233	(1.228)	193285	52.8380	1760
102	safrole	162	7.697	7.697	(0.907)	165821	65.0933	2170
103	1-chloronaphthalene	162	7.773	7.774	(0.916)	384185	57.4050	1910
105	pentachlorobenzene	250	8.684	8.690	(1.024)	170262	54.5711	1820
106	1-naphthylamine	143	8.802	8.802	(1.037)	448006	64.6268	2150
107	2-naphthylamine	143	8.890	8.890	(1.048)	479808	67.8027	2260
109	5-nitro-o-toluidine	152	9.095	9.096	(1.072)	124889	59.2260	1970
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	66293	26.8579	895(R)
112	phenacetin	108	9.507	9.501	(0.961)	207995	52.7818	1760
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	554520	61.1407	2040
114	pentachloronitrobenzene	237	9.771	9.765	(0.988)	58676	56.3665	1880
115	Dinoseb	211	9.918	9.912	(1.002)	71839	49.5770	1650
84	Benzidine	184	10.870	10.870	(1.099)	553431	62.8987	2100
116	p-(dimethylamino)azobenzene	120	11.146	11.146	(1.126)	234192	61.2969	2040
117	o-tolidine	212	11.405	11.399	(1.153)	1083705	127.575	4250(R)
119	7,12-dimethylbenz(a)anthracen	256	13.226	13.220	(1.109)	356064	56.2082	1870
118	2-acetylaminofluorene	181	11.616	11.604	(0.974)	338715	57.8854	1930
120	3-methylcholanthrene	268	14.372	14.360	(1.037)	354145	54.5213	1820

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 09:21

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: a9vdg26.d
Lab Smp Id: A9VDG26
Analysis Type: SV
Quant Type: ISTD
Operator: 60841
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,appdx9.sub

Calibration Date: 26-JUL-2011
Calibration Time: 15:34
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	44644	22322	89288	56568	26.71
2 Naphthalene-d8	172857	86428	345714	221010	27.86
3 Acenaphthene-d10	101300	50650	202600	126694	25.07
4 Phenanthrene-d10	197263	98632	394526	251289	27.39
5 Chrysene-d12	205125	102562	410250	260162	26.83
6 Perylene-d12	176143	88072	352286	228234	29.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.93	0.05
6 Perylene-d12	13.85	13.35	14.35	13.85	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 13:06

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: A9VDG26
Level: LOW
Data Type: MS DATA
SpikeList File: a9lcs.spk
Sublist File: appdx9.sub
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,appdx9.sub

Client SDG: D072611I
Fraction: SV
Client Smp ID: 2ND SOURCE
Operator: 60841
SampleType: BLANK
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
86 N-nitrosomethyleth	2000	1900	95.16	70-130
87 Methyl methanosulf	2000	1920	96.02	70-130
88 N-nitrosodiethylam	2000	1910	95.63	70-130
89 Ethyl methanosulfo	2000	1830	91.62	70-130
90 Pentachloroethane	2000	1800	89.84	70-130
91 acetophenone	2000	1830	91.56	70-130
92 m-cresol	2000	0.00	*	70-130
93 n-nitrosopyrrolidi	2000	1950	97.71	70-130
94 n-nitrosomorpholin	2000	1900	95.24	70-130
95 o-toluidine	2000	1970	98.42	70-130
96 n-nitrosopiperidin	2000	1910	95.51	70-130
97 2,6-dichlorophenol	2000	1850	92.66	70-130
98 hexachloropropene	2000	1730	86.73	70-130
99 N-nitro-di-n-butyl	2000	2070	103.48	70-130
100 Isosafrole	2000	1990	99.45	70-130
101 1,2,4,5-tetrachlor	2000	1760	88.06	70-130
102 safrole	2000	2170	108.49	70-130
103 1-chloronaphthalen	2000	1910	95.68	70-130
104 m-dinitrobenzene	2000	0.00	*	70-130
105 pentachlorobenzene	2000	1820	90.95	70-130
106 1-naphthylamine	2000	2150	107.71	70-130
107 2-naphthylamine	2000	2260	113.00	70-130
108 2,3,4,6-tetrachlo	2000	0.00	*	70-130
109 5-nitro-o-toluidin	2000	1970	98.71	70-130
110 diphenylamine	2000	0.00	*	70-130
111 1,3,5-trinitrobenz	2000	895	44.76*	70-130
112 phenacetin	2000	1760	87.97	70-130
113 4-aminobiphenyl	2000	2040	101.90	70-130
114 pentachloronitrobe	2000	1880	93.94	70-130
115 Dinoseb	2000	1650	82.63	70-130
84 Benzidine	2000	2100	104.83	70-130
116 p-(dimethylamino)a	2000	2040	102.16	70-130
118 2-acetylaminofluor	2000	1930	96.48	70-130

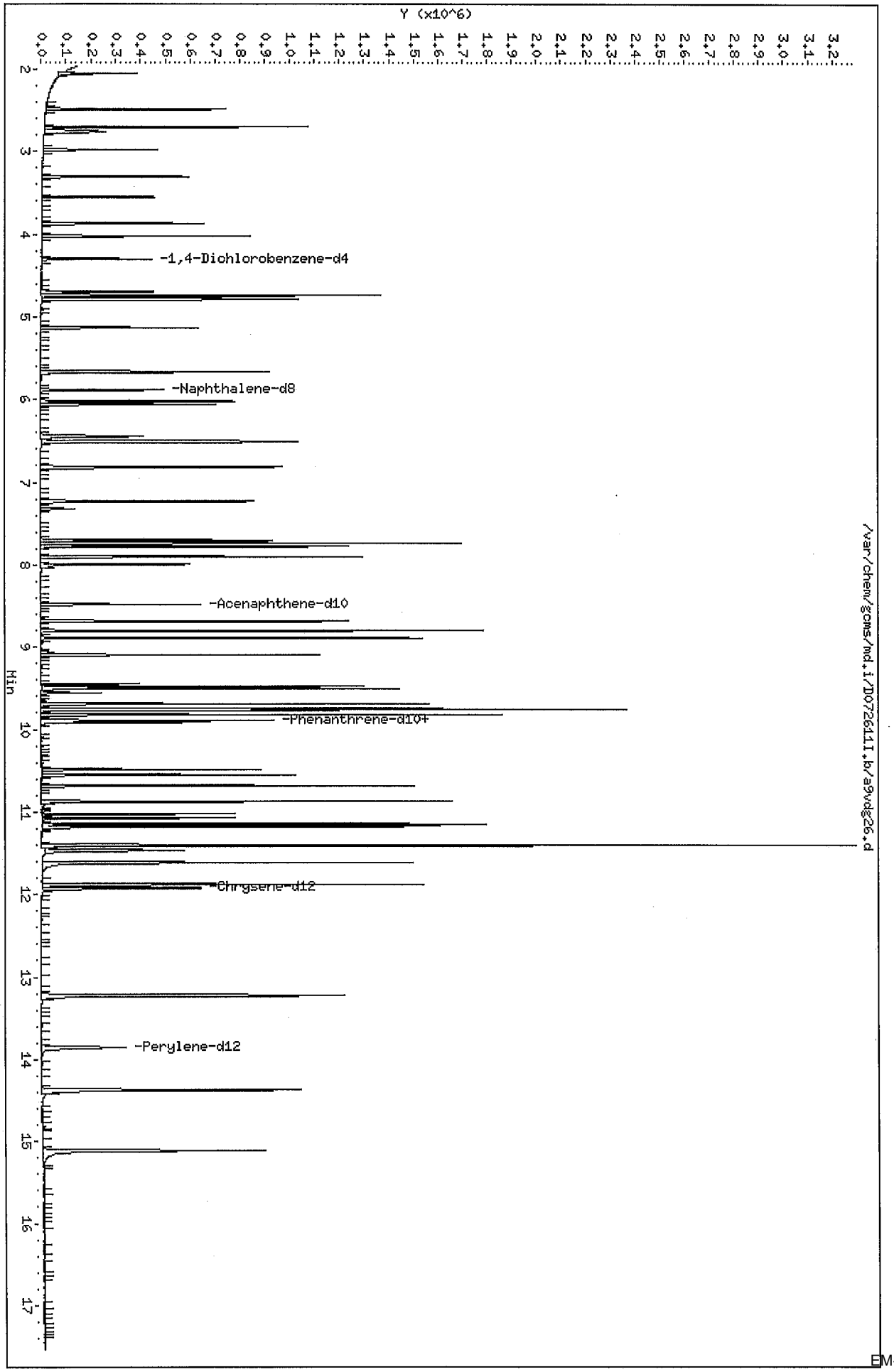
NW 7.27.11

(F) low (NA)

Data File: /var/chem/gcms/md.i/D072611I.b/a9vdg26.d
Report Date: 27-Jul-2011 13:06

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
117 o-tolidine	4000 ~~2000~~	4250	106% ~~212.63*~~	70-130
119 7,12-dimethylbenz(	2000	1870	93.68	70-130
120 3-methylcholanthre	2000	1820	90.87	70-130
176 2-Picoline	2000	1960	98.07	70-130
177 Methapyrilene HCL	~~2000~~	0.00	*	70-130
178 N-Nitroquinoline-	~~2000~~	0.00	*	70-130

JW 7.27.11


Data File: /var/chem/gcms/md.i/D0726111.b/a9vdg26.d
Date : 26-JUL-2011 18:07
Client ID: 2ND SOURCE
Sample Info: A9VDG26,,3,,,2ND SOURCE
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D0726111.b/a9vdg26.d

Data File: /var/chem/gcms/md.i/D072611I.b/icvdg25.d
Report Date: 27-Jul-2011 09:26

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D072611I.b/icvdg25.d
Lab Smp Id: ICVDG25 Client Smp ID: 2ND SOURCE
Inj Date : 25-JUL-2011 15:44
Operator : 60841 Inst ID: md.i
Smp Info : ICVDG25,,3,,,2ND SOURCE
Misc Info : D072511I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D072611I.b/8270a9.m
Meth Date : 27-Jul-2011 08:43 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	51393	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	202378	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	122969	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	234541	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.922	(1.000)	257596	20.0000	20.0
* 6 Perylene-d12	264	13.861	13.855	(1.000)	230089	20.0000	20.0
92 m-cresol	108	4.754	4.754	(1.105)	190035	65.2546	2180
104 m-dinitrobenzene	168	8.203	8.203	(0.967)	79823	78.1459	2600(R)
108 2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	112992	64.1277	2140
110 diphenylamine	169	9.213	9.207	(0.931)	419299	60.9132	2030

Data File: /var/chem/gcms/md.i/D072611I.b/icvdg25.d
Report Date: 27-Jul-2011 09:26

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: icvdg25.d
Lab Smp Id: ICVDG25
Analysis Type: SV
Quant Type: ISTD
Operator: 60841
Calibration Date: 26-JUL-2011
Calibration Time: 15:34
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: SOIL
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072511I,8270a9,8270dxnC13.sub

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	44644	22322	89288	51393	15.12
2 Naphthalene-d8	172857	86428	345714	202378	17.08
3 Acenaphthene-d10	101300	50650	202600	122969	21.39
4 Phenanthrene-d10	197263	98632	394526	234541	18.90
5 Chrysene-d12	205125	102562	410250	257596	25.58
6 Perylene-d12	176143	88072	352286	230089	30.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.93	0.05
6 Perylene-d12	13.85	13.35	14.35	13.86	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

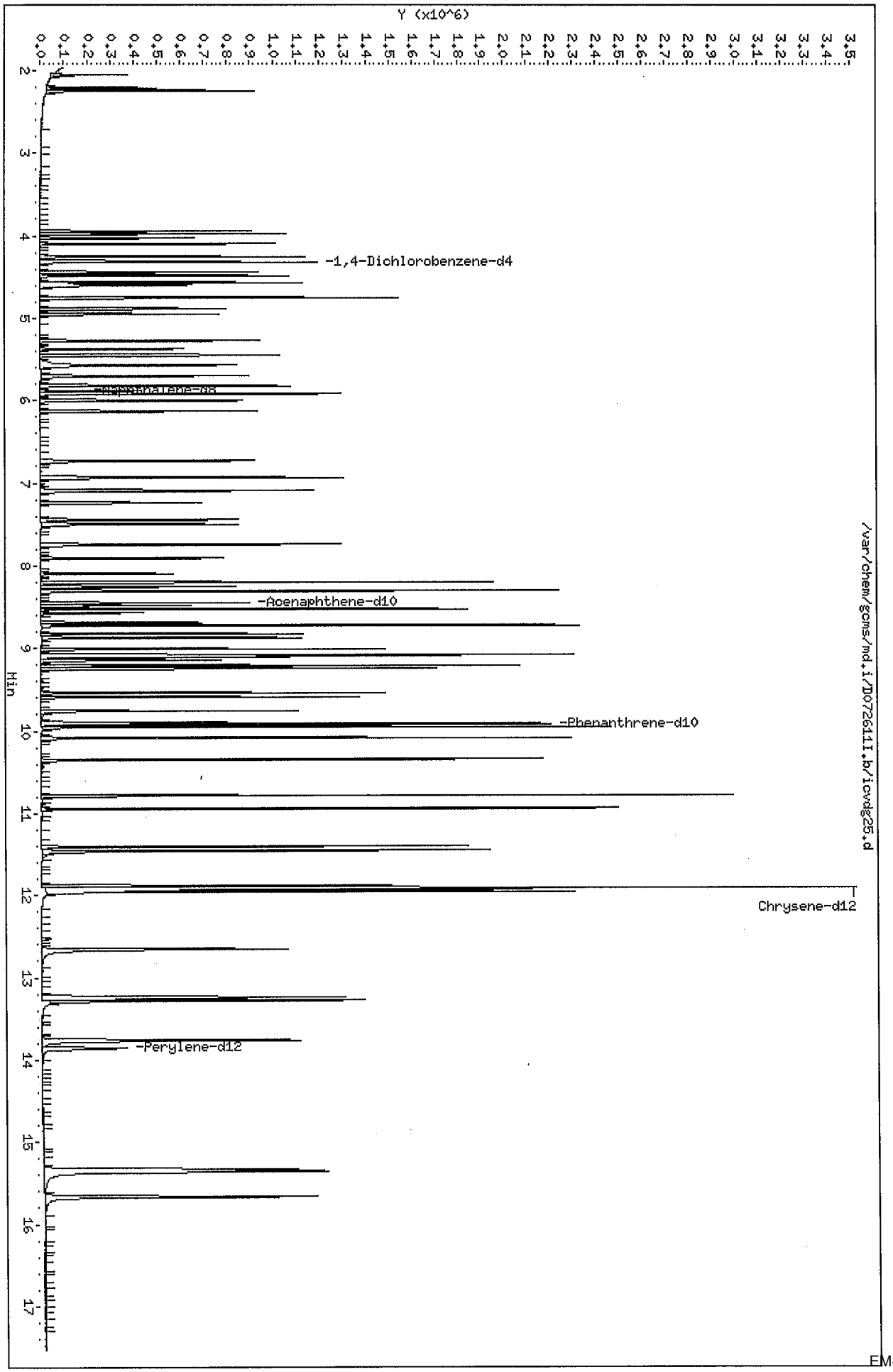
Data File: /var/chem/gcms/md.i/D072611I.b/icvdg25.d
Report Date: 27-Jul-2011 09:26

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: ICVDG25
Level: LOW
Data Type: MS DATA
SpikeList File: a9lcs.spk
Sublist File: appdx9.sub
Client SDG: D072511I
Fraction: SV
Client Smp ID: 2ND SOURCE
Operator: 60841
SampleType: BLANK
Quant Type: ISTD
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072511I,8270a9,8270dxnC13.sub

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS	
86 N-nitrosomethylet	2000	0.00	*	70-130	
87 Methyl methanosul	2000	0.00	*	70-130	
88 N-nitrosodiethyla	2000	0.00	*	70-130	
89 Ethyl methanosulf	2000	0.00	*	70-130	
90 Pentachloroethane	2000	0.00	*	70-130	
91 acetophenone	2000	0.00	*	70-130	
92 m-cresol	2000	2180	108.76	70-130	
93 n-nitrosopyrrolid	2000	0.00	*	70-130	
94 n-nitrosomorpholi	2000	0.00	*	70-130	
95 o-toluidine	2000	0.00	*	70-130	
96 n-nitrosopiperidi	2000	0.00	*	70-130	
97 2,6-dichlorophenol	2000	0.00	*	70-130	
98 hexachloropropene	2000	0.00	*	70-130	
99 N-nitro-di-n-buty	2000	0.00	*	70-130	
100 Isosafrole	2000	0.00	*	70-130	
101 1,2,4,5-tetrachlo	2000	0.00	*	70-130	
102 safrole	2000	0.00	*	70-130	
103 1-chloronaphthale	2000	0.00	*	70-130	
104 m-dinitrobenzene	2000	2600	130.24*	70-130	ok.
105 pentachlorobenzene	2000	0.00	*	70-130	
106 1-naphthylamine	2000	0.00	*	70-130	
107 2-naphthylamine	2000	0.00	*	70-130	
108 2,3,4,6-tetrachlor	2000	2140	106.88	70-130	
109 5-nitro-o-toluidi	2000	0.00	*	70-130	
110 diphenylamine	2000	2030	101.52	70-130	
111 1,3,5-trinitroben	2000	0.00	*	70-130	
112 phenacetin	2000	0.00	*	70-130	
113 4-aminobiphenyl	2000	0.00	*	70-130	
114 pentachloronitrob	2000	0.00	*	70-130	
115 Dinoseb	2000	0.00	*	70-130	
84 Benzidine	2000	0.00	*	70-130	
116 p-(dimethylamino)	2000	0.00	*	70-130	
118 2-acetylaminofluo	2000	0.00	*	70-130	


Data File: /var/chem/gcms/md.i/D072611I.b/icvdg25.d
Date : 25-JUL-2011 15:44
Client ID: 2ND SOURCE
Sample Info: ICVDG25,,3,,,2ND SOURCE
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60841
Column diameter: 0.25
Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D072611I.b/icvdg25.d

Data File: /chem/gcms/md.i/D072611I.b/a9dg261.d
Report Date: 10-Aug-2011 15:50

TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: A9DG261
Level: LOW
Data Type: MS DATA
SpikeList File: a9readback.spk
Sublist File: appdx9.sub
Method File: /var/chem/gcms/md.i/D072611I.b/8270a9.m
Misc Info: D072611I,8270a9,appdx9.sub

Client SDG: D072611I
Fraction: SV
Client Smp ID: STD010
Operator: 60841
SampleType: BLANK
Quant Type: ISTD

RL Readback for linear fits.

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS	
86	N-nitrosomethyleth	333	328	98.25	70-130	
87	Methyl methanosulf	333	325	97.50	70-130	
88	N-nitrosodiethylam	333	319	95.81	70-130	
89	Ethyl methanosulfo	333	324	97.27	70-130	
90	Pentachloroethane	333	317	95.24	70-130	
91	acetophenone	333	321	96.24	70-130	
92	m-cresol	333	316	94.85	70-130	
93	n-nitrosopyrrolidi	333	308	92.50	70-130	
94	n-nitrosomorpholin	333	339	101.58	70-130	
95	o-toluidine	333	336	100.74	70-130	
96	n-nitrosopiperidin	333	318	95.44	70-130	
97	2,6-dichlorophenol	333	292	87.52	70-130	
98	hexachloropropene	333	292	87.55	70-130	
99	N-nitro-di-n-butyl	333	314	94.25	70-130	
100	Isosafrole	333	314	94.17	70-130	
101	1,2,4,5-tetrachlor	333	333	99.80	70-130	
102	safrole	333	320	96.17	70-130	
103	1-chloronaphthalen	333	333	100.02	70-130	
104	m-dinitrobenzene	333	370	110.98	70-130	
105	pentachlorobenzene	333	334	100.27	70-130	
106	1-naphthylamine	333	314	94.28	70-130	
107	2-naphthylamine	333	350	104.94	70-130	
108	2,3,4,6-tetrachlor	333	412	123.76	70-130	✓
109	5-nitro-o-toluidin	333	243	72.82	70-130	
110	diphenylamine	333	312	93.71	70-130	
111	1,3,5-trinitrobenz	333	445	133.58*	70-130	NA
112	phenacetin	333	371	111.22	70-130	✓
113	4-aminobiphenyl	333	309	92.81	70-130	
114	pentachloronitrobe	333	299	89.80	70-130	
115	Dinoseb	333	454	136.27*	70-130	QUAD
84	Benzidine	333	248	74.31	70-130	
116	p-(dimethylamino)a	333	252	75.61	70-130	
118	2-acetylaminofluor	333	399	119.63	70-130	✓

KPM 8/10/11

Data File: /chem/gcms/md.i/D072611I.b/a9dg261.d
Report Date: 10-Aug-2011 15:50

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS	
117 o-tolidine	333	222	66.62*	70-130	NA (Avg)
119 7,12-dimethylbenz(	333	380	113.95	70-130	✓
120 3-methylcholanthre	333	408	122.51	70-130	✓
176 2-Picoline	333	321	96.30	70-130	
177 Methapyrilene HCL	333	414	124.12	70-130	
178 N-Nitroquinoline-n	333	482	144.48*	70-130	NA

TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Review / Narrative Checklist
Method 8270C - KNOX-MS-0016, Rev 11 and Method TO-13A Mod – KNOX-MS-0017, Rev 4

Analysis Date:	8/4/11	CCAL Batch/ Scan Name:	D080411	Instrument:	MD	ICAL Batch/ Scan Name:	D072611I	Scanned □

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd □
1. Did DFTPP meet tune criteria?		✓			✓
2. Was DDT breakdown ≤20% & benzidine tailing ≤3 and PCP tailing ≤5?		✓			✓
3. Were all standards injected within 12 hr of DFTPP?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Are the RFs for SPCCs ≥0.050? (8270C)		✓			✓
6. Do the RFs meet minimum criteria? (TO-13 A mod)		✓			✓
7. Is the %D or drift ≤20% for all CCCs? (8270C)		✓			✓
8. Is the %D or drift ≤30% for all target analytes? (TO-13A Mod)		✓			✓
9. Is the %D or drift ≤ 30% for all other compounds? [Up to 3 TCLs may have %D or drift ≤ 40%; any more and the calibration is INVALID; 3 add'l allowed for App IX and CLP 4.2].		✓		□ %D or drift > 30% for the following TCLs: _____ _____	✓
10. Are the internal standard responses within limits? (50-200% of the mid-level ICAL standard)		✓			✓
11. Are the internal standard retention times within limits? (30 seconds of the mid-level ICAL standard)		✓			✓
12. Were all peaks identified automatically? *If not, list analytes:* _____		✓			✓
13. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
14. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
15. Was the correct ICAL used for quantitation? (Verify date & time of ICAL is documented correctly on CCAL.)		✓			✓
16. Is the first IS documented correctly on the log?		✓			✓
17. Elution order checked on isomeric pairs/coeluters?		✓			✓
• 1,4-dichlorobenzene-d4 / 1,2-dichlorobenzene-d4		✓			✓
• aniline / bis(2-chloroethyl)ether		✓			✓
• 1,3- , 1,4- , 1,2-dichlorobenzene		✓			✓
• benzyl alcohol / 2-methylphenol / 4-methylphenol		✓			✓
• 2,4,6- and 2,4,5-trichlorophenol		✓			✓
• phenanthrene / anthracene		✓			✓
• fluoranthene / pyrene		✓			✓
• benzo(a)anthracene / chrysene		✓			✓
• bis(2-ethylhexyl)/di-n-octyl phthalate		✓			✓
• benzo(b)fluoranthene / benzo(k)fluoranthene		✓			✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene		✓			✓
• safrole/1-chloronaphthalene/2- chloronaphthalene		✓			✓
• 1-/2-naphthylamine		✓			✓
18. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓			NCM #: _____	NA
19. Does the CCAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quant report, chromatogram and manual integrations.		✓			✓

Analyst: KRM	Date: 8/4/11	2nd Level Reviewer :	Date: 8/5/11
Comments:		**Comments:**	

TestAmerica Knoxville
Instrument MD Run/Maintenance Log

Preventive Maintenance Performed ☑ **Daily** INJ **Date/Time Verified** ☑

Target Batch	D080411			Date	8/4/11
ICAL Batch	D072611I			Analyst	KRM
IS #1	(8270) 53885			Internal Std ID*	EM3035

* was added to all sample extracts at 3 ul per 300 ul unless noted. Instrument injection volume is 1 ul unless otherwise noted.

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
Inst Blk	INST BLK	1159	—	—	—	
Tune	DFDHOH	1219	—	EM3057B	—	
8270 CCV	CCDHOHH	1231	—	EM3083	—	
A9 CCV	A9DHOHH	1257	—	EM308H	—	
Extras CCV	XCDH044	1323	—	EM3085	—	
BLK	MK51D1AA	1852	—	Air	1207013	ICR.sub
LCS	MK51D1AC	1420	—	↓	↓	↓
DUP	MK51D1AD	1449	—			
HIG250406	MK5C31AA	1518	1/20			25uL to 500uL RR 1/50x
↓	MK5C51AA	1547	1/20			25uL to 500uL RR 1/50x
	MK5C61AA	1616	1/20			25uL to 500uL RR 1/100x
↓	MK5C71AA	1645	—			
HIG250H17	MK5KL1AA	1713	—			
↓	MK5KQ1AA	1742	—			
↓	MK5KR1AA	1810	—			
↓	MK5KT1AA	1838	—			
↓	MK5KW1AC	1907	—			
HIG250406	MK5C32AA	1935	1/50			10uL to 500uL
↓	MK5C52AA	2003	1/50			10uL to 500uL
↓	MK5C62AA	2032	1/100x	↓	↓	5uL to 500uL
Inst Blk	INSTBLK2	2100	—	—	—	—
Std Check	EM3086	2128	—	—	—	—
↓	EM3087	2157	—	—	—	—
HIG250406	MK5C53AA	2226	1/100	Air	1207013	ICR.sub 5uL to 500uL
			KRM 8/5/11			!

Comments: _____

Data File: /chem/gcms/md.i/D080411.b/dfdh04.d

Date : 04-AUG-2011 12:19

Client ID: Tune

Instrument: md.i

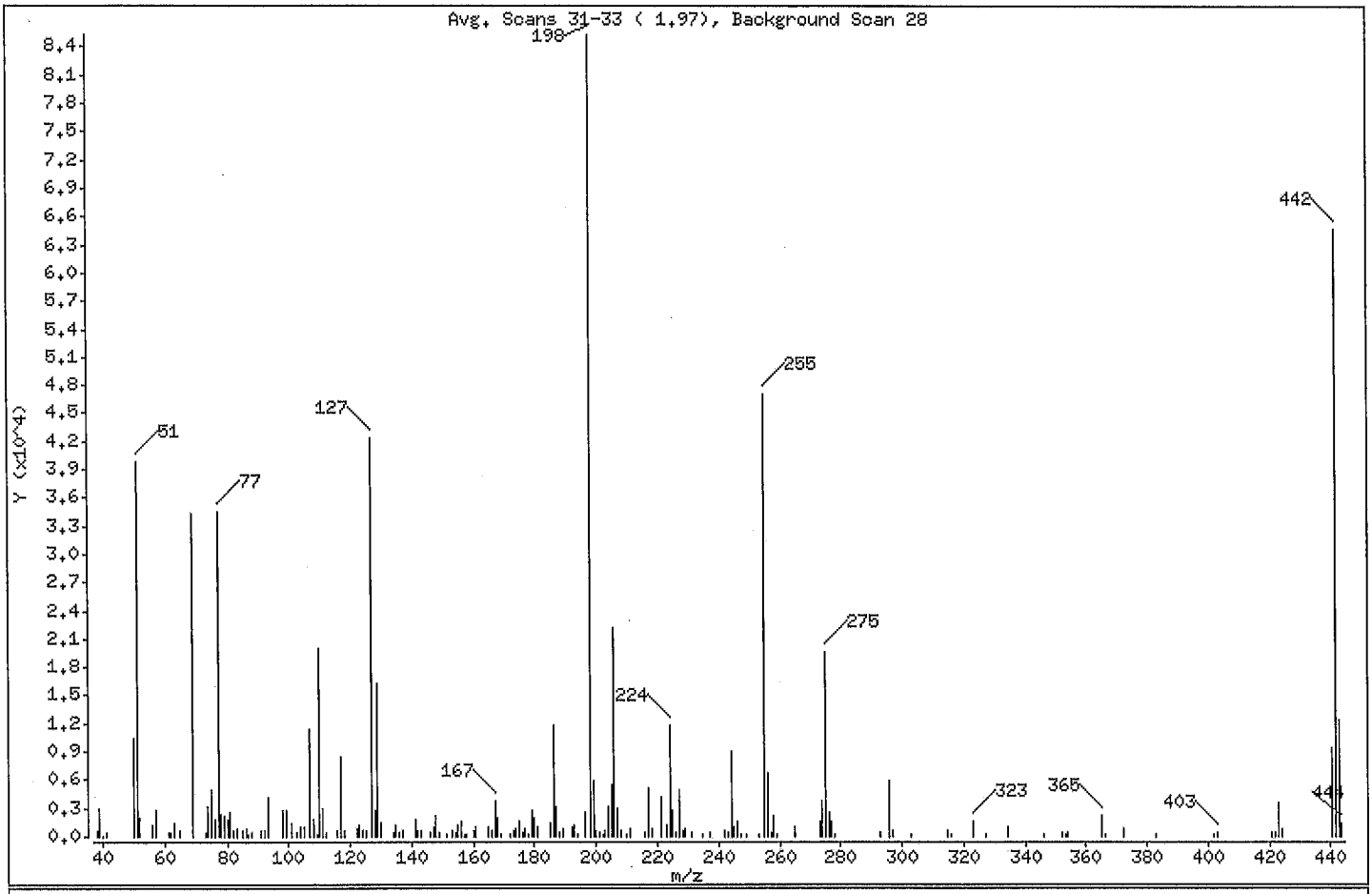
Sample Info: DFDH04,,3,,DFTPP,

Operator: 60487

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	46.75
68	Less than 1.99% of mass 69	0.00 (0.00)
69	Present, but less than mass 198	40.27
70	Less than 1.99% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	49.69
197	Less than 0.99% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.95
275	10.00 - 30.00% of mass 198	22.98
365	1.01 - 100.00% of mass 198	2.43
441	Present, but less than mass 443	10.92
442	50.01 - 110.00% of mass 198	75.76
443	17.00 - 23.00% of mass 442	14.47 (19.10)

Data File: /chem/gcms/md.i/D080411.b/dfdh04.d

Date : 04-AUG-2011 12:19

Client ID: Tune

Instrument: md.i

Sample Info: DFDH04,,3,,DFTPP,

Operator: 60487

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

Data File: dfdh04.d

Spectrum: Avg. Scans 31-33 (1.97), Background Scan 28

Location of Maximum: 198.00

Number of points: 173

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	583	116.00	579	180.00	2056	249.00	250
39.00	2873	117.00	8511	181.00	1067	253.00	260
40.00	76	118.00	677	185.00	1425	255.00	47128
41.00	354	122.00	767	186.00	11745	256.00	6633
50.00	10461	123.00	1163	187.00	3144	257.00	475
51.00	39856	124.00	586	188.00	424	258.00	2212
52.00	1911	125.00	558	189.00	791	259.00	243
56.00	1215	127.00	42360	192.00	952	265.00	985
57.00	2771	128.00	2738	193.00	1199	273.00	1515
61.00	464	129.00	16191	194.00	169	274.00	3646
62.00	470	130.00	1304	196.00	2524	275.00	19592
63.00	1414	134.00	363	198.00	85264	276.00	2568
65.00	663	135.00	1137	199.00	5926	277.00	1562
69.00	34328	136.00	475	200.00	640	278.00	214
73.00	439	137.00	682	201.00	376	293.00	330
74.00	3222	141.00	1758	202.00	184	296.00	5797
75.00	4930	142.00	610	203.00	607	297.00	586
76.00	1824	143.00	514	204.00	3067	303.00	290
77.00	34528	146.00	400	205.00	5564	315.00	499
78.00	2330	147.00	973	206.00	22088	316.00	205
79.00	2145	148.00	2168	207.00	3008	323.00	1488
80.00	1671	149.00	470	208.00	660	327.00	176
81.00	2537	151.00	172	210.00	179	334.00	1015
82.00	619	153.00	632	211.00	720	346.00	203
83.00	699	154.00	490	216.00	419	352.00	388
85.00	675	155.00	1168	217.00	5123	353.00	277
86.00	800	156.00	1658	218.00	760	354.00	435
87.00	207	157.00	199	221.00	4152	365.00	2076
88.00	379	158.00	220	223.00	1239	366.00	203
91.00	651	160.00	624	224.00	11665	372.00	868
92.00	642	161.00	898	225.00	2834	383.00	191
93.00	4022	165.00	943	226.00	366	402.00	265
98.00	2692	166.00	620	227.00	4895	403.00	367
99.00	2652	167.00	3722	228.00	614	421.00	334
101.00	1419	168.00	2007	229.00	773	422.00	298

Data File: /chem/gcms/md.i/D080411.b/dfdh04.d

Date : 04-AUG-2011 12:19

Client ID: Tune

Instrument: md.i

Sample Info: DFDH04,,3,,DFTPP,

Operator: 60487

Column phase: Rxi-5 Sil MS

Column diameter: 0.25

Data File: dfdh04.d
Spectrum: Avg. Scans 31-33 (1.97), Background Scan 28
Location of Maximum: 198.00
Number of points: 173

m/z	Y	m/z	Y	m/z	Y	m/z	Y
103.00	418	169.00	169	231.00	372	423.00	3439
104.00	883	172.00	181	235.00	208	424.00	778
105.00	915	173.00	518	237.00	419	441.00	9311
107.00	11377	174.00	788	242.00	647	442.00	64592
108.00	1704	175.00	1572	243.00	355	443.00	12340
109.00	232	176.00	479	244.00	9046	444.00	1379
110.00	19920	177.00	805	245.00	1044		
111.00	3015	178.00	204	246.00	1647		
112.00	401	179.00	2758	247.00	183		

Data File: /chem/gcms/md.i/D080411.b/dfdh04.d

Date : 04-AUG-2011 12:19

Client ID: Tune

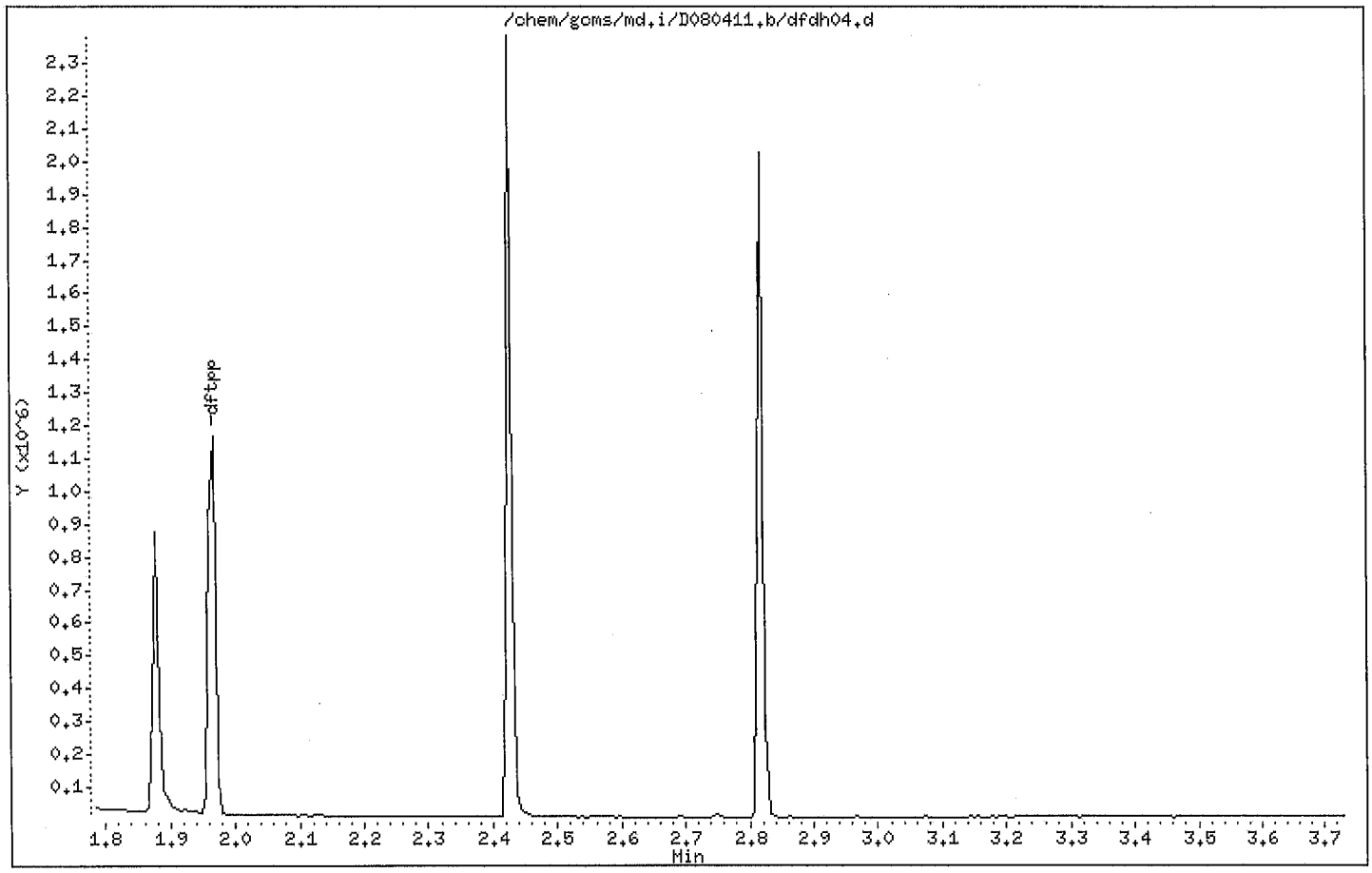
Instrument: md.i

Sample Info: DFDH04,,3,,DFTPP,

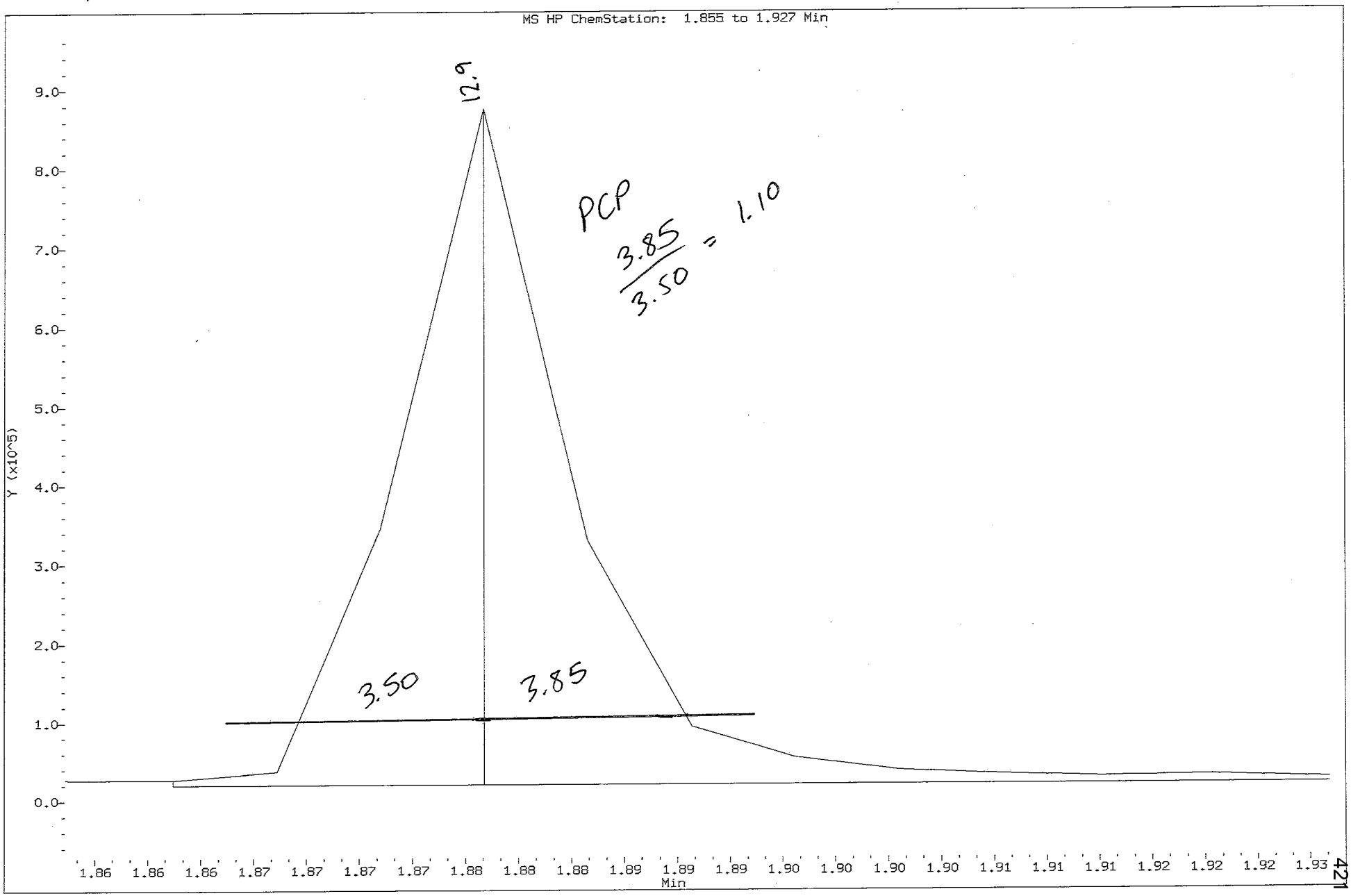
Operator: 60487

Column phase: Rxi-5 Sil MS

Column diameter: 0.25



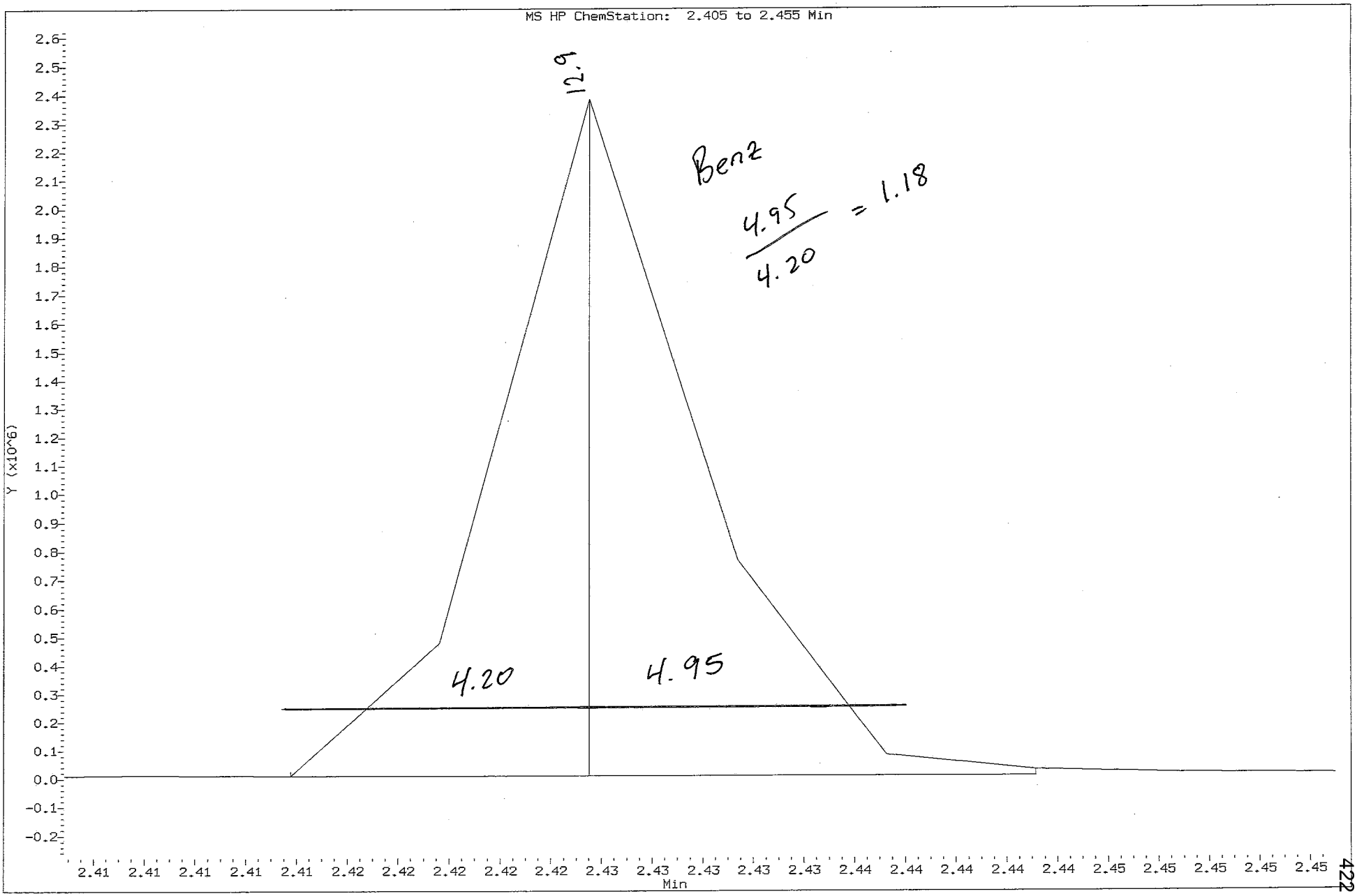
Data File: /var/chem/gcms/md.i/D080411.b/dfdh04.d
Injection Date: 04-AUG-2011 12:19
Instrument: md.i
Client Sample ID: Tune



EM-BTRF-002154

421

Data File: /var/chem/gcms/md.i/D080411.b/dfdh04.d
Injection Date: 04-AUG-2011 12:19
Instrument: md.i
Client Sample ID: Tune



Data File: /chem/gcms/md.i/D080411.b/ccdh044.d
Report Date: 04-Aug-2011 12:49

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdh044.d
Analysis Type: SOIL
Lab Sample ID: CCDH044
Method: /chem/gcms/md.i/D080411.b/8270a9.m

Injection Date: 04-AUG-2011 12:31
Init. Cal. Date(s): 25-JUL-2011 26-JUL-2011
Init. Cal. Times: 12:21 17:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 7 2-Fluorophenol	1.10417	1.13531	1.13531	0.000	-2.81991	30.00000	Averaged
$ 8 Phenol-d5	1.32392	1.34245	1.34245	0.000	-1.39942	30.00000	Averaged
$ 9 Nitrobenzene-d5	0.31871	0.31359	0.31359	0.000	1.60639	30.00000	Averaged
$ 10 2-Fluorobiphenyl	1.25112	1.19706	1.19706	0.000	4.32046	30.00000	Averaged
$ 11 2,4,6-Tribromophenol	0.08007	0.08300	0.08300	0.000	-3.66336	30.00000	Averaged
$ 12 Terphenyl-d14	0.75982	0.76097	0.76097	0.000	-0.15133	30.00000	Averaged
$ 179 13C6-naphthalene	1.08685	1.00696	1.00696	0.000	7.35116	30.00000	Averaged
175 1,4-Dioxane	0.42953	0.42047	0.42047	0.000	2.10815	30.00000	Averaged
13 N-Nitrosodimethylamine	0.62419	0.63622	0.63622	0.000	-1.92758	30.00000	Averaged
14 Pyridine	1.08883	1.11345	1.11345	0.000	-2.26094	30.00000	Averaged
15 Phenol (ccc)	1.36159	1.38613	1.38613	0.800	-1.80213	20.00000	Averaged
16 Aniline	1.68746	1.70928	1.70928	0.000	-1.29310	30.00000	Averaged
17 Bis(2-chloroethyl)ether	1.02217	1.02848	1.02848	0.700	-0.61774	30.00000	Averaged
18 2-Chlorophenol	1.22509	1.21590	1.21590	0.800	0.75043	30.00000	Averaged
19 1,3-Dichlorobenzene	1.39019	1.37744	1.37744	0.000	0.91682	30.00000	Averaged
20 1,4-Dichlorobenzene (ccc)	1.42020	1.40872	1.40872	0.000	0.80828	20.00000	Averaged
21 Benzyl alcohol	0.80411	0.83342	0.83342	0.000	-3.64576	30.00000	Averaged
22 1,2-Dichlorobenzene	1.36699	1.34003	1.34003	0.000	1.97220	30.00000	Averaged
23 2-Methylphenol	1.07590	1.09575	1.09575	0.700	-1.84495	30.00000	Averaged
24 2,2'-Oxybis(1-Chloropropane	1.95048	1.95417	1.95417	0.010	-0.18921	30.00000	Averaged
25 4-Methylphenol	1.10939	1.14771	1.14771	0.600	-3.45499	30.00000	Averaged
26 3&4 Methylphenol	1.10939	1.14771	1.14771	0.600	-3.45499	30.00000	Averaged
27 N-Nitroso-di-n-propylamine#	0.81631	0.83625	0.83625	0.500	-2.44271	30.00000	Averaged
28 Hexachloroethane	0.53310	0.52687	0.52687	0.300	1.16855	30.00000	Averaged
29 Nitrobenzene	0.31224	0.30574	0.30574	0.200	2.08007	30.00000	Averaged
30 Isophorone	0.51349	0.51986	0.51986	0.400	-1.24089	30.00000	Averaged
31 2-Nitrophenol (ccc)	0.15871	0.16666	0.16666	0.100	-5.01208	20.00000	Averaged
32 2,4-Dimethyphenol	0.33554	0.33713	0.33713	0.200	-0.47407	30.00000	Averaged
33 Bis(2-chloroethoxy)methane	0.33677	0.33490	0.33490	0.300	0.55724	30.00000	Averaged
34 Benzoic acid	59.38628	60.00000	0.14639	0.000	1.02287	30.00000	Quadratic
35 2,4-Dichlorophenol (ccc)	0.27272	0.27321	0.27321	0.200	-0.17847	20.00000	Averaged
36 1,2,4-Trichlorobenzene	0.31318	0.30673	0.30673	0.000	2.05896	30.00000	Averaged
37 Naphthalene	0.95835	0.92775	0.92775	0.700	3.19297	30.00000	Averaged
38 4-Chloroaniline	0.39823	0.39763	0.39763	0.010	0.15193	30.00000	Averaged
39 Hexachlorobutadiene (ccc)	0.19689	0.19259	0.19259	0.010	2.18500	20.00000	Averaged

Data File: /chem/gcms/md.i/D080411.b/ccdh044.d
Report Date: 04-Aug-2011 12:49

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdh044.d
Analysis Type: SOIL
Lab Sample ID: CCDH044
Method: /chem/gcms/md.i/D080411.b/8270a9.m

Injection Date: 04-AUG-2011 12:31
Init. Cal. Date(s): 25-JUL-2011 26-JUL-2011
Init. Cal. Times: 12:21 17:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 4-Chloro-3-methylphenol (cc	0.26166	0.26885	0.26885	0.200	-2.74733	20.00000	Averaged
41 2-Methylnaphthalene	0.64823	0.64585	0.64585	0.400	0.36650	30.00000	Averaged
42 Hexachlorocyclopentadiene##	0.31114	0.30935	0.30935	0.050	0.57419	30.00000	Averaged
43 2,4,6-Trichlorophenol (ccc)	0.32021	0.32660	0.32660	0.200	-1.99447	20.00000	Averaged
44 2,4,5-Trichlorphenol	0.36035	0.36483	0.36483	0.200	-1.24580	30.00000	Averaged
45 2-Chloronaphthalene	1.06797	1.04042	1.04042	0.800	2.57906	20.00000	Averaged
46 2-Nitroaniline	56.90912	60.00000	0.30245	0.010	5.15146	30.00000	Linear
47 Acenaphthylene	1.70598	1.68952	1.68952	1.300	0.96498	30.00000	Averaged
48 Dimethyl phthalate	1.32054	1.21177	1.21177	0.010	8.23674	30.00000	Averaged
49 2,6-Dinitrotoluene	0.27720	0.27817	0.27817	0.200	-0.34821	30.00000	Averaged
50 3-Nitroaniline	0.31963	0.31464	0.31464	0.010	1.56132	30.00000	Averaged
51 Acenaphthene (ccc)	1.12880	1.08121	1.08121	0.900	4.21599	20.00000	Averaged
52 2,4-Dinitrophenol ##spcc##	55.23017	60.00000	0.15288	0.050	7.94972	30.00000	Quadratic
53 Dibenzofuran	1.57316	1.49407	1.49407	0.800	5.02711	30.00000	Averaged
54 4-Nitrophenol ##spcc##	0.17245	0.15930	0.15930	0.050	7.62645	30.00000	Averaged
55 2,4-Dinitrotoluene	0.36278	0.37606	0.37606	0.200	-3.66016	30.00000	Averaged
56 Fluorene	1.30247	1.26388	1.26388	0.900	2.96238	30.00000	Averaged
57 4-Chlorophenyl phenyl ether	0.62959	0.59732	0.59732	0.400	5.12446	30.00000	Averaged
58 Diethyl phthalate	53.56761	60.00000	1.23771	0.010	10.72066	30.00000	Linear
59 4-Nitroaniline	0.33364	0.31659	0.31659	0.010	5.10923	30.00000	Averaged
60 4,6-Dinitro-2-methylphenol	52.96783	60.00000	0.10823	0.010	11.72029	30.00000	Linear
61 N-Ndpa / diphenylamine (ccc	0.57601	0.55887	0.55887	0.010	2.97533	20.00000	Averaged
62 1,2-Diphenylhydrazine/azobn	0.59563	0.56854	0.56854	0.000	4.54802	30.00000	Averaged
63 4-Bromophenyl phenyl ether	0.18588	0.18103	0.18103	0.010	2.60857	30.00000	Averaged
64 Hexachlorobenzene	0.19836	0.18973	0.18973	0.100	4.35462	30.00000	Averaged
65 Pentachlorophenol (ccc)	56.47851	60.00000	0.13772	0.050	5.86915	20.00000	Linear
66 Phenanthrene	1.07144	1.00705	1.00705	0.700	6.00921	30.00000	Averaged
67 Anthracene	1.03950	1.01016	1.01016	0.700	2.82294	30.00000	Averaged
68 Carbazole	0.94870	0.91095	0.91095	0.010	3.97927	30.00000	Averaged
69 Di-n-butyl phthalate	1.04310	1.07123	1.07123	0.010	-2.69676	20.00000	Averaged
70 Fluoranthene (ccc)	1.10421	1.10618	1.10618	0.600	-0.17843	20.00000	Averaged
71 Pyrene	1.13263	1.13727	1.13727	0.600	-0.40984	30.00000	Averaged
72 Butyl benzyl phthalate	58.66501	60.00000	0.48636	0.010	2.22498	30.00000	Linear
73 Benzo(a)Anthracene	0.99170	0.99514	0.99514	0.800	-0.34683	30.00000	Averaged
74 3,3'-Dichlorobenzidine	0.36945	0.37025	0.37025	0.010	-0.21683	30.00000	Averaged

Data File: /chem/gcms/md.i/D080411.b/ccdh044.d
Report Date: 04-Aug-2011 12:49

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdh044.d
Analysis Type: SOIL
Lab Sample ID: CCDH044
Method: /chem/gcms/md.i/D080411.b/8270a9.m

Injection Date: 04-AUG-2011 12:31
Init. Cal. Date(s): 25-JUL-2011 26-JUL-2011
Init. Cal. Times: 12:21 17:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
75 Chrysene	1.05787	0.98083	0.98083	0.700	7.28280	30.00000	Averaged
76 Bis(2-ethylhexyl) phthalate	57.31364	60.00000	0.64055	0.010	4.47727	30.00000	Linear
77 Di-n-octyl phthalate (ccc)	60.75654	60.00000	1.17627	0.010	-1.26090	20.00000	Quadratic
78 Benzo(b)fluoranthene	1.00346	1.04887	1.04887	0.700	-4.52470	30.00000	Averaged
79 Benzo(k)fluoranthene	1.20923	1.16817	1.16817	0.700	3.39559	30.00000	Averaged
80 Benzo(a)pyrene (ccc)	57.11712	60.00000	1.03207	0.700	4.80481	20.00000	Linear
81 Indeno(1,2,3-cd)pyrene	1.09627	1.11688	1.11688	0.500	-1.87961	30.00000	Averaged
82 Dibenz(a,h)anthracene	0.89684	0.87291	0.87291	0.400	2.66895	30.00000	Averaged
83 Benzo(g,h,i)perylene	0.96717	0.95207	0.95207	0.500	1.56117	30.00000	Averaged

Data File: /chem/gcms/md.i/D080411.b/ccdh044.d
Report Date: 04-Aug-2011 12:49

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D080411.b/ccdh044.d
Lab Smp Id: CCDH044 Client Smp ID: STD060
Inj Date : 04-AUG-2011 12:31
Operator : 60487 Inst ID: md.i
Smp Info : CCDH044,,2,4,,STD060,
Misc Info : D080411,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 12:49 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL) (1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

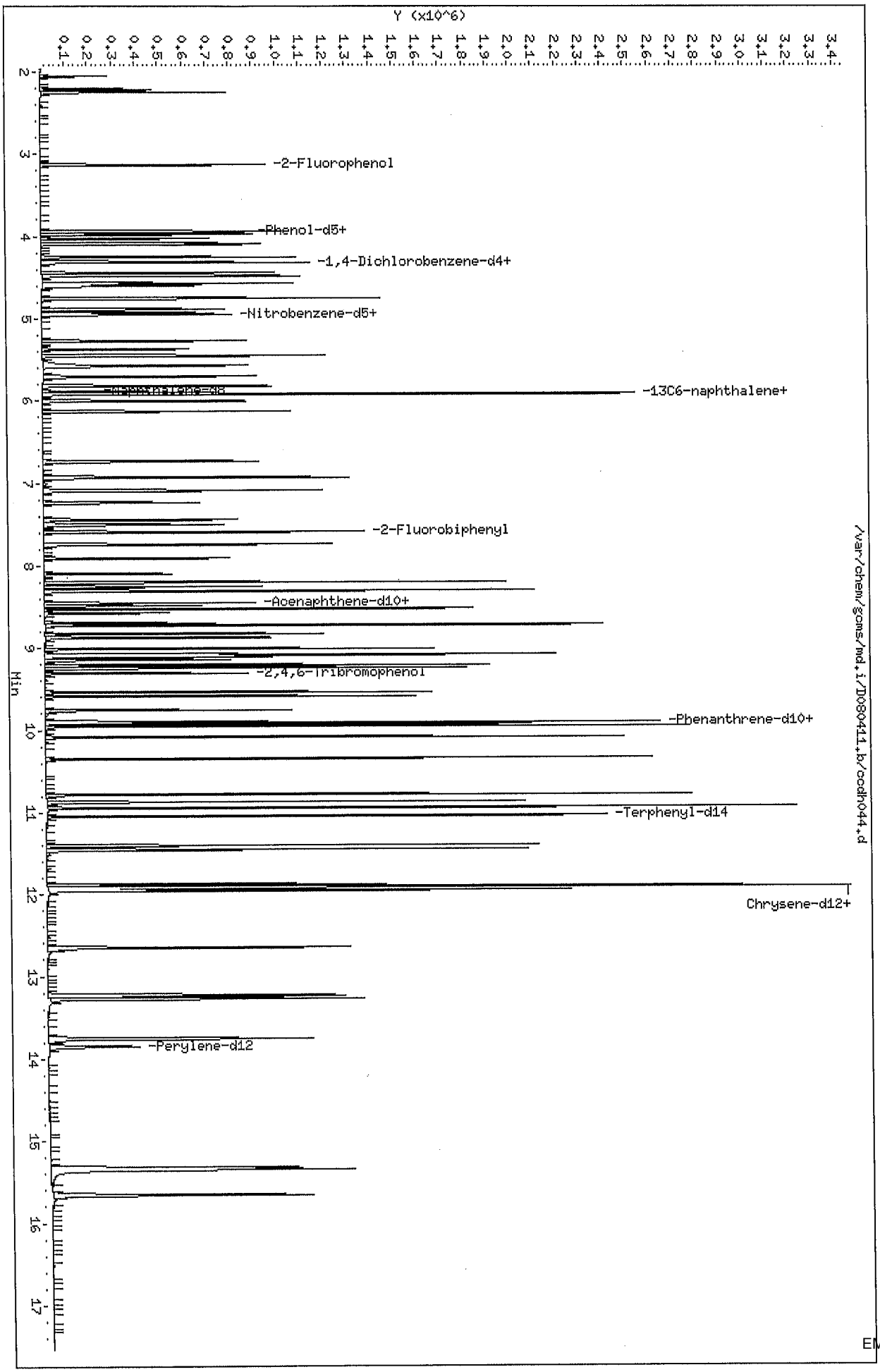
		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/uL)	ON-COL (ng/uL)
*	1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	53885	20.0000	20.0
*	2 Naphthalene-d8	136	5.888	5.888	(1.000)	216727	20.0000	20.0
*	3 Acenaphthene-d10	164	8.485	8.485	(1.000)	132541	20.0000	20.0
*	4 Phenanthrene-d10	188	9.895	9.895	(1.000)	256755	20.0000	20.0
*	5 Chrysene-d12	240	11.922	11.922	(1.000)	266546	20.0000	20.0
*	6 Perylene-d12	264	13.849	13.849	(1.000)	235464	20.0000	20.0
$	7 2-Fluorophenol	112	3.132	3.132	(0.728)	183530	60.0000	61.7
$	8 Phenol-d5	99	3.937	3.937	(0.915)	217016	60.0000	60.8
$	9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	203890	60.0000	59.0
$	10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	475982	60.0000	57.4
$	11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	63934	60.0000	62.2
$	12 Terphenyl-d14	244	11.040	11.040	(0.926)	608499	60.0000	60.1
$	179 13C6-naphthalene	134	5.917	5.917	(1.005)	654707	60.0000	55.6
	175 1,4-Dioxane	88	2.051	2.051	(0.477)	67972	60.0000	58.7

Data File: /chem/gcms/md.i/D080411.b/ccdh044.d
Report Date: 04-Aug-2011 12:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.209	2.209	(0.514)	102848	60.0000	61.2
14 Pyridine	79	2.245	2.245	(0.522)	179996	60.0000	61.4
15 Phenol (ccc)	94	3.949	3.949	(0.918)	224077	60.0000	61.1
16 Aniline	93	3.978	3.978	(0.925)	276316	60.0000	60.8
17 Bis(2-chloroethyl)ether	93	4.031	4.031	(0.937)	166261	60.0000	60.4
18 2-Chlorophenol	128	4.101	4.101	(0.954)	196557	60.0000	59.5
19 1,3-Dichlorobenzene	146	4.248	4.248	(0.988)	222672	60.0000	59.4
20 1,4-Dichlorobenzene (ccc)	146	4.319	4.319	(1.004)	227729	60.0000	59.5
21 Benzyl alcohol	108	4.442	4.442	(1.033)	134728	60.0000	62.2
22 1,2-Dichlorobenzene	146	4.483	4.483	(1.042)	216624	60.0000	58.8
23 2-Methylphenol	108	4.571	4.571	(1.063)	177136	60.0000	61.1
24 2,2'-Oxybis(1-Chloropropane)	45	4.595	4.595	(1.068)	315905	60.0000	60.1
25 4-Methylphenol	108	4.754	4.754	(1.105)	185535	60.0000	62.1
26 3&4 Methylphenol	108	4.754	4.754	(1.105)	185535	60.0000	62.1
27 N-Nitroso-di-n-propylamine###	70	4.748	4.748	(1.104)	135185	60.0000	61.5
28 Hexachloroethane	117	4.883	4.883	(1.135)	85172	60.0000	59.3
29 Nitrobenzene	77	4.953	4.953	(0.841)	198789	60.0000	58.8
30 Isophorone	82	5.271	5.271	(0.895)	338003	60.0000	60.7
31 2-Nitrophenol (ccc)	139	5.370	5.370	(0.912)	108360	60.0000	63.0
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	219197	60.0000	60.3
33 Bis(2-chloroethoxy)methane	93	5.570	5.570	(0.946)	217743	60.0000	59.7
34 Benzoic acid	122	5.594	5.594	(0.950)	95181	60.0000	59.4
35 2,4-Dichlorophenol (ccc)	162	5.705	5.705	(0.969)	177635	60.0000	60.1
36 1,2,4-Trichlorobenzene	180	5.823	5.823	(0.989)	199433	60.0000	58.8
37 Naphthalene	128	5.923	5.923	(1.006)	603210	60.0000	58.1
38 4-Chloroaniline	127	6.005	6.005	(1.020)	258531	60.0000	59.9
39 Hexachlorobutadiene (ccc)	225	6.128	6.128	(1.041)	125217	60.0000	58.7
40 4-Chloro-3-methylphenol (ccc)	107	6.739	6.739	(1.145)	174804	60.0000	61.6
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	419922	60.0000	59.8
42 Hexachlorocyclopentadiene####	237	7.239	7.239	(0.853)	123005	60.0000	59.6
43 2,4,6-Trichlorophenol (ccc)	196	7.445	7.445	(0.877)	129862	60.0000	61.2
44 2,4,5-Trichlorphenol	196	7.503	7.503	(0.884)	145067	60.0000	60.7
45 2-Chloronaphthalene	162	7.744	7.744	(0.913)	413698	60.0000	58.4
46 2-Nitroaniline	65	7.909	7.909	(0.932)	120262	60.0000	56.9
47 Acenaphthylene	152	8.308	8.308	(0.979)	671794	60.0000	59.4
48 Dimethyl phthalate	163	8.202	8.202	(0.967)	481829	60.0000	55.0
49 2,6-Dinitrotoluene	165	8.249	8.249	(0.972)	110606	60.0000	60.2
50 3-Nitroaniline	138	8.449	8.449	(0.996)	125107	60.0000	59.1
51 Acenaphthene (ccc)	153	8.520	8.520	(1.004)	429917	60.0000	57.5
52 2,4-Dinitrophenol ##spcc##	184	8.573	8.573	(1.010)	60787	60.0000	55.2
53 Dibenzofuran	168	8.720	8.720	(1.028)	594080	60.0000	57.0
54 4-Nitrophenol ##spcc##	109	8.690	8.690	(1.024)	63342	60.0000	55.4
55 2,4-Dinitrotoluene	165	8.725	8.725	(1.028)	149531	60.0000	62.2
56 Fluorene	166	9.078	9.078	(1.070)	502552	60.0000	58.2
57 4-Chlorophenyl phenyl ether	204	9.096	9.096	(1.072)	237510	60.0000	56.9
58 Diethyl phthalate	149	9.007	9.007	(1.062)	492145	60.0000	53.6
59 4-Nitroaniline	138	9.107	9.107	(1.073)	125884	60.0000	56.9

Data File: /chem/gcms/md.i/D080411.b/ccdh044.d
Report Date: 04-Aug-2011 12:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.143	9.143	(0.924)	83369	60.0000	53.0
61 N-Ndpa / diphenylamine (ccc)	169	9.213	9.213	(0.931)	430479	60.0000	58.2
62 1,2-Diphenylhydrazine/azobnz	77	9.242	9.242	(0.934)	437923	60.0000	57.3
63 4-Bromophenyl phenyl ether	248	9.536	9.536	(0.964)	139442	60.0000	58.4
64 Hexachlorobenzene	284	9.589	9.589	(0.969)	146139	60.0000	57.4
65 Pentachlorophenol (ccc)	266	9.759	9.759	(0.986)	106084	60.0000	56.5
66 Phenanthrene	178	9.912	9.912	(1.002)	775696	60.0000	56.4
67 Anthracene	178	9.953	9.953	(1.006)	778087	60.0000	58.3
68 Carbazole	167	10.083	10.083	(1.019)	701672	60.0000	57.6
69 Di-n-butyl phthalate	149	10.347	10.347	(1.046)	825131	60.0000	61.6
70 Fluoranthene (ccc)	202	10.782	10.782	(1.090)	852049	60.0000	60.1
71 Pyrene	202	10.941	10.941	(0.918)	909409	60.0000	60.2
72 Butyl benzyl phthalate	149	11.399	11.399	(0.956)	388910	60.0000	58.7
73 Benzo(a)Anthracene	228	11.916	11.916	(1.000)	795754	60.0000	60.2
74 3,3'-Dichlorobenzidine	252	11.875	11.875	(0.996)	296067	60.0000	60.1
75 Chrysene	228	11.951	11.951	(1.002)	784313	60.0000	55.6
76 Bis(2-ethylhexyl) phthalate	149	11.904	11.904	(0.999)	512211	60.0000	57.3
77 Di-n-octyl phthalate (ccc)	149	12.650	12.650	(0.913)	830911	60.0000	60.8
78 Benzo(b)fluoranthene	252	13.232	13.232	(0.955)	740913	60.0000	62.7
79 Benzo(k)fluoranthene	252	13.273	13.273	(0.958)	825185	60.0000	58.0
80 Benzo(a)pyrene (ccc)	252	13.755	13.755	(0.993)	729045	60.0000	57.1
81 Indeno(1,2,3-cd)pyrene	276	15.324	15.324	(1.106)	788955	60.0000	61.1
82 Dibenz(a,h)anthracene	278	15.347	15.347	(1.108)	616616	60.0000	58.4
83 Benzo(g,h,i)perylene	276	15.653	15.653	(1.130)	672539	60.0000	59.1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Date : 04-AUG-2011 12:31
Client ID: STD060
Sample Info: CCDH044,2,4,STD060,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4+
-Nitrobenzene-d5+
-13C6-naphthalene+
-2-Fluorobiphenyl
-Acenaphthene-d10+
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md.i/D080411.b/ccdh044.d

Data File: /chem/gcms/md.i/D080411.b/a9dh044.d
Report Date: 04-Aug-2011 13:15

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: a9dh044.d
Analysis Type: SOIL
Lab Sample ID: A9DH044
Method: /chem/gcms/md.i/D080411.b/8270a9.m

Injection Date: 04-AUG-2011 12:57
Init. Cal. Date(s): 25-JUL-2011 26-JUL-2011
Init. Cal. Times: 12:21 17:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
176 2-Picoline	1.16178	1.14924	1.14924	0.000	1.07862	30.00000	Averaged	
86 N-nitrosomethylethylamine	0.86337	0.84055	0.84055	0.000	2.64344	30.00000	Averaged	
87 Methyl methanosulfonate	0.71583	0.66670	0.66670	0.000	6.86368	30.00000	Averaged	
88 N-nitrosodiethylamine	0.55145	0.56187	0.56187	0.000	-1.89116	30.00000	Averaged	
89 Ethyl methanosulfonate	0.85569	0.85692	0.85692	0.000	-0.14456	30.00000	Averaged	
90 Pentachloroethane	0.51429	0.50508	0.50508	0.000	1.79129	30.00000	Averaged	
91 acetophenone	1.70427	1.69811	1.69811	0.010	0.36126	30.00000	Averaged	
92 m-cresol	1.13331	1.17116	1.17116	0.000	-3.34020	30.00000	Averaged	
93 n-nitrosopyrrolidine	0.60147	0.63201	0.63201	0.000	-5.07653	30.00000	Averaged	
94 n-nitrosomorpholine	0.95347	0.94086	0.94086	0.000	1.32186	30.00000	Averaged	
95 o-toluidine	1.84002	1.89990	1.89990	0.000	-3.25382	30.00000	Averaged	
96 n-nitrosopiperidine	0.28001	0.26370	0.26370	0.000	5.82692	30.00000	Averaged	
97 2,6-dichlorophenol	0.26564	0.26693	0.26693	0.000	-0.48656	30.00000	Averaged	
98 hexachloropropene	0.20993	0.20230	0.20230	0.000	3.63111	30.00000	Averaged	
99 N-nitro-di-n-butylamine	0.18447	0.18732	0.18732	0.000	-1.54465	30.00000	Averaged	
100 Isosafrole	0.24515	0.24390	0.24390	0.000	0.50822	30.00000	Averaged	
101 1,2,4,5-tetrachlorobenzene	0.33103	0.31106	0.31106	0.010	6.03316	30.00000	Averaged	
102 safrole	0.40214	0.38648	0.38648	0.000	3.89508	30.00000	Averaged	
103 1-chloronaphthalene	1.05649	0.94119	0.94119	0.000	10.91281	30.00000	Averaged	
104 m-dinitrobenzene	58.34452	60.00000	0.15690	0.000	2.75914	30.00000	Linear	
105 pentachlorobenzene	0.49253	0.45258	0.45258	0.000	8.10976	30.00000	Averaged	
106 1-naphthylamine	1.09432	1.12803	1.12803	0.000	-3.07983	30.00000	Averaged	
107 2-naphthylamine	1.11711	1.10687	1.10687	0.000	0.91591	30.00000	Averaged	
108 2,3,4,6-tetrachlorophenol	58.50915	60.00000	0.27599	0.010	2.48475	30.00000	Linear	
109 5-nitro-o-toluidine	0.33288	0.34862	0.34862	0.000	-4.73007	30.00000	Averaged	
110 diphenylamine	0.58698	0.53889	0.53889	0.000	8.19231	30.00000	Averaged	
111 1,3,5-trinitrobenzene	54.81041	60.00000	0.23060	0.000	8.64932	30.00000	Linear	
112 phenacetin	54.45838	60.00000	0.28558	0.000	9.23603	30.00000	Linear	
113 4-aminobiphenyl	0.72184	0.68967	0.68967	0.000	4.45655	30.00000	Averaged	
114 pentachloronitrobenzene	0.08285	0.07657	0.07657	0.000	7.57797	30.00000	Averaged	
115 Dinoseb	59.88162	60.00000	0.12054	0.000	0.19730	30.00000	Quadratic	
178 N-Nitroquinoline-n-oxide	0.02531	0.02930	0.02930	0.000	-15.74847	30.00000	Averaged	
177 Methapyrilene HCL	0.18611	0.30946	0.30946	0.000	-66.27576	30.00000	Averaged	<- MJ
84 Benzidine	0.70029	0.70791	0.70791	0.000	-1.08734	30.00000	Averaged	
116 p-(dimethylamino)azobenzene	0.30408	0.28796	0.28796	0.000	5.30287	30.00000	Averaged	

Data File: /chem/gcms/md.i/D080411.b/a9dh044.d
Report Date: 04-Aug-2011 13:15

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: a9dh044.d
Analysis Type: SOIL
Lab Sample ID: A9DH044
Method: /chem/gcms/md.i/D080411.b/8270a9.m

Injection Date: 04-AUG-2011 12:57
Init. Cal. Date(s): 25-JUL-2011 26-JUL-2011
Init. Cal. Times: 12:21 17:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
117 o-tolidine	0.67608	0.69871	0.69871	0.000	-3.34672	30.00000	Averaged
119 7,12-dimethylbenz(a)anthrac	54.98987	60.00000	0.44532	0.000	8.35021	30.00000	Linear
118 2-acetylaminofluorene	56.86597	60.00000	0.42509	0.000	5.22339	30.00000	Linear
120 3-methylcholanthrene	55.36534	60.00000	0.52635	0.000	7.72444	30.00000	Linear

Data File: /chem/gcms/md.i/D080411.b/a9dh044.d
Report Date: 04-Aug-2011 13:15

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D080411.b/a9dh044.d
Lab Smp Id: A9DH044 Client Smp ID: STD060
Inj Date : 04-AUG-2011 12:57
Operator : 60487 Inst ID: md.i
Smp Info : A9DH044,,2,4,,STD060,
Misc Info : D080411,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:15 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

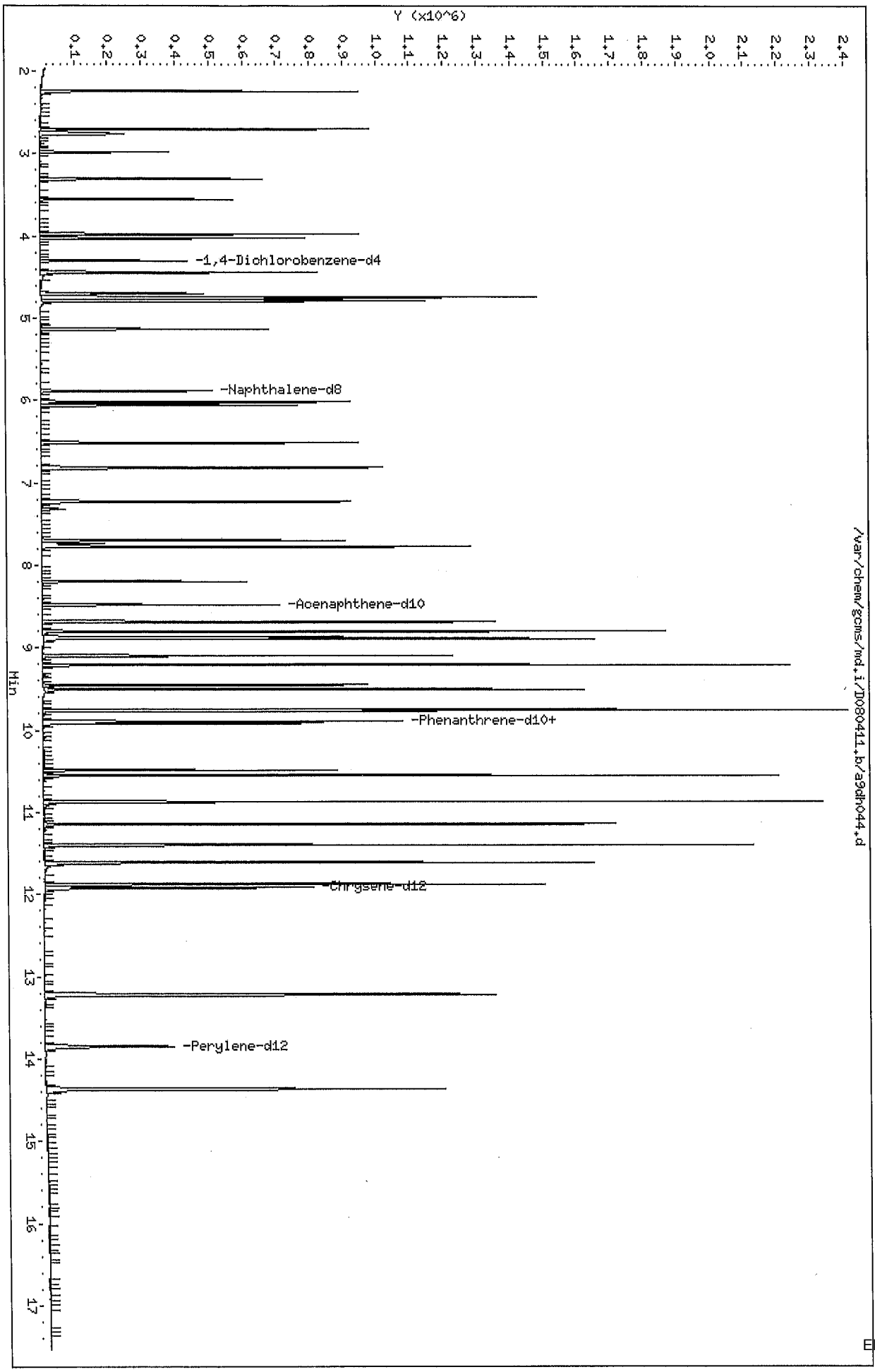
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	55471	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	228553	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	140166	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	281774	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	285204	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	243208	20.0000	20.0
176 2-Picoline	93	2.703	2.703	(0.628)	191249	60.0000	59.4
86 N-nitrosomethylethylamine	42	2.768	2.768	(0.643)	139878	60.0000	58.4
87 Methyl methanosulfonate	80	2.979	2.979	(0.693)	110948	60.0000	55.9
88 N-nitrosodiethylamine	102	3.308	3.308	(0.769)	93503	60.0000	61.1
89 Ethyl methanosulfonate	79	3.555	3.555	(0.826)	142603	60.0000	60.1
90 Pentachloroethane	167	4.031	4.031	(0.937)	84051	60.0000	58.9
91 acetophenone	105	4.742	4.742	(1.102)	282588	60.0000	59.8
92 m-cresol	108	4.759	4.759	(1.107)	194897	60.0000	62.0

Data File: /chem/gcms/md.i/D080411.b/a9dh044.d
Report Date: 04-Aug-2011 13:15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93	n-nitrosopyrrolidine	100	4.701	4.701	(1.093)	105174	60.0000	63.0
94	n-nitrosomorpholine	56	4.742	4.742	(1.102)	156572	60.0000	59.2
95	o-toluidine	106	4.789	4.789	(1.113)	316168	60.0000	62.0
96	n-nitrosopiperidine	42	5.135	5.135	(0.872)	180807	60.0000	56.5
97	2,6-dichlorophenol	162	6.017	6.017	(1.022)	183023	60.0000	60.3
98	hexachloropropene	213	6.064	6.064	(1.030)	138712	60.0000	57.8
99	N-nitro-di-n-butylamine	84	6.516	6.516	(1.107)	128440	60.0000	60.9
100	Isosafrole	162	6.822	6.822	(1.159)	167233	60.0000	59.7
101	1,2,4,5-tetrachlorobenzene	216	7.227	7.227	(1.228)	213282	60.0000	56.4
102	safrole	162	7.697	7.697	(0.907)	162513	60.0000	57.7
103	1-chloronaphthalene	162	7.774	7.774	(0.916)	395773	60.0000	53.4
104	m-dinitrobenzene	168	8.197	8.197	(0.966)	65977	60.0000	58.3
105	pentachlorobenzene	250	8.684	8.684	(1.024)	190311	60.0000	55.1
106	1-naphthylamine	143	8.802	8.802	(1.037)	474335	60.0000	61.8
107	2-naphthylamine	143	8.890	8.890	(1.048)	465441	60.0000	59.4
108	2,3,4,6-tetrachlorophenol	232	8.872	8.872	(1.046)	116053	60.0000	58.5
109	5-nitro-o-toluidine	152	9.096	9.096	(1.072)	146596	60.0000	62.8
110	diphenylamine	169	9.207	9.207	(0.931)	455539	60.0000	55.1
111	1,3,5-trinitrobenzene	75	9.448	9.448	(0.955)	194928	60.0000	54.8
112	phenacetin	108	9.507	9.507	(0.961)	241410	60.0000	54.4
113	4-aminobiphenyl	169	9.754	9.754	(0.986)	582998	60.0000	57.3
114	pentachloronitrobenzene	237	9.771	9.771	(0.988)	64728	60.0000	55.4
115	Dinoseb	211	9.918	9.918	(1.002)	101894	60.0000	59.9
178	N-Nitroquinoline-n-oxide	174	10.482	10.482	(1.059)	24767	60.0000	69.4
177	Methapyrilene HCL	97	10.547	10.547	(1.066)	261593	60.0000	99.8
84	Benzidine	184	10.870	10.870	(1.099)	598409	60.0000	60.6
116	p-(dimethylamino)azobenzene	120	11.140	11.140	(1.126)	243416	60.0000	56.8
117	o-tolidine	212	11.399	11.399	(1.152)	590637	60.0000	62.0
119	7,12-dimethylbenz(a)anthracen	256	13.220	13.220	(1.109)	381022	60.0000	55.0
118	2-acetylaminofluorene	181	11.610	11.610	(0.974)	363710	60.0000	56.9
120	3-methylcholanthrene	268	14.366	14.366	(1.037)	384036	60.0000	55.4


Data File: /var/chem/gcms/md_i/D080411_b/a9dh044.d
Date : 04-AUG-2011 12:57
Client ID: STD060
Sample Info: A9DH044,,2,4,,STD060,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md_i
Operator: 60487
Column diameter: 0.25
Y (x10^6)
Min
/var/chem/gcms/md_i/D080411_b/a9dh044.d
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10+
-Chrysene-d12
-Perylene-d12

Data File: /chem/gcms/md.i/D080411.b/xcdh044.d
Report Date: 04-Aug-2011 13:43

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: xcdh044.d
Analysis Type: SOIL
Lab Sample ID: XCDH044
Method: /chem/gcms/md.i/D080411.b/8270a9.m

Injection Date: 04-AUG-2011 13:23
Init. Cal. Date(s): 25-JUL-2011 26-JUL-2011
Init. Cal. Times: 12:21 17:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
184 Benzaldehyde	0.94577	0.86926	0.86926	0.000	8.08993	30.00000	Averaged
187 Atrazine	53.90890	60.00000	0.17511	0.000	10.15183	30.00000	Linear
188 1,1'-Biphenyl	1.58477	1.34543	1.34543	0.000	15.10213	30.00000	Averaged
189 Caprolactam	52.61406	60.00000	0.14967	0.000	12.30989	30.00000	Linear
199 Phentermine	61.22415	60.00000	0.83558	0.000	-2.04025	30.00000	Quadratic
202 1,4-Phenylenediamine	59.61391	60.00000	0.40885	0.000	0.64348	30.00000	Linear
197 1-methylnaphthalene	0.60485	0.56704	0.56704	0.000	6.25128	30.00000	Averaged
192 2,6-Dimethylnaphthalene	0.96284	0.92517	0.92517	0.000	3.91161	30.00000	Averaged
193 2,3,5-Trimethylnaphthalene	0.45061	0.43457	0.43457	0.000	3.56024	30.00000	Averaged
194 Dibenzothiopene	0.86415	0.81072	0.81072	0.000	6.18198	30.00000	Averaged
195 1-Methylphenanthrene	0.66659	0.65663	0.65663	0.000	1.49451	30.00000	Averaged
200 3,3'-Dimethoxybenzidine	64.55440	60.00000	0.25768	0.000	-7.59066	30.00000	Quadratic
85 Benzo(e)pyrene	1.00431	0.95747	0.95747	0.700	4.66363	30.00000	Averaged
196 Perylene	1.01083	1.01064	1.01064	0.000	0.01928	30.00000	Averaged
201 Dibenzo(a,e)pyrene	52.06464	60.00000	0.69108	0.000	13.22559	30.00000	Wt Linear

Data File: /chem/gcms/md.i/D080411.b/xcdh044.d
Report Date: 04-Aug-2011 13:43

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /chem/gcms/md.i/D080411.b/xcdh044.d
Lab Smp Id: XCDH044 Client Smp ID: STD060
Inj Date : 04-AUG-2011 13:23
Operator : 60487 Inst ID: md.i
Smp Info : XCDH044,,2,4,,STD060,
Misc Info : D080411,8270a9,allextra.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:43 chemist Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allextra.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Vt*Sf/Ws * CpndVariable

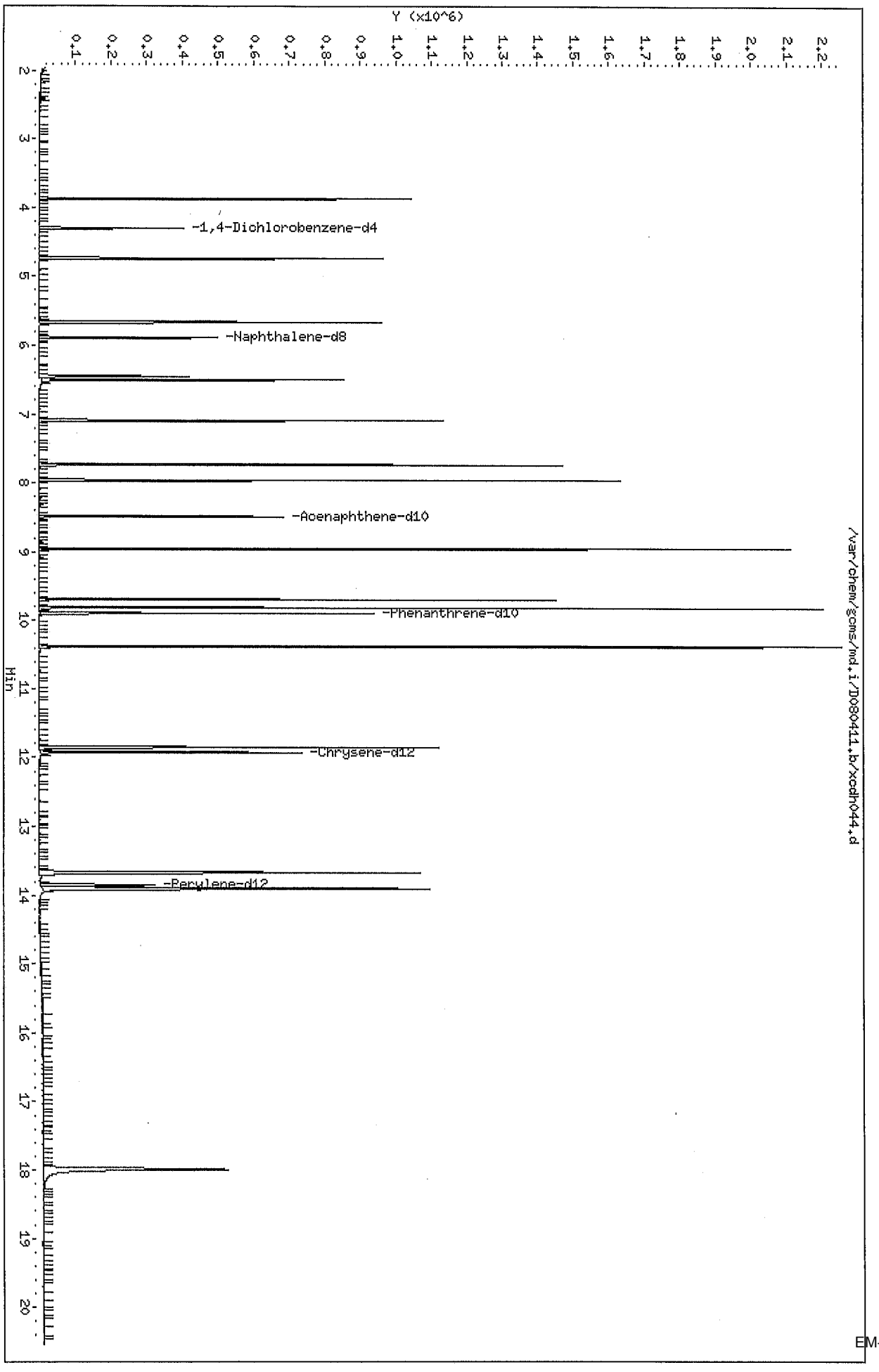
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Sf	1.00000	Prep Split Factor
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
* 1	1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	55266	20.0000	20.0
* 2	Naphthalene-d8	136	5.888	5.888	(1.000)	222156	20.0000	20.0
* 3	Acenaphthene-d10	164	8.485	8.485	(1.000)	133100	20.0000	20.0
* 4	Phenanthrene-d10	188	9.895	9.895	(1.000)	263803	20.0000	20.0
* 5	Chrysene-d12	240	11.922	11.922	(1.000)	265793	20.0000	20.0
* 6	Perylene-d12	264	13.855	13.855	(1.000)	231115	20.0000	20.0
184	Benzaldehyde	105	3.872	3.872	(0.900)	144123	60.0000	55.1
187	Atrazine	200	9.695	9.695	(0.980)	138584	60.0000	53.9
188	1,1'-Biphenyl	154	7.738	7.738	(0.912)	537234	60.0000	50.9
189	Caprolactam	55	6.452	6.452	(1.096)	99750	60.0000	52.6
199	Phentermine	58	5.664	5.664	(0.962)	556888	60.0000	61.2
202	1,4-Phenylenediamine	108	6.504	6.504	(1.105)	272486	60.0000	59.6
197	1-methylnaphthalene	142	7.092	7.092	(1.205)	377916	60.0000	56.2
192	2,6-Dimethylnaphthalene	156	7.962	7.962	(0.938)	369423	60.0000	57.6

Data File: /chem/gcms/md.i/D080411.b/xcdh044.d
Report Date: 04-Aug-2011 13:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
193 2,3,5-Trimethylnaphthalene	170	8.955	8.955	(0.905)	343921	60.0000	57.9
194 Dibenzothiopene	184	9.812	9.812	(0.992)	641615	60.0000	56.3
195 1-Methylphenanthrene	192	10.377	10.377	(1.049)	519660	60.0000	59.1
200 3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	205469	60.0000	64.6
85 Benzo(e)pyrene	252	13.673	13.673	(0.987)	663861	60.0000	57.2
196 Perylene	252	13.902	13.902	(1.003)	700722	60.0000	60.0
201 Dibenzo(a,e)pyrene	302	17.991	17.991	(1.299)	479159	60.0000	52.1


Data File: /var/chem/gcms/md.i/D080411.b/xcdh044.d
Date : 04-AUG-2011 13:23
Client ID: STD060
Sample Info: XCDH044,2,4,STD060,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
Y (x10^6)
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-Acenaphthene-d10
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12
/var/chem/gcms/md.i/D080411.b/xcdh044.d
Min

Raw QC Data

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AA **Matrix.....:** AIR
MB Lot-Sample #: H1G260000-013

Prep Date.....: 07/26/11
Analysis Date..: 08/04/11 **Prep Batch #...:** 1207013
Dilution Factor: 2

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	20	ug	SW846 8270C
Acenaphthylene	ND	20	ug	SW846 8270C
Aniline	ND	20	ug	SW846 8270C
Anthracene	ND	20	ug	SW846 8270C
Benz(a)anthracene	ND	20	ug	SW846 8270C
Benzidine	ND	200	ug	SW846 8270C
Benzo(b)fluoranthene	ND	20	ug	SW846 8270C
Benzo(k)fluoranthene	ND	20	ug	SW846 8270C
Benzo(ghi)perylene	ND	20	ug	SW846 8270C
Benzo(a)pyrene	ND	20	ug	SW846 8270C
Benzo(e)pyrene	ND	20	ug	SW846 8270C
Biphenyl	ND	20	ug	SW846 8270C
Chrysene	ND	20	ug	SW846 8270C
Cresols (total)	ND	20	ug	SW846 8270C
Dibenz(a,h)anthracene	ND	20	ug	SW846 8270C
Dibenzofuran	ND	20	ug	SW846 8270C
Dibenzo(a,e)pyrene	ND	20	ug	SW846 8270C
3,3'-Dimethoxybenzidine	ND	200	ug	SW846 8270C
p-Dimethylaminoazobenzene	ND	20	ug	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	20	ug	SW846 8270C
3,3'-Dimethylbenzidine	ND	200	ug	SW846 8270C
alpha,alpha-Dimethylphene	ND	50	ug	SW846 8270C
2,4-Dimethylphenol	ND	20	ug	SW846 8270C
Fluoranthene	ND	20	ug	SW846 8270C
Fluorene	ND	20	ug	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	20	ug	SW846 8270C
Isophorone	ND	20	ug	SW846 8270C
3-Methylcholanthrene	ND	20	ug	SW846 8270C
2-Methylnaphthalene	ND	20	ug	SW846 8270C
Naphthalene	ND	20	ug	SW846 8270C
Nitrobenzene	ND	20	ug	SW846 8270C
Perylene	ND	20	ug	SW846 8270C
Phenanthrene	ND	20	ug	SW846 8270C
Phenol	ND	20	ug	SW846 8270C
1,4-Phenylenediamine	ND	200	ug	SW846 8270C
Pyrene	ND	20	ug	SW846 8270C
o-Toluidine	ND	20	ug	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(22 - 105)
Phenol-d5	72	(48 - 118)
Nitrobenzene-d5	76	(43 - 110)
2-Fluorobiphenyl	79	(48 - 111)
2,4,6-Tribromophenol	75	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Report Date: 05-Aug-2011 09:38

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Lab Smp Id: MK51D1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 04-AUG-2011 13:52
Operator : 60487 Inst ID: md.i
Smp Info : MK51D1AA,,3,,BLK,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 6 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	2.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

8/5/11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	53322	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.888	(1.000)	210926	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.485	(1.000)	123871	20.0000	20.0
* 4 Phenanthrene-d10	188	9.894	9.895	(1.000)	253878	20.0000	20.0
* 5 Chrysene-d12	240	11.922	11.922	(1.000)	267945	20.0000	20.0
* 6 Perylene-d12	264	13.849	13.849	(1.000)	232002	20.0000	20.0
$ 7 2-Fluorophenol	112	3.132	3.132	(0.728)	114021	38.7316	77.5
$ 8 Phenol-d5	99	3.937	3.937	(0.915)	190884	54.0784	108
$ 9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	128099	38.1113	76.2
$ 11 2,4,6-Tribromophenol	330	9.307	9.307	(0.941)	57129	56.2079	112
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	305133	39.3779	78.8
$ 179 13C6-naphthalene	134	5.887	5.917	(1.000)	20035	1.74798	~~3.50(R)~~ NA
199 Phentermine	58	5.881	5.664	(0.999)	196	5.91777	~~11.8~~

8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Report Date: 05-Aug-2011 09:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
196 Perylene	252	13.855	13.902	(1.000)	806	0.06875	~~0.138~~

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Report Date: 05-Aug-2011 09:38

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: mk51d1aa.d
Lab Smp Id: MK51D1AA
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	53322	-1.04
2 Naphthalene-d8	216727	108364	433454	210926	-2.68
3 Acenaphthene-d10	132541	66270	265082	123871	-6.54
4 Phenanthrene-d10	256755	128378	513510	253878	-1.12
5 Chrysene-d12	266546	133273	533092	267945	0.52
6 Perylene-d12	235464	117732	470928	232002	-1.47

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.92	0.00
6 Perylene-d12	13.85	13.35	14.35	13.85	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Report Date: 05-Aug-2011 09:38

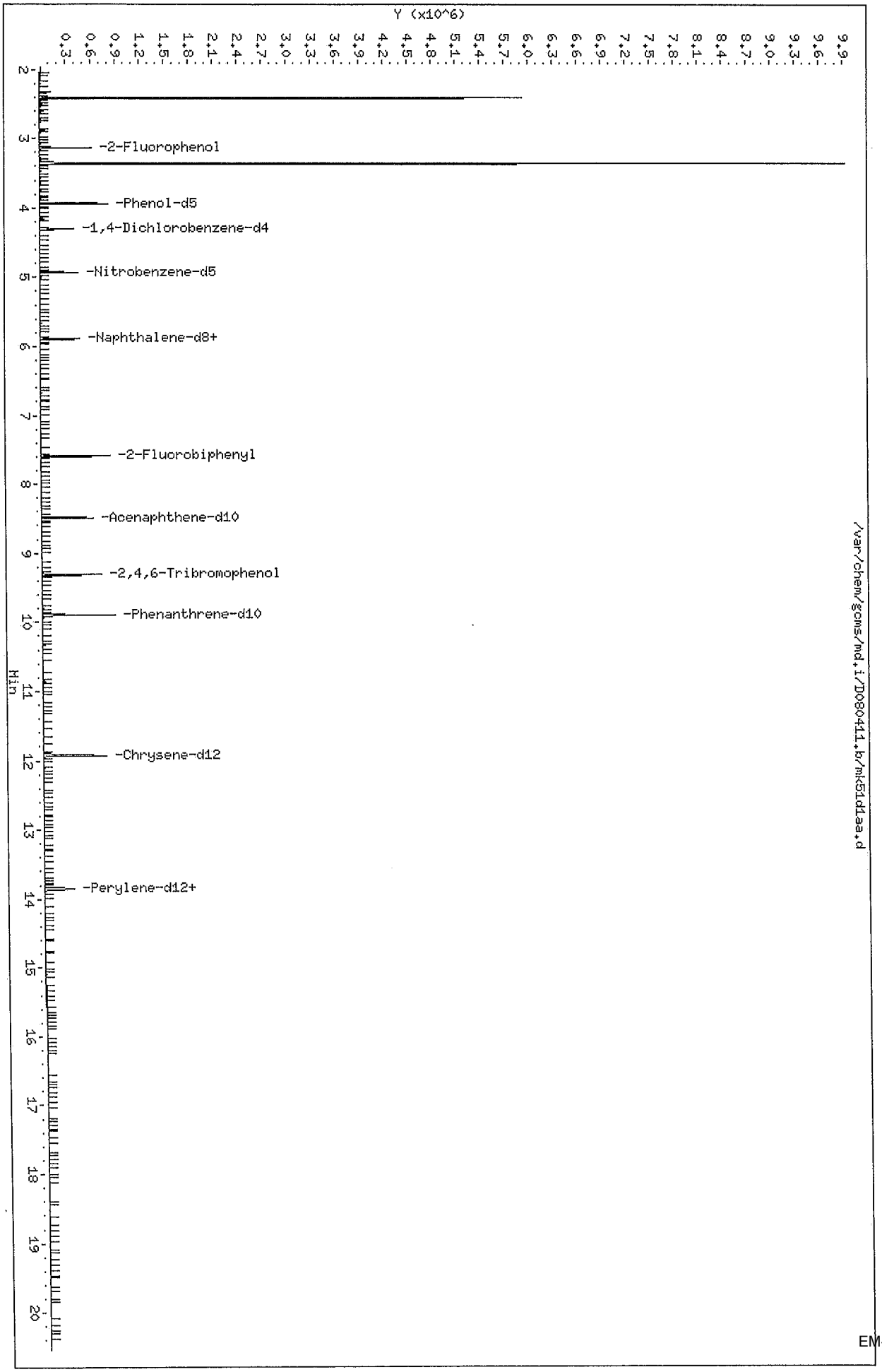
TestAmerica Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: MK51D1AA
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: ICR.sub
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Client SDG: H1G260000
Fraction: SV
Client Smp ID: INTRA-LAB BLANK
Operator: 60487
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	150	77.5	51.64	19-100
$ 8 Phenol-d5	150	108	72.10	15-124
$ 9 Nitrobenzene-d5	100	76.2	76.22	42-104
$ 11 2,4,6-Tribromophen	150	112	74.94	33-130
$ 10 2-Fluorobiphenyl	100	78.8	78.76	51-103
$ 12 Terphenyl-d14	100	0.00	*	58-122
$ 179 13C6-naphthalene	200	3.50	1.75*	50-150


Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Date : 04-AUG-2011 13:52
Client ID: INTRA-LAB BLANK
Sample Info: MK51D1AA,r,3,,BLK,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk51d1aa.d
Y (x10^6)
-2-Fluorophenol
-Phenol-d5
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10
-Chrysene-d12
-Perylene-d12+
Min

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d

Date : 04-AUG-2011 13:52

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: MK51D1AA,,3,,BLK,

Volume Injected (uL): 1.0

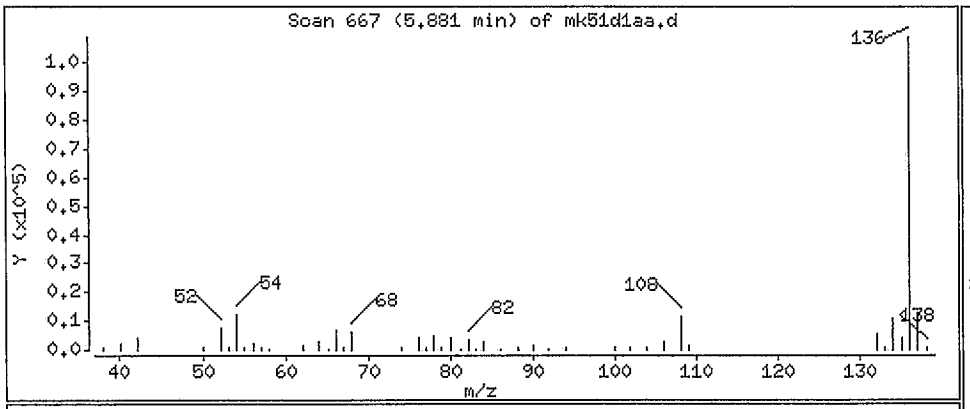
Operator: 60487

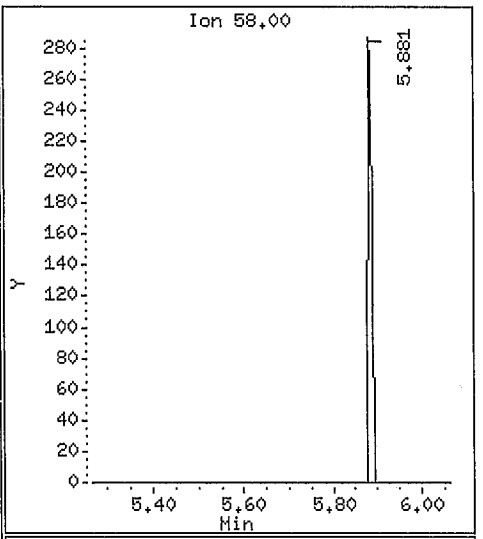
Column phase: Rxi-5 Sil MS

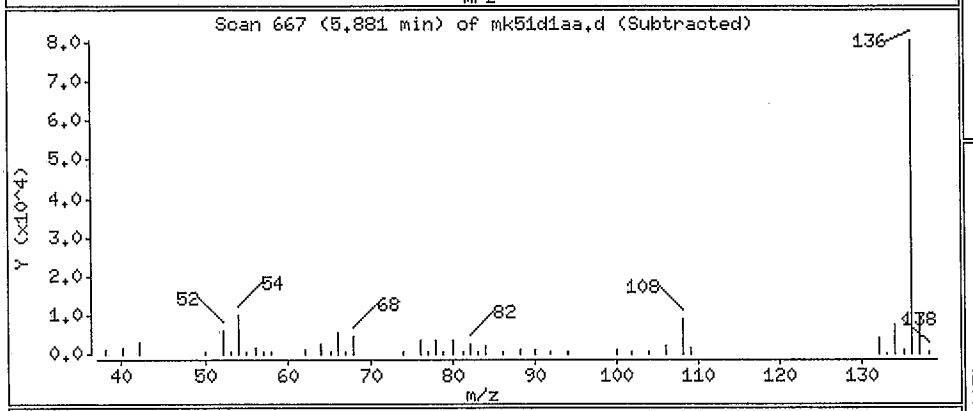
Column diameter: 0.25

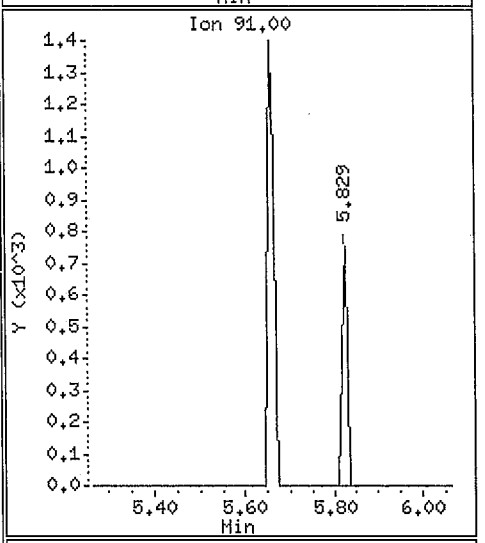
199 Phentermine

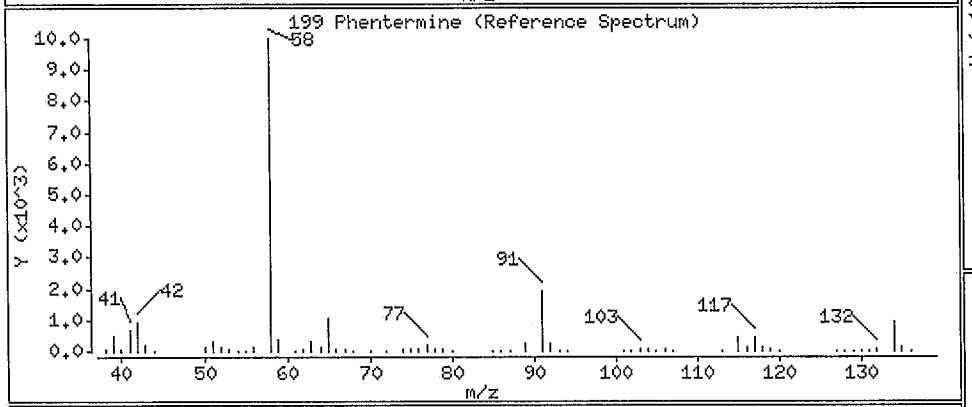
Concentration: 11.8 ug

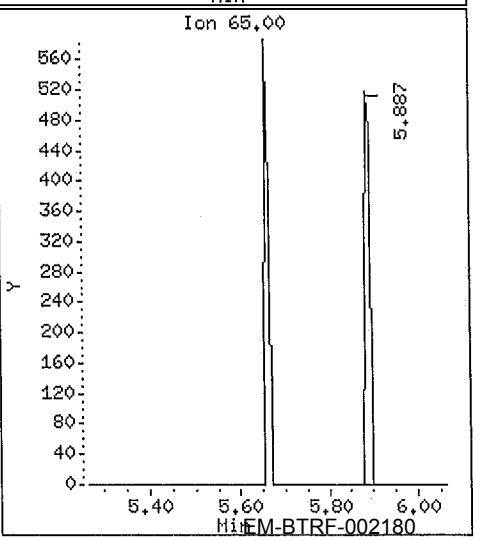


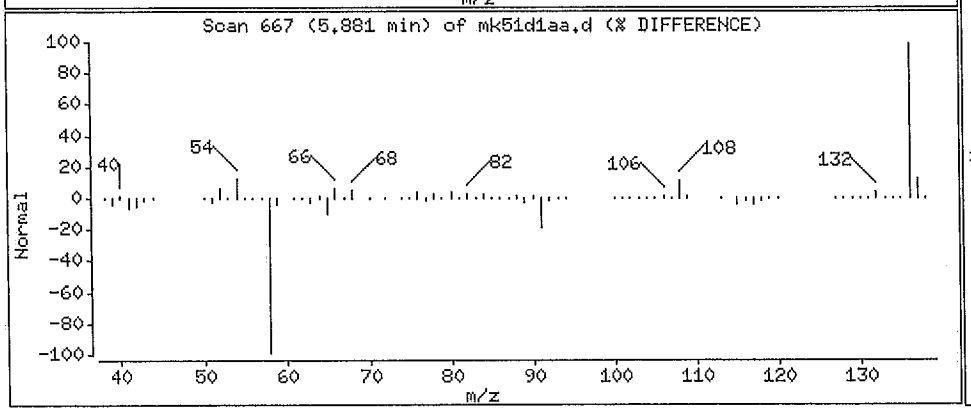












Data File: /var/chem/gcms/md.i/D080411.b/mk51d1aa.d

Date : 04-AUG-2011 13:52

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: MK51D1AA,,3,,BLK,

Volume Injected (uL): 1.0

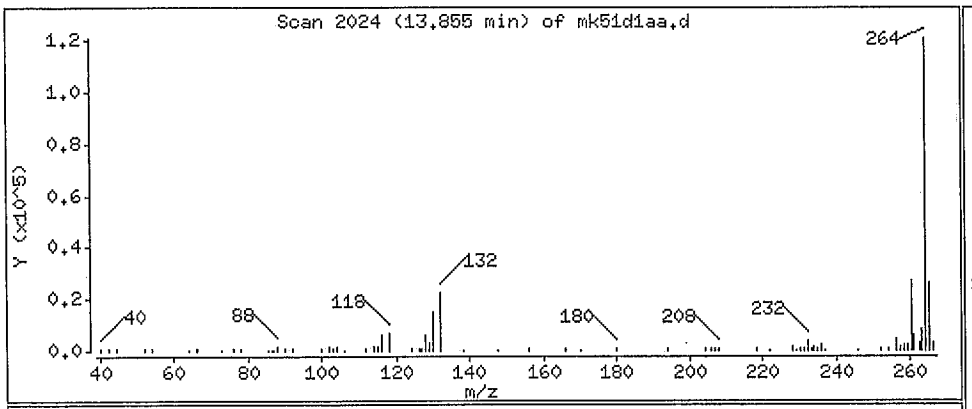
Operator: 60487

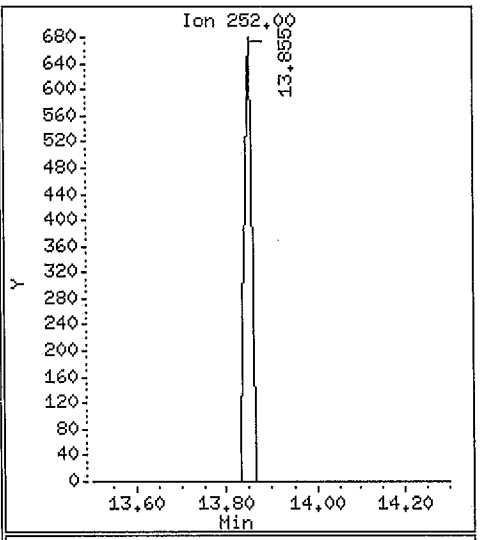
Column phase: Rxi-5 Sil MS

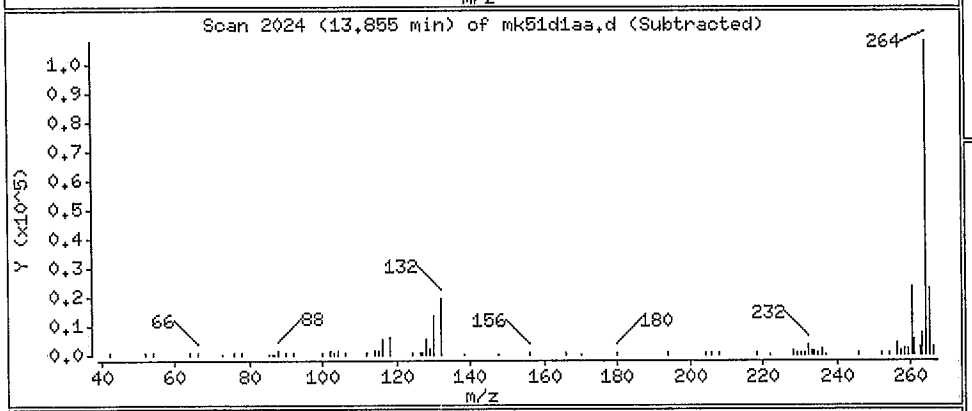
Column diameter: 0.25

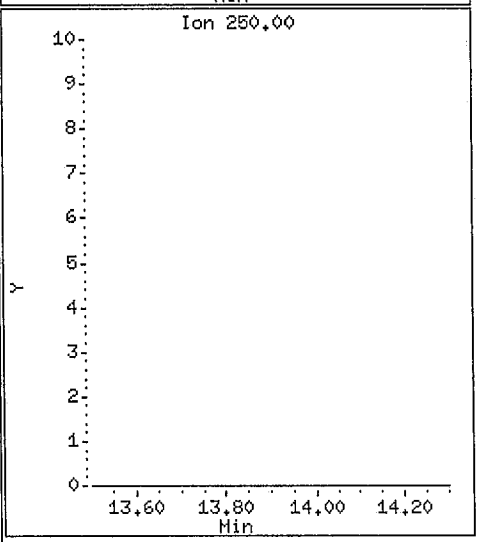
196 Perylene

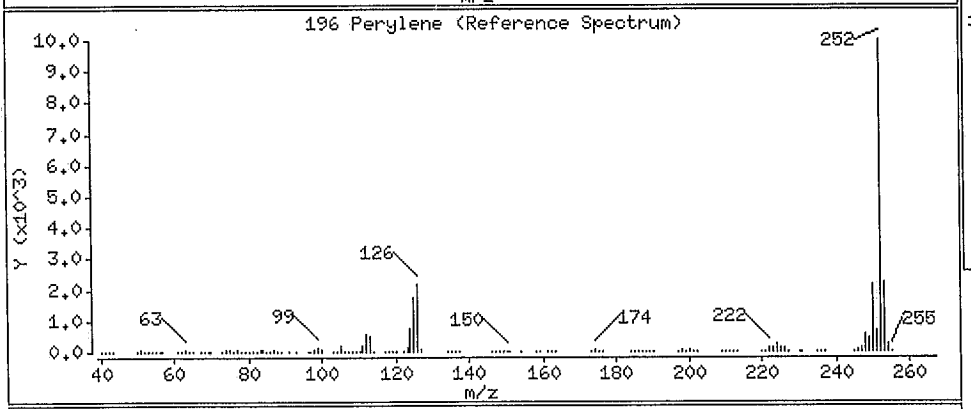
Concentration: 0.138 ug

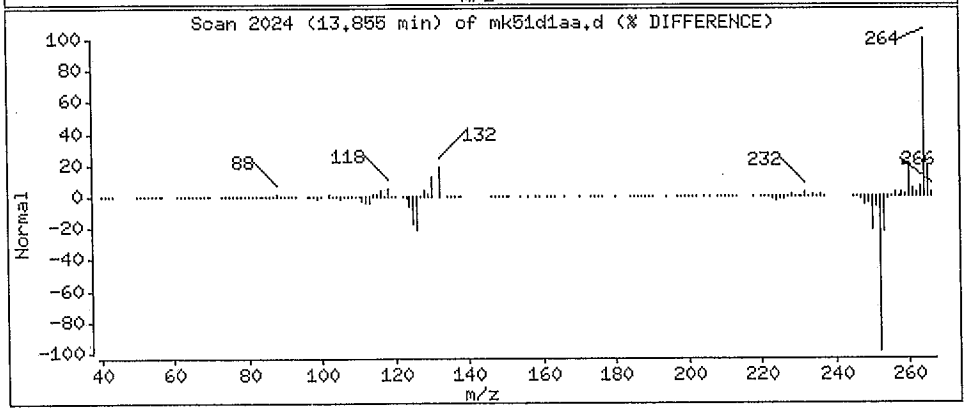












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD
Prep Date.....: 07/26/11 **Analysis Date..:** 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	87	(63 - 107)			SW846 8270C
	87	(63 - 107)	0.11	(0-36)	SW846 8270C
Acenaphthylene	89	(64 - 112)			SW846 8270C
	90	(64 - 112)	0.56	(0-36)	SW846 8270C
Aniline	86	(48 - 109)			SW846 8270C
	87	(48 - 109)	1.3	(0-50)	SW846 8270C
Anthracene	89	(59 - 114)			SW846 8270C
	92	(59 - 114)	2.8	(0-36)	SW846 8270C
Benz(a)anthracene	96	(50 - 130)			SW846 8270C
	95	(50 - 130)	0.52	(0-50)	SW846 8270C
Benzidine	72	(10 - 150)			SW846 8270C
	75	(10 - 150)	3.4	(0-50)	SW846 8270C
Benzo(b)fluoranthene	107	(63 - 122)			SW846 8270C
	108	(63 - 122)	0.93	(0-50)	SW846 8270C
Benzo(k)fluoranthene	89	(69 - 118)			SW846 8270C
	90	(69 - 118)	1.3	(0-50)	SW846 8270C
Benzo(ghi)perylene	93	(71 - 122)			SW846 8270C
	94	(71 - 122)	1.3	(0-50)	SW846 8270C
Benzo(a)pyrene	88	(67 - 122)			SW846 8270C
	90	(67 - 122)	1.4	(0-50)	SW846 8270C
Benzo(e)pyrene	90	(50 - 130)			SW846 8270C
	90	(50 - 130)	0.11	(0-50)	SW846 8270C
Biphenyl	78	(50 - 130)			SW846 8270C
	79	(50 - 130)	1.4	(0-50)	SW846 8270C
Chrysene	91	(67 - 114)			SW846 8270C
	91	(67 - 114)	0.33	(0-41)	SW846 8270C
Cresols (total)	90	(50 - 130)			SW846 8270C
	94	(50 - 130)	3.8	(0-50)	SW846 8270C
Dibenz(a,h)anthracene	93	(67 - 122)			SW846 8270C
	94	(67 - 122)	0.42	(0-50)	SW846 8270C
Dibenzofuran	90	(60 - 108)			SW846 8270C
	91	(60 - 108)	0.99	(0-37)	SW846 8270C
Dibenzo(a,e)pyrene	86	(50 - 130)			SW846 8270C
	86	(50 - 130)	0.34	(0-50)	SW846 8270C
3,3'-Dimethoxybenzidine	93	(30 - 130)			SW846 8270C
	92	(30 - 130)	1.2	(0-50)	SW846 8270C
p-Dimethylaminoazobenzene	93	(50 - 130)			SW846 8270C
	93	(50 - 130)	0.64	(0-50)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	58	(50 - 130)			SW846 8270C
	60	(50 - 130)	3.9	(0-50)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
3,3'-Dimethylbenzidine	93	(30 - 130)			SW846 8270C
	95	(30 - 130)	2.1	(0-50)	SW846 8270C
alpha,alpha-Dimethylphenet	74	(30 - 130)			SW846 8270C
	77	(30 - 130)	4.4	(0-50)	SW846 8270C
2,4-Dimethylphenol	88	(10 - 125)			SW846 8270C
	88	(10 - 125)	0.68	(0-41)	SW846 8270C
Fluoranthene	95	(55 - 120)			SW846 8270C
	96	(55 - 120)	1.0	(0-34)	SW846 8270C
Fluorene	90	(64 - 114)			SW846 8270C
	92	(64 - 114)	2.3	(0-36)	SW846 8270C
Indeno(1,2,3-cd)pyrene	97	(72 - 126)			SW846 8270C
	99	(72 - 126)	1.3	(0-50)	SW846 8270C
Isophorone	90	(56 - 111)			SW846 8270C
	92	(56 - 111)	2.8	(0-37)	SW846 8270C
3-Methylcholanthrene	81	(50 - 130)			SW846 8270C
	82	(50 - 130)	1.1	(0-30)	SW846 8270C
2-Methylnaphthalene	91	(56 - 111)			SW846 8270C
	93	(56 - 111)	2.0	(0-38)	SW846 8270C
Naphthalene	83	(59 - 104)			SW846 8270C
	85	(59 - 104)	2.0	(0-38)	SW846 8270C
Nitrobenzene	83	(58 - 109)			SW846 8270C
	85	(58 - 109)	2.1	(0-38)	SW846 8270C
Perylene	88	(50 - 130)			SW846 8270C
	89	(50 - 130)	0.78	(0-50)	SW846 8270C
Phenanthrene	86	(58 - 109)			SW846 8270C
	88	(58 - 109)	2.1	(0-35)	SW846 8270C
Phenol	84	(54 - 114)			SW846 8270C
	86	(54 - 114)	2.7	(0-39)	SW846 8270C
1,4-Phenylenediamine	11	(5.0- 130)			SW846 8270C
	13	(5.0- 130)	17	(0-50)	SW846 8270C
Pyrene	97	(76 - 118)			SW846 8270C
	98	(76 - 118)	1.1	(0-41)	SW846 8270C
o-Toluidine	90	(30 - 130)			SW846 8270C
	90	(30 - 130)	0.55	(0-50)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
	61	(22 - 105)
Phenol-d5	80	(48 - 118)
	83	(48 - 118)
Nitrobenzene-d5	81	(43 - 110)
	83	(43 - 110)
2-Fluorobiphenyl	82	(48 - 111)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	84	(48 - 111)
2,4,6-Tribromophenol	95	(34 - 125)
	98	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51D1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/04/11
Prep Batch #...: 1207013
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	100	86.9	ug	87		SW846 8270C
	100	86.8	ug	87	0.11	SW846 8270C
Acenaphthylene	100	89.0	ug	89		SW846 8270C
	100	89.5	ug	90	0.56	SW846 8270C
Aniline	100	85.5	ug	86		SW846 8270C
	100	86.6	ug	87	1.3	SW846 8270C
Anthracene	100	89.2	ug	89		SW846 8270C
	100	91.7	ug	92	2.8	SW846 8270C
Benz(a)anthracene	100	95.7	ug	96		SW846 8270C
	100	95.2	ug	95	0.52	SW846 8270C
Benzidine	200	145	ug	72		SW846 8270C
	200	150	ug	75	3.4	SW846 8270C
Benzo(b)fluoranthene	100	107	ug	107		SW846 8270C
	100	108	ug	108	0.93	SW846 8270C
Benzo(k)fluoranthene	100	88.6	ug	89		SW846 8270C
	100	89.8	ug	90	1.3	SW846 8270C
Benzo(ghi)perylene	100	92.6	ug	93		SW846 8270C
	100	93.8	ug	94	1.3	SW846 8270C
Benzo(a)pyrene	100	88.5	ug	88		SW846 8270C
	100	89.8	ug	90	1.4	SW846 8270C
Benzo(e)pyrene	100	89.9	ug	90		SW846 8270C
	100	90.0	ug	90	0.11	SW846 8270C
Biphenyl	100	78.2	ug	78		SW846 8270C
	100	79.3	ug	79	1.4	SW846 8270C
Chrysene	100	90.7	ug	91		SW846 8270C
	100	91.0	ug	91	0.33	SW846 8270C
Cresols (total)	200	180	ug	90		SW846 8270C
	200	187	ug	94	3.8	SW846 8270C
Dibenz(a,h)anthracene	100	93.2	ug	93		SW846 8270C
	100	93.6	ug	94	0.42	SW846 8270C
Dibenzofuran	100	89.7	ug	90		SW846 8270C
	100	90.6	ug	91	0.99	SW846 8270C
Dibenzo(a,e)pyrene	100	86.1	ug	86		SW846 8270C
	100	85.8	ug	86	0.34	SW846 8270C
3,3'-Dimethoxybenzidine	100	93.3	ug	93		SW846 8270C
	100	92.2	ug	92	1.2	SW846 8270C
p-Dimethylaminoazobenzene	100	92.8	ug	93		SW846 8270C
	100	93.4	ug	93	0.64	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	100	57.8	ug	58		SW846 8270C
	100	60.1	ug	60	3.9	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
3,3'-Dimethylbenzidine	100	93.3	ug	93		SW846 8270C
	100	95.3	ug	95	2.1	SW846 8270C
alpha,alpha-Dimethylphenet	100	74.1	ug	74		SW846 8270C
	100	77.4	ug	77	4.4	SW846 8270C
2,4-Dimethylphenol	100	87.5	ug	88		SW846 8270C
	100	88.1	ug	88	0.68	SW846 8270C
Fluoranthene	100	94.7	ug	95		SW846 8270C
	100	95.7	ug	96	1.0	SW846 8270C
Fluorene	100	89.6	ug	90		SW846 8270C
	100	91.7	ug	92	2.3	SW846 8270C
Indeno(1,2,3-cd)pyrene	100	97.4	ug	97		SW846 8270C
	100	98.7	ug	99	1.3	SW846 8270C
Isophorone	100	89.9	ug	90		SW846 8270C
	100	92.5	ug	92	2.8	SW846 8270C
3-Methylcholanthrene	100	81.4	ug	81		SW846 8270C
	100	82.3	ug	82	1.1	SW846 8270C
2-Methylnaphthalene	100	91.4	ug	91		SW846 8270C
	100	93.2	ug	93	2.0	SW846 8270C
Naphthalene	100	83.1	ug	83		SW846 8270C
	100	84.8	ug	85	2.0	SW846 8270C
Nitrobenzene	100	83.2	ug	83		SW846 8270C
	100	85.0	ug	85	2.1	SW846 8270C
Perylene	100	88.4	ug	88		SW846 8270C
	100	89.1	ug	89	0.78	SW846 8270C
Phenanthrene	100	86.0	ug	86		SW846 8270C
	100	87.8	ug	88	2.1	SW846 8270C
Phenol	100	83.6	ug	84		SW846 8270C
	100	85.9	ug	86	2.7	SW846 8270C
1,4-Phenylenediamine	100	10.8	ug	11		SW846 8270C
	100	12.8	ug	13	17	SW846 8270C
Pyrene	100	97.0	ug	97		SW846 8270C
	100	98.1	ug	98	1.1	SW846 8270C
o-Toluidine	100	89.5	ug	90		SW846 8270C
	100	90.0	ug	90	0.55	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	59	(22 - 105)
	61	(22 - 105)
Phenol-d5	80	(48 - 118)
	83	(48 - 118)
Nitrobenzene-d5	81	(43 - 110)
	83	(43 - 110)
2-Fluorobiphenyl	82	(48 - 111)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 **Work Order #...:** MK51D1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: H1G260000-013 MK51D1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	84	(48 - 111)
2,4,6-Tribromophenol	95	(34 - 125)
	98	(34 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Report Date: 05-Aug-2011 09:54

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Lab Smp Id: MK51D1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 04-AUG-2011 14:20
Operator : 60487 Inst ID: md.i
Smp Info : MK51D1AC,,3,,LCS,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 7 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	55358	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	223114	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	138558	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	268653	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.922	(1.000)	264564	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.849	(1.000)	236030	20.0000	20.0
$ 7 2-Fluorophenol	112	3.132	3.132	(0.728)	135290	44.2669	44.3
$ 8 Phenol-d5	99	3.943	3.937	(0.917)	220736	60.2365	60.2
$ 9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	143329	40.3128	40.3
$ 11 2,4,6-Tribromophenol	330	9.313	9.307	(0.941)	76229	70.8746	70.9
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	355692	41.0369	41.0
15 Phenol (ccc)	94	3.954	3.949	(0.919)	315254	83.6495	83.6
16 Aniline	93	3.978	3.978	(0.925)	399403	85.5122	85.5

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Report Date: 05-Aug-2011 09:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
23 2-Methylphenol	108	4.583	4.571	(1.066)	262931	88.2912	88.3
26 3&4 Methylphenol	108	4.759	4.754	(1.107)	281906	91.8061	91.8
M 204 total cresols (methylphenols)	108				544837	180.097	180
95 o-toluidine	106	4.789	4.789	(1.113)	455755	89.4865	89.5
29 Nitrobenzene	77	4.953	4.953	(0.841)	289898	83.2266	83.2
30 Isophorone	82	5.271	5.271	(0.895)	515142	89.9292	89.9
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	327511	87.4952	87.5
199 Phentermine	58	5.905	5.664	(1.003)	688100	74.1151	74.1(M)
37 Naphthalene	128	5.917	5.923	(1.005)	888212	83.0794	83.1
202 1,4-Phenylenediamine	108	6.516	6.504	(1.107)	23617	10.8311	10.8
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	661041	91.4120	91.4
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	858255	78.1716	78.2
47 Acenaphthylene	152	8.308	8.308	(0.979)	1051408	88.9602	89.0
51 Acenaphthene (ccc)	153	8.526	8.520	(1.005)	679723	86.9184	86.9
53 Dibenzofuran	168	8.720	8.720	(1.028)	977662	89.7048	89.7
56 Fluorene	166	9.078	9.078	(1.070)	808945	89.6500	89.6
66 Phenanthrene	178	9.918	9.912	(1.002)	1238553	86.0571	86.0
67 Anthracene	178	9.953	9.953	(1.006)	1245589	89.2049	89.2
70 Fluoranthene (ccc)	202	10.788	10.782	(1.090)	1404525	94.6928	94.7
84 Benzidine	184	10.876	10.870	(1.099)	1360390	144.618	145
71 Pyrene	202	10.941	10.941	(0.917)	1453787	97.0313	97.0
116 p-(dimethylamino)azobenzene	120	11.146	11.140	(1.126)	379130	92.8189	92.8
117 o-tolidine	212	11.399	11.399	(1.152)	847279	93.2961	93.3
200 3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	325025	93.2872	93.3
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	1254932	95.6619	95.7
75 Chrysene	228	11.957	11.951	(1.002)	1269804	90.7406	90.7
119 7,12-dimethylbenz(a)anthracen	256	13.232	13.220	(1.109)	373495	57.8164	57.8
78 Benzo(b)fluoranthene	252	13.244	13.232	(0.956)	1270691	107.300	107
79 Benzo(k)fluoranthene	252	13.285	13.273	(0.959)	1264288	88.5934	88.6
85 Benzo(e)pyrene	252	13.679	13.673	(0.987)	1066086	89.9469	89.9
80 Benzo(a)pyrene (ccc)	252	13.767	13.755	(0.994)	1152440	88.4897	88.5
196 Perylene	252	13.908	13.902	(1.004)	1054921	88.4307	88.4
120 3-methylcholanthrene	268	14.372	14.366	(1.037)	572339	81.4509	81.4
81 Indeno(1,2,3-cd)pyrene	276	15.330	15.324	(1.106)	1260359	97.4179	97.4
82 Dibenz(a,h)anthracene	278	15.353	15.347	(1.108)	986881	93.2418	93.2
83 Benzo(g,h,i)perylene	276	15.665	15.653	(1.131)	1056879	92.5943	92.6
201 Dibenzo(a,e)pyrene	302	17.997	17.991	(1.299)	837400	86.1064	86.1

QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Report Date: 05-Aug-2011 09:41

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Lab Smp Id: MK51D1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 04-AUG-2011 14:20
Operator : 60487 Inst ID: md.i
Smp Info : MK51D1AC,,3,,LCS,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 7 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	55358	20.0000	20.0
* 2 Naphthalene-d8	136	5.888	5.888	(1.000)	223114	20.0000	20.0
* 3 Acenaphthene-d10	164	8.485	8.485	(1.000)	138558	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	268653	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.922	(1.000)	264564	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.849	(1.000)	236030	20.0000	20.0
$ 7 2-Fluorophenol	112	3.132	3.132	(0.728)	135290	44.2666	44.3
$ 8 Phenol-d5	99	3.943	3.937	(0.917)	220736	60.2362	60.2
$ 9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	143329	40.3128	40.3
$ 11 2,4,6-Tribromophenol	330	9.313	9.307	(0.941)	76229	70.8749	70.9
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	355692	41.0370	41.0
$ 179 13C6-naphthalene	134	5.888	5.917	(1.000)	33510	2.76384	~~2.76(R)~~ NA
15 Phenol (ccc)	94	3.954	3.949	(0.919)	315254	83.6491	83.6

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Report Date: 05-Aug-2011 09:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
16 Aniline	93	3.978	3.978	(0.925)	399403	85.5116	85.5
23 2-Methylphenol	108	4.583	4.571	(1.066)	262931	88.2908	88.3
26 3&4 Methylphenol	108	4.759	4.754	(1.107)	281906	91.8056	91.8
M 204 total cresols (methylphenols)	108				544838	180.096	180
95 o-toluidine	106	4.789	4.789	(1.113)	455755	89.4859	89.5
29 Nitrobenzene	77	4.953	4.953	(0.841)	289898	83.2265	83.2
30 Isophorone	82	5.271	5.271	(0.895)	515142	89.9290	89.9
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	327511	87.4951	87.5
199 Phentermine	58	5.694	5.664	(0.967)	355	5.93219	5.93 (6)
37 Naphthalene	128	5.917	5.923	(1.005)	888212	83.0792	83.1
202 1,4-Phenylenediamine	108	6.516	6.504	(1.107)	23617	10.8312	10.8
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	661041	91.4117	91.4
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	858255	78.1715	78.2
47 Acenaphthylene	152	8.308	8.308	(0.979)	1051408	88.9602	89.0
51 Acenaphthene (ccc)	153	8.526	8.520	(1.005)	679723	86.9183	86.9
53 Dibenzofuran	168	8.720	8.720	(1.028)	977662	89.7046	89.7
56 Fluorene	166	9.078	9.078	(1.070)	808945	89.6499	89.6
66 Phenanthrene	178	9.918	9.912	(1.002)	1238553	86.0570	86.0
67 Anthracene	178	9.953	9.953	(1.006)	1245589	89.2048	89.2
70 Fluoranthene (ccc)	202	10.788	10.782	(1.090)	1404525	94.6927	94.7
84 Benzidine	184	10.876	10.870	(1.099)	1360390	144.618	145
71 Pyrene	202	10.941	10.941	(0.917)	1453787	97.0312	97.0
116 p-(dimethylamino)azobenzene	120	11.146	11.140	(1.126)	379130	92.8188	92.8
117 o-tolidine	212	11.399	11.399	(1.152)	847279	93.2960	93.3
200 3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	325025	93.2873	93.3
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	1254932	95.6618	95.7
75 Chrysene	228	11.957	11.951	(1.002)	1269804	90.7405	90.7
119 7,12-dimethylbenz(a)anthracen	256	13.232	13.220	(1.109)	373495	57.8164	57.8
78 Benzo(b)fluoranthene	252	13.244	13.232	(0.956)	1270691	107.300	107
79 Benzo(k)fluoranthene	252	13.285	13.273	(0.959)	1264288	88.5932	88.6
85 Benzo(e)pyrene	252	13.679	13.673	(0.987)	1066086	89.9467	89.9
80 Benzo(a)pyrene (ccc)	252	13.767	13.755	(0.994)	1152440	88.4895	88.5
196 Perylene	252	13.908	13.902	(1.004)	1054921	88.4305	88.4
120 3-methylcholanthrene	268	14.372	14.366	(1.037)	572339	81.4508	81.4
81 Indeno(1,2,3-cd)pyrene	276	15.330	15.324	(1.106)	1260359	97.4177	97.4
82 Dibenz(a,h)anthracene	278	15.353	15.347	(1.108)	986881	93.2417	93.2
83 Benzo(g,h,i)perylene	276	15.665	15.653	(1.131)	1056879	92.5940	92.6
201 Dibenzo(a,e)pyrene	302	17.997	17.991	(1.299)	837400	86.1062	86.1

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Report Date: 05-Aug-2011 09:41

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

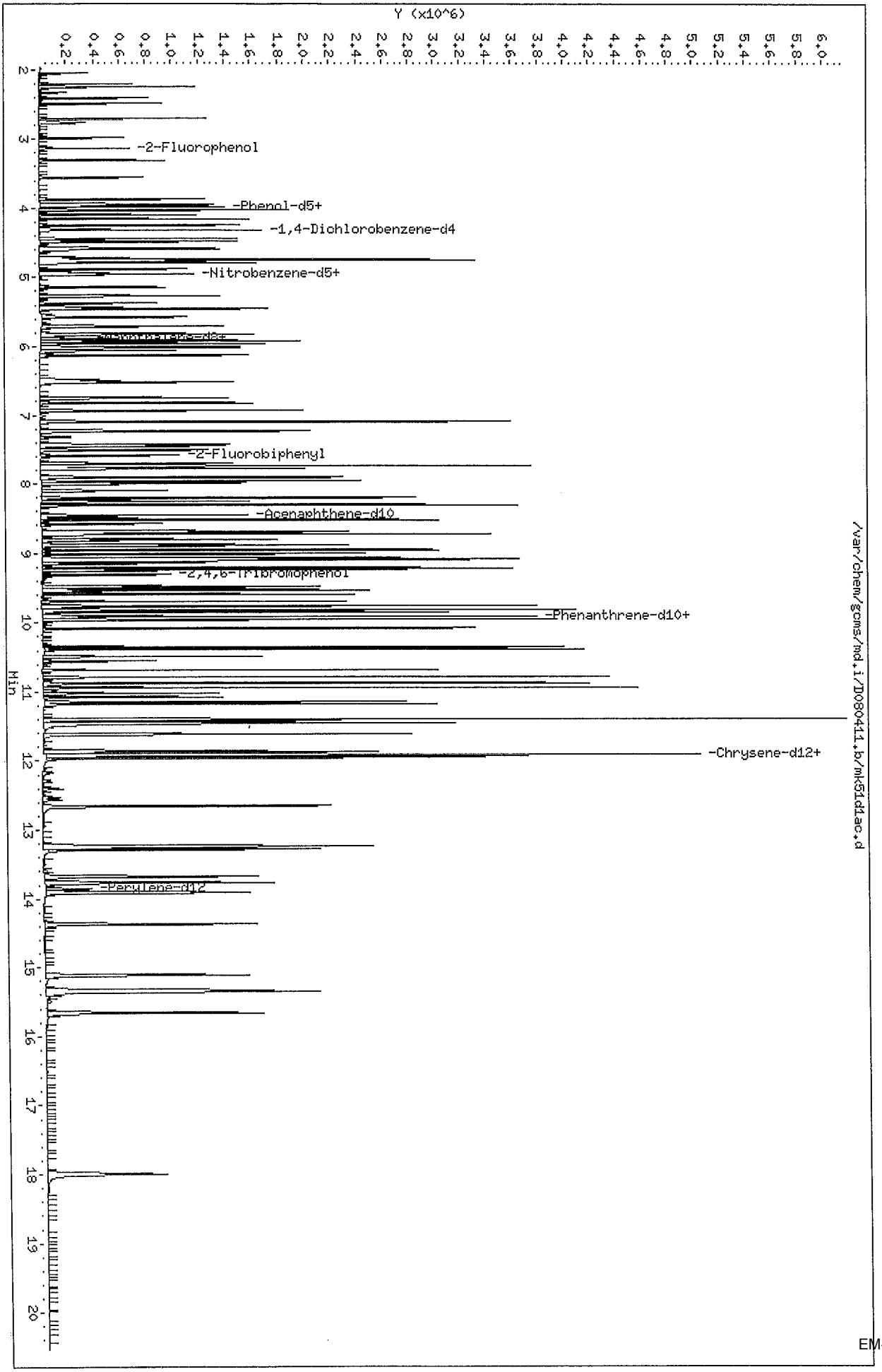
Instrument ID: md.i
Lab File ID: mk51d1ac.d
Lab Smp Id: MK51D1AC
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	55358	2.73
2 Naphthalene-d8	216727	108364	433454	223114	2.95
3 Acenaphthene-d10	132541	66270	265082	138558	4.54
4 Phenanthrene-d10	256755	128378	513510	268653	4.63
5 Chrysene-d12	266546	133273	533092	264564	-0.74
6 Perylene-d12	235464	117732	470928	236030	0.24

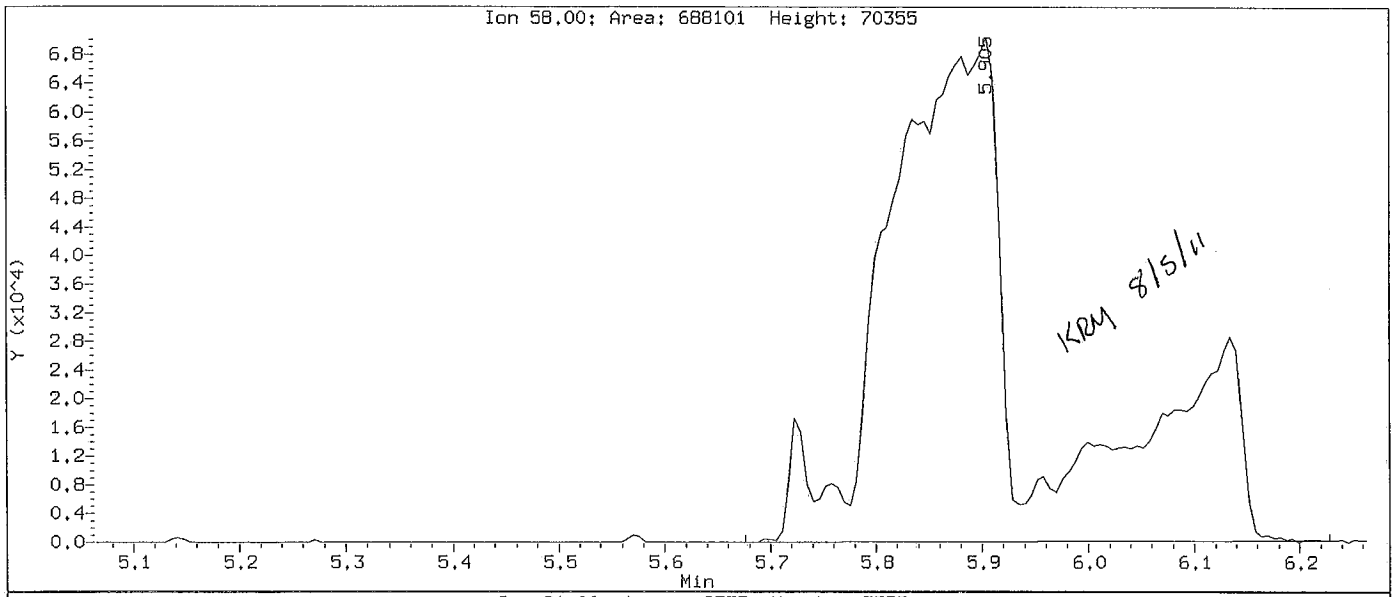
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.93	0.05
6 Perylene-d12	13.85	13.35	14.35	13.85	0.04

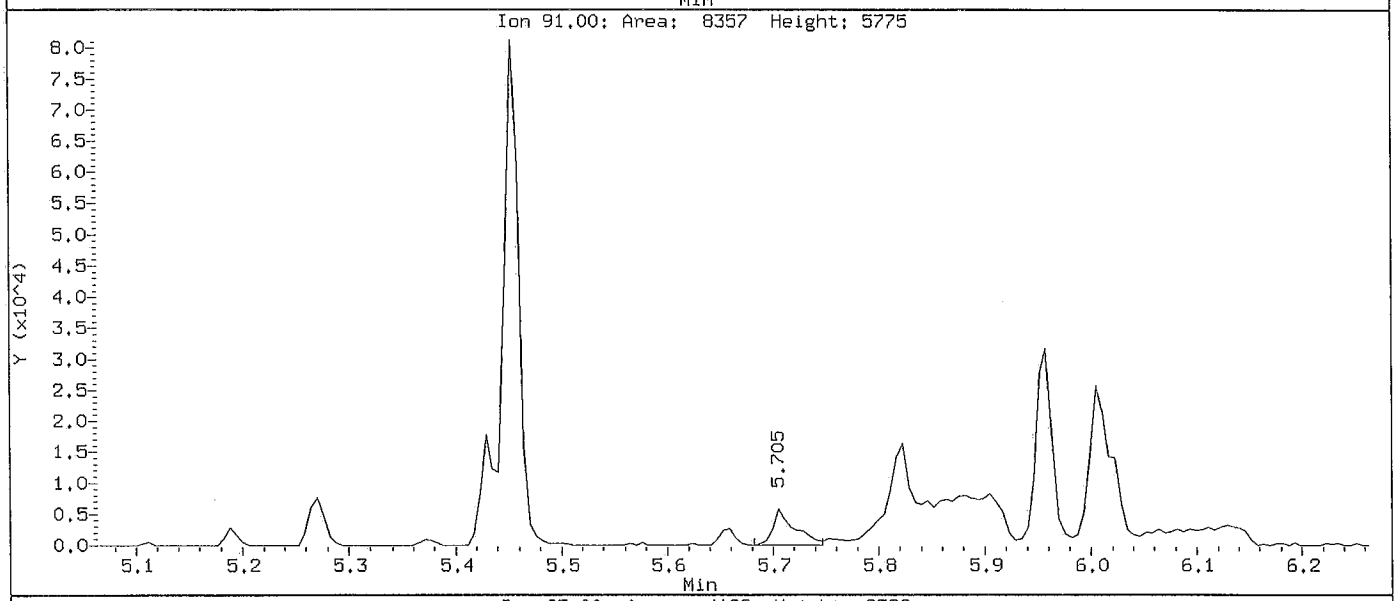
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

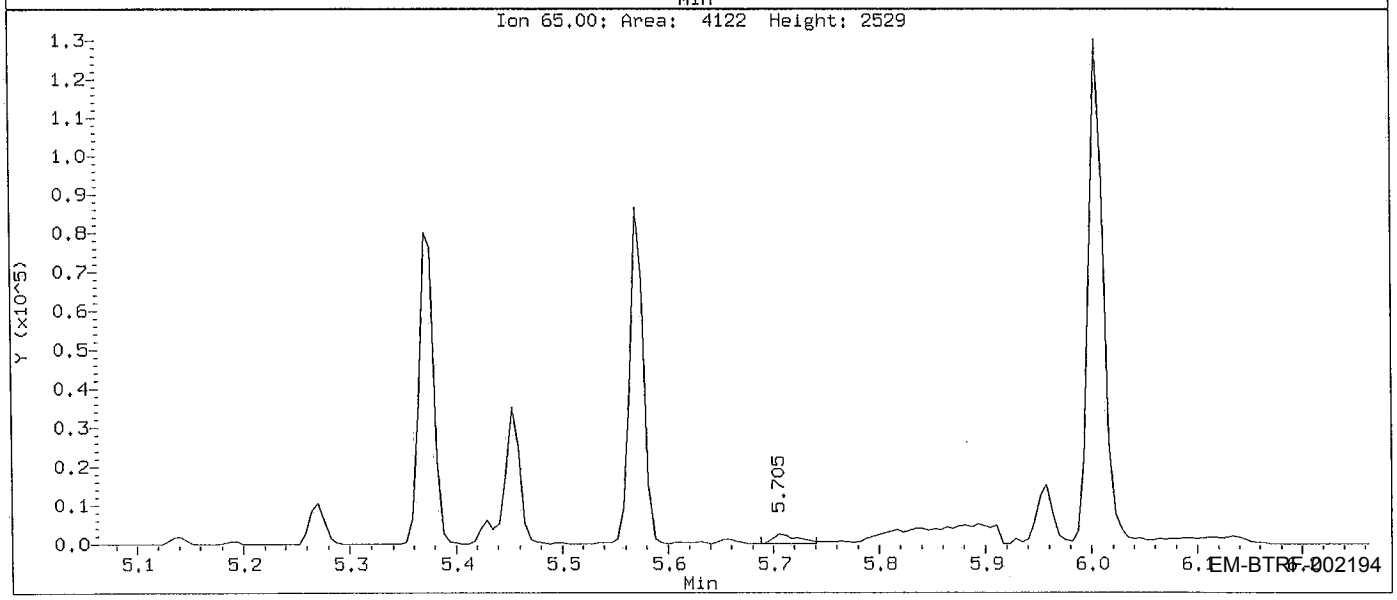

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Date : 04-AUG-2011 14:20
Client ID: INTRA-LAB CHECK
Sample Info: MK51D1AC,,3,,LCS,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
/var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ac.d
Injection Date: 04-AUG-2011 14:20
Instrument: md.i
Client Sample ID: INTRA-LAB CHECK

Compound: Phentermine
CAS Number: 122-09-8







Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Report Date: 05-Aug-2011 09:59

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Lab Smp Id: MK51D1AD Client Smp ID: INTRA-LAB CHECK
Inj Date : 04-AUG-2011 14:49
Operator : 60487 Inst ID: md.i
Smp Info : MK51D1AD,,3,,DUP,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 8 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56470	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.888	(1.000)	228667	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.485	(1.000)	140458	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	271708	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.922	(1.000)	276786	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.849	(1.000)	241618	20.0000	20.0
$ 7 2-Fluorophenol	112	3.132	3.132	(0.728)	143304	45.9657	46.0
$ 8 Phenol-d5	99	3.943	3.937	(0.917)	231713	61.9868	62.0
$ 9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	151891	41.6835	41.7
$ 11 2,4,6-Tribromophenol	330	9.313	9.307	(0.941)	80015	73.5582	73.6
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	369791	42.0865	42.1
$ 179 13C6-naphthalene	134	5.887	5.917	(1.000)	31591	2.54225	~~2.54~~ (R) UA
15 Phenol (ccc)	94	3.954	3.949	(0.919)	330153	85.8778	85.9

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Report Date: 05-Aug-2011 09:59

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
16 Aniline	93	3.978	3.978	(0.925)	412634	86.6052	86.6
23 2-Methylphenol	108	4.583	4.571	(1.066)	277399	91.3153	91.3
26 3&4 Methylphenol	108	4.759	4.754	(1.107)	298688	95.3559	95.4
M 204 total cresols (methylphenols)	108				576087	186.671	187
95 o-toluidine	106	4.789	4.789	(1.113)	467561	89.9967	90.0
29 Nitrobenzene	77	4.953	4.953	(0.841)	303607	85.0456	85.0
30 Isophorone	82	5.271	5.271	(0.895)	542856	92.4659	92.5
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	338029	88.1121	88.1
199 Phentermine	58	5.905	5.664	(1.003)	739179	77.4395	77.4(M)
37 Naphthalene	128	5.917	5.923	(1.005)	929789	84.8564	84.8
202 1,4-Phenylenediamine	108	6.516	6.504	(1.107)	34781	12.8443	12.8
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	690420	93.1562	93.2
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	882650	79.3060	79.3
47 Acenaphthylene	152	8.308	8.308	(0.979)	1072125	89.4860	89.5
51 Acenaphthene (ccc)	153	8.526	8.520	(1.005)	688142	86.8047	86.8
53 Dibenzofuran	168	8.725	8.720	(1.028)	1000934	90.5977	90.6
56 Fluorene	166	9.078	9.078	(1.070)	838601	91.6794	91.7
66 Phenanthrene	178	9.918	9.912	(1.002)	1278766	87.8521	87.8
67 Anthracene	178	9.959	9.953	(1.007)	1295216	91.7160	91.7
70 Fluoranthene (ccc)	202	10.788	10.782	(1.090)	1435737	95.7088	95.7
84 Benzidine	184	10.876	10.870	(1.099)	1426524	149.944	150
71 Pyrene	202	10.940	10.941	(0.917)	1538054	98.1227	98.1
116 p-(dimethylamino)azobenzene	120	11.146	11.140	(1.126)	385891	93.4118	93.4
117 o-tolidine	212	11.399	11.399	(1.152)	875766	95.3486	95.3
200 3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	335131	92.1974	92.2
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	1307362	95.2580	95.2
75 Chrysene	228	11.957	11.951	(1.002)	1332574	91.0213	91.0
119 7,12-dimethylbenz(a)anthracen	256	13.232	13.220	(1.109)	407977	60.1382	60.1
78 Benzo(b)fluoranthene	252	13.244	13.232	(0.956)	1311734	108.204	108
79 Benzo(k)fluoranthene	252	13.285	13.273	(0.959)	1311445	89.7725	89.8
85 Benzo(e)pyrene	252	13.678	13.673	(0.987)	1091458	89.9579	90.0
80 Benzo(a)pyrene (ccc)	252	13.767	13.755	(0.994)	1197294	89.7667	89.8
196 Perylene	252	13.908	13.902	(1.004)	1088332	89.1215	89.1
120 3-methylcholanthrene	268	14.372	14.366	(1.037)	592318	82.2715	82.3
81 Indeno(1,2,3-cd)pyrene	276	15.329	15.324	(1.106)	1306661	98.6610	98.7
82 Dibenz(a,h)anthracene	278	15.359	15.347	(1.109)	1013628	93.5540	93.6
83 Benzo(g,h,i)perylene	276	15.664	15.653	(1.131)	1096094	93.8090	93.8
201 Dibenzo(a,e)pyrene	302	17.997	17.991	(1.299)	854360	85.8326	85.8

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Report Date: 05-Aug-2011 09:57

TestAmerica Knoxville

Semivolatile Organic Compounds by GC/MS

Data file : /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Lab Smp Id: MK51D1AD Client Smp ID: INTRA-LAB CHECK
Inj Date : 04-AUG-2011 14:49
Operator : 60487 Inst ID: md.i
Smp Info : MK51D1AD,,3,,DUP,
Misc Info : D080411,8270a9,ICR.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D080411.b/8270a9.m
Meth Date : 04-Aug-2011 13:44 mcgeek Quant Type: ISTD
Cal Date : 26-JUL-2011 17:42 Cal File: a9dg267.d
Als bottle: 8 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICR.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.301	4.301	(1.000)	56470	20.0000	20.0
* 2 Naphthalene-d8	136	5.887	5.888	(1.000)	228667	20.0000	20.0
* 3 Acenaphthene-d10	164	8.484	8.485	(1.000)	140458	20.0000	20.0
* 4 Phenanthrene-d10	188	9.895	9.895	(1.000)	271708	20.0000	20.0
* 5 Chrysene-d12	240	11.928	11.922	(1.000)	276786	20.0000	20.0
* 6 Perylene-d12	264	13.855	13.849	(1.000)	241618	20.0000	20.0
$ 7 2-Fluorophenol	112	3.132	3.132	(0.728)	143304	45.9657	46.0
$ 8 Phenol-d5	99	3.943	3.937	(0.917)	231713	61.9865	62.0
$ 9 Nitrobenzene-d5	82	4.930	4.930	(0.837)	151891	41.6836	41.7
$ 11 2,4,6-Tribromophenol	330	9.313	9.307	(0.941)	80015	73.5588	73.6
$ 10 2-Fluorobiphenyl	172	7.591	7.591	(0.895)	369791	42.0862	42.1
$ 179 13C6-naphthalene	134	5.887	5.917	(1.000)	31591	2.54226	~~2.54~~(R) N/A
15 Phenol (ccc)	94	3.954	3.949	(0.919)	330153	85.8774	85.9

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Report Date: 05-Aug-2011 09:57

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
16 Aniline	93	3.978	3.978	(0.925)	412634	86.6049	86.6
23 2-Methylphenol	108	4.583	4.571	(1.066)	277399	91.3149	91.3
26 3&4 Methylphenol	108	4.759	4.754	(1.107)	298688	95.3555	95.4
M 204 total cresols (methylphenols)	108				576087	186.670	187
95 o-toluidine	106	4.789	4.789	(1.113)	467561	89.9964	90.0
29 Nitrobenzene	77	4.953	4.953	(0.841)	303607	85.0453	85.0
30 Isophorone	82	5.271	5.271	(0.895)	542856	92.4656	92.5
32 2,4-Dimethyphenol	107	5.453	5.453	(0.926)	338029	88.1120	88.1
199 Phentermine	58	5.735	5.664	(0.974)	10417	6.89351	6.89 (6)
37 Naphthalene	128	5.917	5.923	(1.005)	929789	84.8561	84.8
202 1,4-Phenylenediamine	108	6.516	6.504	(1.107)	34781	12.8444	12.8
41 2-Methylnaphthalene	142	6.933	6.933	(1.178)	690420	93.1559	93.2
188 1,1'-Biphenyl	154	7.738	7.738	(0.912)	882650	79.3056	79.3
47 Acenaphthylene	152	8.308	8.308	(0.979)	1072125	89.4855	89.5
51 Acenaphthene (ccc)	153	8.526	8.520	(1.005)	688142	86.8041	86.8
53 Dibenzofuran	168	8.725	8.720	(1.028)	1000934	90.5972	90.6
56 Fluorene	166	9.078	9.078	(1.070)	838601	91.6789	91.7
66 Phenanthrene	178	9.918	9.912	(1.002)	1278766	87.8520	87.8
67 Anthracene	178	9.959	9.953	(1.007)	1295216	91.7159	91.7
70 Fluoranthene (ccc)	202	10.788	10.782	(1.090)	1435737	95.7087	95.7
84 Benzidine	184	10.876	10.870	(1.099)	1426524	149.943	150
71 Pyrene	202	10.940	10.941	(0.917)	1538054	98.1224	98.1
116 p-(dimethylamino)azobenzene	120	11.146	11.140	(1.126)	385891	93.4117	93.4
117 o-tolidine	212	11.399	11.399	(1.152)	875766	95.3485	95.3
200 3,3'-Dimethoxybenzidine	244	11.851	11.851	(0.994)	335131	92.1973	92.2
73 Benzo(a)Anthracene	228	11.916	11.916	(0.999)	1307362	95.2577	95.2
75 Chrysene	228	11.957	11.951	(1.002)	1332574	91.0211	91.0
119 7,12-dimethylbenz(a)anthracen	256	13.232	13.220	(1.109)	407977	60.1381	60.1
78 Benzo(b)fluoranthene	252	13.244	13.232	(0.956)	1311734	108.204	108
79 Benzo(k)fluoranthene	252	13.285	13.273	(0.959)	1311445	89.7724	89.8
85 Benzo(e)pyrene	252	13.678	13.673	(0.987)	1091458	89.9578	90.0
80 Benzo(a)pyrene (ccc)	252	13.767	13.755	(0.994)	1197294	89.7667	89.8
196 Perylene	252	13.908	13.902	(1.004)	1088332	89.1215	89.1
120 3-methylcholanthrene	268	14.372	14.366	(1.037)	592318	82.2715	82.3
81 Indeno(1,2,3-cd)pyrene	276	15.329	15.324	(1.106)	1306661	98.6609	98.7
82 Dibenz(a,h)anthracene	278	15.359	15.347	(1.109)	1013628	93.5540	93.6
83 Benzo(g,h,i)perylene	276	15.664	15.653	(1.131)	1096094	93.8089	93.8
201 Dibenzo(a,e)pyrene	302	17.997	17.991	(1.299)	854360	85.8326	85.8

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

KRM 8/5/11

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Report Date: 05-Aug-2011 09:57

TestAmerica Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

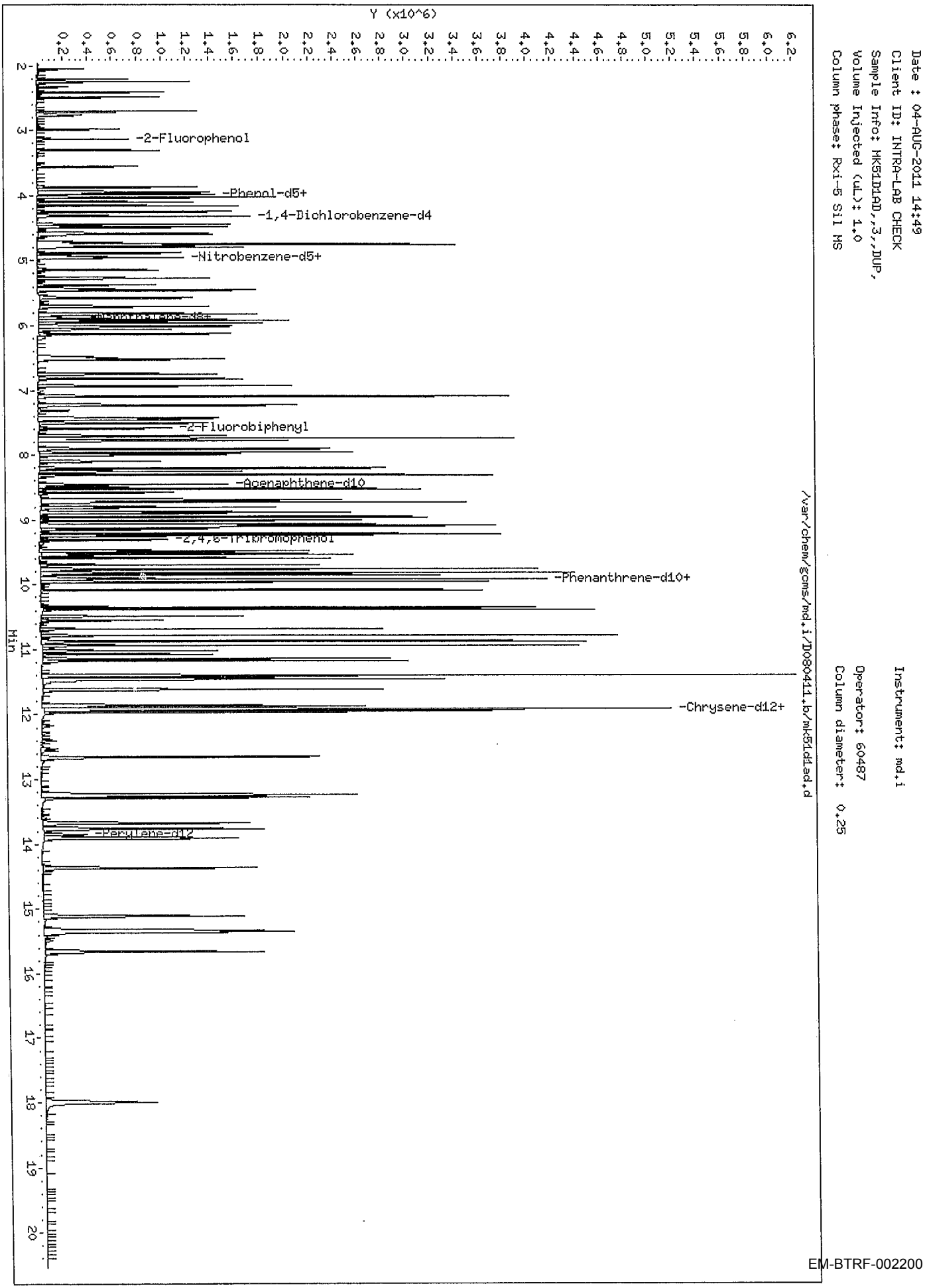
Instrument ID: md.i
Lab File ID: mk51d1ad.d
Lab Smp Id: MK51D1AD
Analysis Type: SV
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/md.i/D080411.b/8270a9.m
Misc Info: D080411,8270a9,ICR.sub

Calibration Date: 04-AUG-2011
Calibration Time: 12:31
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	53885	26942	107770	56470	4.80
2 Naphthalene-d8	216727	108364	433454	228667	5.51
3 Acenaphthene-d10	132541	66270	265082	140458	5.97
4 Phenanthrene-d10	256755	128378	513510	271708	5.82
5 Chrysene-d12	266546	133273	533092	276786	3.84
6 Perylene-d12	235464	117732	470928	241618	2.61

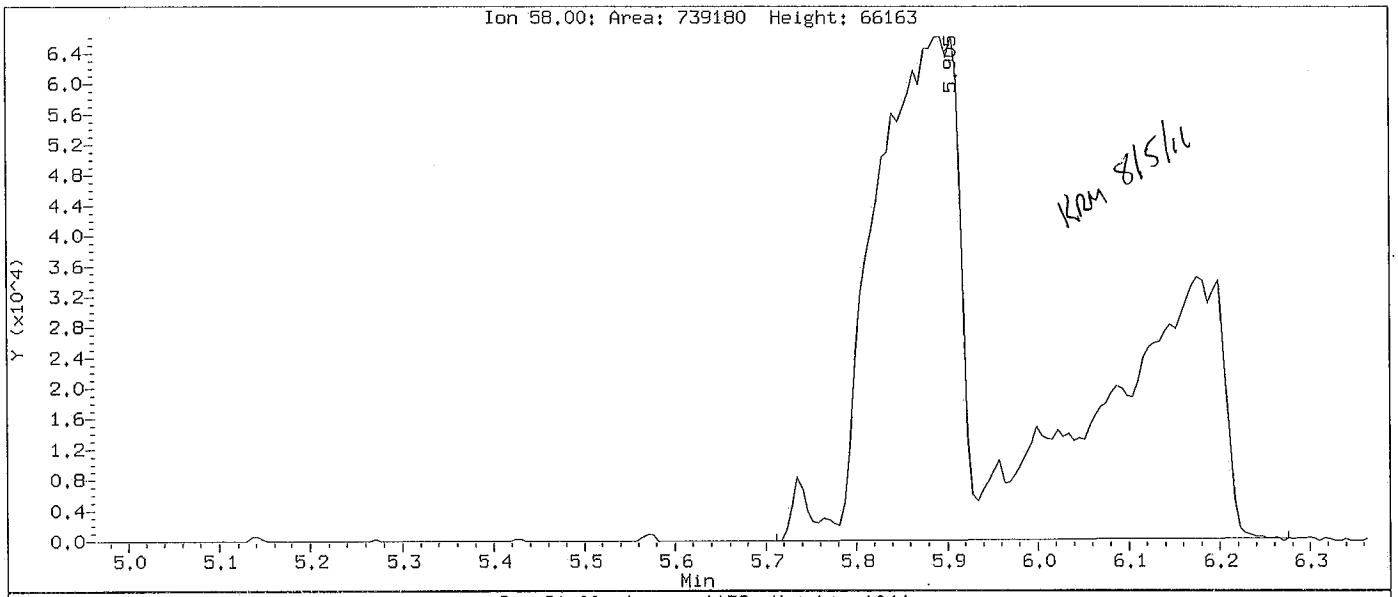
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.30	3.80	4.80	4.30	0.00
2 Naphthalene-d8	5.89	5.39	6.39	5.89	0.00
3 Acenaphthene-d10	8.48	7.98	8.98	8.48	0.00
4 Phenanthrene-d10	9.89	9.39	10.39	9.89	0.00
5 Chrysene-d12	11.92	11.42	12.42	11.93	0.05
6 Perylene-d12	13.85	13.35	14.35	13.85	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

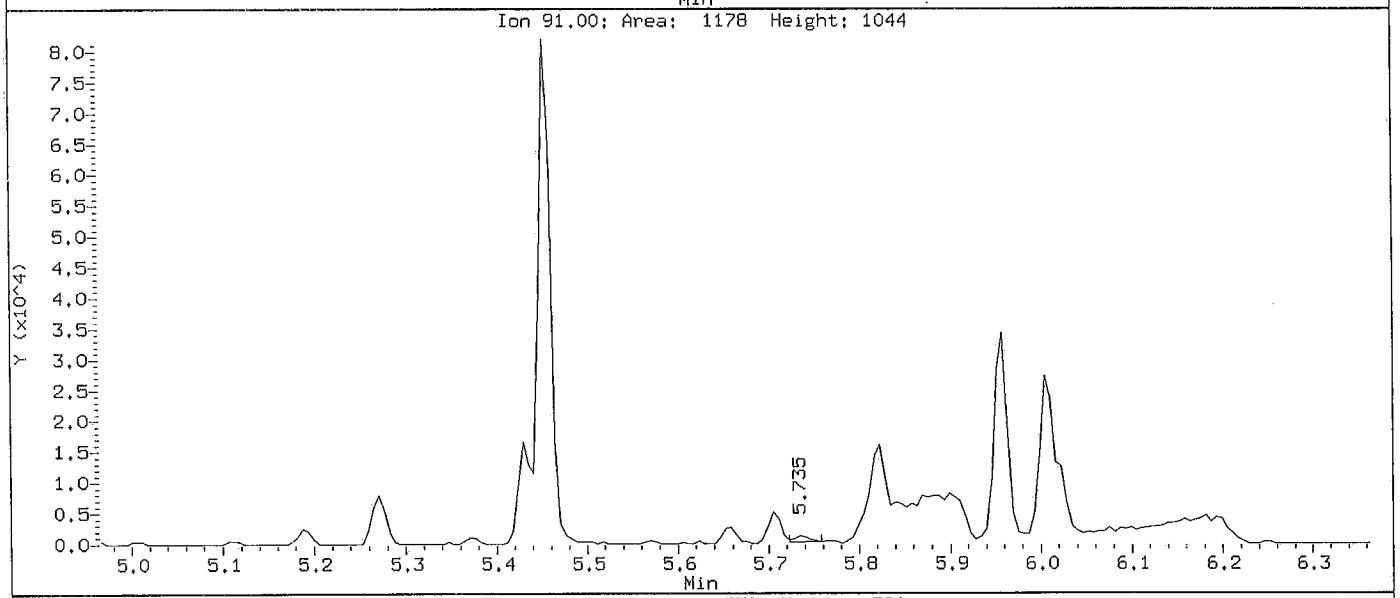

Data File: /var/chem/gcms/md.i/D080411.b/mk51d1ad.d
Date : 04-AUG-2011 14:49
Client ID: INTRA-LAB CHECK
Sample Info: MK51D1AD,,3,,DUP,
Volume Injected (uL): 1.0
Column phase: Rxi-5 Sil MS
Instrument: md.i
Operator: 60487
Column diameter: 0.25
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5+
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5+
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10+
-Chrysene-d12+
-Perylene-d12
/var/chem/gcms/md.i/D080411.b/mk51d1ad.d

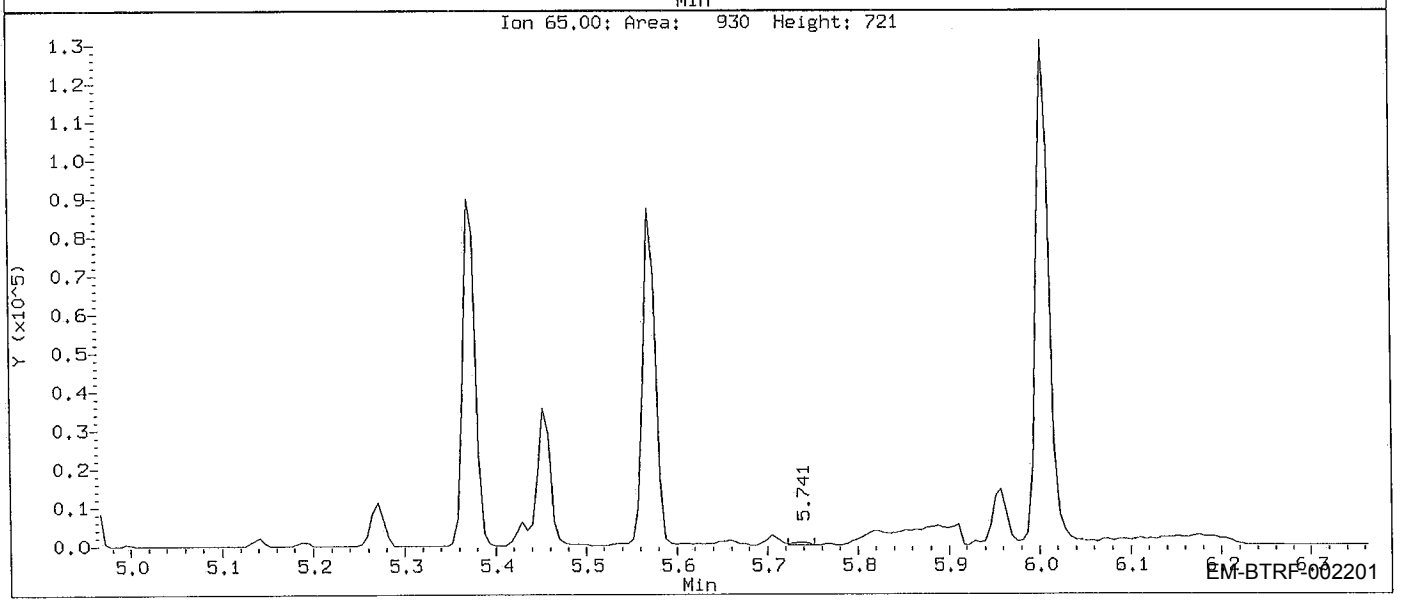
Data File: /var/chem/gcms/md_i/D080411_b/mk51d1ad.d
Injection Date: 04-AUG-2011 14:49
Instrument: md_i
Client Sample ID: INTRA-LAB CHECK

Compound: Phentermine
CAS Number: 122-09-8



KRM 8/5/11





Miscellaneous Data

TestAmerica Knoxville Semivolatile GC/MS Data Review / Narrative Checklist Lot/Project# HLG250406
Method 8270C - KNOX-MS-0016, Rev 11 & Method TO-13A Mod – KNOX-MS-0017, Rev 4 Page 1 of 2

Instrument:	MD					
Scanned File Names:	D072611I					
	D080411					

Review Items **A. Tune / Calibration**	N/A	Yes	No	If No, why is data reportable?	2nd ☐
1. Were all samples injected within 12 hr of DFTPP?		✓			✓
2. Has a Continuing Calibration Checklist been completed for each analytical batch?		✓			✓
3. Was the correct ICAL used for quantitation?		✓			✓
B. Client Sample and QC Sample Results					
1. Were all special project requirements met?		✓			✓
2. Were prep/dilution/split factors & header information verified?		✓			✓
3. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
4. Were the analytes that were not automatically identified in the CCAL searched for manually in the samples?		✓			
5. Sample prep and analyses done within preparation and analytical holding time (HT)? *If no, list samples and NCM #:* _____		✓		☐ [ht1] HT expired upon receipt. ☐ *[ht2] Client requested analysis after HT expired.** ☐ **Re-extraction done after HT expired. See [sur4] or[sur2]**	✓
6. Are surrogates and internal standards within QC limits? *If no, list samples, reason (e.g.,* **sur1***) and NCM #:* _____ Sample / Reason / Sample / Reason		✓		☐ [sur1] MS/MSD surr.%R demonstrated same effect. ☐ [sur2] Re-extraction demonstrated same effect. ☐ **[sur3] Not enough sample for re-extraction.** ☐ **[sur4] Re-extraction done outside HT. Rerun shows original %R were wrong; both data reported.** ☐ **[sur5] Upon client approval, data was flagged as estimated & released without further investigation.*** ☐ [sur7] Obvious matrix interference. Explain: _____ ☐ **[hydr1] H-D exchange; sample reextracted.** ☐ **[hydr2] H-D exchange; affected analytes reported on diluted analysis** ☐ **[sur12] Surr.%R high and all targets ND.** ☐ **[sur13] Surr.%R low. Sample consumed.** ☐ **[sur14] Surr.%R high. Sample consumed.** ☐ [isc1] Samples bracketed by acceptable runs.	✓
6. Are internal standards <0.5min of last CCAL?		✓			✓
7. Were positive hits evaluated using qualitative identification criteria and technical judgment?		✓			✓
8. Are positive results within calibration range? *If no, list samples:* _____		✓		☐ [dil5] At client's request, sample was analyzed with minimum dilution even though some analytes were outside of calibration range.*	✓
9. For initial analysis that's a dilution, was the largest analyte > 20% of calibration range? *List diluted samples and reason (e.g.,* **elev1***):* Sample(s) / Reason 001, 002, 003 > elev4		✓		☐ [elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. ☐ [elev2] Elevated RL for (ANALYTE) due to interfering analyte. ☐ [elev3] Elevated RLs for all analytes due to difficult sample matrix. ☑ [elev4] Diluted based on screening results. ☐ [elev5] Elevated RLs for all analytes due to presence of non-target compounds.	✓

* Such action must be taken in consultation with client. MS029r24.doc, 071111

NOTE: Nonconformance memos are required for **bold** and *italicized* autotext statements: **Bold** = deficiency, *italicized* = anomoly.

TestAmerica Knoxville Semivolatile GC/MS Data Review / Narrative Checklist Lot/Project# H1G250406
Method 8270C - KNOX-MS-0016, Rev 11 & Method TO-13A Mod – KNOX-MS-0017, Rev 4 Page 2 of 2

B. Client Sample and QC Sample Results	N/A	Yes	No	If No, why is data reportable?	2nd ☐
10. If amount extracted was < 80% of nominal amount, were the RLs/MDLs adjusted? List samples:	✓			☐ [elev6] Elevated RLs for all analytes due to insufficient sample amount received.	MS
11. If samples were split, are the dilution factores & prep factors applied properly & MDL/RLs adjusted?		✓		☑ [elev7] Elevated RLs for all analytes due to split; list samples: All samples	✓
12. For secondary diluted analyses to bring compounds in calibration range, was the largest analyte targeted to be above 50% of calibration range? *List diluted samples and reason (e.g.,* **dil1***):* Sample / Reason / Sample / Reason: 001, 002, 003 > dil3		✓		☐ [dil1] Conc. of (ANALYTE) > calibration range. RLs adjusted accordingly. ☐ [dil2] Conc. of several compounds > calibration range. RLs adjusted accordingly. ☑ [dil3] Conc. of (ANALYTE) > calibration range. Both analyses reported to provide lowest RLs. ☐ [dil4] Conc. of several compounds > calibration range. Both analyses reported to provide lowest RLs.	✓
13. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?		✓		Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	✓
14. Have alternate hits and manual integrations been verified as correct?		✓			✓
C. Preparation/Matrix QC					
1. 8270: LCS done per batch and meet criteria with a limited # marginal exceedences allowed (see table) and no two consecutive MEs. --For TO-13: LCS done per batch within method QC limits		✓		☐ **[lcs2] Insufficient sample for reanalysis.*** ☐ **[lcs3] LCS %R high and all analyte(s) were <RL in associated samples.** ☐ **[lcs4] Entire sample consumed.** ☐ [lcs5] LCS outside marginal exceedences high, but analytes were not detected ☐ [lcs6] LCS analyte(s) flagged as being outside control limits but within marginal limits o **[lcs RPD] RPD out, BUT % R OK.**	✓
2. Method blank done per prep batch and method blank or instrument blank analyzed with each sequence?		✓			✓
3. Method blank surrogate recoveries within QC limits?		✓		☐ **[mb1] Sample surrogates OK and there is no analyte >RL in samples associated with blank.*** ☐ **[mb7] Entire sample consumed.**	✓
4. Are all analytes present in the method blank < RL? *If no, list blank ID and NCM #:*		✓		☐ **[mb3] No analyte > RL in associated samples.*** ☐ **[mb4] Sample results > 20x higher than blank.** ☐ **[mb5] Insufficient sample for reanalysis.*** ☐ **[mb8] Entire sample consumed.**	✓
5. MS/MSD (or LCSD for TO13A) done per batch? Batch:			✓	☑ [lcsd] Insufficient sample. LCS/LCSD analyzed. ☐ [lcsd1]LCS/LCSD ana for method precision(TO-13)	✓
6. If MS/MSD was done on this client's sample or for reported batch QC, were the MS/MSD recoveries and RPDs within laboratory generated QC limits? *If no, list MS/MSD ID:*	✓			☐ [ms1] LCS acceptable - sample matrix effects. ☐ [ms2] LCS acceptable. High native analyte concentration relative to spike level. ☐ [rpd] LCS acceptable. RPD out due to lack of sample homogeneity.	MS
7. Were MS run #'s assigned correctly?	✓				MS
D. Other					
1.Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, and extraction/ analysis dates correct.)		✓			✓
2.Are all nonconformances documented appropriately and copy included with deliverable?	✓				MS
3.Are the correct scanned file names listed at the top of the data review checklist?		✓			✓
4.Were the standards scanned properly with runlogs?					✓
5.Was a narrative prepared and all deviations noted?		✓			✓

Analyst: KRM	Date: 8/5/11	2nd Level Reviewer:	Date: 8/8/11
☐ see following page for comments			

* Such action must be taken in consultation with client.

TestAmerica Knoxville Extraction Sheet

Method 0010 Split/Combined Air Train for Semivolatiles and SIM PAHs - KNOX-OP-0009

SVOC Batch #: 1207013
PAH Batch #: 1207014
Start Date/Time: 7/26/11 13:30
Compl Date/Time: 7/27/11 755

PAH Internal Std ID: PAH0317 2.0mL BNA Surr ID: OP70308 1.0mL Spiker: MK
PAH Native Spike ID: PAH 0297 1.0mL BNA Spike ID: OP70316 1.0mL Witness: DWS
Naphthalene Spike ID: PAH0354 0.5mL $MeCl_2$ Lot #: K07503
ICR Extra Spike: EM3075 1.0mL ICR LCS Spike: EM3074 1.0mL

Delivered: DWS 8/2/11 1540 (Initials/Date/Time)
Received: KRM 8/3/11 830 (Initials/Date/Time)

Lot Number	Sample Number	Work Order	Suffix	SAC	FH/BH Combined Extraction: Place XAD and particulate filter sample in a med Soxhlet.	FH/BH Combined Extraction: Set up 1 blank per 10 samples, 1 BNA LCS/LCSD & 1 PAH LCS/LCSD per 20 samples with XAD and blank filters.	FH/BH Combined Extraction: Add 1 mL BNA surr & 2 mL PAH IS to samples/blank. (Add 1/2 the vol. to LCS/LCSDs.)	FH/BH Combined Extraction: Add 1 mL BNA spike (100 µg/mL) to BNA LCS/LCSD.	FH/BH Combined Extraction: Add 1 mL PAH spike (0.25 µg/mL) and 0.5 mL Naphthalene spike (3.75 µg/mL) to PAH LCS/LCSD.	FH/BH Combined Extraction: Extract 18-24 hr with $MeCl_2$.	Solvent Rinses: Acetone present in solvent rinses?	Solvent Rinses: Did solvent rinse lose volume during shipment?	Condensate Volume: Condensate 1 Volume (mL)	Condensate 2 Volume (mL)	Condensate 3 Volume (mL)
H1G250406	1	MK5C31AA/MK5C31AC		QL/YA	✓	✓	✓	NA	NA	✓	N	NA	800	NA	NA
H1G250406	2	MK5C51AA/MK5C51AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	N	380	↓	↓
H1G250406	3	MK5C61AA/MK5C61AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓	940	480	↓
H1G250406	4	MK5C71AA/MK5C71AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	NA	NA	NA	↓
H1G250417	1	MK5KL1AA/MK5KL1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	NA			
H1G250417	2	MK5KQ1AA/MK5KQ1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓			
H1G250417	3	MK5KR1AA/MK5KR1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓			
H1G250417	4	MK5KT1AA/MK5KT1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓			
H1G250417	6	MK5KW1AC/MK5KW1AA		QL/YA	↓	↓	↓	↓	↓	↓	NA	↓			
H1G260000	13	MK51D1AA	B	QL	↓	↓	↓	↓	↓	↓	↓	↓			
H1G260000	13	MK51D1AC	C	QL	↓	↓	↓	✓	↓	↓	↓	↓			
H1G260000	13	MK51D1AD	L	QL	↓	↓	↓	✓	↓	↓	↓	↓			
H1G260000	14	MK51E1AA	B	YA	↓	↓	↓	NA	↓	↓	↓	↓			
H1G260000	14	MK51E1AC	C	YA	↓	↓	↓	↓	✓	↓	↓	↓			
H1G260000	14	MK51E1AD	L	YA	↓	↓	↓	↓	✓	↓	↓	↓			
					MK 7/26/11						DWS 7/27	DWS 7/27	DWS 7/27	DWS 7/27	
					DWS 7/27/11										

Comments: MK5C3 - Has A strong chemical odor, Also MK5C5. They have a strong sulfur odor.
~~MK5C5~~ DWS 8/1/11 MK5C3, MK5C5 and MK5KC6 were dark in color and foamy during initial KD concentration. DWS 8/1/11 DWS 8/1/11

EM-BTRF-00220

TestAmerica Knoxville Extraction Sheet

Method 0010 Split/Combined Air Train for Semivolatiles and SIM PAHs - KNOX-OP-0009

Start Date/Time: 7/27/11 1345
Compl Date/Time: 7/28/11 745
Start Date/Time: 7/28/11 1300
Compl Date/Time: 7/29/11 710

Alternate Surrogate ID: PAH 0355
$MeCl_2$ Lot #: K07503
Na_2SO_4 ID: C4285:32

H_2SO_4 ID: A4022:12
NaOH ID: A4285:37

Spiker DWS witness [illegible]

Lot Number	Sample Number	Work Order	Suffix	SAC	Pour FH/BH extract into CLLE. Add condensate to CLLE. Pour **all** rinses thru condensate.	Record sample pH.	Add 2.0 mL (0.25 µg/mL) Alternate Surr to all samples & blank. Add 1.0 mL to PAH LCS/LCSD.	Adjust pH to 0<pH<2 with 1:1 H_2SO_4. Record pH.	Extract 18-24 hr with $MeCl_2$.	Adjust pH to 11<pH<14 with 10N NaOH. Record pH.	Extract 18-24 hr with $MeCl_2$.	Filter extracts thru Na_2SO_4/ Whatman 41 filter paper to 500 mL KD.	Concentrate to 4 to 6 mL in KD.	Split extract 50:50 for SVOCs and SIM PAHs.
H1G250406	1	MK5C31AA/MK5C31AC		QL/YA	✓	8	✓	2	✓	12	✓			Y
H1G250406	2	MK5C51AA/MK5C51AC		QL/YA		8		2		12				
H1G250406	3	MK5C61AA/MK5C61AC		QL/YA		8		2		12				
H1G250406	4	MK5C71AA/MK5C71AC		QL/YA		NA		2		12				
H1G250417	1	MK5KL1AA/MK5KL1AC		QL/YA				2		12				
H1G250417	2	MK5KQ1AA/MK5KQ1AC		QL/YA				2		12				
H1G250417	3	MK5KR1AA/MK5KR1AC		QL/YA				2		12				
H1G250417	4	MK5KT1AA/MK5KT1AC		QL/YA	✓		✓	2	✓	12	✓			
H1G250417	6	MK5KW1AC/MK5KW1AA		QL/YA	NA		NA	NA	NA	NA	NA			✓
H1G260000	13	MK51D1AA	B	QL	✓		✓	2	✓	12	✓			Y
H1G260000	13	MK51D1AC	C	QL			NA	2		12				NA
H1G260000	13	MK51D1AD	L	QL			✓	2		12				✓
H1G260000	14	MK51E1AA	B	YA			✓	2		12				Y
H1G260000	14	MK51E1AC	C	YA				2		12				NA
H1G260000	14	MK51E1AD	L	YA	✓	✓	✓	2	✓	12	✓	✓	✓	✓
					DWS 7/27	DWS 7/27	DWS 7/27	DWS 7/27	DWS 7/27	1[illegible] → 7/28	→	[illegible] 7/29	[illegible] 7/29	[illegible] 8/1

DWS 7/27/11

EM-BTRF-00220

Comments: All samples had neutral "pH" at 6-11 mLs before split.

TestAmerica Knoxville Extraction Sheet
Method 0010 Split/Combined Air Train for Semivolatiles and SIM PAHs - KNOX-OP-0009

Lot Number	Sample Number	Work Order	Suffix	SAC
H1G250406	1	MK5C31AA/MK5C31AC		QL/YA
H1G250406	2	MK5C51AA/MK5C51AC		QL/YA
H1G250406	3	MK5C61AA/MK5C61AC		QL/YA
H1G250406	4	MK5C71AA/MK5C71AC		QL/YA
H1G250417	1	MK5KL1AA/MK5KL1AC		QL/YA
H1G250417	2	MK5KQ1AA/MK5KQ1AC		QL/YA
H1G250417	3	MK5KR1AA/MK5KR1AC		QL/YA
H1G250417	4	MK5KT1AA/MK5KT1AC		QL/YA
H1G250417	6	MK5KW1AC/MK5KW1AA		QL/YA
H1G260000	13	MK51D1AA	B	QL
H1G260000	13	MK51D1AC	C	QL
H1G260000	13	MK51D1AD	L	QL
H1G260000	14	MK51E1AA	B	YA
H1G260000	14	MK51E1AC	C	YA
H1G260000	14	MK51E1AD	L	YA

8270 Extracts

$MeCl_2$ Lot #: K07503

Concentrate to <1 mL by N-EVAP.	QC to 1 mL in Class A volumetric. Transfer to 2 mL vial.
≥2 mL	2.0 mL
>2 mL	2.0 mL
>1 mL	~~1.0 mL~~
>1 mL	1.0 mL
NA	NA

SIM PAH Extracts

Recovery Std ID: NA
Spiker:
Witness:
$MeCl_2$ Lot #: NA
Hexane Lot #:

Concentrate/solvent exchange to hexane by KD to ~4 mL.	Perform silica gel cleanup if needed.	Conc to ~1 mL by N-EVAP.	Add 25 µL recovery std (10 µg/mL) to 2 mL vial. Transfer sample extract to vial.	Conc to 500 µL hexane by N-EVAP.

Silica Gel Cleanup Reagents

Silica Gel ID: NA
Na_2SO_4 ID:
Hexane Lot #:
2:3 $MeCl_2$/Hex ID:

Comments:

EM-BTRF-002207

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/02/11
Time: 7:10:28

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check			Spike & Surrogate Worksheet
—	—	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			—	—	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
Y Package Submitted to AnalyticalGroup
Y Bench Sheet Copied per COC

Extractionist: 403884 David Stout
060062 Marcus J. Ramsey

Concentrationist: 403899 Joe Maher

QC BATCH: 1207013

PREP DATE: 7/26/11 13:30
COMP DATE: 8/02/11 9:30

Reviewer/Date: MAHERJ / 8/02/11

Base/Neutrals and Acids (8270C)
SOXHLET (NOMINAL), Airtrains: Combined

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
7/28/11	8/08/11	H1G250406-001 **MK5C3-1-AA**	D	IP	QL	AIR	**1.0Sample** 2.00mL	8.0	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													
7/29/11	8/08/11	H1G250406-002 **MK5C5-1-AA**	D	IP	QL	AIR	**1.0Sample** 2.00mL	8.0	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													
7/31/11	8/08/11	H1G250406-003 **MK5C6-1-AA**	D	IP	QL	AIR	**1.0Sample** 2.00mL	8.0	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													
7/31/11	8/08/11	H1G250406-004 **MK5C7-1-AA**	D	IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													
7/31/11	8/05/11	H1G250417-001 **MK5KL-1-AA**	DR	IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													
8/02/11	8/05/11	H1G250417-002 **MK5KQ-1-AA**	DR	IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													
8/02/11	8/05/11	H1G250417-003 **MK5KR-1-AA**	DR	IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH 7													

EM-BTRF-002208

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/02/11
Time: 7:10:28

QC BATCH: 1207013

PREP DATE: 7/26/11 13:30
COMP DATE: 8/02/11 9:30

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
8/02/11	8/05/11	H1G250417-004 **MK5KT-1-AA**	DR	IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH7													
8/03/11	8/05/11	H1G250417-006 **MK5KW-1-AC**	DR	IP	QL	AIR	**1.0Sample** 1.00mL	NA	NA	NA	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:		pH7													
7/28/11	0/00/00	H1G260000-013 **MK51D-1-AA**B		IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	OP70308 1.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-013 **MK51D-1-AC**C		IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	EM3074 & EM3075 1.0ML EA OP70308 0.5ML
COMMENTS:	OP70316	1.0ML													
7/28/11	0/00/00	H1G260000-013 **MK51D-1-AD**L	R	IP	QL	AIR	**1.0Sample** 1.00mL	NA	2.0	12.0	MECL2	400.0		.0	EM3074 & EM3075 1.0ML EA OP70308 0.5ML
COMMENTS:	OP70316	1.0ML													

MK5C3 AND MK5C5 HAD A STRONG CHEMICAL, SULFUR ODOR. MK5C3, MK5C5, AND MK5C6 WERE DARK IN COLOR AND VERY FOAMY DURING INITIAL KD CONCENTRATION.

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 12

EM-BTRF-002209

TestAmerica Knoxville Prep Batch Review Checklist

Batch # 1207013

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd Level
1. Were the samples extracted within the required holding times?		✓		If No, NCM #: _____	✓
2. Are the final extracts free of water, precipitates, multiple phases, and for HRMS - color?		✓			✓
3. Were all project specific requirements met as noted on the Lot Checklists (L40) and the Sample List report?		✓			✓
4. Were MS Run numbers assigned properly?	✓				✓
5. Were the correct weights and volumes entered into QuantIMS for all samples and QC?		✓			✓
6. Was the correct completion date entered into QuantIMS?		✓			✓
7. Were the spike IDs and volumes entered correctly into QuantIMS?		✓			✓
8. Were all appropriate notes and observations recorded on the extraction benchsheet and in QuantIMS?		✓			✓
9. Was the extraction batch reviewed in QuantIMS using LIM L21?		✓			✓
10. Does the prep batch paperwork package contain all required documentation which has been properly and completely filled out, including: • Extraction Benchsheet • QuantIMS Benchsheet • Lot Checklists (L40) for all lots in batch • Sample List • Compound List Report • SOG Sample Tracking Sheet	✓	✓ ✓ ✓ ✓ ✓ ✓			✓
11. Are all nonconformances documented appropriately and copy included with deliverable?	✓			If Yes, NCM#: _____	✓

Analyst : JMM **Date:** 8/2/11

Comments:

2nd Level Reviewer: DWS **Date:** 8/2/11

Comments:

SIM PAH

Raw Sample Data

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-001	Work Order #...:	MK5C33AC	Matrix.....:	AIR
Date Sampled...:	07/14/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2500	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	620000	50000	ng/sample	12000
Acenaphthylene	74000	50000	ng/sample	6000
Anthracene	940000	25000	ng/sample	9500
Benzo(a)anthracene	93000	25000	ng/sample	9500
Benzo(b)fluoranthene	ND	250000	ng/sample	75000
Benzo(k)fluoranthene	ND	250000	ng/sample	110000
Benzo(ghi)perylene	47000	25000	ng/sample	13000
Benzo(a)pyrene	110000	25000	ng/sample	7200
Benzo(e)pyrene	79000	25000	ng/sample	14000
Chrysene	120000	25000	ng/sample	6200
Dibenz(a,h)anthracene	19000 J	25000	ng/sample	9800
Fluoranthene	100000	25000	ng/sample	16000
Fluorene	1400000	25000	ng/sample	10000
Indeno(1,2,3-cd)pyrene	19000 J	25000	ng/sample	6500
2-Methylnaphthalene	15000000 E	120000	ng/sample	52000
Naphthalene	10000000 E	1000000	ng/sample	620000
Perylene	12000 J	25000	ng/sample	7800
Phenanthrene	2200000	75000	ng/sample	60000
Pyrene	370000	150000	ng/sample	90000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	104	(30 - 120)
Naphthalene-d8	99	(30 - 120)
2-Methylnaphthalene-d10	104	(30 - 120)
Acenaphthylene-d8	115	(30 - 120)
Phenanthrene-d10	93	(30 - 120)
Fluoranthene-d10	109	(30 - 120)
Benzo(a)anthracene-d12	136 *	(30 - 120)
Chrysene-d12	92	(30 - 120)
Benzo(b)fluoranthene-d12	112	(30 - 120)
Benzo(k)fluoranthene-d12	89	(30 - 120)
Benzo(a)pyrene-d12	102	(30 - 120)
Perylene-d12	93	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	104	(30 - 120)
Dibenz(ah)anthracene-d14	103	(30 - 120)
Benzo(ghi)perylene-d12	99	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R1-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-001	Work Order #...:	MK5C33AC	Matrix.....:	AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Report Date: 15-Aug-2011 11:16

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Lab Smp Id: MK5C33AC Client Smp ID: EXM-DCU-M0010-R1-CO
Inj Date : 14-AUG-2011 16:55
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C33AC,,0,,POSTSPK
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 11:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 6
Dil Factor: 1250.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1250.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)	
* 1 Naphthalene-d8	136	4.876	4.873	(1.000)	674758	0.50000	0.500	
$ 2 Naphthalene-d8(SS)	136	4.876	4.873	(0.770)	674758	0.49742	497	
3 Naphthalene	128	4.888	4.888	(1.002)	9297761	8.21886	10300000	E
$ 222 13C6-Naphthalene	134	4.895	4.888	(1.004)	23599	0.01893	~~18.9~~(R)	
* 10 2-Methylnaphthalene-d10	152	5.434	5.431	(1.000)	383506	0.50000	0.500	
$ 11 2-Methylnaphthalene-d10(SS)	152	5.434	5.431	(0.858)	383506	0.52014	520	
12 2-Methylnaphthalene	142	5.457	5.457	(1.004)	9000872	11.7086	14600000	E
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	362137	0.50000	0.500	
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.870)	362137	0.49367	494	
15 1-Methylnaphthalene	142	5.543	5.540	(1.005)	4811511	6.85270	8570000	E
16 Biphenyl	154	5.845	5.842	(1.076)	313523	0.34245	428000	
* 17 2,6-Dimethylnaphthalene-d12	168	5.945	5.942	(1.000)	317279	0.50000	0.500	
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.945	5.942	(0.938)	317279	0.50219	502	
19 2,6 Dimethylnaphthalene	156	5.986	5.979	(1.007)	5307542	8.41576	10500000	E

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Report Date: 15-Aug-2011 11:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.205	6.202	(1.000)	611193	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.205	6.202	(0.979)	611193	0.57448	574
	22 Acenaphthylene	152	6.214	6.211	(1.001)	71656	0.05923	74000
*	23 Acenaphthene-d10	164	6.336	6.333	(1.000)	292717	0.50000	0.500
	24 Acenaphthene	154	6.362	6.359	(1.025)	354081	0.49690	621000
	25 2,3,5 Trimethylnaphthalene	170	6.679	6.679	(1.123)	561923	1.04774	1310000
$	26 Fluorene-d10	176	6.778	6.768	(0.893)	56464	0.09843	~~98.4(R)~~
	27 Fluorene	166	6.793	6.791	(0.895)	839824	1.13918	1420000
$	28 13C6-Fluorene	171	6.791	6.791	(0.895)	28276	0.04445	~~44.4(R)~~
*	34 Dibenzothiopene-d8	192	7.486	7.484	(1.000)	527976	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.486	7.484	(0.841)	527976	0.46355	464
	36 Dibenzothiophene	184	7.501	7.499	(1.002)	2387712	2.37818	2970000
*	41 Phenanthrene-d10	188	7.588	7.588	(1.000)	479663	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.588	7.588	(0.853)	479663	0.46590	466
	43 Phenanthrene	178	7.609	7.607	(1.003)	1814870	1.73577	2170000
*	44 Anthracene-d10	188	7.638	7.636	(1.000)	462484	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.638	7.636	(0.858)	462484	0.52037	520
	46 Anthracene	178	7.655	7.653	(1.002)	871620	0.75461	943000
$	47 13C6-Anthracene	184	7.638	7.651	(0.858)	70995	0.07574	~~75.7(R)~~
	52 1-Methylphenanthrene	192	8.155	8.155	(1.075)	357328	0.55513	694000
*	53 Fluoranthene-d10	212	8.678	8.676	(1.000)	534731	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.678	8.676	(0.975)	534731	0.54484	545
	55 Fluoranthene	202	8.696	8.694	(1.002)	97594	0.08249	103000
*	56 Pyrene-d10	212	8.900	8.898	(1.000)	400002	0.50000	0.500
	57 Pyrene	202	8.917	8.915	(1.028)	366220	0.29291	366000
$	58 Terphenyl-d14	244	9.056	9.054	(1.044)	626	0.00117	~~1.17(R)~~
*	60 Benzo(a)anthracene-d12	240	10.116	10.112	(1.000)	344088	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.116	10.112	(1.137)	344088	0.68043	680(R)
	62 Benzo(a)anthracene	228	10.137	10.133	(1.002)	76213	0.07441	93000
*	63 Chrysene-d12	240	10.150	10.146	(1.000)	368767	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.150	10.146	(1.140)	368767	0.46040	460
	65 Chrysene	228	10.175	10.175	(1.002)	80528	0.09928	124000
*	70 Benzo(b)fluoranthene-d12	264	11.271	11.271	(1.000)	314415	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.271	11.271	(0.972)	314415	0.56040	560
	72 Benzo(b)fluoranthene	252	11.301	11.295	(1.003)	33942	0.03889	48600
*	73 Benzo(k)fluoranthene-d12	264	11.307	11.301	(1.000)	348040	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.307	11.301	(0.975)	348040	0.44342	443
	75 Benzo(k)fluoranthene	252	11.325	11.325	(1.002)	16799	0.02185	27300
*	76 Benzo(e)pyrene-d12	264	11.594	11.588	(1.000)	263429	0.50000	0.500
	77 Benzo(e)pyrene	252	11.623	11.617	(0.997)	48060	0.06314	78900
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	297072	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.005)	297072	0.51121	511
	80 Benzo(a)pyrene	252	11.683	11.677	(1.003)	56399	0.08611	108000
*	81 Perylene-d12	264	11.755	11.749	(1.000)	262787	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.755	11.749	(1.014)	262787	0.46683	467
	83 Perylene	252	11.785	11.779	(1.003)	6430	0.00980	12300
*	84 Indeno(123-cd)pyrene-d12	288	13.131	13.131	(1.000)	331793	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Report Date: 15-Aug-2011 11:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.131	13.131	(1.133)	331793	0.52187	522
	86 Indeno(1,2,3-cd)pyrene	276	13.169	13.161	(1.003)	11659	0.01489	18600
*	87 Dibenz(ah)anthracene-d14	292	13.135	13.131	(1.000)	246727	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.135	13.131	(1.133)	246727	0.51382	514
	89 Dibenz(a,h)anthracene	278	13.182	13.178	(1.004)	9150	0.01548	19400
*	90 Benzo(ghi)perylene-d12	288	13.486	13.481	(1.000)	237809	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.486	13.481	(1.163)	236295	0.49662	497
	92 Benzo(g,h,i)perylene	276	13.519	13.515	(1.002)	24481	0.03792	47400

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

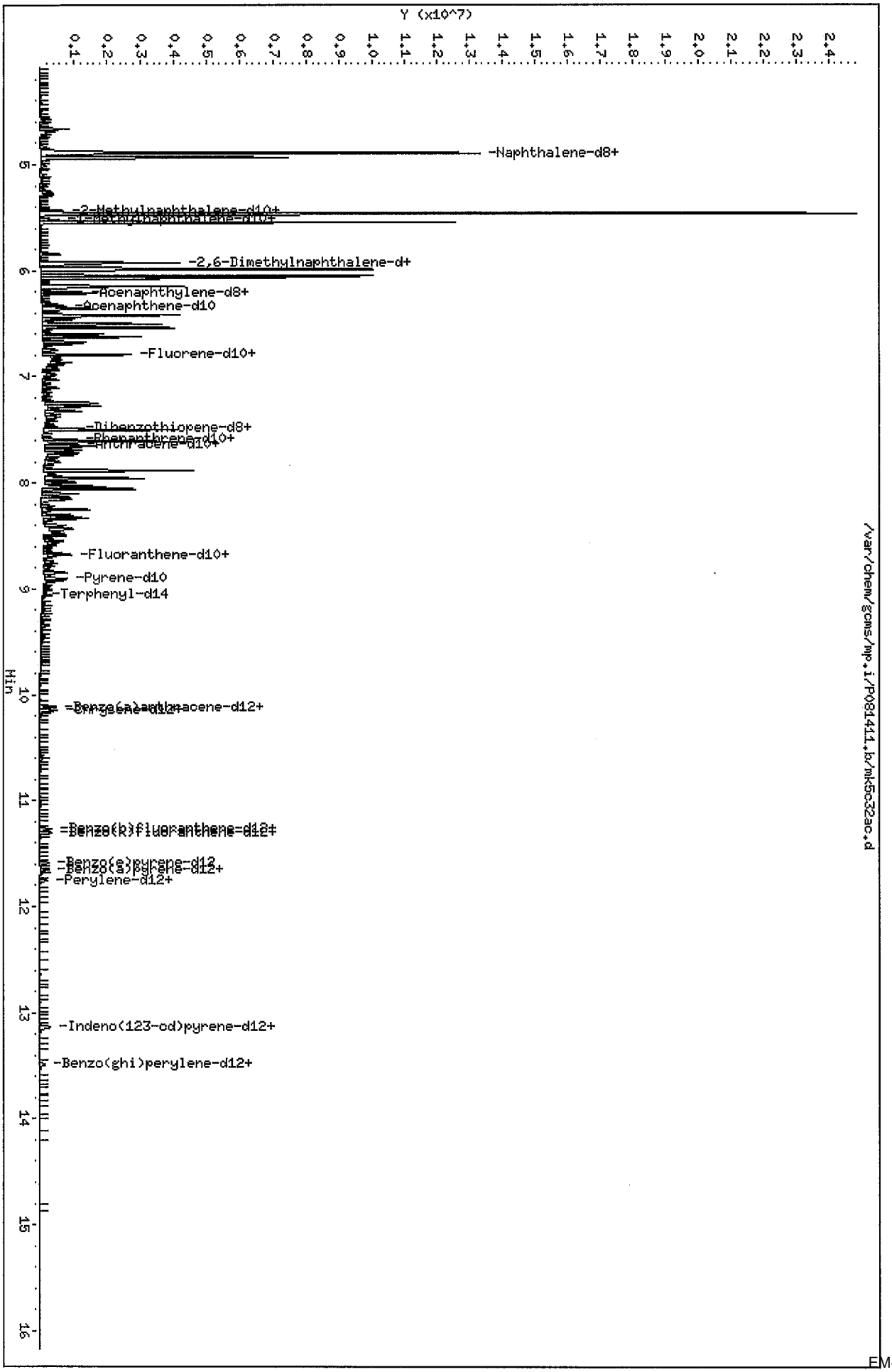
Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Report Date: 15-Aug-2011 11:16

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C33AC Client Smp ID: EXM-DCU-M0010-R1-CO
Level: LOW Operator: 11211
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Misc Info: P081411,SIMPAH3

SURROGATE COMPOUND	AMOUNT ADDED ug/ml	AMOUNT RECOVERED ug/ml	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	0.500	0.497	99.48	30-120
$ 222 13C6-Naphthalene	0.500	0.0189	3.79*	50-150
$ 11 2-Methylnaphthalen	0.500	0.520	104.03	30-120
$ 14 1-Methylnaphthalen	0.500	0.494	98.73	30-120
$ 18 2,6-Dimethylnaph-d	0.500	0.502	100.44	30-120
$ 21 Acenaphthylene-d8(	0.500	0.574	114.90	30-120
$ 26 Fluorene-d10	0.500	0.0984	19.69*	30-120
$ 28 13C6-Fluorene	0.500	0.0444	8.89*	30-120
$ 35 Dibenzothiopene-d8	0.500	0.464	92.71	30-120
$ 42 Phenanthrene-d10(S	0.500	0.466	93.18	30-120
$ 45 Anthracene-d10(SS)	0.500	0.520	104.07	30-120
$ 47 13C6-Anthracene	0.500	0.0757	15.15*	30-120
$ 54 Fluoranthene-d10(S	0.500	0.545	108.97	30-120
$ 58 Terphenyl-d14	0.500	0.00117	0.23*	30-120
$ 61 Benzo(a)anthracene	0.500	0.680	136.09*	30-120
$ 64 Chrysene-d12(SS)	0.500	0.460	92.08	30-120
$ 71 Benzo(b)fluoranthe	0.500	0.560	112.08	30-120
$ 74 Benzo(k)fluoranthe	0.500	0.443	88.68	30-120
$ 79 Benzo(a)pyrene-d12	0.500	0.511	102.24	30-120
$ 82 Perylene-d12(SS)	0.500	0.467	93.37	30-120
$ 85 Indeno(123-cd)pyre	0.500	0.522	104.37	30-120
$ 88 Dibenz(ah)anthrace	0.500	0.514	102.76	30-120
$ 91 Benzo(ghi)perylene	0.500	0.497	99.32	30-120


Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Date : 14-AUG-2011 16:55
Client ID: EXM-DCU-M0010-R1-CO
Instrument: mp.i
Sample Info: MK5C32AC,,0,,POSTSPK
Purge Volume: 1.0
Operator: 11211
Column phase: Varian: 5MS
Column diameter: 0.25
/var/chem/gcms/mp.i/P081411.b/mk5c32ac.d
Y (x10^7)
Min
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10+
-Dibenzothiophene-d8+
-Phenanthrene-d10+
-Anthracene-d10+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12+
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

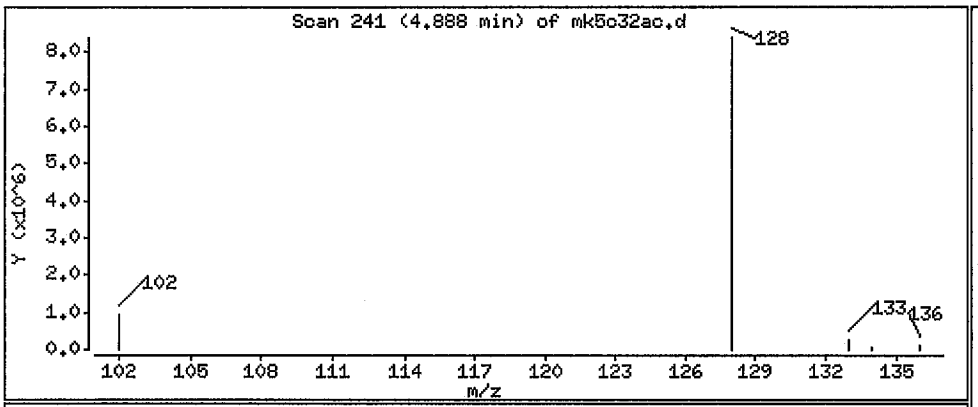
Operator: 11211

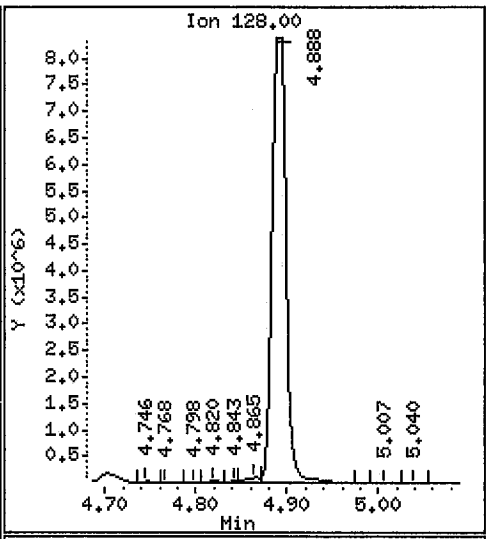
Column phase: Varian: 5MS

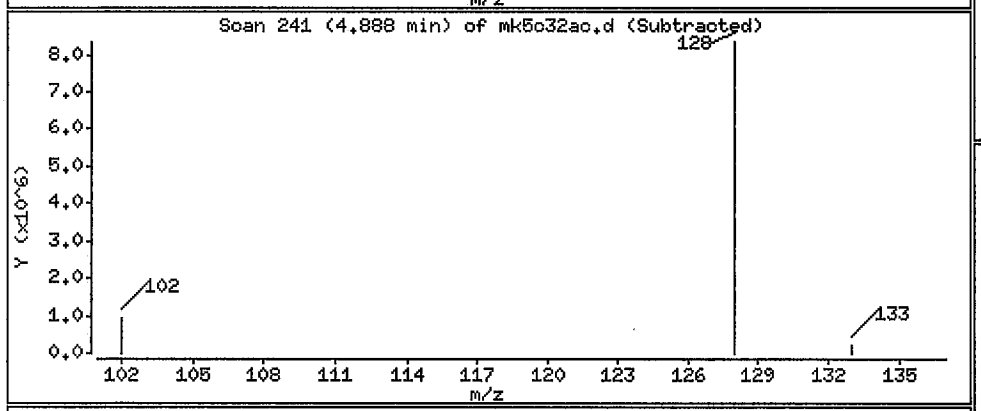
Column diameter: 0.25

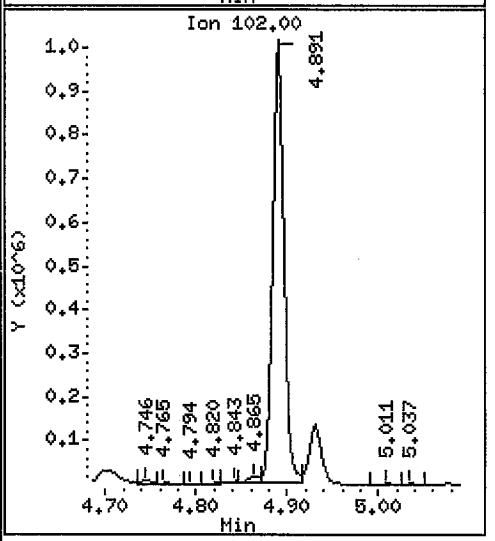
3 Naphthalene

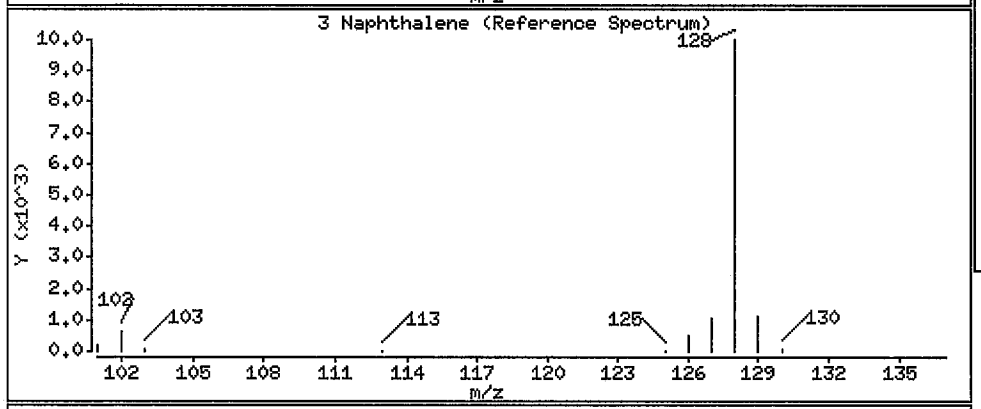
Concentration: 10300000 ng/sample

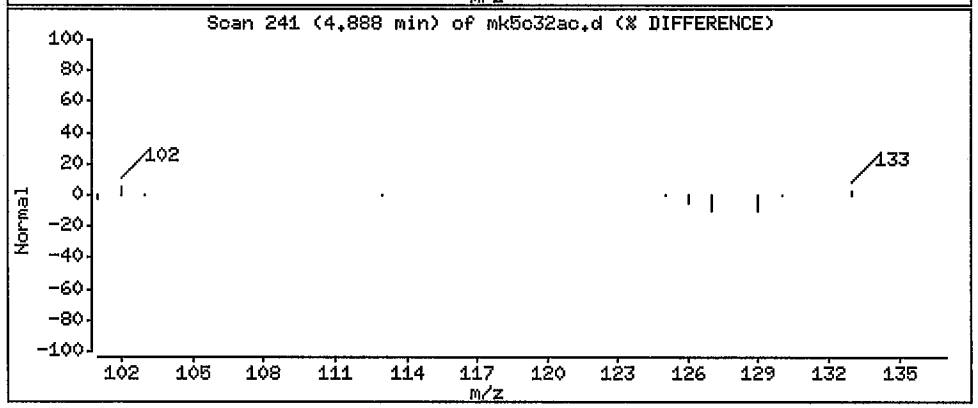












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

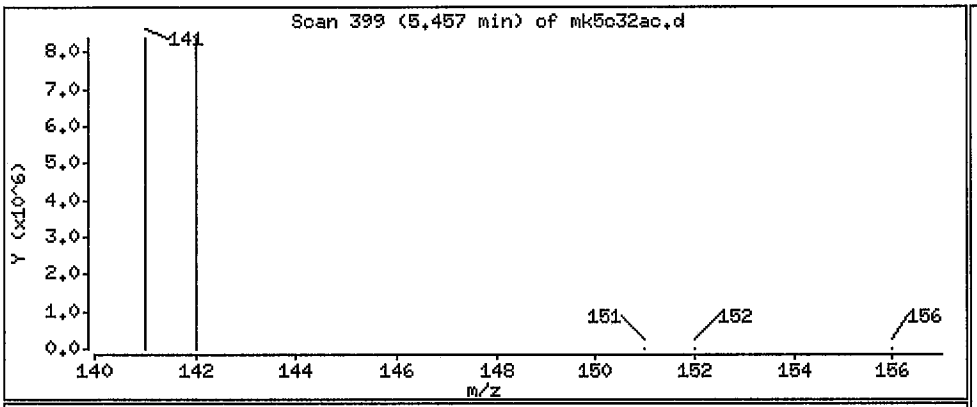
Operator: 11211

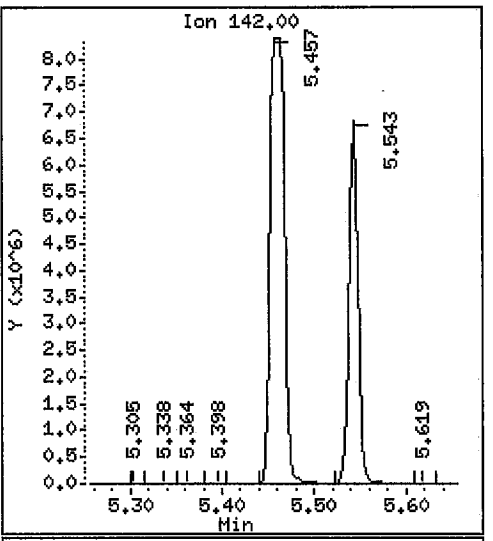
Column phase: Varian: 5MS

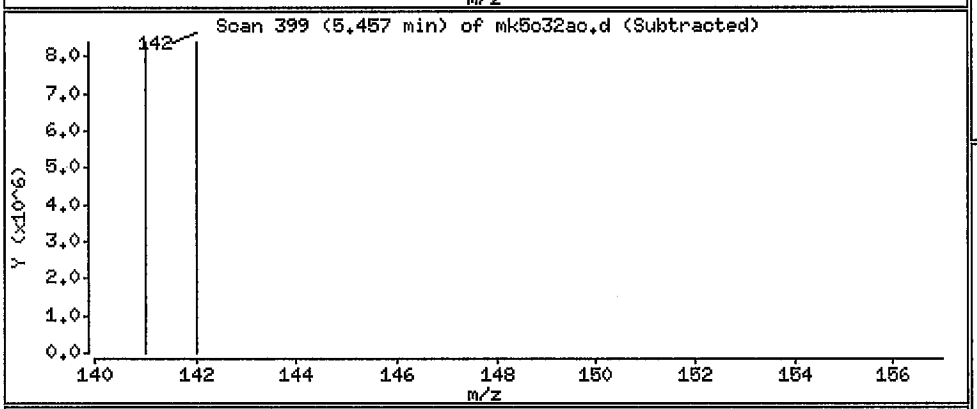
Column diameter: 0.25

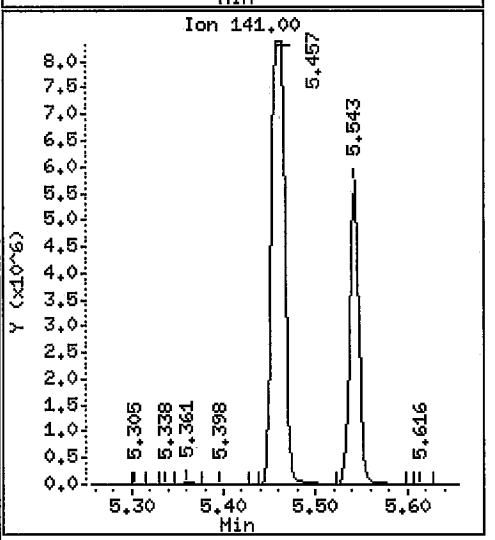
12 2-Methylnaphthalene

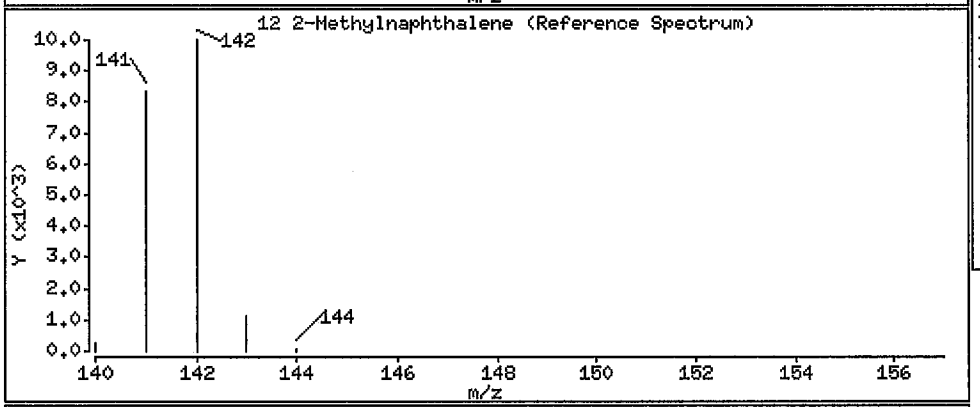
Concentration: 14600000 ng/sample

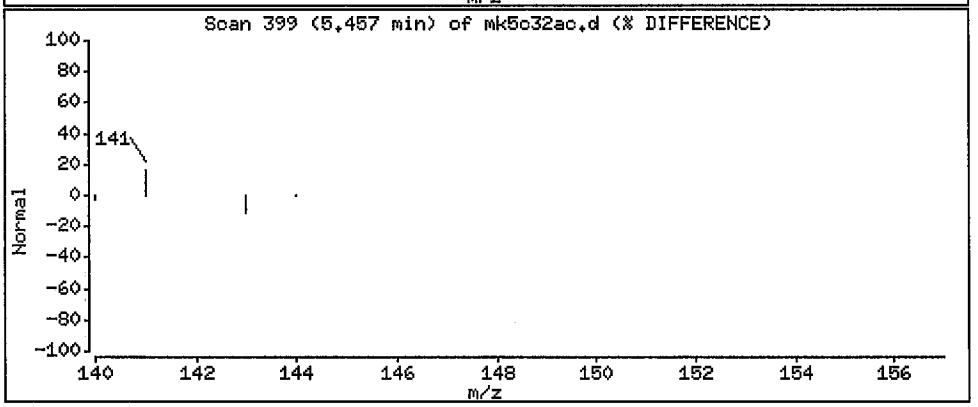












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

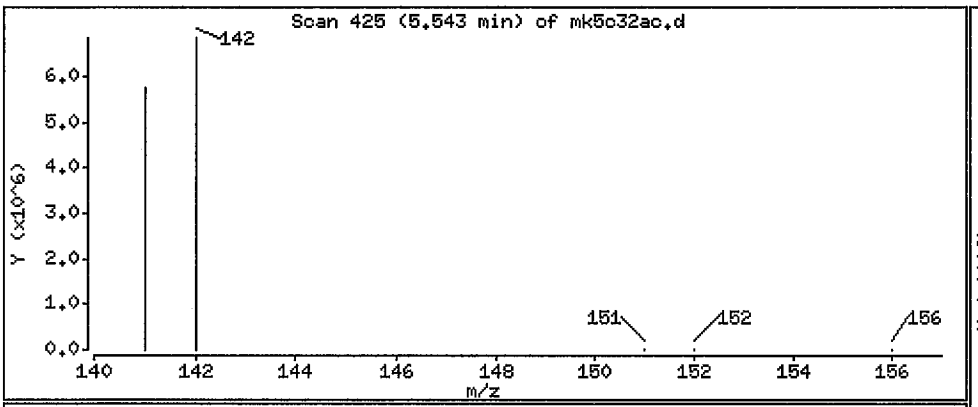
Operator: 11211

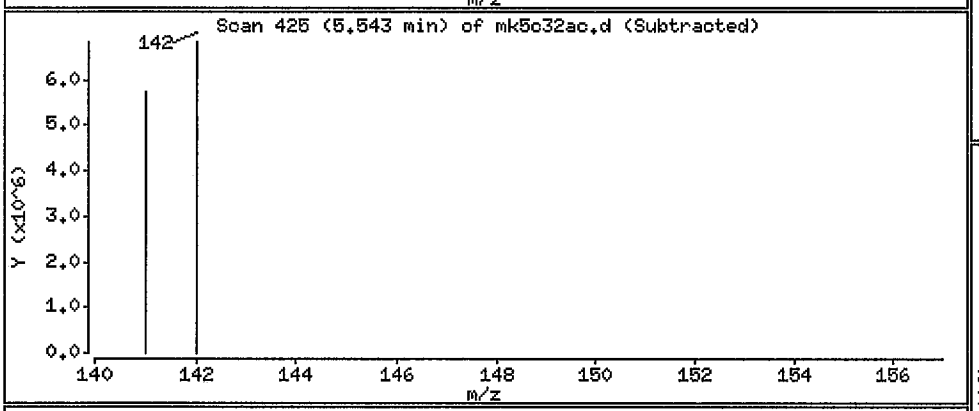
Column phase: Varian: 5MS

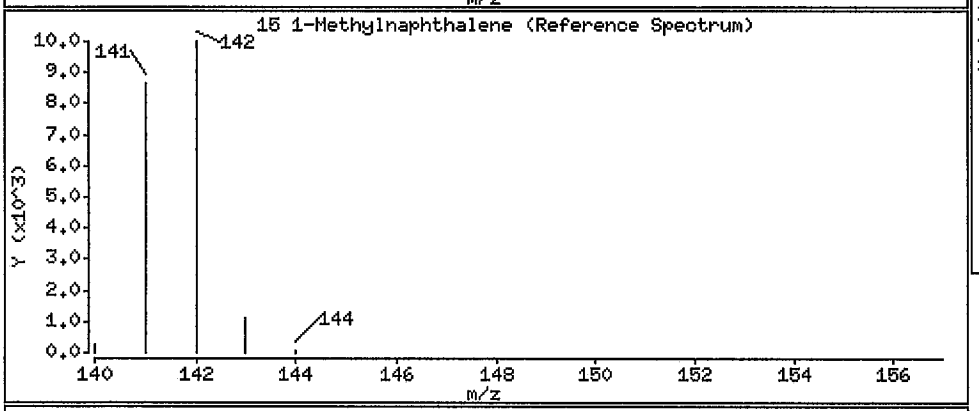
Column diameter: 0.25

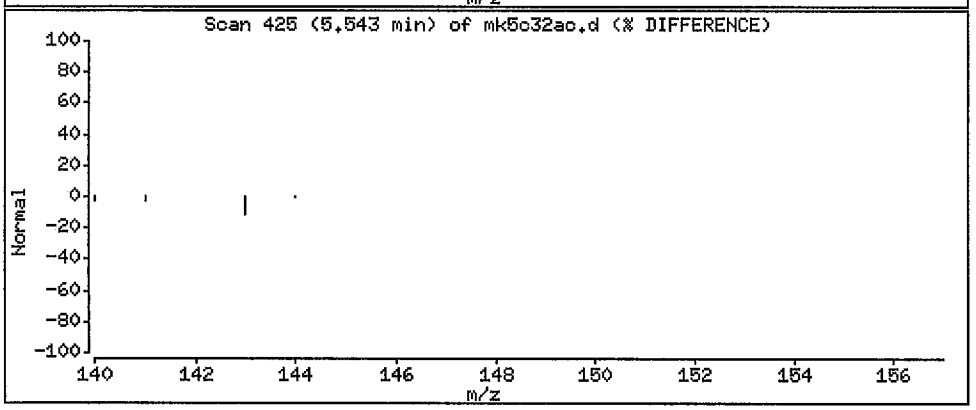
15 1-Methylnaphthalene

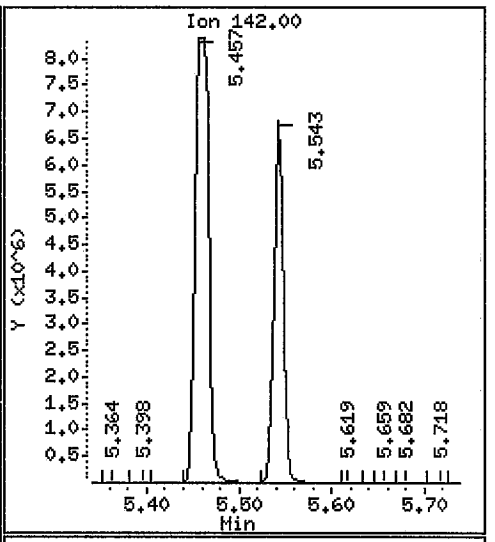
Concentration: 8570000 ng/sample

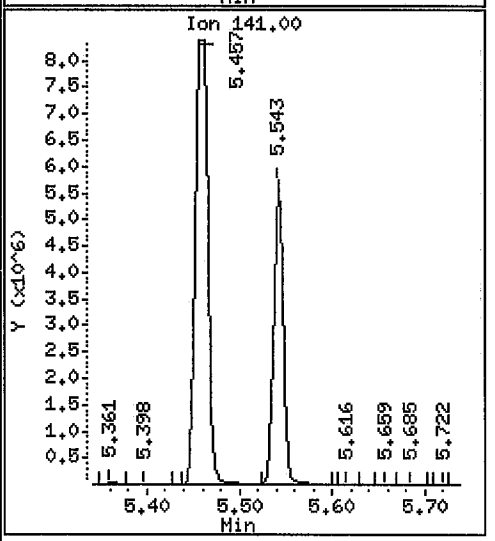












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

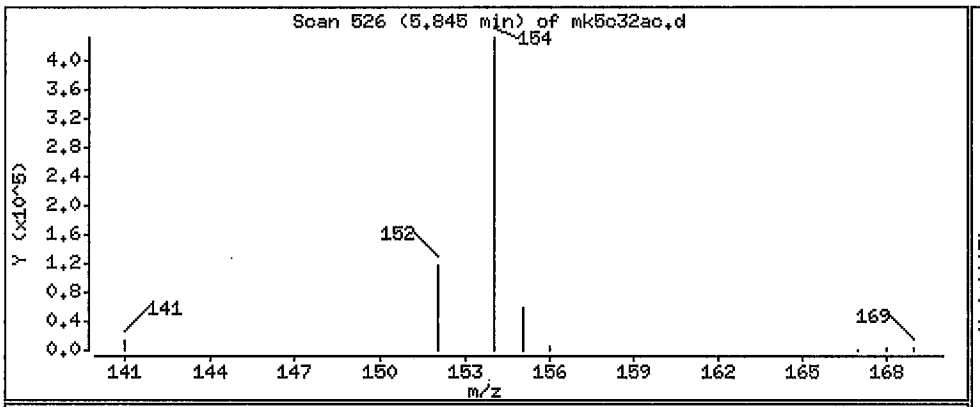
Operator: 11211

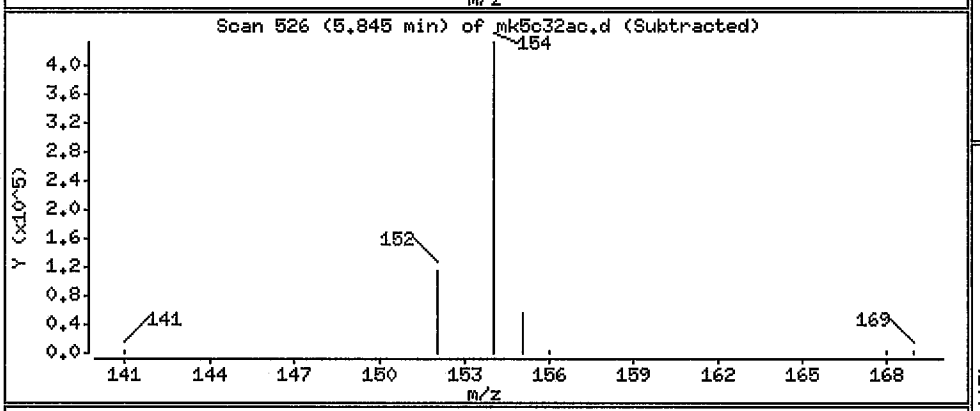
Column phase: Varian: 5MS

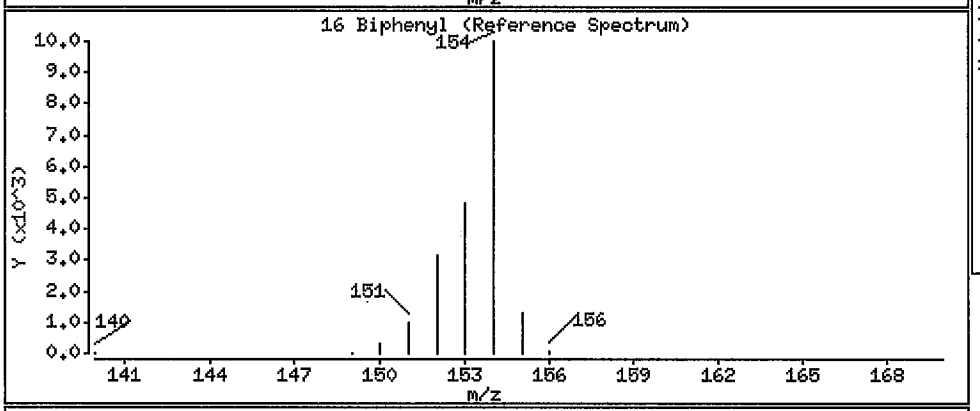
Column diameter: 0.25

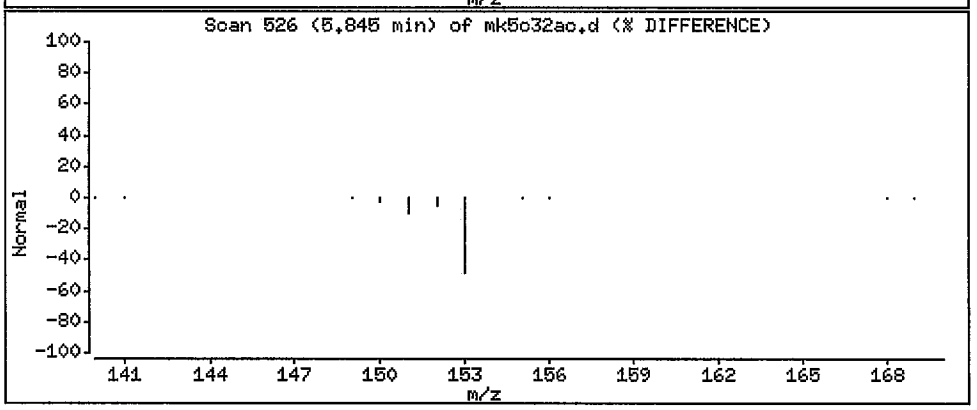
16 Biphenyl

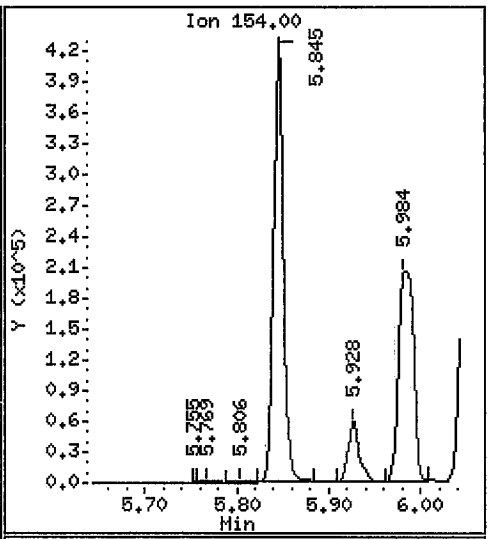
Concentration: 428000 ng/sample

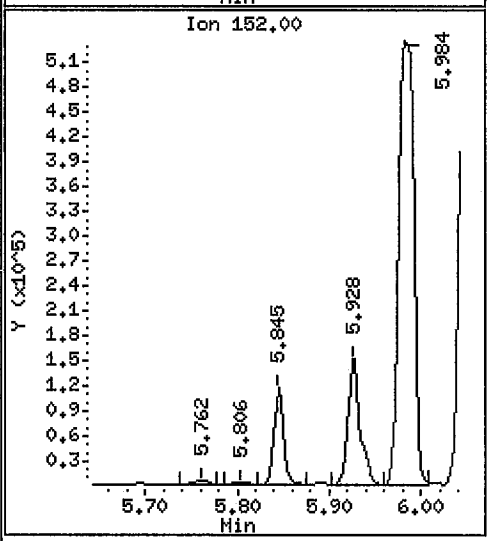












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

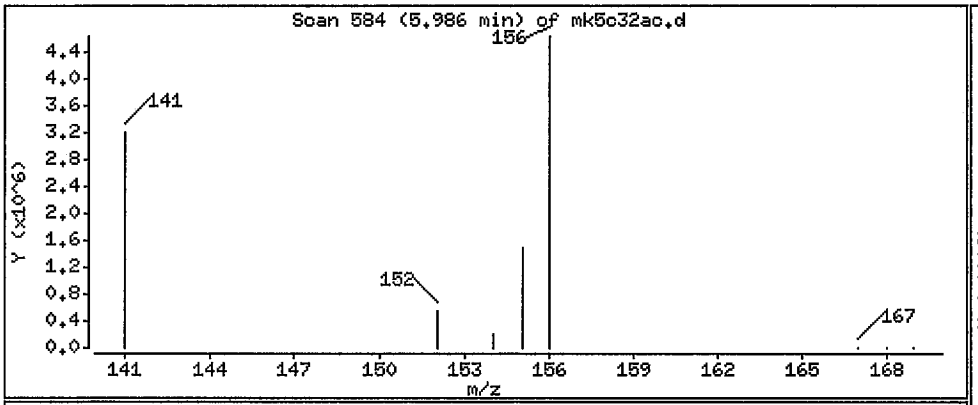
Operator: 11211

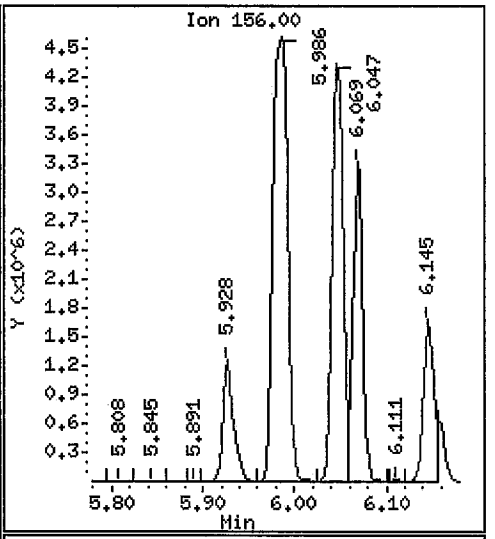
Column phase: Varian: 5MS

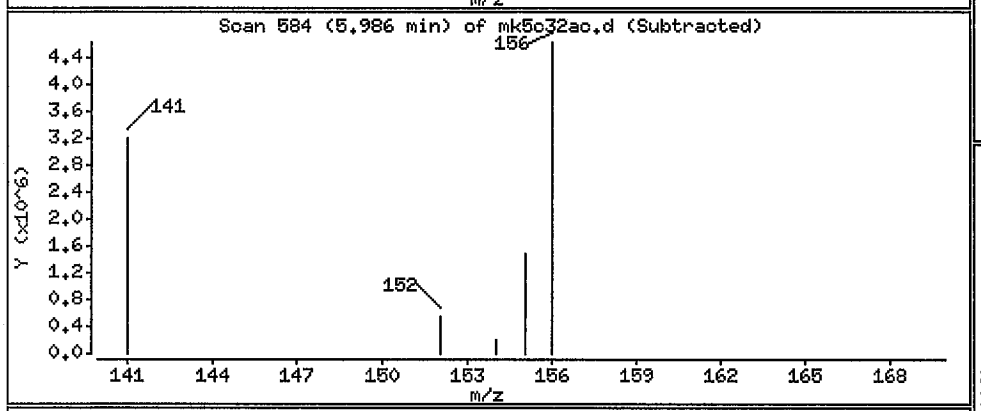
Column diameter: 0.25

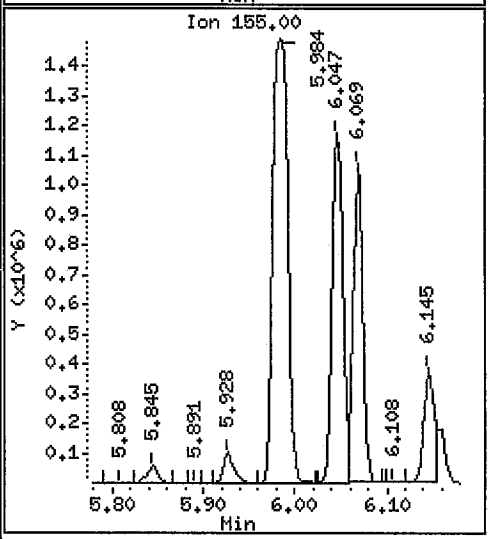
19 2,6 Dimethylnaphthalene

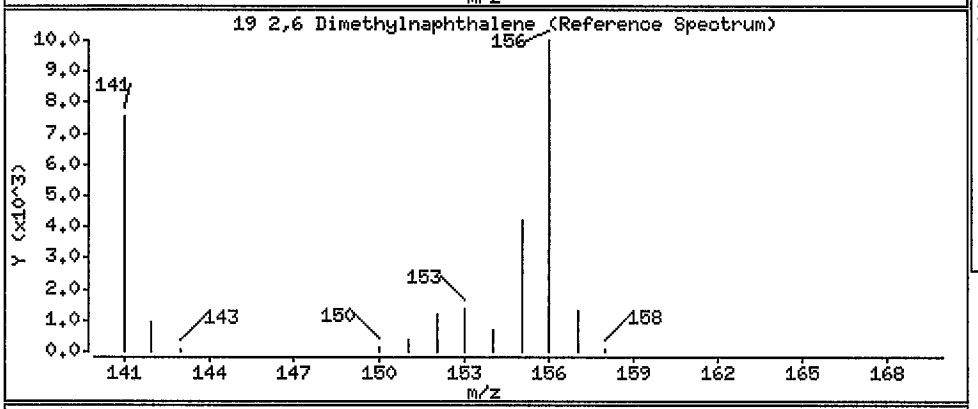
Concentration: 10500000 ng/sample

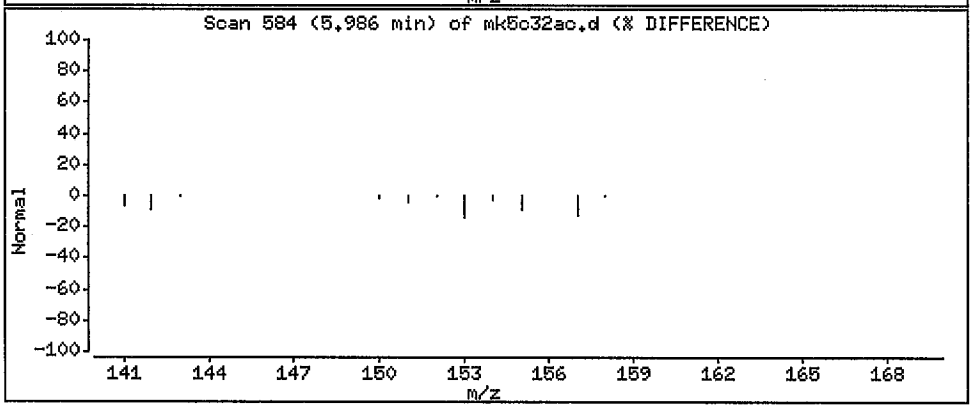












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

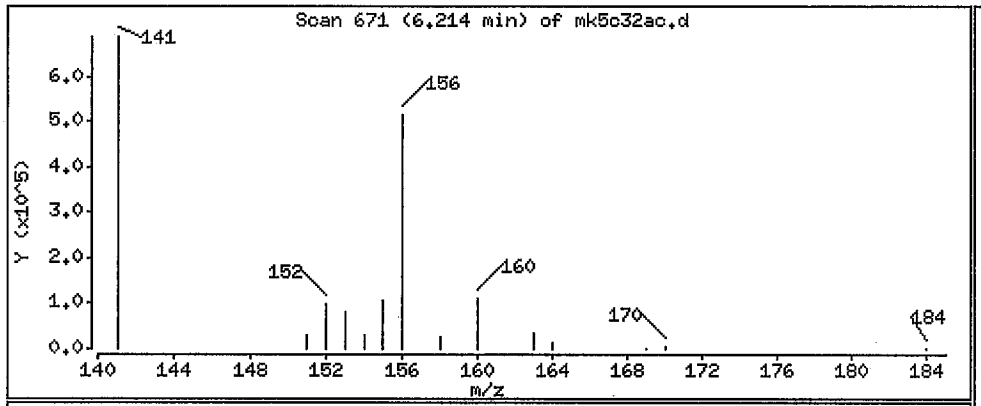
Operator: 11211

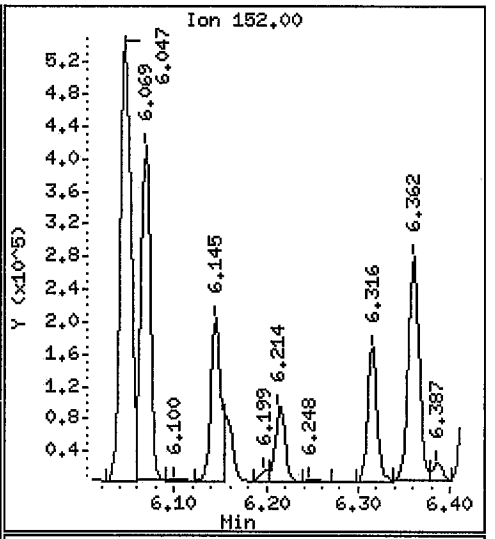
Column phase: Varian: 5MS

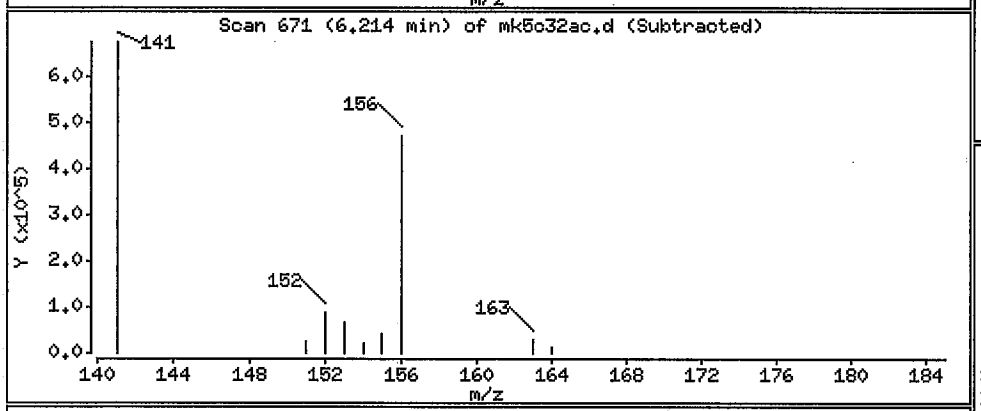
Column diameter: 0.25

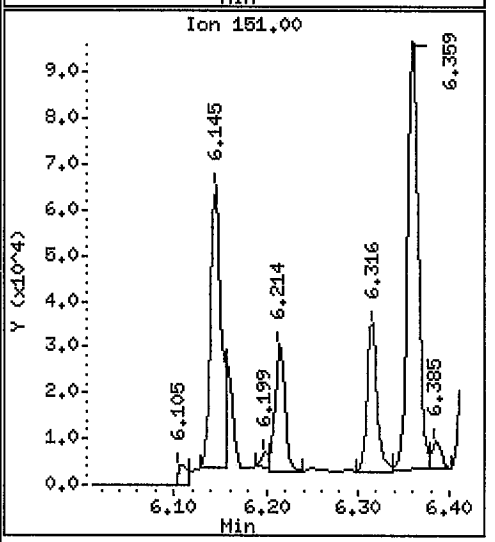
22 Acenaphthylene

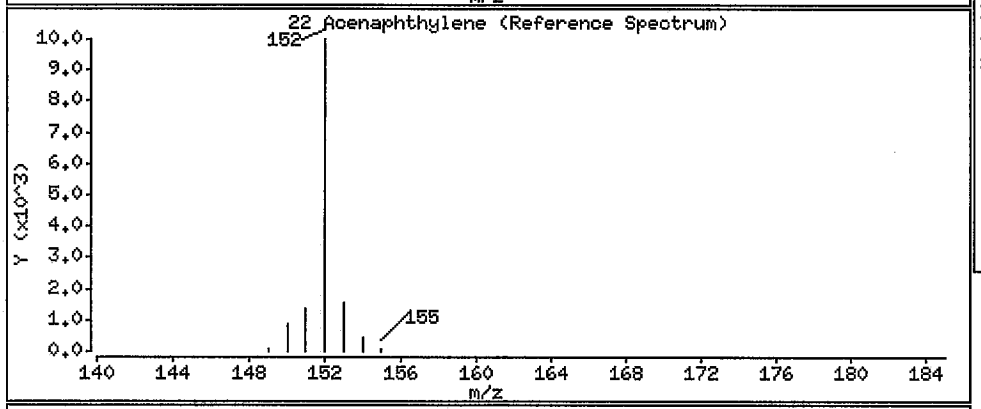
Concentration: 74000 ng/sample

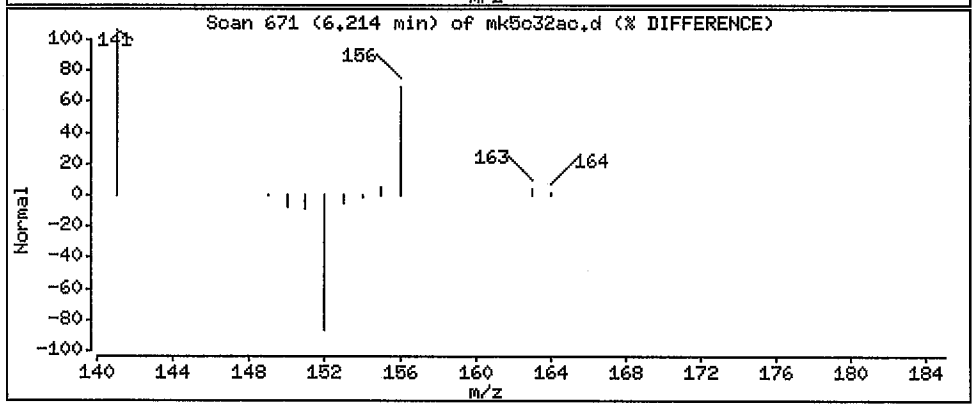












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

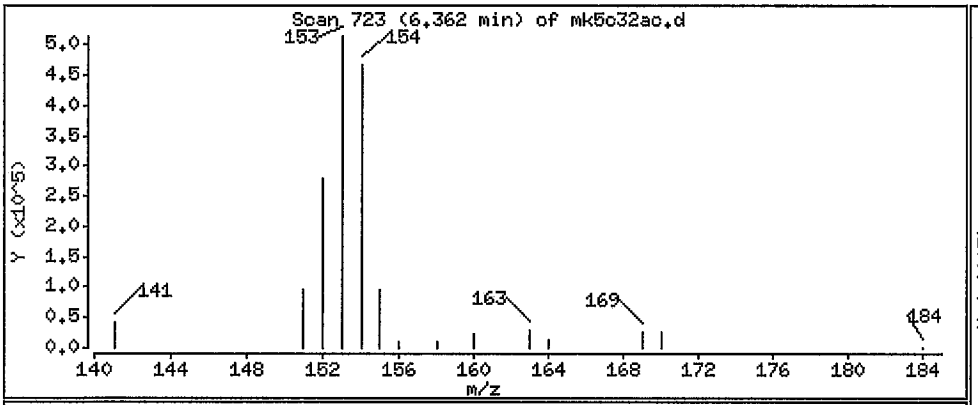
Client ID: EXM-DCU-M0010-R1-C0 Instrument: mp.i

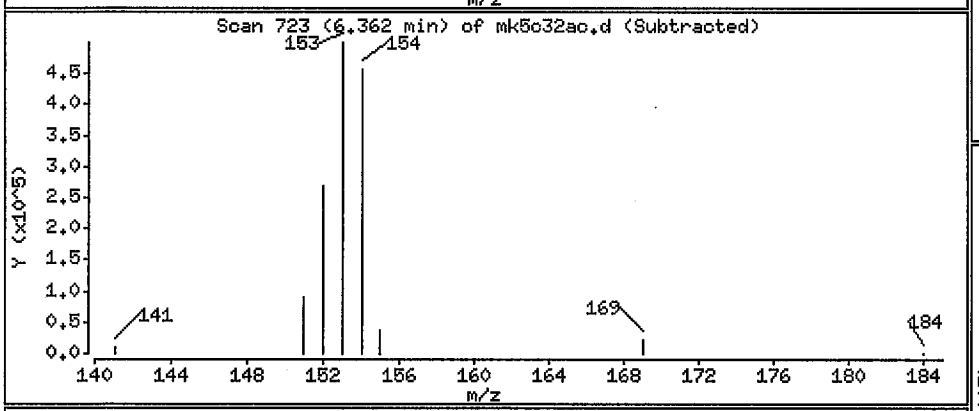
Sample Info: MK5C33AC,,0,,POSTSPK

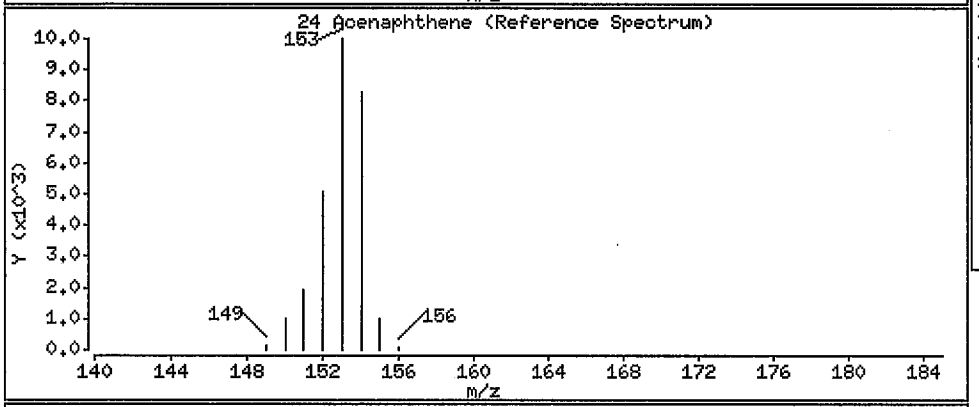
Purge Volume: 1.0 Operator: 11211

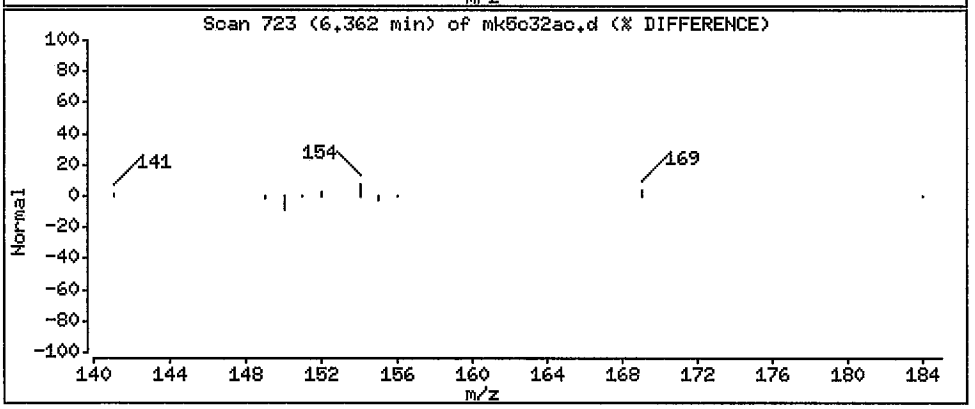
Column phase: Varian: 5MS Column diameter: 0.25

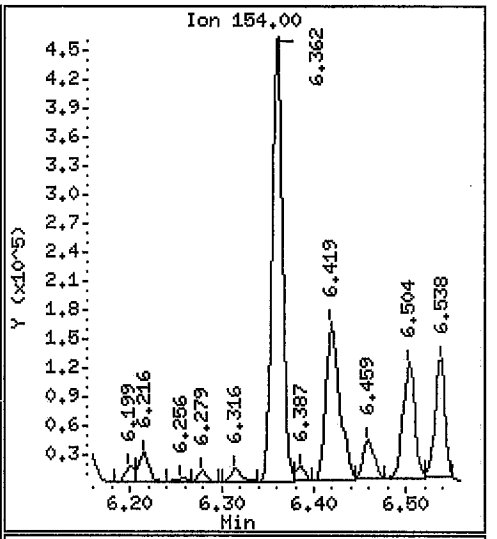
24 Acenaphthene Concentration: 621000 ng/sample

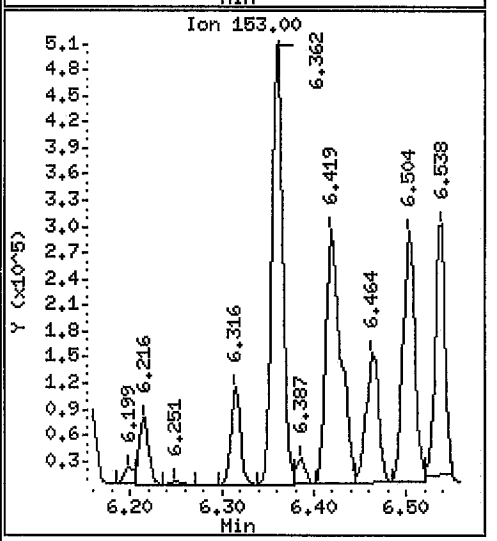












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

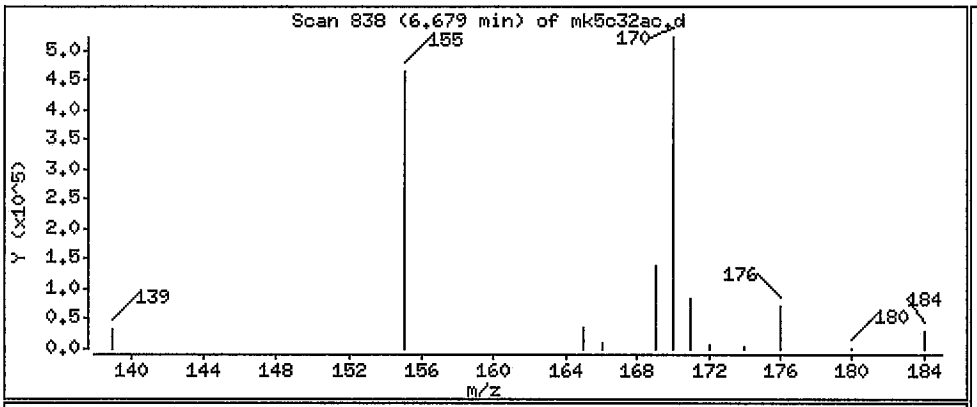
Operator: 11211

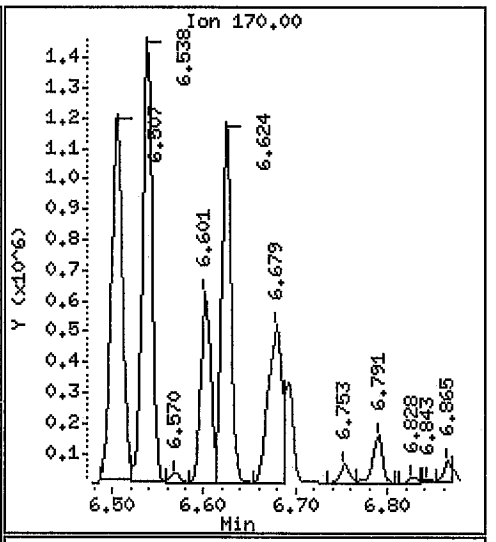
Column phase: Varian: 5MS

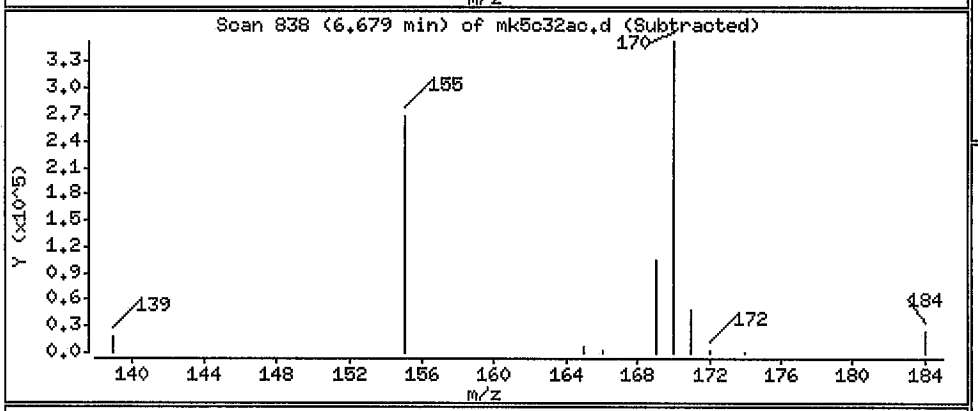
Column diameter: 0.25

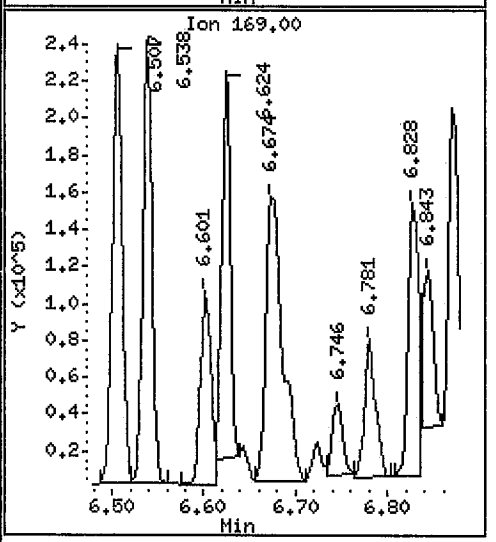
25 2,3,5 Trimethylnaphthalene

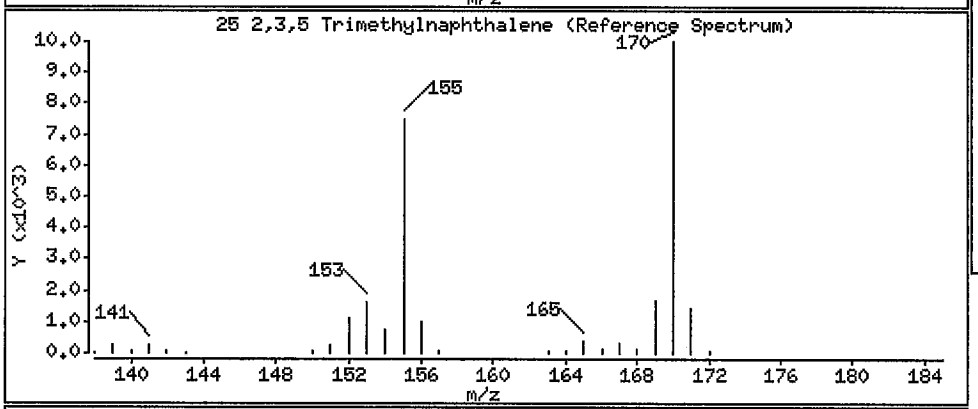
Concentration: 1310000 ng/sample

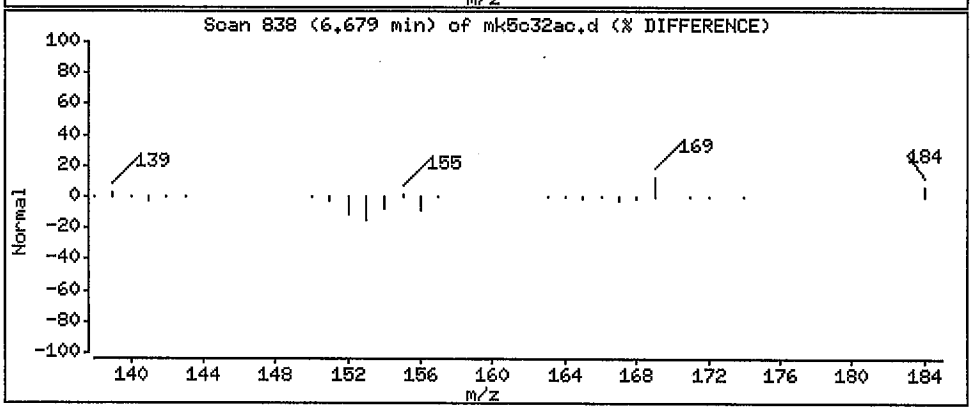












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

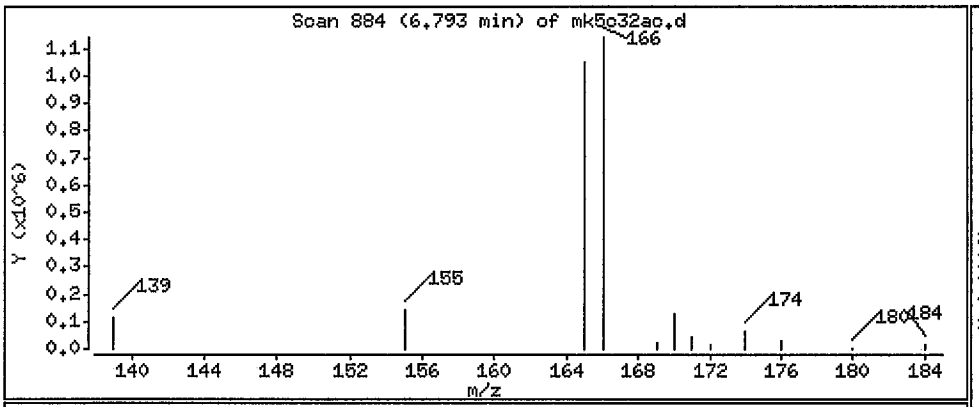
Operator: 11211

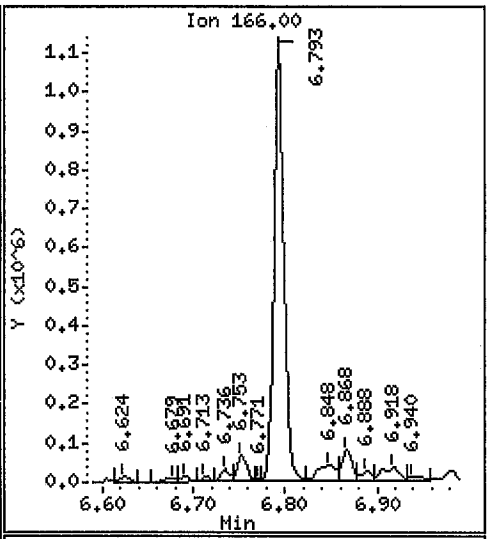
Column phase: Varian: 5MS

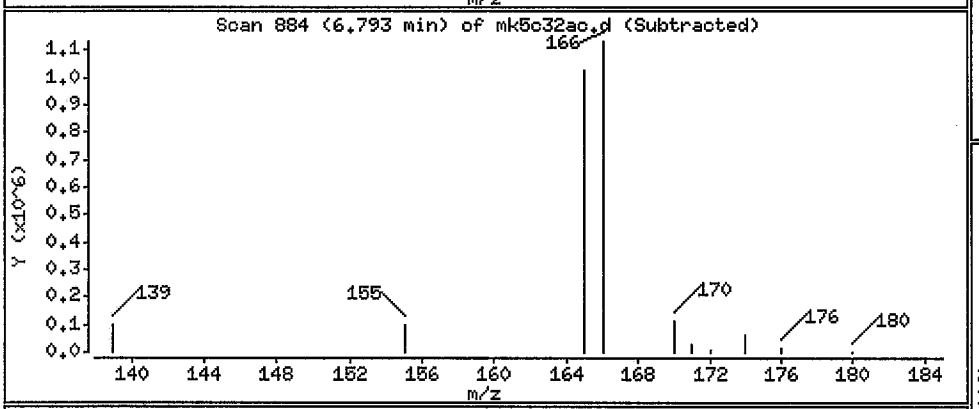
Column diameter: 0.25

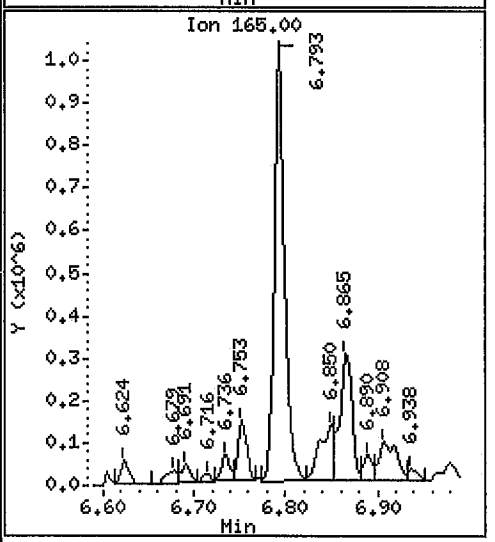
27 Fluorene

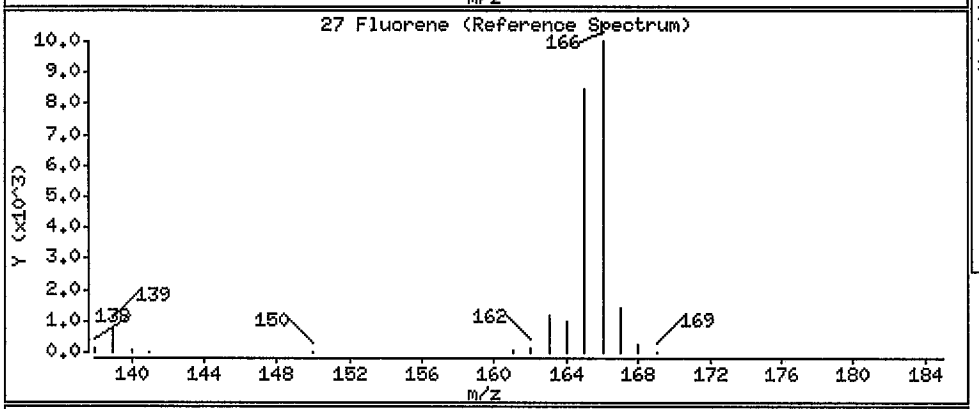
Concentration: 1420000 ng/sample

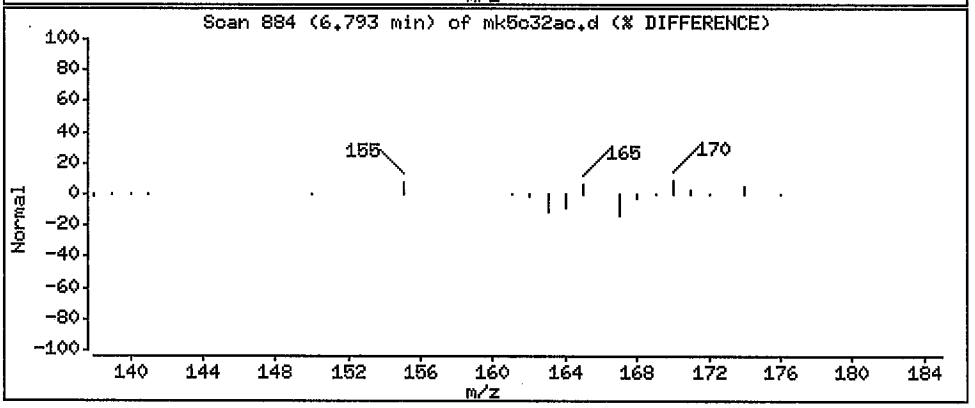












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

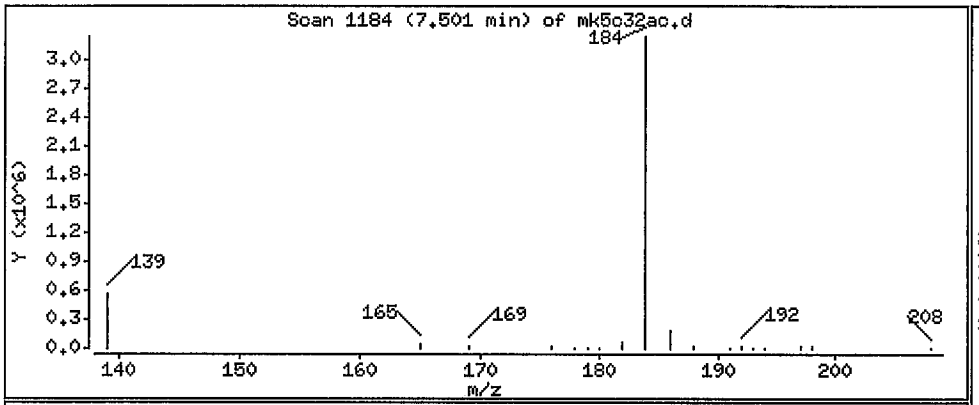
Operator: 11211

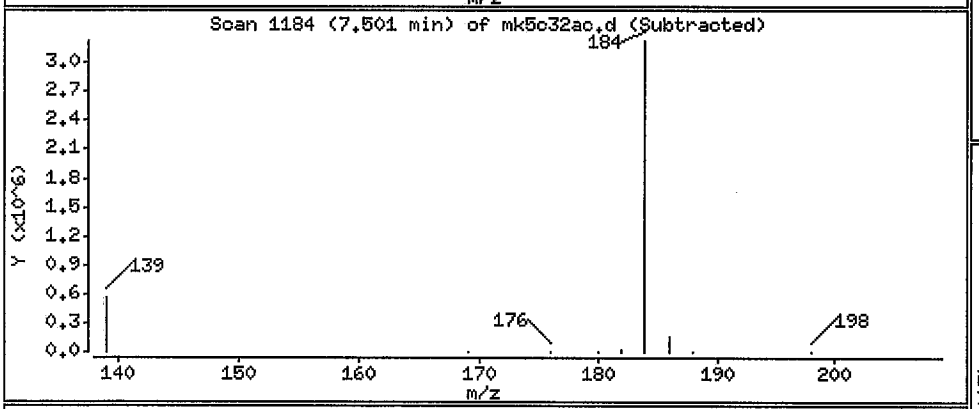
Column phase: Varian: 5MS

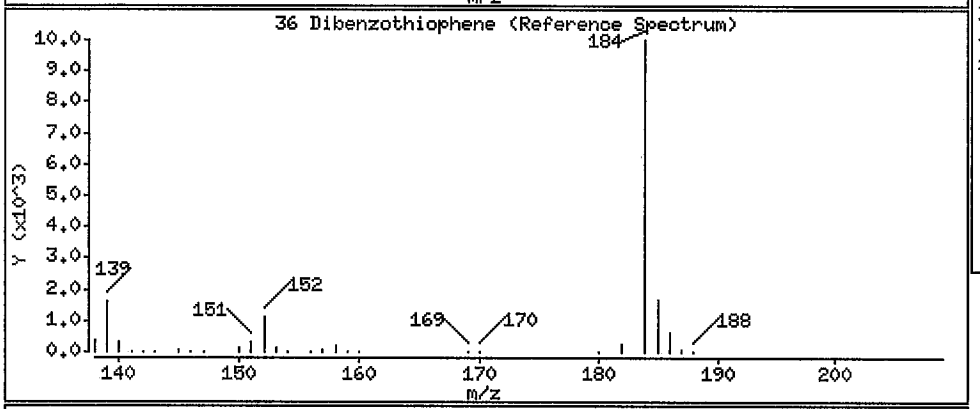
Column diameter: 0.25

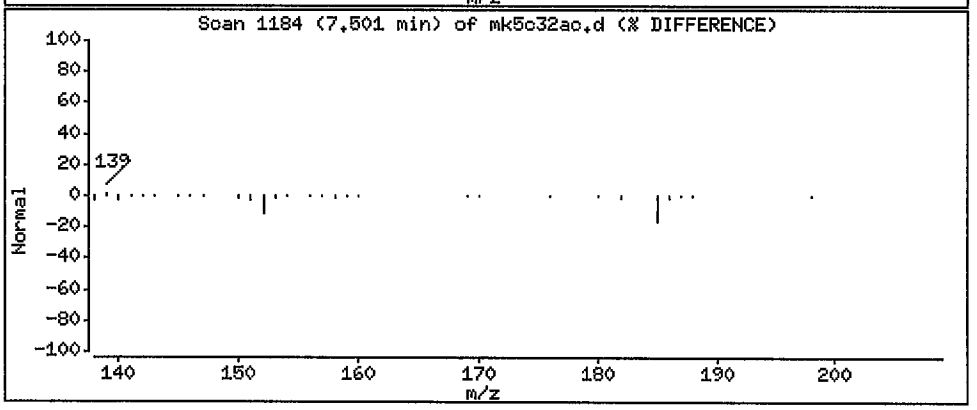
36 Dibenzothiophene

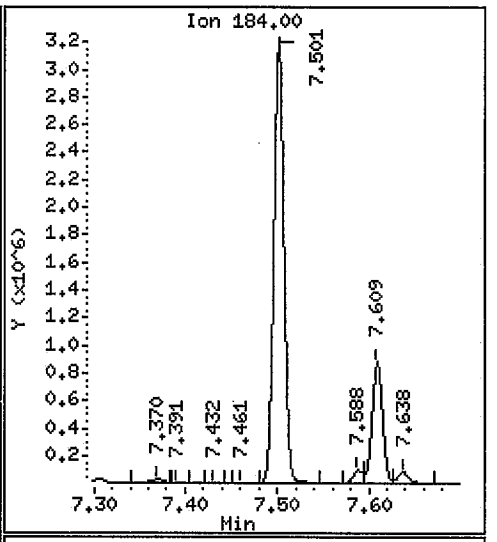
Concentration: 2970000 ng/sample

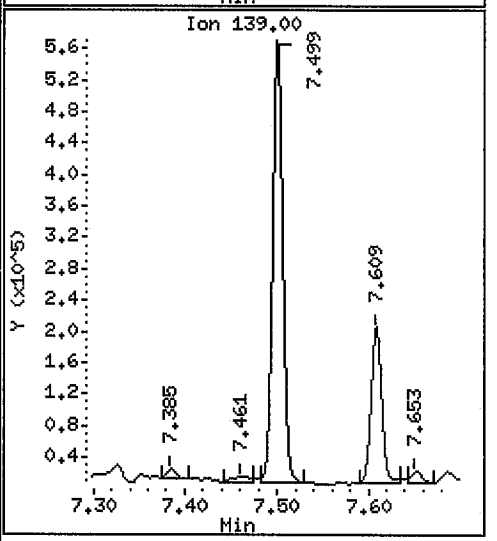












Data File: /var/chem/goms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

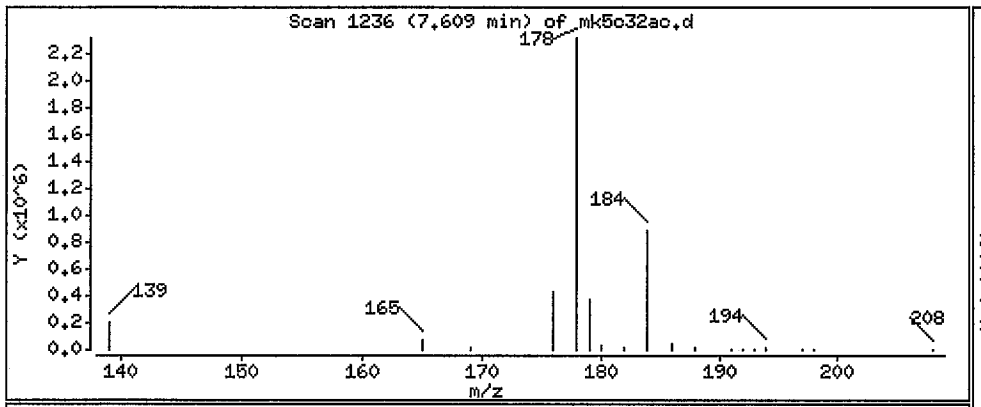
Operator: 11211

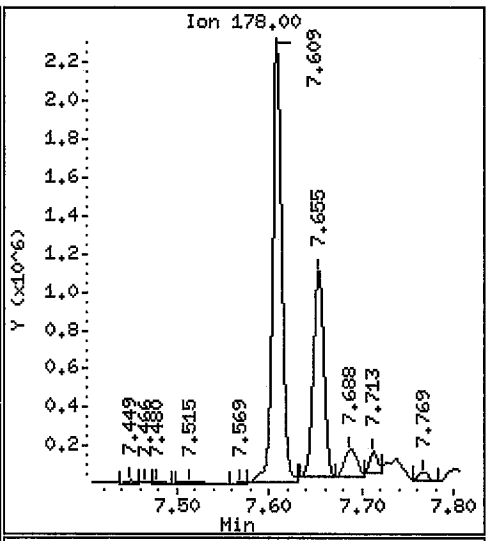
Column phase: Varian: 5MS

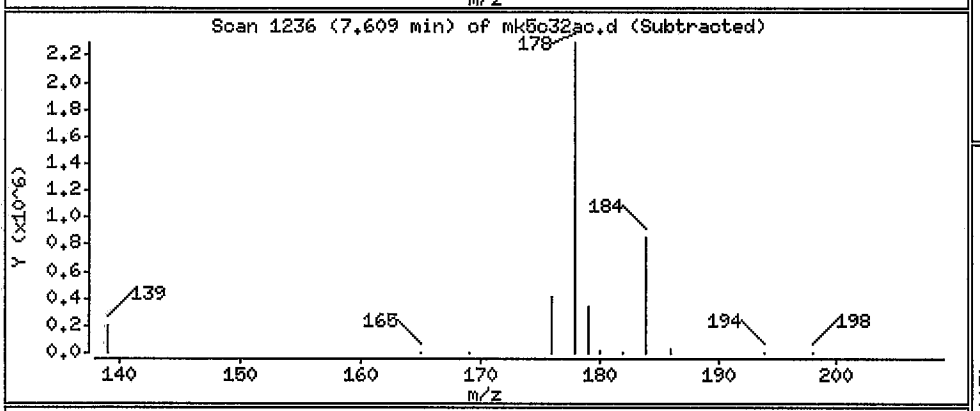
Column diameter: 0.25

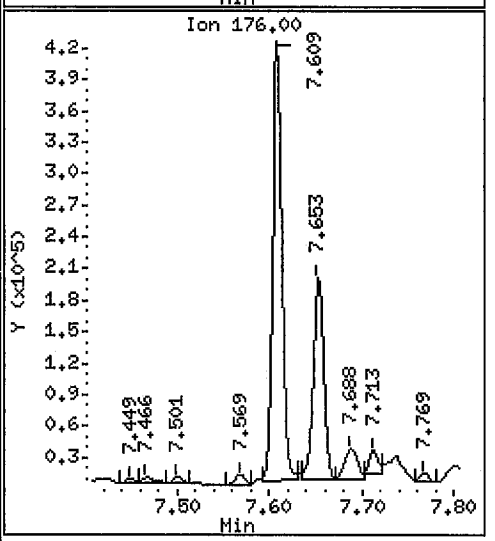
43 Phenanthrene

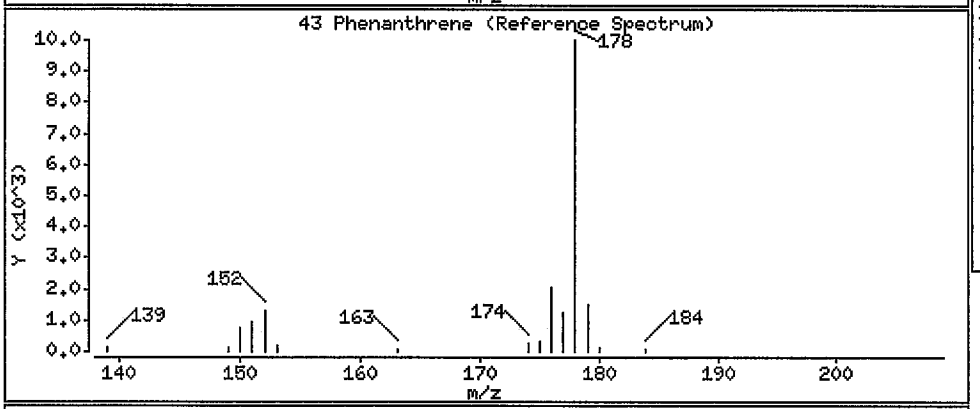
Concentration: 2170000 ng/sample

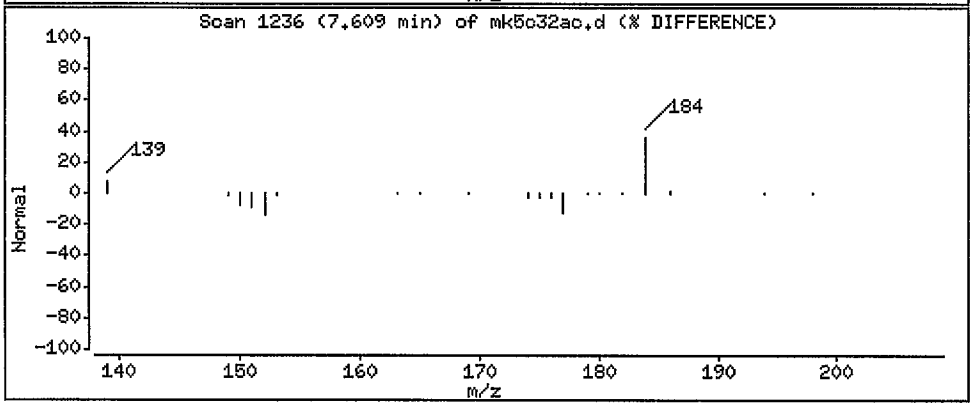












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

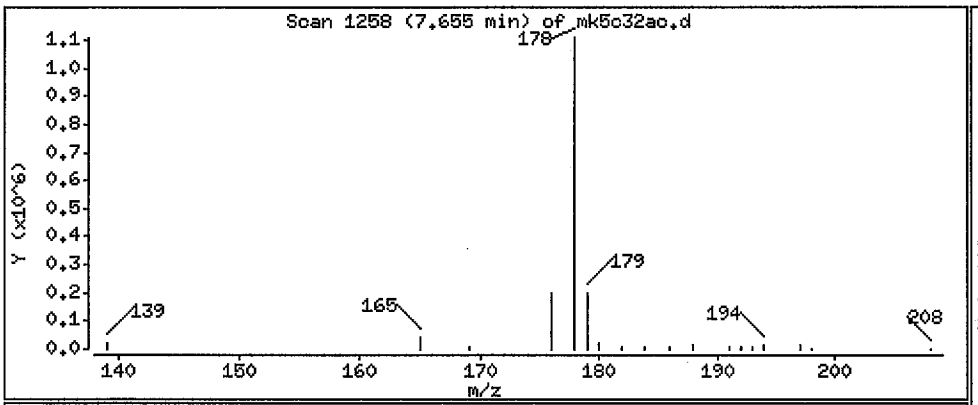
Operator: 11211

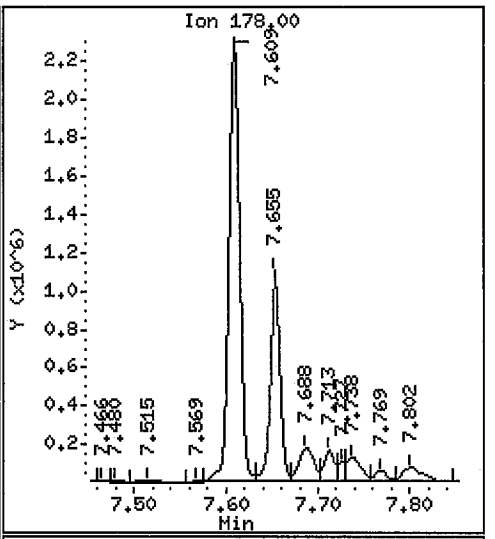
Column phase: Varian: 5MS

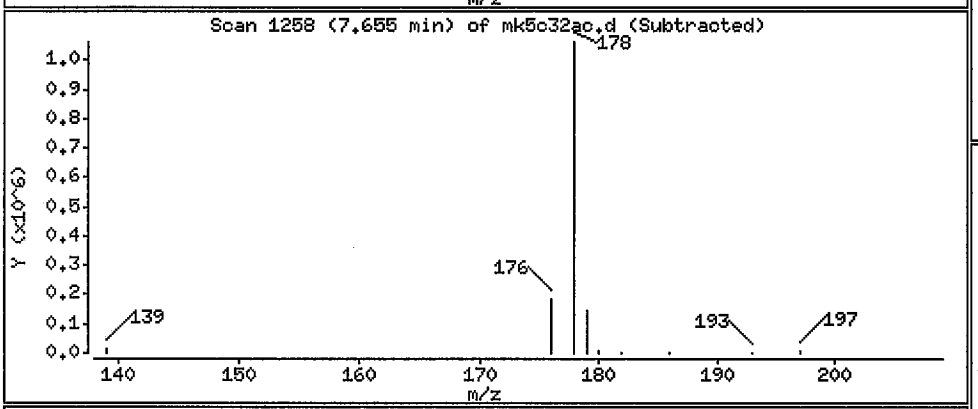
Column diameter: 0.25

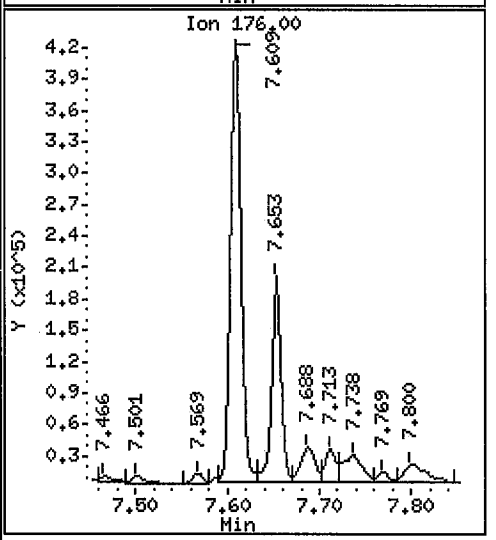
46 Anthracene

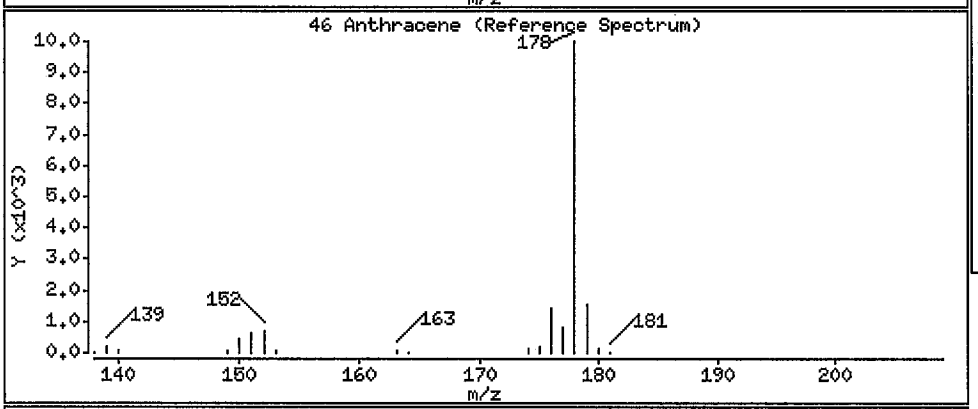
Concentration: 943000 ng/sample

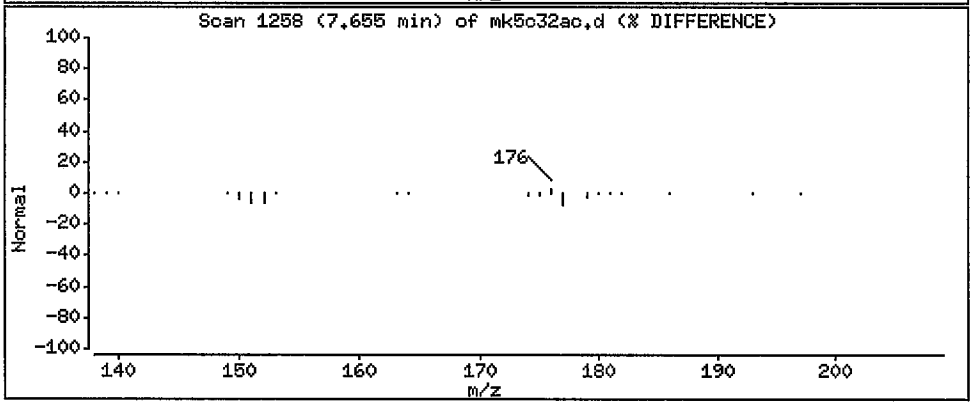












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

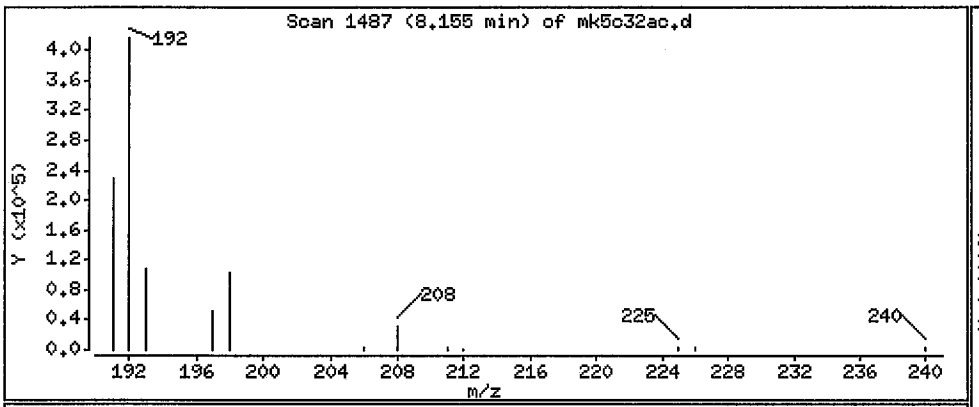
Operator: 11211

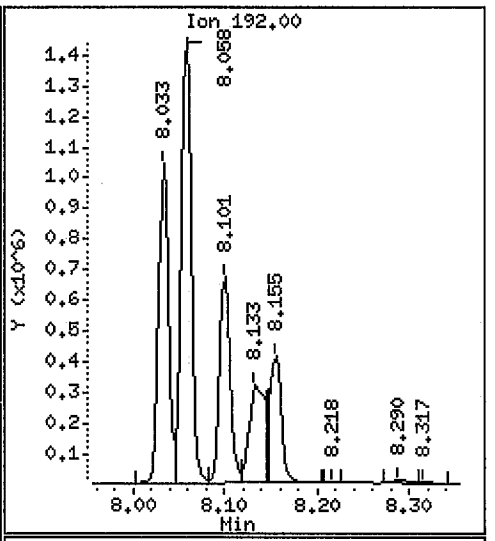
Column phase: Varian: 5MS

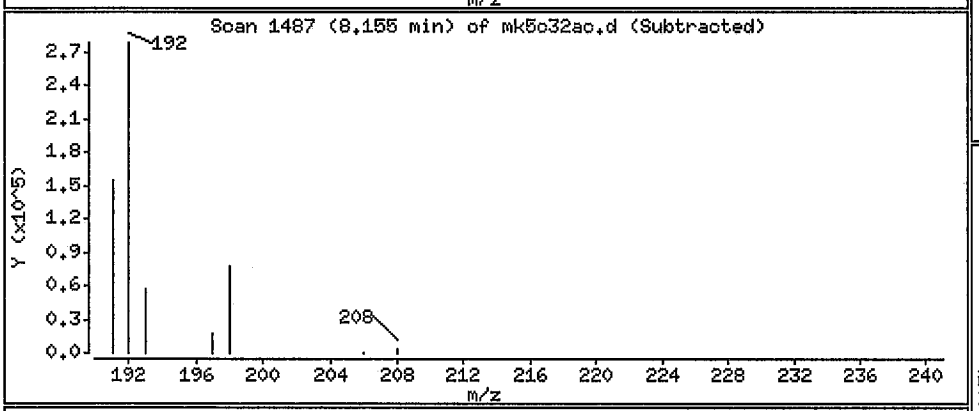
Column diameter: 0.25

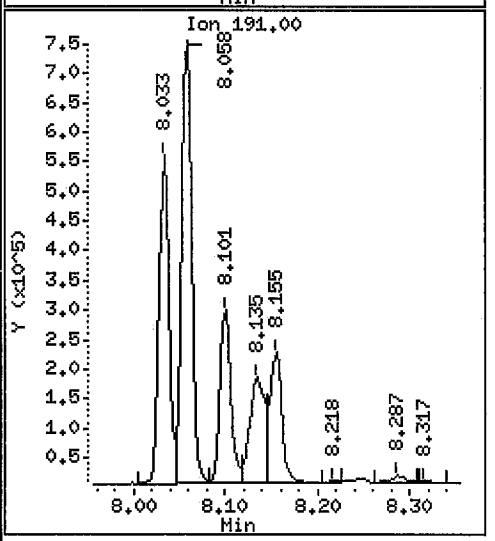
52 1-Methylphenanthrene

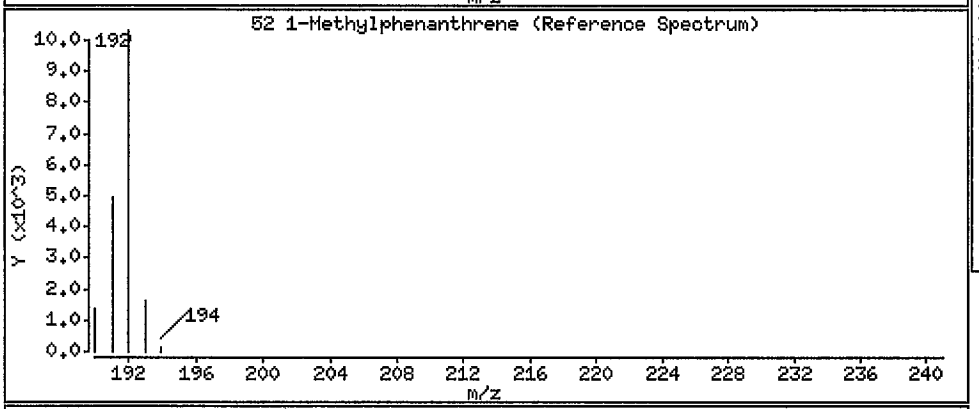
Concentration: 694000 ng/sample

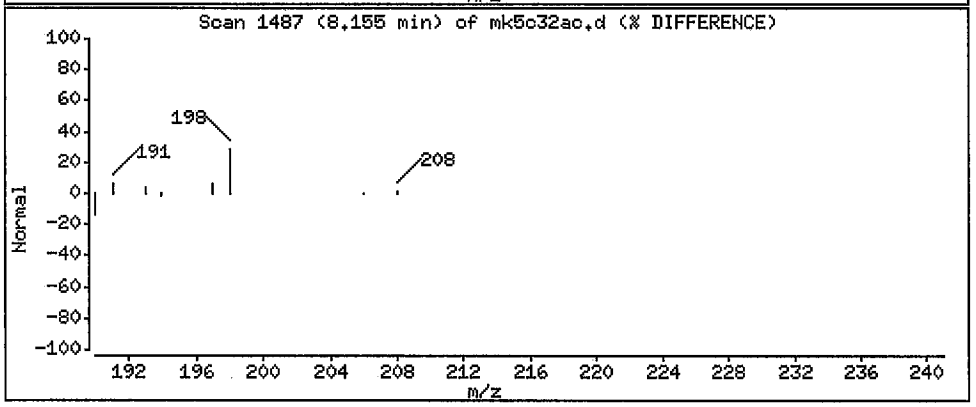












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

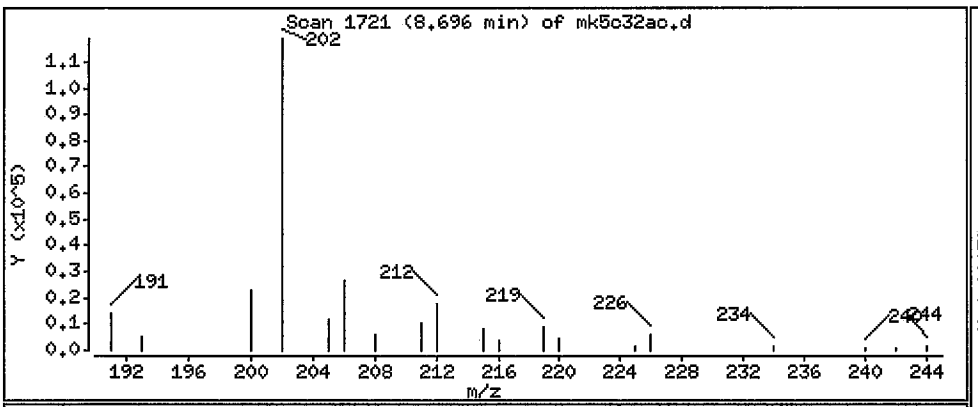
Operator: 11211

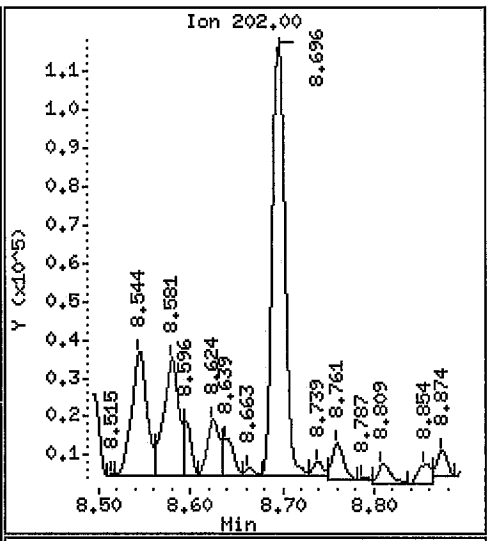
Column phase: Varian: 5MS

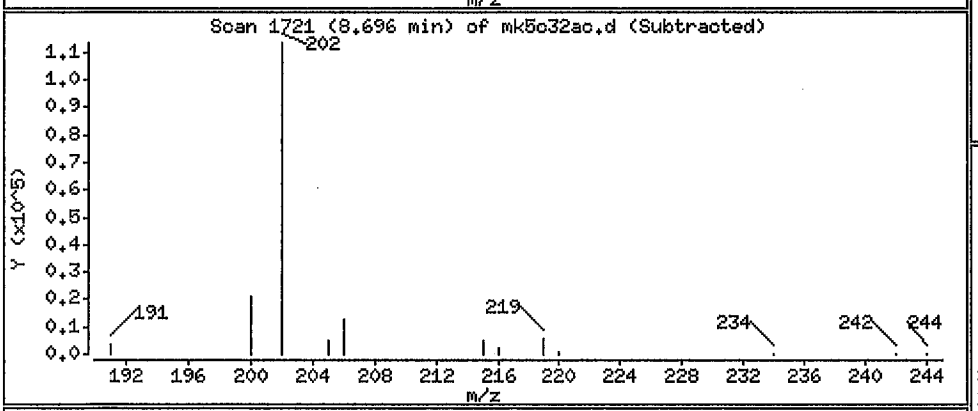
Column diameter: 0.25

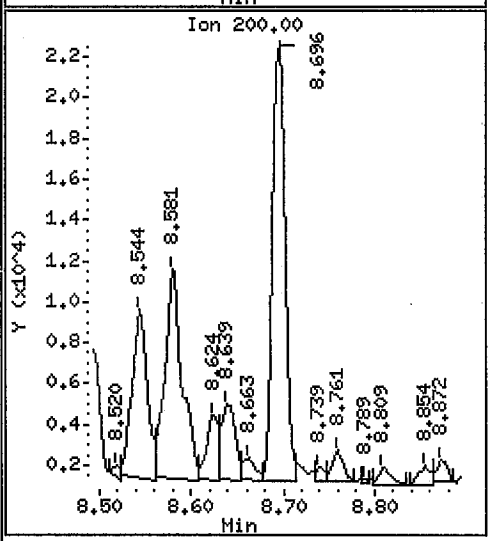
55 Fluoranthene

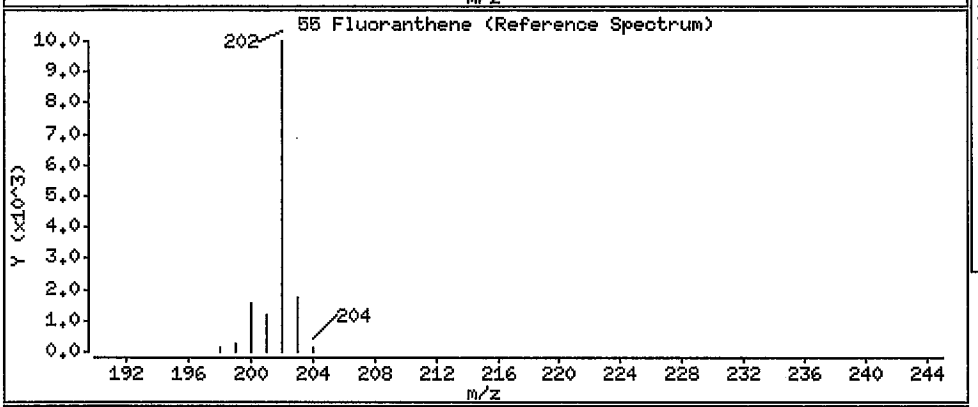
Concentration: 103000 ng/sample

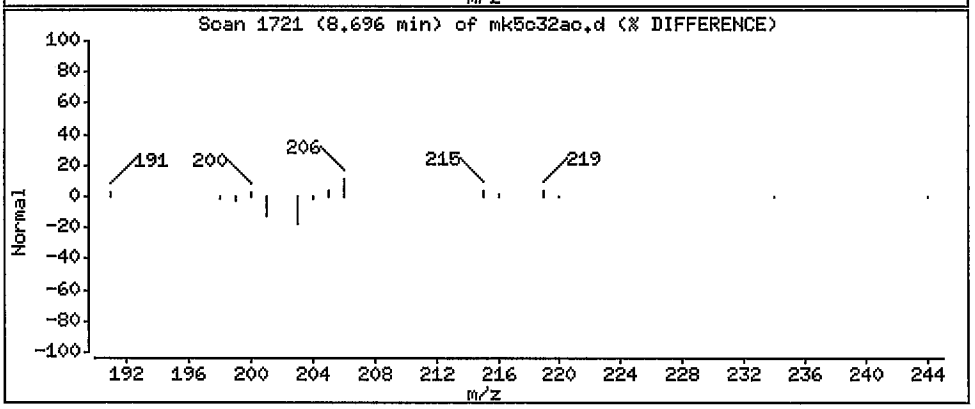












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

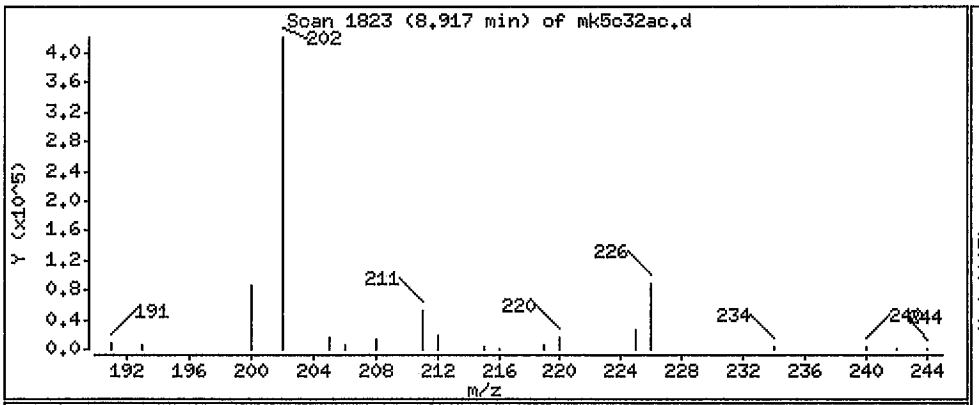
Operator: 11211

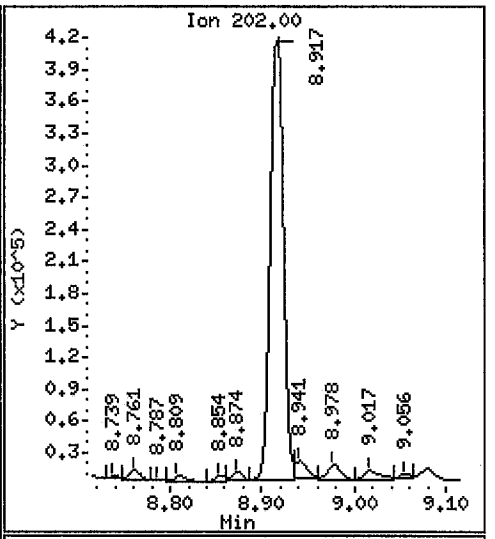
Column phase: Varian: 5MS

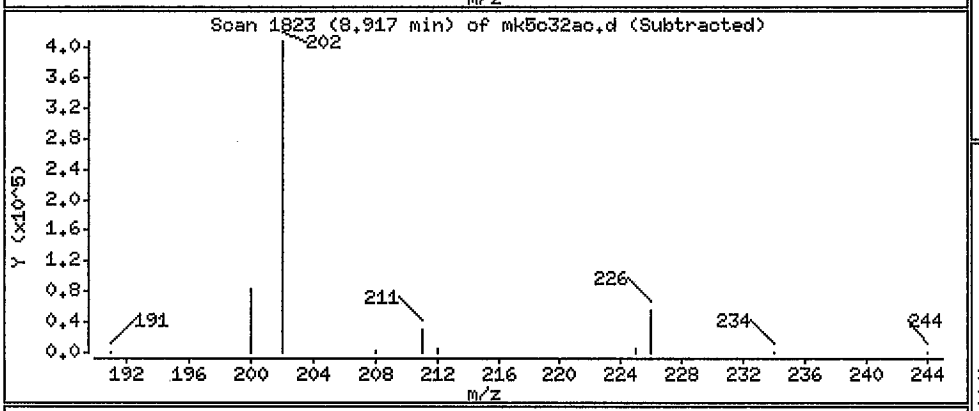
Column diameter: 0.25

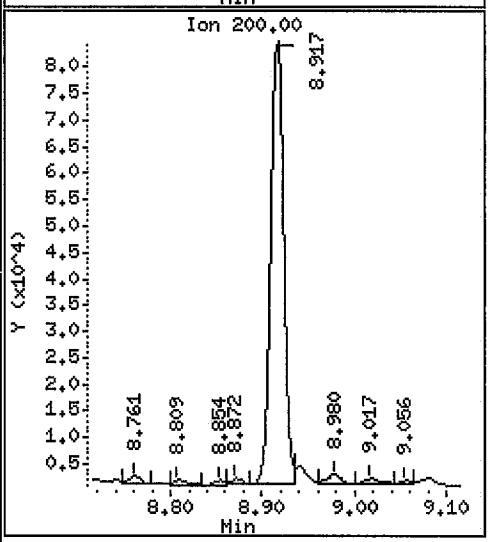
57 Pyrene

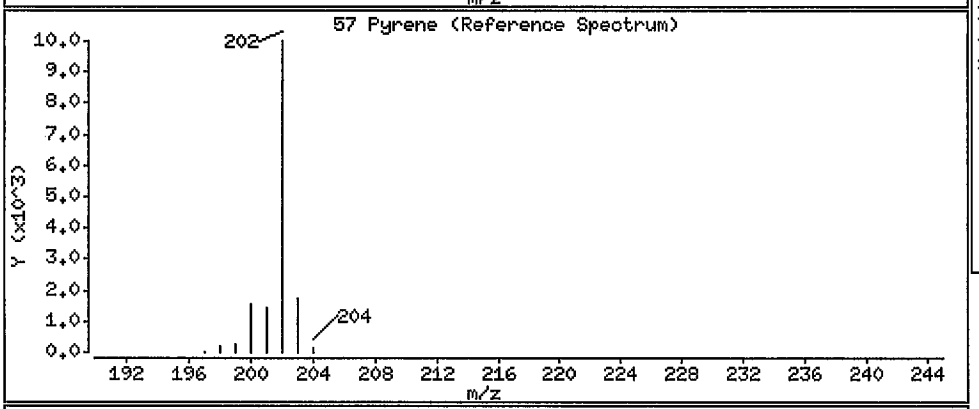
Concentration: 366000 ng/sample

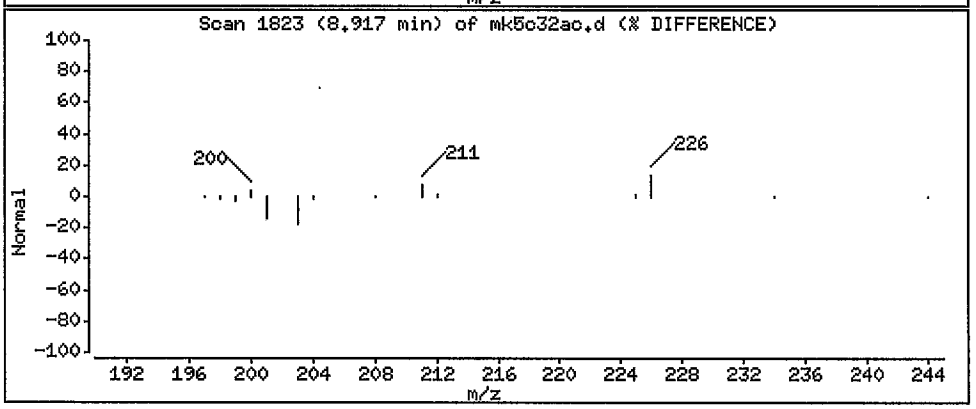












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

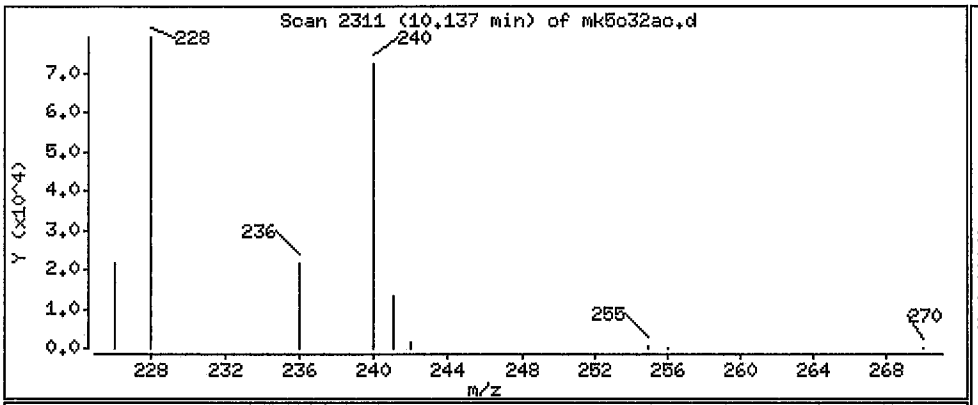
Operator: 11211

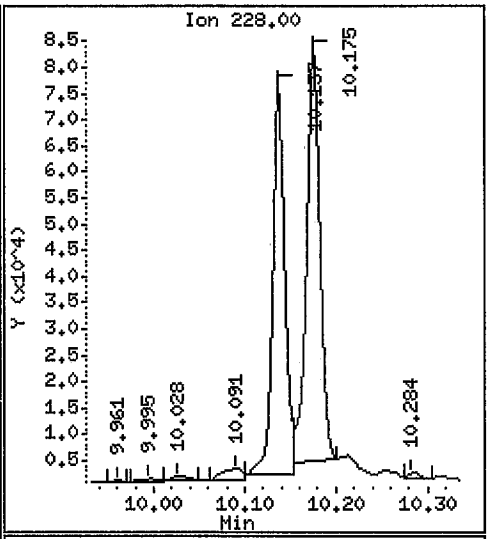
Column phase: Varian: 5MS

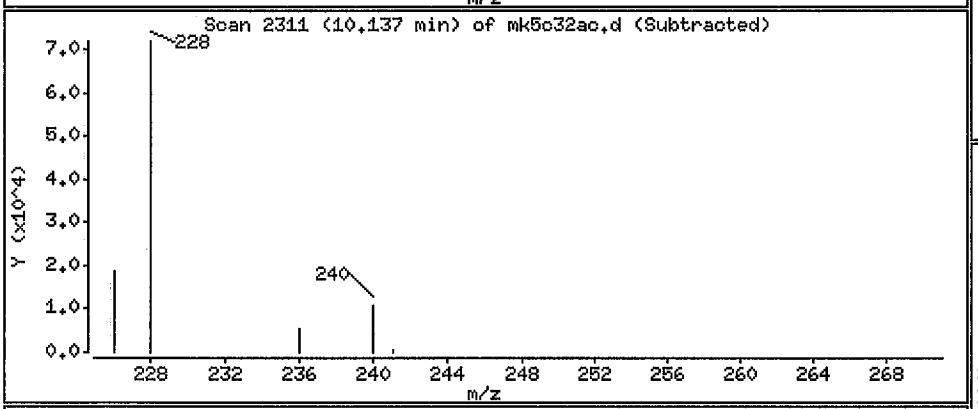
Column diameter: 0.25

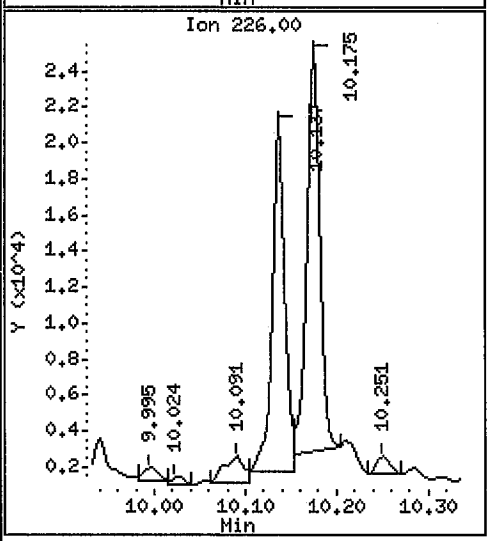
62 Benzo(a)anthracene

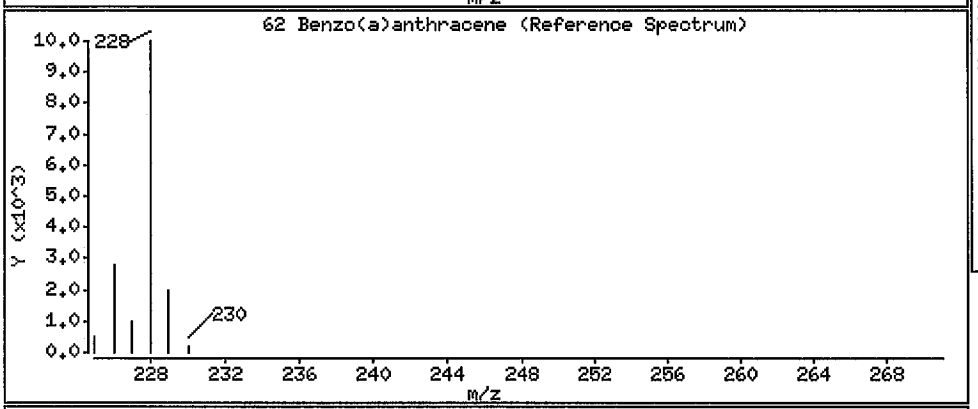
Concentration: 93000 ng/sample

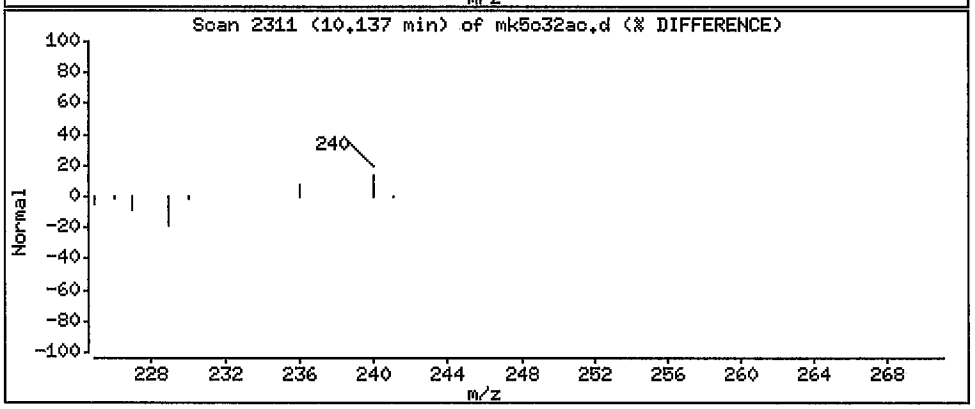












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

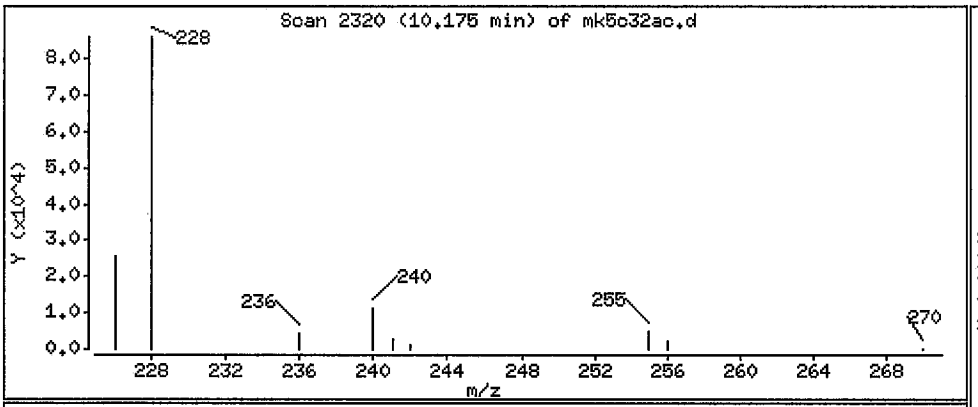
Operator: 11211

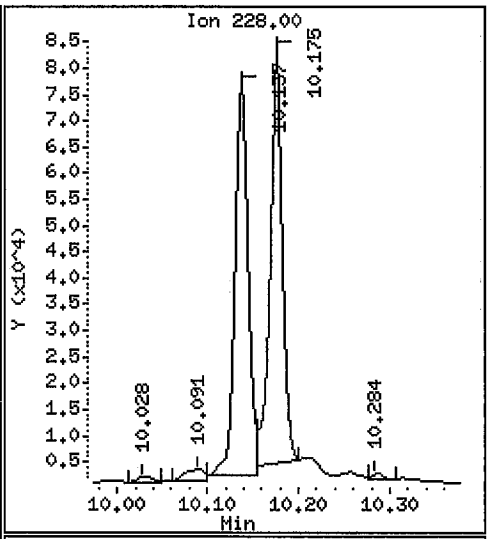
Column phase: Varian: 5MS

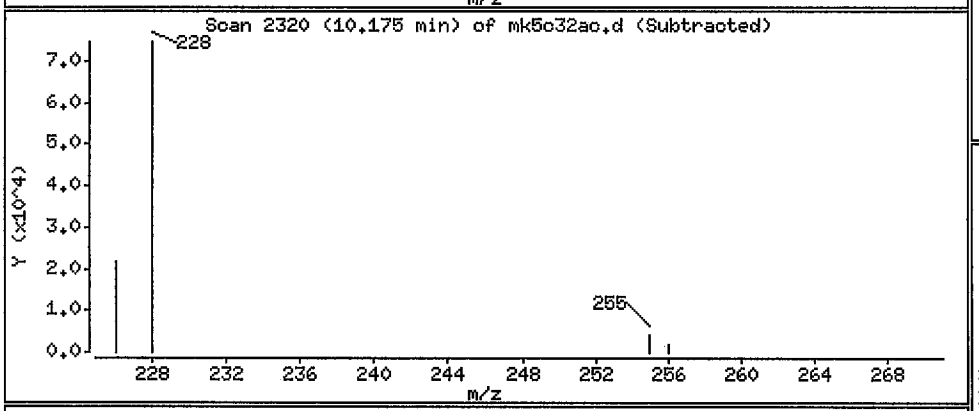
Column diameter: 0.25

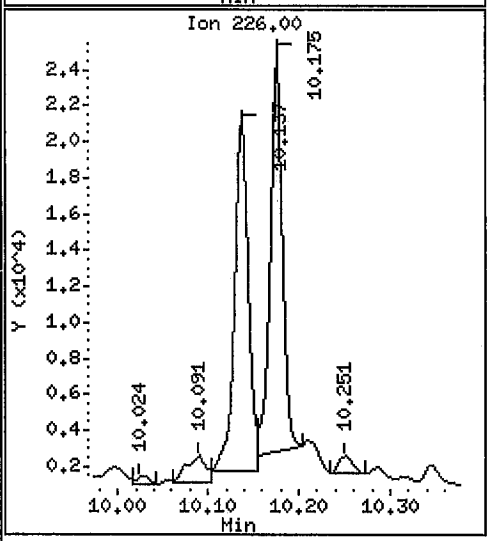
65 Chrysene

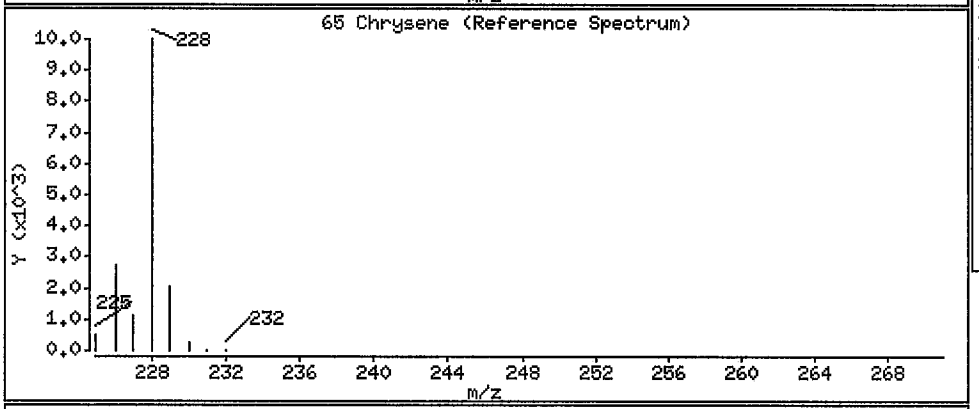
Concentration: 124000 ng/sample

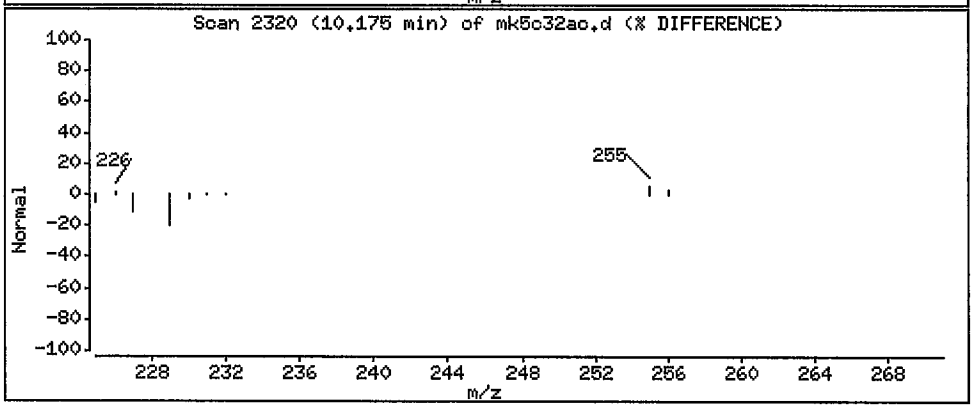












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

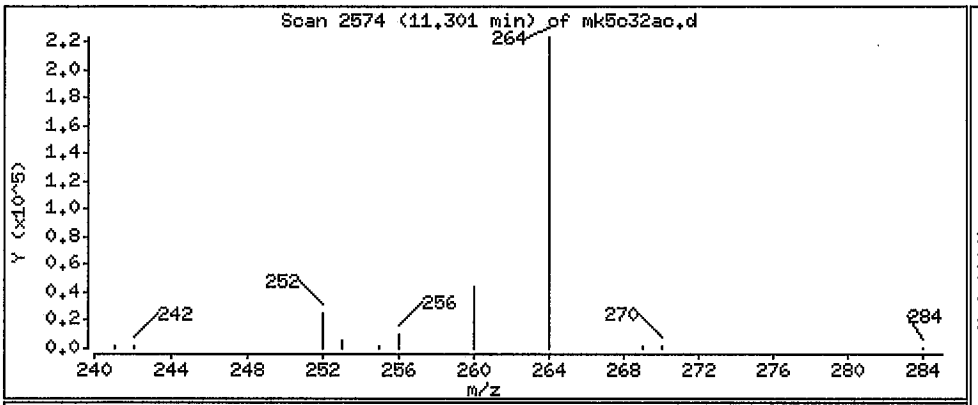
Operator: 11211

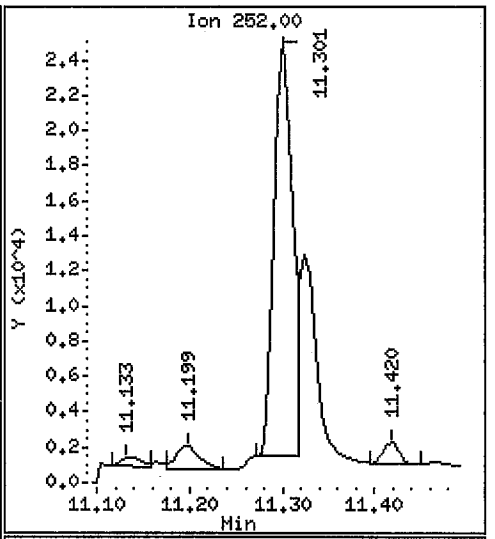
Column phase: Varian: 5MS

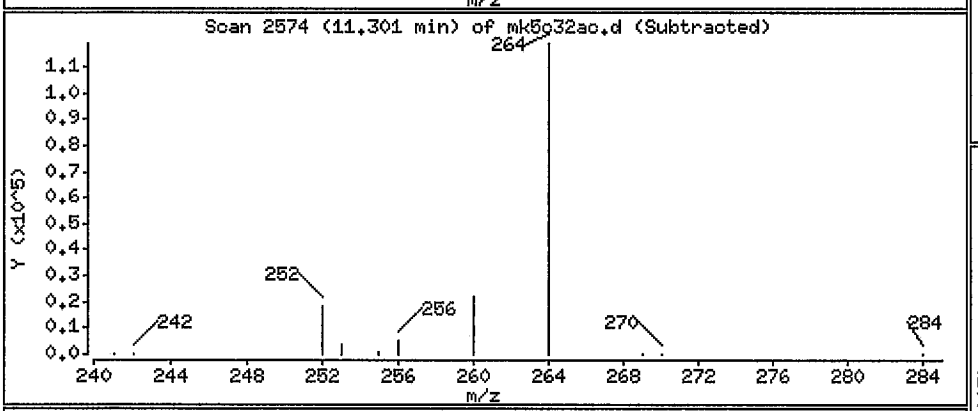
Column diameter: 0.25

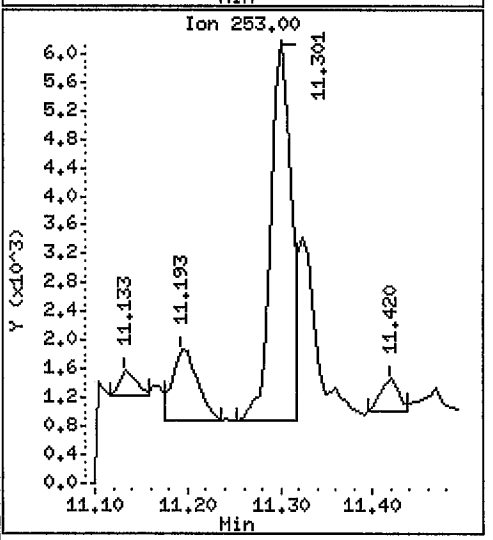
72 Benzo(b)fluoranthene

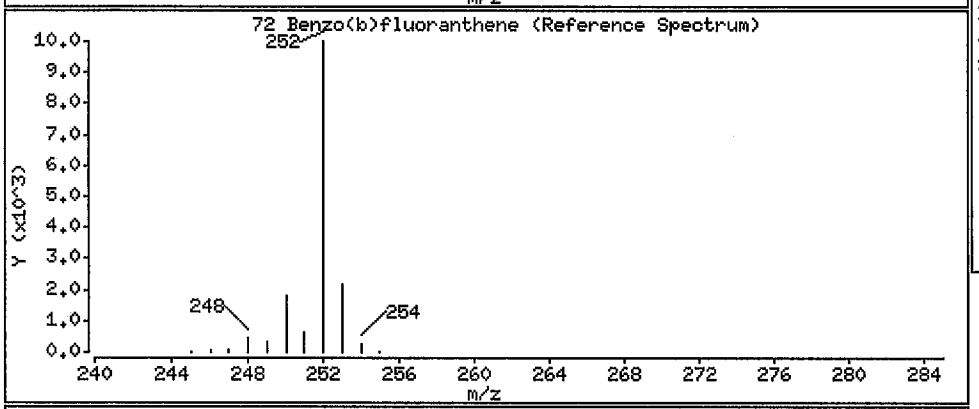
Concentration: 48600 ng/sample

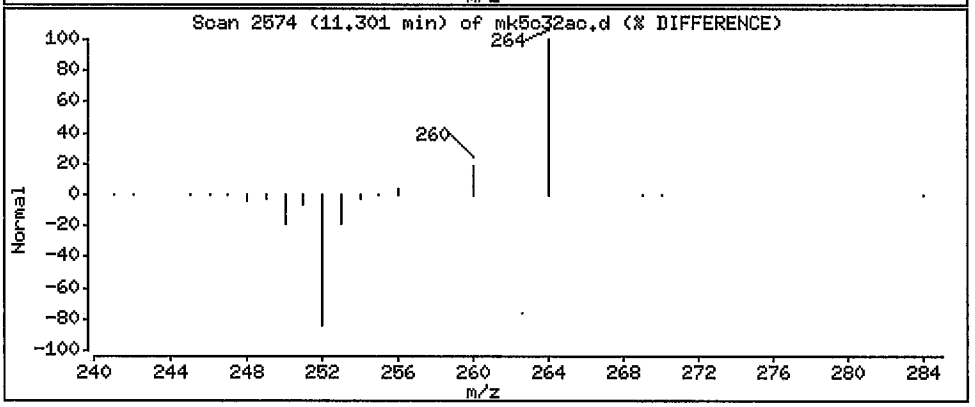












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ao.d

Date : 14-AUG-2011 16:55

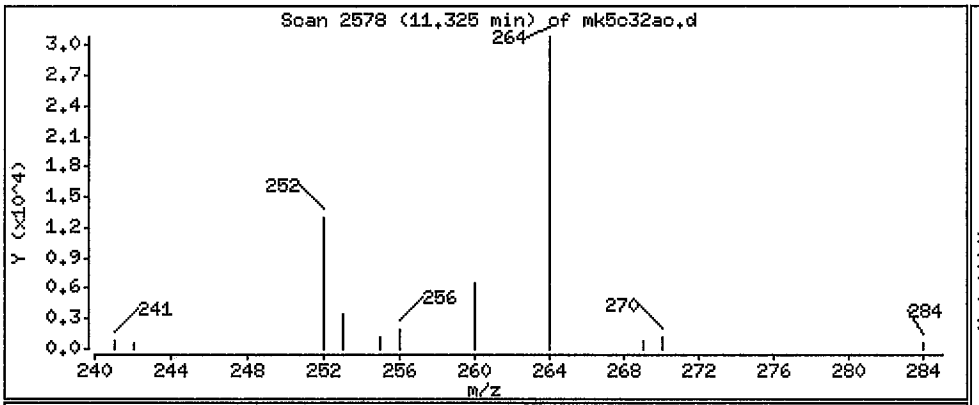
Client ID: EXM-DCU-M0010-R1-C0 Instrument: mp.i

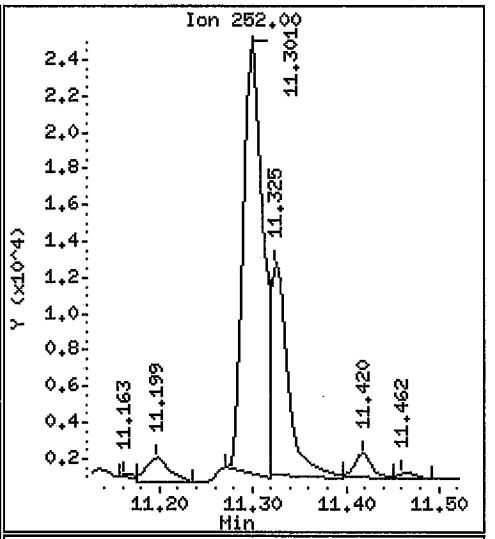
Sample Info: MK5C33AC,,0,,POSTSPK

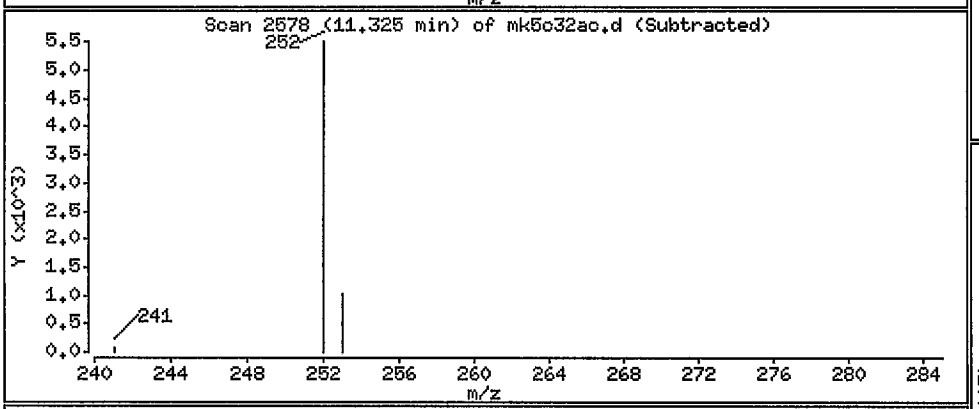
Purge Volume: 1.0 Operator: 11211

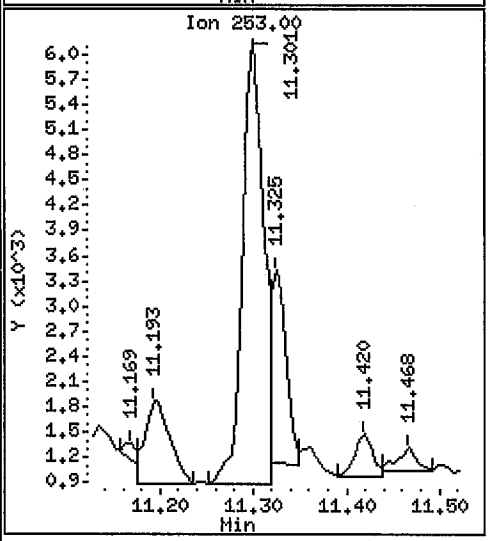
Column phase: Varian: 5MS Column diameter: 0.25

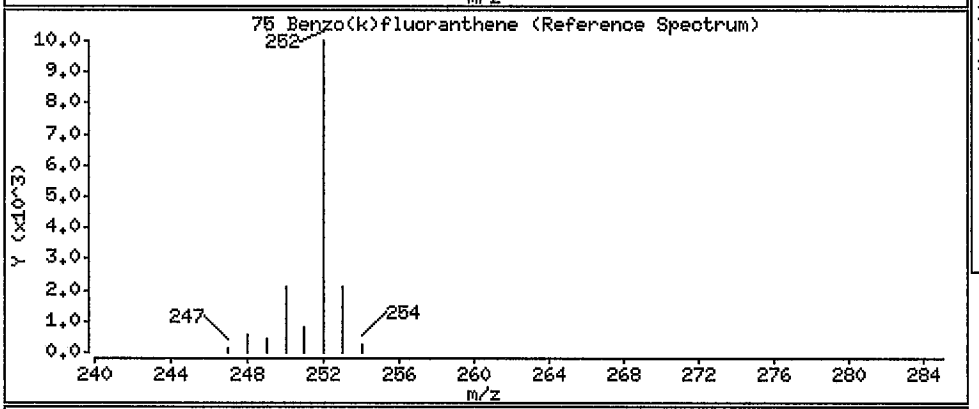
75 Benzo(k)fluoranthene Concentration: 27300 ng/sample

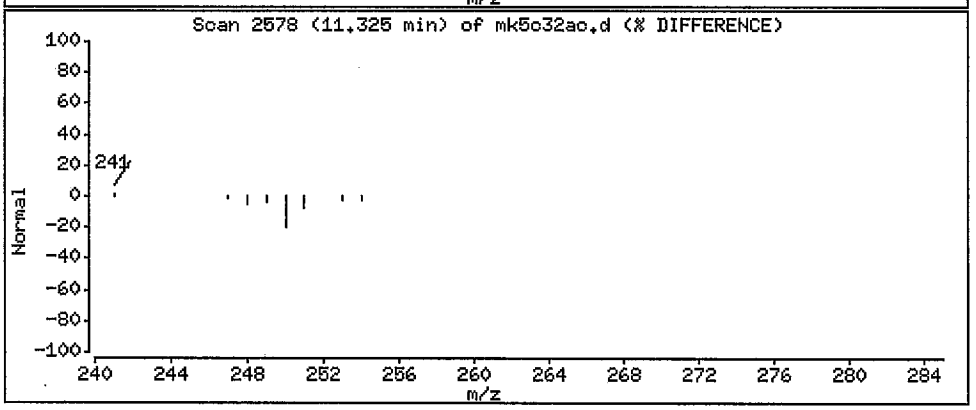












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

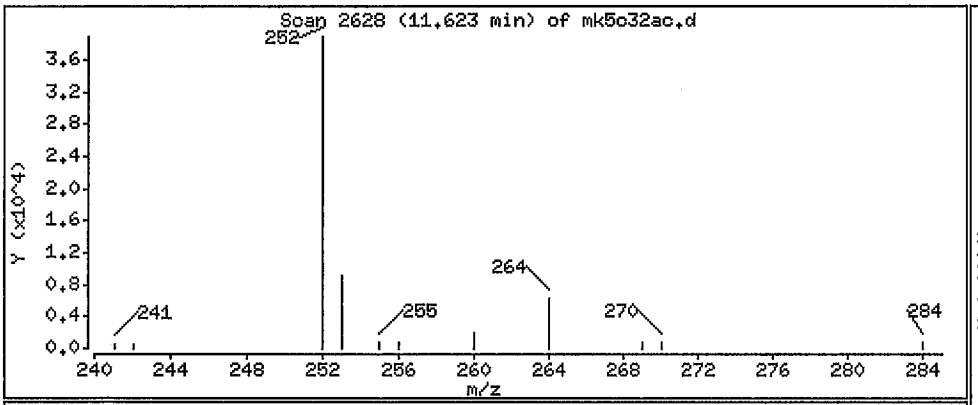
Client ID: EXM-DCU-M0010-R1-C0 Instrument: mp.i

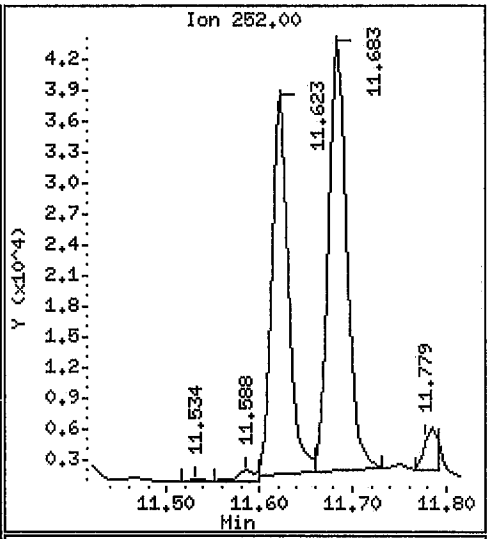
Sample Info: MK5C33AC,,0,,POSTSPK

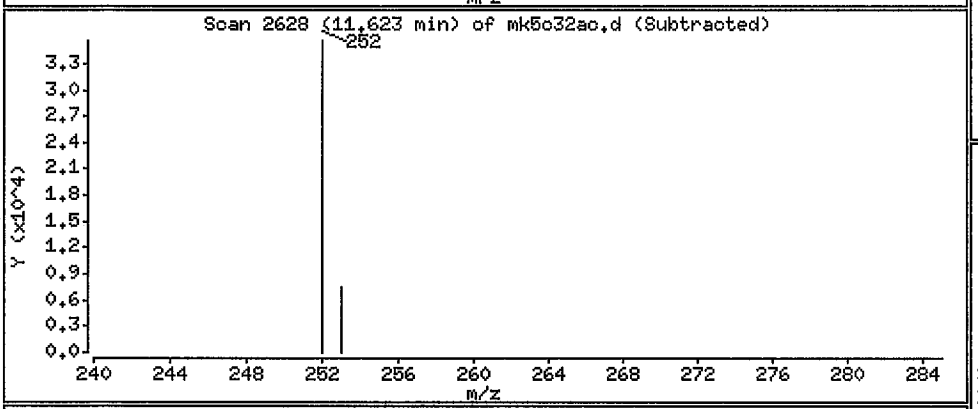
Purge Volume: 1.0 Operator: 11211

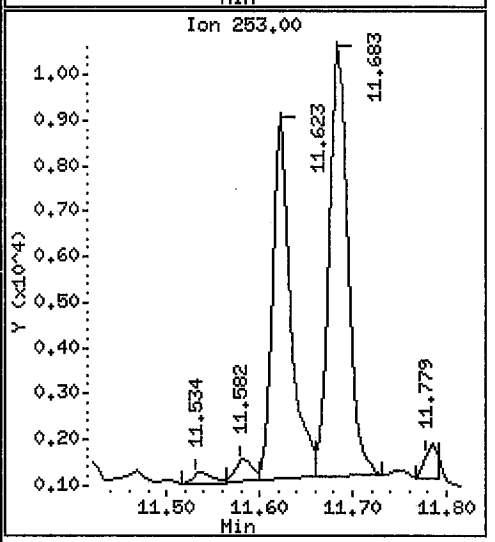
Column phase: Varian: 5MS Column diameter: 0.25

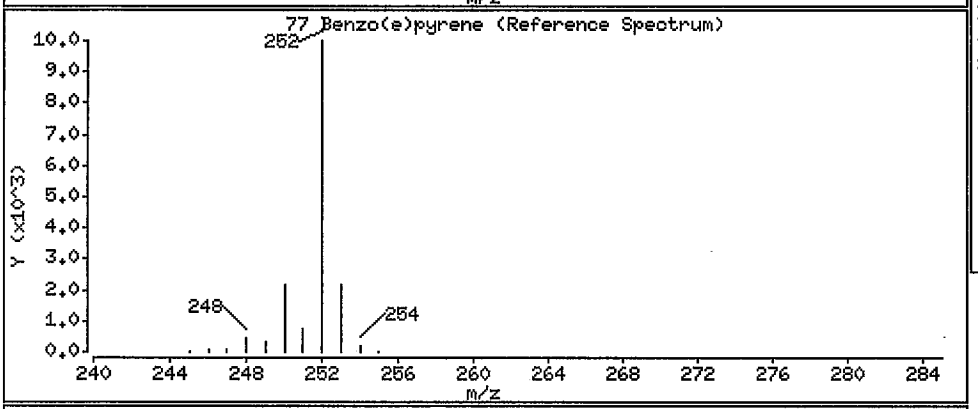
77 Benzo(e)pyrene Concentration: 78900 ng/sample

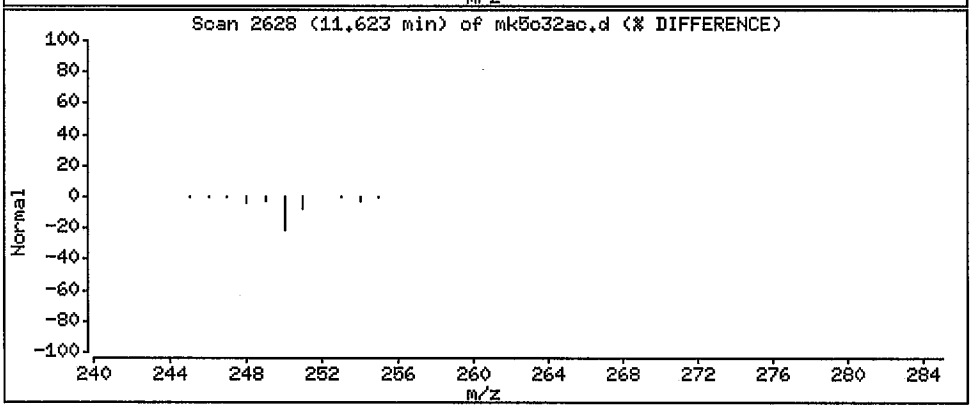












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

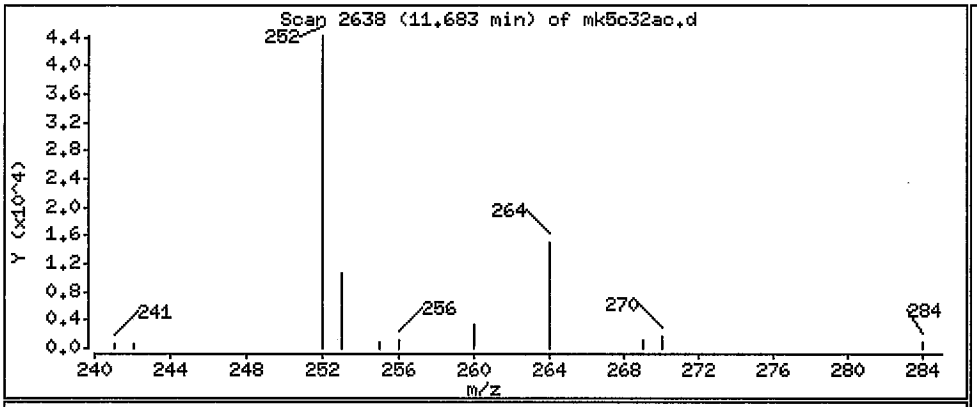
Operator: 11211

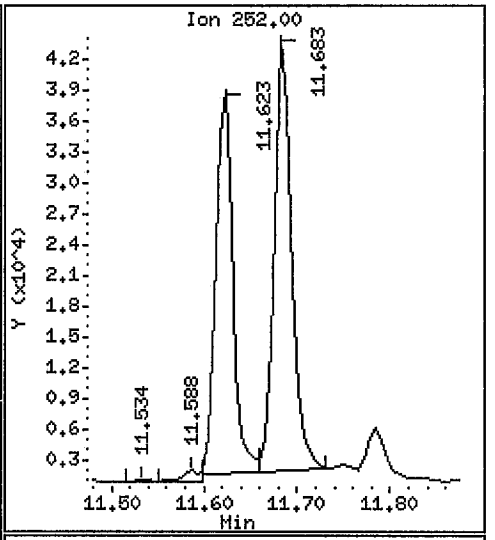
Column phase: Varian: 5MS

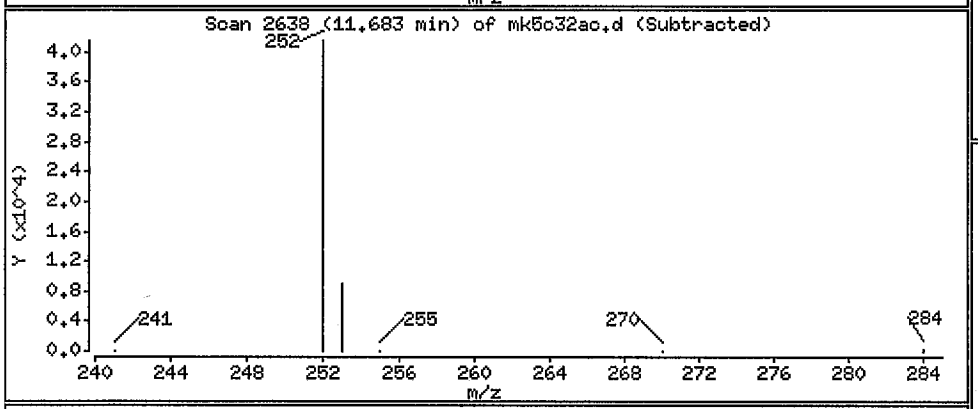
Column diameter: 0.25

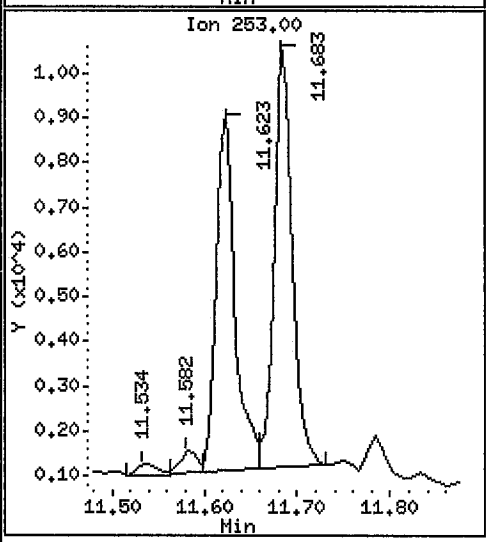
80 Benzo(a)pyrene

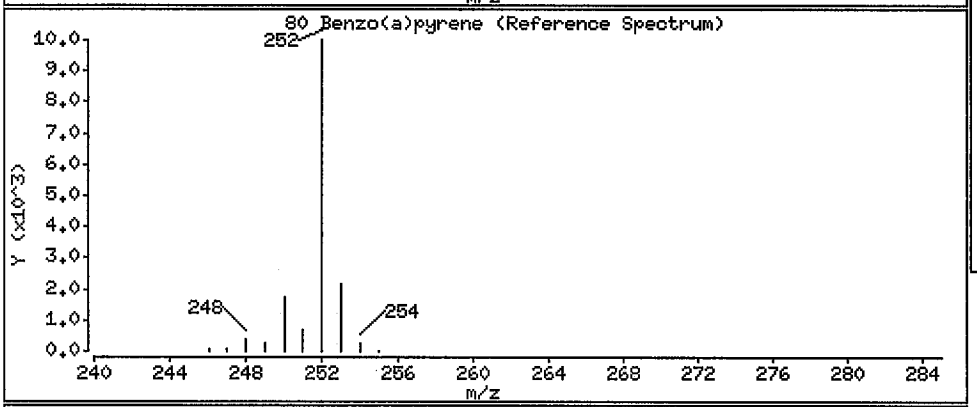
Concentration: 108000 ng/sample

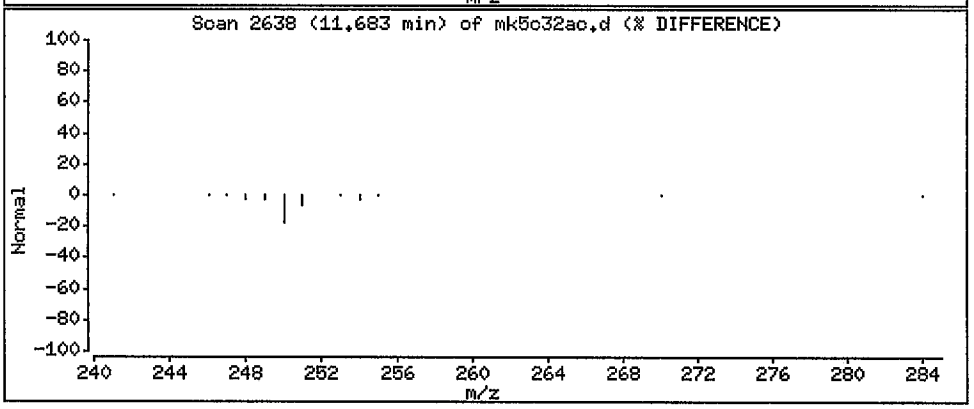












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

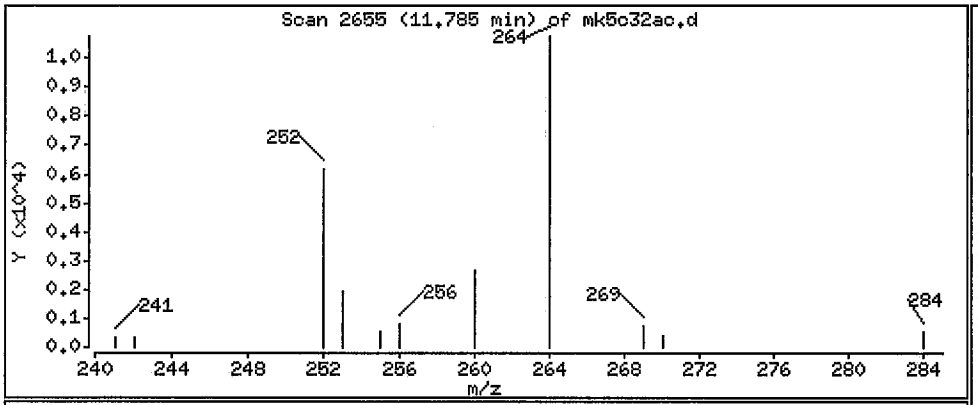
Operator: 11211

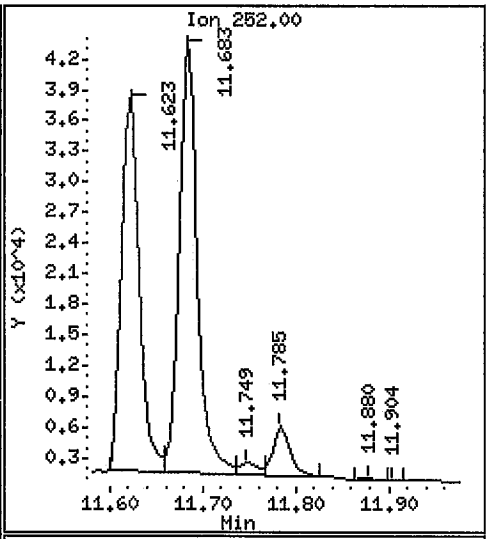
Column phase: Varian: 5MS

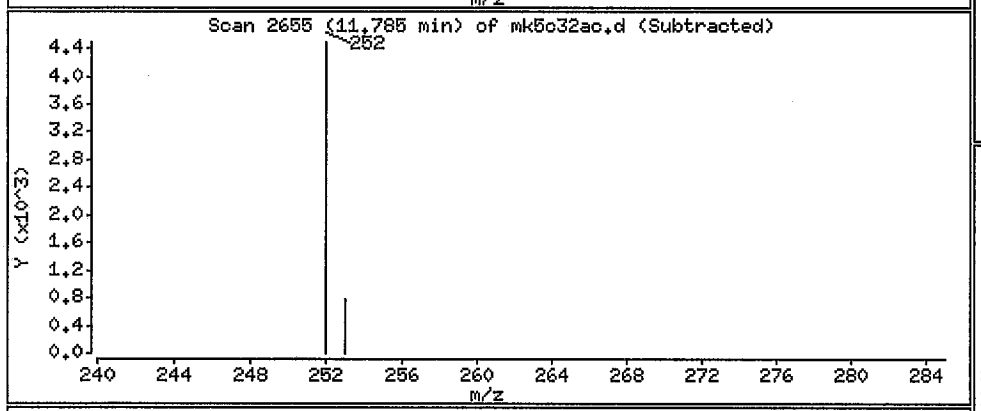
Column diameter: 0.25

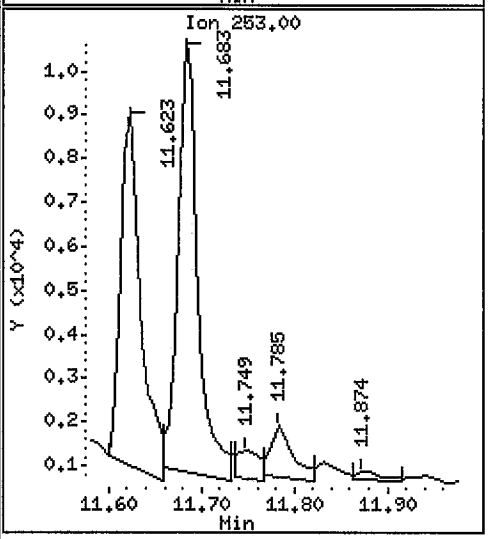
83 Perylene

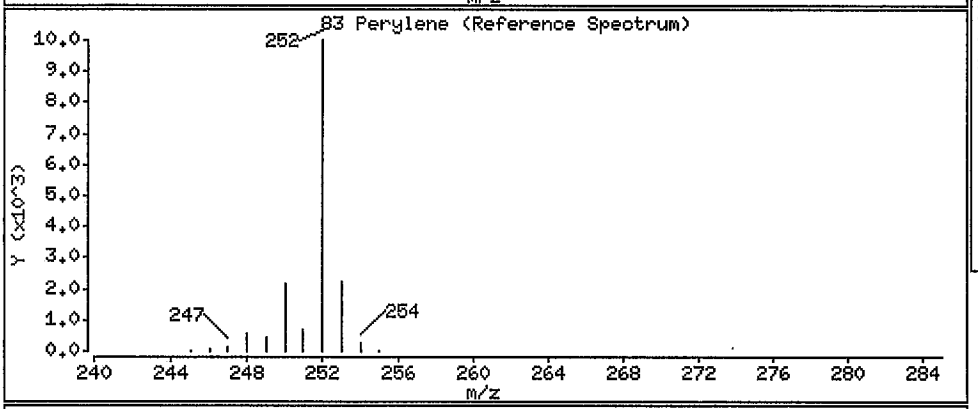
Concentration: 12300 ng/sample

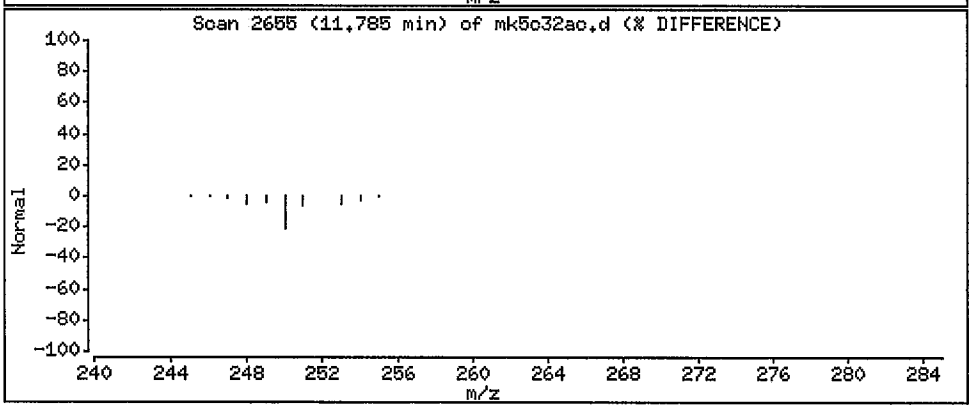












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

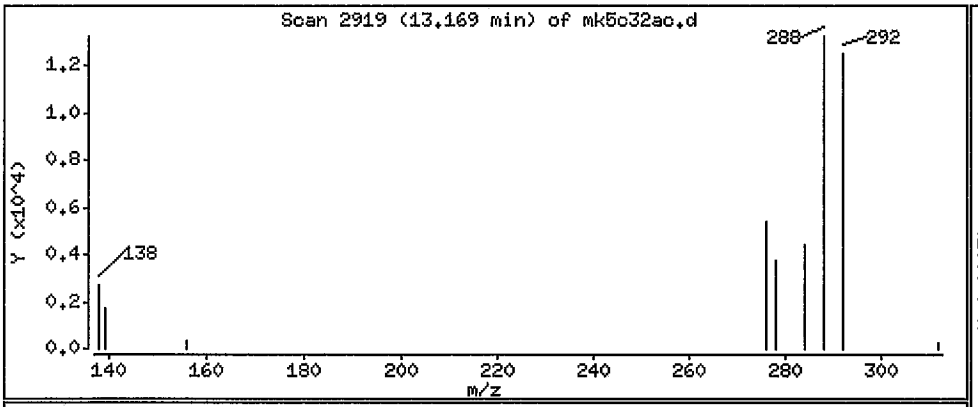
Operator: 11211

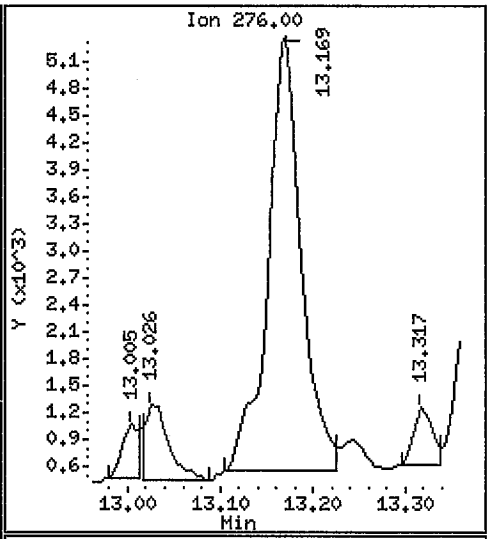
Column phase: Varian: 5MS

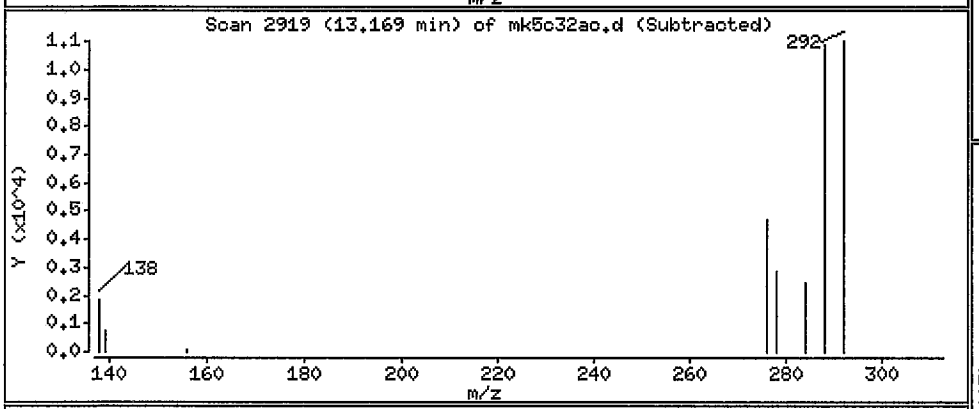
Column diameter: 0.25

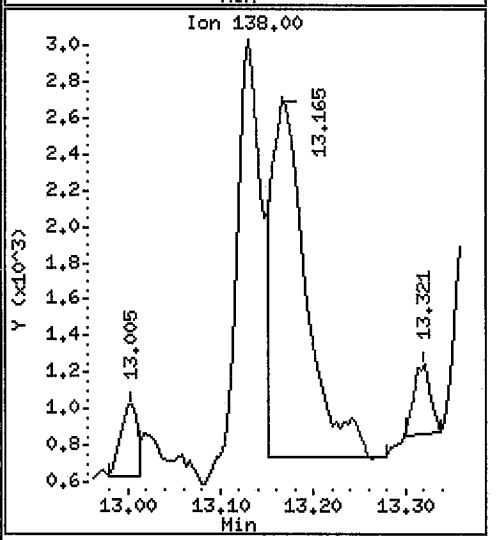
86 Indeno(1,2,3-cd)pyrene

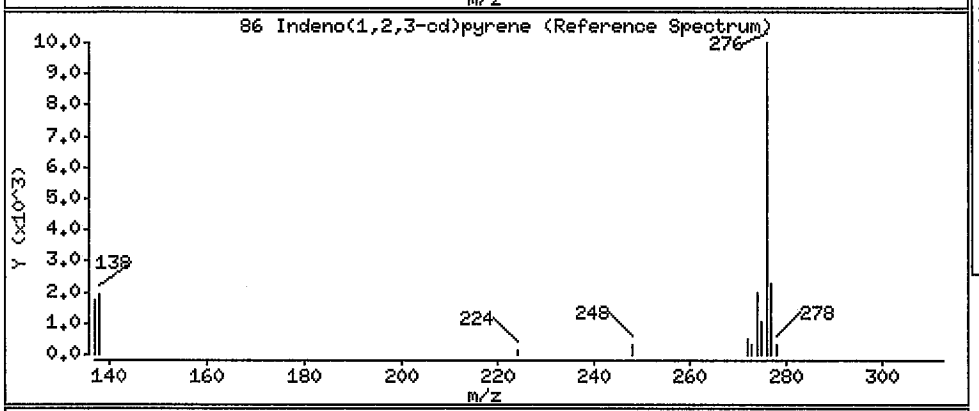
Concentration: 18600 ng/sample

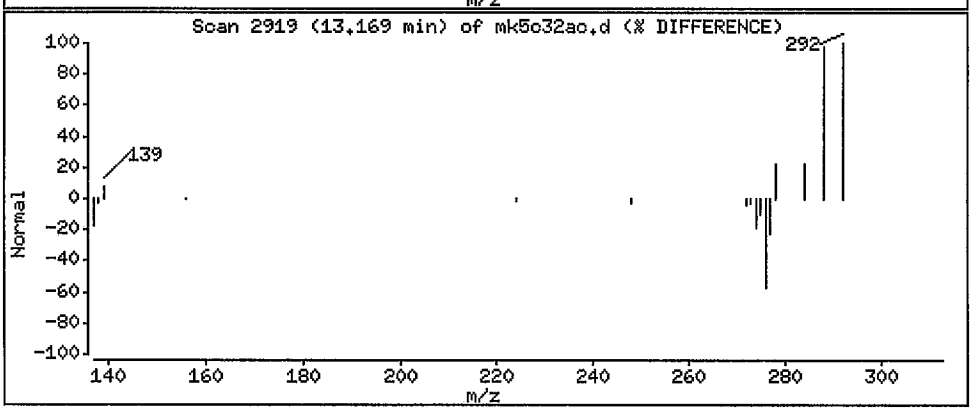












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-CO

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

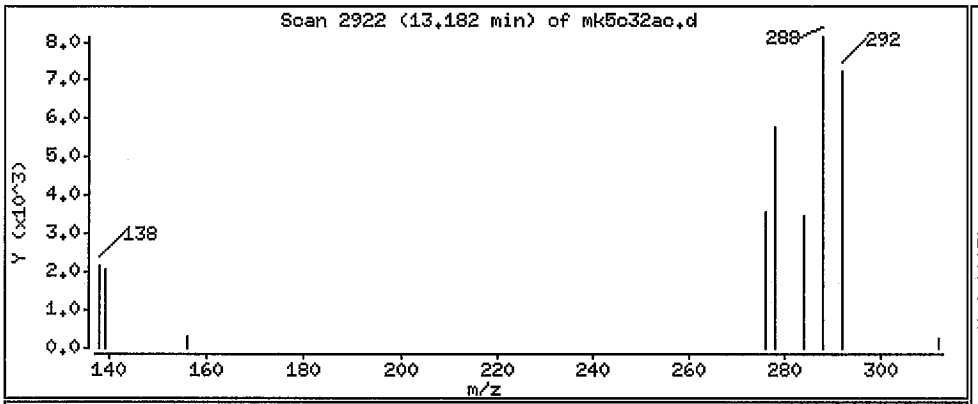
Operator: 11211

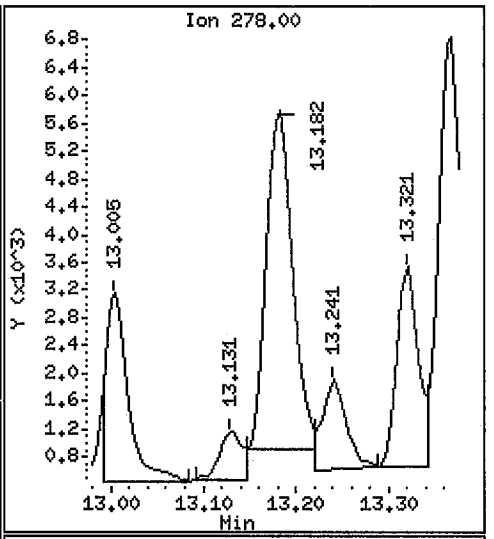
Column phase: Varian: 5MS

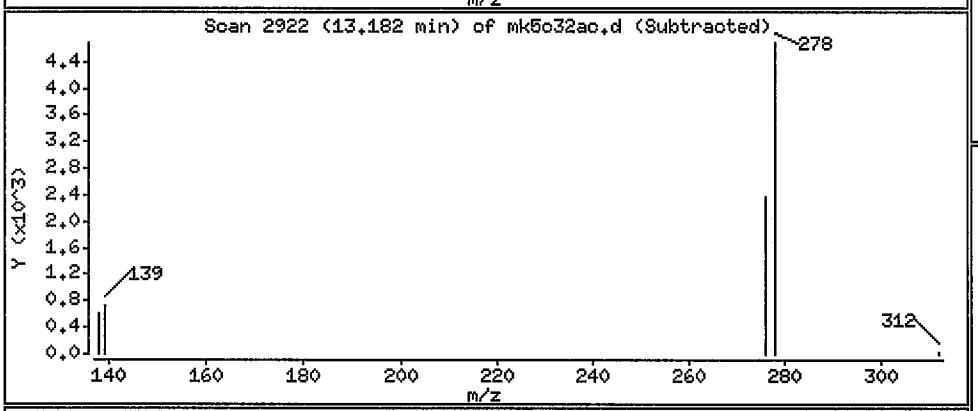
Column diameter: 0.25

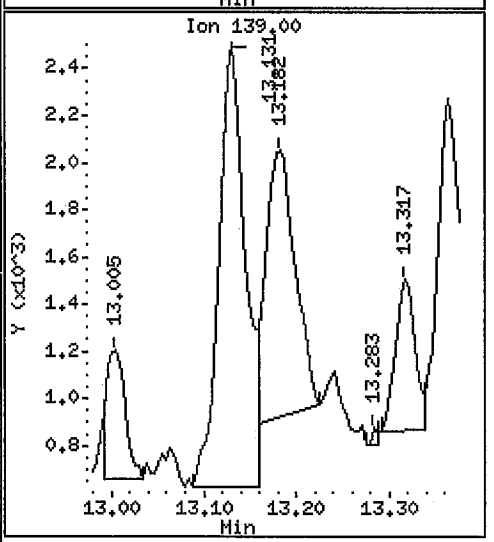
89 Dibenz(a,h)anthracene

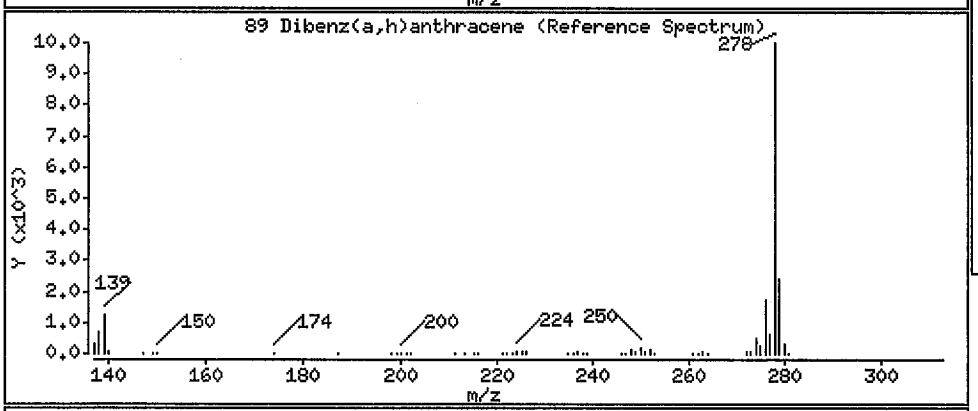
Concentration: 19400 ng/sample

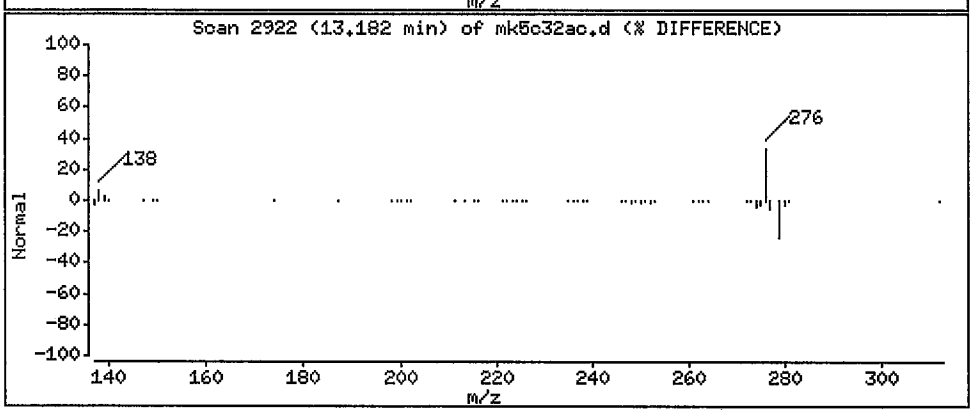












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c32ac.d

Date : 14-AUG-2011 16:55

Client ID: EXM-DCU-M0010-R1-C0

Instrument: mp.i

Sample Info: MK5C33AC,,0,,POSTSPK

Purge Volume: 1.0

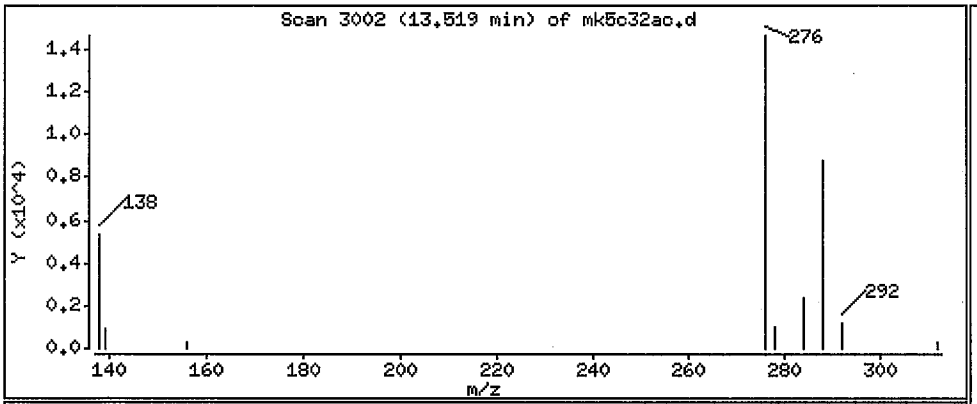
Operator: 11211

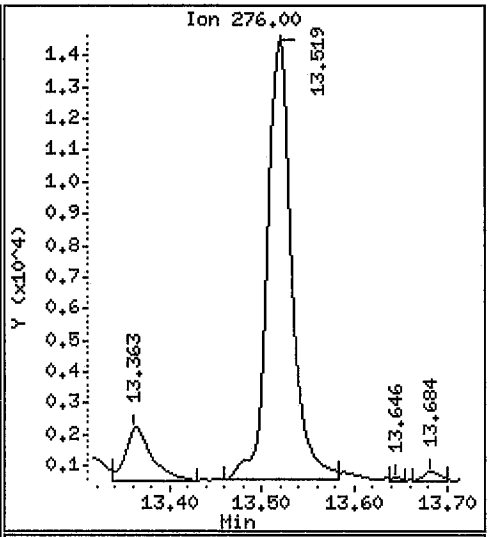
Column phase: Varian: 5MS

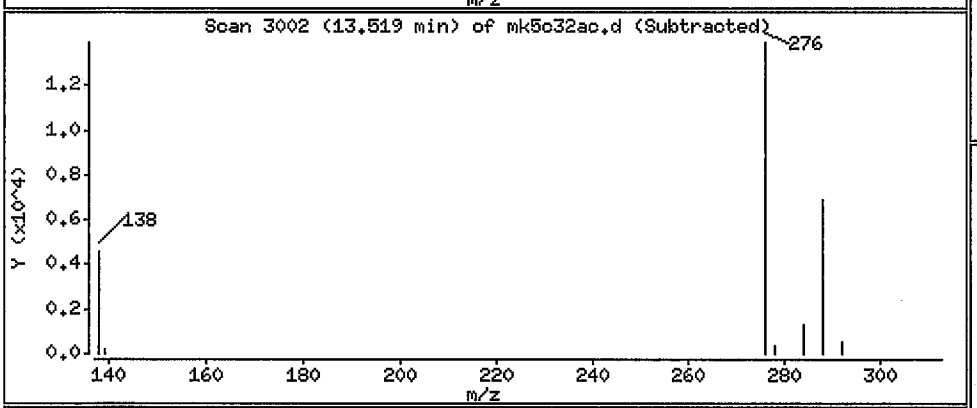
Column diameter: 0.25

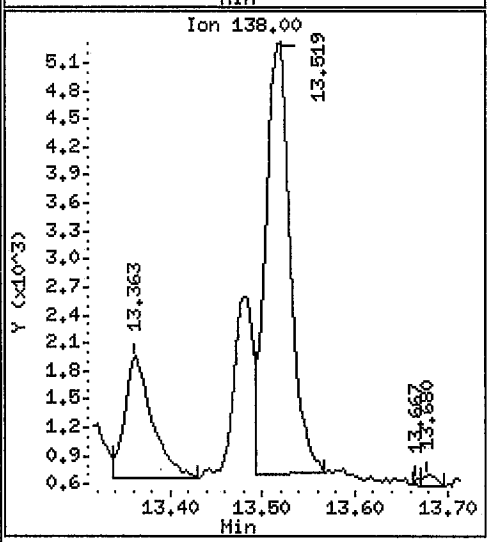
92 Benzo(g,h,i)perylene

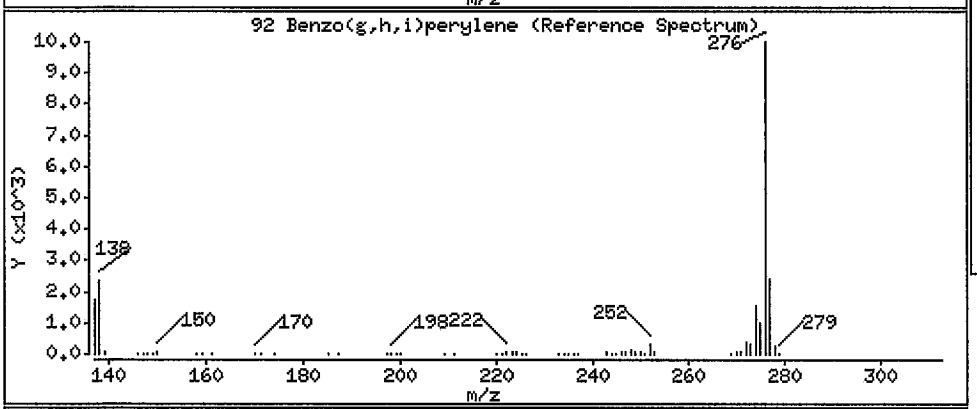
Concentration: 47400 ng/sample

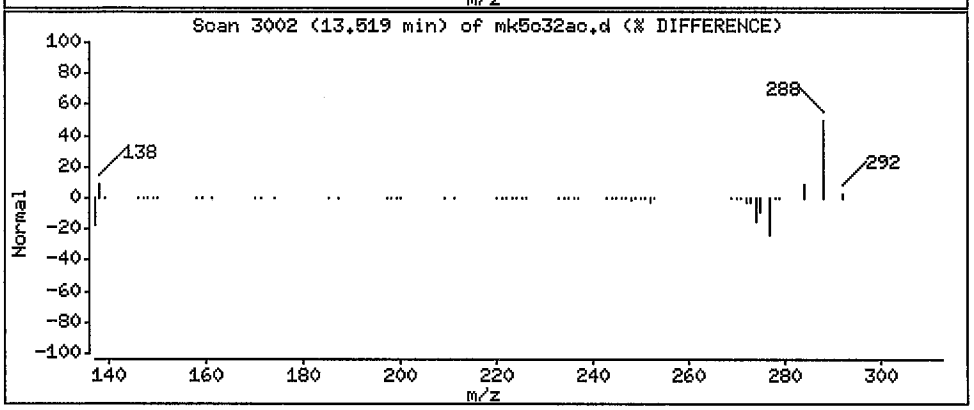












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-002	Work Order #...:	MK5C53AC	Matrix.....:	AIR
Date Sampled...:	07/15/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	5000	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	690000	100000	ng/sample	24000
Acenaphthylene	68000 J	100000	ng/sample	12000
Anthracene	740000	50000	ng/sample	19000
Benzo(a)anthracene	340000	50000	ng/sample	19000
Benzo(b)fluoranthene	150000 J	500000	ng/sample	150000
Benzo(k)fluoranthene	ND	500000	ng/sample	220000
Benzo(ghi)perylene	180000	50000	ng/sample	26000
Benzo(a)pyrene	350000	50000	ng/sample	14000
Benzo(e)pyrene	260000	50000	ng/sample	28000
Chrysene	370000	50000	ng/sample	12000
Dibenz(a,h)anthracene	75000	50000	ng/sample	20000
Fluoranthene	120000	50000	ng/sample	32000
Fluorene	1200000	50000	ng/sample	20000
Indeno(1,2,3-cd)pyrene	59000	50000	ng/sample	13000
2-Methylnaphthalene	24000000 E	250000	ng/sample	100000
Naphthalene	14000000 E	2000000	ng/sample	1200000
Perylene	19000 J	50000	ng/sample	16000
Phenanthrene	1900000	150000	ng/sample	120000
Pyrene	500000	300000	ng/sample	180000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	97	(30 - 120)
Naphthalene-d8	95	(30 - 120)
2-Methylnaphthalene-d10	98	(30 - 120)
Acenaphthylene-d8	103	(30 - 120)
Phenanthrene-d10	95	(30 - 120)
Fluoranthene-d10	103	(30 - 120)
Benzo(a)anthracene-d12	131 *	(30 - 120)
Chrysene-d12	95	(30 - 120)
Benzo(b)fluoranthene-d12	109	(30 - 120)
Benzo(k)fluoranthene-d12	89	(30 - 120)
Benzo(a)pyrene-d12	98	(30 - 120)
Perylene-d12	86	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	104	(30 - 120)
Dibenz(ah)anthracene-d14	104	(30 - 120)
Benzo(ghi)perylene-d12	100	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R2-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-002 Work Order #...: MK5C53AC Matrix.....: AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:17

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Lab Smp Id: MK5C53AC Client Smp ID: EXM-DCU-M0010-R2-CO
Inj Date : 14-AUG-2011 17:20
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C53AC,,0,,POSTSPK
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 11:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 7
Dil Factor: 2500.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	2500.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	682627	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	682627	0.47611	476
3 Naphthalene	128	4.888	4.888	(1.003)	6550324	5.72348	14300000
$ 222 13C6-Naphthalene	134	4.895	4.888	(1.005)	12651	0.01003	~~10.0~~(R)
* 10 2-Methylnaphthalene-d10	152	5.431	5.431	(1.000)	382469	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.431	5.431	(0.857)	382469	0.49078	491
12 2-Methylnaphthalene	142	5.457	5.457	(1.005)	7359600	9.59952	24000000
* 13 1-Methylnaphthalene-d10	152	5.510	5.513	(1.000)	367353	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.513	(0.870)	367353	0.47380	474
15 1-Methylnaphthalene	142	5.540	5.540	(1.005)	2795893	3.92546	9810000
16 Biphenyl	154	5.842	5.842	(1.076)	184218	0.20176	504000
* 17 2,6-Dimethylnaphthalene-d12	168	5.942	5.942	(1.000)	326462	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.942	5.942	(0.938)	326462	0.48889	489
19 2,6 Dimethylnaphthalene	156	5.984	5.979	(1.007)	3113632	4.79817	12000000

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	581453	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	581453	0.51708	517
	22 Acenaphthylene	152	6.214	6.211	(1.002)	31241	0.02714	67900
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	309385	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	186345	0.27488	687000
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.679	(1.123)	238031	0.43134	1080000
$	26 Fluorene-d10	176	6.776	6.768	(0.893)	16650	0.02893	~~28.9(R)~~
	27 Fluorene	166	6.791	6.791	(0.895)	371166	0.50190	1250000
$	28 13C6-Fluorene	171	6.791	6.791	(0.895)	13002	0.02037	~~20.4(R)~~
*	34 Dibenzothiopene-d8	192	7.482	7.484	(1.000)	543076	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.482	7.484	(0.841)	543076	0.48240	482
	36 Dibenzothiophene	184	7.497	7.499	(1.002)	1010571	0.97855	2450000
*	41 Phenanthrene-d10	188	7.586	7.588	(1.000)	481163	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.586	7.588	(0.853)	481163	0.47284	473
	43 Phenanthrene	178	7.607	7.607	(1.003)	785182	0.74862	1870000
*	44 Anthracene-d10	188	7.636	7.636	(1.000)	427025	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.636	7.636	(0.858)	427025	0.48611	486
	46 Anthracene	178	7.653	7.653	(1.002)	317286	0.29750	744000
$	47 13C6-Anthracene	184	7.636	7.651	(0.858)	61968	0.06689	~~66.9(R)~~
	52 1-Methylphenanthrene	192	8.153	8.155	(1.075)	159846	0.24756	619000
*	53 Fluoranthene-d10	212	8.674	8.676	(1.000)	498821	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.674	8.676	(0.975)	500222	0.51566	516
	55 Fluoranthene	202	8.694	8.694	(1.002)	53924	0.04886	122000
*	56 Pyrene-d10	212	8.896	8.898	(1.000)	395363	0.50000	0.500
	57 Pyrene	202	8.913	8.915	(1.028)	232065	0.19897	497000
$	58 Terphenyl-d14	244	9.056	9.054	(1.044)	261	0.000524	~~0.524(R)~~
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	328095	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	328095	0.65642	656(R)
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	131141	0.13429	336000
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	375924	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.141)	375924	0.47484	475
	65 Chrysene	228	10.171	10.175	(1.002)	122815	0.14853	371000
*	70 Benzo(b)fluoranthene-d12	264	11.265	11.271	(1.000)	315673	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.265	11.271	(0.972)	315673	0.54260	543
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.003)	70747	0.08073	~~202000~~ SNR
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	361587	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	361587	0.44427	444
	75 Benzo(k)fluoranthene	252	11.295	11.325	(0.999)	69985	0.08763	~~219000~~ SNR
*	76 Benzo(e)pyrene-d12	264	11.588	11.588	(1.000)	273157	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	79577	0.10468	262000
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	296721	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	296721	0.49242	492
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	92344	0.14116	353000
*	81 Perylene-d12	264	11.749	11.749	(1.000)	252393	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	252393	0.43240	432
	83 Perylene	252	11.779	11.779	(1.003)	4869	0.00773	19300
*	84 Indeno(123-cd)pyrene-d12	288	13.127	13.131	(1.000)	344433	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.127	13.131	(1.133)	344433	0.52246	522
	86 Indeno(1,2,3-cd)pyrene	276	13.161	13.161	(1.003)	19142	0.02356	58900
*	87 Dibenz(ah)anthracene-d14	292	13.131	13.131	(1.000)	259092	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.131	13.131	(1.133)	259092	0.52036	520
	89 Dibenz(a,h)anthracene	278	13.173	13.178	(1.003)	18552	0.02989	74700
*	90 Benzo(ghi)perylene-d12	288	13.477	13.481	(1.000)	247437	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.477	13.481	(1.163)	247437	0.50152	502
	92 Benzo(g,h,i)perylene	276	13.511	13.515	(1.002)	48730	0.07253	181000

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:32

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Lab Smp Id: MK5C53AC Client Smp ID: EXM-DCU-M0010-R2-CO
Inj Date : 14-AUG-2011 17:20
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C53AC,,0,,POSTSPK
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 11:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 7
Dil Factor: 2500.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	2500.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ng/sample)	
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	682627	0.50000	0.500	
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	682627	0.47611	476	
3 Naphthalene	128	4.888	4.888	(1.003)	6550324	5.72348	14300000	E
* 10 2-Methylnaphthalene-d10	152	5.431	5.431	(1.000)	382469	0.50000	0.500	
$ 11 2-Methylnaphthalene-d10(SS)	152	5.431	5.431	(0.857)	382469	0.49078	491	
12 2-Methylnaphthalene	142	5.457	5.457	(1.005)	7359600	9.59952	24000000	E
* 13 1-Methylnaphthalene-d10	152	5.510	5.513	(1.000)	367353	0.50000	0.500	
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.513	(0.870)	367353	0.47380	474	
15 1-Methylnaphthalene	142	5.540	5.540	(1.005)	2795893	3.92546	9810000	
16 Biphenyl	154	5.842	5.842	(1.076)	184218	0.20176	504000	
* 17 2,6-Dimethylnaphthalene-d12	168	5.942	5.942	(1.000)	326462	0.50000	0.500	
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.942	5.942	(0.938)	326462	0.48889	489	
19 2,6 Dimethylnaphthalene	156	5.984	5.979	(1.007)	3113632	4.79817	12000000	
* 20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	581453	0.50000	0.500	

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ng/sample)
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	581453	0.51708	517
	22 Acenaphthylene	152	6.214	6.211	(1.002)	31241	0.02714	67900
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	309385	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	186345	0.27488	687000
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.679	(1.123)	238031	0.43134	1080000
	27 Fluorene	166	6.791	6.791	(0.895)	371166	0.50190	1250000
*	34 Dibenzothiopene-d8	192	7.482	7.484	(1.000)	543076	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.482	7.484	(0.841)	543076	0.48240	482
	36 Dibenzothiophene	184	7.497	7.499	(1.002)	1010571	0.97855	2450000
*	41 Phenanthrene-d10	188	7.586	7.588	(1.000)	481163	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.586	7.588	(0.853)	481163	0.47284	473
	43 Phenanthrene	178	7.607	7.607	(1.003)	785182	0.74862	1870000
*	44 Anthracene-d10	188	7.636	7.636	(1.000)	427025	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.636	7.636	(0.858)	427025	0.48611	486
	46 Anthracene	178	7.653	7.653	(1.002)	317286	0.29750	744000
	52 1-Methylphenanthrene	192	8.153	8.155	(1.075)	159846	0.24756	619000
*	53 Fluoranthene-d10	212	8.674	8.676	(1.000)	498821	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.674	8.676	(0.975)	500222	0.51566	516
	55 Fluoranthene	202	8.694	8.694	(1.002)	53924	0.04886	122000
*	56 Pyrene-d10	212	8.896	8.898	(1.000)	395363	0.50000	0.500
	57 Pyrene	202	8.913	8.915	(1.028)	232065	0.19897	497000
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	328095	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	328095	0.65642	656(R)
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	131141	0.13429	336000
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	375924	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.141)	375924	0.47484	475
	65 Chrysene	228	10.171	10.175	(1.002)	122815	0.14853	371000
*	70 Benzo(b)fluoranthene-d12	264	11.265	11.271	(1.000)	315673	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.265	11.271	(0.972)	315673	0.54260	543
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.003)	53219	0.06073	152000(M)
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	361587	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	361587	0.44427	444
	75 Benzo(k)fluoranthene	252	11.313	11.325	(1.001)	22542	0.02823	70600(M)
*	76 Benzo(e)pyrene-d12	264	11.588	11.588	(1.000)	273157	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	79577	0.10468	262000
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	296721	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	296721	0.49242	492
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	92344	0.14116	353000
*	81 Perylene-d12	264	11.749	11.749	(1.000)	252393	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	252393	0.43240	432
	83 Perylene	252	11.779	11.779	(1.003)	4869	0.00773	19300
*	84 Indeno(123-cd)pyrene-d12	288	13.127	13.131	(1.000)	344433	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.127	13.131	(1.133)	344433	0.52246	522
	86 Indeno(1,2,3-cd)pyrene	276	13.161	13.161	(1.003)	19142	0.02356	58900
*	87 Dibenz(ah)anthracene-d14	292	13.131	13.131	(1.000)	259092	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.131	13.131	(1.133)	259092	0.52036	520
	89 Dibenz(a,h)anthracene	278	13.173	13.178	(1.003)	18552	0.02989	74700

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:32

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 90 Benzo(ghi)perylene-d12	288	13.477	13.481	(1.000)	247437	0.50000	0.500
$ 91 Benzo(ghi)perylene-d12(SS)	288	13.477	13.481	(1.163)	247437	0.50152	502
92 Benzo(g,h,i)perylene	276	13.511	13.515	(1.002)	48730	0.07253	181000

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

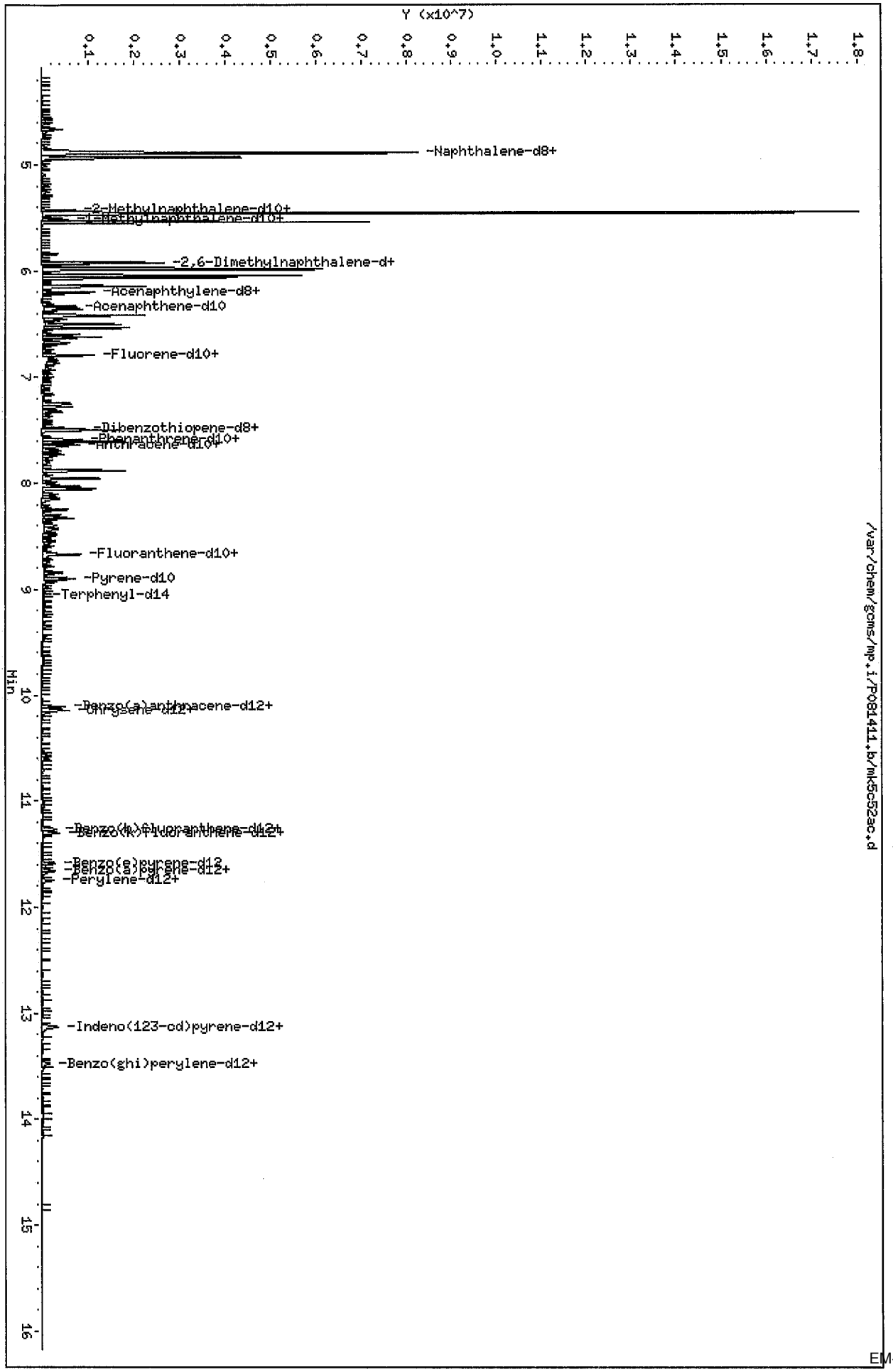
Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Report Date: 15-Aug-2011 11:17

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C53AC Client Smp ID: EXM-DCU-M0010-R2-CO
Level: LOW Operator: 11211
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Misc Info: P081411,SIMPAH3

SURROGATE COMPOUND	AMOUNT ADDED ug/ml	AMOUNT RECOVERED ug/ml	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	0.500	0.476	95.22	30-120
$ 222 13C6-Naphthalene	0.500	~~0.0100~~	~~2.01*~~	50-150
$ 11 2-Methylnaphthalen	0.500	0.491	98.16	30-120
$ 14 1-Methylnaphthalen	0.500	0.474	94.76	30-120
$ 18 2,6-Dimethylnaph-d	0.500	0.489	97.78	30-120
$ 21 Acenaphthylene-d8(	0.500	0.517	103.42	30-120
$ 26 Fluorene-d10	0.500	~~0.0289~~	~~5.79*~~	30-120
$ 28 13C6-Fluorene	0.500	~~0.0204~~	~~4.07*~~	30-120
$ 35 Dibenzothiopene-d8	0.500	0.482	96.48	30-120
$ 42 Phenanthrene-d10(S	0.500	0.473	94.57	30-120
$ 45 Anthracene-d10(SS)	0.500	0.486	97.22	30-120
$ 47 13C6-Anthracene	0.500	~~0.0669~~	~~13.38*~~	30-120
$ 54 Fluoranthene-d10(S	0.500	0.516	103.13	0-120
$ 58 Terphenyl-d14	0.500	~~0.000524~~	~~0.10*~~	30-120
$ 61 Benzo(a)anthracene	0.500	0.656	131.28*	30-120
$ 64 Chrysene-d12(SS)	0.500	0.475	94.97	30-120
$ 71 Benzo(b)fluoranthe	0.500	0.543	108.52	30-120
$ 74 Benzo(k)fluoranthe	0.500	0.444	88.85	30-120
$ 79 Benzo(a)pyrene-d12	0.500	0.492	98.48	30-120
$ 82 Perylene-d12(SS)	0.500	0.432	86.48	30-120
$ 85 Indeno(123-cd)pyre	0.500	0.522	104.49	30-120
$ 88 Dibenz(ah)anthrace	0.500	0.520	104.07	30-120
$ 91 Benzo(ghi)perylene	0.500	0.502	100.30	30-120


Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Date : 14-AUG-2011 17:20
Client ID: EXH-DCU-H0010-R2-CO
Sample Info: MK5C53AC,,0,,POSTSPK
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P081411.b/mk5c52ac.d
Y (x10^7)
Min
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-Anthracene-d10+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

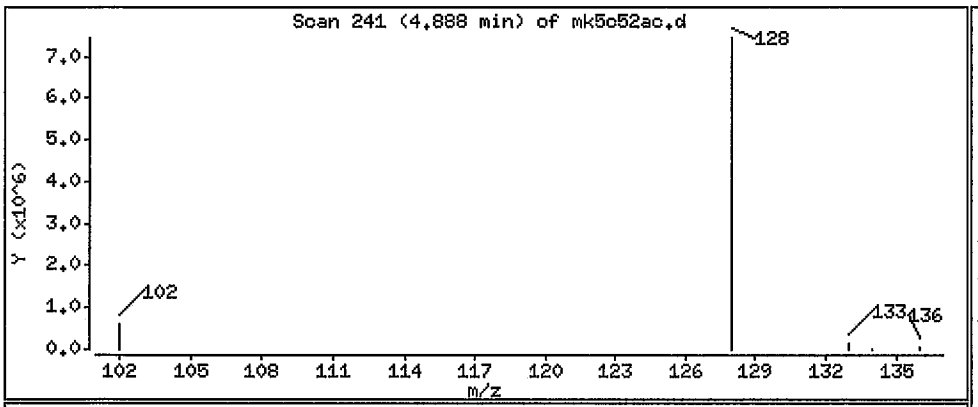
Operator: 11211

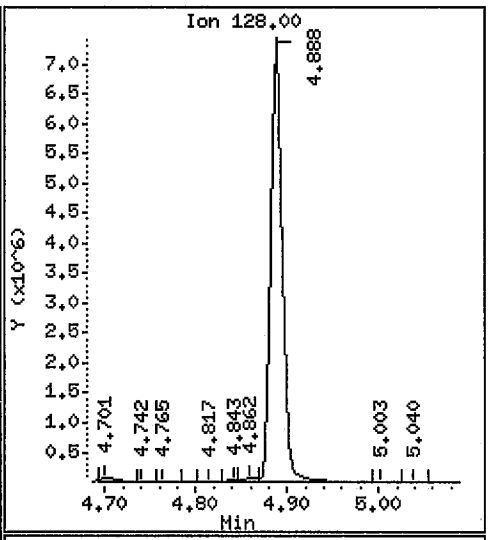
Column phase: Varian: 5MS

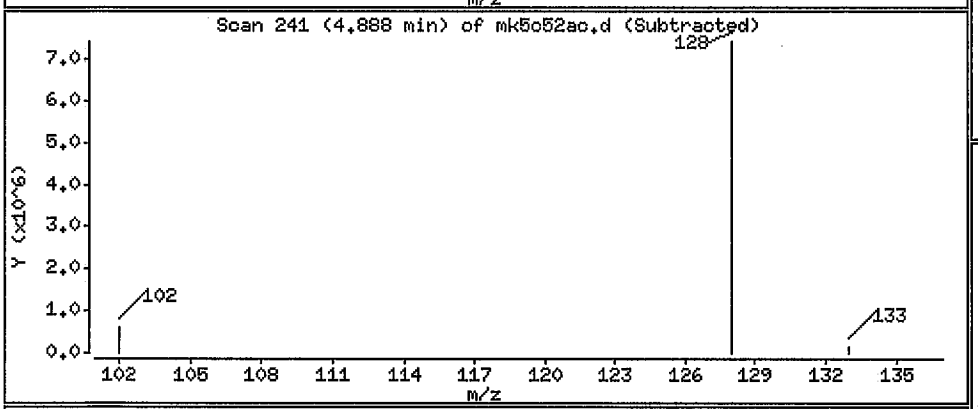
Column diameter: 0.25

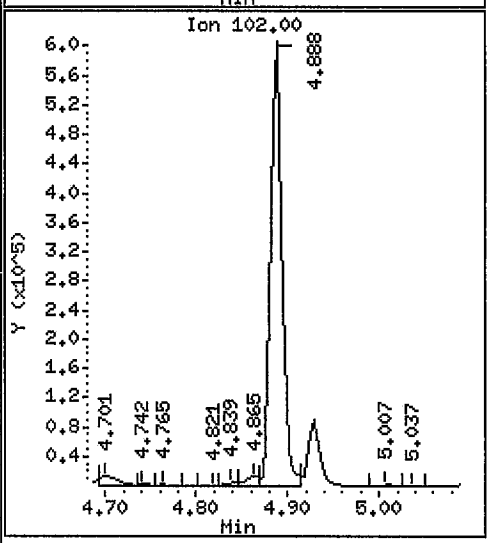
3 Naphthalene

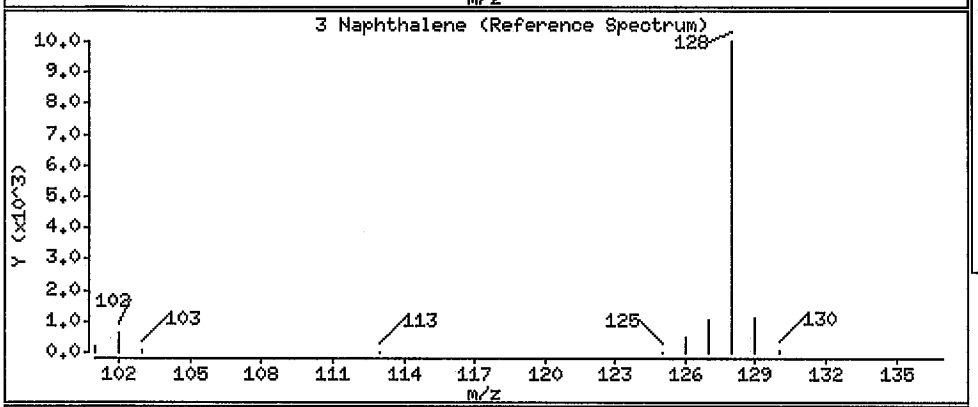
Concentration: 14300000 ng/sample

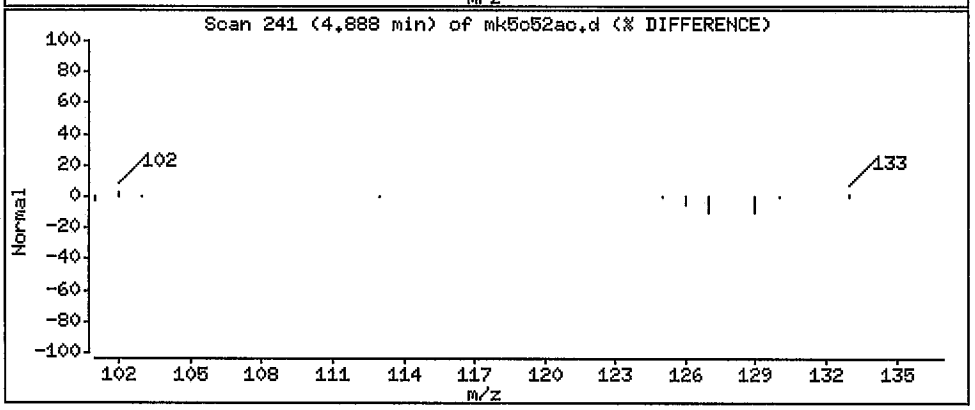












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

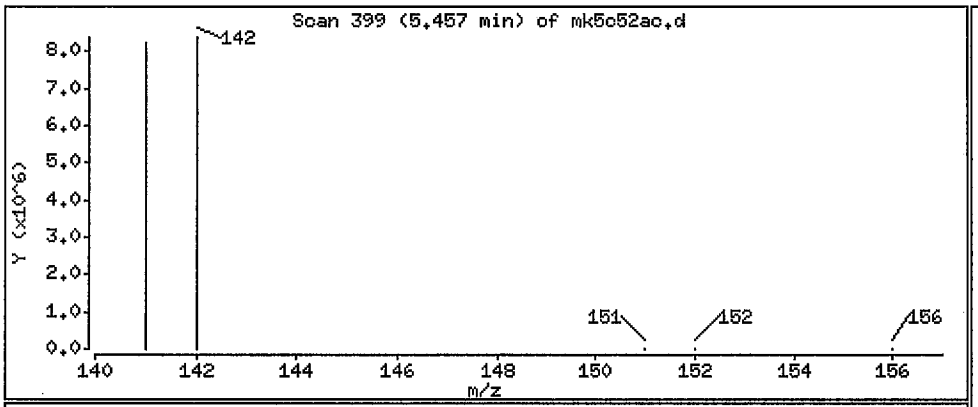
Client ID: EXM-DCU-M0010-R2-C0 Instrument: mp.i

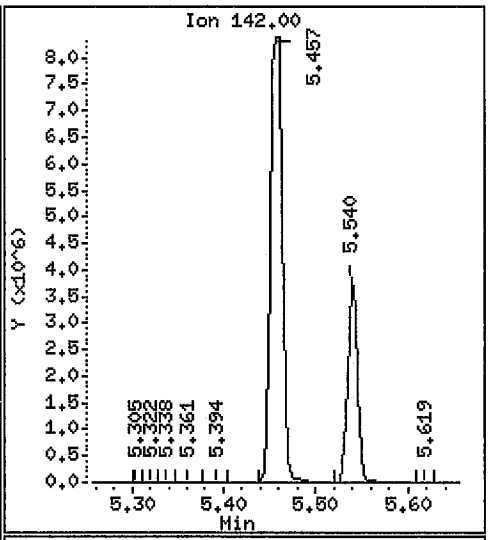
Sample Info: MK5C53AC,,0,,POSTSPK

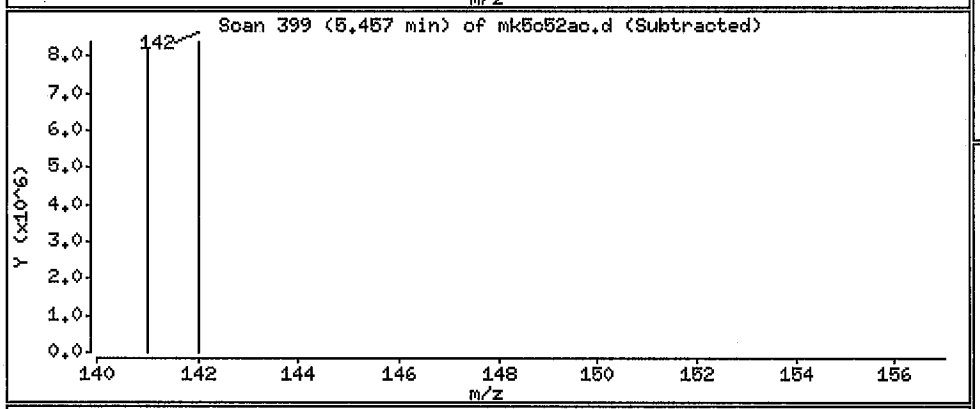
Purge Volume: 1.0 Operator: 11211

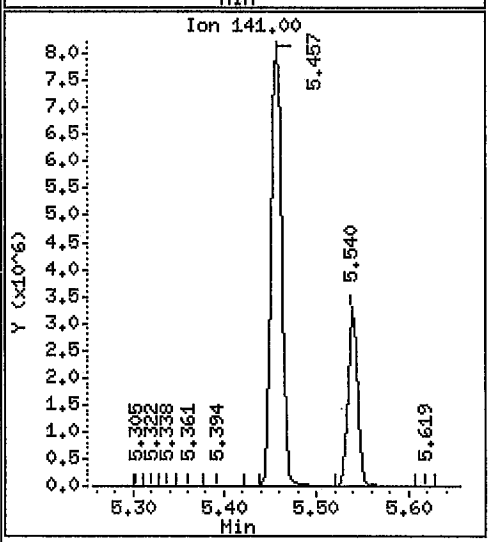
Column phase: Varian: 5MS Column diameter: 0.25

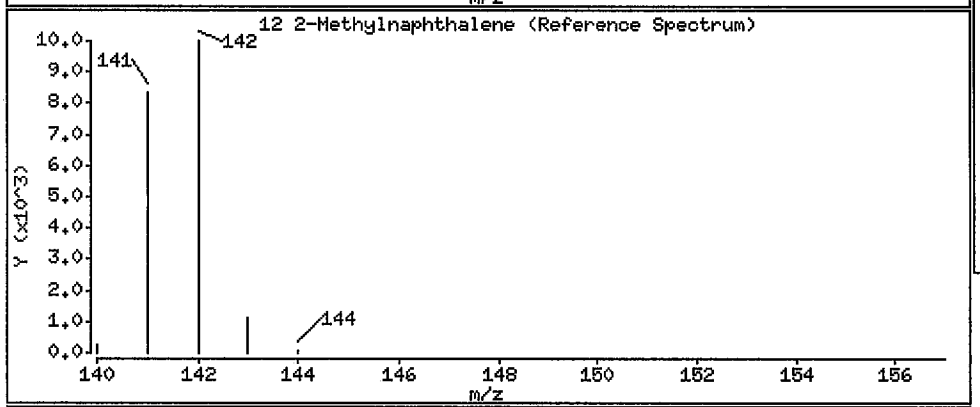
12 2-Methylnaphthalene Concentration: 24000000 ng/sample

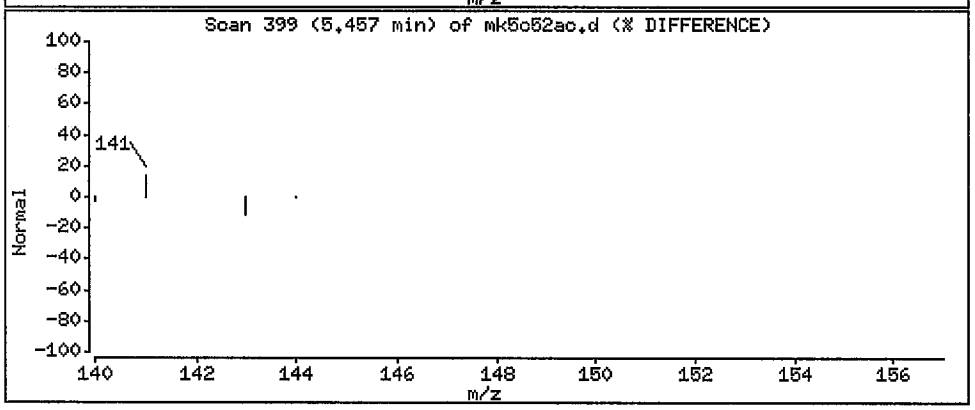












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

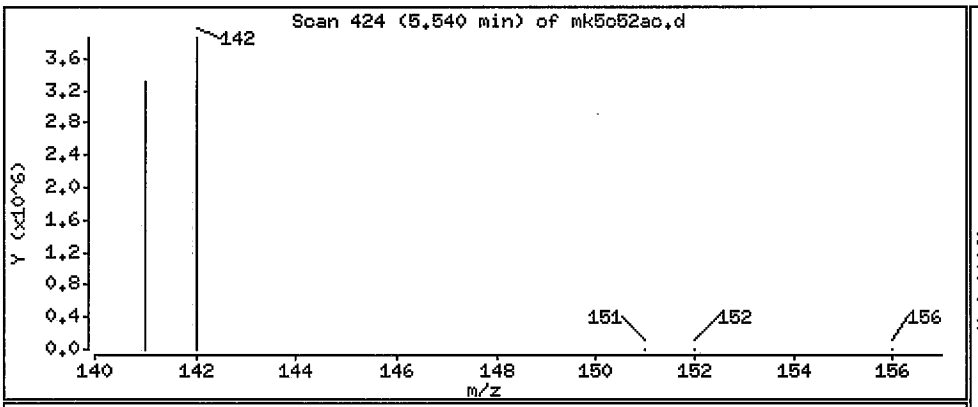
Operator: 11211

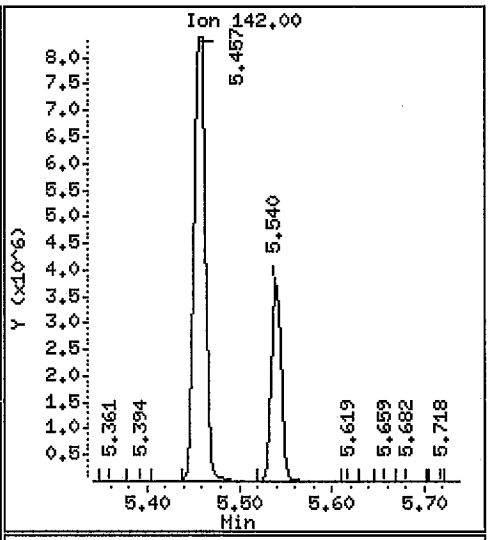
Column phase: Varian: 5MS

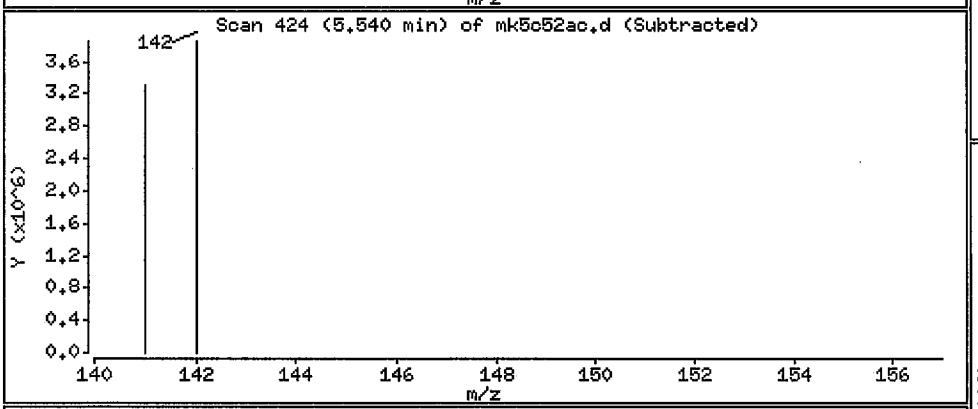
Column diameter: 0.25

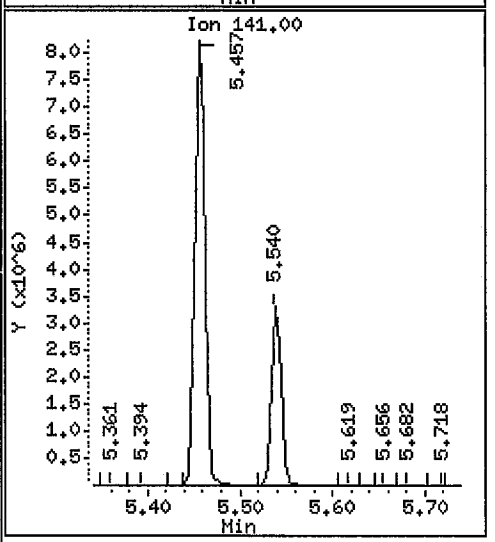
15 1-Methylnaphthalene

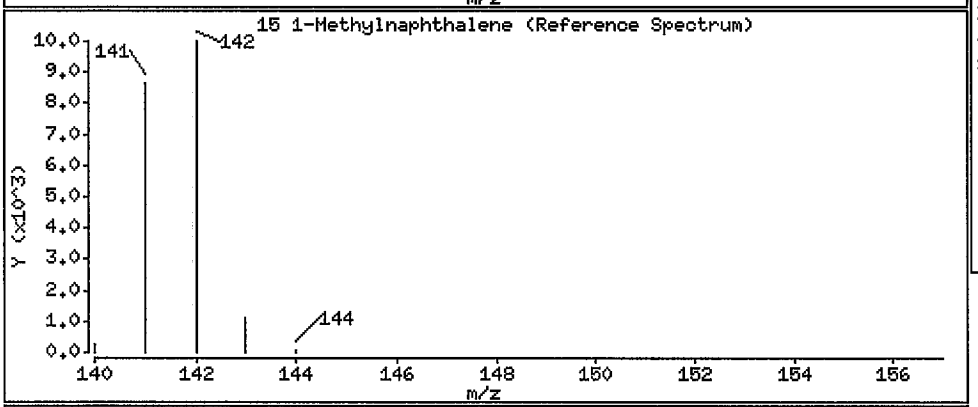
Concentration: 9810000 ng/sample

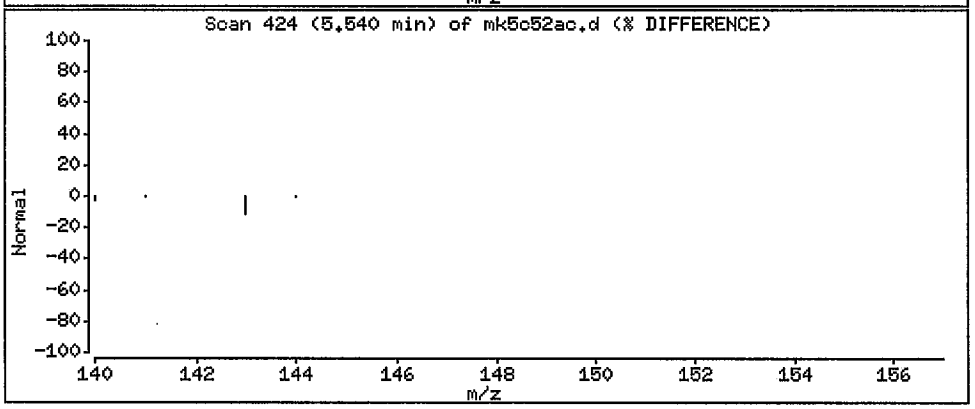












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

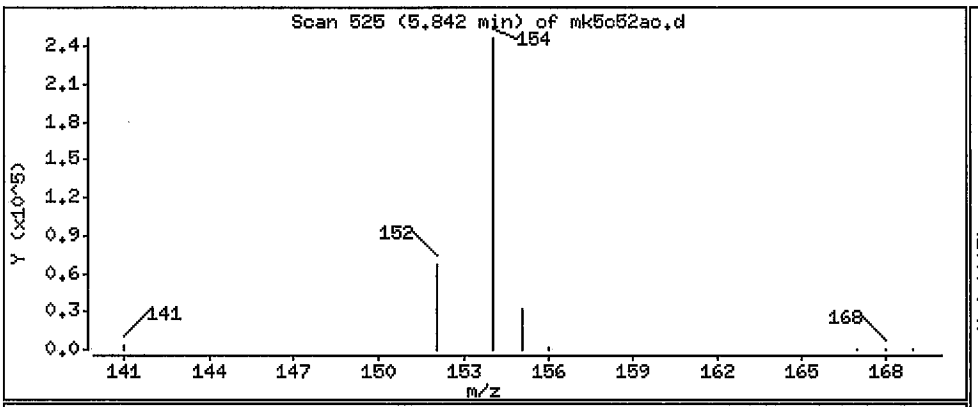
Operator: 11211

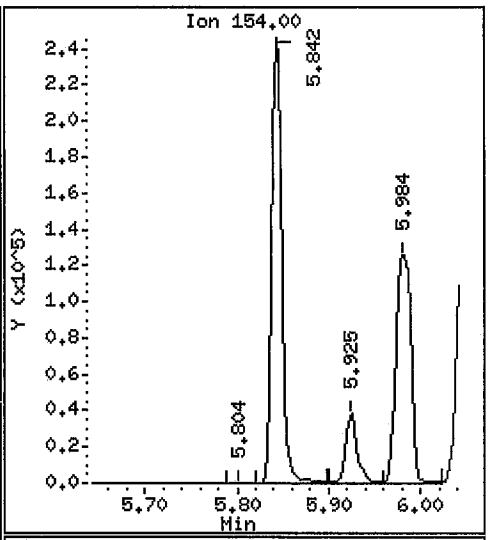
Column phase: Varian: 5MS

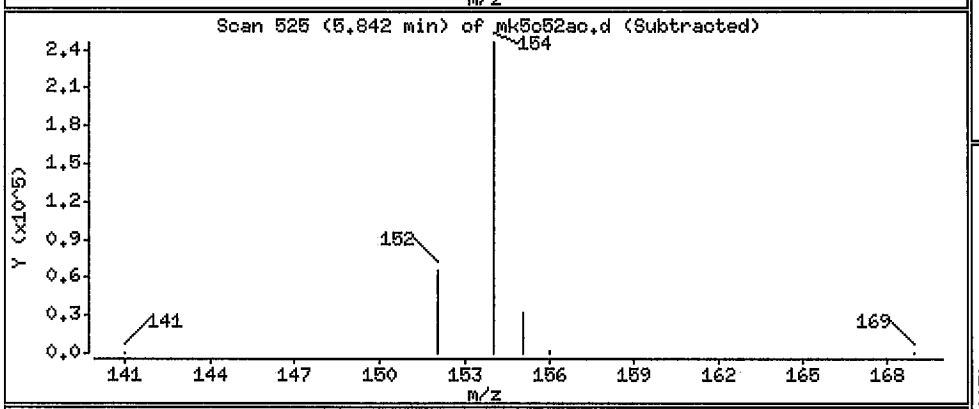
Column diameter: 0.25

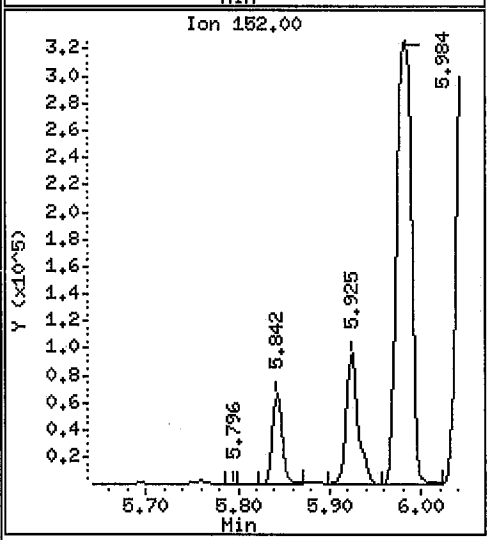
16 Biphenyl

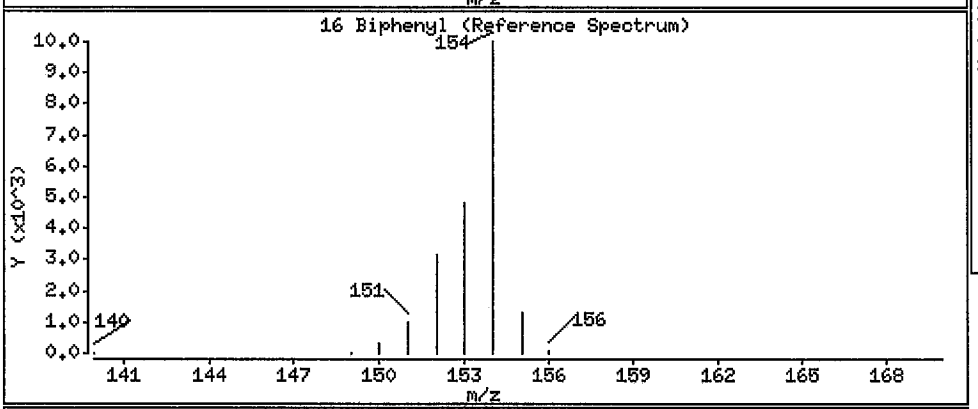
Concentration: 504000 ng/sample

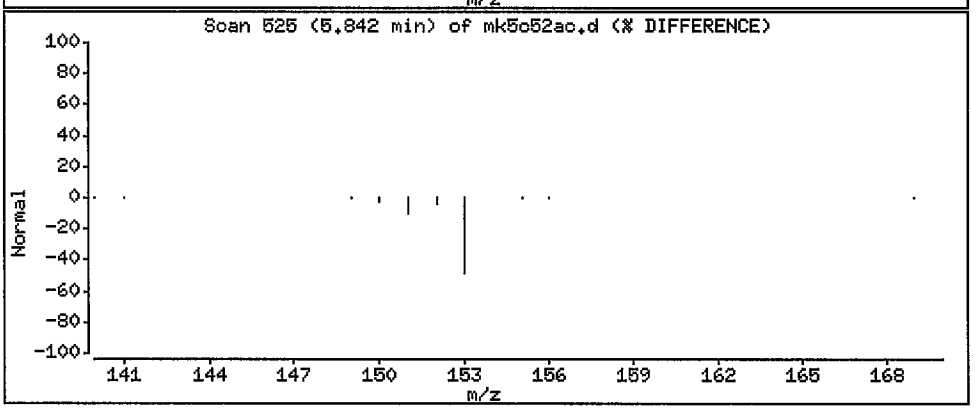












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

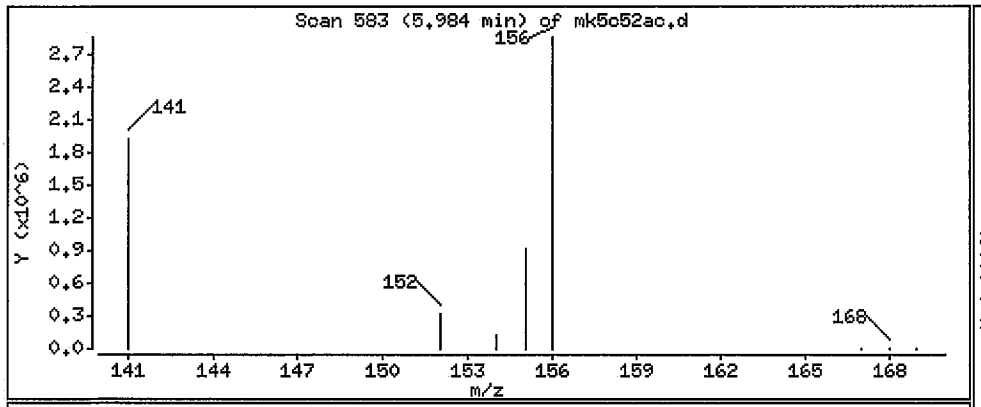
Operator: 11211

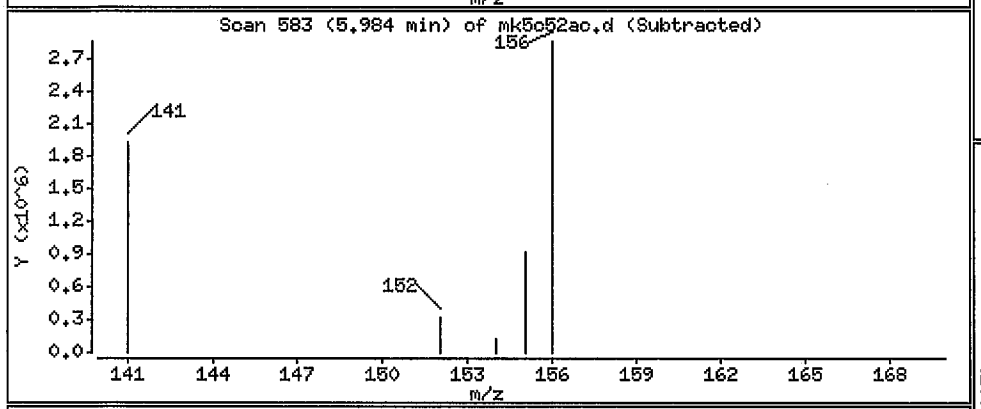
Column phase: Varian: 5MS

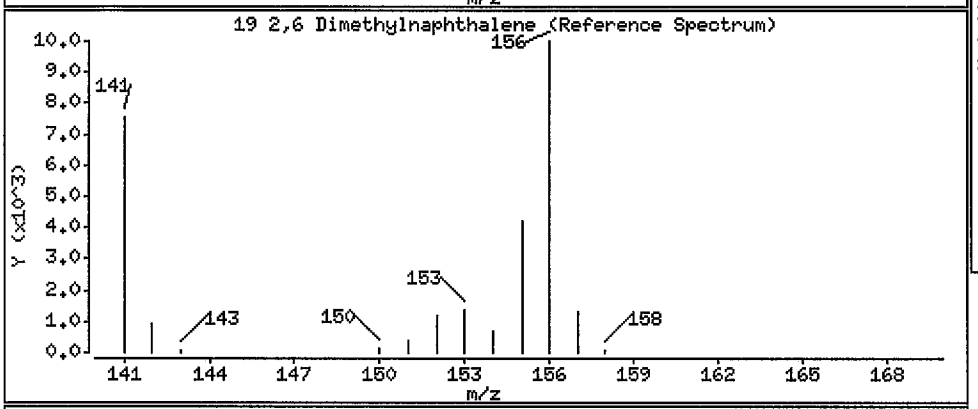
Column diameter: 0.25

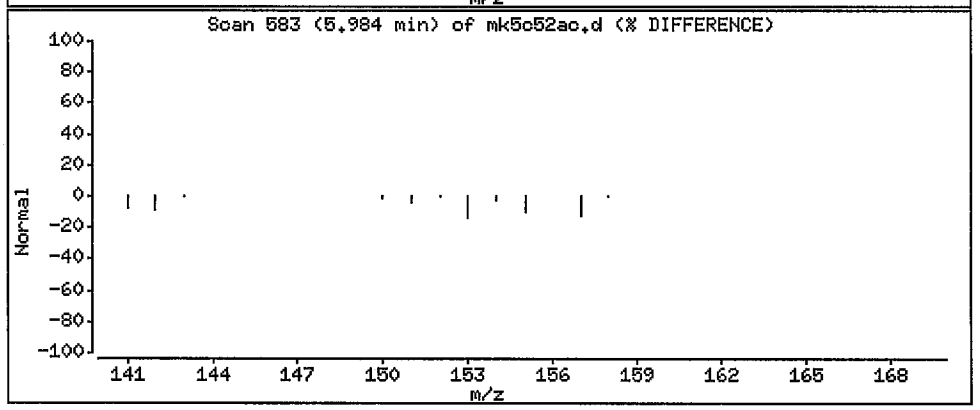
19 2,6 Dimethylnaphthalene

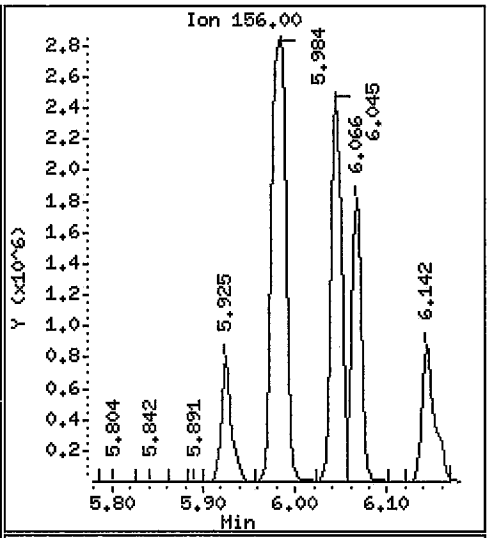
Concentration: 12000000 ng/sample

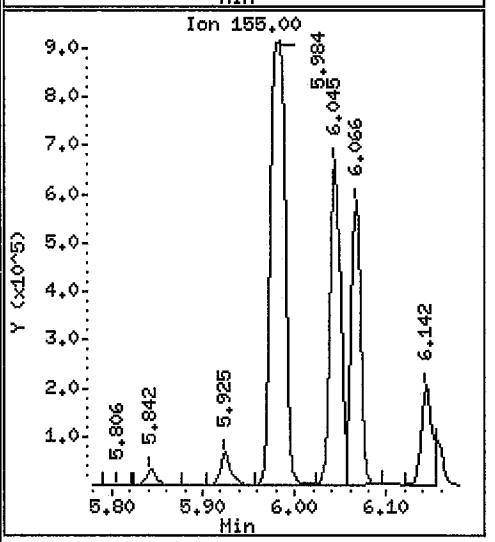












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

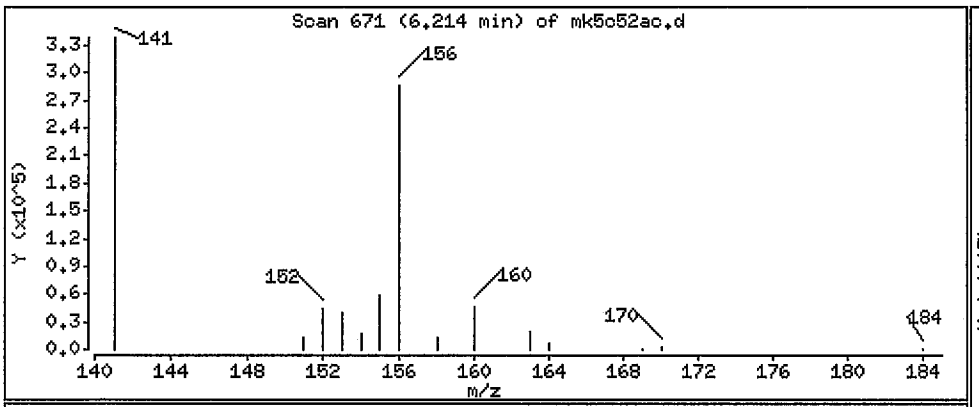
Operator: 11211

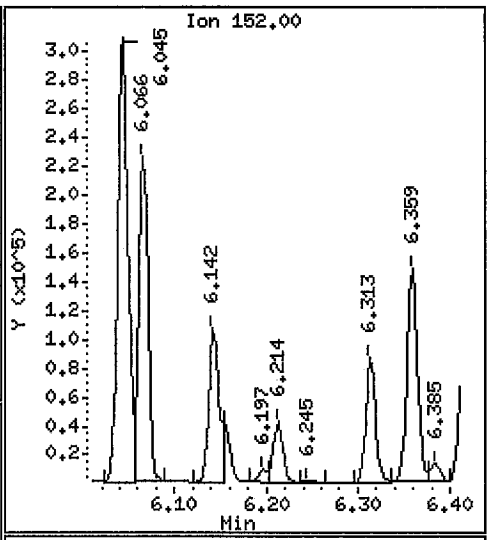
Column phase: Varian: 5MS

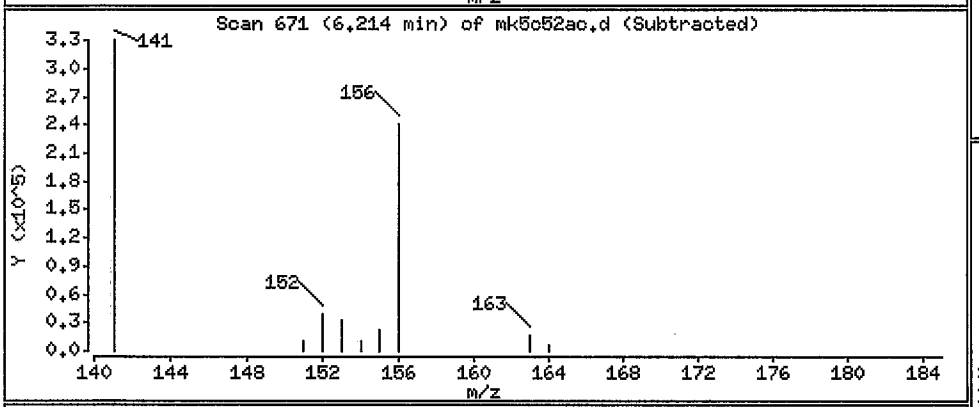
Column diameter: 0.25

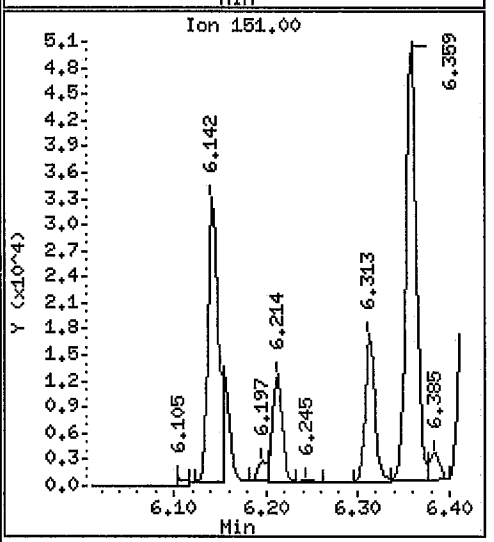
22 Acenaphthylene

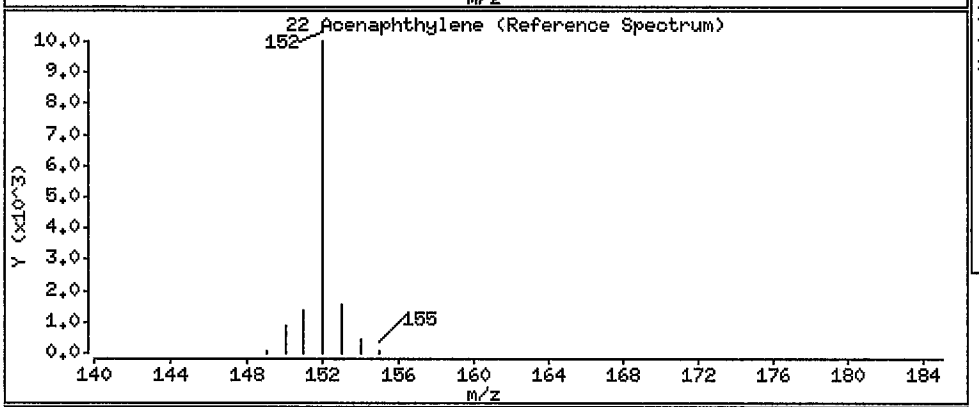
Concentration: 67900 ng/sample

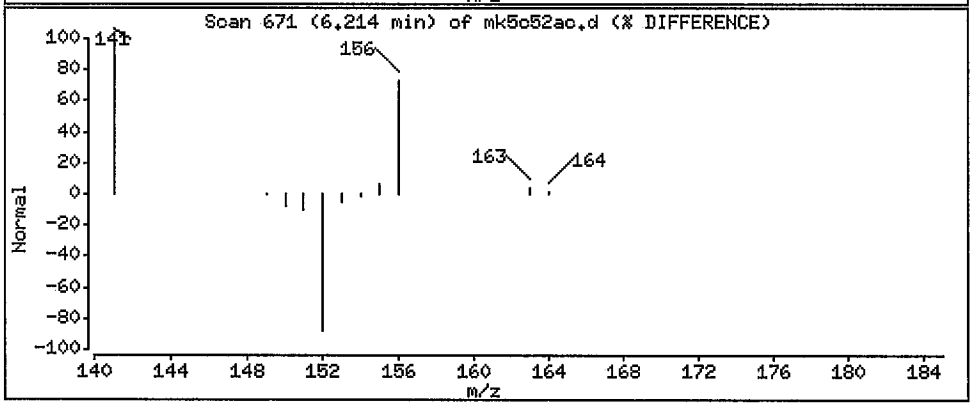












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

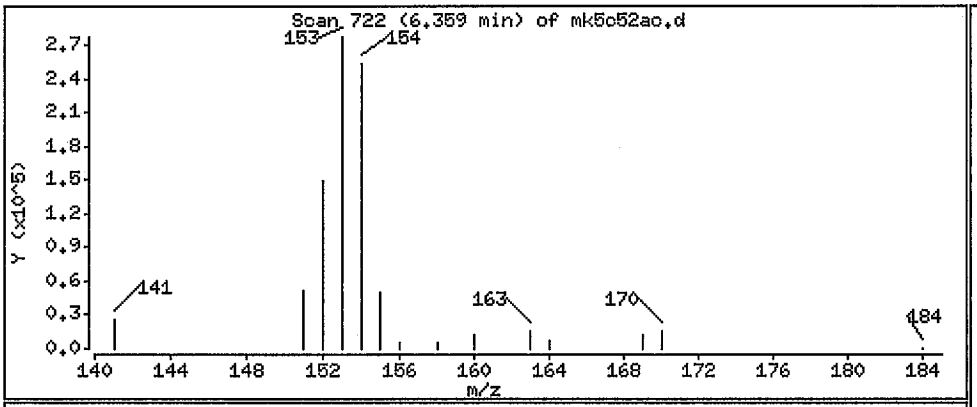
Operator: 11211

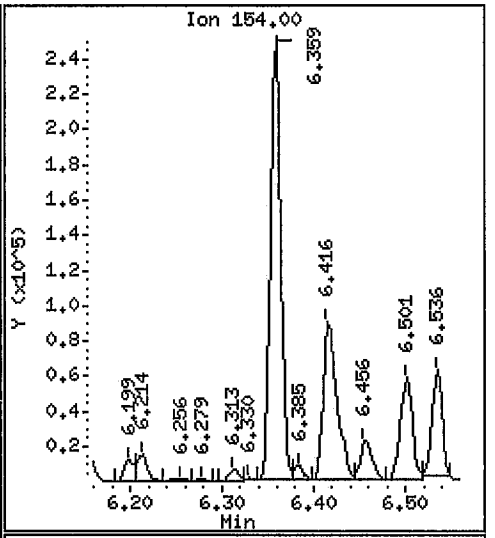
Column phase: Varian: 5MS

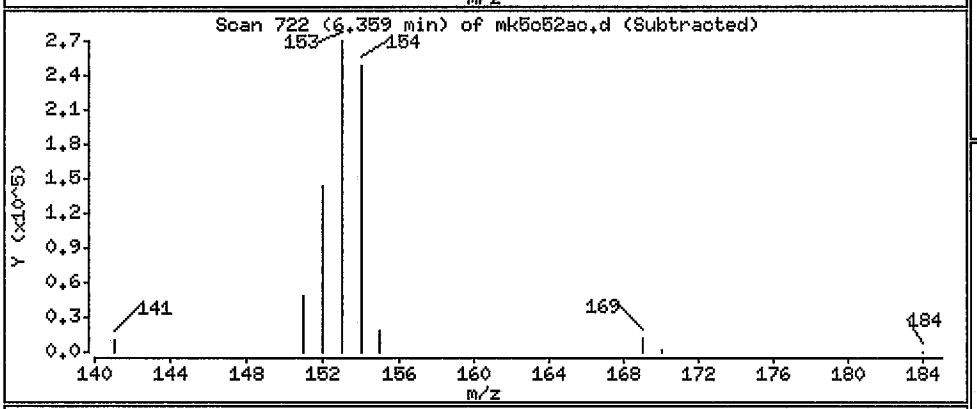
Column diameter: 0.25

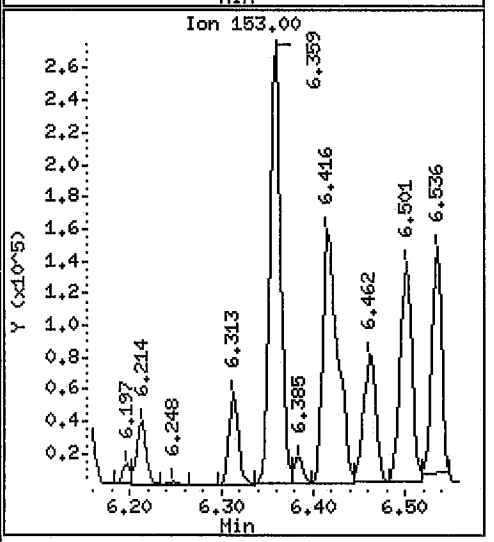
24 Acenaphthene

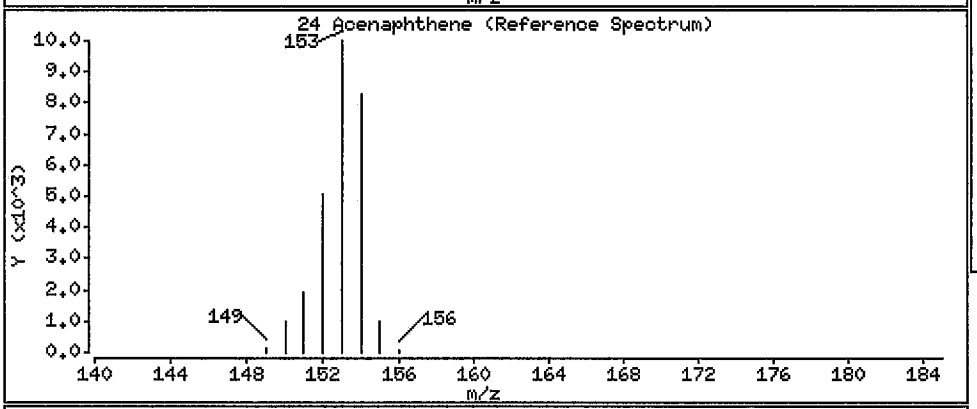
Concentration: 687000 ng/sample

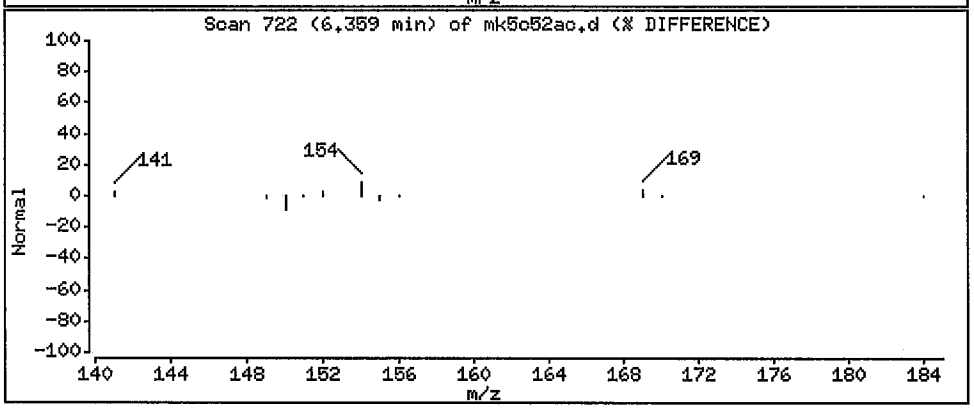












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

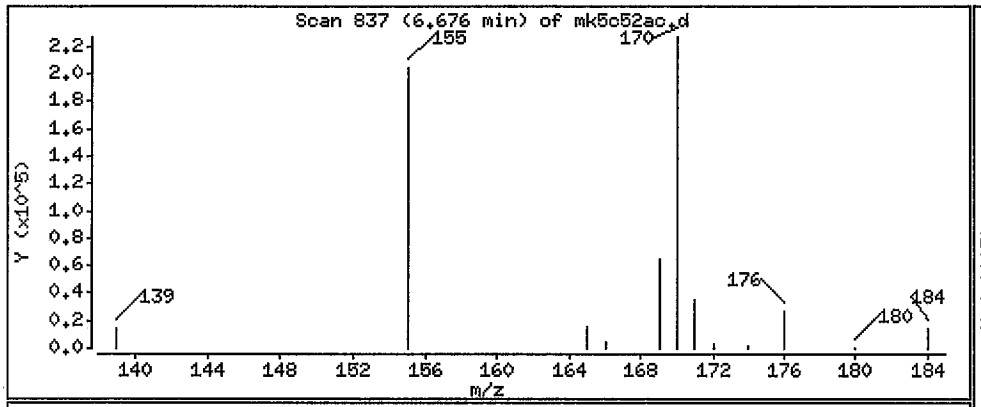
Operator: 11211

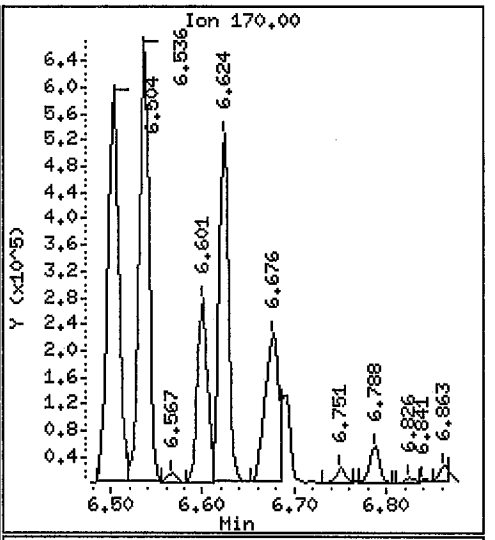
Column phase: Varian: 5MS

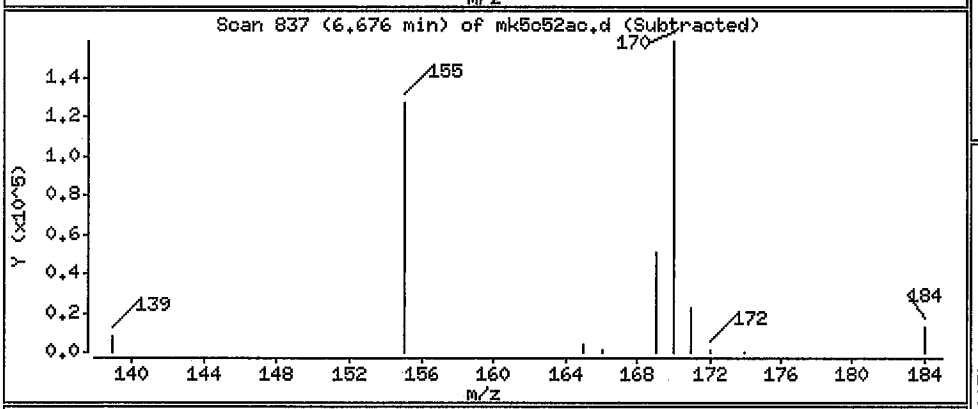
Column diameter: 0.25

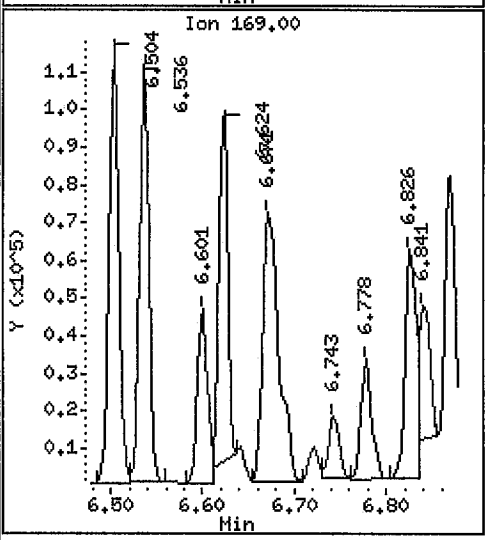
25 2,3,5 Trimethylnaphthalene

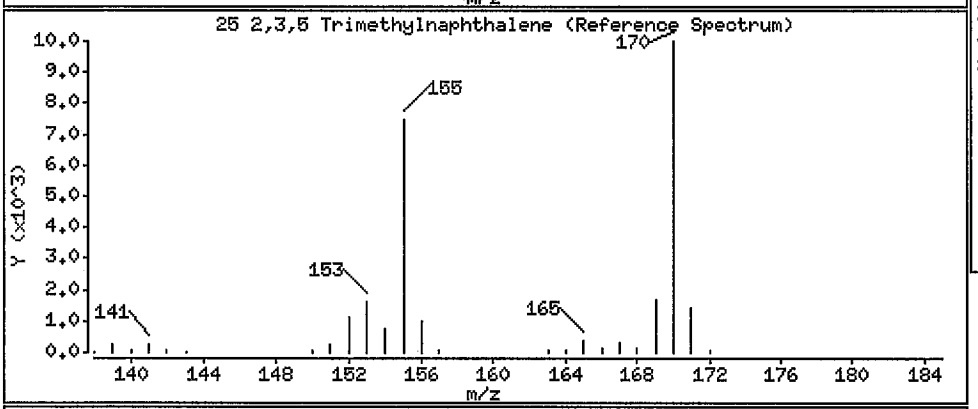
Concentration: 1080000 ng/sample

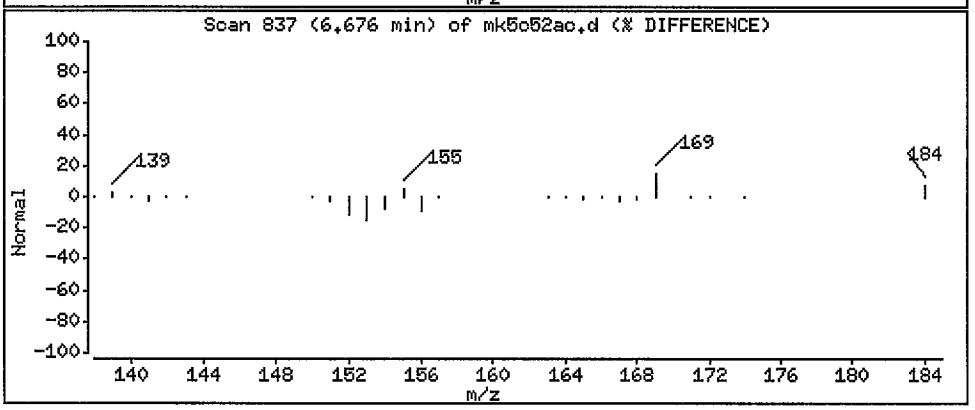












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

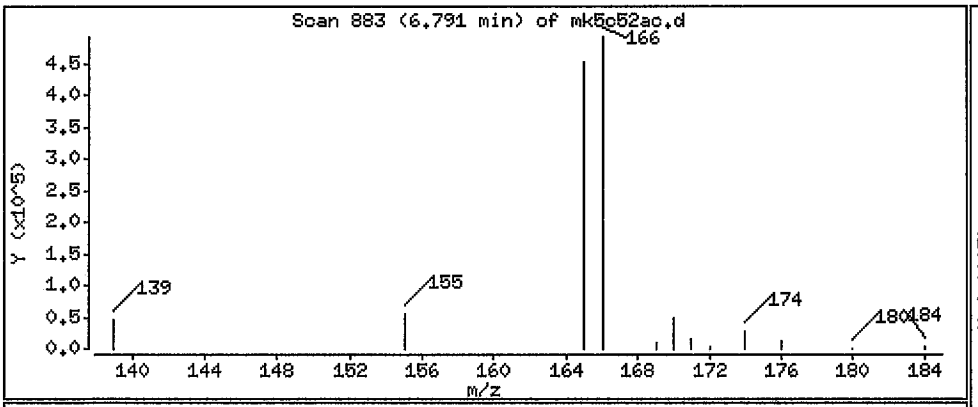
Operator: 11211

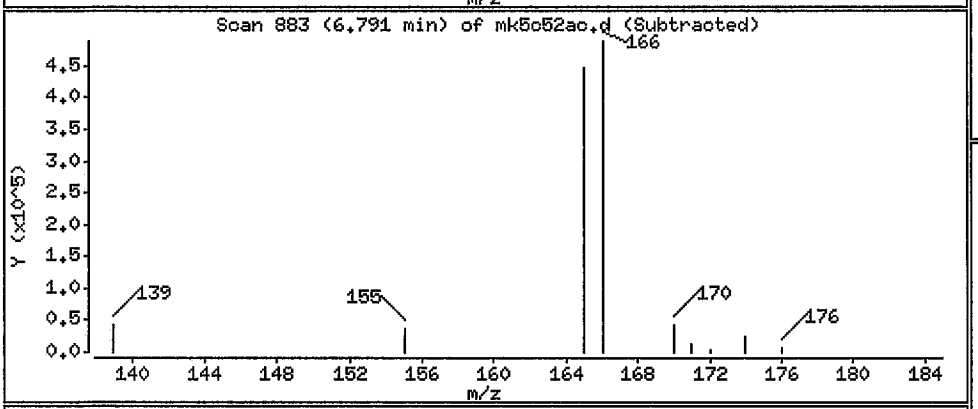
Column phase: Varian: 5MS

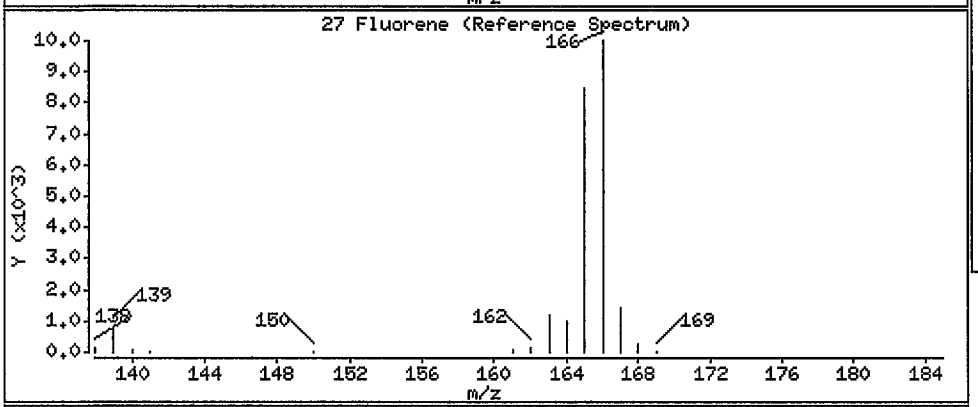
Column diameter: 0.25

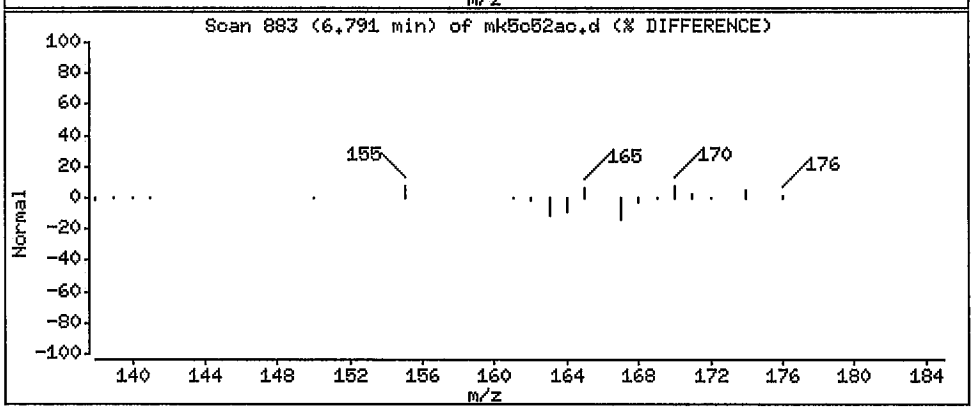
27 Fluorene

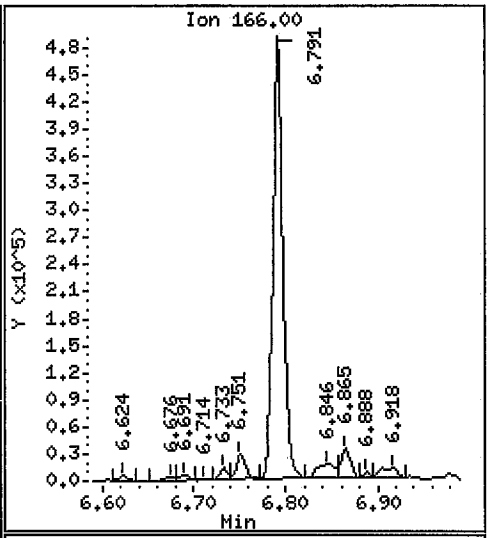
Concentration: 1250000 ng/sample

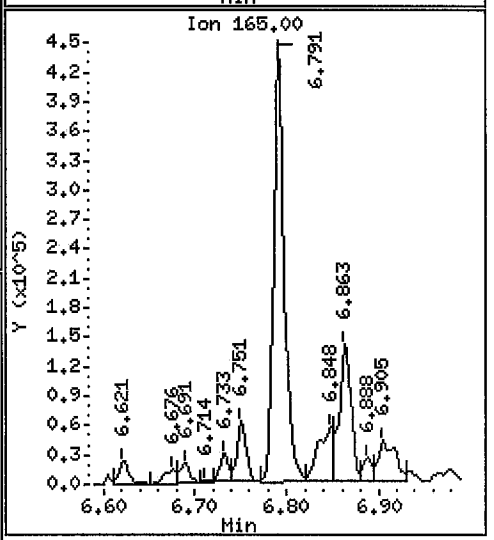












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

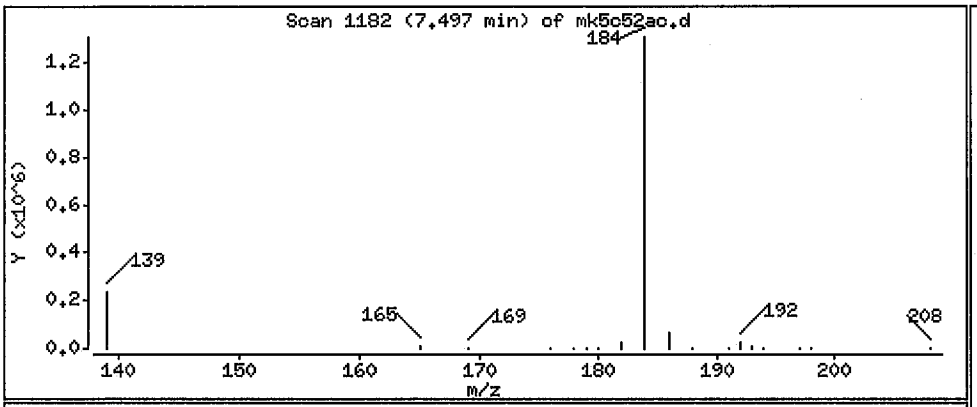
Operator: 11211

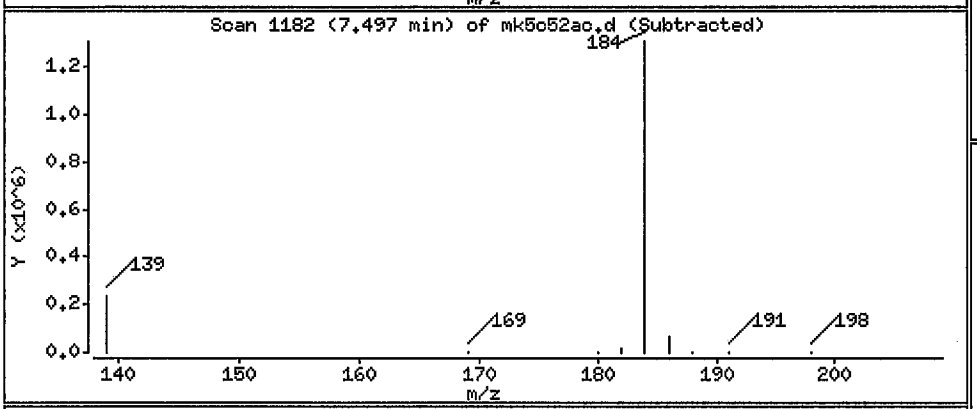
Column phase: Varian: 5MS

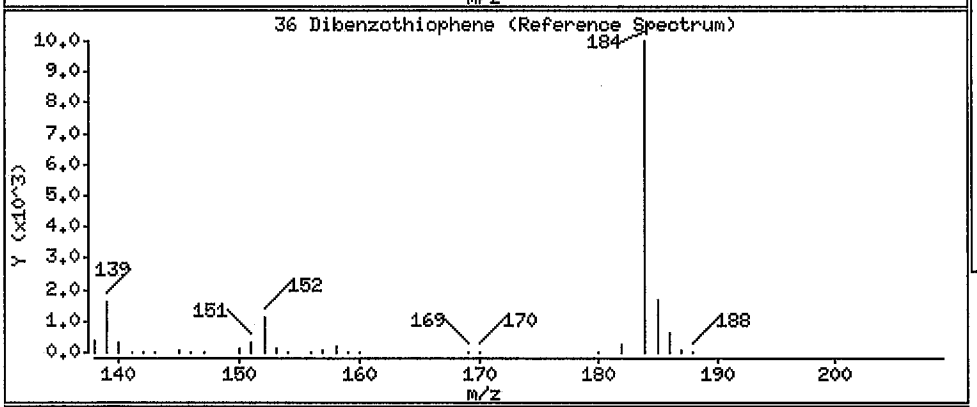
Column diameter: 0.25

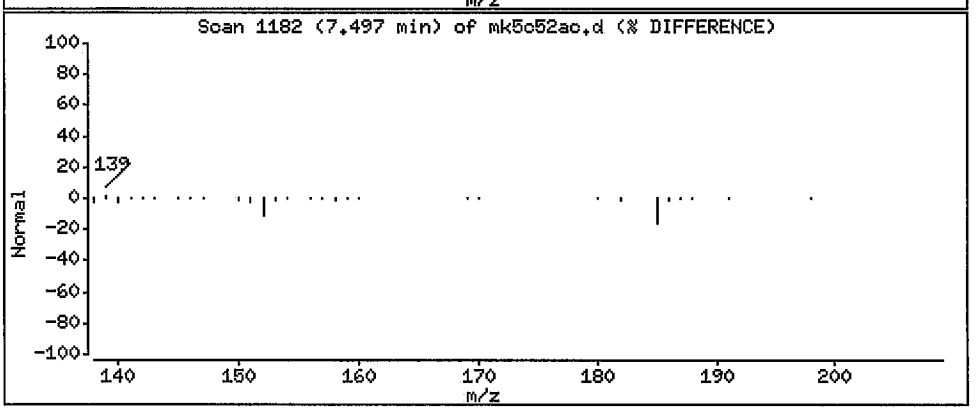
36 Dibenzothiophene

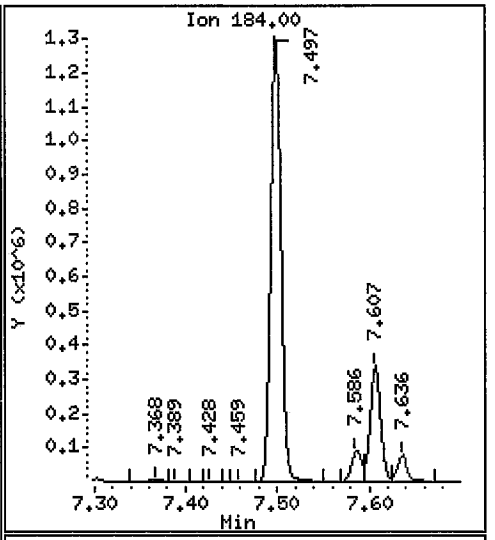
Concentration: 2450000 ng/sample

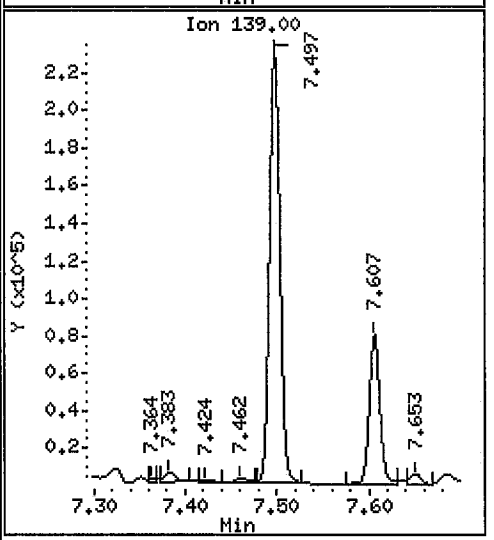












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

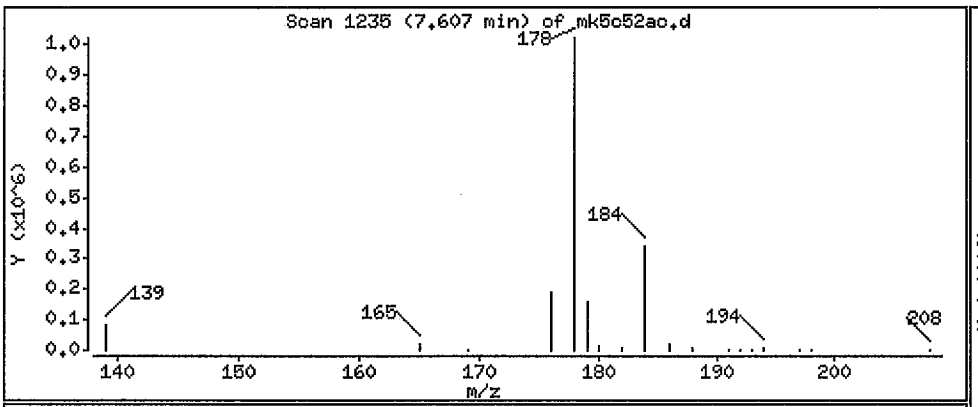
Operator: 11211

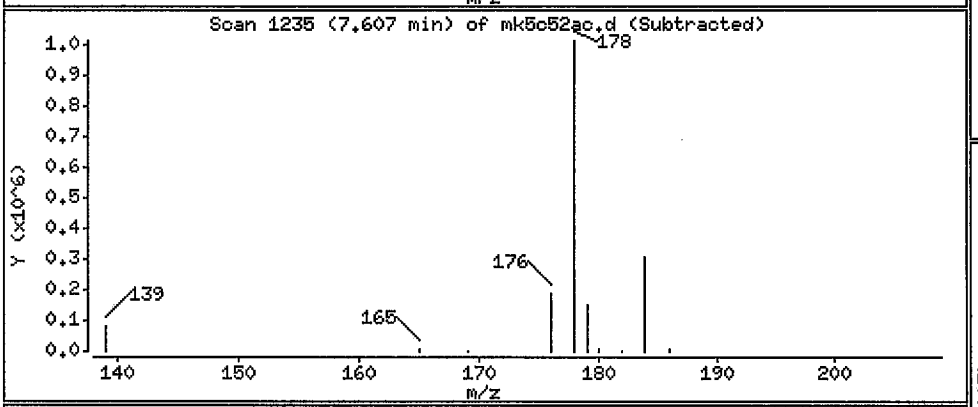
Column phase: Varian: 5MS

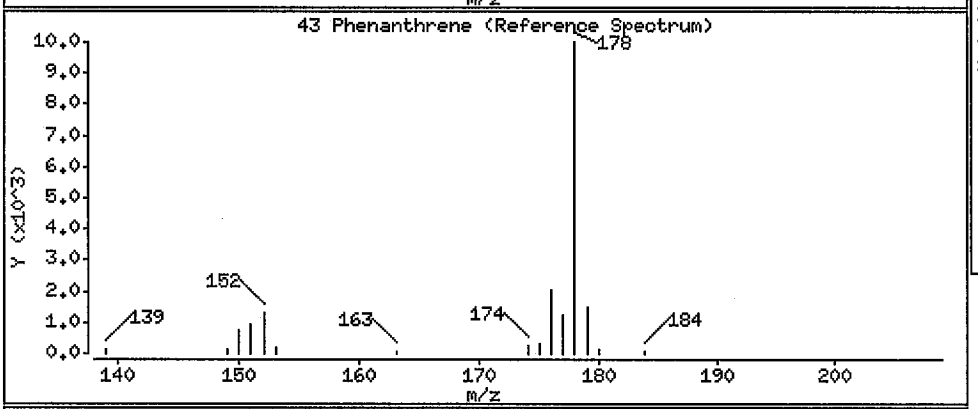
Column diameter: 0.25

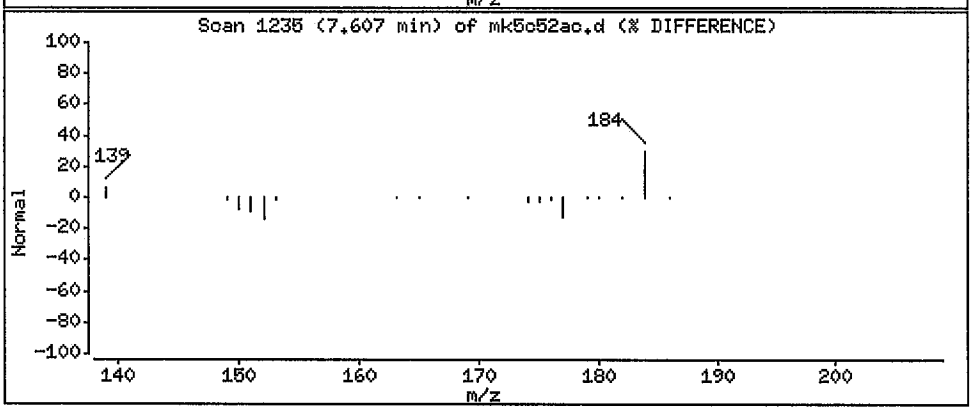
43 Phenanthrene

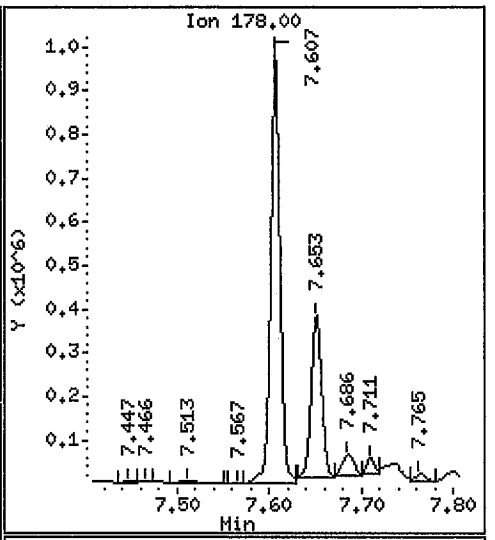
Concentration: 1870000 ng/sample

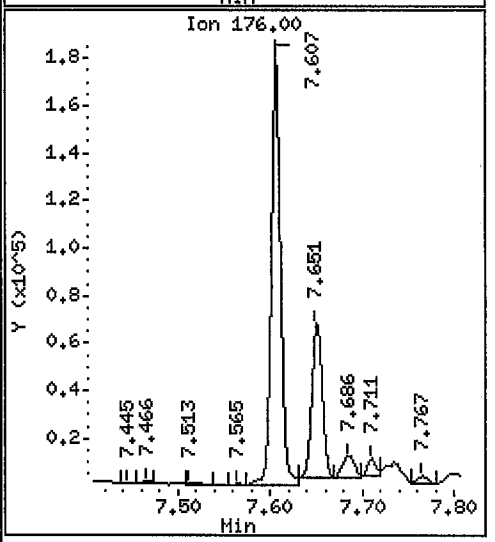












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

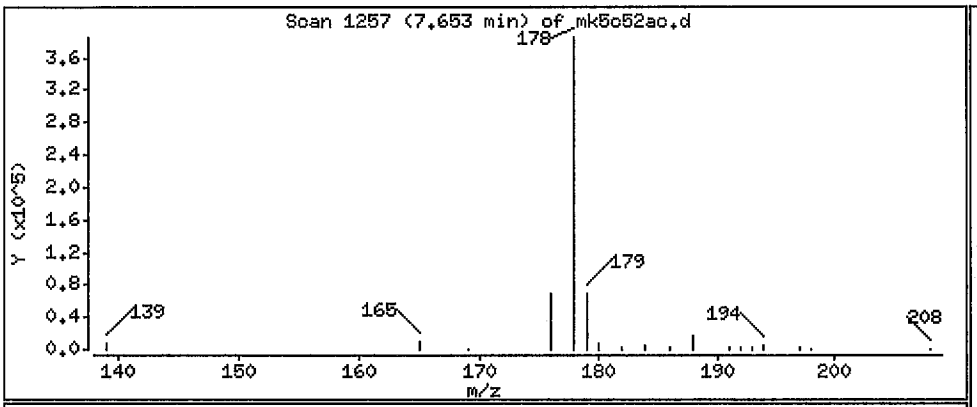
Operator: 11211

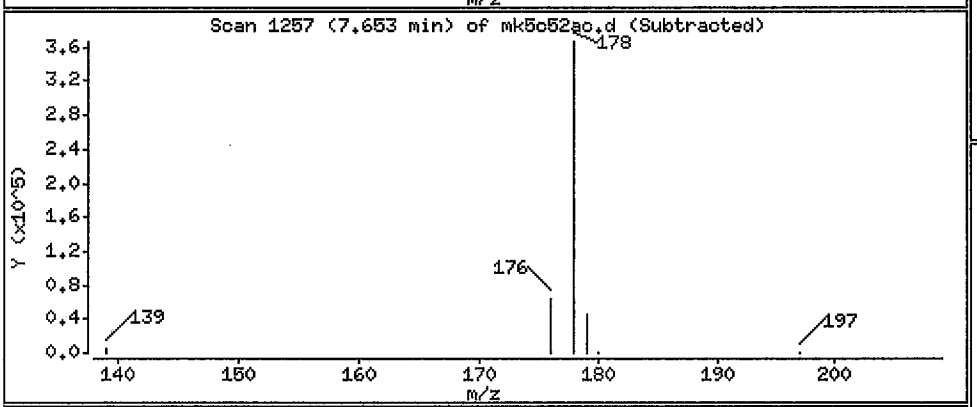
Column phase: Varian: 5MS

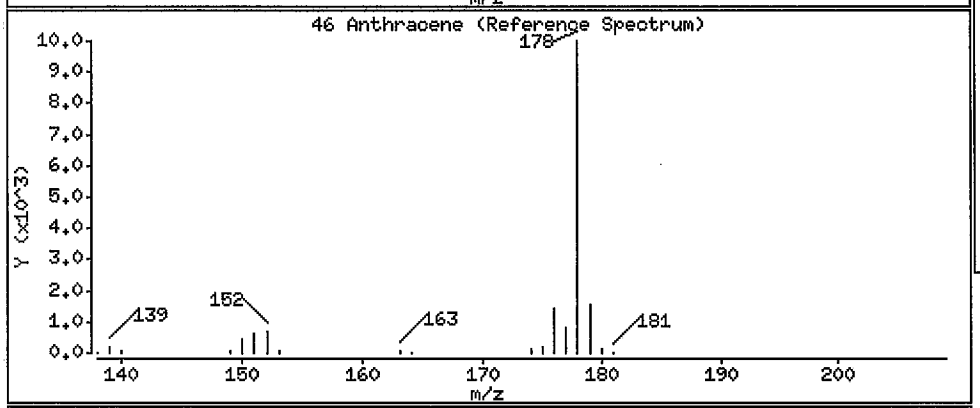
Column diameter: 0.25

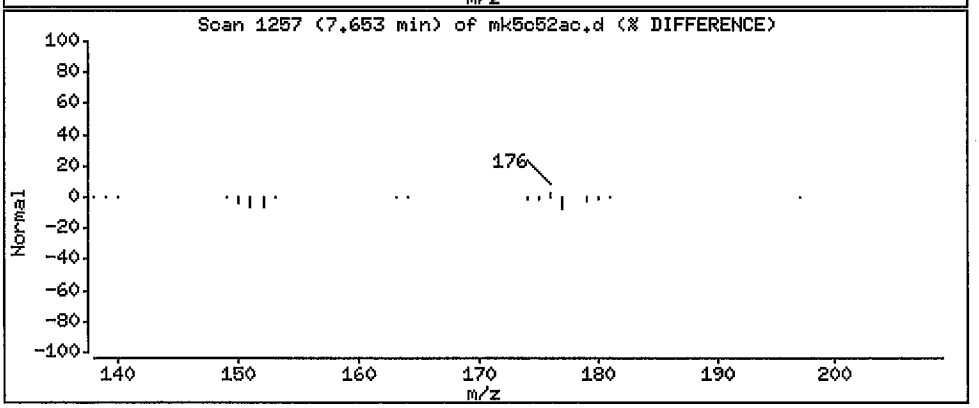
46 Anthracene

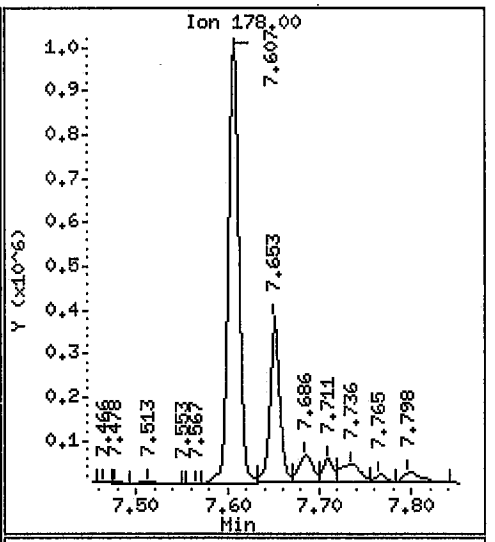
Concentration: 744000 ng/sample

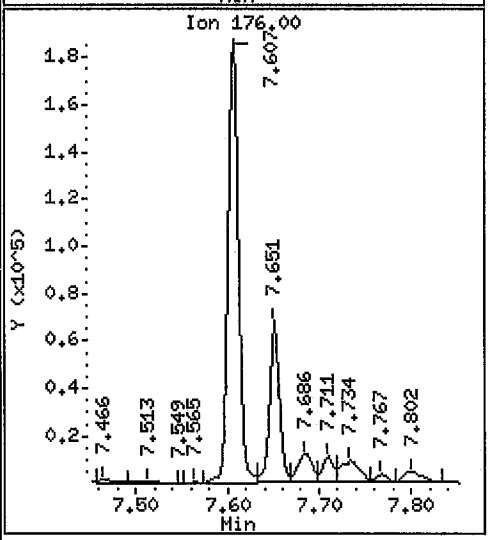












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

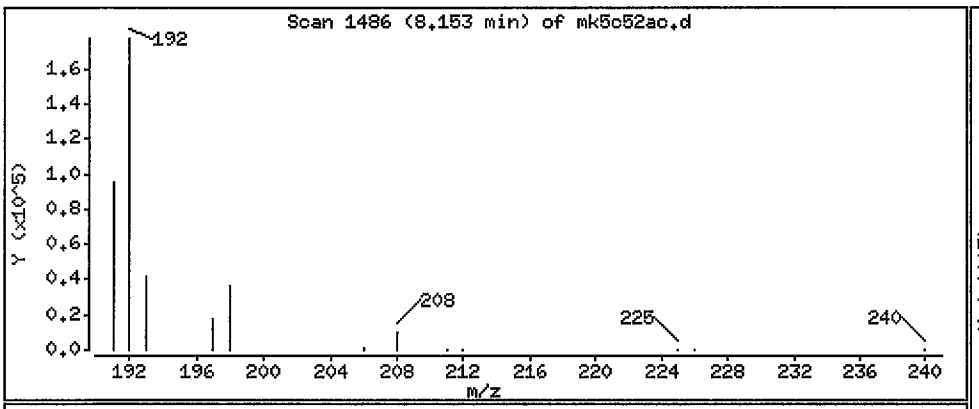
Client ID: EXM-DCU-M0010-R2-C0 Instrument: mp.i

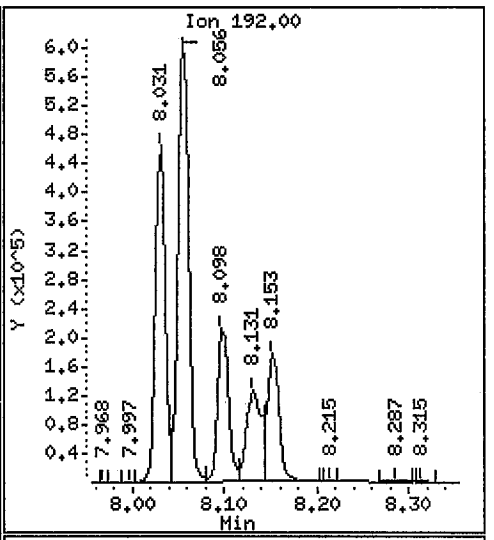
Sample Info: MK5C53AC,,0,,POSTSPK

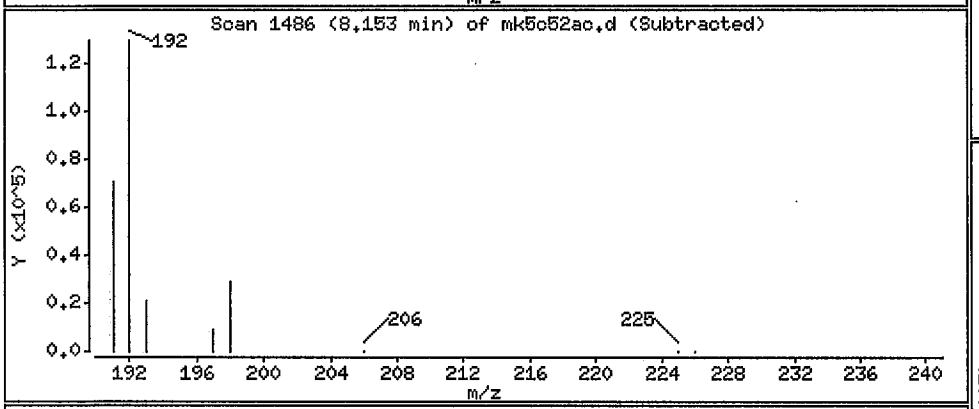
Purge Volume: 1.0 Operator: 11211

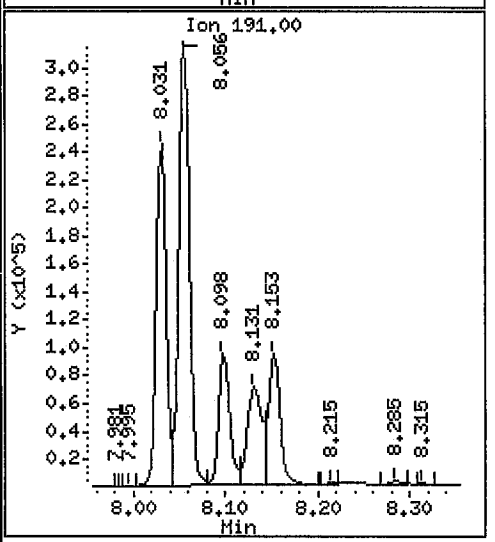
Column phase: Varian: 5MS Column diameter: 0.25

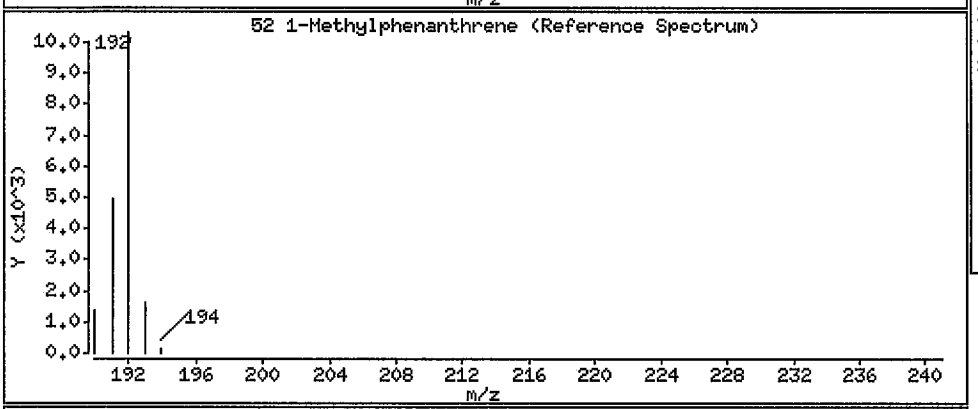
52 1-Methylphenanthrene Concentration: 619000 ng/sample

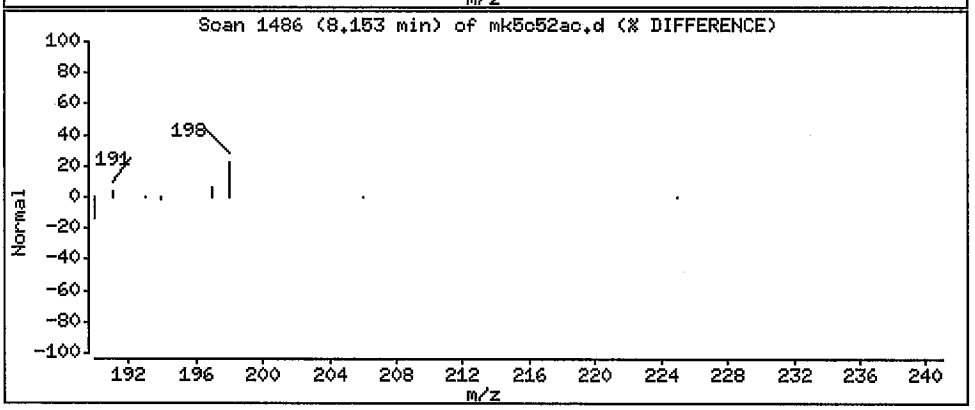












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

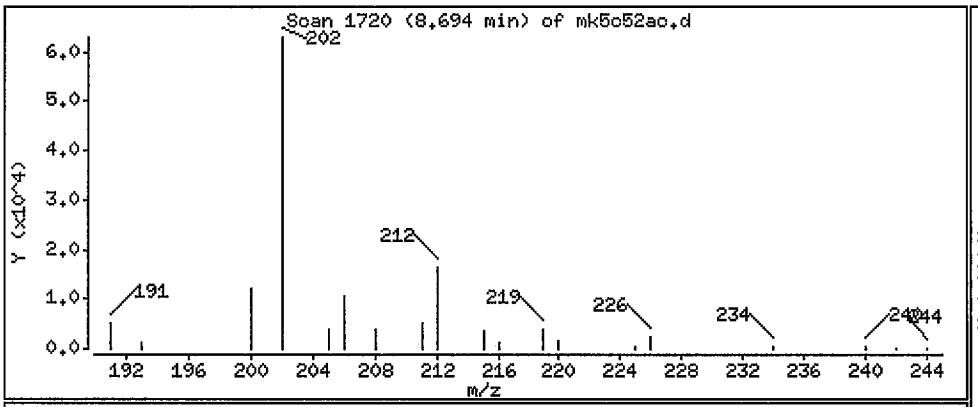
Client ID: EXM-DCU-M0010-R2-C0 Instrument: mp.i

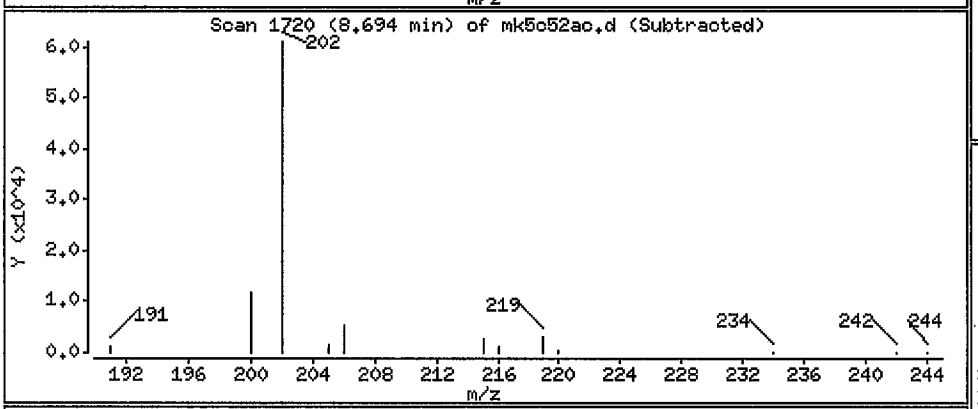
Sample Info: MK5C53AC,,0,,POSTSPK

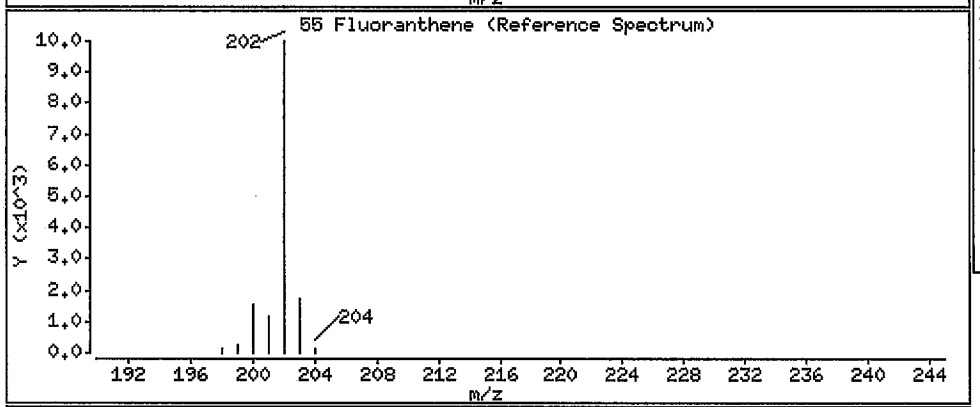
Purge Volume: 1.0 Operator: 11211

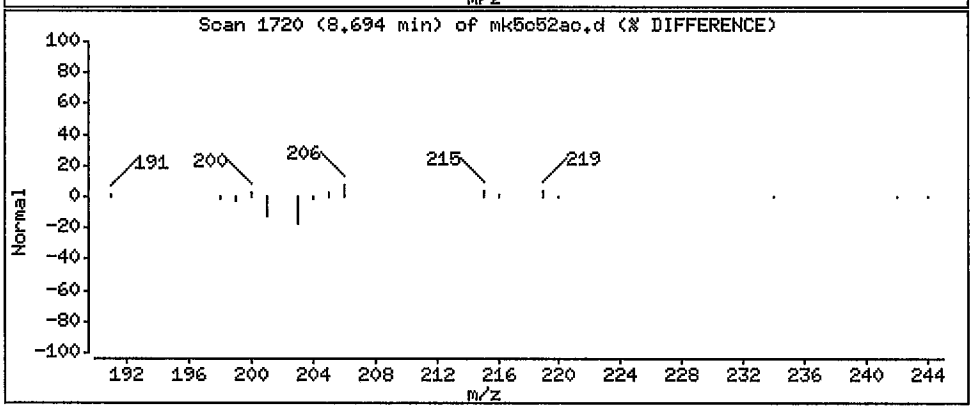
Column phase: Varian: 5MS Column diameter: 0.25

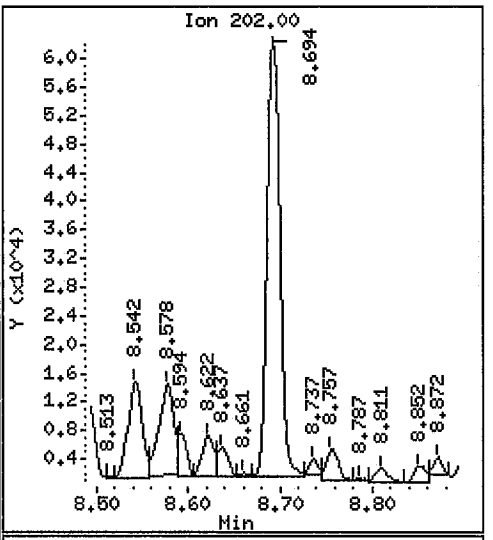
55 Fluoranthene Concentration: 122000 ng/sample

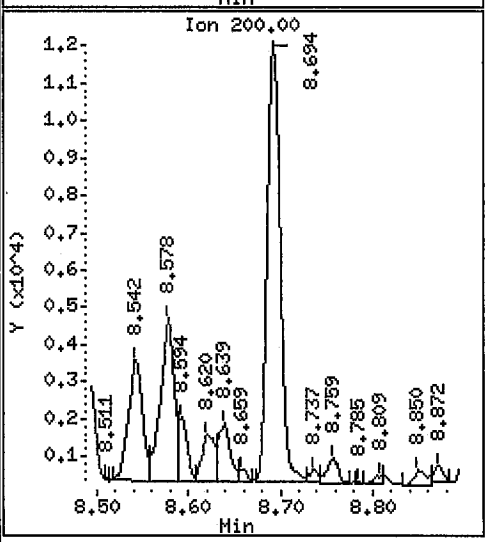












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

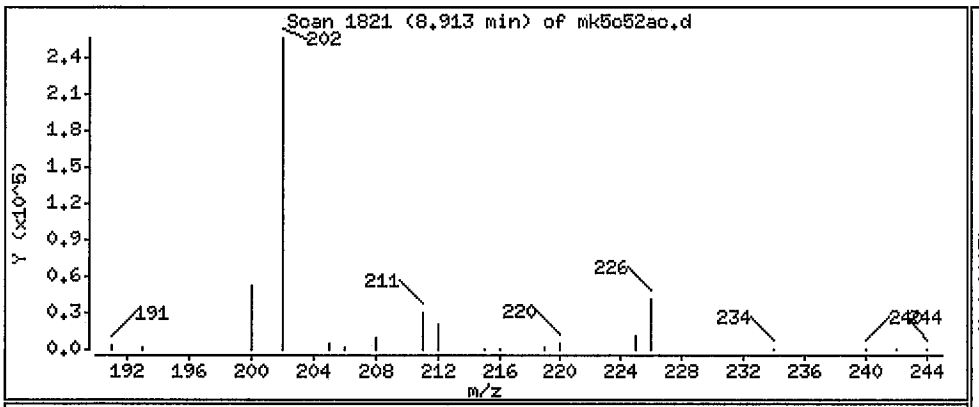
Operator: 11211

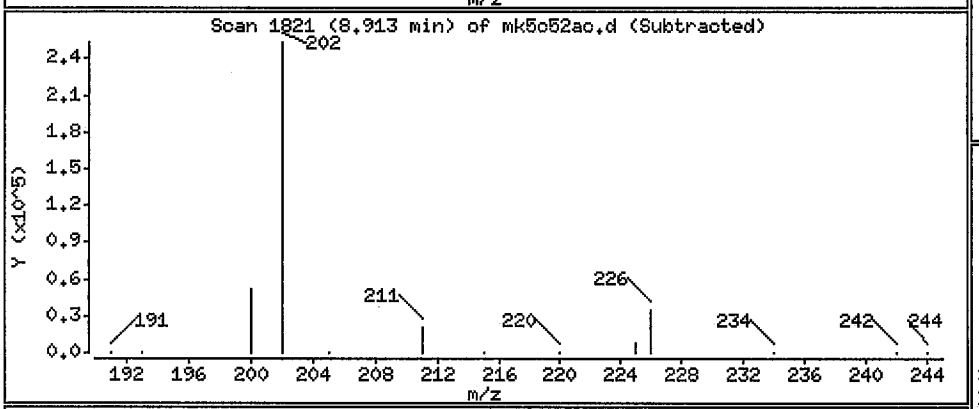
Column phase: Varian: 5MS

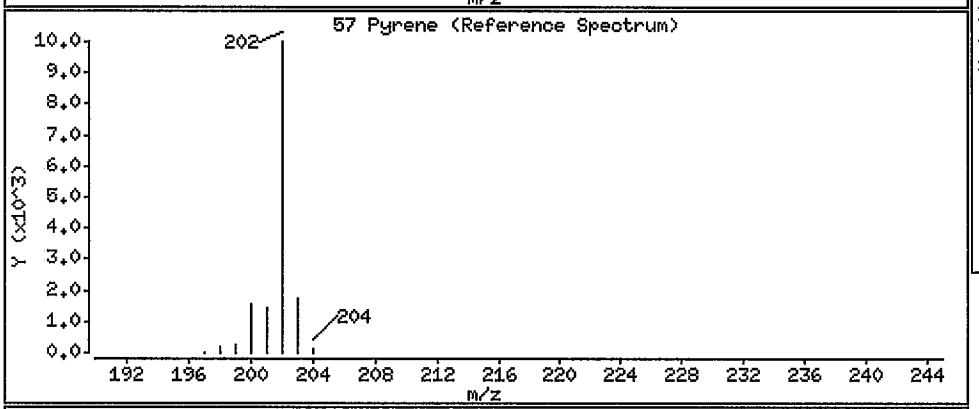
Column diameter: 0.25

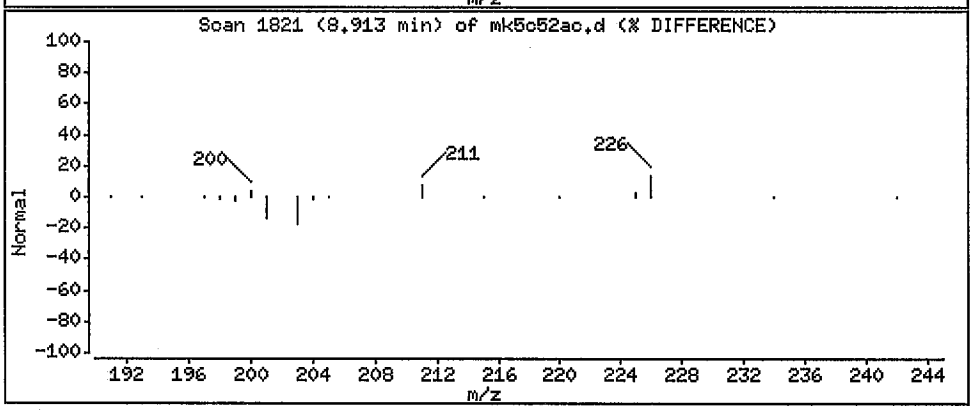
57 Pyrene

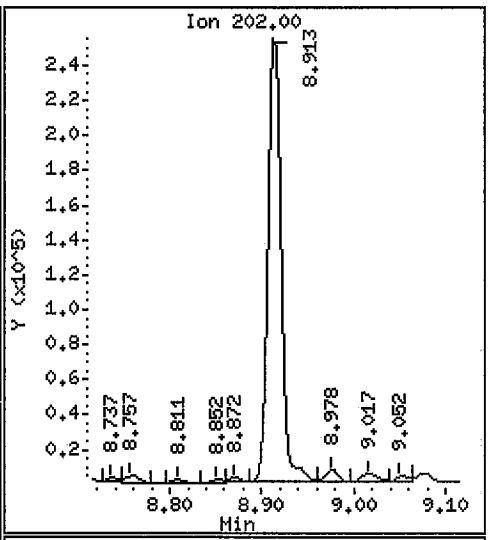
Concentration: 497000 ng/sample

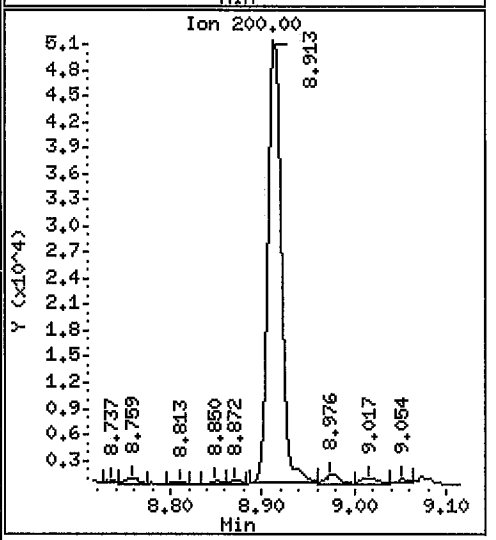












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

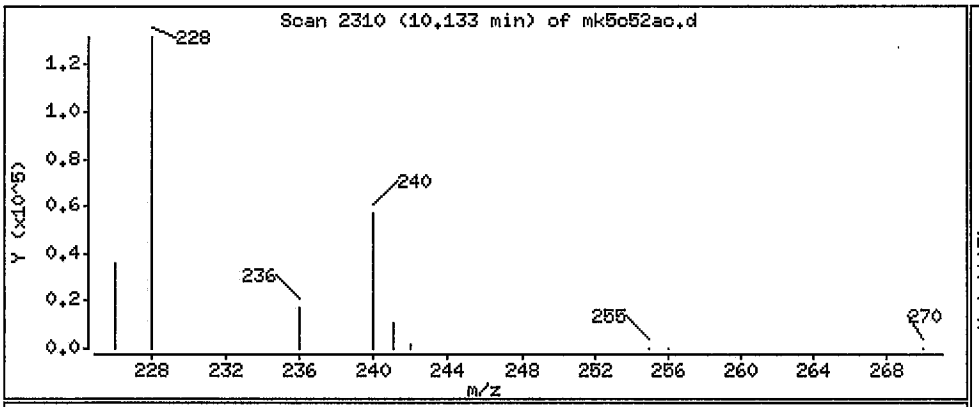
Operator: 11211

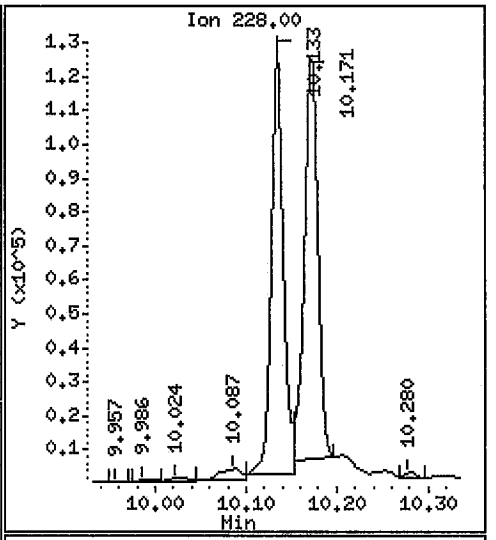
Column phase: Varian: 5MS

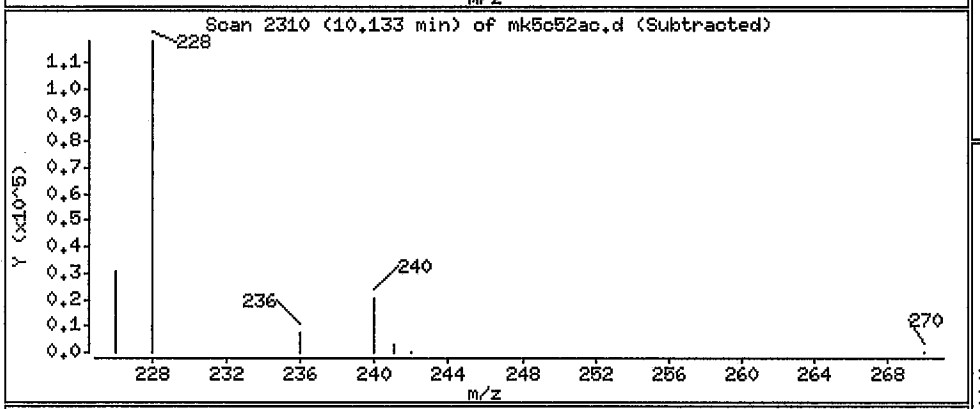
Column diameter: 0.25

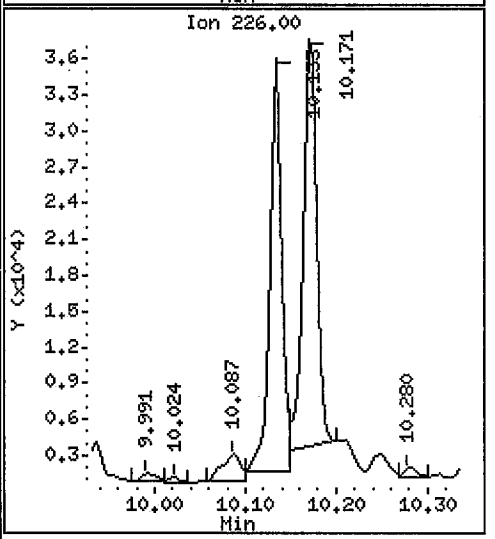
62 Benzo(a)anthracene

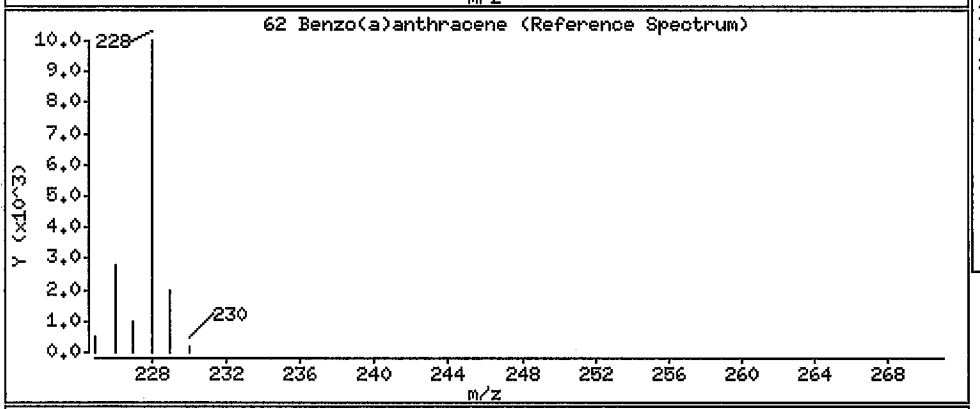
Concentration: 336000 ng/sample

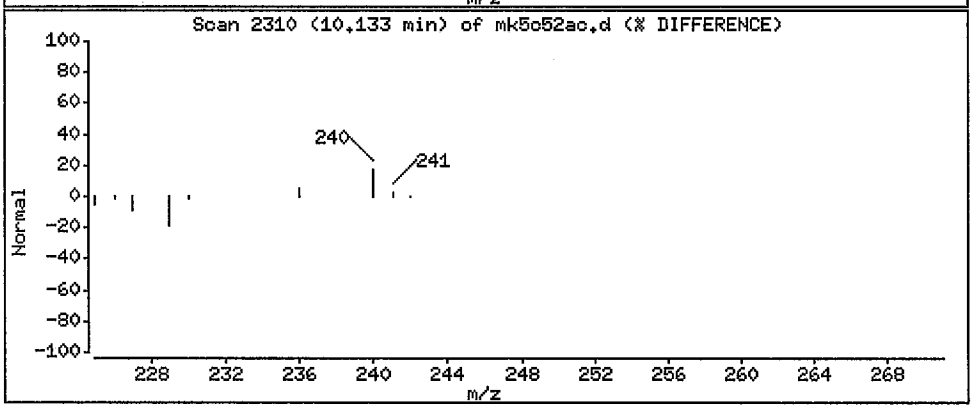












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

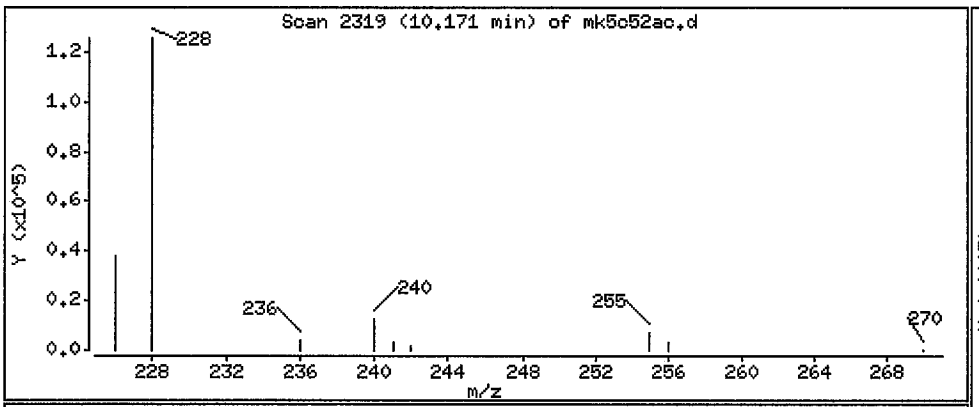
Operator: 11211

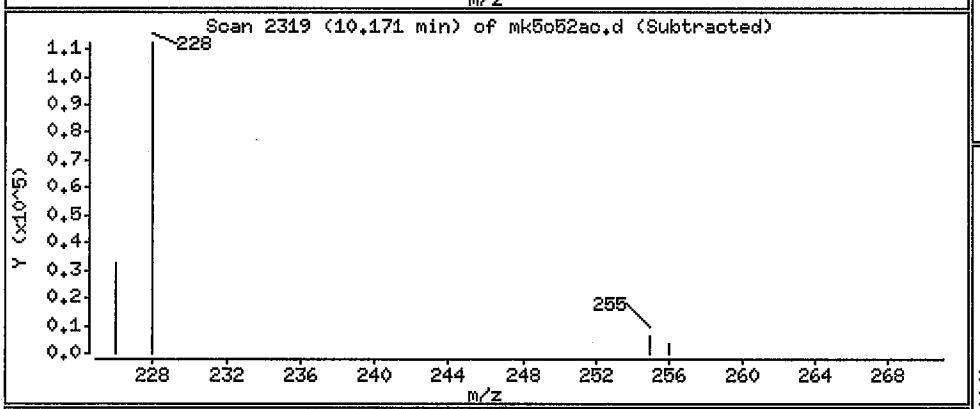
Column phase: Varian: 5MS

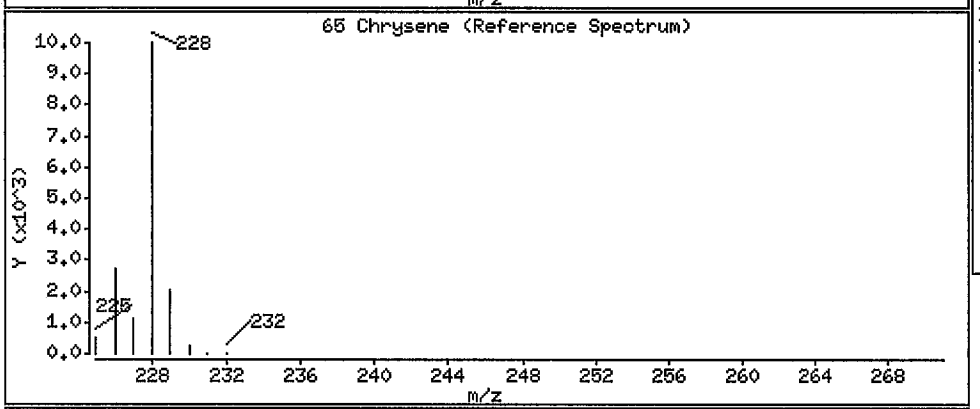
Column diameter: 0.25

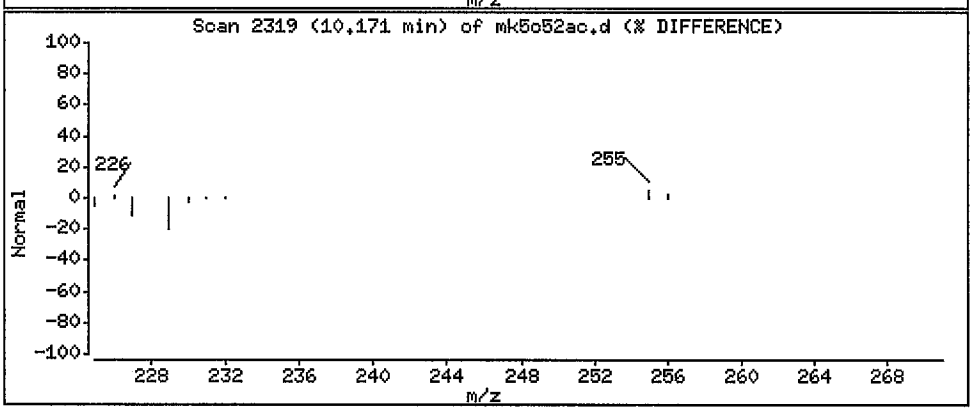
65 Chrysene

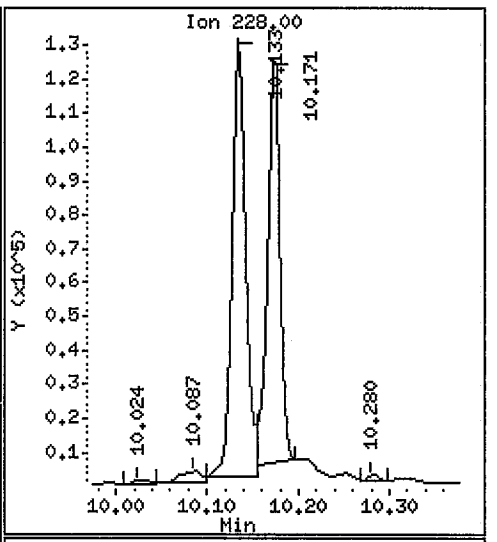
Concentration: 371000 ng/sample

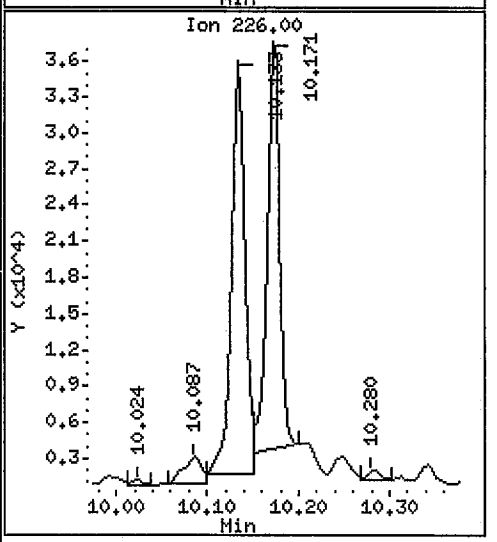












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

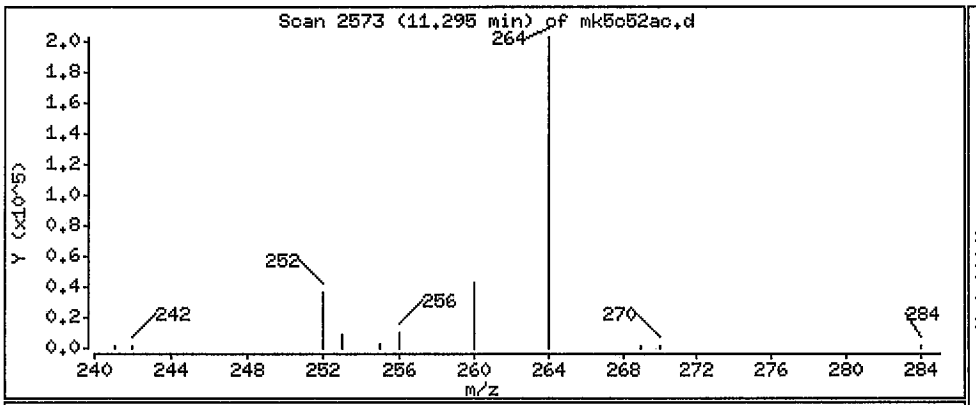
Operator: 11211

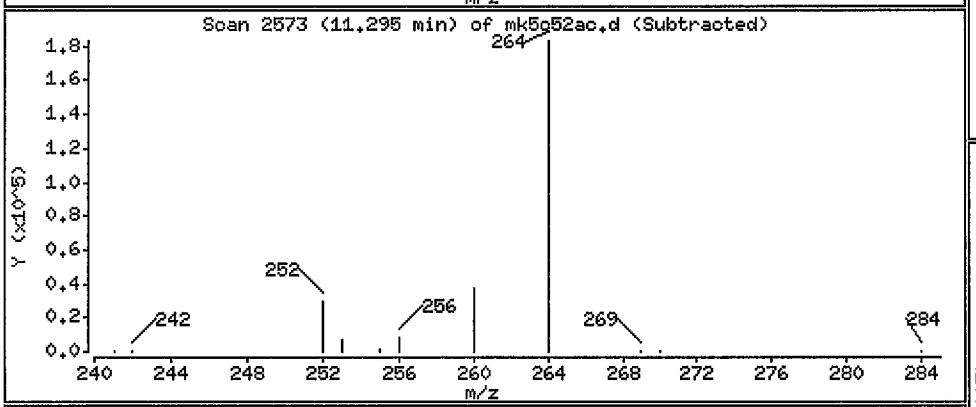
Column phase: Varian: 5MS

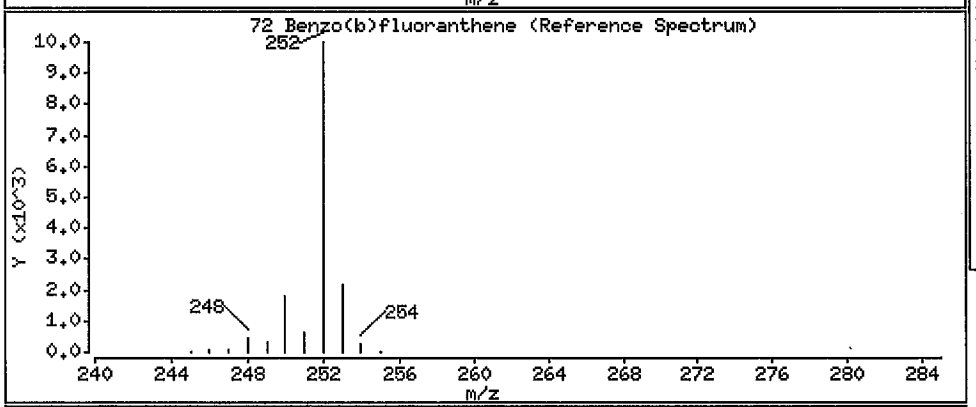
Column diameter: 0.25

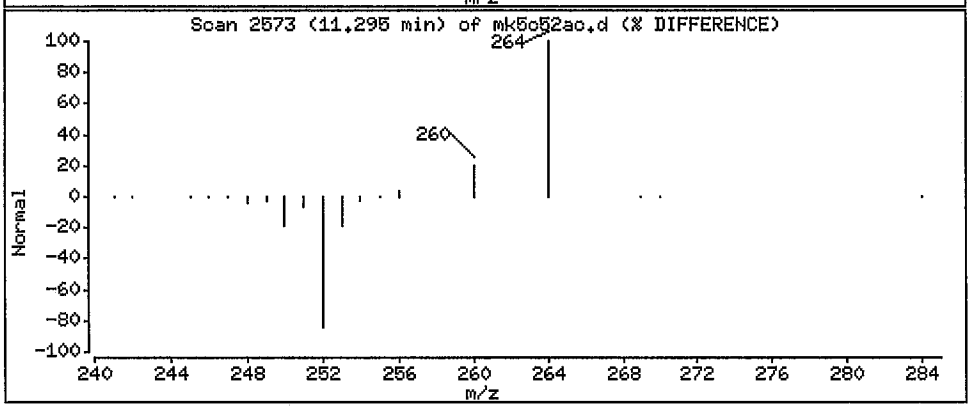
72 Benzo(b)fluoranthene

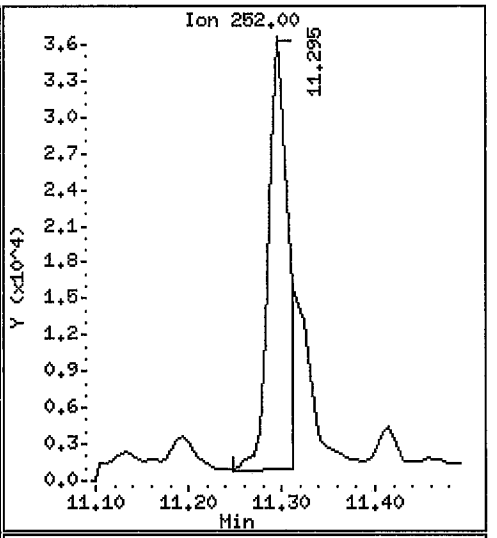
Concentration: 152000 ng/sample

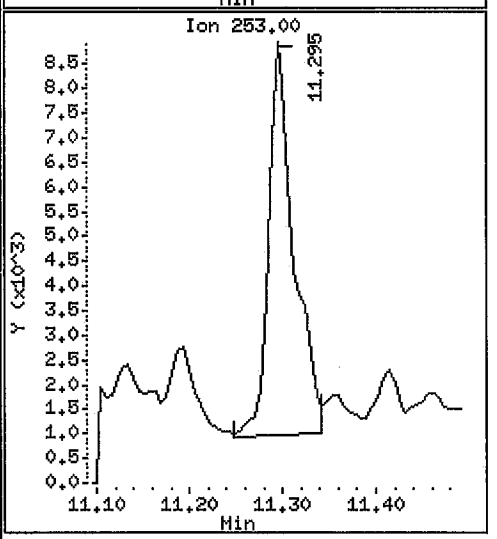












1/8/14

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Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

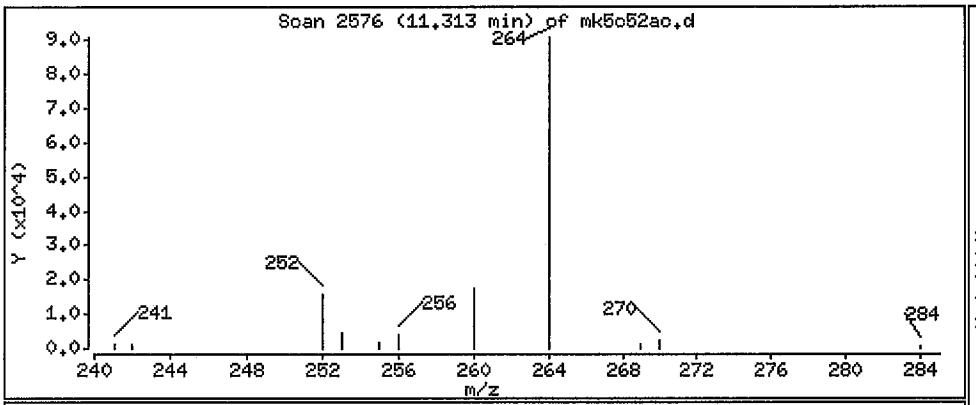
Operator: 11211

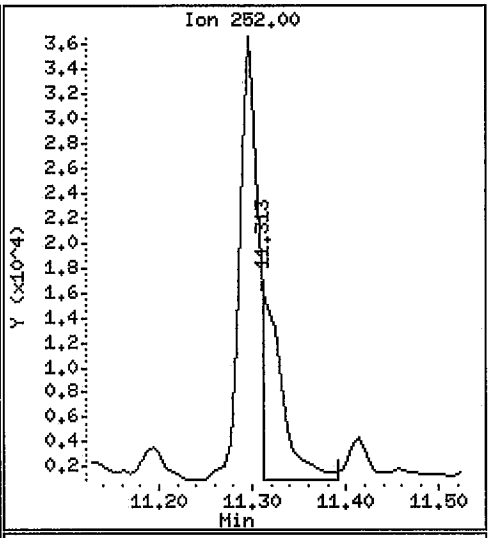
Column phase: Varian: 5MS

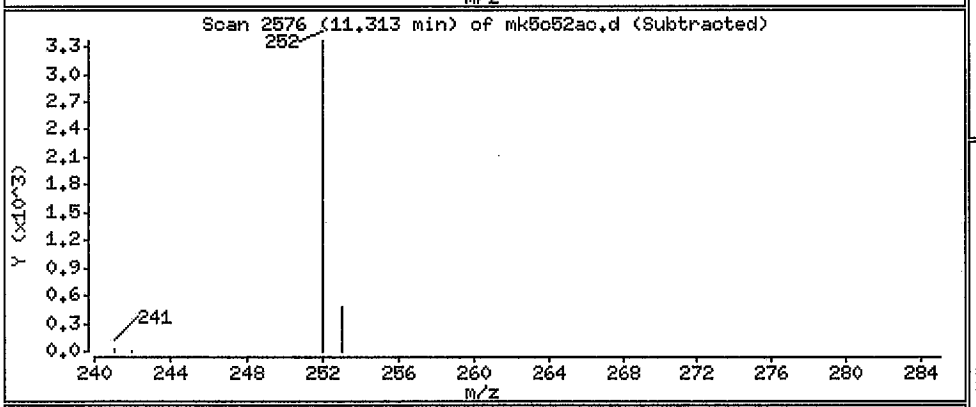
Column diameter: 0.25

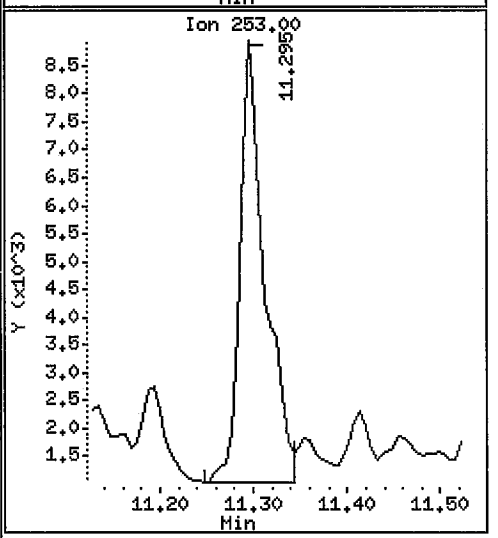
75 Benzo(k)fluoranthene

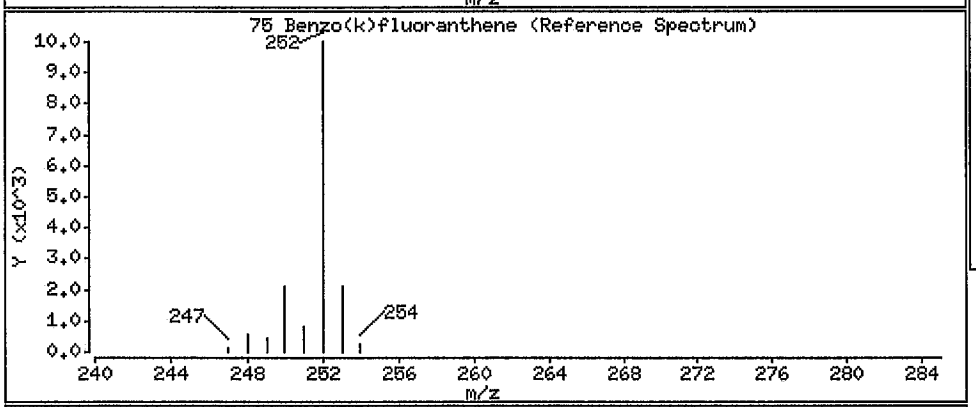
Concentration: 70600 ng/sample

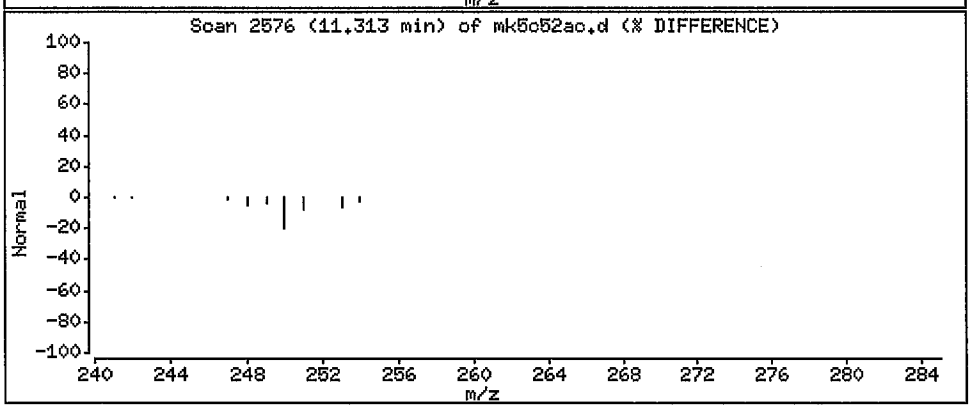












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

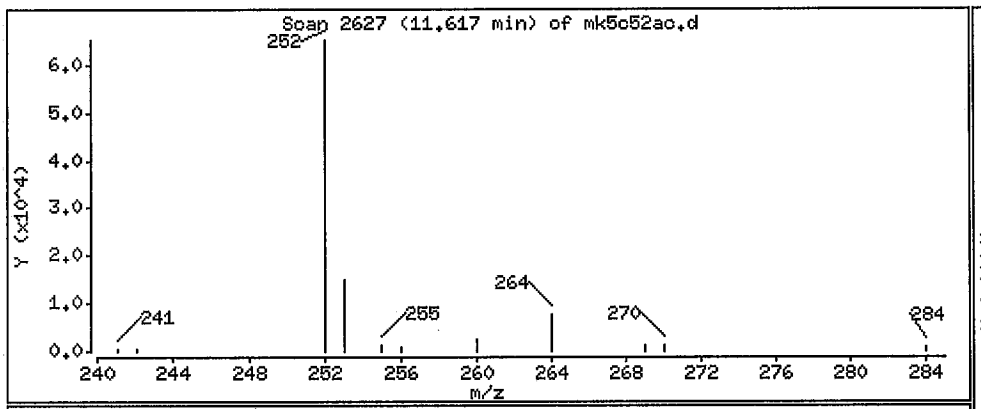
Operator: 11211

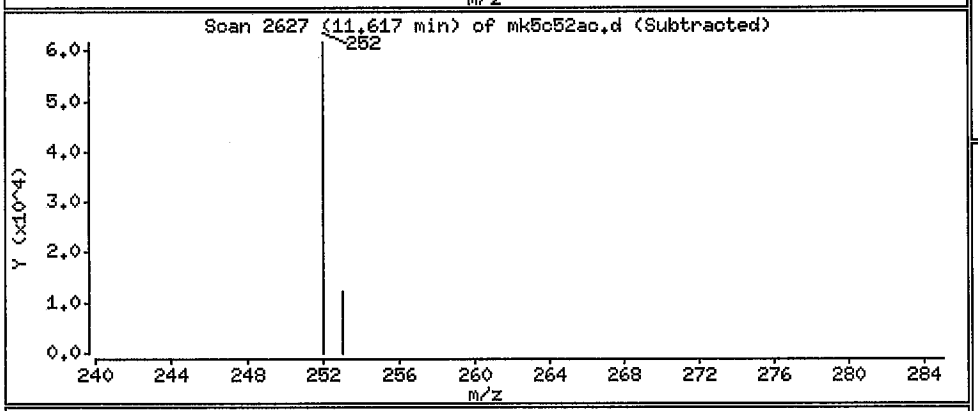
Column phase: Varian: 5MS

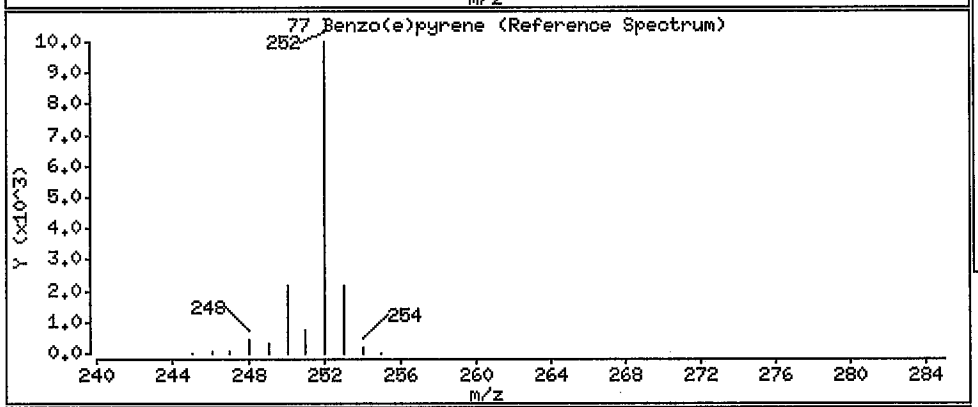
Column diameter: 0.25

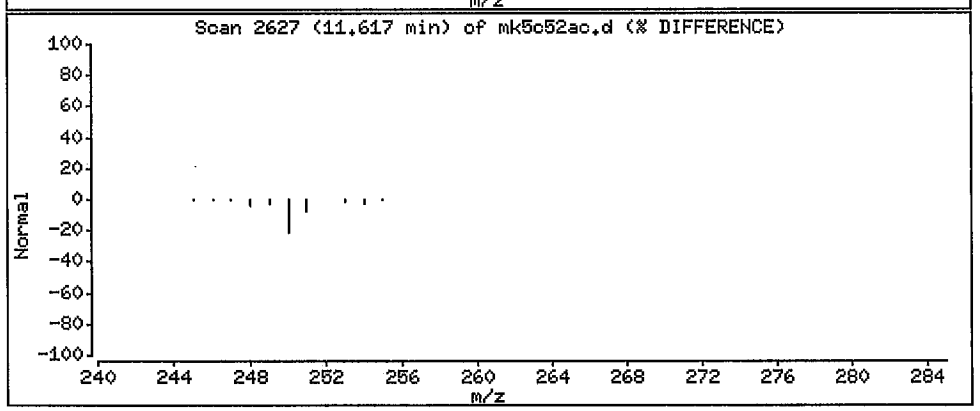
77 Benzo(e)pyrene

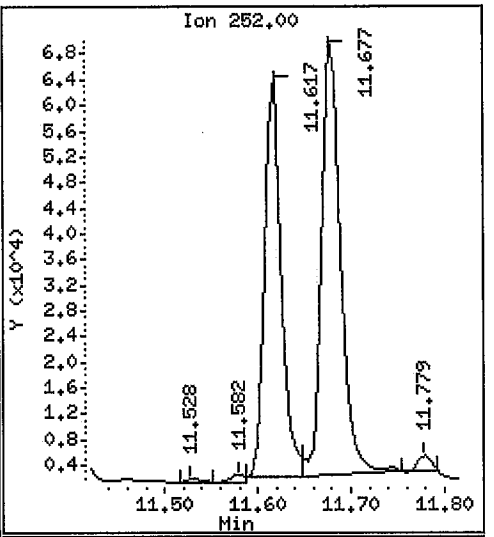
Concentration: 262000 ng/sample

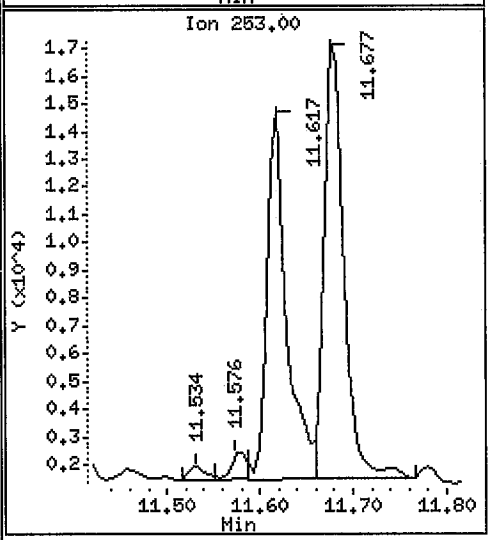












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

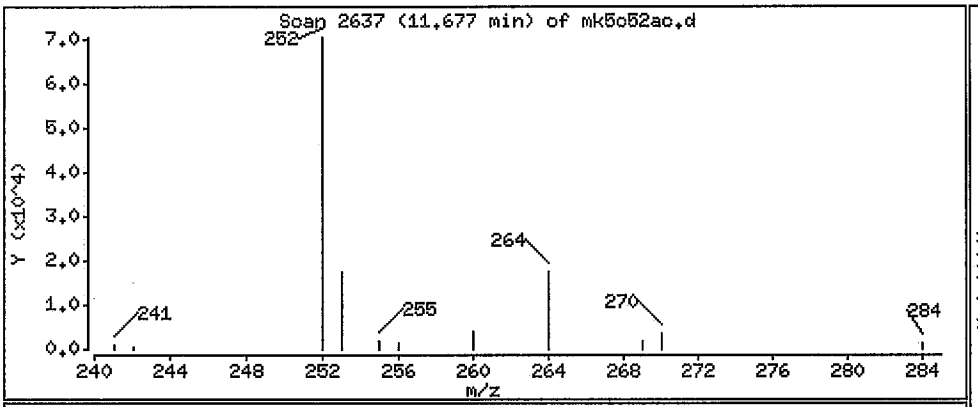
Operator: 11211

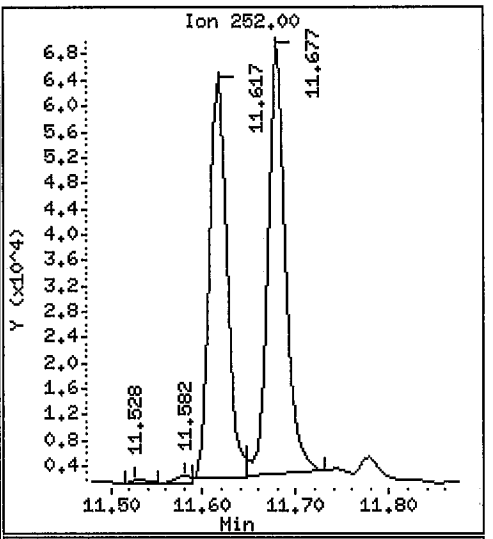
Column phase: Varian: 5MS

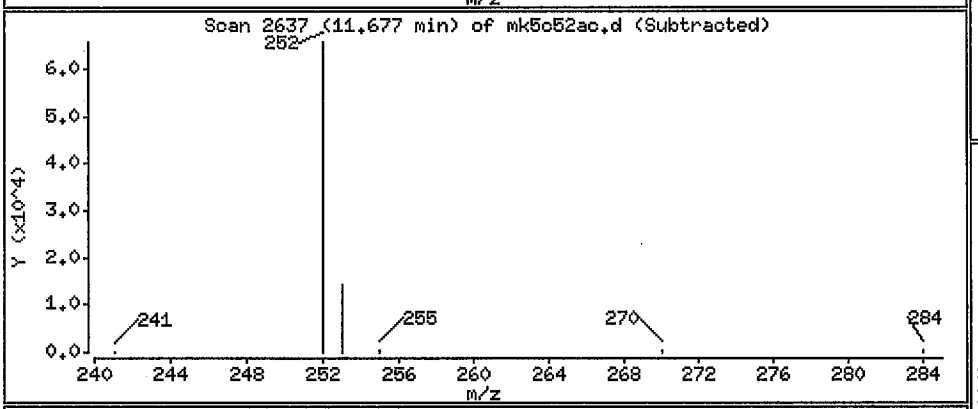
Column diameter: 0.25

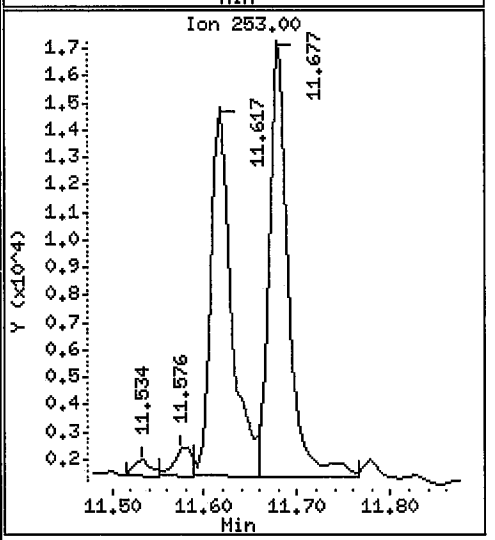
80 Benzo(a)pyrene

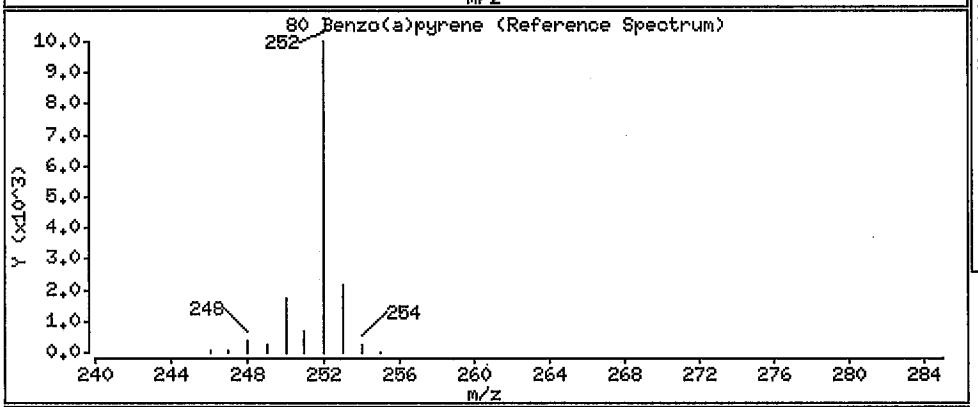
Concentration: 353000 ng/sample

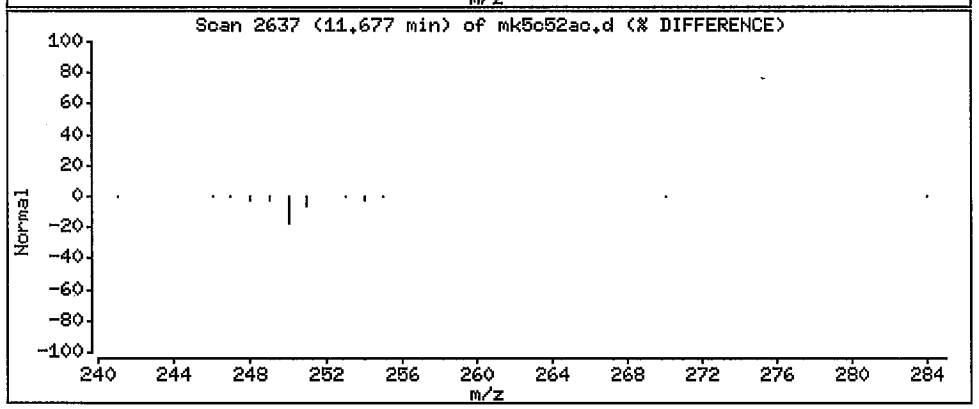












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

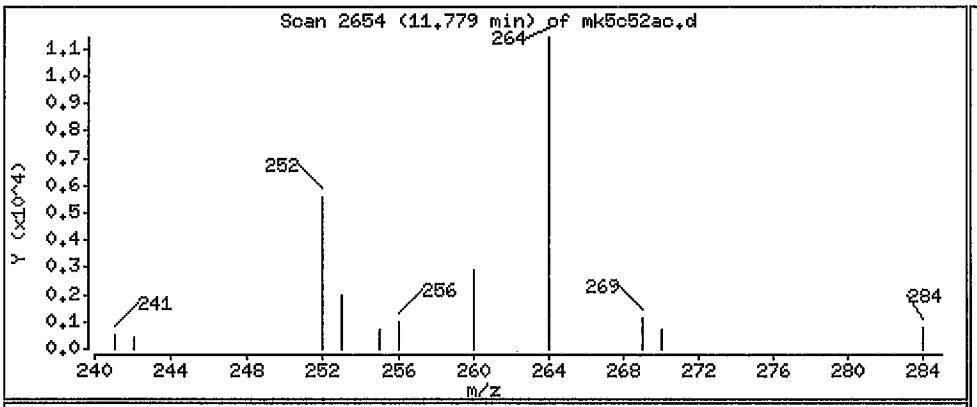
Operator: 11211

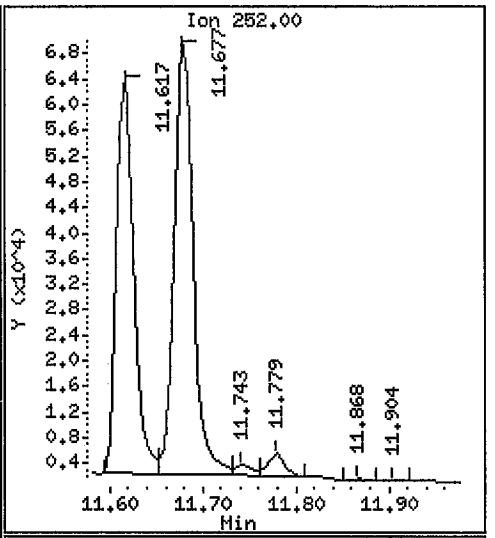
Column phase: Varian: 5MS

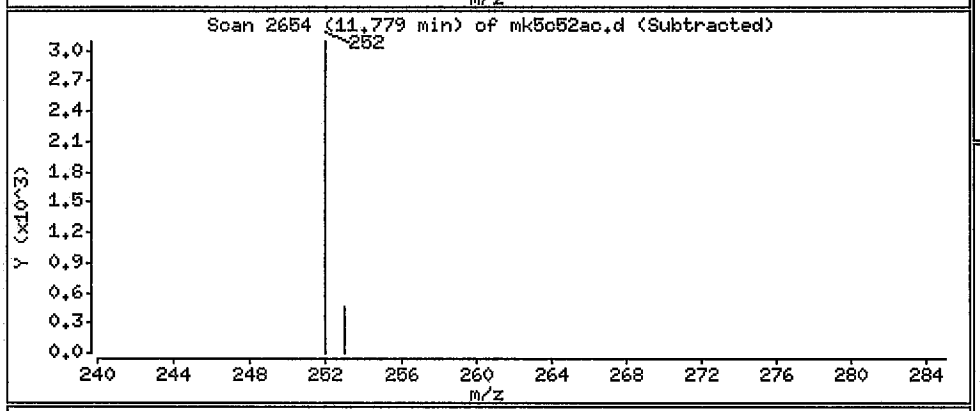
Column diameter: 0.25

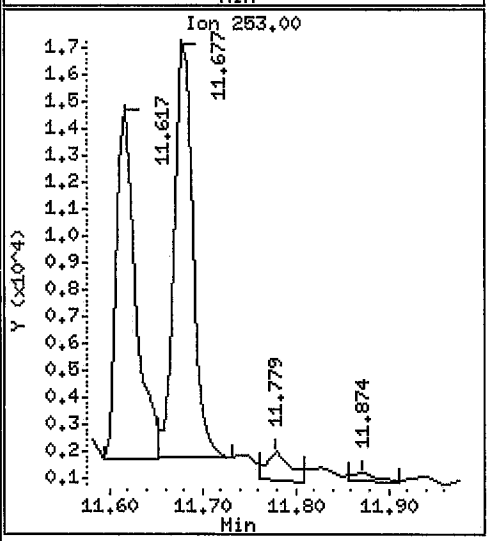
83 Perylene

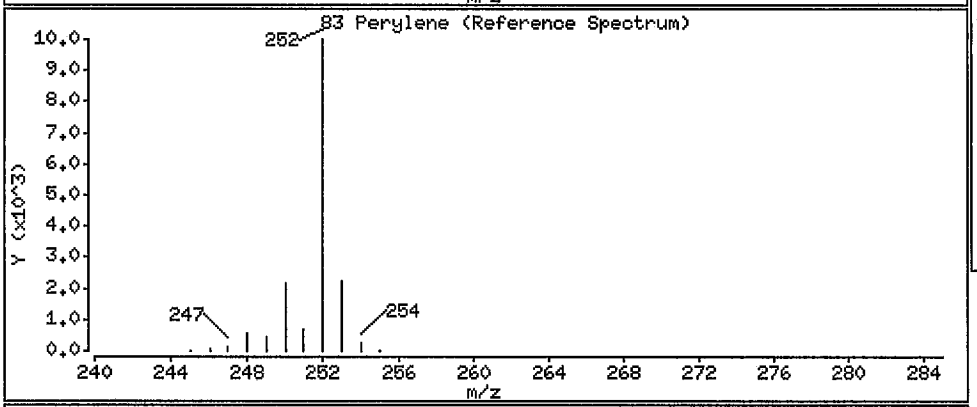
Concentration: 19300 ng/sample

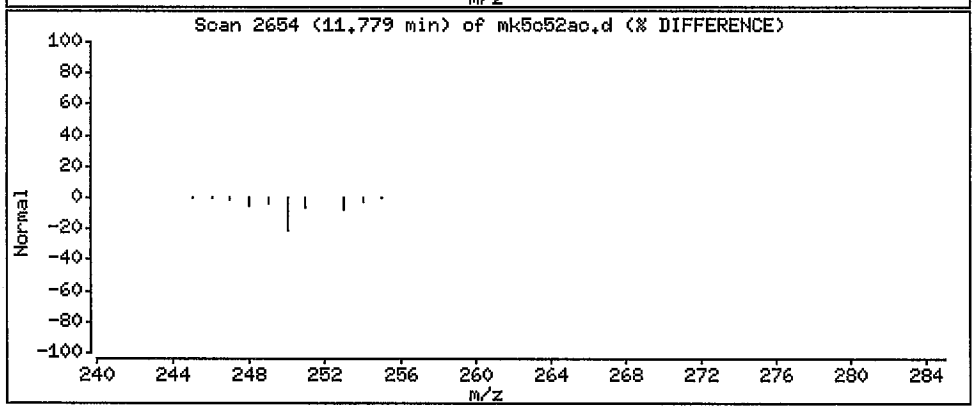












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

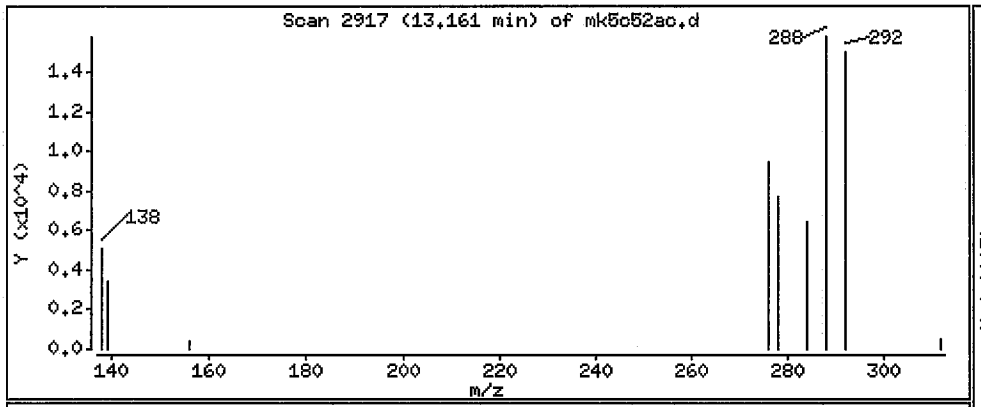
Operator: 11211

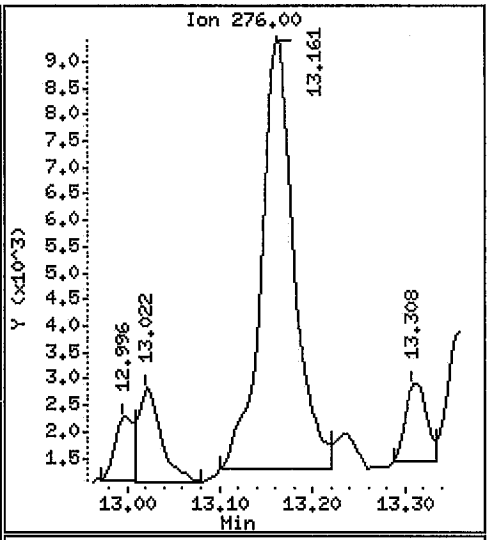
Column phase: Varian: 5MS

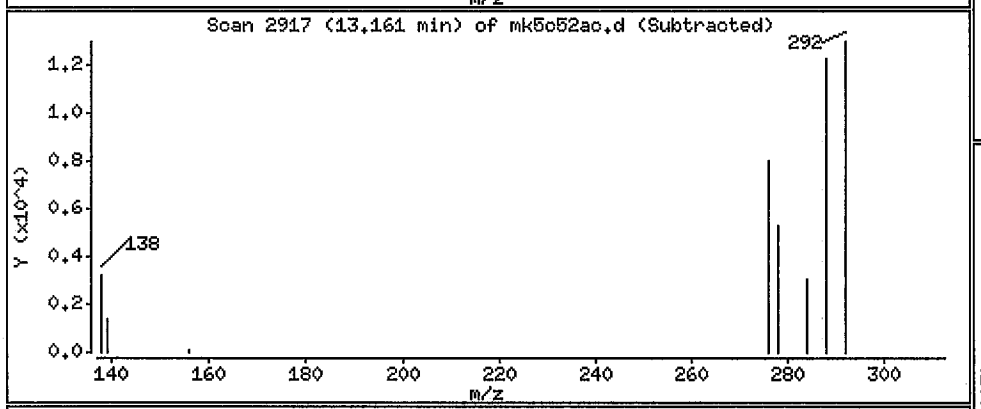
Column diameter: 0.25

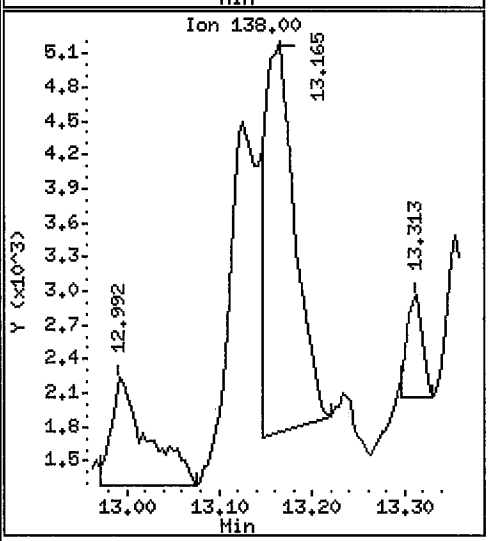
86 Indeno(1,2,3-cd)pyrene

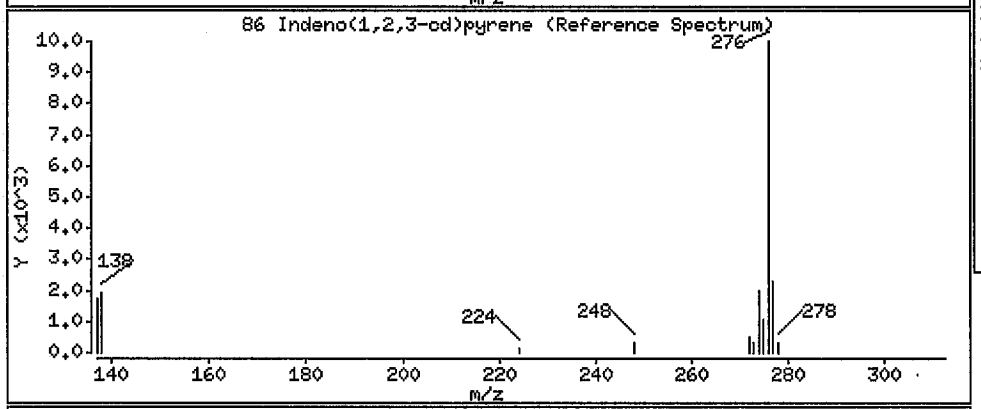
Concentration: 58900 ng/sample

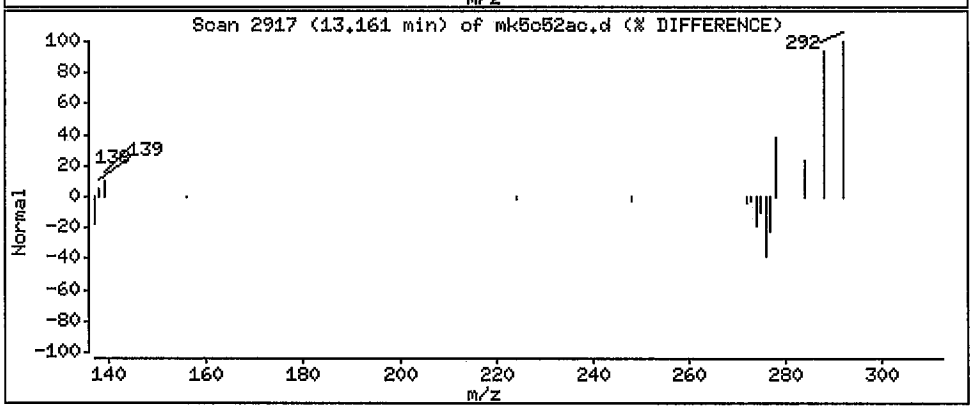












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-C0

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

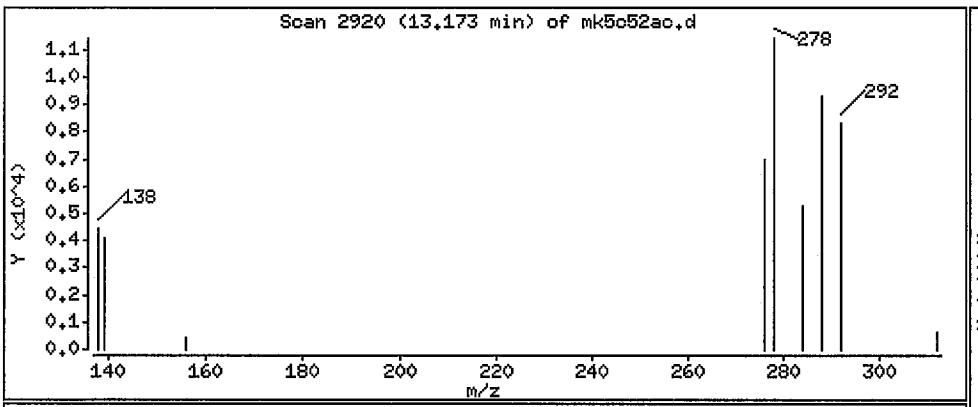
Operator: 11211

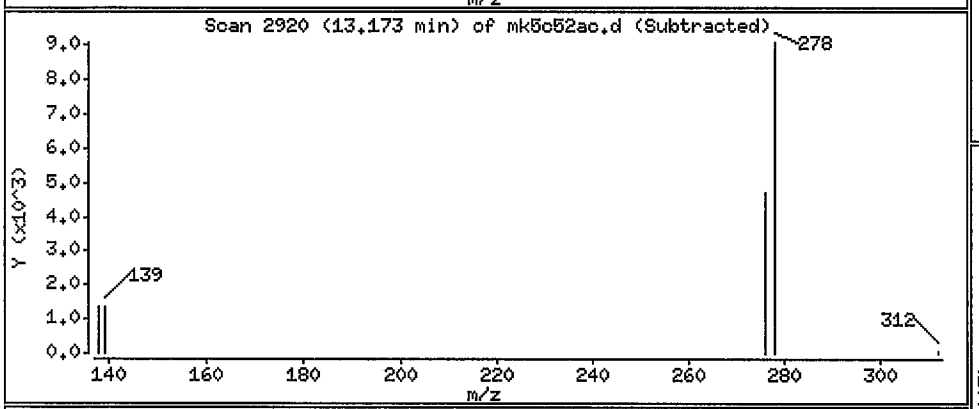
Column phase: Varian: 5MS

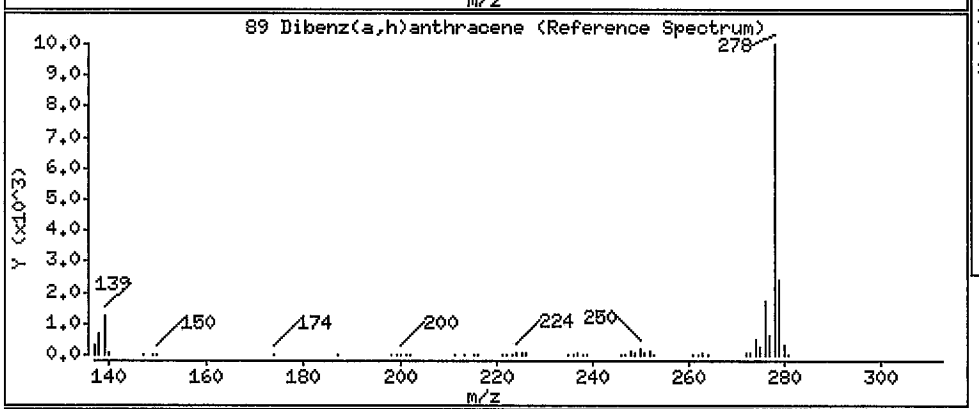
Column diameter: 0.25

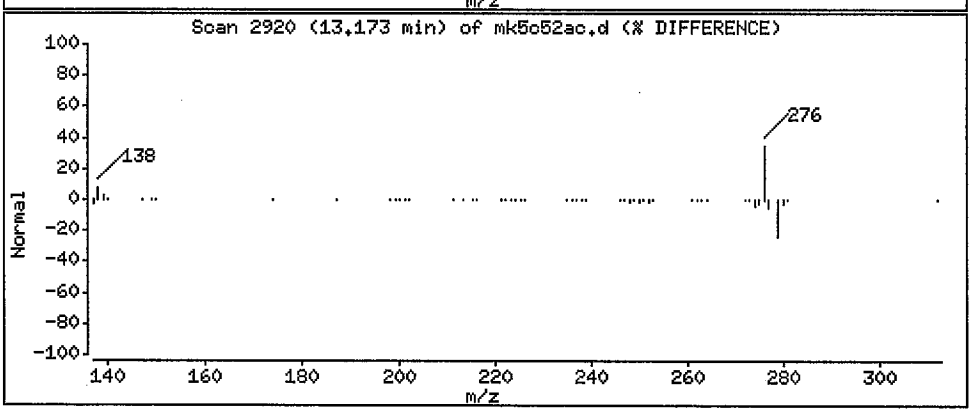
89 Dibenz(a,h)anthracene

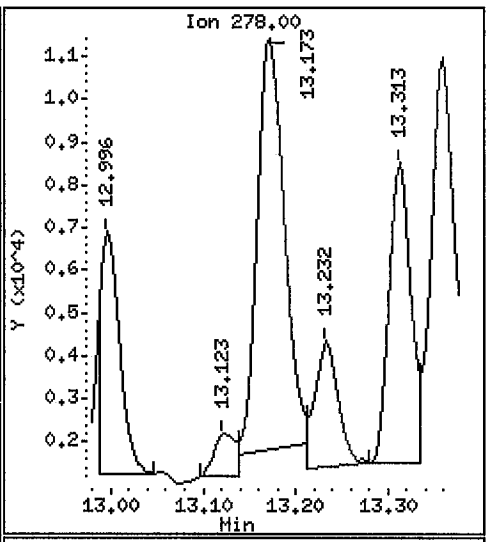
Concentration: 74700 ng/sample

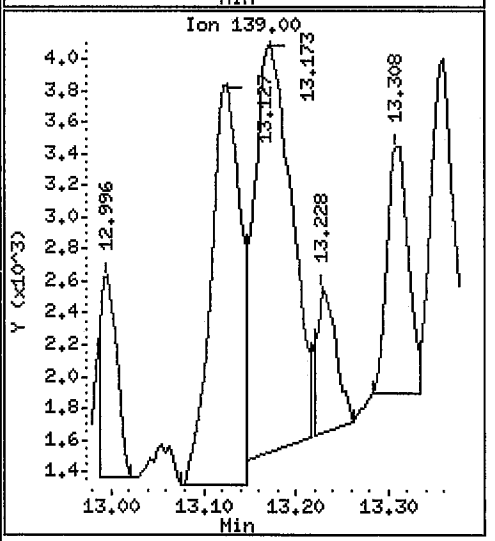












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c52ac.d

Date : 14-AUG-2011 17:20

Client ID: EXM-DCU-M0010-R2-CO

Instrument: mp.i

Sample Info: MK5C53AC,,0,,POSTSPK

Purge Volume: 1.0

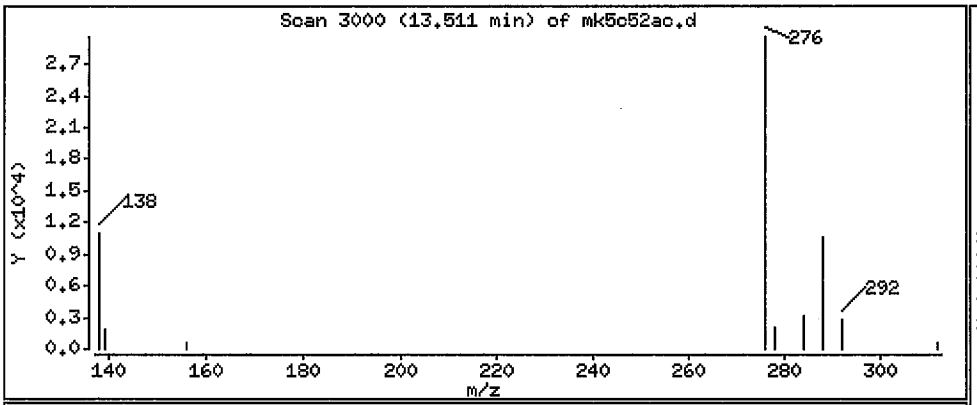
Operator: 11211

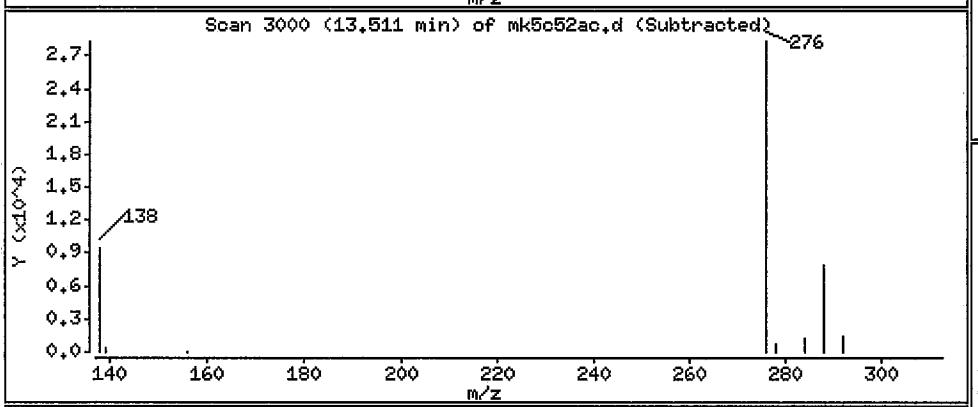
Column phase: Varian: 5MS

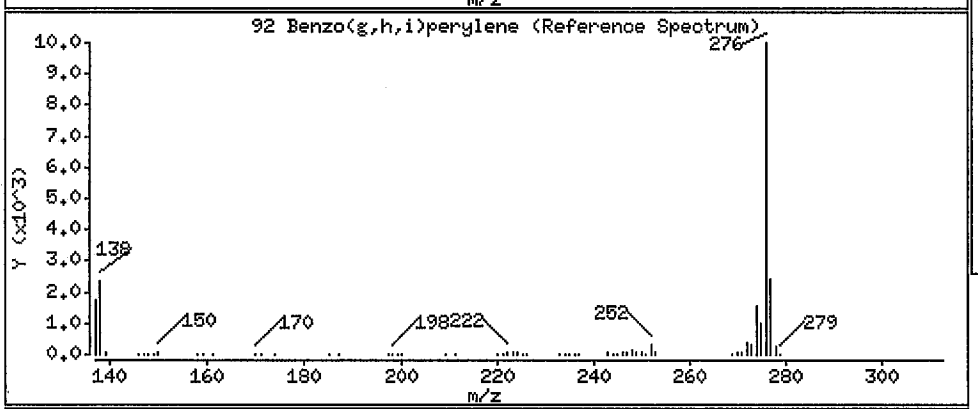
Column diameter: 0.25

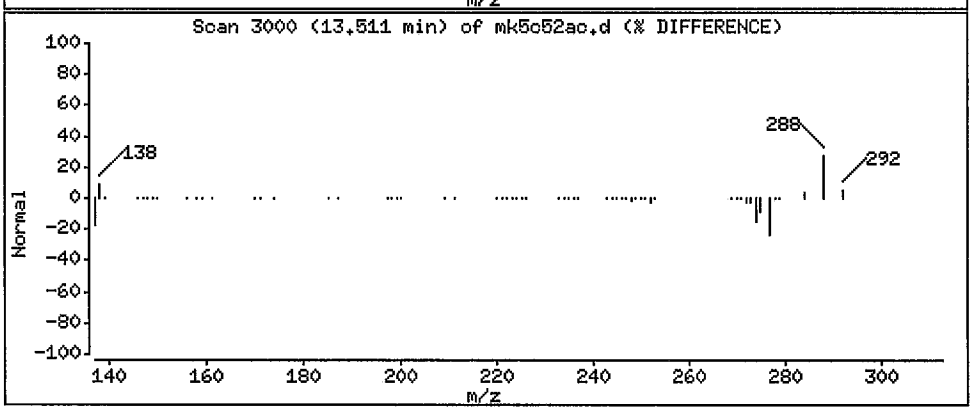
92 Benzo(g,h,i)perylene

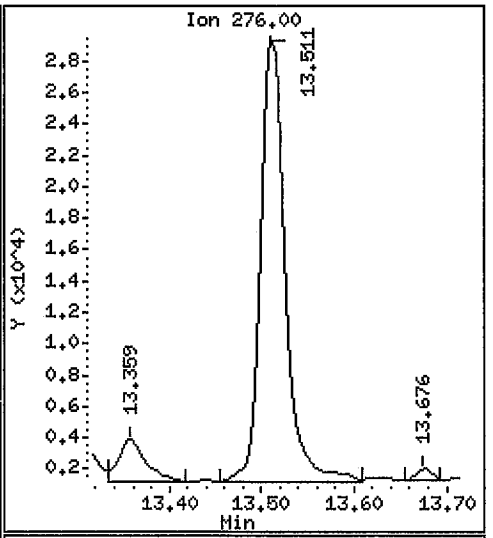
Concentration: 181000 ng/sample

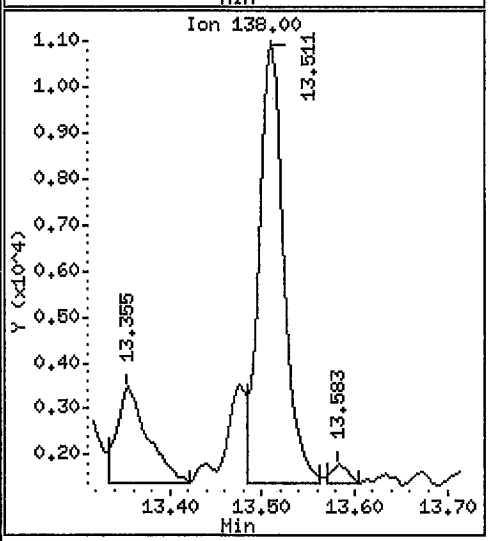












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-003	Work Order #...:	MK5C63AC	Matrix.....:	AIR
Date Sampled...:	07/17/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/14/2011		
Prep Batch #...:	1207014				
Dilution Factor:	1000	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	720000	20000	ng/sample	4900
Acenaphthylene	100000	20000	ng/sample	2400
Anthracene	1900000	10000	ng/sample	3800
Benzo(a)anthracene	190000	10000	ng/sample	3800
Benzo(b)fluoranthene	ND	100000	ng/sample	30000
Benzo(k)fluoranthene	ND	100000	ng/sample	43000
Benzo(ghi)perylene	24000	10000	ng/sample	5100
Benzo(a)pyrene	65000	10000	ng/sample	2900
Benzo(e)pyrene	42000	10000	ng/sample	5600
Chrysene	210000	10000	ng/sample	2500
Dibenz(a,h)anthracene	9700 J	10000	ng/sample	3900
Fluoranthene	240000	10000	ng/sample	6400
Fluorene	2600000 E	10000	ng/sample	4100
Indeno(1,2,3-cd)pyrene	8400 J	10000	ng/sample	2600
2-Methylnaphthalene	8800000 E	50000	ng/sample	21000
Naphthalene	5900000 E	400000	ng/sample	250000
Perylene	3200 J	10000	ng/sample	3100
Phenanthrene	3800000 E	30000	ng/sample	24000
Pyrene	820000	60000	ng/sample	36000

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	NC DIL	(50 - 150)
Terphenyl-d14	NC DIL	(50 - 150)
13C6-Fluorene	NC DIL	(50 - 150)
Anthracene-d10	96	(30 - 120)
Naphthalene-d8	98	(30 - 120)
2-Methylnaphthalene-d10	99	(30 - 120)
Acenaphthylene-d8	116	(30 - 120)
Phenanthrene-d10	88	(30 - 120)
Fluoranthene-d10	105	(30 - 120)
Benzo(a)anthracene-d12	134 *	(30 - 120)
Chrysene-d12	87	(30 - 120)
Benzo(b)fluoranthene-d12	111	(30 - 120)
Benzo(k)fluoranthene-d12	87	(30 - 120)
Benzo(a)pyrene-d12	100	(30 - 120)
Perylene-d12	92	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	103	(30 - 120)
Dibenz(ah)anthracene-d14	102	(30 - 120)
Benzo(ghi)perylene-d12	99	(30 - 120)

TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-R3-COMBINED

GC/MS Semivolatiles

Lot-Sample #...: H1G250406-003 Work Order #...: MK5C63AC Matrix.....: AIR

NOTE(S):

* Surrogate recovery is outside stated control limits.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

NC The recovery and/or RPD were not calculated.

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:17

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Lab Smp Id: MK5C63AC Client Smp ID: EXM-DCU-M0010-R3-CO
Inj Date : 14-AUG-2011 17:44
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C63AC,,0,,POSTSPK
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 11:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 8
Dil Factor: 500.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	500.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	651456	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	651456	0.48925	489
3 Naphthalene	128	4.880	4.888	(1.002)	1326030	1.21409	~~607000~~ SHE
$ 222 13C6-Naphthalene	134	4.895	4.888	(1.005)	16725	0.01390	~~13.9(R)~~
* 10 2-Methylnaphthalene-d10	152	5.434	5.431	(1.000)	358271	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.434	5.431	(0.858)	358271	0.49503	495
12 2-Methylnaphthalene	142	5.434	5.457	(1.000)	1602	0.00223	~~1120~~ SHE
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	340158	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.871)	340158	0.47241	472
15 1-Methylnaphthalene	142	5.543	5.540	(1.005)	8248007	12.5061	6250000
16 Biphenyl	154	5.842	5.842	(1.075)	1353736	1.58279	791000
* 17 2,6-Dimethylnaphthalene-d12	168	5.945	5.942	(1.000)	288793	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.945	5.942	(0.939)	288793	0.46568	466
19 2,6 Dimethylnaphthalene	156	5.925	5.979	(0.997)	2510689	4.37368	~~2190000~~ SHE

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	604116	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	604118	0.57848	578
	22 Acenaphthylene	152	6.213	6.211	(1.002)	243308	0.20345	102000
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	287327	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	1012513	1.43755	719000
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.679	(1.123)	1460936	2.99269	1500000
$	26 Fluorene-d10	176	6.776	6.768	(0.893)	71041	0.12721	~~127(R)~~
	27 Fluorene	166	6.791	6.791	(0.895)	3709528	5.16864	2580000
$	28 13C6-Fluorene	171	6.788	6.791	(0.895)	60581	0.09782	~~97.8(R)~~
*	34 Dibenzothiopene-d8	192	7.484	7.484	(1.000)	522234	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.484	7.484	(0.841)	522234	0.44228	442
	36 Dibenzothiophene	184	7.459	7.499	(0.997)	4876	0.00491	~~2450~~ SNR
*	41 Phenanthrene-d10	188	7.586	7.588	(1.000)	466965	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.586	7.588	(0.853)	466965	0.43751	438
	43 Phenanthrene	178	7.567	7.607	(0.998)	2088	0.00205	~~1030~~ SNR
*	44 Anthracene-d10	188	7.634	7.636	(1.000)	444509	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.634	7.636	(0.858)	444509	0.48244	482
	46 Anthracene	178	7.650	7.653	(1.002)	4318282	3.88977	1940000
$	47 13C6-Anthracene	184	7.657	7.651	(0.861)	8958	0.00922	~~9.22(R)~~
	52 1-Methylphenanthrene	192	8.153	8.155	(1.075)	1724365	2.75176	1380000
*	53 Fluoranthene-d10	212	8.674	8.676	(1.000)	534289	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.674	8.676	(0.975)	534289	0.52512	525
	55 Fluoranthene	202	8.691	8.694	(1.002)	574504	0.48598	243000
*	56 Pyrene-d10	212	8.895	8.898	(1.000)	414679	0.50000	0.500
	57 Pyrene	202	8.913	8.915	(1.028)	2058672	1.64794	824000
$	58 Terphenyl-d14	244	9.052	9.054	(1.044)	1762	0.00331	~~3.31(R)~~
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	352291	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	352291	0.67199	672(R)
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	389769	0.37171	186000
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	362738	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.141)	362738	0.43684	437
	65 Chrysene	228	10.171	10.175	(1.002)	339106	0.42502	213000
*	70 Benzo(b)fluoranthene-d12	264	11.265	11.271	(1.000)	297478	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.265	11.271	(0.972)	297478	0.55469	555
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.003)	59072	0.07153	~~35800~~ SNR
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	325446	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	325446	0.43378	434
	75 Benzo(k)fluoranthene	252	11.295	11.325	(0.999)	59821	0.08323	~~41600~~ SNR
*	76 Benzo(e)pyrene-d12	264	11.587	11.588	(1.000)	251803	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	60483	0.08463	42300
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	278944	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	278944	0.50218	502
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	80425	0.13078	65400
*	81 Perylene-d12	264	11.749	11.749	(1.000)	247162	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	247162	0.45935	459
	83 Perylene	252	11.779	11.779	(1.003)	3990	0.00647	3230
*	84 Indeno(123-cd)pyrene-d12	288	13.123	13.131	(1.000)	313208	0.50000	0.500

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Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.123	13.131	(1.132)	313208	0.51539	515
	86 Indeno(1,2,3-cd)pyrene	276	13.161	13.161	(1.003)	12397	0.01678	8390
*	87 Dibenz(ah)anthracene-d14	292	13.127	13.131	(1.000)	234688	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.127	13.131	(1.133)	234688	0.51132	511
	89 Dibenz(a,h)anthracene	278	13.173	13.178	(1.004)	10931	0.01945	9720
*	90 Benzo(ghi)perylene-d12	288	13.477	13.481	(1.000)	224148	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.477	13.481	(1.163)	224148	0.49285	493
	92 Benzo(g,h,i)perylene	276	13.511	13.515	(1.002)	29505	0.04848	24200

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:38

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Lab Smp Id: MK5C63AC Client Smp ID: EXM-DCU-M0010-R3-CO
Inj Date : 14-AUG-2011 17:44
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C63AC,,0,,POSTSPK
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 11:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 8
Dil Factor: 500.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	500.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

we=5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	651456	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	651456	0.48925	489
3 Naphthalene	128	4.880	4.888	(1.002)	12971728	11.8766	5940000(M) E
* 10 2-Methylnaphthalene-d10	152	5.434	5.431	(1.000)	358271	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.434	5.431	(0.858)	358271	0.49503	495
12 2-Methylnaphthalene	142	5.454	5.457	(1.004)	12712085	17.7010	8850000(M) E
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	340158	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.871)	340158	0.47241	472
15 1-Methylnaphthalene	142	5.543	5.540	(1.005)	8248007	12.5061	6250000 E
16 Biphenyl	154	5.842	5.842	(1.075)	1353736	1.58279	791000
* 17 2,6-Dimethylnaphthalene-d12	168	5.945	5.942	(1.000)	288793	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.945	5.942	(0.939)	288793	0.46568	466
19 2,6 Dimethylnaphthalene	156	5.981	5.979	(1.006)	11392013	19.8452	9920000(M) E
* 20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	604116	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:38

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)	
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	604118	0.57848	578	
	22 Acenaphthylene	152	6.213	6.211	(1.002)	243308	0.20345	102000	
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	287327	0.50000	0.500	
	24 Acenaphthene	154	6.359	6.359	(1.025)	1012513	1.43755	719000	
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.679	(1.123)	1460936	2.99269	1500000	
	27 Fluorene	166	6.791	6.791	(0.895)	3709528	5.16864	2580000	E
*	34 Dibenzothiopene-d8	192	7.484	7.484	(1.000)	522234	0.50000	0.500	
$	35 Dibenzothiopene-d8(SS)	192	7.484	7.484	(0.841)	522234	0.44228	442	
	36 Dibenzothiophene	184	7.495	7.499	(1.001)	8829365	8.89082	4450000(M)	E
*	41 Phenanthrene-d10	188	7.586	7.588	(1.000)	466965	0.50000	0.500	
$	42 Phenanthrene-d10(SS)	188	7.586	7.588	(0.853)	466965	0.43751	438	
	43 Phenanthrene	178	7.605	7.607	(1.002)	7821389	7.68393	3840000(M)	E
*	44 Anthracene-d10	188	7.634	7.636	(1.000)	444509	0.50000	0.500	
$	45 Anthracene-d10(SS)	188	7.634	7.636	(0.858)	444509	0.48244	482	
	46 Anthracene	178	7.650	7.653	(1.002)	4318282	3.88977	1940000	
	52 1-Methylphenanthrene	192	8.153	8.155	(1.075)	1724365	2.75176	1380000	
*	53 Fluoranthene-d10	212	8.674	8.676	(1.000)	534289	0.50000	0.500	
$	54 Fluoranthene-d10(SS)	212	8.674	8.676	(0.975)	534289	0.52512	525	
	55 Fluoranthene	202	8.691	8.694	(1.002)	574504	0.48598	243000	
*	56 Pyrene-d10	212	8.895	8.898	(1.000)	414679	0.50000	0.500	
	57 Pyrene	202	8.913	8.915	(1.028)	2058672	1.64794	824000	
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	352291	0.50000	0.500	
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	352291	0.67199	672(R)	
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	389769	0.37171	186000	
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	362738	0.50000	0.500	
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.141)	362738	0.43684	437	
	65 Chrysene	228	10.171	10.175	(1.002)	339106	0.42502	213000	
*	70 Benzo(b)fluoranthene-d12	264	11.265	11.271	(1.000)	297478	0.50000	0.500	
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.265	11.271	(0.972)	297478	0.55469	555	
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.003)	46137	0.05587	27900(MH)	
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	325446	0.50000	0.500	
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	325446	0.43378	434	
	75 Benzo(k)fluoranthene	252	11.313	11.325	(1.001)	17346	0.02413	12100(M)	
*	76 Benzo(e)pyrene-d12	264	11.587	11.588	(1.000)	251803	0.50000	0.500	
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	60483	0.08463	42300	
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	278944	0.50000	0.500	
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	278944	0.50218	502	
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	80425	0.13078	65400	
*	81 Perylene-d12	264	11.749	11.749	(1.000)	247162	0.50000	0.500	
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	247162	0.45935	459	
	83 Perylene	252	11.779	11.779	(1.003)	3990	0.00647	3230	
*	84 Indeno(123-cd)pyrene-d12	288	13.123	13.131	(1.000)	313208	0.50000	0.500	
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.123	13.131	(1.132)	313208	0.51539	515	
	86 Indeno(1,2,3-cd)pyrene	276	13.161	13.161	(1.003)	12397	0.01678	8390	
*	87 Dibenz(ah)anthracene-d14	292	13.127	13.131	(1.000)	234688	0.50000	0.500	
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.127	13.131	(1.133)	234688	0.51132	511	
	89 Dibenz(a,h)anthracene	278	13.173	13.178	(1.004)	10931	0.01945	9720	

8/15/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:38

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	90 Benzo(ghi)perylene-d12	288	13.477	13.481	(1.000)	224148	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.477	13.481	(1.163)	224148	0.49285	493
	92 Benzo(g,h,i)perylene	276	13.511	13.515	(1.002)	29505	0.04848	24200

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

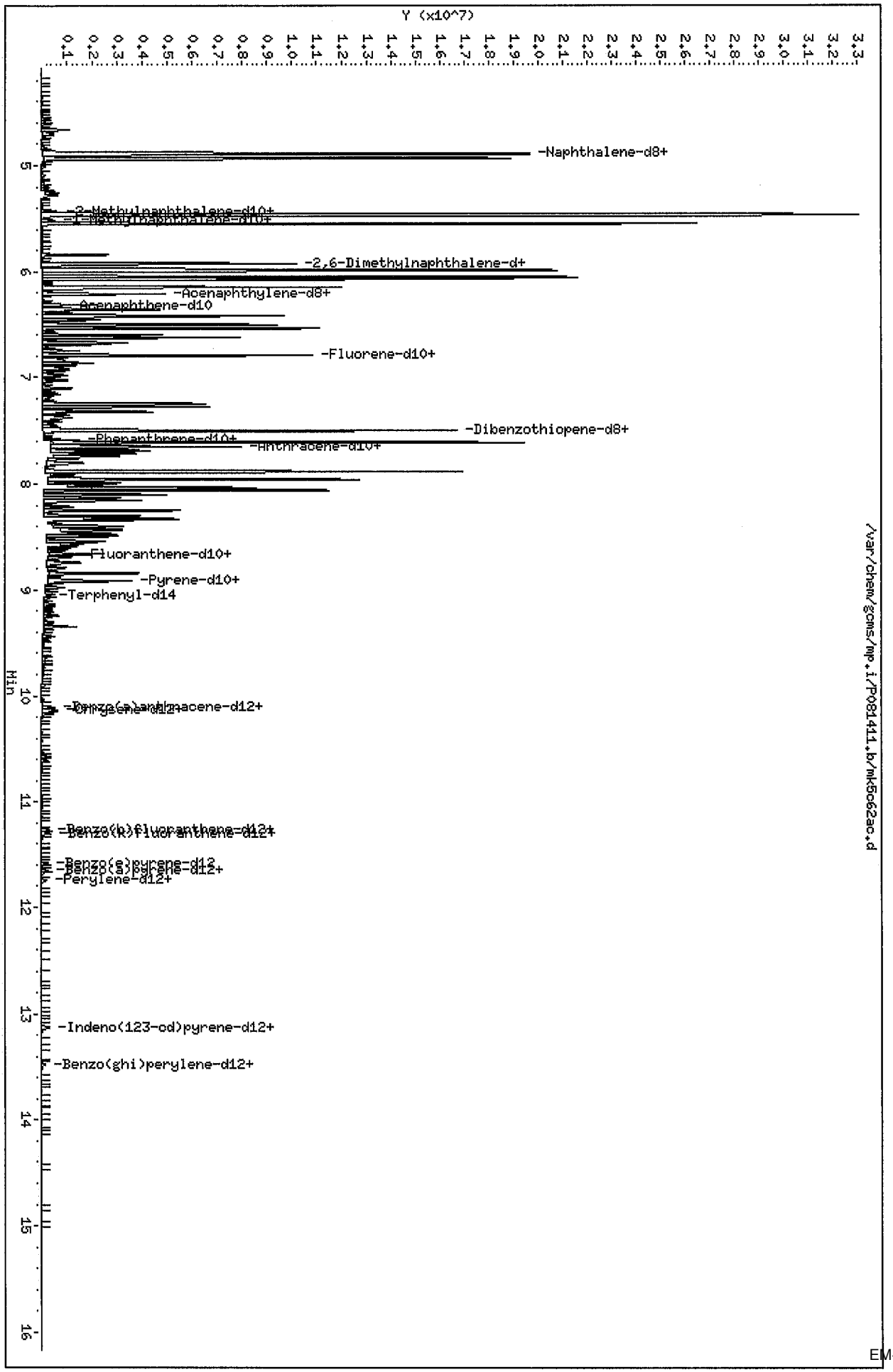
Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Report Date: 15-Aug-2011 11:17

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C63AC Client Smp ID: EXM-DCU-M0010-R3-CO
Level: LOW Operator: 11211
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Misc Info: P081411,SIMPAH3

SURROGATE COMPOUND	AMOUNT ADDED ug/ml	AMOUNT RECOVERED ug/ml	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	0.500	0.489	97.85	30-120
$ 222 13C6-Naphthalene	0.500	0.0139	2.78*	50-150
$ 11 2-Methylnaphthalen	0.500	0.495	99.01	30-120
$ 14 1-Methylnaphthalen	0.500	0.472	94.48	30-120
$ 18 2,6-Dimethylnaph-d	0.500	0.466	93.14	30-120
$ 21 Acenaphthylene-d8(	0.500	0.578	115.70	30-120
$ 26 Fluorene-d10	0.500	0.127	25.44*	30-120
$ 28 13C6-Fluorene	0.500	0.0978	19.56*	30-120
$ 35 Dibenzothiopene-d8	0.500	0.442	88.46	30-120
$ 42 Phenanthrene-d10(S	0.500	0.438	87.50	30-120
$ 45 Anthracene-d10(SS)	0.500	0.482	96.49	30-120
$ 47 13C6-Anthracene	0.500	0.00922	1.84*	30-120
$ 54 Fluoranthene-d10(S	0.500	0.525	105.02	0-120
$ 58 Terphenyl-d14	0.500	0.00331	0.66*	30-120
$ 61 Benzo(a)anthracene	0.500	0.672	134.40*	30-120
$ 64 Chrysene-d12(SS)	0.500	0.437	87.37	30-120
$ 71 Benzo(b)fluoranthe	0.500	0.555	110.94	30-120
$ 74 Benzo(k)fluoranthe	0.500	0.434	86.76	30-120
$ 79 Benzo(a)pyrene-d12	0.500	0.502	100.44	30-120
$ 82 Perylene-d12(SS)	0.500	0.459	91.87	30-120
$ 85 Indeno(123-cd)pyre	0.500	0.515	103.08	30-120
$ 88 Dibenz(ah)anthrace	0.500	0.511	102.26	30-120
$ 91 Benzo(ghi)perylene	0.500	0.493	98.57	30-120


Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Date : 14-AUG-2011 17:44
Client ID: EXM-DCU-M0010-R3-CO
Sample Info: MK5C63AC,,0,,POSTSPK
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P081411.b/mk5c62ac.d
Y (x10^7)
Min
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-Anthracene-d10+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12+
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

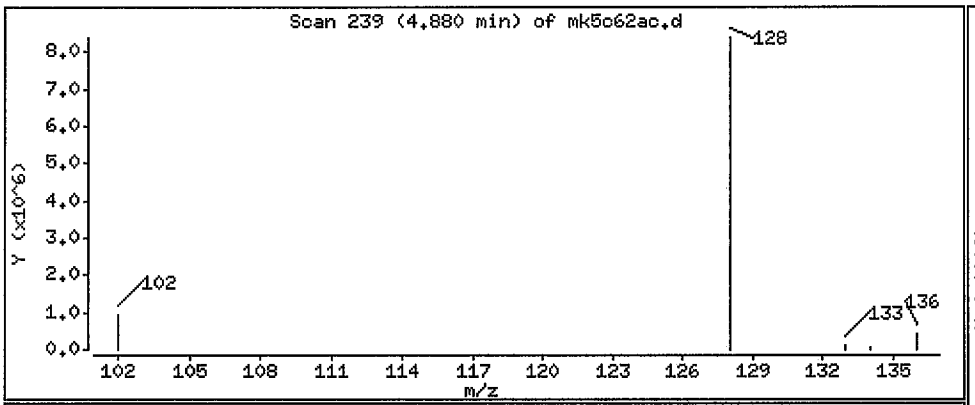
Operator: 11211

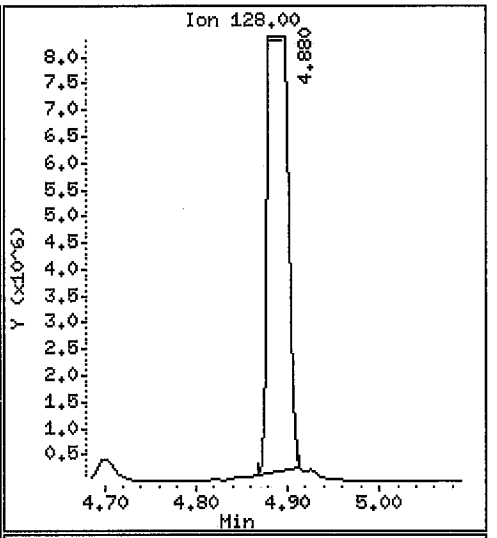
Column phase: Varian: 5MS

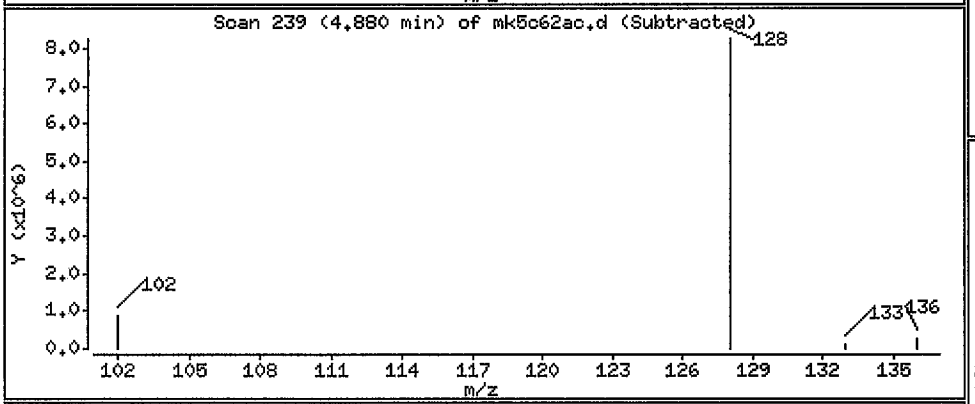
Column diameter: 0.25

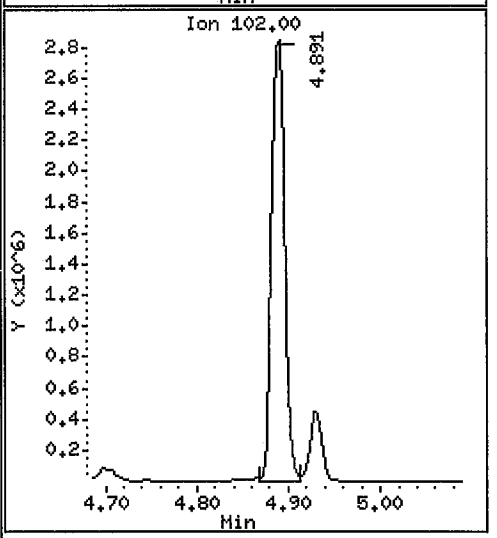
3 Naphthalene

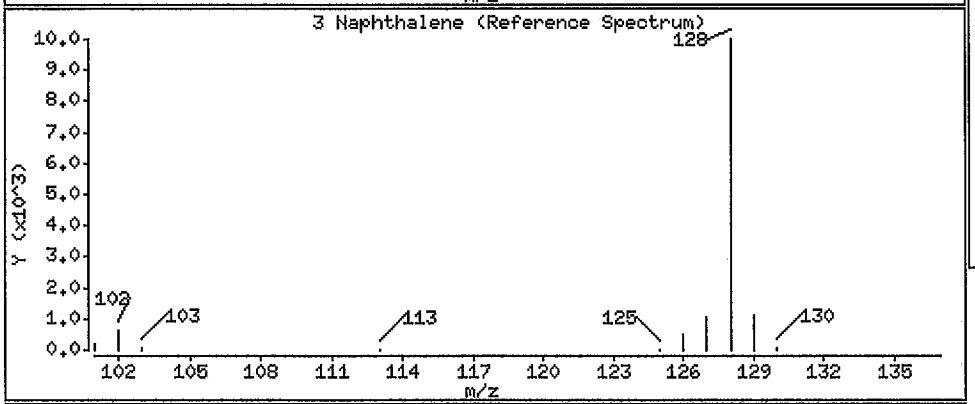
Concentration: 5940000 ng/sample

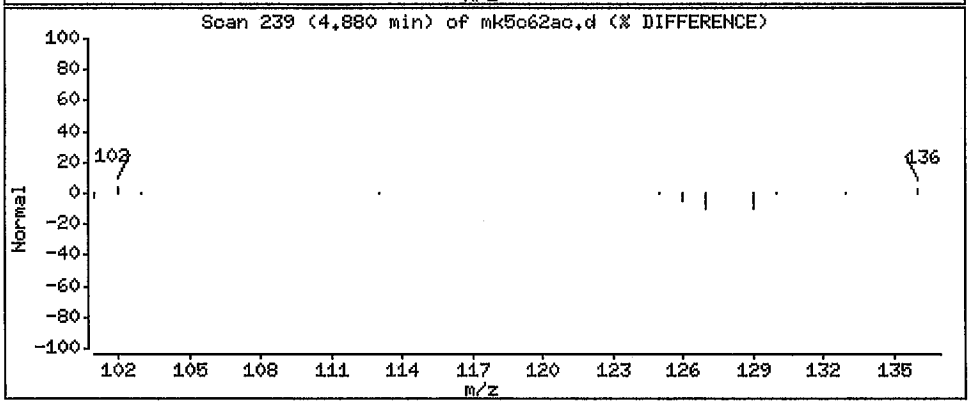












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

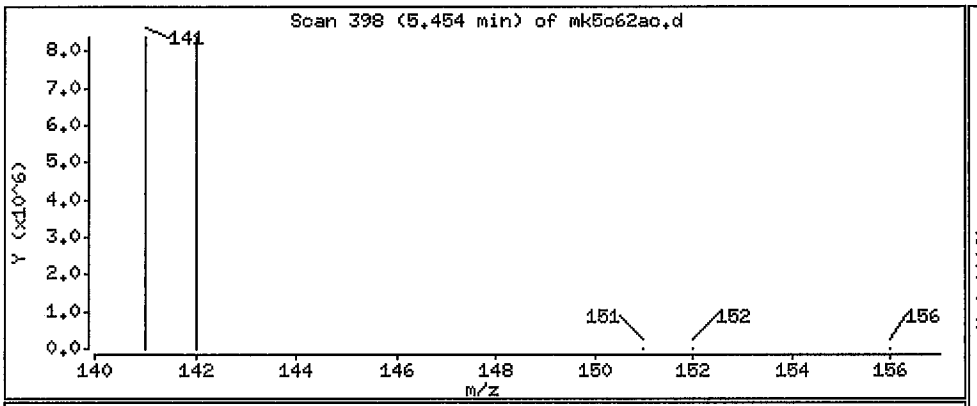
Operator: 11211

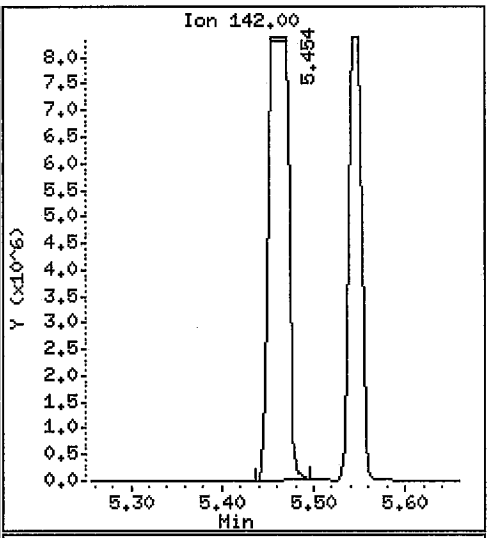
Column phase: Varian: 5MS

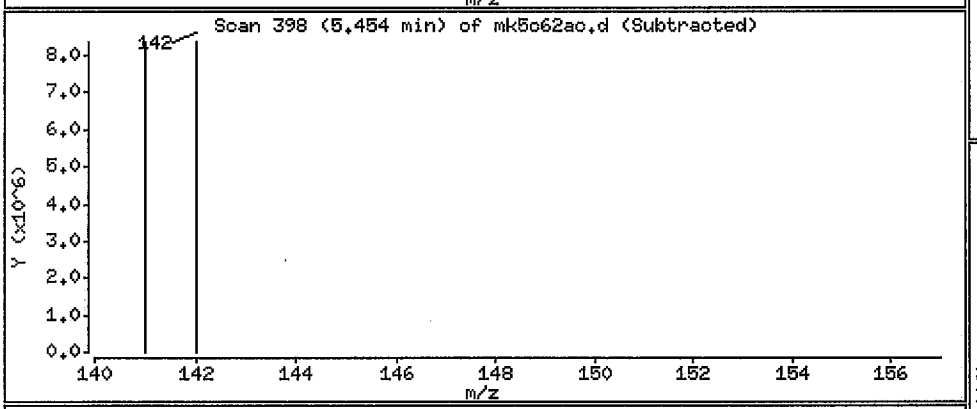
Column diameter: 0.25

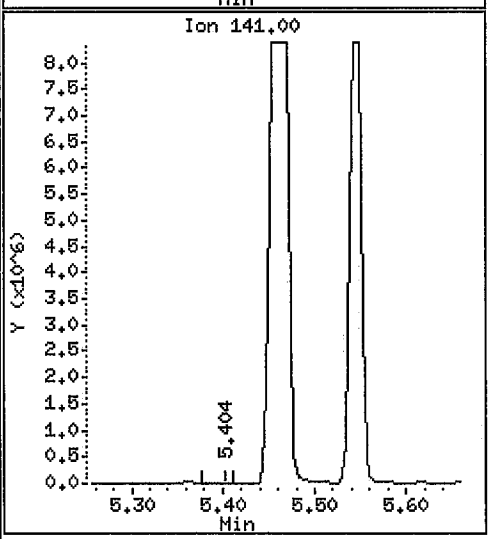
12 2-Methylnaphthalene

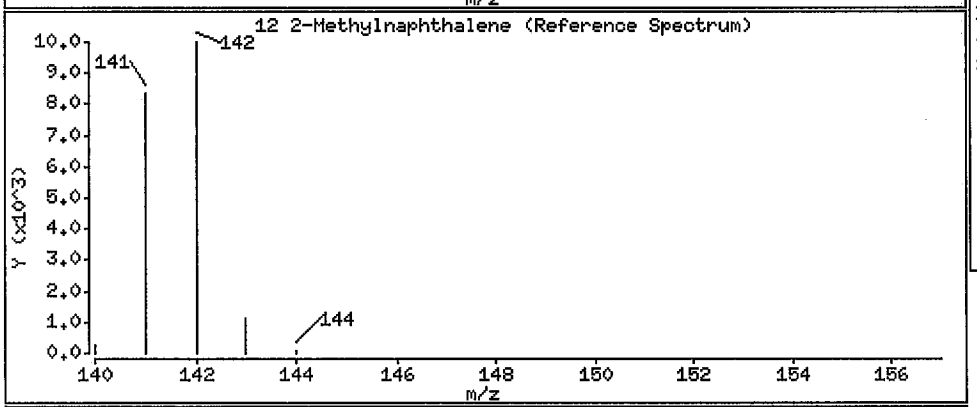
Concentration: 8850000 ng/sample

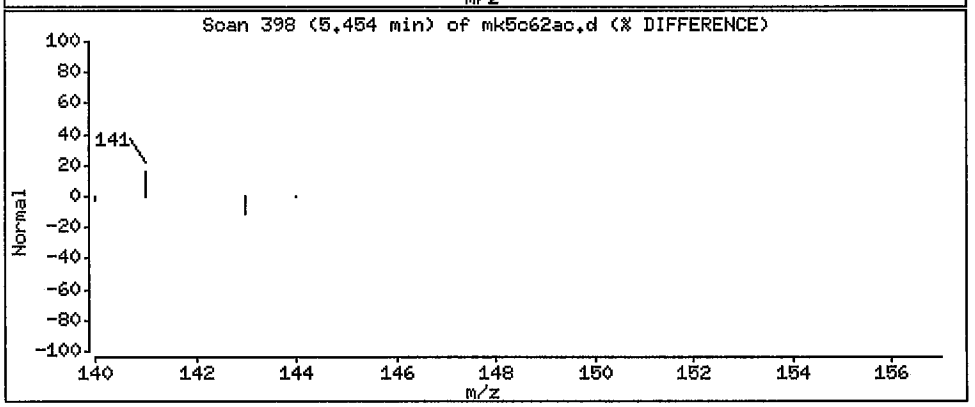












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

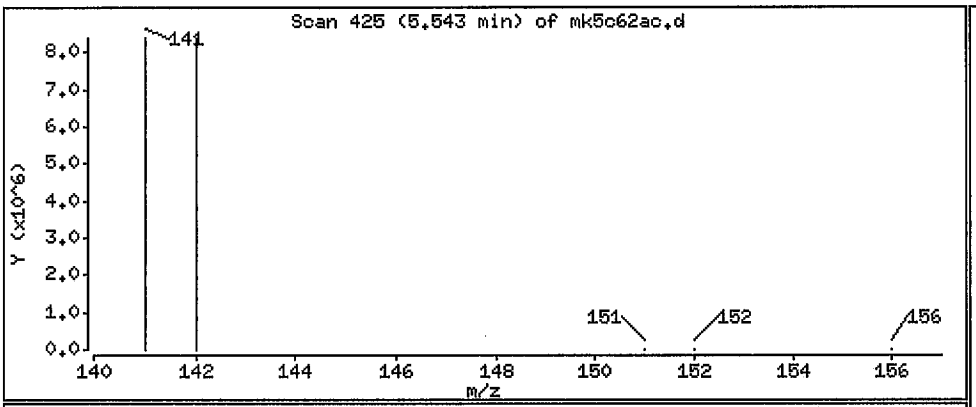
Operator: 11211

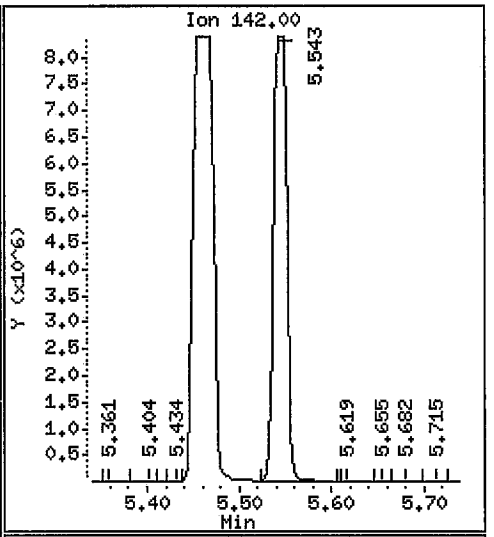
Column phase: Varian: 5MS

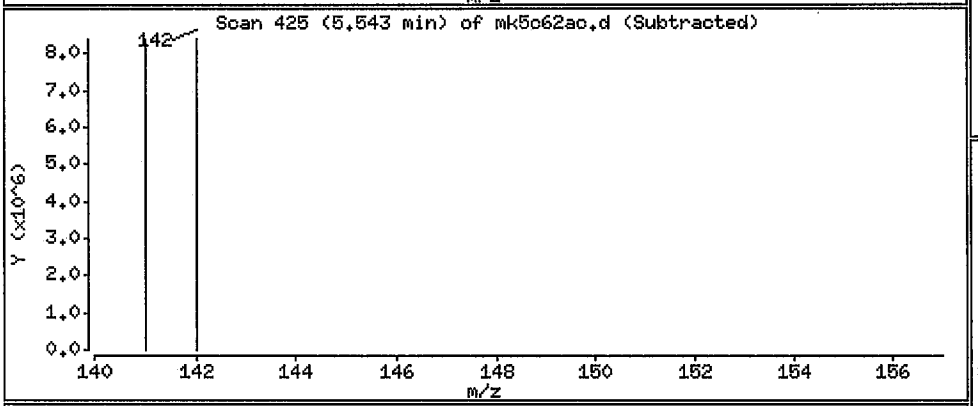
Column diameter: 0.25

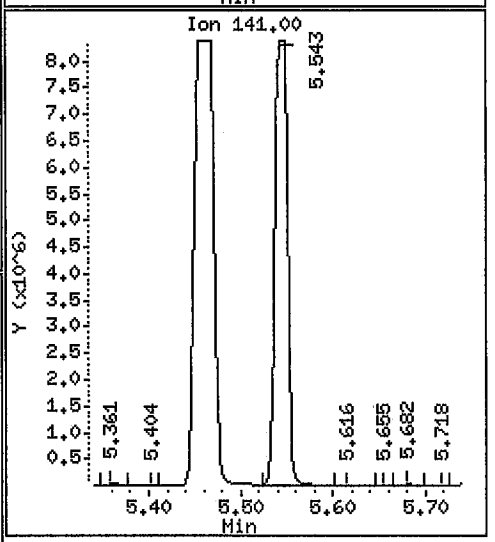
15 1-Methylnaphthalene

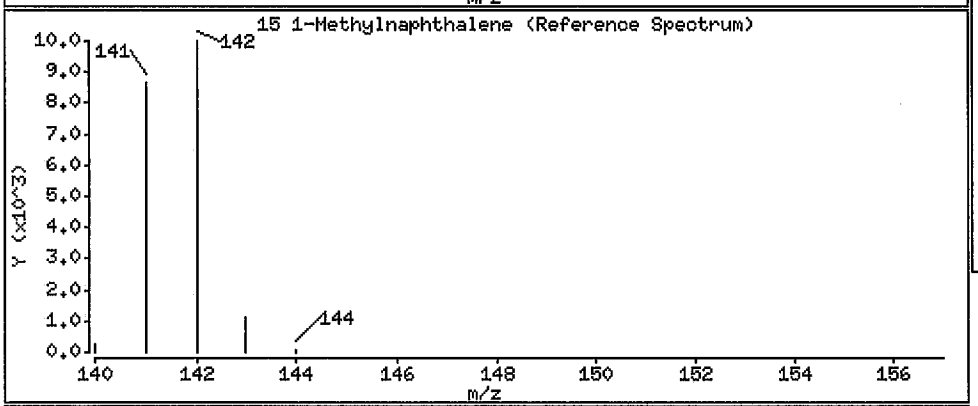
Concentration: 6250000 ng/sample

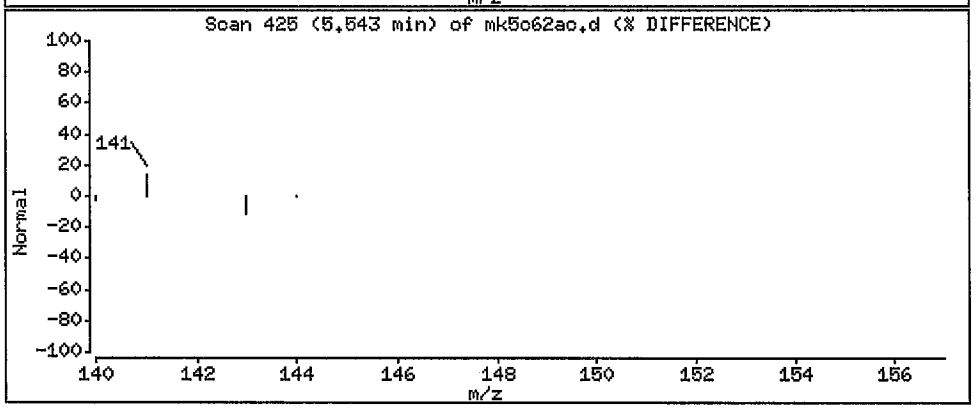












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

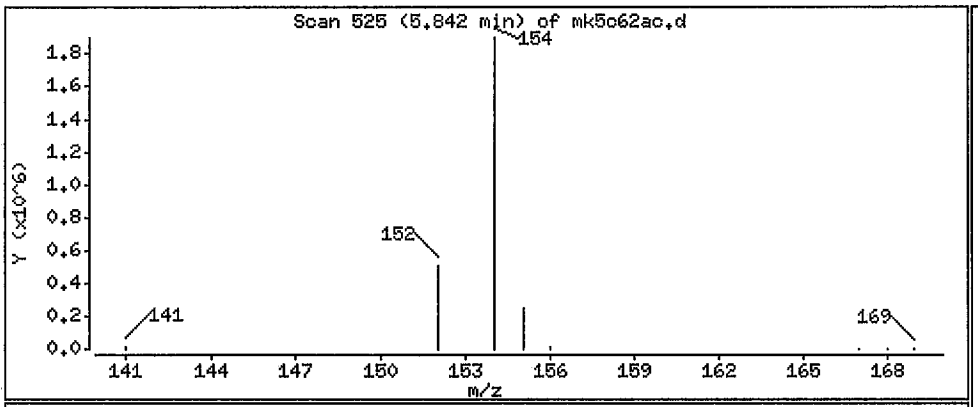
Operator: 11211

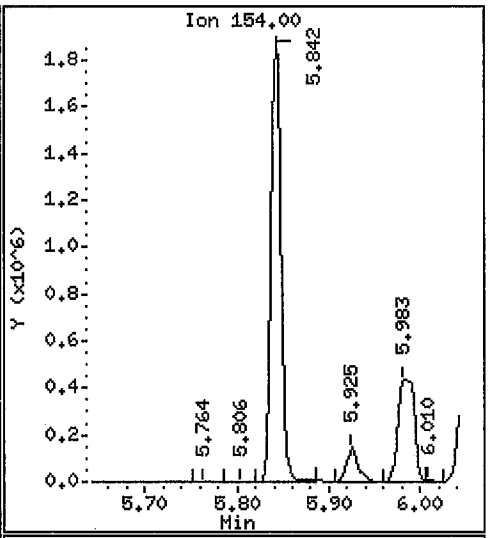
Column phase: Varian: 5MS

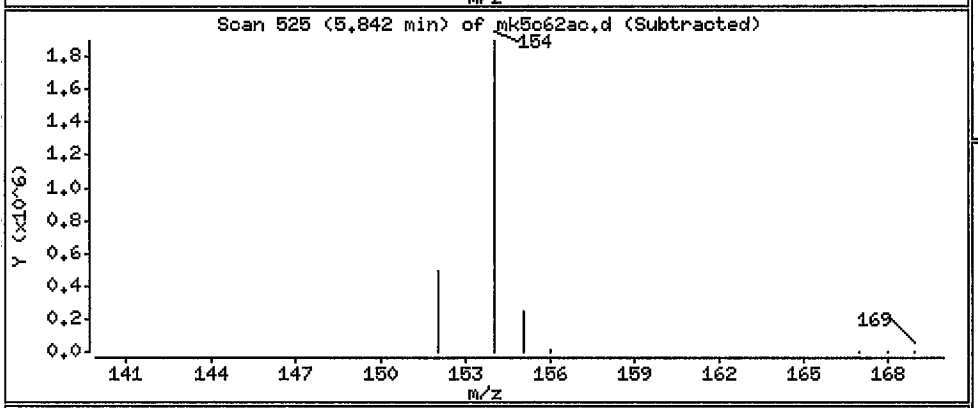
Column diameter: 0.25

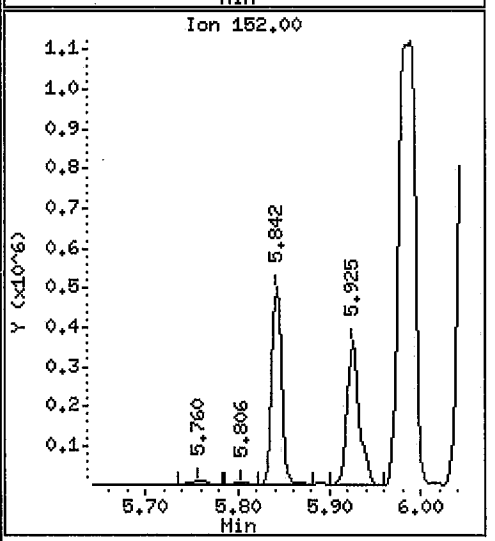
16 Biphenyl

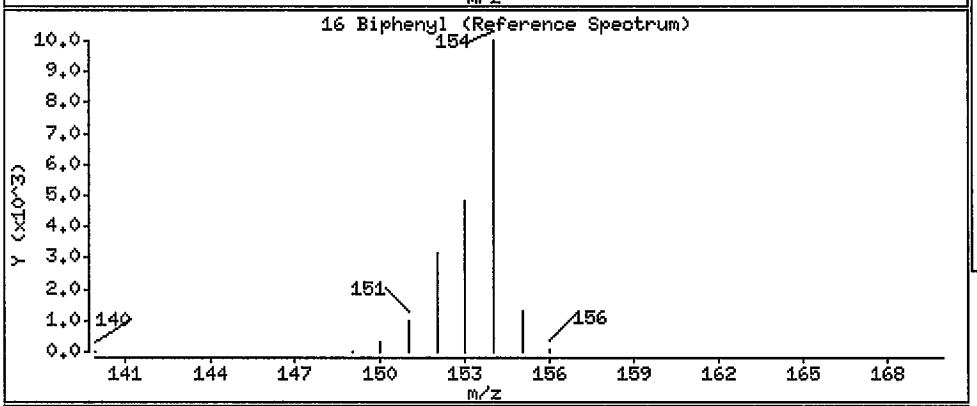
Concentration: 791000 ng/sample

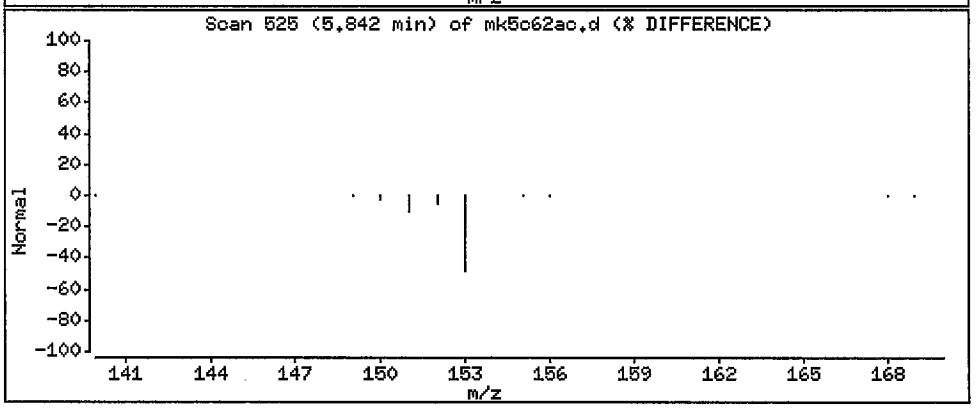












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

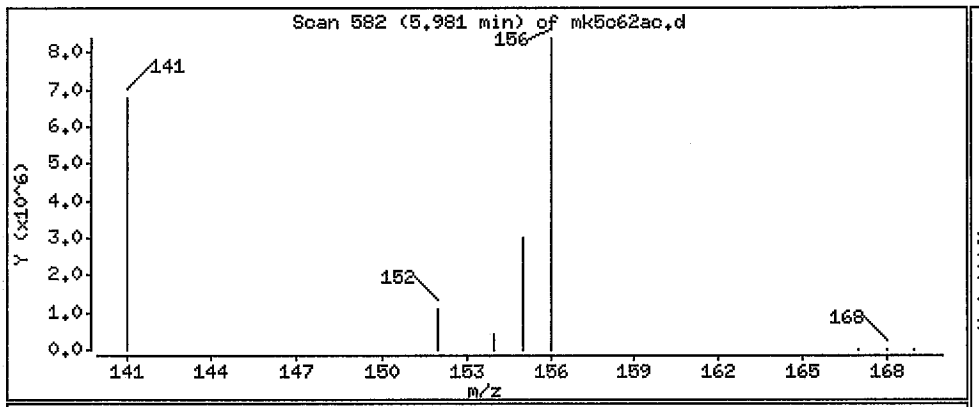
Operator: 11211

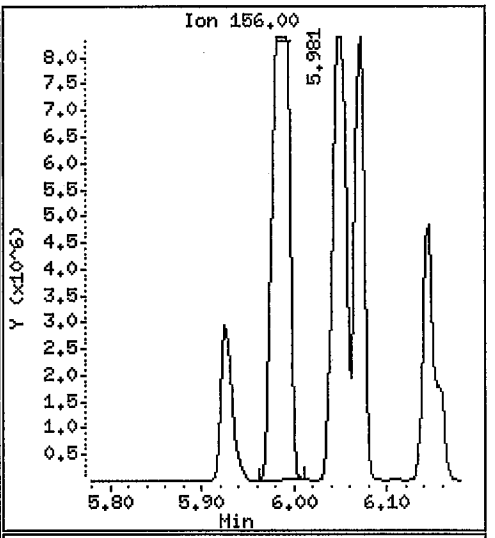
Column phase: Varian: 5MS

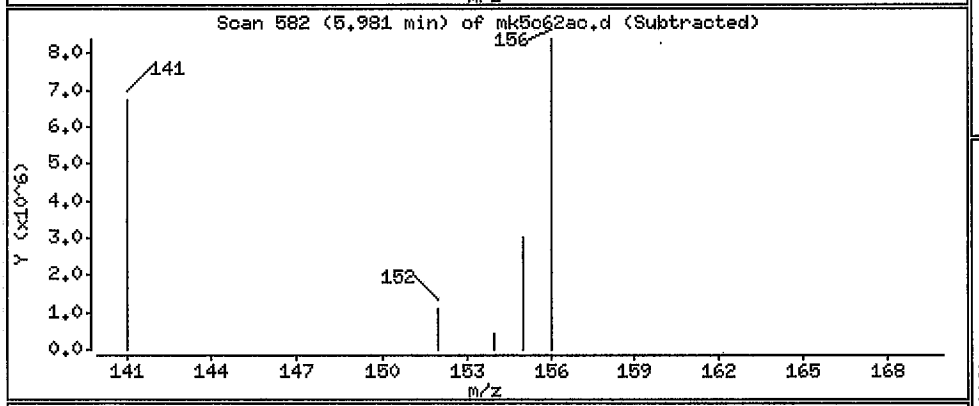
Column diameter: 0.25

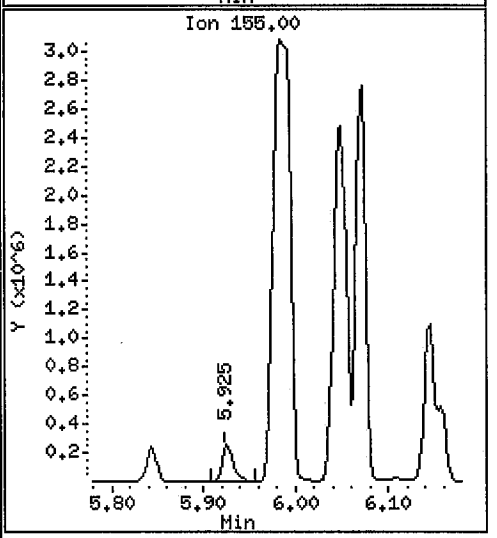
19 2,6 Dimethylnaphthalene

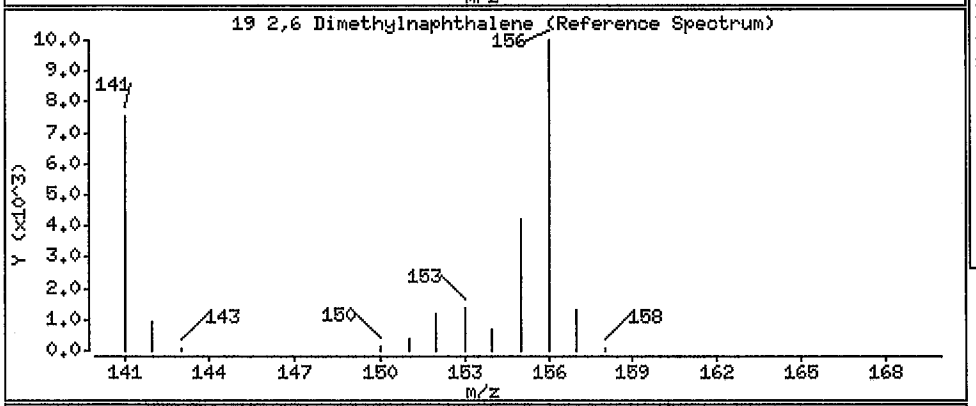
Concentration: 9920000 ng/sample

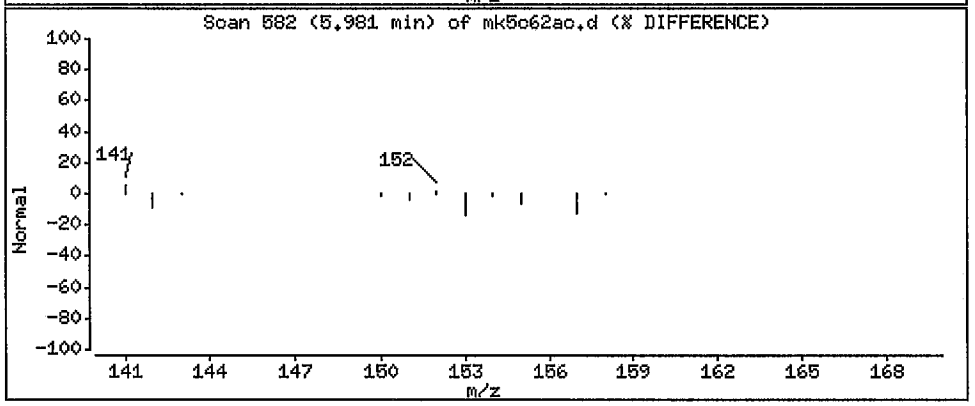












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

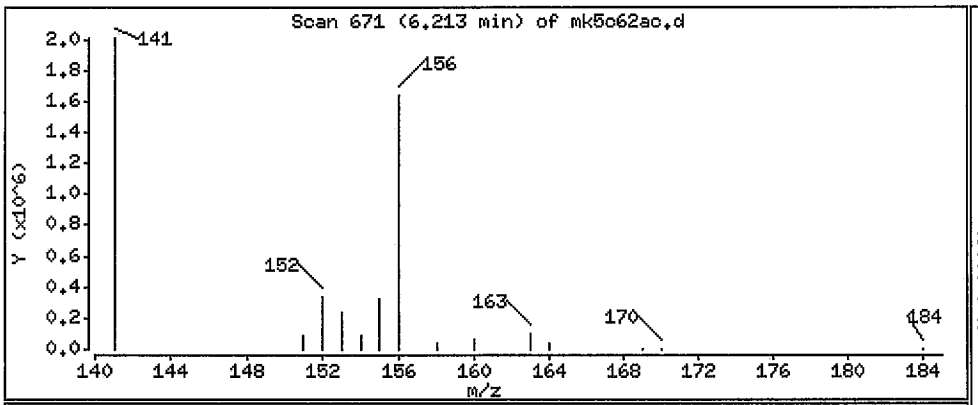
Operator: 11211

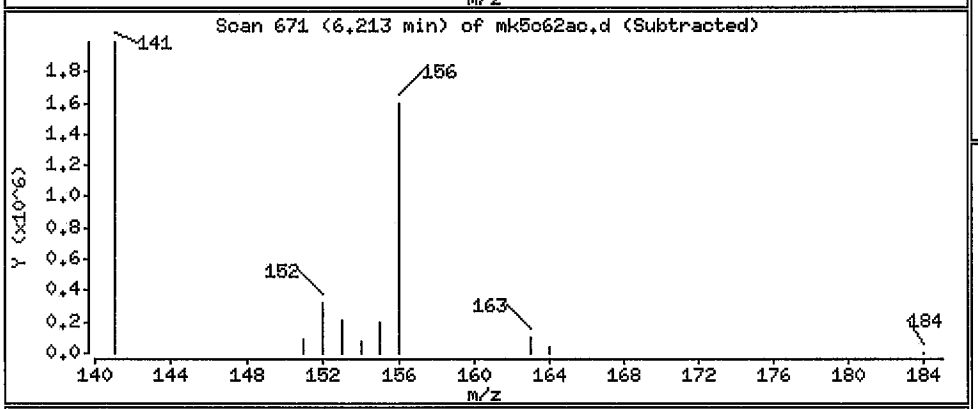
Column phase: Varian: 5MS

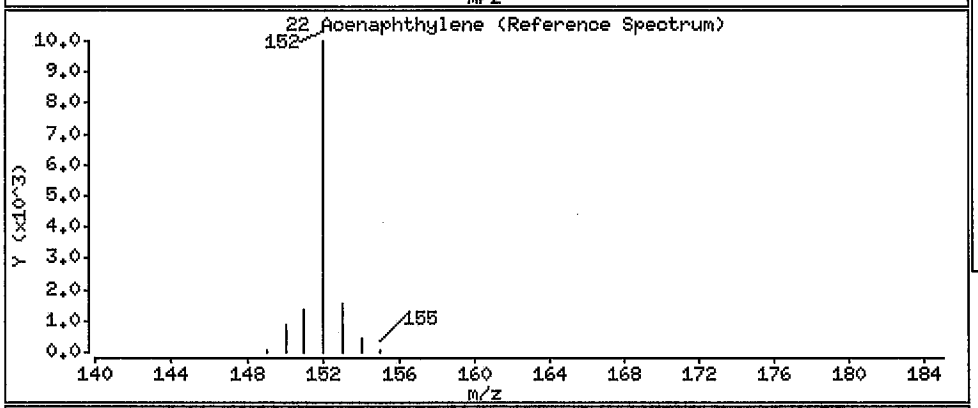
Column diameter: 0.25

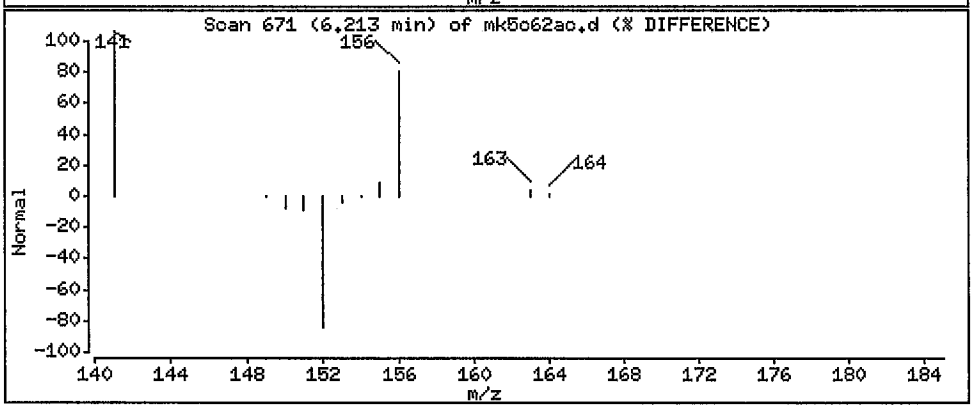
22 Acenaphthylene

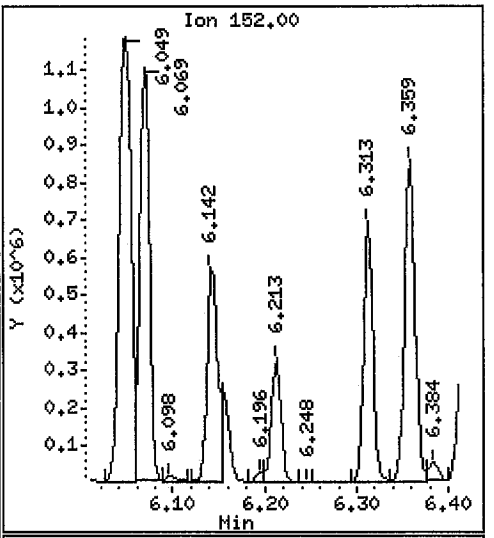
Concentration: 102000 ng/sample

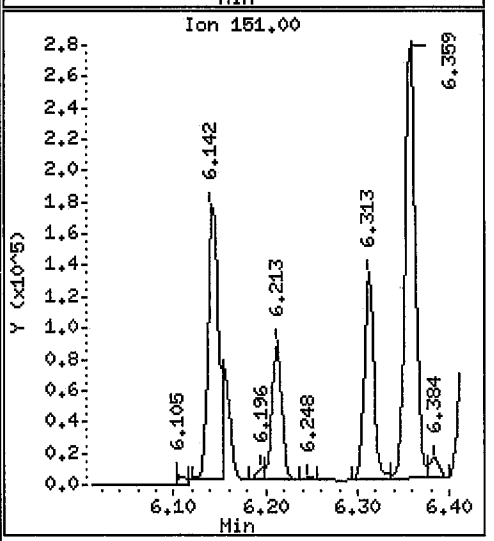












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

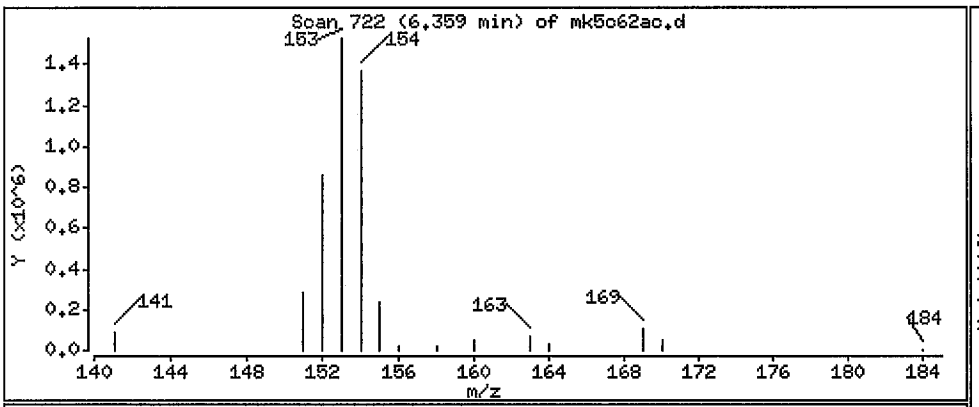
Operator: 11211

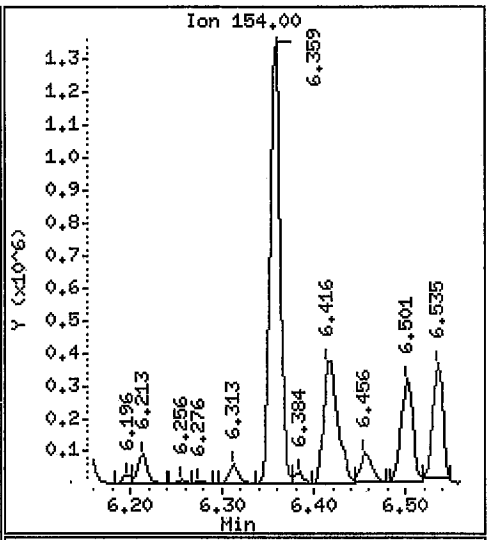
Column phase: Varian: 5MS

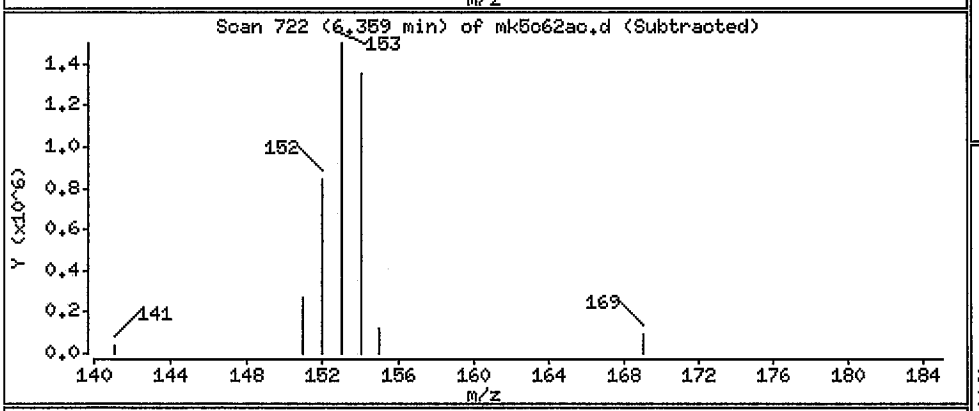
Column diameter: 0.25

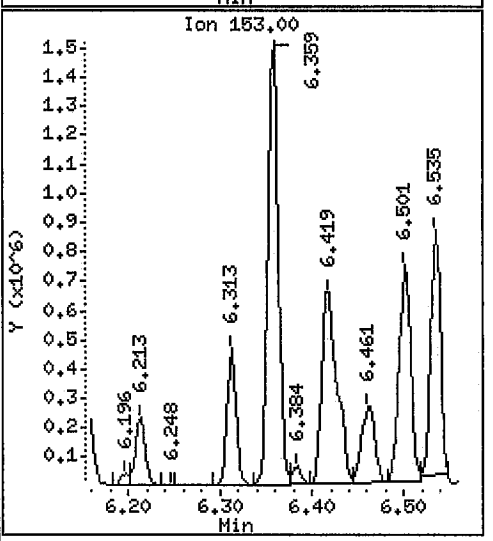
24 Acenaphthene

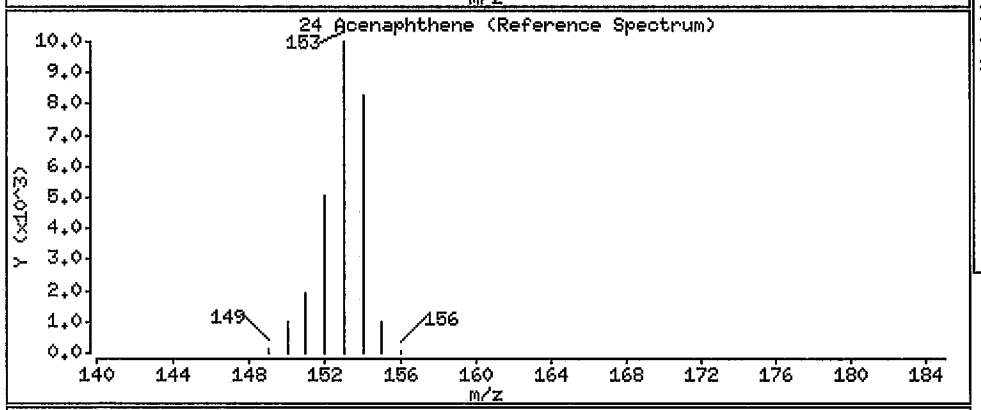
Concentration: 719000 ng/sample

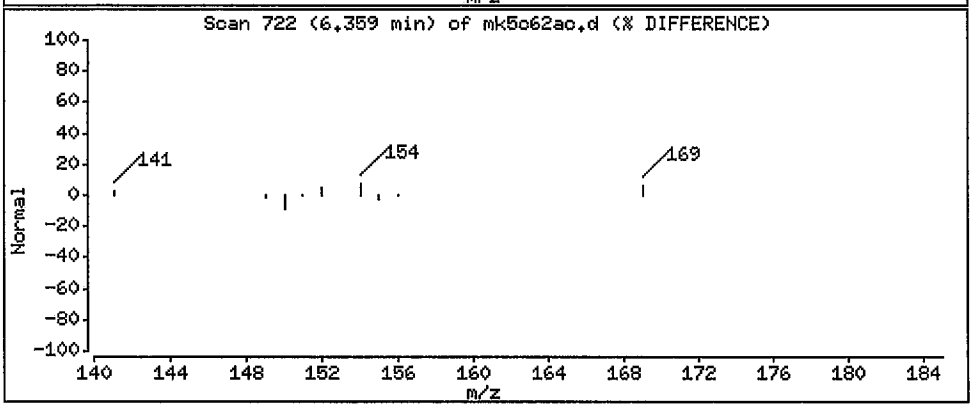












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

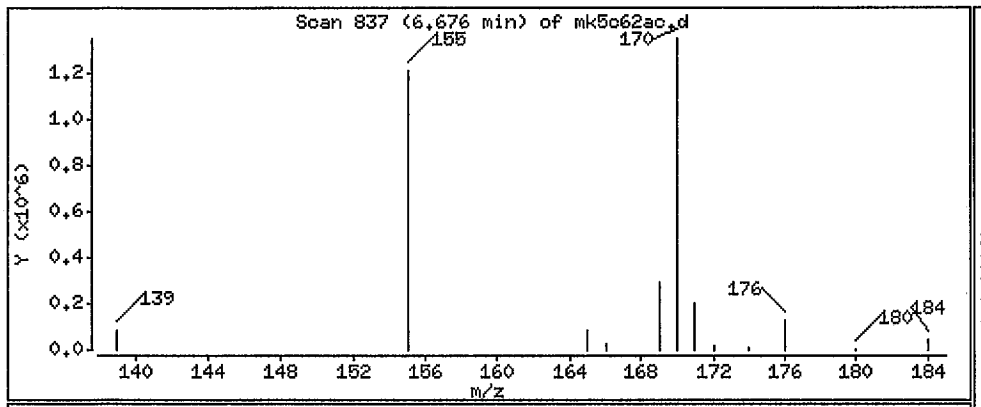
Operator: 11211

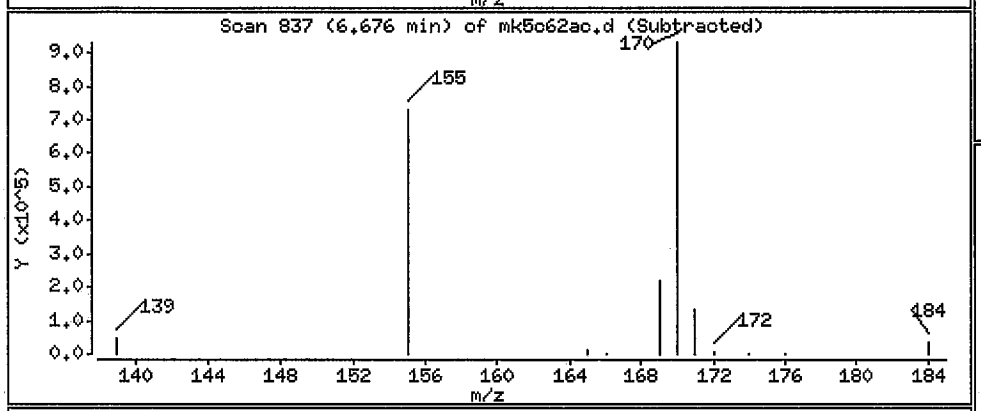
Column phase: Varian: 5MS

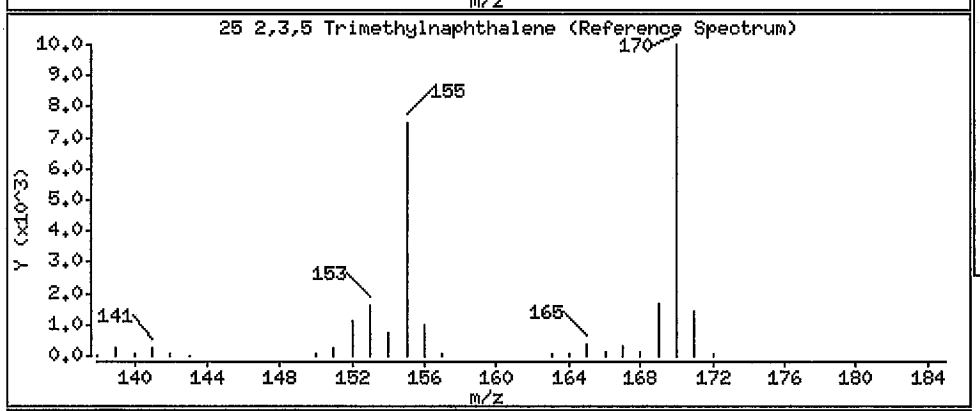
Column diameter: 0.25

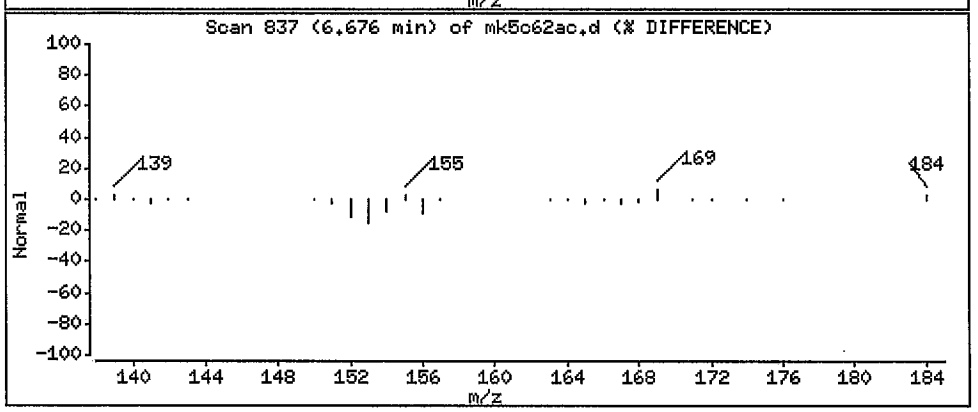
25 2,3,5 Trimethylnaphthalene

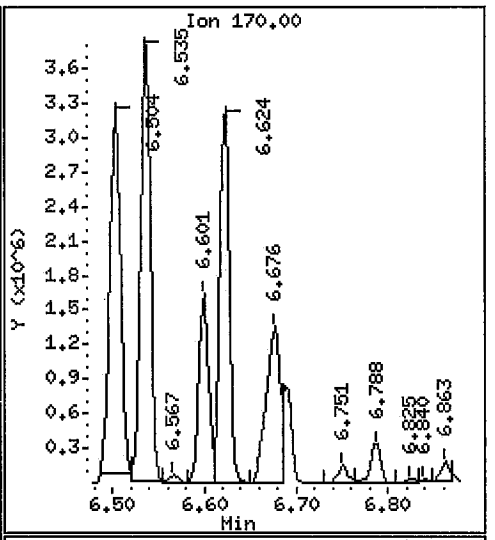
Concentration: 1500000 ng/sample

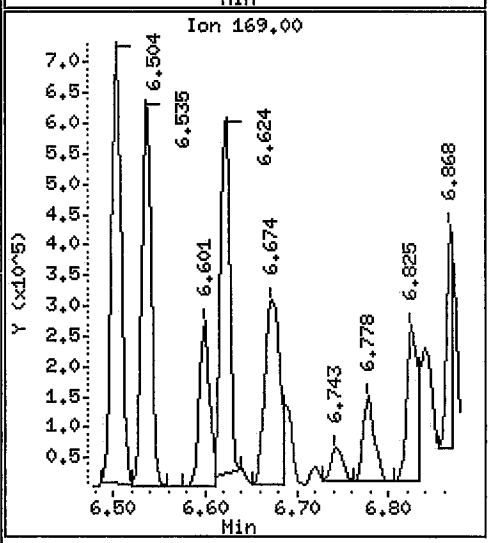












Data File: /var/ohem/goms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

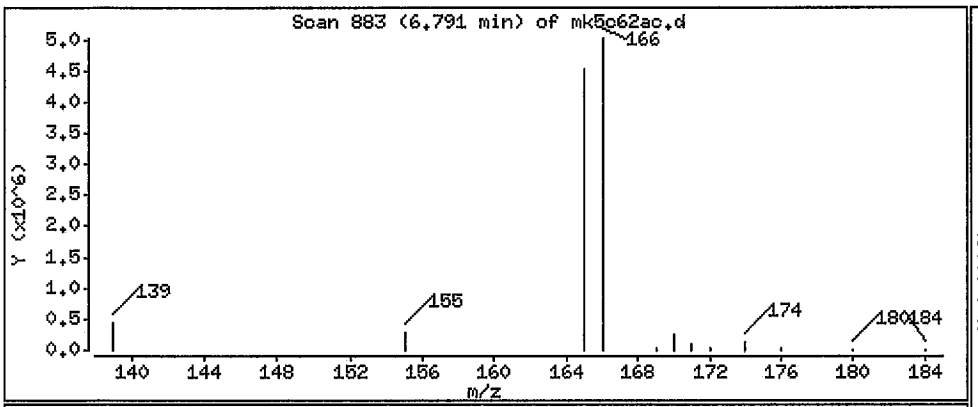
Operator: 11211

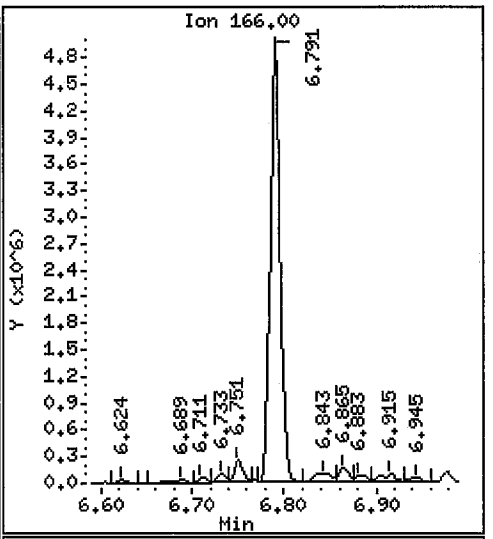
Column phase: Varian: 5MS

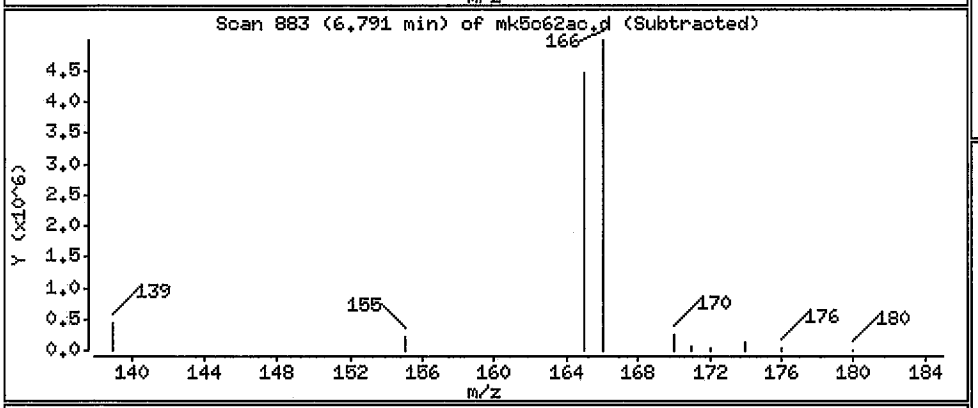
Column diameter: 0.25

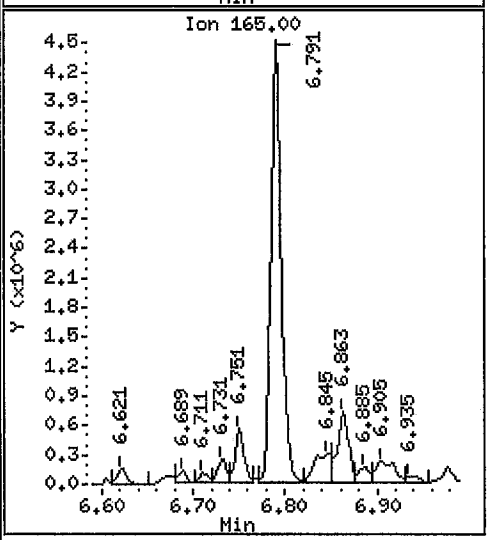
27 Fluorene

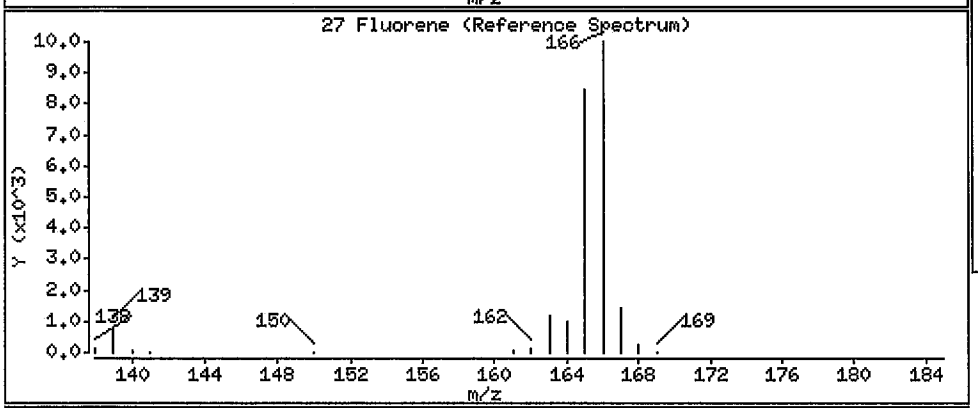
Concentration: 2580000 ng/sample

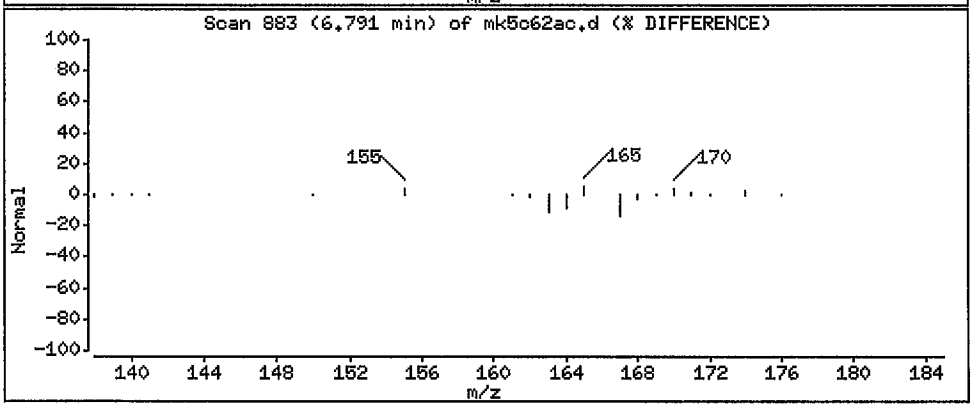












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

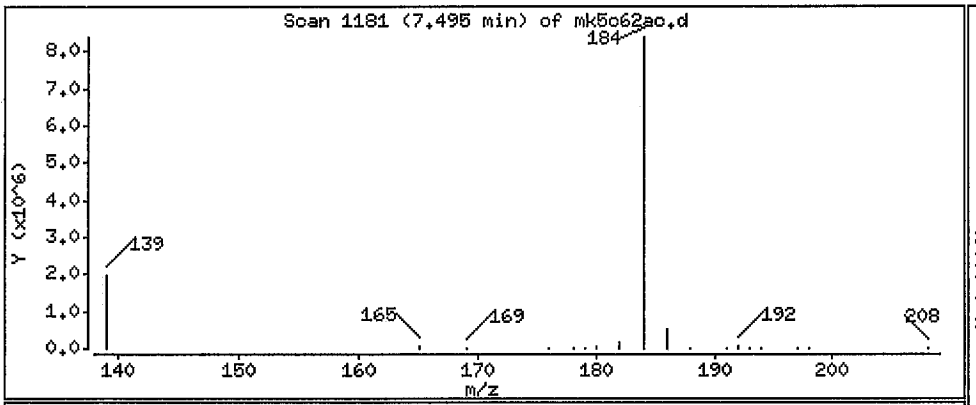
Operator: 11211

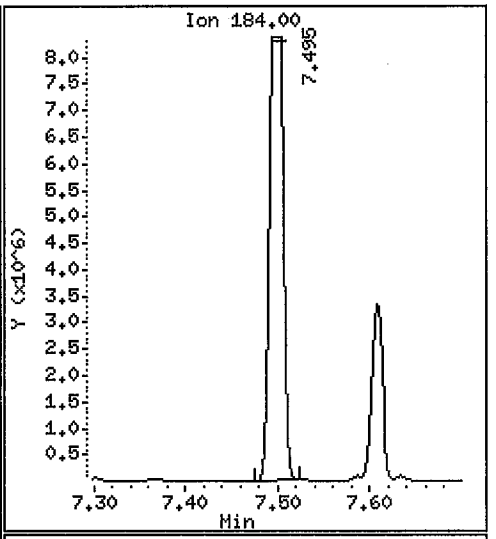
Column phase: Varian: 5MS

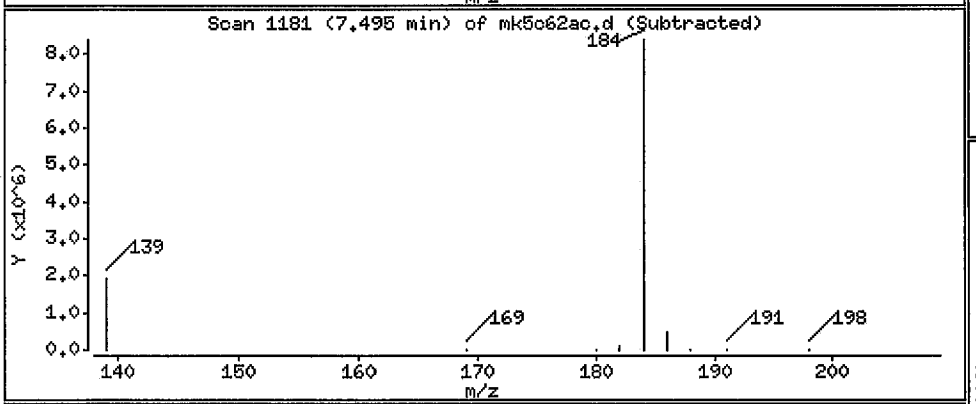
Column diameter: 0.25

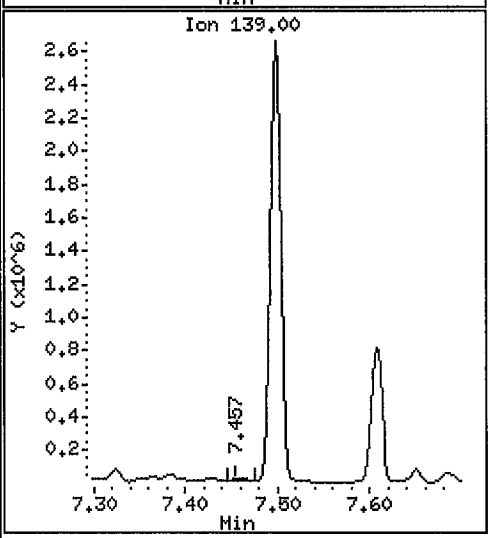
36 Dibenzothiophene

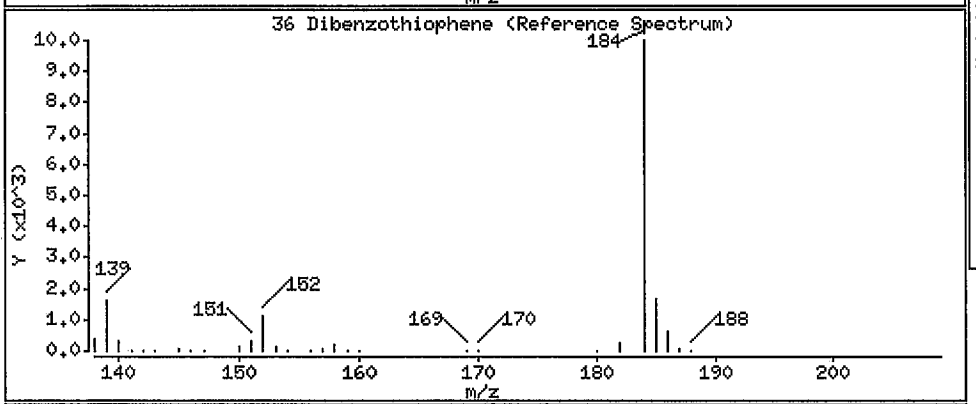
Concentration: 4450000 ng/sample

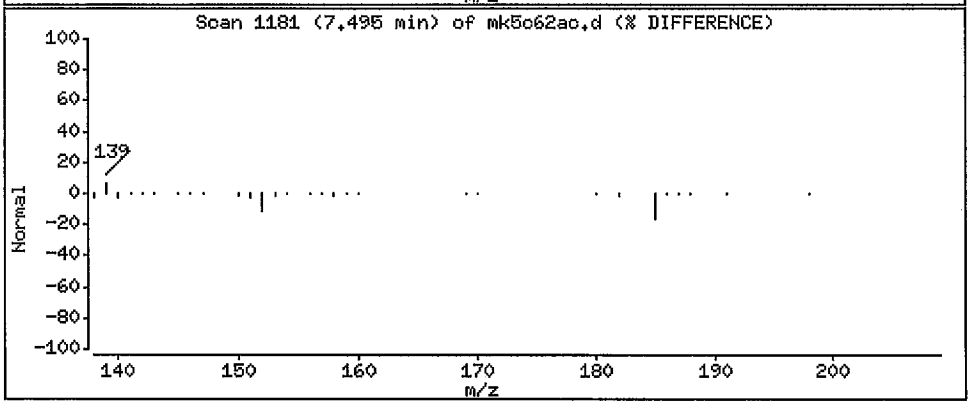












8/15/11

(k)

Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

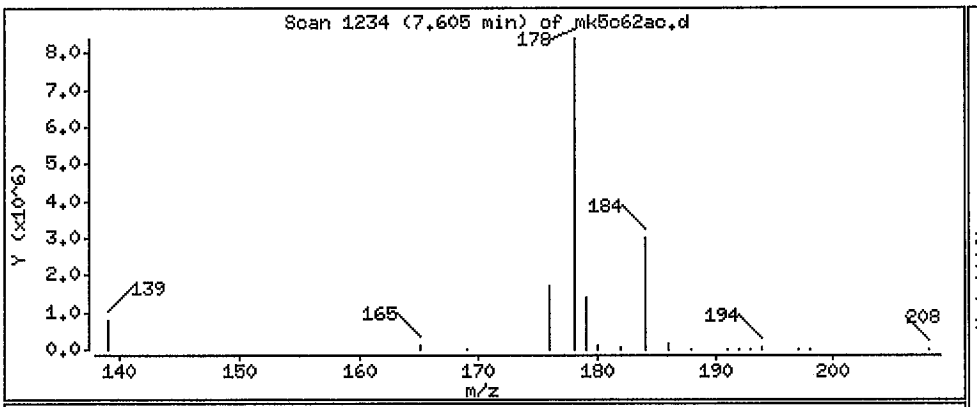
Operator: 11211

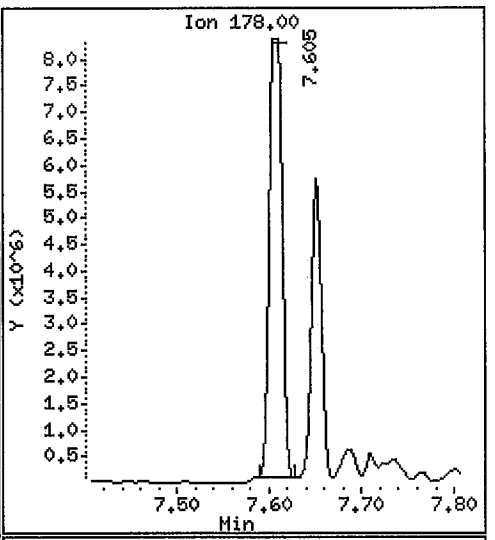
Column phase: Varian: 5MS

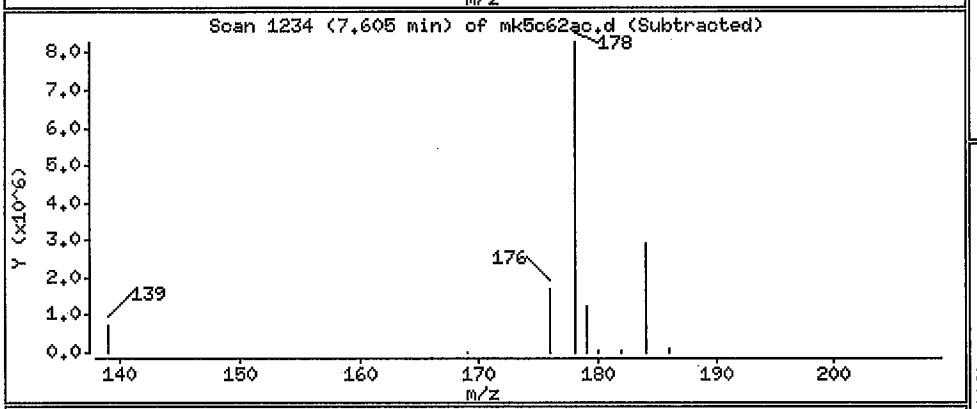
Column diameter: 0.25

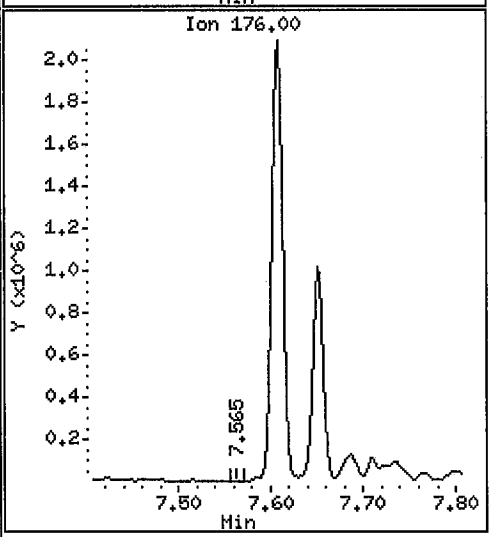
43 Phenanthrene

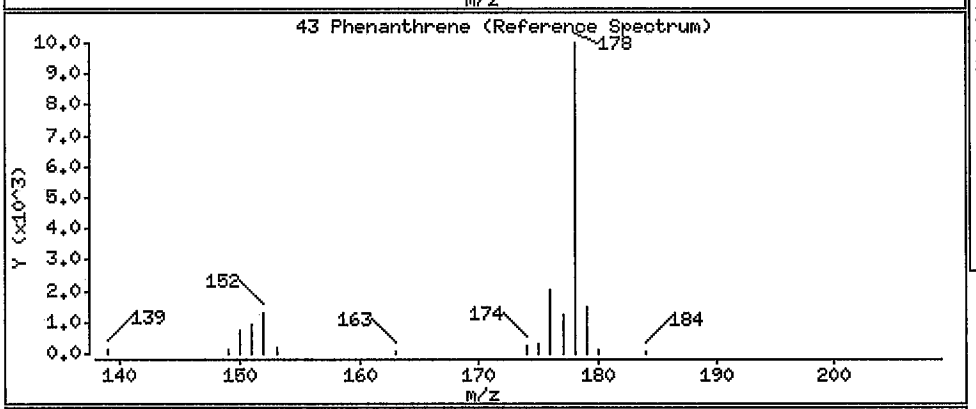
Concentration: 3840000 ng/sample





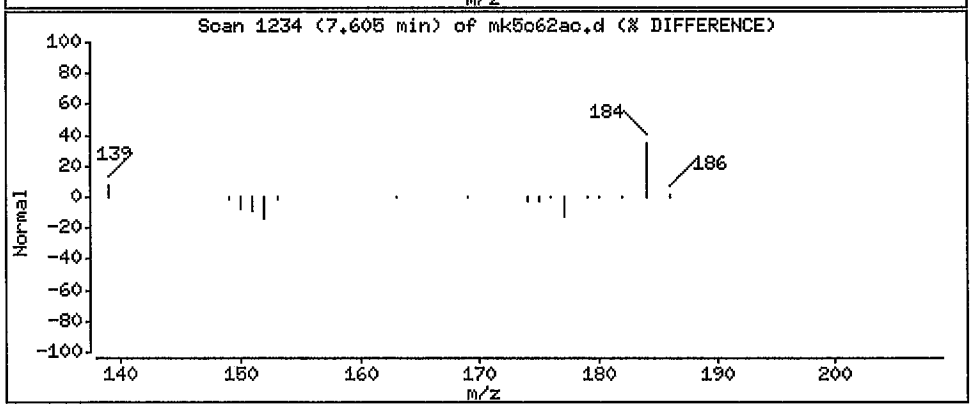






8/15/14

(16)



Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

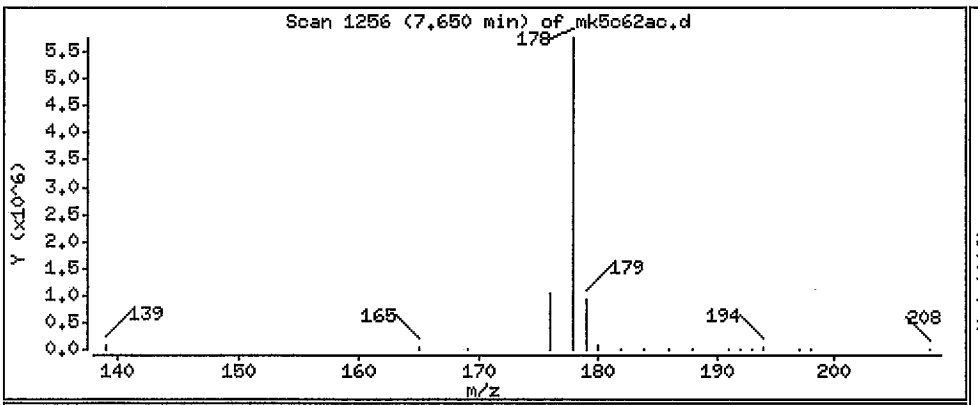
Operator: 11211

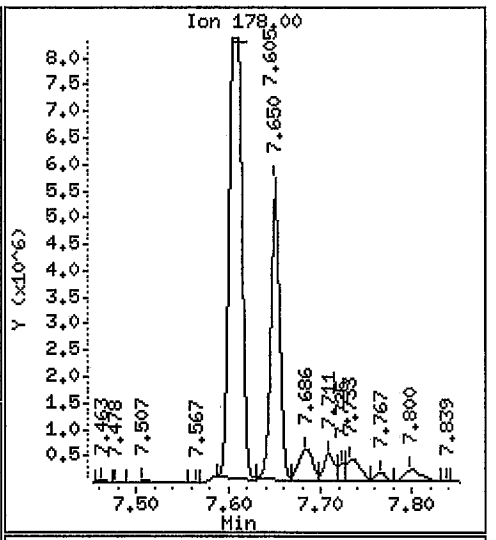
Column phase: Varian: 5MS

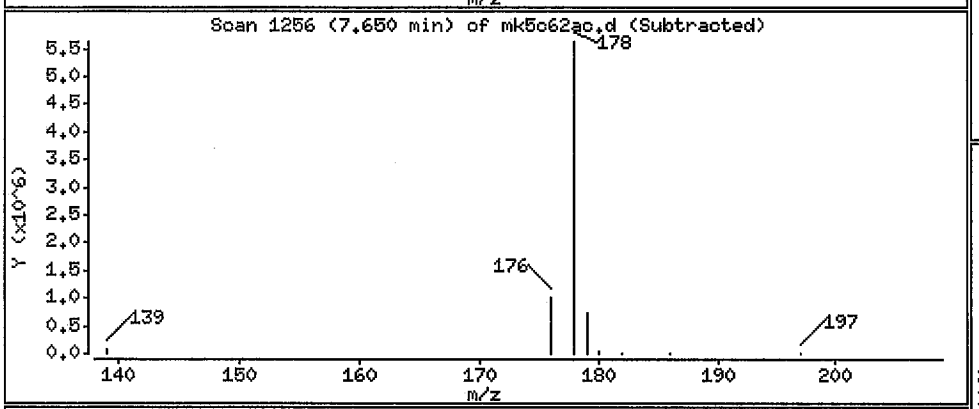
Column diameter: 0.25

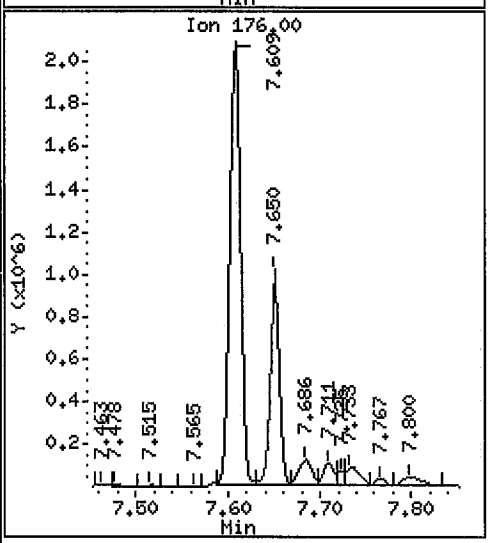
46 Anthracene

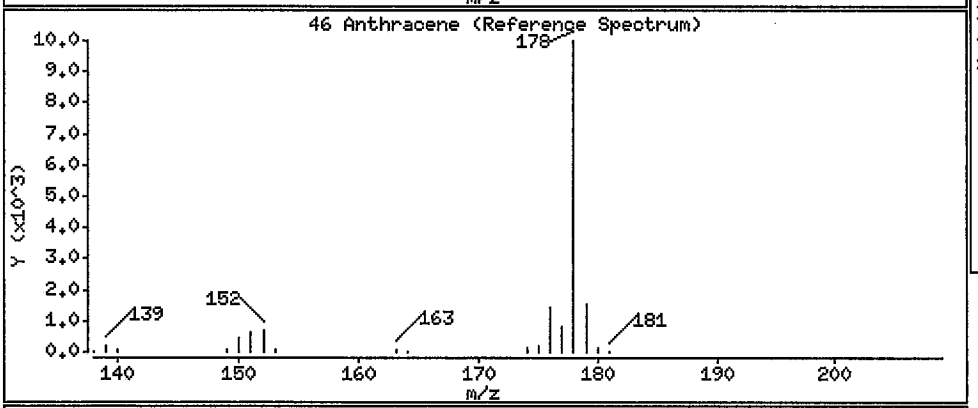
Concentration: 1940000 ng/sample

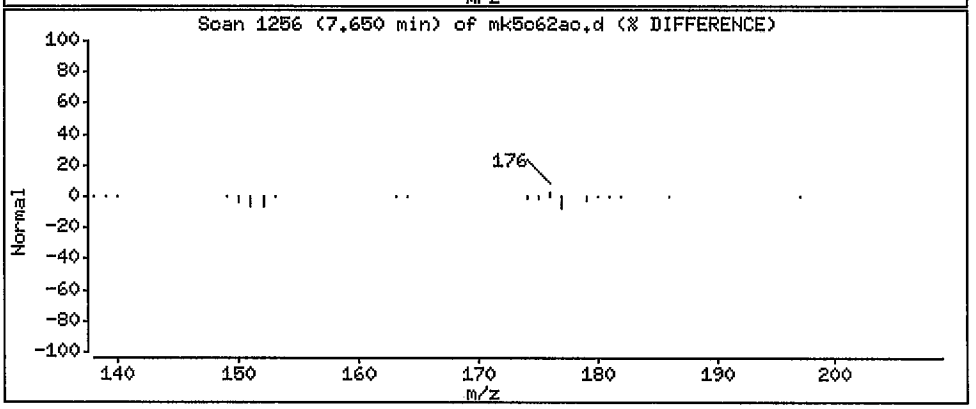












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

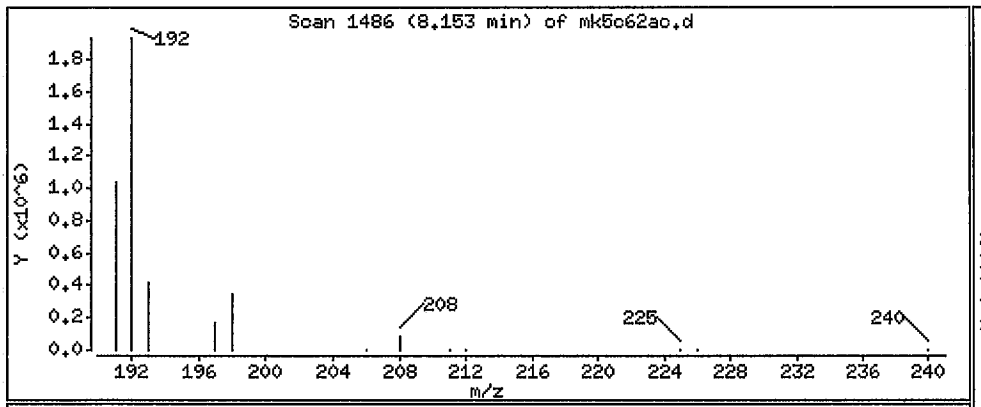
Operator: 11211

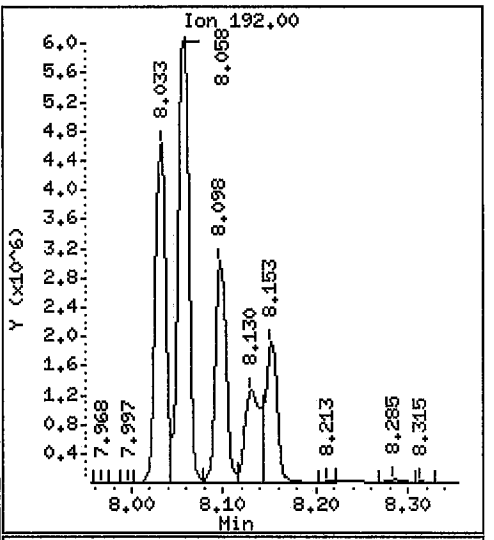
Column phase: Varian: 5MS

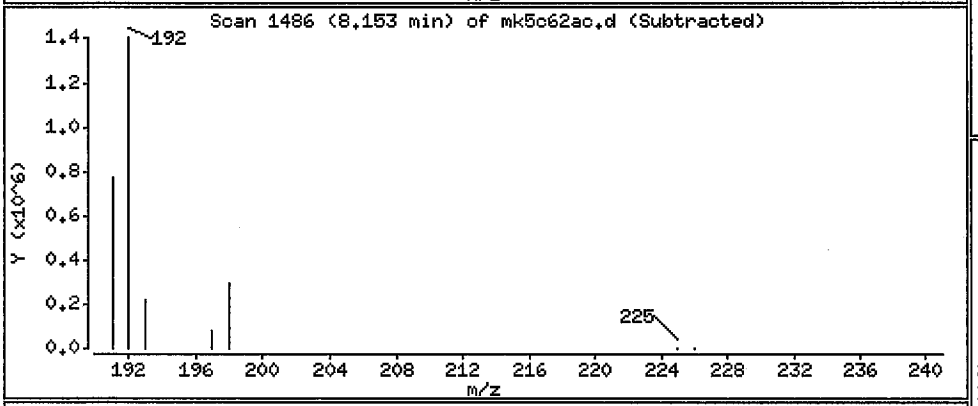
Column diameter: 0.25

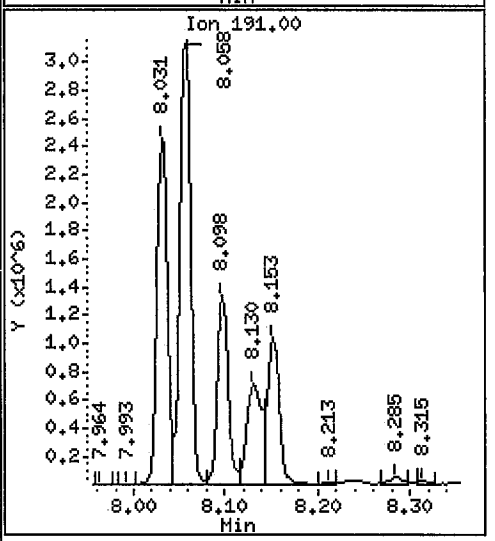
52 1-Methylphenanthrene

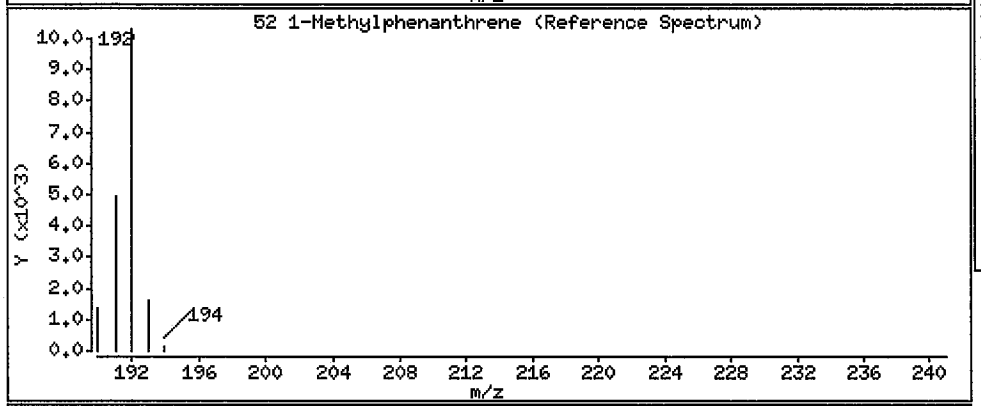
Concentration: 1380000 ng/sample

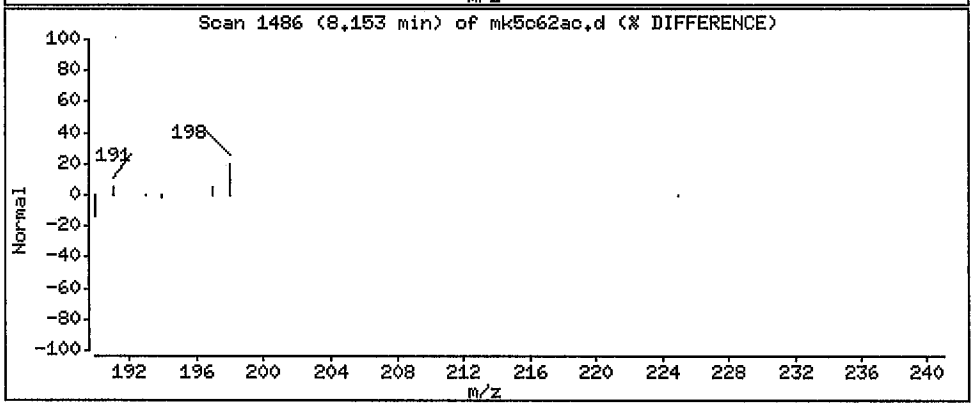












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

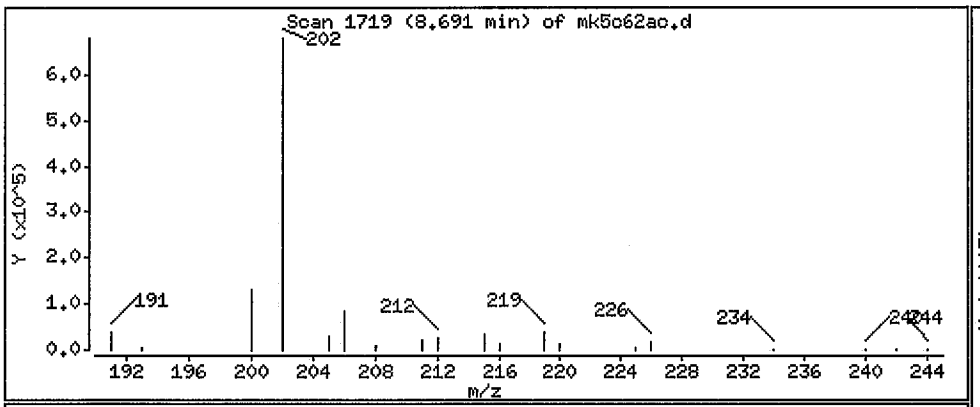
Operator: 11211

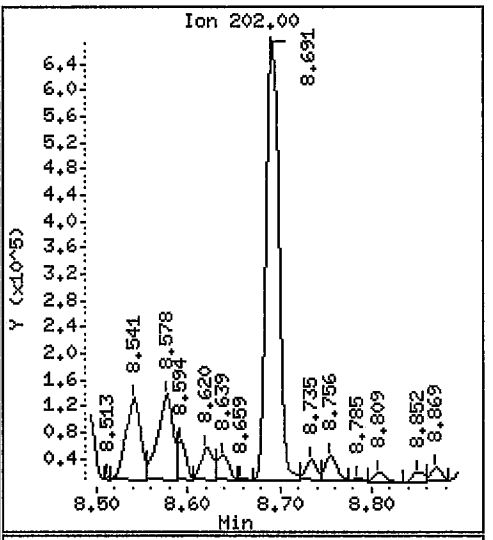
Column phase: Varian: 5MS

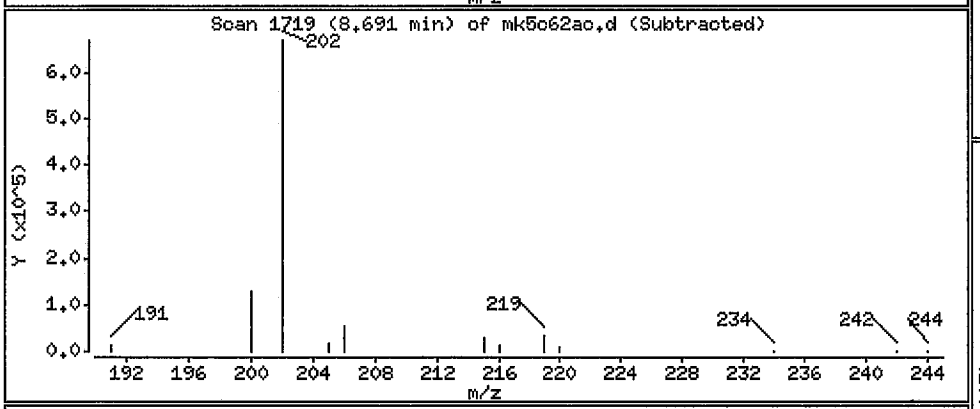
Column diameter: 0.25

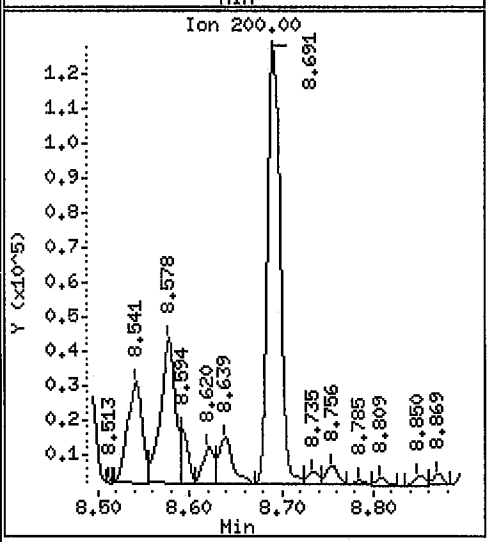
55 Fluoranthene

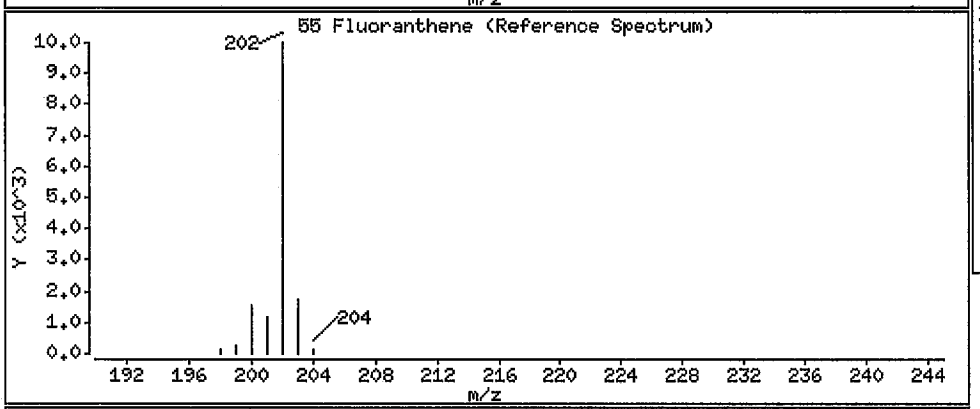
Concentration: 243000 ng/sample

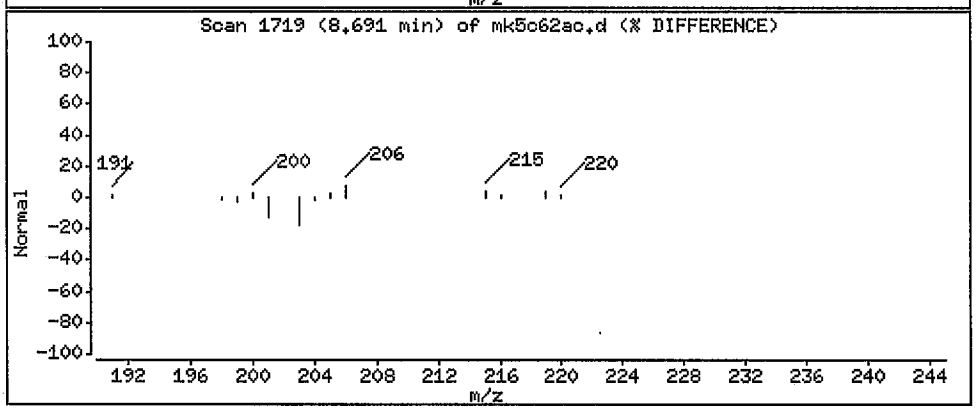












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

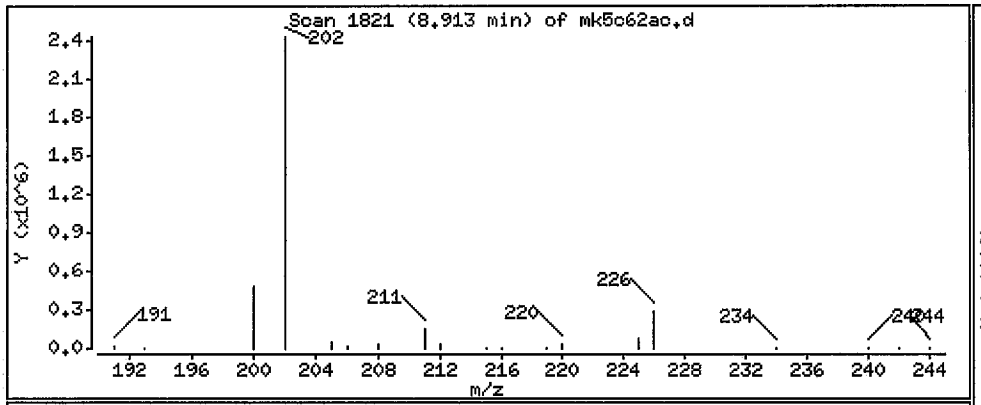
Operator: 11211

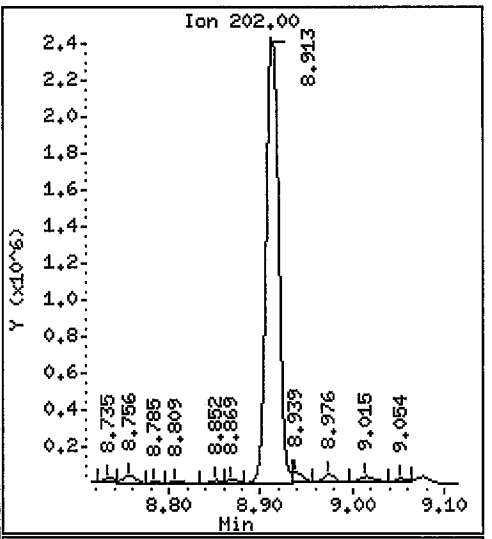
Column phase: Varian: 5MS

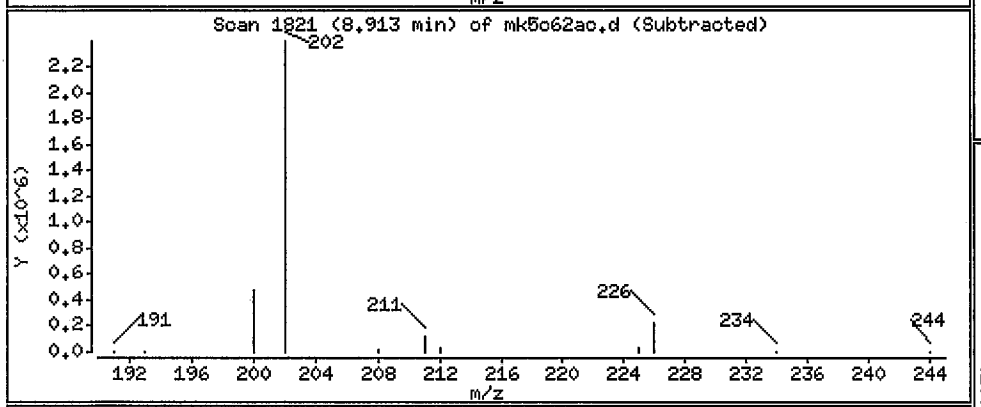
Column diameter: 0.25

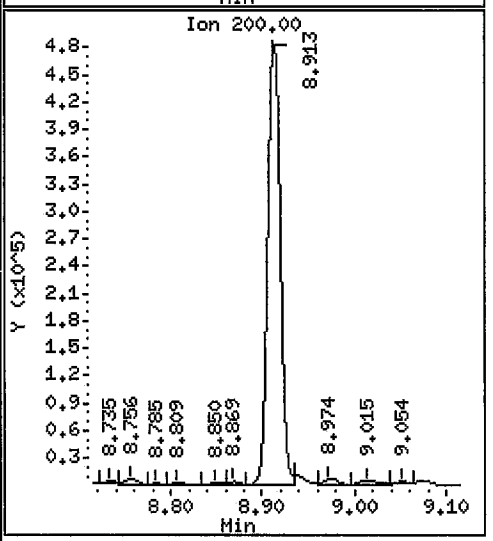
57 Pyrene

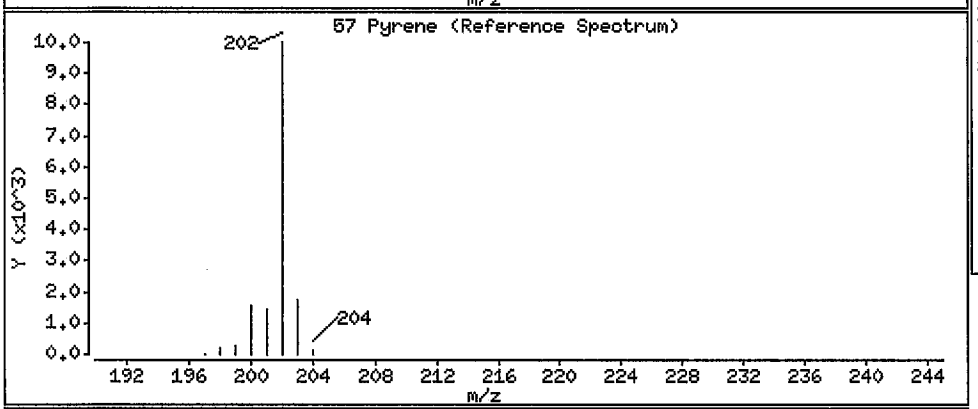
Concentration: 824000 ng/sample

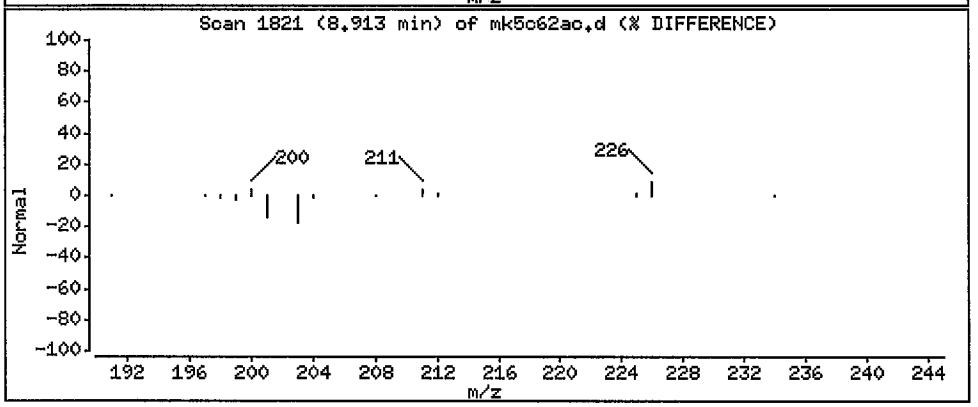












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

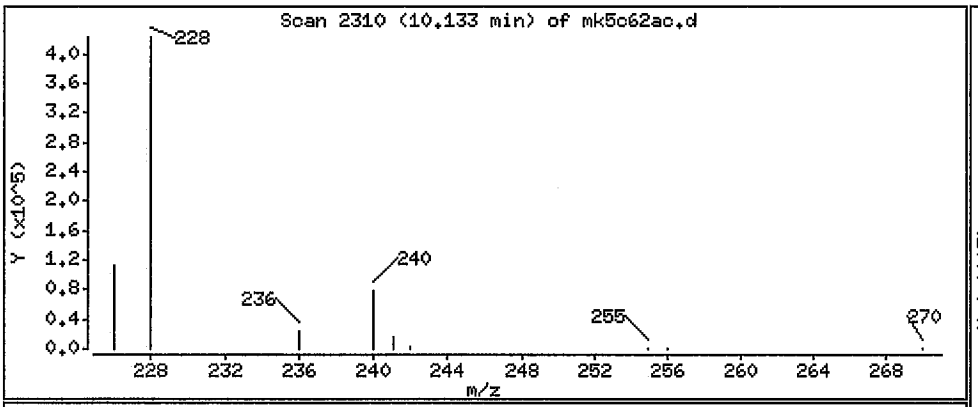
Operator: 11211

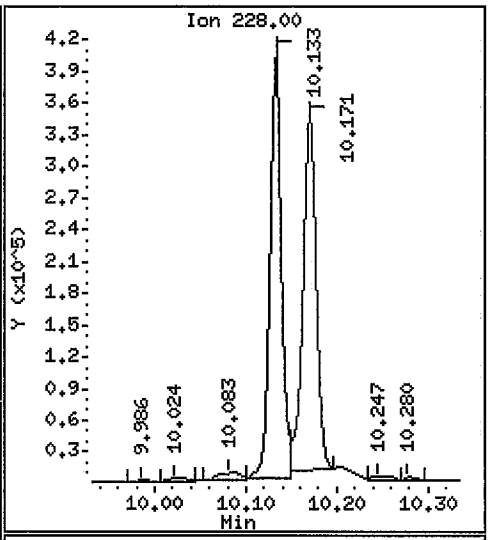
Column phase: Varian: 5MS

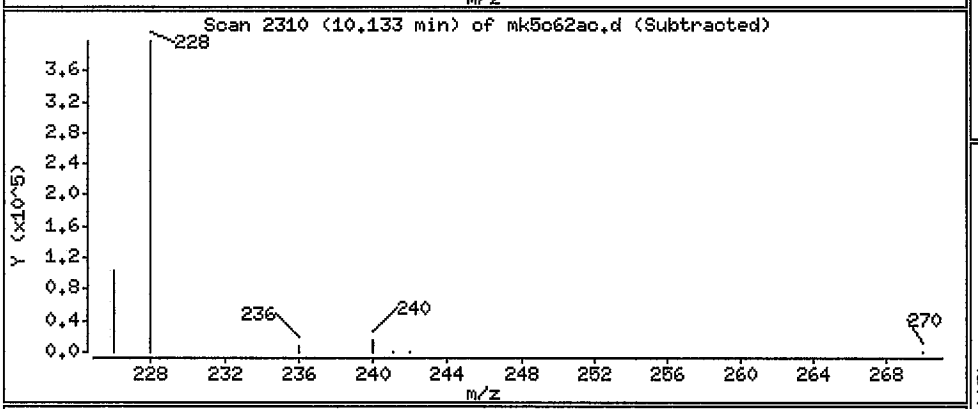
Column diameter: 0.25

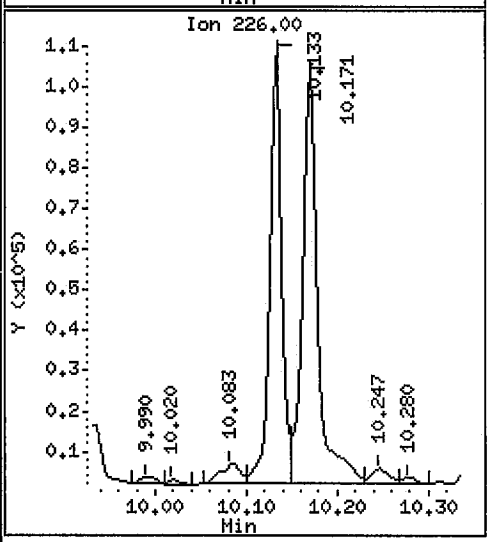
62 Benzo(a)anthracene

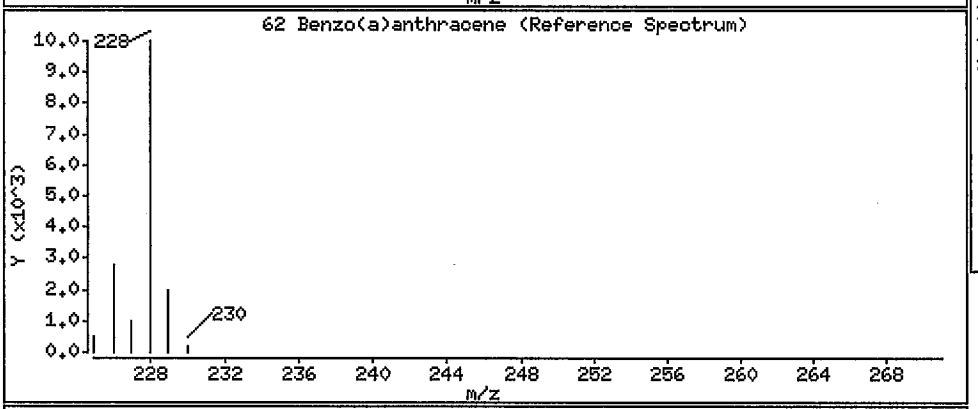
Concentration: 186000 ng/sample

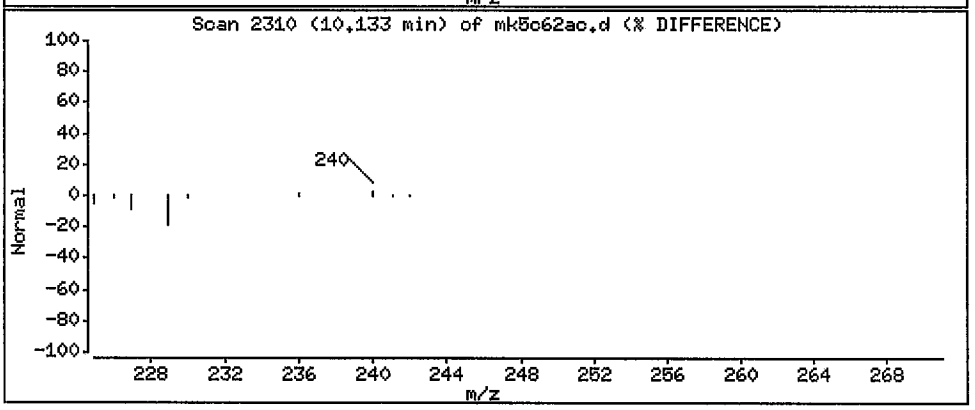












Data File: /var/chem/goms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

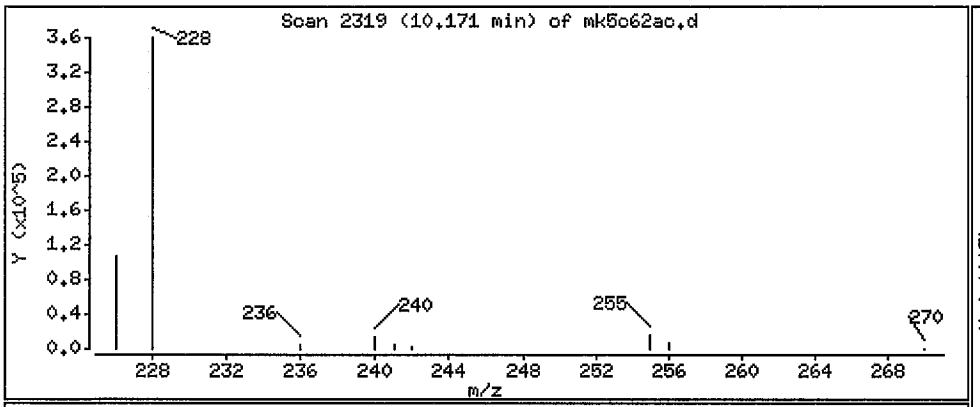
Operator: 11211

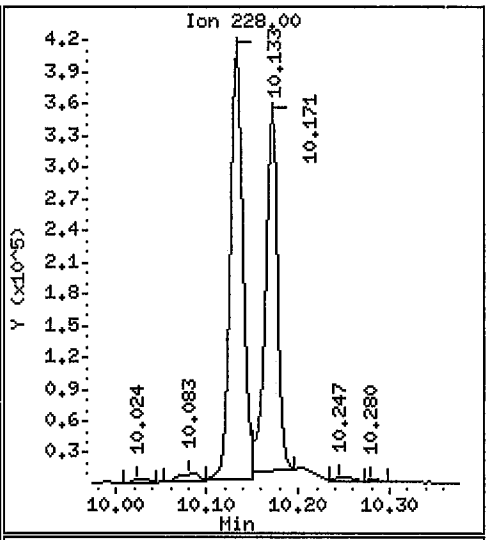
Column phase: Varian: 5MS

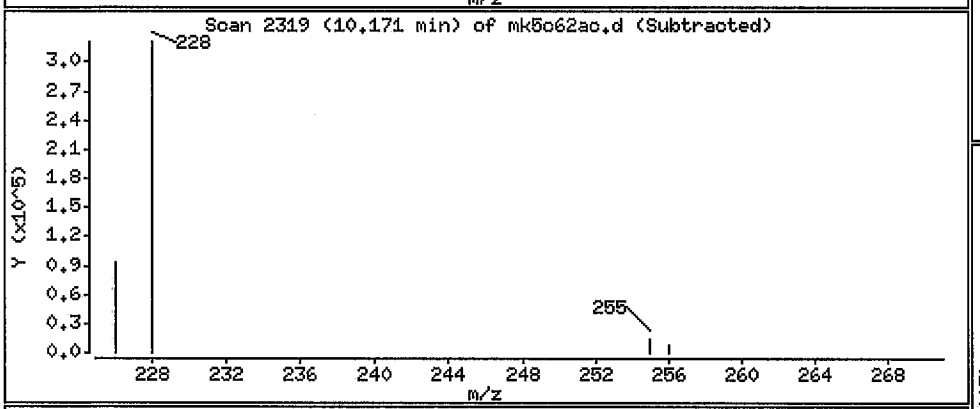
Column diameter: 0.25

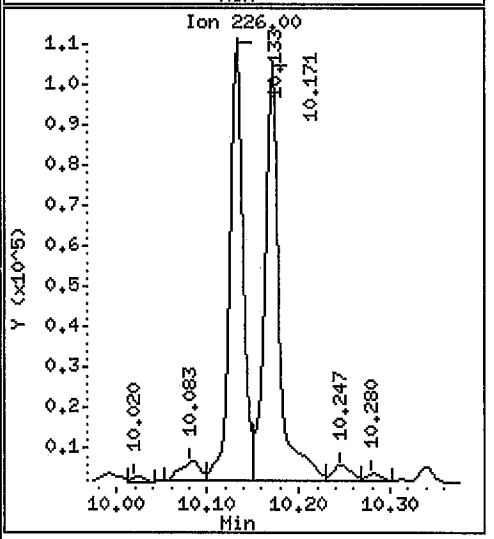
65 Chrysene

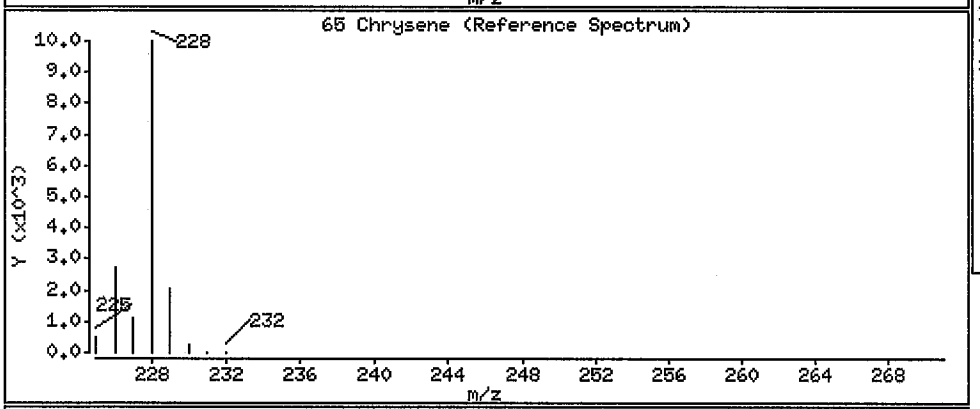
Concentration: 213000 ng/sample

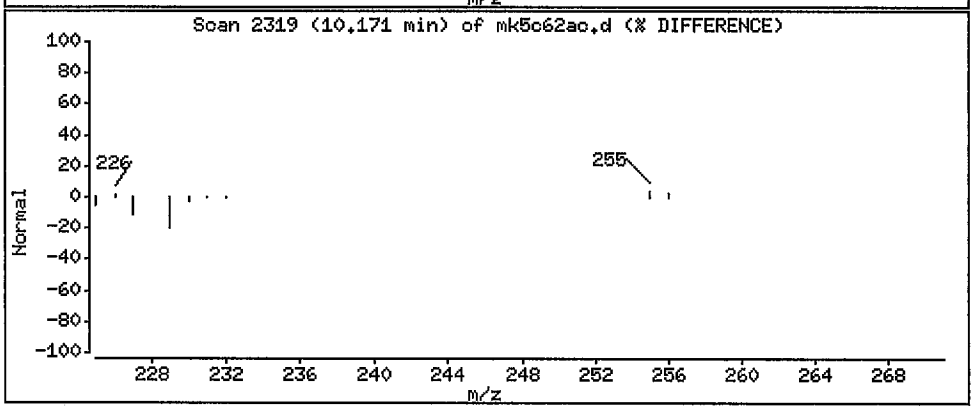












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

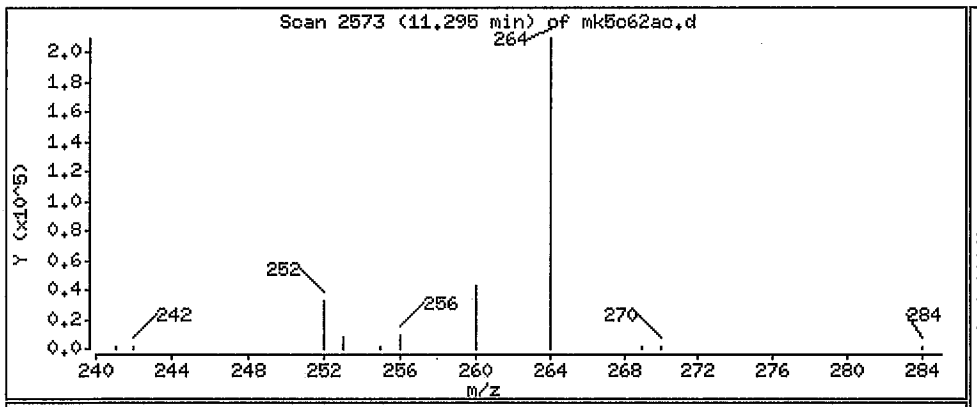
Operator: 11211

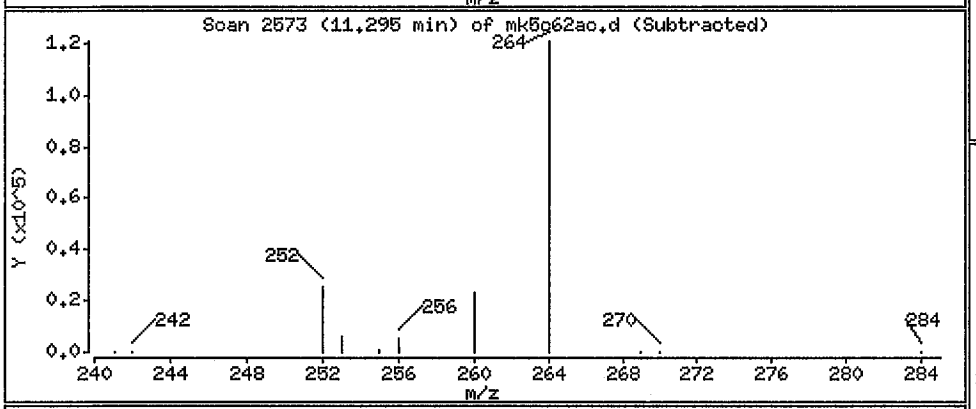
Column phase: Varian: 5MS

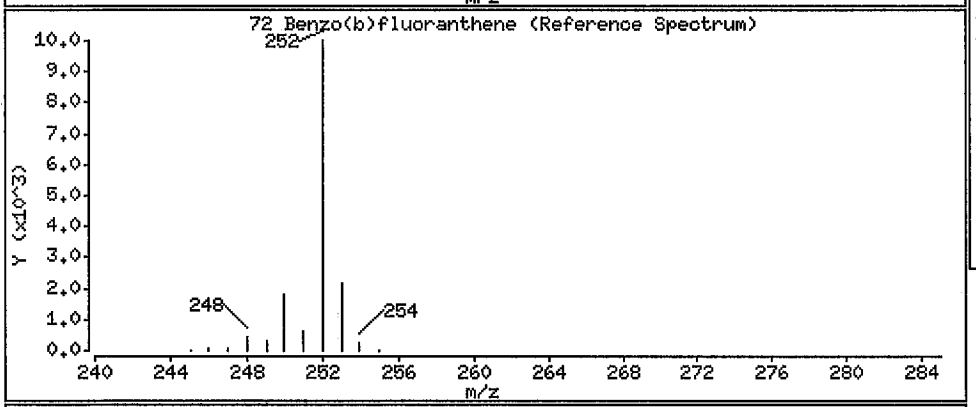
Column diameter: 0.25

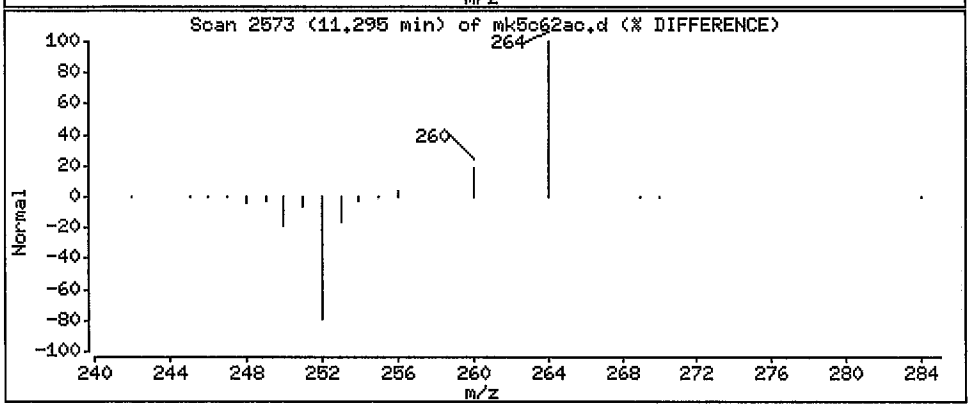
72 Benzo(b)fluoranthene

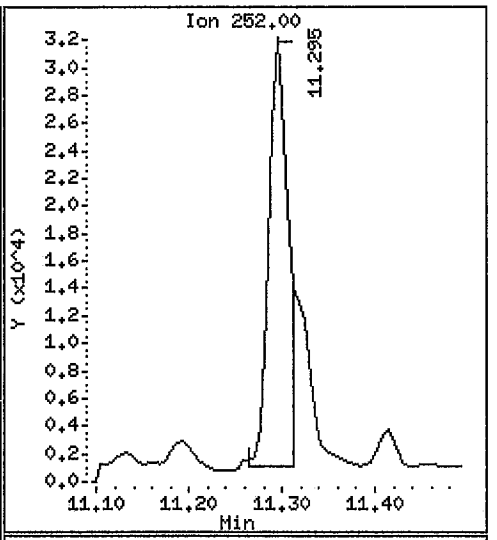
Concentration: 27900 ng/sample

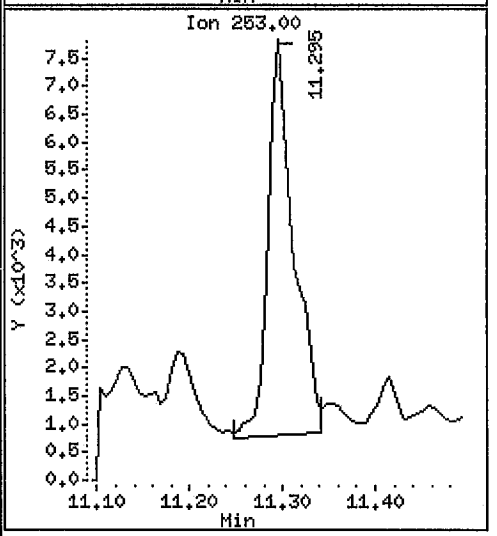












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

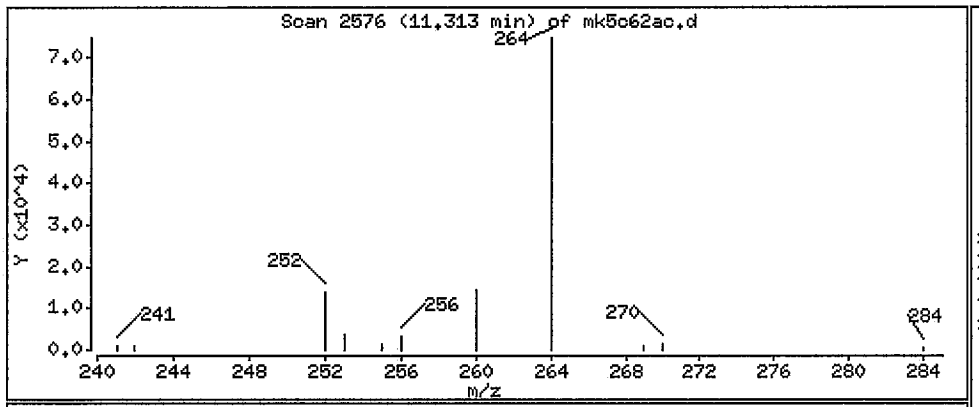
Operator: 11211

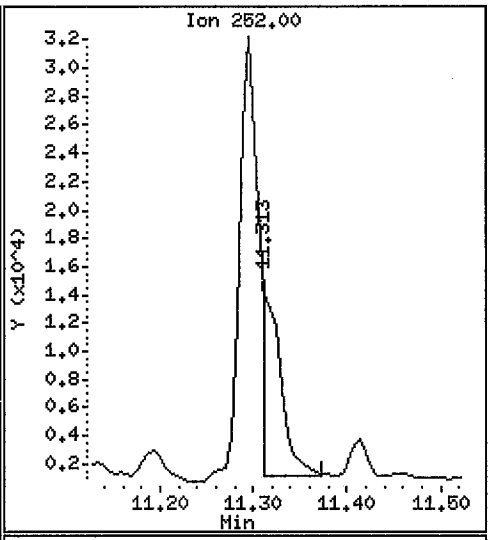
Column phase: Varian: 5MS

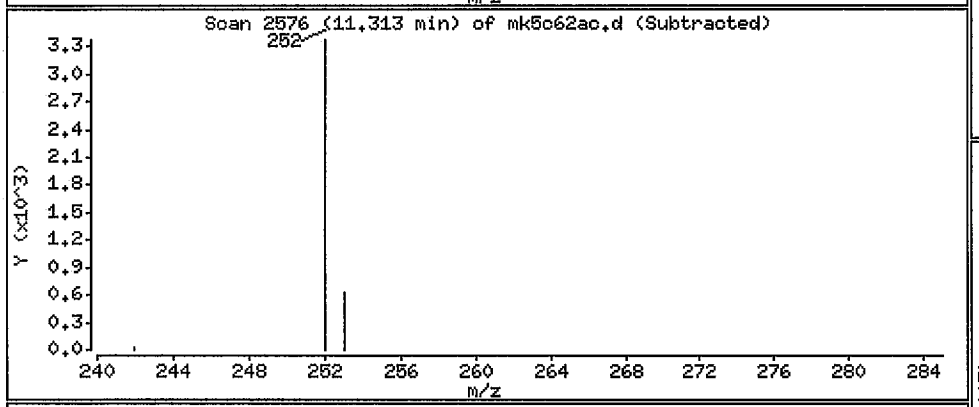
Column diameter: 0.25

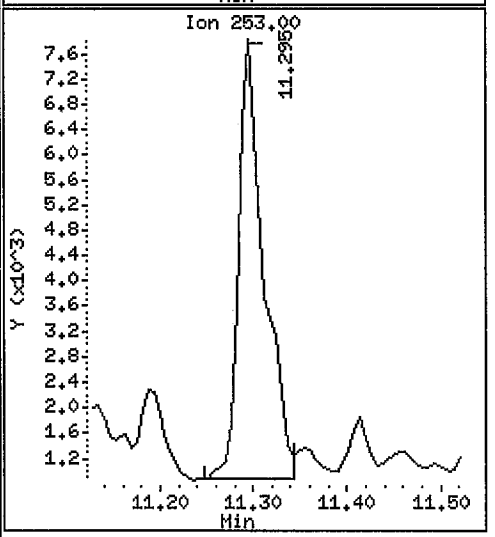
75 Benzo(k)fluoranthene

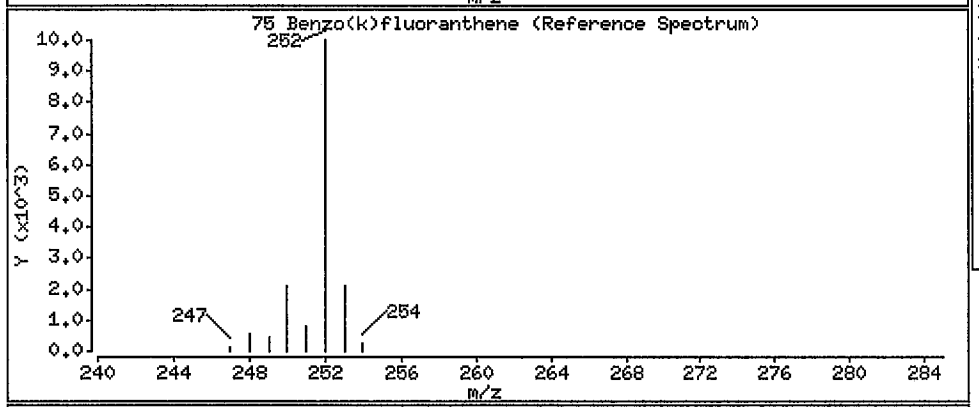
Concentration: 12100 ng/sample

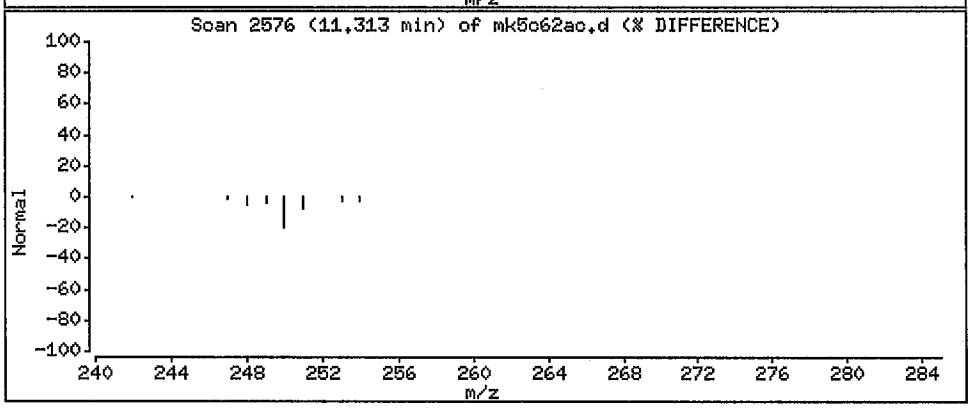












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

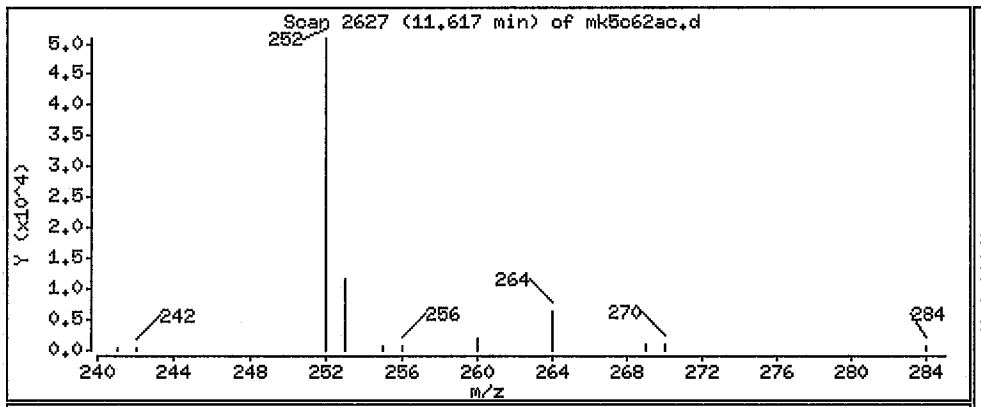
Operator: 11211

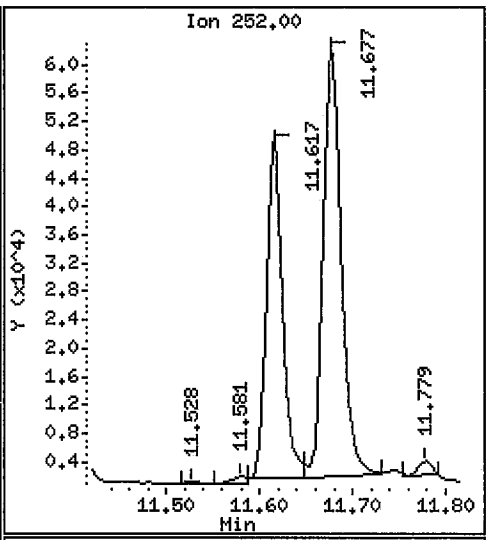
Column phase: Varian: 5MS

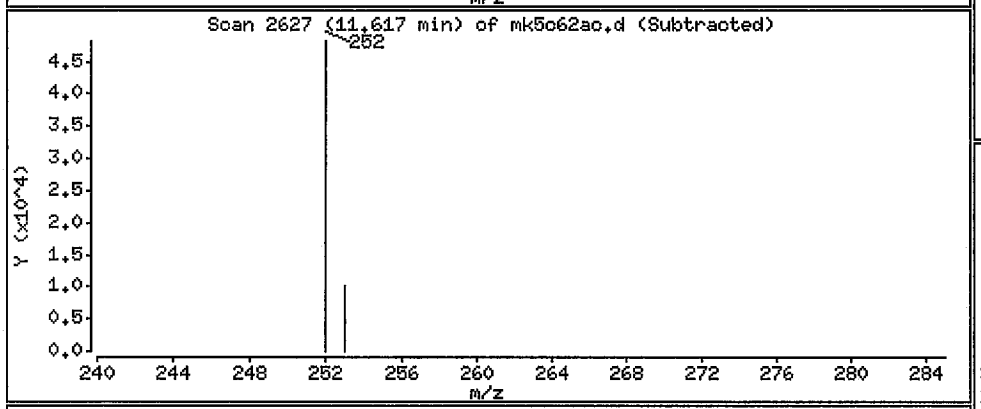
Column diameter: 0.25

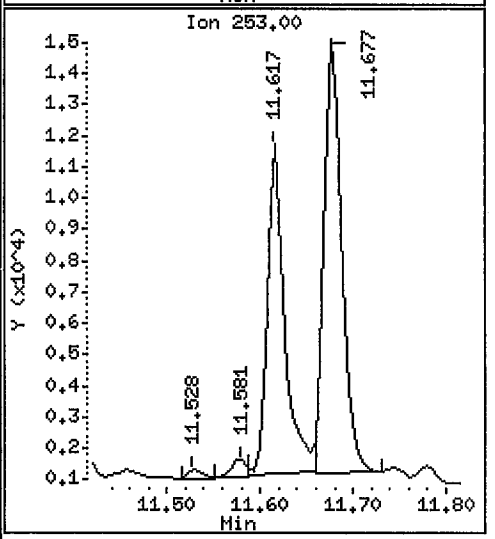
77 Benzo(e)pyrene

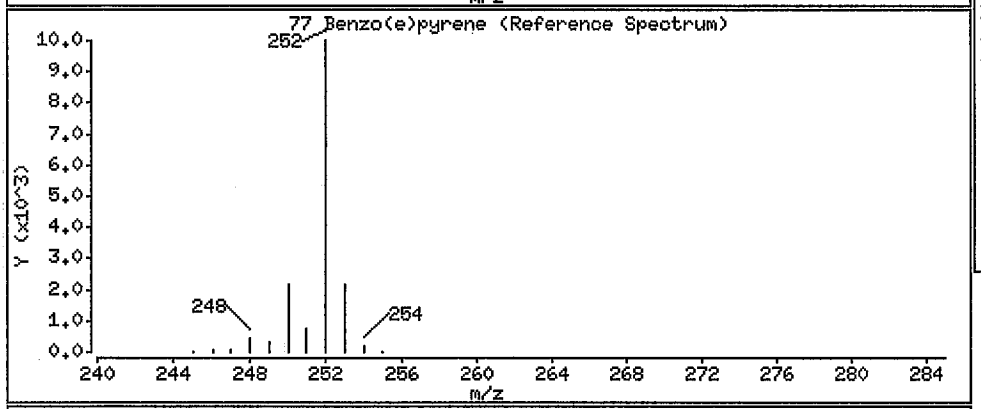
Concentration: 42300 ng/sample

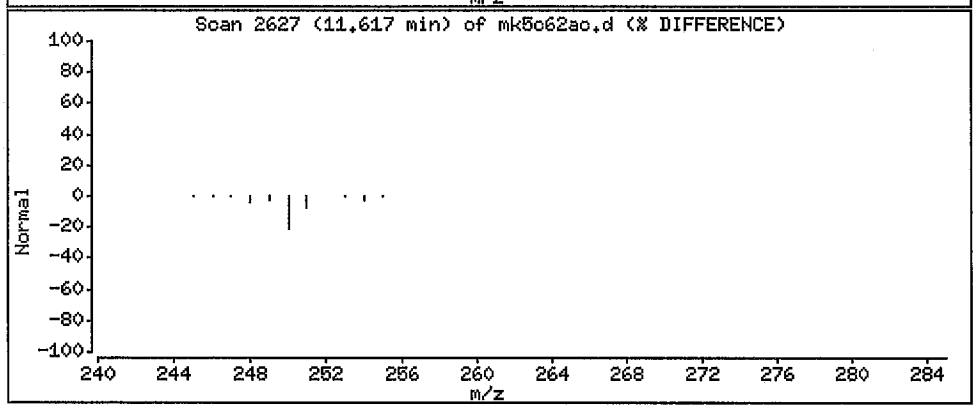












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

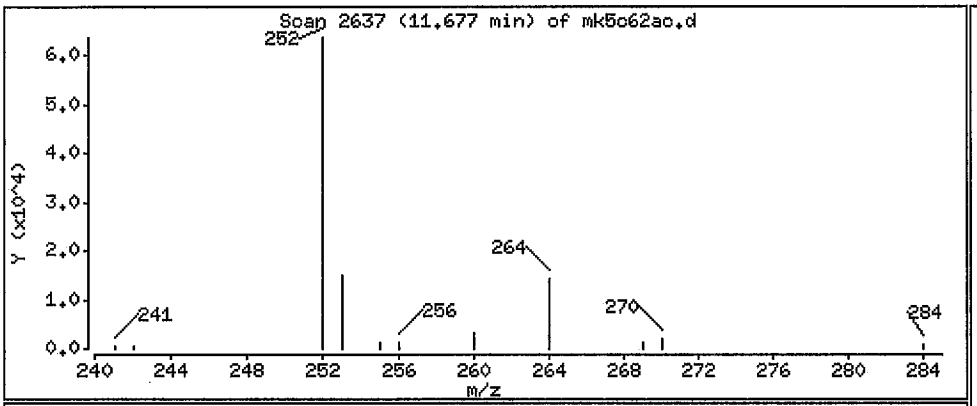
Operator: 11211

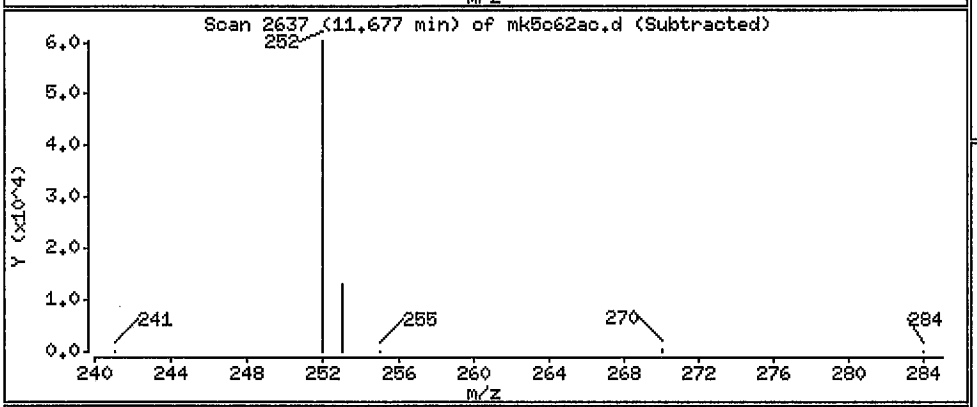
Column phase: Varian: 5MS

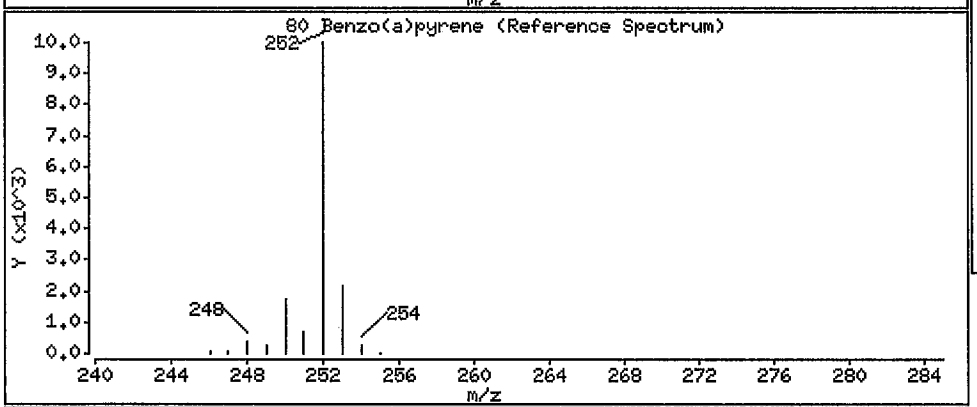
Column diameter: 0.25

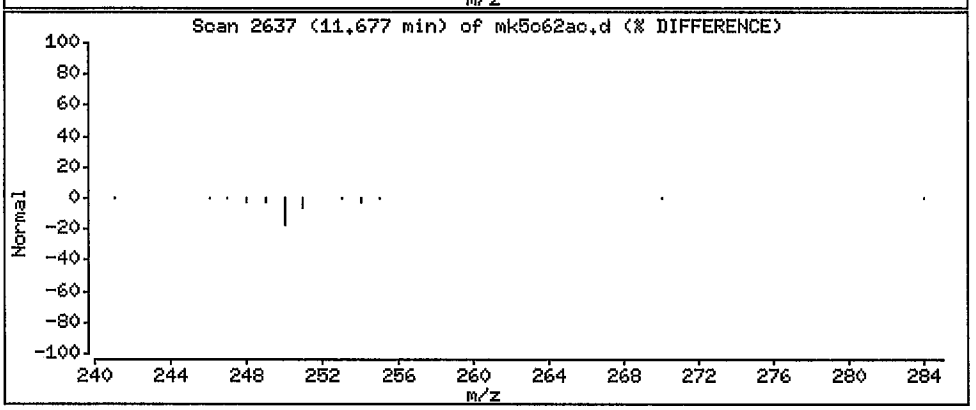
80 Benzo(a)pyrene

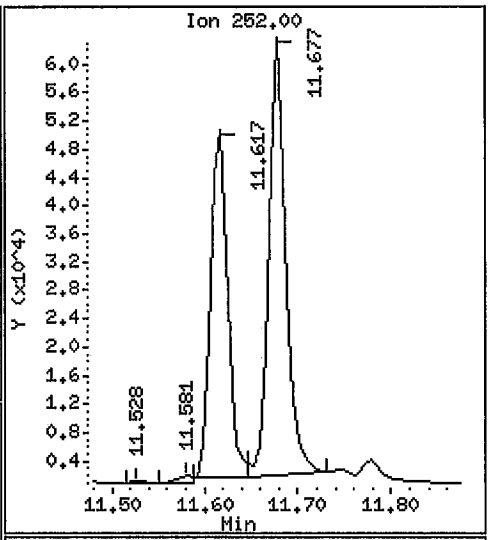
Concentration: 65400 ng/sample

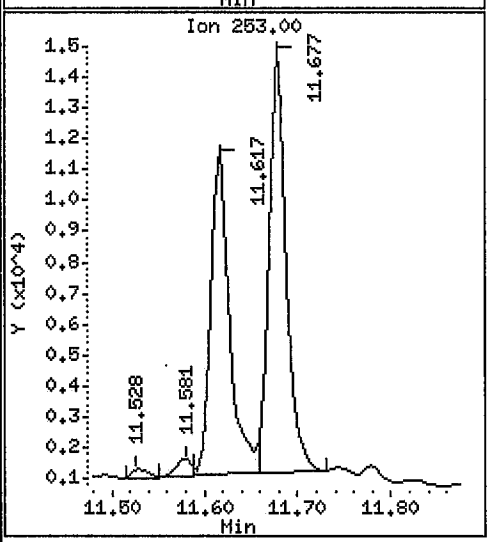












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-C0

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

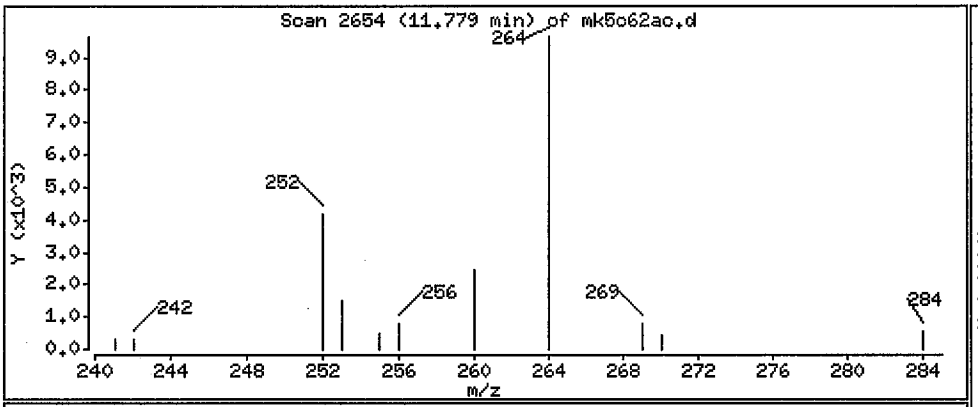
Operator: 11211

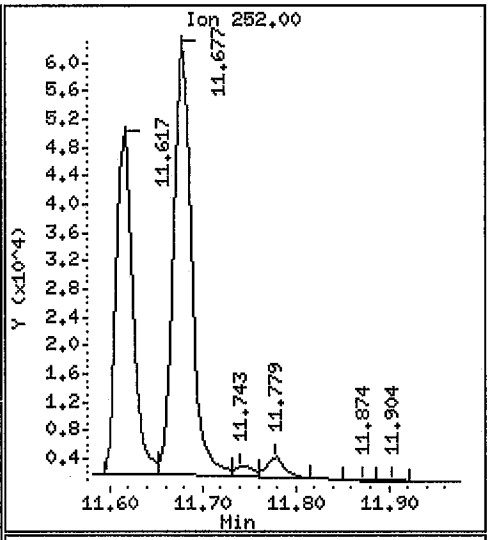
Column phase: Varian: 5MS

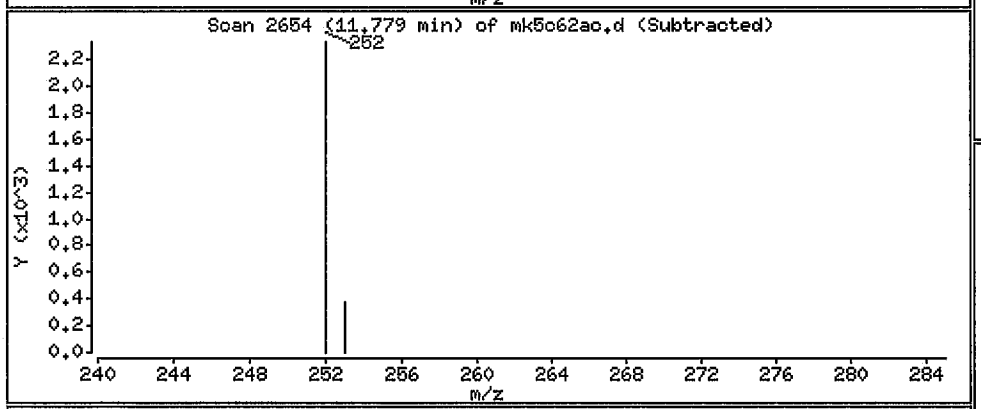
Column diameter: 0.25

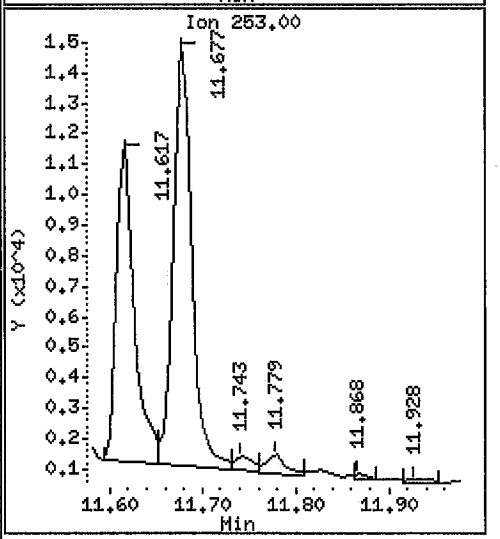
83 Perylene

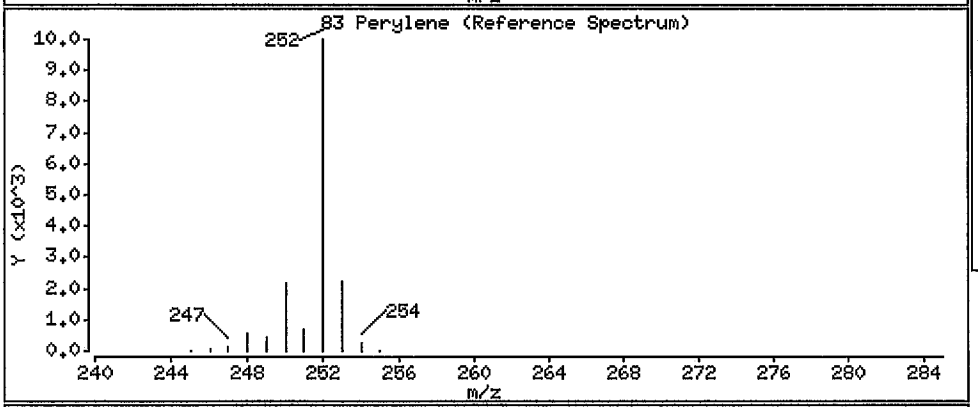
Concentration: 3230 ng/sample

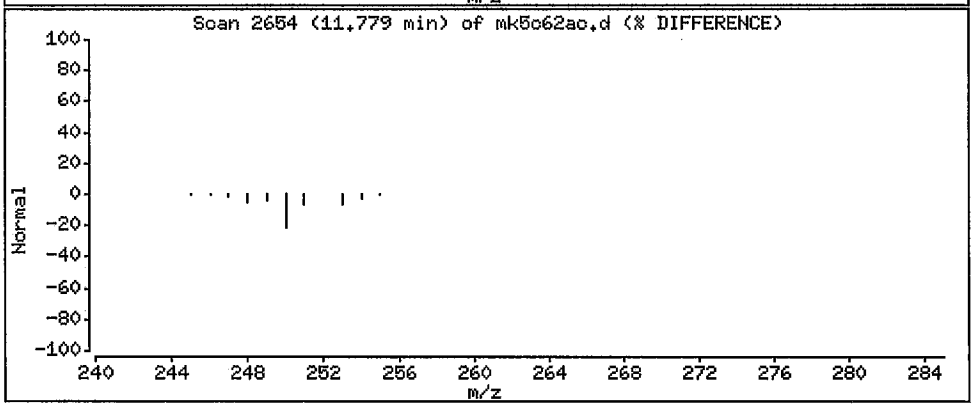












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

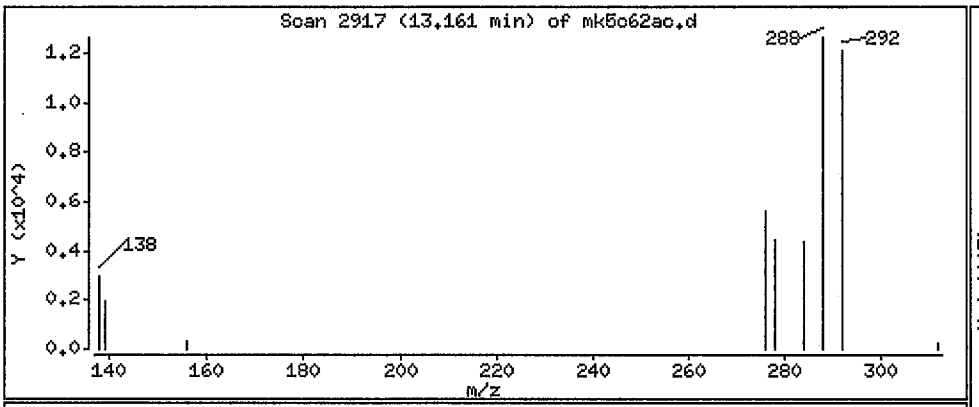
Operator: 11211

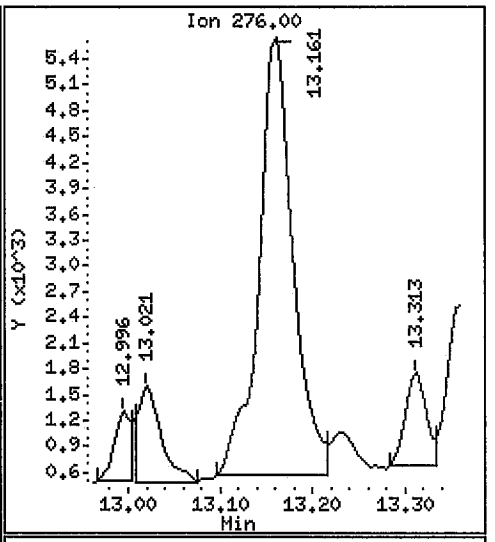
Column phase: Varian: 5MS

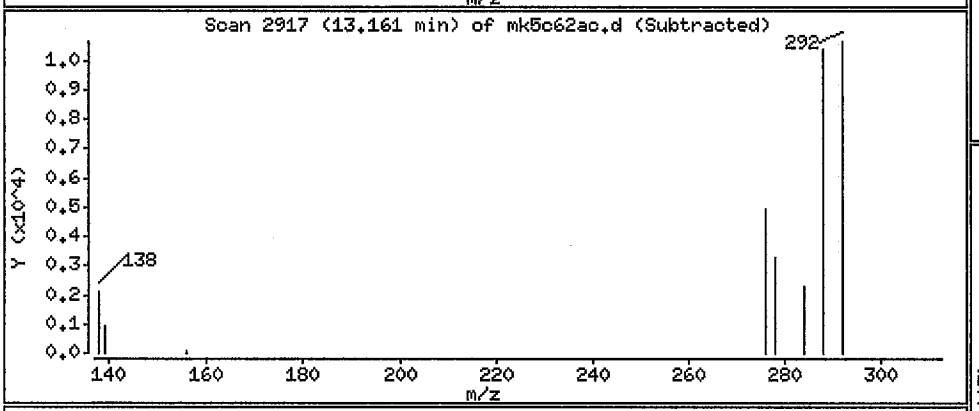
Column diameter: 0.25

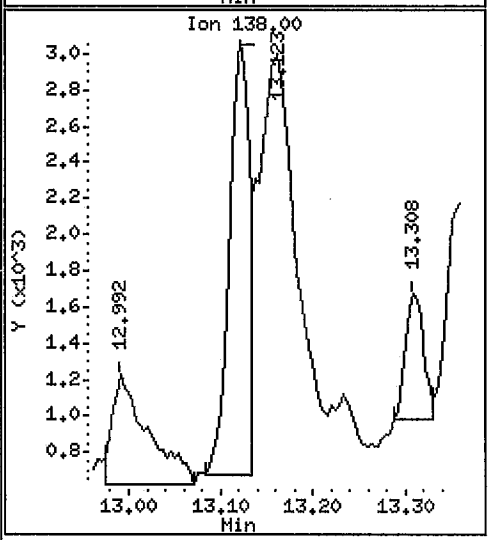
86 Indeno(1,2,3-cd)pyrene

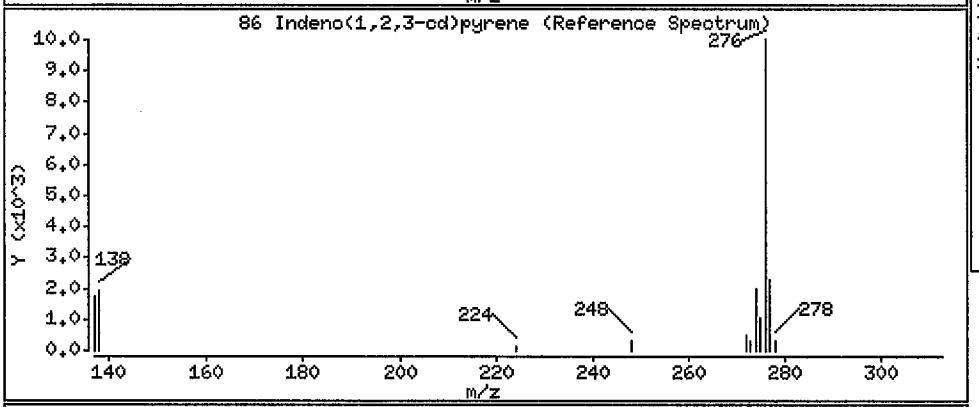
Concentration: 8390 ng/sample

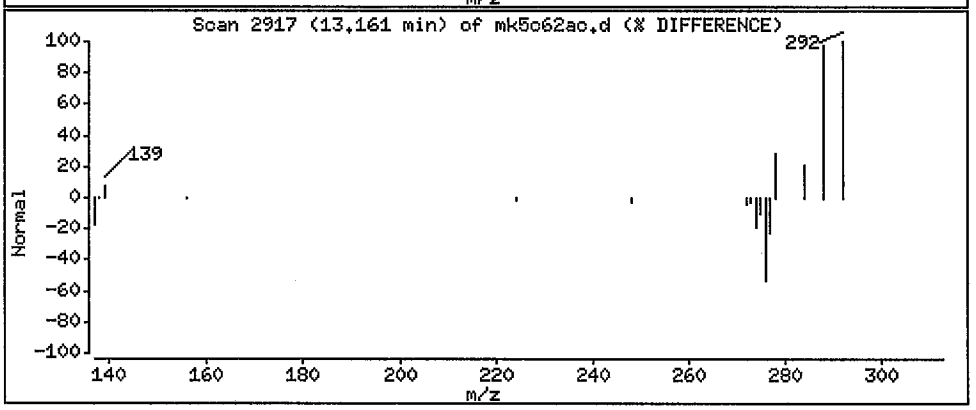












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

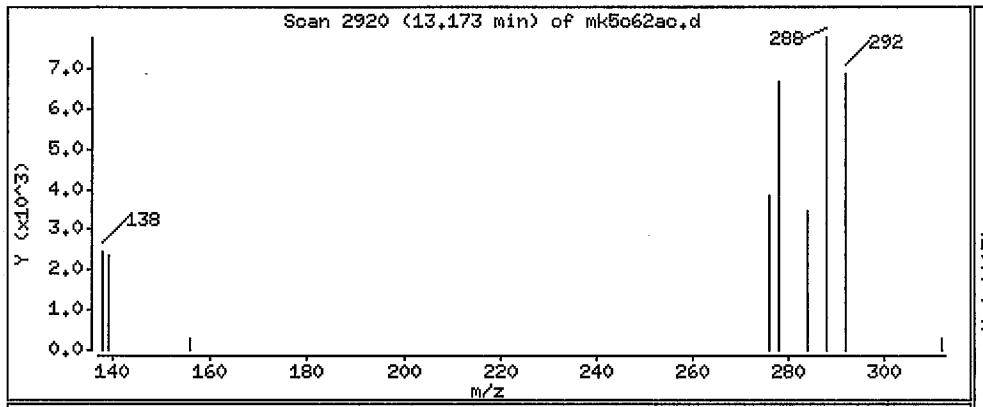
Operator: 11211

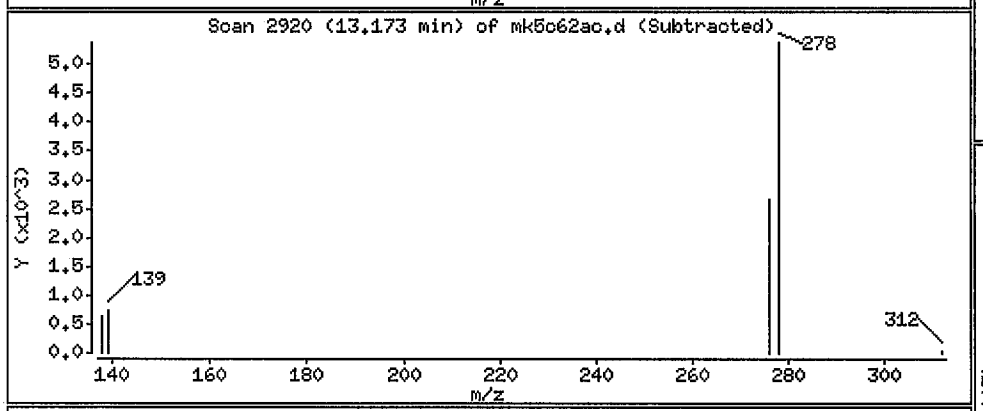
Column phase: Varian: 5MS

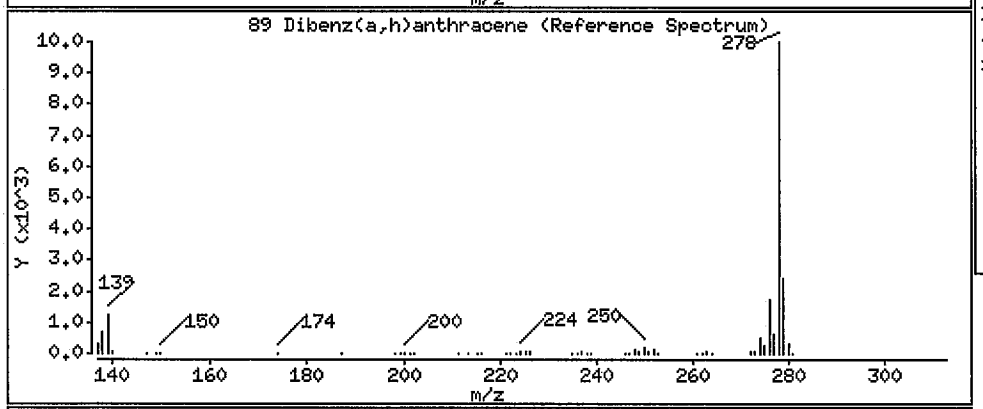
Column diameter: 0.25

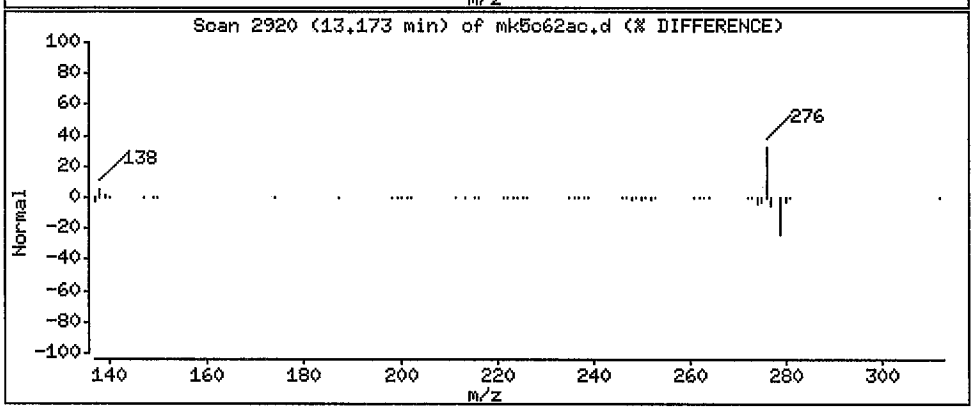
89 Dibenz(a,h)anthracene

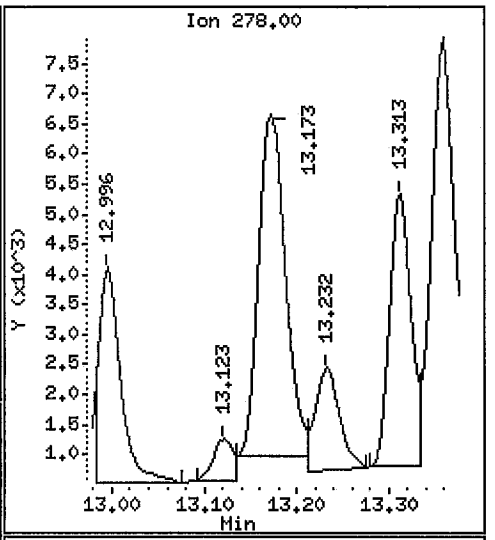
Concentration: 9720 ng/sample

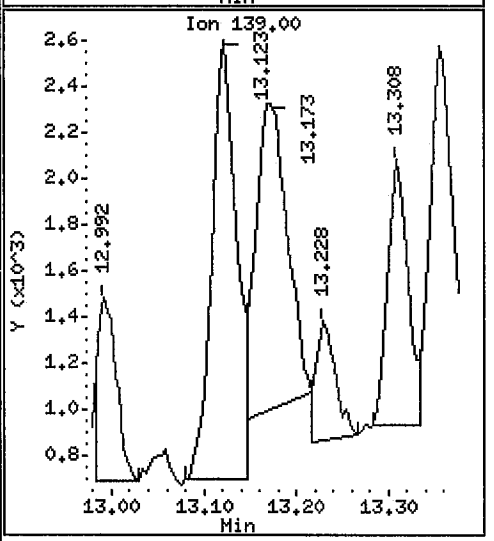












Data File: /var/chem/gcms/mp.i/P081411.b/mk5c62ac.d

Date : 14-AUG-2011 17:44

Client ID: EXM-DCU-M0010-R3-CO

Instrument: mp.i

Sample Info: MK5C63AC,,0,,POSTSPK

Purge Volume: 1.0

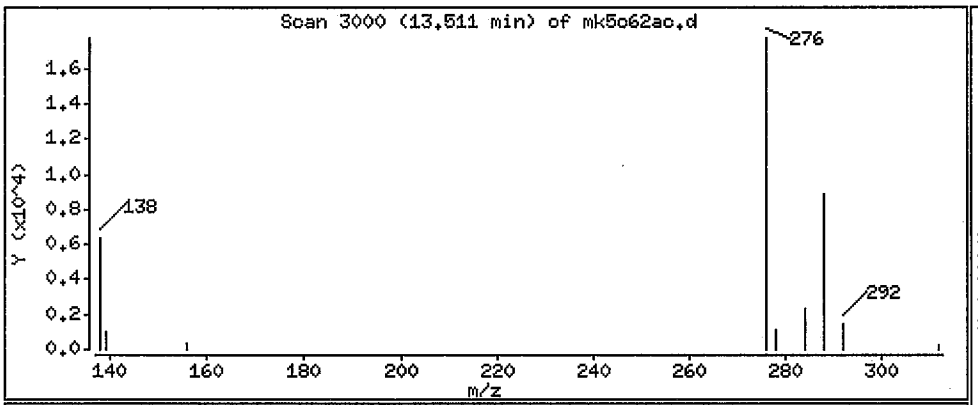
Operator: 11211

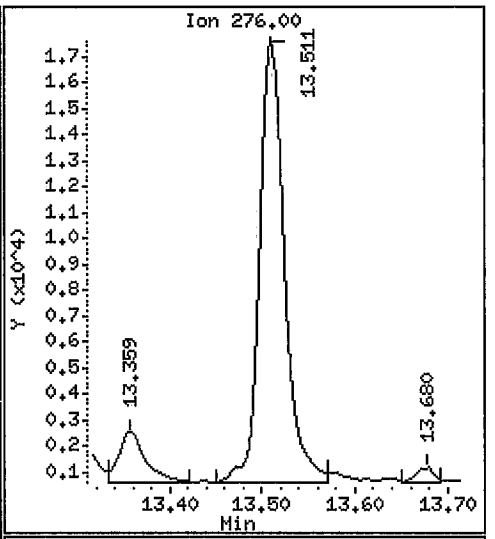
Column phase: Varian: 5MS

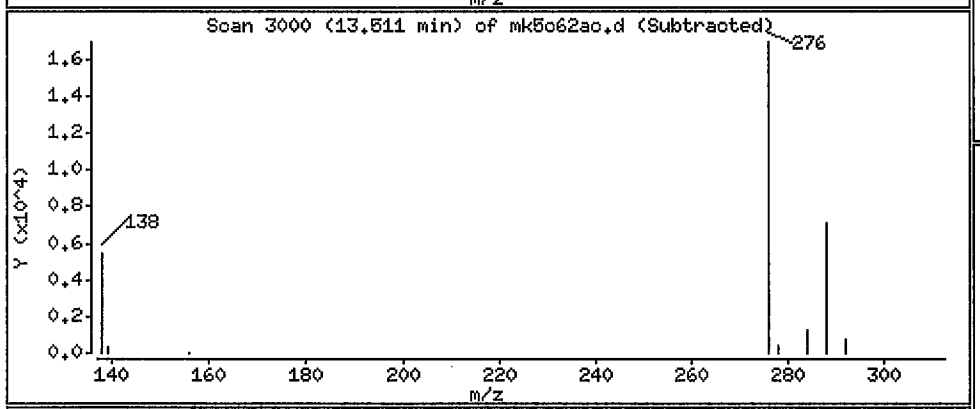
Column diameter: 0.25

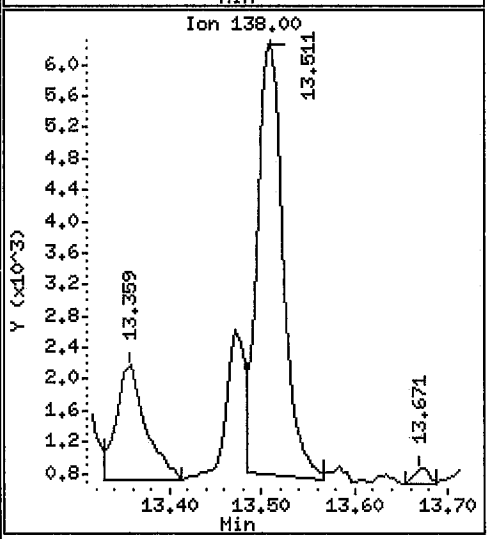
92 Benzo(g,h,i)perylene

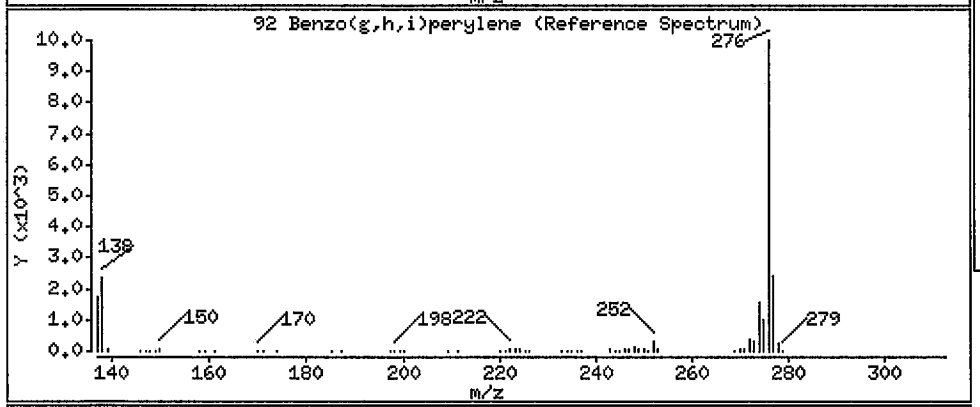
Concentration: 24200 ng/sample

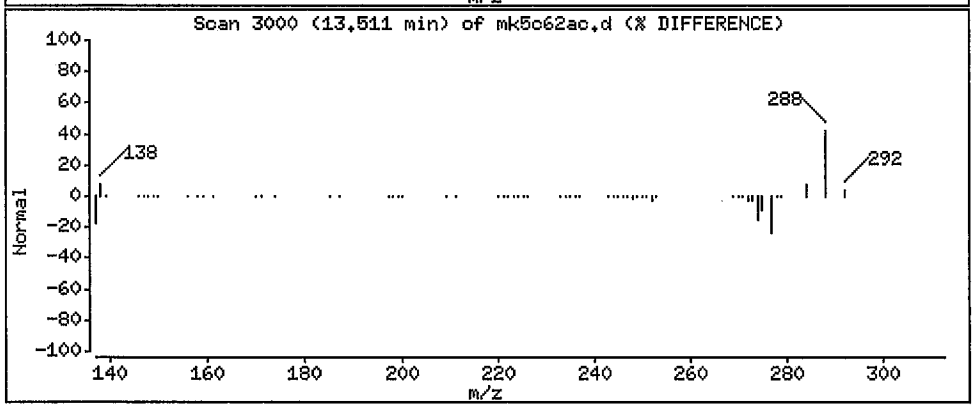












TRC Environmental Corporation

Client Sample ID: EXM-DCU-M0010-RGTBLK-COMBINED

GC/MS Semivolatiles

Lot-Sample #...:	H1G250406-004	Work Order #...:	MK5C71AC	Matrix.....:	AIR
Date Sampled...:	07/17/11	Date Received..:	07/23/2011		
Prep Date.....:	07/26/11	Analysis Date..:	08/03/2011		
Prep Batch #...:	1207014				
Dilution Factor:	2	Method.....:	KNOX ID-0016		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	58	40	ng/sample	9.8
Acenaphthylene	7.6 J	40	ng/sample	4.8
Anthracene	170	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	6.5 J	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	32	20	ng/sample	13
Fluorene	220	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	1400	100	ng/sample	42
Naphthalene	620 J	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	500	60	ng/sample	48
Pyrene	120	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Fluorene d-10	99	(50 - 150)
Terphenyl-d14	104	(50 - 150)
13C6-Fluorene	97	(50 - 150)
Anthracene-d10	92	(30 - 120)
Naphthalene-d8	85	(30 - 120)
2-Methylnaphthalene-d10	91	(30 - 120)
Acenaphthylene-d8	105	(30 - 120)
Phenanthrene-d10	82	(30 - 120)
Fluoranthene-d10	95	(30 - 120)
Benzo(a)anthracene-d12	133 *	(30 - 120)
Chrysene-d12	87	(30 - 120)
Benzo(b)fluoranthene-d12	108	(30 - 120)
Benzo(k)fluoranthene-d12	87	(30 - 120)
Benzo(a)pyrene-d12	105	(30 - 120)
Perylene-d12	102	(30 - 120)
Indeno(1,2,3-cd)pyrene-d12	108	(30 - 120)
Dibenz(ah)anthracene-d14	106	(30 - 120)
Benzo(ghi)perylene-d12	101	(30 - 120)

NOTE(S):

1 13C6-anthracene recovery = 81 %

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 09-Aug-2011 12:04

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Lab Smp Id: MK5C71AC Client Smp ID: EXM-DCU-M0010-RGTBL
Inj Date : 03-AUG-2011 17:13
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C71AC,,0,,
Misc Info : P080311,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 05-Aug-2011 09:34 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.869	(1.000)	648096	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.869	(0.770)	648096	0.42296	423
3 Naphthalene	128	4.888	4.887	(1.003)	674266	0.62054	621
$ 222 13C6-Naphthalene	134	4.873	4.887	(1.000)	60202	0.05028	~~50.3(R)~~
* 10 2-Methylnaphthalene-d10	152	5.431	5.427	(1.000)	379888	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.431	5.427	(0.858)	379888	0.45612	456
12 2-Methylnaphthalene	142	5.457	5.454	(1.005)	1051092	1.38031	1380
* 13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	362504	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.870)	362502	0.43748	437
15 1-Methylnaphthalene	142	5.540	5.536	(1.005)	373117	0.53087	531
16 Biphenyl	154	5.842	5.840	(1.076)	156816	0.17292	173
* 17 2,6-Dimethylnaphthalene-d12	168	5.940	5.937	(1.000)	329871	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.940	5.937	(0.938)	329869	0.46222	462
19 2,6 Dimethylnaphthalene	156	5.981	5.974	(1.007)	579729	0.88414	884

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 09-Aug-2011 12:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.199	6.196	(1.000)	631367	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.199	6.196	(0.979)	631367	0.52537	525
	22 Acenaphthylene	152	6.211	6.208	(1.002)	9469	0.00758	7.58
*	23 Acenaphthene-d10	164	6.330	6.327	(1.000)	330647	0.50000	0.500
	24 Acenaphthene	154	6.356	6.353	(1.025)	42404	0.05761	57.6
	25 2,3,5 Trimethylnaphthalene	170	6.674	6.674	(1.124)	70278	0.12604	126
$	26 Fluorene-d10	176	6.763	6.763	(0.892)	612095	0.98687	987
	27 Fluorene	166	6.788	6.788	(0.895)	174503	0.21892	219
$	28 13C6-Fluorene	171	6.788	6.786	(0.895)	665411	0.96737	967
*	34 Dibenzothiopene-d8	192	7.480	7.478	(1.000)	555123	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.480	7.478	(0.841)	555123	0.39643	396
	36 Dibenzothiophene	184	7.495	7.495	(1.002)	649766	0.61552	616
*	41 Phenanthrene-d10	188	7.584	7.582	(1.000)	518630	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.584	7.582	(0.853)	518630	0.40974	410
	43 Phenanthrene	178	7.603	7.603	(1.002)	565138	0.49990	500
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	501516	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	501516	0.45898	459
	46 Anthracene	178	7.648	7.648	(1.002)	211817	0.16911	169
$	47 13C6-Anthracene	184	7.648	7.646	(0.860)	467973	0.40610	406
	52 1-Methylphenanthrene	192	8.150	8.150	(1.075)	88787	0.12757	128
*	53 Fluoranthene-d10	212	8.672	8.672	(1.000)	573902	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.672	8.672	(0.975)	573902	0.47562	476
	55 Fluoranthene	202	8.689	8.687	(1.002)	40858	0.03218	32.2
*	56 Pyrene-d10	212	8.893	8.891	(1.000)	491778	0.50000	0.500
	57 Pyrene	202	8.910	8.908	(1.028)	157426	0.11732	117
$	58 Terphenyl-d14	244	9.049	9.050	(1.044)	594252	1.03786	1040
*	60 Benzo(a)anthracene-d12	240	10.108	10.108	(1.000)	414672	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.108	10.108	(1.137)	414672	0.66698	667(R)
	62 Benzo(a)anthracene	228	10.129	10.129	(1.002)	7585	0.00615	6.15
*	63 Chrysene-d12	240	10.141	10.142	(1.000)	427275	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.141	10.142	(1.140)	427275	0.43389	434
	65 Chrysene	228	10.167	10.167	(1.002)	6112	0.00650	6.50
*	70 Benzo(b)fluoranthene-d12	264	11.265	11.259	(1.000)	394869	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.265	11.259	(0.973)	394869	0.53873	539
	72 Benzo(b)fluoranthene	252	11.288	11.289	(1.002)	1395	0.00127	1.27
*	73 Benzo(k)fluoranthene-d12	264	11.294	11.295	(1.000)	444721	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.294	11.295	(0.975)	444721	0.43371	434
	75 Benzo(k)fluoranthene	252	11.318	11.319	(1.002)	968	0.000986	0.986
*	76 Benzo(e)pyrene-d12	264	11.581	11.581	(1.000)	344143	0.50000	0.500
	77 Benzo(e)pyrene	252	11.611	11.611	(0.997)	2301	0.00225	2.25
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	399221	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	399221	0.52586	526
	80 Benzo(a)pyrene	252	11.677	11.671	(1.003)	2986	0.00339	3.39
*	81 Perylene-d12	264	11.743	11.743	(1.000)	373241	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.743	11.743	(1.014)	373241	0.50754	508
	83 Perylene	252	11.773	11.773	(1.003)	844	0.000907	0.907
*	84 Indeno(123-cd)pyrene-d12	288	13.118	13.118	(1.000)	446962	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 09-Aug-2011 12:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.118	13.118	(1.133)	446962	0.53814	538
	86 Indeno(1,2,3-cd)pyrene	276	13.118	13.152	(1.000)	1393	0.00132	1.32 SNR CMDL
*	87 Dibenz(ah)anthracene-d14	292	13.122	13.123	(1.000)	333665	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.122	13.123	(1.133)	333665	0.53190	532
	89 Dibenz(a,h)anthracene	278	13.173	13.169	(1.004)	484	0.000606	0.606
*	90 Benzo(ghi)perylene-d12	288	13.473	13.469	(1.000)	314863	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.473	13.469	(1.163)	314863	0.50655	507
	92 Benzo(g,h,i)perylene	276	13.506	13.502	(1.002)	2363	0.00276	2.76

8/9/11

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 10-Aug-2011 08:13

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Lab Smp Id: MK5C71AC Client Smp ID: EXM-DCU-M0010-RGTBL
Inj Date : 03-AUG-2011 17:13
Operator : 11211 Inst ID: mp.i
Smp Info : MK5C71AC,,0,,
Misc Info : P080311,SIMPAH3
Comment   :
Method   : /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 09-Aug-2011 16:01 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	1 Naphthalene-d8	136	4.873	4.869	(1.000)	648096	0.50000	0.500
$	2 Naphthalene-d8(SS)	136	4.873	4.869	(0.770)	648096	0.42296	423
	3 Naphthalene	128	4.888	4.887	(1.003)	674266	0.62054	621
*	10 2-Methylnaphthalene-d10	152	5.431	5.427	(1.000)	379888	0.50000	0.500
$	11 2-Methylnaphthalene-d10(SS)	152	5.431	5.427	(0.858)	379888	0.45612	456
	12 2-Methylnaphthalene	142	5.457	5.454	(1.005)	1051092	1.38031	1380
*	13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	362504	0.50000	0.500
$	14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.870)	362502	0.43748	437
	15 1-Methylnaphthalene	142	5.540	5.536	(1.005)	373117	0.53087	531
	16 Biphenyl	154	5.842	5.840	(1.076)	156816	0.17292	173
*	17 2,6-Dimethylnaphthalene-d12	168	5.940	5.937	(1.000)	329871	0.50000	0.500
$	18 2,6-Dimethylnaph-d12(SS)	168	5.940	5.937	(0.938)	329869	0.46222	462
	19 2,6 Dimethylnaphthalene	156	5.981	5.974	(1.007)	579729	0.88414	884
*	20 Acenaphthylene-d8	160	6.199	6.196	(1.000)	631367	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 10-Aug-2011 08:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	21 Acenaphthylene-d8(SS)	160	6.199	6.196	(0.979)	631367	0.52537	525
	22 Acenaphthylene	152	6.211	6.208	(1.002)	9469	0.00758	7.58
*	23 Acenaphthene-d10	164	6.330	6.327	(1.000)	330647	0.50000	0.500
	24 Acenaphthene	154	6.356	6.353	(1.025)	42404	0.05761	57.6
	25 2,3,5 Trimethylnaphthalene	170	6.674	6.674	(1.124)	70278	0.12604	126
$	26 Fluorene-d10	176	6.763	6.763	(0.892)	612095	0.98688	987
	27 Fluorene	166	6.788	6.788	(0.895)	174503	0.21892	219
$	28 13C6-Fluorene	171	6.788	6.786	(0.895)	665411	0.96738	967
*	34 Dibenzothiopene-d8	192	7.480	7.478	(1.000)	555123	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.480	7.478	(0.841)	555123	0.39643	396
	36 Dibenzothiophene	184	7.495	7.495	(1.002)	649766	0.61552	616
*	41 Phenanthrene-d10	188	7.584	7.582	(1.000)	518630	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.584	7.582	(0.853)	518630	0.40973	410
	43 Phenanthrene	178	7.603	7.603	(1.002)	565138	0.49990	500
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	501516	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	501516	0.45898	459
	46 Anthracene	178	7.648	7.648	(1.002)	211817	0.16911	169
$	47 13C6-Anthracene	184	7.648	7.646	(0.860)	467973	0.40610	406
	52 1-Methylphenanthrene	192	8.150	8.150	(1.075)	88787	0.12757	128
*	53 Fluoranthene-d10	212	8.672	8.672	(1.000)	573902	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.672	8.672	(0.975)	573902	0.47562	476
	55 Fluoranthene	202	8.689	8.687	(1.002)	40858	0.03218	32.2
*	56 Pyrene-d10	212	8.893	8.891	(1.000)	491778	0.50000	0.500
	57 Pyrene	202	8.910	8.908	(1.028)	157426	0.11732	117
$	58 Terphenyl-d14	244	9.049	9.050	(1.044)	594252	1.03786	1040
*	60 Benzo(a)anthracene-d12	240	10.108	10.108	(1.000)	414672	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.108	10.108	(1.137)	414672	0.66698	667(R)
	62 Benzo(a)anthracene	228	10.129	10.129	(1.002)	7585	0.00615	6.15
*	63 Chrysene-d12	240	10.141	10.142	(1.000)	427275	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.141	10.142	(1.140)	427275	0.43389	434
	65 Chrysene	228	10.167	10.167	(1.002)	6112	0.00650	6.50
*	70 Benzo(b)fluoranthene-d12	264	11.265	11.259	(1.000)	394869	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.265	11.259	(0.973)	394869	0.53873	539
	72 Benzo(b)fluoranthene	252	11.288	11.289	(1.002)	1395	0.00127	1.27
*	73 Benzo(k)fluoranthene-d12	264	11.294	11.295	(1.000)	444721	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.294	11.295	(0.975)	444721	0.43371	434
	75 Benzo(k)fluoranthene	252	11.318	11.319	(1.002)	968	0.000986	0.986
*	76 Benzo(e)pyrene-d12	264	11.581	11.581	(1.000)	344143	0.50000	0.500
	77 Benzo(e)pyrene	252	11.611	11.611	(0.997)	2301	0.00225	2.25
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	399221	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	399221	0.52586	526
	80 Benzo(a)pyrene	252	11.677	11.671	(1.003)	2986	0.00339	3.39
*	81 Perylene-d12	264	11.743	11.743	(1.000)	373241	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.743	11.743	(1.014)	373241	0.50754	508
	83 Perylene	252	11.773	11.773	(1.003)	844	0.000906	0.906
*	84 Indeno(123-cd)pyrene-d12	288	13.118	13.118	(1.000)	446962	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.118	13.118	(1.133)	446962	0.53814	538

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 10-Aug-2011 08:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
	86 Indeno(1,2,3-cd)pyrene	276	13.152	13.152	(1.003)	983	0.000932	0.932(M)
*	87 Dibenz(ah)anthracene-d14	292	13.122	13.123	(1.000)	333665	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.122	13.123	(1.133)	333665	0.53190	532
	89 Dibenz(a,h)anthracene	278	13.173	13.169	(1.004)	484	0.000606	0.606
*	90 Benzo(ghi)perylene-d12	288	13.473	13.469	(1.000)	314863	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.473	13.469	(1.163)	314863	0.50655	507
	92 Benzo(g,h,i)perylene	276	13.506	13.502	(1.002)	2363	0.00276	2.76

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

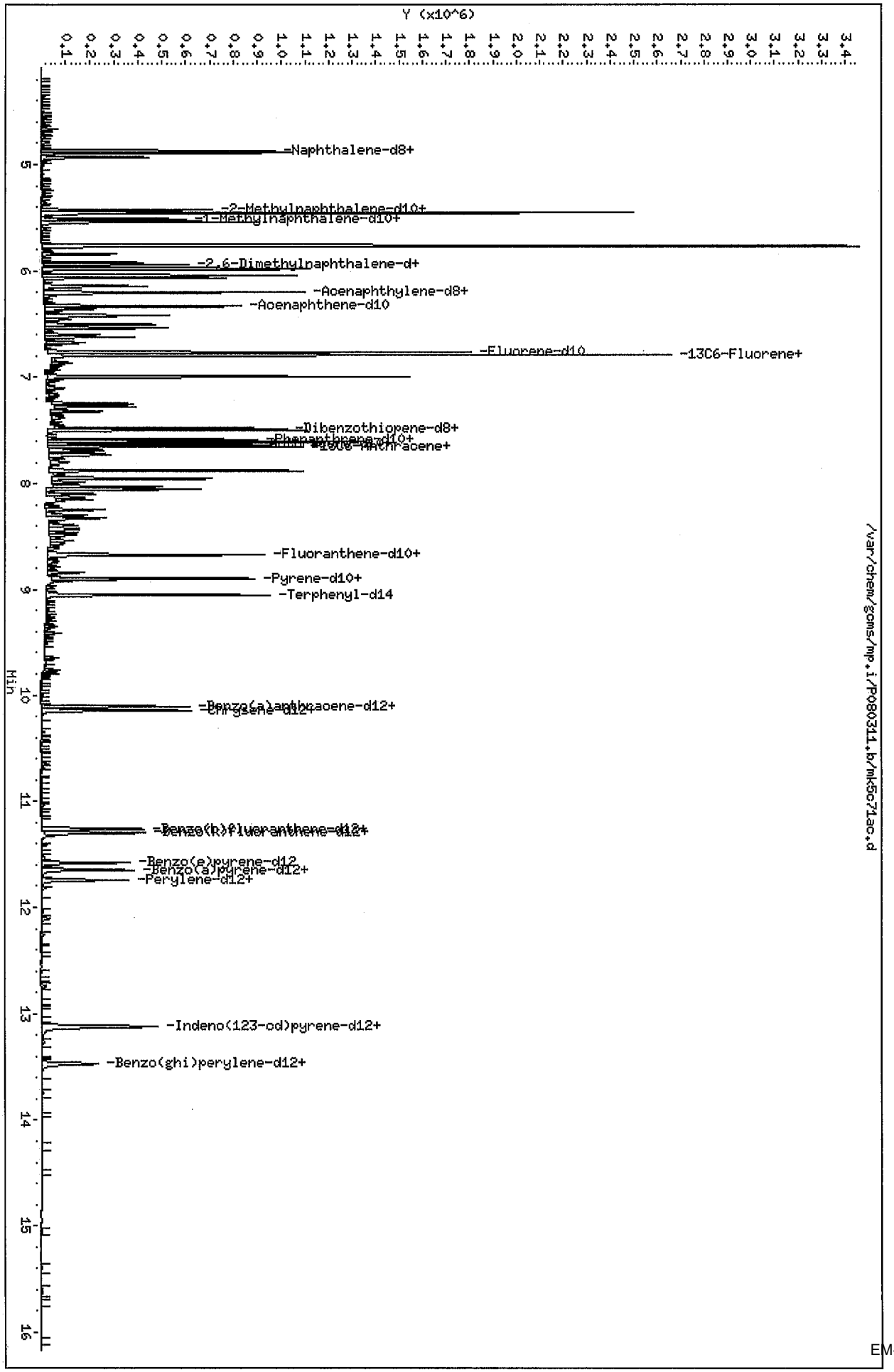
Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Report Date: 09-Aug-2011 12:04

TestAmerica Knoxville

RECOVERY REPORT

Client Name: TRC Environmental Co23-JUL-2011 00:00 Client SDG: H1G250406
Sample Matrix: GAS Fraction: SV
Lab Smp Id: MK5C71AC Client Smp ID: EXM-DCU-M0010-RGTBL
Level: LOW Operator: 11211
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Misc Info: P080311,SIMPAH3

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	500	423	84.59	30-120
$ 222 13C6-Naphthalene	~~500~~	~~50.3~~	~~10.06*~~	50-150
$ 11 2-Methylnaphthalen	500	456	91.22	30-120
$ 14 1-Methylnaphthalen	500	437	87.50	30-120
$ 18 2,6-Dimethylnaph-d	500	462	92.44	30-120
$ 21 Acenaphthylene-d8(	500	525	105.07	30-120
$ 26 Fluorene-d10	1000	987	98.69	~~30-120~~
$ 28 13C6-Fluorene	1000	967	96.74	~~30-120~~ 50-150%
$ 35 Dibenzothiopene-d8	500	396	79.29	30-120
$ 42 Phenanthrene-d10(S	500	410	81.95	30-120
$ 45 Anthracene-d10(SS)	500	459	91.80	30-120
$ 47 13C6-Anthracene	500	406	81.22	30-120
$ 54 Fluoranthene-d10(S	500	476	95.12	0-120
$ 58 Terphenyl-d14	1000	1040	103.79	~~30-120~~ 50-150%
$ 61 Benzo(a)anthracene	500	667	133.40*	30-120
$ 64 Chrysene-d12(SS)	500	434	86.78	30-120
$ 71 Benzo(b)fluoranthe	500	539	107.75	30-120
$ 74 Benzo(k)fluoranthe	500	434	86.74	30-120
$ 79 Benzo(a)pyrene-d12	500	526	105.17	30-120
$ 82 Perylene-d12(SS)	500	508	101.51	30-120
$ 85 Indeno(123-cd)pyre	500	538	107.63	30-120
$ 88 Dibenz(ah)anthrace	500	532	106.38	30-120
$ 91 Benzo(ghi)perylene	500	507	101.31	30-120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Date : 03-AUG-2011 17:13
Client ID: EXM-DCU-H0010-RGTBL
Instrument: mp.i
Sample Info: MK5C71AC,,0,,
Operator: 11211
Purge Volume: 1.0
Column diameter: 0.25
Column phase: Varian 5MS
/var/chem/gcms/mp.i/P080311.b/mk5c71ac.d
Y (x10^6)
Min
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
-13C6-Fluorene+
-Dibenzothiophene-d8+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

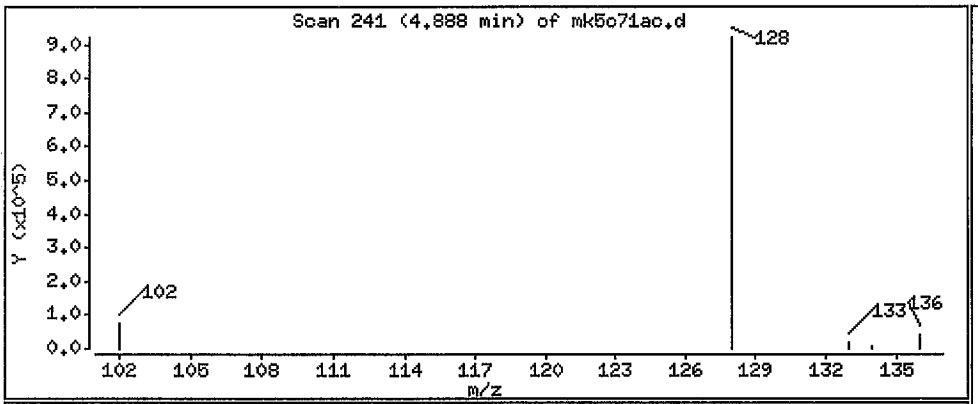
Operator: 11211

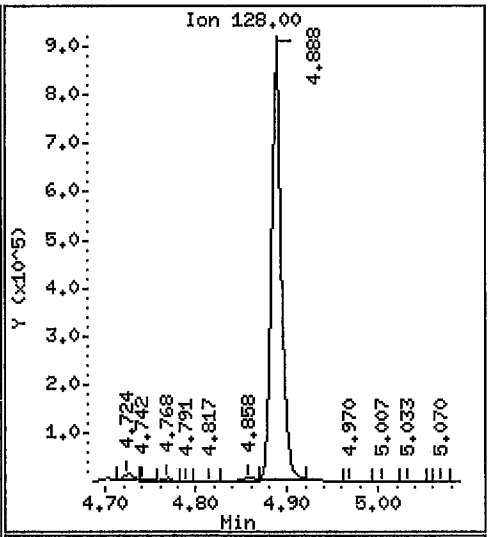
Column phase: Varian: 5MS

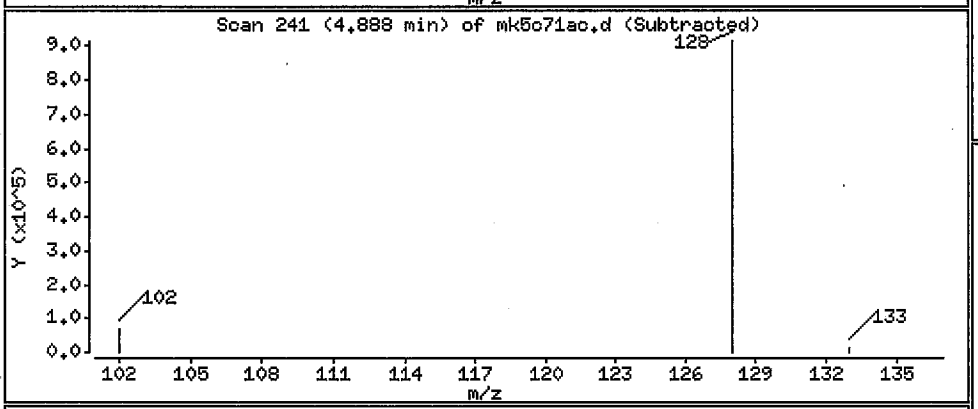
Column diameter: 0.25

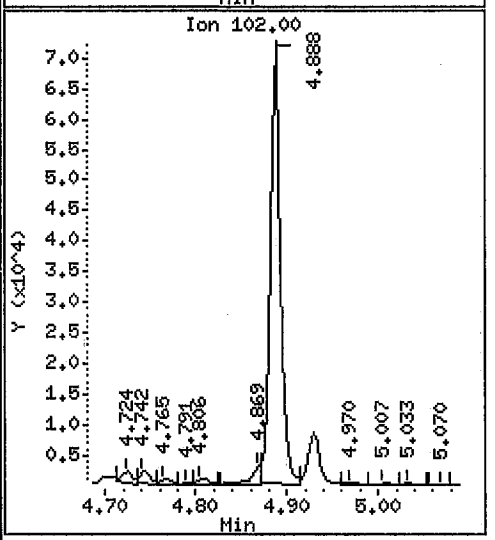
3 Naphthalene

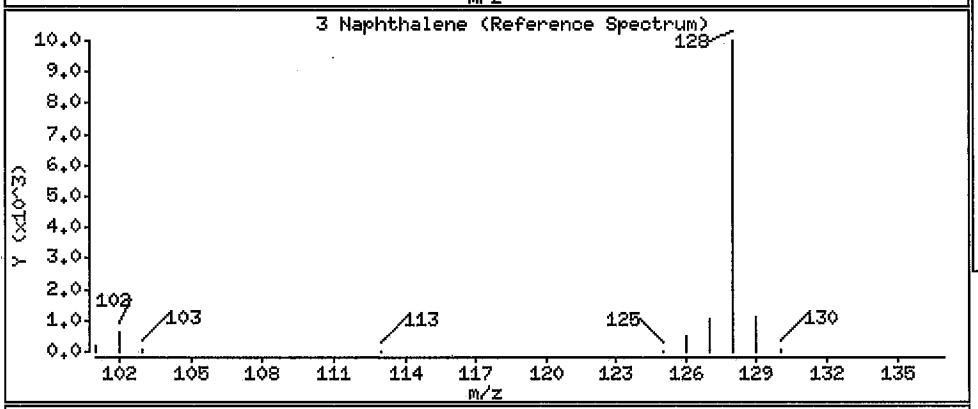
Concentration: 621 ng/sample

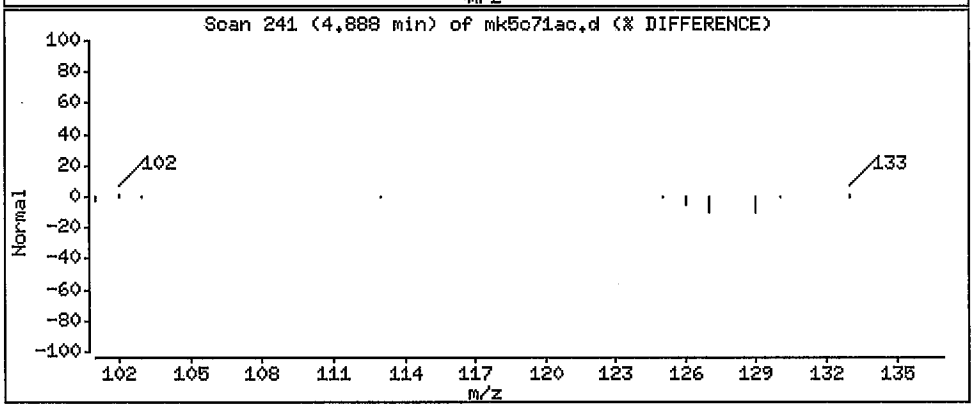












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

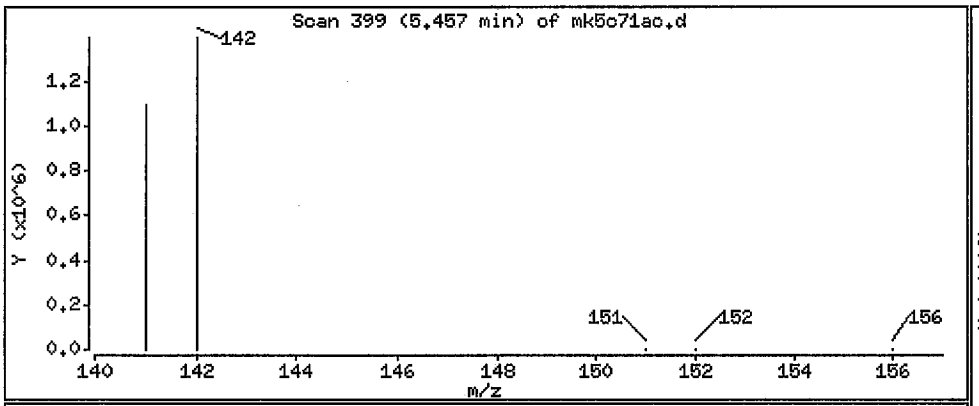
Operator: 11211

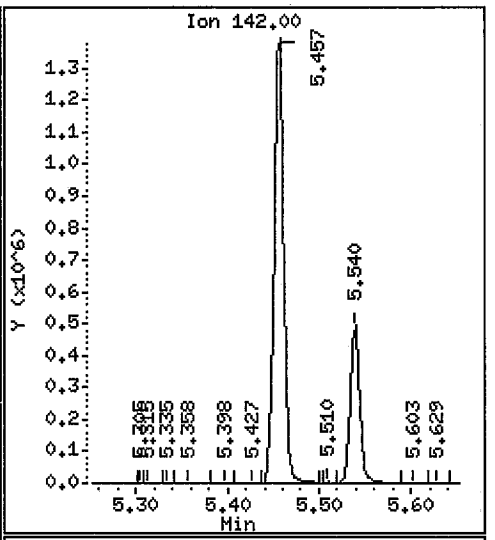
Column phase: Varian: 5MS

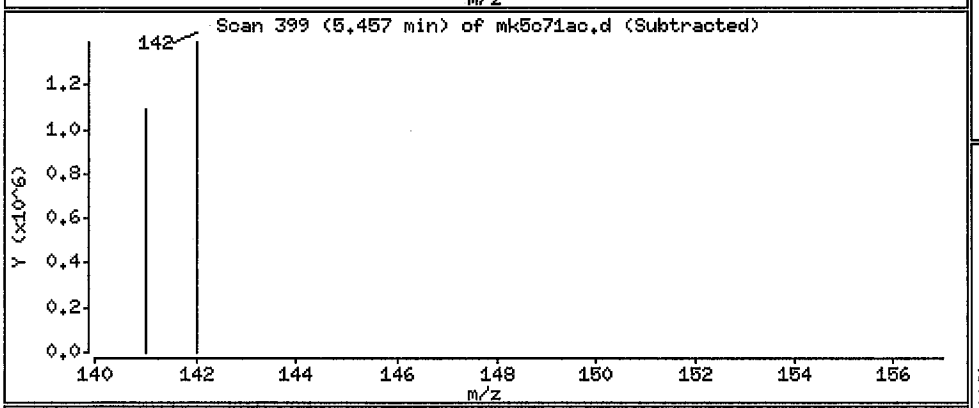
Column diameter: 0.25

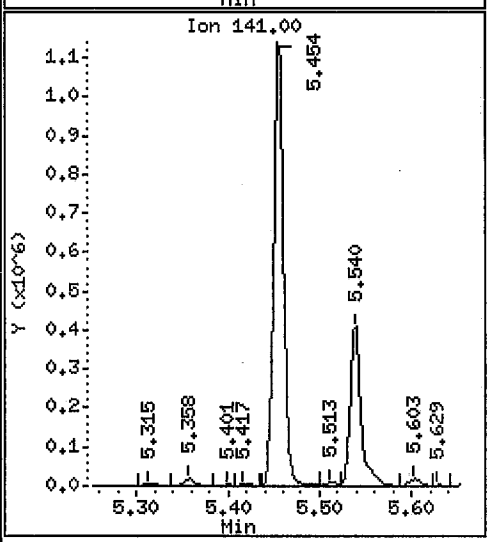
12 2-Methylnaphthalene

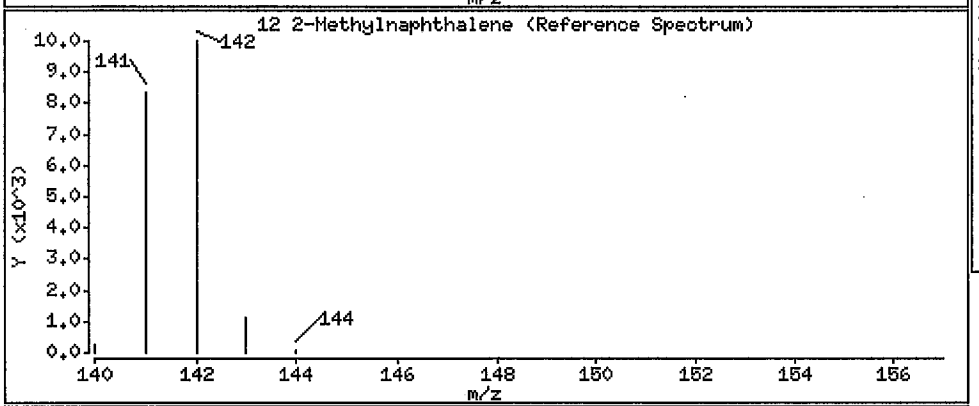
Concentration: 1380 ng/sample

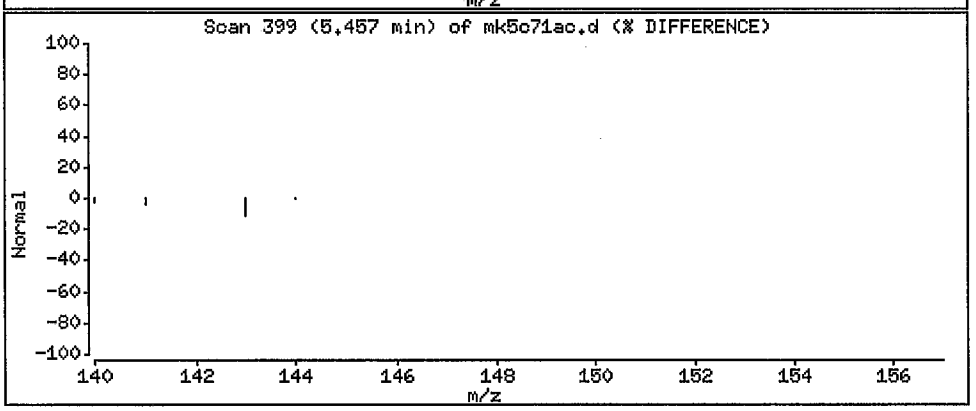












Data File: /var/chem/goms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

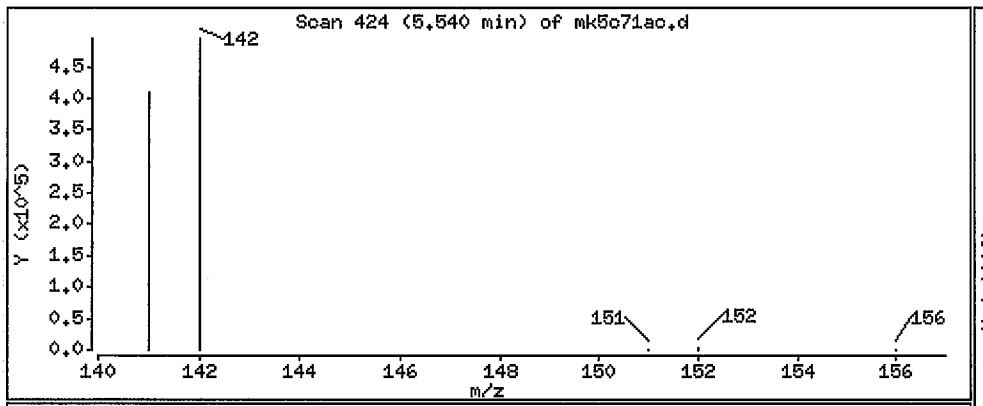
Operator: 11211

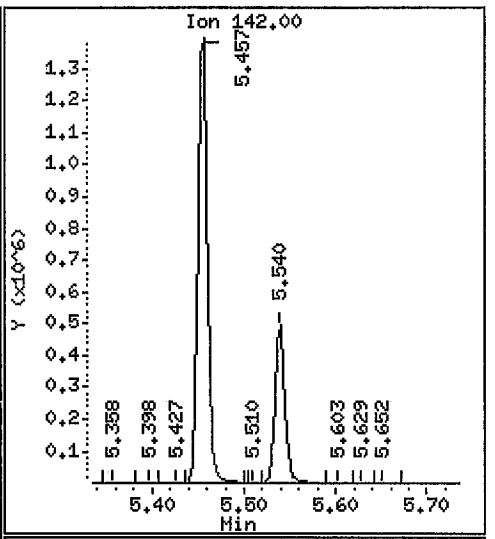
Column phase: Varian: 5MS

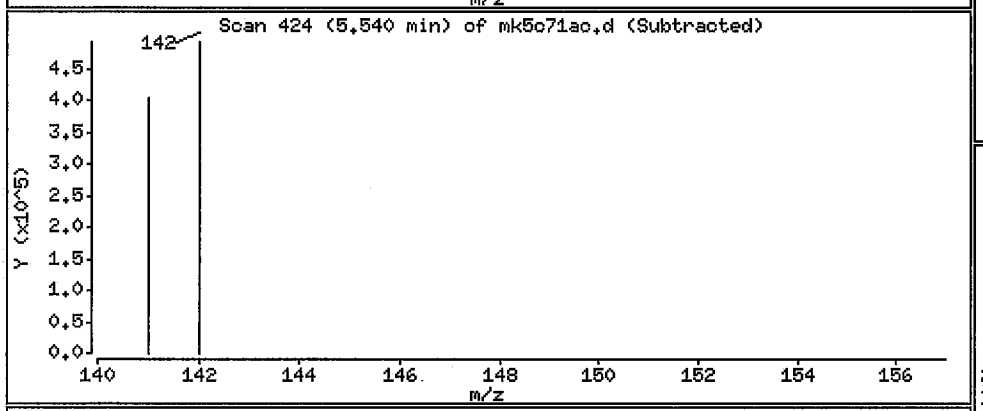
Column diameter: 0.25

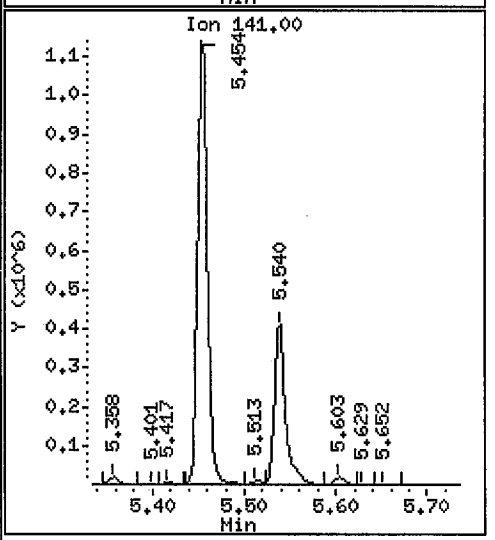
15 1-Methylnaphthalene

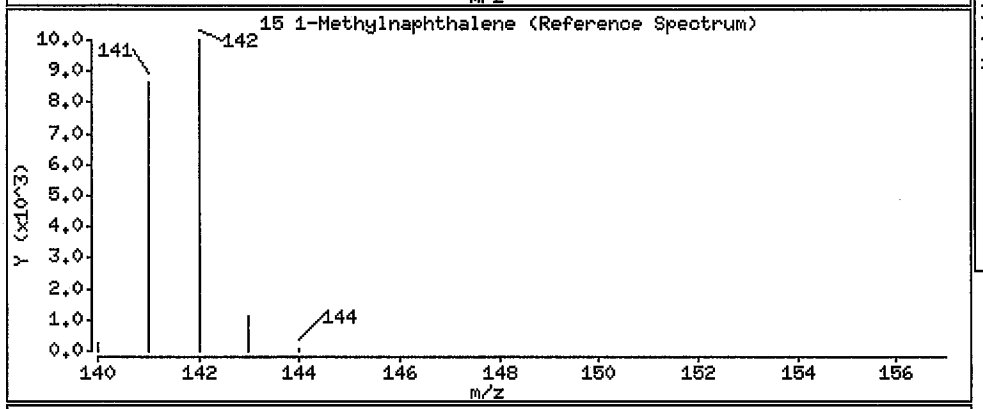
Concentration: 531 ng/sample

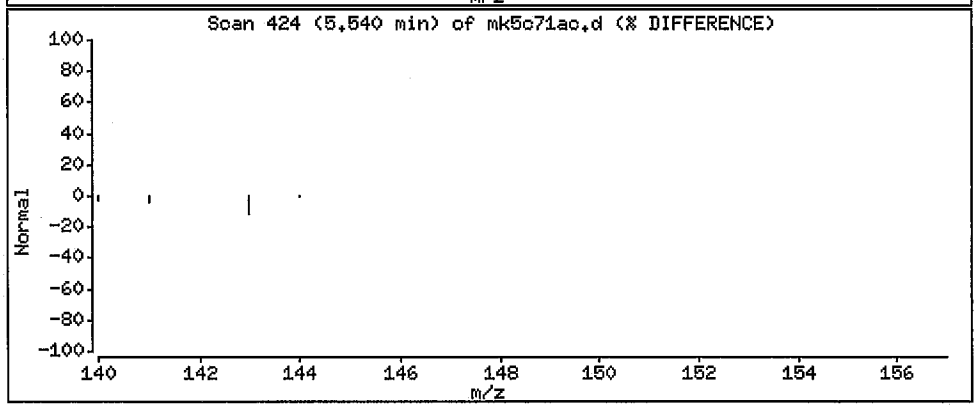












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

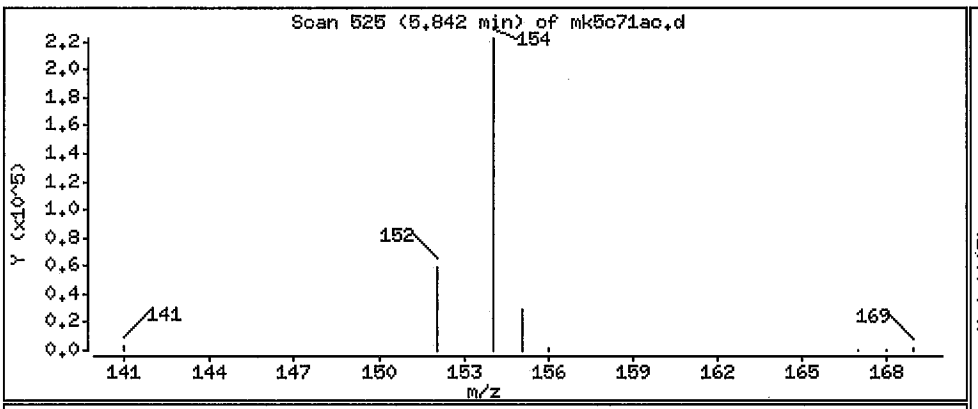
Operator: 11211

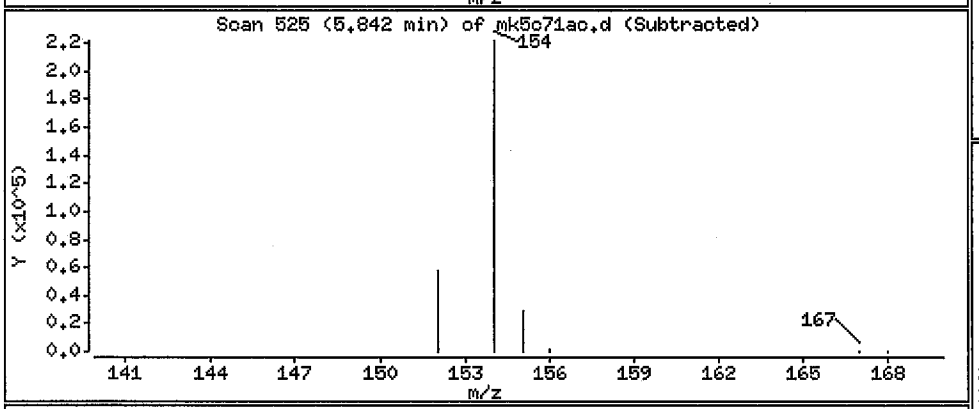
Column phase: Varian: 5MS

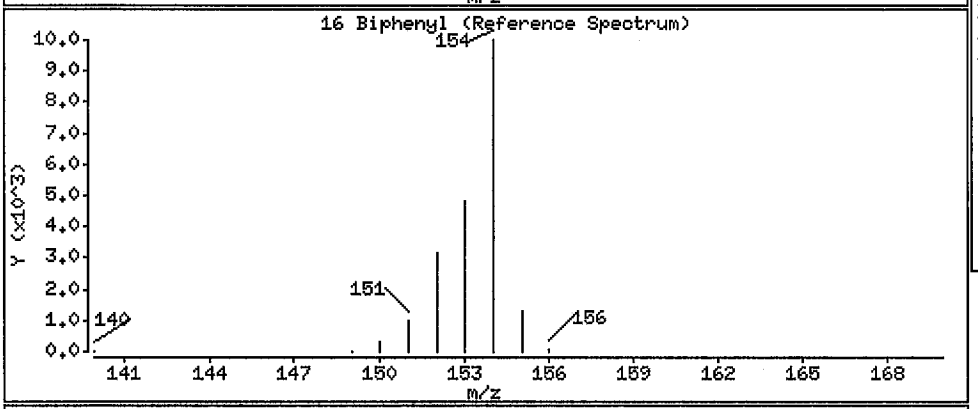
Column diameter: 0.25

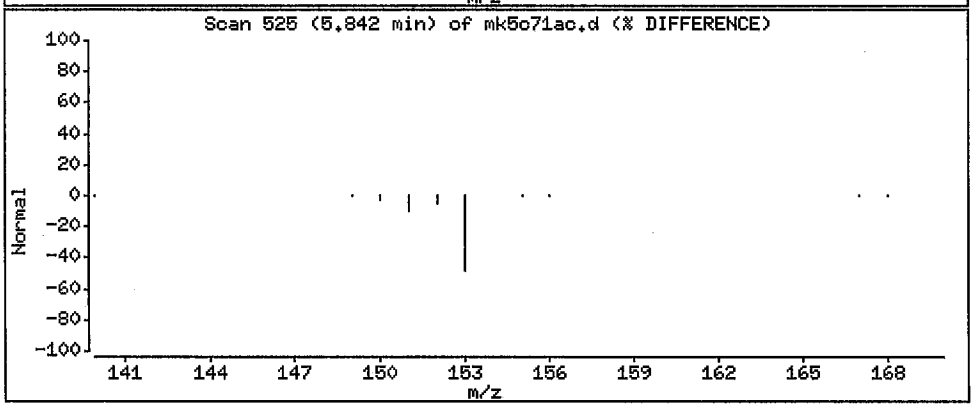
16 Biphenyl

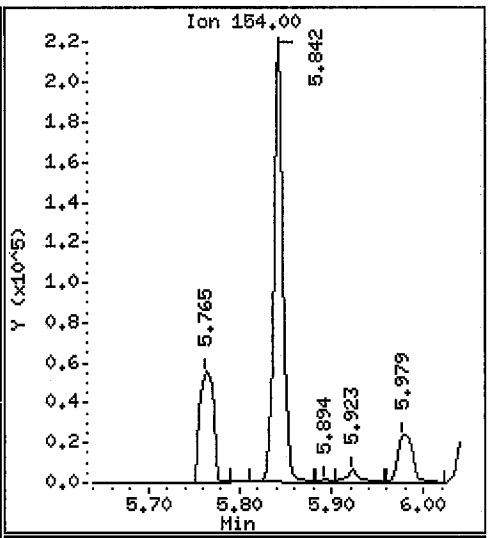
Concentration: 173 ng/sample

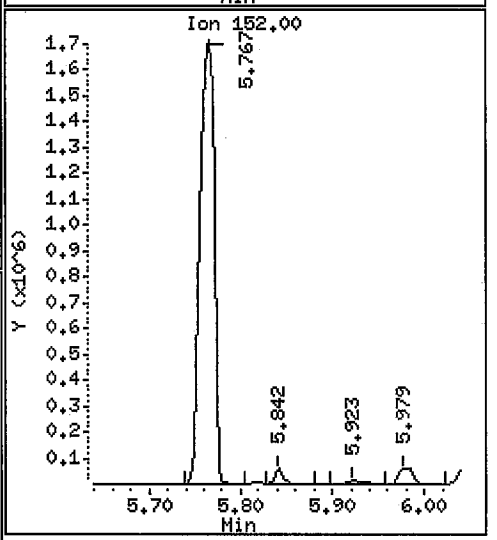












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

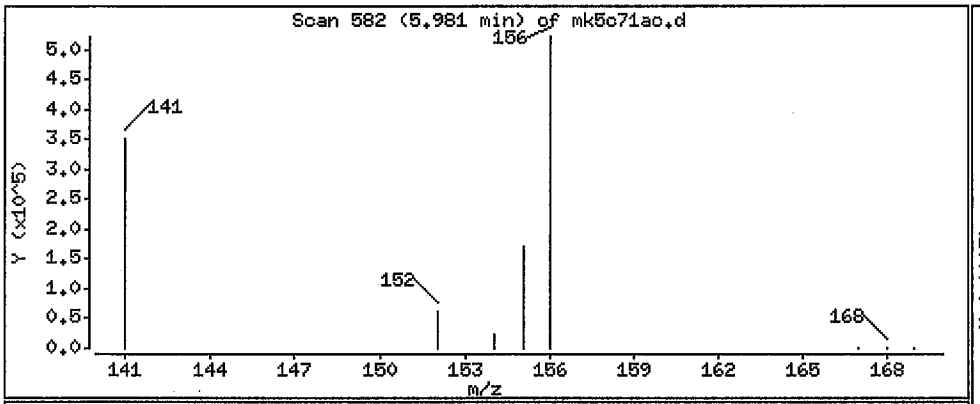
Operator: 11211

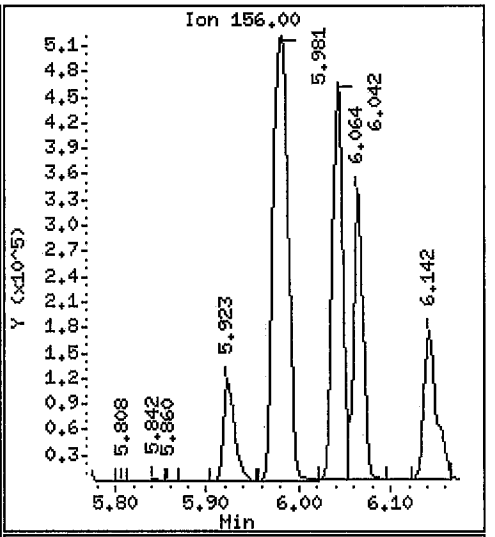
Column phase: Varian: 5MS

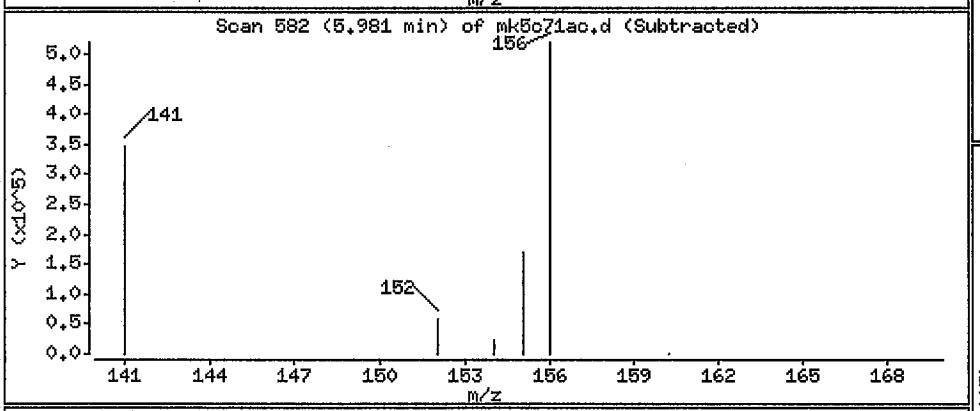
Column diameter: 0.25

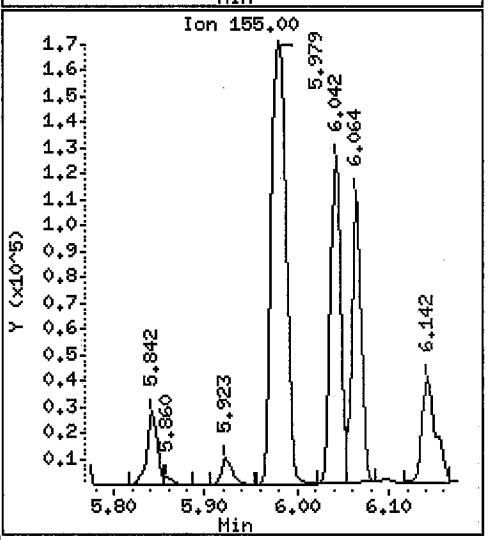
19 2,6 Dimethylnaphthalene

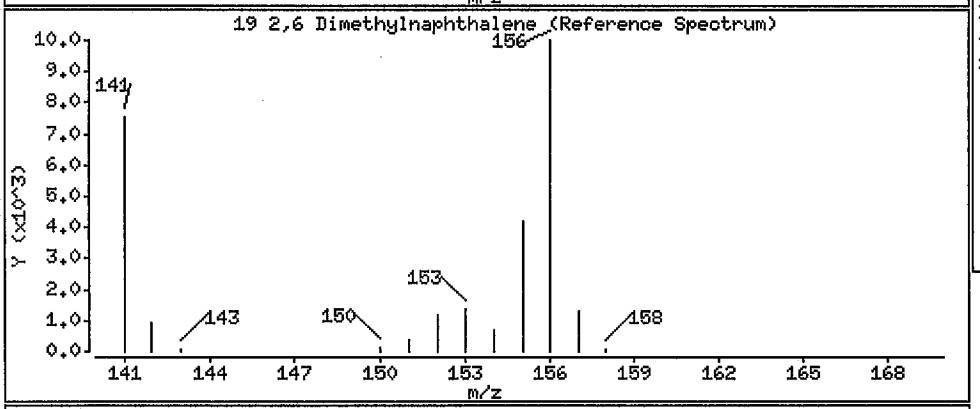
Concentration: 884 ng/sample

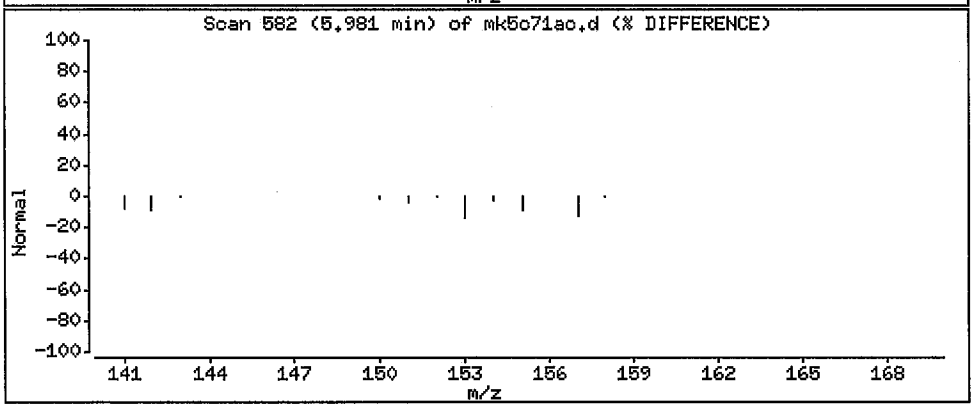












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

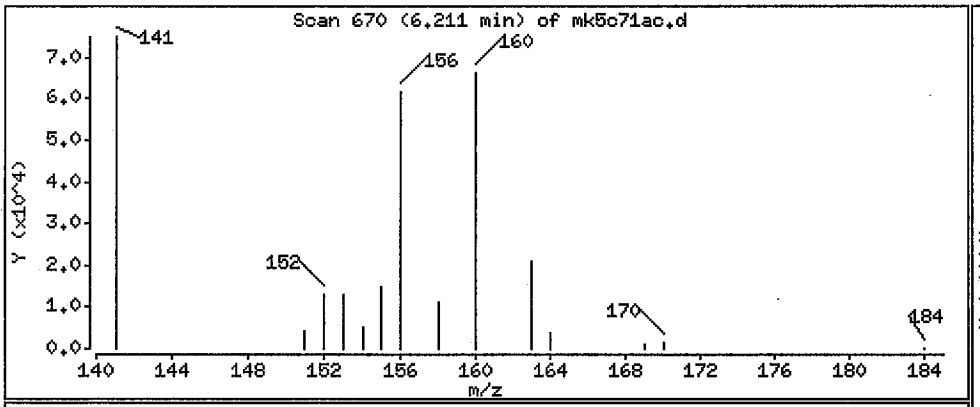
Operator: 11211

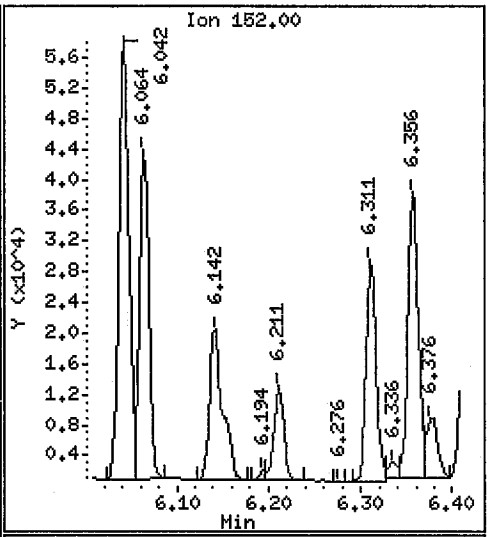
Column phase: Varian: 5MS

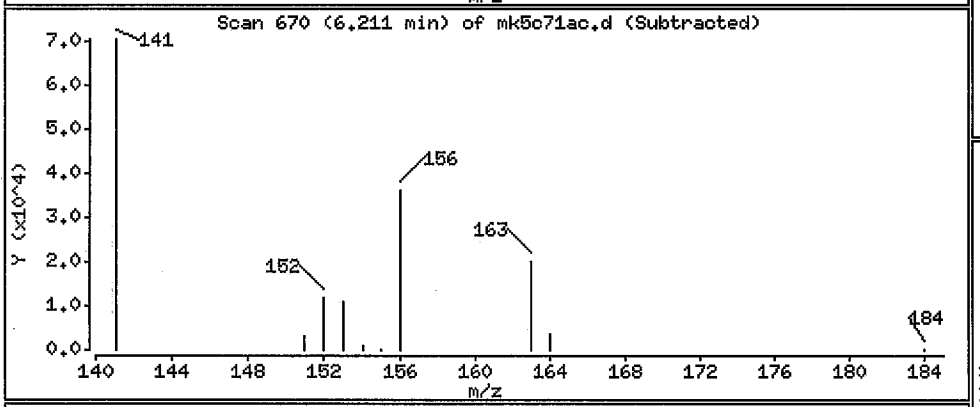
Column diameter: 0.25

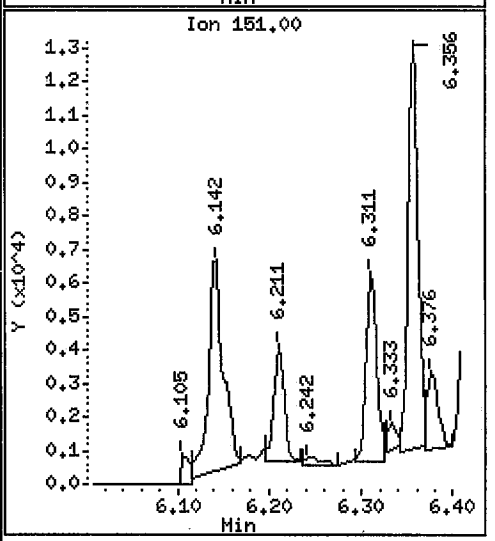
22 Acenaphthylene

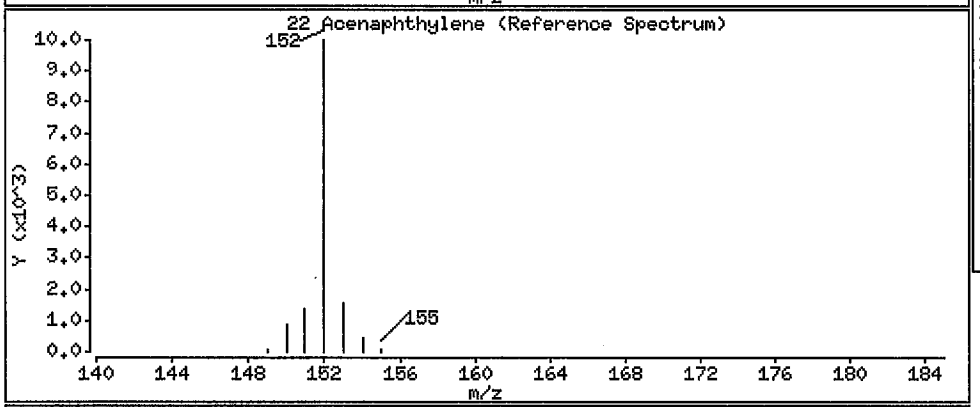
Concentration: 7.58 ng/sample

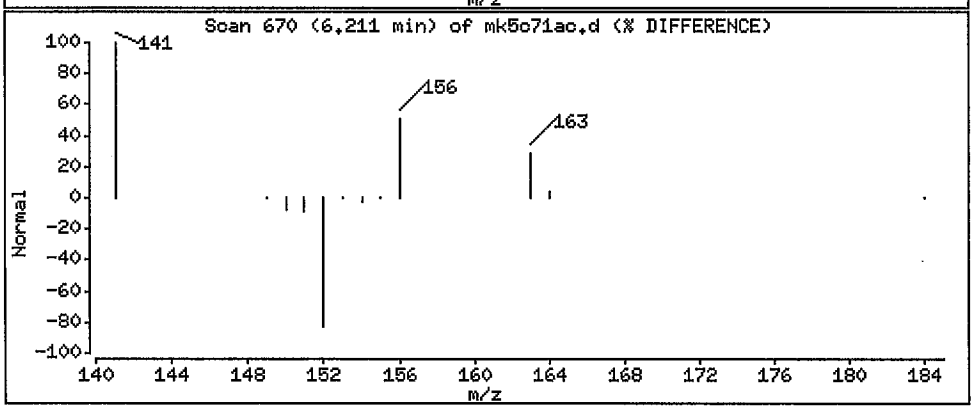












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

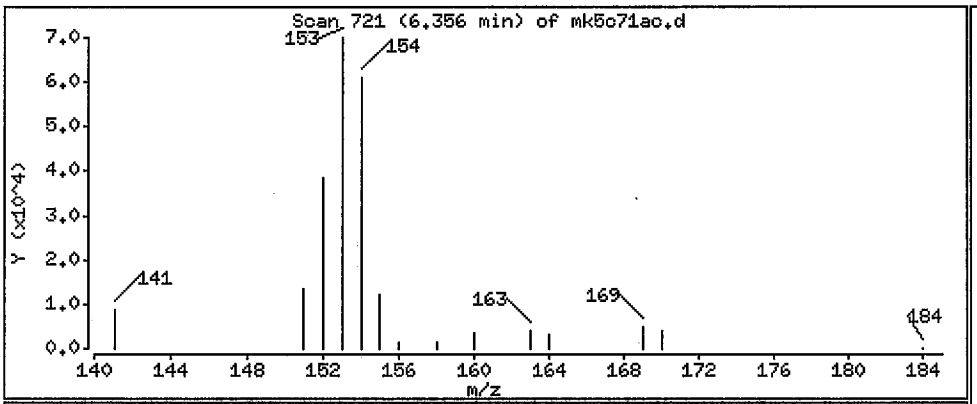
Operator: 11211

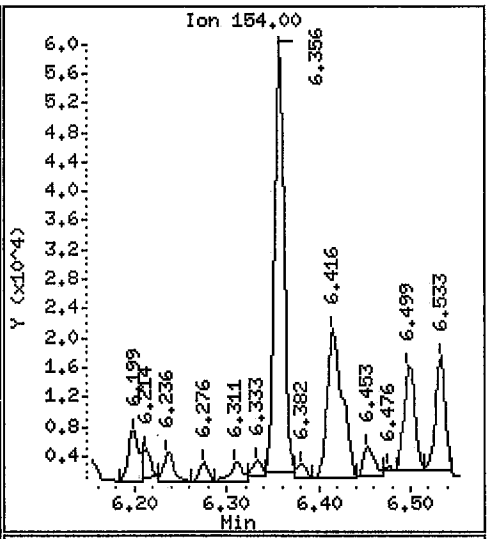
Column phase: Varian: 5MS

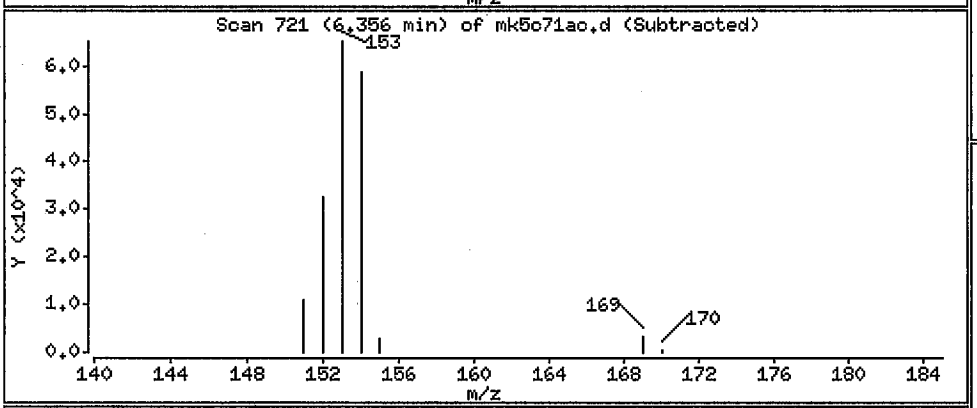
Column diameter: 0.25

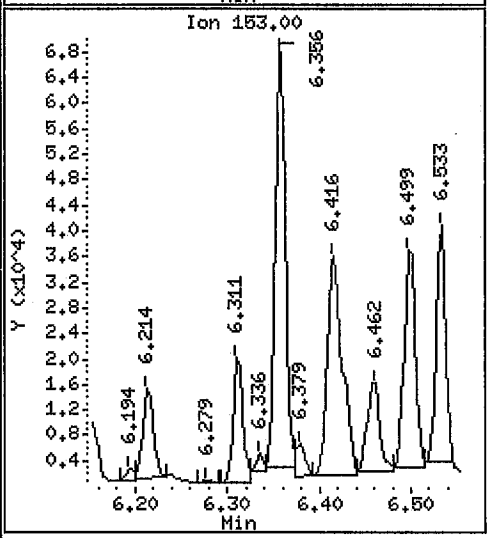
24 Acenaphthene

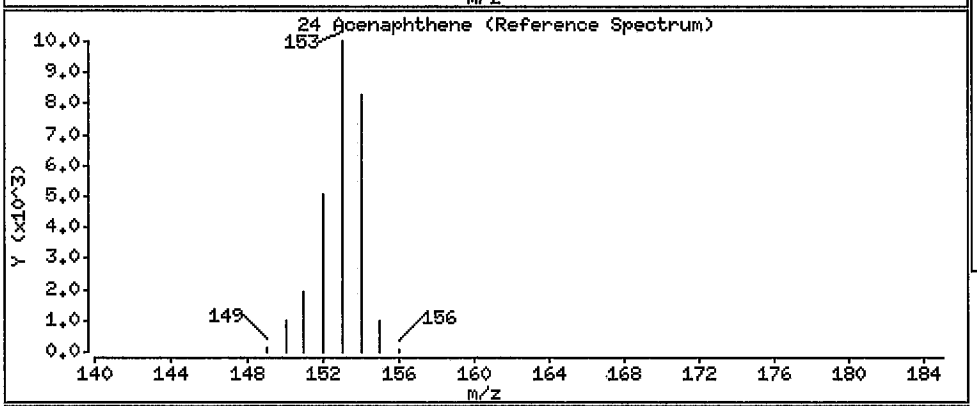
Concentration: 57.6 ng/sample

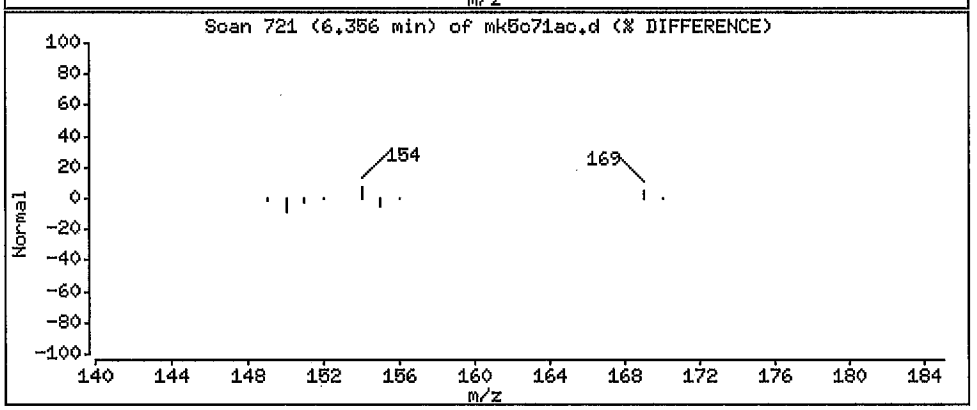












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

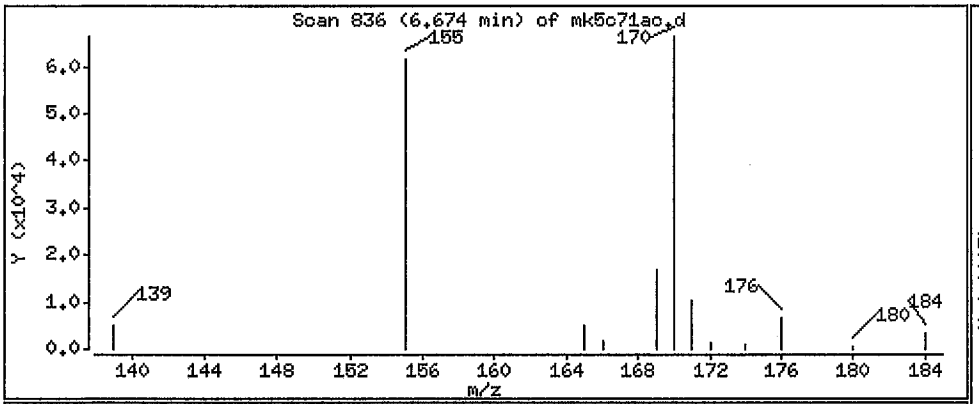
Operator: 11211

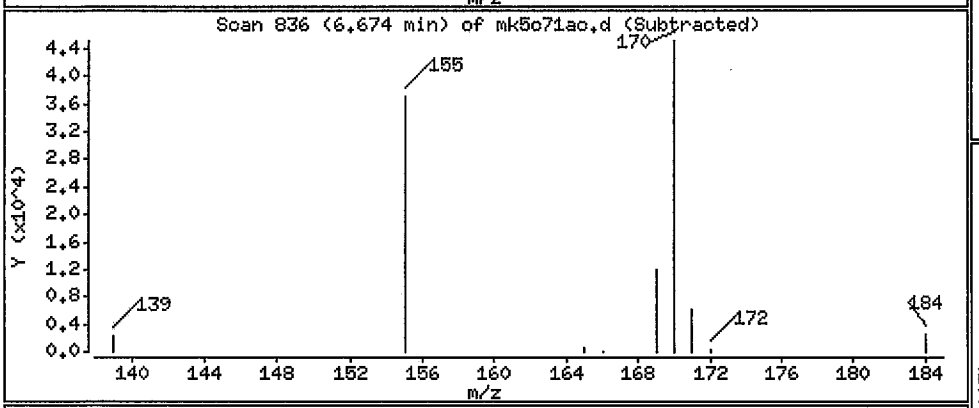
Column phase: Varian: 5MS

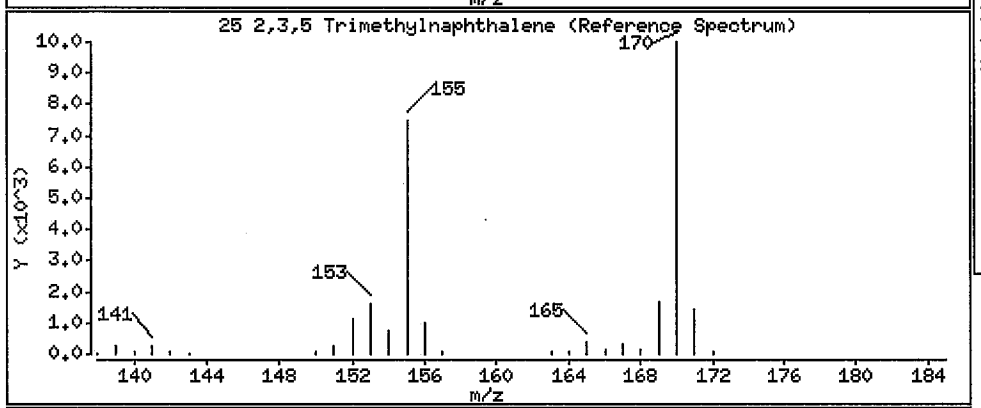
Column diameter: 0.25

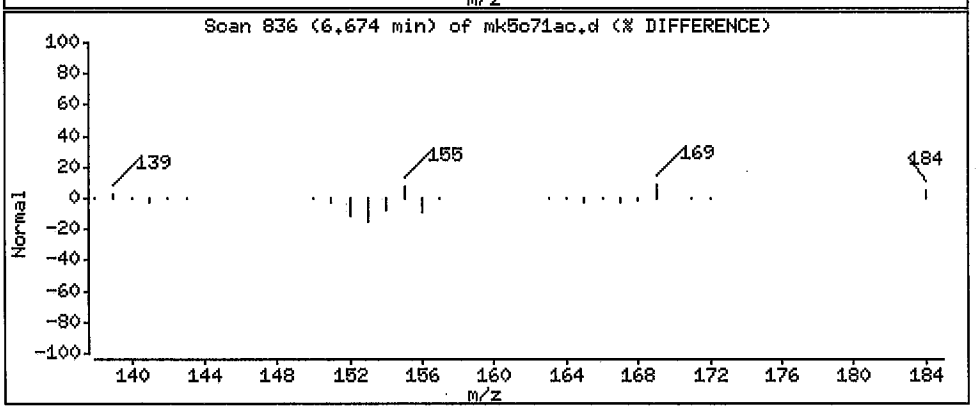
25 2,3,5 Trimethylnaphthalene

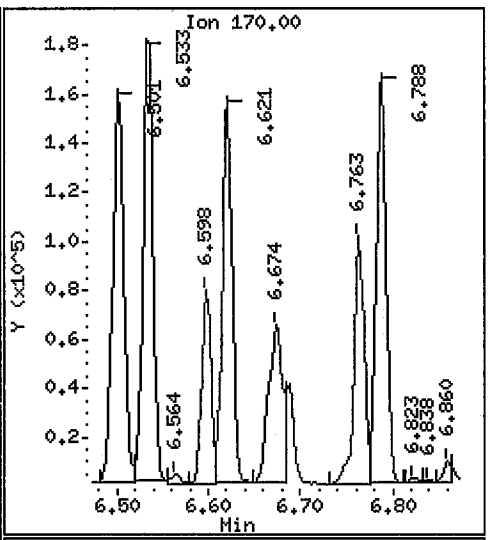
Concentration: 126 ng/sample

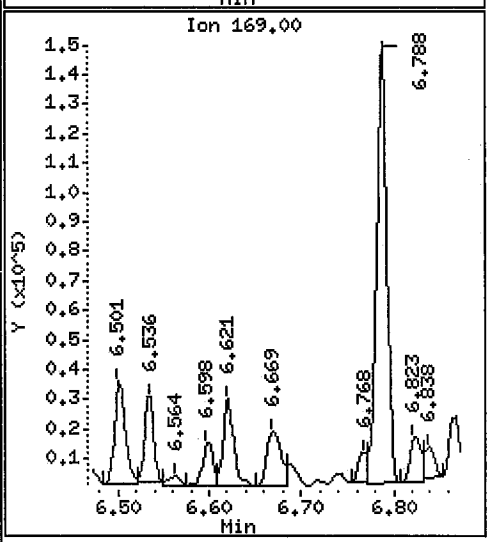












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

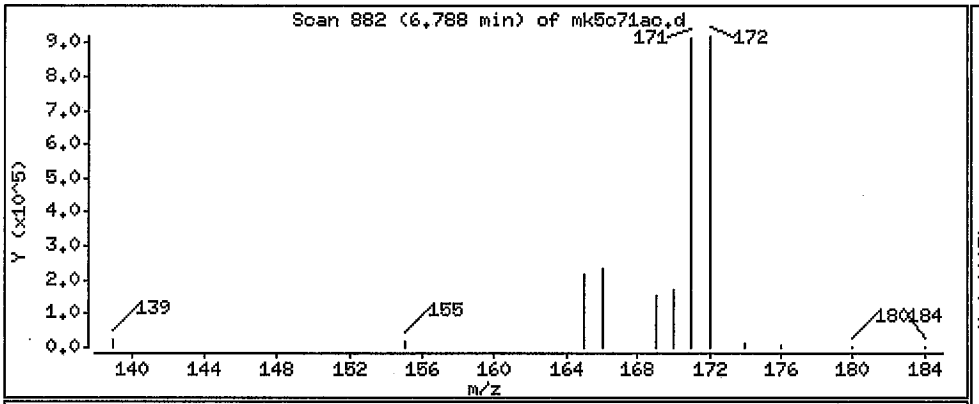
Operator: 11211

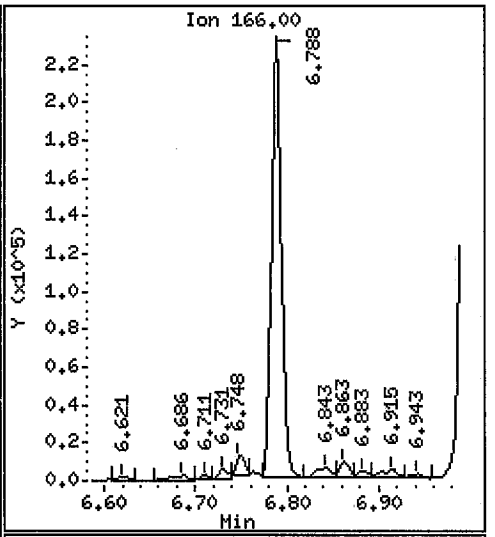
Column phase: Varian: 5MS

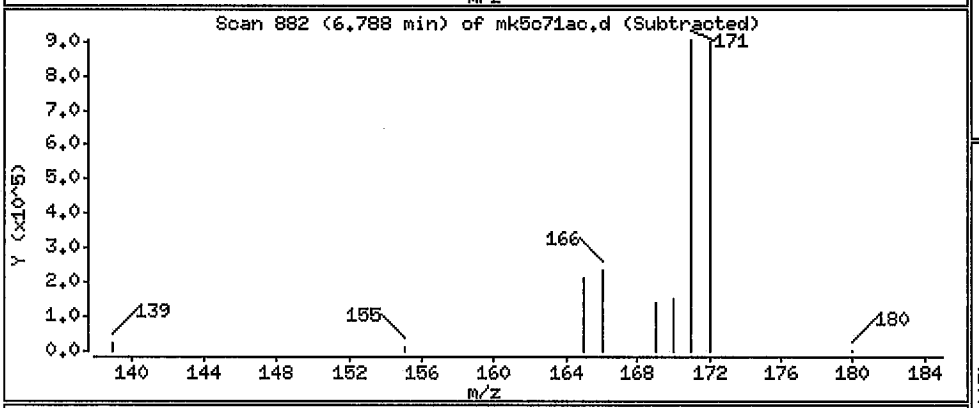
Column diameter: 0.25

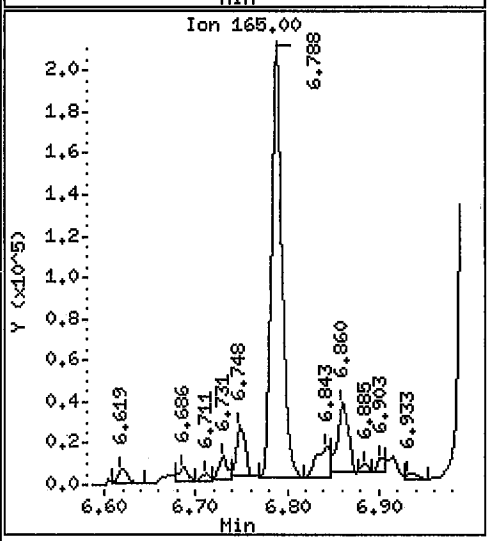
27 Fluorene

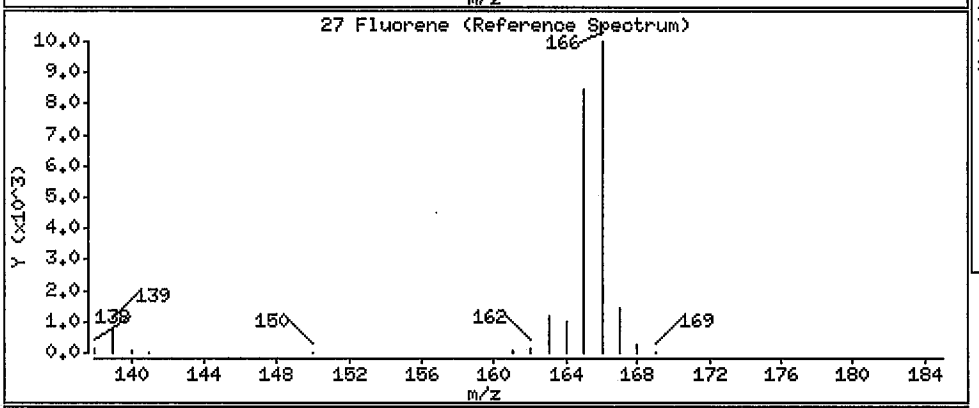
Concentration: 219 ng/sample

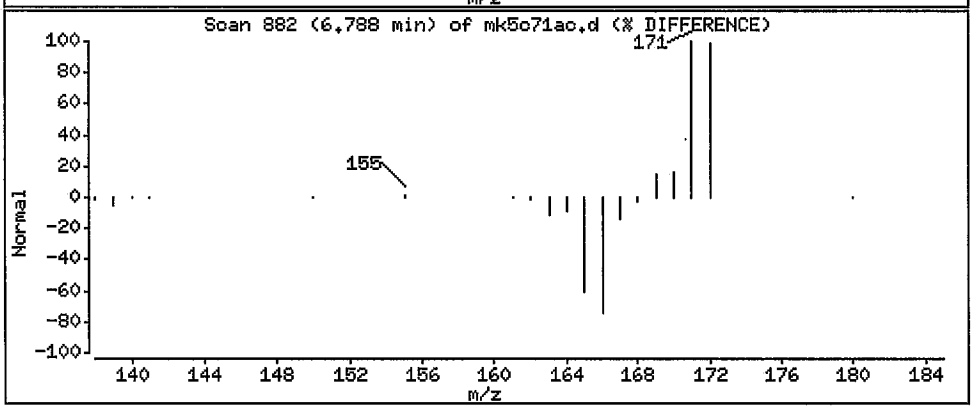












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

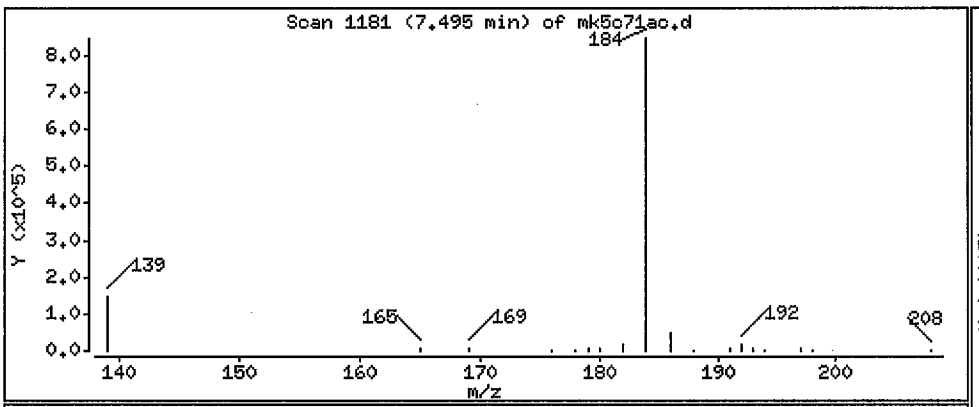
Operator: 11211

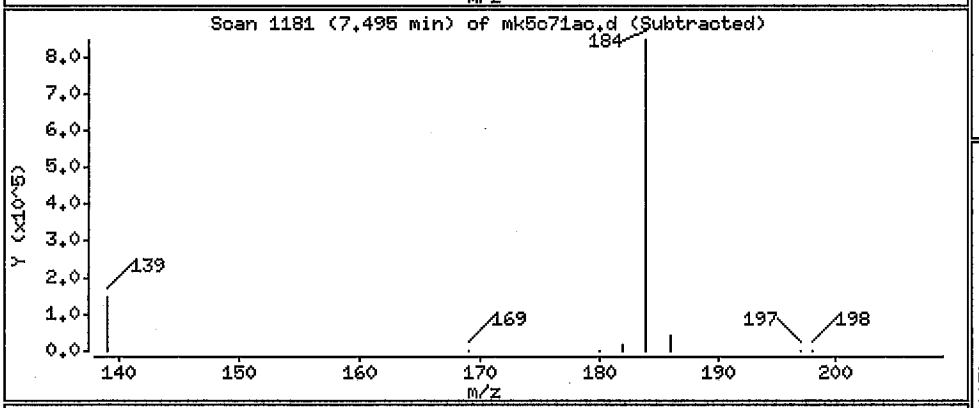
Column phase: Varian: 5MS

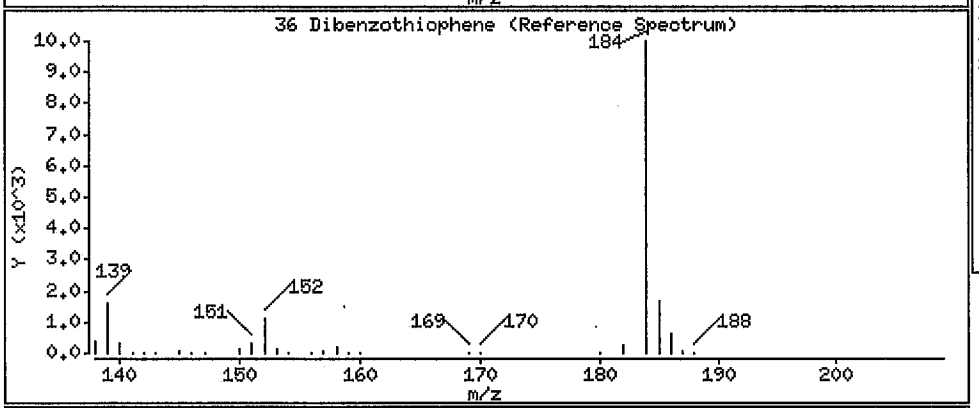
Column diameter: 0.25

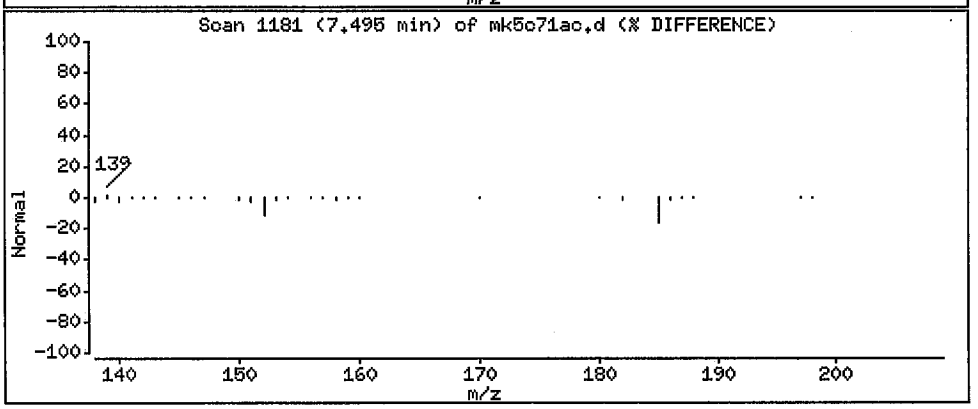
36 Dibenzothiophene

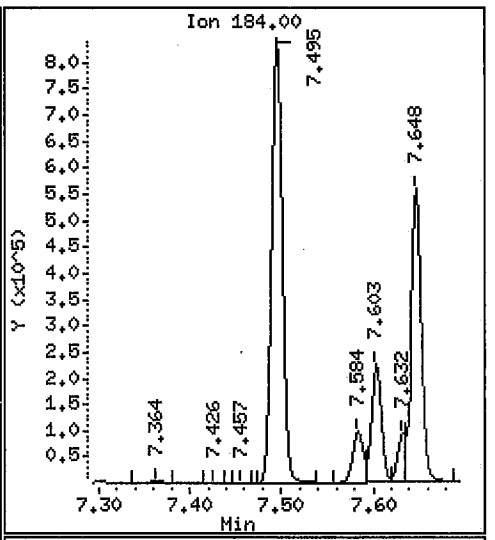
Concentration: 616 ng/sample

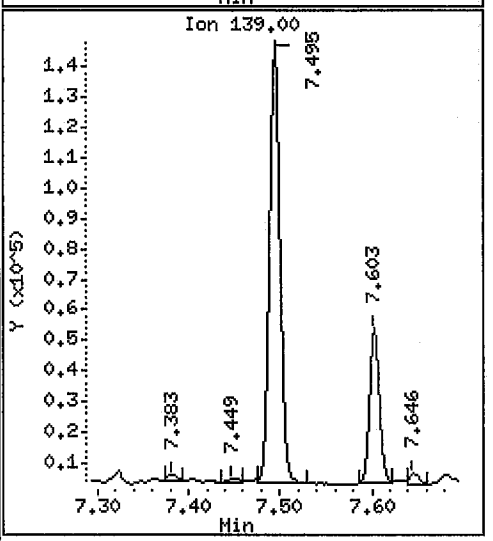












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

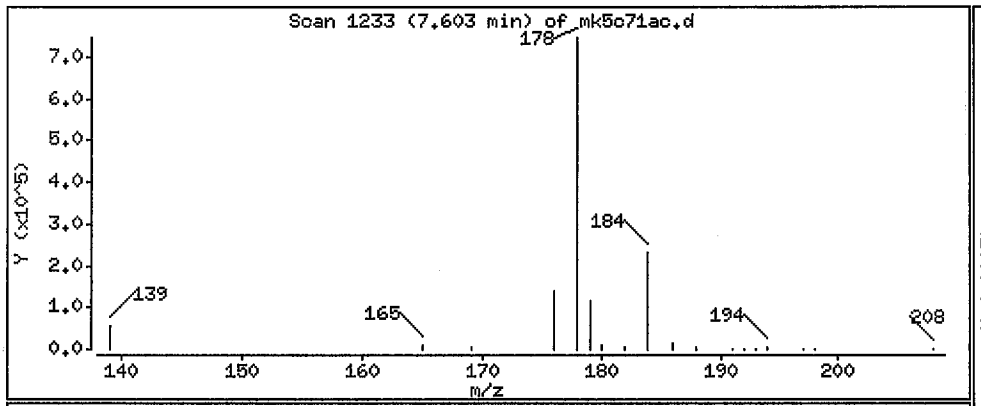
Operator: 11211

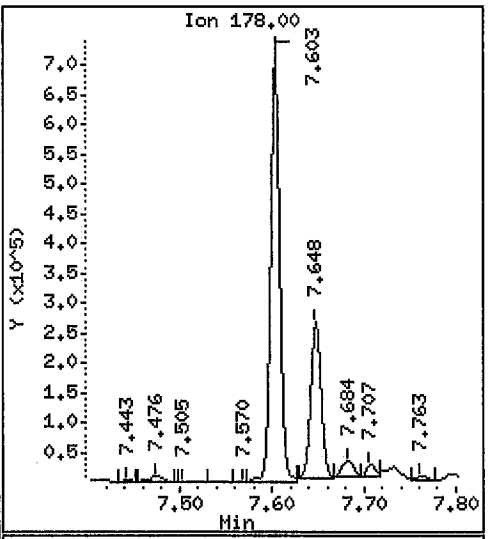
Column phase: Varian: 5MS

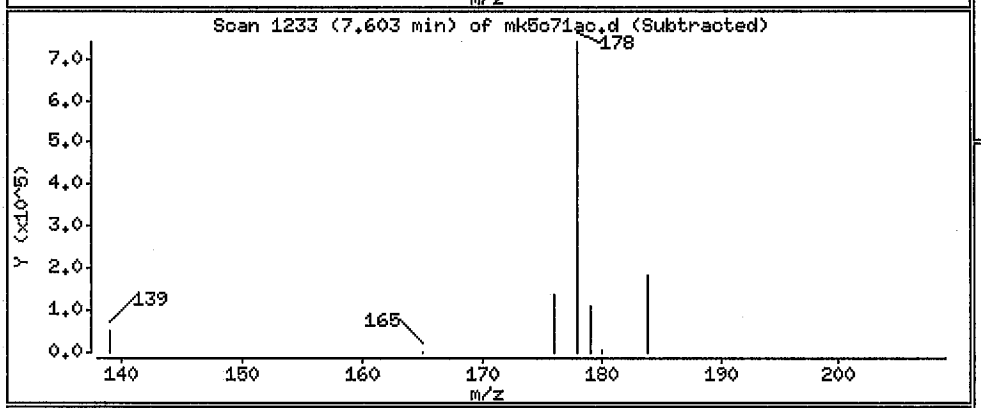
Column diameter: 0.25

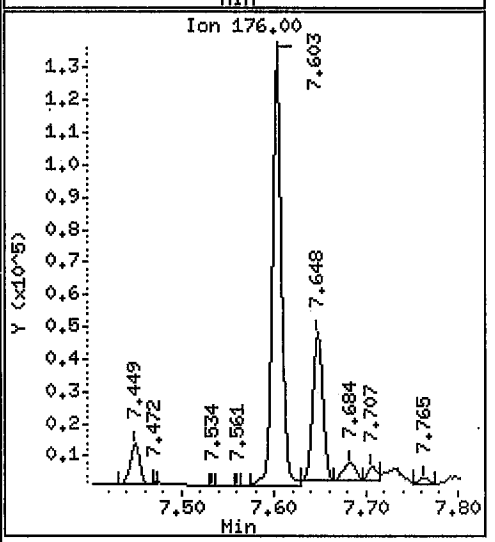
43 Phenanthrene

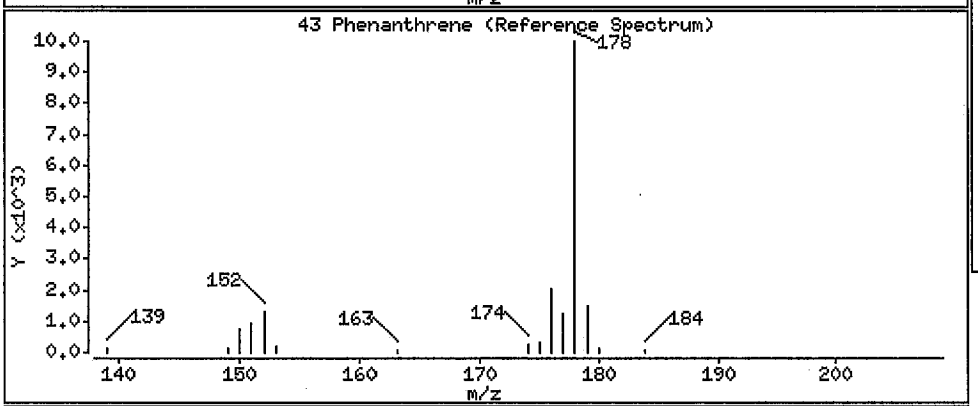
Concentration: 500 ng/sample

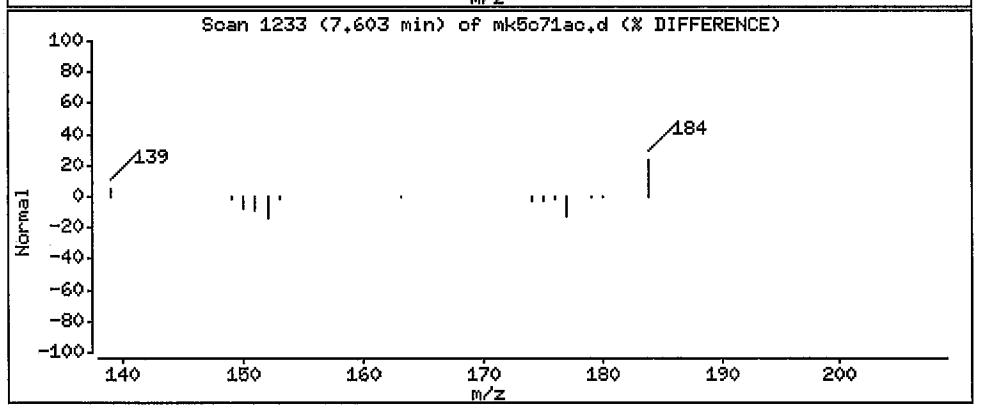












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

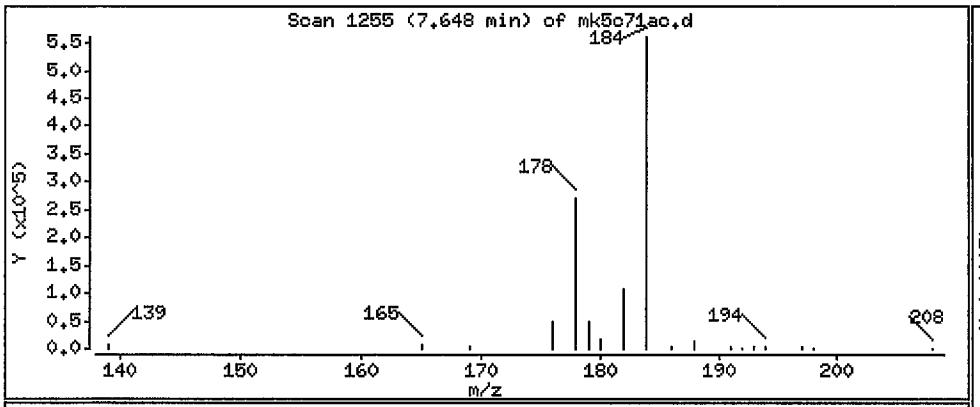
Operator: 11211

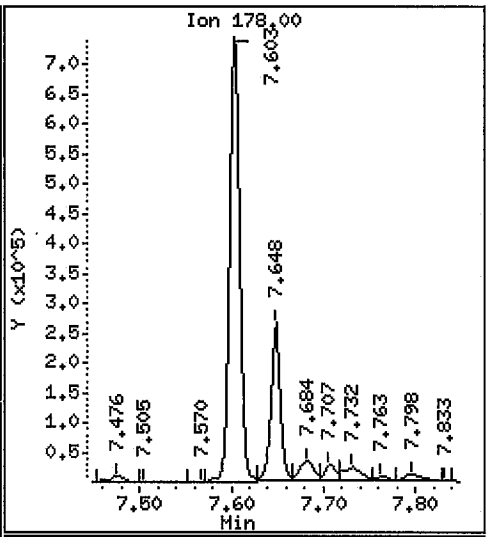
Column phase: Varian: 5MS

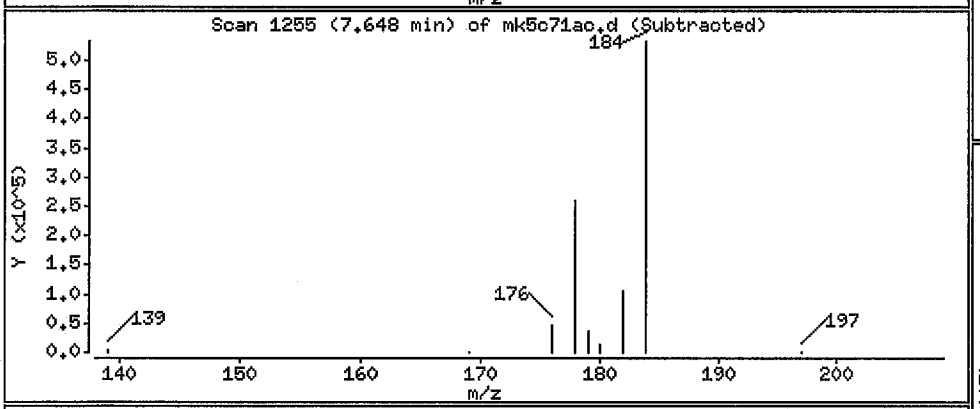
Column diameter: 0.25

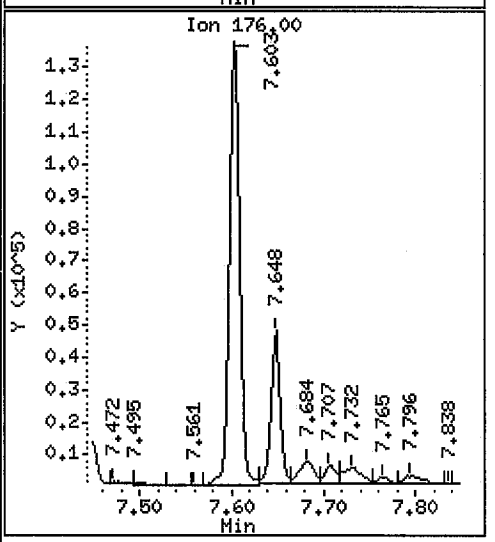
46 Anthracene

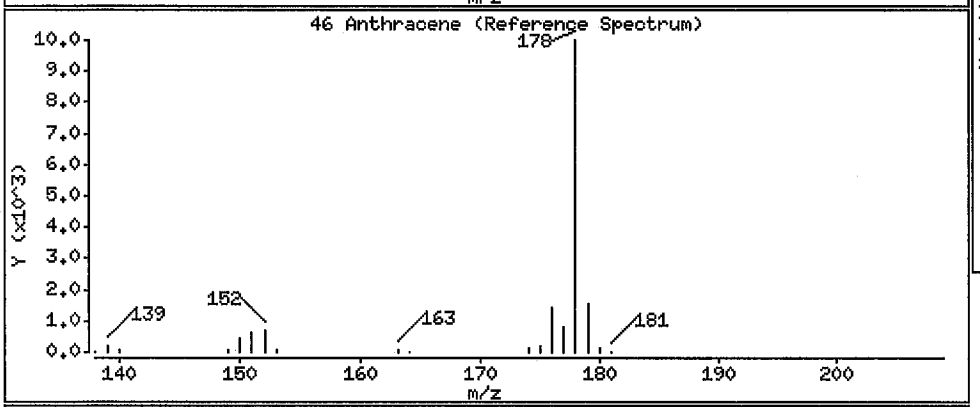
Concentration: 169 ng/sample

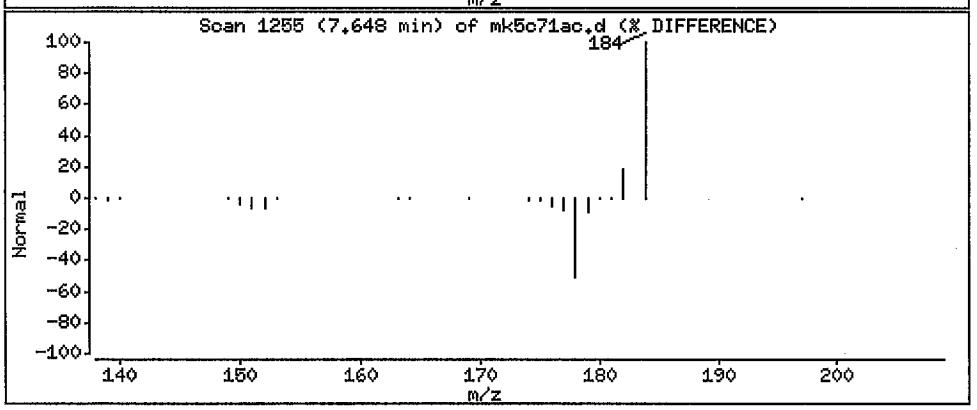












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

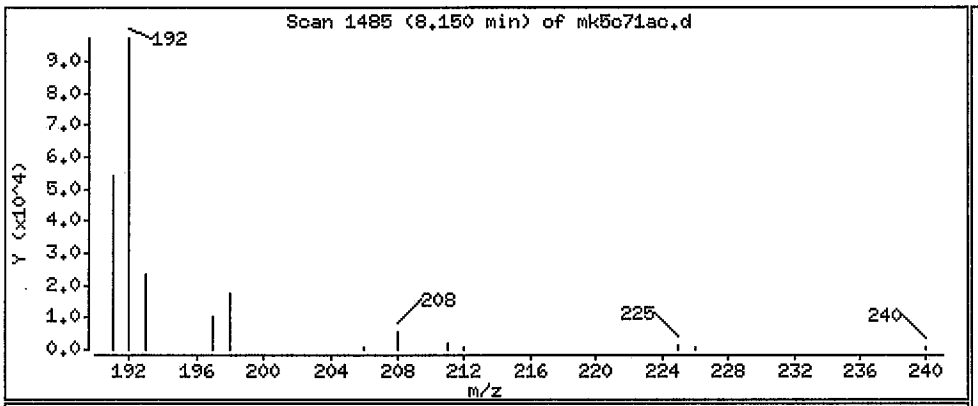
Operator: 11211

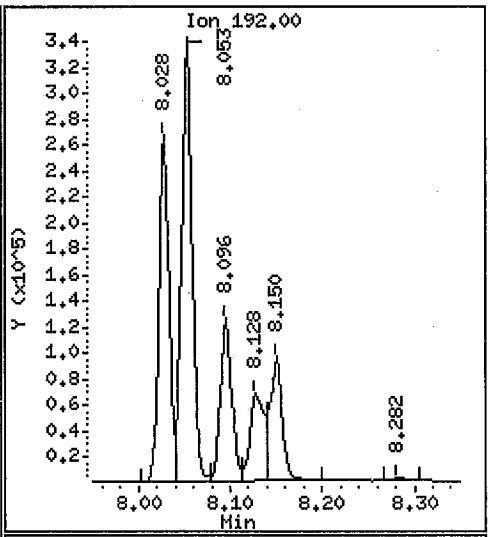
Column phase: Varian: 5MS

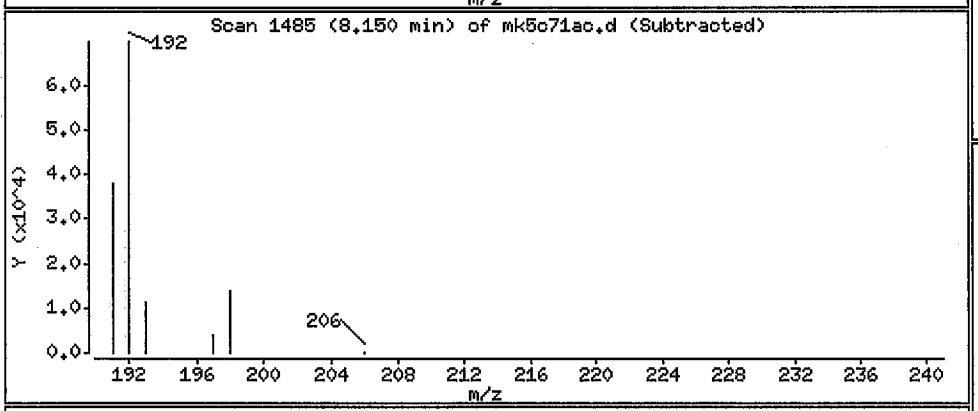
Column diameter: 0.25

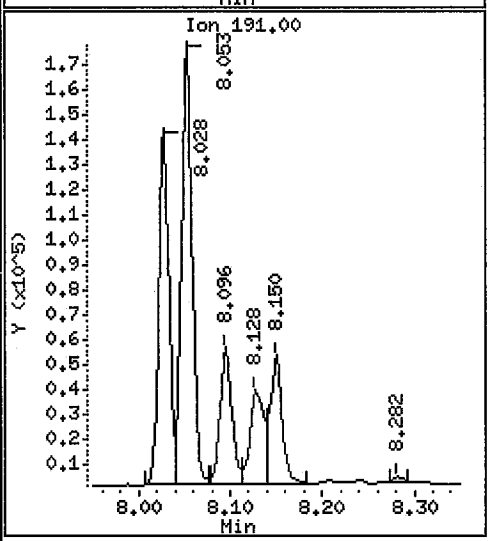
52 1-Methylphenanthrene

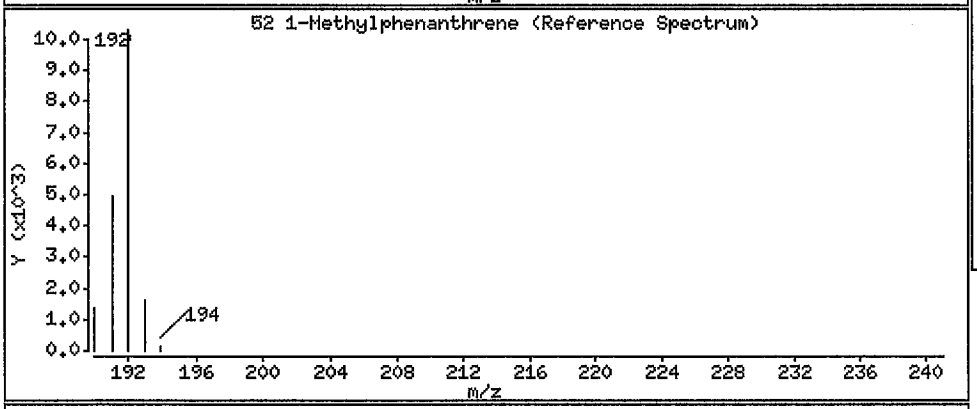
Concentration: 128 ng/sample

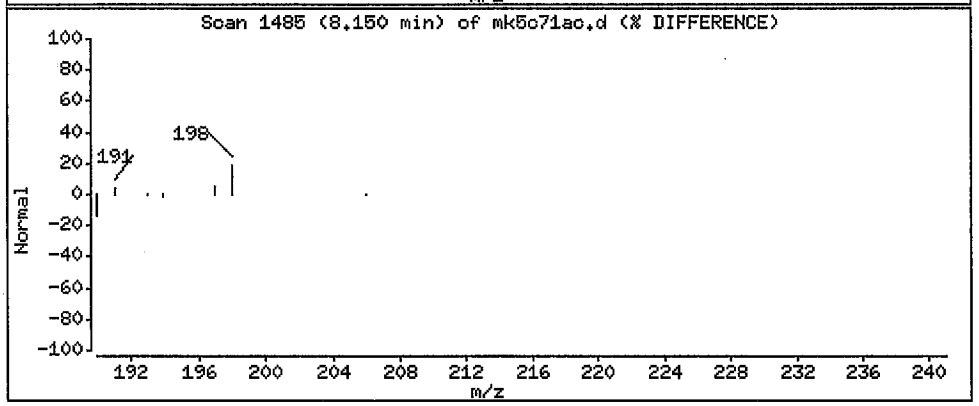












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

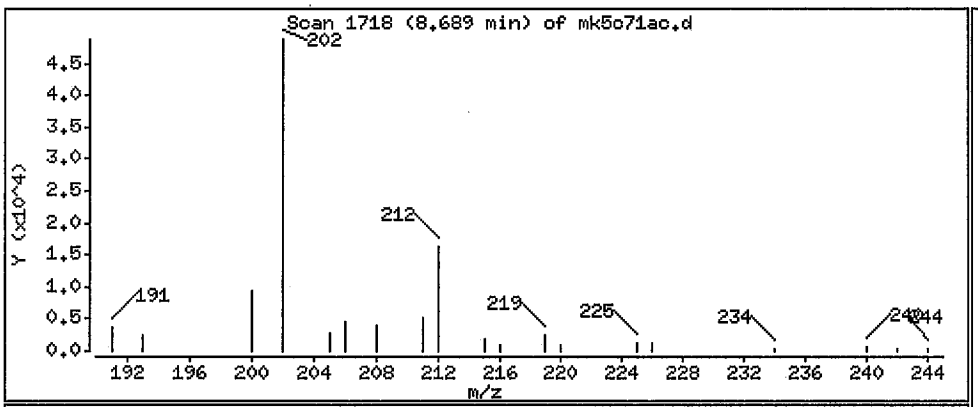
Operator: 11211

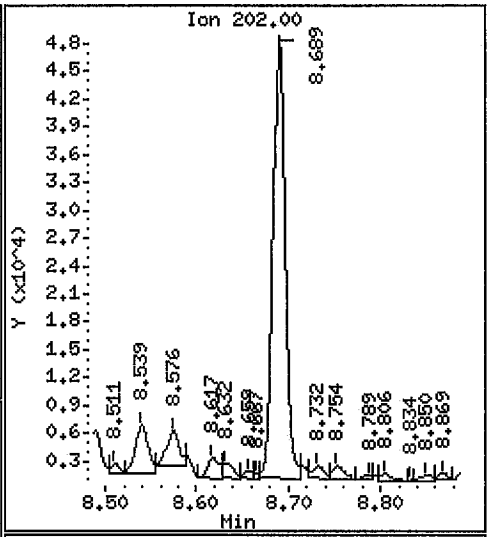
Column phase: Varian: 5MS

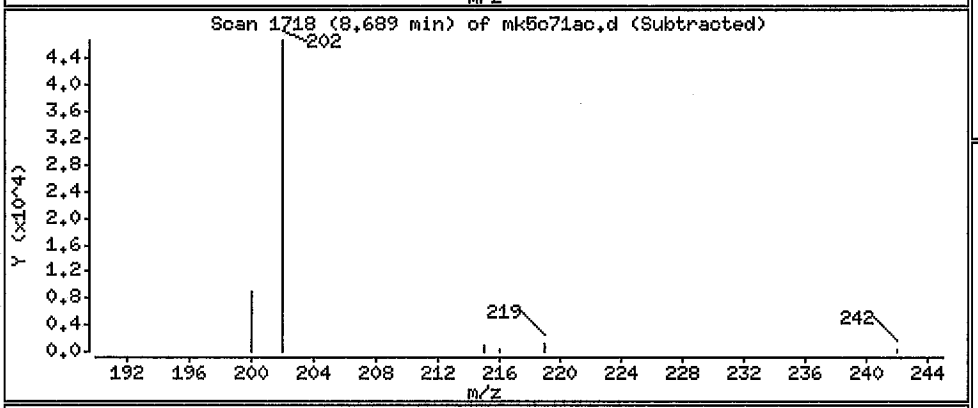
Column diameter: 0.25

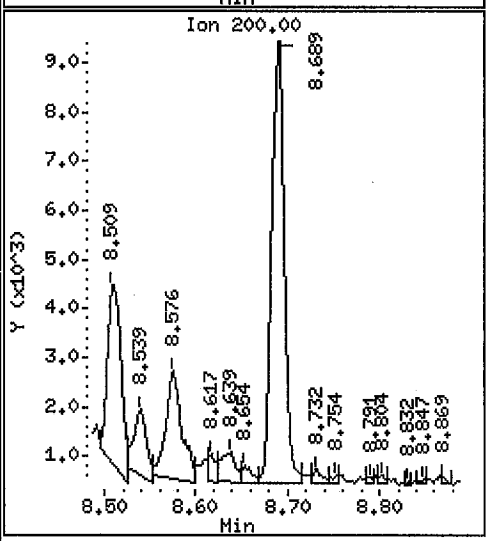
55 Fluoranthene

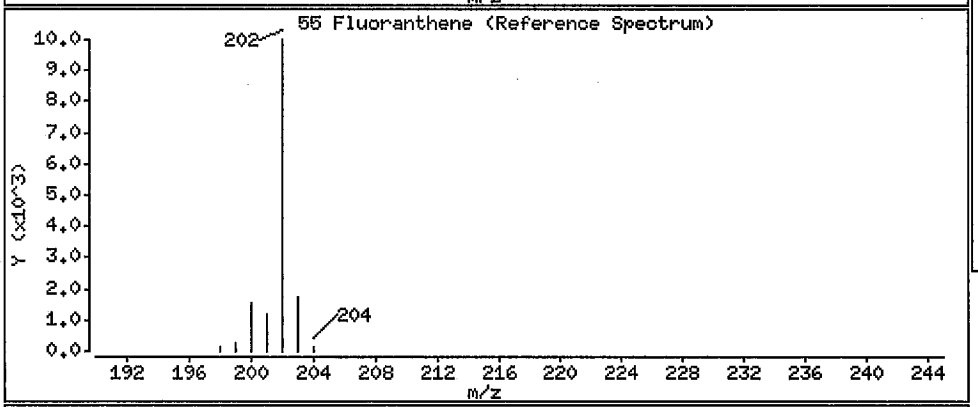
Concentration: 32.2 ng/sample

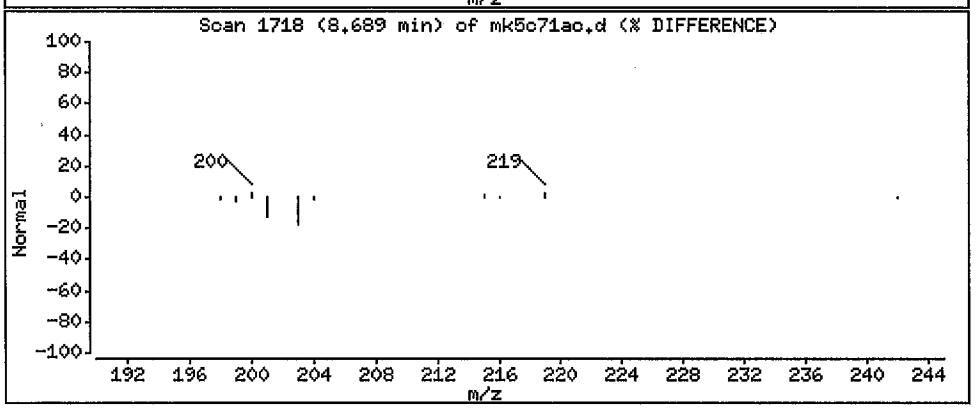












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

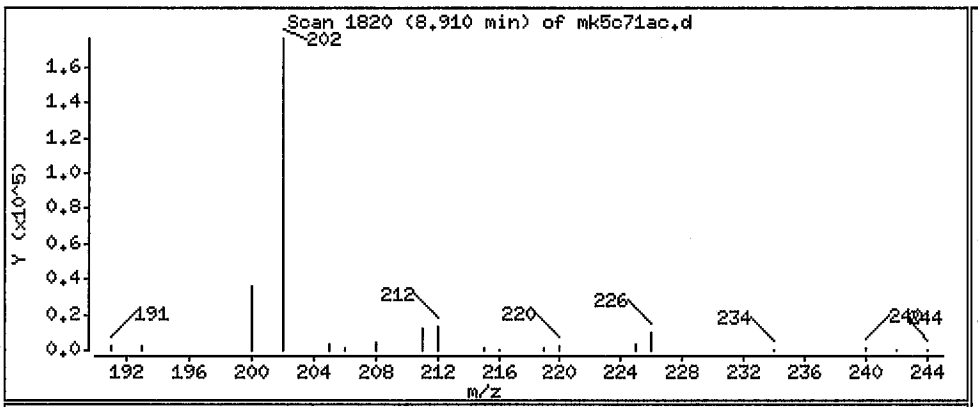
Operator: 11211

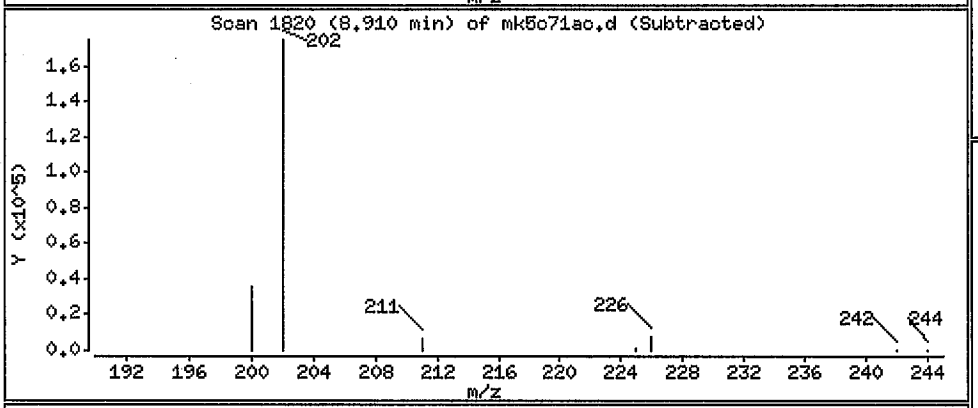
Column phase: Varian: 5MS

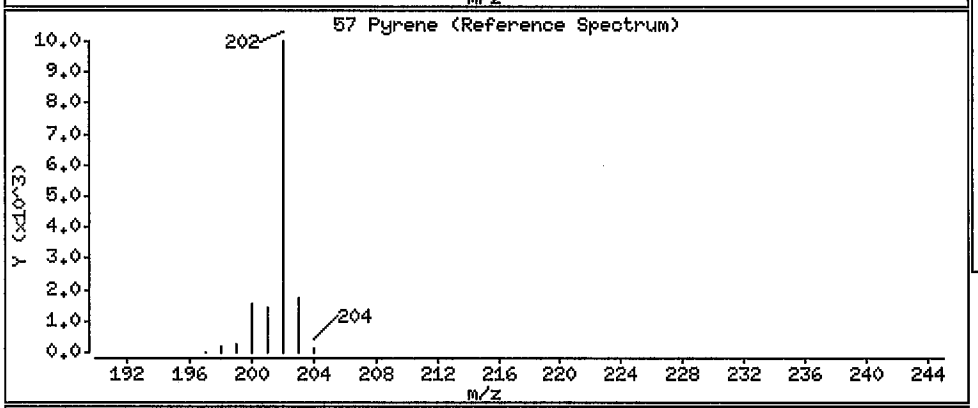
Column diameter: 0.25

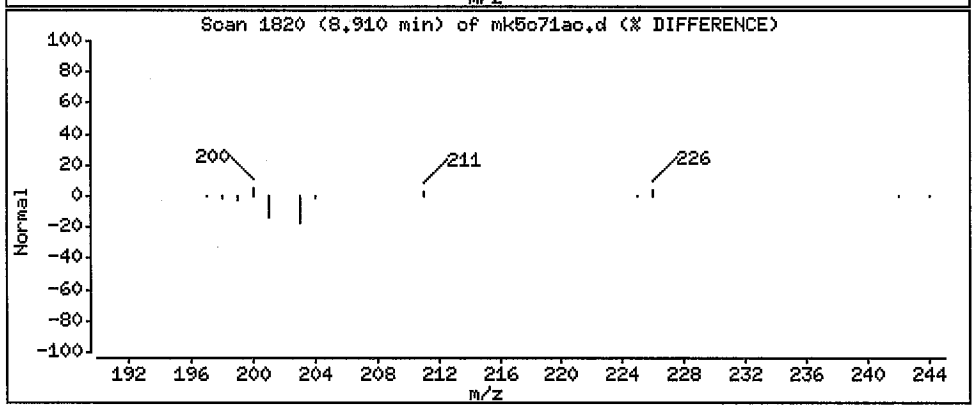
57 Pyrene

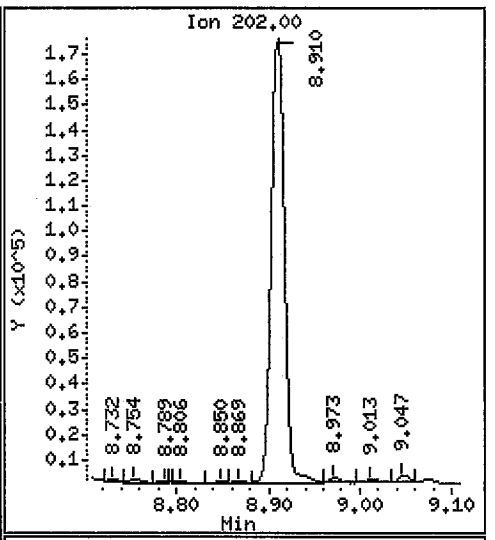
Concentration: 117 ng/sample

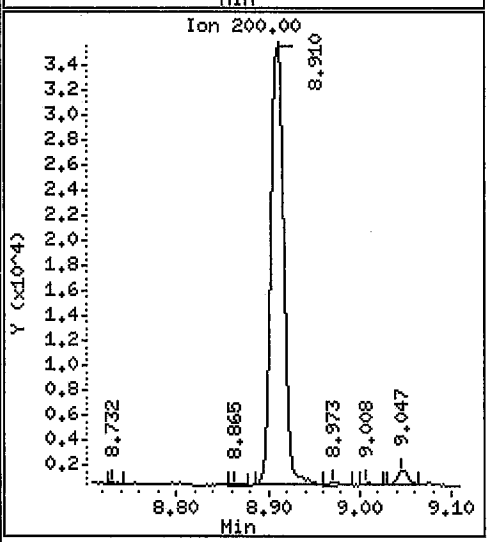












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

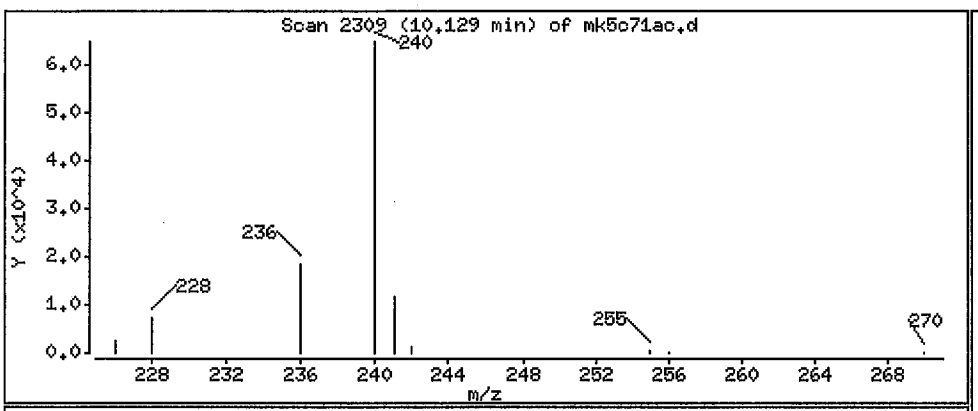
Operator: 11211

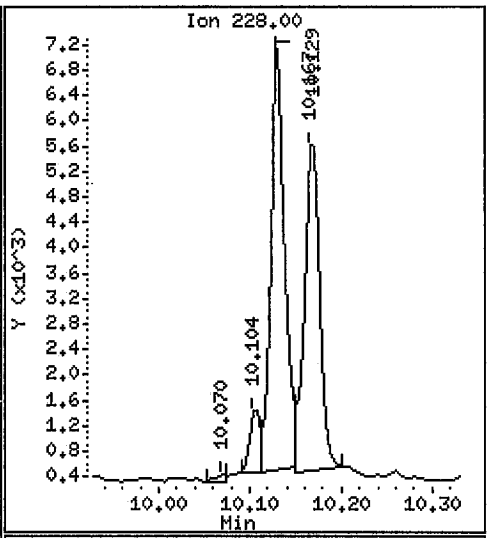
Column phase: Varian: 5MS

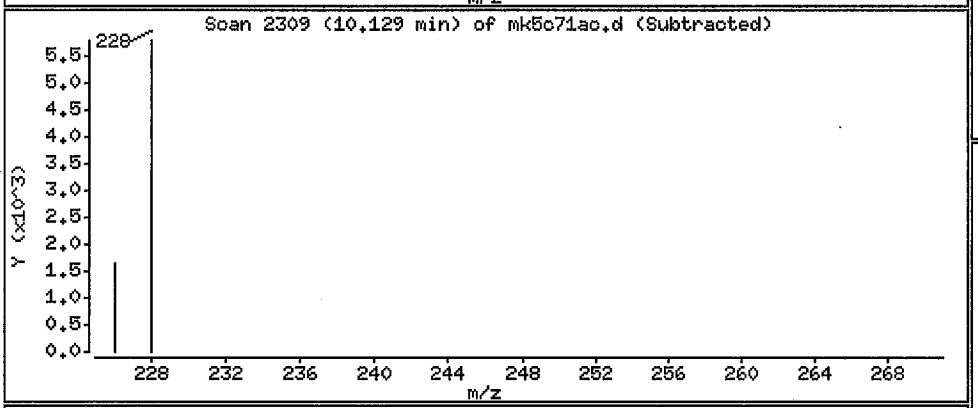
Column diameter: 0.25

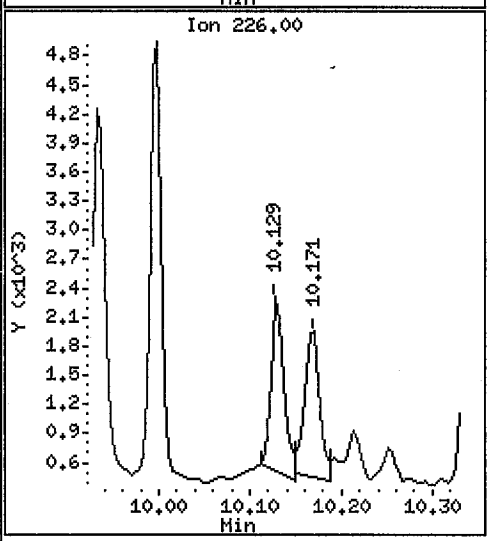
62 Benzo(a)anthracene

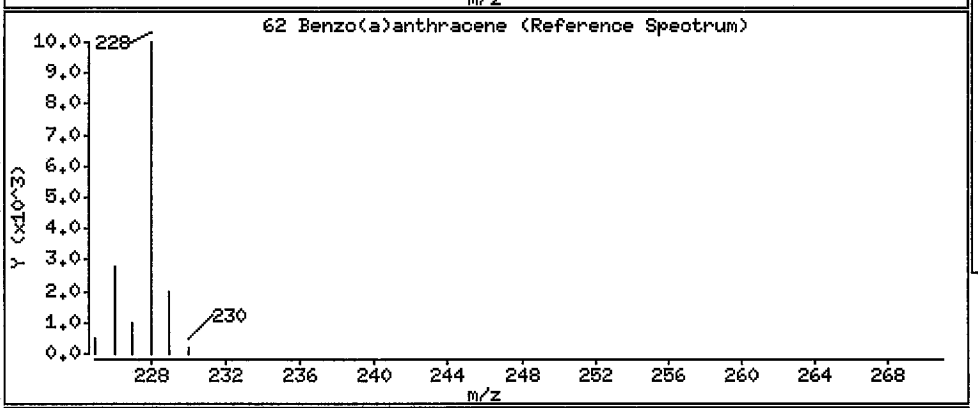
Concentration: 6.15 ng/sample

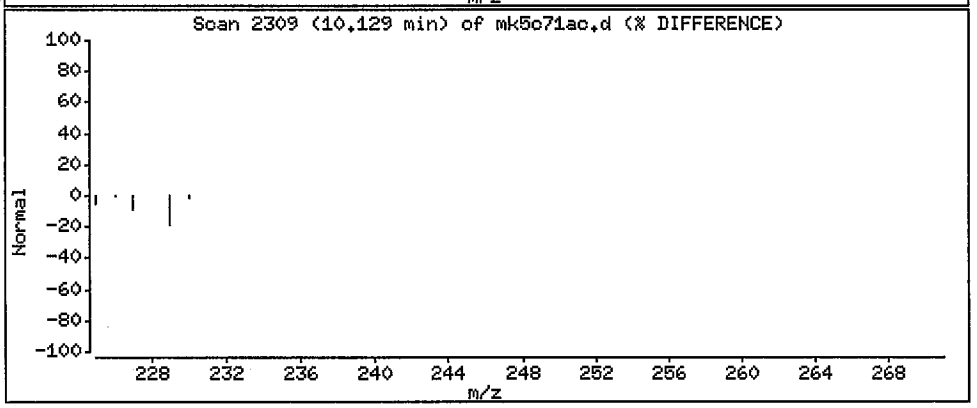












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

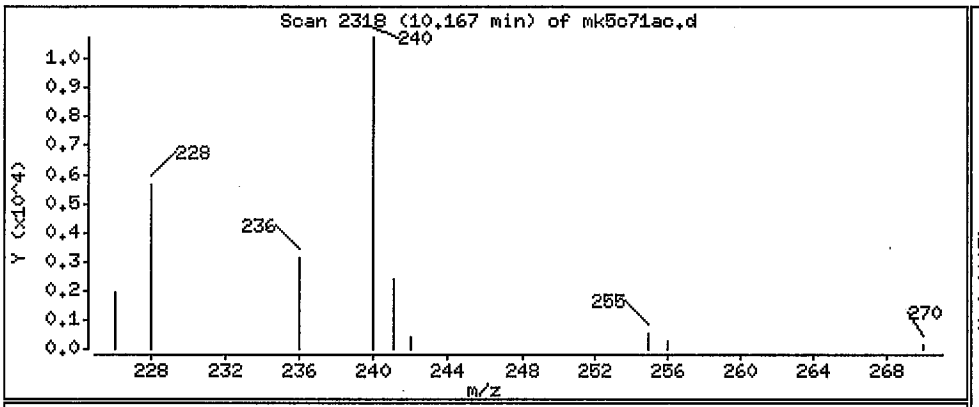
Operator: 11211

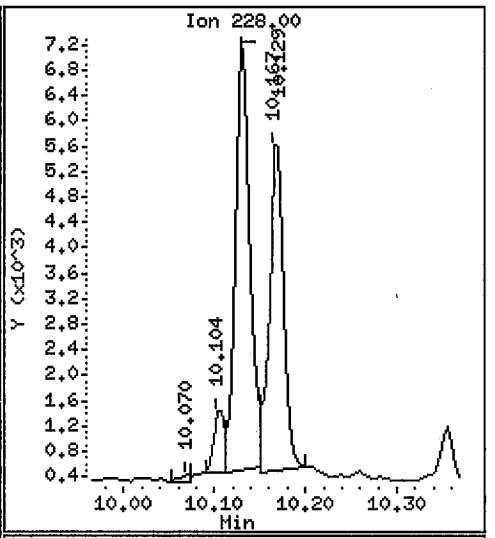
Column phase: Varian: 5MS

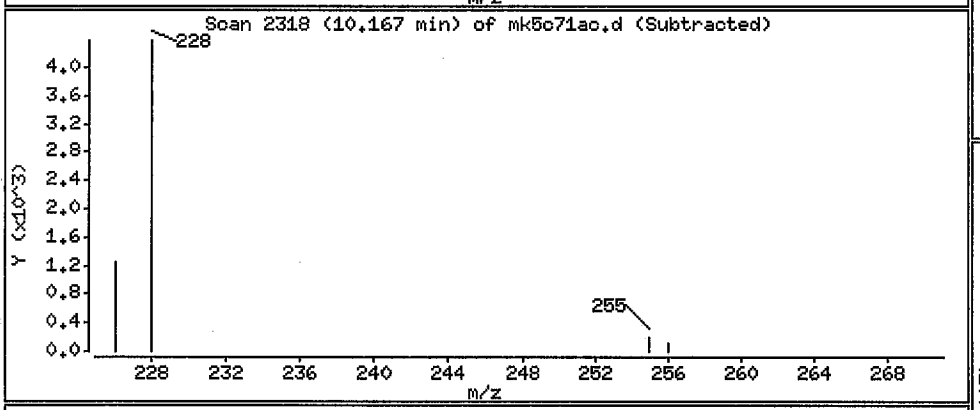
Column diameter: 0.25

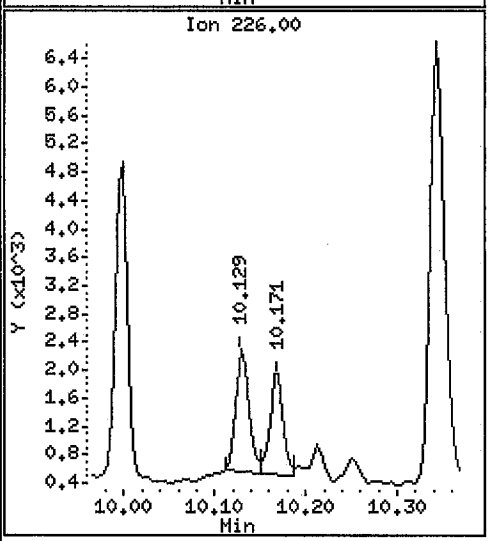
65 Chrysene

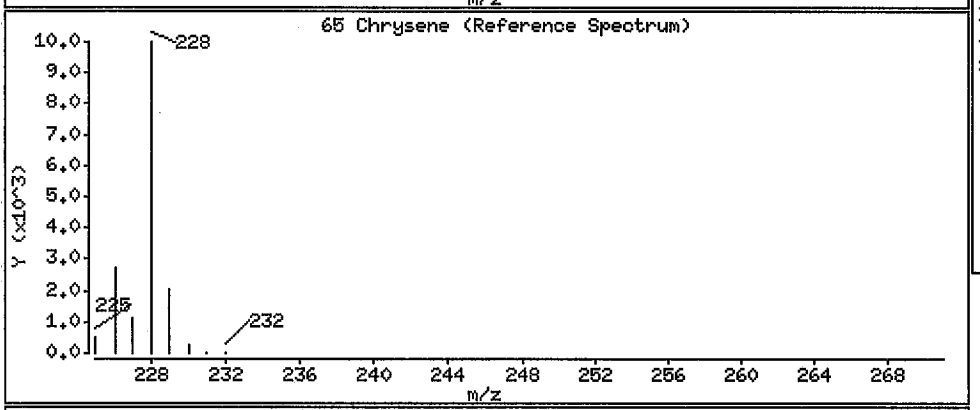
Concentration: 6.50 ng/sample

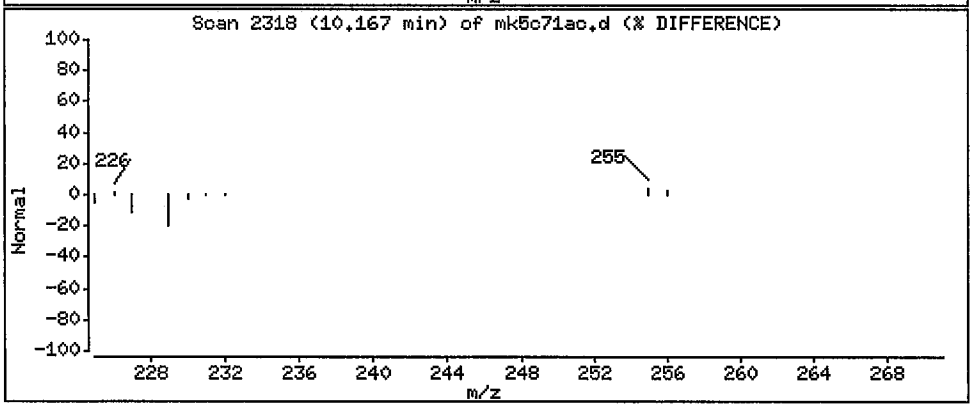












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

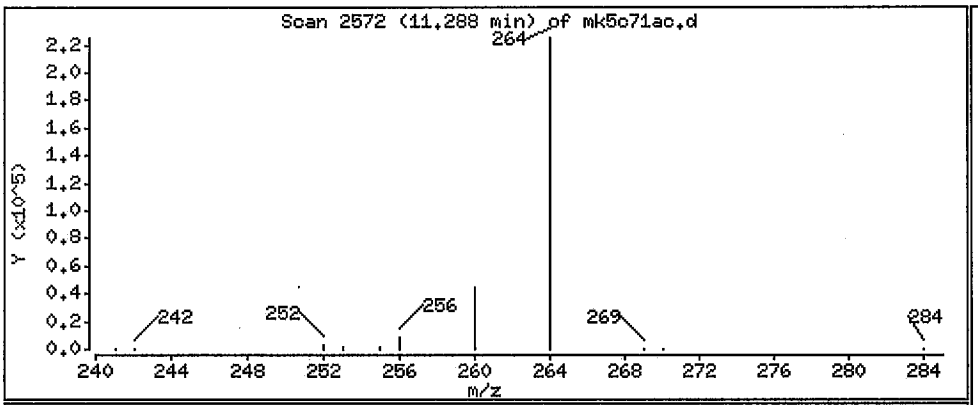
Operator: 11211

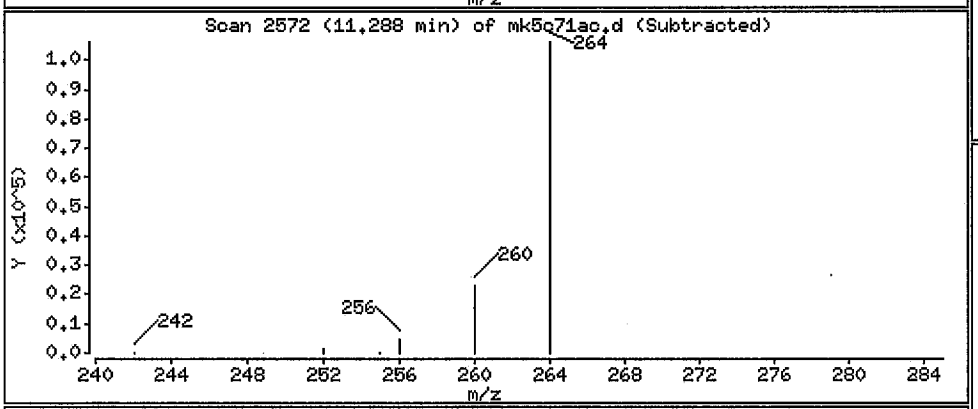
Column phase: Varian: 5MS

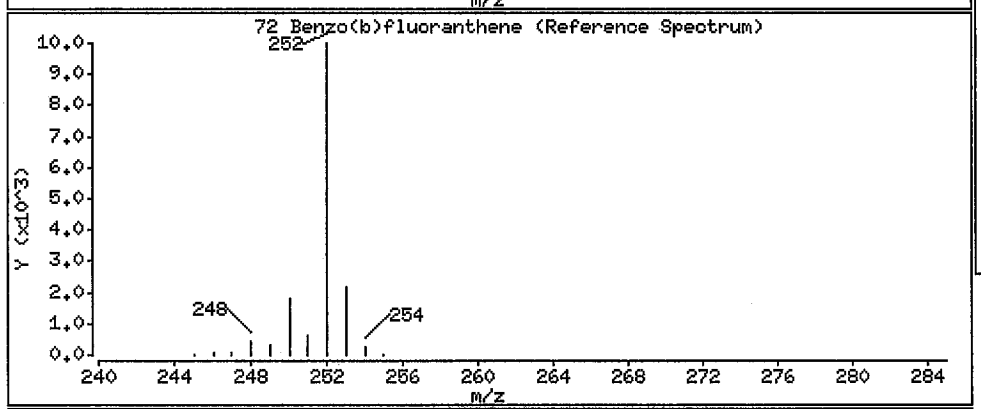
Column diameter: 0.25

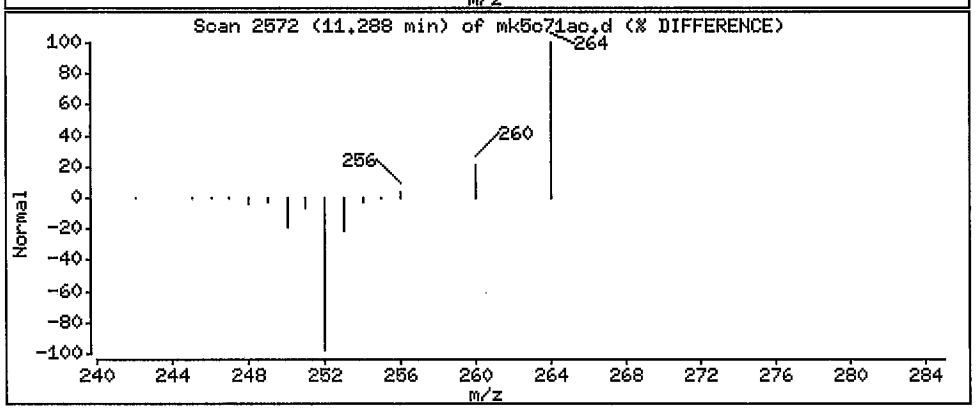
72 Benzo(b)fluoranthene

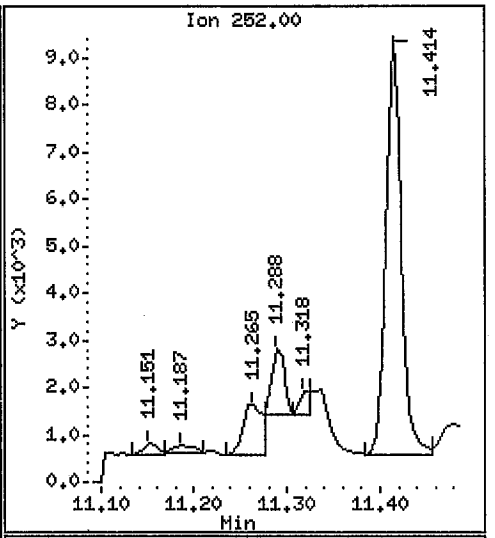
Concentration: 1.27 ng/sample

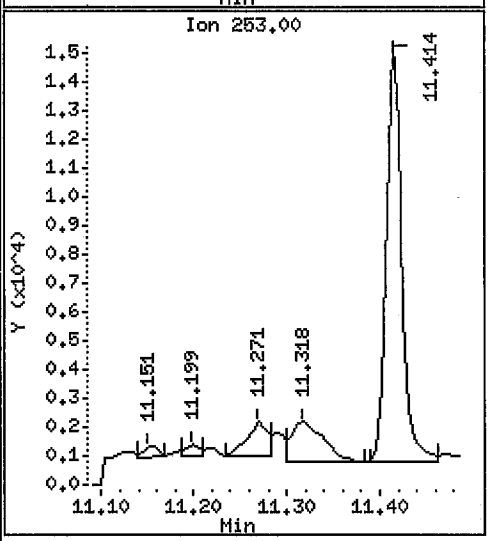












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

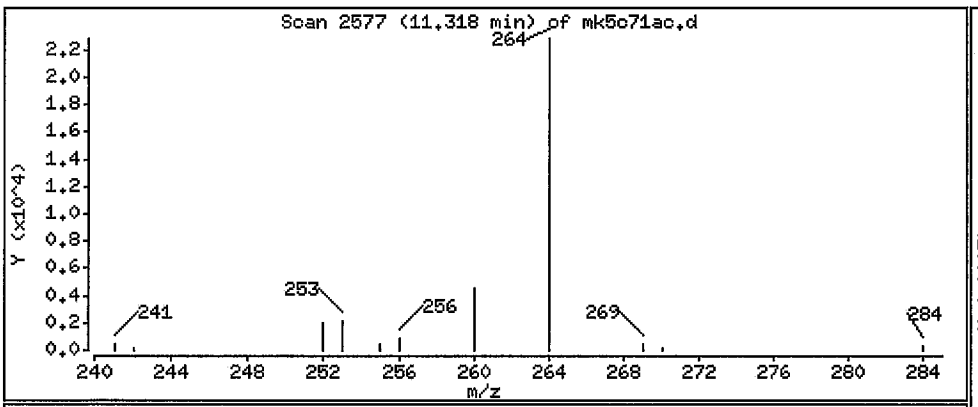
Operator: 11211

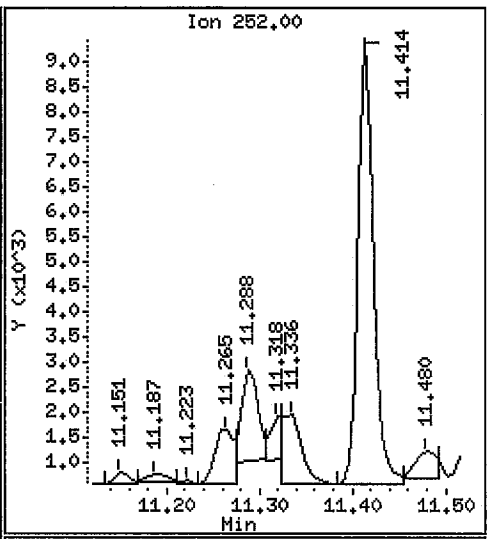
Column phase: Varian: 5MS

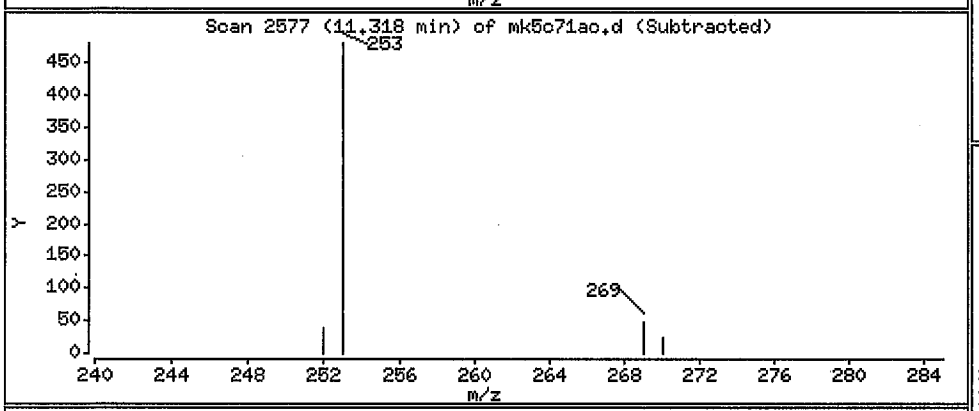
Column diameter: 0.25

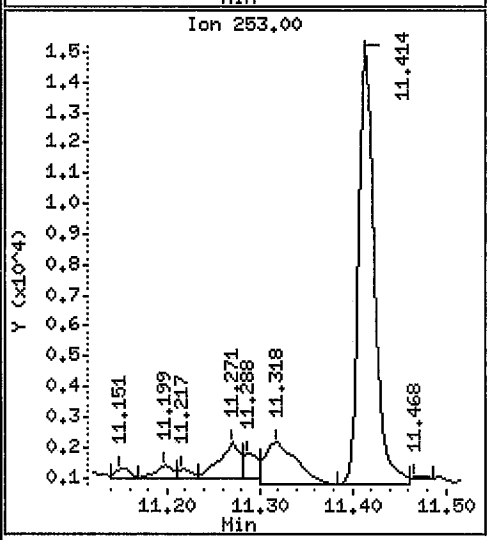
75 Benzo(k)fluoranthene

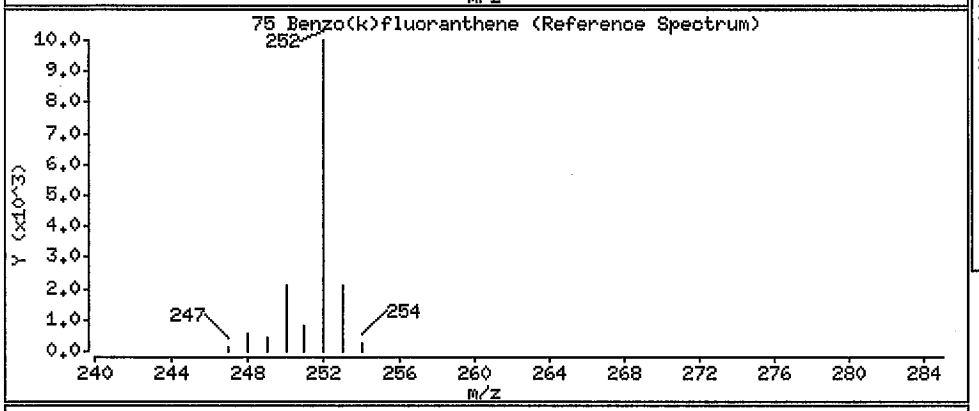
Concentration: 0.986 ng/sample

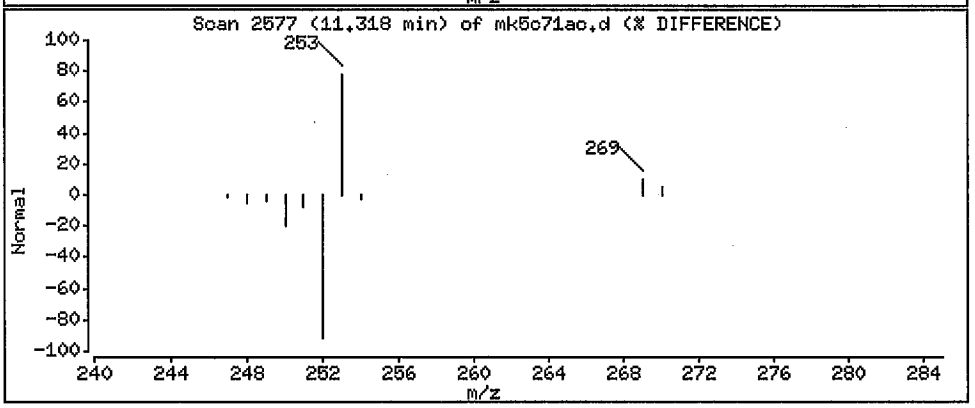












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

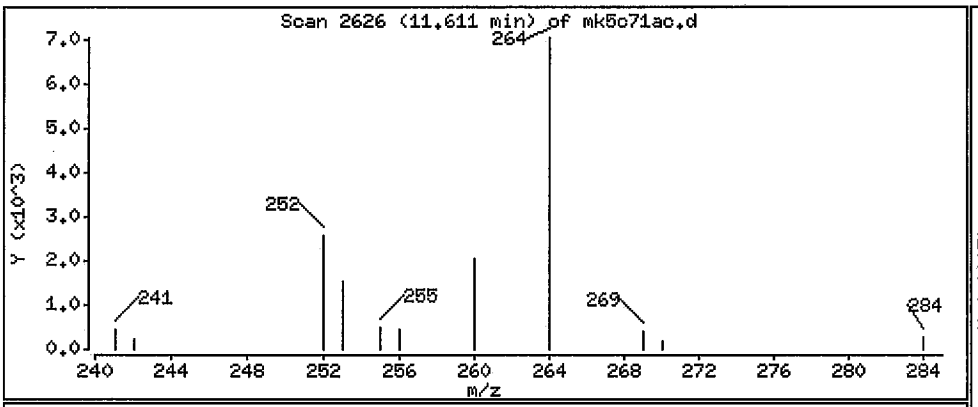
Operator: 11211

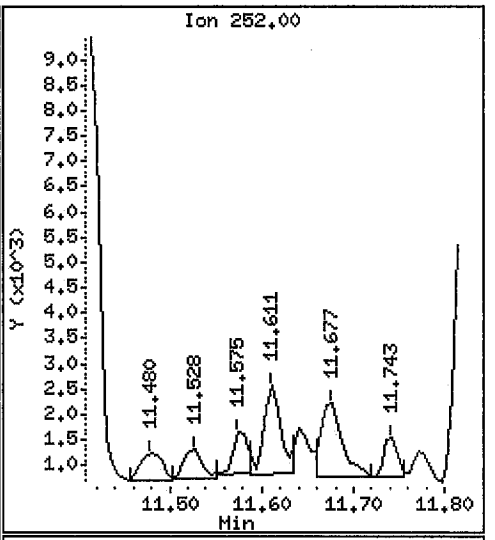
Column phase: Varian: 5MS

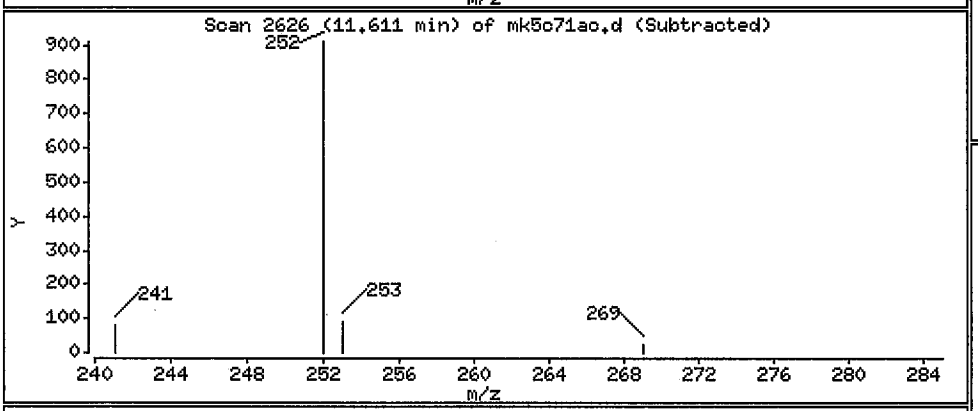
Column diameter: 0.25

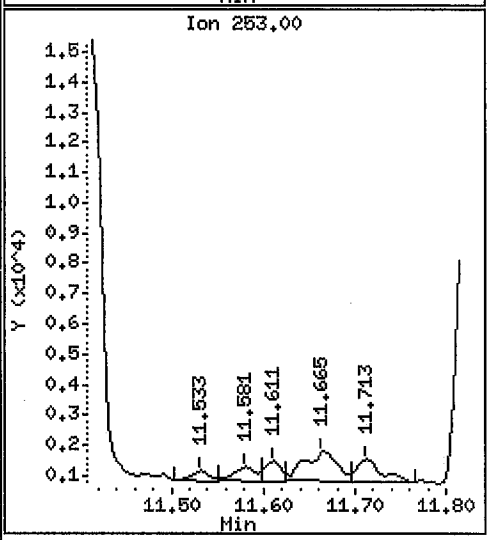
77 Benzo(e)pyrene

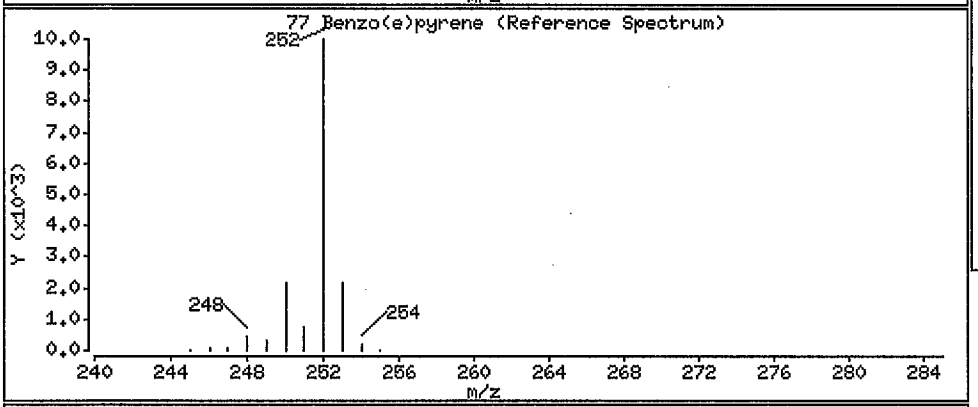
Concentration: 2.25 ng/sample

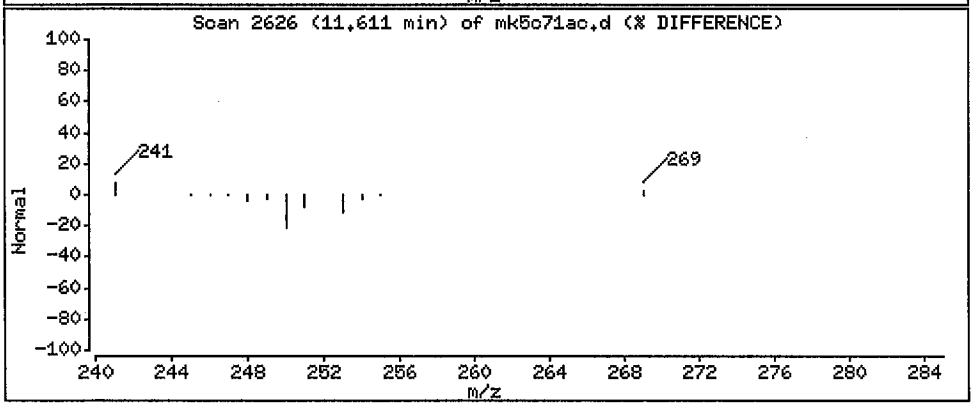












Data File: /var/chem/goms/mp.i/P080311.b/mk5o71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

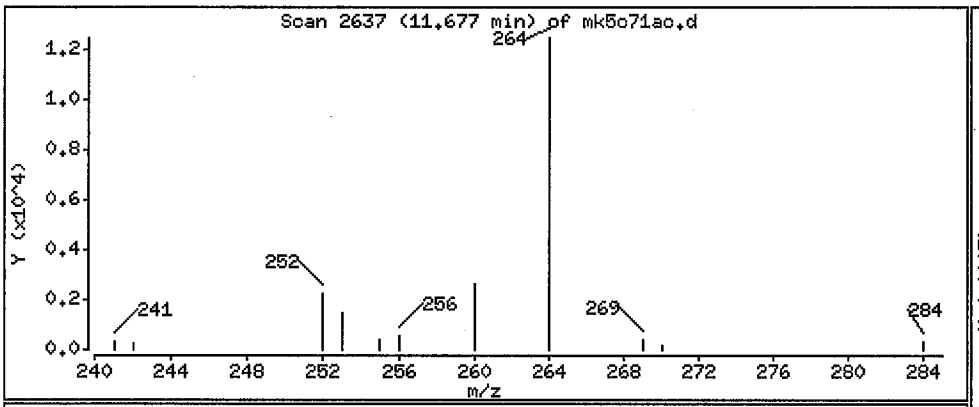
Operator: 11211

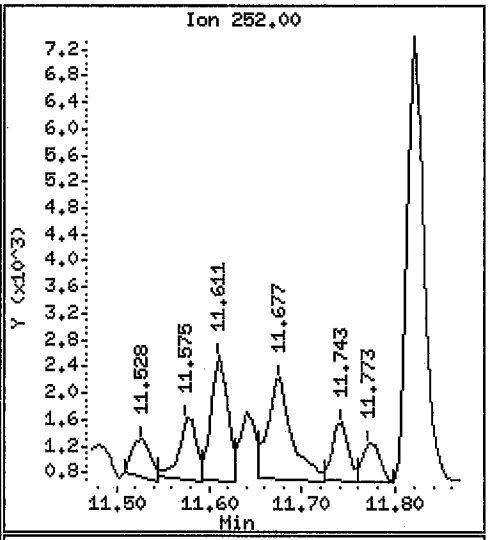
Column phase: Varian: 5MS

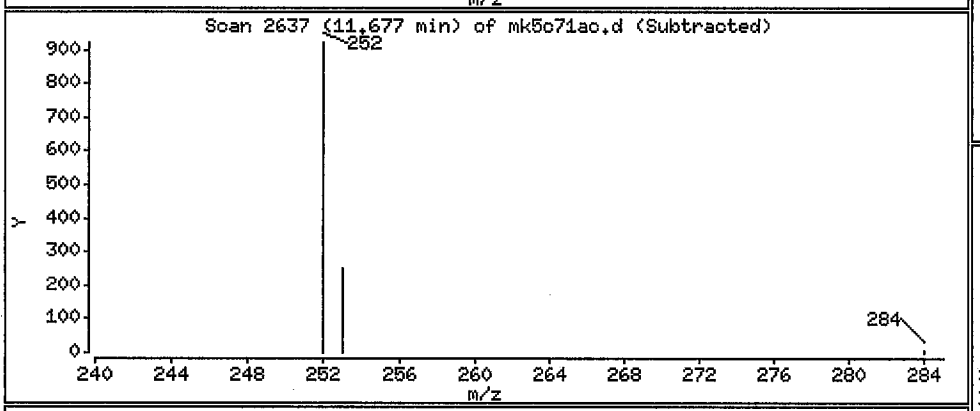
Column diameter: 0.25

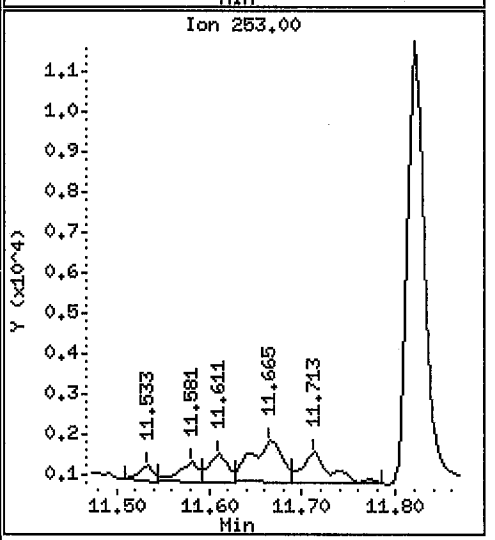
80 Benzo(a)pyrene

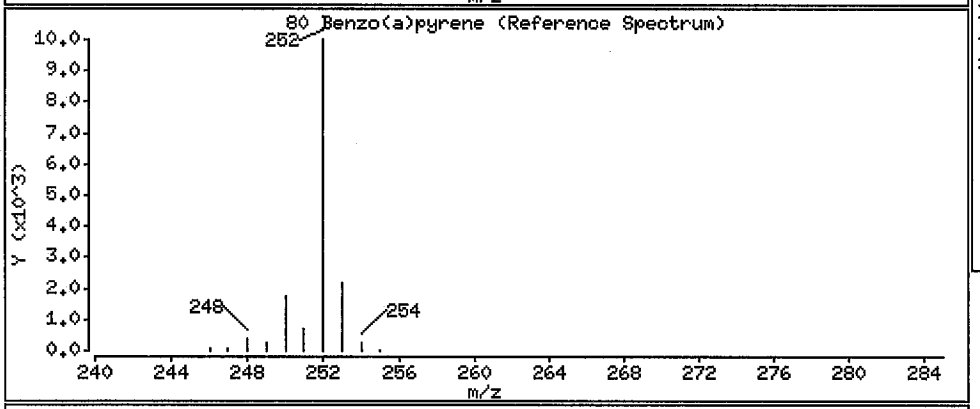
Concentration: 3.39 ng/sample

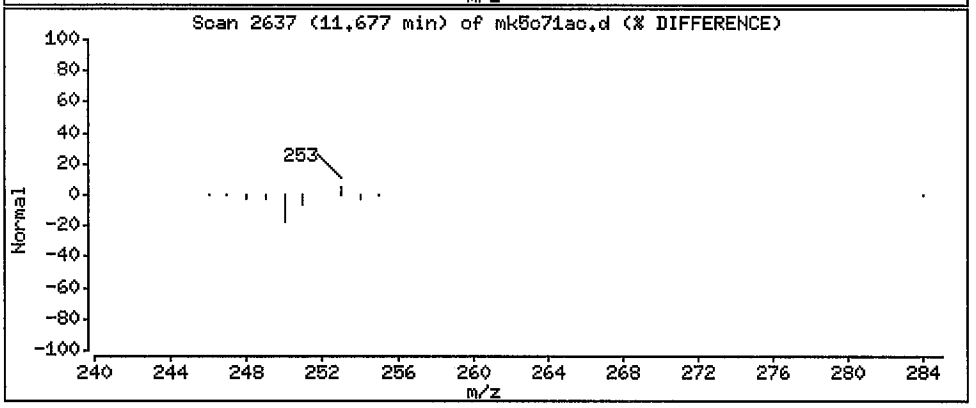












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

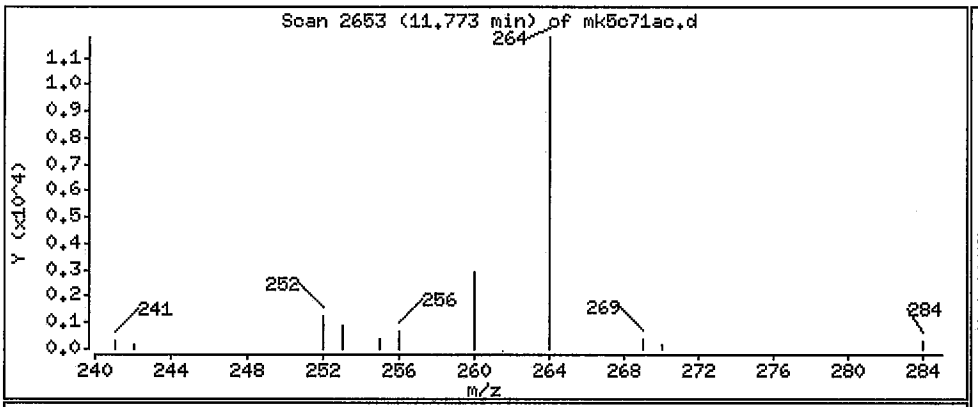
Operator: 11211

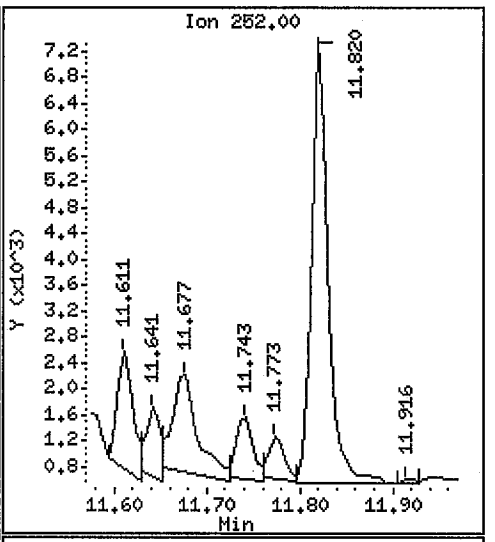
Column phase: Varian: 5MS

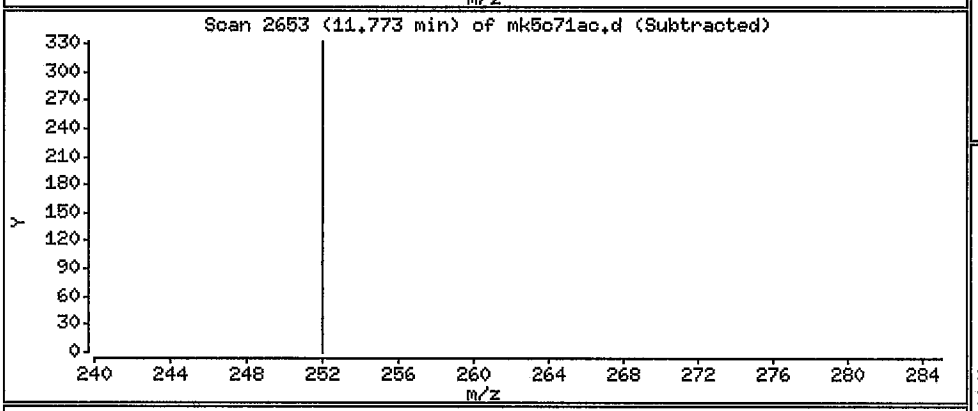
Column diameter: 0.25

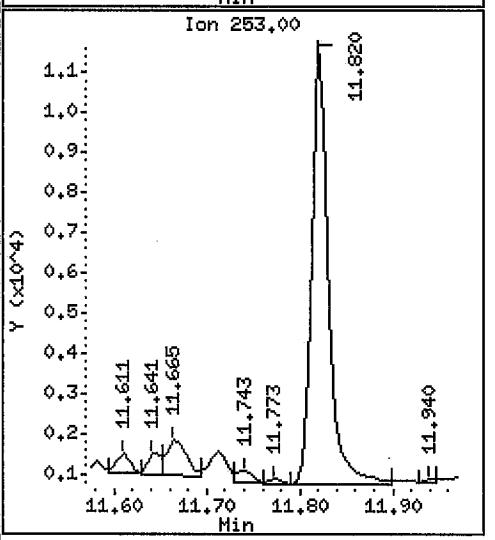
83 Perylene

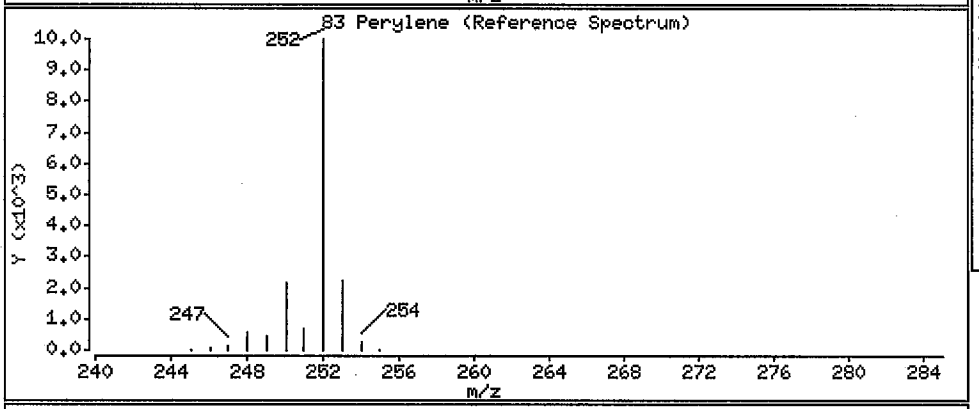
Concentration: 0.907 ng/sample

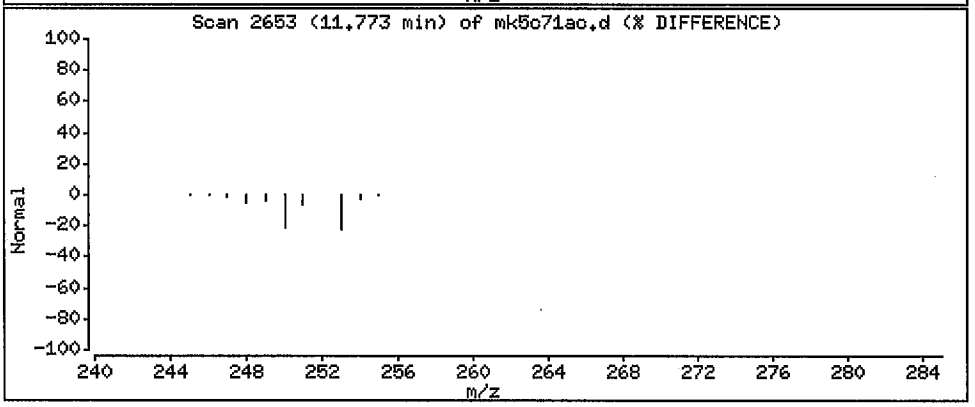












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

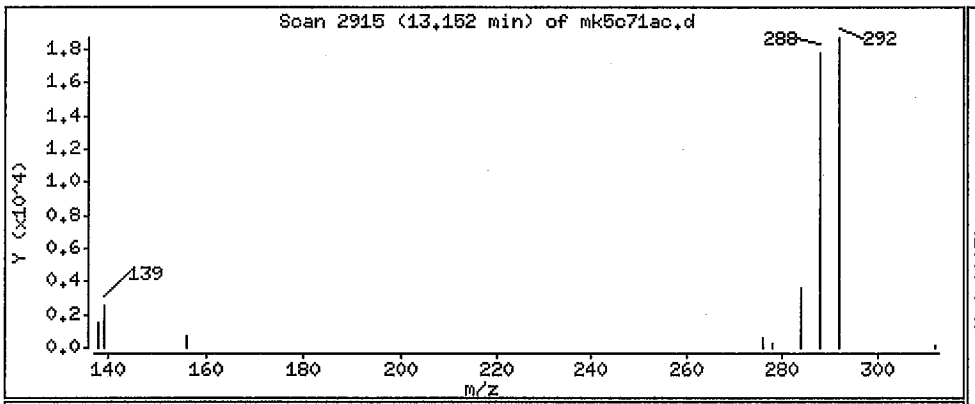
Operator: 11211

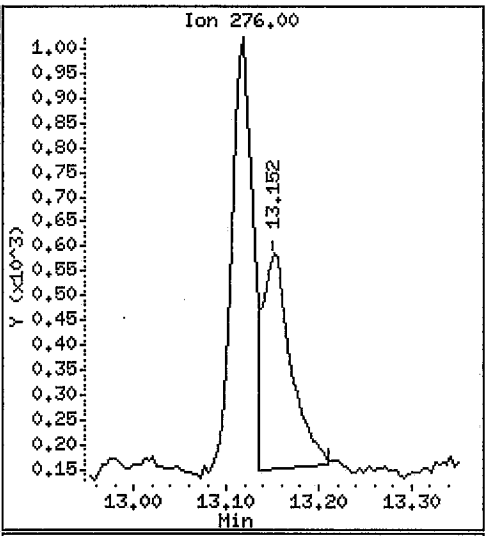
Column phase: Varian: 5MS

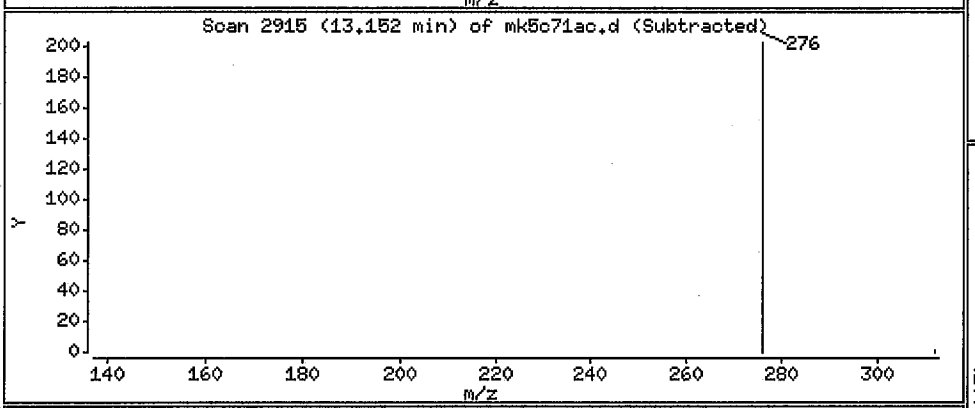
Column diameter: 0.25

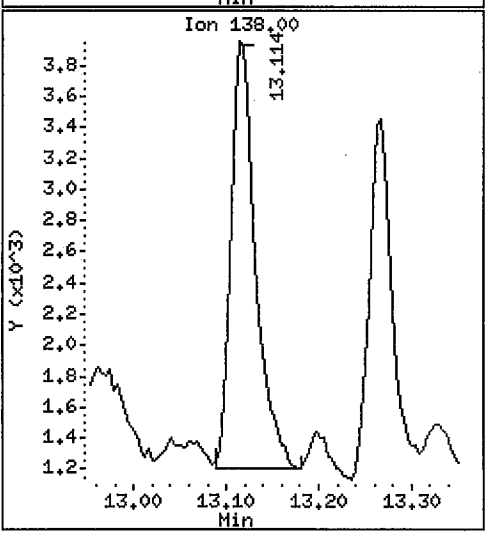
86 Indeno(1,2,3-cd)pyrene

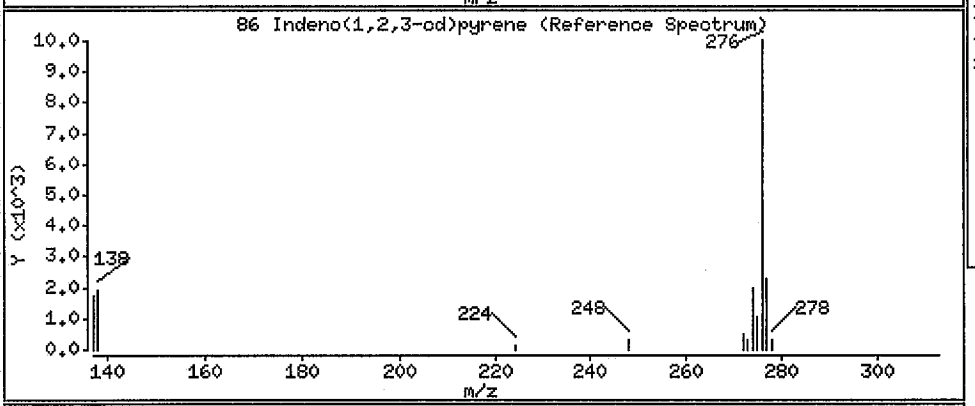
Concentration: 0.932 ng/sample

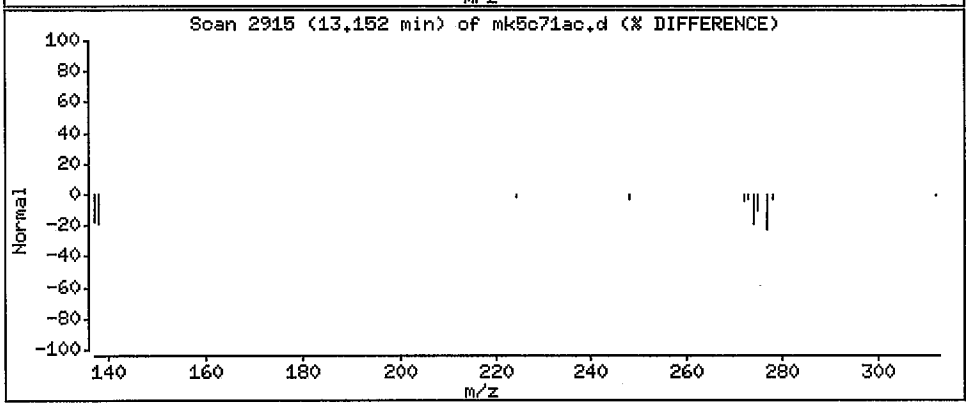












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

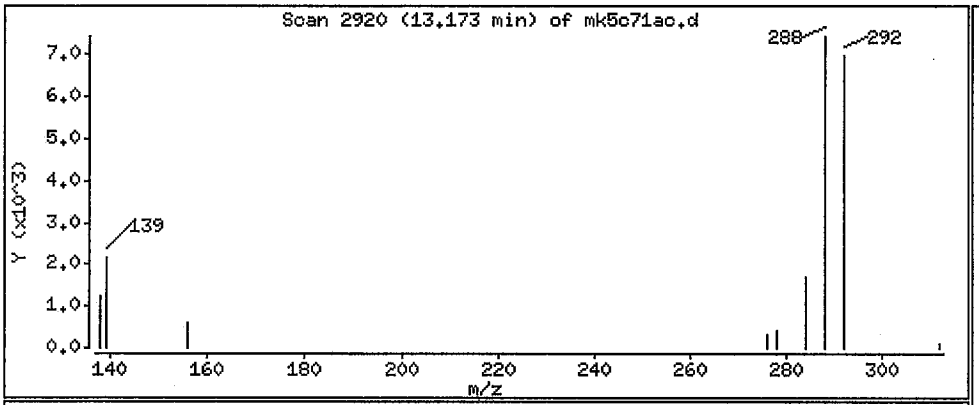
Operator: 11211

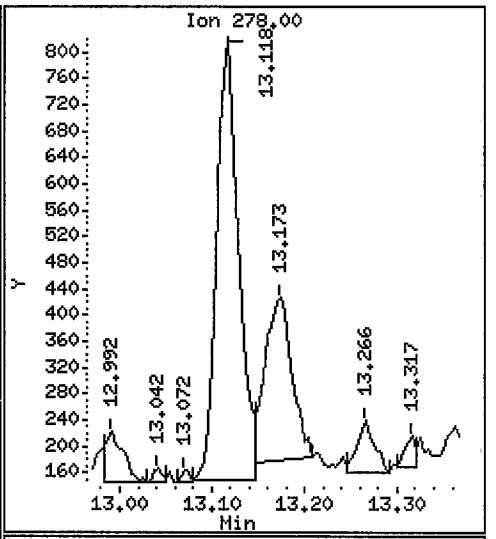
Column phase: Varian: 5MS

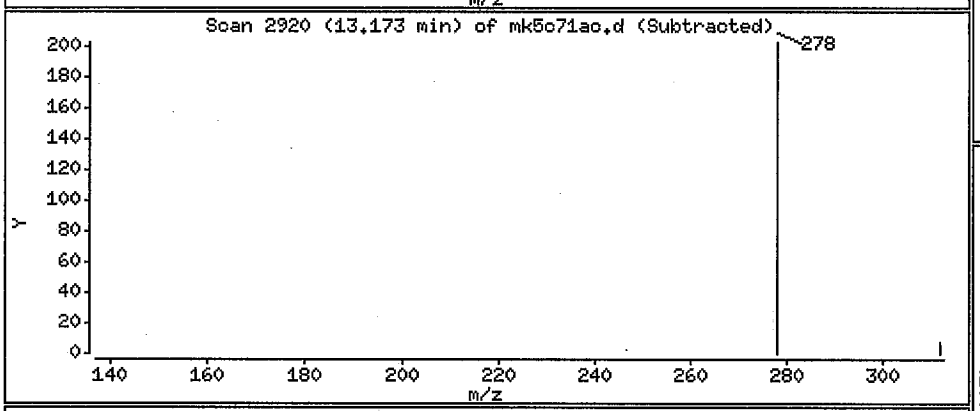
Column diameter: 0.25

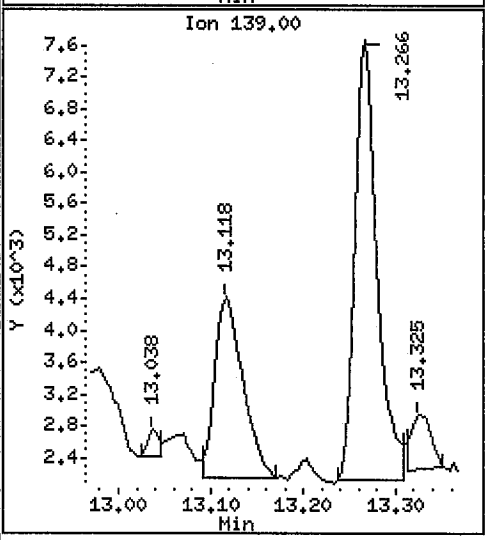
89 Dibenz(a,h)anthracene

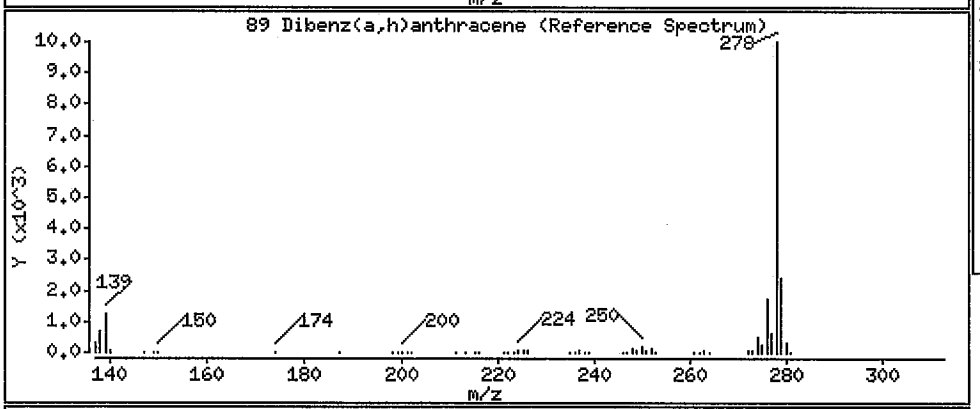
Concentration: 0.606 ng/sample

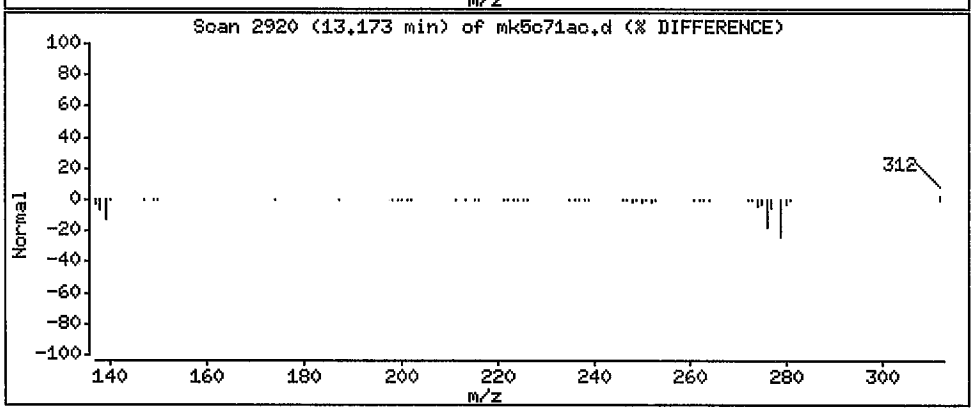












Data File: /var/chem/gcms/mp.i/P080311.b/mk5c71ac.d

Date : 03-AUG-2011 17:13

Client ID: EXM-DCU-M0010-RGTBL

Instrument: mp.i

Sample Info: MK5C71AC,,0,,

Purge Volume: 1.0

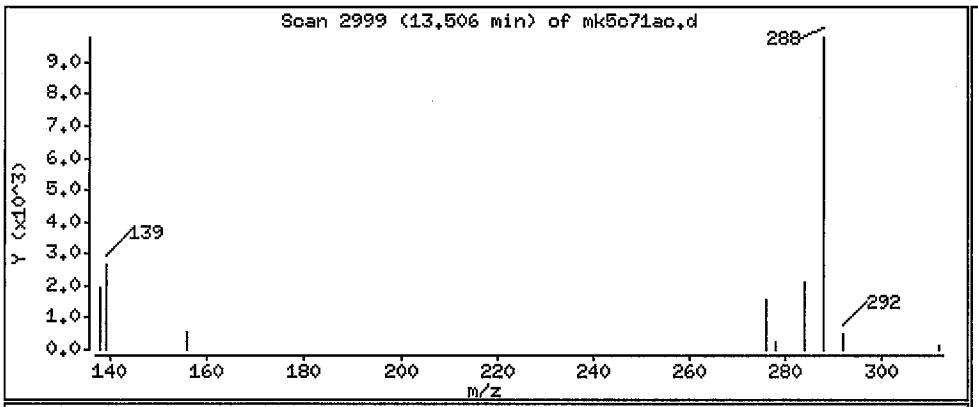
Operator: 11211

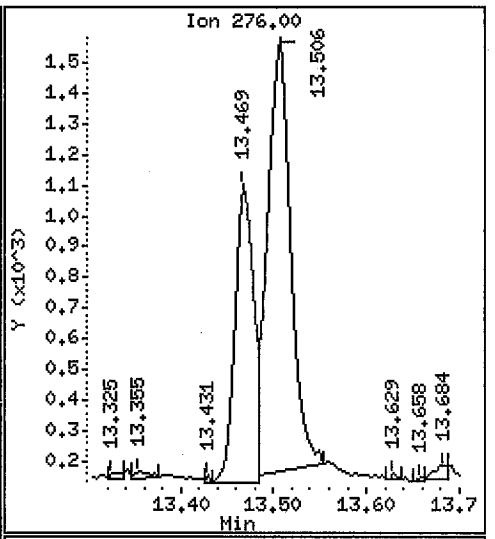
Column phase: Varian: 5MS

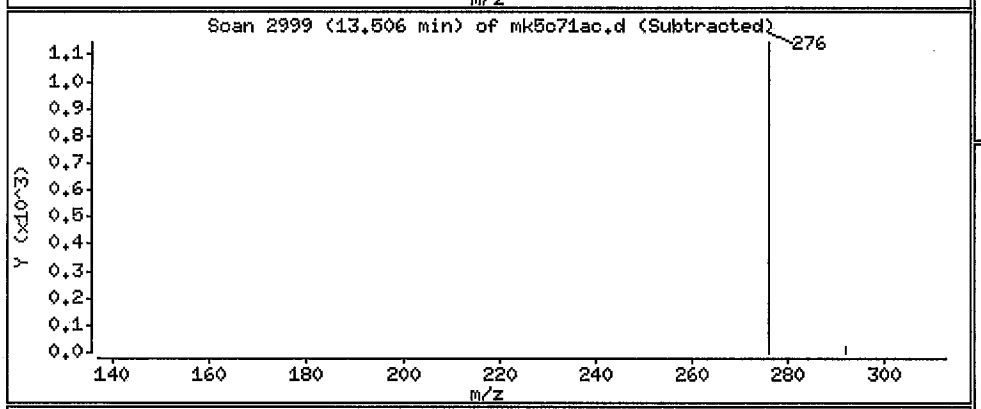
Column diameter: 0.25

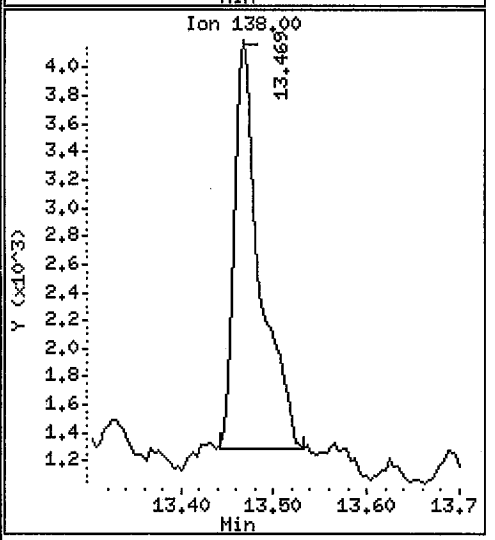
92 Benzo(g,h,i)perylene

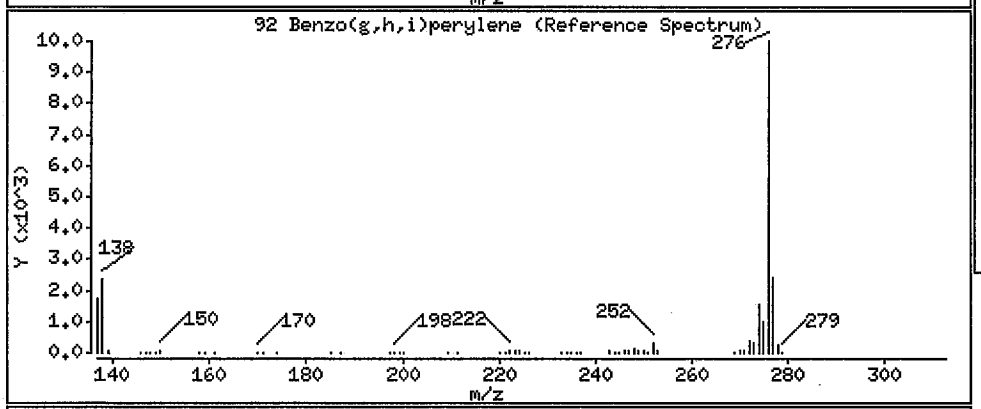
Concentration: 2.76 ng/sample

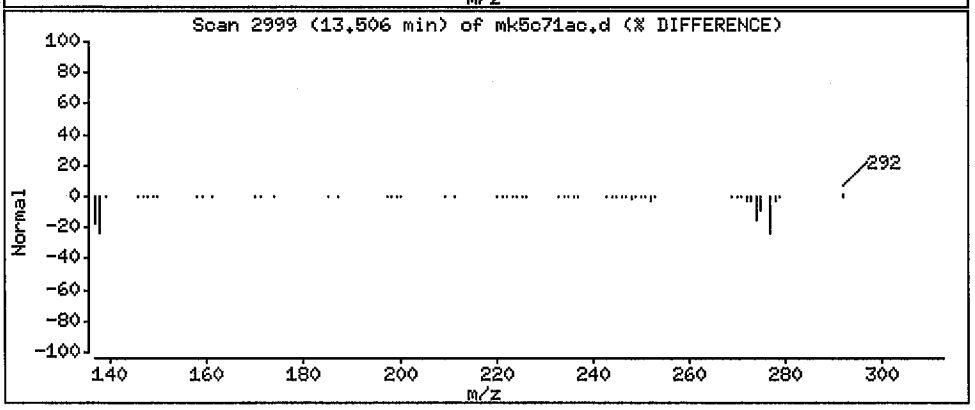












Standards Data

TestAmerica Knoxville GC/MS-SIM Initial Calibration Data Review / Narrative Checklist
Method: PAHs and Selected SVOCs - KNOX-ID-0016, Revision 8

Analysis Date:	8/1/11	Instrument::	MP	ICAL Batch/Scan Name:	P080111E	Scanned ☐

A. Review Items	N/A	Yes	No	Why is data reportable?	2nd √
1. Were all standards injected within 12 hr of first calibration standard?		✓			✓
2. Was date/time of analysis verified between header and logbook?		✓			✓
3. Are peak integrations appropriate?		✓			✓
4. Were ≥ 5 levels of each analyte/IS analyzed?		✓			✓
5. Was the high point standard checked for saturation?		✓			✓
6. Was low level standard at or below RL?		✓			✓
7. Are all %RSD ≤30% ?		✓			✓
8. Are the MID descriptors properly set?		✓			✓
9. Are correct RFs listed in ICAL summary?		✓			✓
10. Was ICAL summary form processed using the correct method?		✓			✓
11. Are the ICAL start and end dates/times correct on ICAL summary?		✓			✓
12. Elution order checked on isomeric pairs?					
• 2-methylnaphthalene before 1-methylnaphthalene (& d10 isomers)		✓			✓
• acenaphthylene before acenaphthene (& d10 isomers)		✓			✓
• dibenzothiophene before anthracene		✓			✓
• phenanthrene before anthracene (& d10 isomers)		✓			✓
• fluoranthene before pyrene (& d10 isomers)		✓			✓
• benzo(a)anthracene before chrysene (& d12 isomers)		✓			✓
• benzo(b)fluoranthene before benzo(k)fluoranthene (& d12 isomers)		✓			✓
• benzo(e)pyrene before benzo(a)pyrene benzo(a)pyrene before perylene (& d12 isomers)		✓			✓
• Indeno(1,2,3-cd)pyrene before benzo(g,h,I)perylene (& d12 isomers)		✓			✓
13. Is the 2nd source ICV with +/- 30% of the expected value?		✓			✓
14. Are the Alkyl RFs correct (i.e., same as the parent RF)?		✓			✓
15. If criteria were not met, was a NCM generated and approved by supervisor?	✓				NA
16. Does the ICAL folder contain **complete** data in the following order? ICAL data review checklist, runlog, Target Initial Calibration Report, followed by the quan report and chromatograms for all calibration and 2nd source standards.		✓			✓

1st Level Reviewer:		Date: 8/1/11
Comments:		
2nd Level Reviewer:		Date: 8/2/11
Comments:		

TestAmerica Knoxville
Instrument MP Run/Maintenance Log

Date/Time Verified ☑

Preventive Maintenance Performed: □ septa □ liner □ seal □ clip column □ SPME fiber □ other: see below / maint. log

Target Batch	P0801111E	P0801111A		Date	8/1/11
ICAL Batch	P0801111E			Analyst	TMC
Method	☑KNOX-ID-0016	□ KNOX-ID-0018	□	IS ID & vol.	1/1A

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
	PH01HEX	11:48				
tune	PH01DFTPP	12:06				PAH0363
	PH01B01	12:25				
ICAL	PH01CC01	12:50				PAH0356
	PH01CC02	13:14				PAH0357
	PH01CC03	13:39				PAH0358
	PH01CC04	14:04				PAH0359
	PH01CC05	14:29				PAH0360
	PH01CC06	14:54				PAH0361
	PH01CC07	15:19				PAH0316
	PH01HEX2	15:43				
ICV	PH01ICV	16:08				PAH0309
	PH01HEX3	16:33				
MB	MK5JL1AA	16:58		Solids	1206100	(P0801111A)
LCS	MK5JL1AC	17:22				
LCSD	MK5JL1AD	17:47				
H1G250404	MK5CW1AA	18:12				

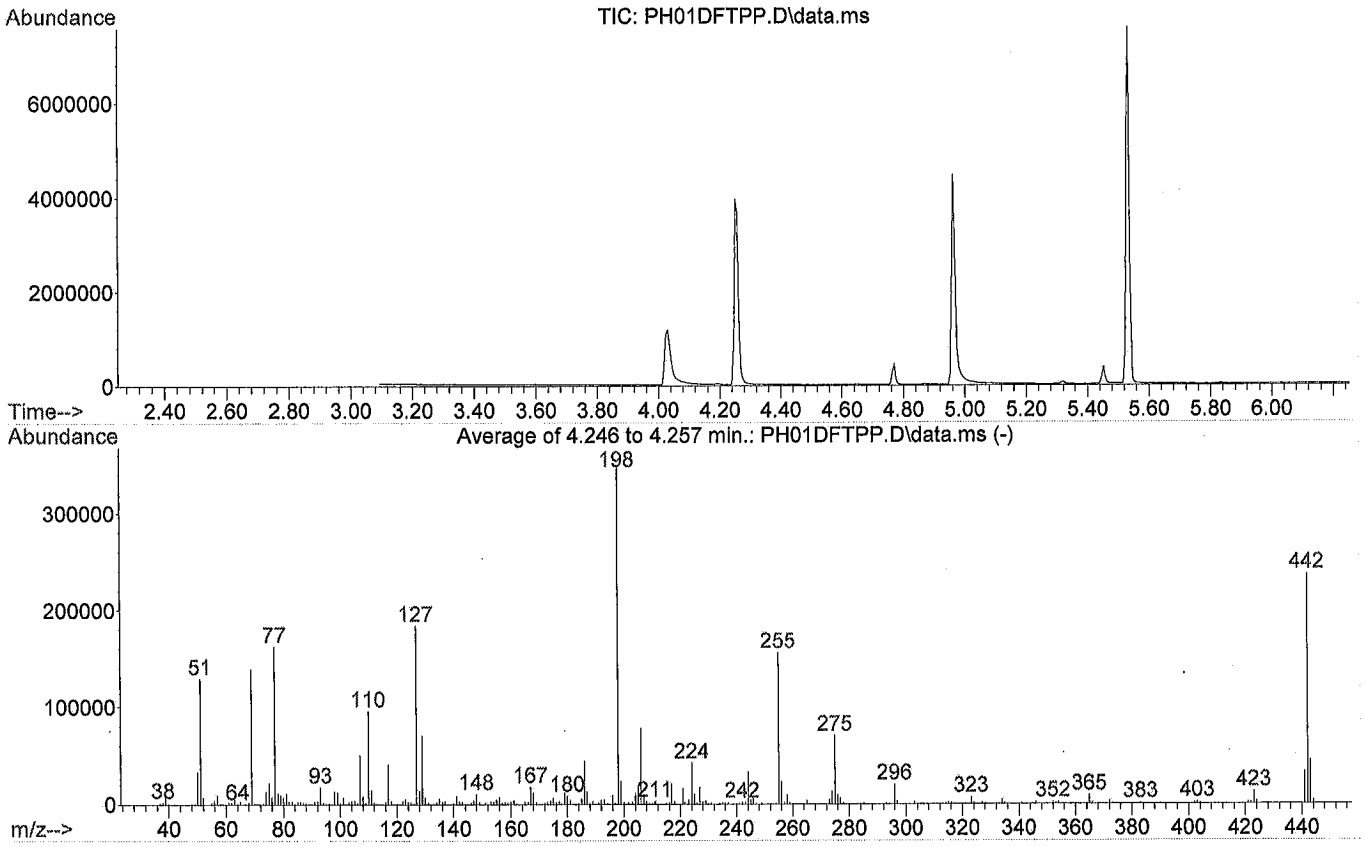
8/1/11

Comments:

Data Path : D:\20110801I\
Data File : PH01DFTPP.D
Acq On : 1 Aug 2011 12:06 pm
Operator : 11211
Sample : PH01DFTPP,,3,,PAH0363
Misc : P080111I,SIMPAH3
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPTest.M
Title : Test
Last Update : Mon Oct 13 10:04:32 2008



AutoFind: Scans 197, 198, 199; Background Corrected with Scan 193

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.9	129072	PASS
68	69	0.00	2	1.4	1977	PASS
69	198	0.01	100	39.7	138981	PASS
70	69	0.00	2	0.6	899	PASS
127	198	10	80	52.5	183971	PASS
197	198	0.00	1	0.4	1311	PASS
198	198	100	100	100.0	350208	PASS
199	198	5	9	6.7	23563	PASS
275	198	10	60	20.0	70175	PASS
365	198	0.90	100	2.5	8911	PASS
441	443	0.01	100	72.4	32458	PASS
442	198	50	100	67.5	236368	PASS
443	442	15	24	19.0	44806	PASS

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 01-AUG-2011 12:50
End Cal Date : 01-AUG-2011 15:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcms/mp.i/P080111I.b/ph01ic01.d
Level 2: /var/chem/gcms/mp.i/P080111I.b/ph01ic02.d
Level 3: /var/chem/gcms/mp.i/P080111I.b/ph01ic03.d
Level 4: /var/chem/gcms/mp.i/P080111I.b/ph01ic04.d
Level 5: /var/chem/gcms/mp.i/P080111I.b/ph01ic05.d
Level 6: /var/chem/gcms/mp.i/P080111I.b/ph01ic06.d
Level 7: /var/chem/gcms/mp.i/P080111I.b/ph01ic07.d

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
3 Naphthalene	0.79229	0.87233	0.88213	0.86454	0.86029	0.81770		
	0.77868						0.83828	4.954
4 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.83828	+++++
5 C3-Naphthalenes(a)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.83828	+++++
6 C3-Naphthalenes(b)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.83828	+++++
7 C3-Naphthalenes(c)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.83828	+++++
M 8 C3-Naphthalenes(total)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.83828	+++++

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
9 C4-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.83828	+++++
12 2-Methylnaphthalene	0.89954	1.01801	1.03718	1.02497	1.03173	1.00816	0.99619	1.00226	4.728
15 1-Methylnaphthalene	0.85978	0.98299	1.00733	0.99075	0.99531	0.98334	0.96652	0.96943	5.152
16 Biphenyl	1.02935	1.18693	1.23634	1.23884	1.24851	1.21813	1.19730	1.19363	6.355
19 2,6 Dimethylnaphthalene	0.85782	0.98831	1.02080	1.01948	1.03128	1.02436	1.01503	0.99387	6.188
22 Acenaphthylene	0.84859	0.96591	0.99897	1.01334	1.03832	1.03548	1.02785	0.98978	6.782
24 Acenaphthene	0.50685	0.57890	0.60608	0.60317	0.60979	0.59475	0.58107	0.58295	6.111
25 2,3,5 Trimethylnaphthalene	0.68375	0.79950	0.84821	0.86707	0.89764	0.91305	0.90710	0.84519	9.639
27 Fluorene	0.62576	0.75186	0.81449	0.82138	0.82735	0.78629	0.75218	0.76847	9.141

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 01-AUG-2011 12:50
End Cal Date : 01-AUG-2011 15:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

	0.02000	0.10000	0.25000	0.50000	1.000	2.500	___	
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD
	5.000							
	Level 7							
29 C1-Fluorenes(a)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.76847	+++++
30 C1-Fluorenes(b)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.76847	+++++
M 31 C1-Fluorenes(total)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.76847	+++++
32 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.76847	+++++
33 C3-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.76847	+++++
36 Dibenzothiophene	0.84825	0.95500	0.97429	0.96831	0.97846	0.97052		
	0.96083						0.95081	4.829
37 C1-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.95081	+++++
38 C2-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.95081	+++++
39 C3-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						0.95081	+++++

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

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Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
40 C4-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.95081	+++++
43 Phenanthrene	0.98834	1.09388	1.11450	1.10907	1.11860	1.10773	1.09716	1.08990	4.187
46 Anthracene	1.16062	1.26309	1.28474	1.27817	1.27068	1.26600	1.21797	1.24875	3.560
48 C1-Phenan/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.08990	+++++
49 C2-Phenan/Anthracenes(a)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.08990	+++++
220 C2-Phenan/Anthracenes(b)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.08990	+++++
M 221 C2-Phenan/Anthracenes(total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.08990	+++++
50 C3-Phenan/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.08990	+++++
51 C4-Phenan/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.08990	+++++

Report Date : 01-Aug-2011 18:58

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INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
52 1-Methylphenanthrene	0.51286	0.61657	0.66147	0.68947	0.71963	0.74567	0.75113	0.67097	12.582
55 Fluoranthene	0.98279	1.07747	1.10489	1.12164	1.14857	1.14870	1.15992	1.10628	5.570
57 Pyrene	1.05064	1.15229	1.17604	1.18958	1.20868	1.20175	1.20451	1.16907	4.771
59 C1-Fluoran/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.16907	+++++
62 Benzo(a)anthracene	1.21668	1.39216	1.46255	1.49702	1.58421	1.62162	1.64354	1.48825	10.073
65 Chrysene	0.96832	1.10684	1.13826	1.13815	1.12562	1.11591	1.10525	1.09976	5.410
66 C1-Benz(a)anthraceneChrysenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.09976	+++++
67 C2-Benz(a)anthraceneChrysenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.09976	+++++
68 C3-Benz(a)anthraceneChrysenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.09976	+++++

Report Date : 01-Aug-2011 18:58

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
69 C4-Benz(a)anthraceneChrysenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.09976	+++++
72 Benzo(b)fluoranthene	1.39743	1.33192	1.35867	1.37946	1.30788	1.47162	1.46927	1.38804	4.574
75 Benzo(k)fluoranthene	0.90548	1.08708	1.12612	1.12821	1.23136	1.11882	1.13308	1.10431	8.908
77 Benzo(e)pyrene	1.17850	1.23486	1.29621	1.31702	1.33594	1.31127	1.29334	1.28102	4.305
80 Benzo(a)pyrene	0.89537	1.00819	1.05901	1.11202	1.19417	1.24389	1.20354	1.10231	11.257
83 Perylene	1.05229	1.17180	1.24795	1.27599	1.31416	1.34847	1.32806	1.24839	8.387
86 Indeno(1,2,3-cd)pyrene	1.03326	1.08885	1.15666	1.18431	1.23363	1.26439	1.29638	1.17964	8.038
89 Dibenz(a,h)anthracene	0.91767	1.04683	1.18968	1.23178	1.29521	1.33605	1.36630	1.19765	13.613
92 Benzo(g,h,i)perylene	1.15455	1.29147	1.34748	1.37166	1.41804	1.43786	1.48186	1.35756	8.038

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 01-AUG-2011 12:50
End Cal Date : 01-AUG-2011 15:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
$ 2 Naphthalene-d8(SS)	2.34341	2.34994	2.29117	2.31171	2.31410	2.26249	2.34685	2.31710	1.404
$ 222 13C6-Naphthalene	1.07138	0.99549	0.94448	0.92810	0.91423	0.84523	0.76787	0.92383	10.637
$ 11 2-Methylnaphthalene-d10(SS)	1.26569	1.27654	1.24177	1.25628	1.25522	1.24583	1.27476	1.25944	1.071
$ 14 1-Methylnaphthalene-d10(SS)	1.27983	1.28558	1.24632	1.25409	1.25084	1.21375	1.24070	1.25302	1.934
$ 18 2,6-Dimethylnaph-d12(SS)	1.08366	1.09262	1.06581	1.08152	1.07704	1.06652	1.08713	1.07919	0.937
$ 21 Acenaphthylene-d8(SS)	1.82595	1.83957	1.77403	1.80053	1.79145	1.81259	1.87693	1.81729	1.876
$ 26 Fluorene-d10	0.49323	0.58480	0.61978	0.62720	0.63446	0.62412	0.60211	0.59796	8.223
$ 28 13C6-Fluorene	0.53224	0.65295	0.70835	0.71171	0.71517	0.68471	0.63688	0.66314	9.831
$ 35 Dibenzothiopene-d8(SS)	1.44218	1.45865	1.42399	1.41746	1.40890	1.38241	1.43246	1.42372	1.721

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 01-AUG-2011 12:50
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
$ 42 Phenanthrene-d10(SS)	1.29666	1.31549	1.28757	1.28158	1.28149	1.25451	1.29123	1.28693	1.432
$ 45 Anthracene-d10(SS)	1.10300	1.11713	1.08453	1.08304	1.10518	1.10590	1.17786	1.11095	2.873
$ 47 13C6-Anthracene	1.14475	1.17788	1.17914	1.18560	1.20121	1.14465	1.16823	1.17164	1.786
$ 54 Fluoranthene-d10(SS)	1.23706	1.25119	1.22172	1.22008	1.21390	1.20825	1.23545	1.22681	1.226
$ 58 Terphenyl-d14	0.34639	0.46609	0.49583	0.53098	0.55518	0.55695	0.54047	0.49884	15.010
$ 61 Benzo(a)anthracene-d12(SS)	0.63398	0.64522	0.59524	0.62639	0.61397	0.64271	0.66728	0.63211	3.679
$ 64 Chrysene-d12(SS)	0.95544	0.98951	0.96116	1.00031	1.02347	1.02965	1.04894	1.00121	3.512
$ 71 Benzo(b)fluoranthene-d12(SS)	1.08147	1.08473	1.02319	1.03855	1.08723	1.06499	1.07423	1.06491	2.328
$ 74 Benzo(k)fluoranthene-d12(SS)	1.45091	1.48786	1.48886	1.51696	1.46659	1.48766	1.52961	1.48978	1.814

Report Date : 01-Aug-2011 18:58

TestAmerica Knoxville

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Cal Date : 01-Aug-2011 18:57 cochranj
Curve Type : Average

Compound	0.02000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
$ 79 Benzo(a)pyrene-d12(SS)	1.06829	1.08957	1.06222	1.10429	1.09977	1.12963	1.16714	1.10299	3.286
$ 82 Perylene-d12(SS)	1.01964	1.04665	1.02791	1.06992	1.08162	1.08844	1.14486	1.06843	3.992
$ 85 Indeno(123-cd)pyrene-d12(SS)	1.18224	1.22006	1.18032	1.21362	1.19357	1.21804	1.23921	1.20672	1.815
$ 88 Dibenz(ah)anthracene-d14(SS)	0.88214	0.91453	0.89146	0.91780	0.90137	0.92671	0.94578	0.91140	2.379
$ 91 Benzo(ghi)perylene-d12(SS)	0.87973	0.91211	0.88928	0.91009	0.89519	0.91143	0.92383	0.90309	1.709

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic01.d
Report Date: 01-Aug-2011 18:59

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic01.d
Lab Smp Id: PH01IC01 Client Smp ID: PAH0356
Inj Date : 01-AUG-2011 12:50
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC01,,1,1,,PAH0356
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 12:50 Cal File: ph01ic01.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

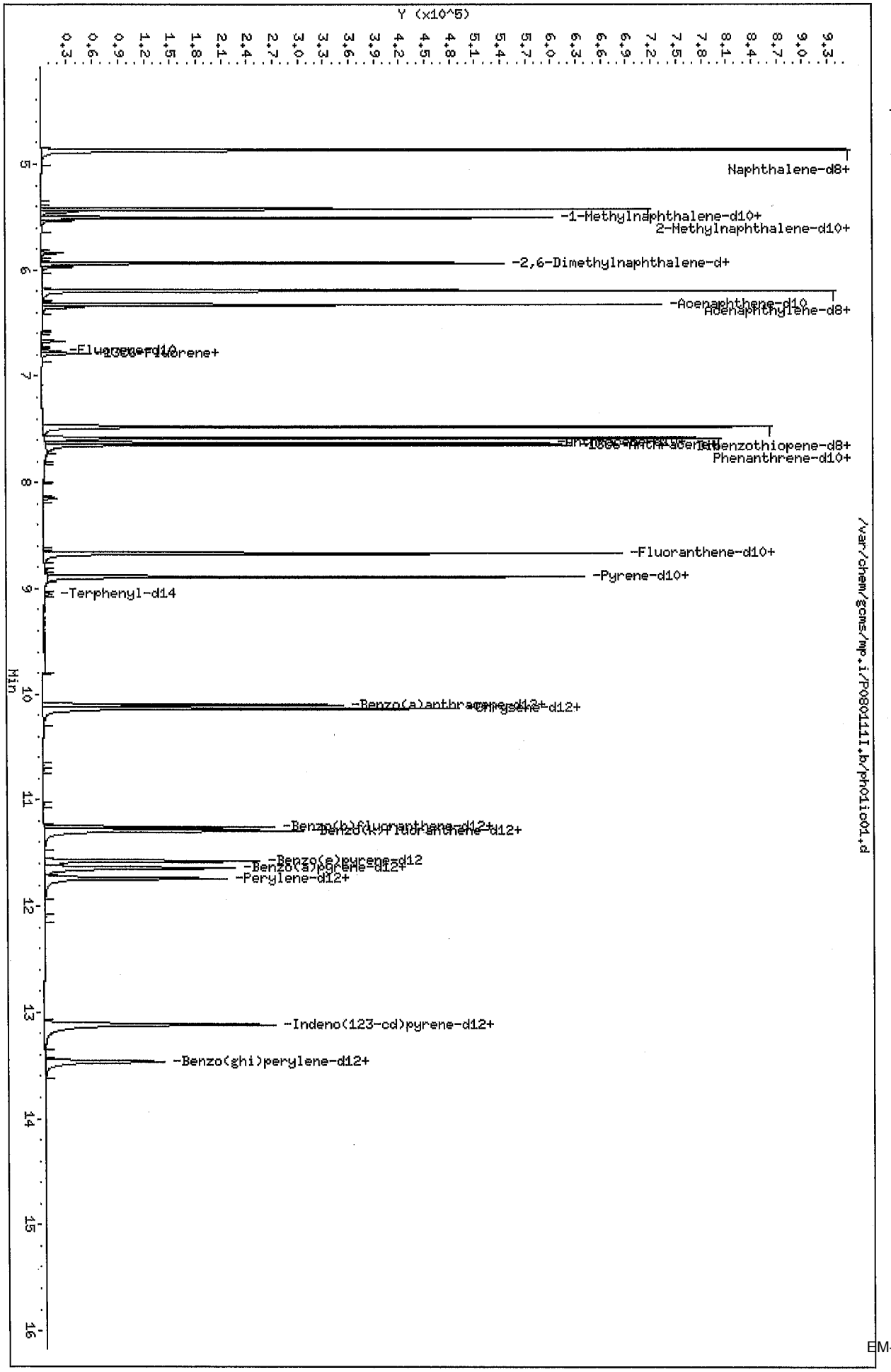
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.869	4.873	(1.000)	741335	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.869	4.873	(0.770)	741335	0.50000	0.500
3 Naphthalene	128	4.884	4.891	(1.003)	23494	0.02000	0.0200
$ 222 13C6-Naphthalene	134	4.884	4.891	(1.003)	31770	0.02000	0.0200
* 10 2-Methylnaphthalene-d10	152	5.424	5.427	(1.000)	400399	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.424	5.427	(0.858)	400399	0.50000	0.500
12 2-Methylnaphthalene	142	5.450	5.454	(1.005)	14407	0.02000	0.0200
* 13 1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	404872	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.871)	404872	0.50000	0.500
15 1-Methylnaphthalene	142	5.533	5.536	(1.005)	13924	0.02000	0.0200
16 Biphenyl	154	5.840	5.838	(1.077)	16486	0.02000	0.0200
* 17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	342815	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	342815	0.50000	0.500
19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	11763	0.02000	0.0200
* 20 Acenaphthylene-d8	160	6.194	6.194	(1.000)	577636	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic01.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.194	6.194	(0.979)	577636	0.50000	0.500
	22 Acenaphthylene	152	6.205	6.205	(1.002)	19607	0.02000	0.0200
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	316349	0.50000	0.500
	24 Acenaphthene	154	6.353	6.350	(1.026)	11711	0.02000	0.0200
	25 2,3,5 Trimethylnaphthalene	170	6.674	6.671	(1.124)	9376	0.02000	0.0200
$	26 Fluorene-d10	176	6.766	6.761	(0.893)	9646	0.02000	0.0200
	27 Fluorene	166	6.788	6.786	(0.896)	12238	0.02000	0.0200
$	28 13C6-Fluorene	171	6.788	6.786	(0.896)	10409	0.02000	0.0200
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	543795	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	543795	0.50000	0.500
	36 Dibenzothiophene	184	7.493	7.490	(1.002)	18451	0.02000	0.0200
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	488924	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	488924	0.50000	0.500
	43 Phenanthrene	178	7.601	7.599	(1.003)	19329	0.02000	0.0200
*	44 Anthracene-d10	188	7.628	7.628	(1.000)	415897	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.628	7.628	(0.858)	415900	0.50000	0.500
	46 Anthracene	178	7.644	7.644	(1.002)	19308	0.02000	0.0200
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	431645	0.50000	0.500
	52 1-Methylphenanthrene	192	8.150	8.145	(1.075)	10030	0.02000	0.0200
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	466452	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	466452	0.50000	0.500
	55 Fluoranthene	202	8.684	8.684	(1.002)	18337	0.02000	0.0200
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	377064	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	19603	0.02000	0.0200
$	58 Terphenyl-d14	244	9.049	9.045	(1.044)	6463	0.02000	0.0200
*	60 Benzo(a)anthracene-d12	240	10.104	10.104	(1.000)	239052	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.104	10.104	(1.137)	239052	0.50000	0.500
	62 Benzo(a)anthracene	228	10.124	10.125	(1.002)	11634	0.02000	0.0200
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	360262	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	360262	0.50000	0.500
	65 Chrysene	228	10.162	10.162	(1.002)	13954	0.02000	0.0200
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.258	(1.000)	252160	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.258	(0.973)	252160	0.50000	0.500
	72 Benzo(b)fluoranthene	252	11.282	11.282	(1.002)	14095	0.02000	0.0200
*	73 Benzo(k)fluoranthene-d12	264	11.288	11.294	(1.000)	338301	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.288	11.294	(0.975)	338301	0.50000	0.500
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	12253	0.02000	0.0200
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	233165	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	11742	0.02000	0.0200
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	249088	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	249088	0.50000	0.500
	80 Benzo(a)pyrene	252	11.665	11.671	(1.002)	8921	0.02000	0.0200
*	81 Perylene-d12	264	11.737	11.737	(1.000)	237744	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.737	11.737	(1.014)	237744	0.50000	0.500
	83 Perylene	252	11.766	11.766	(1.003)	10007	0.02000	0.0200
*	84 Indeno(123-cd)pyrene-d12	288	13.111	13.114	(1.000)	275656	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.111	13.114	(1.133)	275656	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic01.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.145	13.152	(1.003)	11393	0.02000	0.0200
*	87 Dibenz(ah)anthracene-d14	292	13.116	13.118	(1.000)	205685	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.116	13.118	(1.133)	205685	0.50000	0.500
	89 Dibenz(a,h)anthracene	278	13.162	13.165	(1.004)	7550	0.02000	0.0200
*	90 Benzo(ghi)perylene-d12	288	13.462	13.464	(1.000)	205123	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.462	13.464	(1.163)	205123	0.50000	0.500
	92 Benzo(g,h,i)perylene	276	13.495	13.502	(1.002)	9473	0.02000	0.0200


Data File: /var/chem/gcms/mp.i/P0801111.b/ph01ic01.d
Date : 01-AUG-2011 12:50
Client ID: PAH0356
Sample Info: PH01IC01,,1,1,,PAH0356
Purge Volume: 1.0
Column phase: Variant 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P0801111.b/ph01ic01.d
Y (x10^5)
Min
Naphthalene-d8+
-1-Methylnaphthalene-d10+
2-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthene-d10
Acenaphthylene-d8+
Benzothiopene-d8+
Phenanthrene-d10+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic02.d
Report Date: 01-Aug-2011 18:59

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic02.d
Lab Smp Id: PH01IC02 Client Smp ID: PAH0357
Inj Date : 01-AUG-2011 13:14
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC02,,1,2,,PAH0357
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 13:14 Cal File: ph01ic02.d
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

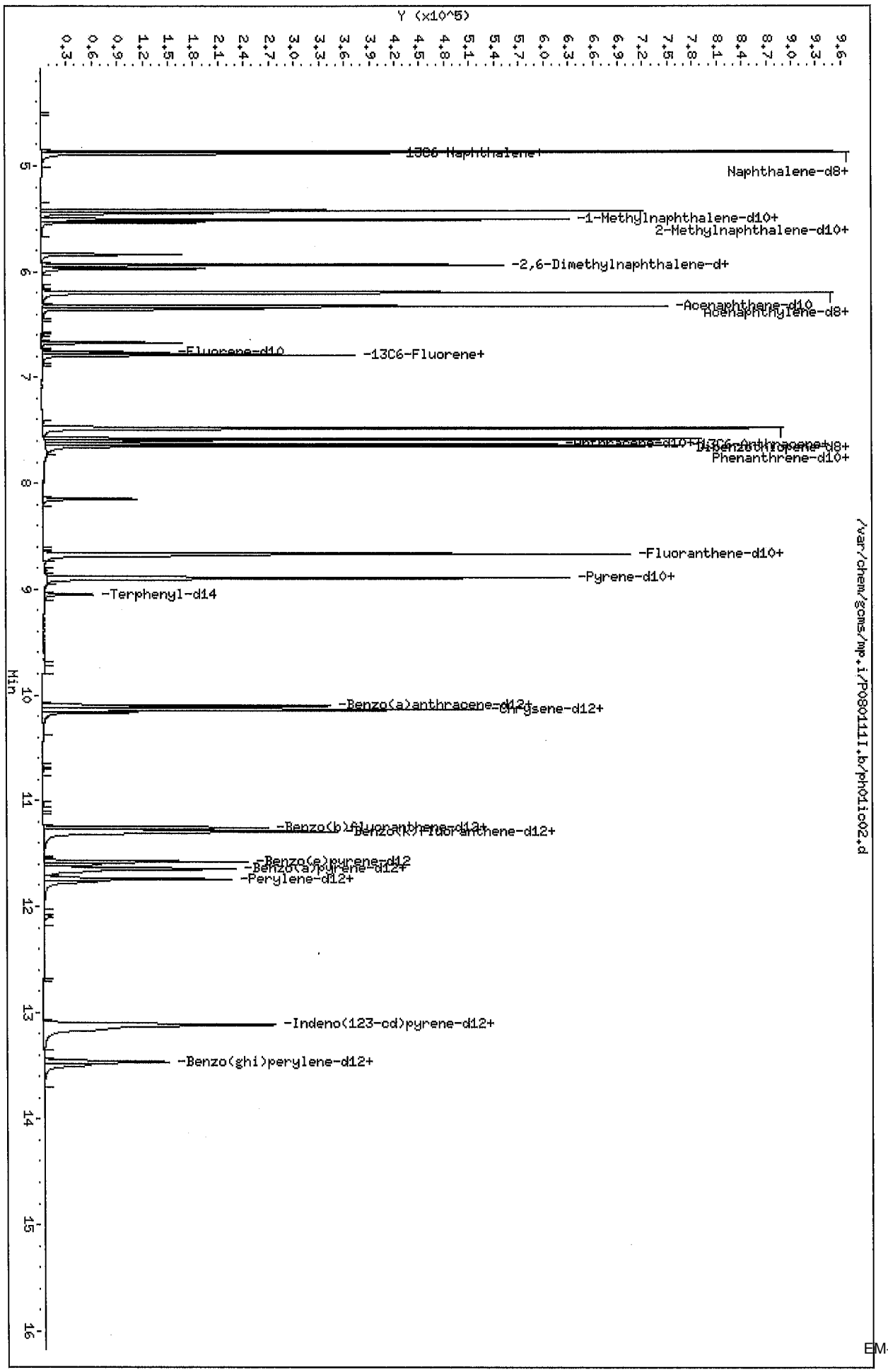
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.869	4.873	(1.000)	739800	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.869	4.873	(0.770)	739800	0.50000	0.501
3 Naphthalene	128	4.884	4.891	(1.003)	129070	0.10000	0.105
$ 222 13C6-Naphthalene	134	4.884	4.891	(1.003)	147293	0.10000	0.0963
* 10 2-Methylnaphthalene-d10	152	5.424	5.427	(1.000)	401877	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.424	5.427	(0.858)	401877	0.50000	0.502
12 2-Methylnaphthalene	142	5.450	5.454	(1.005)	81823	0.10000	0.106
* 13 1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	404723	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.871)	404723	0.50000	0.501
15 1-Methylnaphthalene	142	5.533	5.536	(1.005)	79568	0.10000	0.107
16 Biphenyl	154	5.837	5.838	(1.076)	95400	0.10000	0.107
* 17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	343976	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	343976	0.50000	0.502
19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	67991	0.10000	0.107
* 20 Acenaphthylene-d8	160	6.196	6.194	(1.000)	579128	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic02.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.196	6.194	(0.980)	579128	0.50000	0.502
	22 Acenaphthylene	152	6.205	6.205	(1.001)	111877	0.10000	0.106
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	314817	0.50000	0.500
	24 Acenaphthene	154	6.350	6.350	(1.025)	67052	0.10000	0.107
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	55002	0.10000	0.108
$	26 Fluorene-d10	176	6.761	6.761	(0.892)	57842	0.10000	0.108
	27 Fluorene	166	6.786	6.786	(0.895)	74366	0.10000	0.109
$	28 13C6-Fluorene	171	6.786	6.786	(0.895)	64583	0.10000	0.110
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	548369	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	548369	0.50000	0.503
	36 Dibenzothiophene	184	7.490	7.490	(1.002)	104738	0.10000	0.106
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	494549	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	494549	0.50000	0.504
	43 Phenanthrene	178	7.598	7.599	(1.002)	108195	0.10000	0.105
*	44 Anthracene-d10	188	7.628	7.628	(1.000)	419978	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.628	7.628	(0.858)	419978	0.50000	0.503
	46 Anthracene	178	7.644	7.644	(1.002)	106094	0.10000	0.104
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	442816	0.50000	0.507
	52 1-Methylphenanthrene	192	8.148	8.145	(1.075)	60985	0.10000	0.109
*	53 Fluoranthene-d10	212	8.665	8.667	(1.000)	470377	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.665	8.667	(0.975)	470377	0.50000	0.503
	55 Fluoranthene	202	8.685	8.684	(1.002)	101363	0.10000	0.105
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	375944	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	108402	0.10000	0.105
$	58 Terphenyl-d14	244	9.047	9.045	(1.044)	43848	0.10000	0.115
*	60 Benzo(a)anthracene-d12	240	10.100	10.104	(1.000)	242566	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.100	10.104	(1.136)	242566	0.50000	0.504
	62 Benzo(a)anthracene	228	10.125	10.125	(1.002)	67538	0.10000	0.107
*	63 Chrysene-d12	240	10.133	10.137	(1.000)	372002	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.133	10.137	(1.140)	372002	0.50000	0.509
	65 Chrysene	228	10.163	10.162	(1.003)	82349	0.10000	0.107
*	70 Benzo(b)fluoranthene-d12	264	11.253	11.258	(1.000)	254816	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.253	11.258	(0.972)	254816	0.50000	0.501
	72 Benzo(b)fluoranthene	252	11.283	11.282	(1.003)	67879	0.10000	0.0976
*	73 Benzo(k)fluoranthene-d12	264	11.289	11.294	(1.000)	349515	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.289	11.294	(0.975)	349515	0.50000	0.506
	75 Benzo(k)fluoranthene	252	11.313	11.312	(1.002)	75990	0.10000	0.109
*	76 Benzo(e)pyrene-d12	264	11.576	11.575	(1.000)	234911	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	63213	0.10000	0.102
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	255953	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	255953	0.50000	0.505
	80 Benzo(a)pyrene	252	11.665	11.671	(1.002)	51610	0.10000	0.106
*	81 Perylene-d12	264	11.737	11.737	(1.000)	245869	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.737	11.737	(1.014)	245869	0.50000	0.507
	83 Perylene	252	11.767	11.766	(1.003)	57622	0.10000	0.105
*	84 Indeno(123-cd)pyrene-d12	288	13.110	13.114	(1.000)	286606	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.110	13.114	(1.133)	286606	0.50000	0.508

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic02.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.144	13.152	(1.003)	62414	0.10000	0.103
*	87 Dibenz(ah)anthracene-d14	292	13.114	13.118	(1.000)	214834	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.114	13.118	(1.133)	214834	0.50000	0.509
	89 Dibenz(a,h)anthracene	278	13.161	13.165	(1.004)	44979	0.10000	0.107
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	214264	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	214264	0.50000	0.509
	92 Benzo(g,h,i)perylene	276	13.498	13.502	(1.002)	55343	0.10000	0.106


Data File: /var/chem/gcms/mp.i/P0801111.b/ph01ic02.d
Date : 01-AUG-2011 13:14
Client ID: P&H0357
Sample Info: PH01IC02,,1.2,,P&H0357
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P0801111.b/ph01ic02.d
Y (x10^5)
Min
13C6-Naphthalene+
Naphthalene-d8+
-1-Methylnaphthalene-d10+
2-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthene-d10
Acenaphthylene-d8+
-Fluorene-d10
-13C6-Fluorene+
Phenanthrene-d10+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
-Benzo(a)anthracene-d12+
Chrysene-d12+
-Benzo(b)fluoranthene-d12+
Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic03.d
Report Date: 01-Aug-2011 18:59

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SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic03.d
Lab Smp Id: PH01IC03 Client Smp ID: PAH0358
Inj Date : 01-AUG-2011 13:39
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC03,,1,3,,PAH0358
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 13:39 Cal File: ph01ic03.d
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

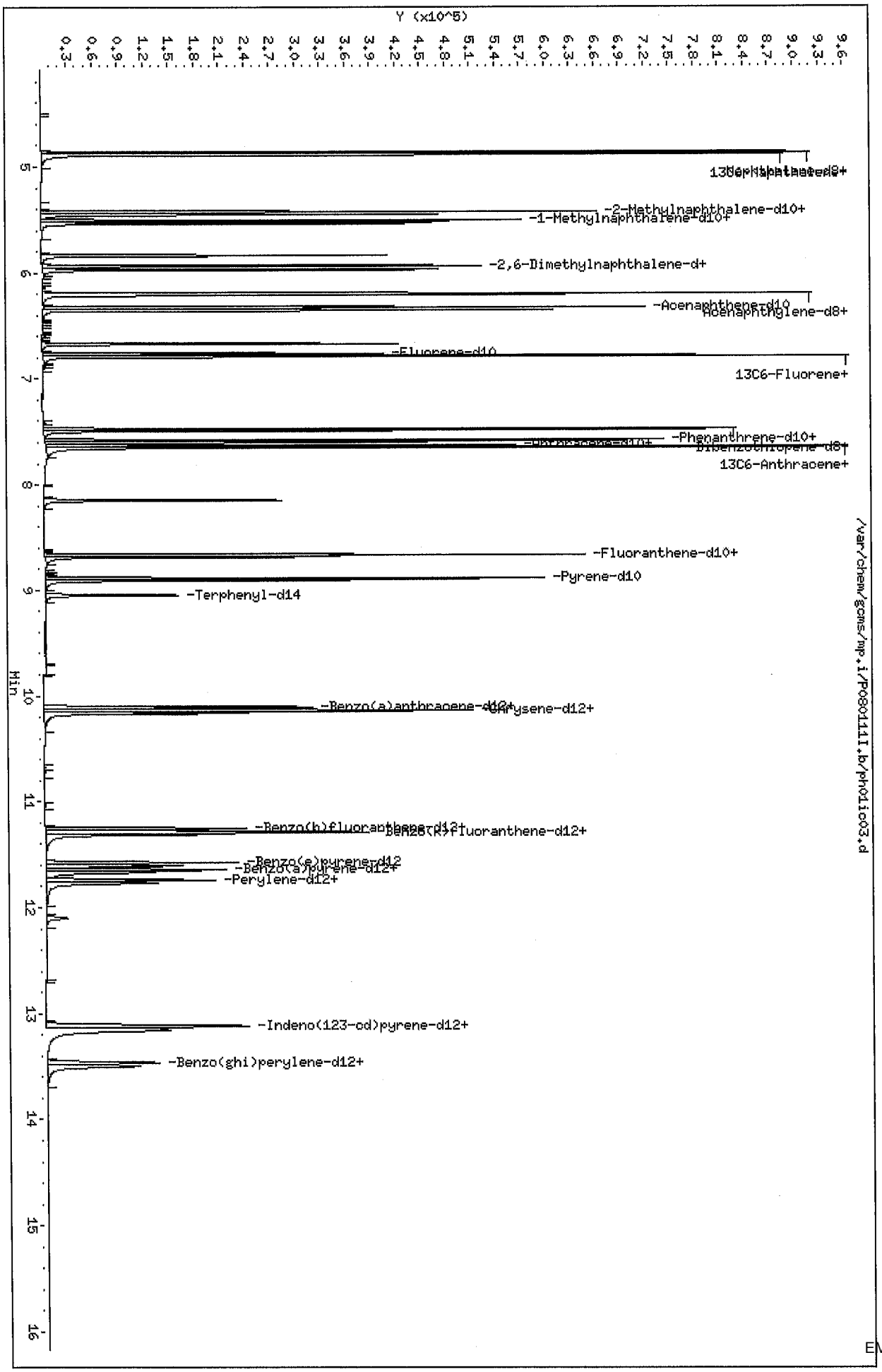
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.869	4.873	(1.000)	688318	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.869	4.873	(0.770)	688318	0.50000	0.492
3 Naphthalene	128	4.884	4.891	(1.003)	303593	0.25000	0.260
$ 222 13C6-Naphthalene	134	4.884	4.891	(1.003)	325050	0.25000	0.235
* 10 2-Methylnaphthalene-d10	152	5.424	5.427	(1.000)	373054	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.424	5.427	(0.858)	373054	0.50000	0.492
12 2-Methylnaphthalene	142	5.450	5.454	(1.005)	193463	0.25000	0.263
* 13 1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	374423	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.871)	374423	0.50000	0.490
15 1-Methylnaphthalene	142	5.533	5.536	(1.005)	188583	0.25000	0.265
16 Biphenyl	154	5.837	5.838	(1.076)	230610	0.25000	0.269
* 17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	320193	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	320193	0.50000	0.493
19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	163426	0.25000	0.267
* 20 Acenaphthylene-d8	160	6.193	6.194	(1.000)	532959	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic03.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.193	6.194	(0.979)	532959	0.50000	0.489
	22 Acenaphthylene	152	6.205	6.205	(1.002)	266205	0.25000	0.266
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	300422	0.50000	0.500
	24 Acenaphthene	154	6.350	6.350	(1.025)	161508	0.25000	0.269
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	135795	0.25000	0.273
$	26 Fluorene-d10	176	6.761	6.761	(0.892)	141682	0.25000	0.274
	27 Fluorene	166	6.786	6.786	(0.895)	186192	0.25000	0.279
$	28 13C6-Fluorene	171	6.786	6.786	(0.895)	161928	0.25000	0.281
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	505642	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	505642	0.50000	0.494
	36 Dibenzothiophene	184	7.490	7.490	(1.002)	246320	0.25000	0.263
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	457200	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	457200	0.50000	0.495
	43 Phenanthrene	178	7.598	7.599	(1.002)	254775	0.25000	0.261
*	44 Anthracene-d10	188	7.627	7.628	(1.000)	385107	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.627	7.628	(0.858)	385103	0.50000	0.492
	46 Anthracene	178	7.644	7.644	(1.002)	247382	0.25000	0.260
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	418697	0.50000	0.505
	52 1-Methylphenanthrene	192	8.148	8.145	(1.075)	151212	0.25000	0.277
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	433819	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	433819	0.50000	0.494
	55 Fluoranthene	202	8.684	8.684	(1.002)	239662	0.25000	0.262
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	355088	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	255094	0.25000	0.261
$	58 Terphenyl-d14	244	9.047	9.045	(1.044)	107551	0.25000	0.284
*	60 Benzo(a)anthracene-d12	240	10.103	10.104	(1.000)	211364	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.103	10.104	(1.137)	211364	0.50000	0.476
	62 Benzo(a)anthracene	228	10.124	10.125	(1.002)	154565	0.25000	0.269
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	341296	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	341296	0.50000	0.496
	65 Chrysene	228	10.162	10.162	(1.002)	194241	0.25000	0.266
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.258	(1.000)	221797	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.258	(0.973)	221797	0.50000	0.481
	72 Benzo(b)fluoranthene	252	11.282	11.282	(1.002)	150675	0.25000	0.249
*	73 Benzo(k)fluoranthene-d12	264	11.288	11.294	(1.000)	322741	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.288	11.294	(0.975)	322741	0.50000	0.504
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	181722	0.25000	0.271
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	216770	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	149231	0.25000	0.262
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	230258	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	230258	0.50000	0.495
	80 Benzo(a)pyrene	252	11.665	11.671	(1.002)	121923	0.25000	0.268
*	81 Perylene-d12	264	11.736	11.737	(1.000)	222819	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.736	11.737	(1.014)	222819	0.50000	0.498
	83 Perylene	252	11.766	11.766	(1.003)	139034	0.25000	0.270
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.114	(1.000)	255857	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.114	(1.133)	255857	0.50000	0.494

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic03.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.148	13.152	(1.003)	147970	0.25000	0.265
*	87 Dibenz(ah)anthracene-d14	292	13.118	13.118	(1.000)	193242	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.118	13.118	(1.133)	193242	0.50000	0.497
	89 Dibenz(a,h)anthracene	278	13.164	13.165	(1.004)	114948	0.25000	0.283
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	192770	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	192770	0.50000	0.498
	92 Benzo(g,h,i)perylene	276	13.498	13.502	(1.002)	129877	0.25000	0.266


Data File: /var/chem/gcms/mp.i/P0801111.b/ph01ic03.d
Date : 01-AUG-2011 13:39
Client ID: PAH0358
Sample Info: PH01IC03,1,3,,PAH0358
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^5)
Min
/var/chem/gcms/mp.i/P0801111.b/ph01ic03.d
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthene-d10
Acenaphthylene-d8+
-Fluorene-d10
13C6-Fluorene+
-Phenanthrene-d10+
13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(a)anthracene-d12+
Chrysene-d12+
-Benzo(b)fluoranthene-d12+
BeP26(R)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic04.d
Report Date: 01-Aug-2011 18:59

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SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic04.d
Lab Smp Id: PH01IC04 Client Smp ID: PAH0359
Inj Date : 01-AUG-2011 14:04
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC04,,1,4,,PAH0359
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 14:04 Cal File: ph01ic04.d
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

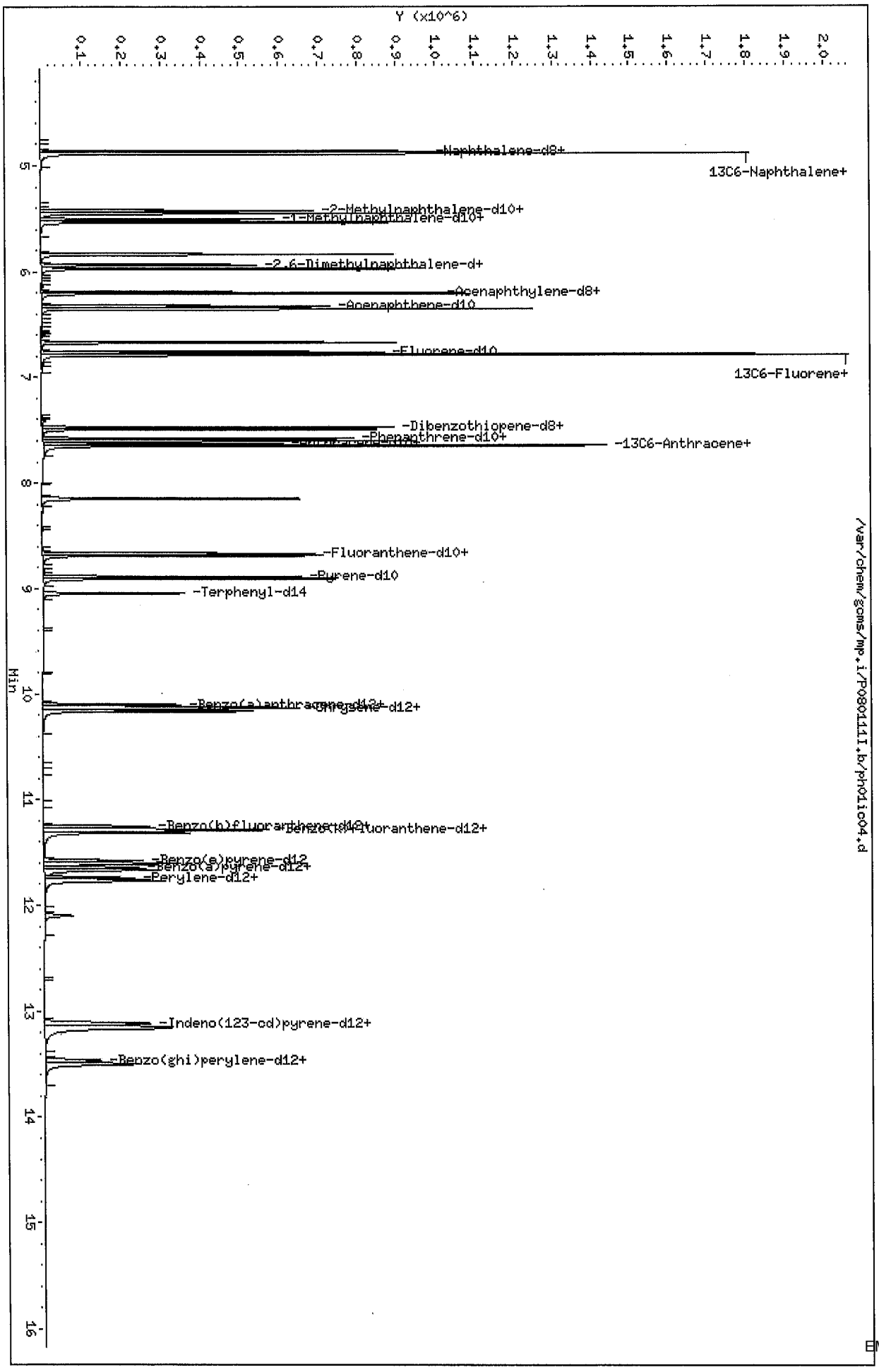
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.869	4.873	(1.000)	699877	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.869	4.873	(0.770)	699877	0.50000	0.497
3 Naphthalene	128	4.884	4.891	(1.003)	605073	0.50000	0.507
$ 222 13C6-Naphthalene	134	4.884	4.891	(1.003)	649557	0.50000	0.471
* 10 2-Methylnaphthalene-d10	152	5.424	5.427	(1.000)	380342	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.424	5.427	(0.858)	380342	0.50000	0.498
12 2-Methylnaphthalene	142	5.450	5.454	(1.005)	389838	0.50000	0.515
* 13 1-Methylnaphthalene-d10	152	5.506	5.507	(1.000)	379679	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.506	5.507	(0.871)	379679	0.50000	0.495
15 1-Methylnaphthalene	142	5.533	5.536	(1.005)	376167	0.50000	0.516
16 Biphenyl	154	5.837	5.838	(1.076)	471181	0.50000	0.528
* 17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	327434	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	327434	0.50000	0.500
19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	333814	0.50000	0.525
* 20 Acenaphthylene-d8	160	6.193	6.194	(1.000)	545116	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic04.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.193	6.194	(0.979)	545116	0.50000	0.497
	22 Acenaphthylene	152	6.205	6.205	(1.002)	552390	0.50000	0.530
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	302753	0.50000	0.500
	24 Acenaphthene	154	6.350	6.350	(1.025)	328799	0.50000	0.526
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	283908	0.50000	0.542
$	26 Fluorene-d10	176	6.761	6.761	(0.892)	298046	0.50000	0.540
	27 Fluorene	166	6.783	6.786	(0.895)	390321	0.50000	0.545
$	28 13C6-Fluorene	171	6.783	6.786	(0.895)	338206	0.50000	0.546
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	525584	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	525584	0.50000	0.494
	36 Dibenzothiophene	184	7.490	7.490	(1.002)	508930	0.50000	0.517
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	475201	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	475201	0.50000	0.495
	43 Phenanthrene	178	7.598	7.599	(1.002)	527033	0.50000	0.515
*	44 Anthracene-d10	188	7.627	7.628	(1.000)	401583	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.627	7.628	(0.858)	401583	0.50000	0.494
	46 Anthracene	178	7.644	7.644	(1.002)	513293	0.50000	0.513
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	439614	0.50000	0.506
	52 1-Methylphenanthrene	192	8.148	8.145	(1.075)	327639	0.50000	0.556
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	452396	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	452396	0.50000	0.495
	55 Fluoranthene	202	8.685	8.684	(1.002)	507427	0.50000	0.523
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	370793	0.50000	0.500
	57 Pyrene	202	8.904	8.906	(1.027)	538160	0.50000	0.521
$	58 Terphenyl-d14	244	9.045	9.045	(1.044)	240211	0.50000	0.577
*	60 Benzo(a)anthracene-d12	240	10.104	10.104	(1.000)	232260	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.104	10.104	(1.137)	232260	0.50000	0.501
	62 Benzo(a)anthracene	228	10.125	10.125	(1.002)	347697	0.50000	0.538
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	370908	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	370908	0.50000	0.512
	65 Chrysene	228	10.162	10.162	(1.002)	422150	0.50000	0.523
*	70 Benzo(b)fluoranthene-d12	264	11.259	11.258	(1.000)	242052	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.259	11.258	(0.973)	242052	0.50000	0.491
	72 Benzo(b)fluoranthene	252	11.283	11.282	(1.002)	333900	0.50000	0.505
*	73 Benzo(k)fluoranthene-d12	264	11.289	11.294	(1.000)	353554	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.289	11.294	(0.975)	353554	0.50000	0.510
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	398883	0.50000	0.531
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	233067	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	338966	0.50000	0.524
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	257374	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	257374	0.50000	0.511
	80 Benzo(a)pyrene	252	11.665	11.671	(1.002)	286204	0.50000	0.546
*	81 Perylene-d12	264	11.737	11.737	(1.000)	249364	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.737	11.737	(1.014)	249364	0.50000	0.514
	83 Perylene	252	11.767	11.766	(1.003)	318185	0.50000	0.537
*	84 Indeno(123-cd)pyrene-d12	288	13.110	13.114	(1.000)	282855	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.110	13.114	(1.133)	282855	0.50000	0.506

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic04.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.144	13.152	(1.003)	334988	0.50000	0.531
*	87 Dibenz(ah)anthracene-d14	292	13.114	13.118	(1.000)	213909	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.114	13.118	(1.133)	213909	0.50000	0.509
	89 Dibenz(a,h)anthracene	278	13.161	13.165	(1.004)	263489	0.50000	0.562
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	212111	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	212111	0.50000	0.507
	92 Benzo(g,h,i)perylene	276	13.498	13.502	(1.002)	290945	0.50000	0.531


Data File: /var/chem/gcms/mp.i/P0801111.b/ph01ic04.d
Date : 01-AUG-2011 14:04
Client ID: PAH0359
Sample Info: PH01IC04,1,4,,PAH0359
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11241
Column diameter: 0.25
Y (x10^6)
Min
-Naphthalene-d8+
13C6-Naphthalene+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
13C6-Fluorene+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+
/var/chem/gcms/mp.i/P0801111.b/ph01ic04.d

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic05.d
Report Date: 01-Aug-2011 18:59

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SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic05.d
Lab Smp Id: PH01IC05 Client Smp ID: PAH0360
Inj Date : 01-AUG-2011 14:29
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC05,,1,5,,PAH0360
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 14:29 Cal File: ph01ic05.d
Als bottle: 8 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

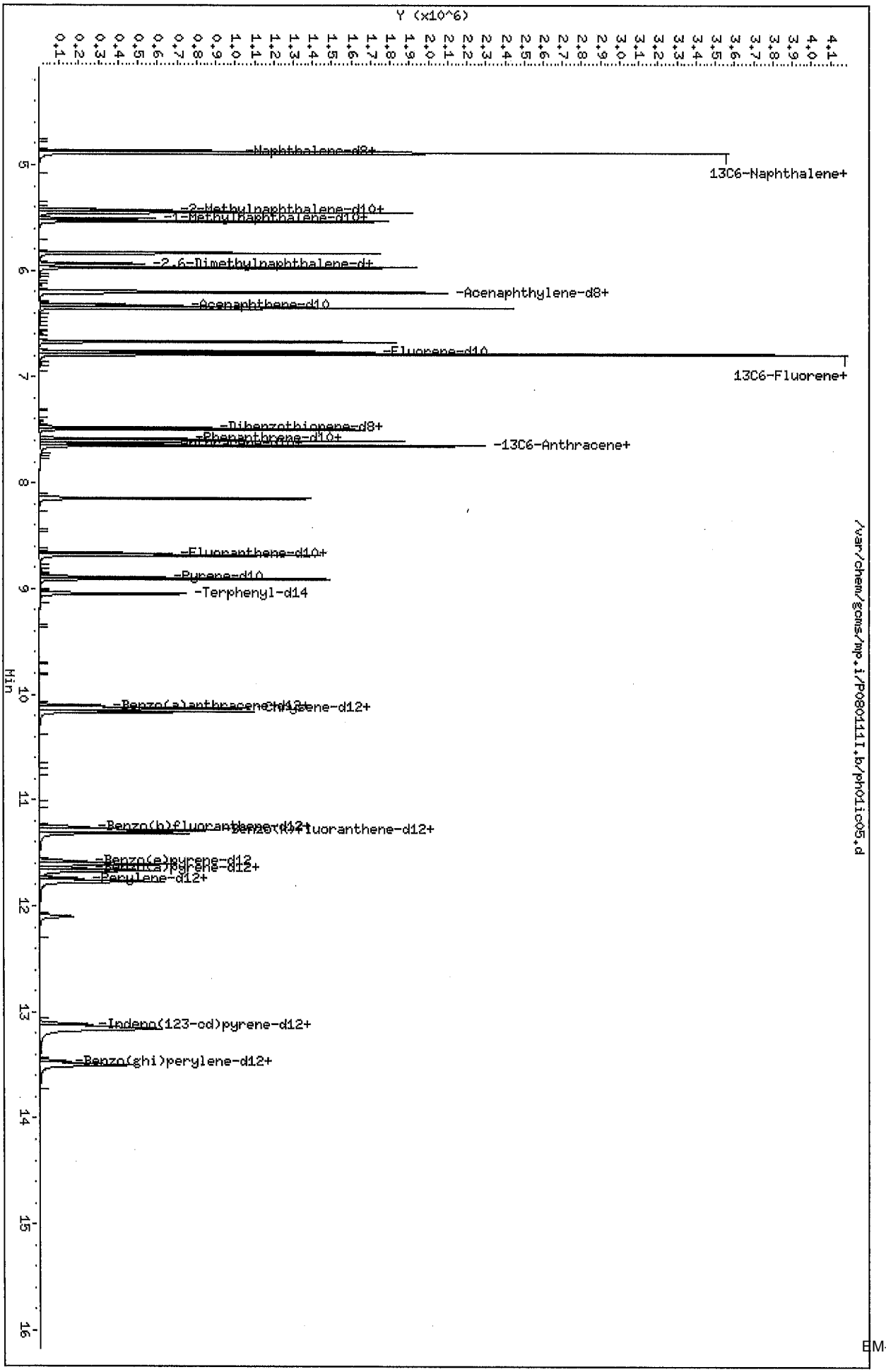
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
*	1 Naphthalene-d8	136	4.869	4.873	(1.000)	684320	0.50000	0.500
$	2 Naphthalene-d8(SS)	136	4.869	4.873	(0.770)	684320	0.50000	0.498
	3 Naphthalene	128	4.884	4.891	(1.003)	1177428	1.00000	1.01
$	222 13C6-Naphthalene	134	4.884	4.891	(1.003)	1251256	1.00000	0.942
*	10 2-Methylnaphthalene-d10	152	5.424	5.427	(1.000)	371191	0.50000	0.500
$	11 2-Methylnaphthalene-d10(SS)	152	5.424	5.427	(0.858)	371191	0.50000	0.498
	12 2-Methylnaphthalene	142	5.450	5.454	(1.005)	765941	1.00000	1.03
*	13 1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	369895	0.50000	0.500
$	14 1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.871)	369895	0.50000	0.495
	15 1-Methylnaphthalene	142	5.533	5.536	(1.005)	736319	1.00000	1.03
	16 Biphenyl	154	5.837	5.838	(1.076)	926875	1.00000	1.05
*	17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	318500	0.50000	0.500
$	18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	318500	0.50000	0.499
	19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	656926	1.00000	1.05
*	20 Acenaphthylene-d8	160	6.194	6.194	(1.000)	529762	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic05.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.194	6.194	(0.979)	529762	0.50000	0.496
	22 Acenaphthylene	152	6.205	6.205	(1.002)	1100126	1.00000	1.07
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	295717	0.50000	0.500
	24 Acenaphthene	154	6.350	6.350	(1.025)	646091	1.00000	1.05
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	571797	1.00000	1.10
$	26 Fluorene-d10	176	6.761	6.761	(0.892)	590529	1.00000	1.07
	27 Fluorene	166	6.783	6.786	(0.895)	770061	1.00000	1.08
$	28 13C6-Fluorene	171	6.783	6.786	(0.895)	665647	1.00000	1.08
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	511649	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	511649	0.50000	0.493
	36 Dibenzothiophene	184	7.490	7.490	(1.002)	1001257	1.00000	1.04
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	465380	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	465380	0.50000	0.496
	43 Phenanthrene	178	7.598	7.599	(1.002)	1041147	1.00000	1.03
*	44 Anthracene-d10	188	7.628	7.628	(1.000)	401349	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.628	7.628	(0.858)	401349	0.50000	0.503
	46 Anthracene	178	7.644	7.644	(1.002)	1019970	1.00000	1.02
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	436224	0.50000	0.510
	52 1-Methylphenanthrene	192	8.145	8.145	(1.075)	669807	1.00000	1.12
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	440831	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	440831	0.50000	0.494
	55 Fluoranthene	202	8.684	8.684	(1.002)	1012654	1.00000	1.06
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	363154	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	1065645	1.00000	1.05
$	58 Terphenyl-d14	244	9.045	9.045	(1.044)	489480	1.00000	1.16
*	60 Benzo(a)anthracene-d12	240	10.104	10.104	(1.000)	222967	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.104	10.104	(1.137)	222967	0.50000	0.493
	62 Benzo(a)anthracene	228	10.124	10.125	(1.002)	706451	1.00000	1.11
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	371677	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	371677	0.50000	0.519
	65 Chrysene	228	10.162	10.162	(1.002)	836736	1.00000	1.03
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.258	(1.000)	244388	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.258	(0.973)	244388	0.50000	0.511
	72 Benzo(b)fluoranthene	252	11.282	11.282	(1.002)	639262	1.00000	0.965
*	73 Benzo(k)fluoranthene-d12	264	11.288	11.294	(1.000)	329661	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.288	11.294	(0.975)	329661	0.50000	0.495
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	811862	1.00000	1.12
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	224780	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	660504	1.00000	1.05
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	247206	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	247206	0.50000	0.507
	80 Benzo(a)pyrene	252	11.665	11.671	(1.002)	590414	1.00000	1.13
*	81 Perylene-d12	264	11.737	11.737	(1.000)	243126	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.737	11.737	(1.014)	243126	0.50000	0.515
	83 Perylene	252	11.766	11.766	(1.003)	639013	1.00000	1.08
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.114	(1.000)	268291	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.114	(1.133)	268291	0.50000	0.498

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic05.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.143	13.152	(1.002)	661941	1.00000	1.08
*	87 Dibenz(ah)anthracene-d14	292	13.118	13.118	(1.000)	202611	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.118	13.118	(1.133)	202611	0.50000	0.500
	89 Dibenz(a,h)anthracene	278	13.160	13.165	(1.003)	524848	1.00000	1.14
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	201220	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	201220	0.50000	0.499
	92 Benzo(g,h,i)perylene	276	13.498	13.502	(1.002)	570677	1.00000	1.08



Data File: /var/chem/gcms/mp.i/P0801111.b/ph01c05.d
Date : 01-AUG-2011 14:29
Client ID: PAH0360
Sample Info: PH01C05,,1,5,,PAH0360
Purge Volume: 1.0
Column phase: Varian 5MS

Instrument: mp.i
Operator: 11211
Column diameter: 0.25

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic06.d
Report Date: 01-Aug-2011 18:59

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SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic06.d
Lab Smp Id: PH01IC06 Client Smp ID: PAH0361
Inj Date : 01-AUG-2011 14:54
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC06,,1,6,,PAH0361
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 14:54 Cal File: ph01ic06.d
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

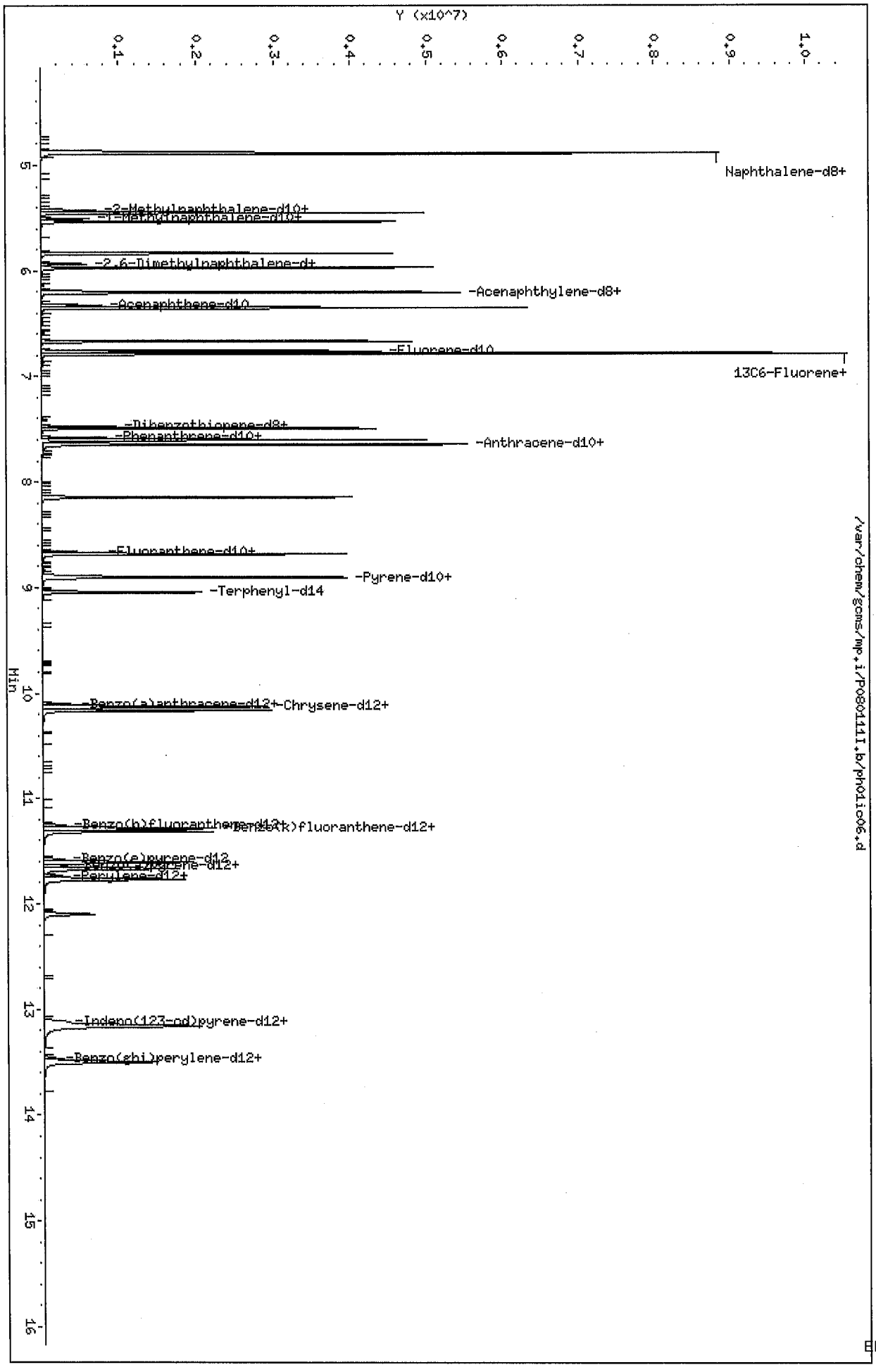
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.869	4.873	(1.000)	700707	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.869	4.873	(0.770)	700707	0.50000	0.489
3 Naphthalene	128	4.887	4.891	(1.004)	2864851	2.50000	2.41
$ 222 13C6-Naphthalene	134	4.887	4.891	(1.004)	2961305	2.50000	2.22
* 10 2-Methylnaphthalene-d10	152	5.424	5.427	(1.000)	385841	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.424	5.427	(0.858)	385841	0.50000	0.496
12 2-Methylnaphthalene	142	5.450	5.454	(1.005)	1944946	2.50000	2.51
* 13 1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	375906	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.871)	375906	0.50000	0.484
15 1-Methylnaphthalene	142	5.533	5.536	(1.005)	1848223	2.50000	2.53
16 Biphenyl	154	5.835	5.838	(1.076)	2350018	2.50000	2.55
* 17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	330307	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	330307	0.50000	0.495
19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	1691764	2.50000	2.59
* 20 Acenaphthylene-d8	160	6.194	6.194	(1.000)	561371	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic06.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.194	6.194	(0.979)	561371	0.50000	0.501
	22 Acenaphthylene	152	6.205	6.205	(1.002)	2906431	2.50000	2.63
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	309706	0.50000	0.500
	24 Acenaphthene	154	6.350	6.350	(1.025)	1669370	2.50000	2.55
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	1507933	2.50000	2.73
$	26 Fluorene-d10	176	6.761	6.761	(0.892)	1535392	2.50000	2.61
	27 Fluorene	166	6.783	6.786	(0.895)	1934354	2.50000	2.55
$	28 13C6-Fluorene	171	6.783	6.786	(0.895)	1684442	2.50000	2.56
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	542182	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	542182	0.50000	0.486
	36 Dibenzothiophene	184	7.490	7.490	(1.002)	2630992	2.50000	2.56
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	492019	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	492019	0.50000	0.488
	43 Phenanthrene	178	7.598	7.599	(1.002)	2725131	2.50000	2.54
*	44 Anthracene-d10	188	7.628	7.628	(1.000)	433737	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.628	7.628	(0.858)	433737	0.50000	0.503
	46 Anthracene	178	7.644	7.644	(1.002)	2745556	2.50000	2.52
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	448933	0.50000	0.488
	52 1-Methylphenanthrene	192	8.145	8.145	(1.075)	1834410	2.50000	2.83
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	473877	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	473877	0.50000	0.493
	55 Fluoranthene	202	8.684	8.684	(1.002)	2721706	2.50000	2.62
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	392201	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	2847419	2.50000	2.58
$	58 Terphenyl-d14	244	9.045	9.045	(1.044)	1319618	2.50000	2.83
*	60 Benzo(a)anthracene-d12	240	10.104	10.104	(1.000)	252070	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.104	10.104	(1.137)	252070	0.50000	0.513
	62 Benzo(a)anthracene	228	10.124	10.125	(1.002)	2043813	2.50000	2.77
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	403828	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	403828	0.50000	0.518
	65 Chrysene	228	10.162	10.162	(1.002)	2253174	2.50000	2.54
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.258	(1.000)	269913	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.258	(0.973)	269913	0.50000	0.501
	72 Benzo(b)fluoranthene	252	11.282	11.282	(1.002)	1986042	2.50000	2.68
*	73 Benzo(k)fluoranthene-d12	264	11.288	11.294	(1.000)	377037	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.288	11.294	(0.975)	377037	0.50000	0.502
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	2109179	2.50000	2.54
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	253443	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	1877071	2.50000	2.56
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	286298	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	286298	0.50000	0.517
	80 Benzo(a)pyrene	252	11.671	11.671	(1.003)	1780615	2.50000	2.86
*	81 Perylene-d12	264	11.737	11.737	(1.000)	275858	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.737	11.737	(1.014)	275858	0.50000	0.516
	83 Perylene	252	11.766	11.766	(1.003)	1859931	2.50000	2.73
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.114	(1.000)	308704	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.114	(1.133)	308704	0.50000	0.507

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic06.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.148	13.152	(1.003)	1951617	2.50000	2.72
*	87 Dibenz(ah)anthracene-d14	292	13.118	13.118	(1.000)	234867	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.118	13.118	(1.133)	234867	0.50000	0.512
	89 Dibenz(a,h)anthracene	278	13.160	13.165	(1.003)	1568970	2.50000	2.86
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	230996	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	230996	0.50000	0.507
	92 Benzo(g,h,i)perylene	276	13.498	13.502	(1.002)	1660698	2.50000	2.69


Data File: /var/chem/gcms/mp.i/P0801111.b/ph01ic06.d
Date : 01-AUG-2011 14:54
Client ID: PAH0361
Sample Info: PH01IC06,,1,6,,PAH0361
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P0801111.b/ph01ic06.d
Y (x10^7)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Min
5
6
7
8
9
10
11
12
13
14
15
16
Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
13C6-Fluorene+
-Dibenzothiophene-d8+
-Phenanthrene-d10+
-Anthracene-d10+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic07.d
Report Date: 01-Aug-2011 18:59

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SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01ic07.d
Lab Smp Id: PH01IC07 Client Smp ID: PAH0316
Inj Date : 01-AUG-2011 15:19
Operator : 11211 Inst ID: mp.i
Smp Info : PH01IC07,,1,7,,PAH0316
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 10 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	676180	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.770)	676180	0.50000	0.506
3 Naphthalene	128	4.891	4.891	(1.004)	5265255	5.00000	4.64
$ 222 13C6-Naphthalene	134	4.891	4.891	(1.004)	5192212	5.00000	4.16
* 10 2-Methylnaphthalene-d10	152	5.427	5.427	(1.000)	367285	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.427	5.427	(0.858)	367285	0.50000	0.506
12 2-Methylnaphthalene	142	5.454	5.454	(1.005)	3658872	5.00000	4.97
* 13 1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	357474	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.871)	357474	0.50000	0.495
15 1-Methylnaphthalene	142	5.536	5.536	(1.005)	3455053	5.00000	4.98
16 Biphenyl	154	5.838	5.838	(1.076)	4397508	5.00000	5.02
* 17 2,6-Dimethylnaphthalene-d12	168	5.935	5.935	(1.000)	313227	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.935	5.935	(0.938)	313227	0.50000	0.504
19 2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	3179333	5.00000	5.11
* 20 Acenaphthylene-d8	160	6.194	6.194	(1.000)	540786	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic07.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	21 Acenaphthylene-d8(SS)	160	6.194	6.194	(0.979)	540786	0.50000	0.516
	22 Acenaphthylene	152	6.205	6.205	(1.002)	5558479	5.00000	5.19
*	23 Acenaphthene-d10	164	6.325	6.325	(1.000)	288122	0.50000	0.500
	24 Acenaphthene	154	6.350	6.350	(1.025)	3142369	5.00000	4.98
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	2841271	5.00000	5.37
$	26 Fluorene-d10	176	6.761	6.761	(0.892)	2808242	5.00000	5.03
	27 Fluorene	166	6.786	6.786	(0.895)	3508187	5.00000	4.89
$	28 13C6-Fluorene	171	6.786	6.786	(0.895)	2970438	5.00000	4.80
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	517416	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	517416	0.50000	0.503
	36 Dibenzothiophene	184	7.490	7.490	(1.002)	4971469	5.00000	5.05
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	466404	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	466404	0.50000	0.502
	43 Phenanthrene	178	7.599	7.599	(1.002)	5117220	5.00000	5.03
*	44 Anthracene-d10	188	7.628	7.628	(1.000)	425452	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.628	7.628	(0.858)	425452	0.50000	0.530
	46 Anthracene	178	7.644	7.644	(1.002)	5181868	5.00000	4.88
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	421973	0.50000	0.499
	52 1-Methylphenanthrene	192	8.145	8.145	(1.075)	3503312	5.00000	5.60
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	446254	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	446254	0.50000	0.504
	55 Fluoranthene	202	8.684	8.684	(1.002)	5176170	5.00000	5.24
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	361208	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	5375176	5.00000	5.15
$	58 Terphenyl-d14	244	9.045	9.045	(1.044)	2411870	5.00000	5.42
*	60 Benzo(a)anthracene-d12	240	10.104	10.104	(1.000)	241026	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.104	10.104	(1.137)	241026	0.50000	0.528
	62 Benzo(a)anthracene	228	10.125	10.125	(1.002)	3961358	5.00000	5.52
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	378887	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	378887	0.50000	0.524
	65 Chrysene	228	10.162	10.162	(1.002)	4187639	5.00000	5.02
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.258	(1.000)	253088	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.258	(0.973)	253088	0.50000	0.504
	72 Benzo(b)fluoranthene	252	11.282	11.282	(1.002)	3718557	5.00000	5.29
*	73 Benzo(k)fluoranthene-d12	264	11.294	11.294	(1.000)	360375	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.294	11.294	(0.976)	360375	0.50000	0.513
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	4083323	5.00000	5.13
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	235599	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	3556378	5.00000	5.05
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	274977	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	274977	0.50000	0.529
	80 Benzo(a)pyrene	252	11.671	11.671	(1.003)	3309445	5.00000	5.46
*	81 Perylene-d12	264	11.737	11.737	(1.000)	269729	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.737	11.737	(1.014)	269729	0.50000	0.536
	83 Perylene	252	11.766	11.766	(1.003)	3582155	5.00000	5.32
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.114	(1.000)	291957	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.114	(1.133)	291957	0.50000	0.513

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01ic07.d
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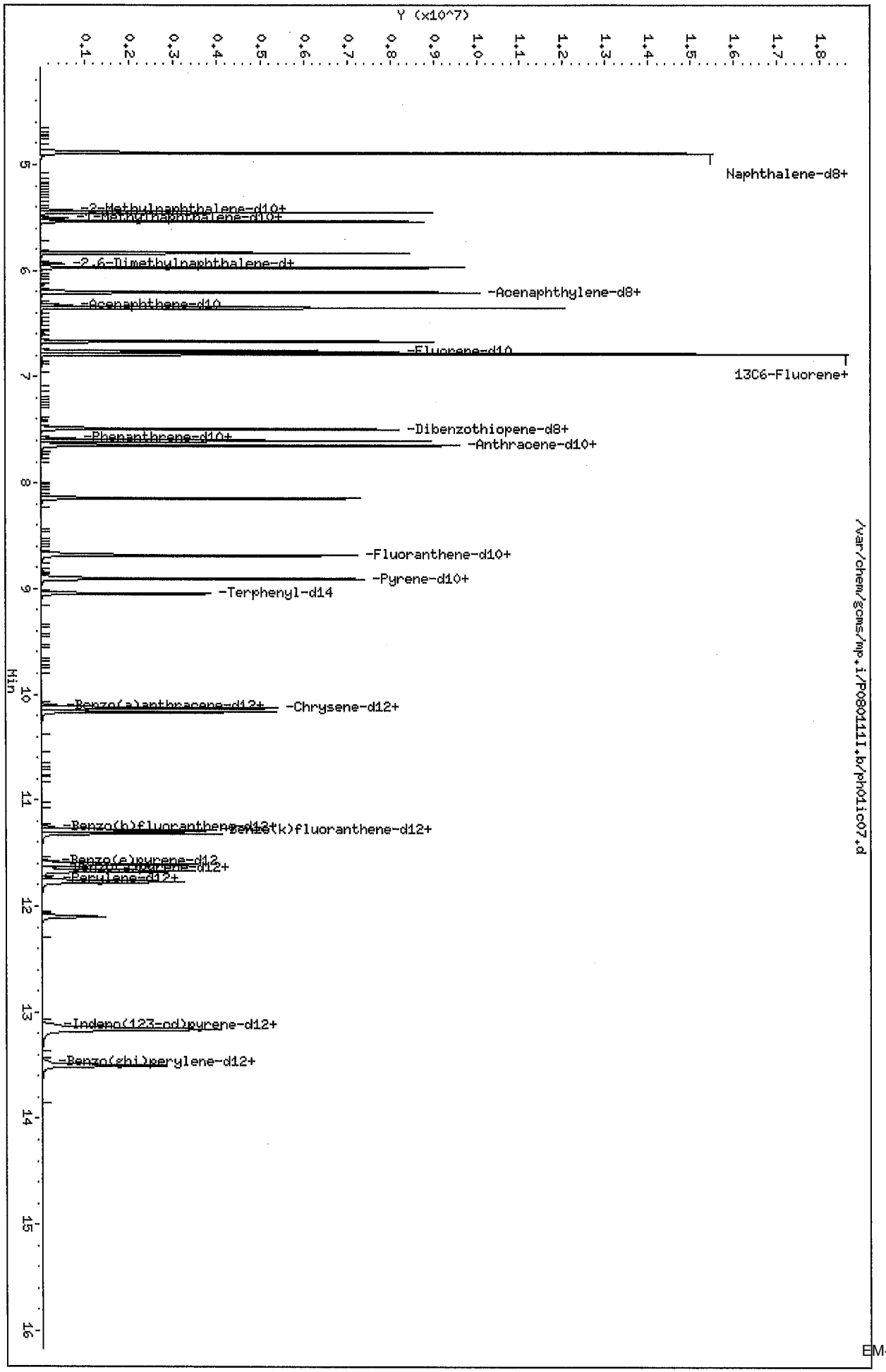
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	86 Indeno(1,2,3-cd)pyrene	276	13.152	13.152	(1.003)	3784863	5.00000	5.49
*	87 Dibenz(ah)anthracene-d14	292	13.118	13.118	(1.000)	222826	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.118	13.118	(1.133)	222826	0.50000	0.519
	89 Dibenz(a,h)anthracene	278	13.165	13.165	(1.004)	3044481	5.00000	5.70
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	217654	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	217654	0.50000	0.511
	92 Benzo(g,h,i)perylene	276	13.502	13.502	(1.003)	3225329	5.00000	5.46


Data File: /var/chem/gcms/mp.i/P0801111.b/ph01ic07.d
Date : 01-AUG-2011 15:19
Client ID: PAH0316
Sample Info: PH01IC07,,1,7,,PAH0316
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^7)
Min
Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
13C6-Fluorene+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-Anthracene-d10+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+
/var/chem/gcms/mp.i/P0801111.b/ph01ic07.d

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01icv.d
Report Date: 01-Aug-2011 18:59

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080111I.b/ph01icv.d
Lab Smp Id: PH01ICV
Inj Date : 01-AUG-2011 16:08
Operator : 11211 Inst ID: mp.i
Smp Info : PH01ICV,,3,,PAH0309
Misc Info : P080111I,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Meth Date : 01-Aug-2011 18:58 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 12 QC Sample: 2ND SOURCE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1	Naphthalene-d8	136	4.869	4.873	(1.000)	660863	0.50000	0.500
$ 2	Naphthalene-d8(SS)	136	4.869	4.873	(0.769)	660863	0.49603	248
3	Naphthalene	128	4.884	4.891	(1.003)	581887	0.52518	263
$ 222	13C6-Naphthalene	134	4.869	4.891	(1.000)	59052	0.04836	~~24.2(R)~~
* 10	2-Methylnaphthalene-d10	152	5.427	5.427	(1.000)	369456	0.50000	0.500
$ 11	2-Methylnaphthalene-d10(SS)	152	5.427	5.427	(0.858)	369456	0.51018	255
12	2-Methylnaphthalene	142	5.450	5.454	(1.004)	380190	0.51337	257
* 13	1-Methylnaphthalene-d10	152	5.507	5.507	(1.000)	361478	0.50000	0.500
$ 14	1-Methylnaphthalene-d10(SS)	152	5.507	5.507	(0.870)	361478	0.50172	251
15	1-Methylnaphthalene	142	5.533	5.536	(1.005)	375457	0.53571	268
16	Biphenyl	154	5.837	5.838	(1.076)	446168	0.50587	253
* 17	2,6-Dimethylnaphthalene-d12	168	5.937	5.935	(1.000)	308569	0.50000	0.500
$ 18	2,6-Dimethylnaph-d12(SS)	168	5.937	5.935	(0.938)	308569	0.49727	249
19	2,6 Dimethylnaphthalene	156	5.971	5.971	(1.006)	314453	0.51268	256
* 20	Acenaphthylene-d8	160	6.196	6.194	(1.000)	513389	0.50000	0.500

JWB 8.2.11

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01icv.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	21 Acenaphthylene-d8(SS)	160	6.196	6.194	(0.979)	513389	0.49132	246
	22 Acenaphthylene	152	6.208	6.205	(1.002)	519260	0.51094	255
*	23 Acenaphthene-d10	164	6.327	6.325	(1.000)	287495	0.50000	0.500
	24 Acenaphthene	154	6.353	6.350	(1.025)	320605	0.53563	268
	25 2,3,5 Trimethylnaphthalene	170	6.671	6.671	(1.124)	273082	0.52355	262
$	26 Fluorene-d10	176	6.763	6.761	(0.892)	306	0.000581	~~0.290(R)~~
	27 Fluorene	166	6.786	6.786	(0.895)	349180	0.51420	257
$	28 13C6-Fluorene	171	6.788	6.786	(0.896)	218	0.000373	~~0.187(R)~~
*	34 Dibenzothiopene-d8	192	7.476	7.476	(1.000)	486131	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.476	7.476	(0.841)	486131	0.50181	251
	36 Dibenzothiophene	184	7.493	7.490	(1.002)	480613	0.51990	260
*	41 Phenanthrene-d10	188	7.580	7.580	(1.000)	441837	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.580	7.580	(0.853)	441837	0.50457	252
	43 Phenanthrene	178	7.601	7.599	(1.003)	521057	0.54101	271
*	44 Anthracene-d10	188	7.628	7.628	(1.000)	368517	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.628	7.628	(0.858)	368517	0.48750	244
	46 Anthracene	178	7.644	7.644	(1.002)	442240	0.48050	240
$	47 13C6-Anthracene	184	7.644	7.644	(0.860)	390580	0.48992	245
	52 1-Methylphenanthrene	192	8.148	8.145	(1.075)	315003	0.53127	266
*	53 Fluoranthene-d10	212	8.667	8.667	(1.000)	417169	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.667	8.667	(0.975)	417169	0.49974	250
	55 Fluoranthene	202	8.687	8.684	(1.002)	488847	0.52962	265
*	56 Pyrene-d10	212	8.889	8.889	(1.000)	340219	0.50000	0.500
	57 Pyrene	202	8.906	8.906	(1.028)	508269	0.52109	261
$	58 Terphenyl-d14	244	9.058	9.045	(1.045)	158	0.00038	0~~.190(R)~~
*	60 Benzo(a)anthracene-d12	240	10.103	10.104	(1.000)	205478	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.103	10.104	(1.137)	205478	0.47773	239
	62 Benzo(a)anthracene	228	10.124	10.125	(1.002)	314832	0.51476	257
*	63 Chrysene-d12	240	10.137	10.137	(1.000)	346927	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.137	10.137	(1.140)	346927	0.50924	255
	65 Chrysene	228	10.162	10.162	(1.002)	399082	0.52299	261
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.258	(1.000)	229113	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.258	(0.973)	229113	0.50854	254
	72 Benzo(b)fluoranthene	252	11.282	11.282	(1.002)	339440	0.53368	267
*	73 Benzo(k)fluoranthene-d12	264	11.288	11.294	(1.000)	311793	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.288	11.294	(0.975)	311793	0.49469	247
	75 Benzo(k)fluoranthene	252	11.312	11.312	(1.002)	358467	0.52055	260
*	76 Benzo(e)pyrene-d12	264	11.575	11.575	(1.000)	211533	0.50000	0.500
	77 Benzo(e)pyrene	252	11.605	11.605	(0.997)	320956	0.54146	271
*	78 Benzo(a)pyrene-d12	264	11.641	11.641	(1.000)	231364	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.641	11.641	(1.006)	231364	0.49581	248
	80 Benzo(a)pyrene	252	11.671	11.671	(1.003)	266770	0.52301	262
*	81 Perylene-d12	264	11.742	11.737	(1.000)	228284	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.742	11.737	(1.014)	228284	0.50503	253
	83 Perylene	252	11.766	11.766	(1.002)	292518	0.51321	257
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.114	(1.000)	248237	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.114	(1.133)	248237	0.48624	243

JDW 8.2.11

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01icv.d
Report Date: 01-Aug-2011 18:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
	86 Indeno(1,2,3-cd)pyrene	276	13.148	13.152	(1.003)	294355	0.50260	251
*	87 Dibenz(ah)anthracene-d14	292	13.118	13.118	(1.000)	186685	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.118	13.118	(1.133)	186685	0.48416	242
	89 Dibenz(a,h)anthracene	278	13.165	13.165	(1.004)	240042	0.53681	268
*	90 Benzo(ghi)perylene-d12	288	13.464	13.464	(1.000)	187991	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.464	13.464	(1.163)	187991	0.49203	246
	92 Benzo(g,h,i)perylene	276	13.498	13.502	(1.002)	265609	0.52037	260

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01icv.d
Report Date: 01-Aug-2011 18:59

TestAmerica Knoxville

RECOVERY REPORT

Client Name: ITSBUR
Client SDG: P080111I
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: PH01ICV
Level: LOW
Operator: 11211
Data Type: MS DATA
SampleType: 2ND SOURCE
SpikeList File: icv.spk
Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P080111I.b/SIMPAH3.m
Misc Info: P080111I,SIMPAH3

SPIKE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
3 Naphthalene	250	263	105.04	70-130
12 2-Methylnaphthalen	250	257	102.67	70-130
15 1-Methylnaphthalen	250	268	107.14	70-130
16 Biphenyl	250	253	101.17	70-130
19 2,6 Dimethylnaphth	250	256	102.54	70-130
22 Acenaphthylene	250	255	102.19	70-130
24 Acenaphthene	250	268	107.13	70-130
25 2,3,5 Trimethylnap	250	262	104.71	70-130
27 Fluorene	250	257	102.84	70-130
36 Dibenzothiophene	250	260	103.98	70-130
43 Phenanthrene	250	271	108.20	70-130
46 Anthracene	250	240	96.10	70-130
52 1-Methylphenanthre	250	266	106.25	70-130
55 Fluoranthene	250	265	105.92	70-130
57 Pyrene	250	261	104.22	70-130
62 Benzo(a)anthracene	250	257	102.95	70-130
65 Chrysene	250	261	104.60	70-130
72 Benzo(b)fluoranthe	250	267	106.74	70-130
75 Benzo(k)fluoranthe	250	260	104.11	70-130
77 Benzo(e)pyrene	250	271	108.29	70-130
80 Benzo(a)pyrene	250	262	104.60	70-130
83 Perylene	250	257	102.64	70-130
86 Indeno(1,2,3-cd)py	250	251	100.52	70-130
89 Dibenz(a,h)anthrac	250	268	107.36	70-130
92 Benzo(g,h,i)peryle	250	260	104.07	70-130

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	250	248	99.21	~~30-120~~ 70-130

8/1/11

Data File: /var/chem/gcms/mp.i/P080111I.b/ph01icv.d
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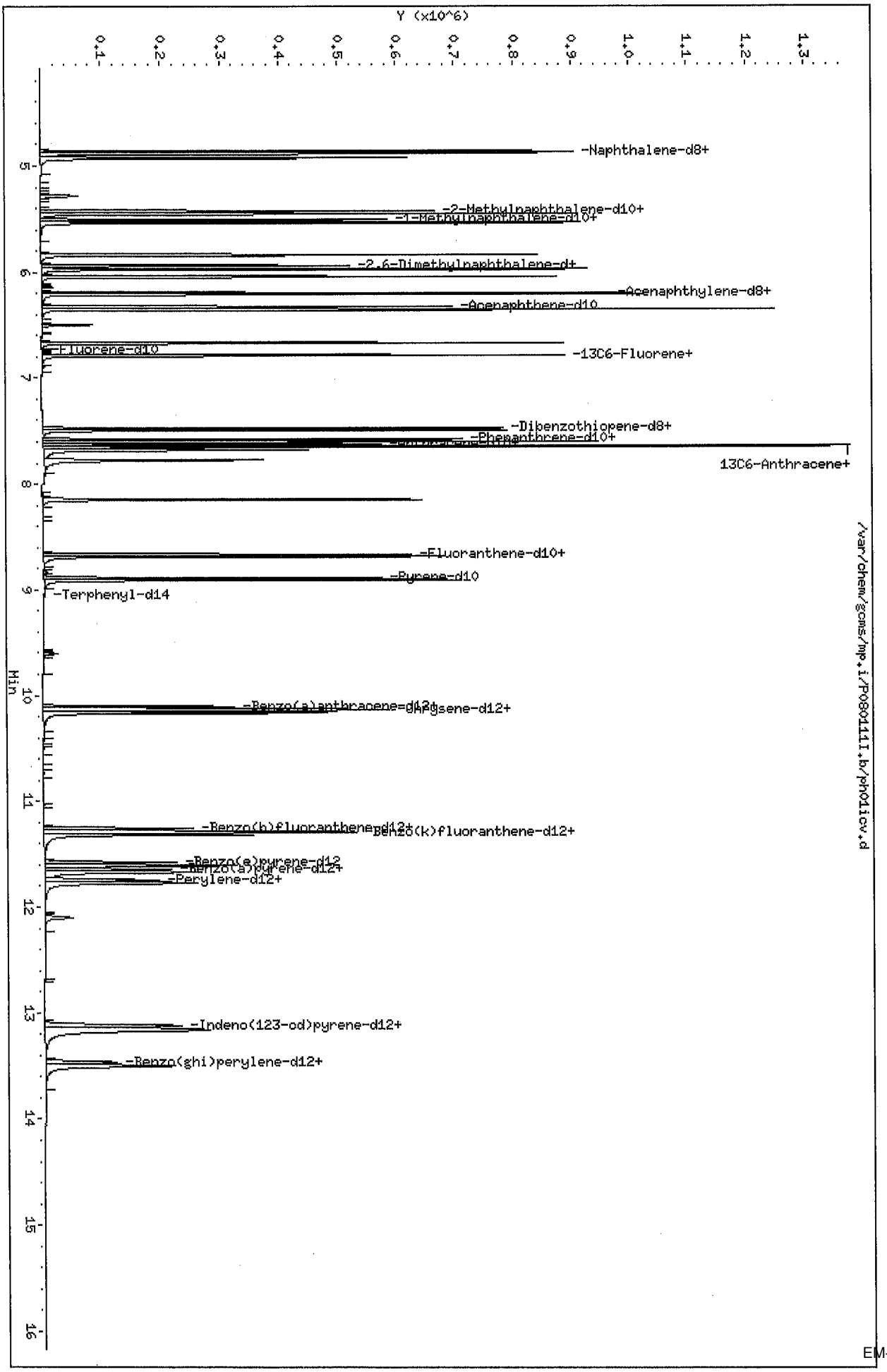
SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 222 13C6-Naphthalene	250	24.2	9.67*	50-150
$ 11 2-Methylnaphthalen	250	255	102.04	30-120
$ 14 1-Methylnaphthalen	250	251	100.34	30-120
$ 18 2,6-Dimethylnaph-d	250	249	99.45	30-120
$ 21 Acenaphthylene-d8(	250	246	98.26	30-120
$ 26 Fluorene-d10	250	0.290	0.12*	30-120
$ 28 13C6-Fluorene	250	0.187	0.07*	30-120
$ 35 Dibenzothiopene-d8	250	251	100.36	30-120
$ 42 Phenanthrene-d10(S	250	252	100.91	30-120
$ 45 Anthracene-d10(SS)	250	244	97.50	30-120
$ 47 13C6-Anthracene	250	245	97.98	30-120
$ 54 Fluoranthene-d10(S	250	250	99.95	0-120
$ 58 Terphenyl-d14	250	0.190	0.08*	30-120
$ 61 Benzo(a)anthracene	250	239	95.55	30-120
$ 64 Chrysene-d12(SS)	250	255	101.85	30-120
$ 71 Benzo(b)fluoranthe	250	254	101.71	30-120
$ 74 Benzo(k)fluoranthe	250	247	98.94	30-120
$ 79 Benzo(a)pyrene-d12	250	248	99.16	30-120
$ 82 Perylene-d12(SS)	250	253	101.01	30-120
$ 85 Indeno(123-cd)pyre	250	243	97.25	30-120
$ 88 Dibenz(ah)anthrace	250	242	96.83	30-120
$ 91 Benzo(ghi)perylene	250	246	98.41	30-120

70-130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Date : 01-AUG-2011 16:08
Client ID:
Sample Info: PH01ICV,.3,.PAH0309
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
Min
5
6
7
8
9
10
11
12
13
14
15
16
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
-13C6-Fluorene+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(a)anthracene-d12+
Chrysene-d12+
-Benzo(b)fluoranthene-d12+
Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+
/var/chem/gcms/mp.i/P0801111.b/ph01icv.d

TestAmerica Knoxville GC/MS-SIM Continuing Calibration Review / Narrative Checklist
Method: LRPAH PAHs and Selected SVOCs - KNOX-ID-0016, Revision 8

Analysis Date:	8/3/11	CCAL Batch/ Scan Name:	P080311	Instrument:	MP	ICAL Batch/ Scan Name:	P080111E	Scanned ✓

A. Review Items	N/A	Yes	No	Why is data reportable?	2nd √
1. Were all injections in sequence within 12 hr of CCAL?		✓			✓
2. Was date/time of analysis verified between header and logbook?		✓			✓
3. Are peak integrations appropriate?		✓			✓
4. Is the %D or drift <30% for all analytes		✓			✓
5. Are the recovery standards within 50-200% of the ICAL CS4 level?		✓			✓
6. Are the MID descriptors properly set?		✓			✓
7. Are correct RFs listed in CCAL summary?		✓			✓
8. Was the correct ICAL used for quantitation? (Verify 1 RF.)		✓			✓
9. Elution order checked on isomeric pairs/coeluters?					
• 2-methylnaphthalene before 1-methylnaphthalene (& d10 isomers)		✓			✓
• acenaphthylene before acenaphthene (& d10 isomers)		✓			✓
• dibenzothiophene before anthracene		✓			✓
• phenanthrene before anthracene (& d10 isomers)		✓			✓
• fluoranthene before pyrene (& d10 isomers)		✓			✓
• benzo(a)anthracene before chrysene (& d12 isomers)		✓			✓
• benzo(b)fluoranthene before benzo(k)fluoranthene (& d12 isomers)		✓			✓
• benzo(e)pyrene before benzo(a)pyrene benzo(a)pyrene before perylene (& d12 isomers)		✓			✓
• Indeno(1,2,3-cd)pyrene before benzo(g,h,i)perylene (& d12 isomers)		✓			✓
10. Were the first/last RTs for each alkyl PAH homologue group properly identified and indicated on the chromatogram?	✓				NA
11. If criteria were not met, was a NCM generated and approved by supervisor?	✓	8/4/11 ✓			NA
12. Does the CCAL folder contain complete data in the following order? CCAL data review checklist, runlog, Target Continuing Calibration Report, followed by the quan report and chromatograms for the CCAL and window standard.		✓			✓

1st Level Reviewer:		Date: 8/4/11
Comments:		
2nd Level Reviewer:		Date: 8/4/11
Comments:		

TestAmerica Knoxville
Instrument MP Run/Maintenance Log

Date/Time Verified ☑

Preventive Maintenance Performed: □ septa □ liner □ seal □ clip column □ SPME fiber □ other: see below / maint. log

Target Batch	P080311			Date	5/3/11
ICAL Batch	P080111F			Analyst	TMC
Method	☑ KNOX-ID-0016	□ KNOX-ID-0018	□	IS ID & vol.	WLA

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
IB	PH03FB01	12:03			—	
CCV	PH03CCV	12:27			—	PBH0362
MB	MK2D01AA	12:52			1201079	
HIGH10403	MK09P2AC	13:54	5	Comb Air		20 uL to 100 uL
	MK09Q2AC	14:19	5			20 uL to 100 uL
	MK09R2AC	14:43	5			20 uL to 100 uL
HIG200446	MK2H22AC	15:08	2			50 uL to 100 uL
—	PH03HEX01	15:33	—	—	—	
MB	MK51E1AA	15:58		Combined Air	1207014	
LCS	MK51E1AC	16:23				
LCSD	MK51E1AD	16:48				
HIG250906	MK5C71AC	17:13				
HIG250917	MK5KL1AC	17:38				
	MK5K61AC	18:02				
	MK5KR1AC	18:27				
	MK5KT1AC	18:52				
	MK5KW1AC	19:17			—	
—	PH03HEX02	19:41		—	—	
HIG190403	MK09P2AC2	20:06	7	Comb Air	1201079	13 uL to 91 uL
HIG200446	MK2H22AC2	20:31	5			20 uL to 100 uL
HIG250406	MK5C31AC	20:56	25		1207014	4 uL to 100 uL
	MK5C61AC	21:20	25			4 uL to 100 uL
	MK5C51AC	21:45	50			2 uL to 100 uL
MB	MK51EX	5/4/11 12:24	—		1207014	Full scan
MB	MK2D0X	12:49	—		1201079	Full scan

Comments: Three hexane rinses were analyzed after sample MK5C51AC : PH03HEX03 22:09
PH03HEX04 22:34
PH03HEX05 22:59

5/4/11

Data File: /var/chem/gcms/mp.i/P080311.b/ph03ccv.d
Report Date: 04-Aug-2011 15:29

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mp.i
Lab File ID: ph03ccv.d
Analysis Type: AIR
Lab Sample ID: PH03CCV
Method: /chem/gcms/mp.i/P080311.b/SIMPAH3.m

Injection Date: 03-AUG-2011 12:27
Init. Cal. Date(s): 01-AUG-2011 01-AUG-2011
Init. Cal. Times: 12:50 15:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 2 Naphthalene-d8(SS)	2.31710	2.27686	0.000	1.73653	30.00000	Averaged
3 Naphthalene	0.83828	0.86720	0.000	-3.45004	30.00000	Averaged
$ 222 13C6-Naphthalene	0.92383	0.92603	0.000	-0.23824	30.00000	Averaged
$ 11 2-Methylnaphthalene-d10(SS)	1.25944	1.24101	0.000	1.46338	30.00000	Averaged
12 2-Methylnaphthalene	1.00226	1.03159	0.000	-2.92688	30.00000	Averaged
$ 14 1-Methylnaphthalene-d10(SS)	1.25302	1.24700	0.000	0.48017	30.00000	Averaged
15 1-Methylnaphthalene	0.96943	0.99499	0.000	-2.63659	30.00000	Averaged
16 Biphenyl	1.19363	1.25006	0.000	-4.72752	30.00000	Averaged
$ 18 2,6-Dimethylnaph-d12(SS)	1.07919	1.06979	0.000	0.87078	30.00000	Averaged
19 2,6 Dimethylnaphthalene	0.99387	1.02240	0.000	-2.87110	30.00000	Averaged
$ 21 Acenaphthylene-d8(SS)	1.81729	1.69150	0.000	6.92184	30.00000	Averaged
22 Acenaphthylene	0.98978	1.04514	0.000	-5.59343	30.00000	Averaged
24 Acenaphthene	0.58295	0.63724	0.000	-9.31382	30.00000	Averaged
25 2,3,5 Trimethylnaphthalene	0.84519	0.86901	0.000	-2.81818	30.00000	Averaged
$ 26 Fluorene-d10	0.59796	0.62071	0.000	-3.80514	30.00000	Averaged
27 Fluorene	0.76847	0.81554	0.000	-6.12525	30.00000	Averaged
$ 28 13C6-Fluorene	0.66314	0.70192	0.000	-5.84767	30.00000	Averaged
$ 35 Dibenzothiopene-d8(SS)	1.42372	1.43824	0.000	-1.02002	30.00000	Averaged
36 Dibenzothiophene	0.95081	0.97602	0.000	-2.65157	30.00000	Averaged
$ 42 Phenanthrene-d10(SS)	1.28693	1.29920	0.000	-0.95301	30.00000	Averaged
43 Phenanthrene	1.08990	1.11793	0.000	-2.57150	30.00000	Averaged
$ 45 Anthracene-d10(SS)	1.11095	1.06402	0.000	4.22400	30.00000	Averaged
46 Anthracene	1.24875	1.32075	0.000	-5.76582	30.00000	Averaged
$ 47 13C6-Anthracene	1.17164	1.17282	0.000	-0.10134	30.00000	Averaged
52 1-Methylphenanthrene	0.67097	0.68804	0.000	-2.54432	30.00000	Averaged
$ 54 Fluoranthene-d10(SS)	1.22681	1.23623	0.000	-0.76835	30.00000	Averaged
55 Fluoranthene	1.10628	1.12184	0.000	-1.40637	30.00000	Averaged
57 Pyrene	1.16907	1.19511	0.000	-2.22741	30.00000	Averaged
$ 58 Terphenyl-d14	0.49884	0.53751	0.000	-7.75103	30.00000	Averaged
$ 61 Benzo(a)anthracene-d12(SS)	0.63211	0.57485	0.000	9.05831	30.00000	Averaged
62 Benzo(a)anthracene	1.48825	1.63359	0.000	-9.76587	30.00000	Averaged
$ 64 Chrysene-d12(SS)	1.00121	1.07840	0.000	-7.70951	30.00000	Averaged
65 Chrysene	1.09976	1.10401	0.000	-0.38595	30.00000	Averaged
$ 71 Benzo(b)fluoranthene-d12(SS	1.06491	1.01827	0.000	4.38010	30.00000	Averaged
72 Benzo(b)fluoranthene	1.38804	1.43915	0.000	-3.68253	30.00000	Averaged
$ 74 Benzo(k)fluoranthene-d12(SS	1.48978	1.50325	0.000	-0.90417	30.00000	Averaged

Data File: /var/chem/gcms/mp.i/P080311.b/ph03ccv.d
Report Date: 04-Aug-2011 15:29

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/ph03ccv.d
Lab Smp Id: PH03CCV Client Smp ID: PAH0362
Inj Date : 03-AUG-2011 12:27
Operator : 11211 Inst ID: mp.i
Smp Info : PH03CCV,,2,4,,PAH0362
Misc Info : P080311,SIMPAH3
Comment :
Method : /chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 04-Aug-2011 15:29 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

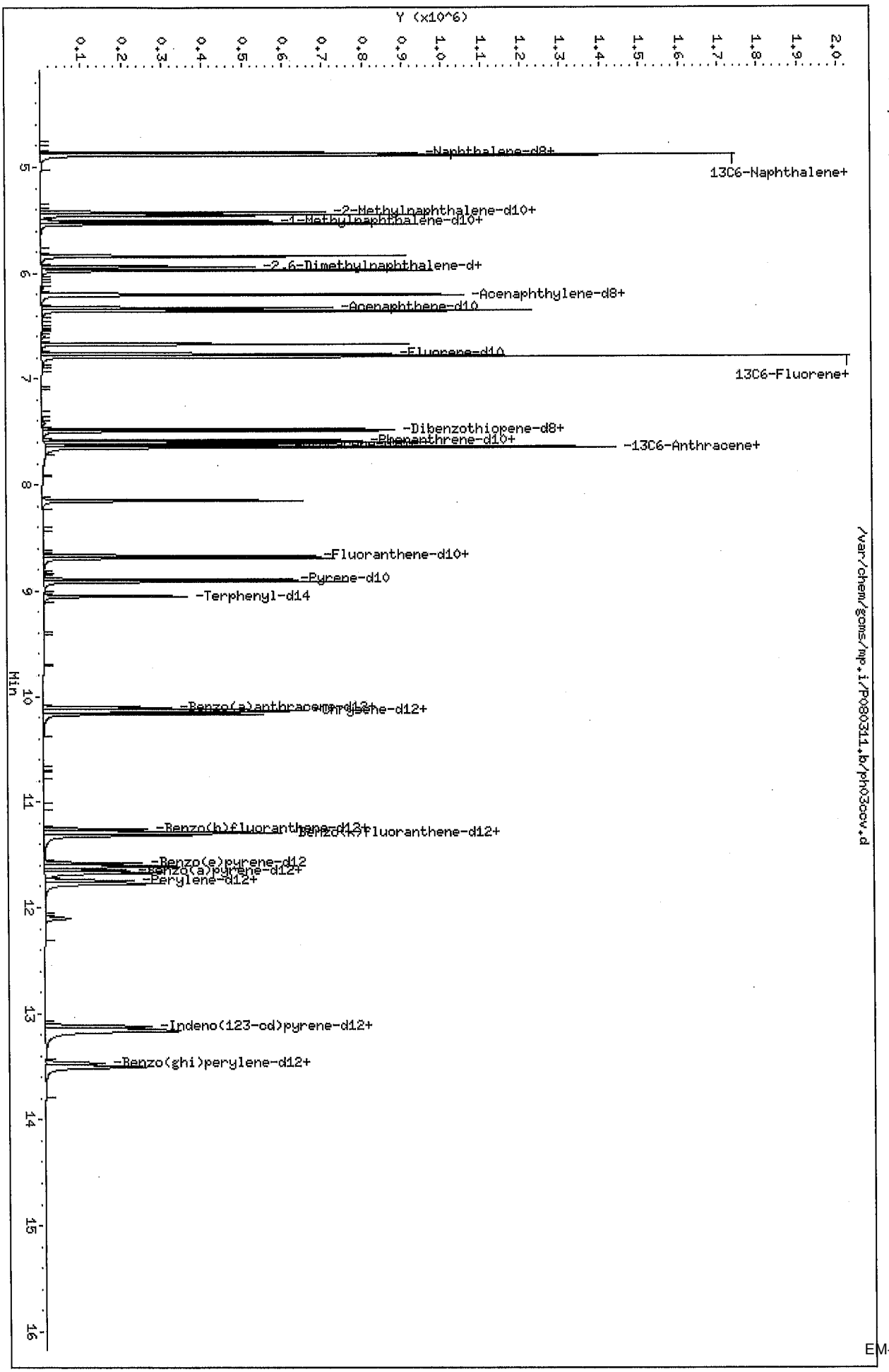
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.869	4.869	(1.000)	692165	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.869	4.869	(0.769)	692165	0.50000	0.491
3 Naphthalene	128	4.887	4.887	(1.004)	600246	0.50000	0.517
$ 222 13C6-Naphthalene	134	4.887	4.887	(1.004)	640964	0.50000	0.501
* 10 2-Methylnaphthalene-d10	152	5.427	5.427	(1.000)	377267	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.427	5.427	(0.858)	377267	0.50000	0.493
12 2-Methylnaphthalene	142	5.454	5.454	(1.005)	389185	0.50000	0.515
* 13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	379088	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.871)	379088	0.50000	0.498
15 1-Methylnaphthalene	142	5.536	5.536	(1.005)	377189	0.50000	0.513
16 Biphenyl	154	5.840	5.840	(1.076)	471605	0.50000	0.524
* 17 2,6-Dimethylnaphthalene-d12	168	5.937	5.937	(1.000)	325216	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.937	5.937	(0.938)	325216	0.50000	0.496
19 2,6 Dimethylnaphthalene	156	5.974	5.974	(1.006)	332502	0.50000	0.514

Data File: /var/chem/gcms/mp.i/P080311.b/ph03ccv.d
Report Date: 04-Aug-2011 15:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
*	20 Acenaphthylene-d8	160	6.196	6.196	(1.000)	514217	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.196	6.196	(0.979)	514217	0.50000	0.465
	22 Acenaphthylene	152	6.208	6.208	(1.002)	537430	0.50000	0.528
*	23 Acenaphthene-d10	164	6.327	6.327	(1.000)	304000	0.50000	0.500
	24 Acenaphthene	154	6.353	6.353	(1.025)	327680	0.50000	0.547
	25 2,3,5 Trimethylnaphthalene	170	6.674	6.674	(1.124)	282615	0.50000	0.514
$	26 Fluorene-d10	176	6.763	6.763	(0.892)	297686	0.50000	0.519
	27 Fluorene	166	6.788	6.788	(0.895)	391127	0.50000	0.531
$	28 13C6-Fluorene	171	6.786	6.786	(0.895)	336635	0.50000	0.529
*	34 Dibenzothiopene-d8	192	7.478	7.478	(1.000)	530919	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.478	7.478	(0.841)	530919	0.50000	0.505
	36 Dibenzothiophene	184	7.495	7.495	(1.002)	518187	0.50000	0.513
*	41 Phenanthrene-d10	188	7.582	7.582	(1.000)	479591	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.582	7.582	(0.853)	479591	0.50000	0.505
	43 Phenanthrene	178	7.603	7.603	(1.003)	536147	0.50000	0.513
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	392777	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	392777	0.50000	0.479
	46 Anthracene	178	7.648	7.648	(1.002)	518762	0.50000	0.529
$	47 13C6-Anthracene	184	7.646	7.646	(0.860)	432941	0.50000	0.501
	52 1-Methylphenanthrene	192	8.150	8.150	(1.075)	329980	0.50000	0.513
*	53 Fluoranthene-d10	212	8.672	8.672	(1.000)	456348	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.672	8.672	(0.975)	456348	0.50000	0.504
	55 Fluoranthene	202	8.687	8.687	(1.002)	511950	0.50000	0.507
*	56 Pyrene-d10	212	8.891	8.891	(1.000)	369144	0.50000	0.500
	57 Pyrene	202	8.908	8.908	(1.027)	545386	0.50000	0.511
$	58 Terphenyl-d14	244	9.050	9.050	(1.044)	245290	0.50000	0.539
*	60 Benzo(a)anthracene-d12	240	10.108	10.108	(1.000)	212204	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.108	10.108	(1.137)	212204	0.50000	0.455
	62 Benzo(a)anthracene	228	10.129	10.129	(1.002)	346655	0.50000	0.549
*	63 Chrysene-d12	240	10.142	10.142	(1.000)	398085	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.142	10.142	(1.141)	398085	0.50000	0.539
	65 Chrysene	228	10.167	10.167	(1.002)	439489	0.50000	0.502
*	70 Benzo(b)fluoranthene-d12	264	11.259	11.259	(1.000)	241851	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.259	11.259	(0.972)	241851	0.50000	0.478
	72 Benzo(b)fluoranthene	252	11.289	11.289	(1.003)	348060	0.50000	0.518
*	73 Benzo(k)fluoranthene-d12	264	11.295	11.295	(1.000)	357040	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.295	11.295	(0.975)	357040	0.50000	0.505
	75 Benzo(k)fluoranthene	252	11.319	11.319	(1.002)	399386	0.50000	0.506
*	76 Benzo(e)pyrene-d12	264	11.581	11.581	(1.000)	237512	0.50000	0.500
	77 Benzo(e)pyrene	252	11.611	11.611	(0.997)	344655	0.50000	0.563
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	238944	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	243570	0.50000	0.465
	80 Benzo(a)pyrene	252	11.671	11.671	(1.002)	278522	0.50000	0.529
*	81 Perylene-d12	264	11.743	11.743	(1.000)	252806	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.743	11.743	(1.014)	252806	0.50000	0.498
	83 Perylene	252	11.773	11.773	(1.003)	317859	0.50000	0.504
*	84 Indeno(123-cd)pyrene-d12	288	13.118	13.118	(1.000)	279187	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080311.b/ph03ccv.d
Report Date: 04-Aug-2011 15:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.118	13.118	(1.133)	279187	0.50000	0.487
	86 Indeno(1,2,3-cd)pyrene	276	13.152	13.152	(1.003)	339113	0.50000	0.515
*	87 Dibenz(ah)anthracene-d14	292	13.123	13.123	(1.000)	214736	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.123	13.123	(1.133)	214736	0.50000	0.496
	89 Dibenz(a,h)anthracene	278	13.169	13.169	(1.004)	270639	0.50000	0.526
*	90 Benzo(ghi)perylene-d12	288	13.469	13.469	(1.000)	217118	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.469	13.469	(1.163)	215687	0.50000	0.503
	92 Benzo(g,h,i)perylene	276	13.502	13.502	(1.002)	299165	0.50000	0.507


Data File: /var/chem/gcms/mp.i/P080311.b/ph03ccv.d
Date : 03-AUG-2011 12:27
Client ID: PAH0362
Sample Info: PH03CCV,2,4,,PAH0362
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^6)
Min
-Naphthalene-d8+
13C6-Naphthalene+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
13C6-Fluorene+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+
/var/chem/gcms/mp.i/P080311.b/ph03ccv.d

TestAmerica Knoxville GC/MS-SIM Continuing Calibration Review / Narrative Checklist
Method: LRPAH PAHs and Selected SVOCs - KNOX-ID-0016, Revision 8

Analysis Date:	8/14/11	CCAL Batch/ Scan Name:	P081411	Instrument:	MP	ICAL Batch/ Scan Name:	P080111F	Scanned ☐ ✓

A. Review Items	N/A	Yes	No	Why is data reportable?	2nd √
1. Were all injections in sequence within 12 hr of CCAL?		✓			✓
2. Was date/time of analysis verified between header and logbook?		✓			✓
3. Are peak integrations appropriate?		✓			✓
4. Is the %D or drift <30% for all analytes		✓			✓
5. Are the recovery standards within 50-200% of the ICAL CS4 level?		✓			✓
6. Are the MID descriptors properly set?		✓			✓
7. Are correct RFs listed in CCAL summary?		✓			✓
8. Was the correct ICAL used for quantitation? (Verify 1 RF.)		✓			✓
9. Elution order checked on isomeric pairs/coeluters?					
• 2-methylnaphthalene before 1-methylnaphthalene (& d10 isomers)		✓			✓
• acenaphthylene before acenaphthene (& d10 isomers)		✓			✓
• dibenzothiophene before anthracene		✓			✓
• phenanthrene before anthracene (& d10 isomers)		✓			✓
• fluoranthene before pyrene (& d10 isomers)		✓			✓
• benzo(a)anthracene before chrysene (& d12 isomers)		✓			✓
• benzo(b)fluoranthene before benzo(k)fluoranthene (& d12 isomers)		✓			✓
• benzo(e)pyrene before benzo(a)pyrene benzo(a)pyrene before perylene (& d12 isomers)		✓			✓
• Indeno(1,2,3-cd)pyrene before benzo(g,h,i)perylene (& d12 isomers)		✓			✓
10. Were the first/last RTs for each alkyl PAH homologue group properly identified and indicated on the chromatogram?	✓				NA
11. If criteria were not met, was a NCM generated and approved by supervisor?	✓				NA
12. Does the CCAL folder contain complete data in the following order? CCAL data review checklist, runlog, Target Continuing Calibration Report, followed by the quan report and chromatograms for the CCAL and window standard.		✓			✓

1st Level Reviewer:	Date: 8/15/11
Comments:	

2nd Level Reviewer:	Date: 8/16/11
Comments:	

TestAmerica Knoxville
Instrument MP Run/Maintenance Log

Date/Time Verified ☐

Preventive Maintenance Performed: ☑ septa ☑ liner ☑ seal ☑ clip column ☐ SPME fiber ☐ other: see below / maint. log

Target Batch	P080411			Date	8/14/11
ICAL Batch	P080111E			Analyst	ME
Method	☑ KNOX-ID-0016	☐ KNOX-ID-0018	☐	IS ID & vol.	AP N/A 8/14/11

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
	PH14HEX01	14:39				
CCV	PH14CCV	15:03				P0H0362
HIG250404	MK51E2AC A	15:28		Comb Ac	1207014	
	MK51E2AC	15:53				MK51E1AE
	MK51E2AD	16:18				MK51E14F
	MK5C32AC	16:55	1250			(MK5C33AC) Post Spike
	MK5C52AC	17:20	2500			(MK5C53AC)
	MK5C62AC	17:44	500			(MK5C63AC)
	~~PB14~~ PH14HEX02	18:31				
HIH020452	MLE7G1AA	18:56			1217069	MB
	MLE7G1AC	19:21				LCS
	MLE7G1AD	19:45				LCSD
	MLCLK1AC	20:10				
	MLCLJ1AC	20:35				
	MLCLH1AC	21:00				
	MLCKW1AC	21:24				
	MLCLF2AC	21:49	10			10 ml to 100 ml Rpt @ DC50
	MLCLF1AC	22:13	—			

Comments: Post Spike:

MK5C33AC : 25 ml of P0H0293 (Recovery STD), 12.5 ml of P0H0652 (labeled I.S.), 20 ml to 500 ml of sample (Dilution) in Hexane

MK5C53AC : " " " " , 10 ml to 500 ml of Sample (dilution)

MK5C63AC : " " " " , 50 ml to 500 ml of Sample (dilution)

Samples: AP 8/14/11

Data File: /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Report Date: 15-Aug-2011 19:10

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mp.i
Lab File ID: ph14ccv.d
Analysis Type: AIR
Lab Sample ID: PH14CCV
Method: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m

Injection Date: 14-AUG-2011 15:03
Init. Cal. Date(s): 01-AUG-2011 01-AUG-2011
Init. Cal. Times: 12:50 15:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 2 Naphthalene-d8(SS)	2.31710	2.38483	0.000	-2.92322	30.00000	Averaged
3 Naphthalene	0.83828	0.87905	0.000	-4.86321	30.00000	Averaged
$ 222 13C6-Naphthalene	0.92383	0.95207	0.000	-3.05733	30.00000	Averaged
$ 11 2-Methylnaphthalene-d10(SS)	1.25944	1.28599	0.000	-2.10776	30.00000	Averaged
12 2-Methylnaphthalene	1.00226	1.03555	0.000	-3.32208	30.00000	Averaged
$ 14 1-Methylnaphthalene-d10(SS)	1.25302	1.27873	0.000	-2.05244	30.00000	Averaged
15 1-Methylnaphthalene	0.96943	0.99403	0.000	-2.53789	30.00000	Averaged
16 Biphenyl	1.19363	1.24158	0.000	-4.01738	30.00000	Averaged
$ 18 2,6-Dimethylnaph-d12(SS)	1.07919	1.07879	0.000	0.03676	30.00000	Averaged
19 2,6 Dimethylnaphthalene	0.99387	1.03493	0.000	-4.13132	30.00000	Averaged
$ 21 Acenaphthylene-d8(SS)	1.81729	1.67799	0.000	7.66541	30.00000	Averaged
22 Acenaphthylene	0.98978	1.04650	0.000	-5.73045	30.00000	Averaged
24 Acenaphthene	0.58295	0.65369	0.000	-12.13473	30.00000	Averaged
25 2,3,5 Trimethylnaphthalene	0.84519	0.85063	0.000	-0.64401	30.00000	Averaged
$ 26 Fluorene-d10	0.59796	0.62778	0.000	-4.98830	30.00000	Averaged
27 Fluorene	0.76847	0.84022	0.000	-9.33704	30.00000	Averaged
$ 28 13C6-Fluorene	0.66314	0.72906	0.000	-9.94090	30.00000	Averaged
$ 35 Dibenzothiopene-d8(SS)	1.42372	1.50697	0.000	-5.84734	30.00000	Averaged
36 Dibenzothiophene	0.95081	0.97981	0.000	-3.05079	30.00000	Averaged
$ 42 Phenanthrene-d10(SS)	1.28693	1.35984	0.000	-5.66502	30.00000	Averaged
43 Phenanthrene	1.08990	1.12757	0.000	-3.45666	30.00000	Averaged
$ 45 Anthracene-d10(SS)	1.11095	1.09689	0.000	1.26502	30.00000	Averaged
46 Anthracene	1.24875	1.34499	0.000	-7.70639	30.00000	Averaged
$ 47 13C6-Anthracene	1.17164	1.24721	0.000	-6.44993	30.00000	Averaged
52 1-Methylphenanthrene	0.67097	0.67111	0.000	-0.02004	30.00000	Averaged
$ 54 Fluoranthene-d10(SS)	1.22681	1.22872	0.000	-0.15596	30.00000	Averaged
55 Fluoranthene	1.10628	1.15046	0.000	-3.99324	30.00000	Averaged
57 Pyrene	1.16907	1.21656	0.000	-4.06218	30.00000	Averaged
$ 58 Terphenyl-d14	0.49884	0.56780	0.000	-13.82416	30.00000	Averaged
$ 61 Benzo(a)anthracene-d12(SS)	0.63211	0.58475	0.000	7.49278	30.00000	Averaged
62 Benzo(a)anthracene	1.48825	1.62689	0.000	-9.31559	30.00000	Averaged
$ 64 Chrysene-d12(SS)	1.00121	1.09928	0.000	-9.79467	30.00000	Averaged
65 Chrysene	1.09976	1.13628	0.000	-3.32061	30.00000	Averaged
$ 71 Benzo(b)fluoranthene-d12(SS	1.06491	1.01200	0.000	4.96861	30.00000	Averaged
72 Benzo(b)fluoranthene	1.38804	1.44050	0.000	-3.77966	30.00000	Averaged
$ 74 Benzo(k)fluoranthene-d12(SS	1.48978	1.57346	0.000	-5.61699	30.00000	Averaged

Data File: /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Report Date: 15-Aug-2011 19:10

TestAmerica Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mp.i
Lab File ID: ph14ccv.d
Analysis Type: AIR
Lab Sample ID: PH14CCV
Method: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m

Injection Date: 14-AUG-2011 15:03
Init. Cal. Date(s): 01-AUG-2011 01-AUG-2011
Init. Cal. Times: 12:50 15:19
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
75 Benzo(k)fluoranthene	1.10431	1.13852	0.000	-3.09820	30.00000	Averaged
77 Benzo(e)pyrene	1.28102	1.44141	0.000	-12.52089	30.00000	Averaged
$ 79 Benzo(a)pyrene-d12(SS)	1.10299	1.03470	0.000	6.19110	30.00000	Averaged
80 Benzo(a)pyrene	1.10231	1.18766	0.000	-7.74233	30.00000	Averaged
$ 82 Perylene-d12(SS)	1.06843	1.05027	0.000	1.70005	30.00000	Averaged
83 Perylene	1.24839	1.27997	0.000	-2.52953	30.00000	Averaged
$ 85 Indeno(123-cd)pyrene-d12(SS	1.20672	1.21143	0.000	-0.38983	30.00000	Averaged
86 Indeno(1,2,3-cd)pyrene	1.17964	1.16647	0.000	1.11627	30.00000	Averaged
$ 88 Dibenz(ah)anthracene-d14(SS	0.91140	0.92407	0.000	-1.39062	30.00000	Averaged
89 Dibenz(a,h)anthracene	1.19765	1.22460	0.000	-2.25080	30.00000	Averaged
$ 91 Benzo(ghi)perylene-d12(SS)	0.90309	0.96498	0.000	-6.85312	30.00000	Averaged
92 Benzo(g,h,i)perylene	1.35756	1.31829	0.000	2.89244	30.00000	Averaged

Data File: /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Report Date: 15-Aug-2011 19:10

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Lab Smp Id: PH14CCV Client Smp ID: PAH0362
Inj Date : 14-AUG-2011 15:03
Operator : 11211 Inst ID: mp.i
Smp Info : PH14CCV,,2,4,,PAH0362
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 19:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

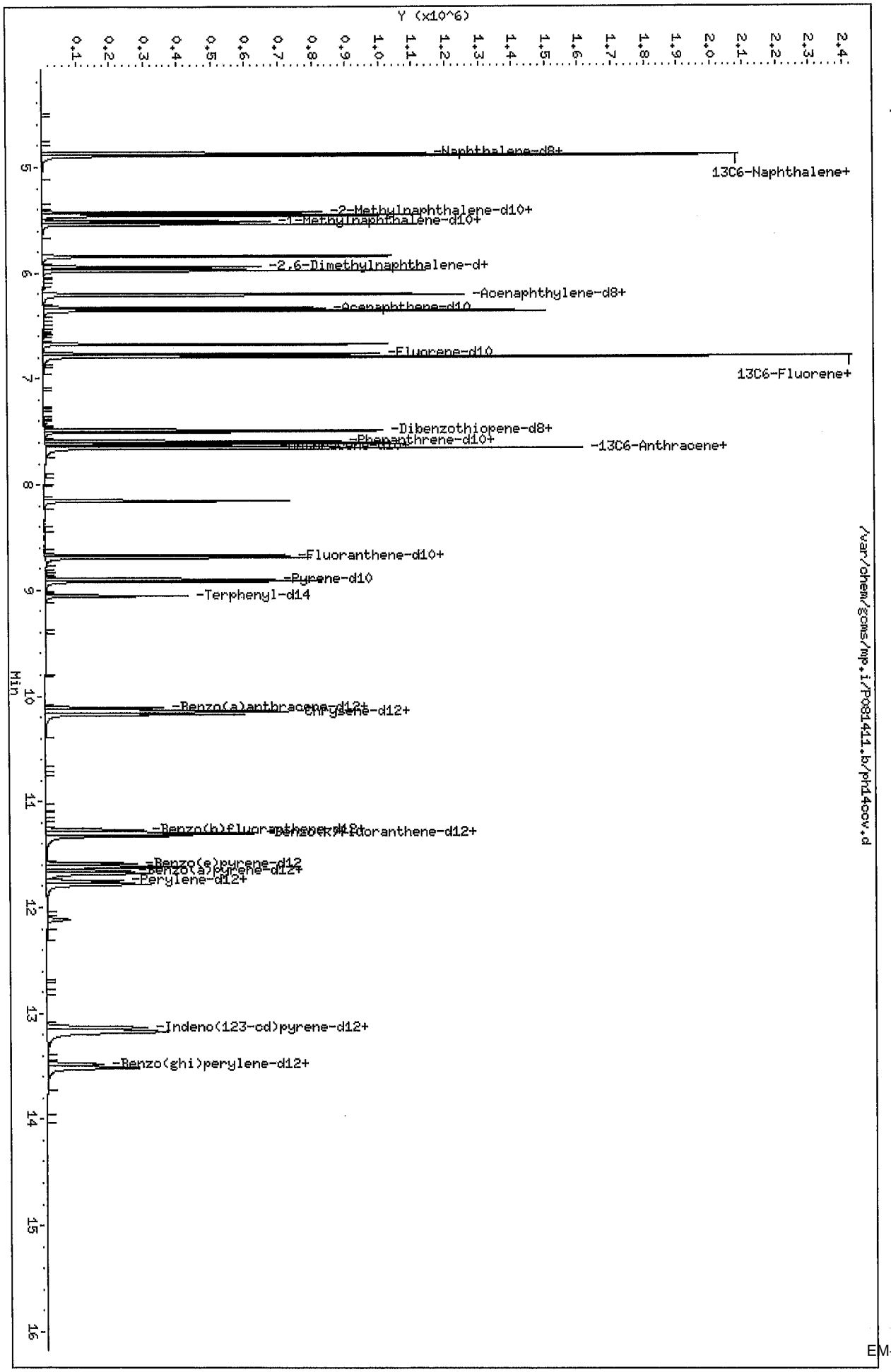
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	834614	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	834614	0.50000	0.515
3 Naphthalene	128	4.888	4.888	(1.003)	733665	0.50000	0.524
$ 222 13C6-Naphthalene	134	4.888	4.888	(1.003)	794612	0.50000	0.515
* 10 2-Methylnaphthalene-d10	152	5.431	5.431	(1.000)	450054	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.431	5.431	(0.857)	450054	0.50000	0.511
12 2-Methylnaphthalene	142	5.457	5.457	(1.005)	466054	0.50000	0.517
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	447516	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.871)	447516	0.50000	0.510
15 1-Methylnaphthalene	142	5.540	5.540	(1.005)	444846	0.50000	0.513
16 Biphenyl	154	5.842	5.842	(1.076)	558778	0.50000	0.520
* 17 2,6-Dimethylnaphthalene-d12	168	5.942	5.942	(1.000)	377542	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.942	5.942	(0.938)	377542	0.50000	0.500
19 2,6 Dimethylnaphthalene	156	5.979	5.979	(1.006)	390729	0.50000	0.521

Data File: /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Report Date: 15-Aug-2011 19:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
*	20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	587243	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	587243	0.50000	0.462
	22 Acenaphthylene	152	6.211	6.211	(1.001)	614549	0.50000	0.529
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	349968	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	383872	0.50000	0.561
	25 2,3,5 Trimethylnaphthalene	170	6.679	6.679	(1.124)	321149	0.50000	0.503
$	26 Fluorene-d10	176	6.768	6.768	(0.892)	340984	0.50000	0.525
	27 Fluorene	166	6.791	6.791	(0.895)	456373	0.50000	0.547
$	28 13C6-Fluorene	171	6.791	6.791	(0.895)	395996	0.50000	0.550
*	34 Dibenzothiopene-d8	192	7.484	7.484	(1.000)	601925	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.484	7.484	(0.841)	601925	0.50000	0.529
	36 Dibenzothiophene	184	7.499	7.499	(1.002)	589775	0.50000	0.515
*	41 Phenanthrene-d10	188	7.588	7.588	(1.000)	543156	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.588	7.588	(0.853)	543156	0.50000	0.528
	43 Phenanthrene	178	7.607	7.607	(1.002)	612448	0.50000	0.517
*	44 Anthracene-d10	188	7.636	7.636	(1.000)	438129	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.636	7.636	(0.858)	438129	0.50000	0.494
	46 Anthracene	178	7.653	7.653	(1.002)	589278	0.50000	0.539
$	47 13C6-Anthracene	184	7.651	7.651	(0.860)	498168	0.50000	0.532
	52 1-Methylphenanthrene	192	8.155	8.155	(1.075)	364516	0.50000	0.500
*	53 Fluoranthene-d10	212	8.676	8.676	(1.000)	490784	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.676	8.676	(0.975)	490784	0.50000	0.501
	55 Fluoranthene	202	8.694	8.694	(1.002)	564627	0.50000	0.520
*	56 Pyrene-d10	212	8.898	8.898	(1.000)	399427	0.50000	0.500
	57 Pyrene	202	8.915	8.915	(1.028)	597068	0.50000	0.520
$	58 Terphenyl-d14	244	9.054	9.054	(1.044)	278668	0.50000	0.569
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	233565	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	233565	0.50000	0.463
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	379985	0.50000	0.547
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	439074	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.140)	439081	0.50000	0.549
	65 Chrysene	228	10.175	10.175	(1.003)	498912	0.50000	0.517
*	70 Benzo(b)fluoranthene-d12	264	11.271	11.271	(1.000)	257860	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.271	11.271	(0.973)	257860	0.50000	0.475
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.002)	371447	0.50000	0.519
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	400921	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	400921	0.50000	0.528
	75 Benzo(k)fluoranthene	252	11.325	11.325	(1.002)	456456	0.50000	0.515
*	76 Benzo(e)pyrene-d12	264	11.588	11.588	(1.000)	254802	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	373248	0.50000	0.563
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	258946	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	263644	0.50000	0.469
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	307539	0.50000	0.539
*	81 Perylene-d12	264	11.749	11.749	(1.000)	267611	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	267611	0.50000	0.491
	83 Perylene	252	11.779	11.779	(1.003)	342533	0.50000	0.513
*	84 Indeno(123-cd)pyrene-d12	288	13.131	13.131	(1.000)	308222	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Report Date: 15-Aug-2011 19:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.131	13.131	(1.133)	308674	0.50000	0.502
	86 Indeno(1,2,3-cd)pyrene	276	13.161	13.161	(1.002)	359532	0.50000	0.494
*	87 Dibenz(ah)anthracene-d14	292	13.131	13.131	(1.000)	235456	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.131	13.131	(1.133)	235456	0.50000	0.507
	89 Dibenz(a,h)anthracene	278	13.178	13.178	(1.004)	288340	0.50000	0.511
*	90 Benzo(ghi)perylene-d12	288	13.481	13.481	(1.000)	245704	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.481	13.481	(1.163)	245880	0.50000	0.534
	92 Benzo(g,h,i)perylene	276	13.515	13.515	(1.002)	323910	0.50000	0.486


Data File: /var/chem/gcms/mp.i/P081411.b/ph14ccv.d
Date : 14-AUG-2011 15:03
Client ID: PAH0362
Sample Info: PH14CCV,2,4,,PAH0362
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^6)
Min
-Naphthalene-d8+
13C6-Naphthalene+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
13C6-Fluorene+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+
/var/chem/gcms/mp.i/P081411.b/ph14ccv.d

Raw QC Data

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406
MB Lot-Sample #: H1G260000-014 Work Order #...: MK51E1AA Matrix.....: AIR

Prep Date.....: 07/26/11 Analysis Date..: 08/03/2011
Prep Batch #...: 1207014
Dilution Factor: 2 Method.....: KNOX ID-0016

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	40	ng/sample	9.8
Acenaphthylene	ND	40	ng/sample	4.8
Anthracene	ND	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	ND	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	ND	20	ng/sample	13
Fluorene	ND	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	ND	100	ng/sample	42
Naphthalene	ND	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	ND	60	ng/sample	48
Pyrene	ND	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	100	(60 - 140)
Naphthalene-d8	88	(60 - 140)
2-Methylnaphthalene-d10	94	(60 - 140)
Acenaphthylene-d8	109	(60 - 140)
Phenanthrene-d10	87	(60 - 140)
Fluoranthene-d10	100	(60 - 140)
Benzo(a)anthracene-d12	135	(60 - 140)
Chrysene-d12	93	(60 - 140)
Benzo(b)fluoranthene-d12	110	(60 - 140)
Benzo(k)fluoranthene-d12	82	(60 - 140)
Benzo(a)pyrene-d12	105	(60 - 140)
Perylene-d12	101	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	108	(60 - 140)
Dibenz(ah)anthracene-d14	106	(60 - 140)
Benzo(ghi)perylene-d12	101	(60 - 140)

NOTE(S):

1 13C6-anthracene recovery = 85 %

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 12:03

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Lab Smp Id: MK51E1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 03-AUG-2011 15:58
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E1AA,,3,,MBLK
Misc Info : P080311,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 05-Aug-2011 09:34 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 9 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.872	4.869	(1.000)	645533	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.872	4.869	(0.770)	645533	0.44187	442
3 Naphthalene	128	4.887	4.887	(1.003)	133945	0.12376	124
$ 222 13C6-Naphthalene	134	4.869	4.887	(0.999)	59349	0.04976	~~49.8(R)~~
* 10 2-Methylnaphthalene-d10	152	5.430	5.427	(1.000)	374735	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.430	5.427	(0.858)	374735	0.47192	472
12 2-Methylnaphthalene	142	5.457	5.454	(1.005)	12910	0.01719	17.2
* 13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	363624	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.870)	363624	0.46027	460
15 1-Methylnaphthalene	142	5.540	5.536	(1.005)	6693	0.00949	9.49
16 Biphenyl	154	5.842	5.840	(1.076)	117827	0.13171	132
* 17 2,6-Dimethylnaphthalene-d12	168	5.940	5.937	(1.000)	328492	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.940	5.937	(0.938)	328492	0.48278	483
19 2,6 Dimethylnaphthalene	156	5.983	5.974	(1.007)	3142	0.00481	4.81

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 12:03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.199	6.196	(1.000)	622011	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.199	6.196	(0.979)	622011	0.54287	543
	22 Acenaphthylene	152	6.211	6.208	(1.002)	616	0.000501	0.501
*	23 Acenaphthene-d10	164	6.330	6.327	(1.000)	315246	0.50000	0.500
	24 Acenaphthene	154	6.356	6.353	(1.025)	3125	0.00431	4.31
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.674	(1.124)	696	0.00125	1.25
$	26 Fluorene-d10	176	6.771	6.763	(0.893)	314	0.000517	~~0.517(R)~~
	27 Fluorene	166	6.793	6.788	(0.896)	4228	0.00540	5.40
$	28 13C6-Fluorene	171	6.788	6.786	(0.895)	63	9.34e-05	~~0.0934(R)~~
*	34 Dibenzothiopene-d8	192	7.480	7.478	(1.000)	524931	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.480	7.478	(0.841)	524931	0.40419	404
	36 Dibenzothiophene	184	7.495	7.495	(1.002)	3006	0.00301	3.01
*	41 Phenanthrene-d10	188	7.584	7.582	(1.000)	509339	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.584	7.582	(0.853)	509339	0.43387	434
	43 Phenanthrene	178	7.603	7.603	(1.002)	23336	0.02102	21.0
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	505029	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	505029	0.49835	498
	46 Anthracene	178	7.648	7.648	(1.002)	2199	0.00174	1.74
$	47 13C6-Anthracene	184	7.646	7.646	(0.860)	455655	0.42634	426
	52 1-Methylphenanthrene	192	8.153	8.150	(1.075)	1435	0.00210	2.10
*	53 Fluoranthene-d10	212	8.671	8.672	(1.000)	559202	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.671	8.672	(0.975)	559202	0.49969	500
	55 Fluoranthene	202	8.689	8.687	(1.002)	5496	0.00444	4.44
*	56 Pyrene-d10	212	8.893	8.891	(1.000)	456100	0.50000	0.500
	57 Pyrene	202	8.910	8.908	(1.028)	3579	0.00274	2.74
$	58 Terphenyl-d14	244	9.053	9.050	(1.044)	94	0.00017	~~0.170(R)~~
*	60 Benzo(a)anthracene-d12	240	10.103	10.108	(1.000)	389302	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.103	10.108	(1.136)	389302	0.67515	675(R)
	62 Benzo(a)anthracene	228	10.137	10.129	(1.003)	1763	0.00152	~~1.52~~
*	63 Chrysene-d12	240	10.141	10.142	(1.000)	422711	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.141	10.142	(1.140)	422711	0.46284	463
	65 Chrysene	228	10.166	10.167	(1.002)	1069	0.00115	1.15
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.259	(1.000)	375555	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.259	(0.972)	375555	0.55097	551
	72 Benzo(b)fluoranthene	252	11.288	11.289	(1.003)	1258	0.00121	1.21
*	73 Benzo(k)fluoranthene-d12	264	11.294	11.295	(1.000)	391480	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.294	11.295	(0.975)	391480	0.41054	411
	75 Benzo(k)fluoranthene	252	11.336	11.319	(1.004)	1551	0.00179	1.79
*	76 Benzo(e)pyrene-d12	264	11.581	11.581	(1.000)	320038	0.50000	0.500
	77 Benzo(e)pyrene	252	11.641	11.611	(0.999)	1171	0.00123	~~1.23~~ SMQ
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	371412	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	371412	0.52608	526
	80 Benzo(a)pyrene	252	11.677	11.671	(1.003)	736	0.00090	0.900
*	81 Perylene-d12	264	11.742	11.743	(1.000)	346370	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.742	11.743	(1.014)	346370	0.50648	506
	83 Perylene	252	11.772	11.773	(1.003)	166	0.000193	0.193
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.118	(1.000)	417235	0.50000	0.500

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Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 12:03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.118	(1.132)	417235	0.54018	540
	86 Indeno(1,2,3-cd)pyrene	276	13.114	13.152	(1.000)	1685	0.00171	1.71 SHR CMOL
*	87 Dibenz(ah)anthracene-d14	292	13.122	13.123	(1.000)	308165	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.122	13.123	(1.133)	308165	0.52825	528
	89 Dibenz(a,h)anthracene	278	13.169	13.169	(1.004)	186	0.000252	0.252
*	90 Benzo(ghi)perylene-d12	288	13.468	13.469	(1.000)	291687	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.468	13.469	(1.163)	291687	0.50461	505
	92 Benzo(g,h,i)perylene	276	13.506	13.502	(1.003)	518	0.000655	0.655

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 15:54

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Lab Smp Id: MK51E1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 03-AUG-2011 15:58
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E1AA,,3,,MBLK
Misc Info : P080311,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 05-Aug-2011 09:34 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 9 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

all results OK 8-12-11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	1 Naphthalene-d8	136	4.872	4.869	(1.000)	645533	0.50000	0.500
$	2 Naphthalene-d8(SS)	136	4.872	4.869	(0.770)	645533	0.44187	442
	3 Naphthalene	128	4.887	4.887	(1.003)	133945	0.12376	124
*	10 2-Methylnaphthalene-d10	152	5.430	5.427	(1.000)	374735	0.50000	0.500
$	11 2-Methylnaphthalene-d10(SS)	152	5.430	5.427	(0.858)	374735	0.47192	472
	12 2-Methylnaphthalene	142	5.457	5.454	(1.005)	12910	0.01719	17.2
*	13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	363624	0.50000	0.500
$	14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.870)	363624	0.46027	460
	15 1-Methylnaphthalene	142	5.540	5.536	(1.005)	6693	0.00949	9.49
	16 Biphenyl	154	5.842	5.840	(1.076)	117827	0.13171	132
*	17 2,6-Dimethylnaphthalene-d12	168	5.940	5.937	(1.000)	328492	0.50000	0.500
$	18 2,6-Dimethylnaph-d12(SS)	168	5.940	5.937	(0.938)	328492	0.48278	483
	19 2,6 Dimethylnaphthalene	156	5.983	5.974	(1.007)	3142	0.00481	4.81
*	20 Acenaphthylene-d8	160	6.199	6.196	(1.000)	622011	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 15:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	21 Acenaphthylene-d8(SS)	160	6.199	6.196	(0.979)	622011	0.54287	543
	22 Acenaphthylene	152	6.211	6.208	(1.002)	616	0.00050	0.500
*	23 Acenaphthene-d10	164	6.330	6.327	(1.000)	315246	0.50000	0.500
	24 Acenaphthene	154	6.356	6.353	(1.025)	3125	0.00431	4.31
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.674	(1.124)	696	0.00125	1.25
	27 Fluorene	166	6.793	6.788	(0.896)	4228	0.00540	5.40
*	34 Dibenzothiopene-d8	192	7.480	7.478	(1.000)	524931	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.480	7.478	(0.841)	524931	0.40419	404
	36 Dibenzothiophene	184	7.495	7.495	(1.002)	3006	0.00301	3.01
*	41 Phenanthrene-d10	188	7.584	7.582	(1.000)	509339	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.584	7.582	(0.853)	509339	0.43387	434
	43 Phenanthrene	178	7.603	7.603	(1.002)	23336	0.02102	21.0
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	505029	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	505029	0.49835	498
	46 Anthracene	178	7.648	7.648	(1.002)	2199	0.00174	1.74
$	47 13C6-Anthracene	184	7.646	7.646	(0.860)	455655	0.42634	426
	52 1-Methylphenanthrene	192	8.153	8.150	(1.075)	1435	0.00210	2.10
*	53 Fluoranthene-d10	212	8.671	8.672	(1.000)	559202	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.671	8.672	(0.975)	559202	0.49969	500
	55 Fluoranthene	202	8.689	8.687	(1.002)	5496	0.00444	4.44
*	56 Pyrene-d10	212	8.893	8.891	(1.000)	456100	0.50000	0.500
	57 Pyrene	202	8.910	8.908	(1.028)	3579	0.00274	2.74
*	60 Benzo(a)anthracene-d12	240	10.103	10.108	(1.000)	389302	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.103	10.108	(1.136)	389302	0.67515	675(R)
*	63 Chrysene-d12	240	10.141	10.142	(1.000)	422711	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.141	10.142	(1.140)	422711	0.46284	463
	65 Chrysene	228	10.166	10.167	(1.002)	1069	0.00115	1.15
*	70 Benzo(b)fluoranthene-d12	264	11.258	11.259	(1.000)	375555	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.258	11.259	(0.972)	375555	0.55097	551
	72 Benzo(b)fluoranthene	252	11.288	11.289	(1.003)	1258	0.00121	1.21
*	73 Benzo(k)fluoranthene-d12	264	11.294	11.295	(1.000)	391480	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.294	11.295	(0.975)	391480	0.41054	411
	75 Benzo(k)fluoranthene	252	11.336	11.319	(1.004)	1551	0.00179	1.79
*	76 Benzo(e)pyrene-d12	264	11.581	11.581	(1.000)	320038	0.50000	0.500
	77 Benzo(e)pyrene	252	11.611	11.611	(0.997)	405	0.000427	0.427(M)
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	371412	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	371412	0.52608	526
	80 Benzo(a)pyrene	252	11.677	11.671	(1.003)	736	0.000899	0.899
*	81 Perylene-d12	264	11.742	11.743	(1.000)	346370	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.742	11.743	(1.014)	346370	0.50648	506
	83 Perylene	252	11.772	11.773	(1.003)	166	0.000192	~~0.192~~ EMDL
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.118	(1.000)	417235	0.50000	0.500
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.118	(1.132)	417235	0.54018	540
	86 Indeno(1,2,3-cd)pyrene	276	13.139	13.152	(1.002)	388	0.000394	0.394(M)
*	87 Dibenz(ah)anthracene-d14	292	13.122	13.123	(1.000)	308165	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.122	13.123	(1.133)	308165	0.52825	528
	89 Dibenz(a,h)anthracene	278	13.169	13.169	(1.004)	186	0.000252	0.252

No Spectra
8/11/11

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 15:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	90 Benzo(ghi)perylene-d12	288	13.468	13.469	(1.000)	291687	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.468	13.469	(1.163)	291687	0.50461	505
	92 Benzo(g,h,i)perylene	276	13.506	13.502	(1.003)	518	0.000654	0.654

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Report Date: 09-Aug-2011 12:03

TestAmerica Knoxville

RECOVERY REPORT

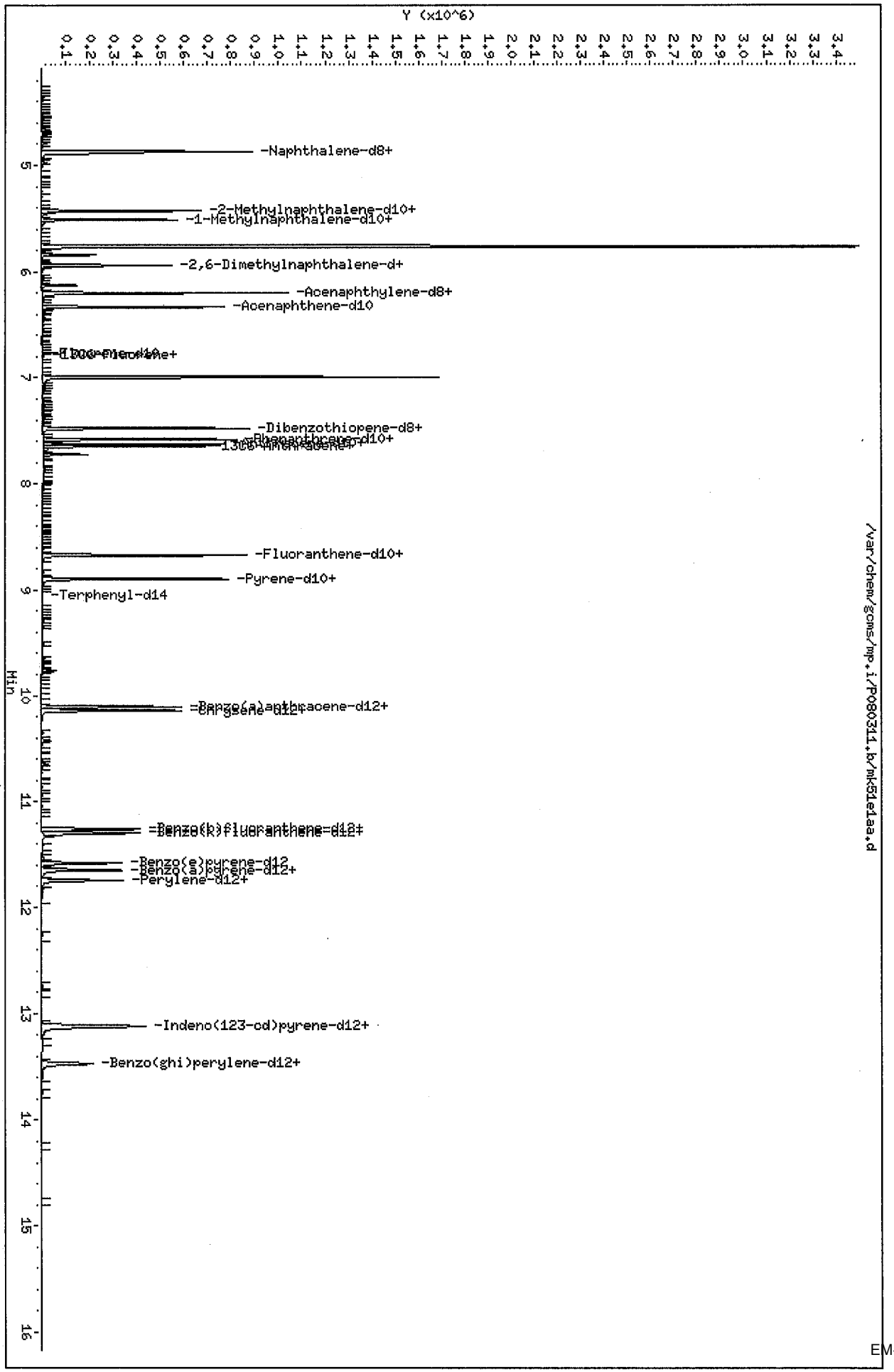
Client Name: ITSBUR
Sample Matrix: GAS
Lab Smp Id: MK51E1AA
Level: LOW
Data Type: MS DATA
SpikeList File: icv.spk
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Misc Info: P080311,SIMPAH3

Client SDG: H1G260000
Fraction: SV
Client Smp ID: INTRA-LAB BLANK
Operator: 11211
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	500	442	88.37	30-120
$ 222 13C6-Naphthalene	500	49.8	9.95*	50-150
$ 11 2-Methylnaphthalen	500	472	94.38	30-120
$ 14 1-Methylnaphthalen	500	460	92.05	30-120
$ 18 2,6-Dimethylnaph-d	500	483	96.56	30-120
$ 21 Acenaphthylene-d8(	500	543	108.57	30-120
$ 26 Fluorene-d10	1000	0.517	0.05*	30-120
$ 28 13C6-Fluorene	1000	0.0934	0.01*	30-120
$ 35 Dibenzothiopene-d8	500	404	80.84	30-120
$ 42 Phenanthrene-d10(S	500	434	86.77	30-120
$ 45 Anthracene-d10(SS)	500	498	99.67	30-120
$ 47 13C6-Anthracene	500	426	85.27	30-120
$ 54 Fluoranthene-d10(S	500	500	99.94	0-120
$ 58 Terphenyl-d14	1000	0.170	0.02*	30-120
$ 61 Benzo(a)anthracene	500	675	135.03*	30-120
$ 64 Chrysene-d12(SS)	500	463	92.57	30-120
$ 71 Benzo(b)fluoranthe	500	551	110.19	30-120
$ 74 Benzo(k)fluoranthe	500	411	82.11	30-120
$ 79 Benzo(a)pyrene-d12	500	526	105.22	30-120
$ 82 Perylene-d12(SS)	500	506	101.30	30-120
$ 85 Indeno(123-cd)pyre	500	540	108.04	30-120
$ 88 Dibenz(ah)anthrace	500	528	105.65	30-120
$ 91 Benzo(ghi)perylene	500	505	100.92	30-120

8.17.11

60-140


Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Date : 03-AUG-2011 15:58
Client ID: INTR4-LAB BLANK
Sample Info: MK51E1AA,,3,,MBLK
Purge Volume: 1.0
Column phase: Varian 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P080311.b/mk51e1aa.d
Y (x10^6)
Min
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Dibenzothiopene-d8+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
=Benzo(a)anthracene-d12+
=Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

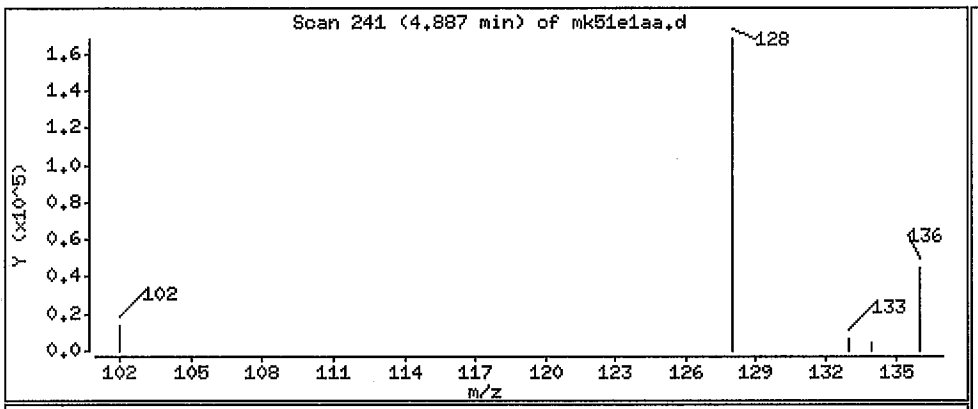
Operator: 11211

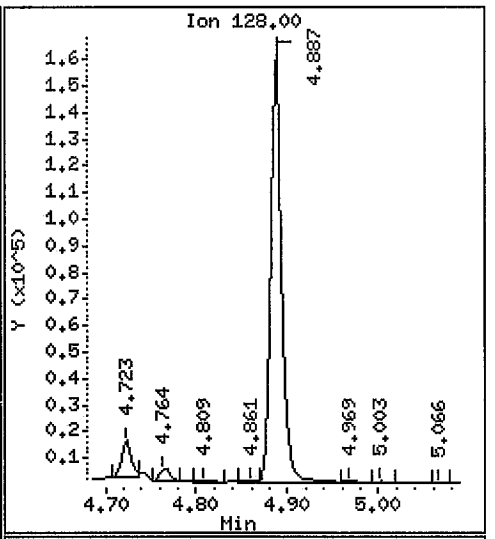
Column phase: Varian: 5MS

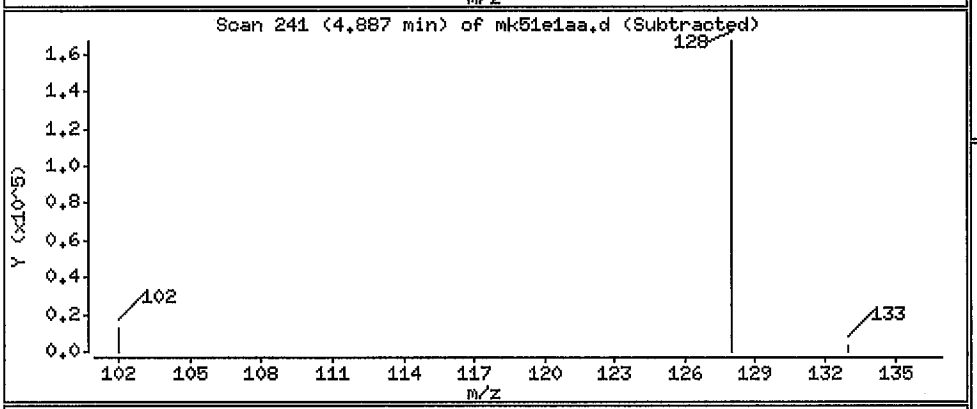
Column diameter: 0.25

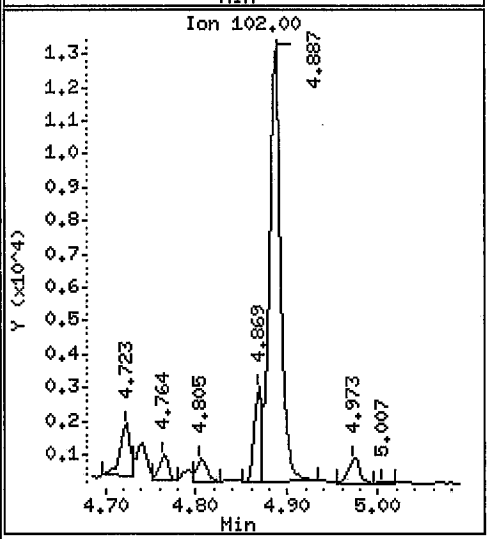
3 Naphthalene

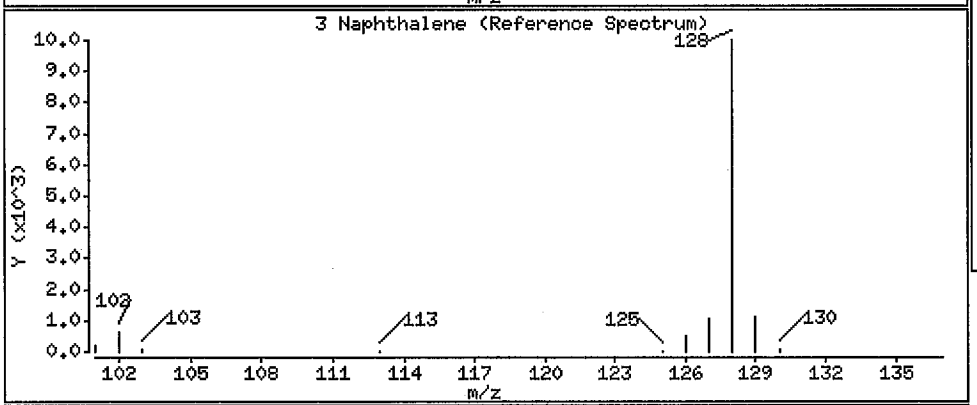
Concentration: 124 ng/sample

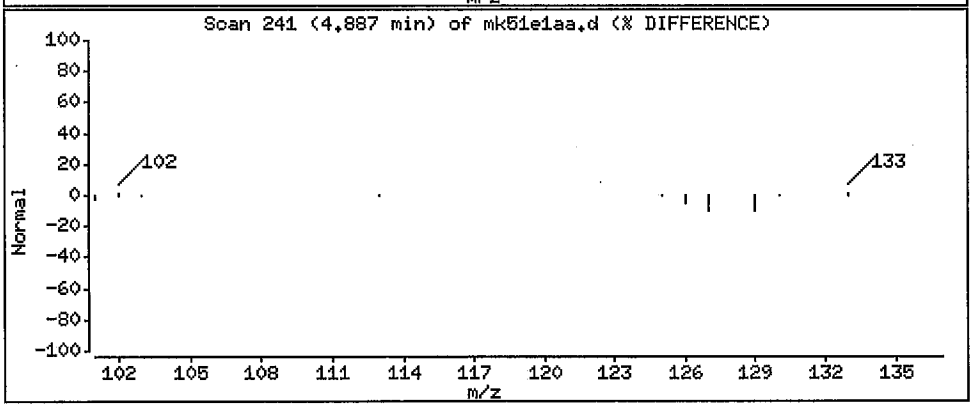












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

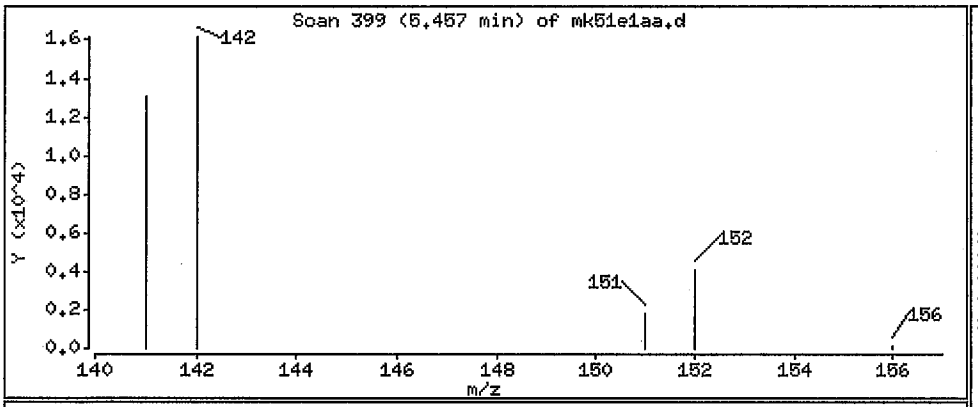
Operator: 11211

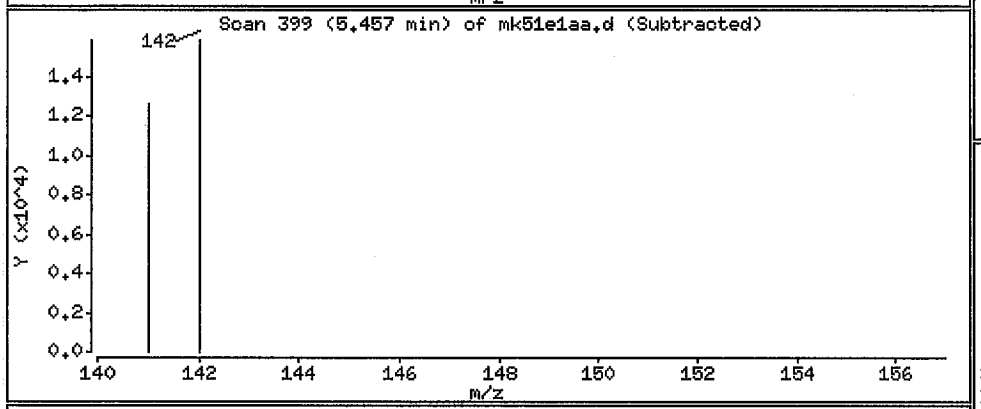
Column phase: Varian: 5MS

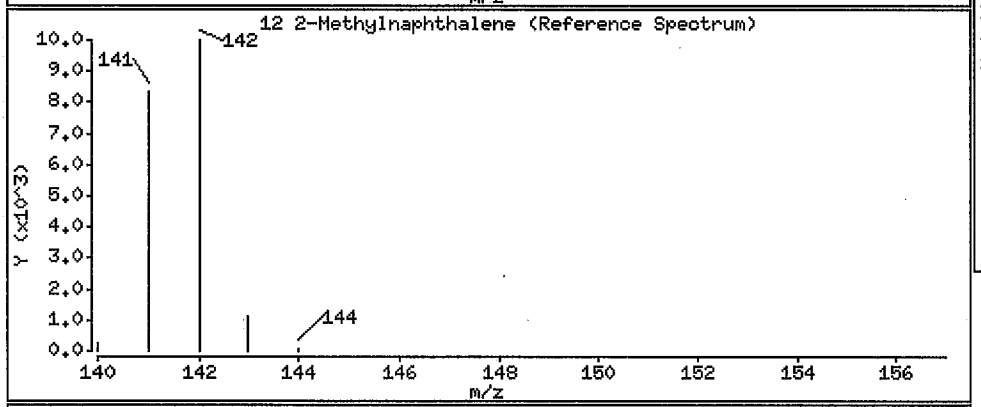
Column diameter: 0.25

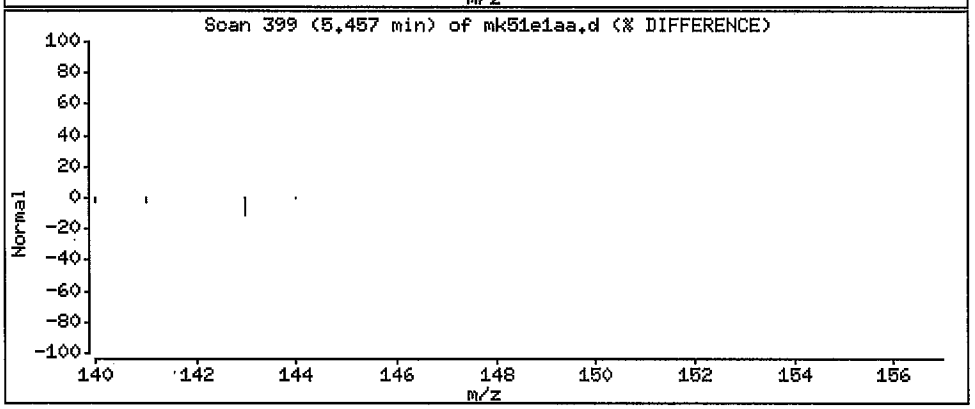
12 2-Methylnaphthalene

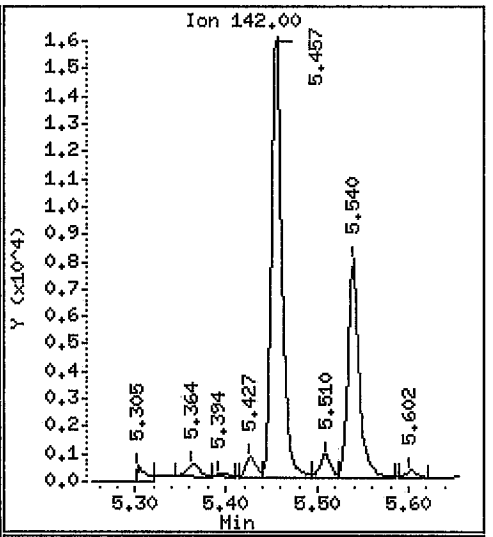
Concentration: 17.2 ng/sample

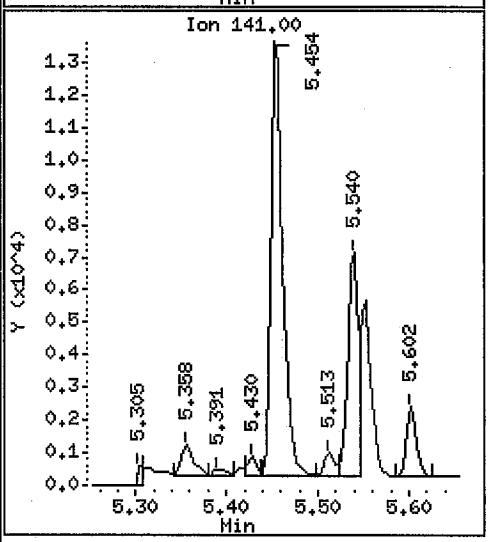












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

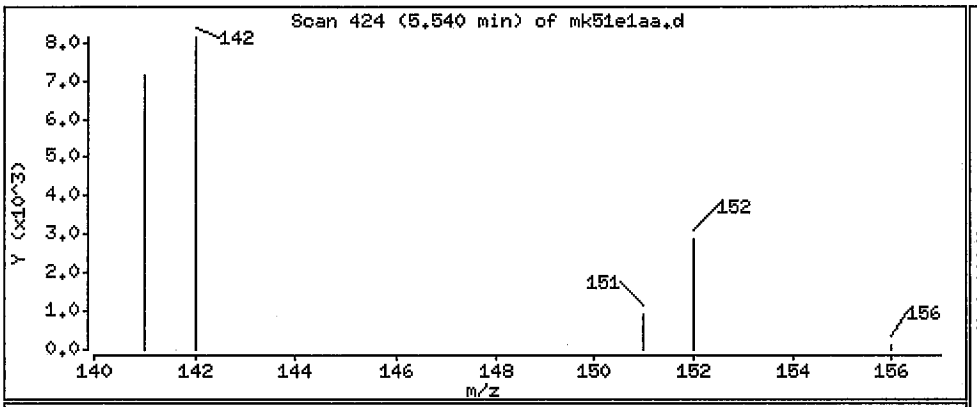
Operator: 11211

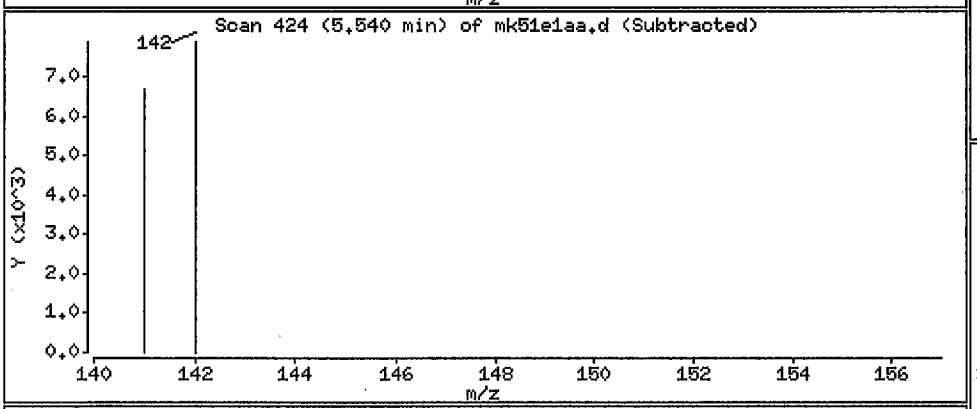
Column phase: Varian: 5MS

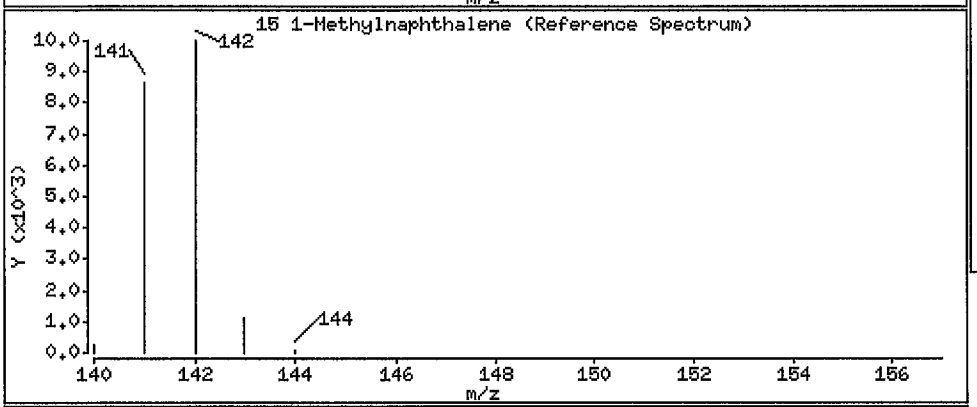
Column diameter: 0.25

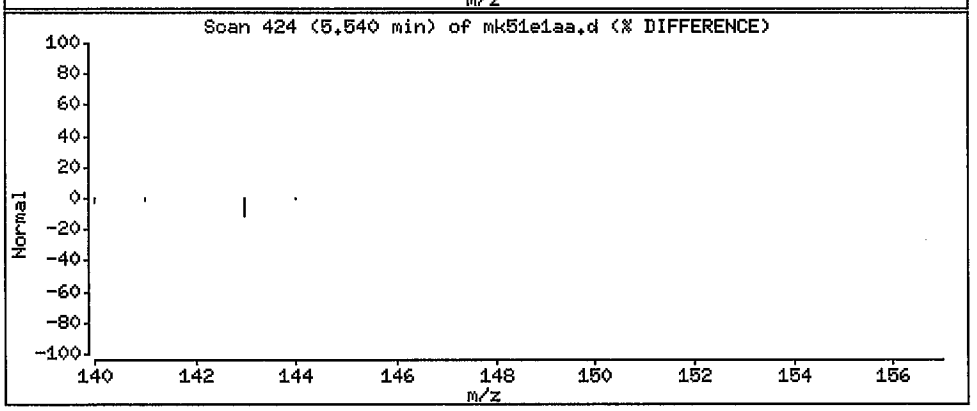
15 1-Methylnaphthalene

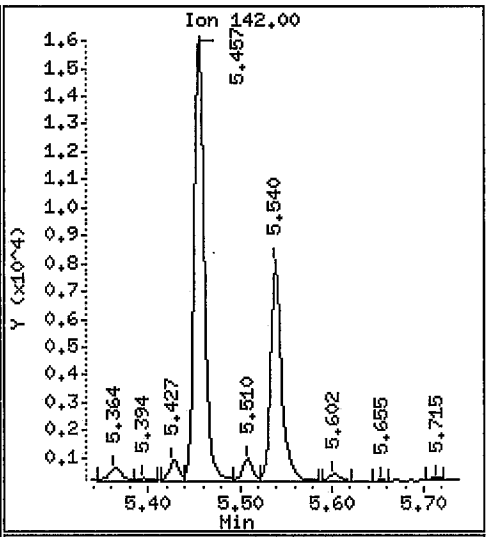
Concentration: 9.49 ng/sample

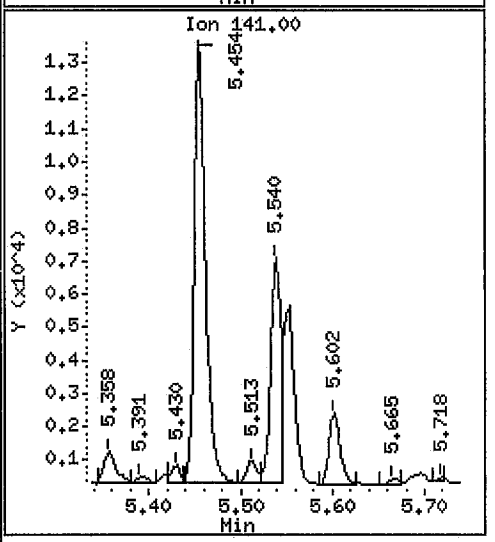












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

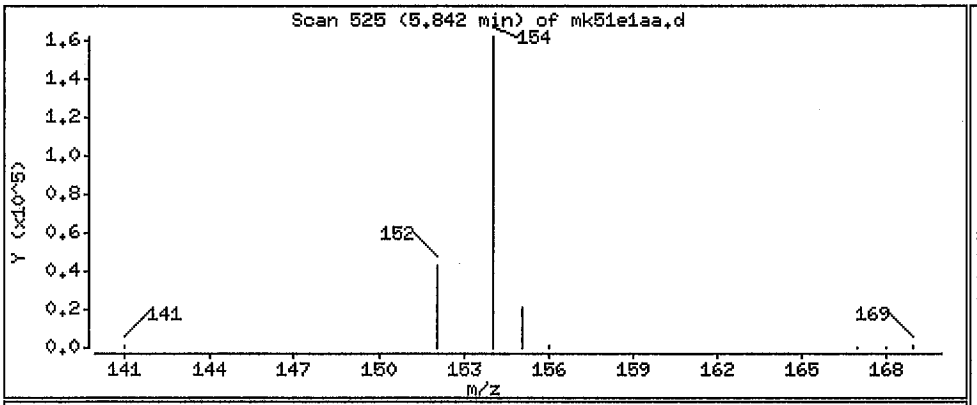
Operator: 11211

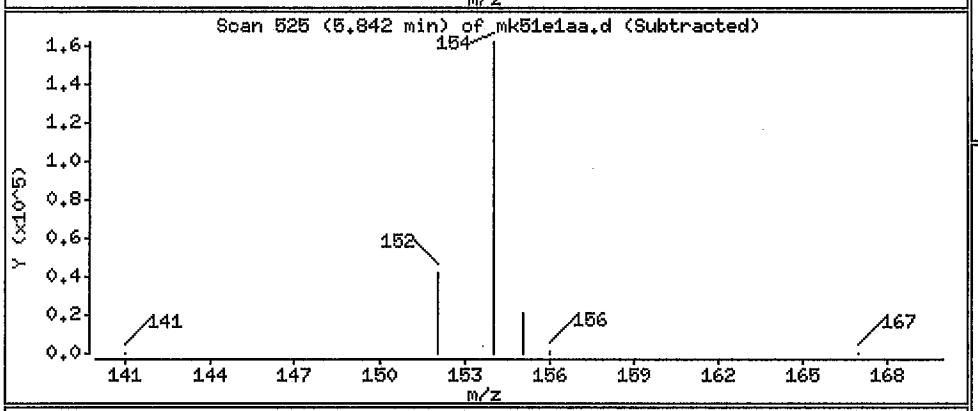
Column phase: Varian: 5MS

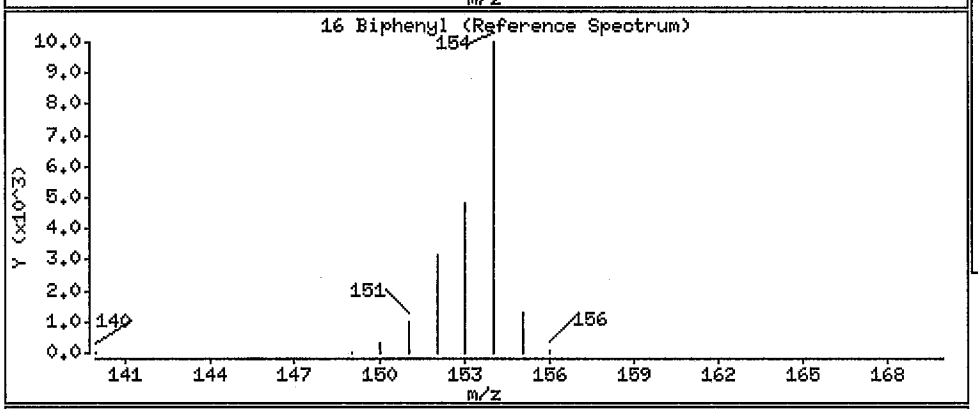
Column diameter: 0.25

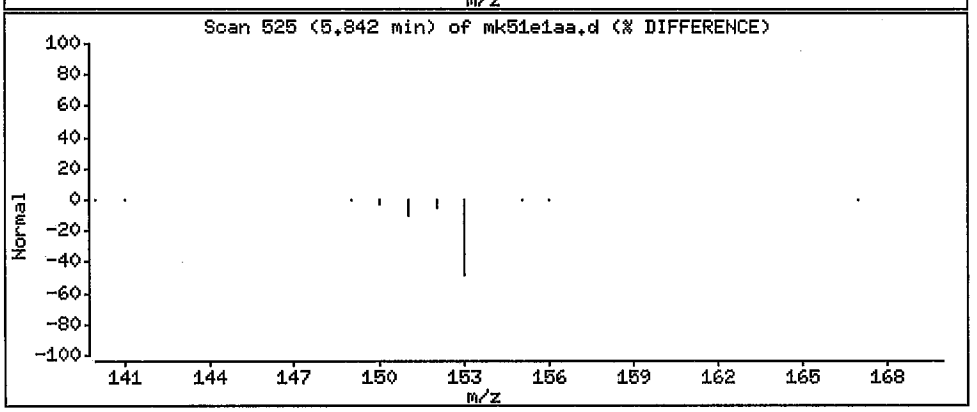
16 Biphenyl

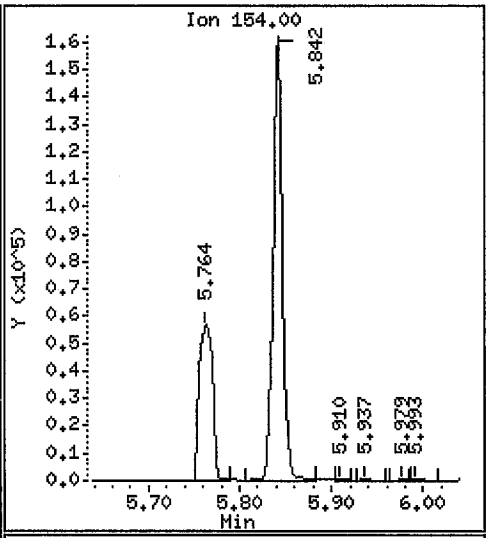
Concentration: 132 ng/sample

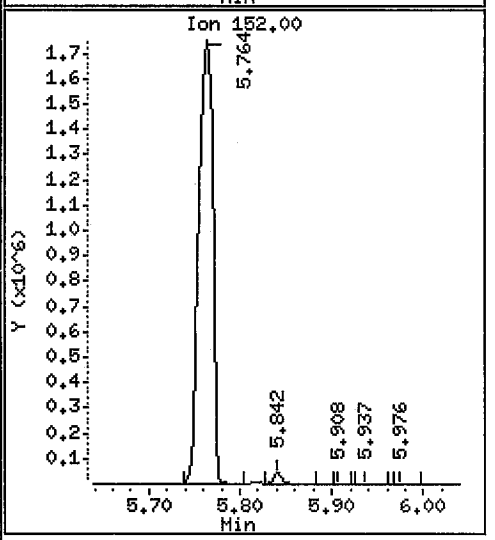












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

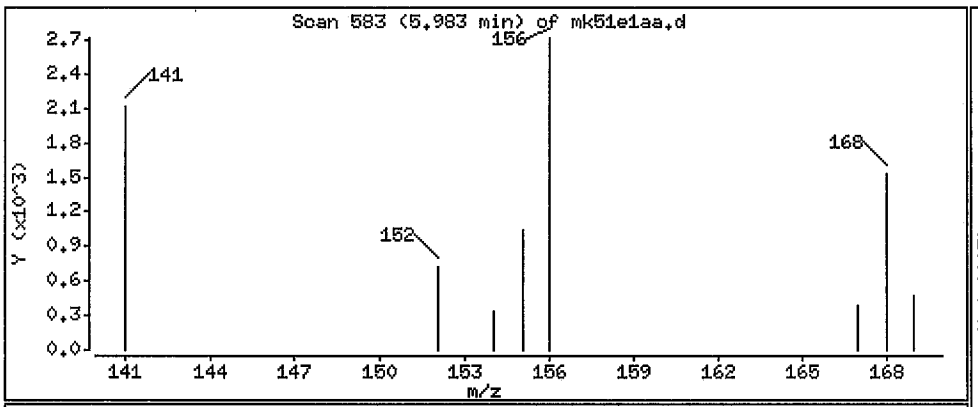
Operator: 11211

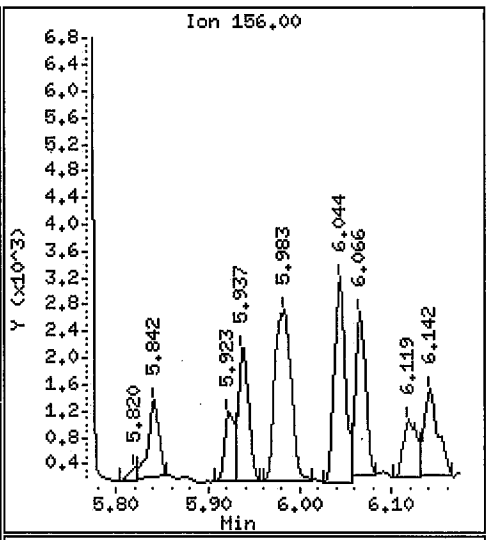
Column phase: Varian: 5MS

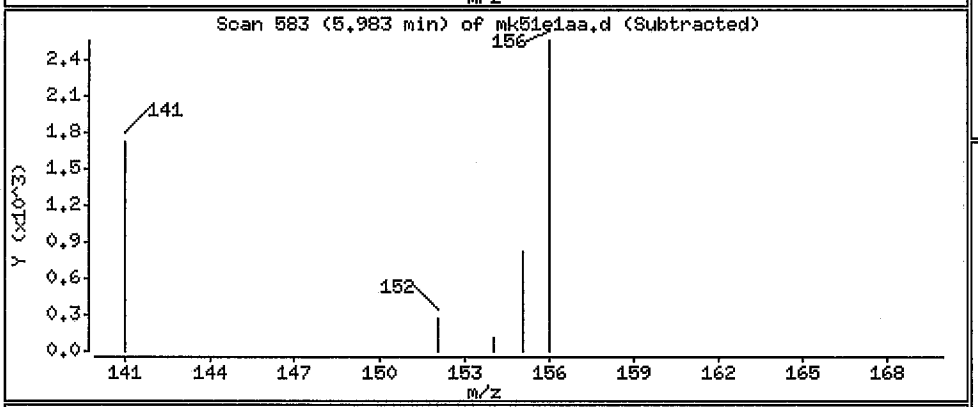
Column diameter: 0.25

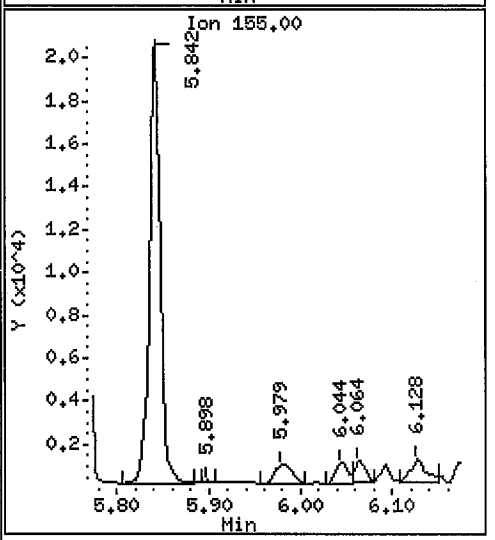
19 2,6 Dimethylnaphthalene

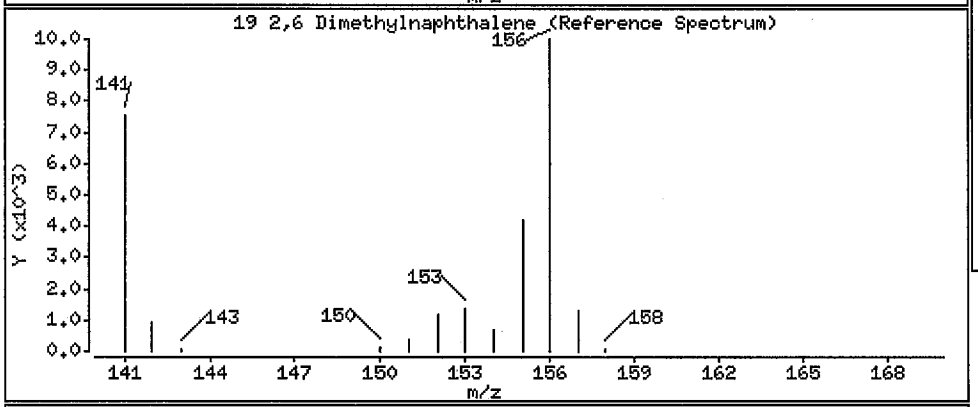
Concentration: 4.81 ng/sample

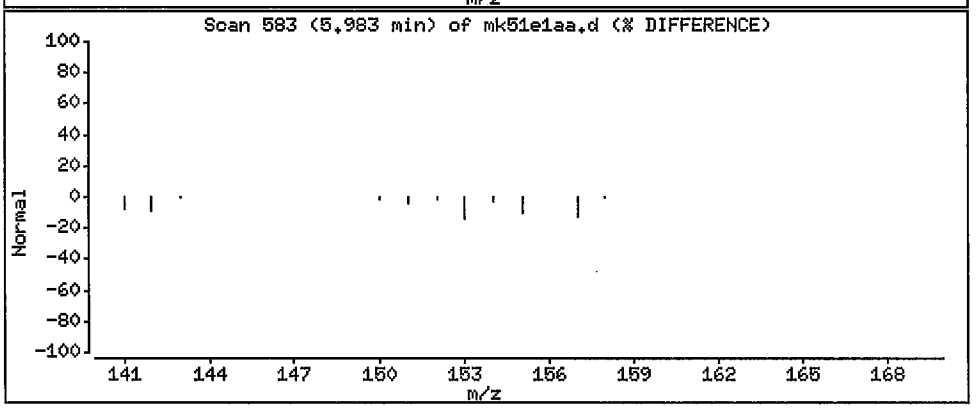












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

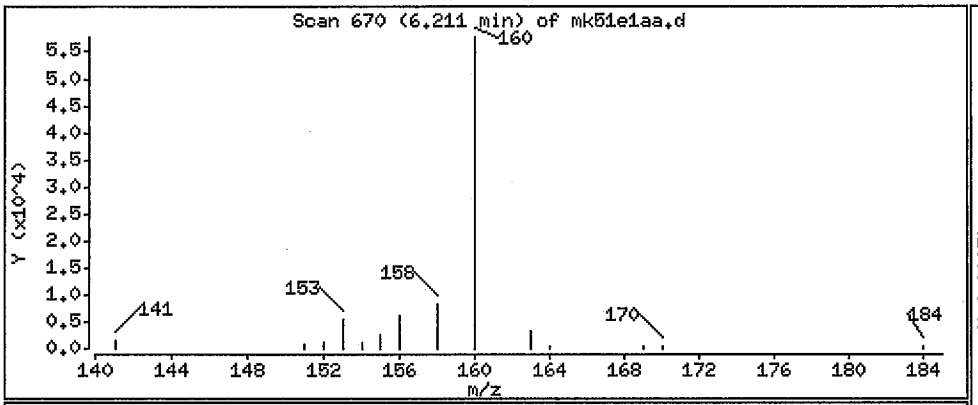
Operator: 11211

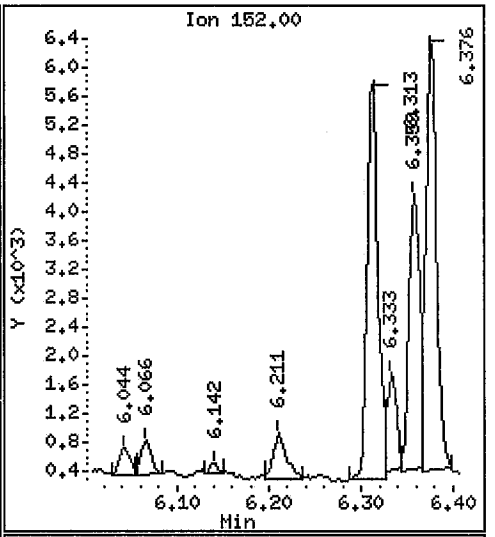
Column phase: Varian: 5MS

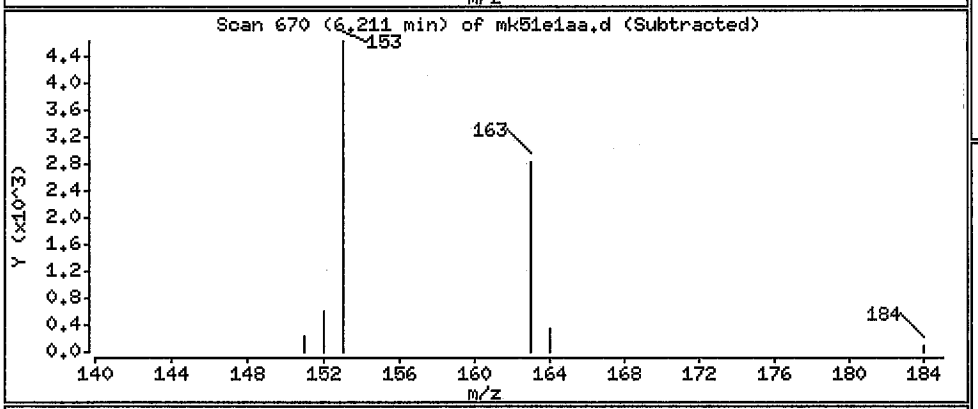
Column diameter: 0.25

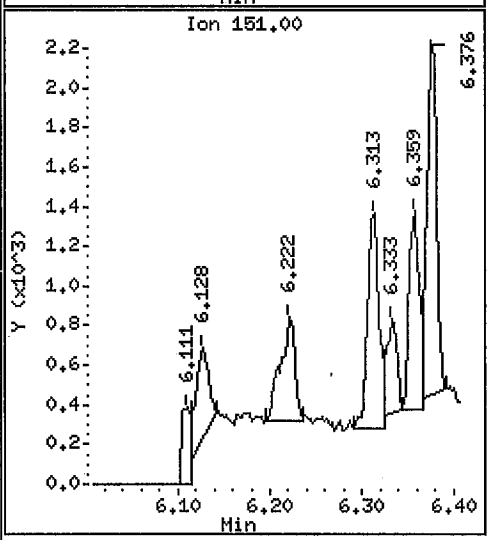
22 Acenaphthylene

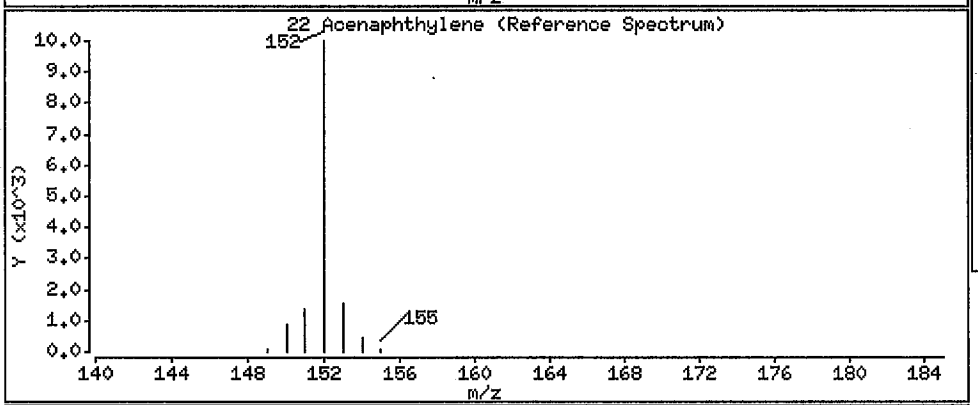
Concentration: 0.501 ng/sample

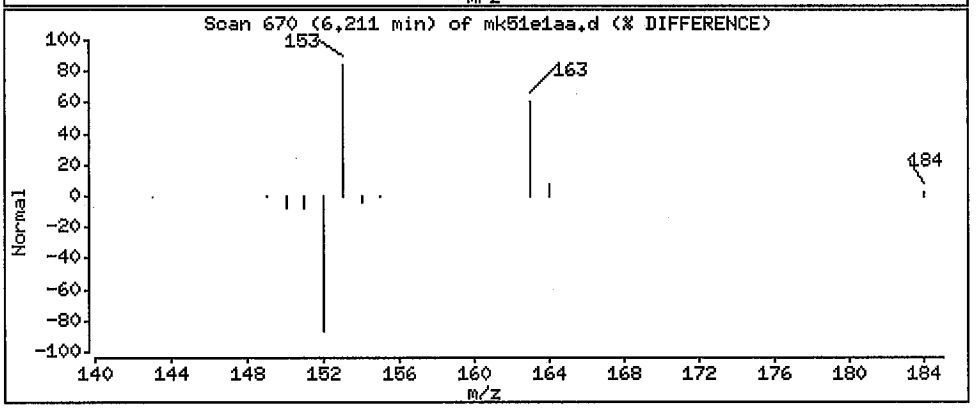












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

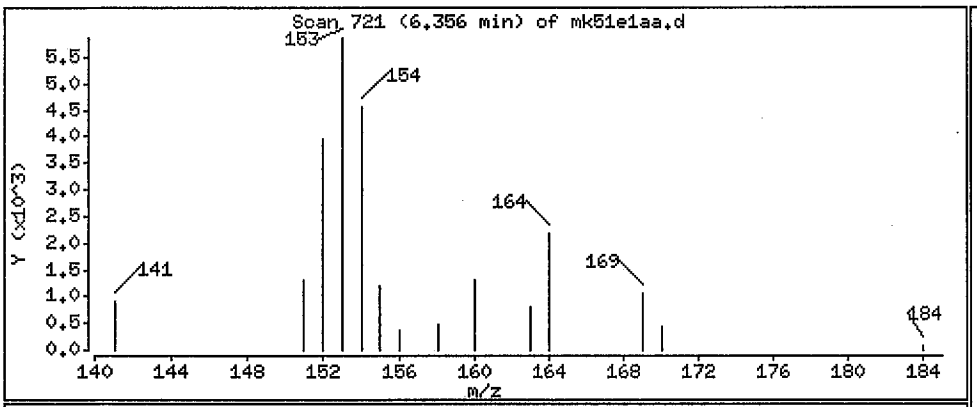
Operator: 11211

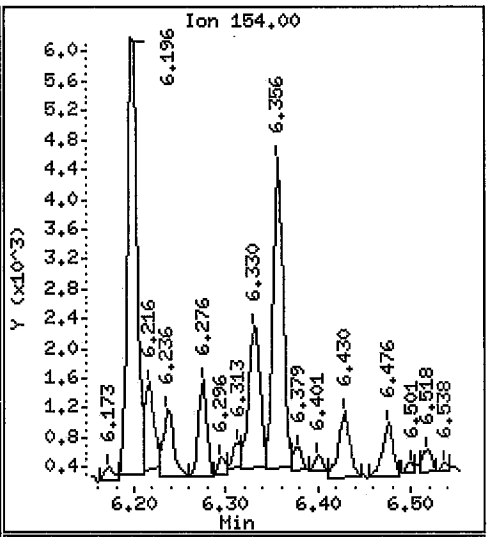
Column phase: Varian: 5MS

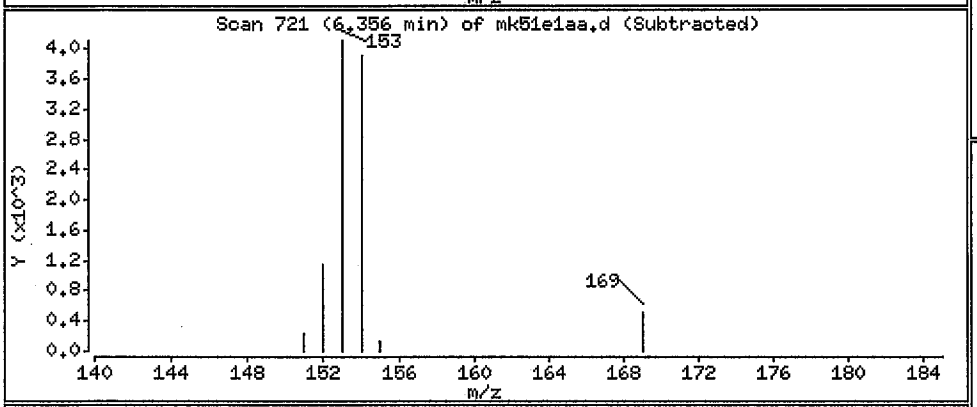
Column diameter: 0.25

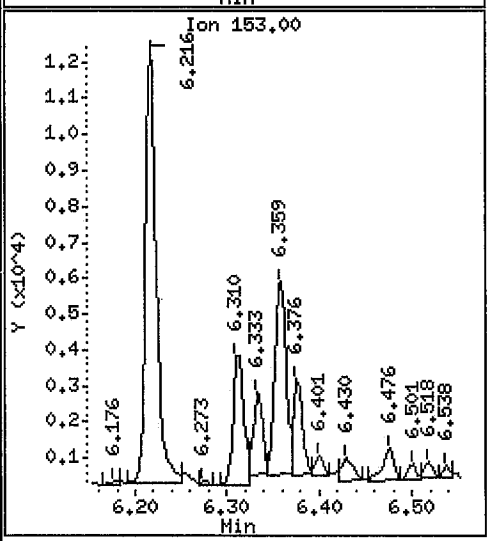
24 Acenaphthene

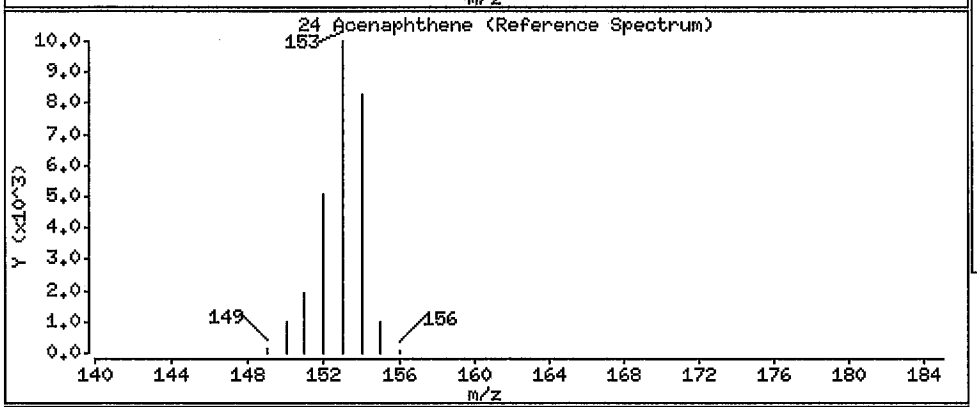
Concentration: 4.31 ng/sample

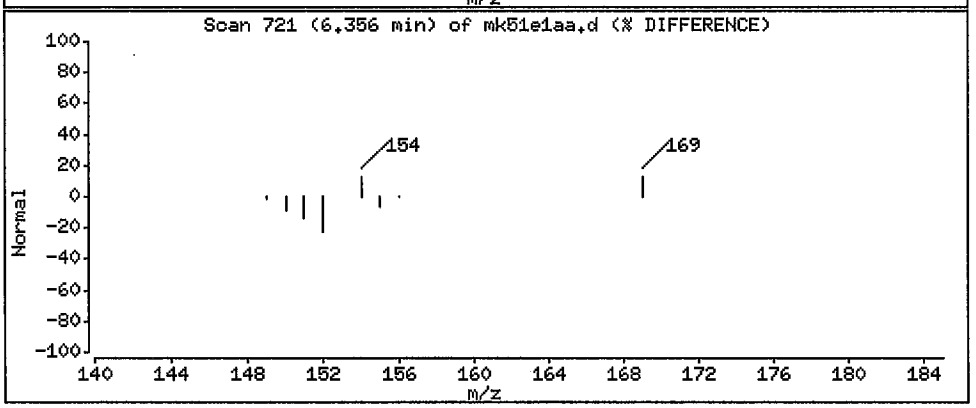












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

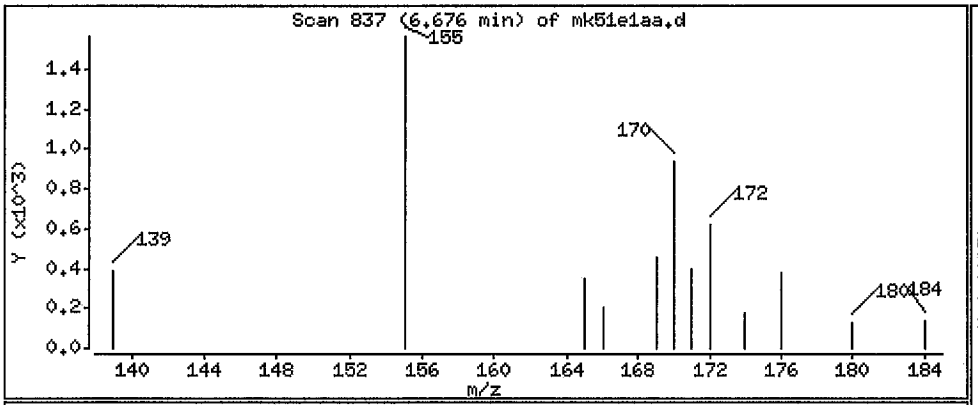
Operator: 11211

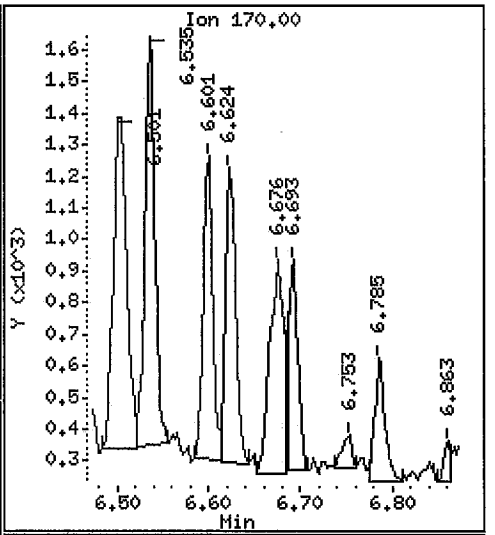
Column phase: Varian: 5MS

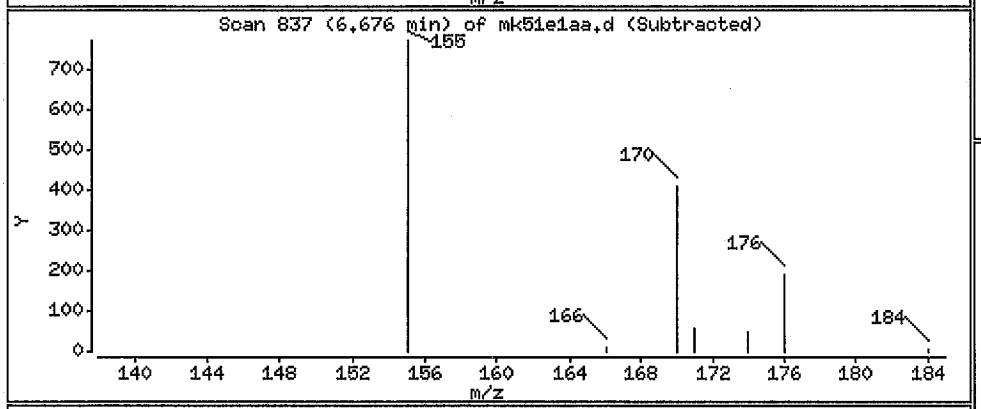
Column diameter: 0.25

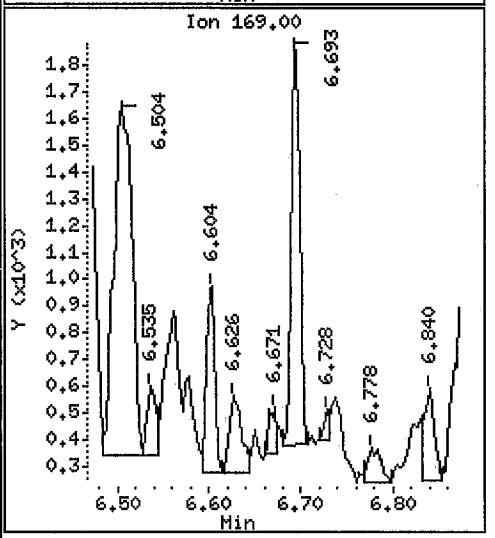
25 2,3,5 Trimethylnaphthalene

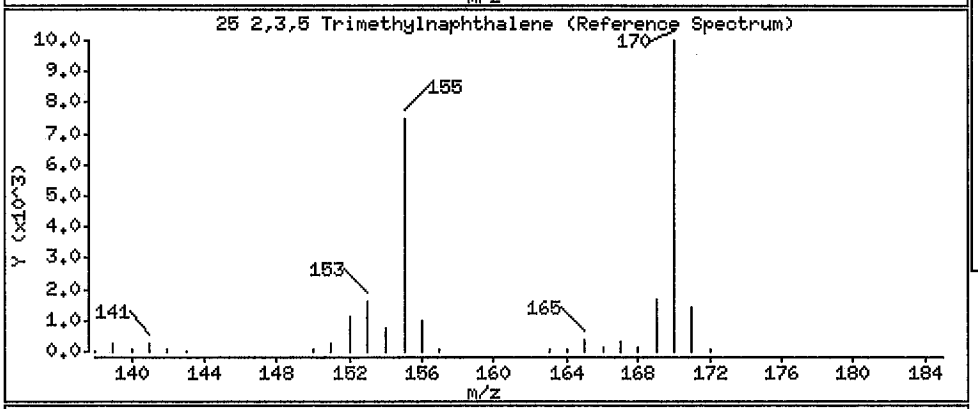
Concentration: 1.25 ng/sample

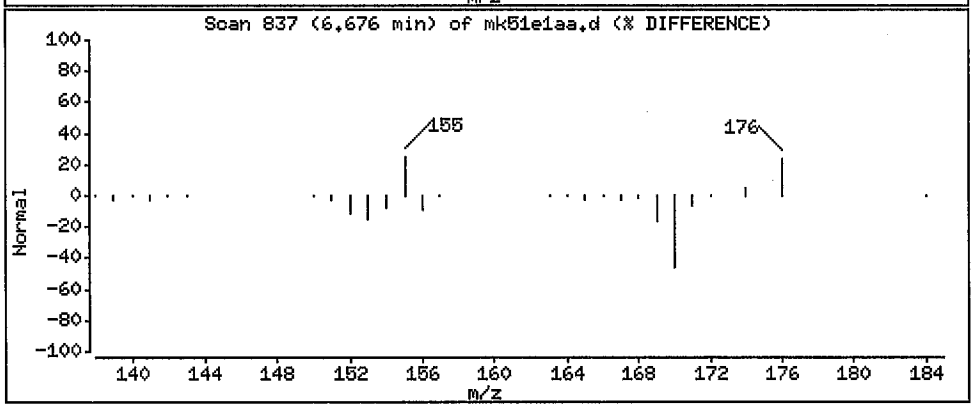












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

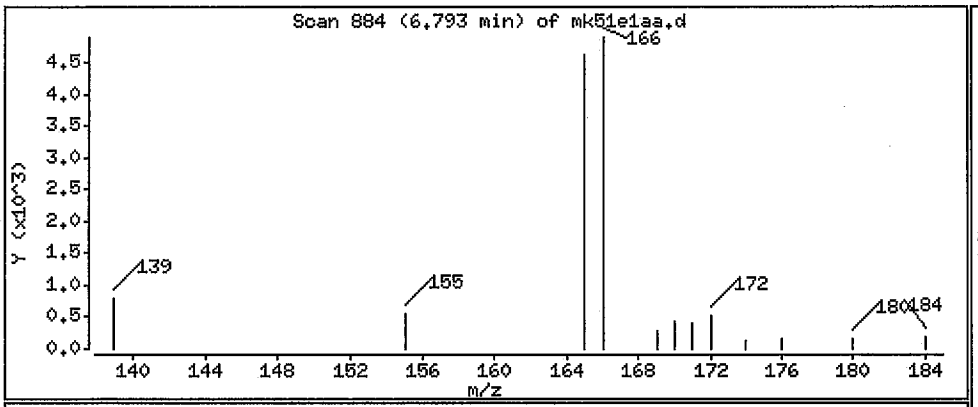
Operator: 11211

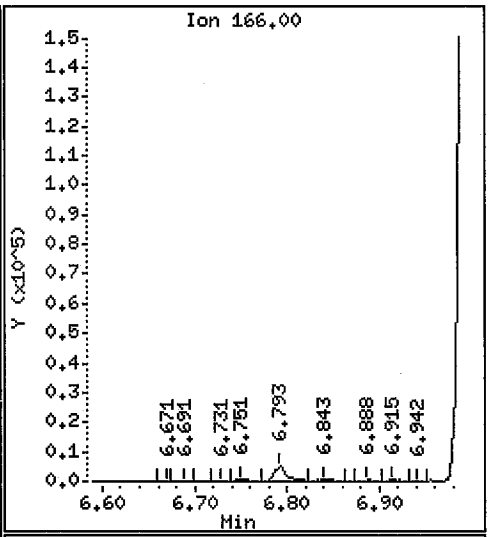
Column phase: Varian: 5MS

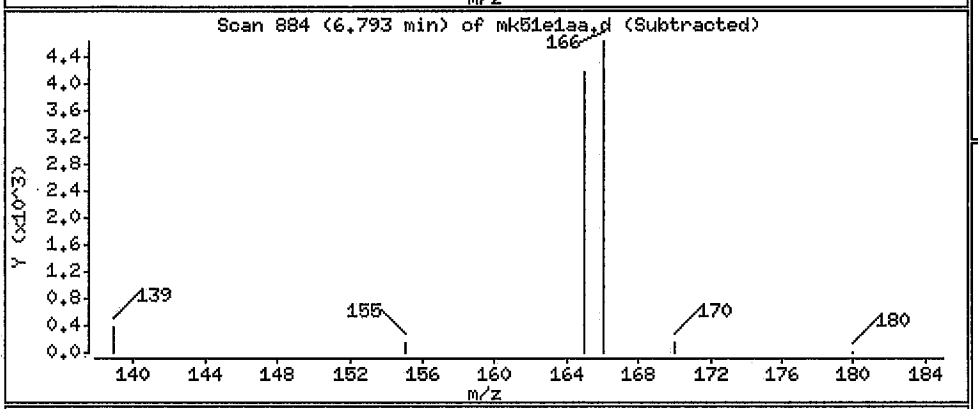
Column diameter: 0.25

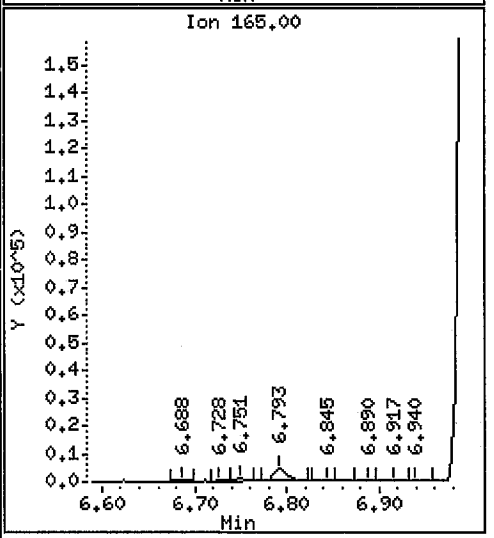
27 Fluorene

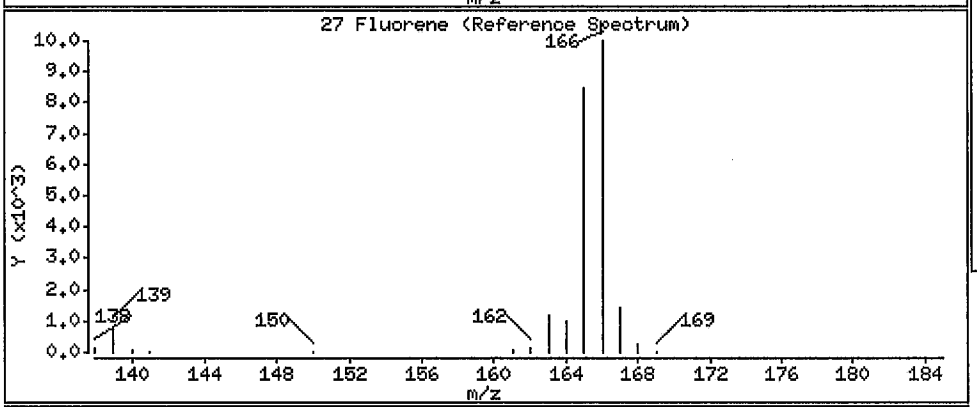
Concentration: 5.40 ng/sample

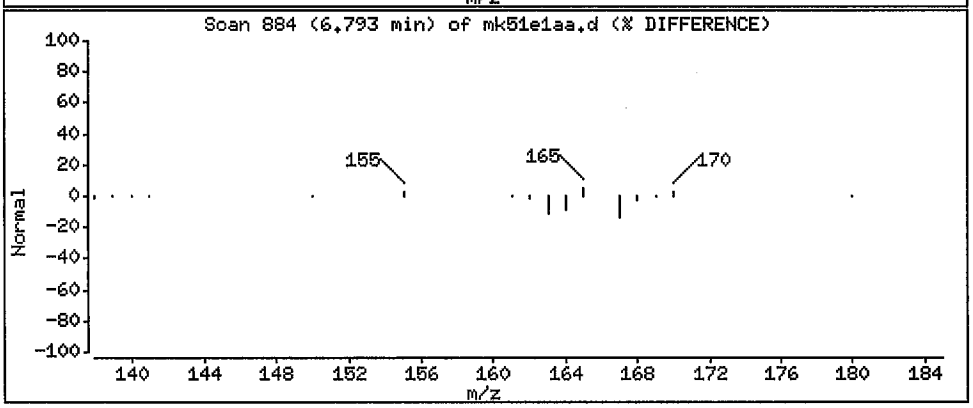












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

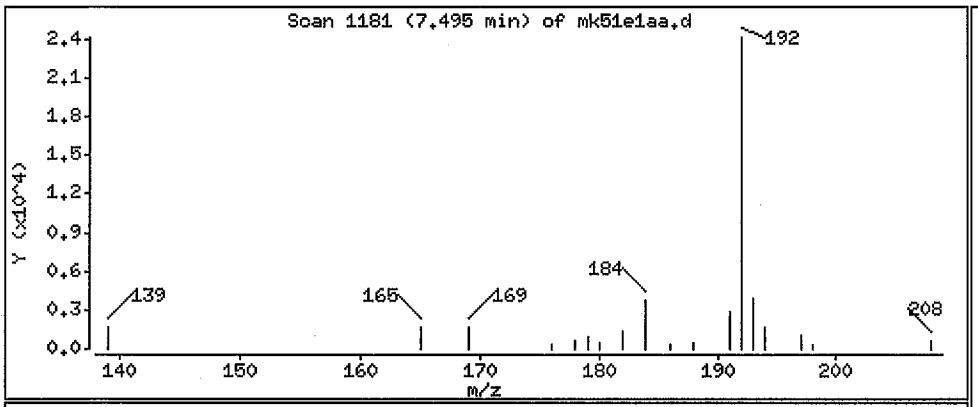
Operator: 11211

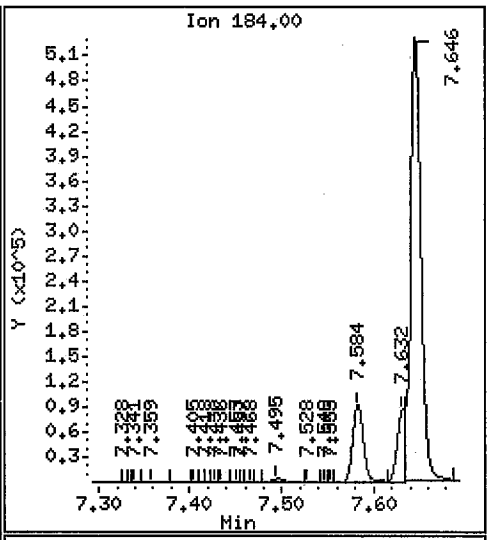
Column phase: Varian: 5MS

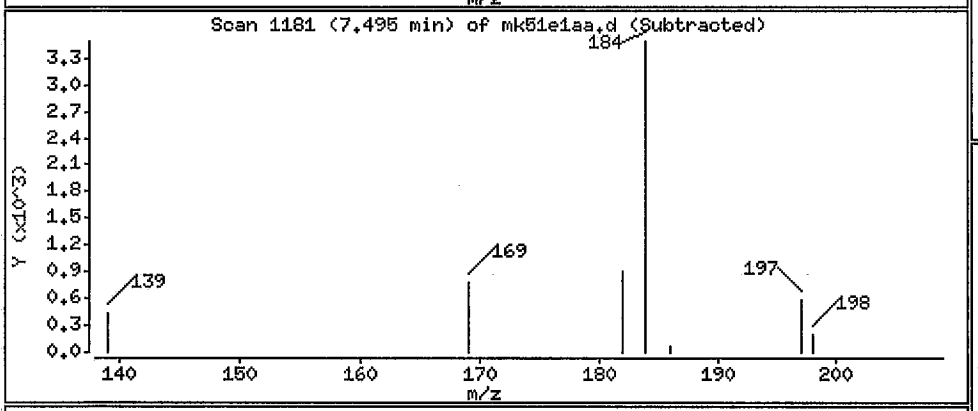
Column diameter: 0.25

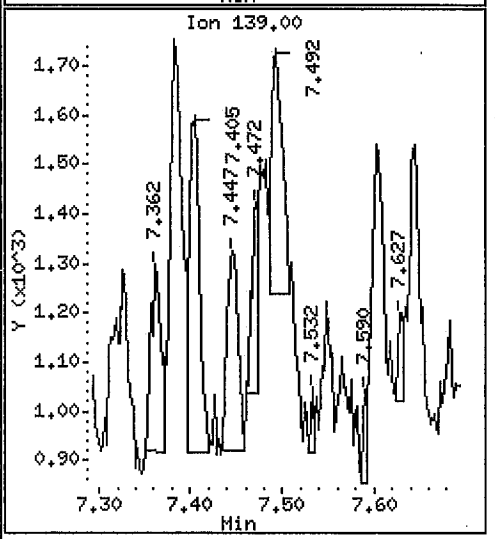
36 Dibenzothiophene

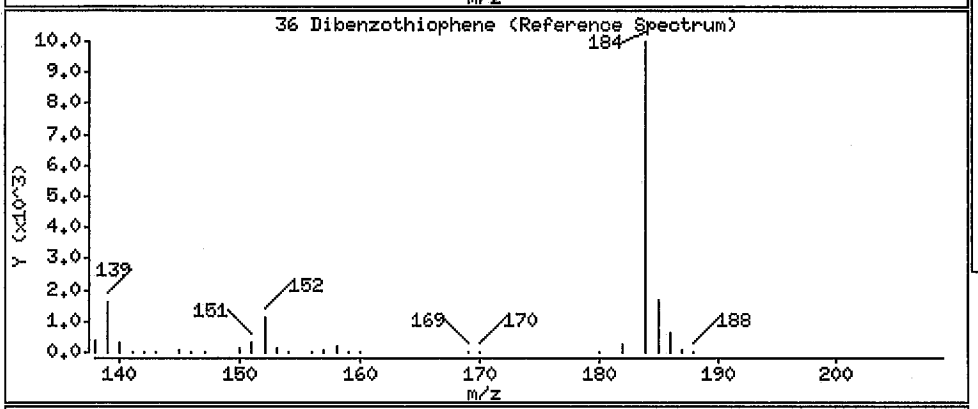
Concentration: 3.01 ng/sample

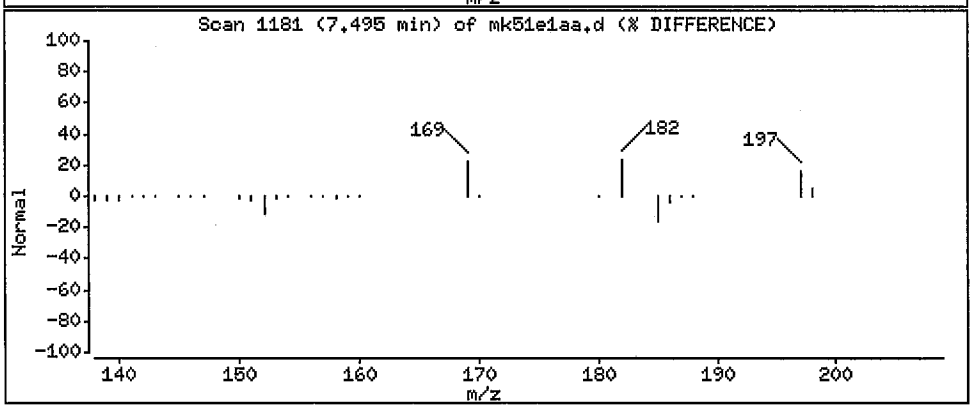












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

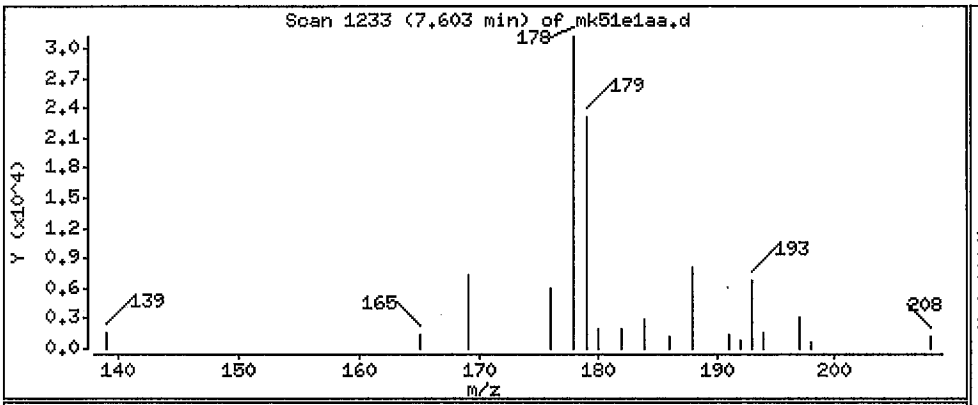
Operator: 11211

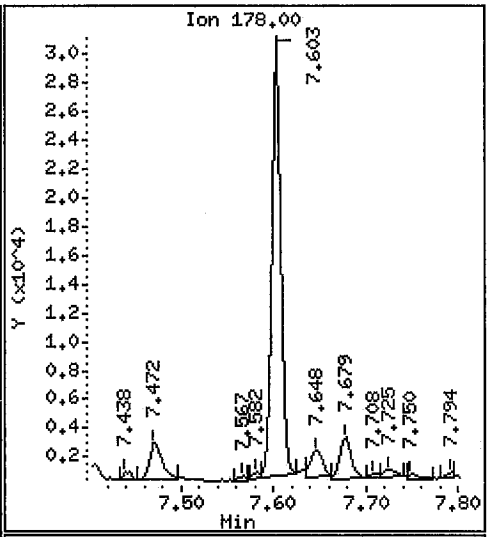
Column phase: Varian: 5MS

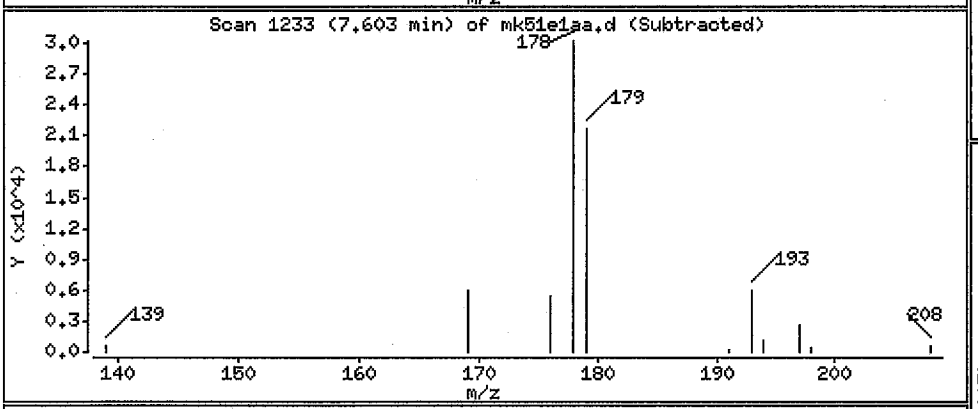
Column diameter: 0.25

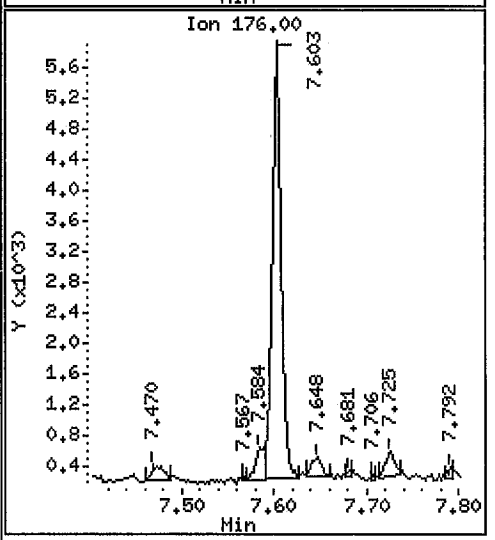
43 Phenanthrene

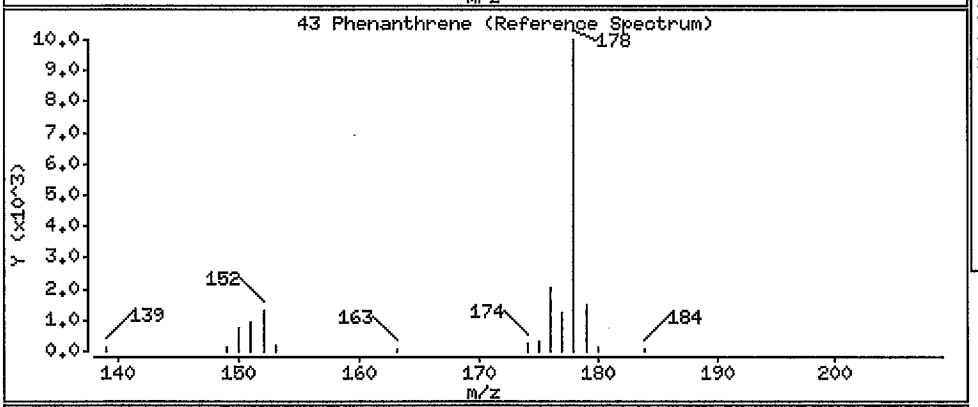
Concentration: 21.0 ng/sample

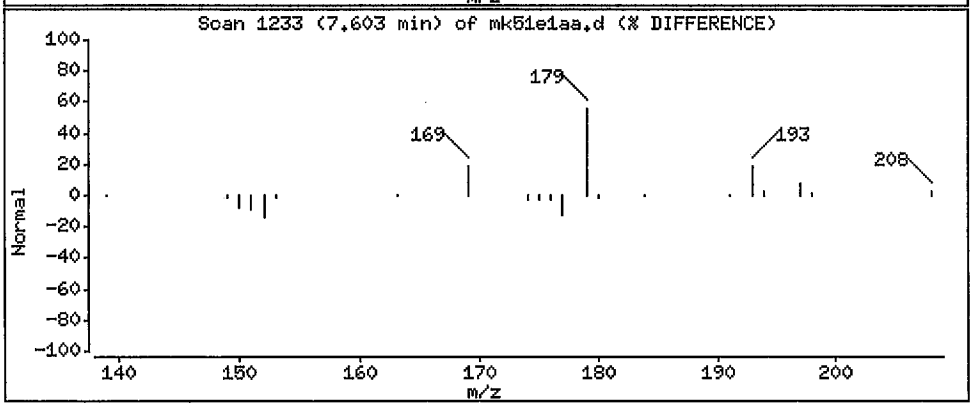












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

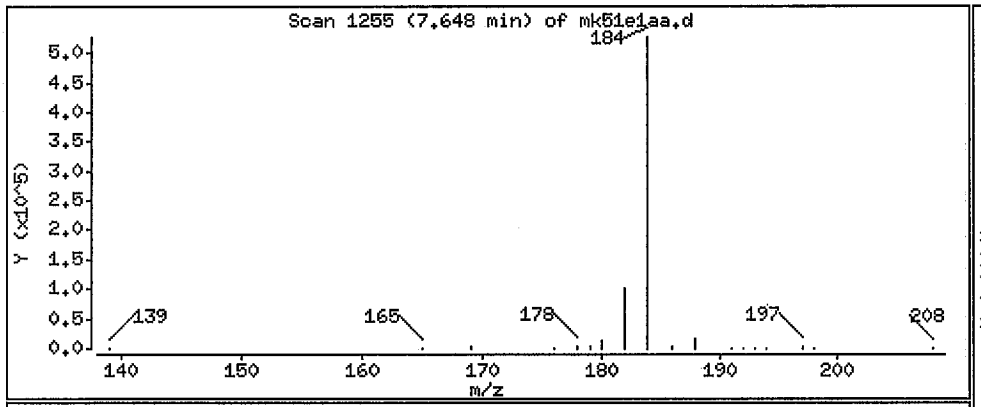
Operator: 11211

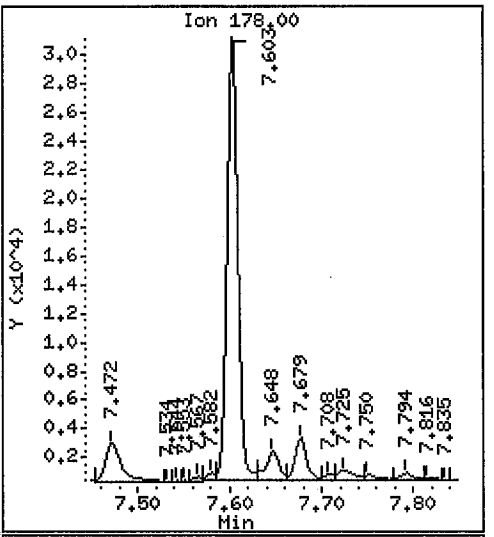
Column phase: Varian: 5MS

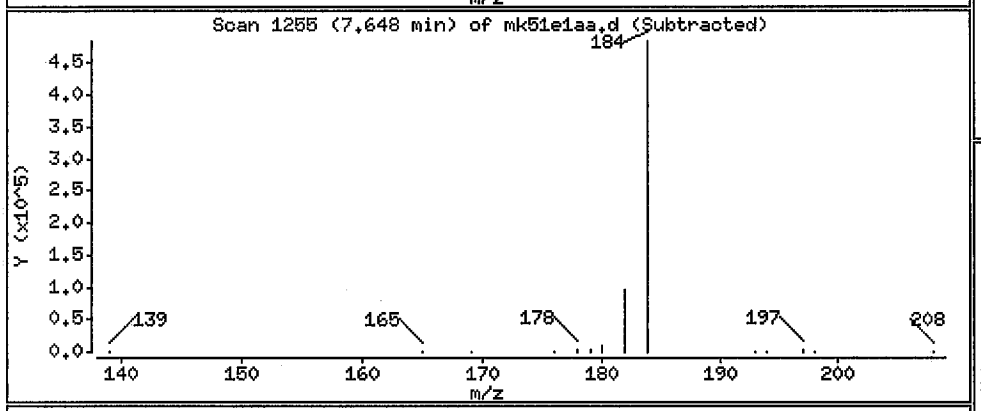
Column diameter: 0.25

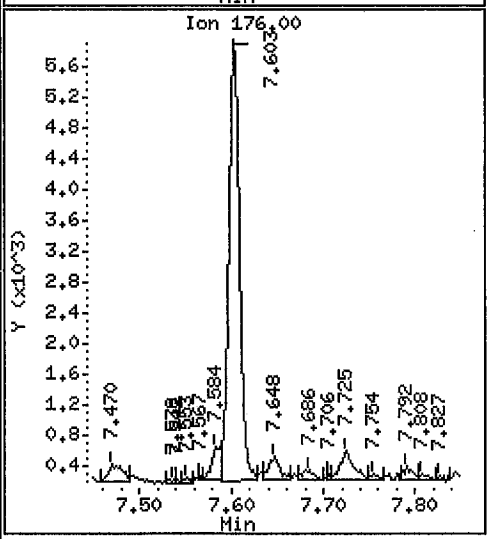
46 Anthracene

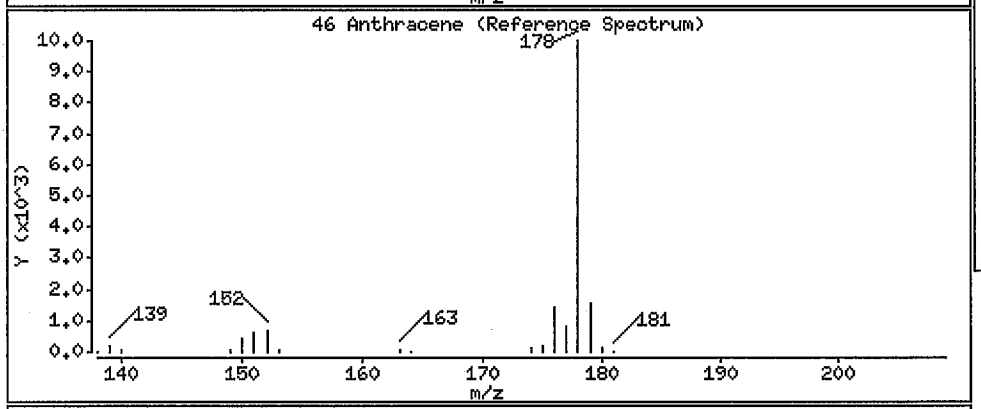
Concentration: 1.74 ng/sample

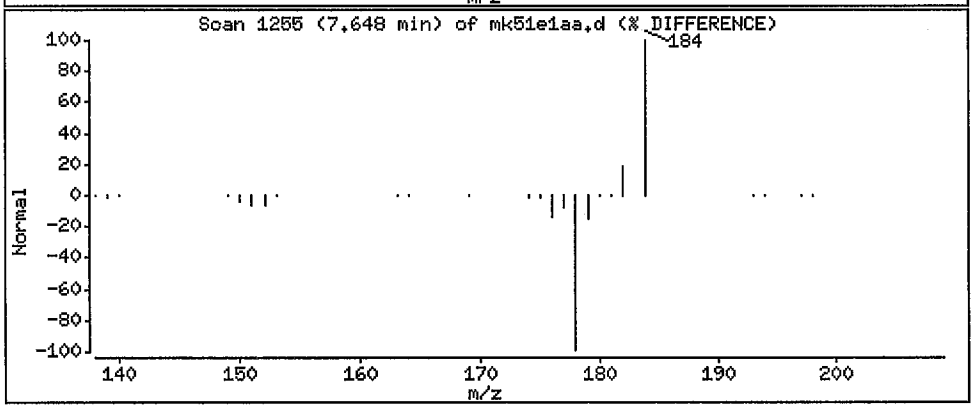












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

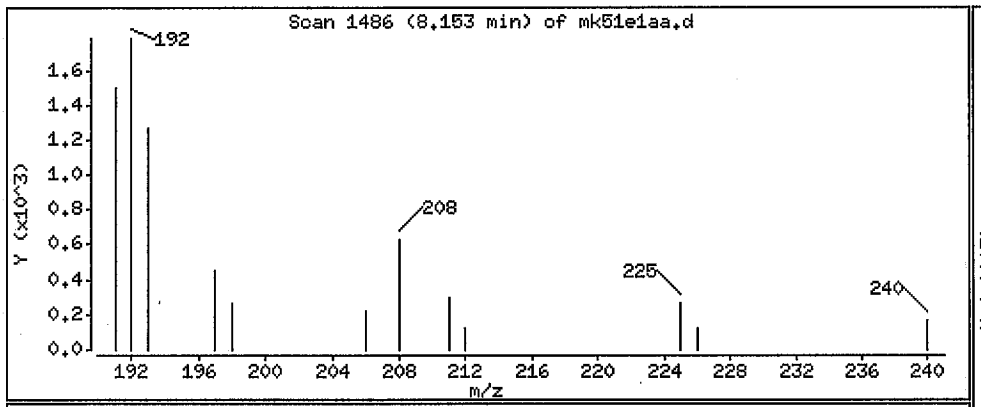
Operator: 11211

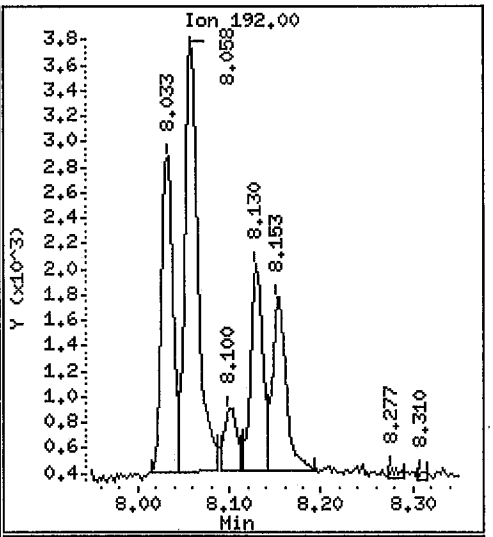
Column phase: Varian: 5MS

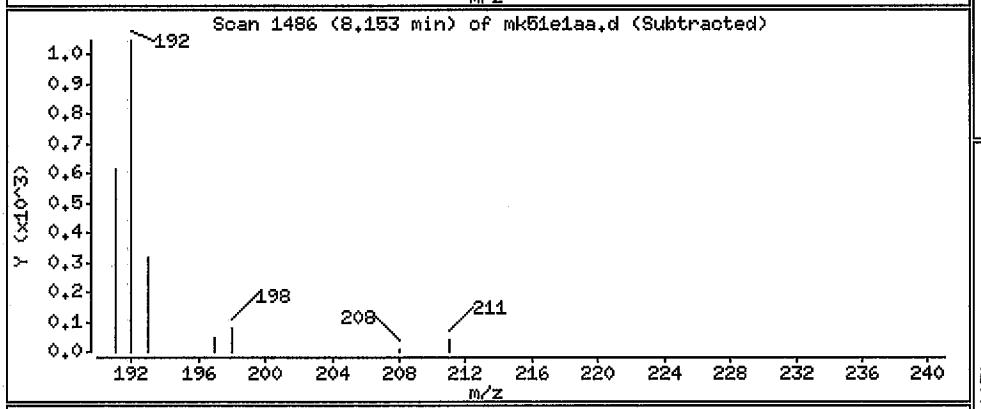
Column diameter: 0.25

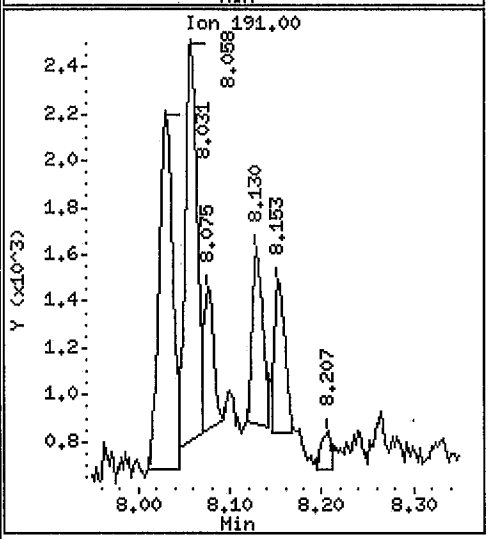
52 1-Methylphenanthrene

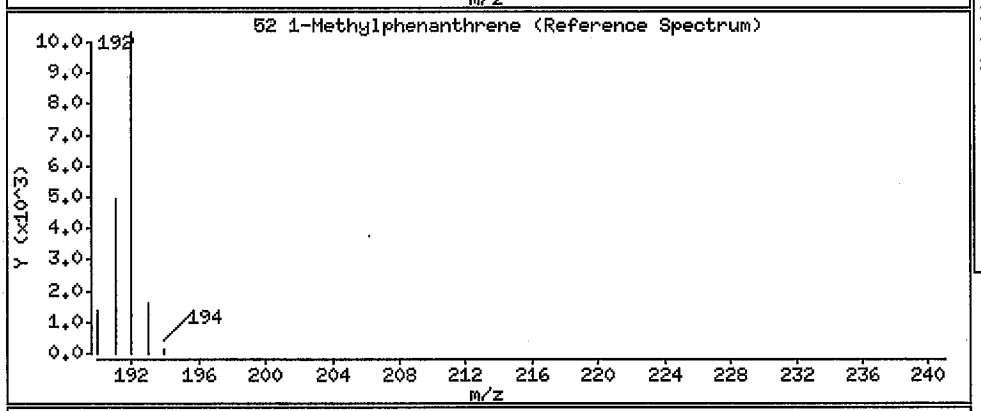
Concentration: 2.10 ng/sample

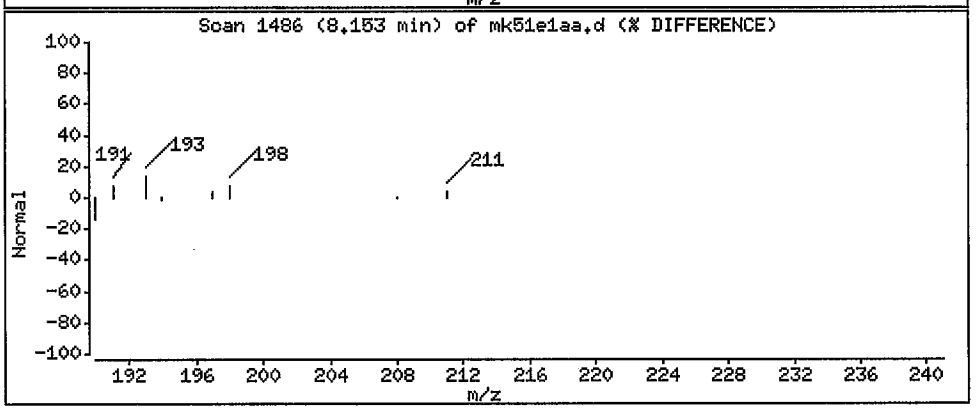












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

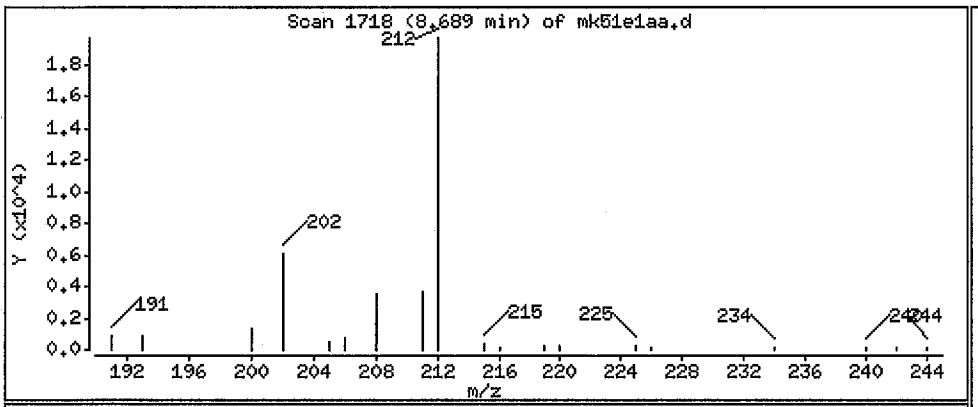
Operator: 11211

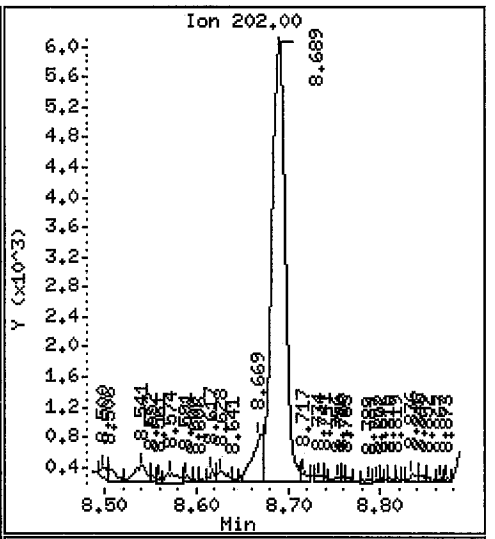
Column phase: Varian: 5MS

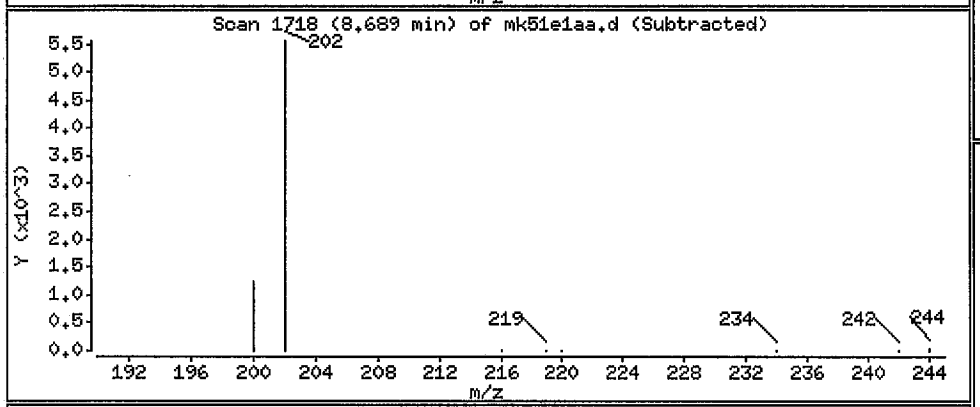
Column diameter: 0.25

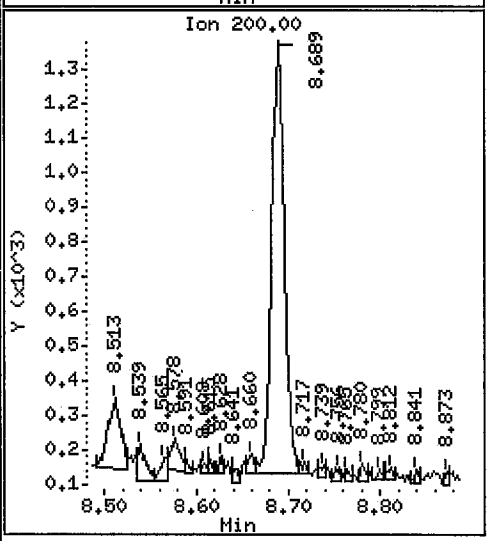
55 Fluoranthene

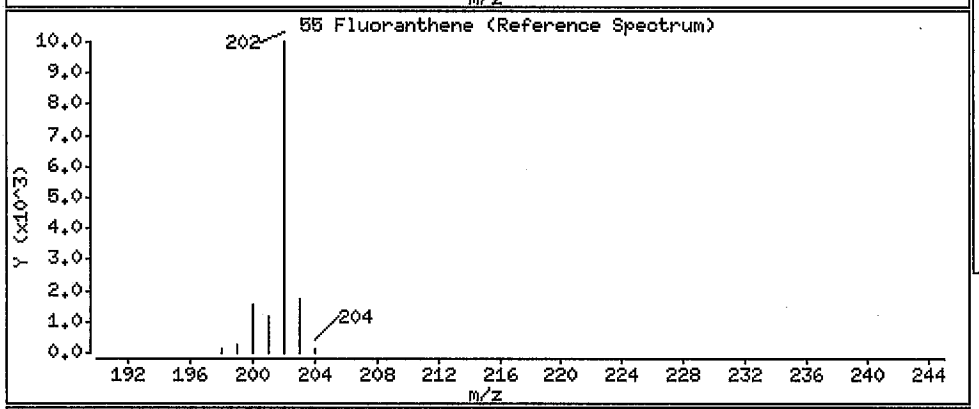
Concentration: 4.44 ng/sample

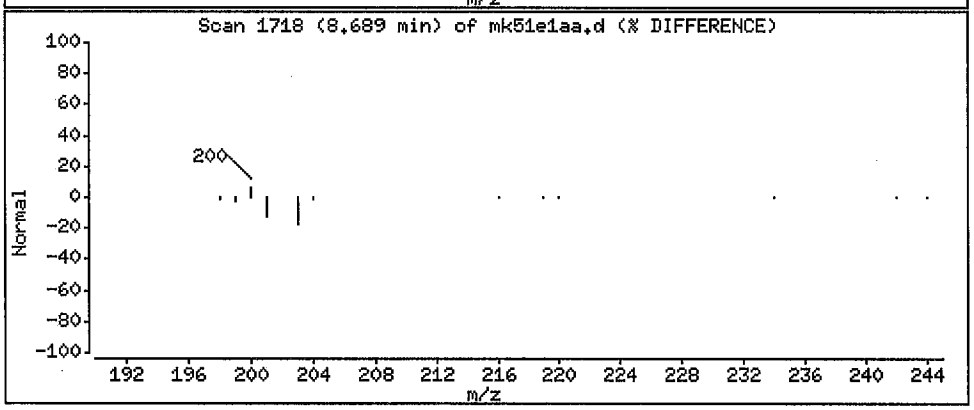












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

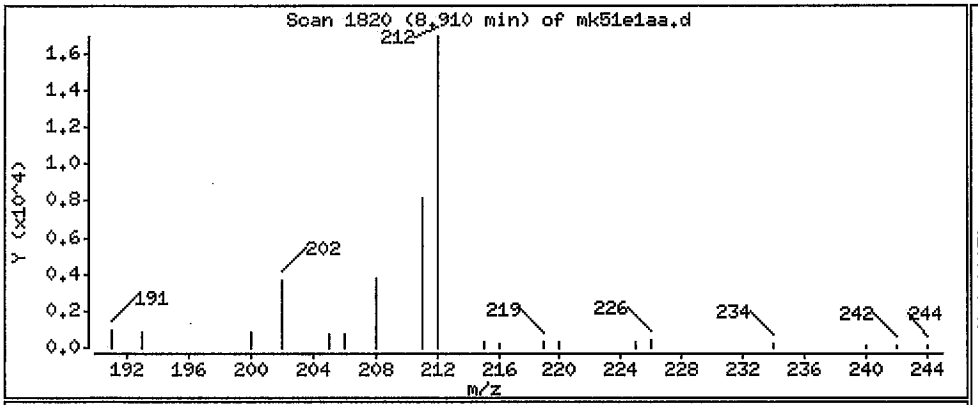
Operator: 11211

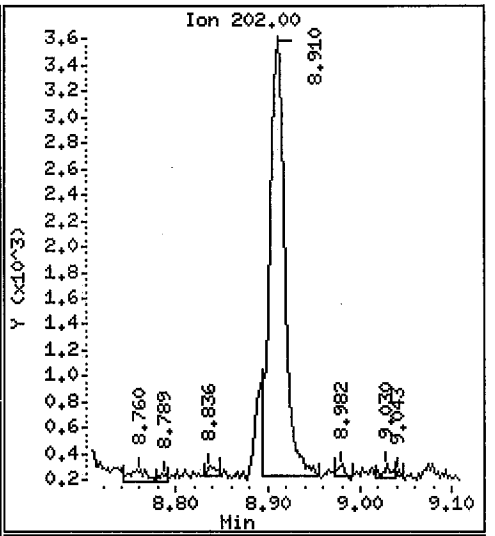
Column phase: Varian: 5MS

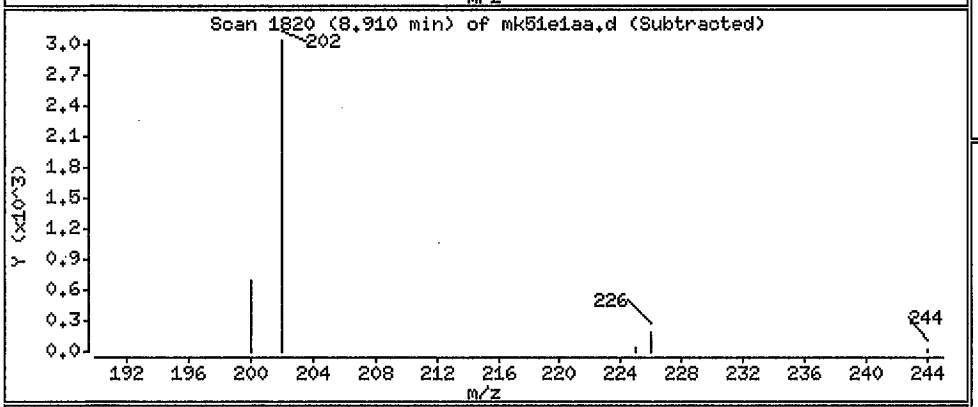
Column diameter: 0.25

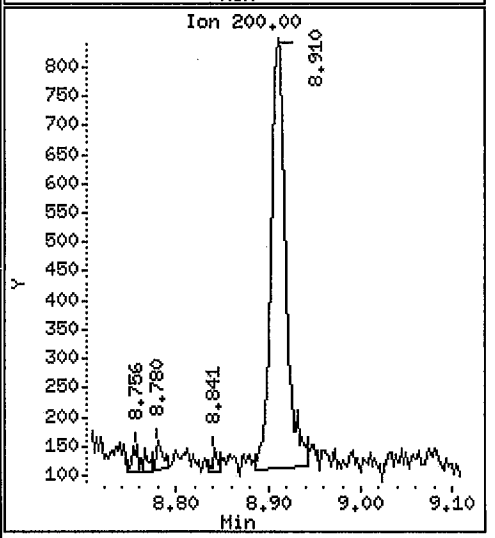
57 Pyrene

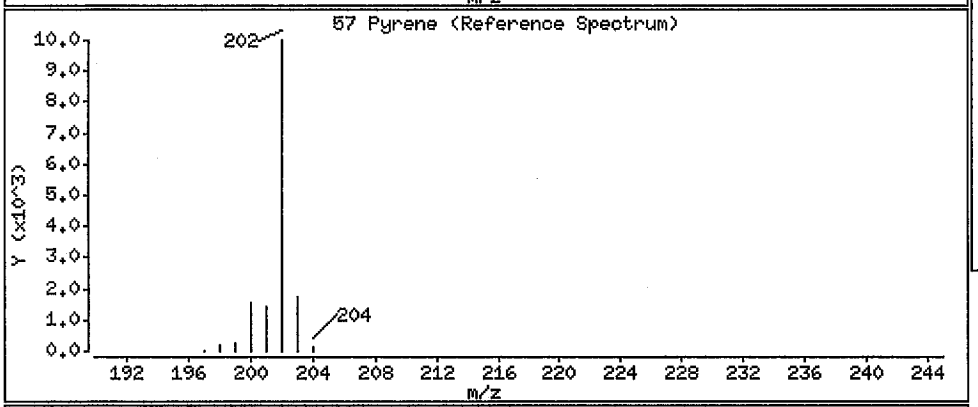
Concentration: 2.74 ng/sample

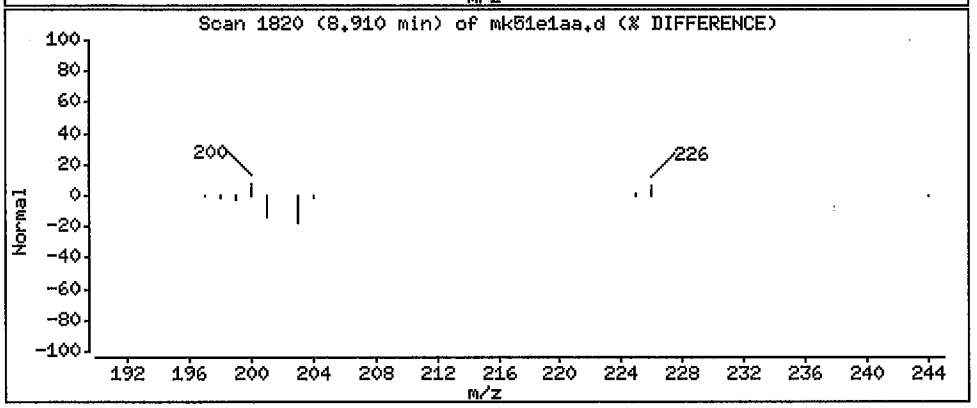












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

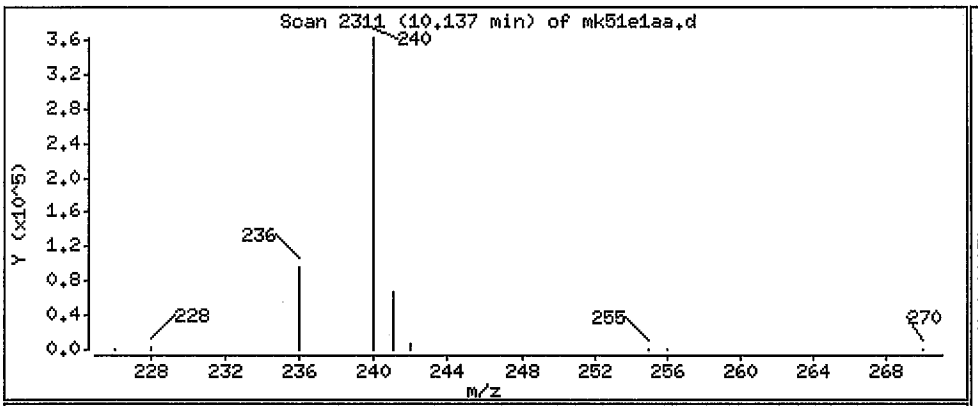
Operator: 11211

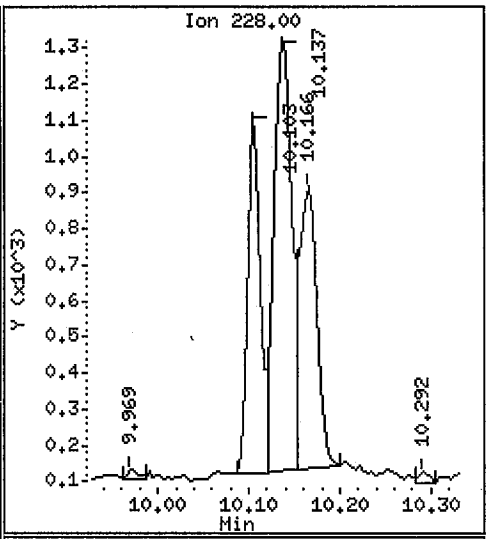
Column phase: Varian: 5MS

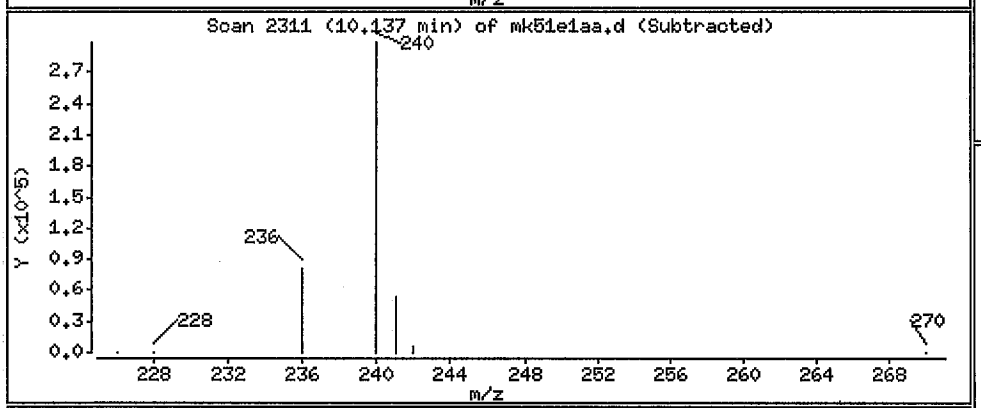
Column diameter: 0.25

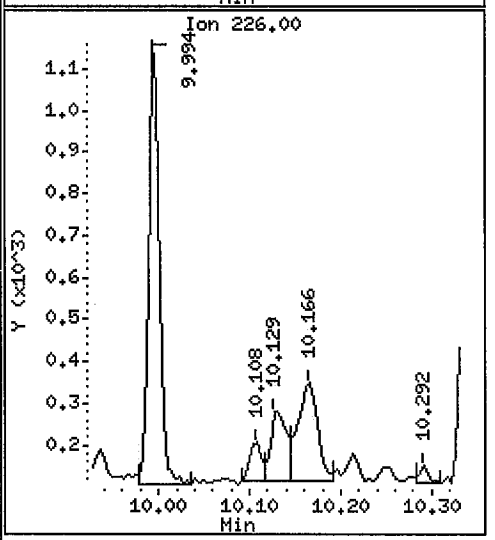
62 Benzo(a)anthracene

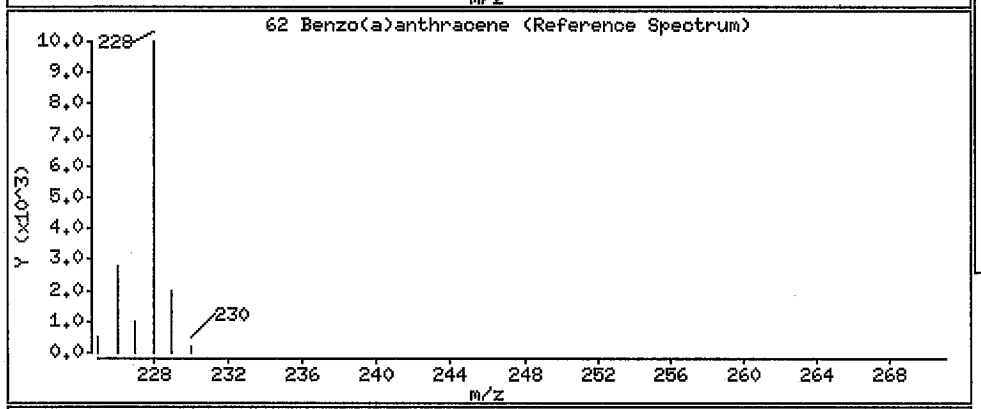
Concentration: 1.52 ng/sample

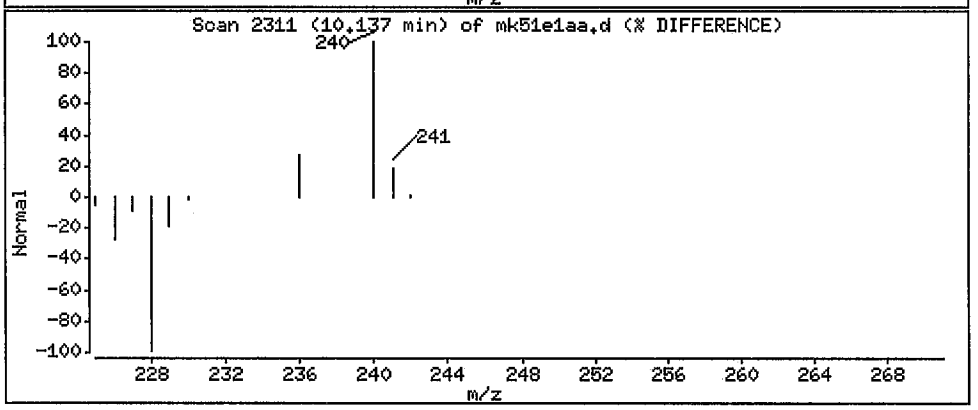












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

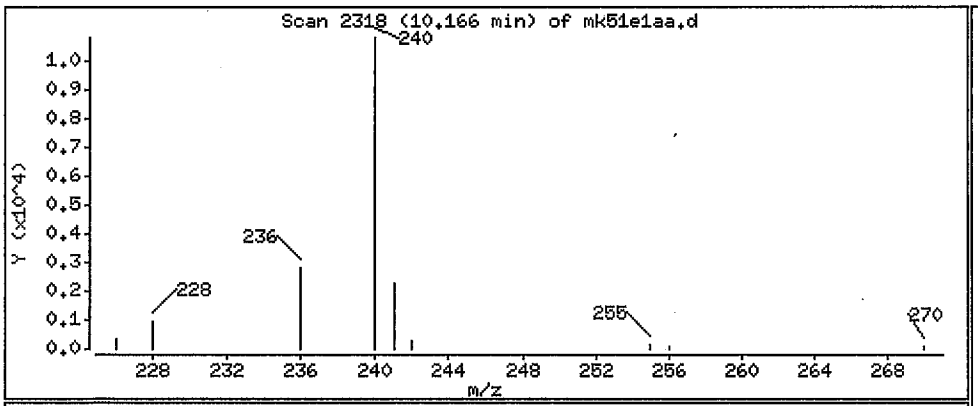
Operator: 11211

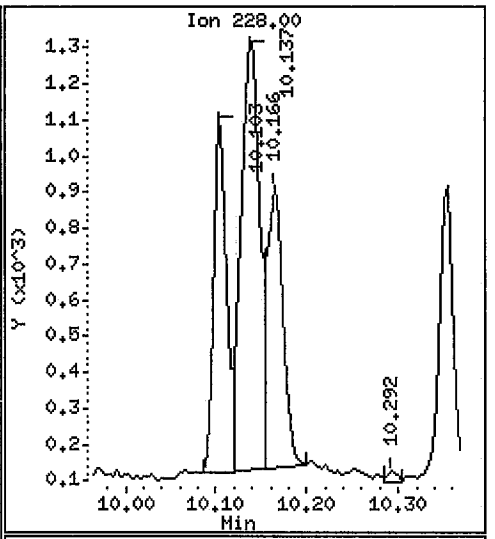
Column phase: Varian: 5MS

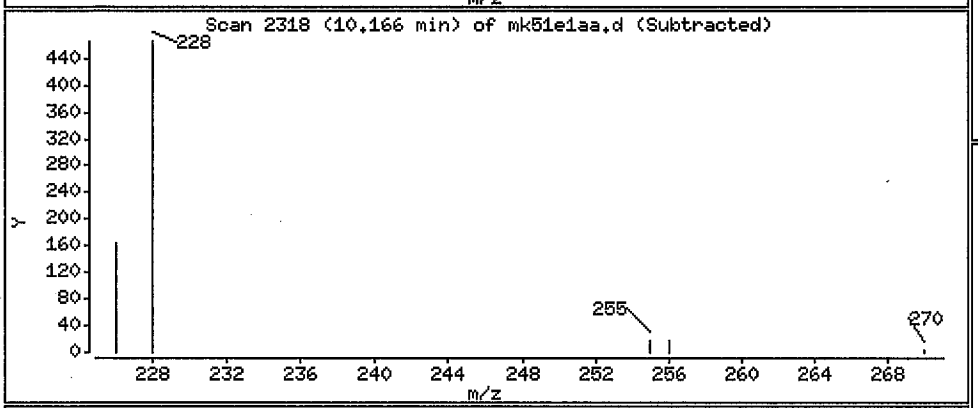
Column diameter: 0.25

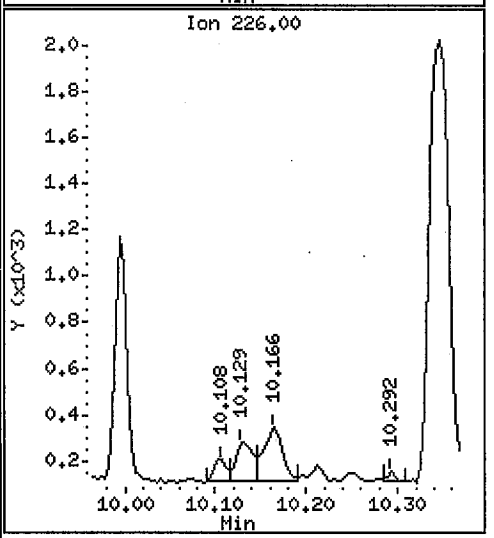
65 Chrysene

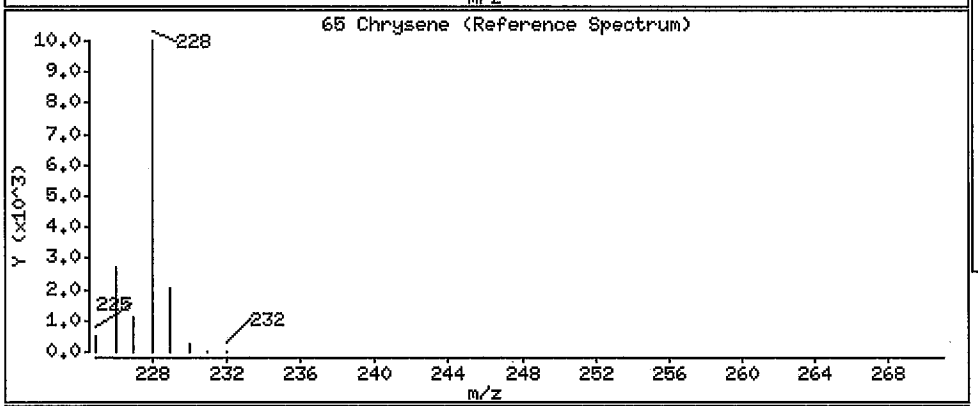
Concentration: 1.15 ng/sample

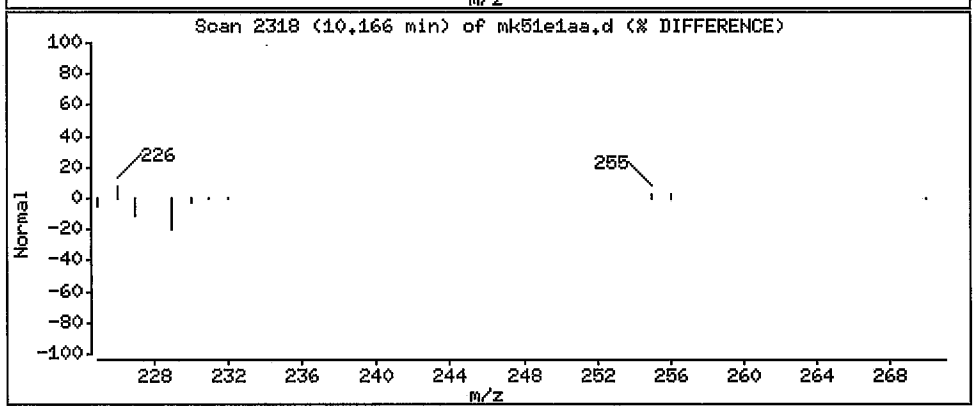












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

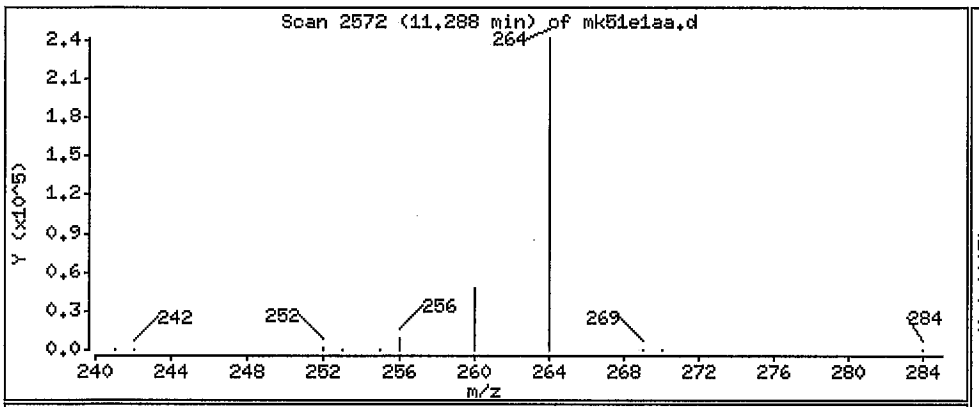
Operator: 11211

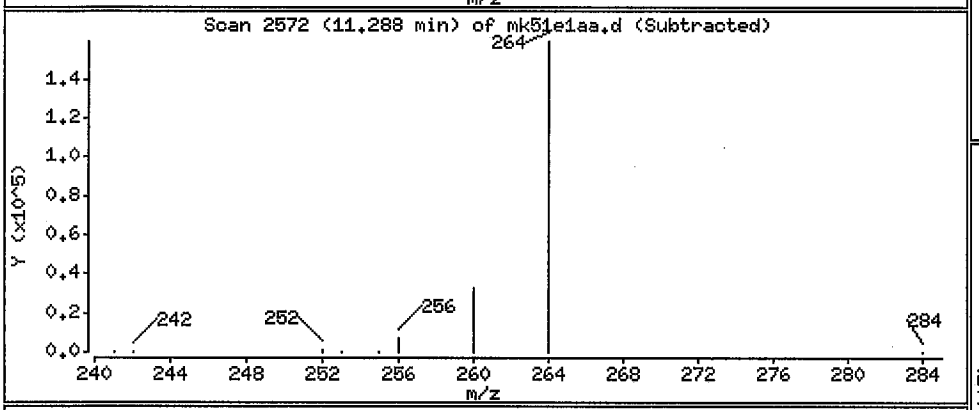
Column phase: Varian: 5MS

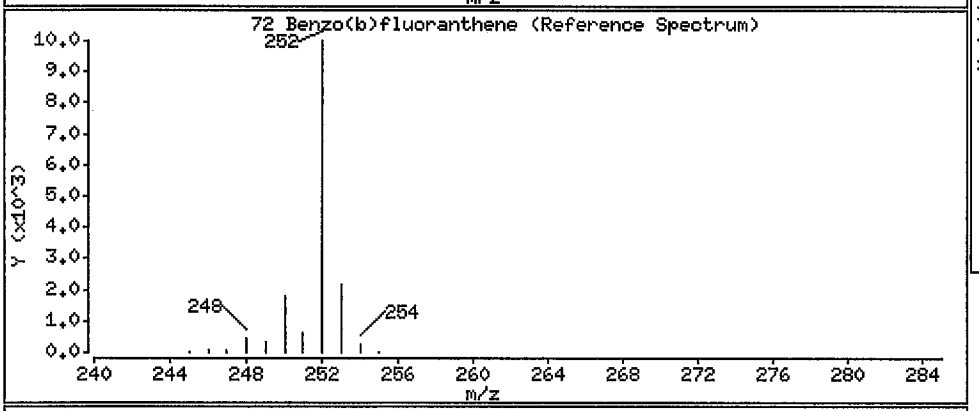
Column diameter: 0.25

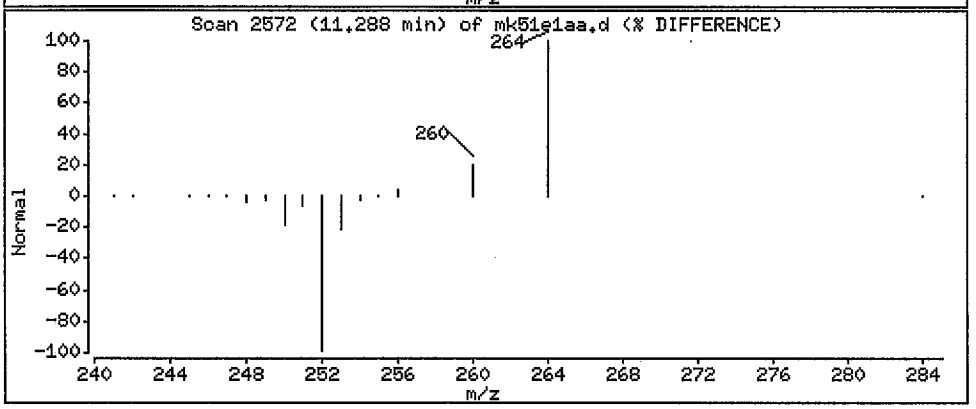
72 Benzo(b)fluoranthene

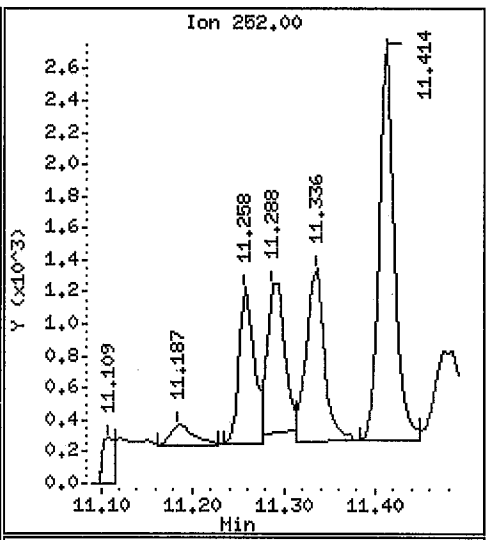
Concentration: 1.21 ng/sample

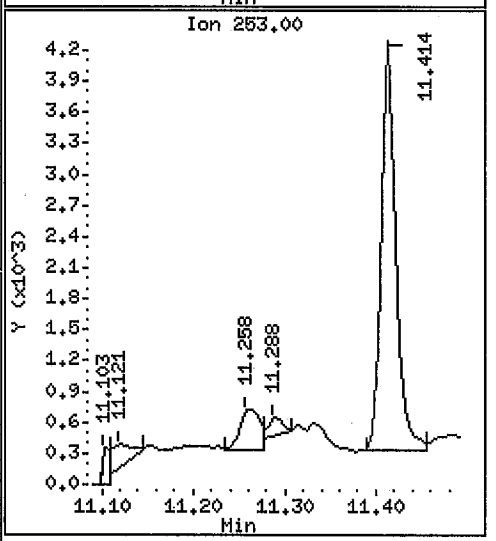












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

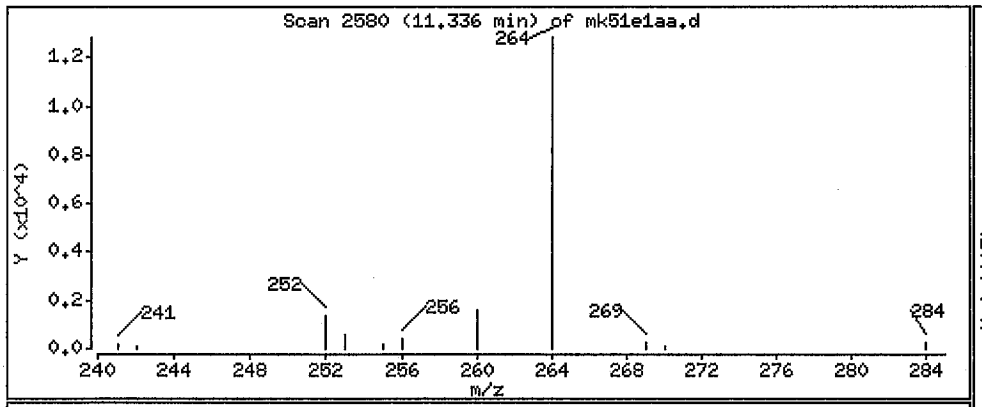
Operator: 11211

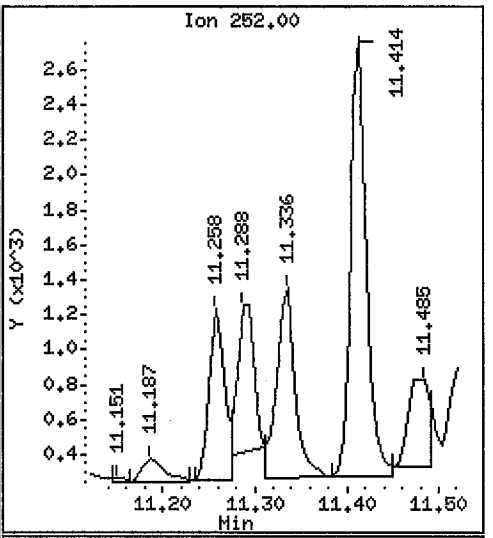
Column phase: Varian: 5MS

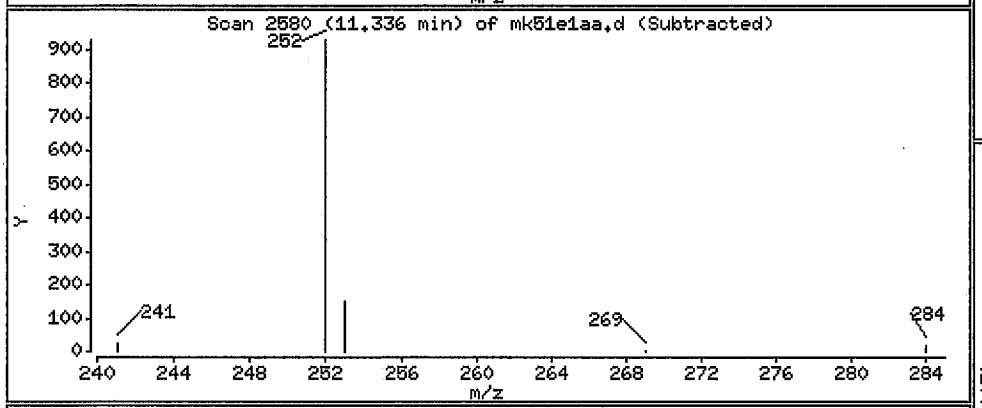
Column diameter: 0.25

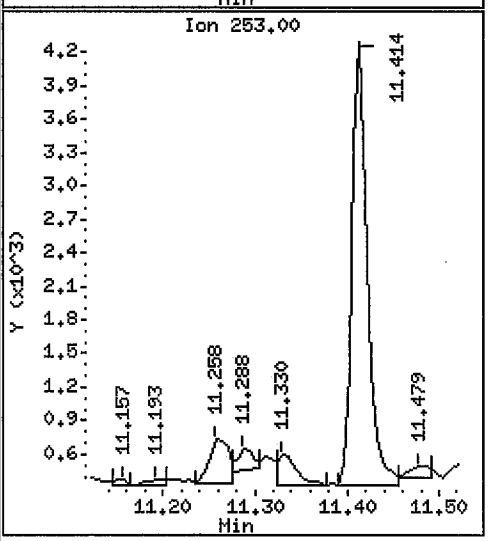
75 Benzo(k)fluoranthene

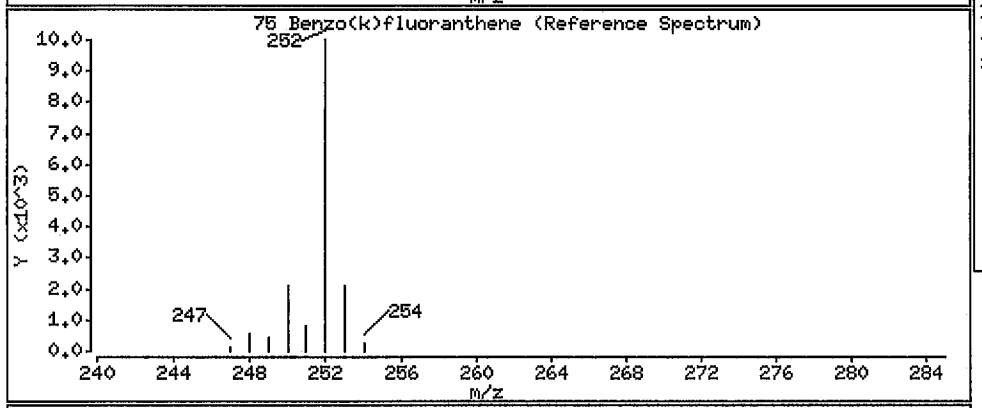
Concentration: 1.79 ng/sample

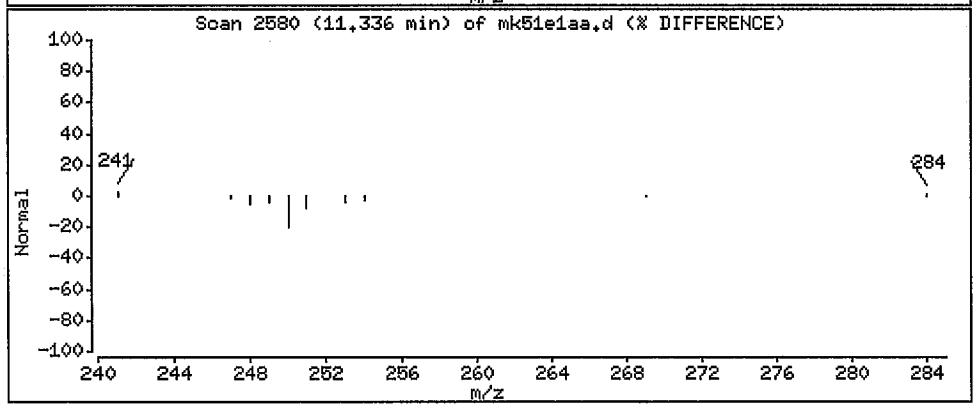












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

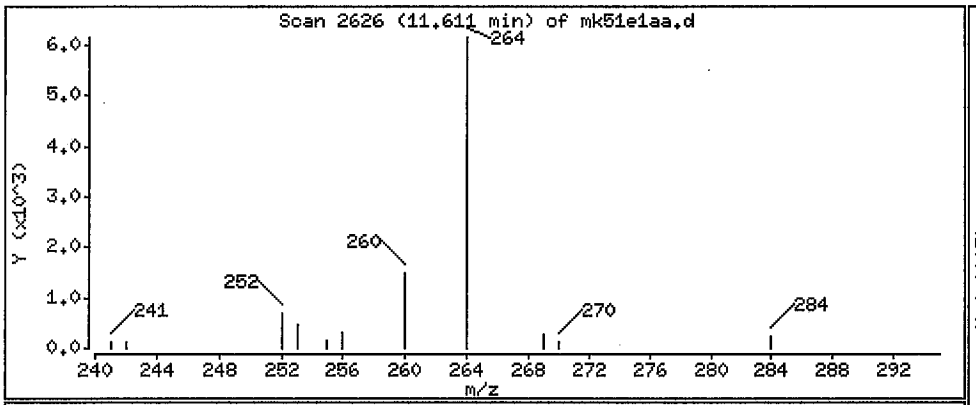
Operator: 11211

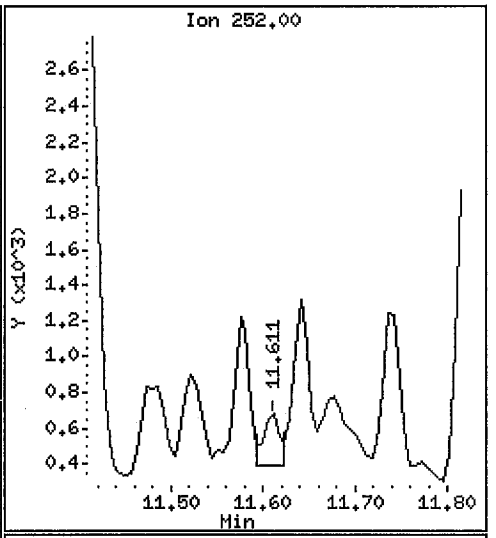
Column phase: Varian: 5MS

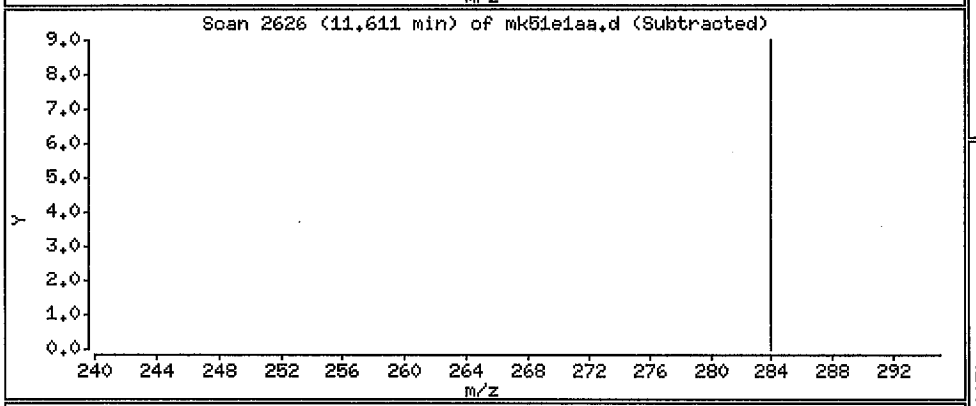
Column diameter: 0.25

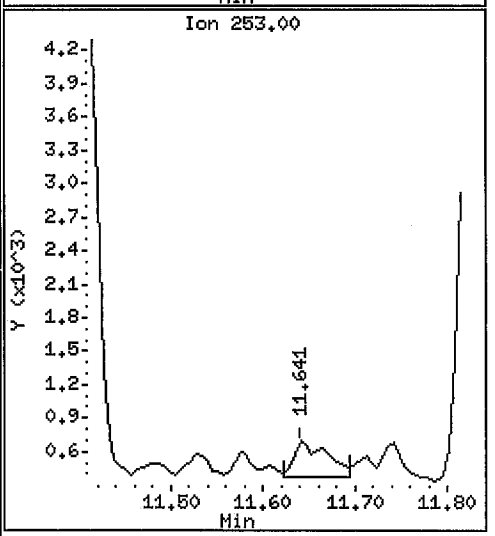
77 Benzo(e)pyrene

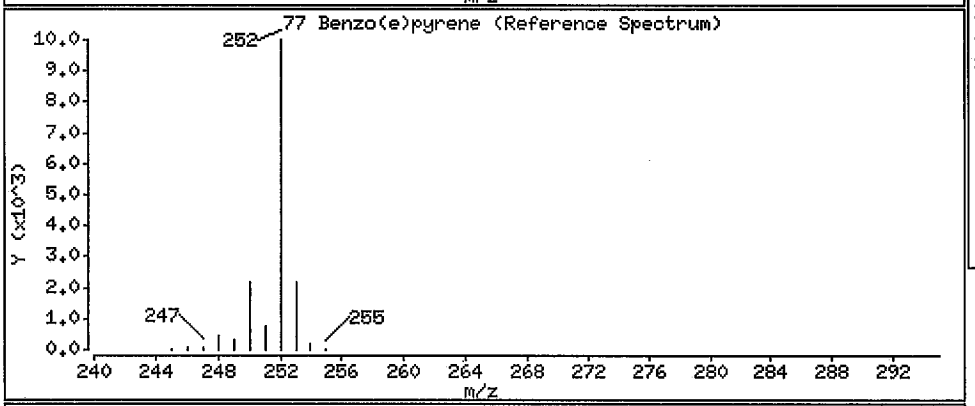
Concentration: 0.427 ng/sample











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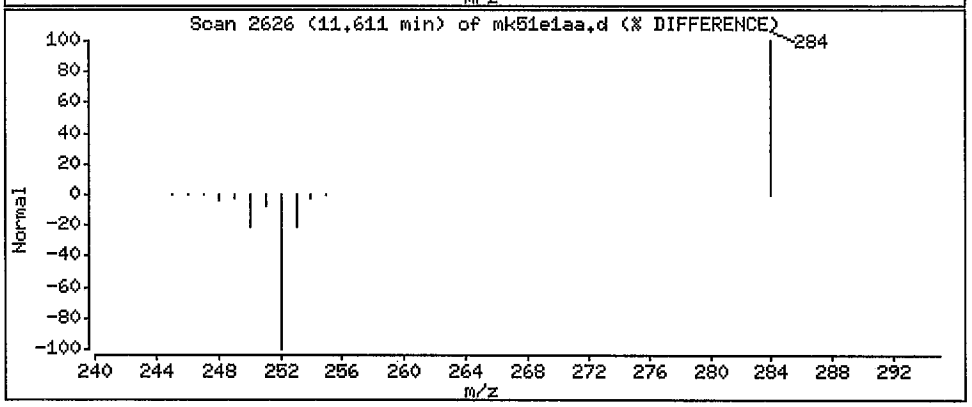
(5)



Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

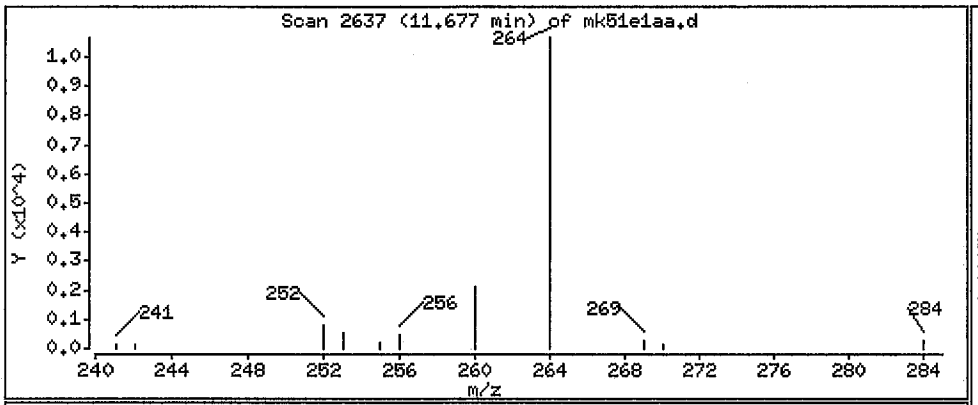
Operator: 11211

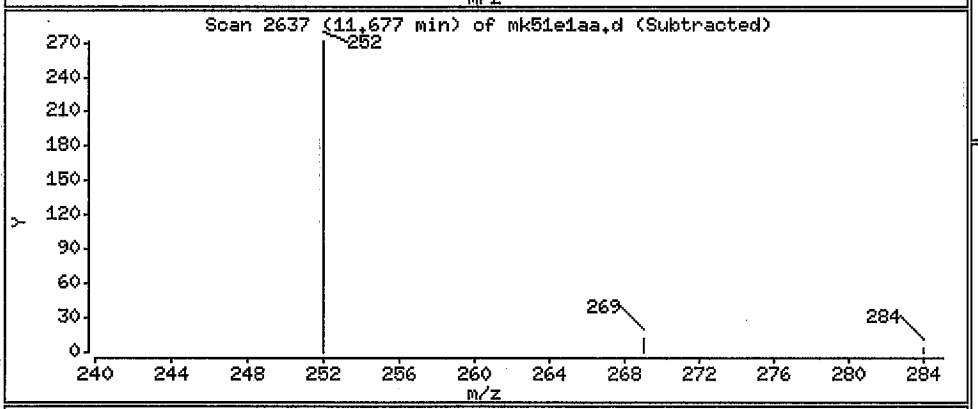
Column phase: Varian: 5MS

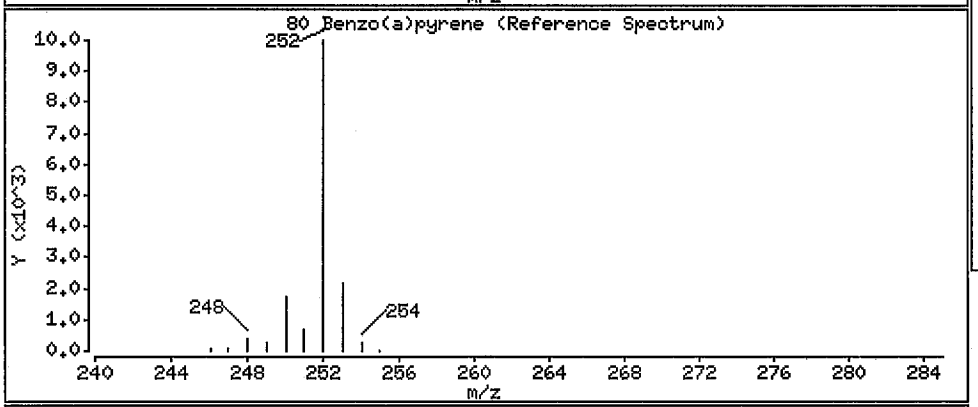
Column diameter: 0.25

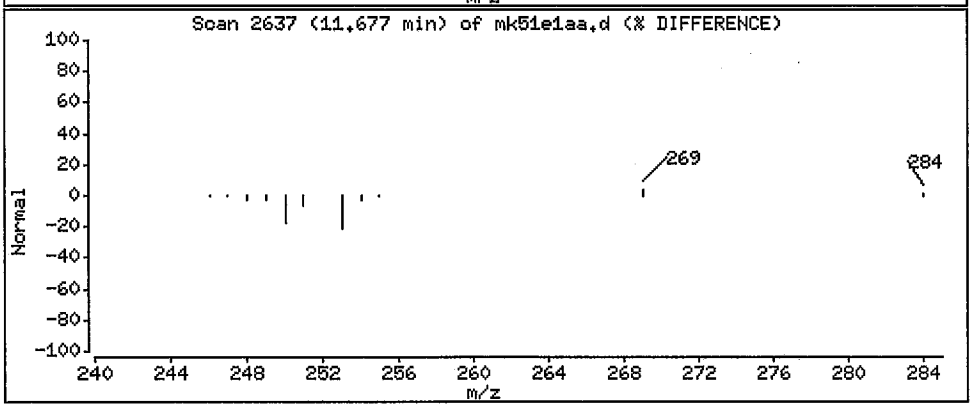
80 Benzo(a)pyrene

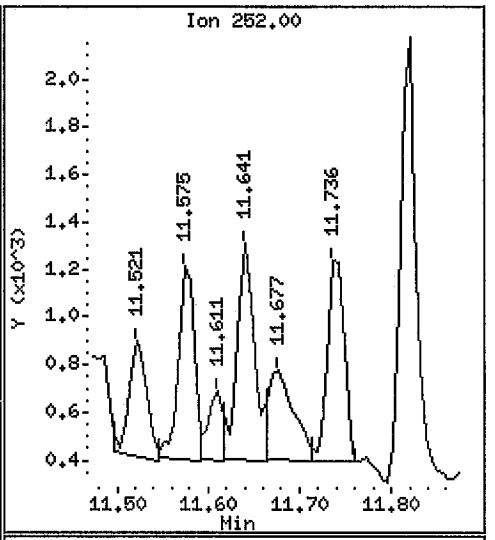
Concentration: 0.900 ng/sample

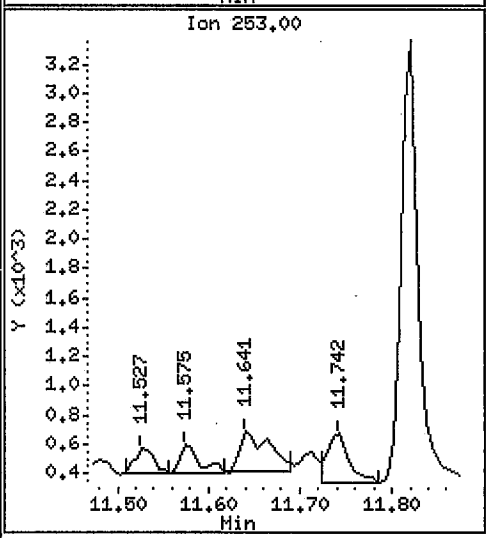












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

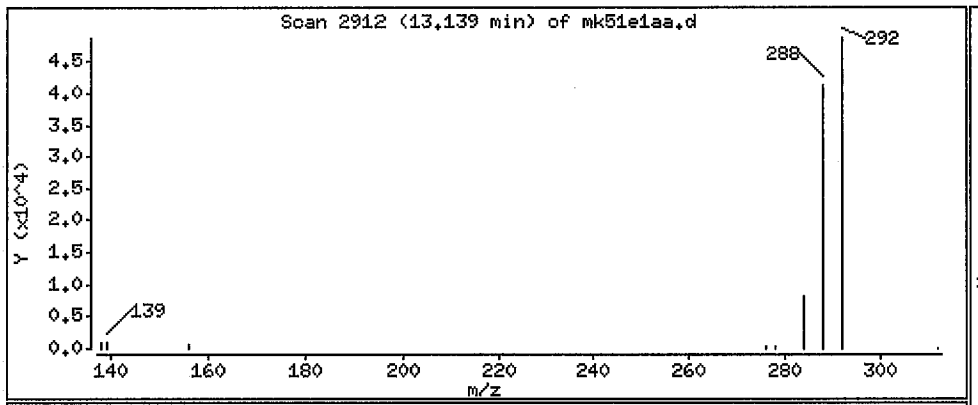
Operator: 11211

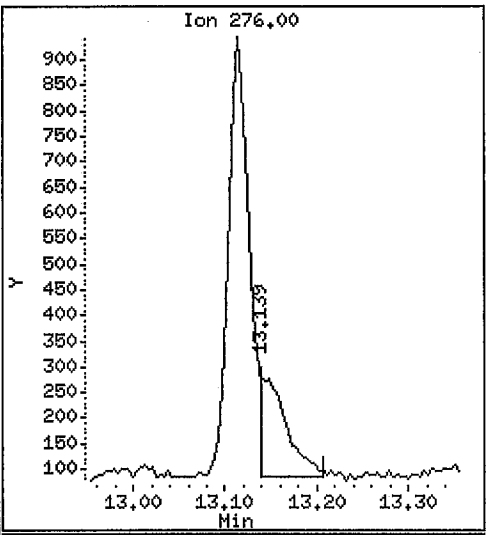
Column phase: Varian: 5MS

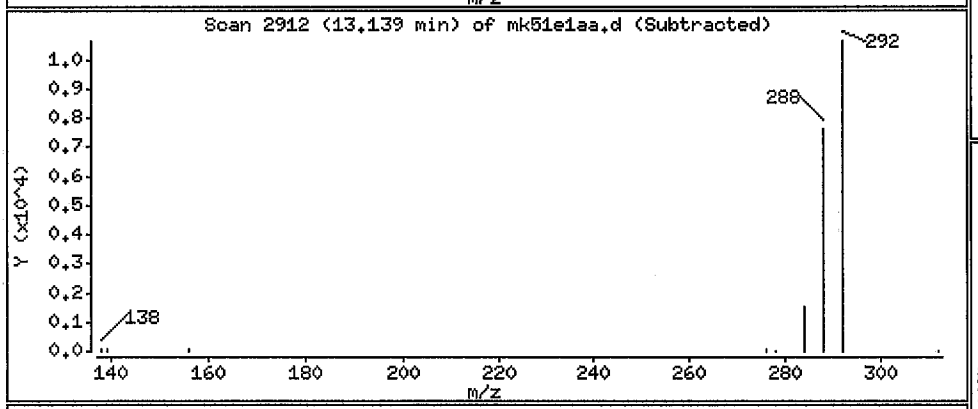
Column diameter: 0.25

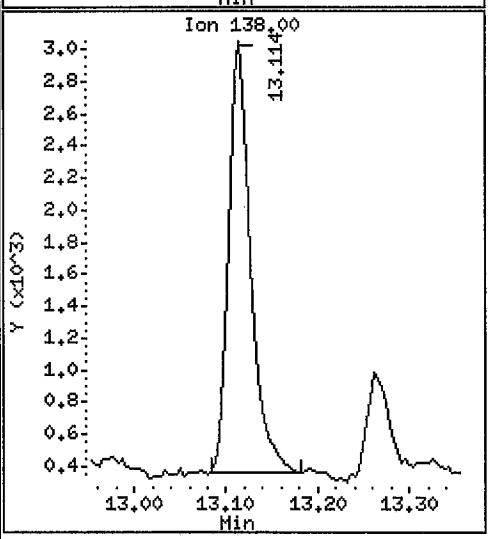
86 Indeno(1,2,3-cd)pyrene

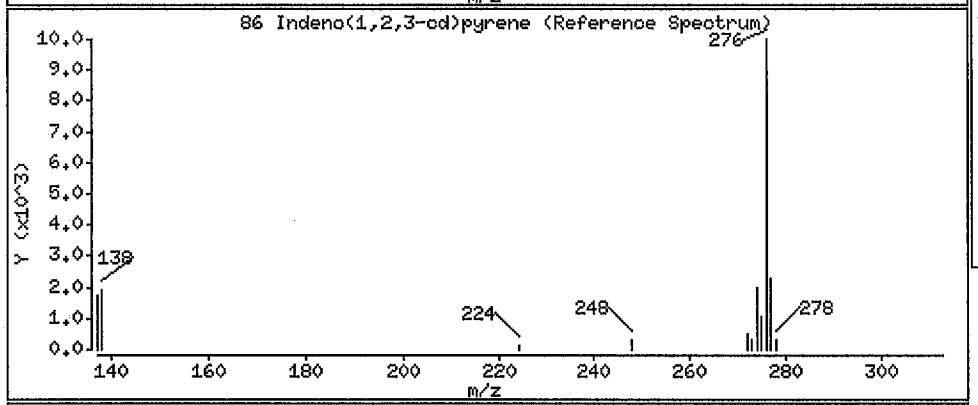
Concentration: 0.394 ng/sample











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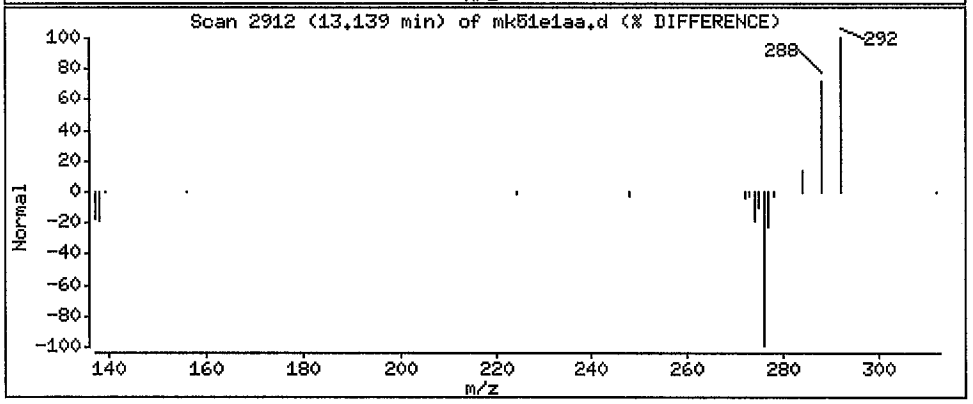


Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

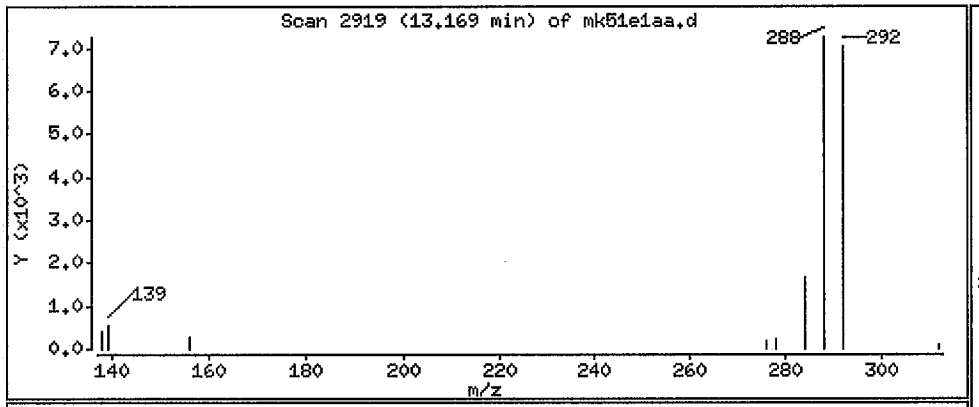
Operator: 11211

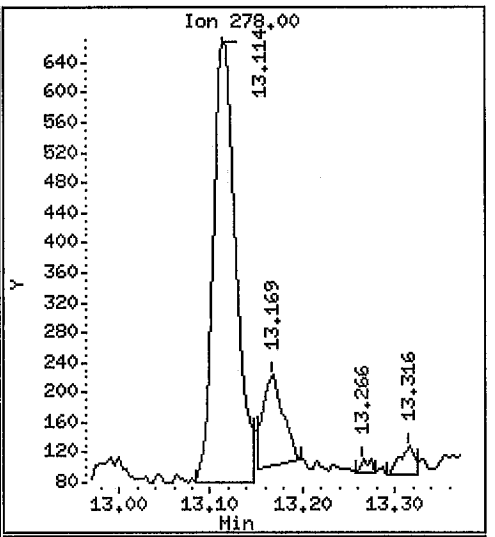
Column phase: Varian: 5MS

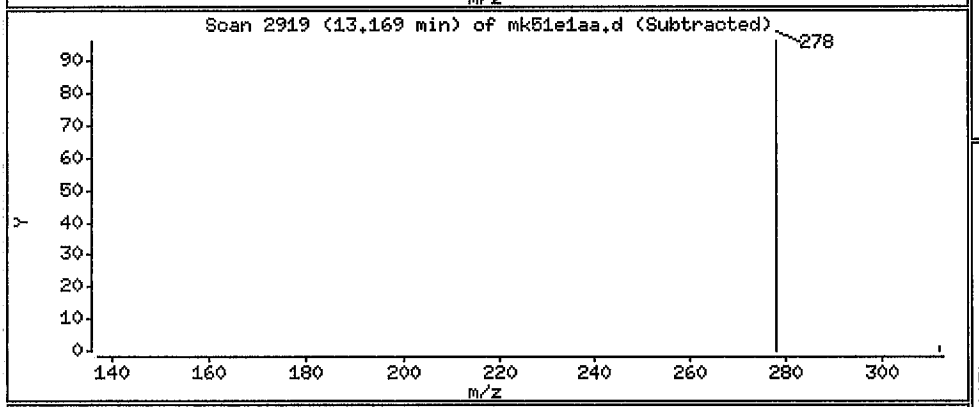
Column diameter: 0.25

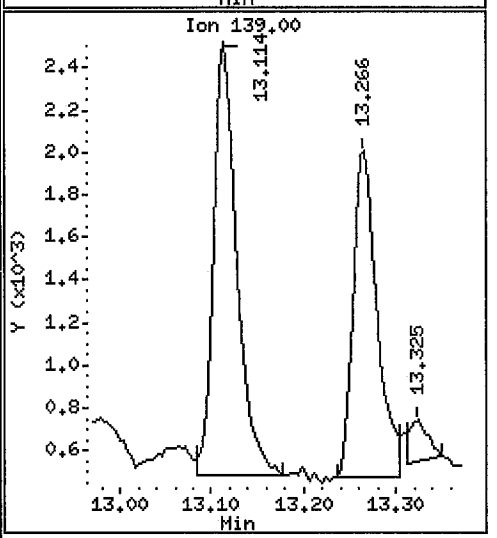
89 Dibenz(a,h)anthracene

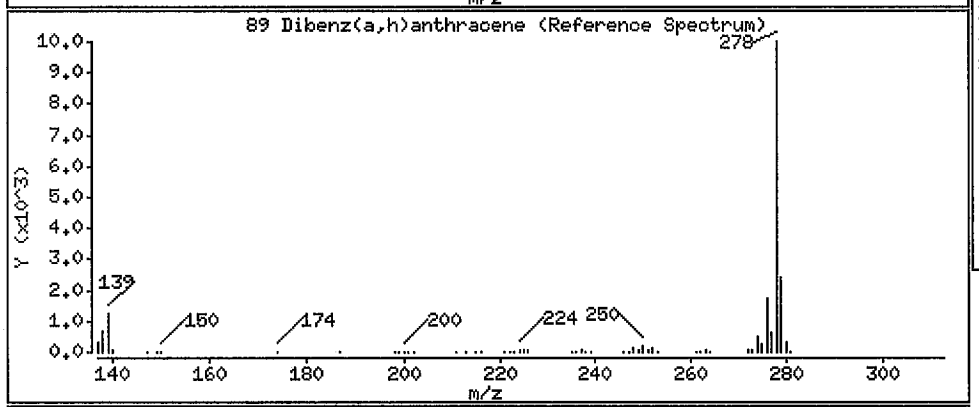
Concentration: 0.252 ng/sample

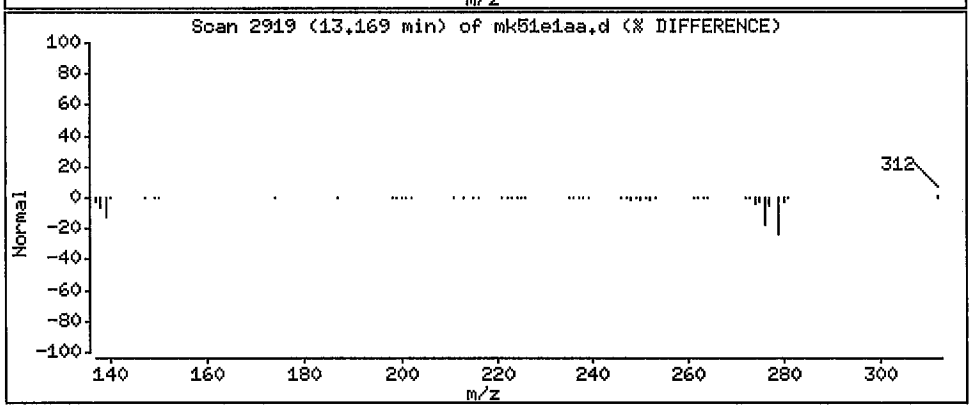












Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1aa.d

Date : 03-AUG-2011 15:58

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E1AA,,3,,MBLK

Purge Volume: 1.0

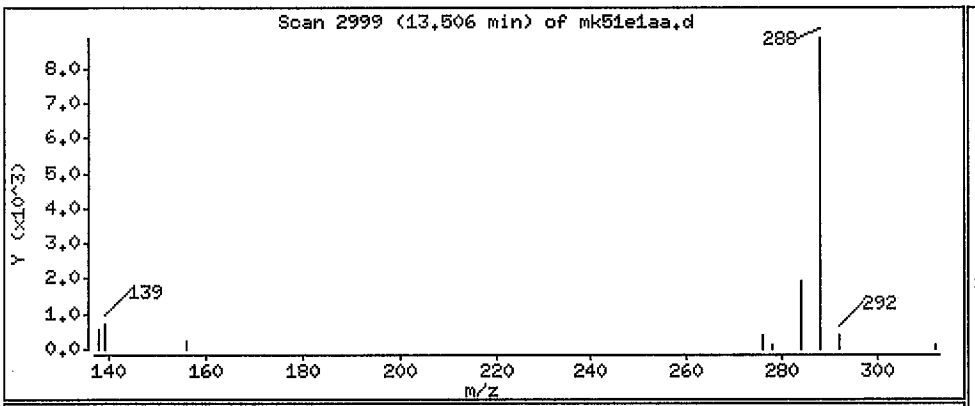
Operator: 11211

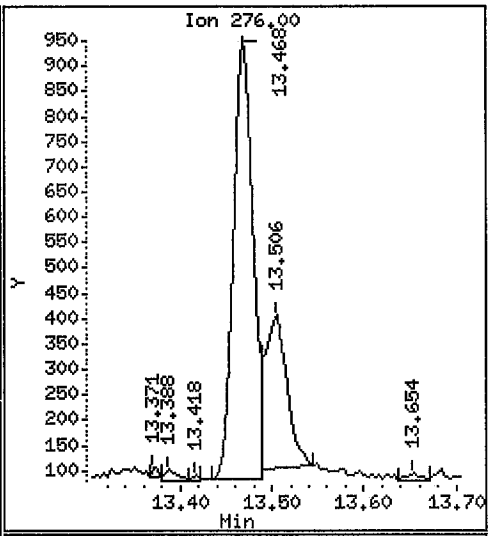
Column phase: Varian: 5MS

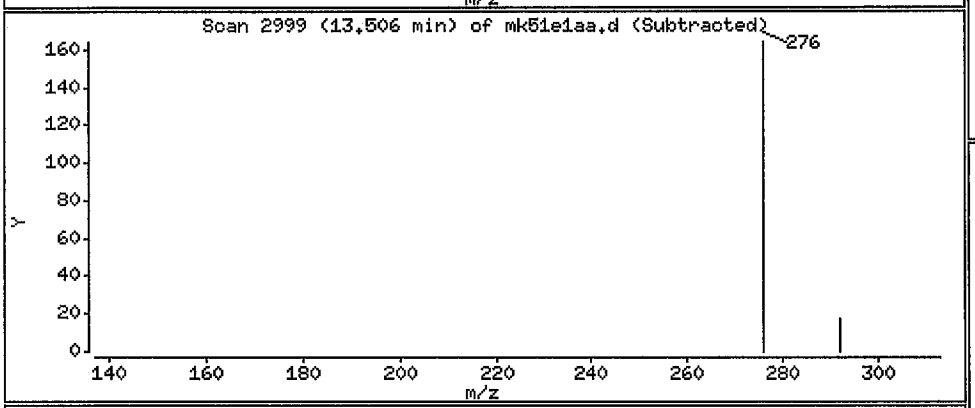
Column diameter: 0.25

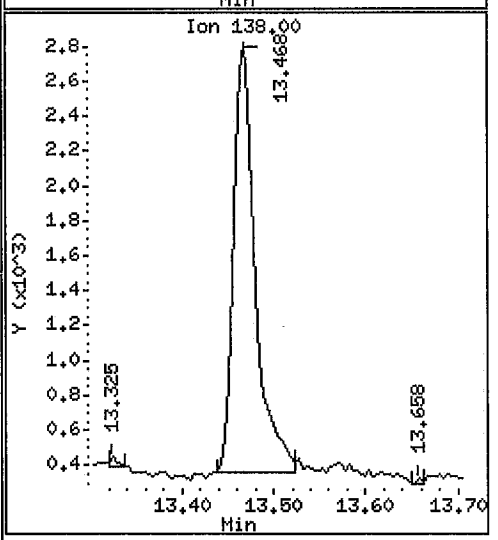
92 Benzo(g,h,i)perylene

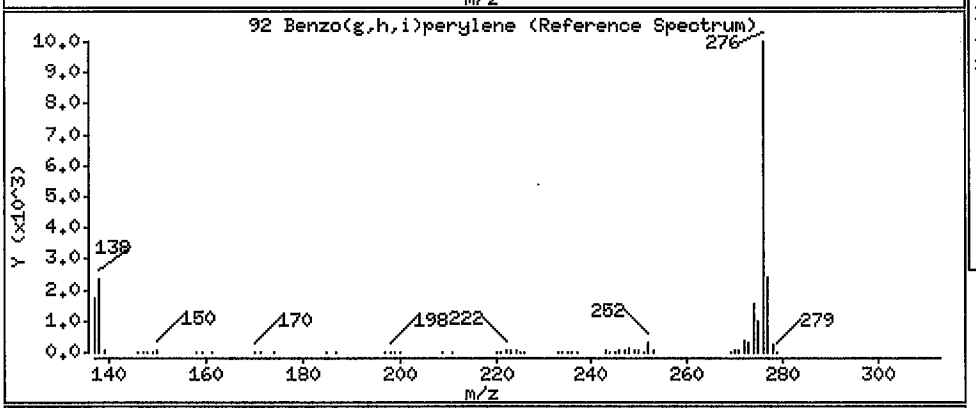
Concentration: 0.654 ng/sample

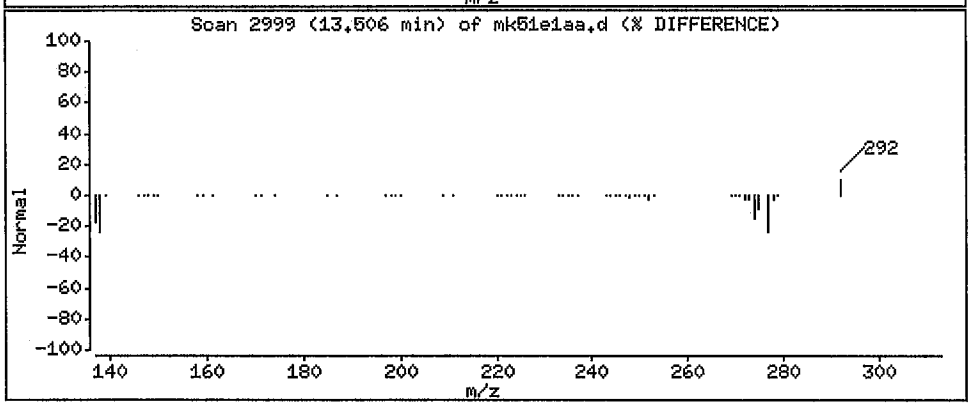












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/03/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	90	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	2.2	(0-25)	KNOX ID-0016
Acenaphthylene	91	(60 - 140)			KNOX ID-0016
	93	(60 - 140)	1.7	(0-25)	KNOX ID-0016
Anthracene	86	(60 - 140)			KNOX ID-0016
	90	(60 - 140)	4.6	(0-25)	KNOX ID-0016
Benzo(a)anthracene	80	(60 - 140)			KNOX ID-0016
	81	(60 - 140)	1.5	(0-25)	KNOX ID-0016
Benzo(b)fluoranthene	82	(60 - 140)			KNOX ID-0016
	83	(60 - 140)	1.9	(0-25)	KNOX ID-0016
Benzo(k)fluoranthene	105	(60 - 140)			KNOX ID-0016
	107	(60 - 140)	1.5	(0-25)	KNOX ID-0016
Benzo(ghi)perylene	96	(60 - 140)			KNOX ID-0016
	97	(60 - 140)	1.2	(0-25)	KNOX ID-0016
Benzo(a)pyrene	96	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	2.1	(0-25)	KNOX ID-0016
Benzo(e)pyrene	89	(60 - 140)			KNOX ID-0016
	90	(60 - 140)	1.8	(0-25)	KNOX ID-0016
Chrysene	103	(60 - 140)			KNOX ID-0016
	104	(60 - 140)	1.2	(0-25)	KNOX ID-0016
Dibenz(a,h)anthracene	95	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	2.9	(0-25)	KNOX ID-0016
Fluoranthene	94	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	0.85	(0-25)	KNOX ID-0016
Fluorene	101	(60 - 140)			KNOX ID-0016
	103	(60 - 140)	2.0	(0-25)	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	91	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	0.87	(0-25)	KNOX ID-0016
2-Methylnaphthalene	105	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	2.6	(0-25)	KNOX ID-0016
Naphthalene	106	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	0.93	(0-25)	KNOX ID-0016
Perylene	86	(60 - 140)			KNOX ID-0016
	98	(60 - 140)	13	(0-25)	KNOX ID-0016
Phenanthrene	104	(60 - 140)			KNOX ID-0016
	104	(60 - 140)	0.76	(0-25)	KNOX ID-0016
Pyrene	91	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	1.3	(0-25)	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	98	(60 - 140)
	95	(60 - 140)
Naphthalene-d8	90	(60 - 140)
	89	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
	95	(60 - 140)
Acenaphthylene-d8	110	(60 - 140)
	109	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	102	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	138	(60 - 140)
	136	(60 - 140)
Chrysene-d12	94	(60 - 140)
	92	(60 - 140)
Benzo(b)fluoranthene-d12	114	(60 - 140)
	112	(60 - 140)
Benzo(k)fluoranthene-d12	90	(60 - 140)
	89	(60 - 140)
Benzo(a)pyrene-d12	108	(60 - 140)
	105	(60 - 140)
Perylene-d12	102	(60 - 140)
	98	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	111	(60 - 140)
	110	(60 - 140)
Dibenz(ah)anthracene-d14	109	(60 - 140)
	108	(60 - 140)
Benzo(ghi)perylene-d12	104	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/03/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	250	225	ng/sample	90		KNOX ID-0016
	250	230	ng/sample	92	2.2	KNOX ID-0016
Acenaphthylene	250	228	ng/sample	91		KNOX ID-0016
	250	232	ng/sample	93	1.7	KNOX ID-0016
Anthracene	250	214	ng/sample	86		KNOX ID-0016
	250	224	ng/sample	90	4.6	KNOX ID-0016
Benzo(a)anthracene	250	199	ng/sample	80		KNOX ID-0016
	250	202	ng/sample	81	1.5	KNOX ID-0016
Benzo(b)fluoranthene	250	204	ng/sample	82		KNOX ID-0016
	250	208	ng/sample	83	1.9	KNOX ID-0016
Benzo(k)fluoranthene	250	263	ng/sample	105		KNOX ID-0016
	250	267	ng/sample	107	1.5	KNOX ID-0016
Benzo(ghi)perylene	250	240	ng/sample	96		KNOX ID-0016
	250	243	ng/sample	97	1.2	KNOX ID-0016
Benzo(a)pyrene	250	239	ng/sample	96		KNOX ID-0016
	250	244	ng/sample	98	2.1	KNOX ID-0016
Benzo(e)pyrene	250	222	ng/sample	89		KNOX ID-0016
	250	226	ng/sample	90	1.8	KNOX ID-0016
Chrysene	250	257	ng/sample	103		KNOX ID-0016
	250	260	ng/sample	104	1.2	KNOX ID-0016
Dibenz(a,h)anthracene	250	237	ng/sample	95		KNOX ID-0016
	250	244	ng/sample	98	2.9	KNOX ID-0016
Fluoranthene	250	234	ng/sample	94		KNOX ID-0016
	250	236	ng/sample	94	0.85	KNOX ID-0016
Fluorene	250	253	ng/sample	101		KNOX ID-0016
	250	258	ng/sample	103	2.0	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	250	228	ng/sample	91		KNOX ID-0016
	250	230	ng/sample	92	0.87	KNOX ID-0016
2-Methylnaphthalene	250	263	ng/sample	105		KNOX ID-0016
	250	270	ng/sample	108	2.6	KNOX ID-0016
Naphthalene	2000	2130	ng/sample	106		KNOX ID-0016
	2000	2150	ng/sample	108	0.93	KNOX ID-0016
Perylene	250	216	ng/sample	86		KNOX ID-0016
	250	246	ng/sample	98	13	KNOX ID-0016
Phenanthrene	250	259	ng/sample	104		KNOX ID-0016
	250	261	ng/sample	104	0.76	KNOX ID-0016
Pyrene	250	228	ng/sample	91		KNOX ID-0016
	250	231	ng/sample	92	1.3	KNOX ID-0016

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	98	(60 - 140)
	95	(60 - 140)
Naphthalene-d8	90	(60 - 140)
	89	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
	95	(60 - 140)
Acenaphthylene-d8	110	(60 - 140)
	109	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	102	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	138	(60 - 140)
	136	(60 - 140)
Chrysene-d12	94	(60 - 140)
	92	(60 - 140)
Benzo(b)fluoranthene-d12	114	(60 - 140)
	112	(60 - 140)
Benzo(k)fluoranthene-d12	90	(60 - 140)
	89	(60 - 140)
Benzo(a)pyrene-d12	108	(60 - 140)
	105	(60 - 140)
Perylene-d12	102	(60 - 140)
	98	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	111	(60 - 140)
	110	(60 - 140)
Dibenz(ah)anthracene-d14	109	(60 - 140)
	108	(60 - 140)
Benzo(ghi)perylene-d12	104	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AC-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Report Date: 09-Aug-2011 16:02

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Lab Smp Id: MK51E1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 03-AUG-2011 16:23
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E1AC,,3,,LCS
Misc Info : P080311,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 09-Aug-2011 16:01 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 10 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.869	(1.000)	623077	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.869	(0.770)	623077	0.44860	224
3 Naphthalene	128	4.888	4.887	(1.003)	4453608	4.26335	2130
$ 222 13C6-Naphthalene	134	4.873	4.887	(1.000)	57435	0.04989	~~24.9(R)~~
* 10 2-Methylnaphthalene-d10	152	5.431	5.427	(1.000)	361014	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.431	5.427	(0.858)	361014	0.47820	239
12 2-Methylnaphthalene	142	5.457	5.454	(1.005)	381006	0.52650	263
* 13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	350036	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.870)	350036	0.46603	233
15 1-Methylnaphthalene	142	5.540	5.536	(1.005)	348187	0.51304	257
16 Biphenyl	154	5.842	5.840	(1.076)	444690	0.51598	258
* 17 2,6-Dimethylnaphthalene-d12	168	5.940	5.937	(1.000)	314411	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.940	5.937	(0.938)	314411	0.48603	243
19 2,6 Dimethylnaphthalene	156	5.976	5.974	(1.006)	319119	0.51062	255

8/9/11

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Report Date: 09-Aug-2011 16:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.199	6.196	(1.000)	602146	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.199	6.196	(0.979)	602146	0.55276	276
	22 Acenaphthylene	152	6.211	6.208	(1.002)	543033	0.45557	228
*	23 Acenaphthene-d10	164	6.330	6.327	(1.000)	299716	0.50000	0.500
	24 Acenaphthene	154	6.356	6.353	(1.025)	316229	0.45044	225
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.674	(1.124)	287708	0.54134	271
$	26 Fluorene-d10	176	6.768	6.763	(0.892)	366	0.000625	~~0.313(R)~~
	27 Fluorene	166	6.788	6.788	(0.895)	380963	0.50623	253
$	28 13C6-Fluorene	171	6.786	6.786	(0.895)	359	0.000553	~~0.276(R)~~
*	34 Dibenzothiopene-d8	192	7.480	7.478	(1.000)	520056	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.480	7.478	(0.841)	520056	0.41354	207
	36 Dibenzothiophene	184	7.495	7.495	(1.002)	483754	0.48916	245
*	41 Phenanthrene-d10	188	7.584	7.582	(1.000)	489644	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.584	7.582	(0.853)	489644	0.43074	215
	43 Phenanthrene	178	7.605	7.603	(1.003)	552111	0.51728	259
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	478365	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	478367	0.48749	244
	46 Anthracene	178	7.648	7.648	(1.002)	510470	0.42727	214
$	47 13C6-Anthracene	184	7.648	7.646	(0.860)	425437	0.41109	206
	52 1-Methylphenanthrene	192	8.150	8.150	(1.075)	376034	0.57228	286
*	53 Fluoranthene-d10	212	8.672	8.672	(1.000)	551580	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.672	8.672	(0.975)	551580	0.50901	255
	55 Fluoranthene	202	8.689	8.687	(1.002)	570138	0.46717	234
*	56 Pyrene-d10	212	8.893	8.891	(1.000)	441647	0.50000	0.500
	57 Pyrene	202	8.911	8.908	(1.028)	587648	0.45566	228
$	58 Terphenyl-d14	244	9.048	9.050	(1.043)	39	7.09e-05	~~0.0354(R)~~
*	60 Benzo(a)anthracene-d12	240	10.108	10.108	(1.000)	385966	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.108	10.108	(1.137)	385966	0.69127	346(R)
	62 Benzo(a)anthracene	228	10.129	10.129	(1.002)	458254	0.39889	199
*	63 Chrysene-d12	240	10.142	10.142	(1.000)	414706	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.142	10.142	(1.140)	414706	0.46893	234
	65 Chrysene	228	10.167	10.167	(1.002)	469429	0.51464	257
*	70 Benzo(b)fluoranthene-d12	264	11.259	11.259	(1.000)	371368	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.259	11.259	(0.972)	371368	0.57087	285
	72 Benzo(b)fluoranthene	252	11.289	11.289	(1.003)	420697	0.40807	204
*	73 Benzo(k)fluoranthene-d12	264	11.295	11.295	(1.000)	410553	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.295	11.295	(0.975)	410553	0.45112	226
	75 Benzo(k)fluoranthene	252	11.319	11.319	(1.002)	476305	0.52529	263
*	76 Benzo(e)pyrene-d12	264	11.582	11.581	(1.000)	305439	0.50000	0.500
	77 Benzo(e)pyrene	252	11.611	11.611	(0.997)	412039	0.44378	222
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	362398	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	362398	0.53785	269
	80 Benzo(a)pyrene	252	11.671	11.671	(1.002)	381280	0.47723	239
*	81 Perylene-d12	264	11.743	11.743	(1.000)	333383	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.743	11.743	(1.014)	333383	0.51079	255
	83 Perylene	252	11.773	11.773	(1.003)	360392	0.43296	216
*	84 Indeno(123-cd)pyrene-d12	288	13.119	13.118	(1.000)	409696	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Report Date: 09-Aug-2011 16:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.119	13.118	(1.133)	409696	0.55578	278
	86 Indeno(1,2,3-cd)pyrene	276	13.152	13.152	(1.003)	440846	0.45609	228
*	87 Dibenz(ah)anthracene-d14	292	13.123	13.123	(1.000)	303883	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.123	13.123	(1.133)	303883	0.54581	273
	89 Dibenz(a,h)anthracene	278	13.169	13.169	(1.004)	344461	0.47323	237
*	90 Benzo(ghi)perylene-d12	288	13.469	13.469	(1.000)	285657	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.469	13.469	(1.163)	285657	0.51779	259
	92 Benzo(g,h,i)perylene	276	13.503	13.502	(1.002)	373037	0.48097	240

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Report Date: 09-Aug-2011 16:02

TestAmerica Knoxville

RECOVERY REPORT

Client Name: ITSBUR
Sample Matrix: GAS
Lab Smp Id: MK51E1AC
Level: LOW
Data Type: MS DATA
SpikeList File: icv.spk
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Misc Info: P080311,SIMPAH3

Client SDG: H1G260000
Fraction: SV
Client Smp ID: INTRA-LAB CHECK
Operator: 11211
SampleType: METHOD SPIKE
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS 60-140
3 Naphthalene	2000	2130	106.58	70-130
12 2-Methylnaphthalen	250	263	105.30	70-130
15 1-Methylnaphthalen	250	257	102.61	70-130
16 Biphenyl	250	258	103.20	70-130
19 2,6 Dimethylnaphth	250	255	102.12	70-130
22 Acenaphthylene	250	228	91.11	70-130
24 Acenaphthene	250	225	90.09	70-130
25 2,3,5 Trimethylnap	250	271	108.27	70-130
27 Fluorene	250	253	101.25	70-130
36 Dibenzothiophene	250	245	97.83	70-130
43 Phenanthrene	250	259	103.46	70-130
46 Anthracene	250	214	85.45	70-130
52 1-Methylphenanthre	250	286	114.46	70-130
55 Fluoranthene	250	234	93.43	70-130
57 Pyrene	250	228	91.13	70-130
62 Benzo(a)anthracene	250	199	79.78	70-130
65 Chrysene	250	257	102.93	70-130
72 Benzo(b)fluoranthe	250	204	81.61	70-130
75 Benzo(k)fluoranthe	250	263	105.06	70-130
77 Benzo(e)pyrene	250	222	88.76	70-130
80 Benzo(a)pyrene	250	239	95.45	70-130
83 Perylene	250	216	86.59	70-130
86 Indeno(1,2,3-cd)py	250	228	91.22	70-130
89 Dibenz(a,h)anthrac	250	237	94.65	70-130
92 Benzo(g,h,i)peryle	250	240	96.19	70-130

8.17.11

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS 60-140
$ 2 Naphthalene-d8(SS)	250	224	89.72	30-120

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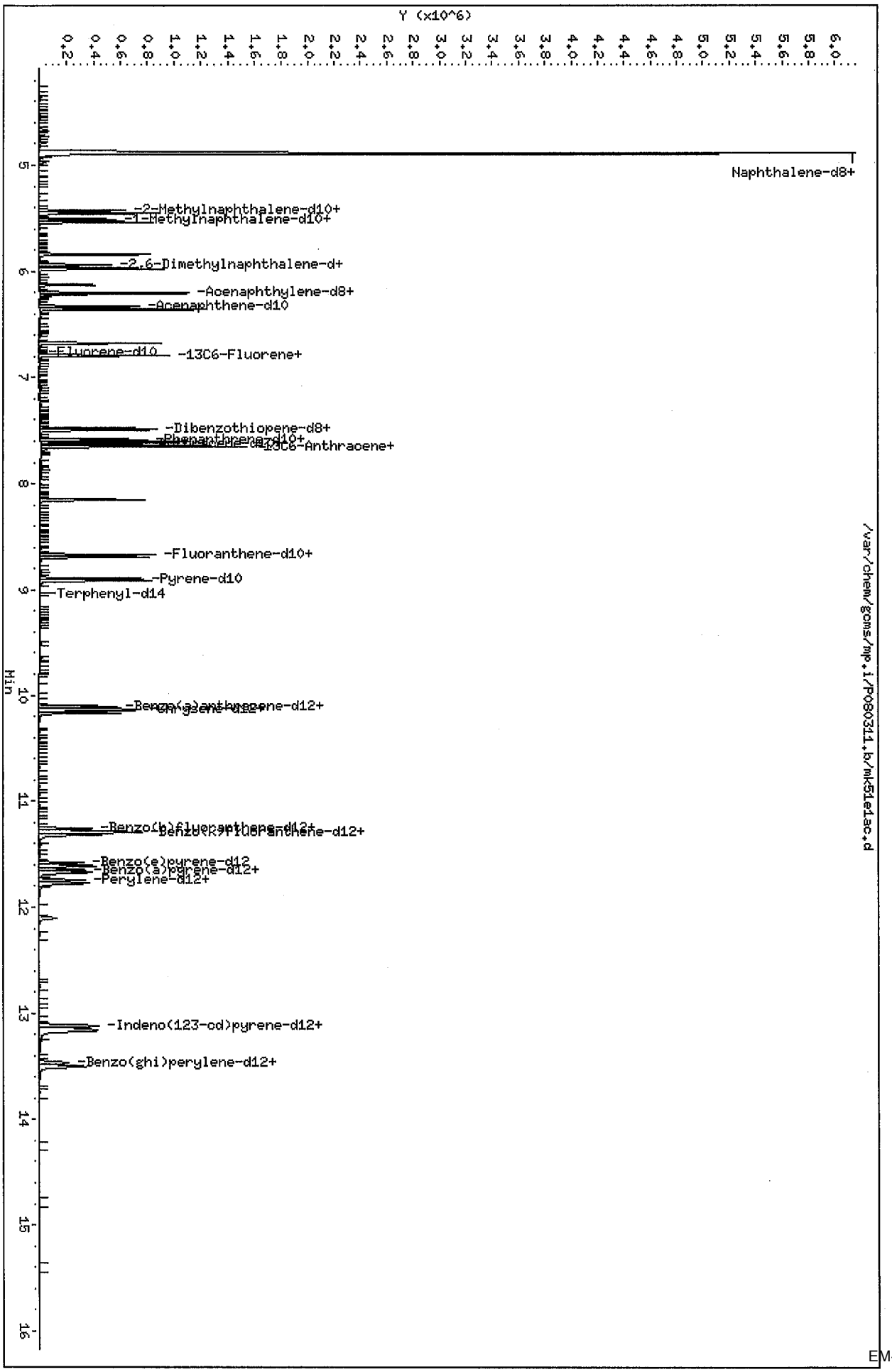
Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Report Date: 09-Aug-2011 16:02

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 222 13C6-Naphthalene	250	24.9	9.98*	50-150
$ 11 2-Methylnaphthalen	250	239	95.64	30-120
$ 14 1-Methylnaphthalen	250	233	93.21	30-120
$ 18 2,6-Dimethylnaph-d	250	243	97.21	30-120
$ 21 Acenaphthylene-d8(	250	276	110.55	30-120
$ 26 Fluorene-d10	500	0.313	0.06*	30-120
$ 28 13C6-Fluorene	500	0.276	0.06*	30-120
$ 35 Dibenzothiopene-d8	250	207	82.71	30-120
$ 42 Phenanthrene-d10(S	250	215	86.15	30-120
$ 45 Anthracene-d10(SS)	250	244	97.50	30-120
$ 47 13C6-Anthracene	250	206	82.22	30-120
$ 54 Fluoranthene-d10(S	250	255	101.80	0-120
$ 58 Terphenyl-d14	500	0.0354	0.01*	30-120
$ 61 Benzo(a)anthracene	250	346	138.25*	30-120
$ 64 Chrysene-d12(SS)	250	234	93.79	30-120
$ 71 Benzo(b)fluoranthe	250	285	114.17	30-120
$ 74 Benzo(k)fluoranthe	250	226	90.22	30-120
$ 79 Benzo(a)pyrene-d12	250	269	107.57	30-120
$ 82 Perylene-d12(SS)	250	255	102.16	30-120
$ 85 Indeno(123-cd)pyre	250	278	111.16	30-120
$ 88 Dibenz(ah)anthrace	250	273	109.16	30-120
$ 91 Benzo(ghi)perylene	250	259	103.56	30-120

60-140
8/9/11


Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Date : 03-AUG-2011 16:23
Client ID: INTRA-LAB CHECK
Sample Info: MK51E1AC,3,LCS
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P080311.b/mk51e1ac.d
Y (x10^6)
Min
Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
-13C6-Fluorene+
-Dibenzothiopene-d8+
-13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(b)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Report Date: 09-Aug-2011 16:02

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Lab Smp Id: MK51E1AD Client Smp ID: INTRA-LAB CHECK
Inj Date : 03-AUG-2011 16:48
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E1AD,,3,,LCSD
Misc Info : P080311,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Meth Date : 09-Aug-2011 16:01 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 11 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.872	4.869	(1.000)	632757	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.872	4.869	(0.770)	632757	0.44666	223
3 Naphthalene	128	4.887	4.887	(1.003)	4560251	4.29866	2150
$ 222 13C6-Naphthalene	134	4.869	4.887	(0.999)	58226	0.04980	~~24.9(R)~~
* 10 2-Methylnaphthalene-d10	152	5.430	5.427	(1.000)	365310	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.430	5.427	(0.858)	365310	0.47442	237
12 2-Methylnaphthalene	142	5.454	5.454	(1.004)	395231	0.53974	270
* 13 1-Methylnaphthalene-d10	152	5.510	5.510	(1.000)	354836	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.510	5.510	(0.870)	354836	0.46318	232
15 1-Methylnaphthalene	142	5.540	5.536	(1.005)	358364	0.52089	260
16 Biphenyl	154	5.840	5.840	(1.075)	457190	0.52425	262
* 17 2,6-Dimethylnaphthalene-d12	168	5.940	5.937	(1.000)	319489	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.940	5.937	(0.938)	319489	0.48422	242
19 2,6 Dimethylnaphthalene	156	5.976	5.974	(1.006)	329778	0.51929	260

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Report Date: 09-Aug-2011 16:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.199	6.196	(1.000)	606075	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.199	6.196	(0.979)	606075	0.54549	273
	22 Acenaphthylene	152	6.211	6.208	(1.002)	556434	0.46379	232
*	23 Acenaphthene-d10	164	6.330	6.327	(1.000)	305694	0.50000	0.500
	24 Acenaphthene	154	6.356	6.353	(1.025)	324532	0.45927	230
	25 2,3,5 Trimethylnaphthalene	170	6.676	6.674	(1.124)	297783	0.55139	276
$	26 Fluorene-d10	176	6.766	6.763	(0.892)	289	0.00049	~~0.245(R)~~
	27 Fluorene	166	6.788	6.788	(0.895)	390895	0.51548	258
$	28 13C6-Fluorene	171	6.786	6.786	(0.895)	371	0.000567	~~0.283(R)~~
*	34 Dibenzothiopene-d8	192	7.480	7.478	(1.000)	517800	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.480	7.478	(0.841)	517800	0.40297	201
	36 Dibenzothiophene	184	7.497	7.495	(1.002)	491264	0.49892	249
*	41 Phenanthrene-d10	188	7.584	7.582	(1.000)	493386	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.584	7.582	(0.853)	493386	0.42478	212
	43 Phenanthrene	178	7.605	7.603	(1.003)	562060	0.52261	261
*	44 Anthracene-d10	188	7.632	7.632	(1.000)	476654	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.632	7.632	(0.858)	476654	0.47538	238
	46 Anthracene	178	7.648	7.648	(1.002)	532427	0.44725	224
$	47 13C6-Anthracene	184	7.648	7.646	(0.860)	445424	0.42123	211
	52 1-Methylphenanthrene	192	8.150	8.150	(1.075)	384809	0.58120	291
*	53 Fluoranthene-d10	212	8.672	8.672	(1.000)	551986	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.672	8.672	(0.975)	551986	0.49853	249
	55 Fluoranthene	202	8.689	8.687	(1.002)	577348	0.47273	236
*	56 Pyrene-d10	212	8.893	8.891	(1.000)	451268	0.50000	0.500
	57 Pyrene	202	8.911	8.908	(1.028)	597051	0.46261	231
$	58 Terphenyl-d14	244	9.045	9.050	(1.043)	16	2.91e-05	~~0.0145(R)~~
*	60 Benzo(a)anthracene-d12	240	10.108	10.108	(1.000)	389209	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.108	10.108	(1.137)	389209	0.68222	341(R)
	62 Benzo(a)anthracene	228	10.129	10.129	(1.002)	468827	0.40469	202
*	63 Chrysene-d12	240	10.142	10.142	(1.000)	416116	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.142	10.142	(1.140)	416116	0.46049	230
	65 Chrysene	228	10.167	10.167	(1.002)	476243	0.52034	260
*	70 Benzo(b)fluoranthene-d12	264	11.259	11.259	(1.000)	370317	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.259	11.259	(0.972)	370317	0.56232	281
	72 Benzo(b)fluoranthene	252	11.289	11.289	(1.003)	427862	0.41620	208
*	73 Benzo(k)fluoranthene-d12	264	11.295	11.295	(1.000)	409311	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.295	11.295	(0.975)	409311	0.44428	222
	75 Benzo(k)fluoranthene	252	11.318	11.319	(1.002)	483277	0.53459	267
*	76 Benzo(e)pyrene-d12	264	11.581	11.581	(1.000)	309206	0.50000	0.500
	77 Benzo(e)pyrene	252	11.611	11.611	(0.997)	415030	0.45218	226
*	78 Benzo(a)pyrene-d12	264	11.647	11.647	(1.000)	358250	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.647	11.647	(1.006)	358250	0.52522	263
	80 Benzo(a)pyrene	252	11.671	11.671	(1.002)	385617	0.48824	244
*	81 Perylene-d12	264	11.743	11.743	(1.000)	321885	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.743	11.743	(1.014)	321885	0.48716	244
	83 Perylene	252	11.773	11.773	(1.003)	395542	0.49217	246
*	84 Indeno(123-cd)pyrene-d12	288	13.114	13.118	(1.000)	409744	0.50000	0.500

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Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Report Date: 09-Aug-2011 16:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.114	13.118	(1.132)	409744	0.54907	275
	86 Indeno(1,2,3-cd)pyrene	276	13.152	13.152	(1.003)	445418	0.46076	230
*	87 Dibenz(ah)anthracene-d14	292	13.123	13.123	(1.000)	304040	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.123	13.123	(1.133)	304040	0.53944	270
	89 Dibenz(a,h)anthracene	278	13.169	13.169	(1.004)	355518	0.48817	244
*	90 Benzo(ghi)perylene-d12	288	13.469	13.469	(1.000)	286164	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.469	13.469	(1.163)	286164	0.51239	256
	92 Benzo(g,h,i)perylene	276	13.502	13.502	(1.002)	376890	0.48508	243

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Report Date: 09-Aug-2011 16:02

TestAmerica Knoxville

RECOVERY REPORT

Client Name: ITSBUR
Client SDG: H1G260000
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: MK51E1AD
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Operator: 11211
Data Type: MS DATA
SampleType: METHOD SPIKE
SpikeList File: icv.spk
Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P080311.b/SIMPAH3.m
Misc Info: P080311,SIMPAH3

SPIKE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS 60-140
3 Naphthalene	2000	2150	107.47	70-130
12 2-Methylnaphthalen	250	270	107.95	70-130
15 1-Methylnaphthalen	250	260	104.18	70-130
16 Biphenyl	250	262	104.85	70-130
19 2,6 Dimethylnaphth	250	260	103.86	70-130
22 Acenaphthylene	250	232	92.76	70-130
24 Acenaphthene	250	230	91.85	70-130
25 2,3,5 Trimethylnap	250	276	110.28	70-130
27 Fluorene	250	258	103.10	70-130
36 Dibenzothiophene	250	249	99.78	70-130
43 Phenanthrene	250	261	104.52	70-130
46 Anthracene	250	224	89.45	70-130
52 1-Methylphenanthre	250	291	116.24	70-130
55 Fluoranthene	250	236	94.55	70-130
57 Pyrene	250	231	92.52	70-130
62 Benzo(a)anthracene	250	202	80.94	70-130
65 Chrysene	250	260	104.07	70-130
72 Benzo(b)fluoranthe	250	208	83.24	70-130
75 Benzo(k)fluoranthe	250	267	106.92	70-130
77 Benzo(e)pyrene	250	226	90.44	70-130
80 Benzo(a)pyrene	250	244	97.65	70-130
83 Perylene	250	246	98.43	70-130
86 Indeno(1,2,3-cd)py	250	230	92.15	70-130
89 Dibenz(a,h)anthrac	250	244	97.63	70-130
92 Benzo(g,h,i)peryle	250	243	97.02	70-130

MW 8-17-11

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	250	223	89.33	~~30-120~~ 60-140 %

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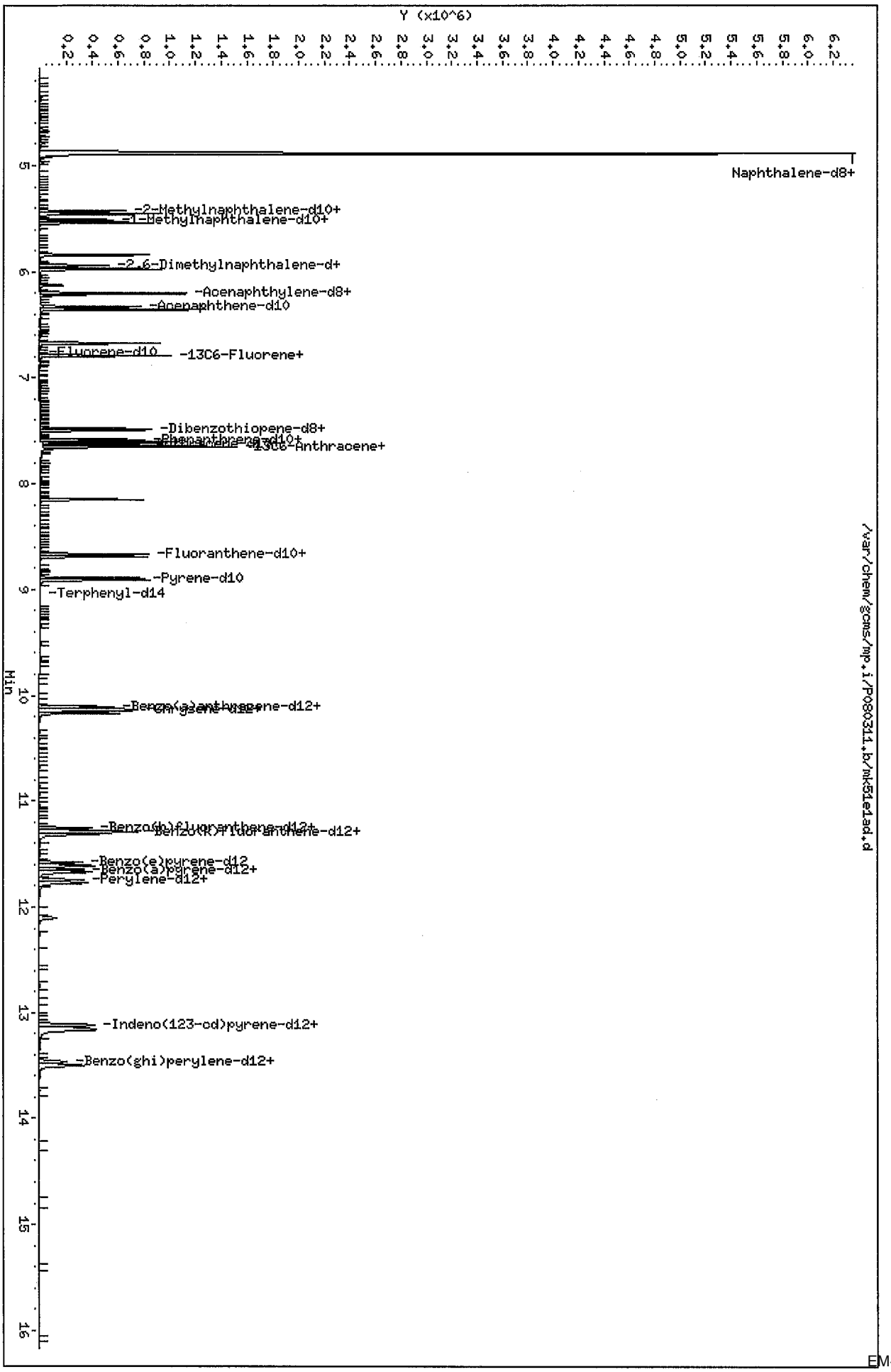
Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Report Date: 09-Aug-2011 16:02

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 222 13C6-Naphthalene	250	24.9	9.96*	50-150
$ 11 2-Methylnaphthalen	250	237	94.88	30-120
$ 14 1-Methylnaphthalen	250	232	92.64	30-120
$ 18 2,6-Dimethylnaph-d	250	242	96.84	30-120
$ 21 Acenaphthylene-d8(	250	273	109.10	30-120
$ 26 Fluorene-d10	500	0.245	0.05*	30-120
$ 28 13C6-Fluorene	500	0.283	0.06*	30-120
$ 35 Dibenzothiopene-d8	250	201	80.59	30-120
$ 42 Phenanthrene-d10(S	250	212	84.96	30-120
$ 45 Anthracene-d10(SS)	250	238	95.08	30-120
$ 47 13C6-Anthracene	250	211	84.25	30-120
$ 54 Fluoranthene-d10(S	250	249	99.71	30-120
$ 58 Terphenyl-d14	500	0.0145	0.00*	30-120
$ 61 Benzo(a)anthracene	250	341	136.44*	30-120
$ 64 Chrysene-d12(SS)	250	230	92.10	30-120
$ 71 Benzo(b)fluoranthe	250	281	112.46	30-120
$ 74 Benzo(k)fluoranthe	250	222	88.86	30-120
$ 79 Benzo(a)pyrene-d12	250	263	105.04	30-120
$ 82 Perylene-d12(SS)	250	244	97.43	30-120
$ 85 Indeno(123-cd)pyre	250	275	109.81	30-120
$ 88 Dibenz(ah)anthrace	250	270	107.89	30-120
$ 91 Benzo(ghi)perylene	250	256	102.48	30-120

60-140 8/9/11


Data File: /var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Date : 03-AUG-2011 16:48
Client ID: INTRA-LAB CHECK
Sample Info: MK51E1AD,3,LCSD
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P080311.b/mk51e1ad.d
Y (x10^6)
Min
Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Fluorene-d10
-13C6-Fluorene+
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-13C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406
MB Lot-Sample #: H1G260000-014 Work Order #...: MK51E2AA Matrix.....: AIR

Prep Date.....: 07/26/11 Analysis Date..: 08/14/2011
Prep Batch #...: 1207014
Dilution Factor: 2 Method.....: KNOX ID-0016

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	40	ng/sample	9.8
Acenaphthylene	ND	40	ng/sample	4.8
Anthracene	ND	20	ng/sample	7.6
Benzo(a)anthracene	ND	20	ng/sample	7.6
Benzo(b)fluoranthene	ND	200	ng/sample	60
Benzo(k)fluoranthene	ND	200	ng/sample	86
Benzo(ghi)perylene	ND	20	ng/sample	10
Benzo(a)pyrene	ND	20	ng/sample	5.8
Benzo(e)pyrene	ND	20	ng/sample	11
Chrysene	ND	20	ng/sample	5.0
Dibenz(a,h)anthracene	ND	20	ng/sample	7.8
Fluoranthene	ND	20	ng/sample	13
Fluorene	ND	20	ng/sample	8.2
Indeno(1,2,3-cd)pyrene	ND	20	ng/sample	5.2
2-Methylnaphthalene	ND	100	ng/sample	42
Naphthalene	ND	800	ng/sample	500
Perylene	ND	20	ng/sample	6.2
Phenanthrene	ND	60	ng/sample	48
Pyrene	ND	120	ng/sample	72

Internal Standard	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	92	(60 - 140)
Naphthalene-d8	92	(60 - 140)
2-Methylnaphthalene-d10	96	(60 - 140)
Acenaphthylene-d8	95	(60 - 140)
Phenanthrene-d10	90	(60 - 140)
Fluoranthene-d10	99	(60 - 140)
Benzo(a)anthracene-d12	128	(60 - 140)
Chrysene-d12	102	(60 - 140)
Benzo(b)fluoranthene-d12	109	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
Benzo(a)pyrene-d12	94	(60 - 140)
Perylene-d12	86	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	99	(60 - 140)
Dibenz(ah)anthracene-d14	98	(60 - 140)
Benzo(ghi)perylene-d12	95	(60 - 140)

NOTE(S):

1 13C6-anthracene recovery = 91 %

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Report Date: 15-Aug-2011 10:42

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Lab Smp Id: MK51E2AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 14-AUG-2011 15:28
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E2AA,,3,,MBLK
Misc Info : P081411,SIMPAH3
Comment :
Method : /chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 14-Aug-2011 15:17 chemist Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 3 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	2.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

all are LMDC 8/17/11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	541980	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	541980	0.45934	459
3 Naphthalene	128	4.887	4.888	(1.003)	125444	0.13805	138
$ 222 13C6-Naphthalene	134	4.873	4.888	(1.000)	49632	0.04956	~~49.6(R)~~
* 10 2-Methylnaphthalene-d10	152	5.434	5.431	(1.000)	308926	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.434	5.431	(0.858)	308926	0.48170	482
12 2-Methylnaphthalene	142	5.460	5.457	(1.005)	14218	0.02296	23.0
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	302944	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.871)	302944	0.47479	475
15 1-Methylnaphthalene	142	5.543	5.540	(1.005)	7373	0.01255	12.6
16 Biphenyl	154	5.845	5.842	(1.076)	100292	0.13599	136
* 17 2,6-Dimethylnaphthalene-d12	168	5.942	5.942	(1.000)	266182	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.942	5.942	(0.938)	266182	0.48437	484
19 2,6 Dimethylnaphthalene	156	5.986	5.979	(1.007)	3250	0.00614	6.14

8/15/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Report Date: 15-Aug-2011 10:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	439367	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	439367	0.47479	475
	22 Acenaphthylene	152	6.213	6.211	(1.002)	561	0.000645	0.645
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	254609	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	2734	0.00534	5.34
	25 2,3,5 Trimethylnaphthalene	170	6.681	6.679	(1.124)	626	0.00139	1.39
$	26 Fluorene-d10	176	6.773	6.768	(0.893)	265	0.00055	~~0.550(R)~~
	27 Fluorene	166	6.798	6.791	(0.896)	3749	0.00604	6.04
$	28 13C6-Fluorene	171	6.793	6.791	(0.895)	134	0.000251	0.~~251(R)~~
*	34 Dibenzothiopene-d8	192	7.484	7.484	(1.000)	396697	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.484	7.484	(0.841)	396697	0.39777	398
	36 Dibenzothiophene	184	7.501	7.499	(1.002)	2516	0.00334	3.34
*	41 Phenanthrene-d10	188	7.588	7.588	(1.000)	404049	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.588	7.588	(0.853)	404049	0.44820	448
	43 Phenanthrene	178	7.609	7.607	(1.003)	21108	0.02397	24.0
*	44 Anthracene-d10	188	7.636	7.636	(1.000)	359436	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.636	7.636	(0.858)	359436	0.46188	462
	46 Anthracene	178	7.652	7.653	(1.002)	2148	0.00239	2.39
$	47 13C6-Anthracene	184	7.652	7.651	(0.860)	372786	0.45422	454
	52 1-Methylphenanthrene	192	8.158	8.155	(1.075)	1449	0.00267	2.67
*	53 Fluoranthene-d10	212	8.676	8.676	(1.000)	424820	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.676	8.676	(0.975)	424820	0.49434	494
	55 Fluoranthene	202	8.693	8.694	(1.002)	5323	0.00566	5.66
*	56 Pyrene-d10	212	8.898	8.898	(1.000)	350246	0.50000	0.500
	57 Pyrene	202	8.915	8.915	(1.028)	3637	0.00366	3.66
$	58 Terphenyl-d14	244	9.058	9.054	(1.044)	120	0.000285	0.285(R)
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	283907	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	283907	0.64118	641(R)
	62 Benzo(a)anthracene	228	10.137	10.133	(1.002)	3709	0.00439	4.39
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	358324	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.140)	358324	0.51091	511
	65 Chrysene	228	10.175	10.175	(1.003)	3784	0.00480	4.80
*	70 Benzo(b)fluoranthene-d12	264	11.271	11.271	(1.000)	286131	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.271	11.271	(0.973)	286131	0.54379	544
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.002)	3991	0.00503	5.03
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	345824	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	345824	0.46980	470
	75 Benzo(k)fluoranthene	252	11.325	11.325	(1.002)	4842	0.00634	6.34
*	76 Benzo(e)pyrene-d12	264	11.587	11.588	(1.000)	247055	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	2818	0.00430	4.30
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	255606	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	255606	0.46900	469
	80 Benzo(a)pyrene	252	11.683	11.677	(1.003)	2834	0.00503	5.03
*	81 Perylene-d12	264	11.749	11.749	(1.000)	227092	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	227092	0.43016	430
	83 Perylene	252	11.779	11.779	(1.003)	1401	0.00247	2.47
*	84 Indeno(123-cd)pyrene-d12	288	13.127	13.131	(1.000)	295569	0.50000	0.500

8/15/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Report Date: 15-Aug-2011 10:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.127	13.131	(1.133)	295569	0.49571	496
	86 Indeno(1,2,3-cd)pyrene	276	13.165	13.161	(1.003)	991	0.00142	1.42
*	87 Dibenz(ah)anthracene-d14	292	13.131	13.131	(1.000)	219564	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.131	13.131	(1.133)	219564	0.48756	488
	89 Dibenz(a,h)anthracene	278	13.182	13.178	(1.004)	543	0.00103	1.03
*	90 Benzo(ghi)perylene-d12	288	13.481	13.481	(1.000)	212992	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.481	13.481	(1.163)	212992	0.47732	477
	92 Benzo(g,h,i)perylene	276	13.515	13.515	(1.002)	1581	0.00274	2.74

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Report Date: 15-Aug-2011 10:42

TestAmerica Knoxville

RECOVERY REPORT

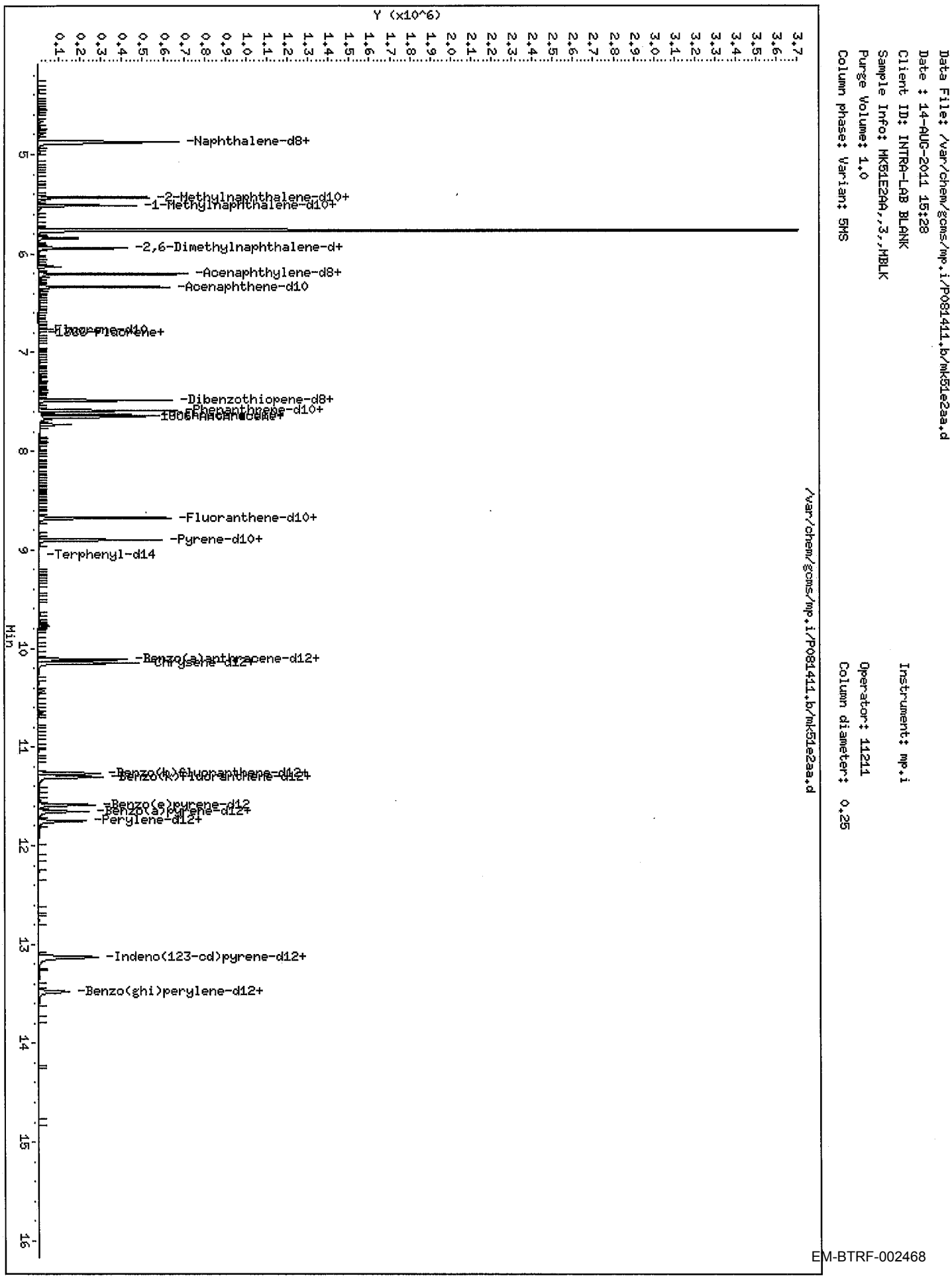
Client Name: ITSBUR
Sample Matrix: GAS
Lab Smp Id: MK51E2AA
Level: LOW
Data Type: MS DATA
SpikeList File: icv.spk
Sublist File: pah.sub
Method File: /chem/gcms/mp.i/P081411.b/SIMPAH3.m
Misc Info: P081411,SIMPAH3

Client SDG: H1G260000
Fraction: SV
Client Smp ID: INTRA-LAB BLANK
Operator: 11211
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	500	459	91.87	30-120
$ 222 13C6-Naphthalene	500	49.6	9.91*	50-150
$ 11 2-Methylnaphthalen	500	482	96.34	30-120
$ 14 1-Methylnaphthalen	500	475	94.96	30-120
$ 18 2,6-Dimethylnaph-d	500	484	96.87	30-120
$ 21 Acenaphthylene-d8(	500	475	94.96	30-120
$ 26 Fluorene-d10	500	0.550	0.11*	30-120
$ 28 13C6-Fluorene	500	0.251	0.05*	30-120
$ 35 Dibenzothiopene-d8	500	398	79.55	30-120
$ 42 Phenanthrene-d10(S	500	448	89.64	30-120
$ 45 Anthracene-d10(SS)	500	462	92.38	30-120
$ 47 13C6-Anthracene	500	454	90.84	30-120
$ 54 Fluoranthene-d10(S	500	494	98.87	0-120
$ 58 Terphenyl-d14	500	0.285	0.06*	30-120
$ 61 Benzo(a)anthracene	500	641	128.24*	30-120
$ 64 Chrysene-d12(SS)	500	511	102.18	30-120
$ 71 Benzo(b)fluoranthe	500	544	108.76	30-120
$ 74 Benzo(k)fluoranthe	500	470	93.96	30-120
$ 79 Benzo(a)pyrene-d12	500	469	93.80	30-120
$ 82 Perylene-d12(SS)	500	430	86.03	30-120
$ 85 Indeno(123-cd)pyre	500	496	99.14	30-120
$ 88 Dibenz(ah)anthrace	500	488	97.51	30-120
$ 91 Benzo(ghi)perylene	500	477	95.46	30-120

8.17.11

60-140 ok


Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Date : 14-AUG-2011 15:28
Client ID: INTRA-LAB BLANK
Sample Info: MK51E2AA,3,,MBLK
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
/var/chem/gcms/mp.i/P081411.b/mk51e2aa.d
Y (x10^6)
Min
-Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-Fluoranthene-d10+
-Pyrene-d10+
-Terphenyl-d14
-Benzo(a)anthracene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

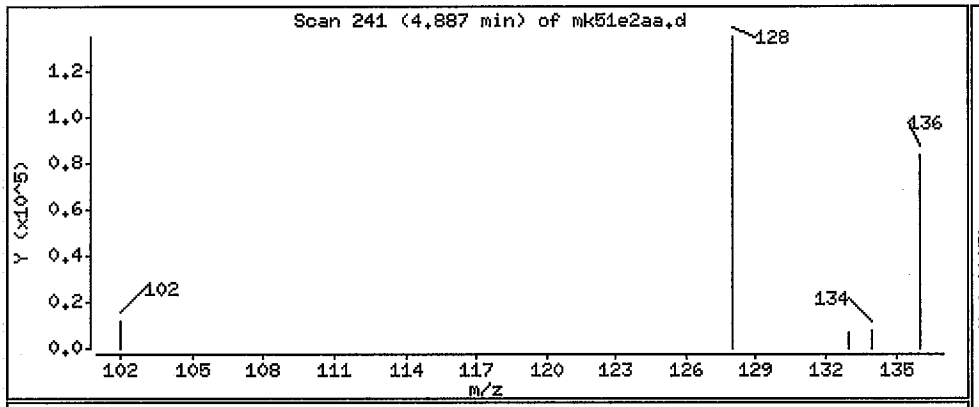
Operator: 11211

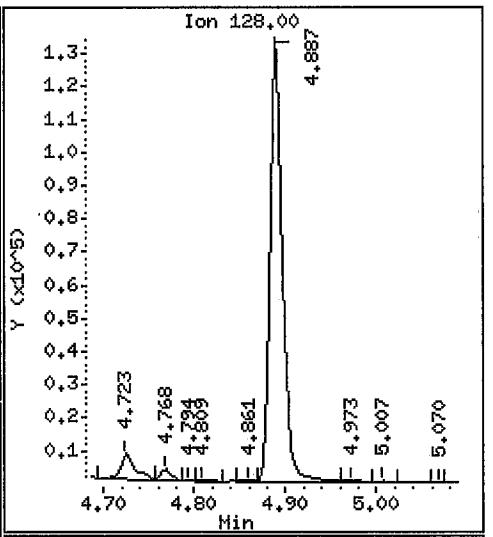
Column phase: Varian: 5MS

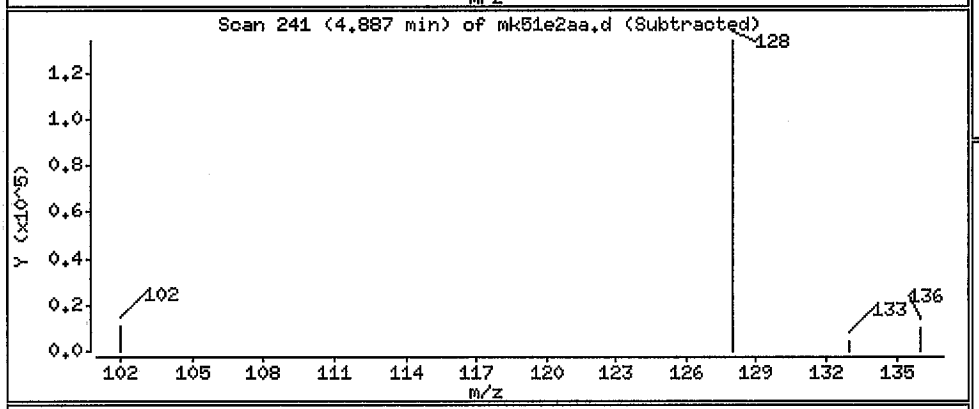
Column diameter: 0.25

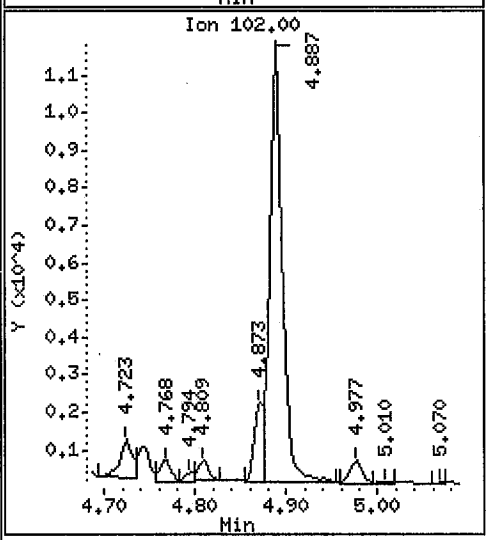
3 Naphthalene

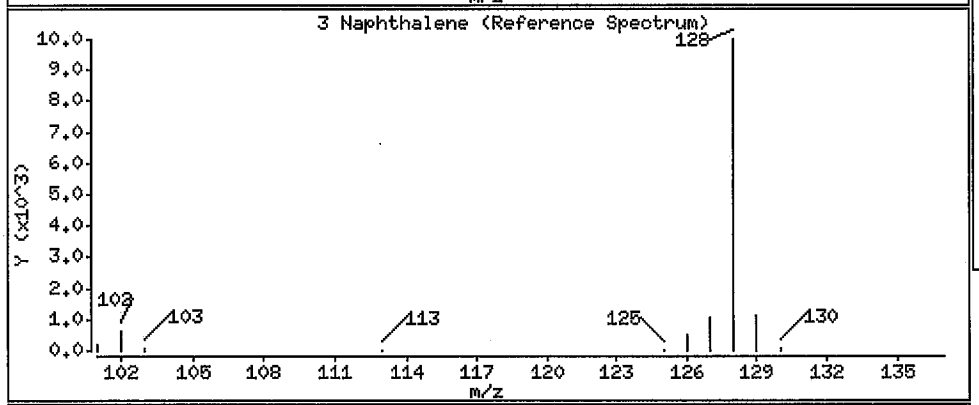
Concentration: 138 ng/sample

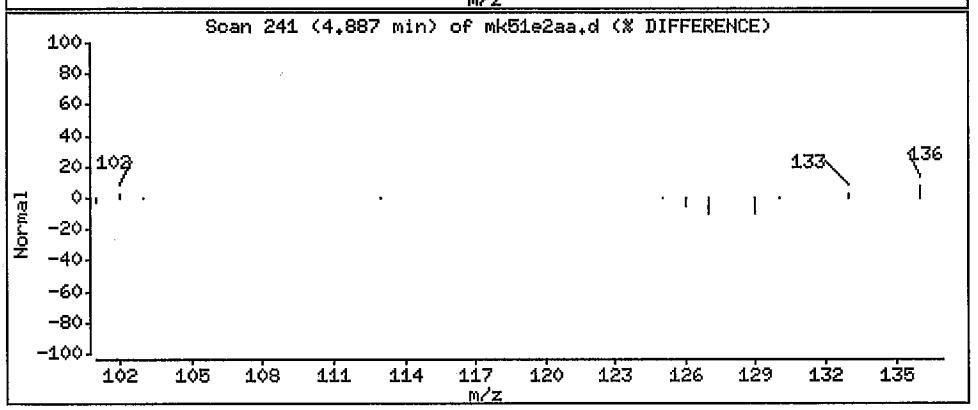












Data File: /var/chem/goms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

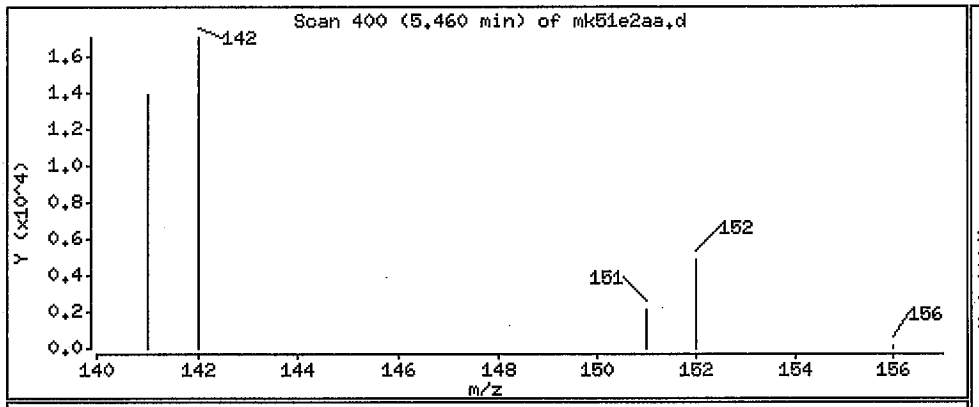
Operator: 11211

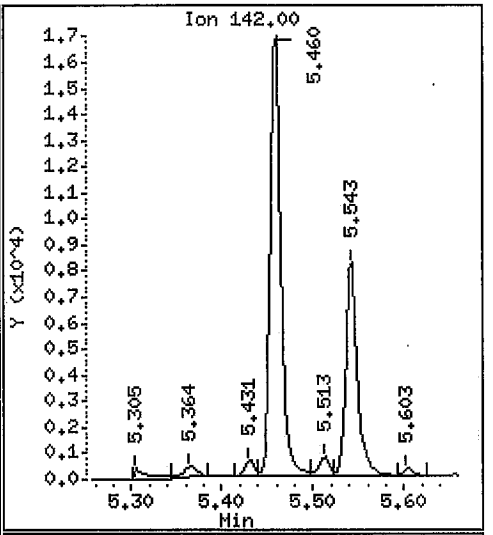
Column phase: Varian: 5MS

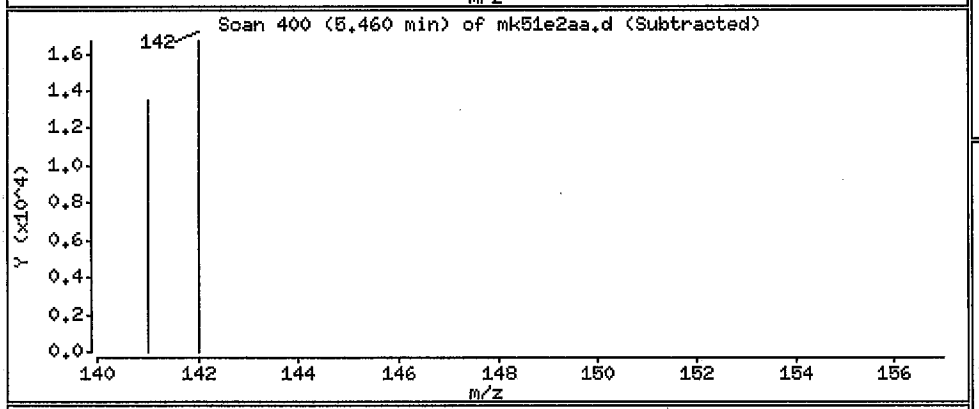
Column diameter: 0.25

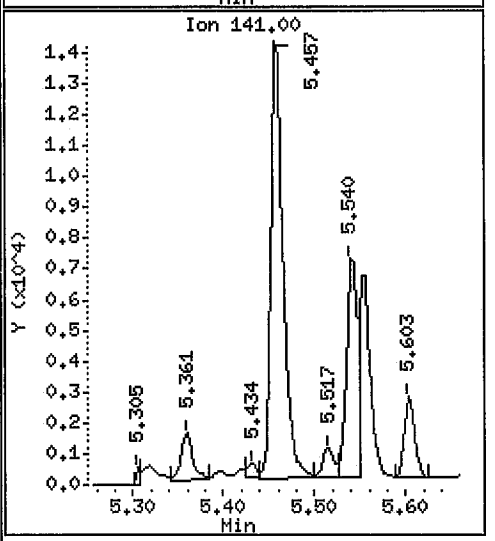
12 2-Methylnaphthalene

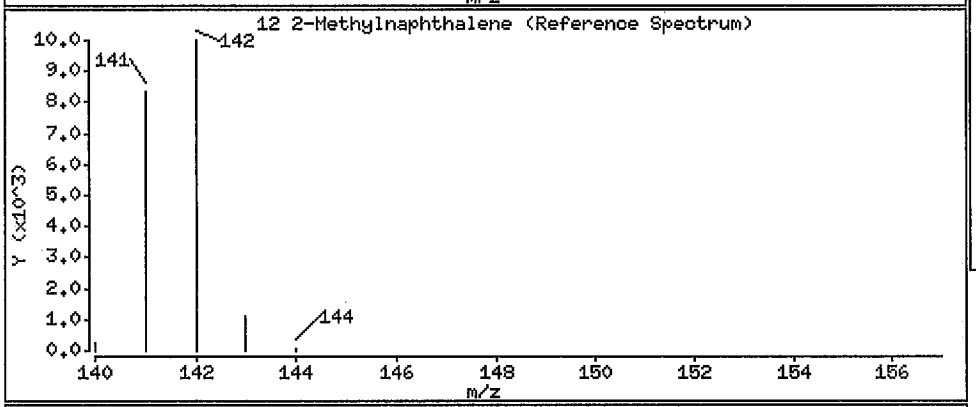
Concentration: 23.0 ng/sample

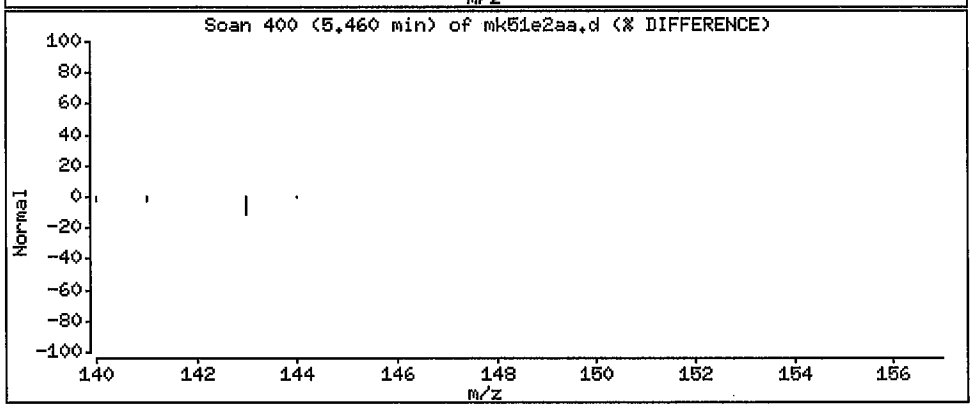












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

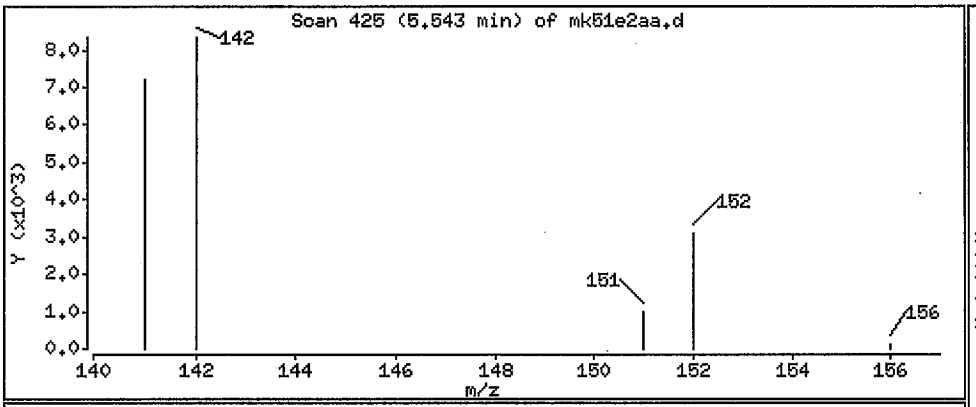
Operator: 11211

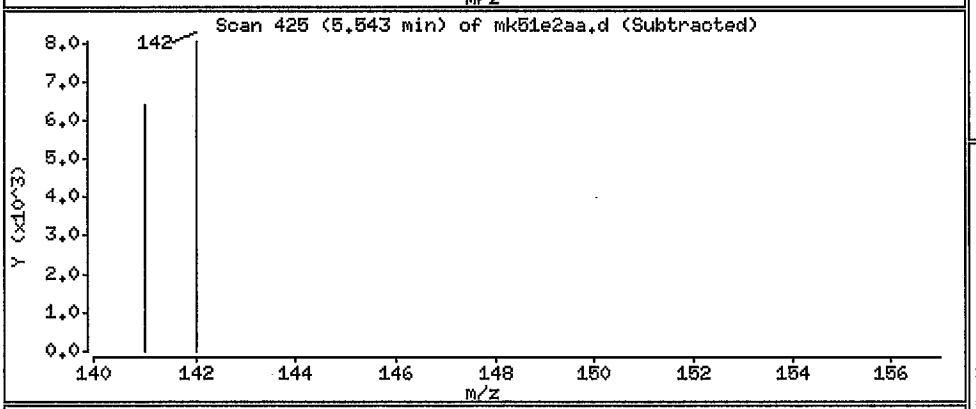
Column phase: Varian: 5MS

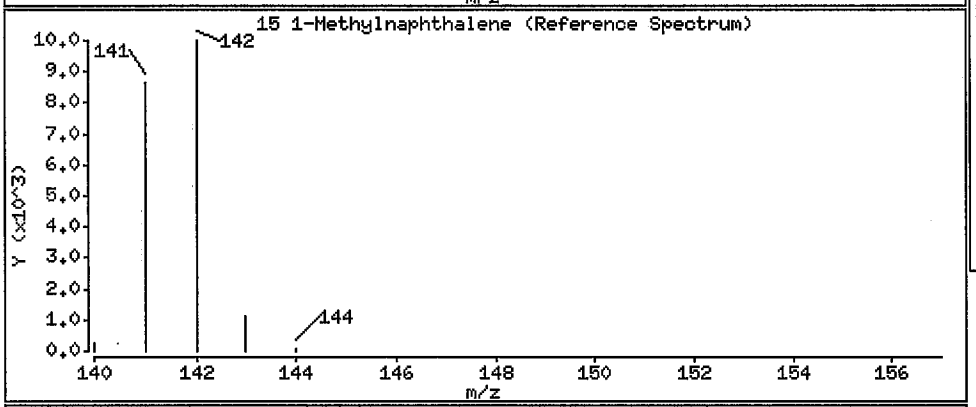
Column diameter: 0.25

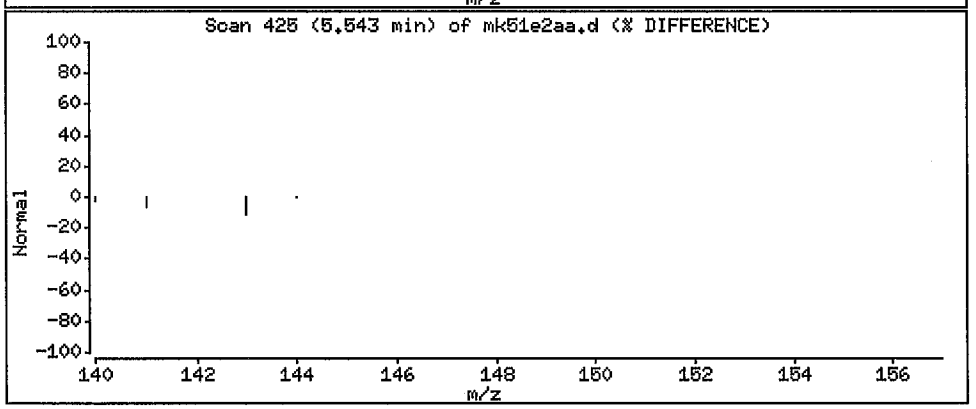
15 1-Methylnaphthalene

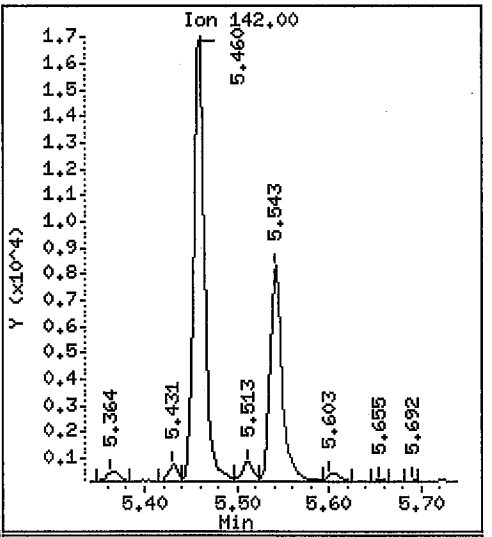
Concentration: 12.6 ng/sample

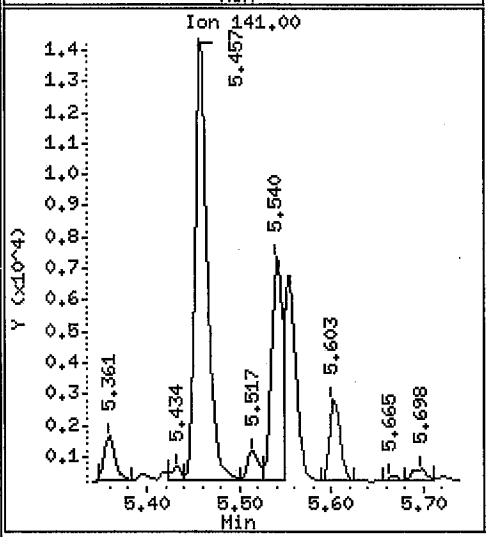












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

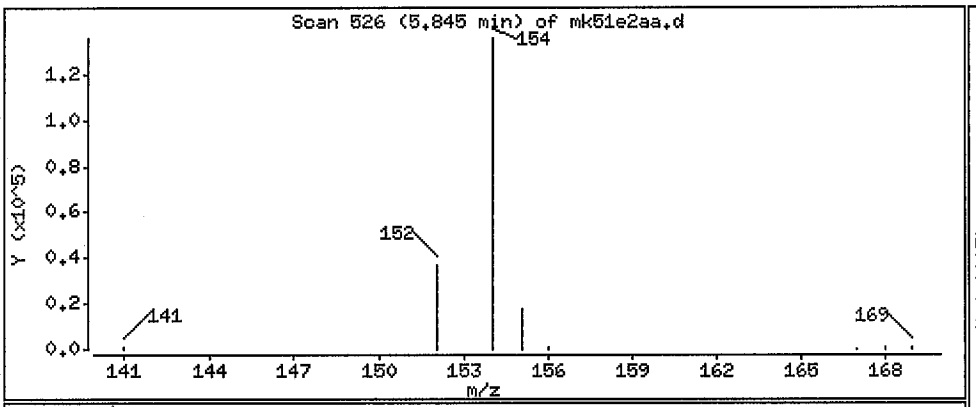
Operator: 11211

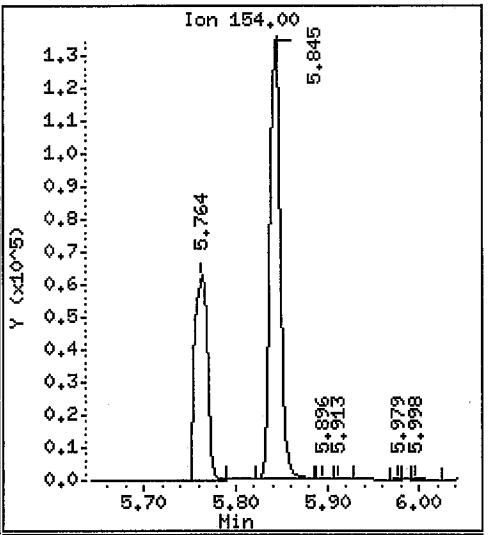
Column phase: Varian: 5MS

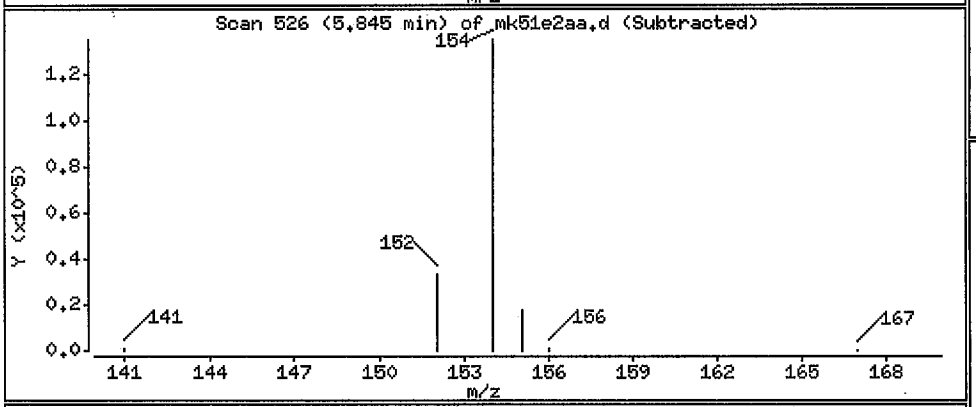
Column diameter: 0.25

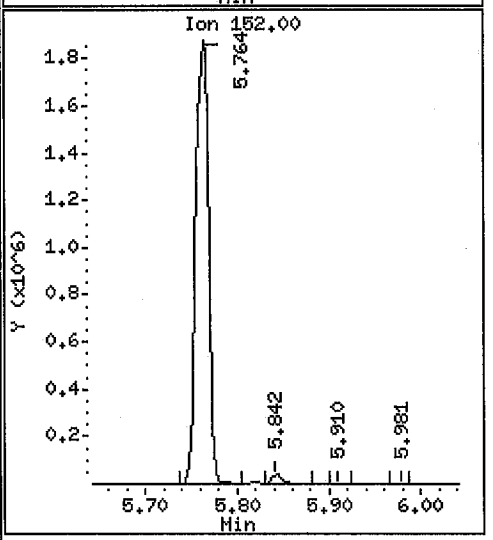
16 Biphenyl

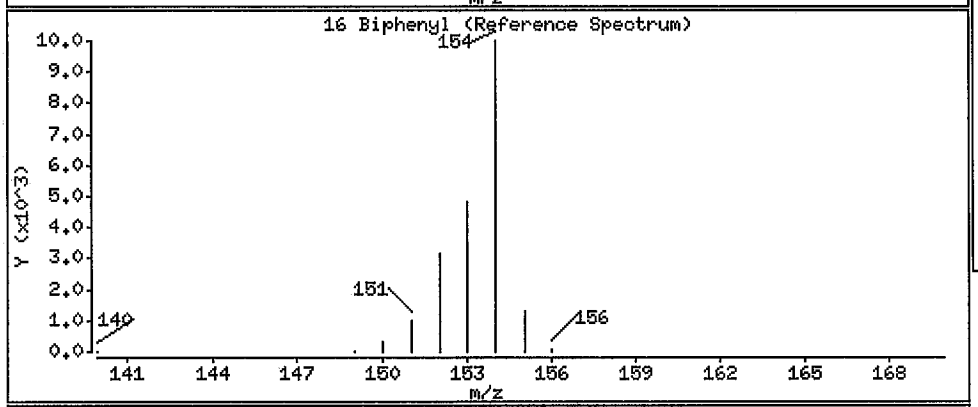
Concentration: 136 ng/sample

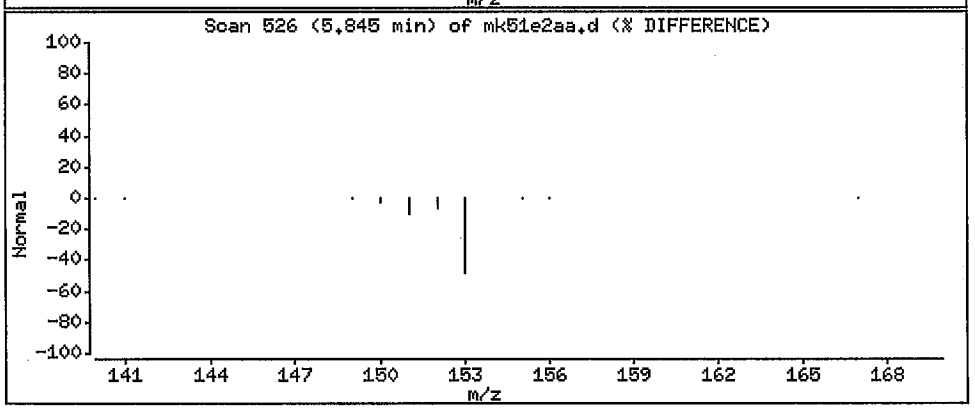












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

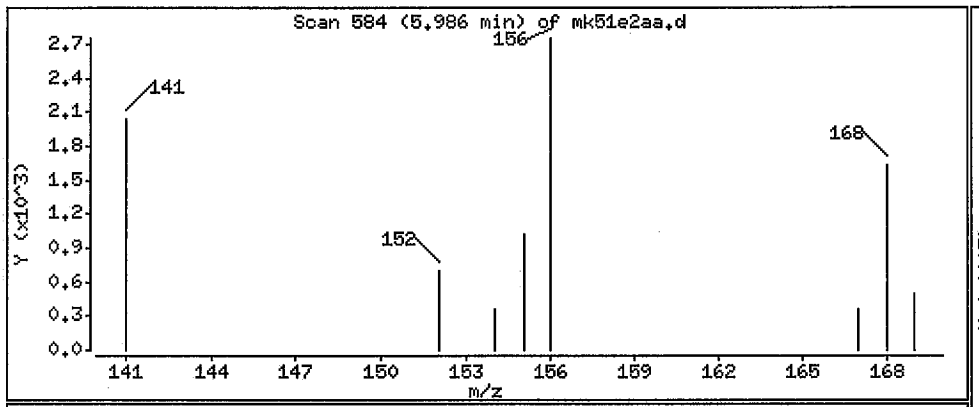
Operator: 11211

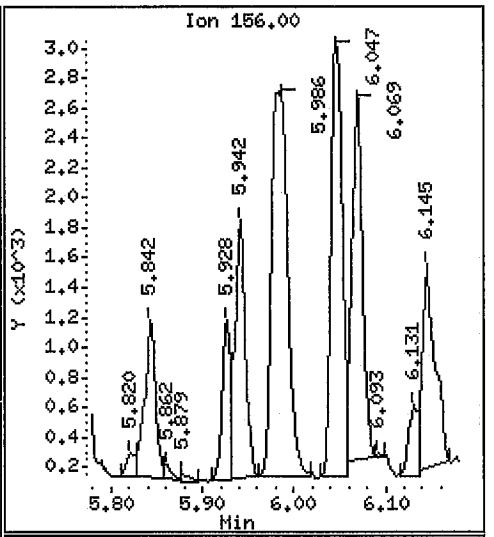
Column phase: Varian: 5MS

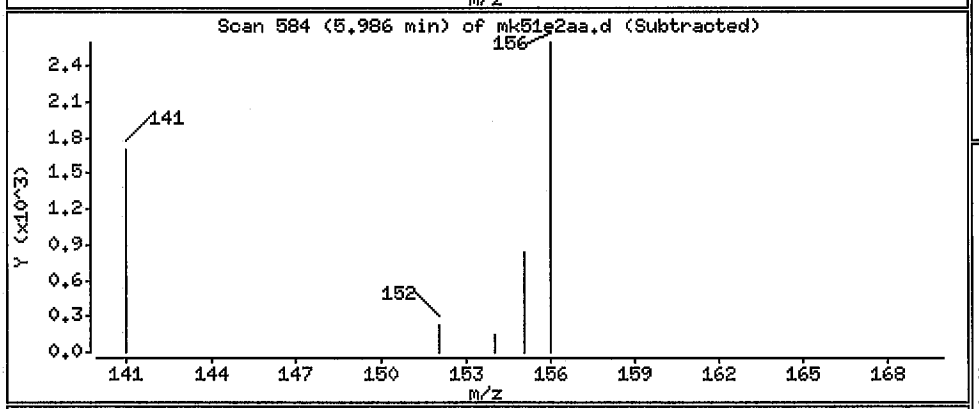
Column diameter: 0.25

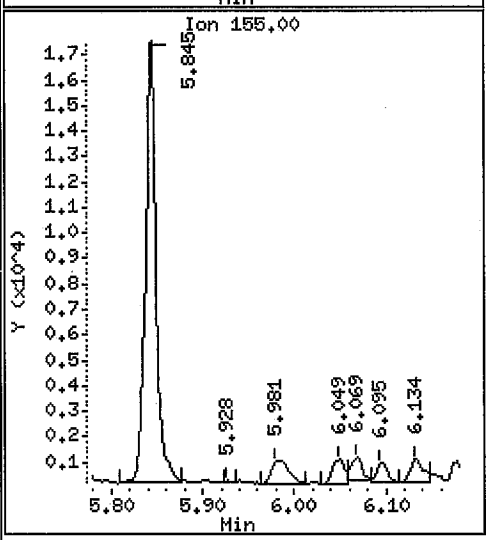
19 2,6 Dimethylnaphthalene

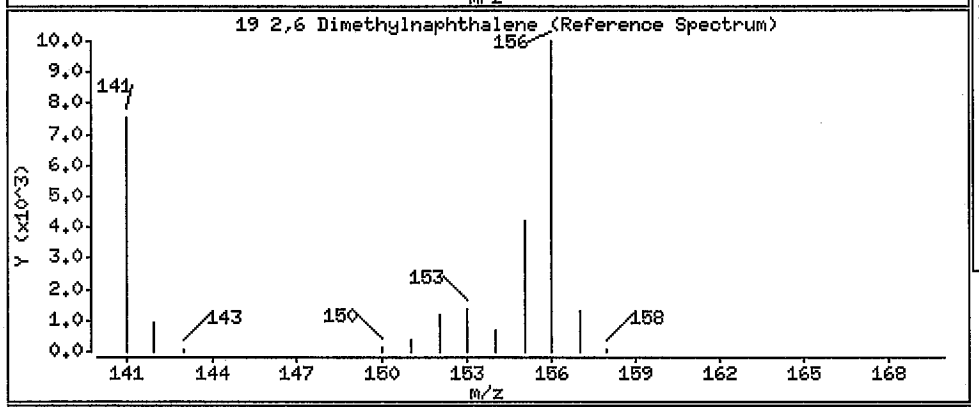
Concentration: 6.14 ng/sample

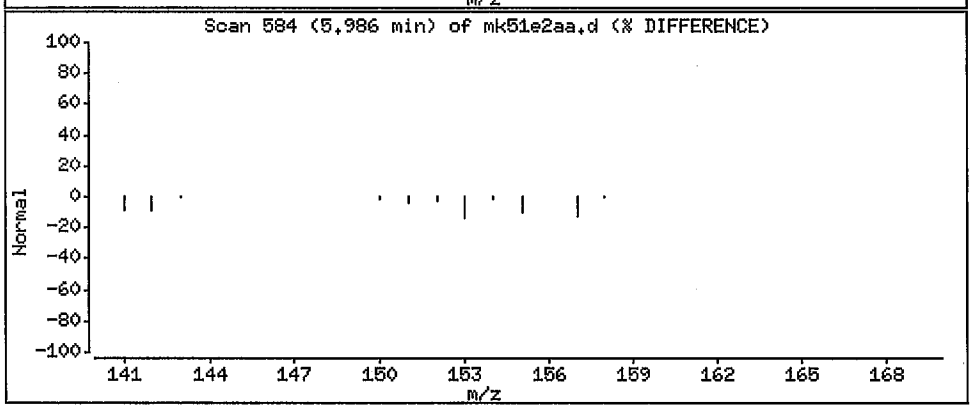












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

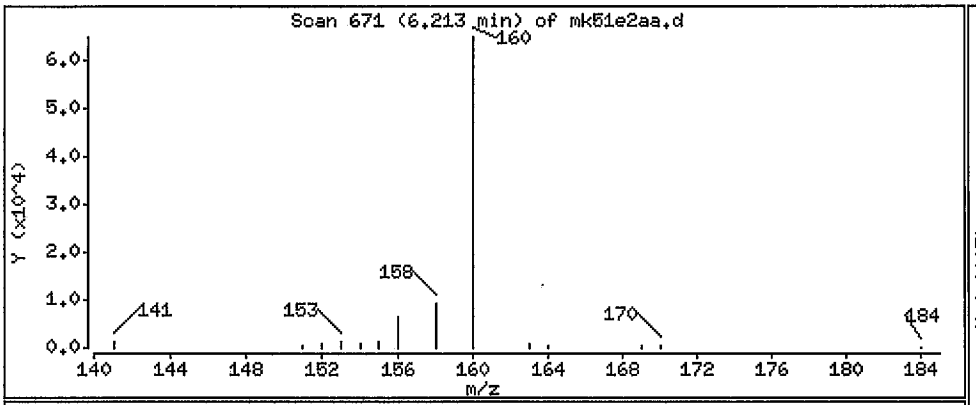
Operator: 11211

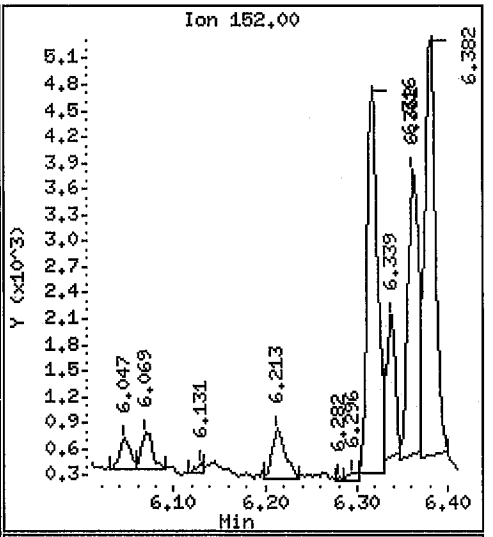
Column phase: Varian: 5MS

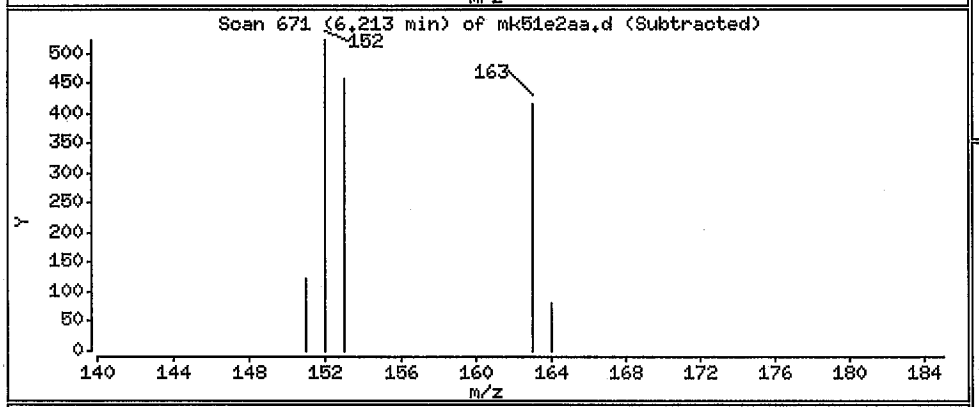
Column diameter: 0.25

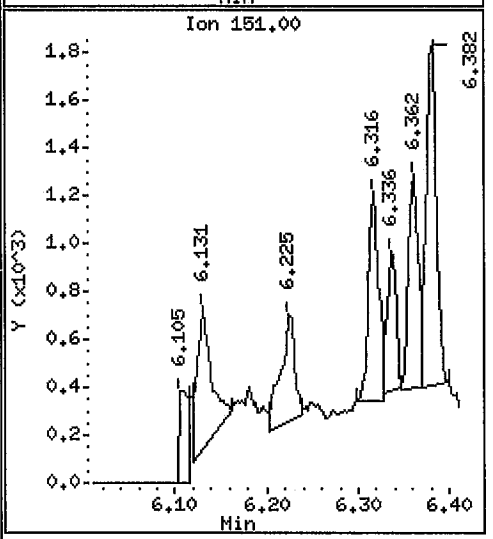
22 Acenaphthylene

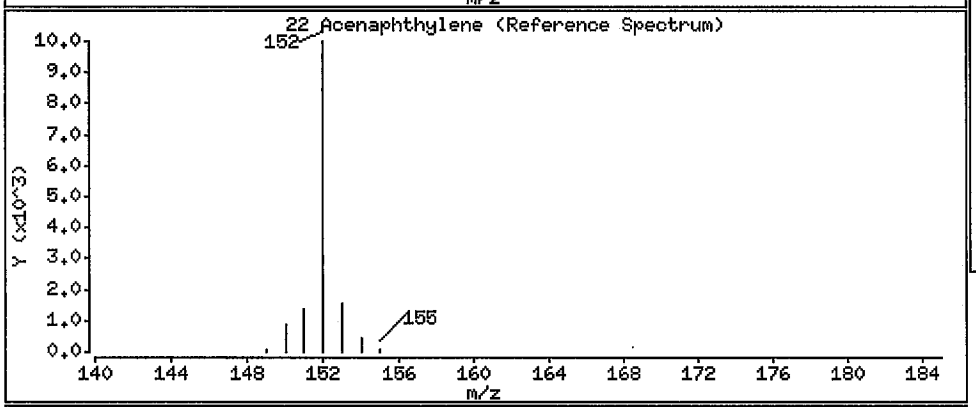
Concentration: 0.645 ng/sample

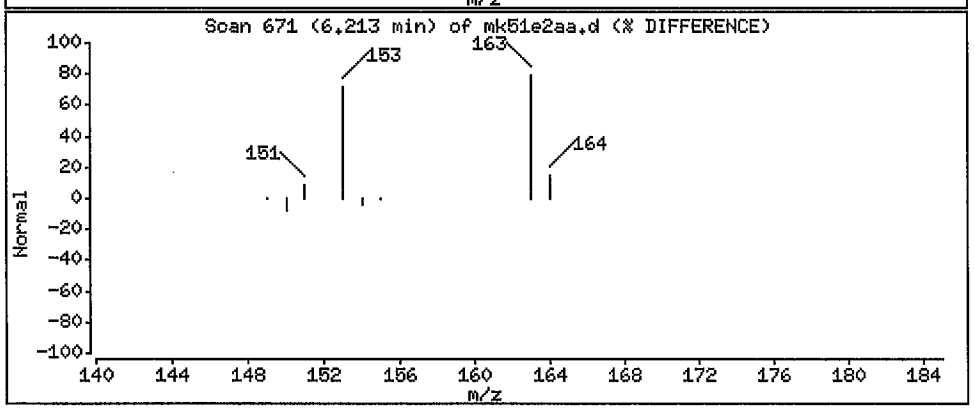












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

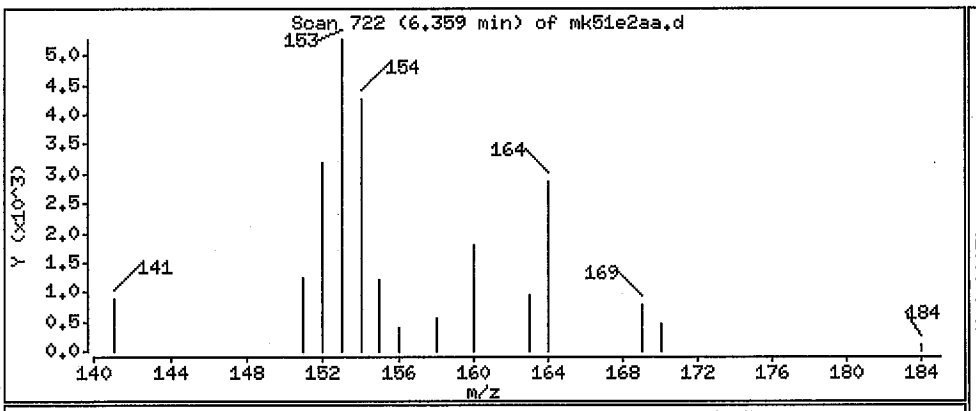
Operator: 11211

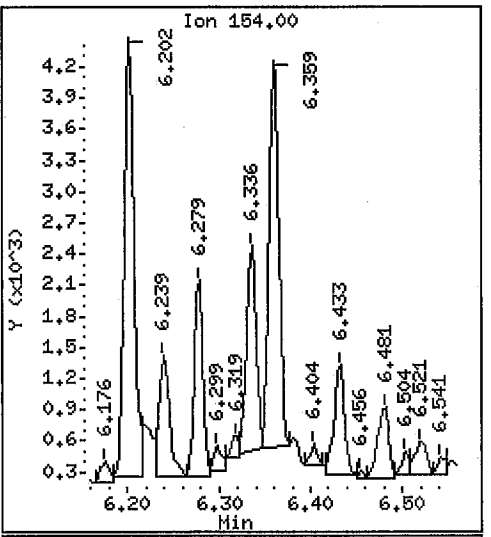
Column phase: Varian: 5MS

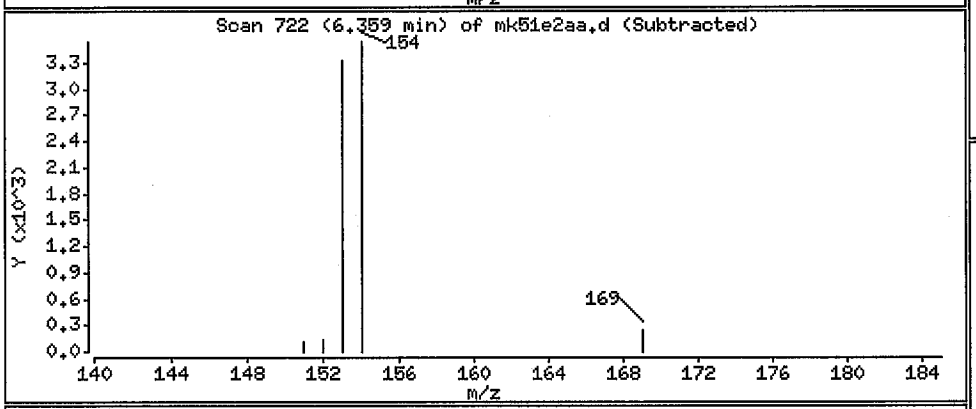
Column diameter: 0.25

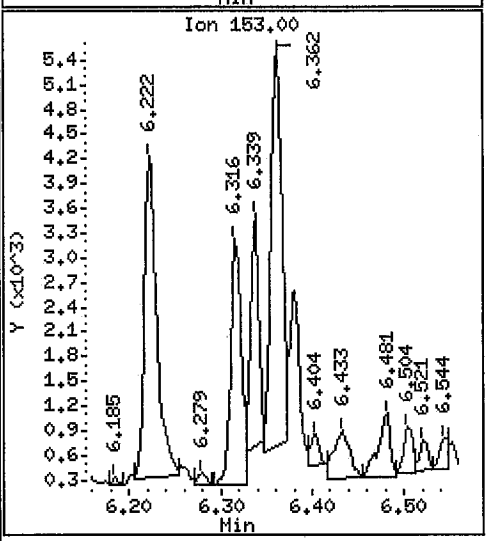
24 Acenaphthene

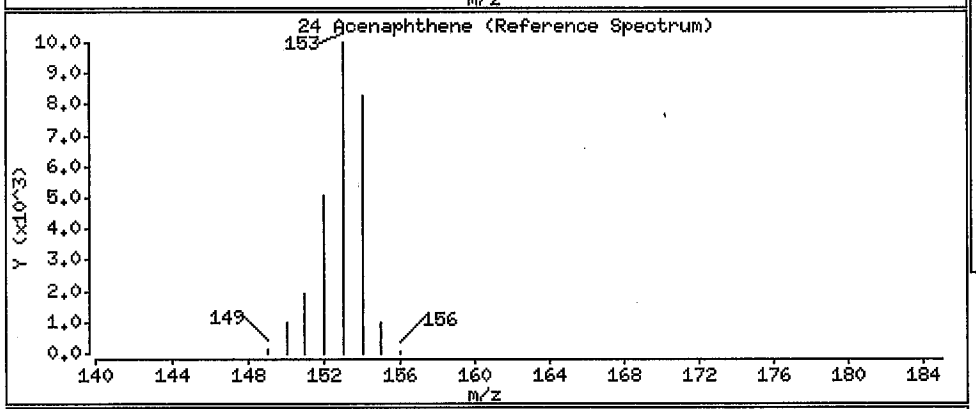
Concentration: 5.34 ng/sample

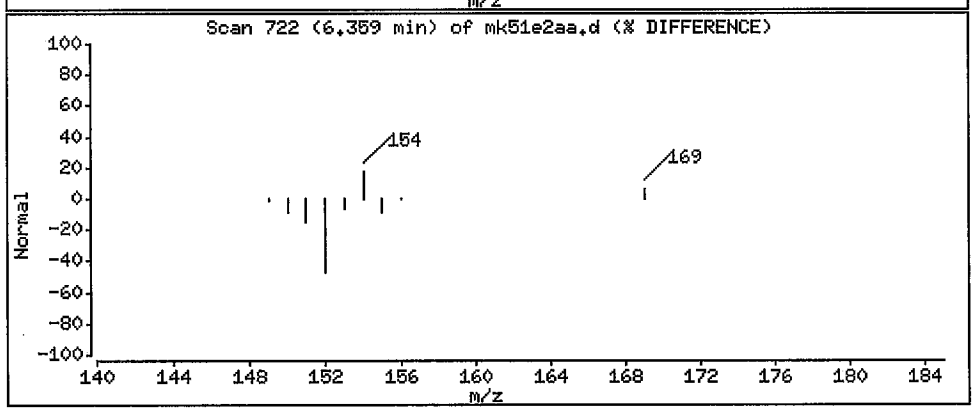












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

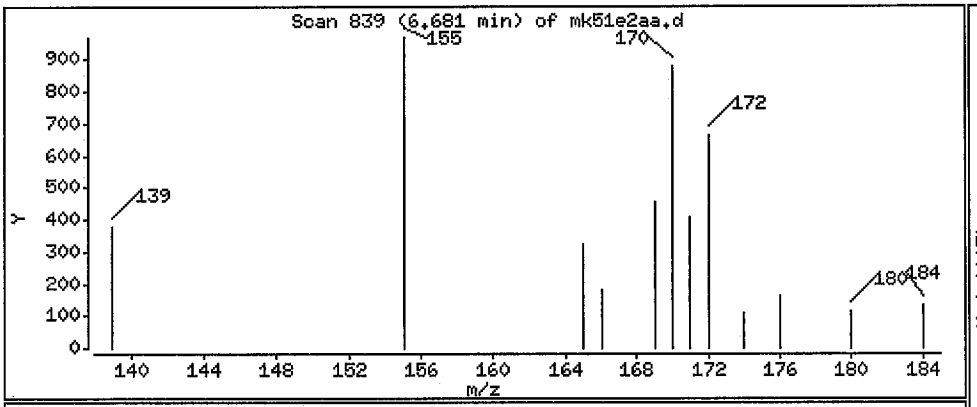
Operator: 11211

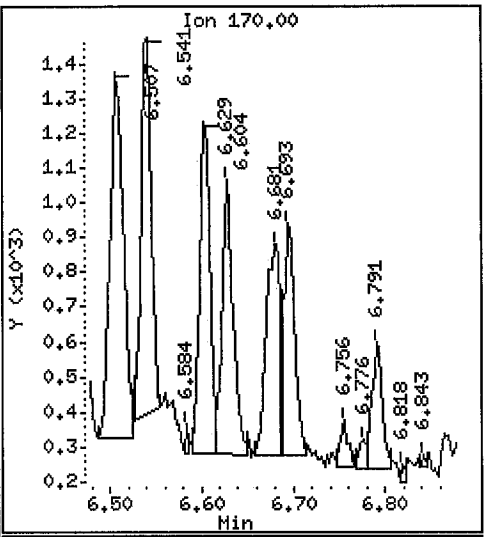
Column phase: Varian: 5MS

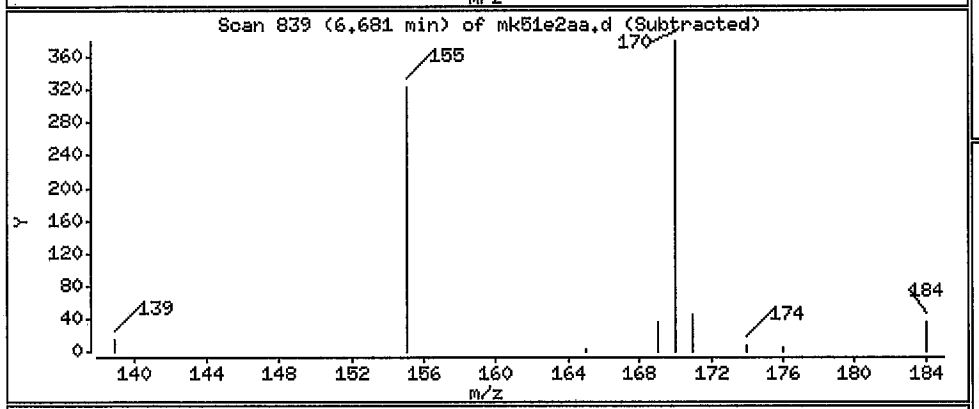
Column diameter: 0.25

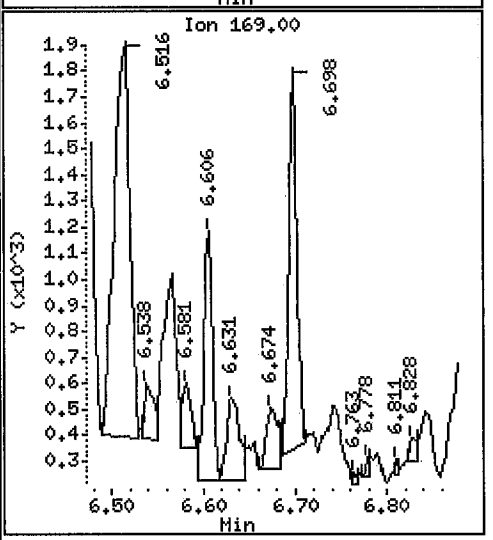
25 2,3,5 Trimethylnaphthalene

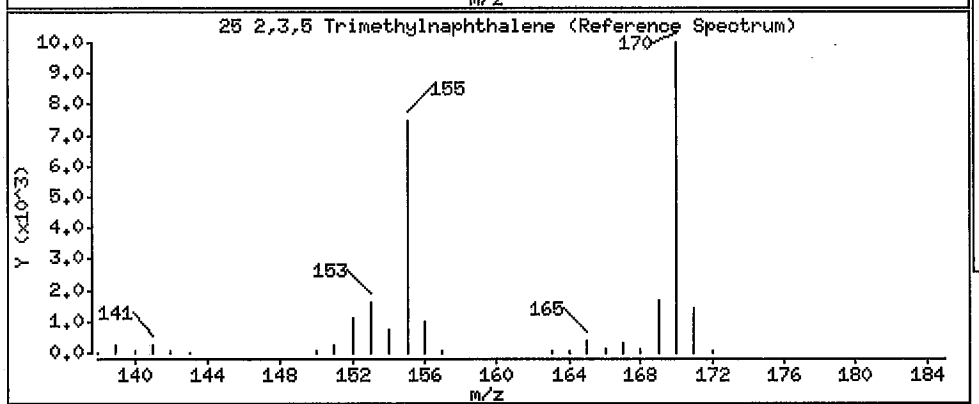
Concentration: 1.39 ng/sample

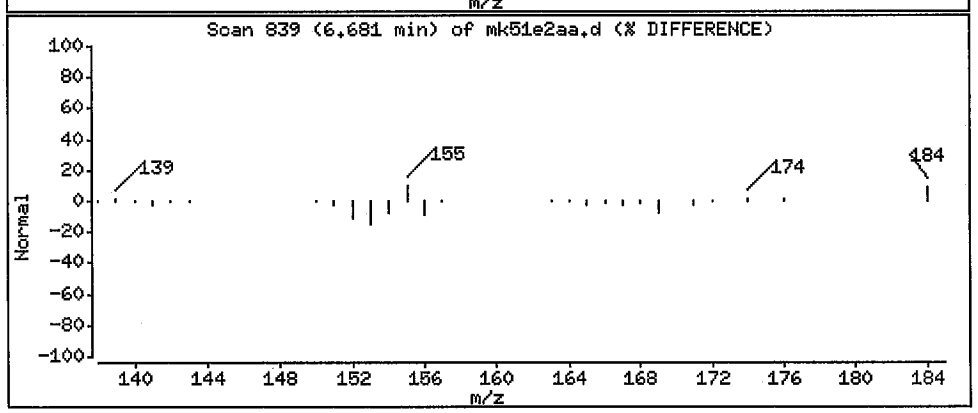












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

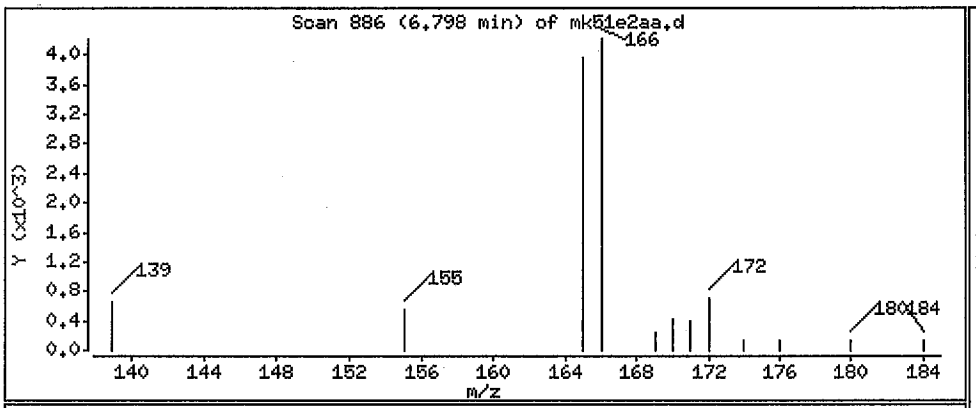
Operator: 11211

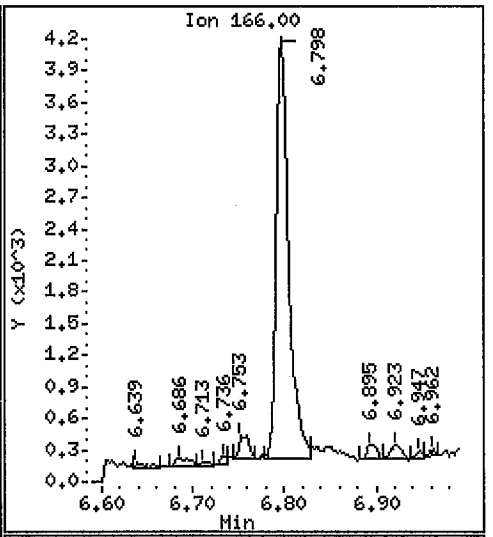
Column phase: Varian: 5MS

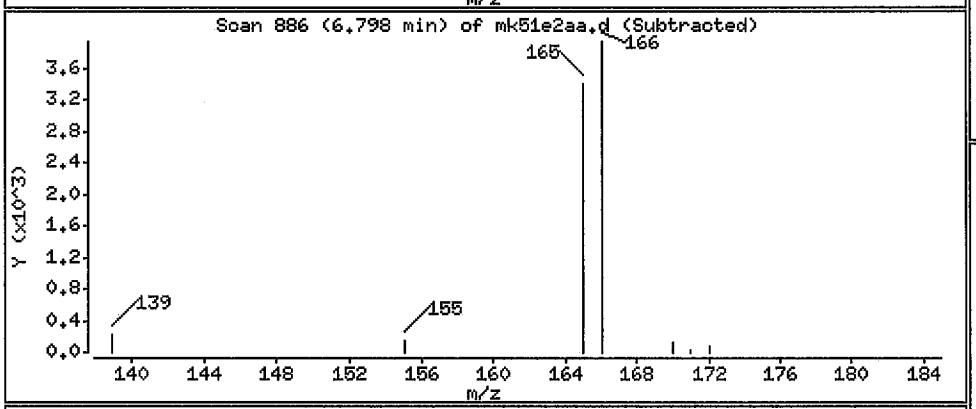
Column diameter: 0.25

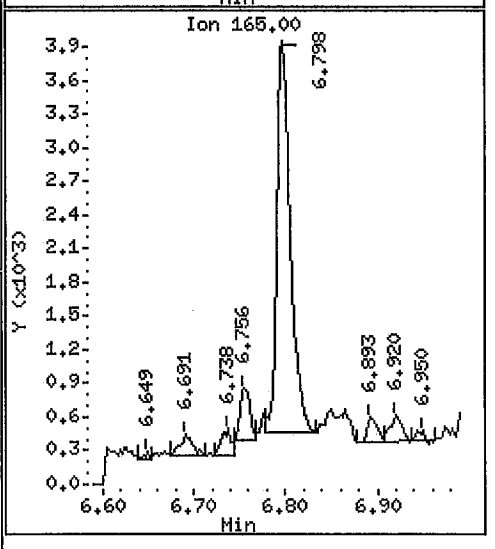
27 Fluorene

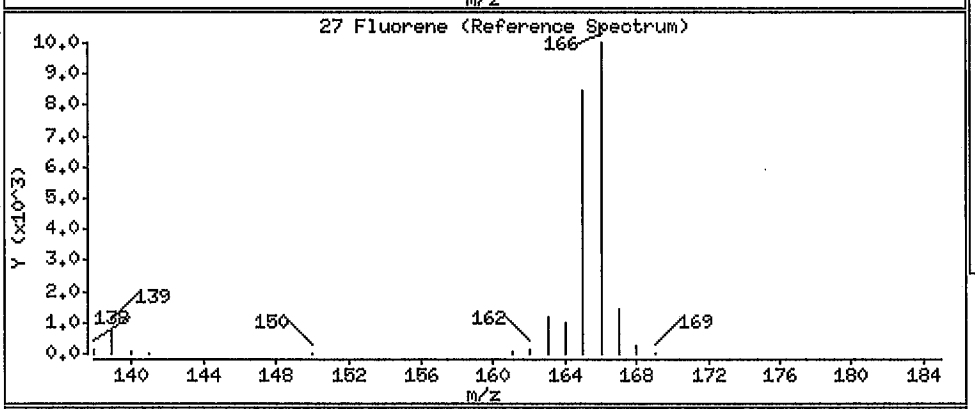
Concentration: 6.04 ng/sample

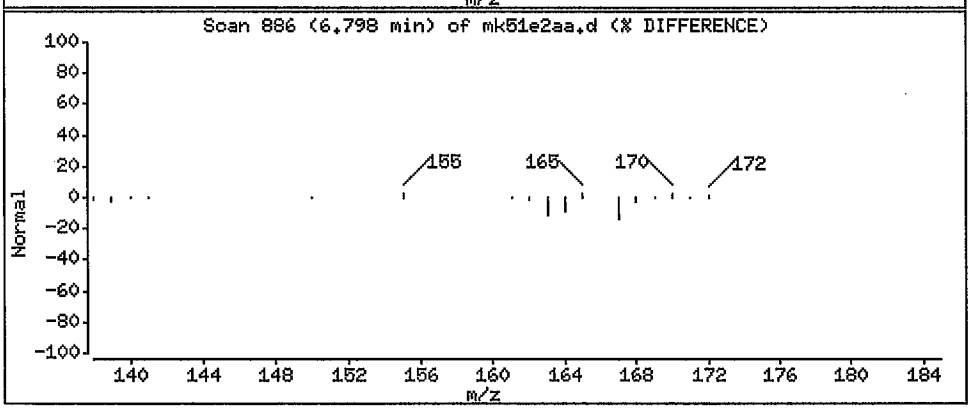












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

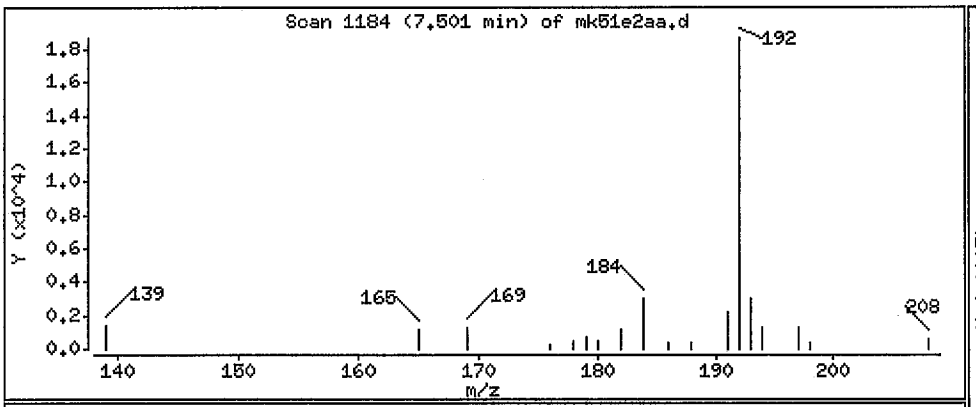
Operator: 11211

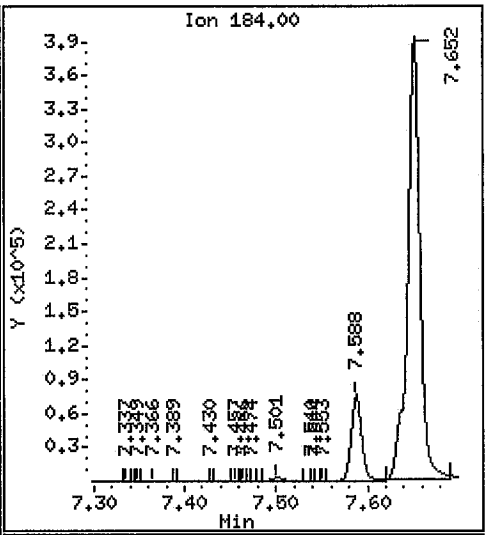
Column phase: Varian: 5MS

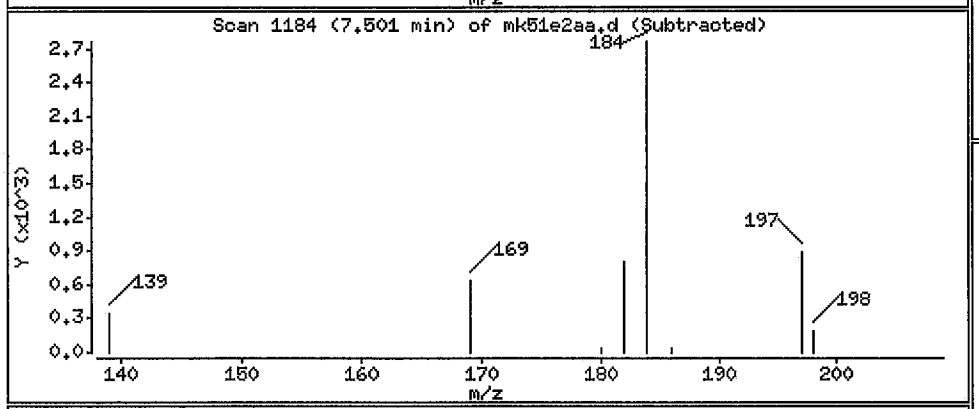
Column diameter: 0.25

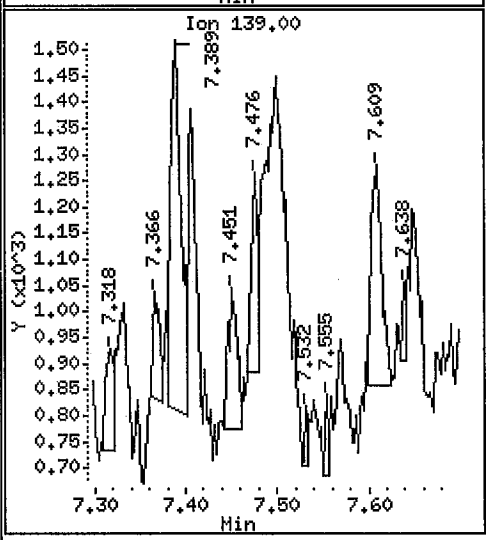
36 Dibenzothiophene

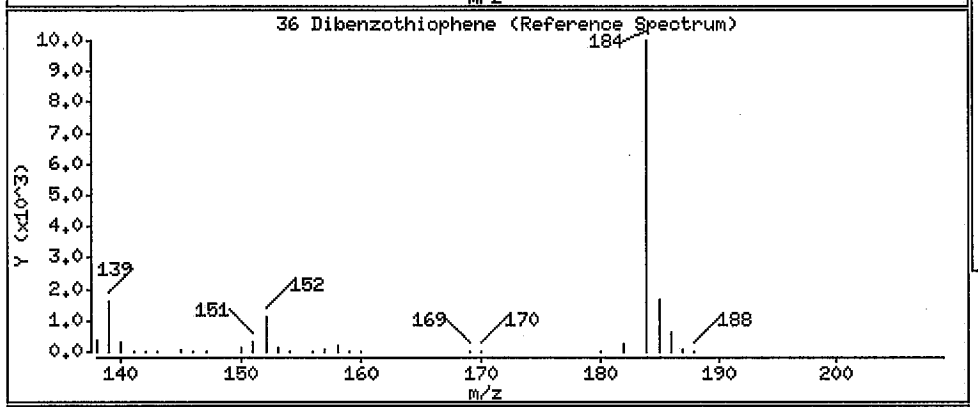
Concentration: 3.34 ng/sample

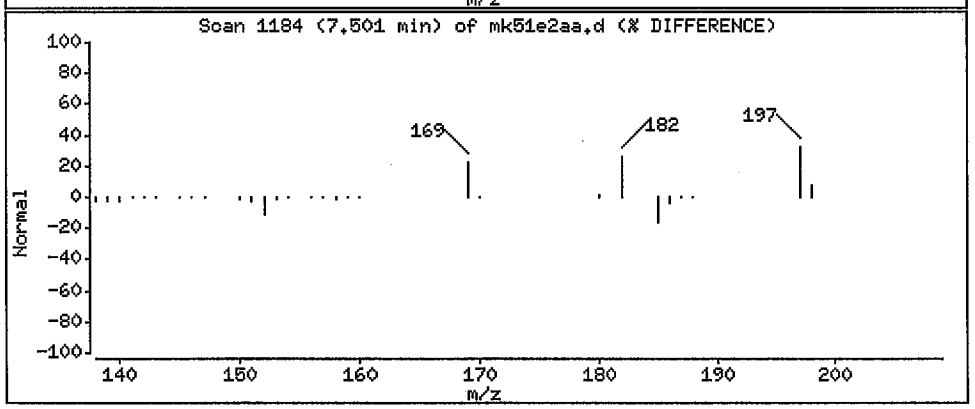












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

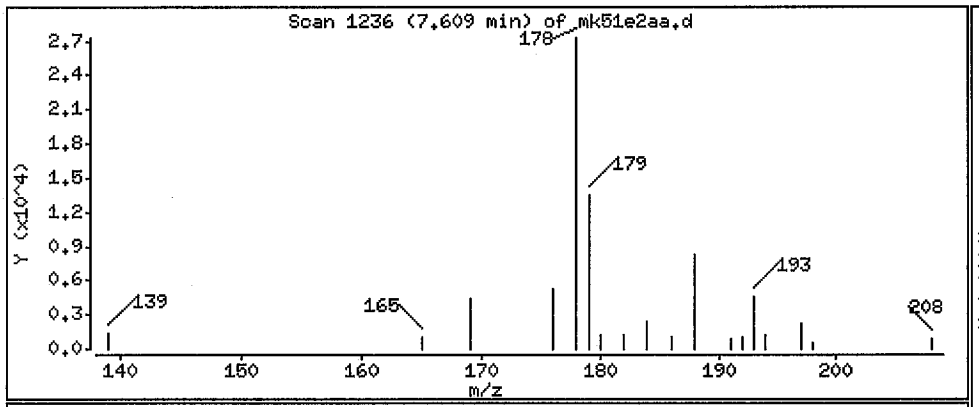
Operator: 11211

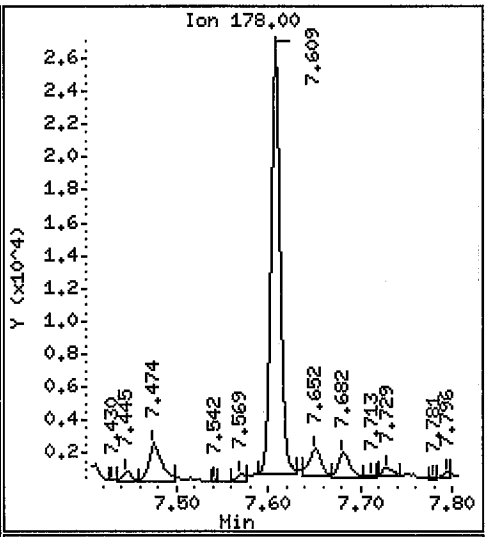
Column phase: Varian: 5MS

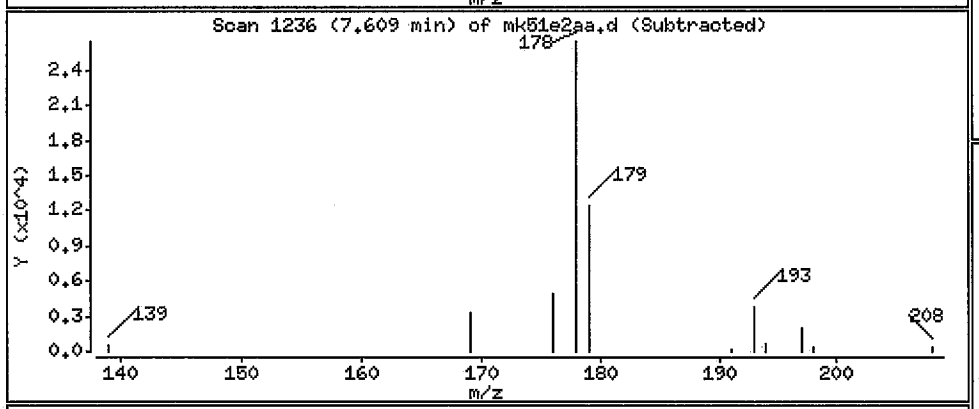
Column diameter: 0.25

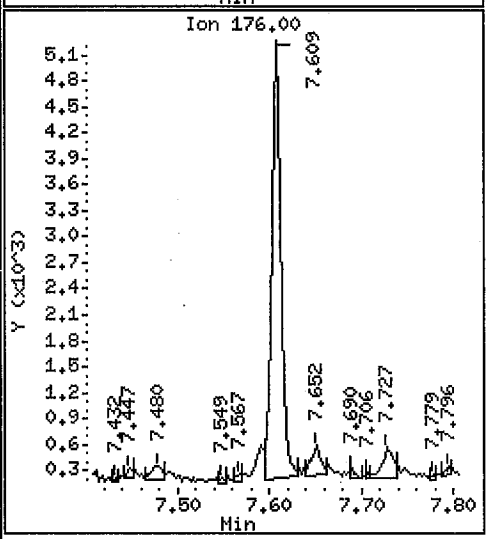
43 Phenanthrene

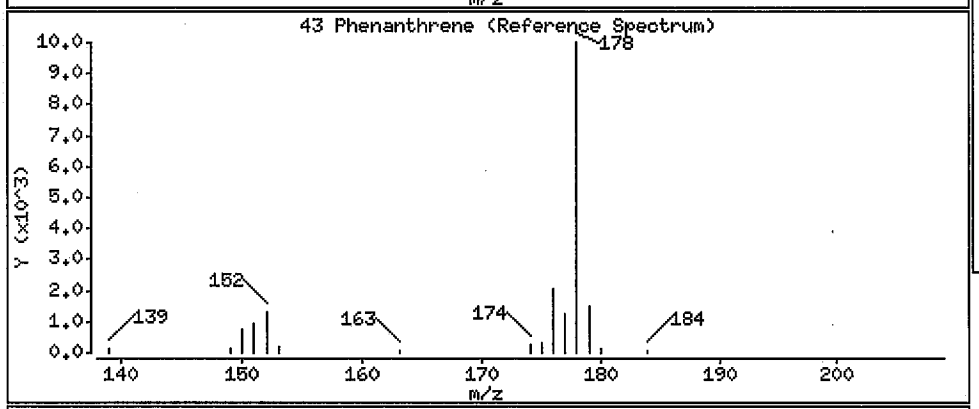
Concentration: 24.0 ng/sample

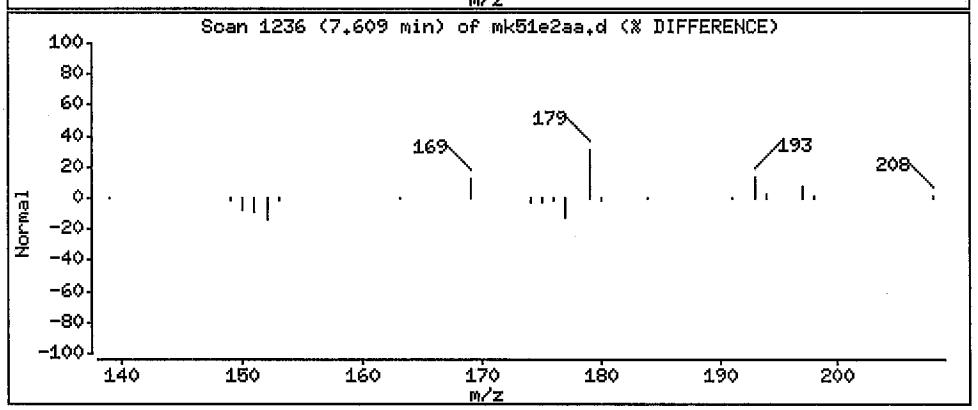












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

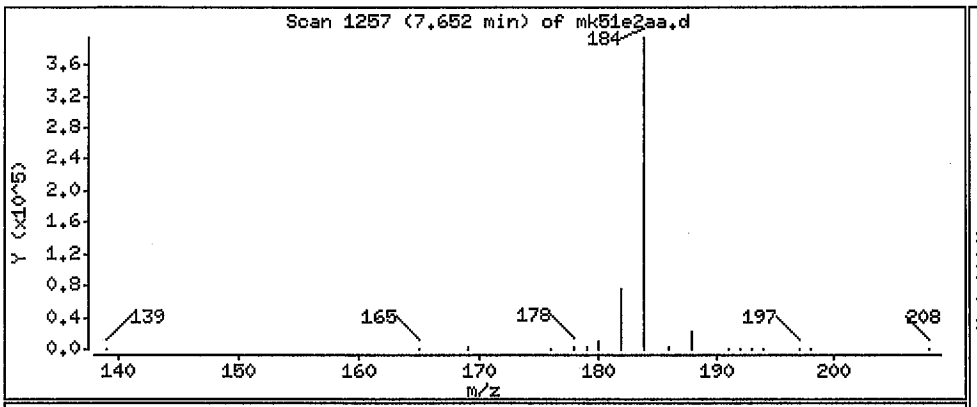
Operator: 11211

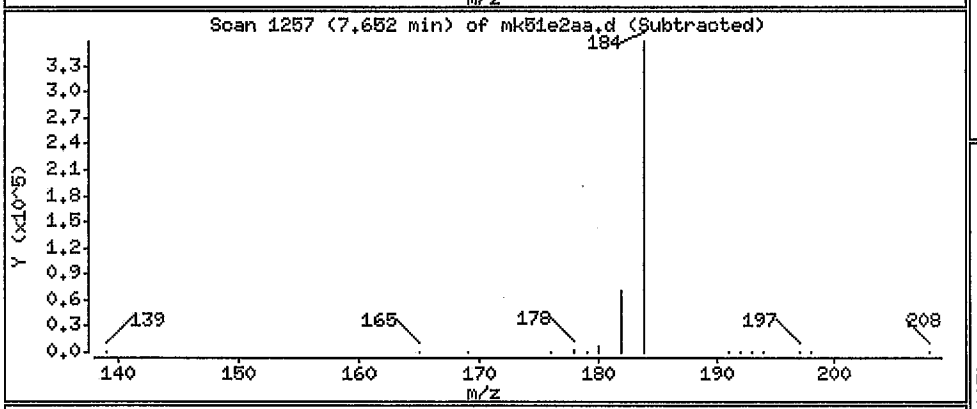
Column phase: Varian: 5MS

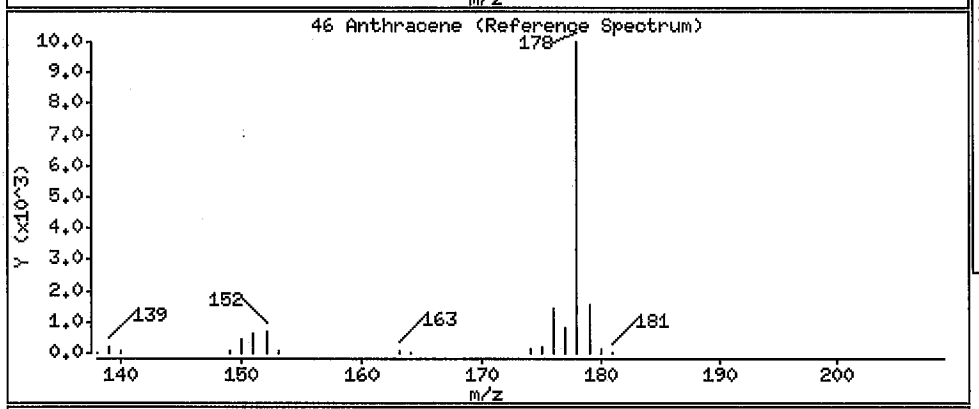
Column diameter: 0.25

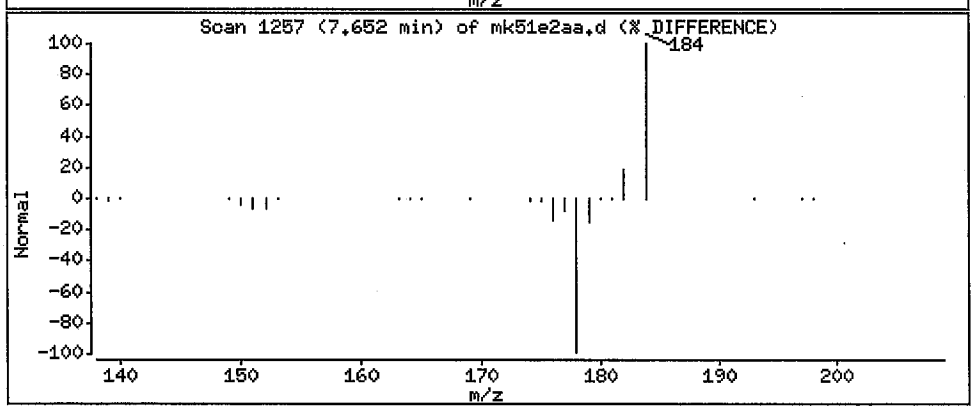
46 Anthracene

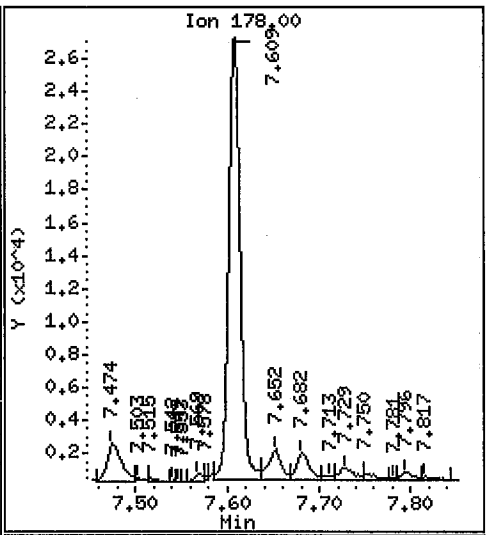
Concentration: 2.39 ng/sample

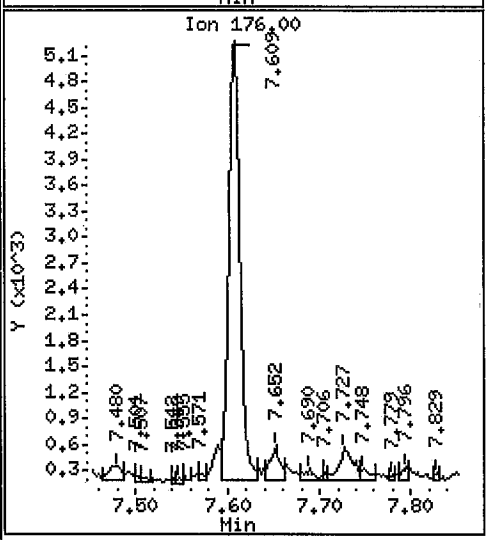












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

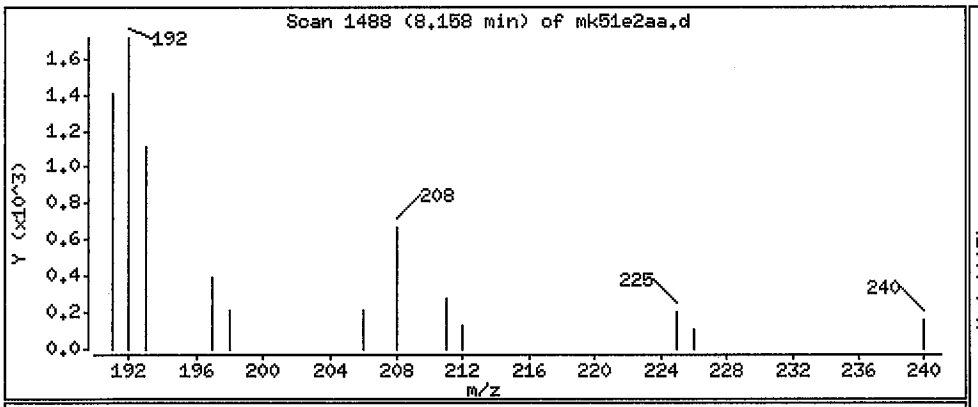
Operator: 11211

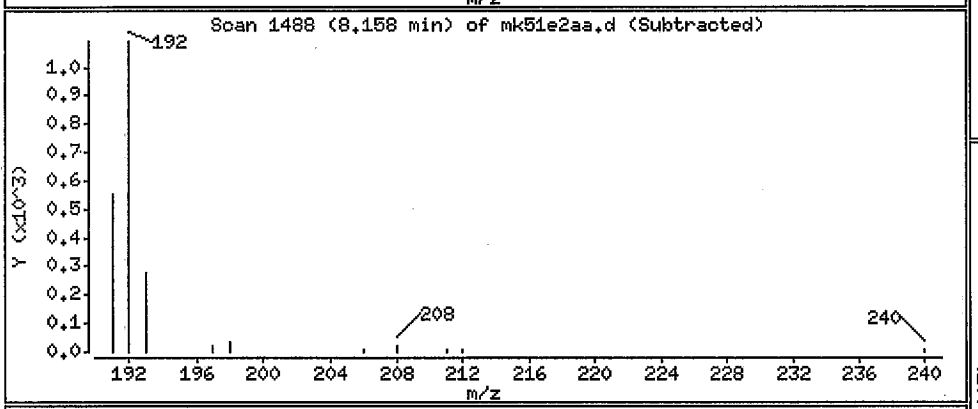
Column phase: Varian: 5MS

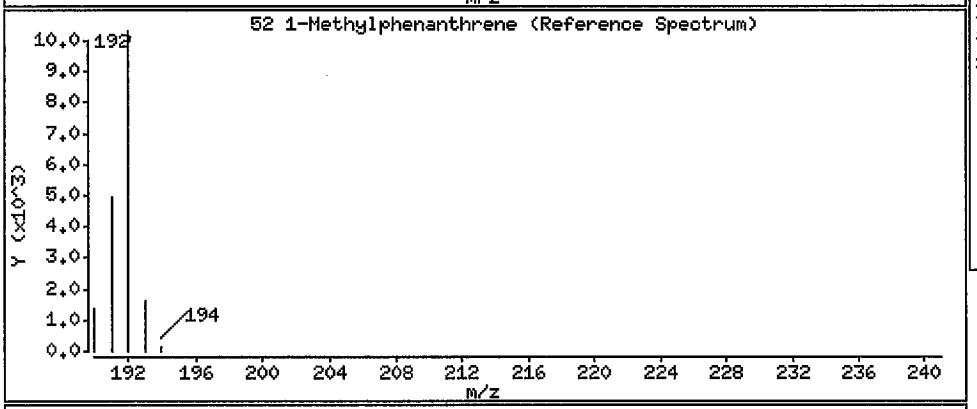
Column diameter: 0.25

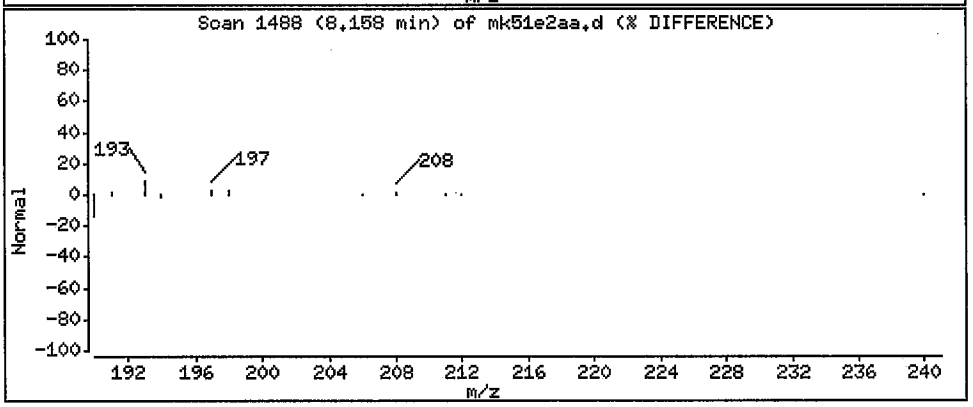
52 1-Methylphenanthrene

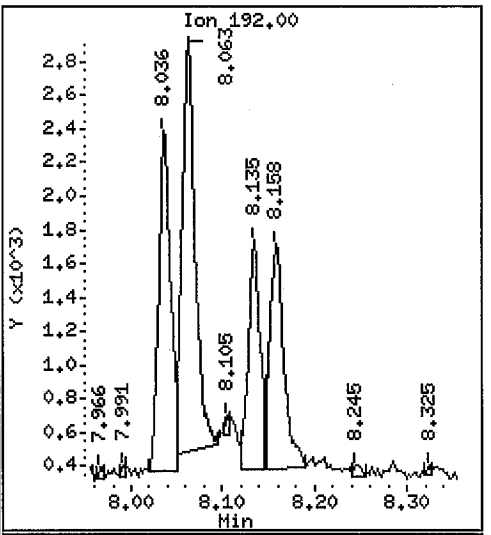
Concentration: 2.67 ng/sample

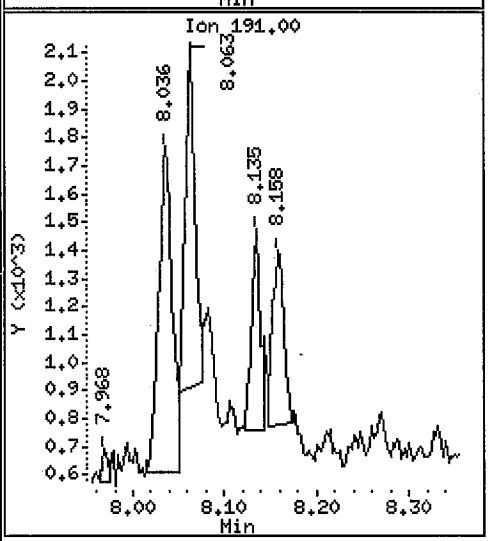












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

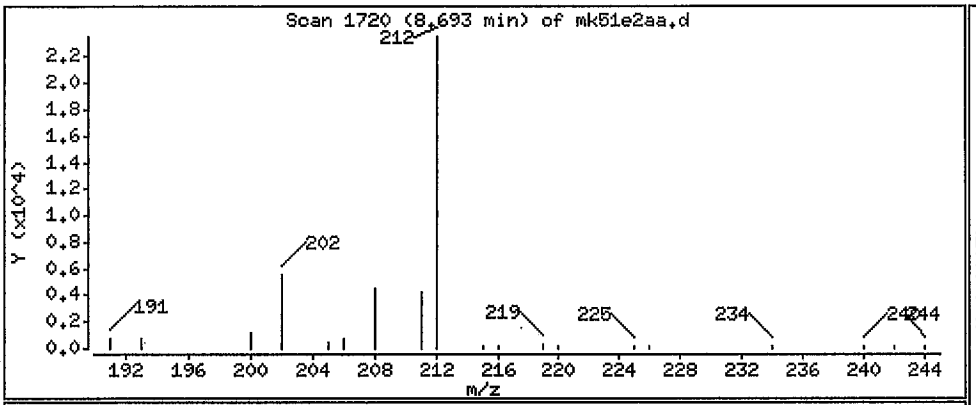
Operator: 11211

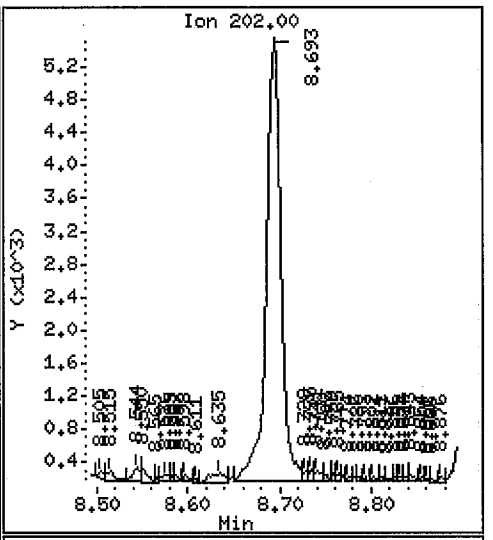
Column phase: Varian: 5MS

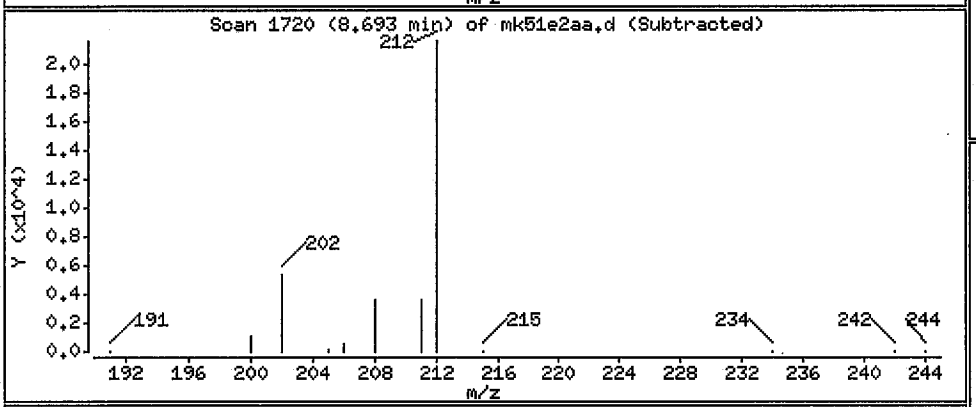
Column diameter: 0.25

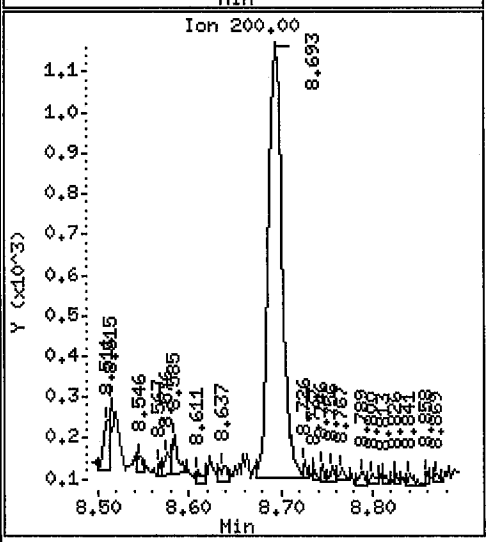
55 Fluoranthene

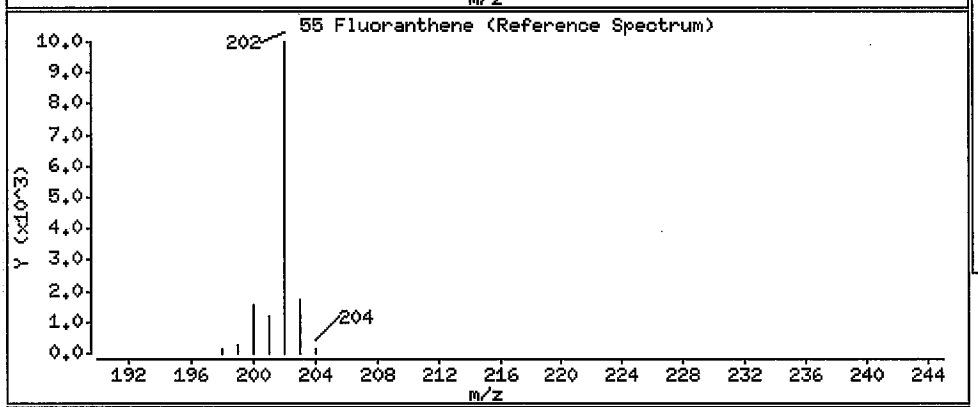
Concentration: 5.66 ng/sample

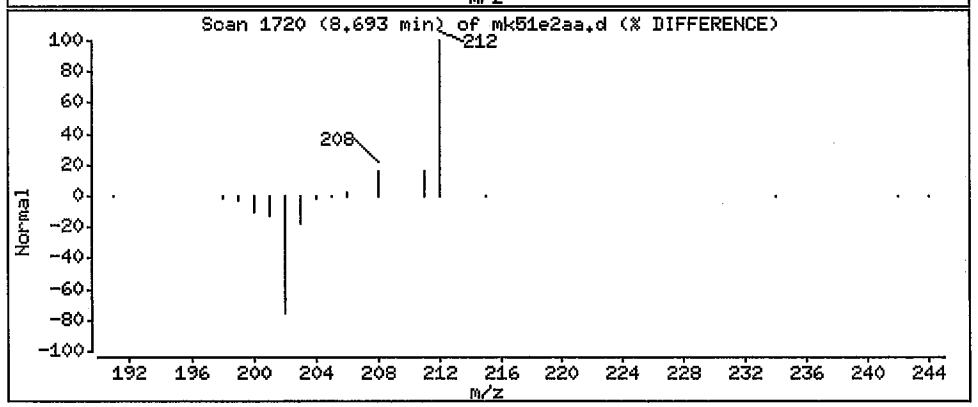












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

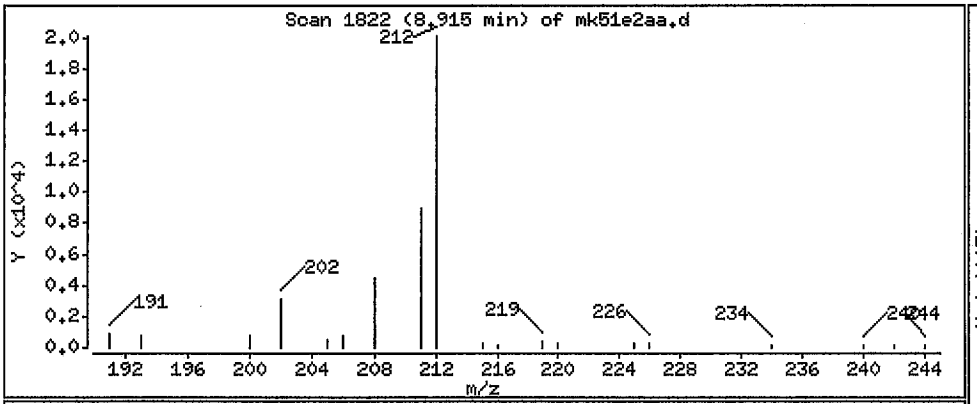
Operator: 11211

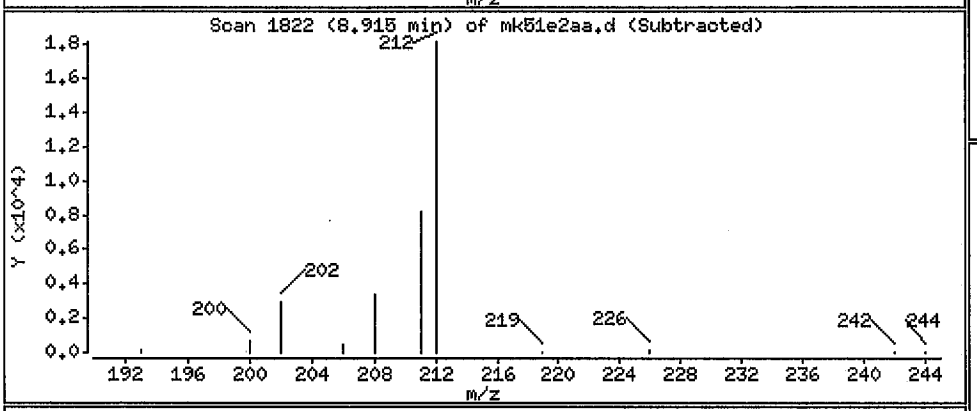
Column phase: Varian: 5MS

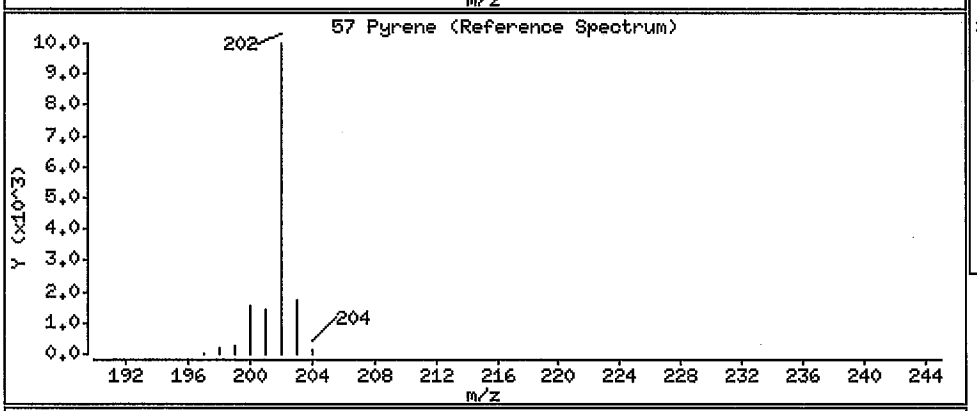
Column diameter: 0.25

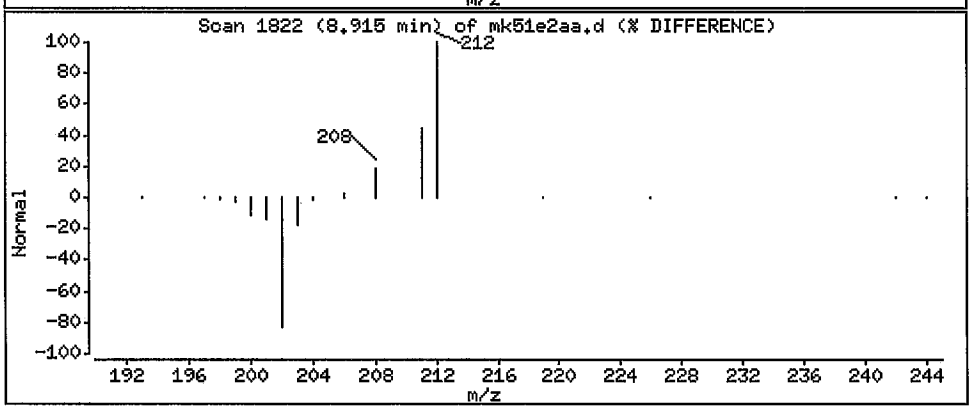
57 Pyrene

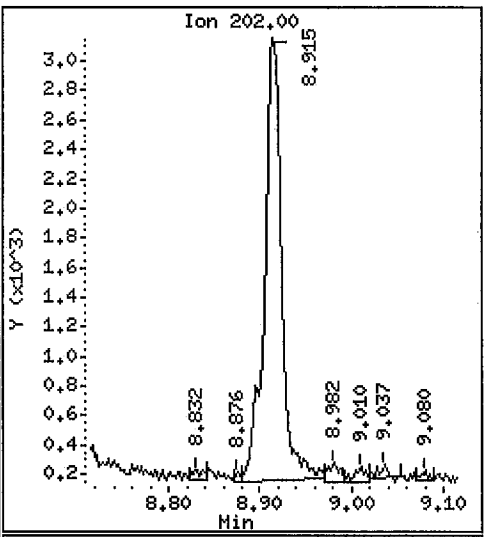
Concentration: 3.66 ng/sample

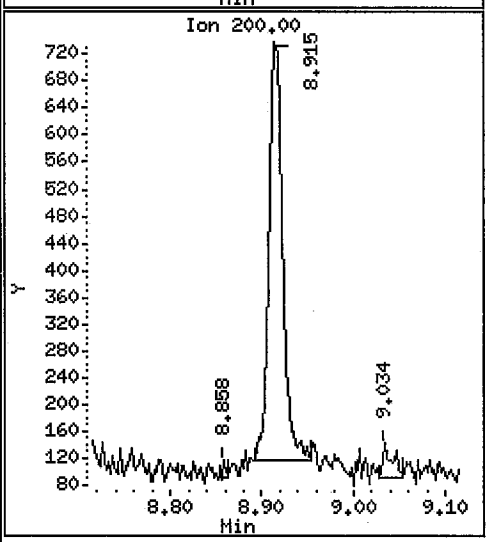












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

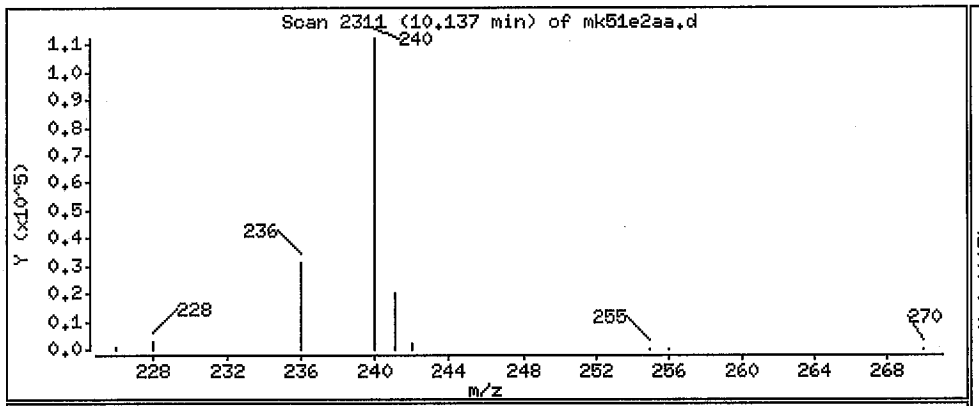
Operator: 11211

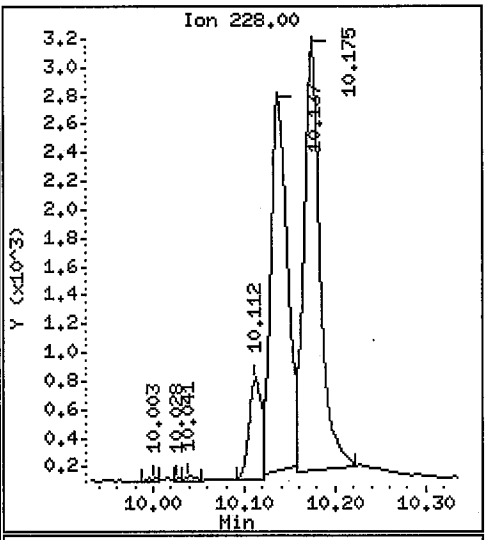
Column phase: Varian: 5MS

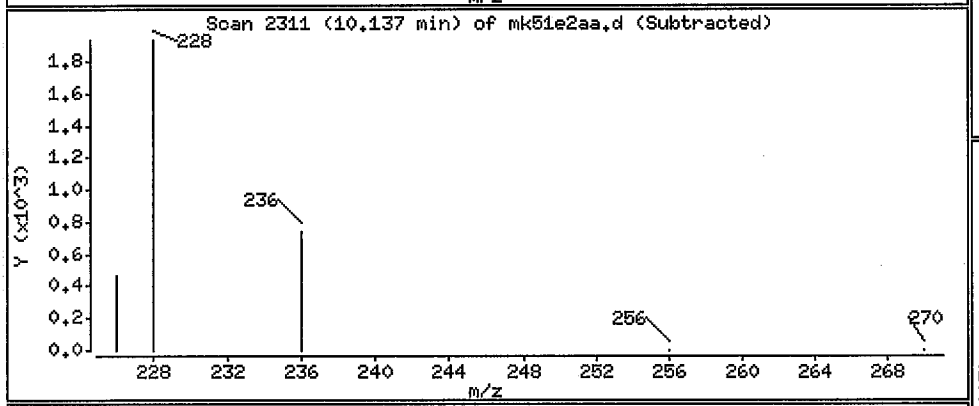
Column diameter: 0.25

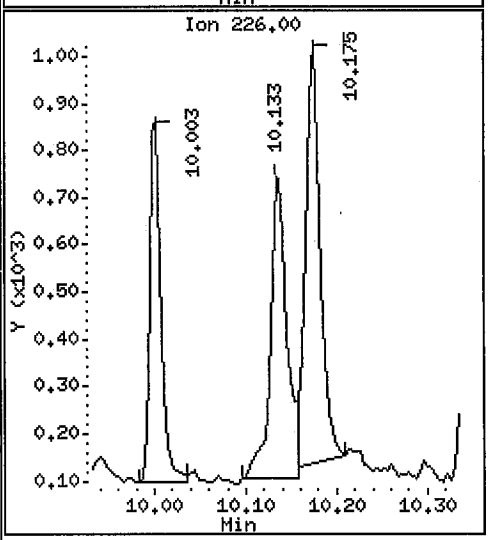
62 Benzo(a)anthracene

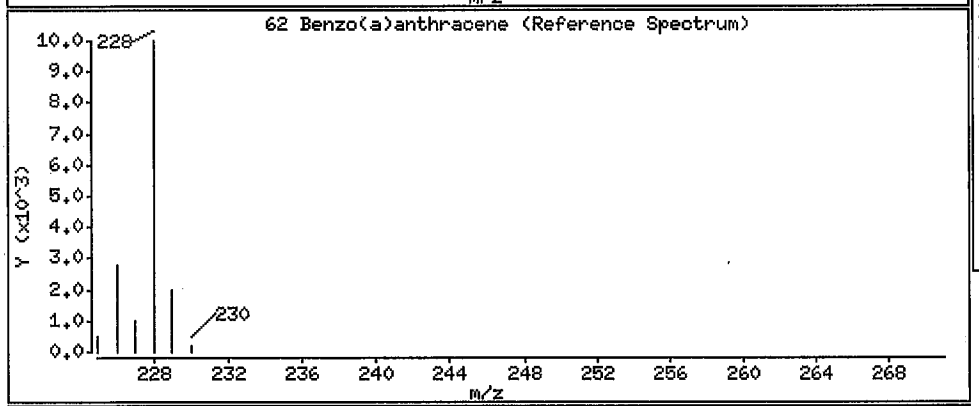
Concentration: 4.39 ng/sample

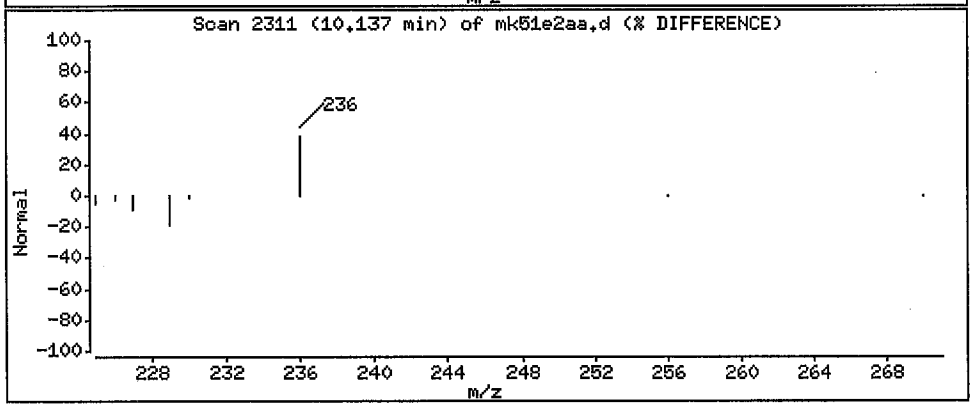












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

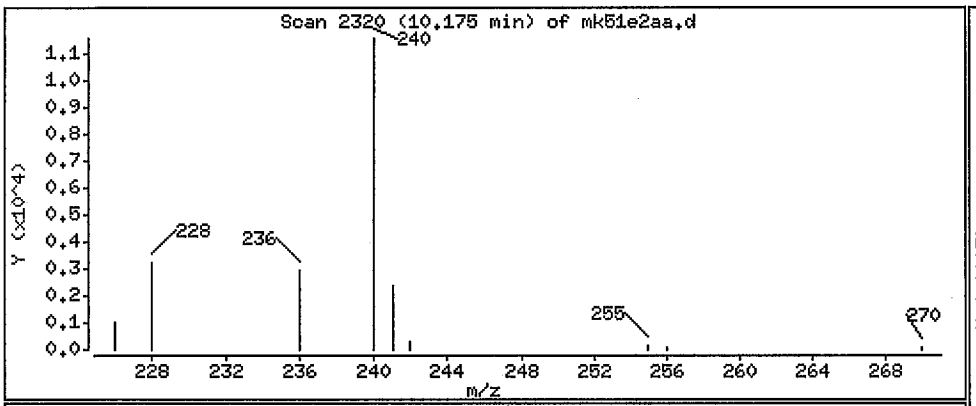
Operator: 11211

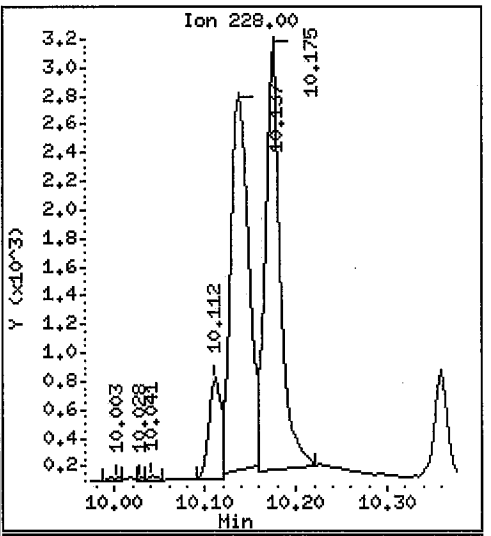
Column phase: Varian: 5MS

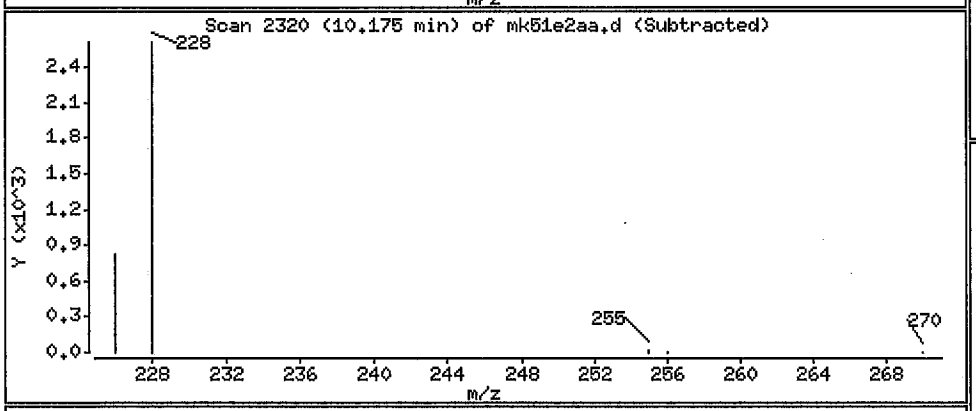
Column diameter: 0.25

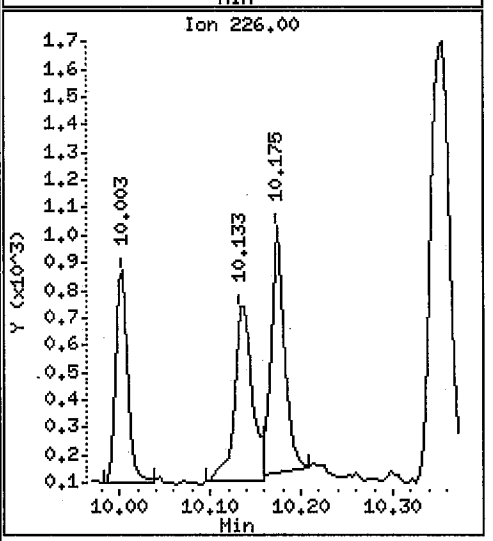
65 Chrysene

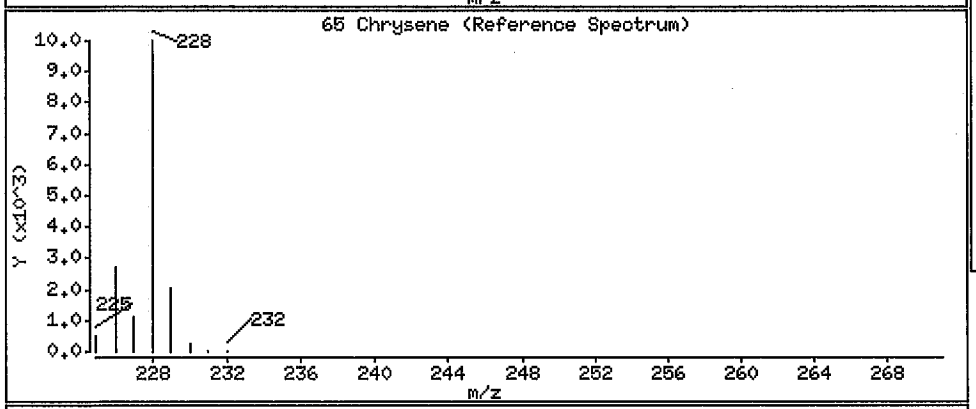
Concentration: 4.80 ng/sample

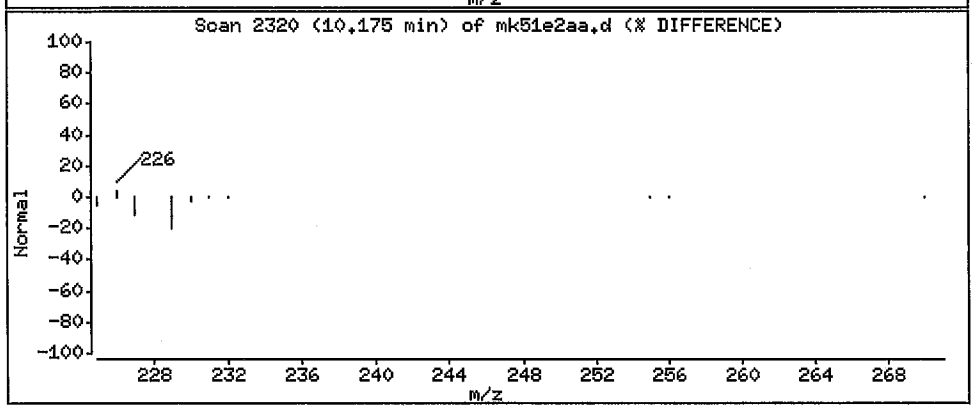












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

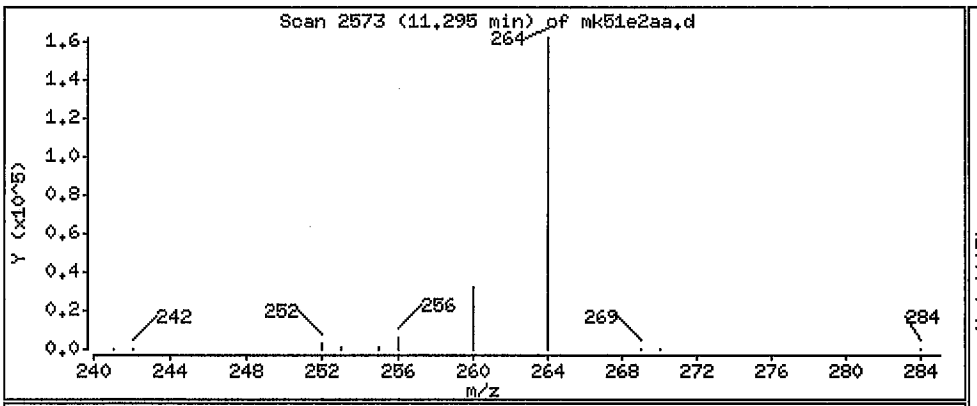
Operator: 11211

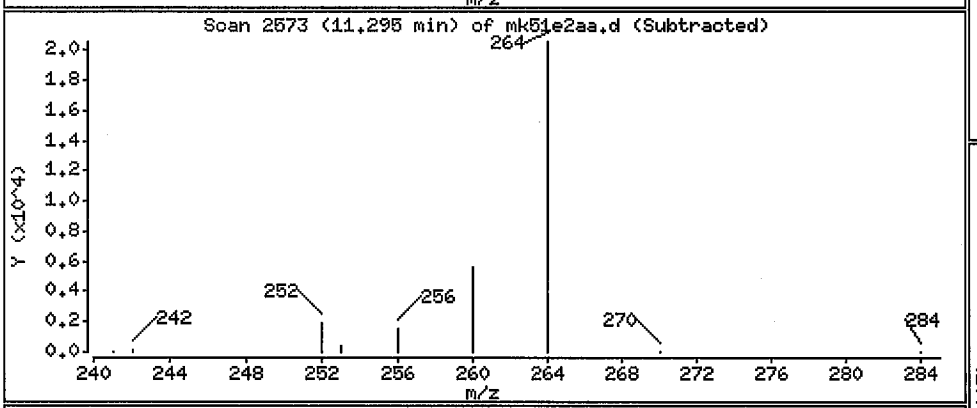
Column phase: Varian: 5MS

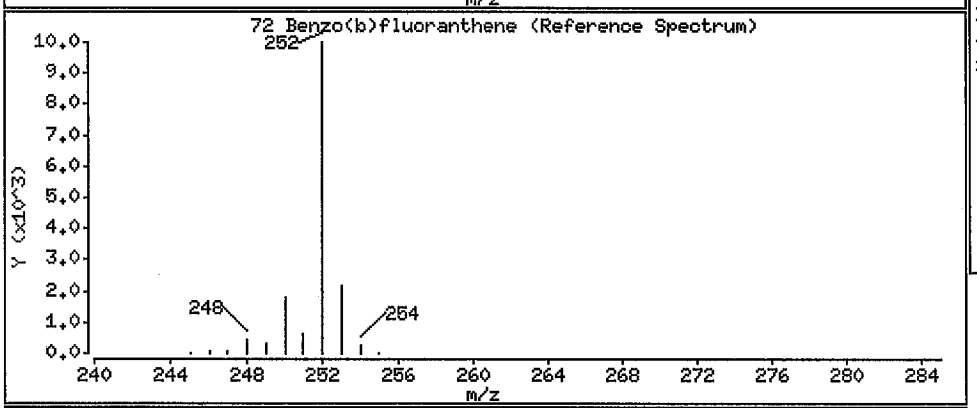
Column diameter: 0.25

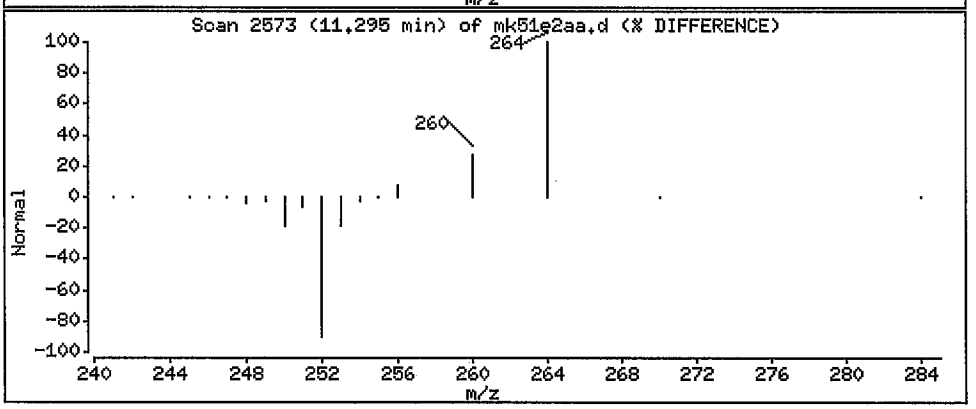
72 Benzo(b)fluoranthene

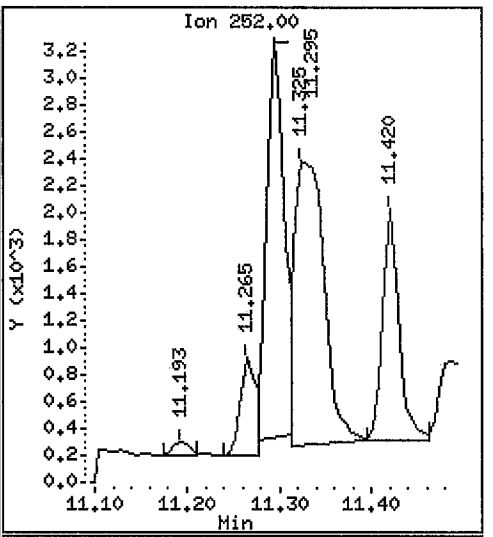
Concentration: 5.03 ng/sample

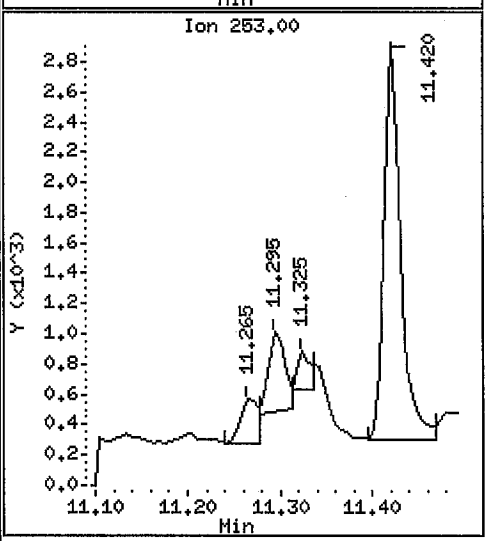












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

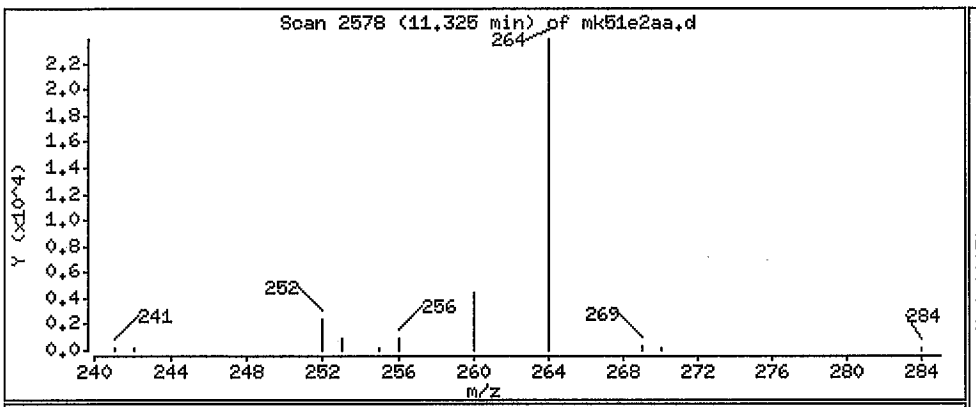
Operator: 11211

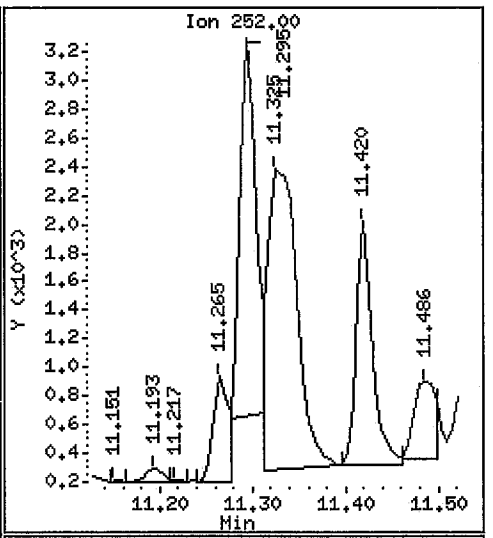
Column phase: Varian: 5MS

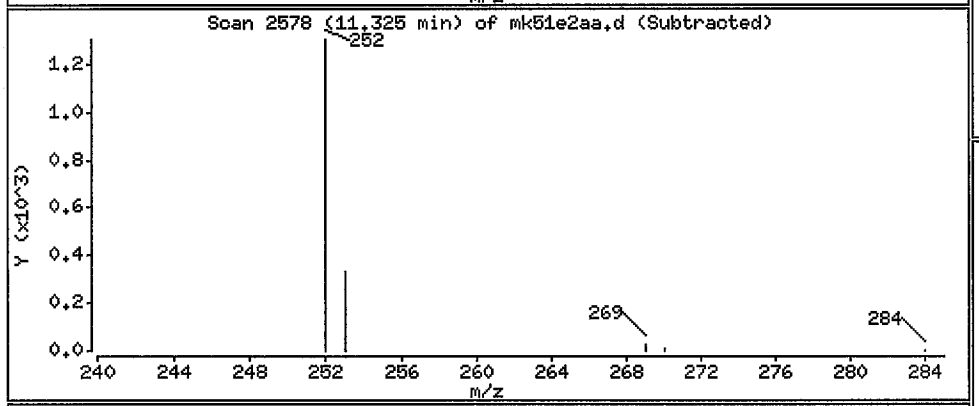
Column diameter: 0.25

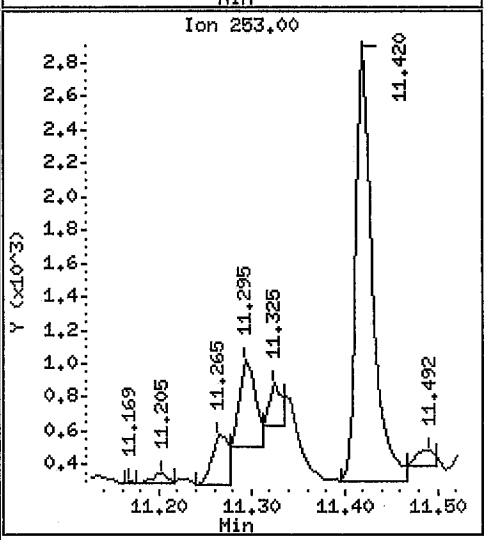
75 Benzo(k)fluoranthene

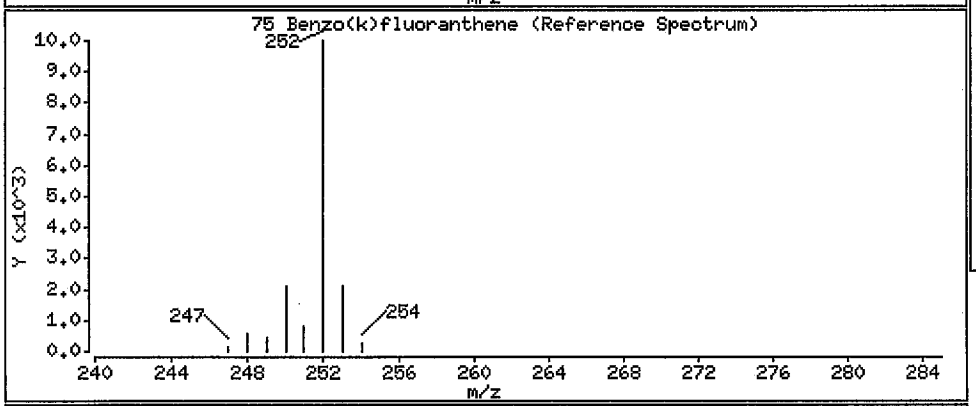
Concentration: 6.34 ng/sample

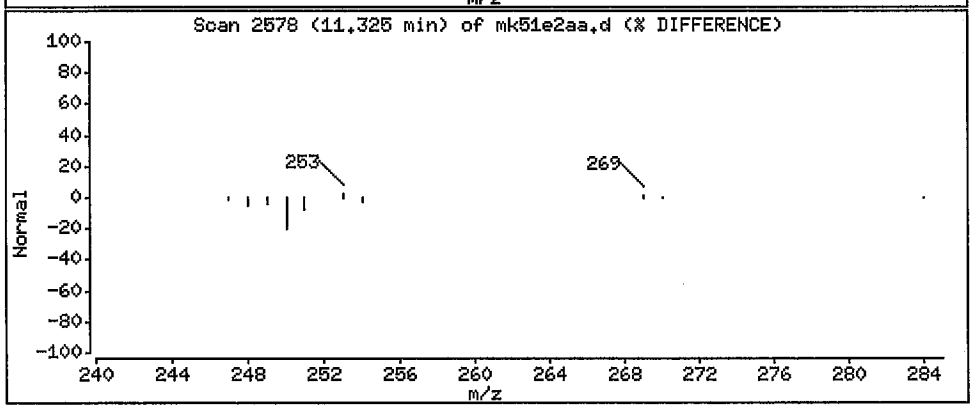












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

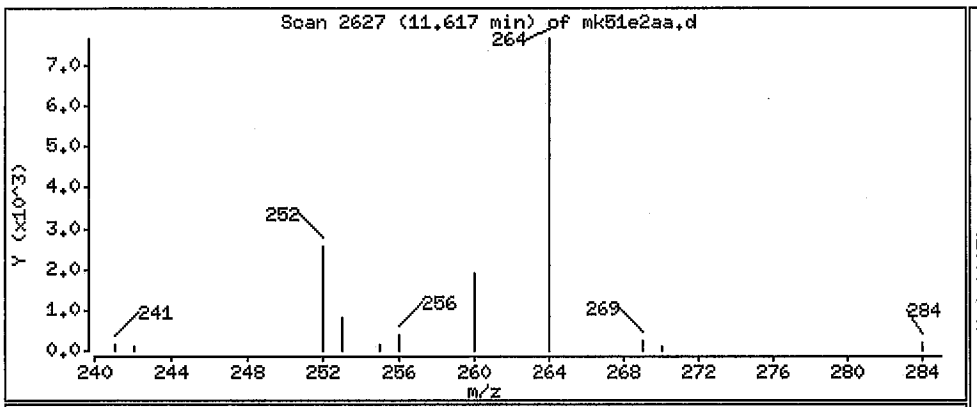
Operator: 11211

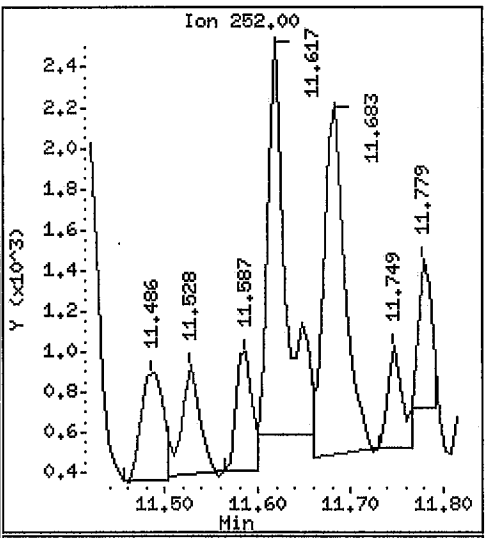
Column phase: Varian: 5MS

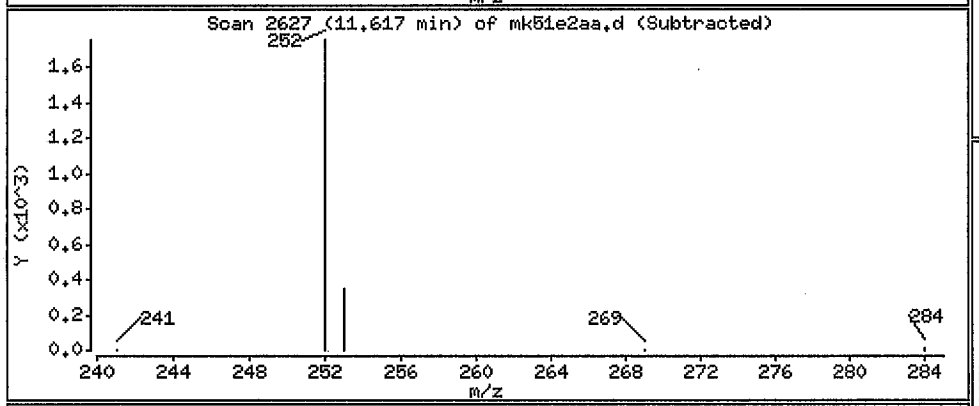
Column diameter: 0.25

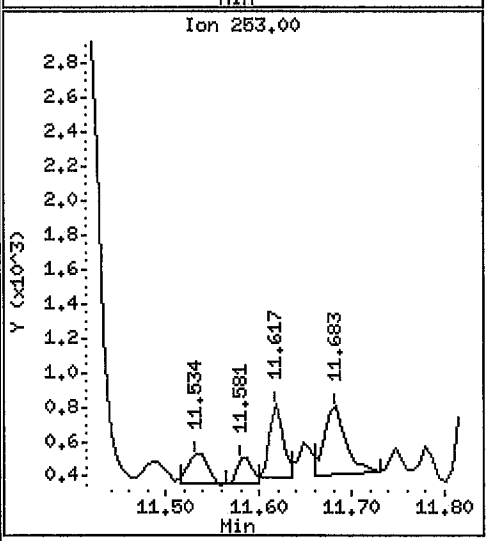
77 Benzo(e)pyrene

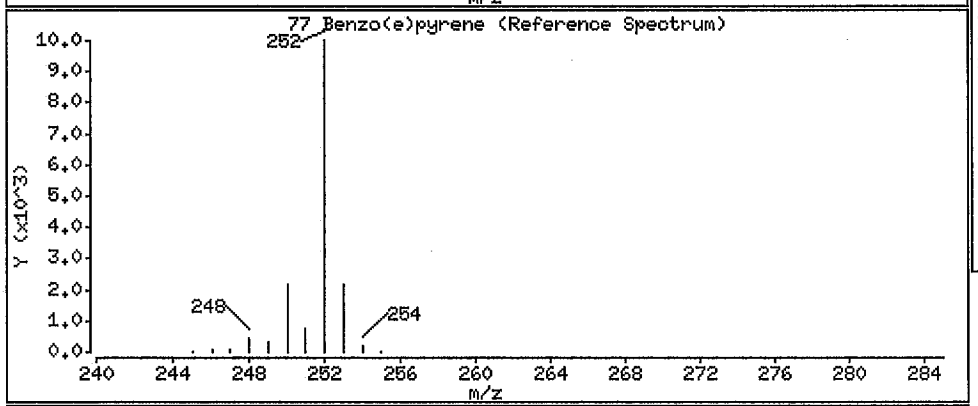
Concentration: 4.30 ng/sample

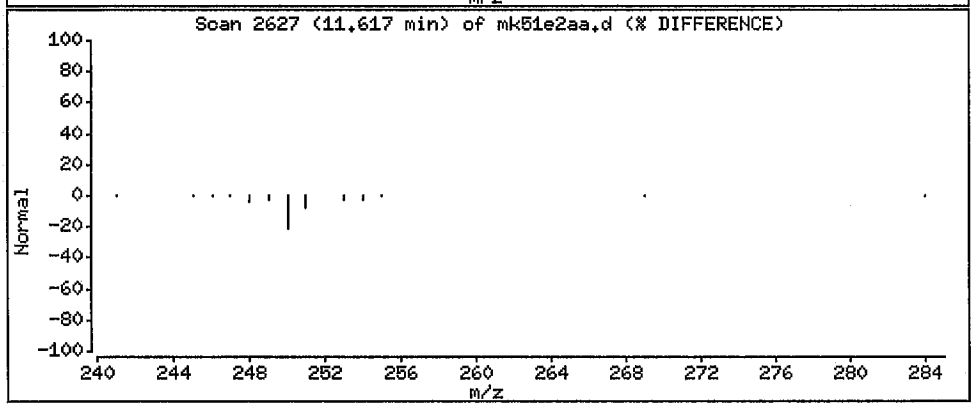












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

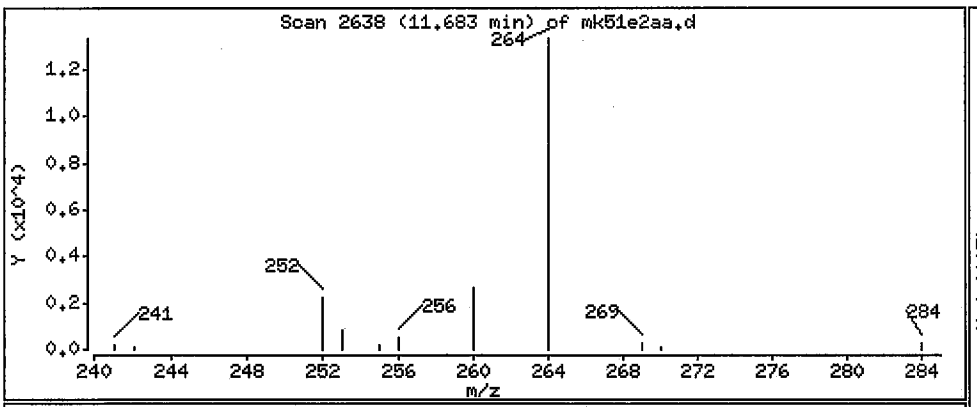
Operator: 11211

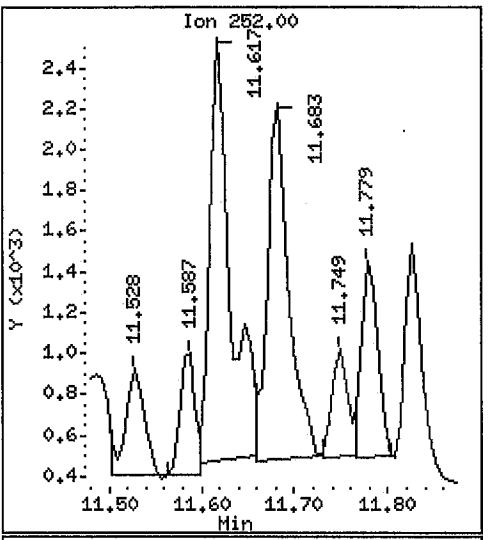
Column phase: Varian: 5MS

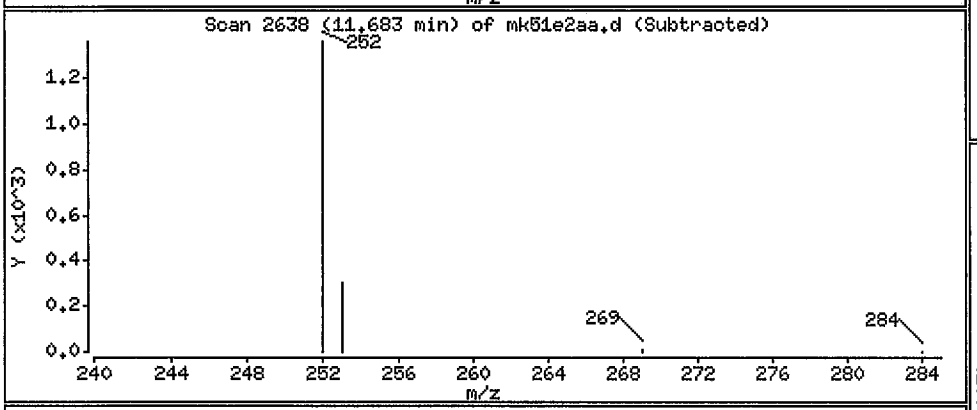
Column diameter: 0.25

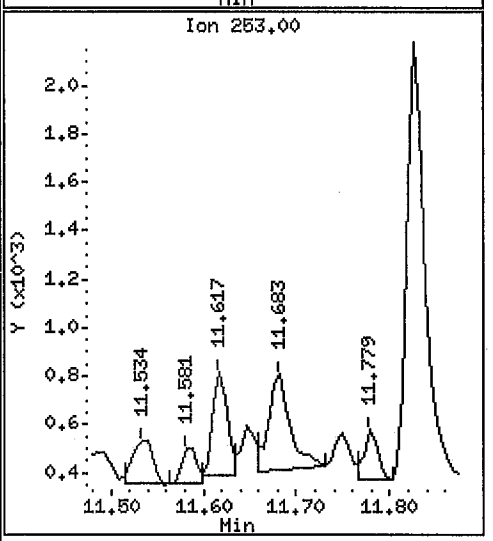
80 Benzo(a)pyrene

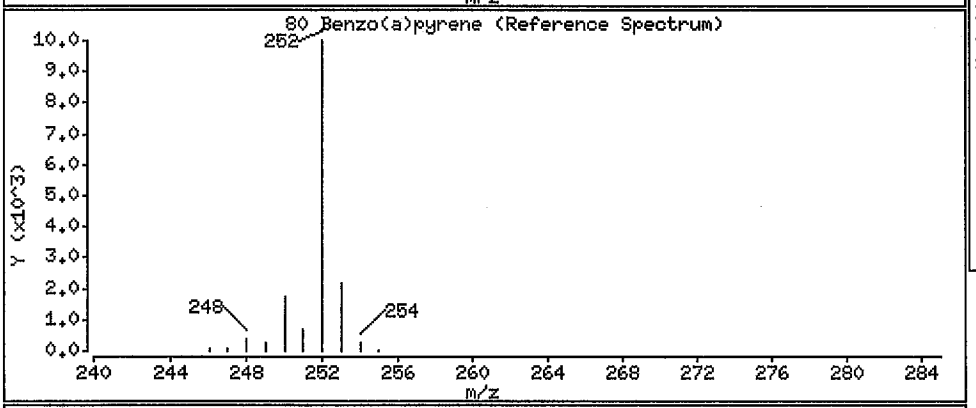
Concentration: 5.03 ng/sample

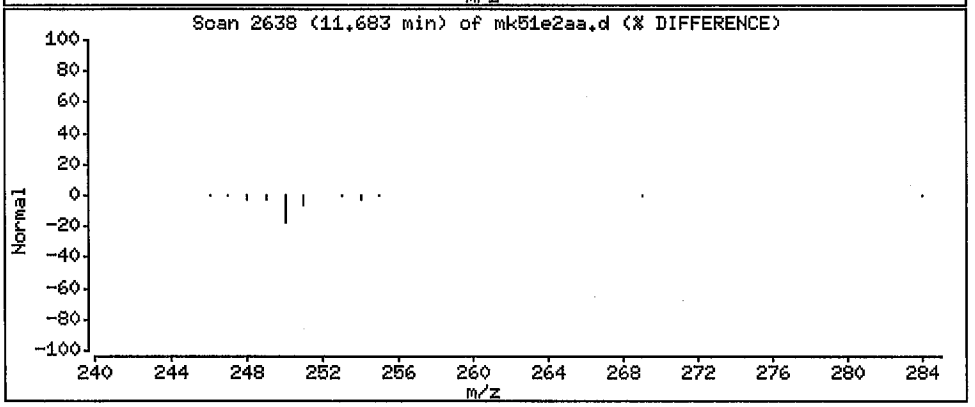












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

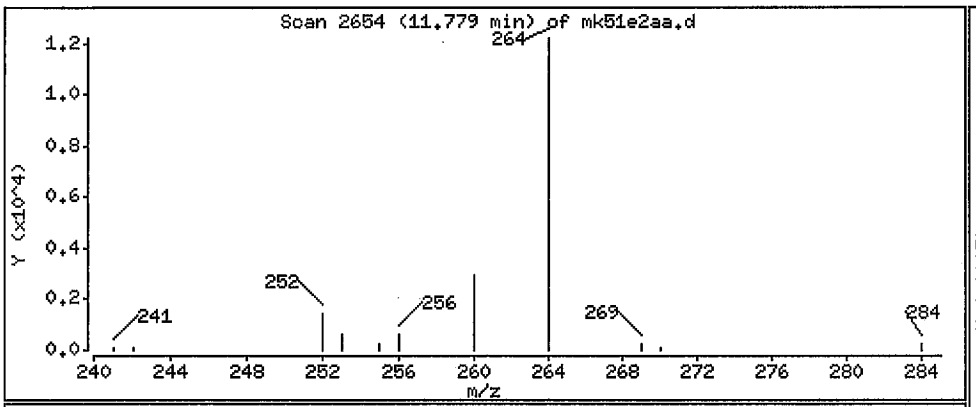
Operator: 11211

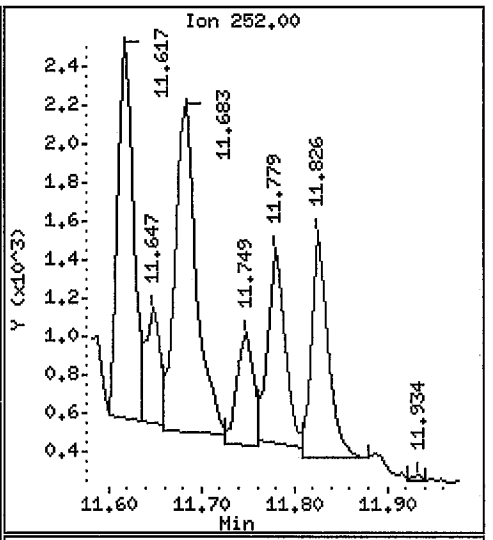
Column phase: Varian: 5MS

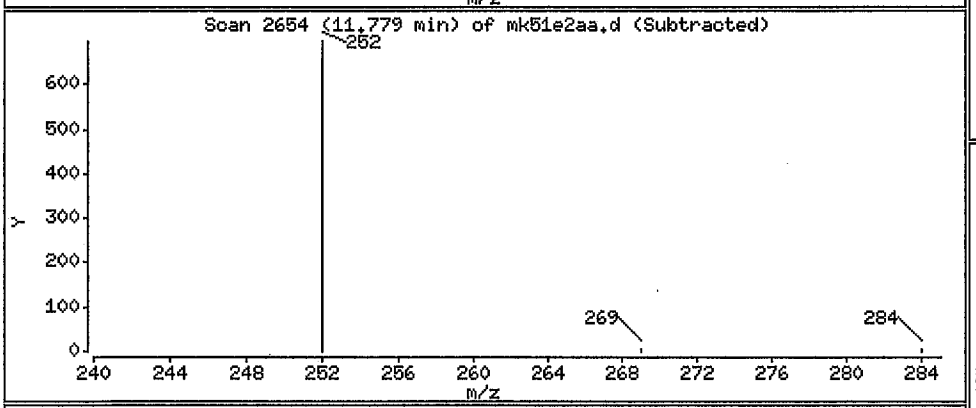
Column diameter: 0.25

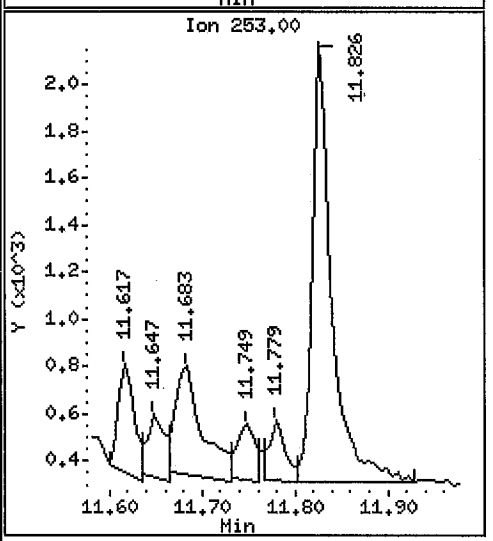
83 Perylene

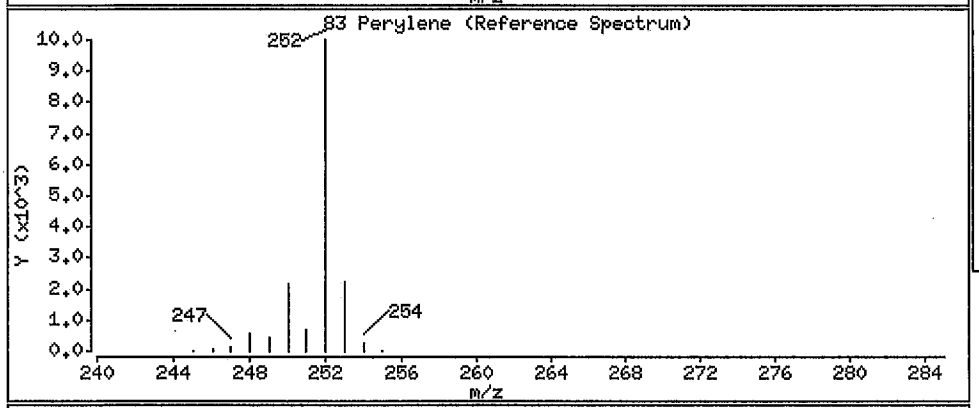
Concentration: 2.47 ng/sample

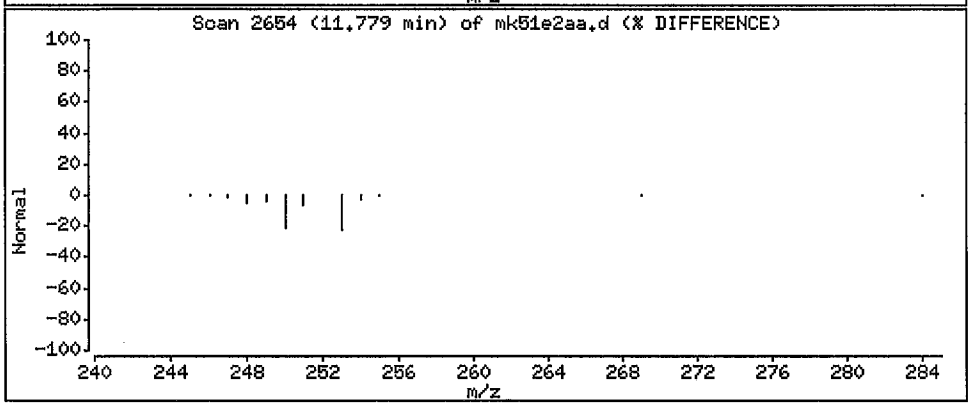












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

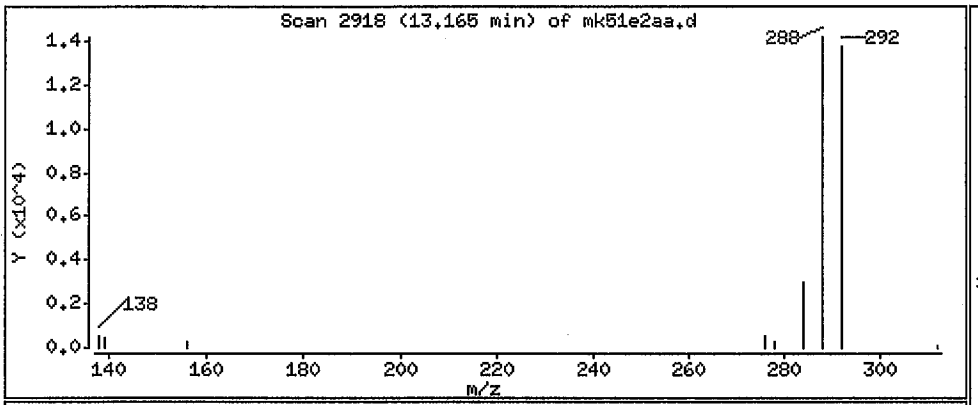
Operator: 11211

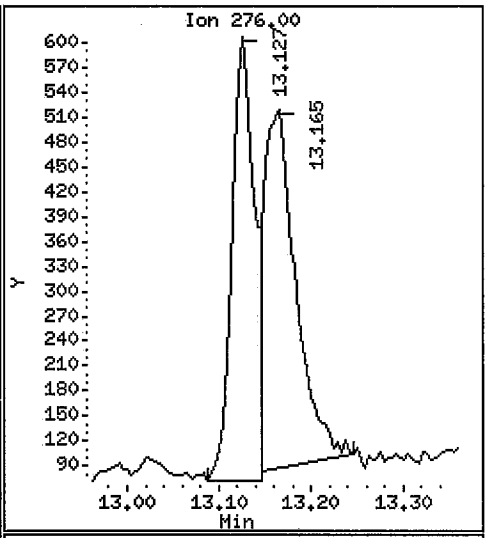
Column phase: Varian: 5MS

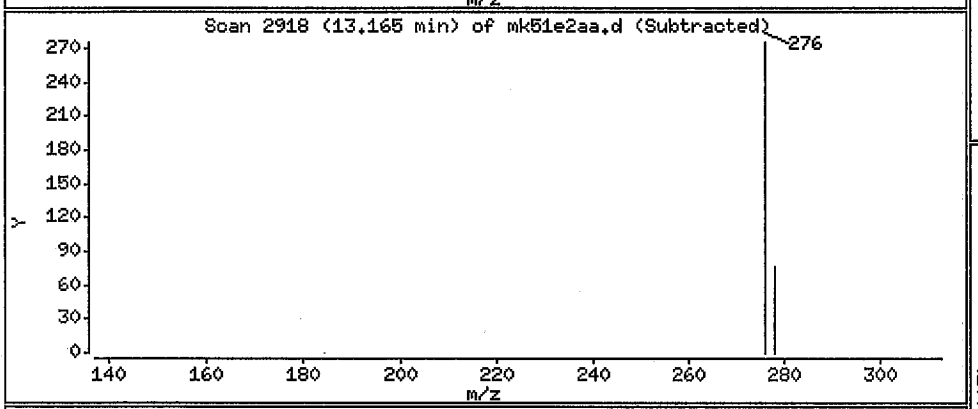
Column diameter: 0.25

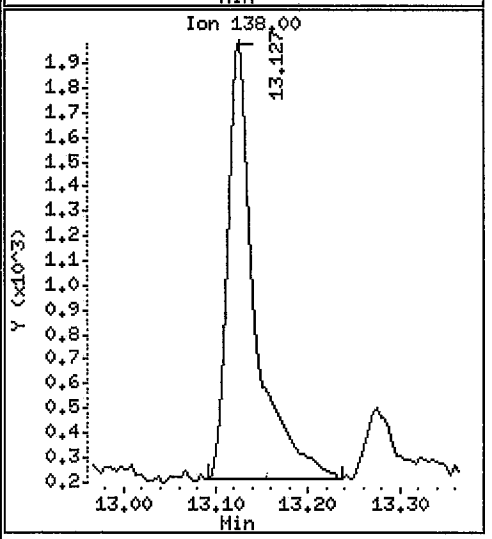
86 Indeno(1,2,3-cd)pyrene

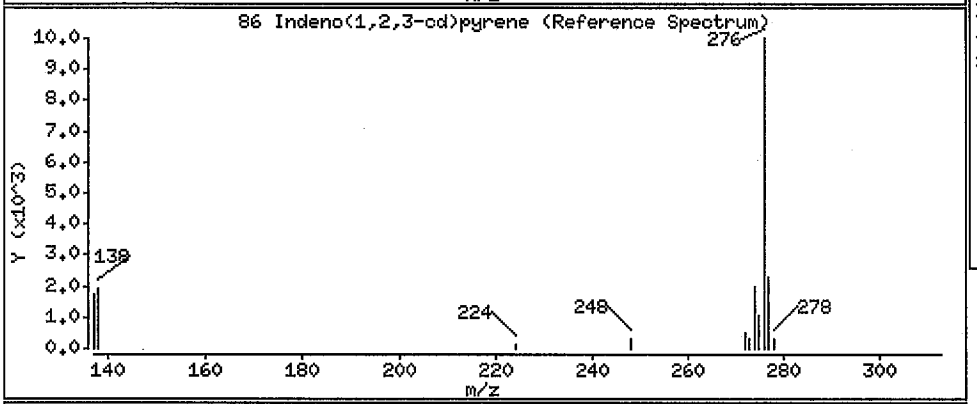
Concentration: 1.42 ng/sample

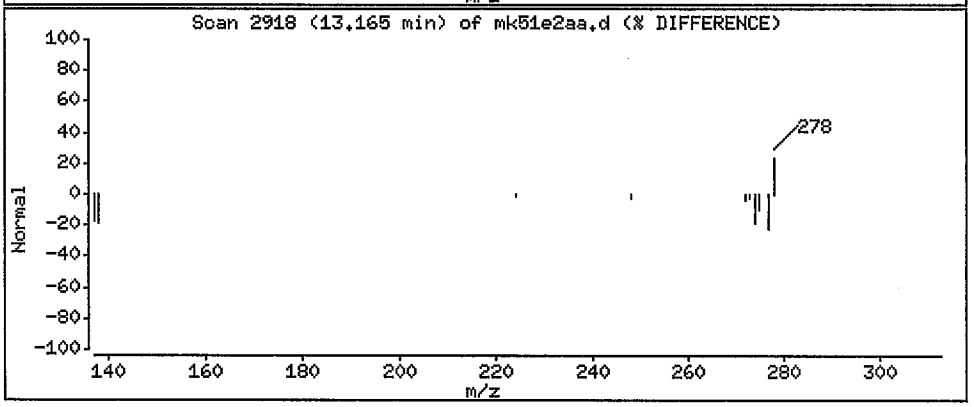












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

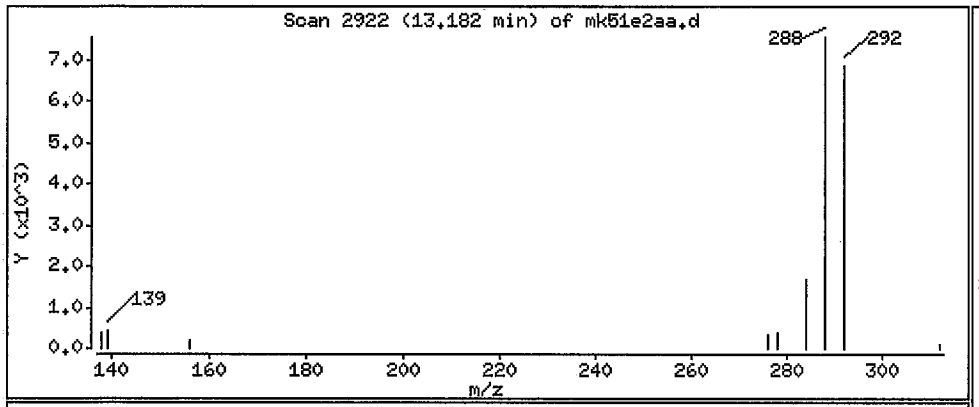
Operator: 11211

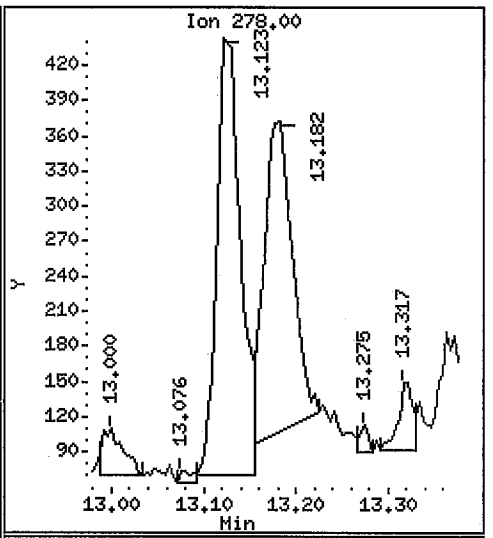
Column phase: Varian: 5MS

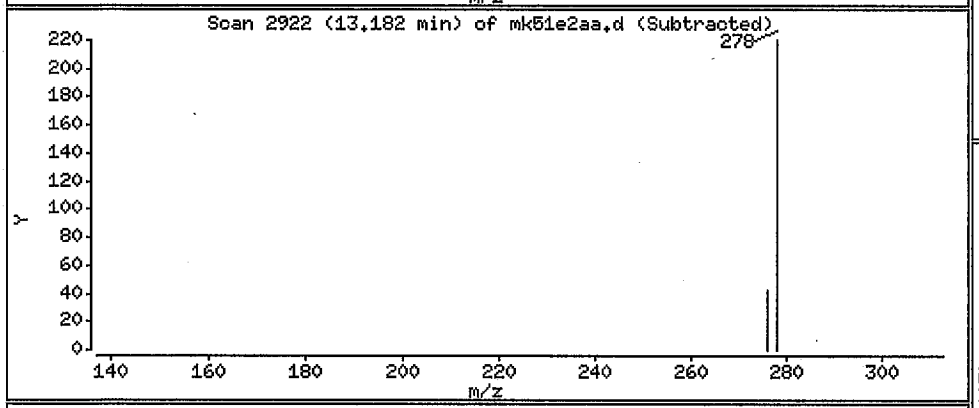
Column diameter: 0.25

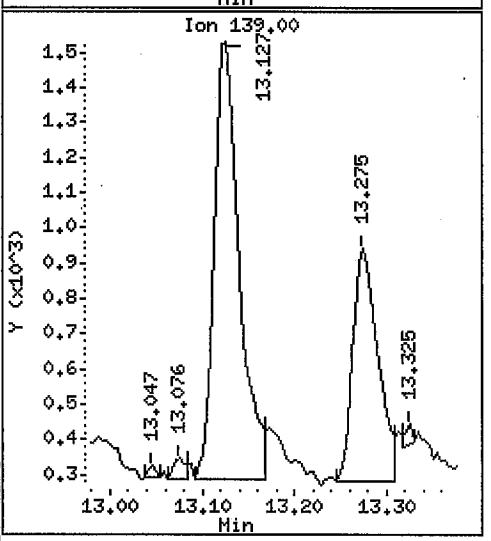
89 Dibenz(a,h)anthracene

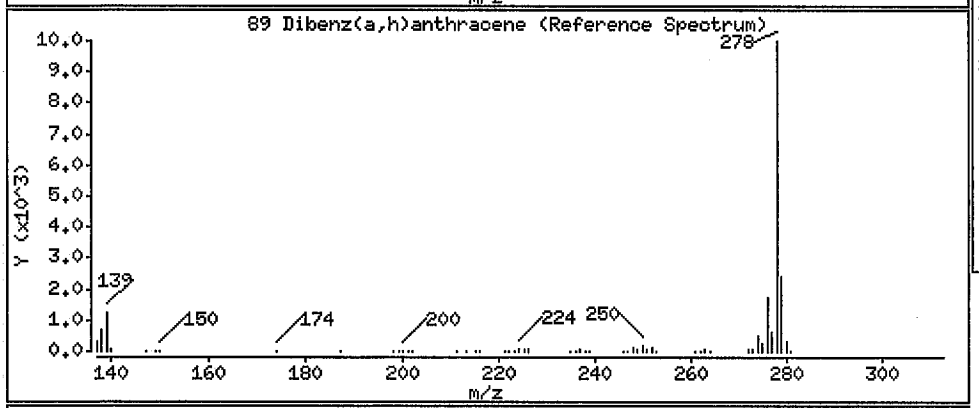
Concentration: 1.03 ng/sample

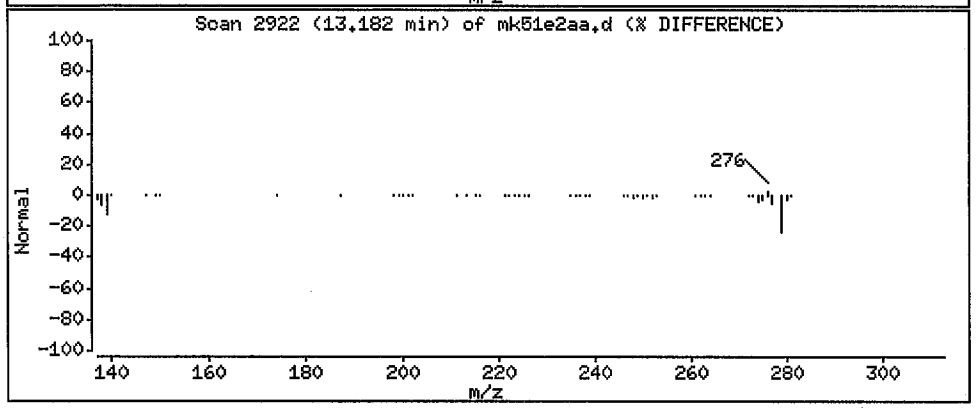












Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2aa.d

Date : 14-AUG-2011 15:28

Client ID: INTRA-LAB BLANK

Instrument: mp.i

Sample Info: MK51E2AA,,3,,MBLK

Purge Volume: 1.0

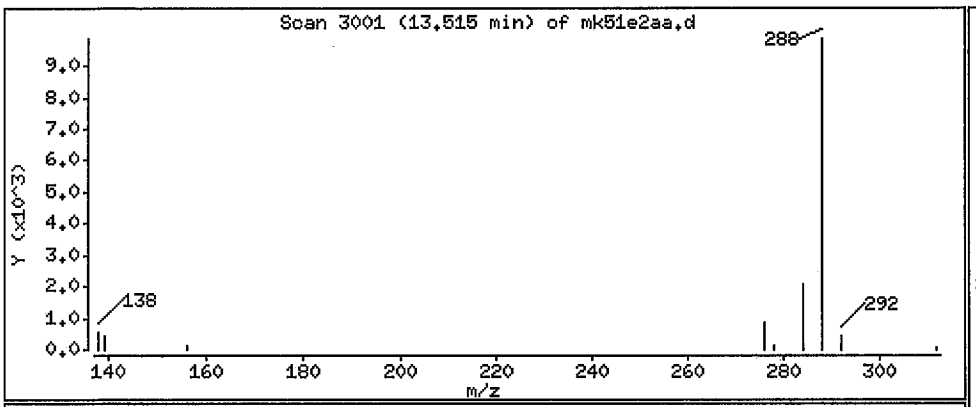
Operator: 11211

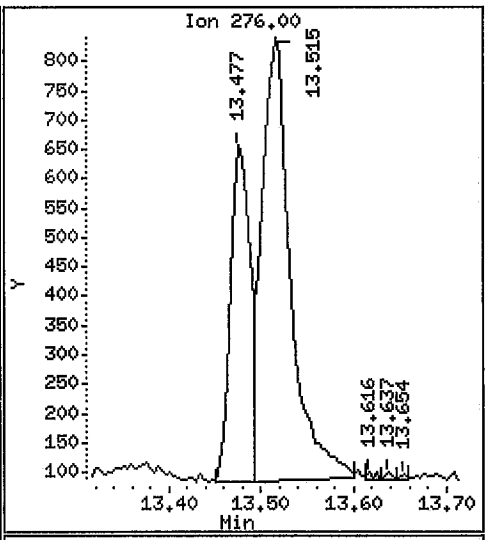
Column phase: Varian: 5MS

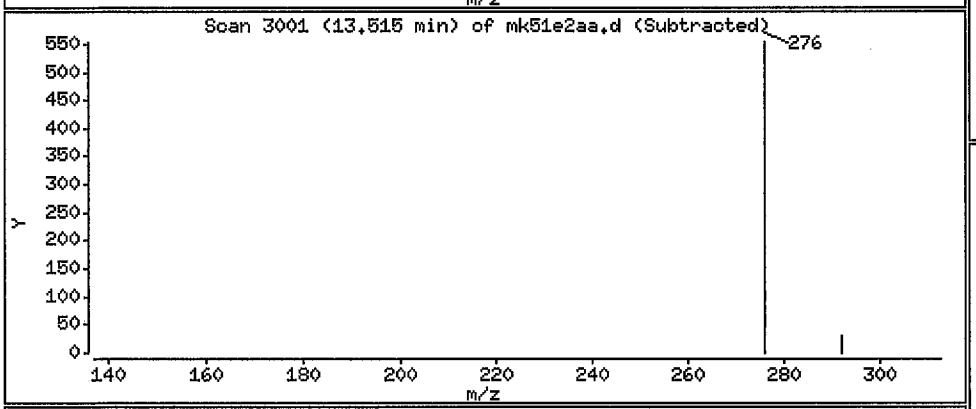
Column diameter: 0.25

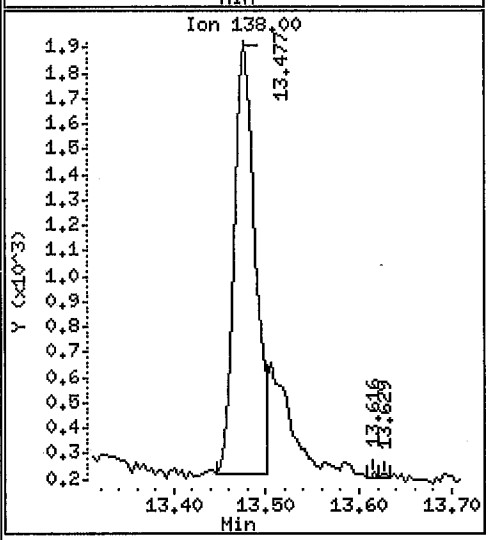
92 Benzo(g,h,i)perylene

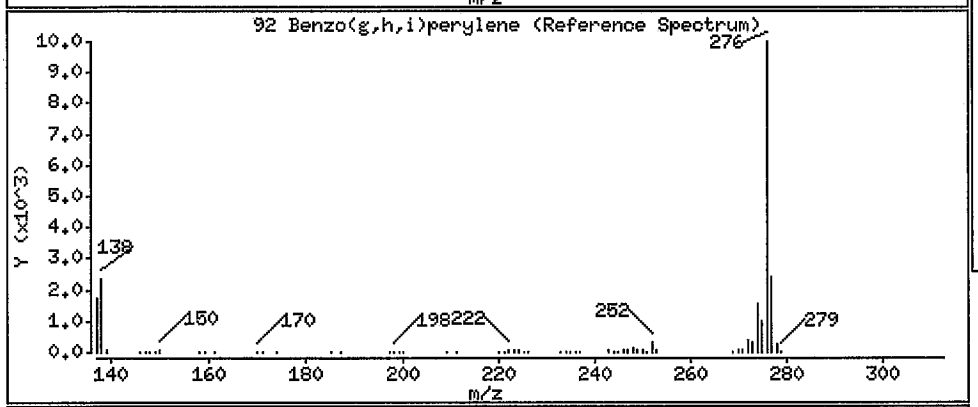
Concentration: 2.74 ng/sample

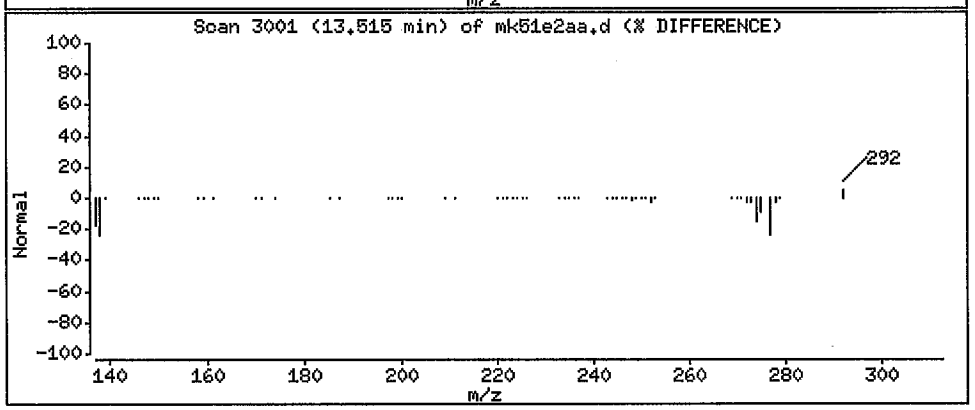












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/14/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	98	(60 - 140)			KNOX ID-0016
	101	(60 - 140)	2.4	(0-25)	KNOX ID-0016
Acenaphthylene	95	(60 - 140)			KNOX ID-0016
	96	(60 - 140)	0.84	(0-25)	KNOX ID-0016
Anthracene	92	(60 - 140)			KNOX ID-0016
	92	(60 - 140)	0.87	(0-25)	KNOX ID-0016
Benzo(a)anthracene	82	(60 - 140)			KNOX ID-0016
	83	(60 - 140)	1.4	(0-25)	KNOX ID-0016
Benzo(b)fluoranthene	84	(60 - 140)			KNOX ID-0016
	84	(60 - 140)	0.47	(0-25)	KNOX ID-0016
Benzo(k)fluoranthene	105	(60 - 140)			KNOX ID-0016
	108	(60 - 140)	2.2	(0-25)	KNOX ID-0016
Benzo(ghi)perylene	93	(60 - 140)			KNOX ID-0016
	93	(60 - 140)	0.0	(0-25)	KNOX ID-0016
Benzo(a)pyrene	95	(60 - 140)			KNOX ID-0016
	101	(60 - 140)	5.7	(0-25)	KNOX ID-0016
Benzo(e)pyrene	92	(60 - 140)			KNOX ID-0016
	96	(60 - 140)	4.7	(0-25)	KNOX ID-0016
Chrysene	102	(60 - 140)			KNOX ID-0016
	105	(60 - 140)	2.3	(0-25)	KNOX ID-0016
Dibenz(a,h)anthracene	93	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	1.7	(0-25)	KNOX ID-0016
Fluoranthene	95	(60 - 140)			KNOX ID-0016
	95	(60 - 140)	0.0	(0-25)	KNOX ID-0016
Fluorene	101	(60 - 140)			KNOX ID-0016
	102	(60 - 140)	1.6	(0-25)	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	87	(60 - 140)			KNOX ID-0016
	88	(60 - 140)	0.91	(0-25)	KNOX ID-0016
2-Methylnaphthalene	107	(60 - 140)			KNOX ID-0016
	110	(60 - 140)	2.6	(0-25)	KNOX ID-0016
Naphthalene	109	(60 - 140)			KNOX ID-0016
	111	(60 - 140)	1.8	(0-25)	KNOX ID-0016
Perylene	93	(60 - 140)			KNOX ID-0016
	103	(60 - 140)	10	(0-25)	KNOX ID-0016
Phenanthrene	106	(60 - 140)			KNOX ID-0016
	106	(60 - 140)	0.37	(0-25)	KNOX ID-0016
Pyrene	93	(60 - 140)			KNOX ID-0016
	94	(60 - 140)	0.42	(0-25)	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	94	(60 - 140)
	91	(60 - 140)
Naphthalene-d8	94	(60 - 140)
	92	(60 - 140)
2-Methylnaphthalene-d10	98	(60 - 140)
	96	(60 - 140)
Acenaphthylene-d8	102	(60 - 140)
	101	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	101	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	139	(60 - 140)
	138	(60 - 140)
Chrysene-d12	104	(60 - 140)
	104	(60 - 140)
Benzo(b)fluoranthene-d12	112	(60 - 140)
	110	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
	93	(60 - 140)
Benzo(a)pyrene-d12	104	(60 - 140)
	100	(60 - 140)
Perylene-d12	100	(60 - 140)
	89	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	110	(60 - 140)
	109	(60 - 140)
Dibenz(ah)anthracene-d14	107	(60 - 140)
	105	(60 - 140)
Benzo(ghi)perylene-d12	102	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD
Prep Date.....: 07/26/11 Analysis Date..: 08/14/11
Prep Batch #...: 1207014
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	250	246	ng/sample	98		KNOX ID-0016
	250	252	ng/sample	101	2.4	KNOX ID-0016
Acenaphthylene	250	237	ng/sample	95		KNOX ID-0016
	250	239	ng/sample	96	0.84	KNOX ID-0016
Anthracene	250	229	ng/sample	92		KNOX ID-0016
	250	231	ng/sample	92	0.87	KNOX ID-0016
Benzo(a)anthracene	250	205	ng/sample	82		KNOX ID-0016
	250	208	ng/sample	83	1.4	KNOX ID-0016
Benzo(b)fluoranthene	250	210	ng/sample	84		KNOX ID-0016
	250	209	ng/sample	84	0.47	KNOX ID-0016
Benzo(k)fluoranthene	250	263	ng/sample	105		KNOX ID-0016
	250	269	ng/sample	108	2.2	KNOX ID-0016
Benzo(ghi)perylene	250	232	ng/sample	93		KNOX ID-0016
	250	232	ng/sample	93	0.0	KNOX ID-0016
Benzo(a)pyrene	250	238	ng/sample	95		KNOX ID-0016
	250	252	ng/sample	101	5.7	KNOX ID-0016
Benzo(e)pyrene	250	229	ng/sample	92		KNOX ID-0016
	250	240	ng/sample	96	4.7	KNOX ID-0016
Chrysene	250	256	ng/sample	102		KNOX ID-0016
	250	262	ng/sample	105	2.3	KNOX ID-0016
Dibenz(a,h)anthracene	250	232	ng/sample	93		KNOX ID-0016
	250	236	ng/sample	94	1.7	KNOX ID-0016
Fluoranthene	250	238	ng/sample	95		KNOX ID-0016
	250	238	ng/sample	95	0.0	KNOX ID-0016
Fluorene	250	252	ng/sample	101		KNOX ID-0016
	250	256	ng/sample	102	1.6	KNOX ID-0016
Indeno(1,2,3-cd)pyrene	250	218	ng/sample	87		KNOX ID-0016
	250	220	ng/sample	88	0.91	KNOX ID-0016
2-Methylnaphthalene	250	268	ng/sample	107		KNOX ID-0016
	250	275	ng/sample	110	2.6	KNOX ID-0016
Naphthalene	2000	2180	ng/sample	109		KNOX ID-0016
	2000	2220	ng/sample	111	1.8	KNOX ID-0016
Perylene	250	232	ng/sample	93		KNOX ID-0016
	250	257	ng/sample	103	10	KNOX ID-0016
Phenanthrene	250	265	ng/sample	106		KNOX ID-0016
	250	266	ng/sample	106	0.37	KNOX ID-0016
Pyrene	250	233	ng/sample	93		KNOX ID-0016
	250	234	ng/sample	94	0.42	KNOX ID-0016

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Anthracene-d10	94	(60 - 140)
	91	(60 - 140)
Naphthalene-d8	94	(60 - 140)
	92	(60 - 140)
2-Methylnaphthalene-d10	98	(60 - 140)
	96	(60 - 140)
Acenaphthylene-d8	102	(60 - 140)
	101	(60 - 140)
Phenanthrene-d10	86	(60 - 140)
	85	(60 - 140)
Fluoranthene-d10	101	(60 - 140)
	100	(60 - 140)
Benzo(a)anthracene-d12	139	(60 - 140)
	138	(60 - 140)
Chrysene-d12	104	(60 - 140)
	104	(60 - 140)
Benzo(b)fluoranthene-d12	112	(60 - 140)
	110	(60 - 140)
Benzo(k)fluoranthene-d12	94	(60 - 140)
	93	(60 - 140)
Benzo(a)pyrene-d12	104	(60 - 140)
	100	(60 - 140)
Perylene-d12	100	(60 - 140)
	89	(60 - 140)
Indeno(1,2,3-cd)pyrene-d12	110	(60 - 140)
	109	(60 - 140)
Dibenz(ah)anthracene-d14	107	(60 - 140)
	105	(60 - 140)
Benzo(ghi)perylene-d12	102	(60 - 140)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H1G250406 Work Order #...: MK51E1AE-LCS Matrix.....: AIR
LCS Lot-Sample#: H1G260000-014 MK51E1AF-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Report Date: 15-Aug-2011 10:42

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Lab Smp Id: MK51E2AC
Inj Date : 14-AUG-2011 15:53
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E2AC,,3,,LCS
Misc Info : P081411,SIMPAH3
Comment :
Method : /chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 14-Aug-2011 15:17 chemist Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.873	4.873	(1.000)	602781	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.873	4.873	(0.769)	602781	0.46827	234
3 Naphthalene	128	4.887	4.888	(1.003)	4398304	4.35218	2180
$ 222 13C6-Naphthalene	134	4.873	4.888	(1.000)	55199	0.04956	24.8(R)
* 10 2-Methylnaphthalene-d10	152	5.431	5.431	(1.000)	342707	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.431	5.431	(0.857)	342707	0.48981	245
12 2-Methylnaphthalene	142	5.457	5.457	(1.005)	368562	0.53651	268
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	334135	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.871)	334135	0.48001	240
15 1-Methylnaphthalene	142	5.540	5.540	(1.005)	334857	0.51688	258
16 Biphenyl	154	5.845	5.842	(1.076)	424086	0.51836	259
* 17 2,6-Dimethylnaphthalene-d12	168	5.942	5.942	(1.000)	290658	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.942	5.942	(0.938)	290658	0.48481	242
19 2,6 Dimethylnaphthalene	156	5.979	5.979	(1.006)	298334	0.51637	258

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Report Date: 15-Aug-2011 10:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	513199	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	513199	0.50833	254
	22 Acenaphthylene	152	6.213	6.211	(1.002)	480606	0.47308	237
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	277770	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	294882	0.49284	246
	25 2,3,5 Trimethylnaphthalene	170	6.679	6.679	(1.124)	261826	0.53290	266
$	26 Fluorene-d10	176	6.771	6.768	(0.892)	267	0.000502	~~0.251(R)~~
	27 Fluorene	166	6.793	6.791	(0.895)	345504	0.50482	252
$	28 13C6-Fluorene	171	6.788	6.791	(0.895)	270	0.000458	~~0.229(R)~~
*	34 Dibenzothiopene-d8	192	7.484	7.484	(1.000)	317697	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.484	7.484	(0.841)	317697	0.27878	139
	36 Dibenzothiophene	184	7.499	7.499	(1.002)	304559	0.50412	252
*	41 Phenanthrene-d10	188	7.588	7.588	(1.000)	445308	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.588	7.588	(0.853)	445308	0.43230	216
	43 Phenanthrene	178	7.607	7.607	(1.002)	513629	0.52914	265
*	44 Anthracene-d10	188	7.634	7.636	(1.000)	417893	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.634	7.636	(0.858)	417893	0.46995	235
	46 Anthracene	178	7.650	7.653	(1.002)	477602	0.45761	229
$	47 13C6-Anthracene	184	7.650	7.651	(0.860)	423354	0.45143	226
	52 1-Methylphenanthrene	192	8.153	8.155	(1.074)	344392	0.57631	288
*	53 Fluoranthene-d10	212	8.674	8.676	(1.000)	495788	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.674	8.676	(0.975)	495788	0.50489	252
	55 Fluoranthene	202	8.693	8.694	(1.002)	522011	0.47587	238
*	56 Pyrene-d10	212	8.898	8.898	(1.000)	400211	0.50000	0.500
	57 Pyrene	202	8.915	8.915	(1.028)	540803	0.46652	233
$	58 Terphenyl-d14	244	9.052	9.054	(1.044)	37	7.61e-05	0.0380(R)
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	351789	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	351789	0.69529	348(R)
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	430311	0.41096	205
*	63 Chrysene-d12	240	10.146	10.146	(1.000)	416413	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.146	10.146	(1.140)	416413	0.51961	260
	65 Chrysene	228	10.171	10.175	(1.002)	469673	0.51279	256
*	70 Benzo(b)fluoranthene-d12	264	11.271	11.271	(1.000)	343859	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.271	11.271	(0.973)	343859	0.55713	279
	72 Benzo(b)fluoranthene	252	11.295	11.295	(1.002)	400162	0.41920	210
*	73 Benzo(k)fluoranthene-d12	264	11.301	11.301	(1.000)	405430	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.301	11.301	(0.975)	405430	0.46955	235
	75 Benzo(k)fluoranthene	252	11.325	11.325	(1.002)	471237	0.52626	263
*	76 Benzo(e)pyrene-d12	264	11.587	11.588	(1.000)	289786	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	390866	0.45878	229
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	332533	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	332533	0.52018	260
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	348602	0.47551	238
*	81 Perylene-d12	264	11.749	11.749	(1.000)	309043	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.749	11.749	(1.014)	309043	0.49907	250
	83 Perylene	252	11.779	11.779	(1.003)	358661	0.46482	232
*	84 Indeno(123-cd)pyrene-d12	288	13.127	13.131	(1.000)	384981	0.50000	0.500

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Report Date: 15-Aug-2011 10:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.127	13.131	(1.133)	384981	0.55046	275
	86 Indeno(1,2,3-cd)pyrene	276	13.161	13.161	(1.003)	395933	0.43592	218
*	87 Dibenz(ah)anthracene-d14	292	13.131	13.131	(1.000)	283208	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.131	13.131	(1.133)	283208	0.53615	268
	89 Dibenz(a,h)anthracene	278	13.177	13.178	(1.004)	314717	0.46393	232
*	90 Benzo(ghi)perylene-d12	288	13.477	13.481	(1.000)	267687	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.477	13.481	(1.163)	267687	0.51143	256
	92 Benzo(g,h,i)perylene	276	13.511	13.515	(1.002)	336756	0.46334	232

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Report Date: 15-Aug-2011 12:10

TestAmerica Knoxville

RECOVERY REPORT

Client Name: ITSBUR
Client SDG: P081411
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: MK51E1AE
Level: LOW
Operator: 11211
Data Type: MS DATA
SampleType: LCS
SpikeList File: icv.spk
Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Misc Info: P081411,SIMPAH3

SPIKE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS 60-140
3 Naphthalene	2000	2180	108.80	70-130
12 2-Methylnaphthalen	250	268	107.30	70-130
15 1-Methylnaphthalen	250	258	103.38	70-130
16 Biphenyl	250	259	103.67	70-130
19 2,6 Dimethylnaphth	250	258	103.27	70-130
22 Acenaphthylene	250	237	94.62	70-130
24 Acenaphthene	250	246	98.57	70-130
25 2,3,5 Trimethylnap	250	266	106.58	70-130
27 Fluorene	250	252	100.96	70-130
36 Dibenzothiophene	250	252	100.82	70-130
43 Phenanthrene	250	265	105.83	70-130
46 Anthracene	250	229	91.52	70-130
52 1-Methylphenanthre	250	288	115.26	70-130
55 Fluoranthene	250	238	95.17	70-130
57 Pyrene	250	233	93.30	70-130
62 Benzo(a)anthracene	250	205	82.19	70-130
65 Chrysene	250	256	102.56	70-130
72 Benzo(b)fluoranthe	250	210	83.84	70-130
75 Benzo(k)fluoranthe	250	263	105.25	70-130
77 Benzo(e)pyrene	250	229	91.76	70-130
80 Benzo(a)pyrene	250	238	95.10	70-130
83 Perylene	250	232	92.96	70-130
86 Indeno(1,2,3-cd)py	250	218	87.18	70-130
89 Dibenz(a,h)anthrac	250	232	92.79	70-130
92 Benzo(g,h,i)peryle	250	232	92.67	70-130

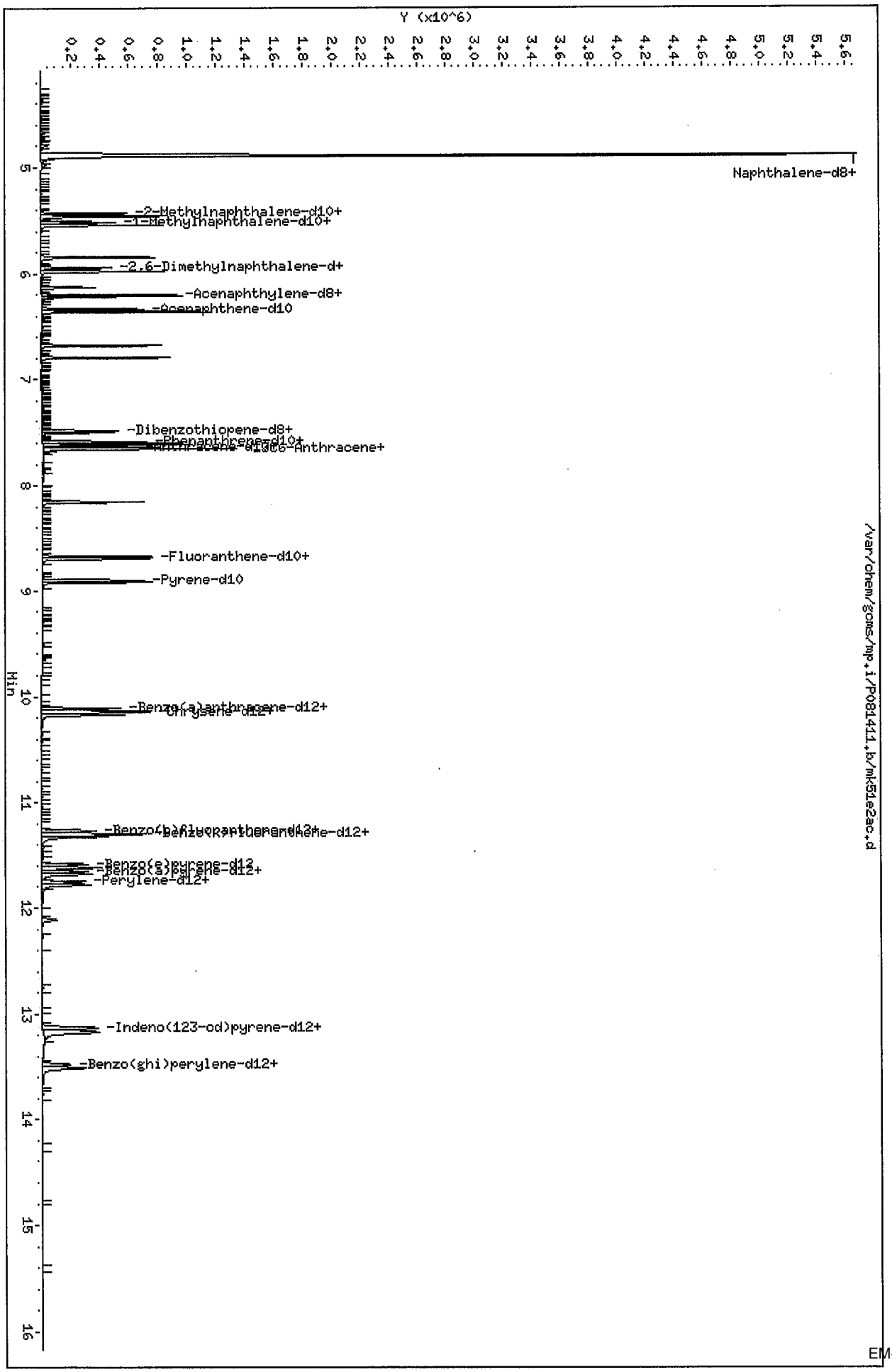
8/17/11

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	250	234	93.65	30-120

60-140 ok
8/15/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Report Date: 15-Aug-2011 12:10

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 222 13C6-Naphthalene	250	0.00	*	50-150
$ 11 2-Methylnaphthalen	250	245	97.96	30-120
$ 14 1-Methylnaphthalen	250	240	96.00	30-120
$ 18 2,6-Dimethylnaph-d	250	242	96.96	30-120
$ 21 Acenaphthylene-d8(	250	254	101.67	30-120
$ 26 Fluorene-d10	250	0.00	*	30-120
$ 28 13C6-Fluorene	250	0.00	*	30-120
$ 35 Dibenzothiopene-d8	250	139	55.76	30-120
$ 42 Phenanthrene-d10(S	250	216	86.46	30-120
$ 45 Anthracene-d10(SS)	250	235	93.99	30-120
$ 47 13C6-Anthracene	250	226	90.29	30-120
$ 54 Fluoranthene-d10(S	250	252	100.98	0-120
$ 58 Terphenyl-d14	250	0.00	*	30-120
$ 61 Benzo(a)anthracene	250	348	139.06*	30-120
$ 64 Chrysene-d12(SS)	250	260	103.92	30-120
$ 71 Benzo(b)fluoranthe	250	279	111.43	30-120
$ 74 Benzo(k)fluoranthe	250	235	93.91	30-120
$ 79 Benzo(a)pyrene-d12	250	260	104.04	30-120
$ 82 Perylene-d12(SS)	250	250	99.81	30-120
$ 85 Indeno(123-cd)pyre	250	275	110.09	30-120
$ 88 Dibenz(ah)anthrace	250	268	107.23	30-120
$ 91 Benzo(ghi)perylene	250	256	102.29	30-120


Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Date : 14-AUG-2011 15:53
Client ID:
Sample Info: MK51E1AE,r3,LCS
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^6)
Min
/var/chem/gcms/mp.i/P081411.b/mk51e2ac.d
Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Benzo(a)anthracene-d12+
-Chrysene-d12+
-Benzo(b)fluoranthene-d12+
-Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Report Date: 15-Aug-2011 11:11

TestAmerica Knoxville

SEMIVOLATILE QUANTITATION REPORT

Data file : /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Lab Smp Id: MK51E2AD
Inj Date : 14-AUG-2011 16:18
Operator : 11211 Inst ID: mp.i
Smp Info : MK51E2AD,,3,,LCSD
Misc Info : P081411,SIMPAH3
Comment :
Method : /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Meth Date : 15-Aug-2011 11:10 cochranj Quant Type: ISTD
Cal Date : 01-AUG-2011 15:19 Cal File: ph01ic07.d
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Sf*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Sf	1.00000	Split factor
Vt	500.00000	Volume of final extract (uL)
Vo	1.00000	Volume of sample extracted (sample)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
* 1 Naphthalene-d8	136	4.872	4.873	(1.000)	552219	0.50000	0.500
$ 2 Naphthalene-d8(SS)	136	4.872	4.873	(0.769)	552219	0.45763	229
3 Naphthalene	128	4.887	4.888	(1.003)	4105634	4.43455	2220
$ 222 13C6-Naphthalene	134	4.872	4.888	(1.000)	50521	0.04952	~~24.8(R)~~
* 10 2-Methylnaphthalene-d10	152	5.430	5.431	(1.000)	316138	0.50000	0.500
$ 11 2-Methylnaphthalene-d10(SS)	152	5.430	5.431	(0.857)	316138	0.48199	241
12 2-Methylnaphthalene	142	5.457	5.457	(1.005)	348013	0.54917	275
* 13 1-Methylnaphthalene-d10	152	5.513	5.513	(1.000)	308258	0.50000	0.500
$ 14 1-Methylnaphthalene-d10(SS)	152	5.513	5.513	(0.871)	308258	0.47239	236
15 1-Methylnaphthalene	142	5.540	5.540	(1.005)	316381	0.52936	265
16 Biphenyl	154	5.845	5.842	(1.076)	397241	0.52635	263
* 17 2,6-Dimethylnaphthalene-d12	168	5.942	5.942	(1.000)	272544	0.50000	0.500
$ 18 2,6-Dimethylnaph-d12(SS)	168	5.942	5.942	(0.938)	272544	0.48493	242
19 2,6 Dimethylnaphthalene	156	5.979	5.979	(1.006)	284458	0.52508	263

8/15/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Report Date: 15-Aug-2011 11:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
*	20 Acenaphthylene-d8	160	6.202	6.202	(1.000)	479022	0.50000	0.500
$	21 Acenaphthylene-d8(SS)	160	6.202	6.202	(0.979)	479022	0.50614	253
	22 Acenaphthylene	152	6.213	6.211	(1.002)	453328	0.47807	239
*	23 Acenaphthene-d10	164	6.333	6.333	(1.000)	260392	0.50000	0.500
	24 Acenaphthene	154	6.359	6.359	(1.025)	281082	0.50329	252
	25 2,3,5 Trimethylnaphthalene	170	6.678	6.679	(1.124)	249193	0.54090	270
$	26 Fluorene-d10	176	6.768	6.768	(0.892)	206	0.000418	~~0.209(R)~~
	27 Fluorene	166	6.793	6.791	(0.895)	324792	0.51281	256
$	28 13C6-Fluorene	171	6.790	6.791	(0.895)	322	0.000589	~~0.295(R)~~
*	34 Dibenzothiopene-d8	192	7.484	7.484	(1.000)	276187	0.50000	0.500
$	35 Dibenzothiopene-d8(SS)	192	7.484	7.484	(0.841)	276187	0.25833	129
	36 Dibenzothiophene	184	7.499	7.499	(1.002)	274067	0.52183	261
*	41 Phenanthrene-d10	188	7.586	7.588	(1.000)	412087	0.50000	0.500
$	42 Phenanthrene-d10(SS)	188	7.586	7.588	(0.853)	412087	0.42641	213
	43 Phenanthrene	178	7.607	7.607	(1.003)	478458	0.53265	266
*	44 Anthracene-d10	188	7.636	7.636	(1.000)	380160	0.50000	0.500
$	45 Anthracene-d10(SS)	188	7.636	7.636	(0.858)	380160	0.45568	228
	46 Anthracene	178	7.652	7.653	(1.002)	439327	0.46272	231
$	47 13C6-Anthracene	184	7.652	7.651	(0.860)	358871	0.40788	204
	52 1-Methylphenanthrene	192	8.153	8.155	(1.075)	320789	0.58009	290
*	53 Fluoranthene-d10	212	8.676	8.676	(1.000)	462342	0.50000	0.500
$	54 Fluoranthene-d10(SS)	212	8.676	8.676	(0.975)	462342	0.50185	251
	55 Fluoranthene	202	8.693	8.694	(1.002)	486700	0.47578	238
*	56 Pyrene-d10	212	8.897	8.898	(1.000)	375474	0.50000	0.500
	57 Pyrene	202	8.915	8.915	(1.028)	506737	0.46876	234
$	58 Terphenyl-d14	244	9.049	9.054	(1.043)	13	2.82e-05	~~0.0141(R)~~
*	60 Benzo(a)anthracene-d12	240	10.112	10.112	(1.000)	328202	0.50000	0.500
$	61 Benzo(a)anthracene-d12(SS)	240	10.112	10.112	(1.137)	328202	0.69141	346(R)
	62 Benzo(a)anthracene	228	10.133	10.133	(1.002)	406964	0.41659	208
*	63 Chrysene-d12	240	10.145	10.146	(1.000)	390274	0.50000	0.500
$	64 Chrysene-d12(SS)	240	10.145	10.146	(1.140)	390274	0.51908	260
	65 Chrysene	228	10.175	10.175	(1.003)	449902	0.52411	262
*	70 Benzo(b)fluoranthene-d12	264	11.270	11.271	(1.000)	324712	0.50000	0.500
$	71 Benzo(b)fluoranthene-d12(SS)	264	11.270	11.271	(0.973)	324712	0.55195	276
	72 Benzo(b)fluoranthene	252	11.294	11.295	(1.002)	377264	0.41852	209
*	73 Benzo(k)fluoranthene-d12	264	11.300	11.301	(1.000)	382716	0.50000	0.500
$	74 Benzo(k)fluoranthene-d12(SS)	264	11.300	11.301	(0.975)	382716	0.46501	233
	75 Benzo(k)fluoranthene	252	11.324	11.325	(1.002)	455577	0.53897	269
*	76 Benzo(e)pyrene-d12	264	11.587	11.588	(1.000)	276222	0.50000	0.500
	77 Benzo(e)pyrene	252	11.617	11.617	(0.997)	372445	0.47998	240
*	78 Benzo(a)pyrene-d12	264	11.653	11.653	(1.000)	302870	0.50000	0.500
$	79 Benzo(a)pyrene-d12(SS)	264	11.653	11.653	(1.006)	302870	0.49705	249
	80 Benzo(a)pyrene	252	11.677	11.677	(1.002)	336103	0.50336	252
*	81 Perylene-d12	264	11.748	11.749	(1.000)	263245	0.50000	0.500
$	82 Perylene-d12(SS)	264	11.748	11.749	(1.014)	263245	0.44599	223
	83 Perylene	252	11.778	11.779	(1.003)	338101	0.51441	257
*	84 Indeno(123-cd)pyrene-d12	288	13.126	13.131	(1.000)	362070	0.50000	0.500

8/19/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Report Date: 15-Aug-2011 11:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ng/sample)
$	85 Indeno(123-cd)pyrene-d12(SS)	288	13.126	13.131	(1.133)	362070	0.54312	272
	86 Indeno(1,2,3-cd)pyrene	276	13.160	13.161	(1.003)	376397	0.44063	220
*	87 Dibenz(ah)anthracene-d14	292	13.131	13.131	(1.000)	264511	0.50000	0.500
$	88 Dibenz(ah)anthracene-d14(SS)	292	13.131	13.131	(1.133)	264511	0.52535	263
	89 Dibenz(a,h)anthracene	278	13.177	13.178	(1.004)	298610	0.47131	236
*	90 Benzo(ghi)perylene-d12	288	13.477	13.481	(1.000)	253236	0.50000	0.500
$	91 Benzo(ghi)perylene-d12(SS)	288	13.477	13.481	(1.163)	253236	0.50758	254
	92 Benzo(g,h,i)perylene	276	13.515	13.515	(1.003)	319430	0.46458	232

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Report Date: 15-Aug-2011 12:11

TestAmerica Knoxville

RECOVERY REPORT

Client Name: ITSBUR
Client SDG: P081411
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: MK51E1AF
Level: LOW
Operator: 11211
Data Type: MS DATA
SampleType: LCSD
SpikeList File: icv.spk
Quant Type: ISTD
Sublist File: pah.sub
Method File: /var/chem/gcms/mp.i/P081411.b/SIMPAH3.m
Misc Info: P081411,SIMPAH3

SPIKE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS 60-140
3 Naphthalene	2000	2220	110.86	70-130
12 2-Methylnaphthalen	250	275	109.83	70-130
15 1-Methylnaphthalen	250	265	105.87	70-130
16 Biphenyl	250	263	105.27	70-130
19 2,6 Dimethylnaphth	250	263	105.02	70-130
22 Acenaphthylene	250	239	95.61	70-130
24 Acenaphthene	250	252	100.66	70-130
25 2,3,5 Trimethylnap	250	270	108.18	70-130
27 Fluorene	250	256	102.56	70-130
36 Dibenzothiophene	250	261	104.37	70-130
43 Phenanthrene	250	266	106.53	70-130
46 Anthracene	250	231	92.54	70-130
52 1-Methylphenanthre	250	290	116.02	70-130
55 Fluoranthene	250	238	95.16	70-130
57 Pyrene	250	234	93.75	70-130
62 Benzo(a)anthracene	250	208	83.32	70-130
65 Chrysene	250	262	104.82	70-130
72 Benzo(b)fluoranthe	250	209	83.70	70-130
75 Benzo(k)fluoranthe	250	269	107.79	70-130
77 Benzo(e)pyrene	250	240	96.00	70-130
80 Benzo(a)pyrene	250	252	100.67	70-130
83 Perylene	250	257	102.88	70-130
86 Indeno(1,2,3-cd)py	250	220	88.13	70-130
89 Dibenz(a,h)anthrac	250	236	94.26	70-130
92 Benzo(g,h,i)peryle	250	232	92.92	70-130

8/17/11

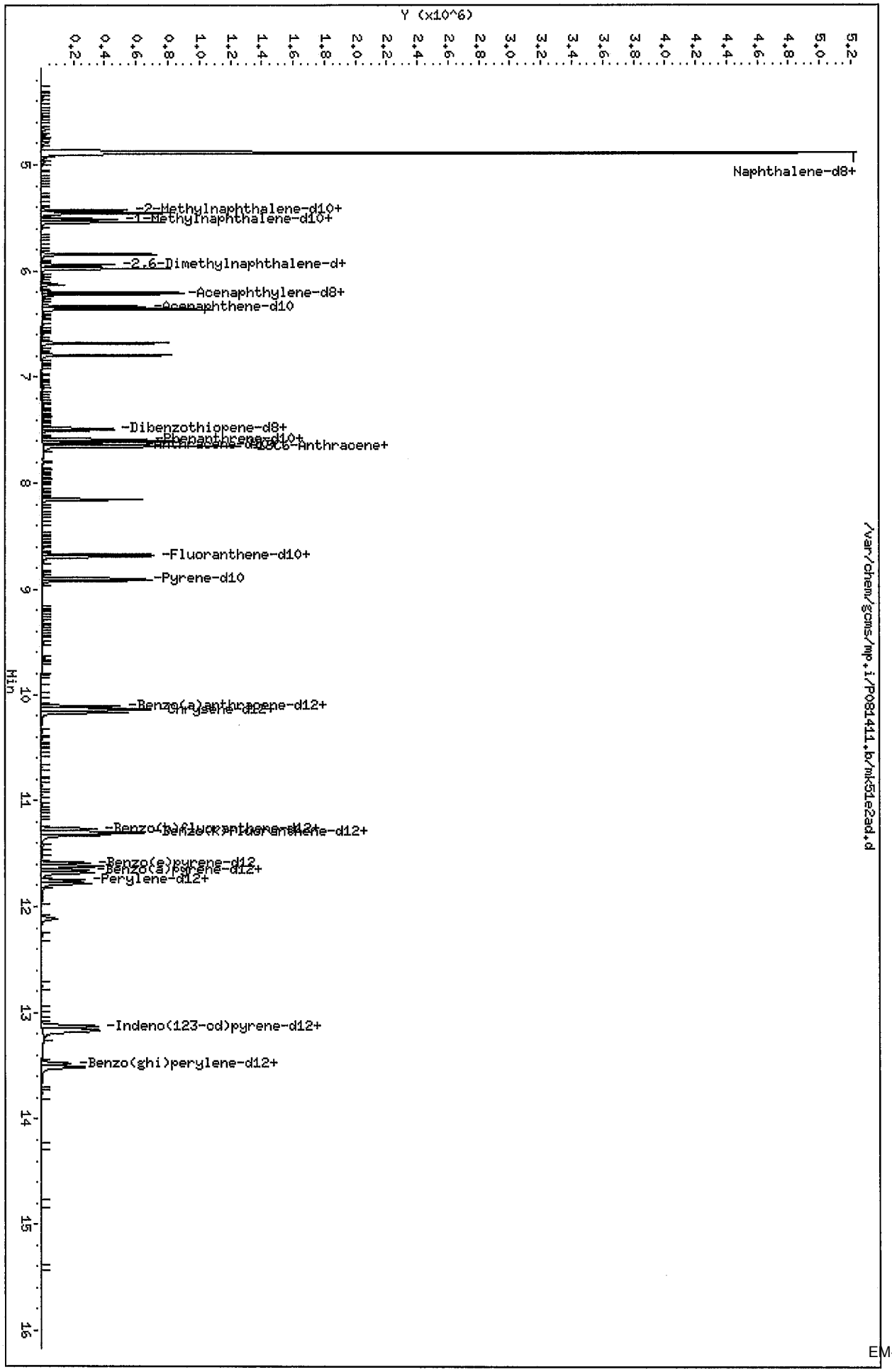
SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 2 Naphthalene-d8(SS)	250	229	91.53	~~30-120~~ 60-140

8/15/11

Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Report Date: 15-Aug-2011 12:11

SURROGATE COMPOUND	CONC ADDED ng/sample	CONC RECOVERED ng/sample	% RECOVERED	LIMITS
$ 222 13C6-Naphthalene	250	0.00	*	50-150
$ 11 2-Methylnaphthalen	250	241	96.40	30-120
$ 14 1-Methylnaphthalen	250	236	94.48	30-120
$ 18 2,6-Dimethylnaph-d	250	242	96.99	30-120
$ 21 Acenaphthylene-d8(	250	253	101.23	30-120
$ 26 Fluorene-d10	250	0.00	*	30-120
$ 28 13C6-Fluorene	250	0.00	*	30-120
$ 35 Dibenzothiopene-d8	250	129	51.67	30-120
$ 42 Phenanthrene-d10(S	250	213	85.28	30-120
$ 45 Anthracene-d10(SS)	250	228	91.14	30-120
$ 47 13C6-Anthracene	250	204	81.58	30-120
$ 54 Fluoranthene-d10(S	250	251	100.37	0-120
$ 58 Terphenyl-d14	250	0.00	*	30-120
$ 61 Benzo(a)anthracene	250	346	138.28*	30-120
$ 64 Chrysene-d12(SS)	250	260	103.82	30-120
$ 71 Benzo(b)fluoranthe	250	276	110.39	30-120
$ 74 Benzo(k)fluoranthe	250	233	93.00	30-120
$ 79 Benzo(a)pyrene-d12	250	249	99.41	30-120
$ 82 Perylene-d12(SS)	250	223	89.20	30-120
$ 85 Indeno(123-cd)pyre	250	272	108.62	30-120
$ 88 Dibenz(ah)anthrace	250	263	105.07	30-120
$ 91 Benzo(ghi)perylene	250	254	101.52	30-120

60-140?


Data File: /var/chem/gcms/mp.i/P081411.b/mk51e2ad.d
Date : 14-AUG-2011 16:18
Client ID:
Sample Info: MK51E1AF,,3,,LCSD
Purge Volume: 1.0
Column phase: Varian: 5MS
Instrument: mp.i
Operator: 11211
Column diameter: 0.25
Y (x10^6)
Min
Naphthalene-d8+
-2-Methylnaphthalene-d10+
-1-Methylnaphthalene-d10+
-2,6-Dimethylnaphthalene-d+
-Acenaphthylene-d8+
-Acenaphthene-d10
-Dibenzothiopene-d8+
-Phenanthrene-d10+
-Anthracene-d10
C6-Anthracene+
-Fluoranthene-d10+
-Pyrene-d10
-Benzo(a)anthracene-d12+
Chrysene-d12+
-Benzo(b)fluoranthene-d12+
Benzo(k)fluoranthene-d12+
-Benzo(e)pyrene-d12
-Benzo(a)pyrene-d12+
-Perylene-d12+
-Indeno(123-cd)pyrene-d12+
-Benzo(ghi)perylene-d12+
/var/chem/gcms/mp.i/P081411.b/mk51e2ad.d

Miscellaneous Data

TestAmerica Knoxville GC/MS-SIM Data Review / Narrative Checklist
Method: LRPAH PAHs and Selected SVOCs - KNOX-ID-0016, Revision 8

Lot Number:	H1G250406		Instrument:	MP	
Scanned Filenames:	P080111.D				
	P080311				
	P081911				

A. Tune / Calibration	N/A	Yes	No	Why is data reportable?	2nd √
1. Were all samples injected within 12 hr of CCAL?		✓			✓
2. Was the correct ICAL used for quantitation? (Check 1 RF per sample/QC sample.)		✓			✓
B. Sample Results	**N/A**	**Yes**	**No**	**Why is data reportable?**	**2nd √**
1. Were all special project requirements met?		✓			✓
2. Were sample preparation and analytical HTs met? If no, list NCM#_____		✓		☐ [ht1] HT expired upon receipt. ☐ [ht2] Client requested analysis after HT expired.* ☐ Re-extraction done after HT expired.	✓
3. Was prep info (sample amount, final vol, split factors, units, prep dates/times) verified?		✓			✓
4. For sediment samples, were the RLs and MDLs adjusted for % moisture using QuantIMS DF?	✓				NA
5. Was date/time of analysis verified between header and logbook?		✓			✓
6. Was header information (WO#, data file, initial wt/vol, extract vol, DF) verified?		✓			✓
7. Were peaks properly identified?		✓			✓
8. Are peak integrations appropriate?		✓			✓
9. Were alkyl group start/end times and patterns verified?	✓				NA
10. Are internal standards & alternate standards (30-120% R), sampling surrogates (50-150% R) within QC limits for samples and matrix spikes? Sample / Reason / Sample / Reason: MK5C31AC ISI; MK5C51AC ↓; MK5C61AC ↓; MK5C71AC			✓	☑ [is1] IS above QC limits. ☐ [is2] IS below QC limts. ☐ [sur1] Surrogates outside QC limits.	NO
11. If amount extracted was <80% of nominal amount, were the RLs/MDLs adjusted? List samples:_____	✓	✓ 2nd 8.18.11		☐ [elev6] Elevated RLs for all analytes due to insufficient sample amount received.	NA
12. For initial analysis that's a dilution, was the largest analyte >20% of calibration range? List dilutated samples and reason (e.g elev1). Sample / Reason / Sample / Reason: MK5C31AC ELEV1; MK5C51AC ↓; MK5C61AC ↓		✓		☑ [elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. ☐ [elev2] Elevated RL for (ANALYTE) due to interfering analyte. ☐ [elev3] Elevated RLs for all analytes due to difficult sample matrix. ☐ [elev4] Diluted based on screening results. ☐ [elev5] Elevated RLs for all analytes due to presence of non-target compounds. See comments.*	✓

781

Lot Number:	HIG1504dc				
13. If bench dilutions were required, were results within calibration range? Sample / Reason / Sample / Reason _____ 7/28/11 dc			✓	☐ [E1] 1 g reprep performed. ☐ [E2] 1 g multi-spike reprep performed. ☑ [E3] Post-extraction spike performed. ☐ [E4] E values reported per client. E values reported w/o further dilution see 8270 for results w/in cal range	NO ✓
14. For secondary diluted analyses to bring compounds in calibration range, was the largest analyte targeted to be above 50% of calibration range? List diluted samples and reason (e.g., dil1): Sample / Reason / Sample / Reason _____	✓			☐ [dil1] Conc. of (ANALYTE) > calibration range. RLs adjusted accordingly. ☑ [dil2] Conc. of several compounds > calibration range. RLs adjusted accordingly. ☐ [dil3] Conc. of (ANALYTE) > calibration range. Both analyses reported to provide lowest RLs. ☐ [dil4] Conc. of several compounds > calibration range. Both analyses reported to provide lowest RLs.	(dil2) ✓
15. Was the upper calibration range (UCL) calculated correctly and were hits >UCL flagged with "E"?		✓			✓
16. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?		✓		Reasons: 1) Corrected split peak; 2) Unresolved peak; 3) Tailing; 4) RT shift; 5) Wrong peak selected; 6) Other	✓
17. Have alternate hits and manual integrations been verified as correct?		✓			✓
C. Preparation/Matrix QC Results	N/A	Yes	No	Why is data reportable?	2nd ✓
1. LCS native analyte %R within QC limits (60-140%)? If no, list NCM#:: _____		✓		☐ [lcs1] Insufficient sample for reanalysis. ☐ [lcs2] Samples consumed during prep. ☐ [lcs3] LCS %R high but analyte <RL in associated samples.	✓
2. LCS IS %R within QC limits (60-140%)?		✓		☐ [is3] IS above QC limits. ☐ [is4] IS below QC limts.	✓
3. Method blank done per prep batch and method blank or instrument blank analyzed with each sequence?		✓			✓
4. Method blank IS %R within QC limits (60-140%)?.		✓		☐ [is5] IS above QC limits. ☐ [is6] IS below QC limts.	✓
5. Are all analytes present in the method blank ≤ RL?		✓		☐ [mb1] Reported blank after client consultation. ☐ [mb3] Analyte < RL in associated samples. ☐ [mb4] Sample results >10x blank. ☐ [mb5] Insufficient sample for reanalysis. ☐ [mb7] Samples consumed during prep.	✓
6. Were MS run #'s assigned correctly?	✓				NA
7. Are MS/MSD recoveries and RPDs within QC limits?	✓			☐ [ms1] LCS acceptable. High native analyte concentration relative to spike level and/or lack of sample homogeneity.	NA
D. Final Report	N/A	Yes	No	Why is data reportable?	2nd ✓
1. Final report acceptable? (Results correct, RLs calculated correctly, units correct, IS %R correct, appropriate flags used, dilution factor correct, and extraction/ analysis dates correct.)		✓			✓

Lot Number:	HG 250406				
2. If samples were split, are the dilution factors & prep factors applied properly & MDL/RLs adjusted		✓		☑ [elev7] Elevated RLs for all analytes due to split; list samples: All	✓
3. For alkyl PAHs, are hits fagged with EST?	✓				NA
4. Were all non-associated internal standards turned to 'NA'?		✓			✓
5. Was a narrative prepared and all deviations noted?		✓			✓
6. Are all non-conformances documented appropriately and copy included with deliverable?		✓		.10461 (post-dil spk) -10459 (b(a)A-diz high)	✓
7. Are the correct scanned file names listed?		✓			✓
8. Were all CCALs and window standards scanned?		✓			✓

1st Level Reviewer: [signature] Date: 8/15/11

Comments:

All client samples: MK5C31AC, MK5C51AC, MK5C61AC & MK5C71AC had benzo(a)anthracene/chrysene outside QC limits (high) MCM # 10459

Samples MK5C31AC, MK5C51AC, MK5C61AC were analyzed post spike. Sample extracts were given to prep @ DI:50 in 500ul final volume and were put back through a silica gel cleanup. Samples were concentrated back down to 500ul. Samples were further diluted and post spiked prior to analysis.

(3AC) MK5C31AC: 25ul of Recovery Std (PAH0293), 12.5ul of IS (PAH0252), sample extract 20ul to 500ul (DI:25)
(3AC) MK5C51AC: " " " " sample extract 10ul to 500ul (DI:50)
(3AC) MK5C61AC: " " " " sample extract 50ul to 500ul (DI:10)

2nd Level Reviewer: [signature] Date: 8/18/11

Comments:

TestAmerica Knoxville Extraction Sheet

Method 0010 Split/Combined Air Train for Semivolatiles and SIM PAHs - KNOX-OP-0009

SVOC Batch #: 1207013
PAH Batch #: 1207014
Start Date/Time: 7/26/11 13:30
Compl Date/Time: 7/27/11 755

PAH Internal Std ID: PAH0317 2.0mL BNA Surr ID: OP70308 1.0mL Spiker: NA
PAH Native Spike ID: PAH 0297 1.0mL BNA Spike ID: OP70316 1.0mL Witness: DWS
Naphthalene Spike ID: PAH 0354 0.5mL $MeCl_2$ Lot #: K07503
ICR Extra Spike: EM3075 1.0mL ICR LCS Spike: EM3074 1.0mL

Delivered: SDO 8/2/11 11:30 (Initials/Date/Time)
Received: KK 8/2/11 11:30 (Initials/Date/Time)

Lot Number	Sample Number	Work Order	Suffix	SAC	FH/BH Combined Extraction: Place XAD and particulate filter sample in a med Soxhlet.	Set up 1 blank per 10 samples, 1 BNA LCS/LCSD & 1 PAH LCS/LCSD per 20 samples with XAD and blank filters.	Add 1 mL BNA surr & 2 mL PAH IS to samples/blank. (Add 1/2 the vol. to LCS/LCSDs.)	Add 1 mL BNA spike (100 µg/mL) to BNA LCS/LCSD.	Add 1 mL PAH spike (0.25 µg/mL) and 0.5 mL Naphthalene spike (3.75 µg/mL) to PAH LCS/LCSD.	Extract 18-24 hr with $MeCl_2$.	Solvent Rinses: Acetone present in solvent rinses?	Did solvent rinse lose volume during shipment?	Condensate Volume: Condensate 1 Volume (mL)	Condensate 2 Volume (mL)	Condensate 3 Volume (mL)
H1G250406	1	MK5C31AA/MK5C31AC		QL/YA	✓	✓	✓	NA	NA	✓	N	NA	800	NA	NA
H1G250406	2	MK5C51AA/MK5C51AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	N	380	↓	↓
H1G250406	3	MK5C61AA/MK5C61AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓	940	480	↓
H1G250406	4	MK5C71AA/MK5C71AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	NA	NA	NA	↓
H1G250417	1	MK5KL1AA/MK5KL1AC		QL/YA	↓	↓	↓	↓	↓	↓	N	NA			
H1G250417	2	MK5KQ1AA/MK5KQ1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓			
H1G250417	3	MK5KR1AA/MK5KR1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓			
H1G250417	4	MK5KT1AA/MK5KT1AC		QL/YA	↓	↓	↓	↓	↓	↓	↓	↓			
H1G250417	6	MK5KW1AC/MK5KW1AA		QL/YA	↓	↓	↓	↓	↓	↓	NA	↓			
H1G260000	13	MK51D1AA	B	QL	↓	↓	↓	↓	↓	↓	↓	↓	DWS 7/27/11		
H1G260000	13	MK51D1AC	C	QL	↓	↓	↓	✓	↓	↓	↓	↓			
H1G260000	13	MK51D1AD	L	QL	↓	↓	↓	✓	↓	↓	↓	↓			
H1G260000	14	MK51E1AA	B	YA	↓	↓	↓	NA	↓	↓	↓	↓			
H1G260000	14	MK51E1AC	C	YA	↓	↓	↓	↓	✓	↓	↓	↓			
H1G260000	14	MK51E1AD	L	YA	↓	↓	↓	↓	✓	↓	↓	↓			
					MDL					→	DWS	DWS	DWS	DWS	
					7/26/11					→	7/27	7/27	7/27	7/27	
					DWS 7/27/11										

EM-BTRF-002516

Comments: MK5C3 - Has A strong chemical odor, Also MK5C5. They have a strong sulfur odor.
~~MK5C5~~ MK5C3, MK5C5 and MK5KCC were dark in color and foamy during initial KD concentration ~~before~~ after columns conc.
gmm 8/1/11 gmm 8/1/11 gmm 8/1/11

TestAmerica Knoxville Extraction Sheet

Method 0010 Split/Combined Air Train for Semivolatiles and SIM PAHs - KNOX-OP-0009

Start Date/Time: 7/27/11 1345
Compl Date/Time: 7/28/11 745
Start Date/Time: 7/28/11 1300
Compl Date/Time: 7/29/11 710

Alternate Surrogate ID: PAH0355
$MeCl_2$ Lot #: K07503
Na_2SO_4 ID: C4285:32
Spiker DWS witness

H_2SO_4 ID: A4022:12
NaOH ID: A4285:37

Lot Number	Sample Number	Work Order	Suffix	SAC	Pour FH/BH extract into CLLE. Add condensate to CLLE. Pour all rinses thru condensate.	Record sample pH.	Add 2.0 mL (0.25 µg/mL) Alternate Surr to all samples & blank. Add 1.0 mL to PAH LCS/LCSD.	Adjust pH to 0<pH<2 with 1:1 H_2SO_4. Record pH.	Extract 18-24 hr with $MeCl_2$.	Adjust pH to 11<pH<14 with 10N NaOH. Record pH.	Extract 18-24 hr with $MeCl_2$.	Filter extracts thru Na_2SO_4/ Whatman 41 filter paper to 500 mL KD.	Concentrate to 4 to 6 mL in KD.	Split extract 50:50 for SVOCs and SIM PAHs.
H1G250406	1	MK5C31AA/MK5C31AC		QL/YA	✓	8	✓	2	✓	12	✓			Y
H1G250406	2	MK5C51AA/MK5C51AC		QL/YA		8		2		12				
H1G250406	3	MK5C61AA/MK5C61AC		QL/YA		8		2		12				
H1G250406	4	MK5C71AA/MK5C71AC		QL/YA		NA		2		12				
H1G250417	1	MK5KL1AA/MK5KL1AC		QL/YA				2		12				
H1G250417	2	MK5KQ1AA/MK5KQ1AC		QL/YA				2		12				
H1G250417	3	MK5KR1AA/MK5KR1AC		QL/YA				2		12				
H1G250417	4	MK5KT1AA/MK5KT1AC		QL/YA	✓		✓	2	✓	12	✓			
H1G250417	6	MK5KW1AC/MK5KW1AA		QL/YA	NA		NA	NA	NA	NA	NA			✓
H1G260000	13	MK51D1AA	B	QL	✓		✓	2	✓	12	✓			Y
H1G260000	13	MK51D1AC	C	QL			NA	2		12				NA
H1G260000	13	MK51D1AD	L	QL			✓	2		12				✓
H1G260000	14	MK51E1AA	B	YA			✓	2		12				Y
H1G260000	14	MK51E1AC	C	YA				2		12				NA
H1G260000	14	MK51E1AD	L	YA	✓	✓	✓	2	✓	12	✓	✓	✓	✓
					DWS 7/27	DWS 7/27	DWS 7/27	DWS 7/27	DWS 7/27	1100 7/28	→	7/29	7/29	8/1

DWS 7/27/11

EMLBTRE-002847

Comments: All samples had neutral "pH" at 6-11 mLs before split.

TestAmerica Knoxville Extraction Sheet

Method 0010 Split/Combined Air Train for Semivolatiles and SIM PAHs - KNOX-OP-0009

8270 Extracts

MeCl$_2$ Lot #: NA

SIM PAH Extracts

Recovery Std ID: PAH0293 | MeCl$_2$ Lot #: K07503
Spiker: SDO | Hexane Lot #: J52E11
Witness: [initials]

Lot Number	Sample Number	Work Order	Suffix	SAC	8270: Concentrate to <1 mL by N-EVAP.	8270: QC to 1 mL in Class A volumetric. Transfer to 2 mL vial.	SIM PAH: Concentrate/solvent exchange to hexane by KD to ~4 mL.	SIM PAH: Perform silica gel cleanup if needed.	SIM PAH: Conc to ~1 mL by N-EVAP.	SIM PAH: Add 25 µL recovery std (10 µg/mL) to 2 mL vial. Transfer sample extract to vial.	SIM PAH: Conc to 500 µL hexane by N-EVAP.
H1G250406	1	MK5C31AA/MK5C31AC		QL/YA			✓	✓	✓	25µl	500µl
H1G250406	2	MK5C51AA/MK5C51AC		QL/YA							
H1G250406	3	MK5C61AA/MK5C61AC		QL/YA							
H1G250406	4	MK5C71AA/MK5C71AC		QL/YA							
H1G250417	1	MK5KL1AA/MK5KL1AC		QL/YA							
H1G250417	2	MK5KQ1AA/MK5KQ1AC		QL/YA							
H1G250417	3	MK5KR1AA/MK5KR1AC		QL/YA							
H1G250417	4	MK5KT1AA/MK5KT1AC		QL/YA							
H1G250417	6	MK5KW1AC/MK5KW1AA		QL/YA			↓	↓	↓	↓	↓
H1G260000	13	MK51D1AA	B	QL			✓	N/A	N/A	N/A	N/A
H1G260000	13	MK51D1AC	C	QL			NA	↓	↓	↓	↓
H1G260000	13	MK51D1AD	L	QL			NA	↓	✓	↓	↓
H1G260000	14	MK51E1AA	B	YA			✓	✓	✓	25µl	500µl
H1G260000	14	MK51E1AC	C	YA							
H1G260000	14	MK51E1AD	L	YA			↓	↓	↓	↓	↓
							[initials]	SDO	SDO	SDO	SDO
							8/1/11	8/1/11	8/2/11	8/2/11	8/2/11

[initials] 8/1/11

Comments:

Silica Gel Cleanup Reagents	
Silica Gel ID:	D4285:17
Na$_2$SO$_4$ ID:	C4285:32
Hexane Lot #:	J52E11
2:3 MeCl$_2$/Hex ID:	A4285:38

TestAmerica Knoxville
Extraction Comments

Batch 1207014

Samples MK5C3-2AC,MK5C5-2AC,MK5C6-2AC AND MK51E-1AAB,MK51E-1AEC AND MK51E1-AFL WERE GIVEN TO PREP AT A 1:50 DILUTION. THESE WERE RUN THROUGH A SILICA GEL ONLY COLUMN USING HEXANE-J52E11, D4285:17 PRECLEANED SILICA GEL, C4285:32 PRECLEANED SODIUM SULFATE AND 2:3 A4285:38. SDO 8/11/2011.

8/11/11 JVE - Samples MK5C3-1AC, MK5C5-1AC, & MK5C6-1AC were diluted 1:50 (10ul to 500ul) in hexane (lot J52E11) and delivered to organic extraction for additional cleanup, accompanying the diluted samples were the QC samples MK51E1AA, MK51E1AC, & MK51E1AD (MB, LCS, LCSD), → these become -2AC

→ these become ~~-1AE~~, 2AA, 1AE, 1AF respectively TW 8.17.11

8/14/11 : Sample analysis: (TW 8.17.11) (TW 8.17.11)
JVE Samples MK5C3-2AC, MK5C5-2AC & ~~MK5C6-2AC~~ MK5C6-2AC were analyzed post spike

(3AC) MK5C3-2AC : 25ul of Recovery STD (PAH0293), 12.5ul of IS (PAH0252), sample extract 20ul to 500ul final volume hexane (01:25)
(3AC) MK5C5-2AC : " " " " , sample extract 10ul to 500ul final volume in hexane (01:50)
(3AC) MK5C6-2AC : " " " " , sample extract 50ul to 500ul final volume in hexane (01:10)
TW 8.17.11

EM-BTRF-002519

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/17/11
Time: 10:09:50

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
—	—	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct & all match
			—	—	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
Y Package Submitted to AnalyticalGroup
Y Bench Sheet Copied per COC

Extractionist: 060062 Marcus J. Ramsey
403884 David Stout

Concentrationist: 403899 Joe Maher
013451 Susan D. Oxendine

****
* *
* **QC BATCH: 1207014** *
* *
****

PREP DATE: 7/26/11 13:30
COMP DATE: 8/02/11 10:30

Reviewer/Date: OXENDINS / 8/02/11

PAHs & Selected SVOCs (HRGC/LRMS)
SOXHLET (NOMINAL), Airtrains: Combined

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
		H1G250406-001													
7/28/11	8/08/11	**MK5C3-1-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 800														
		H1G250406-001													
7/28/11	8/08/11	**MK5C3-2-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 800														
		H1G250406-001													
7/28/11	8/08/11	**MK5C3-3-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 800														
		H1G250406-002													
7/29/11	8/08/11	**MK5C5-1-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 380														
		H1G250406-002													
7/29/11	8/08/11	**MK5C5-2-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 380														
		H1G250406-002													
7/29/11	8/08/11	**MK5C5-3-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 380														
		H1G250406-003													
7/31/11	8/08/11	**MK5C6-1-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:	COND VOL 1420														

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/17/11
Time: 10:09:50

QC BATCH: 1207014

PREP DATE: 7/26/11 13:30
COMP DATE: 8/02/11 10:30

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
7/31/11	8/08/11	H1G250406-003 **MK5C6-2-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:		COND VOL 1420													
7/31/11	8/08/11	H1G250406-003 **MK5C6-3-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	8.0	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:		COND VOL 1420													
7/31/11	8/08/11	H1G250406-004 **MK5C7-1-AC**	D	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
7/31/11	8/05/11	H1G250417-001 **MK5KL-1-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
7/31/11	8/05/11	H1G250417-001 **MK5KL-2-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
8/02/11	8/05/11	H1G250417-002 **MK5KQ-1-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
8/02/11	8/05/11	H1G250417-002 **MK5KQ-2-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
8/02/11	8/05/11	H1G250417-003 **MK5KR-1-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
8/02/11	8/05/11	H1G250417-003 **MK5KR-2-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
8/02/11	8/05/11	H1G250417-004 **MK5KT-1-AC**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/17/11
Time: 10:09:50

QC BATCH: 1207014

PREP DATE: 7/26/11 13:30
COMP DATE: 8/02/11 10:30

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJT	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
8/03/11	8/05/11	H1G250417-006 **MK5KW-1-AA**	DR	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-014 **MK51E-1-AA**B		IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-014 **MK51E-1-ACC**		IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0297 1.0ML PAH0317 1.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-014 **MK51E-1-ADL**	R	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0297 1.0ML PAH0317 1.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-014 **MK51E-1-AEC**		IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0297 1.0ML PAH0317 1.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-014 **MK51E-1-AFL**	R	IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0297 1.0ML PAH0317 1.0ML
COMMENTS:															
7/28/11	0/00/00	H1G260000-014 **MK51E-2-AA**B		IP	YA	AIR	**1.0Sample** .50mL	NA	2.0	12.0	MECL2	450.0	HEXANE	10.0	PAH0317 2.0ML
COMMENTS:															

ICR EXTRA SPIKE EM3075 1.0ML,ICR LCS SPIKE EM3074 1.0ML. SAMPLES MK5C3 & MK5C5 HAD A STRONG CHEMICAL ODOR,STRONG SULFUR ODOR. MK5C3,MK5C5 AND MK5C6 WERE DARK IN COLOR AND FOAMY DURING INITIAL CONC. AND AFTER COLUMN CONC TOO

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 24

EM-BTRF-002522

TestAmerica Knoxville Prep Batch Review Checklist

Batch # 1207014

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd Level
1. Were the samples extracted within the required holding times?		✓		If No, NCM #: _____	✓
2. Are the final extracts free of water, precipitates, multiple phases, and for HRMS - color?		✓			✓
3. Were all project specific requirements met as noted on the Lot Checklists (L40) and the Sample List report?		✓			✓
4. Were MS Run numbers assigned properly?	✓				✓
5. Were the correct weights and volumes entered into QuantIMS for all samples and QC?		✓			✓
6. Was the correct completion date entered into QuantIMS?		✓			✓
7. Were the spike IDs and volumes entered correctly into QuantIMS?		✓			
8. Were all appropriate notes and observations recorded on the extraction benchsheet and in QuantIMS?		✓			✓
9. Was the extraction batch reviewed in QuantIMS using LIM L21?		✓			✓
10. Does the prep batch paperwork package contain all required documentation which has been properly and completely filled out, including: • Extraction Benchsheet • QuantIMS Benchsheet • Lot Checklists (L40) for all lots in batch • Sample List • Compound List Report • SOG Sample Tracking Sheet		✓			✓
11. Are all nonconformances documented appropriately and copy included with deliverable?	✓			If Yes, NCM#: _____	✓

Analyst : SDO **Date:** 8/2/11

Comments:

2nd Level Reviewer: MJL **Date:** 8/2/11

Comments:

XAD Source Sampling Media Request Form

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
865-291-3000

Form Number: 070711-4

-scan completed document and save on the public drive under Media/PDFs; filename should be the form number. **Send a copy to PM.**

Date of Request: July 7, 2011
Company: Emission Technologies, Inc.
Client Project: Petro ICR
Client PO#: Pending

Rush Order? Yes
Quantims Quote: TBD
Media Needed By: 7/11/2011
Project Manager: Kevin Woodcock

Quantity	Media Type	Spiked for Method	Media Check ID
6	Spiked XAD	8270C, SIM-PAH, Surrogate-SVM Pre-cleaned: D4285:21	A 6480
6	Particulate Filter	82.6mm (M0010)	A 6481

[redacted]

[redacted]

Comments:
RUSH, needed by July 11, 2011.

Method	Color Code	Amt. Spiked	Conc. And Units	Spike Soln ID	Exp. Date	Spiked By/Date	Verified By
8270C	NA	NA					
Dioxin							
TCDD Mod							
8270C-SIM	NA	200µl	5 µg/ml	PAH0347	5-12-12	DH/7-8-11	CA 7/8/11
5050A							
TCDD Grav		NA	NA	NA	NA	NA	NA

Shipping *(include blank COCs and Custody Seals with this shipment. Send temperature blanks where applicable)*

Attn: Wendy Pounds
Company: Emission Technologies, Inc.
Address 1: 15609D Peterson Rd.
Address 2:
City, State, Zip: Burlington, WA 98233
Phone: (360) 757-1210
Fax:
FedEx Email: wendypounds@stacktester.com
Lot Number:

Completed/Shipped by: [redacted]
Date Shipped: 7-8-11
Shipping Courier: Fed Ex
Tracking Number
Invoice #:

Ref: Sampling Media
Dep: 140015
Date: 07/08/2011
Wgt: 9.3 LBS
DV: 0.00

SHIPPING:	41.92
SPECIAL:	6.92
HANDLING:	0.00
TOTAL:	48.84

Svcs: PRIORITY OVERNIGHT
TRCK: 4169 7487 7227

EM-BTRF-002524

791

Sample Receipt Documentation

CHAIN OF CUSTODY RECORD

H162307406

Project Name: ExxonMobil DCU ICR

Box No.:

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Test America

Laboratory P.O.:

Shipping Date(s): 7/21/2011

Shipper's Name: Randall Monson

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M0010-R1-FHR 7-14		250 amber glass	Organic	run 1	M 0010	
EXM-DCU-M0010-R1-FIL		petri dish	Filter	run 1	M 0010	
EXM-DCU-M0010-R1-BHR		500 amber glass	Organic	run 1	M 0010	
EXM-DCU-M0010-R1-XAD		xad	XAD	run 1	M 0010	
EXM-DCU-M0010-R1-COND		500 ml glass amber	Aqueous	run 1	M 0010	
EXM-DCU-M0010-R2-FHR 7-15		250 amber glass	Organic	run 2	M 0010	
EXM-DCU-M0010-R2-FIL		petri dish	Filter	run 2	M 0010	
EXM-DCU-M0010-R2-BHR		500 amber glass	Organic	run 2	M 0010	
EXM-DCU-M0010-R2-XAD		xad	XAD	run 2	M 0010	
EXM-DCU-M0010-R2-COND		500 ml glass amber	Aqueous	run 2	M 0010	
EXM-DCU-M0010-R3-FHR 7-17		250 amber glass	Organic	run 3	M 0010	
EXM-DCU-M0010-R3-FIL		petri dish	Filter	run 3	M 0010	
EXM-DCU-M0010-R3-BHR		500 amber glass	Organic	run 3	M 0010	REC. @ 1.6, 2.3°C
EXM-DCU-M0010-R3-XAD		xad	XAD	run 3	M 0010	NO CUSTODY SEALS
EXM-DCU-M0010-R3-COND		500 ml glass amber	Aqueous	run 3	M 0010	2 COOLERS RH 7/25/11
						FED EX # 782705378475
EXM-DCU-M0010-RGTBLK-XAD		250 amber glass	XAD	xad reagent blank	M 0010	795003588103
EXM-DCU-M0010-RGTBLK-rinse		250 amber glass	Orgqanic	MeCl2/MeOH reagent blank	M 0010	

Relinquished by: Randall Monson	**Date/Time:** 7-22-11 1230	**Relinquished by:**	**Date/Time:**
Received by: Ryan Henry	**Date/Time:** 7/23/11 0930	**Received by:**	**Date/Time:**

Remarks (*):

EM-TRC-0002-CS

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H1625040 6

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **1a** Do not match COC ☐ **1b** Incomplete information ☐ **1c** Marking smeared ☐ **1d** Label torn ☐ **1e** No label ☐ **1f** COC not received ☐ **1g** Other:	4a 5a - RECEIVED '... RGTBLK-FILT' NOT ON COC
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C)	✓			☐ **2a** Temp Blank = _____ ☐ **2b** Cooler Temp = _____ ☐ **2c** Cooling initiated for recently collected samples, ice present.	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **3a** Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☐ **4a** Not present ☐ **4b** Not intact ☐ **4c** Other:	
5. Were all of the samples listed on the COC received?	✓			☑ **5a** Samples received-not on COC ☐ **5b** Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ **6a** Leaking ☐ **6b** Broken	
7. Were VOA samples received without headspace?			✓	☐ **7a** Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ **8a** Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ **9a** Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ **10a** Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ **13a** Leaking ☐ **13b** Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **14a** Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ **15a** Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ **15a** Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ **15a** Incomplete information	
18. Is the client and project name/# identified?	✓			☐ **15a** Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 89094 PM Instructions: NA

Sample Receiving Associate: Ryan Henry Date: 7/25/11

QA026R22.doc, 012811

EM-BTRF-002527

APPENDIX N: ALDEHYDES LAB REPORT

TRC Environmental Corporation

9225 US Hwy 183 S
Austin, TX 78747

ExxonMobil - DCU

Project # 182129
PO # 35483

Analytical Report (0611-122)

EPA SW-846 Method 0011

Formaldehyde, Acetaldehyde, and Propionaldehyde

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 80 pages.

Report Issued: 08/11/2011

Summary of Results

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

Compound	Sample ID / Catch Weight (ug)		
	EXM-DCU-R1	***EXM-DCU-R2***	***EXM-DCU-R3***
Formaldehyde	24.5	46.0	40.0
Acetaldehyde	410	455	418
Propionaldehyde	39.7	63.9	39.8
	EXM-DCU-Spike	***EXM-DCU-DNPH RB***	***EXM-DCU-MeCl2 RB***
Formaldehyde	47.2	5.46 J	20.9
Acetaldehyde	0.443 ND	0.609 ND	0.879 ND
Propionaldehyde	0.437 ND	0.600 ND	0.867 ND

Results

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00271 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Formaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
EXM-DCU-R1	077-1101.D	HPLC54PG120ICR.M	5.02	0.0792	2	155	24.5	
EXM-DCU-R1	077-1201.D	HPLC54PG120ICR.M	5.01	0.0783	2	155	24.2	
						% Difference	1.1%	
LD/EXM-DCU-R1	078-1401.D	HPLC54PG120ICR.M	5.00	0.0713	2	157	22.4	J
						% Difference	8.7%	
EXM-DCU-R2	079-1501.D	HPLC54PG120ICR.M	5.00	0.134	2	172	46.0	
EXM-DCU-R3	080-1601.D	HPLC54PG120ICR.M	5.00	0.110	1	362	40.0	
EXM-DCU-Spike	083-1901.D	HPLC54PG120ICR.M	5.01	0.478	1	98.9	47.2	
EXM-DCU-DNPH RB	081-1701.D	HPLC54PG120ICR.M	5.00	0.0402	1	136	5.46	J
EXM-DCU-MeCl2 RB	082-1801.D	HPLC54PG120ICR.M	5.00	0.106	1	196	20.9	
MB-1	084-2001.D	HPLC54PG120ICR.M	5.00	0.0202	1	143	2.89	J
MB-2	017-0901.D	HPLC54PG120ICR.M	NA	0.00271	1	133	0.360	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00271	1	1.00	0.00271	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00271	1	1.00	0.00271	ND
MS/EXM-DCU-R2	015-0701.D	HPLC54PG120ICR.M	5.01	1.65	1	114	188	
						Spike Amount (ug)	301	
						Native Amount (ug)	7.67	
						Spike Recovery (%)	60.2%	
MSD/EXM-DCU-R2	016-0801.D	HPLC54PG120ICR.M	5.02	1.92	1	115	220	
						Spike Amount (ug)	301	
						Native Amount (ug)	7.67	
						Spike Recovery (%)	70.8%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00271 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Formaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	085-2101.D	HPLC54PG120ICR.M	5.00	6.34	1	139	881	
						Spike Amount (ug)	1,002	
						Spike Recovery (%)	87.9%	
LCS-2	018-1001.D	HPLC54PG120ICR.M	5.01	1.87	1	139	260	
						Spike Amount (ug)	301	
						Spike Recovery (%)	86.4%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00271	1	1.00	0.00271	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00271	1	1.00	0.00271	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00271	1	1.00	0.00271	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	5.06	3.07	1	1.00	3.07	
						Spike Amount (ug)	2.90	
						Spike Recovery (%)	106%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00448 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Acetaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
EXM-DCU-R1	077-1101.D	HPLC54PG120ICR.M	6.32	1.32	2	155	410	
EXM-DCU-R1	077-1201.D	HPLC54PG120ICR.M	6.31	1.32	2	155	409	
						% Difference	0.3%	
LD/EXM-DCU-R1	078-1401.D	HPLC54PG120ICR.M	6.30	1.27	2	157	399	
						% Difference	2.7%	
EXM-DCU-R2	079-1501.D	HPLC54PG120ICR.M	6.30	1.32	2	172	455	
EXM-DCU-R3	080-1601.D	HPLC54PG120ICR.M	6.30	1.15	1	362	418	
EXM-DCU-Spike	083-1901.D	HPLC54PG120ICR.M	NA	0.00448	1	98.9	0.443	ND
EXM-DCU-DNPH RB	081-1701.D	HPLC54PG120ICR.M	NA	0.00448	1	136	0.609	ND
EXM-DCU-MeCl2 RB	082-1801.D	HPLC54PG120ICR.M	NA	0.00448	1	196	0.879	ND
MB-1	084-2001.D	HPLC54PG120ICR.M	NA	0.00448	1	143	0.639	ND
MB-2	017-0901.D	HPLC54PG120ICR.M	NA	0.00448	1	133	0.595	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00448	1	1.00	0.00448	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00448	1	1.00	0.00448	ND
MS/EXM-DCU-R2	015-0701.D	HPLC54PG120ICR.M	6.31	2.11	1	114	241	
						Spike Amount (ug)	293	
						Native Amount (ug)	75.9	
						Spike Recovery (%)	56.3%	
MSD/EXM-DCU-R2	016-0801.D	HPLC54PG120ICR.M	6.31	2.47	1	115	283	
						Spike Amount (ug)	293	
						Native Amount (ug)	75.9	
						Spike Recovery (%)	70.8%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00448 (ug/mL)
LOQ 0.0747 (ug/mL)
Compound Acetaldehyde

Lower Curve Limit 0.0747 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	085-2101.D	HPLC54PG120ICR.M	6.30	5.77	1	139	801	
						Spike Amount (ug)	978	
						Spike Recovery (%)	81.9%	
LCS-2	018-1001.D	HPLC54PG120ICR.M	6.30	2.91	1	139	404	
						Spike Amount (ug)	489	
						Spike Recovery (%)	82.6%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00448	1	1.00	0.00448	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00448	1	1.00	0.00448	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00448	1	1.00	0.00448	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	6.39	3.11	1	1.00	3.11	
						Spike Amount (ug)	2.90	
						Spike Recovery (%)	107%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00442 (ug/mL)
LOQ 0.0746 (ug/mL)
Compound Propionaldehyde

Lower Curve Limit 0.0746 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
EXM-DCU-R1	077-1101.D	HPLC54PG120ICR.M	8.58	0.128	2	155	39.7	
EXM-DCU-R1	077-1201.D	HPLC54PG120ICR.M	8.56	0.126	2	155	39.0	
						% Difference	1.9%	
LD/EXM-DCU-R1	078-1401.D	HPLC54PG120ICR.M	8.54	0.124	2	157	39.0	
						% Difference	1.9%	
EXM-DCU-R2	079-1501.D	HPLC54PG120ICR.M	8.55	0.186	2	172	63.9	
EXM-DCU-R3	080-1601.D	HPLC54PG120ICR.M	8.56	0.110	1	362	39.8	
EXM-DCU-Spike	083-1901.D	HPLC54PG120ICR.M	NA	0.00442	1	98.9	0.437	ND
EXM-DCU-DNPH RB	081-1701.D	HPLC54PG120ICR.M	NA	0.00442	1	136	0.600	ND
EXM-DCU-MeCl2 RB	082-1801.D	HPLC54PG120ICR.M	NA	0.00442	1	196	0.867	ND
MB-1	084-2001.D	HPLC54PG120ICR.M	NA	0.00442	1	143	0.630	ND
MB-2	017-0901.D	HPLC54PG120ICR.M	NA	0.00442	1	133	0.587	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00442	1	1.00	0.00442	ND
RB/100% ACN	002-0301.D	HPLC54PG120ICR.M	NA	0.00442	1	1.00	0.00442	ND
MS/EXM-DCU-R2	015-0701.D	HPLC54PG120ICR.M	8.56	1.72	1	114	196	
						Spike Amount (ug)	289	
						Native Amount (ug)	10.7	
						Spike Recovery (%)	64.3%	
MSD/EXM-DCU-R2	016-0801.D	HPLC54PG120ICR.M	8.58	2.04	1	115	234	
						Spike Amount (ug)	289	
						Native Amount (ug)	10.7	
						Spike Recovery (%)	77.2%	

Company	TRC Environmental Corp.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	182129
Job #	0611-122
# Samples	3 Runs, 2 blanks, 1 spike

MDL 0.00442 (ug/mL)
LOQ 0.0746 (ug/mL)
Compound Propionaldehyde

Lower Curve Limit 0.0746 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	085-2101.D	HPLC54PG120ICR.M	8.57	6.54	1	139	908	
						Spike Amount (ug)	962	
						Spike Recovery (%)	94.4%	
LCS-2	018-1001.D	HPLC54PG120ICR.M	8.56	1.82	1	139	253	
						Spike Amount (ug)	289	
						Spike Recovery (%)	87.7%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00442	1	1.00	0.00442	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00442	1	1.00	0.00442	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00442	1	1.00	0.00442	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	8.62	3.08	1	1.00	3.08	
						Spike Amount (ug)	2.90	
						Spike Recovery (%)	106%	

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp.	**Client #**	182129
Analyst	KHB	**Job #**	0611-122
Parameters	EPA SW-846 Method 0011	**# Samples**	3 Runs, 2 blanks, 1 spike

Custody	Thorne Gregory of Enthalpy Analytical, Inc. received the samples on 7/23/11 at 9.1°C after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The samples were analyzed for acetaldehyde, formaldehyde, and propionaldehyde using the analytical procedures in EPA SW-846 Method 0011, Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources. Due to the large volume of DNPH, the sample, ***EXM-DCU – Run 3*** was split in half (both DNPH and MeCl2), extracted each with 100 mL of methylene chloride and then combined. The Agilent Model 1100, High Performance Liquid Chromatograph ("Bart") was equipped with an Ultraviolet (UV) Detector operating at 360 nm and a Restek Ultra C18, 150 x 4 mm (S/N 100316P) column.
Calibration	The calibration curves are located in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition method 8315ICR.M is included in the Calibration Curve Chromatograms section of this report.
QC Notes	During sample preparation, ***EXM-DCU-R1*** was split in two equal halves. The first half was extracted and analyzed as ***EXM-DCU-R1***. The second half was extracted and analyzed as ***LD/ EXM-DCU-R1***. To determine the catch weights, this splitting is compensated for by use of the 'Aliquot Factor' (2) shown in the detailed results spreadsheet.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	The percent difference value of the formaldehyde analysis from the initial result was within 9% for all target compounds. A replicate injection was made of the sample ***EXM-DCU-R1*** and the difference between the results of the replicate was within 2% for all target compounds. ***EXM-DCU-R2*** was also split in half. The first half was analyzed as the sample, and has an aliquot factor of two. The remaining half was split in thirds for use as the Matrix Spike (MS), Matrix Spike Duplicate (MSD), and an archive fraction. These spikes do not have an aliquot factor, and their results are calculated on the basis of what was prepared. Therefore the native amount of the sample used in determining the spike recovery values was 1/6 the calculated final result for the sample itself. The MS and MSD exhibited recovery values of 87.9% and 86.4% for formaldehyde, 81.9% and 82.6% for acetaldehyde, and 94.4% and 87.7% for propionaldehyde. Prior to sample collection, five aqueous spikes were prepared from a spike solution; three were shipped to the client. The spikes contained 1,002 µg of formaldehyde.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Box No.:

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy

Laboratory P.O.:

Shipping Date(s): 7/21/2011

Shipper's Name:

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M0011-Run1	07/14/11	1000 ml glass amber	Acidic	run 1 (2 containers)	ald/ket	2 containers
EXM-DCU-M0011-Run2	07/16/11	1000 ml glass amber	Acidic	run 2 (3 containers)	ald/ket	3 containers
EXM-DCU-M0011-Run3	07/17/11	1000 ml glass amber	Acidic	run 3 9 3 containers)	ald/ket	3 containers
EXM-DCU-M0011-DNPH-RGTBLK	07/17/11	250 glass amber	Acidic	DNPH RGT BLK	ald/ket	
EXM-DCU-M0011-MeCl2RGTBLK	07/17/11	250 glass amber	Acidic	METHYLENE CHLORIDE RGT BLK	ald/ket	
EXM-DCU-M0011-SPIKE	07/17/11	250 glass amber	Acidic	200 ul of 1000 ppm into 200 ml	ald/ket	

Relinquished by: Raydeen Morrison	**Date/Time:** 7-22-11 1230	**Relinquished by:**	**Date/Time:**
Received by: [illegible]	**Date/Time:** 7-22-11 1000	**Received by:**	**Date/Time:**

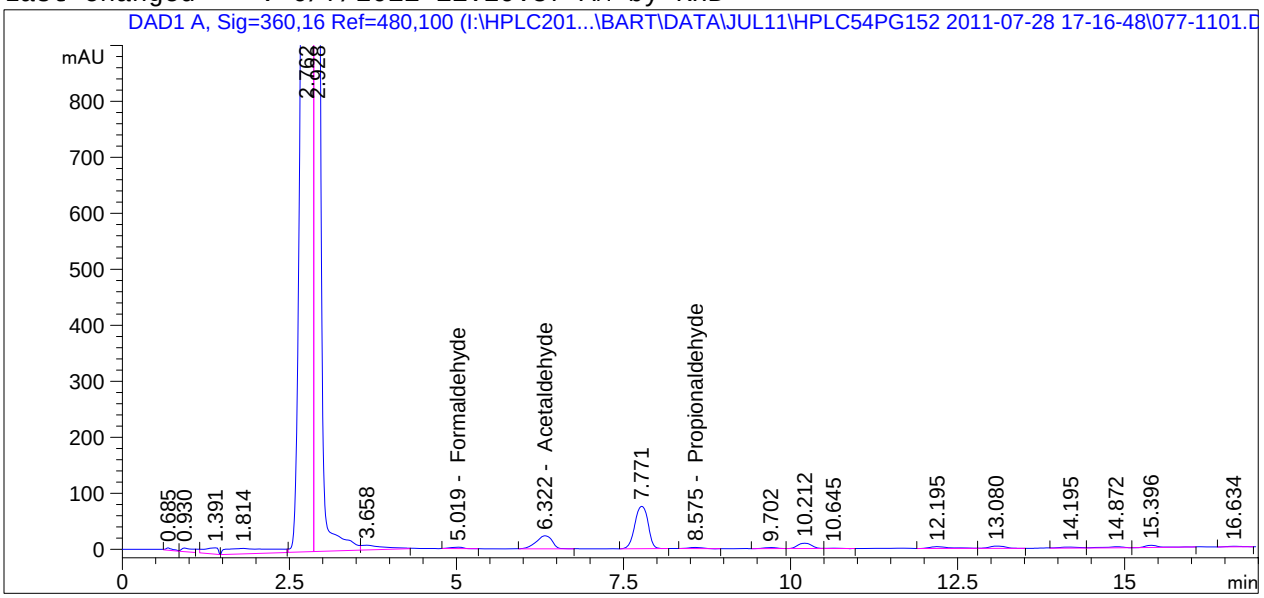
Remarks (*): 9.1 °C 11 bottles rcvd

TRC

Sample Chromatograms

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\077-1101.D
Sample Name: EXM-DCU-R1 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  11
Acq. Instrument : Bart                           Location : Vial 77
Injection Date  : 7/28/2011 8:53:12 PM                Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.019 BB       32.65395 2.42472e-3 7.91767e-2    Formaldehyde
  6.322 BB      387.67606 3.41603e-3    1.32431    Acetaldehyde
  8.575 BB       29.06533 4.41958e-3 1.28457e-1    Propionaldehyde

Totals :                                1.53195

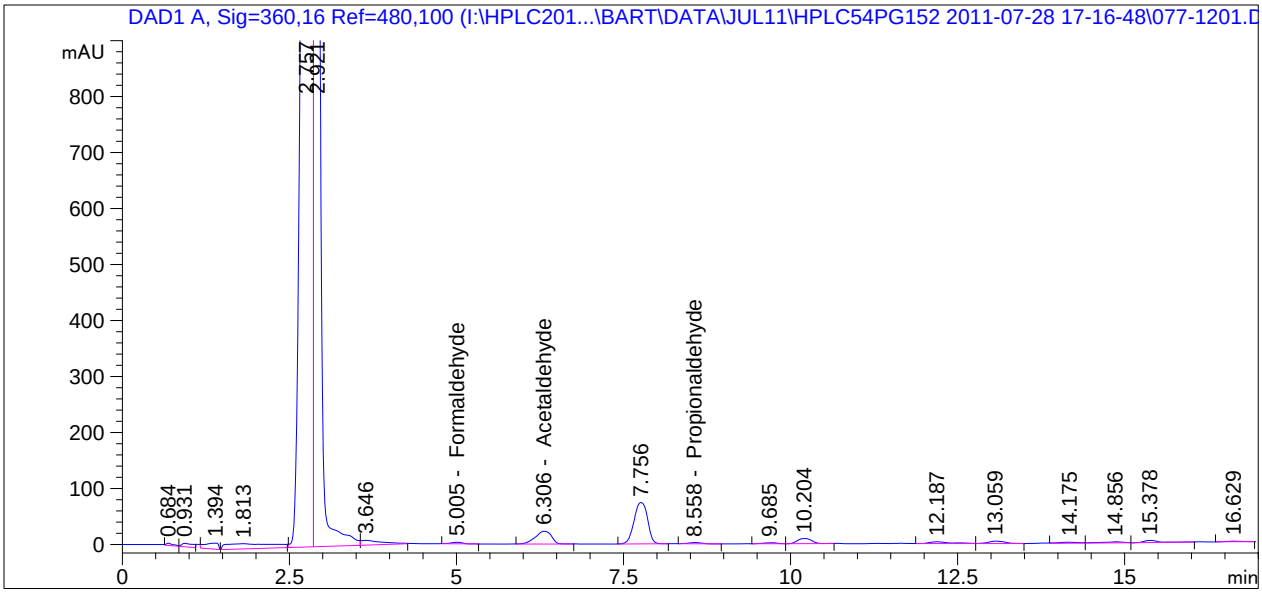

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\077-1201.D
Sample Name: EXM-DCU-R1 0611-122

```
==================================================================
Acq. Operator   : Kristen Bounds                Seq. Line :  12
Acq. Instrument : Bart                           Location : Vial 77
Injection Date  : 7/28/2011 9:14:38 PM                Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
Sample Info     : Duplicate Injection
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  5.005 BB       32.29744 2.42472e-3 7.83122e-2    Formaldehyde
  6.306 BB      386.64395 3.41603e-3    1.32079    Acetaldehyde
  8.558 BB       28.52281 4.41958e-3 1.26059e-1    Propionaldehyde

Totals :                                1.52516

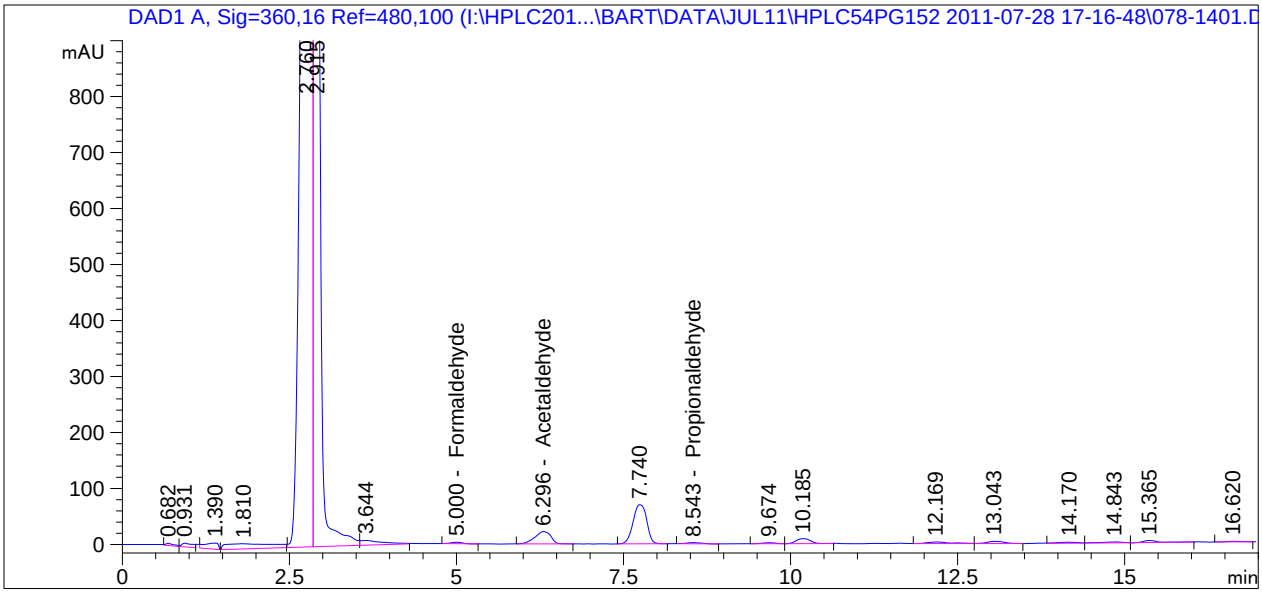

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                         *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\078-1401.D
Sample Name: LD/EXM-DCU-R1 0611-122

```
==================================================================
Acq. Operator   : Kristen Bounds                Seq. Line :  14
Acq. Instrument : Bart                           Location : Vial 78
Injection Date  : 7/28/2011 9:57:35 PM                Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
Sample Info     : Lab Duplicate Sample
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  5.000 BB       29.39816 2.42472e-3 7.12823e-2    Formaldehyde
  6.296 BB      371.80197 3.41603e-3    1.27009    Acetaldehyde
  8.543 BB       28.09967 4.41958e-3 1.24189e-1    Propionaldehyde

Totals :                                1.46556

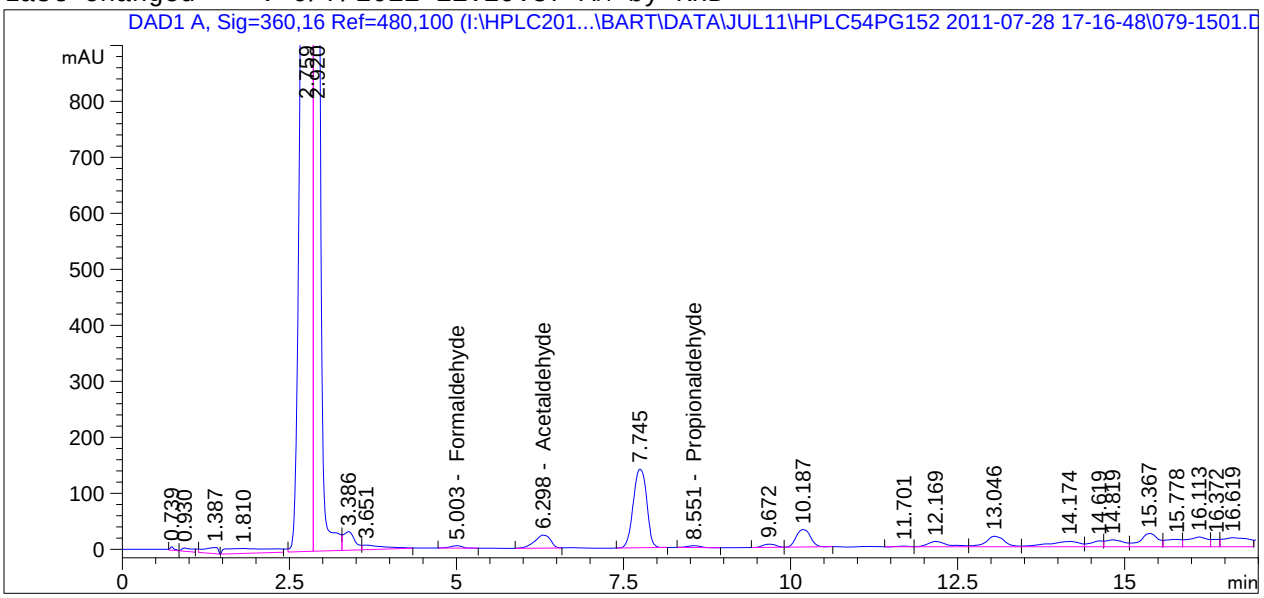

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                         *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\079-1501.D
Sample Name: EXM-DCU-R2 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  15
Acq. Instrument : Bart                           Location : Vial 79
Injection Date  : 7/28/2011 10:19:03 PM               Inj :   1
                                                Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.003 BB       55.15169 2.42472e-3 1.33727e-1    Formaldehyde
  6.298 BV      387.13016 3.41603e-3    1.32245    Acetaldehyde
  8.551 BB       42.02270 4.41958e-3 1.85723e-1    Propionaldehyde

Totals :                                1.64190

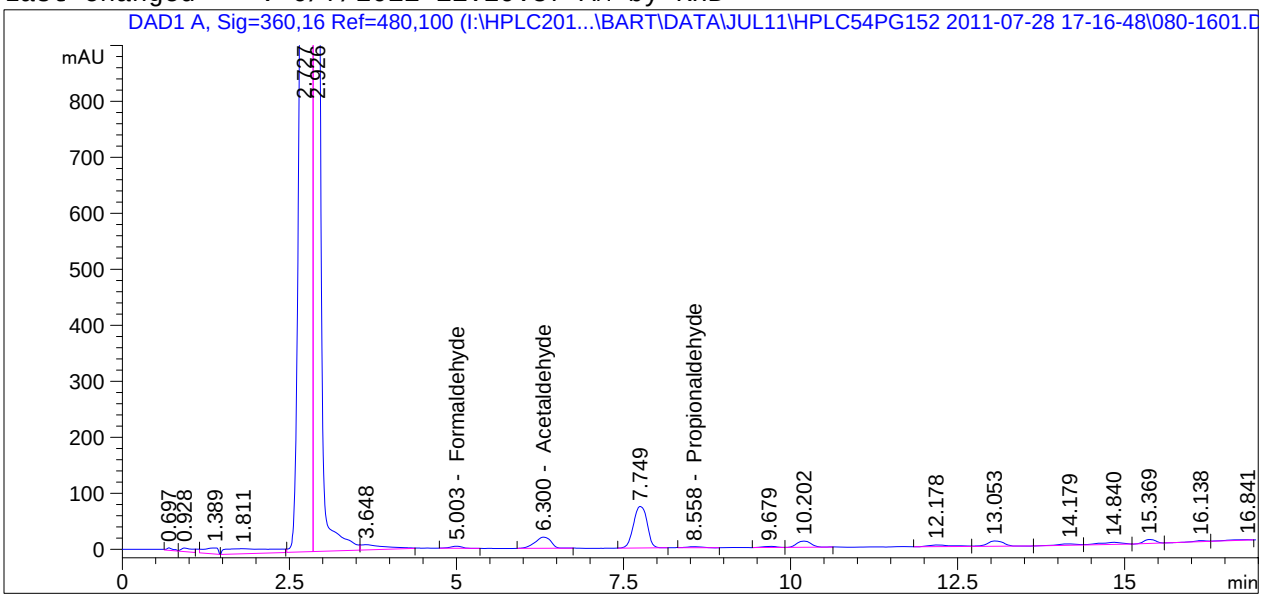

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                         *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\080-1601.D
Sample Name: EXM-DCU-R3 0611-122

```
==================================================================
Acq. Operator   : Kristen Bounds                Seq. Line :  16
Acq. Instrument : Bart                           Location : Vial 80
Injection Date  : 7/28/2011 10:40:32 PM               Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.003 BB       45.54470 2.42472e-3 1.10433e-1    Formaldehyde
  6.300 BB      337.48779 3.41603e-3    1.15287    Acetaldehyde
  8.558 BB       24.86901 4.41958e-3 1.09911e-1    Propionaldehyde

Totals :                                1.37321

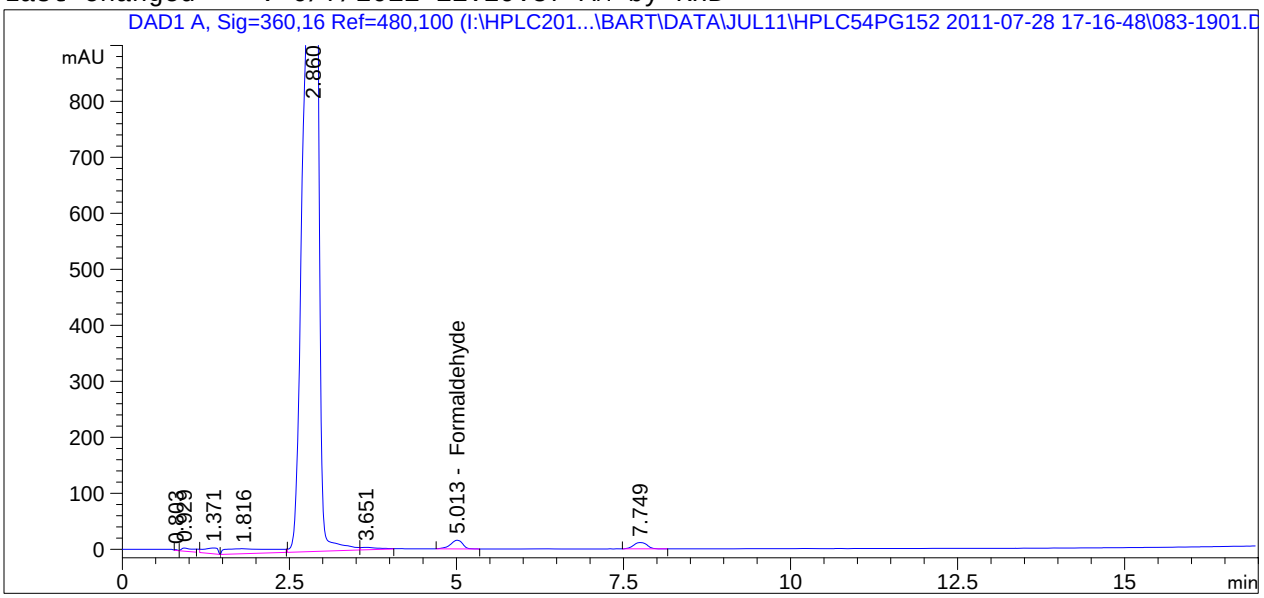

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                         *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\083-1901.D
Sample Name: EXM-DCU-Spike 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  19
Acq. Instrument : Bart                           Location : Vial 83
Injection Date  : 7/28/2011 11:44:50 PM               Inj :   1
                                                Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.013 BB      196.93597 2.42472e-3 4.77514e-1    Formaldehyde
  6.380            -          -          -         Acetaldehyde
  8.604            -          -          -         Propionaldehyde

Totals :                              4.77514e-1

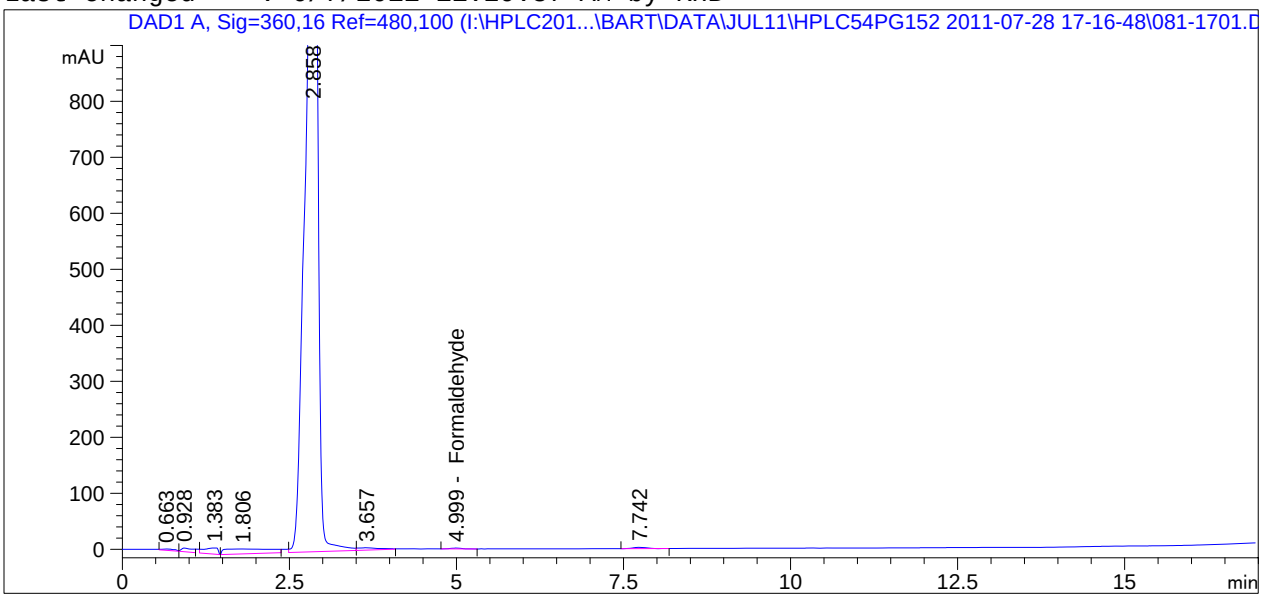

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\081-1701.D
Sample Name: EXM-DCU-DNPH RB 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  17
Acq. Instrument : Bart                           Location : Vial 81
Injection Date  : 7/28/2011 11:01:55 PM               Inj :   1
                                                Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  4.999 BB       16.57193 2.42472e-3 4.01823e-2    Formaldehyde
  6.380            -          -          -         Acetaldehyde
  8.604            -          -          -         Propionaldehyde

Totals :                              4.01823e-2

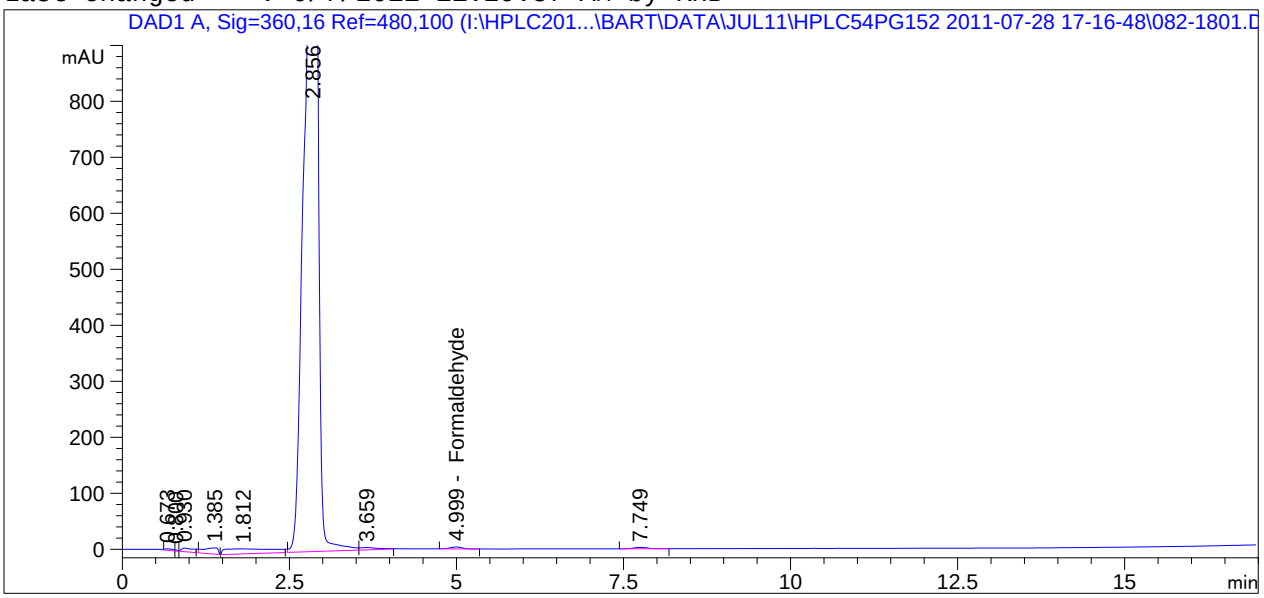

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\082-1801.D
Sample Name: EXM-DCU-MeCl2 RB 0611-122

```
==================================================================
Acq. Operator   : Kristen Bounds                Seq. Line :  18
Acq. Instrument : Bart                           Location : Vial 82
Injection Date  : 7/28/2011 11:23:23 PM               Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  4.999 BB       43.91902 2.42472e-3 1.06491e-1    Formaldehyde
  6.380            -          -          -         Acetaldehyde
  8.604            -          -          -         Propionaldehyde

Totals :                              1.06491e-1

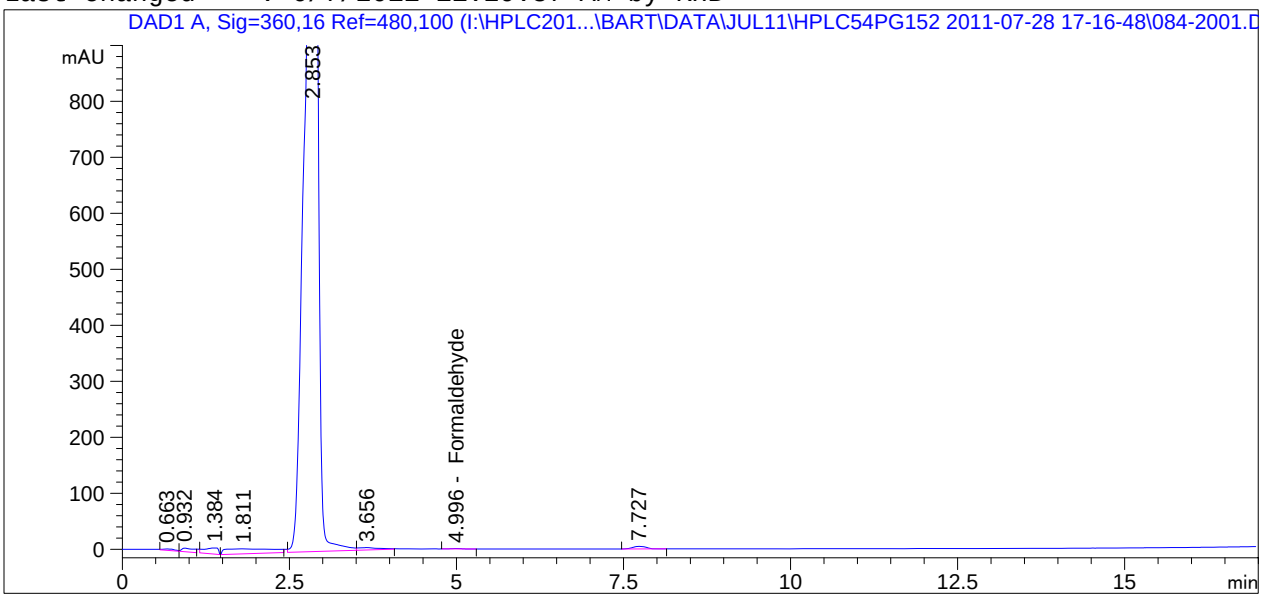

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==================================================================
                         *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\084-2001.D
Sample Name: MB-1 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  20
Acq. Instrument : Bart                          Location : Vial 84
Injection Date  : 7/29/2011 12:06:19 AM               Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  4.996 BB        8.34503 2.42472e-3 2.02344e-2    Formaldehyde
  6.380            -          -          -         Acetaldehyde
  8.604            -          -          -         Propionaldehyde

Totals :                              2.02344e-2


2 Warnings or Errors :

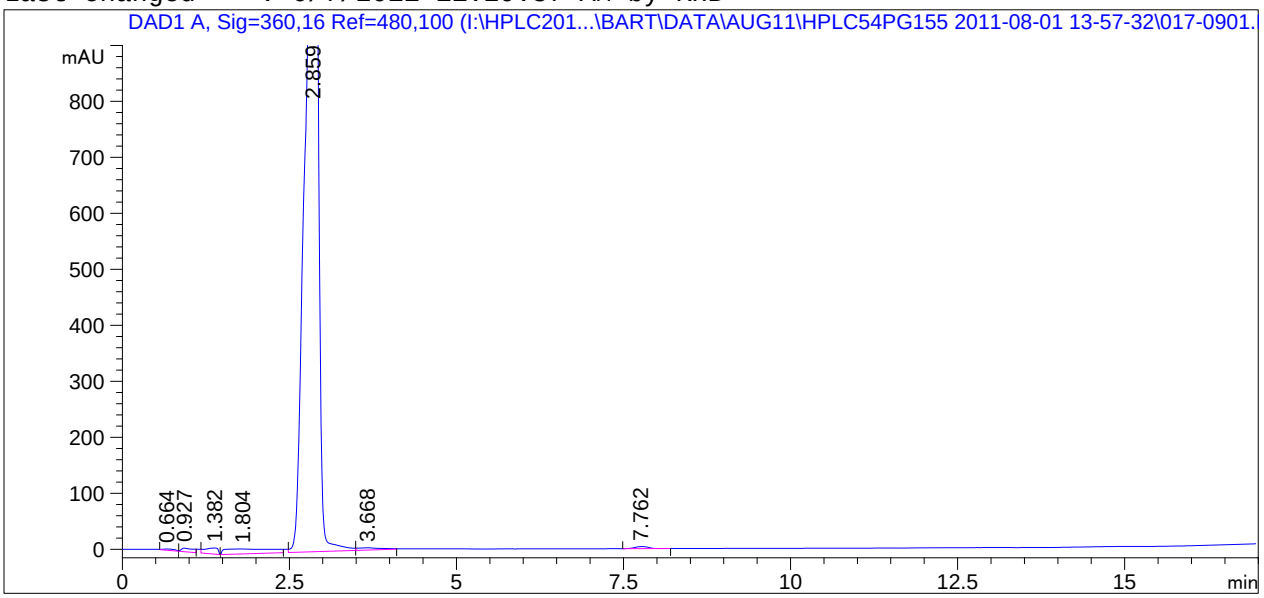
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\017-0901.D
Sample Name: MB-2 0611-122

==========

Acq. Operator : Kristen Bounds Seq. Line : 9
Acq. Instrument : Bart Location : Vial 17
Injection Date : 8/1/2011 4:51:08 PM Inj : 1
Inj Volume : 15.0 µl
Acq. Method : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed : 6/7/2011 11:29:37 AM by KHB



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057		-	-	-		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 0.00000

2 Warnings or Errors :

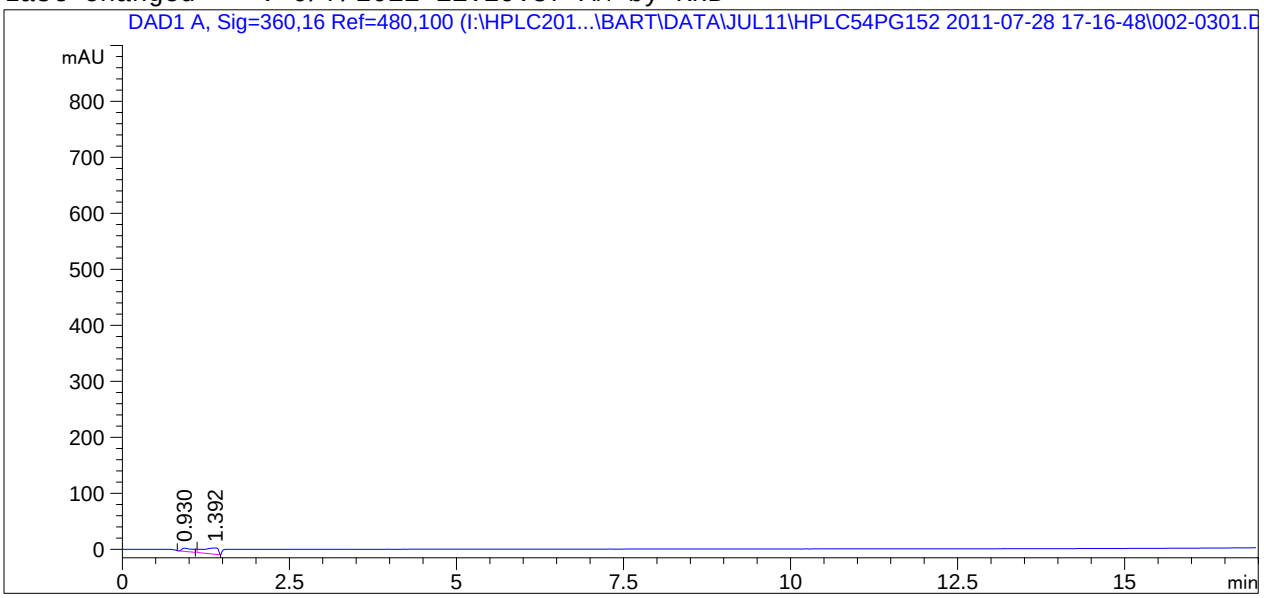
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\002-0301.D
Sample Name: RB/100% ACN

==========

Acq. Operator : Kristen Bounds Seq. Line : 3
Acq. Instrument : Bart Location : Vial 2
Injection Date : 7/28/2011 6:01:37 PM Inj : 1
Inj Volume : 15.0 µl
Acq. Method : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed : 6/7/2011 11:29:37 AM by KHB



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057		-	-	-		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 0.00000

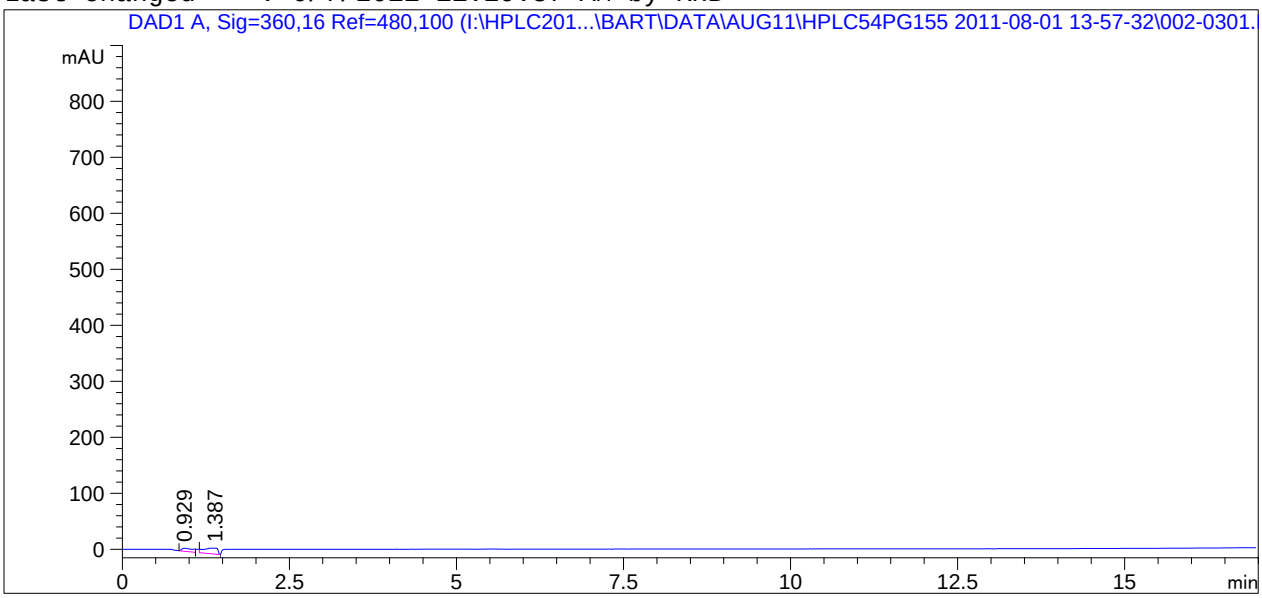
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\002-0301.D
Sample Name: RB/100% ACN

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :   3
Acq. Instrument : Bart                          Location : Vial 2
Injection Date  : 8/1/2011 2:42:21 PM                Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.057            -          -          -         Formaldehyde
  6.380            -          -          -         Acetaldehyde
  8.604            -          -          -         Propionaldehyde

Totals :                                0.00000

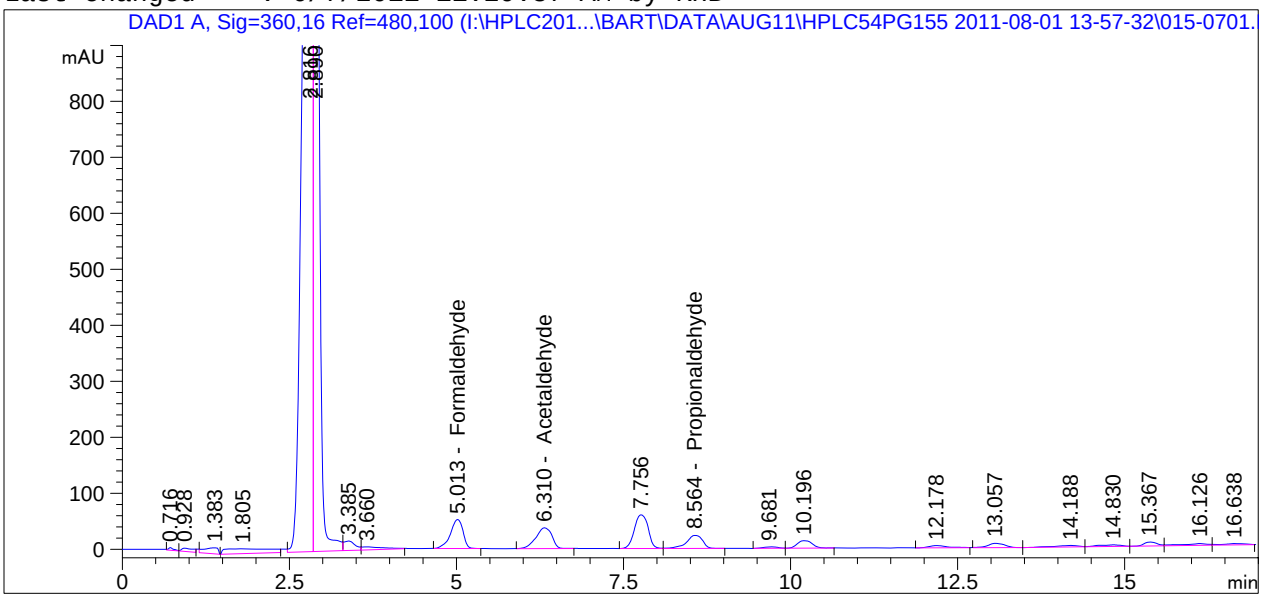

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\015-0701.D
Sample Name: MS/EXM-DCU-R2 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :   7
Acq. Instrument : Bart                           Location : Vial 15
Injection Date  : 8/1/2011 4:08:12 PM                 Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.013 BB      682.11316 2.42472e-3    1.65393    Formaldehyde
  6.310 BB      618.64056 3.41603e-3    2.11330    Acetaldehyde
  8.564 VB      389.73782 4.41958e-3    1.72248    Propionaldehyde

Totals :                                5.48971

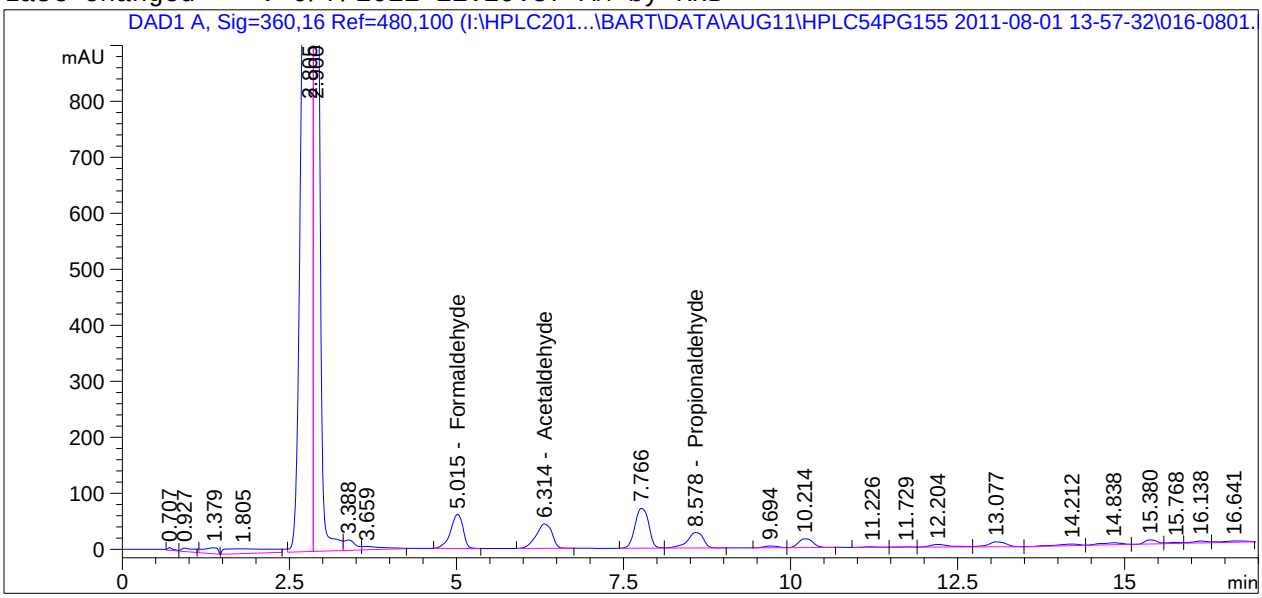

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\016-0801.D
Sample Name: MSD/EXM-DCU-R2 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :   8
Acq. Instrument : Bart                           Location : Vial 16
Injection Date  : 8/1/2011 4:29:40 PM                 Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.015 BB      792.06744 2.42472e-3    1.92054    Formaldehyde
  6.314 BB      723.35162 3.41603e-3    2.47099    Acetaldehyde
  8.578 VB      460.63467 4.41958e-3    2.03581    Propionaldehyde

Totals :                                6.42735

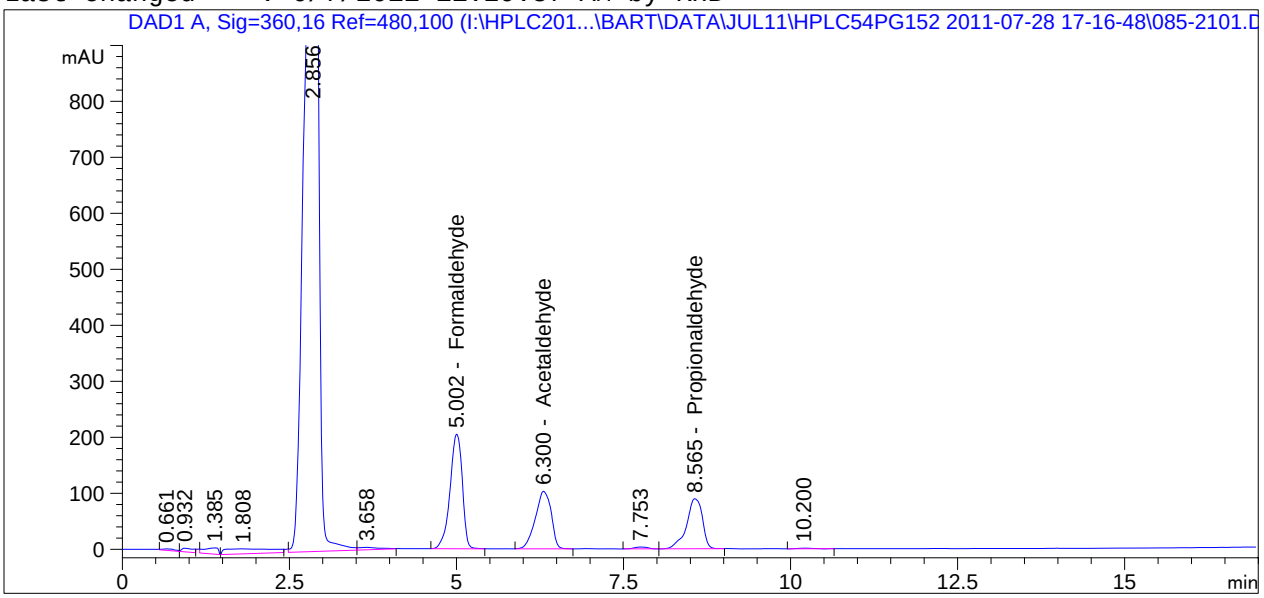

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\085-2101.D
Sample Name: LCS-1 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  21
Acq. Instrument : Bart                           Location : Vial 85
Injection Date  : 7/29/2011 12:27:46 AM               Inj :   1
                                                Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.002 BB     2615.14648 2.42472e-3    6.34100    Formaldehyde
  6.300 BB     1688.17664 3.41603e-3    5.76687    Acetaldehyde
  8.565 VB     1479.89661 4.41958e-3    6.54052    Propionaldehyde

Totals :                                18.64839

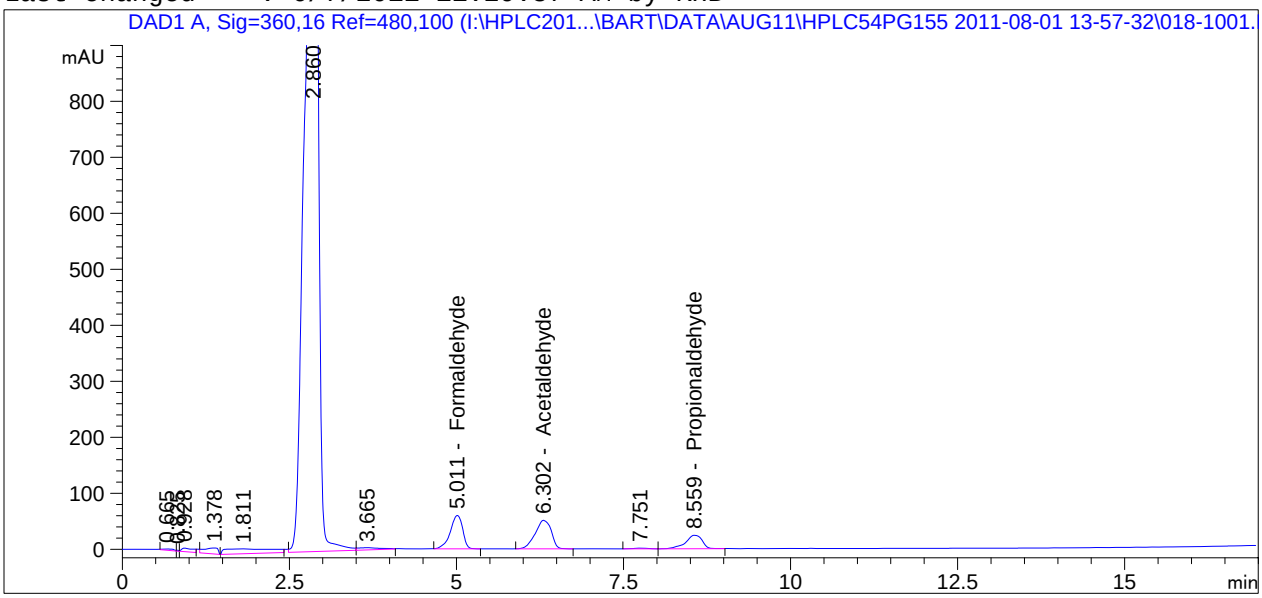

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\018-1001.D
Sample Name: LCS-2 0611-122

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  10
Acq. Instrument : Bart                           Location : Vial 18
Injection Date  : 8/1/2011 5:12:36 PM                 Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.011 BB      771.04132 2.42472e-3    1.86956    Formaldehyde
  6.302 BB      851.58392 3.41603e-3    2.90904    Acetaldehyde
  8.559 VB      412.31650 4.41958e-3    1.82227    Propionaldehyde

Totals :                                6.60086


1 Warnings or Errors :

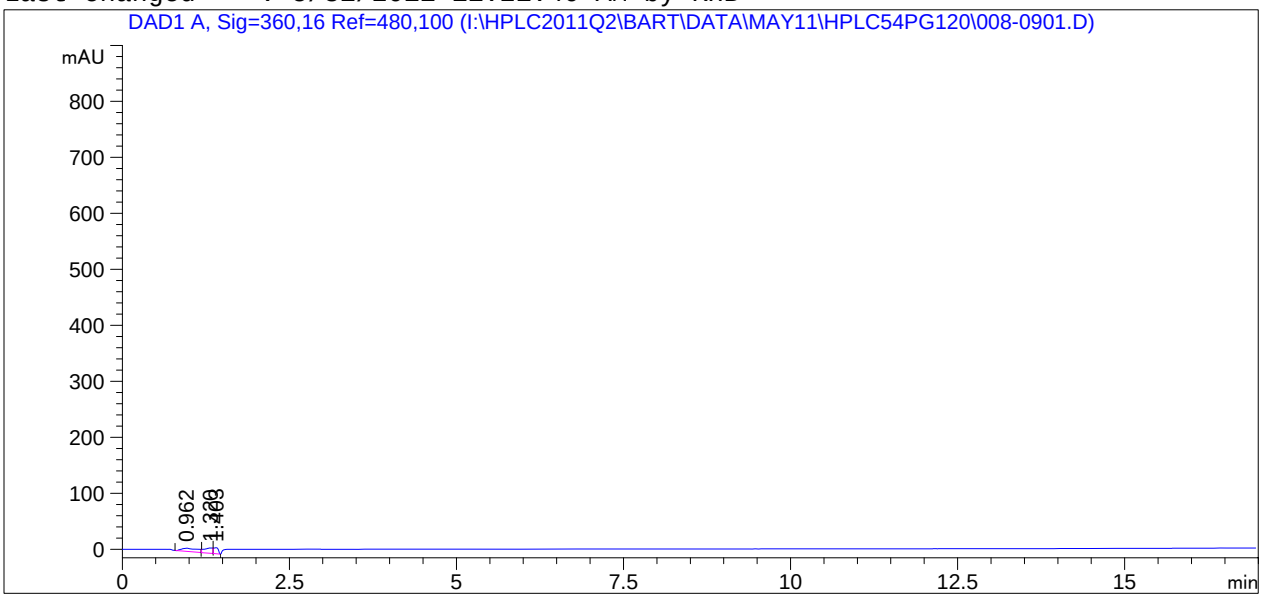
Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\008-0901.D
Sample Name: RB/100% ACN

==========

Acq. Operator : KHB Seq. Line : 9
Acq. Instrument : Bart Location : Vial 8
Injection Date : 5/27/2011 11:24:14 PM Inj : 1
Inj Volume : 15.000 µl
Acq. Method : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed : 5/31/2011 11:21:40 AM by KHB



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057		-	-	-		Formaldehyde
6.380		-	-	-		Acetaldehyde
7.788		-	-	-		Acetone
8.093		-	-	-		Acrolein
8.604		-	-	-		Propionaldehyde

Totals : 0.00000

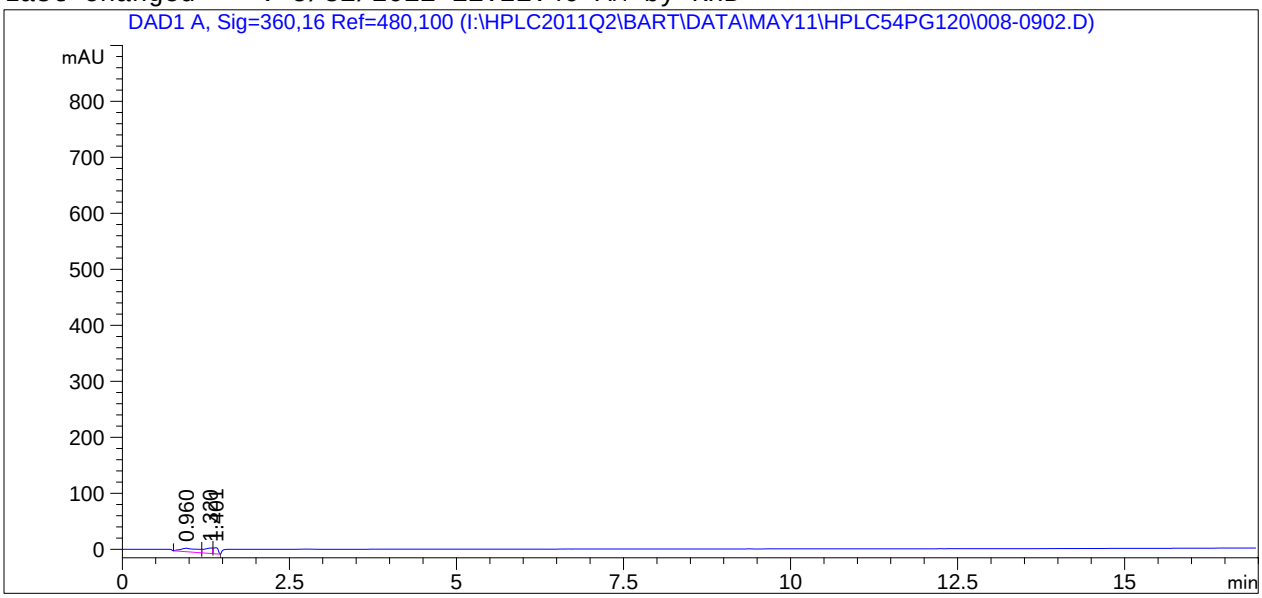
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\008-0902.D
Sample Name: RB/100% ACN

```
==========================================================================
Acq. Operator   : KHB                              Seq. Line :   9
Acq. Instrument : Bart                              Location : Vial 8
Injection Date  : 5/27/2011 11:45:53 PM                 Inj :   2
                                                  Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.057            -          -          -         Formaldehyde
  6.380            -          -          -         Acetaldehyde
  7.788            -          -          -         Acetone
  8.093            -          -          -         Acrolein
  8.604            -          -          -         Propionaldehyde

Totals :                                0.00000

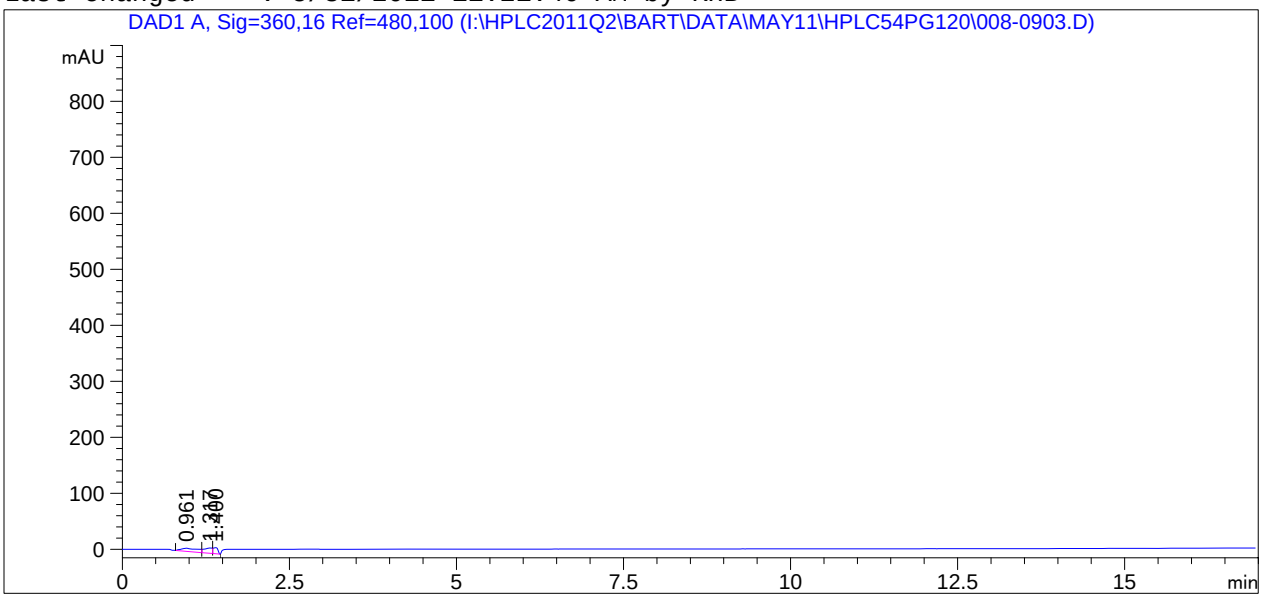

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\008-0903.D
Sample Name: RB/100% ACN

```
==========================================================================
Acq. Operator   : KHB                              Seq. Line :   9
Acq. Instrument : Bart                              Location : Vial 8
Injection Date  : 5/28/2011 12:07:30 AM                 Inj :   3
                                                  Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.057            -          -          -         Formaldehyde
  6.380            -          -          -         Acetaldehyde
  7.788            -          -          -         Acetone
  8.093            -          -          -         Acrolein
  8.604            -          -          -         Propionaldehyde

Totals :                                0.00000


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : 6/7/2011 11:27:58 AM

Rel. Reference Window : 5.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 5.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Average Response/Amount
Origin : Ignored
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref Grp	Name
5.057	1	1	7.47000e-2	30.61963	2.43961e-3		Formaldehyde
		2	7.15000e-1	310.99482	2.29907e-3		
		3	2.50000	1000.60588	2.49849e-3		
		4	5.00000	2049.16028	2.44002e-3		
		5	9.01000	3688.39754	2.44280e-3		
		6	15.00000	6153.18799	2.43776e-3		
6.380	1	1	7.47000e-2	21.60617	3.45735e-3		Acetaldehyde
		2	7.15000e-1	220.44158	3.24349e-3		
		3	2.50000	712.11804	3.51065e-3		
		4	5.01000	1458.37695	3.43533e-3		
		5	9.01000	2621.98153	3.43633e-3		
		6	15.00000	4378.88102	3.42553e-3		
8.604	1	1	7.46000e-2	16.01441	4.65831e-3		Propionaldehyde
		2	7.14000e-1	171.99996	4.15116e-3		
		3	2.50000	553.96212	4.51294e-3		
		4	5.00000	1133.32080	4.41181e-3		
		5	9.00000	2038.95015	4.41404e-3		
		6	15.00000	3408.43978	4.40084e-3		

1 Warnings or Errors :

Warning : Overlapping peak time windows at 8.604 min, signal 1

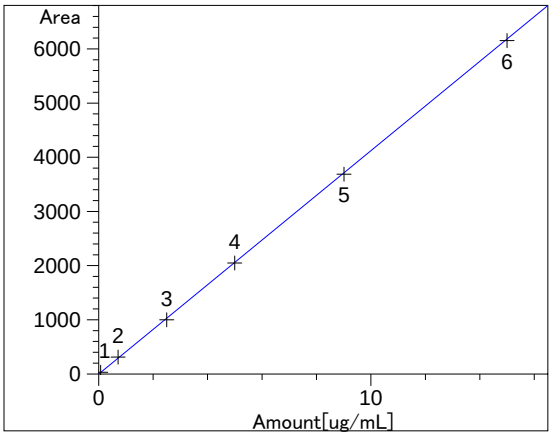
Peak Sum Table

No Entries in table

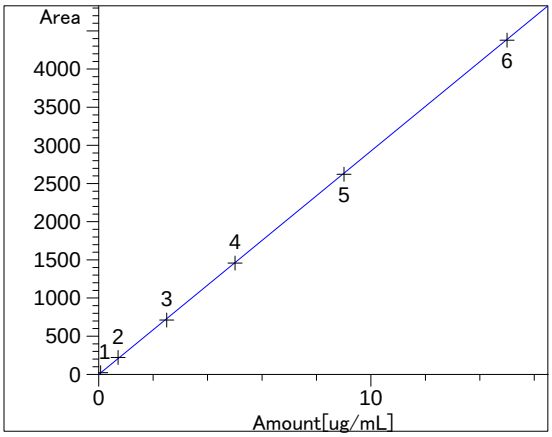
==========
==========

Calibration Curves

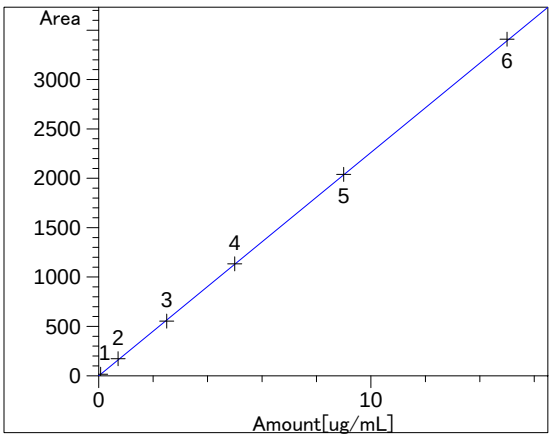
==========



Formaldehyde at exp. RT: 5.057
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 28.30642
Formula: y = mx
m: 412.41885
x: Amount
y: Area



Acetaldehyde at exp. RT: 6.380
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 15.58800
Formula: y = mx
m: 292.73714
x: Amount
y: Area



Propionaldehyde at exp. RT: 8.604
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 10.79580
Formula: y = mx
m: 226.26583
x: Amount
y: Area

==========

Calibration Table

Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM

Rel. Reference Window : 5.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 5.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Average Response/Amount
Origin : Ignored
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref	Grp	Name
5.057	1	1	7.47000e-2	30.61963	2.43961e-3			Formaldehyde
		2	7.15000e-1	310.99482	2.29907e-3			
		3	2.50000	1000.60588	2.49849e-3			
		4	5.00000	2049.16028	2.44002e-3			
		5	9.01000	3688.39754	2.44280e-3			
		6	15.00000	6153.18799	2.43776e-3			
6.380	1	1	7.47000e-2	21.60617	3.45735e-3			Acetaldehyde
		2	7.15000e-1	220.44158	3.24349e-3			
		3	2.50000	712.11804	3.51065e-3			
		4	5.01000	1458.37695	3.43533e-3			
		5	9.01000	2621.98153	3.43633e-3			
		6	15.00000	4378.88102	3.42553e-3			
7.788	1	1	7.47000e-2	16.62340	4.49366e-3			Acetone
		2	7.15000e-1	165.24312	4.32696e-3			
		3	2.50000	533.17934	4.68885e-3			
		4	5.00000	1092.29525	4.57752e-3			
		5	9.01000	1967.45394	4.57952e-3			
		6	15.00000	3276.86100	4.57755e-3			
8.093	1	1	7.47000e-2	20.19522	3.69889e-3			Acrolein
		2	7.15000e-1	195.41486	3.65888e-3			
		3	2.50000	629.92090	3.96875e-3			
		4	5.01000	1287.60856	3.89093e-3			
		5	9.01000	2315.26774	3.89156e-3			
		6	15.00000	3867.90869	3.87806e-3			
8.604	1	1	7.46000e-2	16.01441	4.65831e-3			Propionaldehyde
		2	7.14000e-1	171.99996	4.15116e-3			
		3	2.50000	553.96212	4.51294e-3			
		4	5.00000	1133.32080	4.41181e-3			

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref	Grp	Name
		5	9.00000	2038.95015	4.41404e-3			
		6	15.00000	3408.43978	4.40084e-3			

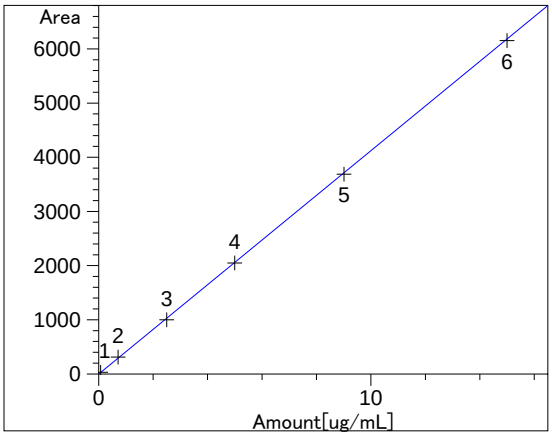
1 Warnings or Errors :

Warning : Overlapping peak time windows at 7.788 min, signal 1

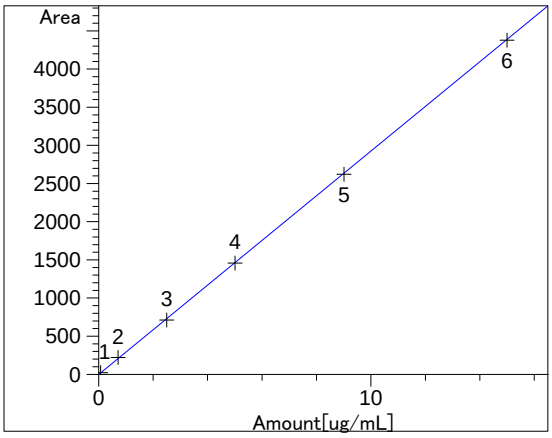
Peak Sum Table

No Entries in table

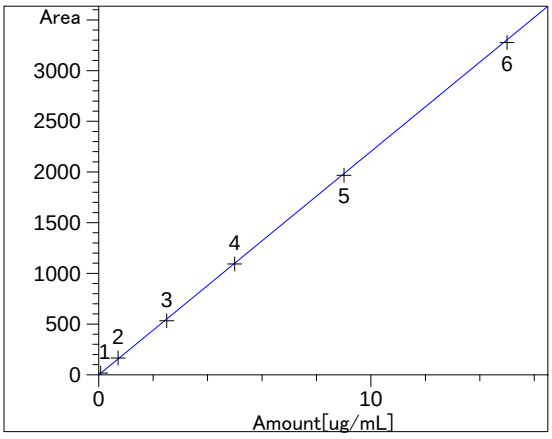
Calibration Curves



Formaldehyde at exp. RT: 5.057
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 28.30642
Formula: y = mx
m: 412.41885
x: Amount
y: Area

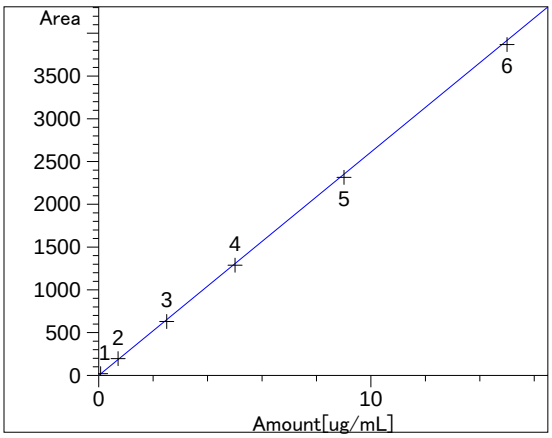


Acetaldehyde at exp. RT: 6.380
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 15.58800
Formula: y = mx
m: 292.73714
x: Amount
y: Area

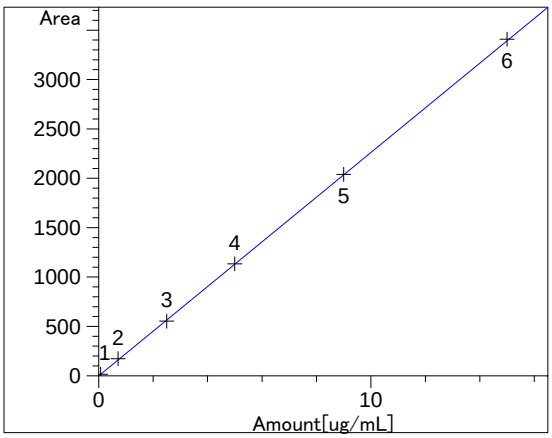


Acetone at exp. RT: 7.788
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 20.06094
Formula: y = mx
m: 220.36606
x: Amount
y: Area

EM-BTRF-002571



Acrolein at exp. RT: 8.093
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 35.78804
Formula: y = mx
m: 261.24361
x: Amount
y: Area

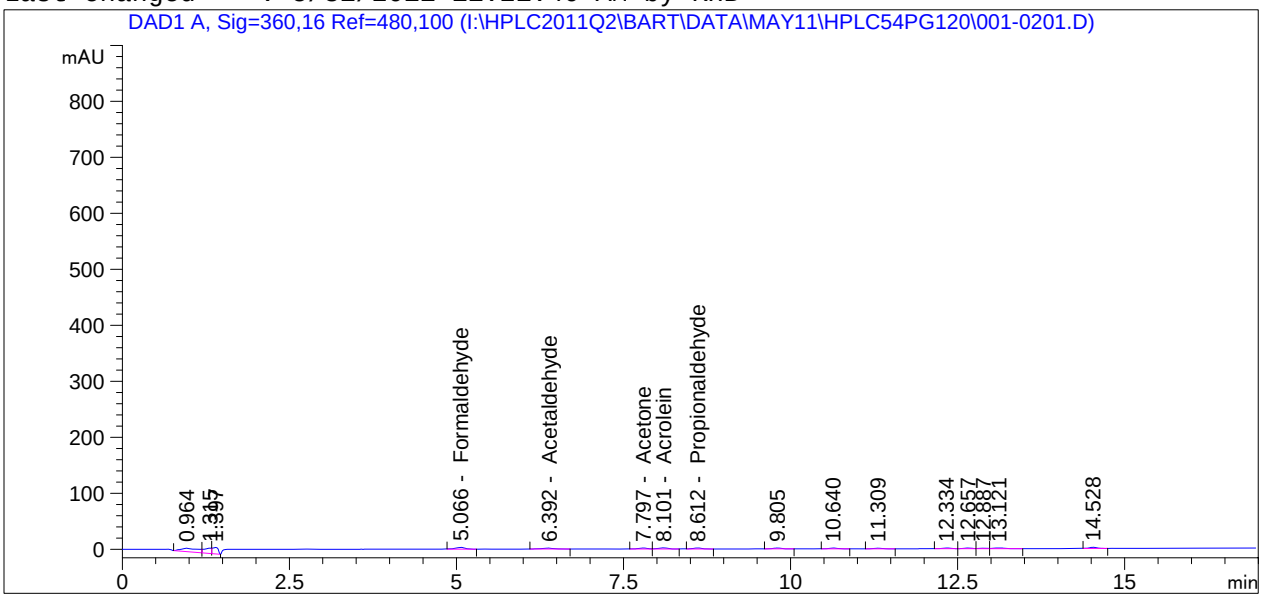


Propionaldehyde at exp. RT: 8.604
DAD1 A, Sig=360,16 Ref=480,100
Correlation: 0.99998
Residual Std. Dev.: 10.79580
Formula: y = mx
m: 226.26583
x: Amount
y: Area

==========

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\001-0201.D
Sample Name: hplc54pg120 #1

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   2
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 5/27/2011 3:49:47 PM               Inj :   1
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.066 BB       29.63630 2.42472e-3 7.18597e-2    Formaldehyde
  6.392 BB       22.03458 3.41603e-3 7.52709e-2    Acetaldehyde
  7.797 BV       16.60152 4.53790e-3 7.53361e-2    Acetone
  8.101 VB       20.15335 3.82784e-3 7.71439e-2    Acrolein
  8.612 BB       16.10484 4.41958e-3 7.11766e-2    Propionaldehyde

Totals :                              3.70787e-1

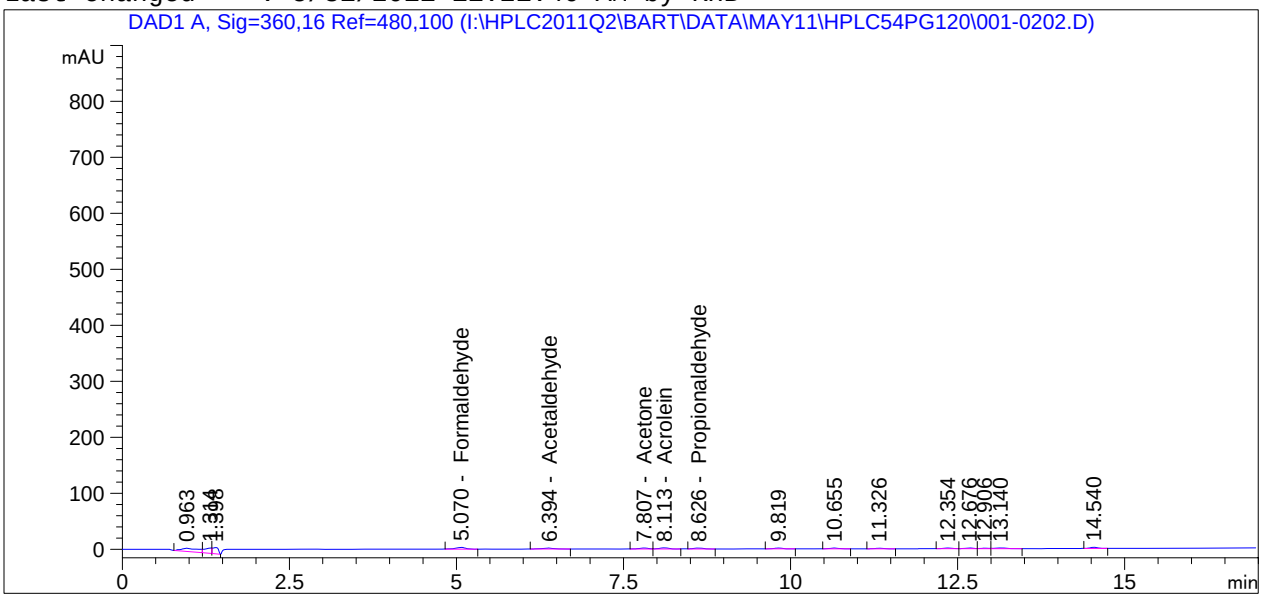

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\001-0202.D
Sample Name: hplc54pg120 #1

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   2
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 5/27/2011 4:11:25 PM               Inj :   2
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.070 BB       31.00495 2.42472e-3 7.51783e-2    Formaldehyde
  6.394 BB       21.29319 3.41603e-3 7.27383e-2    Acetaldehyde
  7.807 BV       16.89919 4.53790e-3 7.66869e-2    Acetone
  8.113 VB       20.30722 3.82784e-3 7.77329e-2    Acrolein
  8.626 BB       16.01859 4.41958e-3 7.07955e-2    Propionaldehyde

Totals :                              3.73132e-1

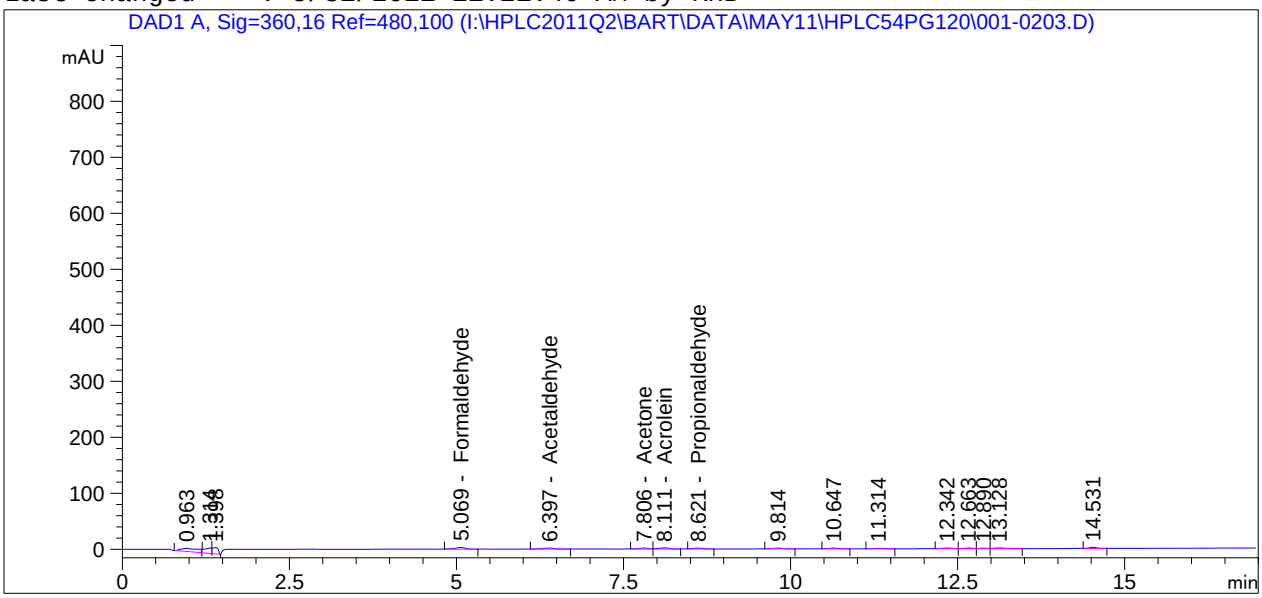

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\001-0203.D
Sample Name: hplc54pg120 #1

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   2
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 5/27/2011 4:33:05 PM               Inj :   3
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.069 BB       31.21763 2.42472e-3 7.56940e-2    Formaldehyde
  6.397 BB       21.49072 3.41603e-3 7.34130e-2    Acetaldehyde
  7.806 BV       16.36949 4.53790e-3 7.42832e-2    Acetone
  8.111 VB       20.12511 3.82784e-3 7.70358e-2    Acrolein
  8.621 BB       15.91979 4.41958e-3 7.03588e-2    Propionaldehyde

Totals :                              3.70785e-1

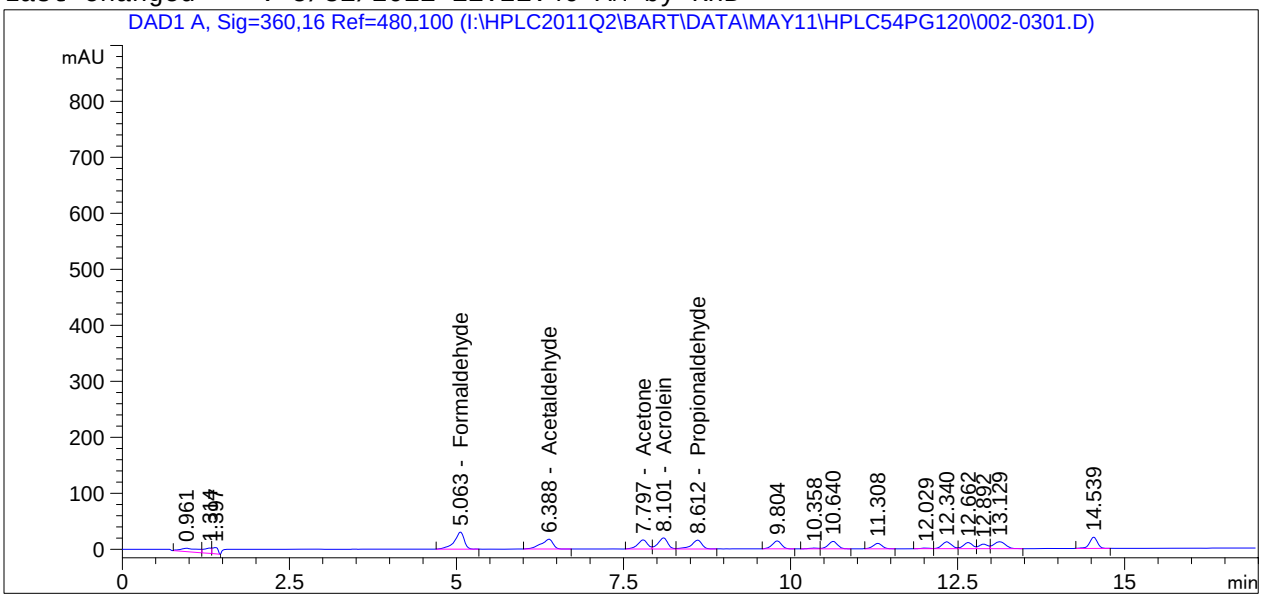

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\002-0301.D
Sample Name: hplc54pg120 #2

```
==========================================================================
Acq. Operator   : KHB                              Seq. Line :   3
Acq. Instrument : Bart                              Location : Vial 2
Injection Date  : 5/27/2011 4:54:43 PM                   Inj :   1
                                                  Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.063 BB      311.51663 2.42472e-3 7.55340e-1    Formaldehyde
  6.388 BB      221.01292 3.41603e-3 7.54988e-1    Acetaldehyde
  7.797 BV      166.06204 4.53790e-3 7.53574e-1    Acetone
  8.101 VV      195.89969 3.82784e-3 7.49874e-1    Acrolein
  8.612 VB      172.74652 4.41958e-3 7.63467e-1    Propionaldehyde

Totals :                                3.77724


1 Warnings or Errors :

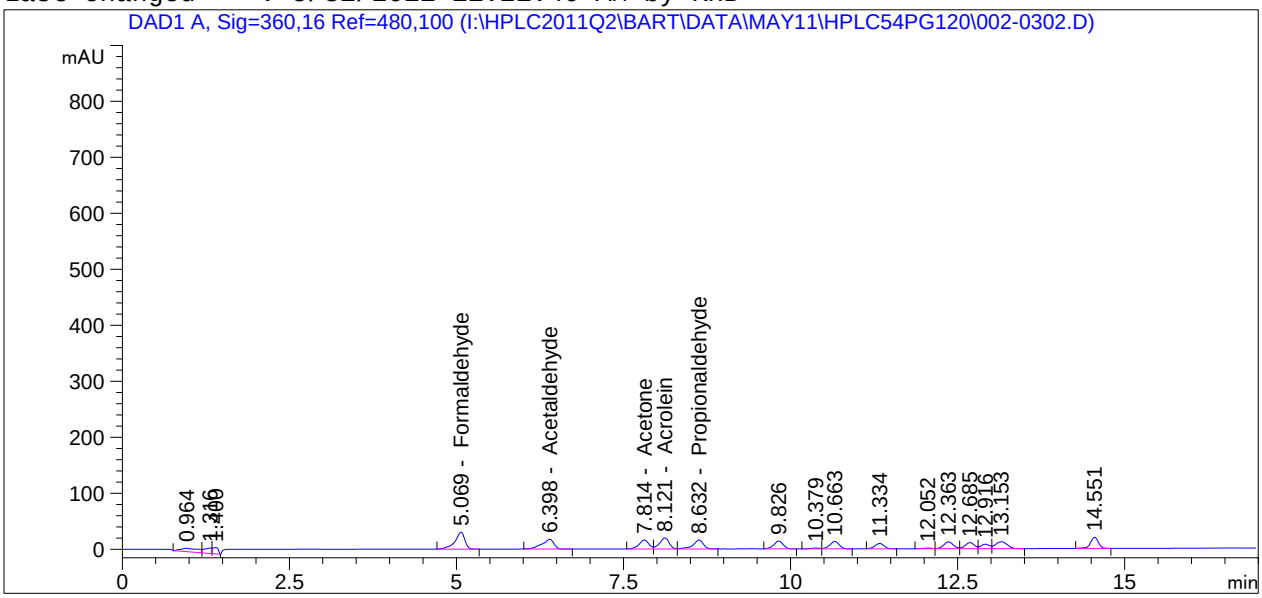
Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\002-0302.D
Sample Name: hplc54pg120 #2

==========

Acq. Operator : KHB Seq. Line : 3
Acq. Instrument : Bart Location : Vial 2
Injection Date : 5/27/2011 5:16:23 PM Inj : 2
Inj Volume : 15.000 µl
Acq. Method : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed : 5/31/2011 11:21:40 AM by KHB



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.069	BB	310.92529	2.42472e-3	7.53907e-1		Formaldehyde
6.398	BB	220.41605	3.41603e-3	7.52949e-1		Acetaldehyde
7.814	BV	164.85385	4.53790e-3	7.48091e-1		Acetone
8.121	VV	195.58609	3.82784e-3	7.48673e-1		Acrolein
8.632	VB	171.94592	4.41958e-3	7.59929e-1		Propionaldehyde

Totals : 3.76355

1 Warnings or Errors :

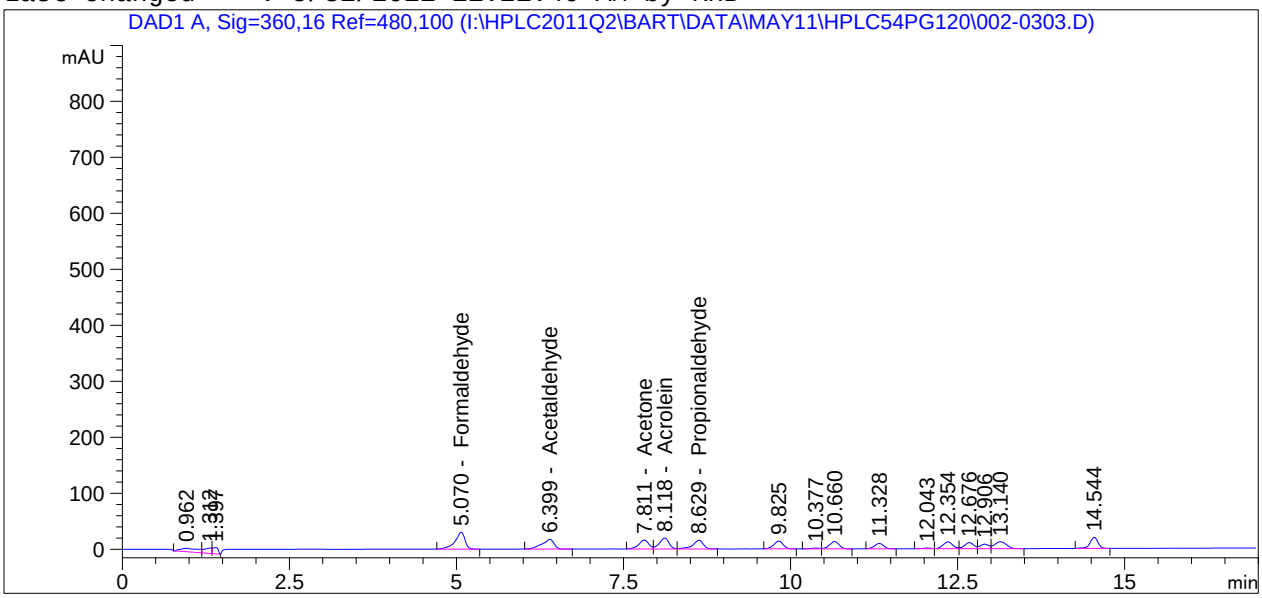
Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\002-0303.D
Sample Name: hplc54pg120 #2

```
==========================================================================
Acq. Operator   : KHB                              Seq. Line :   3
Acq. Instrument : Bart                              Location : Vial 2
Injection Date  : 5/27/2011 5:38:01 PM                  Inj :   3
                                                  Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.070 BB      310.54254 2.42472e-3 7.52979e-1    Formaldehyde
  6.399 BB      219.89577 3.41603e-3 7.51171e-1    Acetaldehyde
  7.811 BV      164.81348 4.53790e-3 7.47908e-1    Acetone
  8.118 VV      194.75879 3.82784e-3 7.45506e-1    Acrolein
  8.629 VB      171.30743 4.41958e-3 7.57107e-1    Propionaldehyde

Totals :                                3.75467

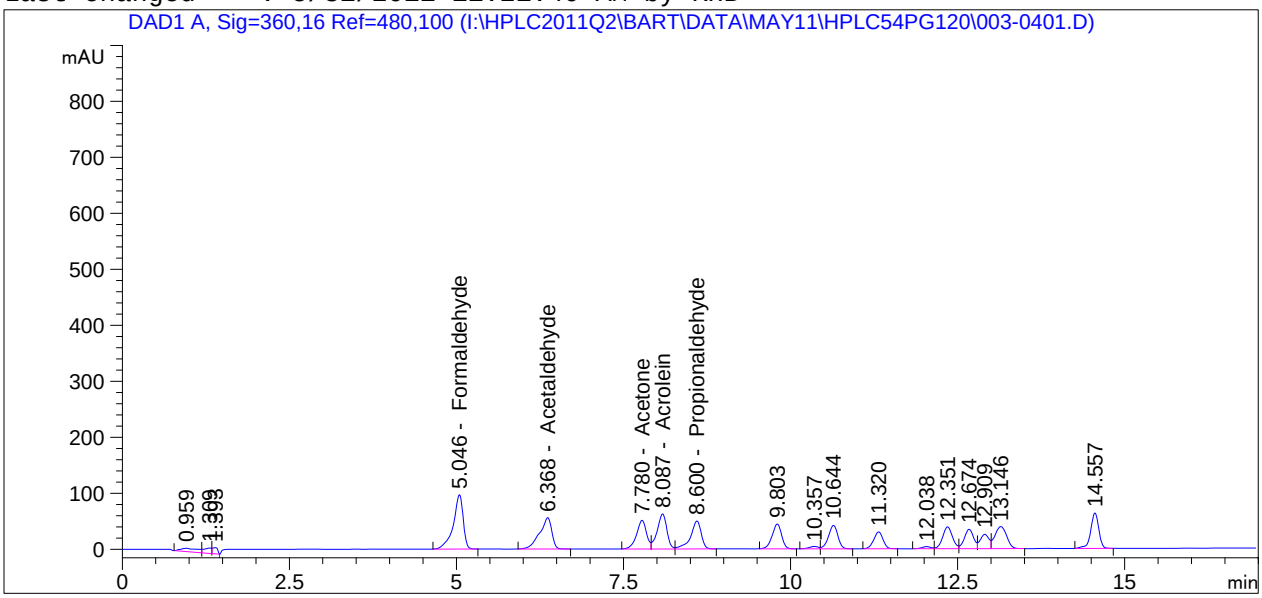

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-0401.D
Sample Name: hplc54pg120 #3

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   4
Acq. Instrument : Bart                          Location : Vial 3
Injection Date  : 5/27/2011 5:59:39 PM               Inj :   1
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.046	BB	998.41003	2.42472e-3	2.42086		Formaldehyde
6.368	BB	709.74158	3.41603e-3	2.42450		Acetaldehyde
7.780	BV	531.52472	4.53790e-3	2.41201		Acetone
8.087	VV	627.80054	3.82784e-3	2.40312		Acrolein
8.600	VB	551.54254	4.41958e-3	2.43759		Propionaldehyde

```
Totals :                              12.09808

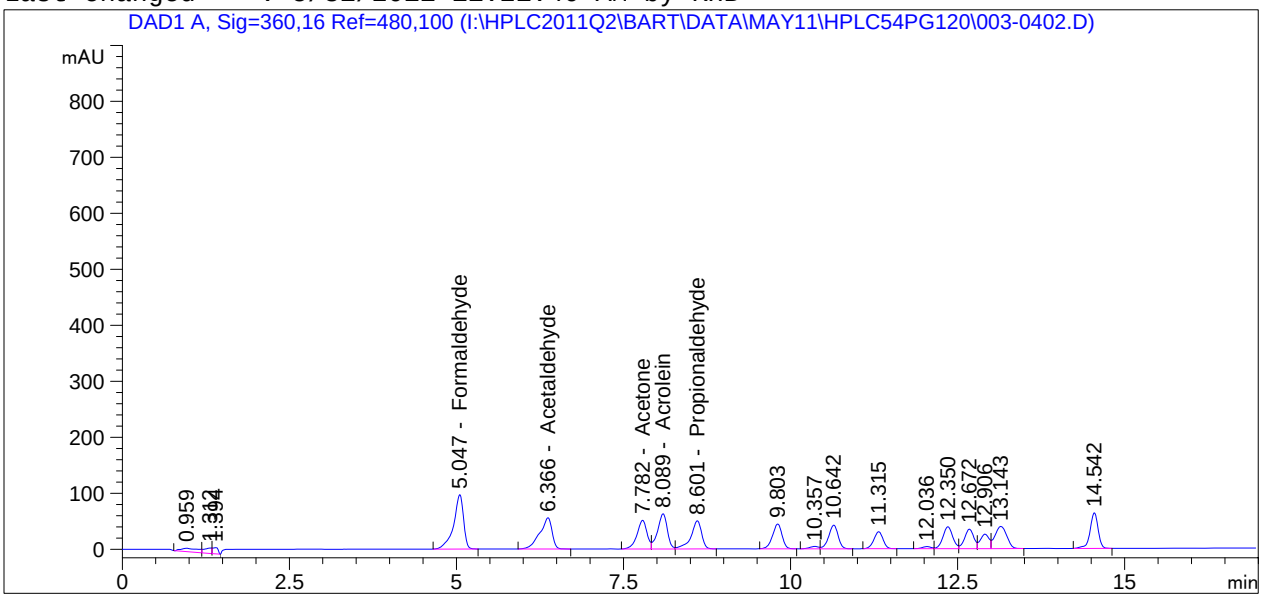

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-0402.D
Sample Name: hplc54pg120 #3

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   4
Acq. Instrument : Bart                          Location : Vial 3
Injection Date  : 5/27/2011 6:21:18 PM               Inj :   2
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.047	BB	1000.59607	2.42472e-3	2.42616		Formaldehyde
6.366	BB	712.76935	3.41603e-3	2.43484		Acetaldehyde
7.782	BV	534.88556	4.53790e-3	2.42726		Acetone
8.089	VV	630.79639	3.82784e-3	2.41459		Acrolein
8.601	VB	555.57050	4.41958e-3	2.45539		Propionaldehyde

```
Totals :                              12.15825


1 Warnings or Errors :

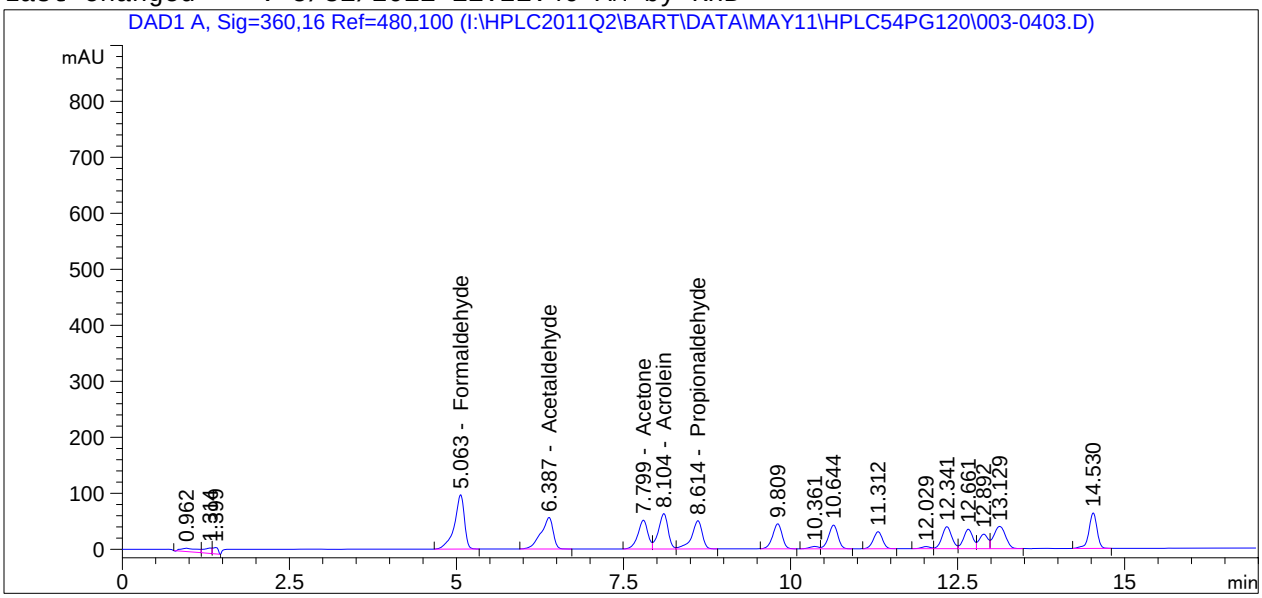
Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-0403.D
Sample Name: hplc54pg120 #3

==========

Acq. Operator : KHB Seq. Line : 4
Acq. Instrument : Bart Location : Vial 3
Injection Date : 5/27/2011 6:42:57 PM Inj : 3
Inj Volume : 15.000 µl
Acq. Method : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed : 5/31/2011 11:21:40 AM by KHB



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	1002.81152	2.42472e-3	2.43154		Formaldehyde
6.387	BB	713.84320	3.41603e-3	2.43851		Acetaldehyde
7.799	BV	533.12775	4.53790e-3	2.41928		Acetone
8.104	VV	631.16577	3.82784e-3	2.41600		Acrolein
8.614	VB	554.77332	4.41958e-3	2.45187		Propionaldehyde

Totals : 12.15720

1 Warnings or Errors :

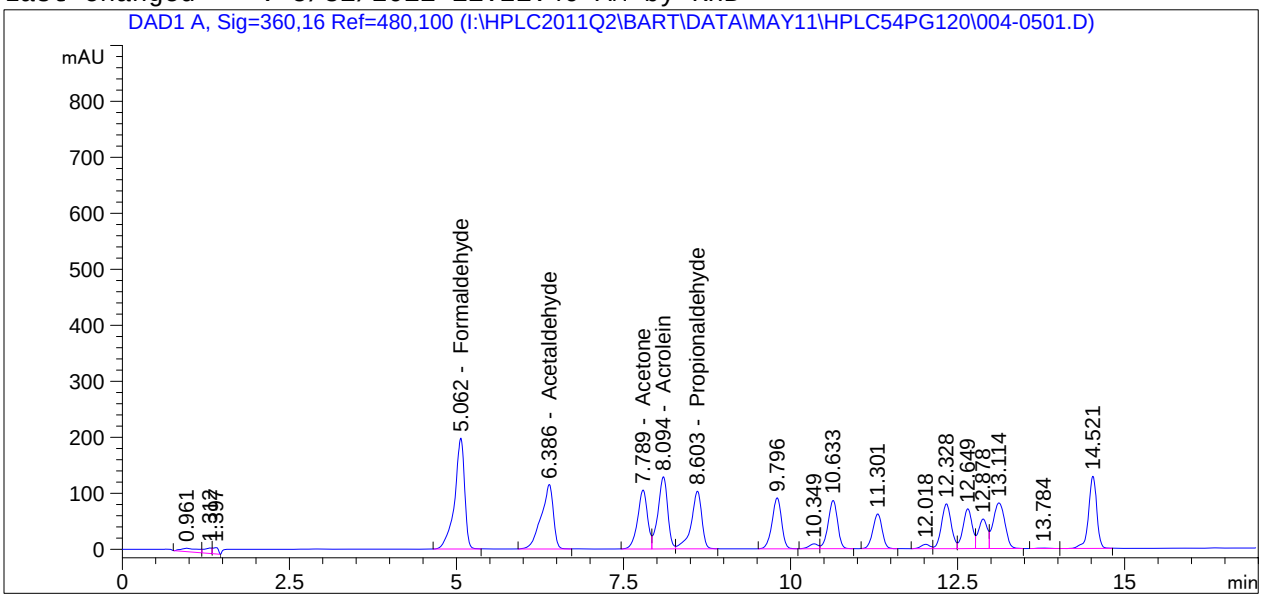
Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\004-0501.D
Sample Name: hplc54pg120 #4

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   5
Acq. Instrument : Bart                          Location : Vial 4
Injection Date  : 5/27/2011 7:04:36 PM               Inj :   1
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.062 BB     2044.54797 2.42472e-3    4.95746    Formaldehyde
  6.386 BB     1454.89929 3.41603e-3    4.96999    Acetaldehyde
  7.789 BV     1085.05432 4.53790e-3    4.92387    Acetone
  8.094 VV     1287.47888 3.82784e-3    4.92827    Acrolein
  8.603 VB     1130.24646 4.41958e-3    4.99522    Propionaldehyde

Totals :                                24.77480

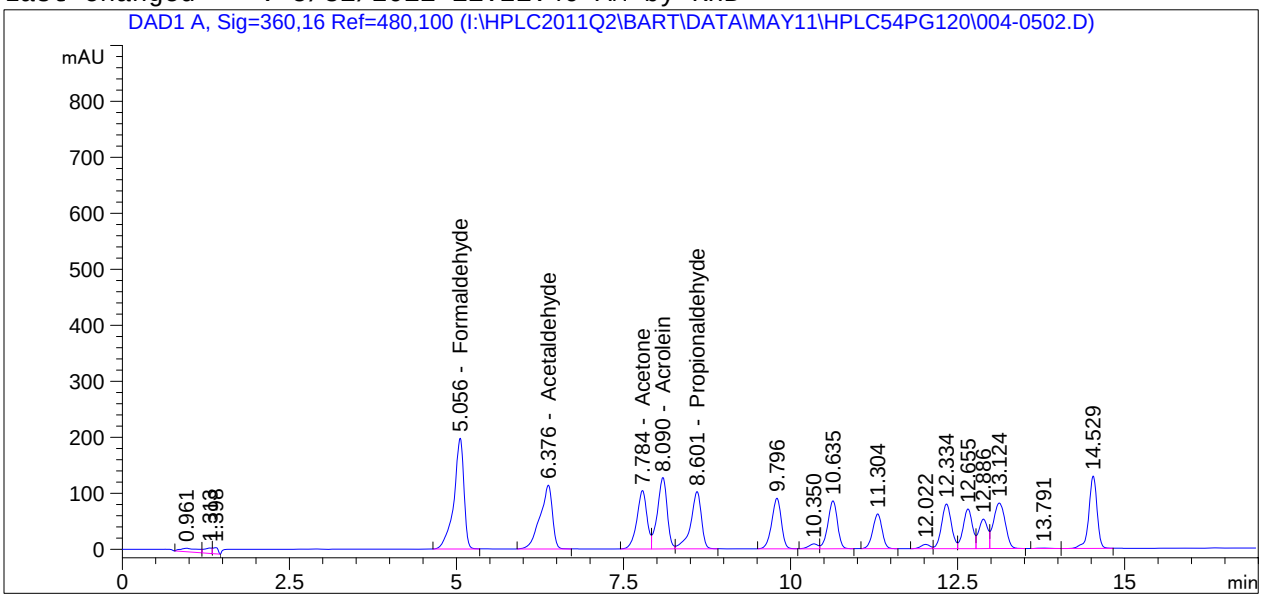

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\004-0502.D
Sample Name: hplc54pg120 #4

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   5
Acq. Instrument : Bart                          Location : Vial 4
Injection Date  : 5/27/2011 7:26:13 PM               Inj :   2
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.056 BB     2051.84546 2.42472e-3    4.97515    Formaldehyde
  6.376 BB     1460.14539 3.41603e-3    4.98791    Acetaldehyde
  7.784 BV     1094.21240 4.53790e-3    4.96543    Acetone
  8.090 VV     1288.81555 3.82784e-3    4.93339    Acrolein
  8.601 VB     1135.35559 4.41958e-3    5.01780    Propionaldehyde

Totals :                                24.87967

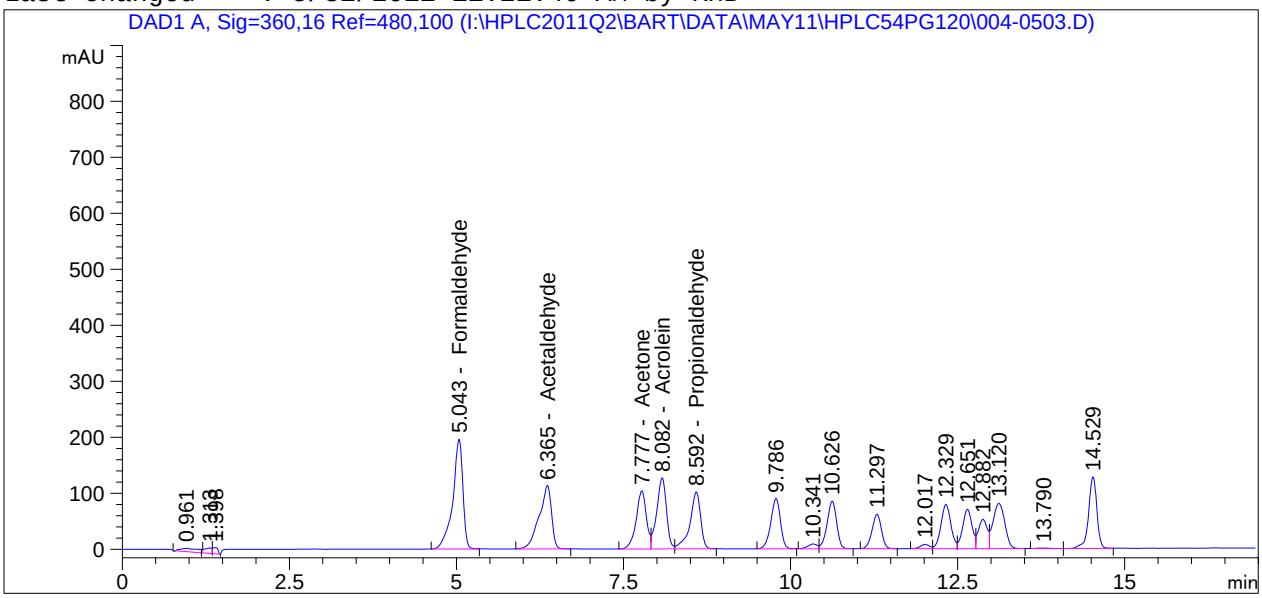

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\004-0503.D
Sample Name: hplc54pg120 #4

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   5
Acq. Instrument : Bart                          Location : Vial 4
Injection Date  : 5/27/2011 7:47:52 PM               Inj :   3
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.043 BB     2051.08740 2.42472e-3    4.97331    Formaldehyde
  6.365 BB     1460.08618 3.41603e-3    4.98770    Acetaldehyde
  7.777 BV     1097.61902 4.53790e-3    4.98089    Acetone
  8.082 VV     1286.53125 3.82784e-3    4.92464    Acrolein
  8.592 VB     1134.36035 4.41958e-3    5.01340    Propionaldehyde

Totals :                               24.87994

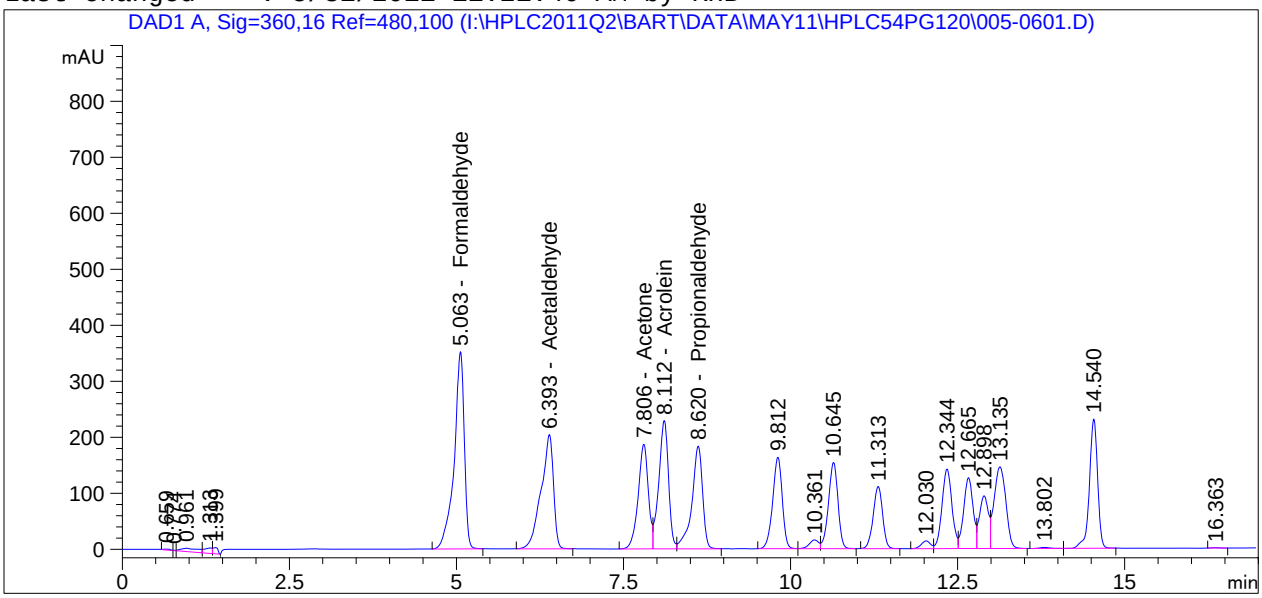

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\005-0601.D
Sample Name: hplc54pg120 #5

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   6
Acq. Instrument : Bart                          Location : Vial 5
Injection Date  : 5/27/2011 8:09:31 PM               Inj :   1
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	3694.70972	2.42472e-3	8.95863		Formaldehyde
6.393	BB	2628.70581	3.41603e-3	8.97975		Acetaldehyde
7.806	BV	1967.23157	4.53790e-3	8.92711		Acetone
8.112	VV	2322.37964	3.82784e-3	8.88971		Acrolein
8.620	VB	2043.09290	4.41958e-3	9.02961		Propionaldehyde

```
Totals :                                  44.78481

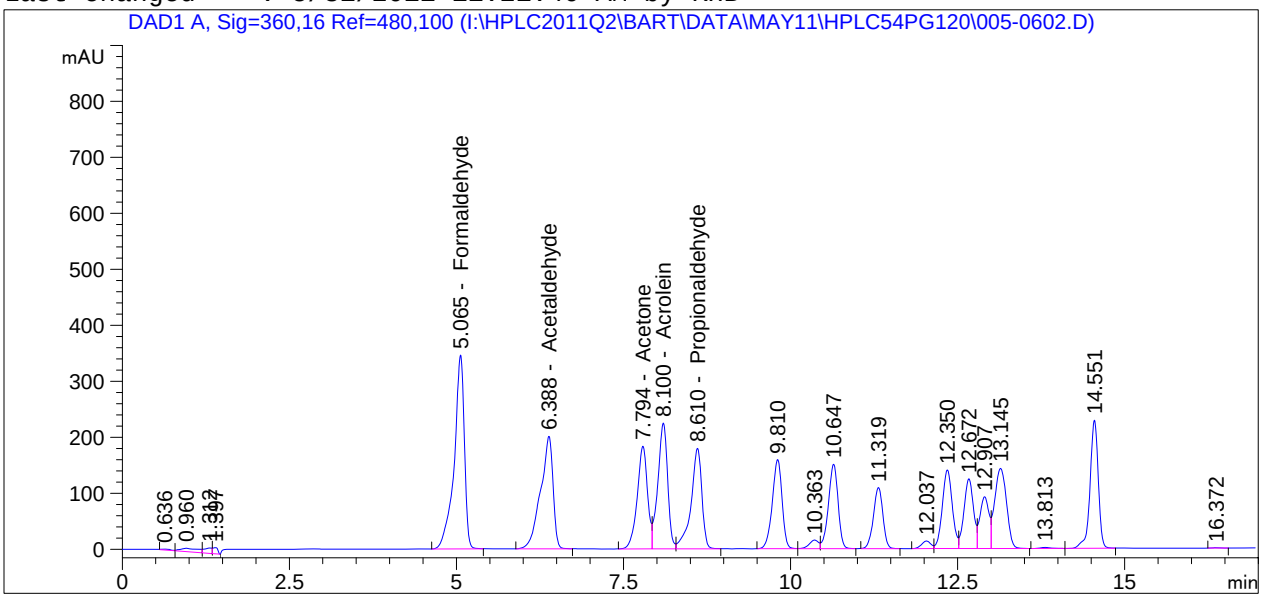

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\005-0602.D
Sample Name: hplc54pg120 #5

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   6
Acq. Instrument : Bart                          Location : Vial 5
Injection Date  : 5/27/2011 8:31:10 PM               Inj :   2
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.065	BB	3663.10767	2.42472e-3	8.88201		Formaldehyde
6.388	BB	2602.87476	3.41603e-3	8.89151		Acetaldehyde
7.794	BV	1958.41614	4.53790e-3	8.88710		Acetone
8.100	VV	2293.68091	3.82784e-3	8.77985		Acrolein
8.610	VB	2025.27539	4.41958e-3	8.95087		Propionaldehyde

```
Totals :                                44.39134

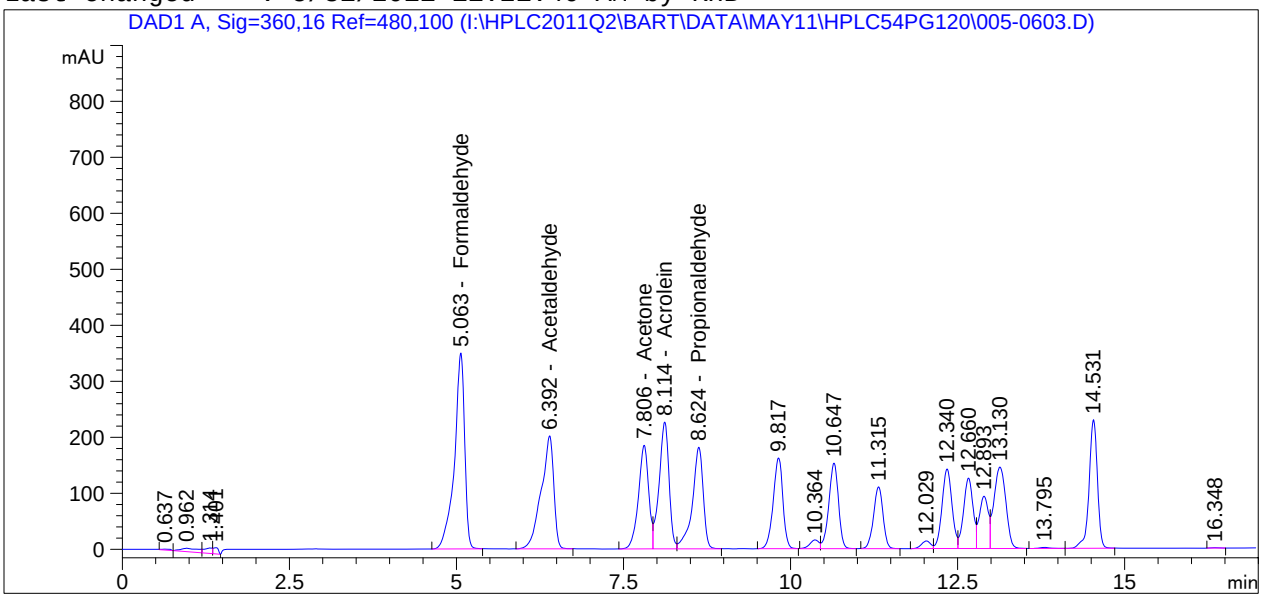

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\005-0603.D
Sample Name: hplc54pg120 #5

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   6
Acq. Instrument : Bart                          Location : Vial 5
Injection Date  : 5/27/2011 8:52:48 PM               Inj :   3
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	3707.37524	2.42472e-3	8.98934		Formaldehyde
6.392	BB	2634.36401	3.41603e-3	8.99908		Acetaldehyde
7.806	BV	1976.71411	4.53790e-3	8.97014		Acetone
8.114	VV	2329.74268	3.82784e-3	8.91789		Acrolein
8.624	VB	2048.48218	4.41958e-3	9.05343		Propionaldehyde

```
Totals :                              44.92989

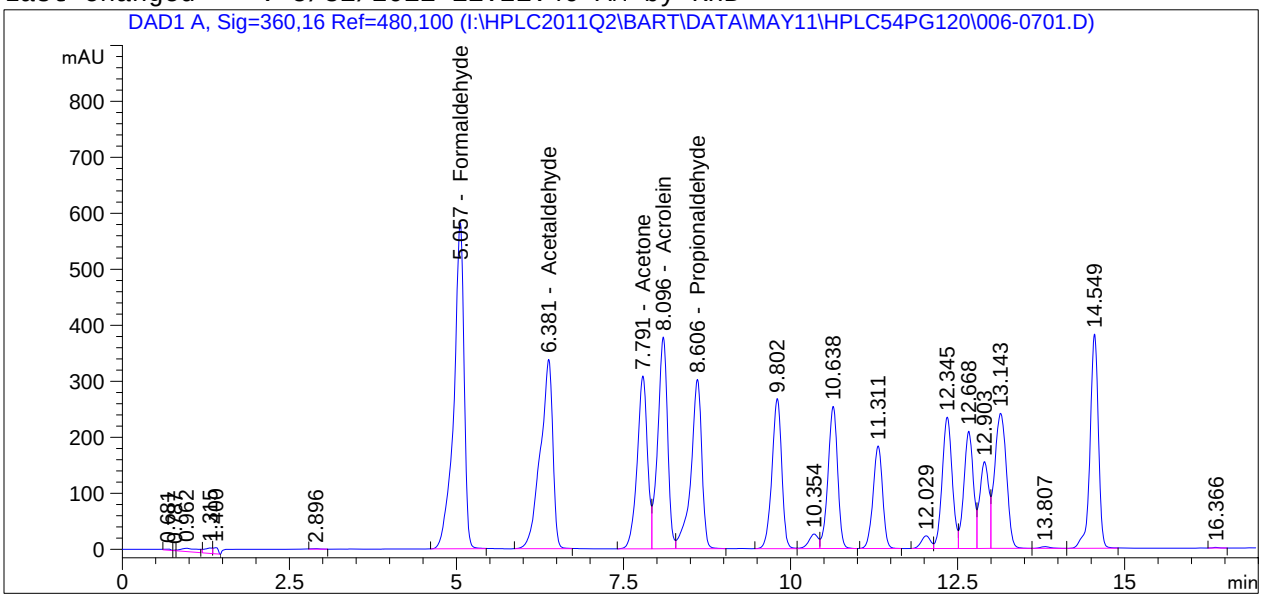

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\006-0701.D
Sample Name: hplc54pg120 #6

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   7
Acq. Instrument : Bart                          Location : Vial 6
Injection Date  : 5/27/2011 9:14:25 PM               Inj :   1
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	BB	6163.41943	2.42472e-3	14.94456		Formaldehyde
6.381	BB	4384.52734	3.41603e-3	14.97769		Acetaldehyde
7.791	BV	3290.95898	4.53790e-3	14.93406		Acetone
8.096	VV	3868.78564	3.82784e-3	14.80911		Acrolein
8.606	VB	3406.74805	4.41958e-3	15.05640		Propionaldehyde

```
Totals :                              74.72182

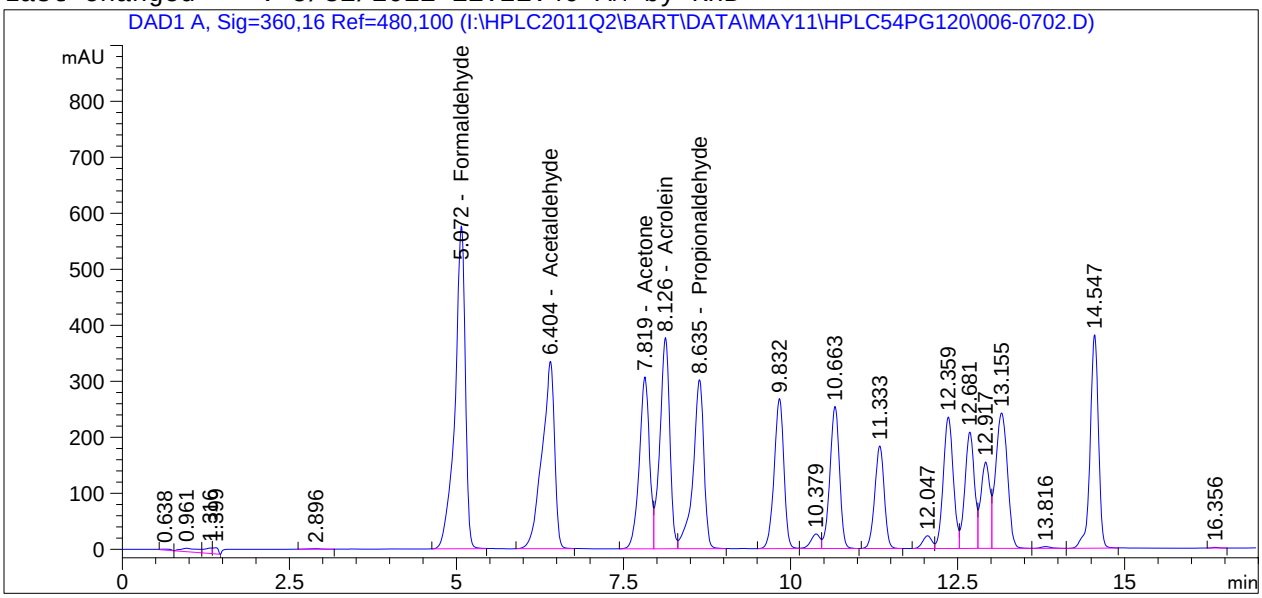

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                         *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\006-0702.D
Sample Name: hplc54pg120 #6

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   7
Acq. Instrument : Bart                          Location : Vial 6
Injection Date  : 5/27/2011 9:36:05 PM               Inj :   2
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.072	BB	6128.59717	2.42472e-3	14.86013		Formaldehyde
6.404	BB	4362.37842	3.41603e-3	14.90203		Acetaldehyde
7.819	BV	3252.63745	4.53790e-3	14.76016		Acetone
8.126	VV	3856.25903	3.82784e-3	14.76116		Acrolein
8.635	VB	3395.85425	4.41958e-3	15.00825		Propionaldehyde

```
Totals :                                  74.29173

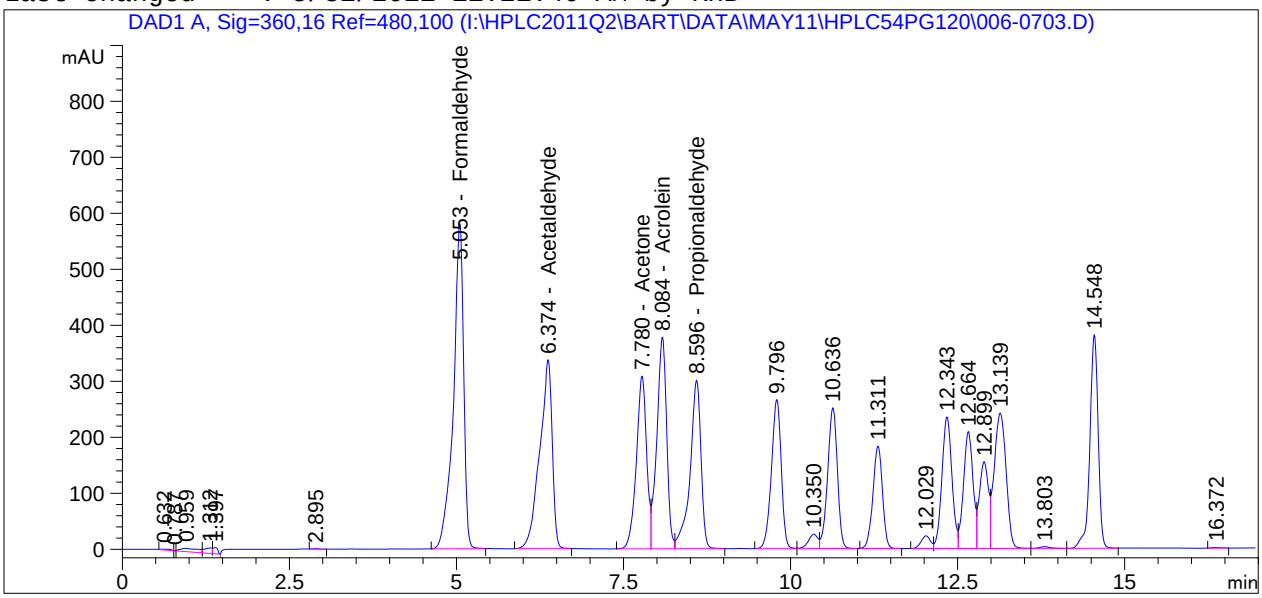

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\006-0703.D
Sample Name: hplc54pg120 #6

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   7
Acq. Instrument : Bart                          Location : Vial 6
Injection Date  : 5/27/2011 9:57:44 PM               Inj :   3
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.053	BB	6167.54736	2.42472e-3	14.95457		Formaldehyde
6.374	BB	4389.73730	3.41603e-3	14.99549		Acetaldehyde
7.780	BV	3286.98657	4.53790e-3	14.91603		Acetone
8.084	VV	3878.68140	3.82784e-3	14.84699		Acrolein
8.596	VB	3422.71704	4.41958e-3	15.12697		Propionaldehyde

```
Totals :                                74.84006

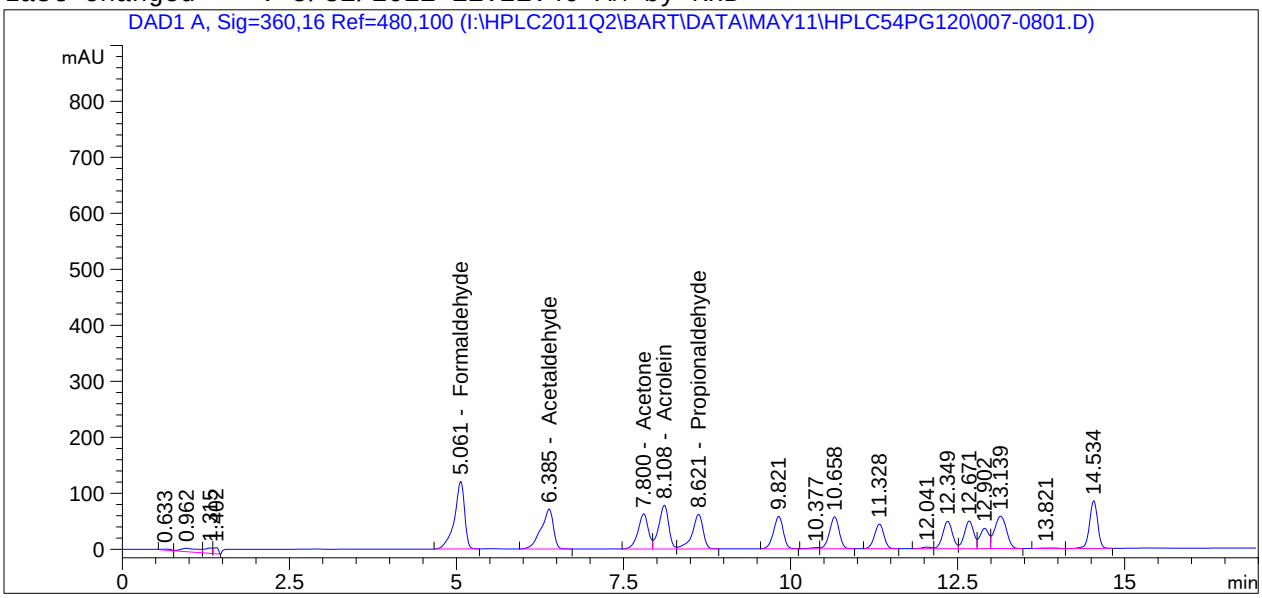

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\007-0801.D
Sample Name: hplc54pg120 #SS

```
==================================================================
Acq. Operator   : KHB                          Seq. Line :   8
Acq. Instrument : Bart                          Location : Vial 7
Injection Date  : 5/27/2011 10:19:22 PM              Inj :   1
                                               Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.061	BB	1265.50842	2.42472e-3	3.06850		Formaldehyde
6.385	BB	910.46594	3.41603e-3	3.11018		Acetaldehyde
7.800	BV	673.00220	4.53790e-3	3.05402		Acetone
8.108	VV	804.38818	3.82784e-3	3.07907		Acrolein
8.621	VB	697.69531	4.41958e-3	3.08352		Propionaldehyde

```
Totals :                              15.39530


1 Warnings or Errors :

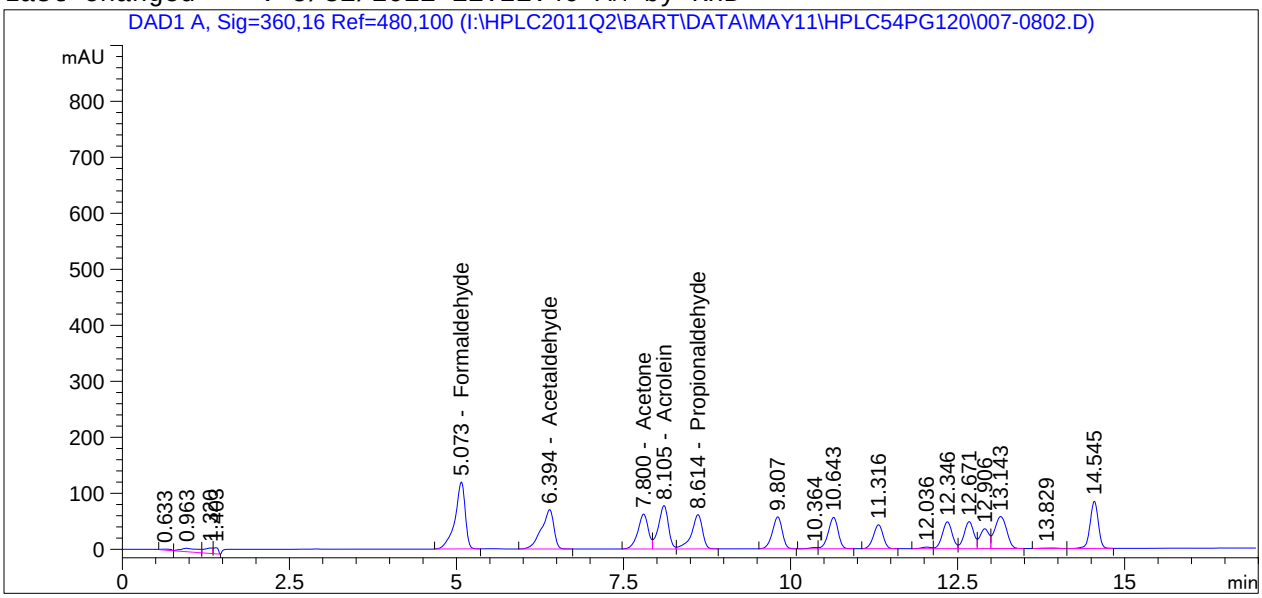
Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\007-0802.D
Sample Name: hplc54pg120 #SS

==========

Acq. Operator : KHB Seq. Line : 8
Acq. Instrument : Bart Location : Vial 7
Injection Date : 5/27/2011 10:40:59 PM Inj : 2
Inj Volume : 15.000 µl
Acq. Method : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed : 5/31/2011 11:21:40 AM by KHB



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.073	BB	1264.89819	2.42472e-3	3.06702		Formaldehyde
6.394	BB	909.70721	3.41603e-3	3.10759		Acetaldehyde
7.800	BV	676.37134	4.53790e-3	3.06931		Acetone
8.105	VV	800.74591	3.82784e-3	3.06513		Acrolein
8.614	VB	697.62158	4.41958e-3	3.08319		Propionaldehyde

Totals : 15.39225

1 Warnings or Errors :

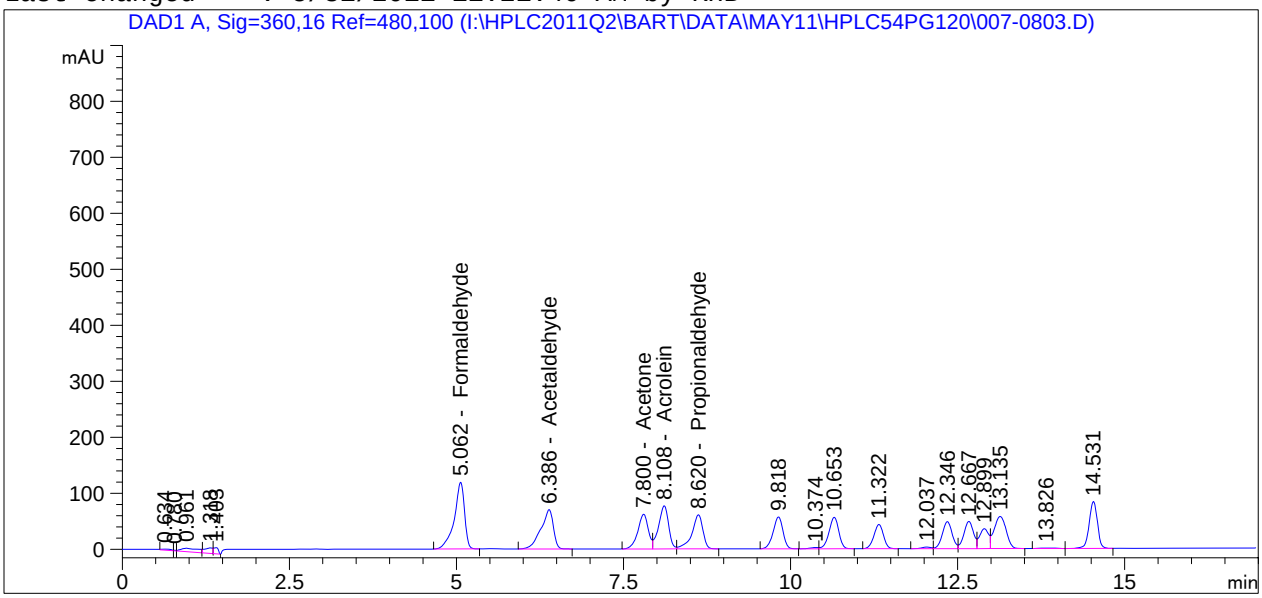
Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\007-0803.D
Sample Name: hplc54pg120 #SS

```
==========================================================================
Acq. Operator   : KHB                              Seq. Line :   8
Acq. Instrument : Bart                              Location : Vial 7
Injection Date  : 5/27/2011 11:02:36 PM                 Inj :   3
                                                  Inj Volume : 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Tuesday, May 31, 2011 11:20:41 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.062 BB     1263.88220 2.42472e-3    3.06456    Formaldehyde
  6.386 BB      908.57458 3.41603e-3    3.10372    Acetaldehyde
  7.800 BV      674.59912 4.53790e-3    3.06127    Acetone
  8.108 VV      800.84680 3.82784e-3    3.06552    Acrolein
  8.620 VB      695.49054 4.41958e-3    3.07378    Propionaldehyde

Totals :                                15.36884

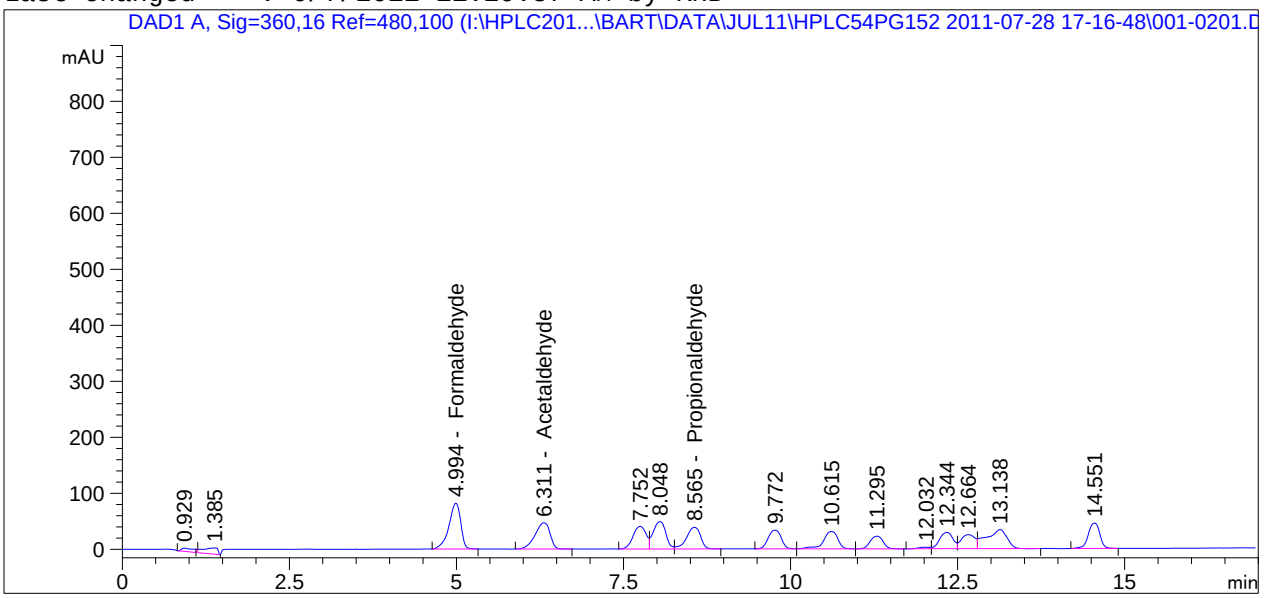

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\001-0201.D
Sample Name: hplc54pg146 #3

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :   2
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 7/28/2011 5:40:07 PM               Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  4.994 BB     1002.69916 2.42472e-3    2.43126    Formaldehyde
  6.311 BB      731.19922 3.41603e-3    2.49780    Acetaldehyde
  8.565 VB      565.38086 4.41958e-3    2.49875    Propionaldehyde

Totals :                                7.42781

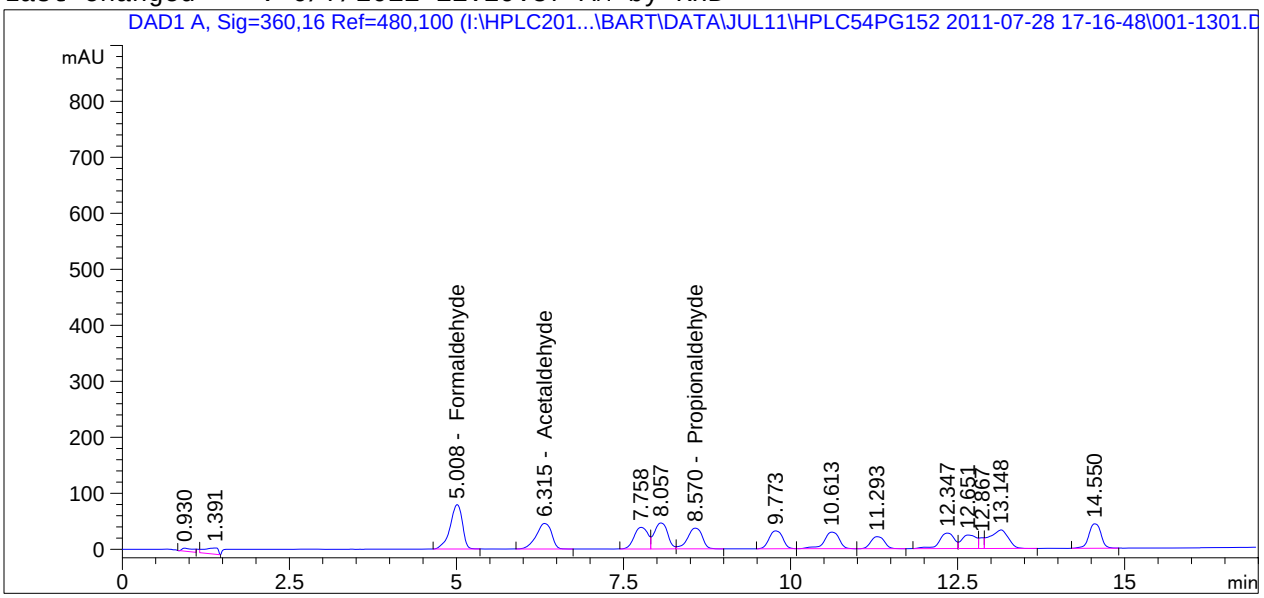

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\001-1301.D
Sample Name: hplc54pg146 #3

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  13
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 7/28/2011 9:36:10 PM               Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.008 BB     1012.18713 2.42472e-3    2.45427    Formaldehyde
  6.315 BB      734.22742 3.41603e-3    2.50815    Acetaldehyde
  8.570 VB      565.86426 4.41958e-3    2.50088    Propionaldehyde

Totals :                                7.46330

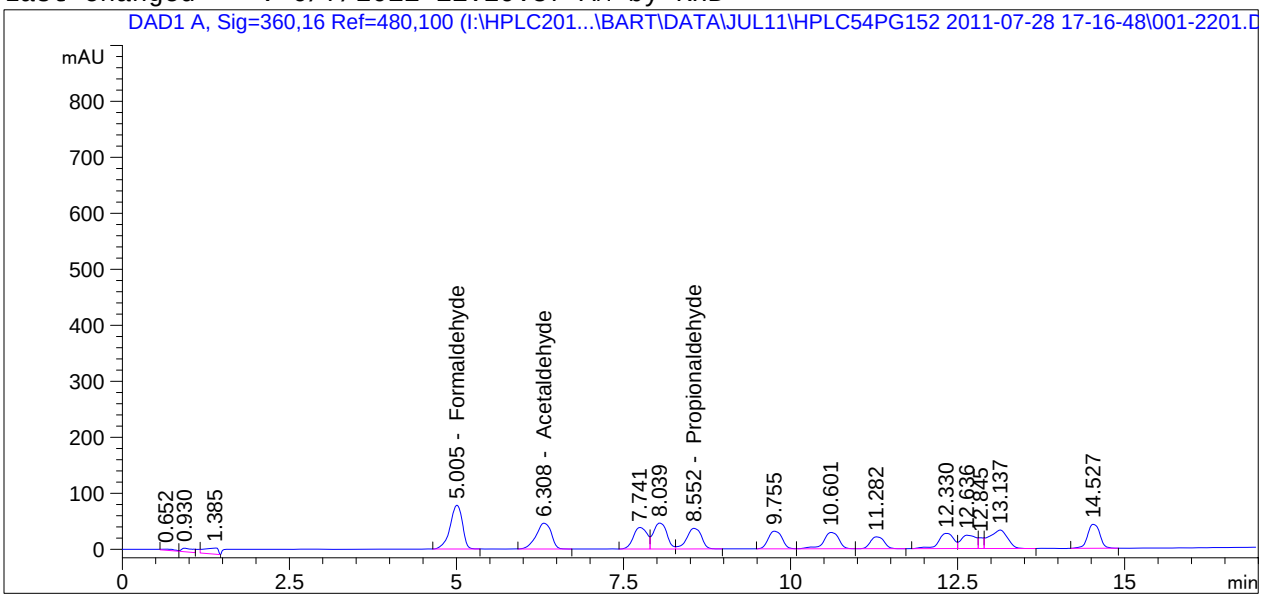

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\JUL11\HPLC54PG152 2011-07-28 17-16-48\001-2201.D
Sample Name: hplc54pg146 #3

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  22
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 7/29/2011 12:49:17 AM               Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG152 2011-07-28 17-16-48\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.005 BB     1005.18799 2.42472e-3    2.43730    Formaldehyde
  6.308 BB      730.67029 3.41603e-3    2.49599    Acetaldehyde
  8.552 VB      562.79364 4.41958e-3    2.48731    Propionaldehyde

Totals :                                7.42061

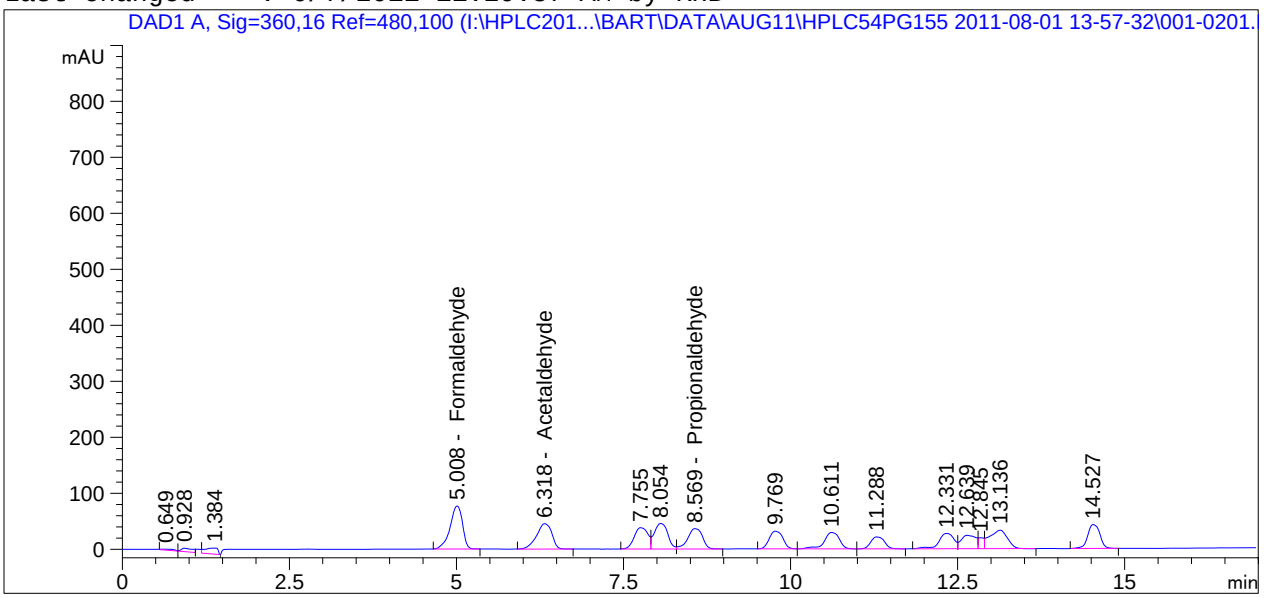

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\001-0201.D
Sample Name: hplc54pg146 #3

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :   2
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 8/1/2011 2:20:50 PM                Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.008 BB      994.75671 2.42472e-3    2.41201    Formaldehyde
  6.318 BB      725.12817 3.41603e-3    2.47706    Acetaldehyde
  8.569 VB      557.34271 4.41958e-3    2.46322    Propionaldehyde

Totals :                                7.35229

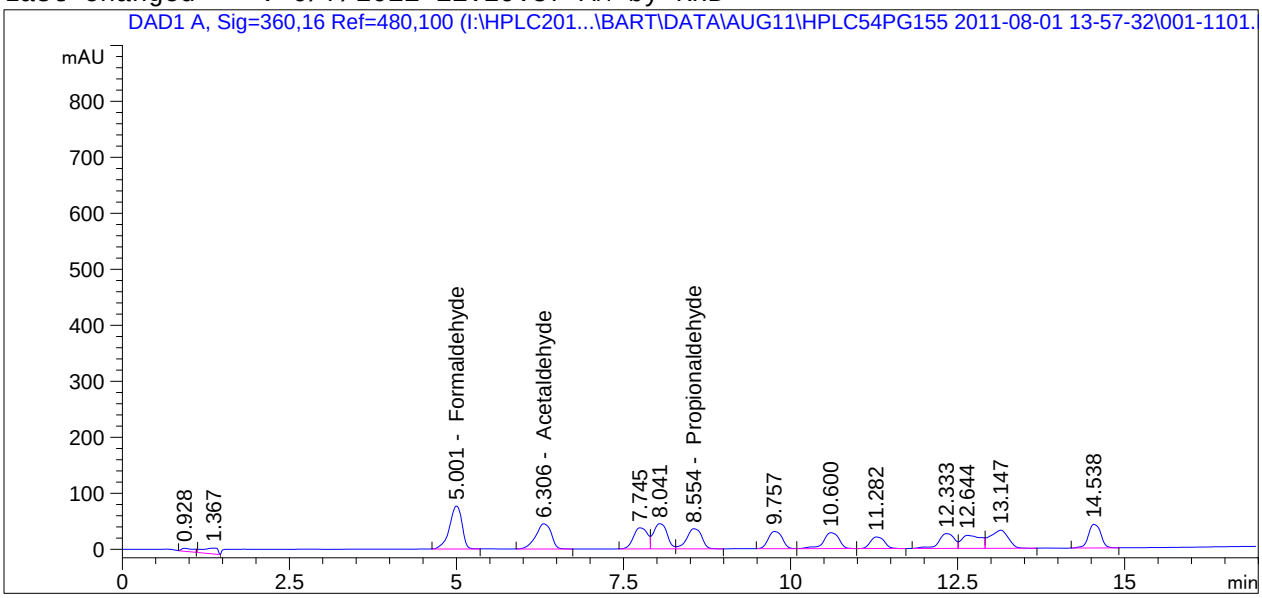

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\001-1101.D
Sample Name: hplc54pg146 #3

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  11
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 8/1/2011 5:34:06 PM                 Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.001	BB	997.95258	2.42472e-3	2.41975		Formaldehyde
6.306	BB	726.28284	3.41603e-3	2.48101		Acetaldehyde
8.554	VB	559.24512	4.41958e-3	2.47163		Propionaldehyde

```
Totals :                                  7.37239

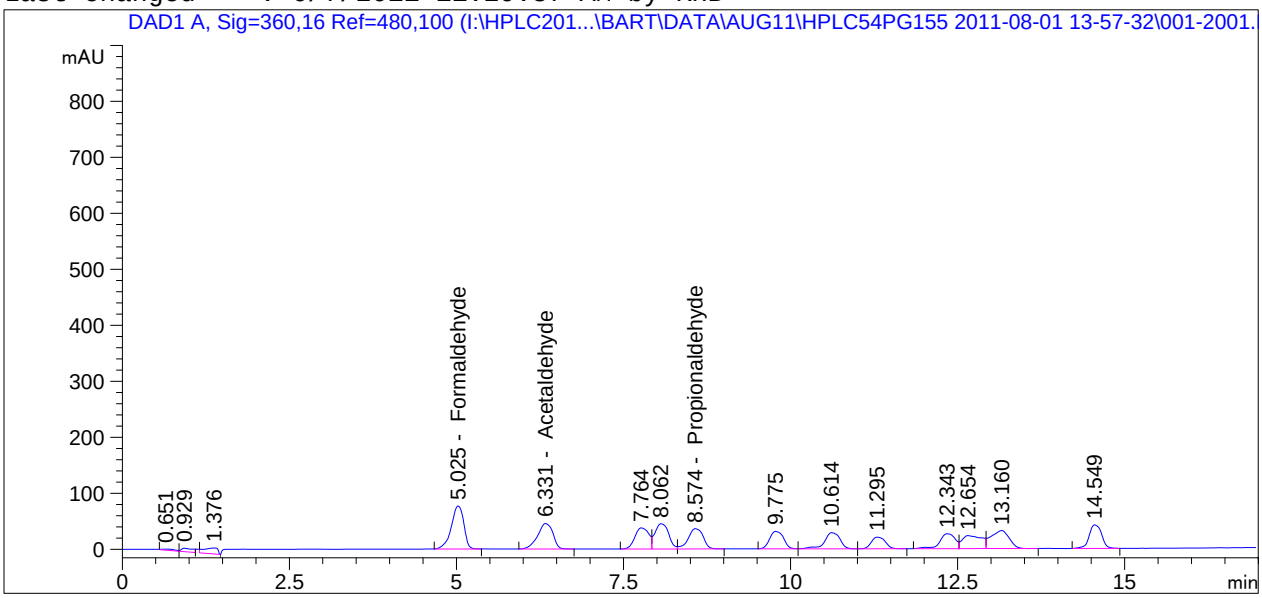

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Data File I:\HPLC2011Q3\BART\DATA\AUG11\HPLC54PG155 2011-08-01 13-57-32\001-2001.D
Sample Name: hplc54pg146 #3

```
==========================================================================
Acq. Operator   : Kristen Bounds                 Seq. Line :  20
Acq. Instrument : Bart                          Location : Vial 1
Injection Date  : 8/1/2011 8:47:25 PM                Inj :   1
                                               Inj Volume : 15.0 µl
Acq. Method     : C:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG155 2011-08-01 13-57-32\8315ICR.M
Last changed    : 6/23/2011 6:03:33 PM by System
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/7/2011 11:27:58 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]                [ug/mL]
-------|------|----------|----------|----------|--|-----------------
  5.025 BB      999.45746 2.42472e-3    2.42340    Formaldehyde
  6.331 BB      725.52216 3.41603e-3    2.47841    Acetaldehyde
  8.574 VB      559.50378 4.41958e-3    2.47277    Propionaldehyde

Totals :                                7.37458


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                          *** End of Report ***
```

Method Information

Method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Modified: 5/27/2011 at 3:16:54 PM

Column: Restek Ultra C18, 4*150mm
Mobile Phase: 59:30:10:1 DIUF H2O:ACN:THF:IPA to 100% ACN on a gradient
Flow rate: 1.2 mL/min
UV Detection at 360 nm

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Modified on: 5/27/2011 at 3:16:54 PM

Agilent 1100/1200 Quaternary Pump 1

Control

Column Flow	:	1.200 ml/min
Stoptime	:	17.00 min
Posttime	:	3.00 min

Solvents

Solvent A	:	100.0 % (59:30:10:1 DI:ACN:THF:IPA)
Solvent B	:	0.0 % (100% ACN)
Solvent C	:	Off
Solvent D	:	Off

PressureLimits

Minimum Pressure	:	0 bar
Maximum Pressure	:	400 bar

Auxiliary

Maximal Flow Ramp	:	100.00 ml/min^2
Primary Channel	:	Auto
Compressibility	:	83*10^-6/bar
Minimal Stroke	:	Auto

Store Parameters

Store Ratio A	:	Yes
Store Ratio B	:	Yes
Store Ratio C	:	Yes
Store Ratio D	:	Yes
Store Flow	:	Yes
Store Pressure	:	Yes

Agilent Contacts Option

Contact 1	:	Open
Contact 2	:	Open
Contact 3	:	Open
Contact 4	:	Open

Timetable

Time	Solv.B	Solv.C	Solv.D	Flow	Pressure
0.00	0.0	0.0	0.0		
0.10	0.0	0.0	0.0		
12.00	50.0	0.0	0.0		
17.00	100.0	0.0	0.0		

Agilent Contacts Option Timetable

Timetable is empty

Agilent 1100/1200 Diode Array Detector 1

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Modified on: 5/27/2011 at 3:16:54 PM

Signals

Signal	Store	Signal,Bw	Reference,Bw [nm]
A:	Yes	360 16	480 100
B:	No	254 16	360 100
C:	No	218 8	360 100
D:	No	230 16	360 100
E:	No	280 16	360 100

Spectrum
- Store Spectra : None

Time
- Stoptime : As pump
- Posttime : Off

Required Lamps
- UV lamp required : Yes
- Vis lamp required : Yes

Autobalance
- Prerun balancing : Yes
- Postrun balancing : No
- Margin for negative Absorbance: 100 mAU

Peakwidth : > 0.1 min
Slit : 4 nm

Analog Outputs
- Zero offset ana. out. 1: 5 %
- Zero offset ana. out. 2: 5 %
- Attenuation ana. out. 1: 1000 mAU
- Attenuation ana. out. 2: 1000 mAU

Agilent Contacts Option

- Contact 1 : Open
- Contact 2 : Open
- Contact 3 : Open
- Contact 4 : Open

Agilent 1100 Autosampler 1

Injection
- Injection Mode : Needle Wash
- Injector volume : 15.00 µl
- Wash Vial : 100
- Optimization : Prefetch Sample Vial 8.00 min. after Injection

Auxiliary
- Drawspeed : 100 µl/min
- Ejectspeed : 1000 µl/min
- Draw position : 2.0 mm

Time
- Stoptime : As Pump
- Posttime : Off

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Modified on: 5/27/2011 at 3:16:54 PM

==========

Agilent 1100/1200 Column Thermostat 1

==========

Temperature settings

Left temperature	:	30.0°C
Right temperature	:	Same as left
Enable analysis	:	When Temp. is within setpoint +/- 0.8°C
Store left temperature	:	No
Store right temperature	:	No

Time

Stoptime	:	As pump
Posttime	:	Off

Column Switching Valve : Column 1

Timetable is empty

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 8	RB/100% ACN	8315ICR	1	Sample	
2	Vial 1	hplc54pg120 #1	8315ICR	3	Sample	
3	Vial 2	hplc54pg120 #2	8315ICR	3	Sample	
4	Vial 3	hplc54pg120 #3	8315ICR	3	Sample	
5	Vial 4	hplc54pg120 #4	8315ICR	3	Sample	
6	Vial 5	hplc54pg120 #5	8315ICR	3	Sample	
7	Vial 6	hplc54pg120 #6	8315ICR	3	Sample	
8	Vial 7	hplc54pg120 #SS	8315ICR	3	Sample	
9	Vial 8	RB/100% ACN	8315ICR	3	Sample	
10	Vial 11	052011-0011U-1-1 05 11-68	8315ICR	1	Sample	
11	Vial 11	052011-0011U-1-1 05 11-68	8315ICR	1	Sample	
12	Vial 12	052011-0011U-1-1 LD 0511-68	8315ICR	1	Sample	
13	Vial 13	052011-0011U-1-2 05 11-68	8315ICR	1	Sample	
14	Vial 14	052011-0011U-1-3 05 11-68	8315ICR	1	Sample	
15	Vial 15	052011-0011S-1-1 05 11-68	8315ICR	1	Sample	
16	Vial 16	052011-0011-FieldSpi ke 0511-68	8315ICR	1	Sample	
17	Vial 17	052011-0011-Sample B L 0511-68	8315ICR	1	Sample	
18	Vial 18	052011-0011-DM/H2O B L 0511-68	8315ICR	1	Sample	
19	Vial 19	MB-1 0511-68	8315ICR	1	Sample	
20	Vial 3	hplc54pg120 #3	8315ICR	3	Sample	
21	Vial 20	LCS-1 0511-68	8315ICR	1	Sample	
22	Vial 21	ZRT LCS-1	8315ICR	1	Sample	
23	Vial 22	ZRT LCS-2	8315ICR	1	Sample	

Sequence: I:\HPLC2011Q1\BART\SEQUENCE\HPLC54PG120.S

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
24	Vial 23	ZRT LCS-3	8315ICR	1	Sample	
25	Vial 24	ZRT LCS-4	8315ICR	1	Sample	
26	Vial 3	hplc54pg120 #3	8315ICR	3	Sample	
27	Vial 9	hplc54pg120 #MDL 1	8315ICR	8	Sample	
28	Vial 3	hplc54pg120 #3	8315ICR	3	Sample	
29	Vial 9	hplc54pg120 #MDL 1	8315ICR	8	Sample	
30	Vial 10	hplc54pg120 #MDL 2	8315ICR	8	Sample	
31	Vial 3	hplc54pg120 #3	8315ICR	3	Sample	

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
~~1~~	~~Vial 2~~	~~RB/100% ACN~~	~~8315ICR~~	~~1~~	~~Sample~~	
2	Vial 1	hplc54pg146 #3	8315ICR	1	Sample	
3	Vial 2	RB/100% ACN	8315ICR	1	Sample	
4	Vial 71	M0011-Cont 1-R1 071 1-41	8315ICR	1	Sample	
5	Vial 71	M0011-Cont 1-R1 071 1-41	8315ICR	1	Sample	
6	Vial 72	LD/M0011-Cont 1-R1 0711-41	8315ICR	1	Sample	
7	Vial 73	M0011-Cont 1-R2 071 1-41	8315ICR	1	Sample	
8	Vial 74	M0011-Cont 1-R3 071 1-41	8315ICR	1	Sample	
9	Vial 75	M0011-Matrix Spike 0711-41	8315ICR	1	Sample	
10	Vial 76	M0011-Sample Blank 0711-41	8315ICR	1	Sample	
11	Vial 77	EXM-DCU-R1 0611-122	8315ICR	1	Sample	
12	Vial 77	EXM-DCU-R1 0611-122	8315ICR	1	Sample	
13	Vial 1	hplc54pg146 #3	8315ICR	1	Sample	
14	Vial 78	LD/EXM-DCU-R1 0611-122	8315ICR	1	Sample	
15	Vial 79	EXM-DCU-R2 0611-122	8315ICR	1	Sample	
16	Vial 80	EXM-DCU-R3 0611-122	8315ICR	1	Sample	
17	Vial 81	EXM-DCU-DNPH RB 061 1-122	8315ICR	1	Sample	
18	Vial 82	EXM-DCU-MeCl2 RB 06 11-122	8315ICR	1	Sample	
19	Vial 83	EXM-DCU-Spike 0611-122	8315ICR	1	Sample	
20	Vial 84	MB-1 0611-122	8315ICR	1	Sample	
21	Vial 85	LCS-1 0611-122	8315ICR	1	Sample	
22	Vial 1	hplc54pg146 #3	8315ICR	1	Sample	

EM-BTRF-002606

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 2	RB/100% ACN	8315ICR	1	Sample	
2	Vial 1	hplc54pg146 #3	8315ICR	1	Sample	
3	Vial 2	RB/100% ACN	8315ICR	1	Sample	
4	Vial 12	Archive MS/R2 0711-25	8315ICR	1	Sample	
5	Vial 13	MS/M0011-Cont 1-R2 0711-41	8315ICR	1	Sample	
6	Vial 14	MSD/M0011-Cont 1-R2 0711-41	8315ICR	1	Sample	
7	Vial 15	MS/EXM-DCU-R2 0611-122	8315ICR	1	Sample	
8	Vial 16	MSD/EXM-DCU-R2 0611-122	8315ICR	1	Sample	
9	Vial 17	MB-2 0611-122	8315ICR	1	Sample	
10	Vial 18	LCS-2 0611-122	8315ICR	1	Sample	
11	Vial 1	hplc54pg146 #3	8315ICR	1	Sample	
12	Vial 21	M0011 T1R0 Recovery Spike 0711-81	8315ICR	1	Sample	
13	Vial 22	M0011 T1R1 0711-81	8315ICR	1	Sample	
14	Vial 22	M0011 T1R1 0711-81	8315ICR	1	Sample	
15	Vial 23	LD/M0011 T1R1 0711-81	8315ICR	1	Sample	
16	Vial 24	M0011 T1R2 0711-81	8315ICR	1	Sample	
17	Vial 25	M0011 T1R3 0711-81	8315ICR	1	Sample	
18	Vial 26	M0011 T1R4 Matrix Spike 0711-81	8315ICR	1	Sample	
19	Vial 27	M0011 Blank 0711-81	8315ICR	1	Sample	
20	Vial 1	hplc54pg146 #3	8315ICR	1	Sample	

This Is The Last Page Of This Report.

APPENDIX O: ACID GASES LAB REPORT

TRC Environmental Corporation

9225 US Hwy 183 S
Austin, TX 78747

ExxonMobil - DCU ICR

Project #182129

Analytical Report (0711-163)

EPA Method 26A

Hydrogen chloride, Hydrogen fluoride
Chloride

EPA OTM 29

Hydrogen cyanide

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 135 pages.

Report Issued: 09/20/2011

Summary of Results

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A

Client #	182129
Job #	0711-163
# Samples	3 Runs, 2 Blanks

Compound	Sample ID / Catch Weight (ug)		
	R1 H2SO4	***R2 H2SO4***	***R3 H2SO4***
Hydrogen fluoride	301 ND	581 ND	472 ND
Hydrogen chloride	320 J	567 ND	461 ND
	Rgtblk-H2SO4		
Hydrogen fluoride	25.3 ND		
Hydrogen chloride	24.7 ND		
	R1 NaOH	***R2 NaOH***	***R3 NaOH***
Chloride	177 J	69.0 ND	68.2 ND
	Rgtblk-NaOH		
Chloride	40.0 ND		

Company	TRC Environmental Corp.
Analyst	AMP
Parameters	EPA OTM 29

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

Compound	Sample ID / Catch Weight (ug)		
	R1-NaOH	***R2-NaOH***	***R3-NaOH***
Hydrogen Cyanide	19.8 ND	25.2 ND	24.9 ND
	Rgtblk-NaOH		
Hydrogen Cyanide	14.6 ND		

Results

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A H2SO4

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Hydrogen fluoride as Fluoride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Acid Conversion Factor	Catch Weight (ug)	Qual
R1 H2SO4	037-5101.D	037-5102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	1,431	1.053	301	ND
R2 H2SO4	040-5401.D	040-5402.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,760	1.053	581	ND
R3 H2SO4	041-5501.D	041-5502.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,242	1.053	472	ND
H2SO4 Blank	042-5801.D	042-5802.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	120	1.053	25.3	ND
0.01N H2SO4/NaOH RB	064-4701.D	064-4702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
0.01N H2SO4/NaOH RB	064-7101.D	064-7102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
MS R1 H2SO4	038-5201.D	038-5202.D	HPLC55PG192.M	2.71	2.71	0.0	3.24	3.24	0.1	3.24	1	10.0	1.053	34.1	
													Spike Amount (ug)	31.6	
													Native Amount (ug)	0.00	
													Spike Recovery (%)	108%	
MSD R1 H2SO4	039-5301.D	039-5302.D	HPLC55PG192.M	2.71	2.71	0.0	3.26	3.23	0.4	3.24	1	10.0	1.053	34.1	
													Spike Amount (ug)	31.6	
													Native Amount (ug)	0.00	
													Spike Recovery (%)	108%	
HPLC55pg192 #SS	063-4601.D	063-4602.D	HPLC55PG192.M	2.71	2.71	0.0	1.32	1.33	0.2	1.32	1	1.00	1.053	1.40	
													Spike Amount (ug)	1.32	
													Spike Recovery (%)	106%	
HPLC55pg192 #SS	063-7001.D	063-7002.D	HPLC55PG192.M	2.71	2.71	0.0	1.34	1.34	0.2	1.34	1	1.00	1.053	1.41	
													Spike Amount (ug)	1.32	
													Spike Recovery (%)	107%	

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A H2SO4

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Hydrogen chloride as Chloride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Acid Conversion Factor	Catch Weight (ug)	Qual
R1 H2SO4	037-5101.D	037-5102.D	HPLC55PG192.M	3.60	3.59	0.2	0.0214	0.0222	1.7	0.0218	10	1,431	1.028	320	J
R2 H2SO4	040-5401.D	040-5402.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,760	1.028	567	ND
R3 H2SO4	041-5501.D	041-5502.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	2,242	1.028	461	ND
H2SO4 Blank	042-5801.D	042-5802.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	120	1.028	24.7	ND
0.01N H2SO4/NaOH RB	064-4701.D	064-4702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
0.01N H2SO4/NaOH RB	064-7101.D	064-7102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
MS R1 H2SO4	038-5201.D	038-5202.D	HPLC55PG192.M	3.60	3.60	0.0	2.89	2.89	0.0	2.89	1	10.0	1.028	29.7	
													Spike Amount (ug)	30.8	
													Native Amount (ug)	0.224	
													Spike Recovery (%)	95.6%	
MSD R1 H2SO4	039-5301.D	039-5302.D	HPLC55PG192.M	3.60	3.60	0.1	2.88	2.87	0.2	2.87	1	10.0	1.028	29.5	
													Spike Amount (ug)	30.8	
													Native Amount (ug)	0.224	
													Spike Recovery (%)	95.0%	
HPLC55pg192 #SS	063-4601.D	063-4602.D	HPLC55PG192.M	3.62	3.62	0.0	2.43	2.44	0.2	2.43	1	1.00	1.028	2.50	
													Spike Amount (ug)	2.57	
													Spike Recovery (%)	97.2%	
HPLC55pg192 #SS	063-7001.D	063-7002.D	HPLC55PG192.M	3.61	3.61	0.1	2.46	2.45	0.1	2.46	1	1.00	1.028	2.52	
													Spike Amount (ug)	2.57	
													Spike Recovery (%)	98.2%	

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A NaOH

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Chloride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 NaOH	052-7201.D	052-7202.D	HPLC55PG192.M	3.56	3.56	0.1	0.0659	0.0647	0.9	0.0653	10	271	177	J
R2 NaOH	055-7501.D	055-7502.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	345	69.0	ND
R3 NaOH	056-7601.D	056-7602.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	341	68.2	ND
NaOH Blank	057-7701.D	057-7702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	200	40.0	ND
0.01N H2SO4/NaOH RB	064-4701.D	064-4702.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	0.0200	ND
0.01N H2SO4/NaOH RB	064-7101.D	064-7102.D	HPLC55PG192.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	0.0200	ND
MS R1 NaOH	053-7301.D	053-7302.D	HPLC55PG192.M	3.56	3.56	0.0	3.03	3.02	0.2	3.03	1	10.0	30.3	
													Spike Amount (ug)	30.0
													Native Amount (ug)	0.653
													Spike Recovery (%)	98.7%
MSD R1 NaOH	054-7401.D	054-7402.D	HPLC55PG192.M	3.56	3.56	0.0	3.03	3.03	0.1	3.03	1	10.0	30.3	
													Spike Amount (ug)	30.0
													Native Amount (ug)	0.653
													Spike Recovery (%)	98.8%

Company	TRC Environmental Corp.
Analyst	EO
Parameters	EPA Method 26A NaOH

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0200 (ug/mL)
LOQ 0.200 (ug/mL)
Compound Chloride

Lower Curve Limit 0.200 (ug/mL)
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
HPLC55pg192 #SS	063-4601.D	063-4602.D	HPLC55PG192.M	3.62	3.62	0.0	2.43	2.44	0.2	2.43	1	1.00	2.43	
												Spike Amount (ug)	2.50	
												Spike Recovery (%)	97.2%	
HPLC55pg192 #SS	063-7001.D	063-7002.D	HPLC55PG192.M	3.61	3.61	0.1	2.46	2.45	0.1	2.46	1	1.00	2.46	
												Spike Amount (ug)	2.50	
												Spike Recovery (%)	98.2%	

Company	TRC Environmental Corp.
Analyst	AMP
Parameters	EPA OTM 29

Client #	182129
Job #	0711-163
# Samples	3 Runs, 1 Blank

MDL 0.0146 (ug/mL)
LOQ 0.0998 (ug/mL)
Compound Hydrogen Cyanide

Lower Curve Limit 0.0998 (ug/mL)
Upper Curve Limit 2.50 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1-NaOH	hplc60pg24 #42	hplc60pg24 #43	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	271	19.8	ND
R2-NaOH	hplc60pg24 #48	hplc60pg24 #49	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	345	25.2	ND
R3-NaOH	hplc60pg24 #50	hplc60pg24 #51	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	341	24.9	ND
Rgtblk-NaOH	hplc60pg24 #56	hplc60pg24 #57	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	5	200	14.6	ND
Hplc60pg20 #RB	hplc60pg24 #16	hplc60pg24 #17	HCN-Method	NA	NA	NA	0.0146	0.0146	0.0	0.0146	1	1.00	0.0146	ND
MS / R1-NaOH	hplc60pg24 #44	hplc60pg24 #45	HCN-Method	8.37	8.37	0.0	1.01	1.01	0.4	1.01	1	1.05	1.06	
													Spike Amount (ug)	1.25
													Native Amount (ug)	0.00
													Spike Recovery (%)	84.7%
MSD / R1-NaOH	hplc60pg24 #46	hplc60pg24 #47	HCN-Method	8.37	8.37	0.0	0.995	1.00	0.3	1.00	1	1.05	1.05	
													Spike Amount (ug)	1.25
													Native Amount (ug)	0.00
													Spike Recovery (%)	83.7%
Hplc60pg20 #SS	hplc60pg24 #14	hplc60pg24 #15	HCN-Method	8.07	8.07	0.0	0.491	0.485	0.6	0.488	1	1.00	0.488	
													Spike Amount (ug)	0.440
													Spike Recovery (%)	111%

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corporation - Austin
Analyst	EO
Parameters	EPA Method 26A

Client #	182129
Job #	0711-163
# Samples	3 Runs, 2 Blanks

Custody	Heather Tarjeft received the samples on 7/27/11 after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received at 16.7°C in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The samples were analyzed for hydrogen chloride (HCl), hydrogen fluoride (HF), and chloride using the analytical procedures in EPA Method 26A, Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method (40 CFR Part 60, Appendix A). The samples were analyzed following the procedures in Section 11.0, Analytical Procedures. All samples and standards are prepared, stored, and analyzed using high-density polyethylene containers. The Metrohm 861 Compact IC ("Smithers" S/N 1861002007189) was equipped with a Metrohm 861 Conductivity Detector and a Metrosep A Supp 5 - 110/4.0mm column (S/N # 7908289).
Calibration	The calibration curve(s) is (are) located in the back of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition method Metrohm.M is included in the Calibration Curve Chromatograms section of this report.
QC Notes	As required in Section 7.2.2, Absorbing Solution Blanks, client-provided reagent blanks were analyzed. Additionally, a quality control check sample was analyzed at the same time as the blanks and samples. All method required acceptance criteria were met.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	HCl, HF, and chloride were not identified above the MDL in the analyses of the method blanks and run blanks. A matrix spike and matrix spike duplicate (MS and MSD) were prepared using aliquots of the samples ***R1-H2SO4*** and ***R1-NaOH***. The recovery values were 108% and 108% for HF, 95.6% and 95.0% for HCl, and 98.7% and 98.8% for Cl. A second source standard (hplc55pg192 #SS) was prepared and used as a Laboratory Control Sample and analyzed with the samples. The recovery values were 106% and 107% for HF and 97.2% and 98.2% for HCl. All sample preparation and analytical holding times specified in the method were met. Section 13.2, Sample Stability, specifies an analytical holding time of four weeks.
Reporting Notes	The volumes as recorded on the chain of custody were used for the catch weight calculations, with the exception of the reagent blanks which were measured. The H_2SO_4 matrix samples were analyzed for Cl^- and F^- but are reported as HCl and HF. The results were converted using an acid conversion factor of 1.028 for HCl and 1.053 for HF. These analyses met the requirements of the NELAC Standard. Any deviations from the requirements of the reference method and/or the NELAC Standard have been previously noted in this narrative. The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	TRC Environmental Corp.
Analyst	AMP
Parameters	EPA OTM-29

Client #	182129
Job #	0711-163
# Samples	3 runs, 1 blank

Custody	Heather Tarjeft received the samples on 7/27/11 after being relinquished by TRC Environmental Corporation of Austin, TX. The samples were received at 16.7°C in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The samples were analyzed for hydrogen cyanide (HCN) using the analytical procedures in OTM-29, Sampling and Analysis of Hydrogen Cyanide Emissions from Stationary Sources. The pH of the NaOH samples was 14. The ICS-3000 Ion Chromatograph ("Flanders") was equipped with an Electrochemical Detector and a Dionex Ion Pac AS7, 4 x 250 mm (S/N 011640) column, for these analyses.
Calibration	The calibration curve is located in the back of this report and referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound. Some of the calibration check standards analyzed with the samples were not within the 10% method criteria. The recoveries of the check standards ranged from 49% to 105%.
Chromatographic Conditions	The acquisition method (HCN.Back) is included in the Calibration Curve Chromatograms section of this report.
QC Notes	Hydrogen cyanide was not detected in the field reagent blank or the laboratory reagent blank. The samples were analyzed 34 days outside the method recommended holding time of 30 days. A matrix spike was performed in duplicate (MS and MSD) on sample ***R1-NaOH***. The recovery values were 84.7% and 83.7%.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	A second source standard (#SS) was prepared and used as a Laboratory Control Sample and analyzed with the samples. The recovery value was 111%.
Reporting Notes	The volumes as recorded on the chain of custody were used for the catch weight calculations, with the exception of the reagent blanks which were measured. The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Box No.:

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M26A-R1-H2SO4	7-14-11	poly	Acidic	run 1	Cl, F	100ml aliquot of 143ml
EXM-DCU-M26A-R1-NaOH	↓	poly	Basic	run 1	Cl2,CN	271ml
EXM-DCU-M26A-R2-H2SO4	7-16-11	poly	Acidic	run 2	Cl, F	2760ml
EXM-DCU-M26A-R2-NaOH	↓	poly	Basic	run 2	Cl2,CN	345ml
EXM-DCU-M26A-R3-H2SO4	7-17-11	poly	Acidic	run 3	Cl, F	2242ml
EXM-DCU-M26A-R3-NaOH	↓	poly	Basic	run 3	Cl2,CN	341ml
EXM-DCU-M26A-Rgtblk-H2SO4	↓	poly	Acidic	1N H2SO4 reagent blank	Cl, F	
EXM-DCU-M26A-Rgtblk-NaOH	↓	poly	Basic	1N NaOH reagent blank	Cl2,CN	
EXM-DCU-M29-R1-FHR	7-14-11	glass	Acidic	run 1	M29	
EXM-DCU-M29-R1-Fil	↓	petri dish	filter	run 1	M29	
EXM-DCU-M29-R1-IMPs	↓	poly	Acidic	run 1 impingers and BHR	M29	1 container HLT 7/27/11
EXM-DCU-M29-R2-FHR	7-16-11	glass	Acidic	run 2	M29	
EXM-DCU-M29-R2-Fil	↓	petri dish	filter	run 2	M29	
EXM-DCU-M29-R2-IMPs	↓	poly	Acidic	run 2 impingers and BHR	M29	3 containers
EXM-DCU-M29-R3-FHR	7-17-11	glass	Acidic	run 3	M29	
EXM-DCU-M29-R3-Fil	↓	petri dish	filter	run 3	M29	
EXM-DCU-M29-R3-IMPs	↓	poly	Acidic	run 3 impingers and BHR	M29	3 containers

Relinquished by: R Monson	**Date/Time:** 7-26-11 1600	**Relinquished by:**	**Date/Time:**
Received by: [signature]	**Date/Time:** 7/27/11 11:00am	**Received by:**	**Date/Time:**

Remarks (*):

Temp = 16.7°C Rayleh qty #2

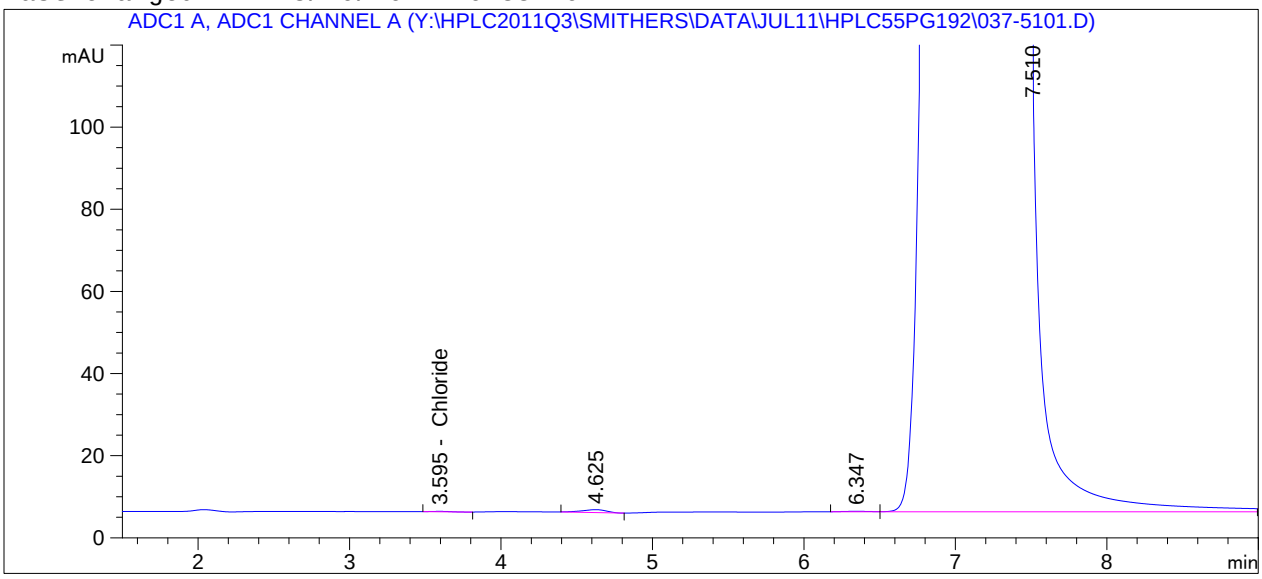
RC

Sample Chromatograms

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\037-5101.D
Sample Name: Run 1 *10 ~~acid~~ 0711-163 H2SO4

==========

Acq. Operator : EO Seq. Line : 51
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 11:17:13 AM Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.743		-	-	-		Fluoride
3.595	BB	8.22259e-1	2.60538e-2	2.14230e-2		Chloride

Totals : 2.14230e-2

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

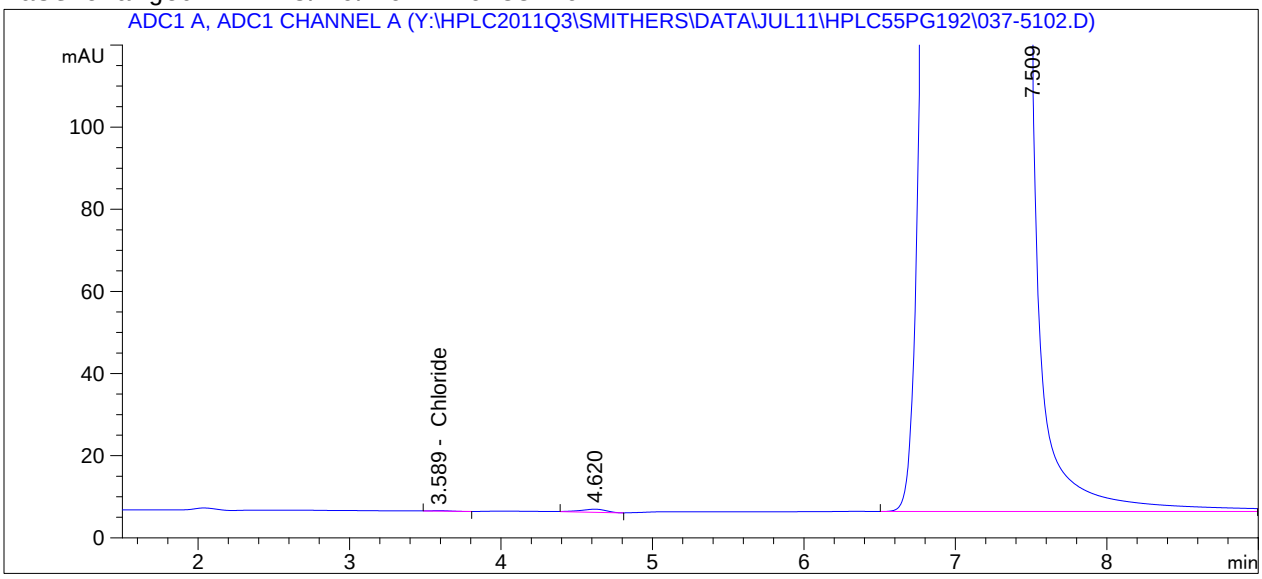
==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\037-5102.D
Sample Name: Run 1 *10 ~~acid~~ 0711-163 H2SO4

==========

Acq. Operator : EO Seq. Line : 51
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 11:28:29 AM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.743		-	-	-		Fluoride
3.589	BB	8.50181e-1	2.60538e-2	2.21504e-2		Chloride

Totals : 2.21504e-2

1 Warnings or Errors :

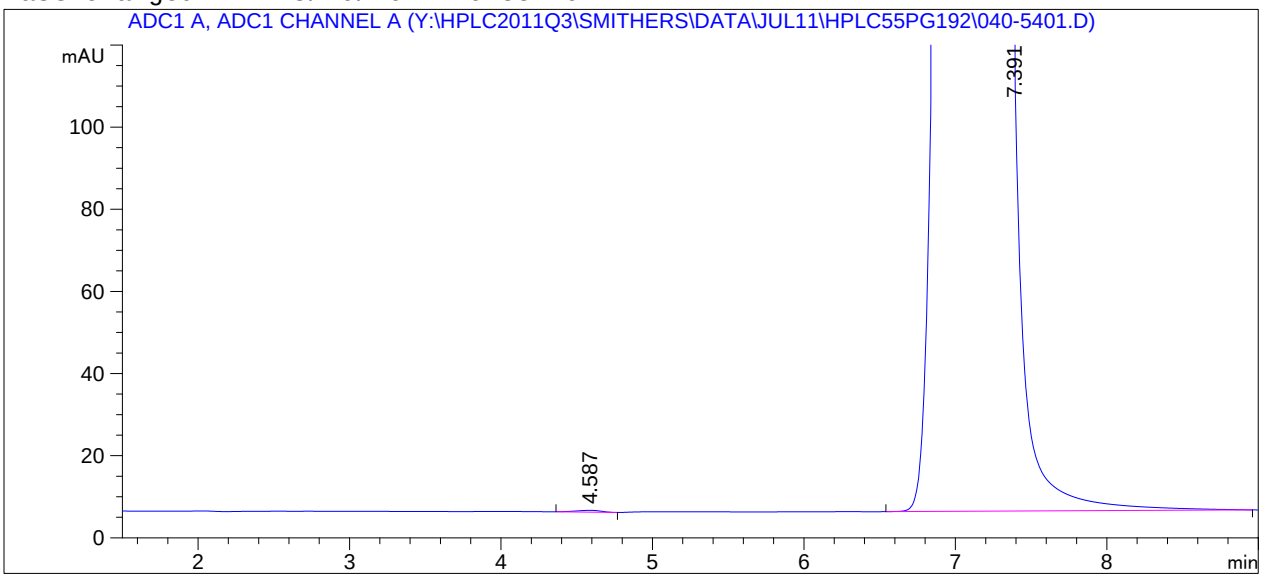
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\040-5401.D
Sample Name: Run 2 *10 ~~acid~~ 0711-163 H2SO4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  54
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 12:24:50 PM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

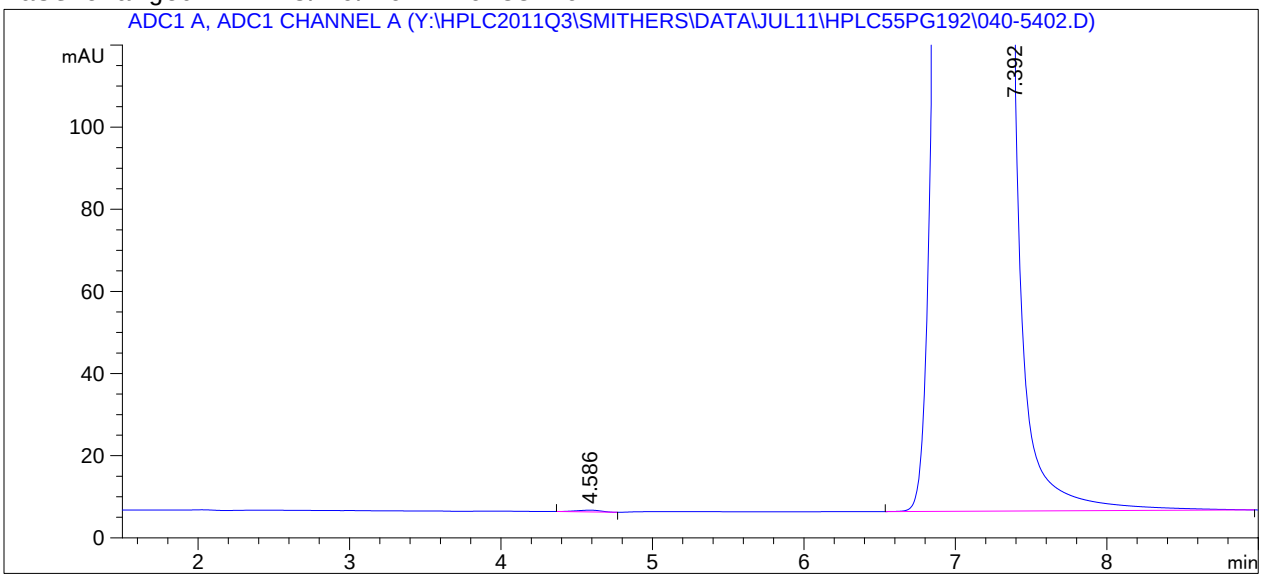
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\040-5402.D
Sample Name: Run 2 *10 ~~acid~~ 0711-163 H2SO4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  54
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 12:36:06 PM                 Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

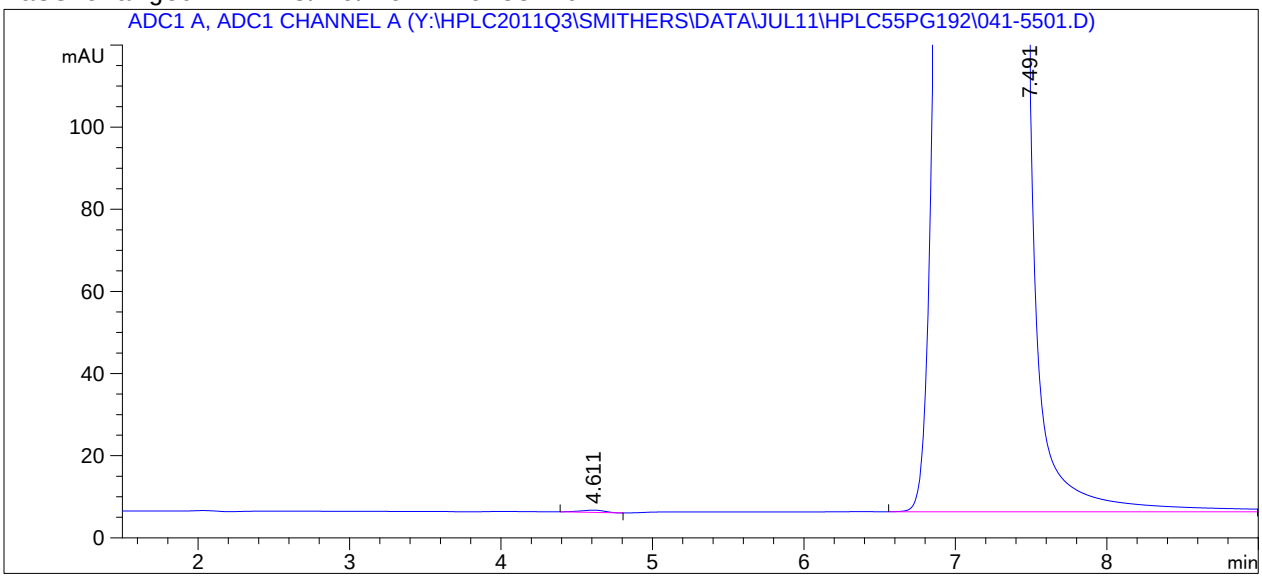
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                         Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\041-5501.D
Sample Name: Run 3 *10 ~~acid~~ 0711-163 H_2SO_4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  55
Acq. Instrument : Smithers                        Location :   -
Injection Date  : 8/9/2011 12:47:23 PM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

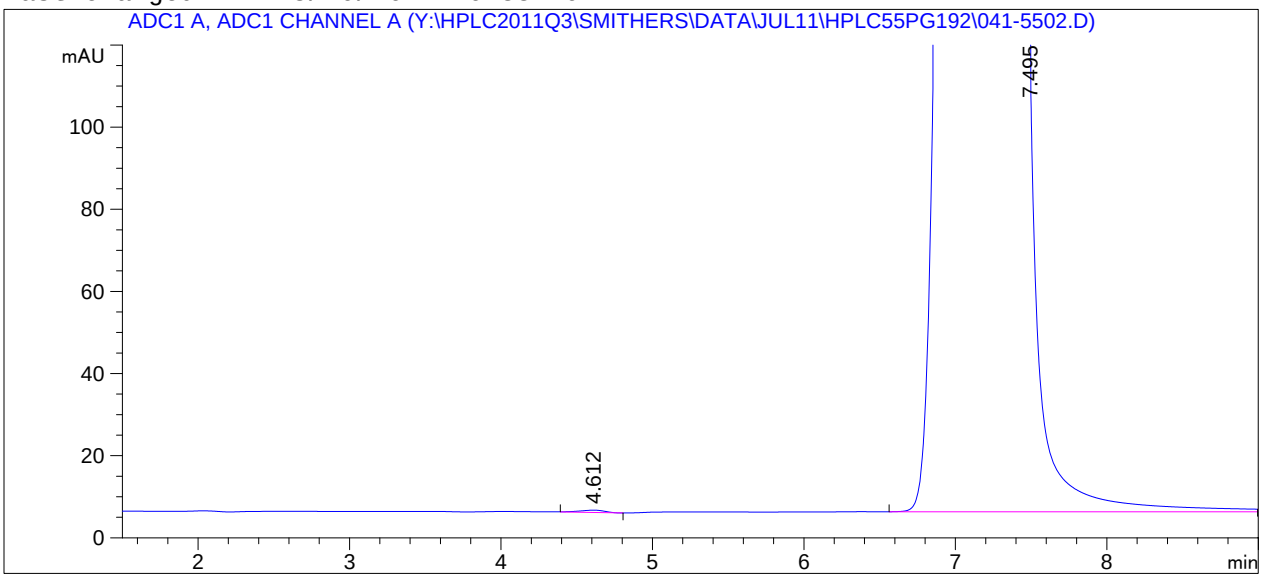
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\041-5502.D
Sample Name: Run 3 *10 ~~acid~~ 0711-163 H2SO4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  55
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 12:58:38 PM                 Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

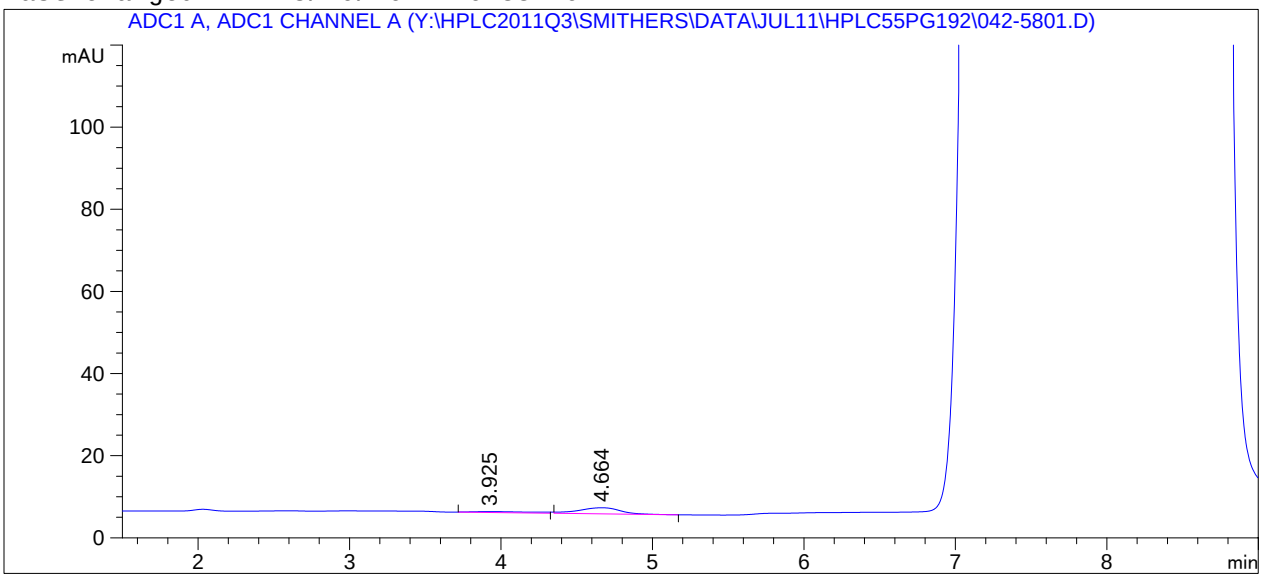
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                         Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\042-5801.D
Sample Name: H2SO4 Blank *10 0711-163

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  58
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 1:54:59 PM                   Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

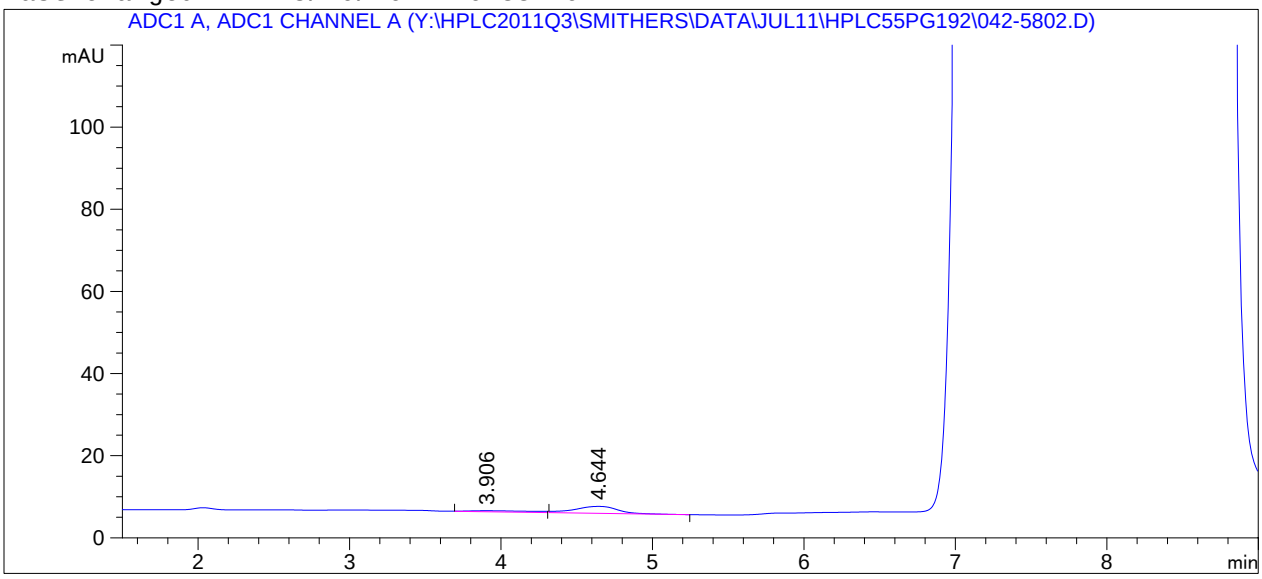
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\042-5802.D
Sample Name: H2SO4 Blank *10 0711-163

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  58
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 2:06:15 PM                   Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

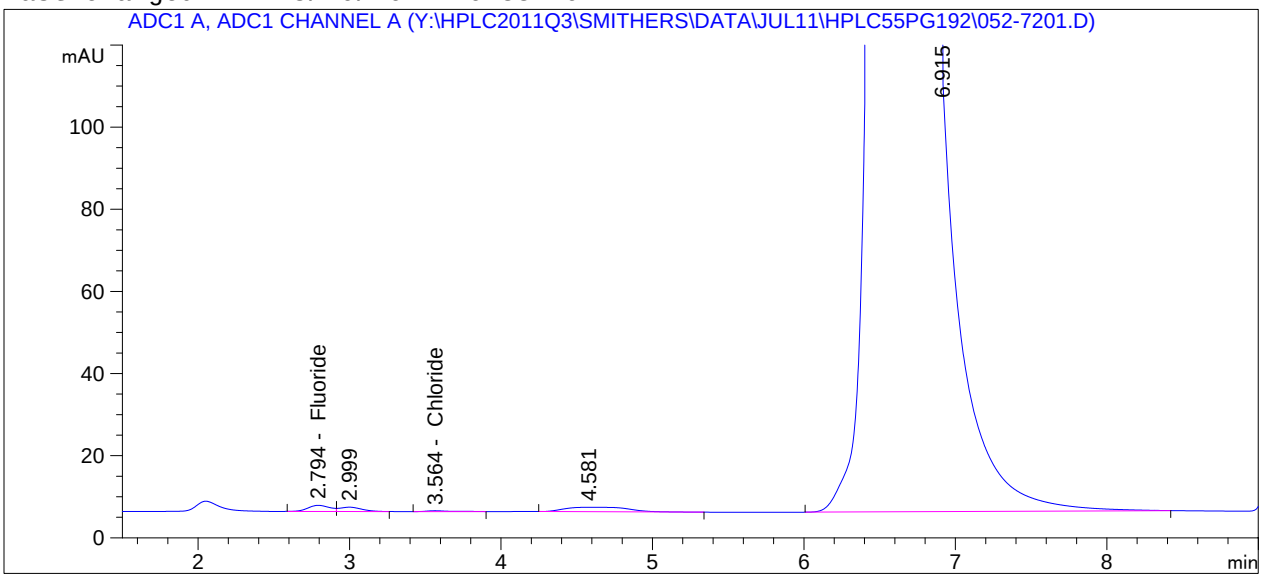
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\052-7201.D
Sample Name: R1 *10 ~~base~~ 0711-163 NaOH

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  72
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 8:49:57 PM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.794 BV       15.02243 1.45661e-2 2.18818e-1    Fluoride
  3.564 BB        2.52835 2.60538e-2 6.58731e-2    Chloride

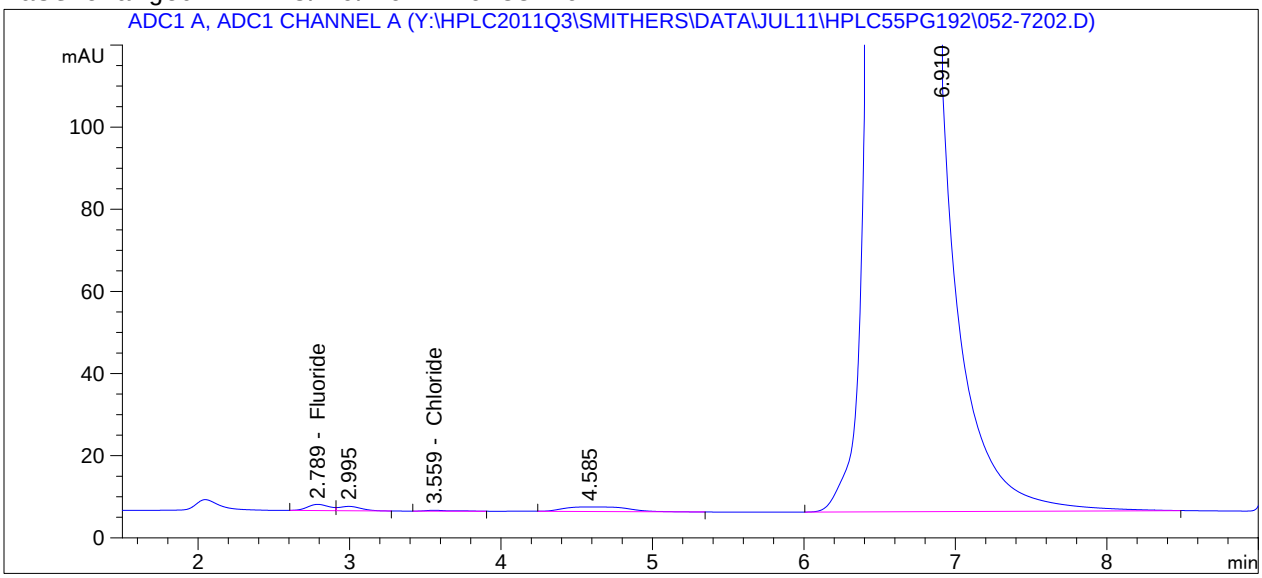
Totals :                              2.84691e-1


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\052-7202.D
Sample Name: R1 *10 base 0711-163

NaOH

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  72
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 9:06:46 PM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.789 BV       15.08462 1.45761e-2 2.19875e-1    Fluoride
  3.559 BB        2.48429 2.60538e-2 6.47252e-2    Chloride

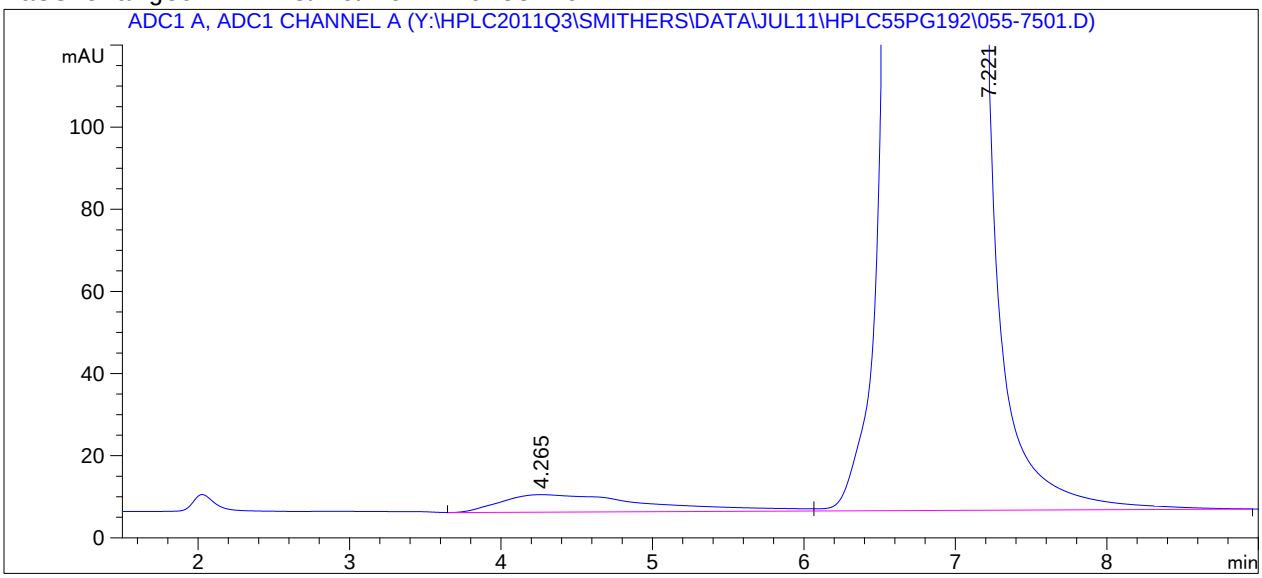
Totals :                              2.84600e-1


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\055-7501.D
Sample Name: R2 *10 base 0711-163 NaOH

==========

Acq. Operator : EO Seq. Line : 75
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 10:30:45 PM Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.743		-	-	-		Fluoride
3.624		-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

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Area Percent Report

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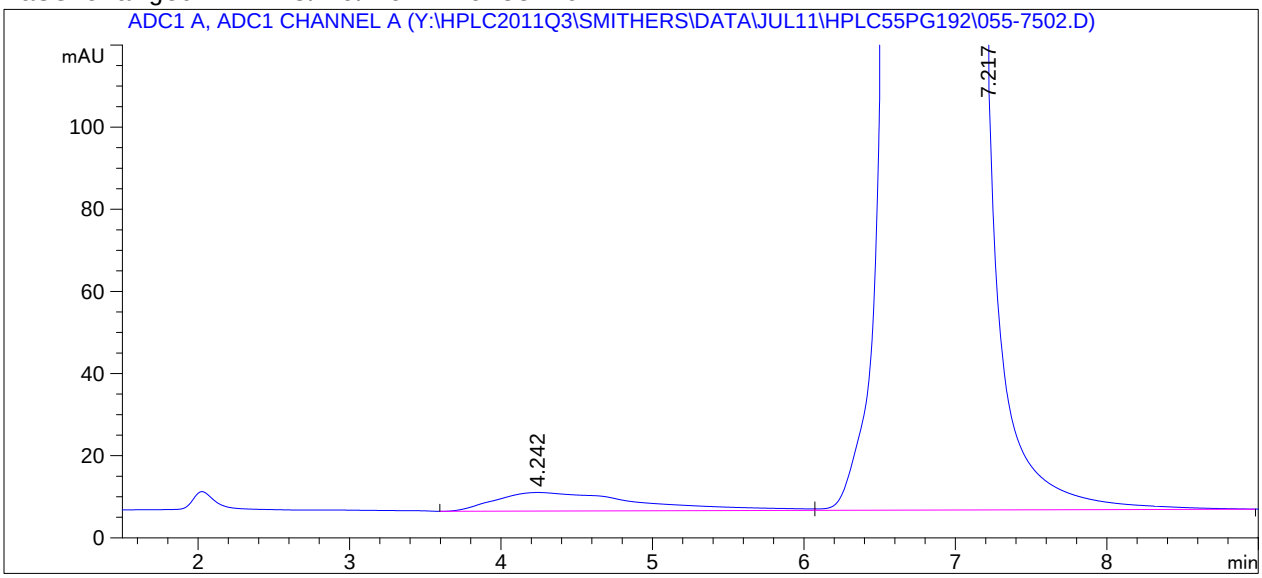
Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\055-7502.D
Sample Name: R2 *10 base 0711-163 NaOH

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  75
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 10:47:32 PM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

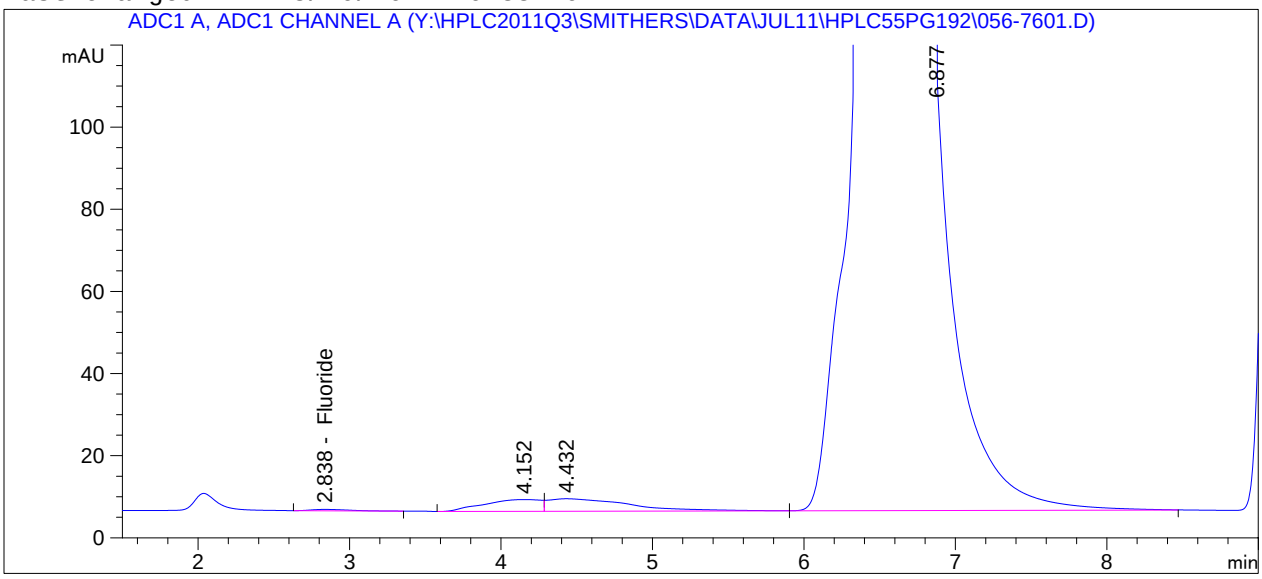
==========================================================================
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\056-7601.D
Sample Name: R3 *10 base 0711-163 NaOH

==========

Acq. Operator : EO Seq. Line : 76
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 11:04:20 PM Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.838	BB	5.58728	1.43735e-2	8.03087e-2		Fluoride
3.624		-	-	-		Chloride

Totals : 8.03087e-2

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

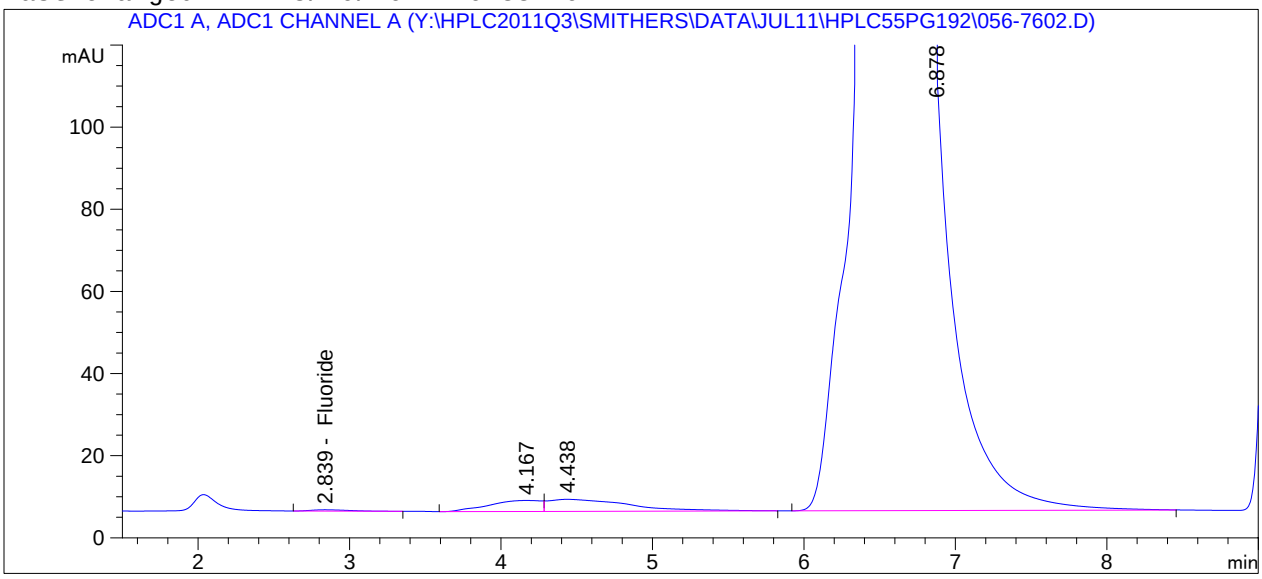
==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\056-7602.D
Sample Name: R3 *10 base 0711-163 NaOH

==========

Acq. Operator : EO Seq. Line : 76
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 11:21:07 PM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.839	BB	5.36362	1.43735e-2	7.70939e-2		Fluoride
3.624		-	-	-		Chloride

Totals : 7.70939e-2

1 Warnings or Errors :

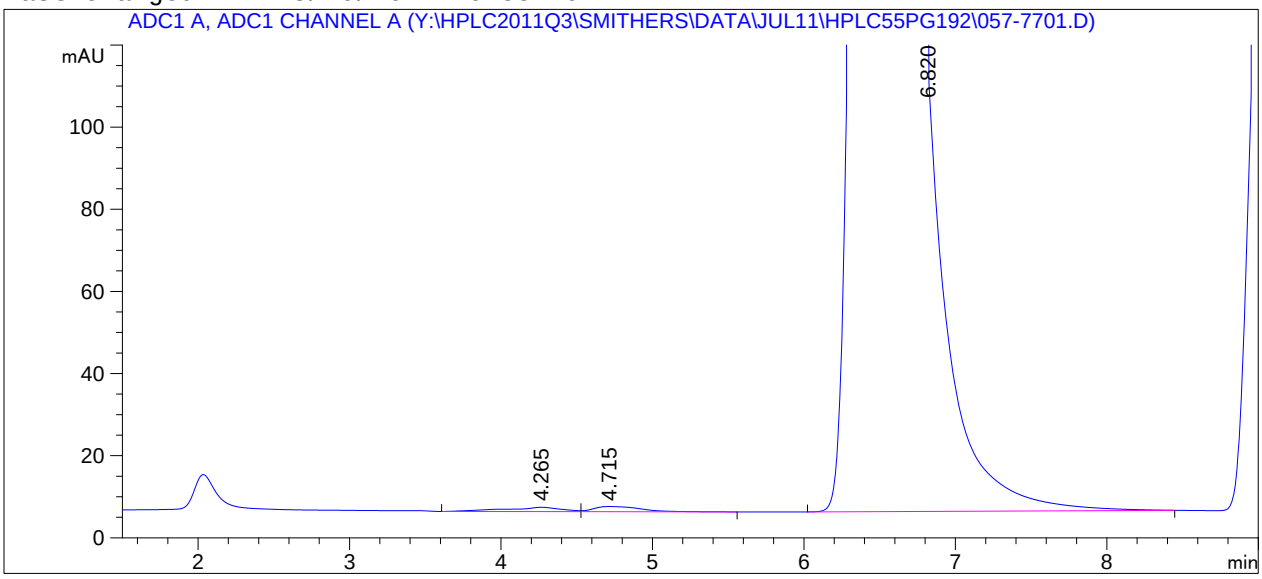
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\057-7701.D
Sample Name: NaOH Blank *10 0711-163

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  77
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 11:37:54 PM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

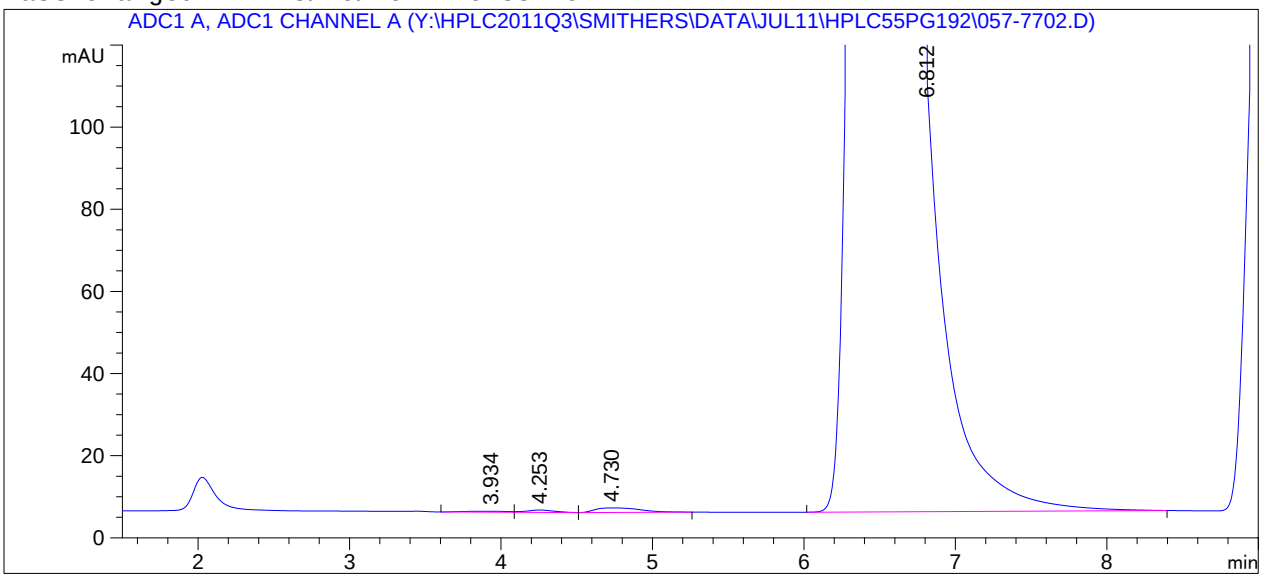
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                         Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\057-7702.D
Sample Name: NaOH Blank *10 0711-163

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  77
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 11:54:42 PM                 Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

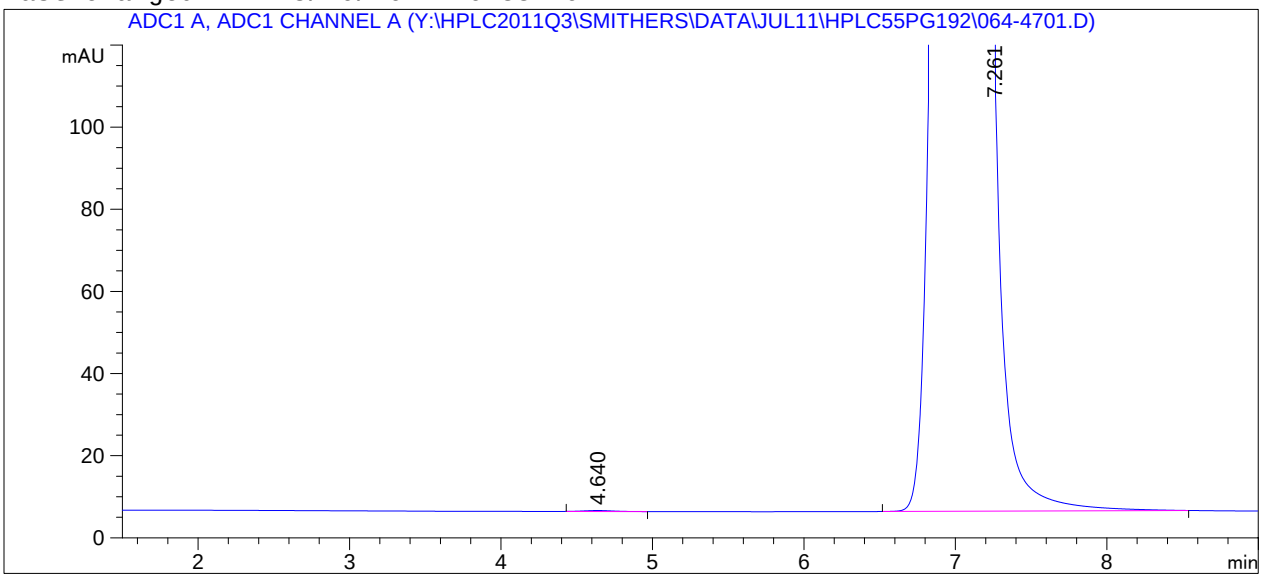
==========================================================================
==========================================================================
                         Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\064-4701.D
Sample Name: 0.01N H2SO4/NaOH RB

==========

Acq. Operator : EO Seq. Line : 47
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 9:47:04 AM Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.743		-	-	-		Fluoride
3.624		-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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Area Percent Report

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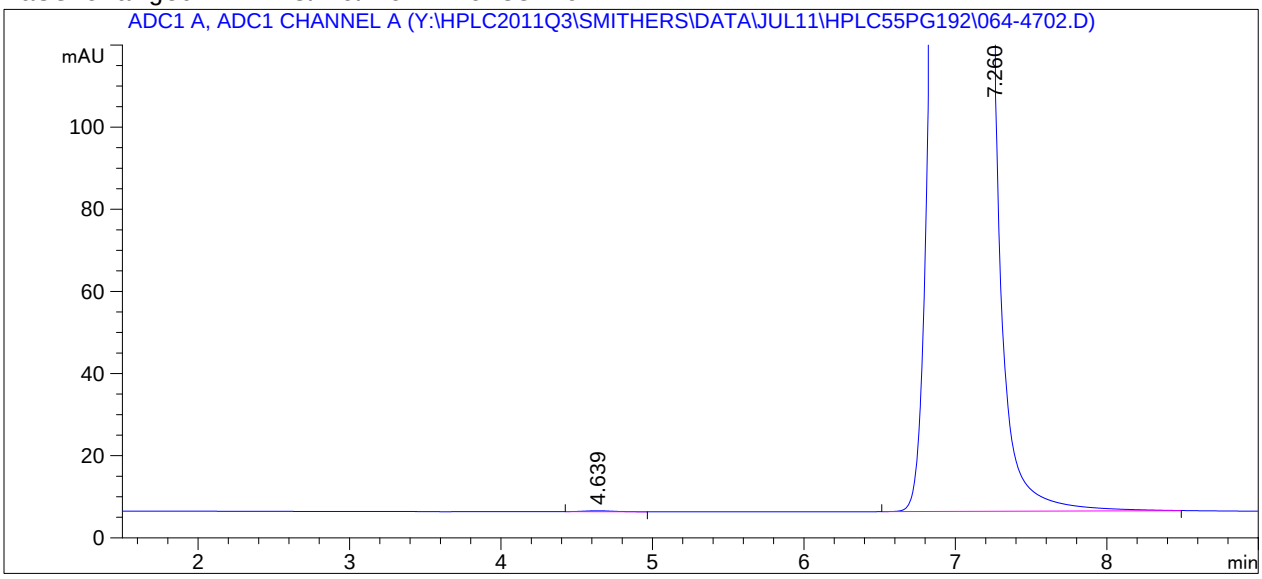
Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\064-4702.D
Sample Name: 0.01N H2SO4/NaOH RB

==========

Acq. Operator : EO Seq. Line : 47
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 9:58:21 AM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.743		-	-	-		Fluoride
3.624		-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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Area Percent Report

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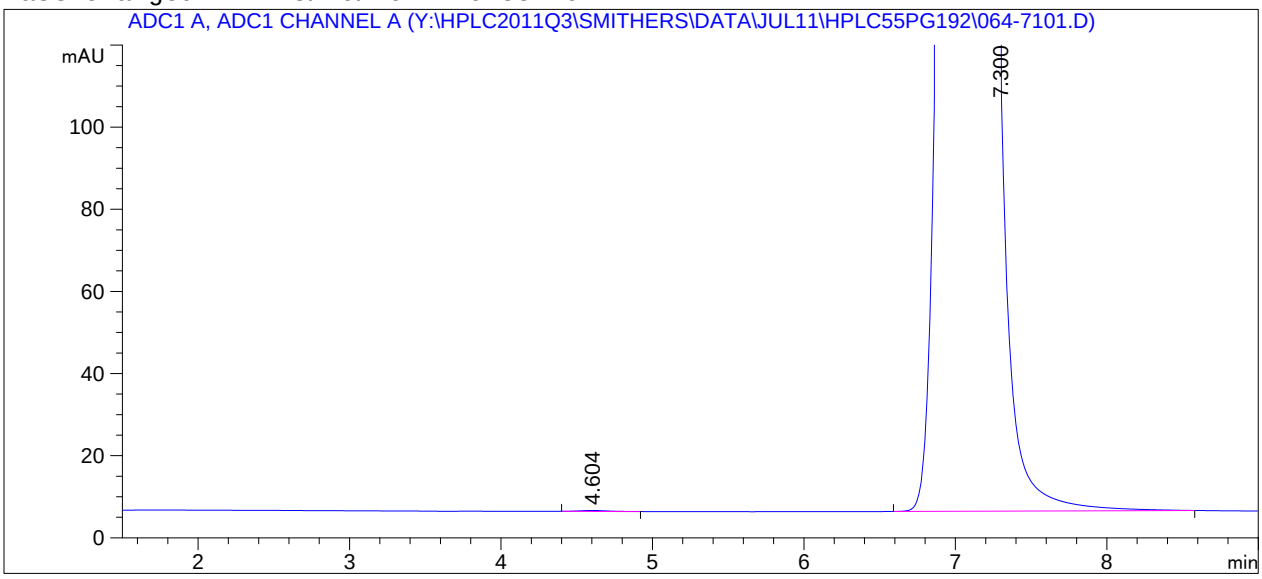
Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\064-7101.D
Sample Name: 0.01N H2SO4/NaOH RB

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  71
Acq. Instrument : Smithers                          Location :   -
Injection Date  : 8/9/2011 8:27:26 PM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

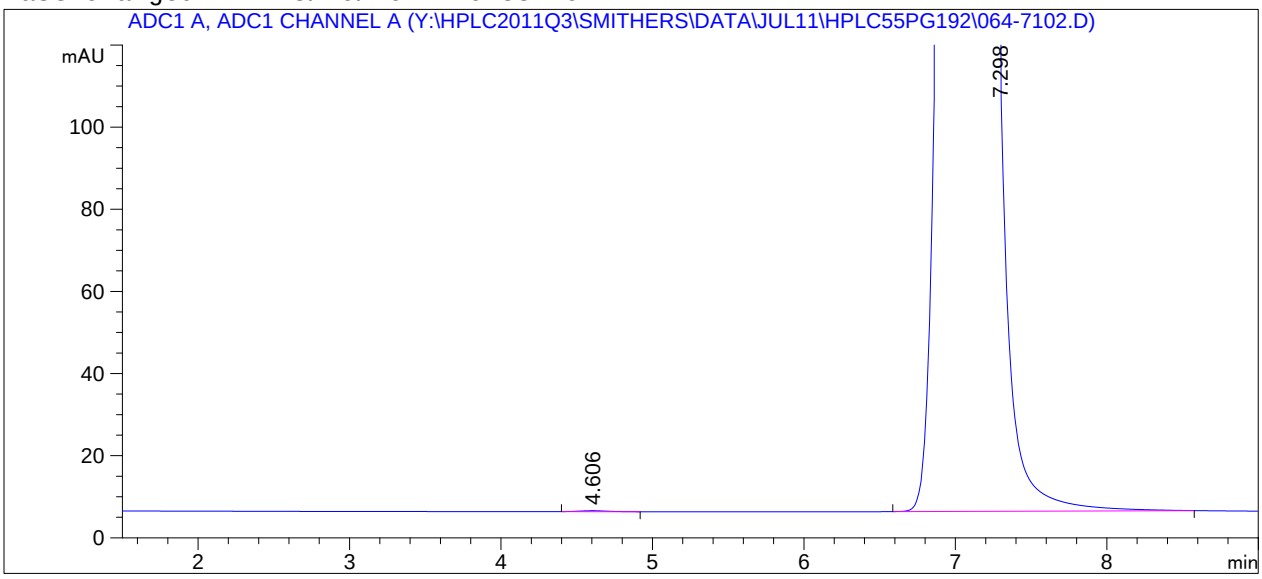
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\064-7102.D
Sample Name: 0.01N H2SO4/NaOH RB

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  71
Acq. Instrument : Smithers                        Location :   -
Injection Date  : 8/9/2011 8:38:42 PM                  Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.743            -          -          -         Fluoride
  3.624            -          -          -         Chloride

Totals :                                0.00000


1 Warnings or Errors :

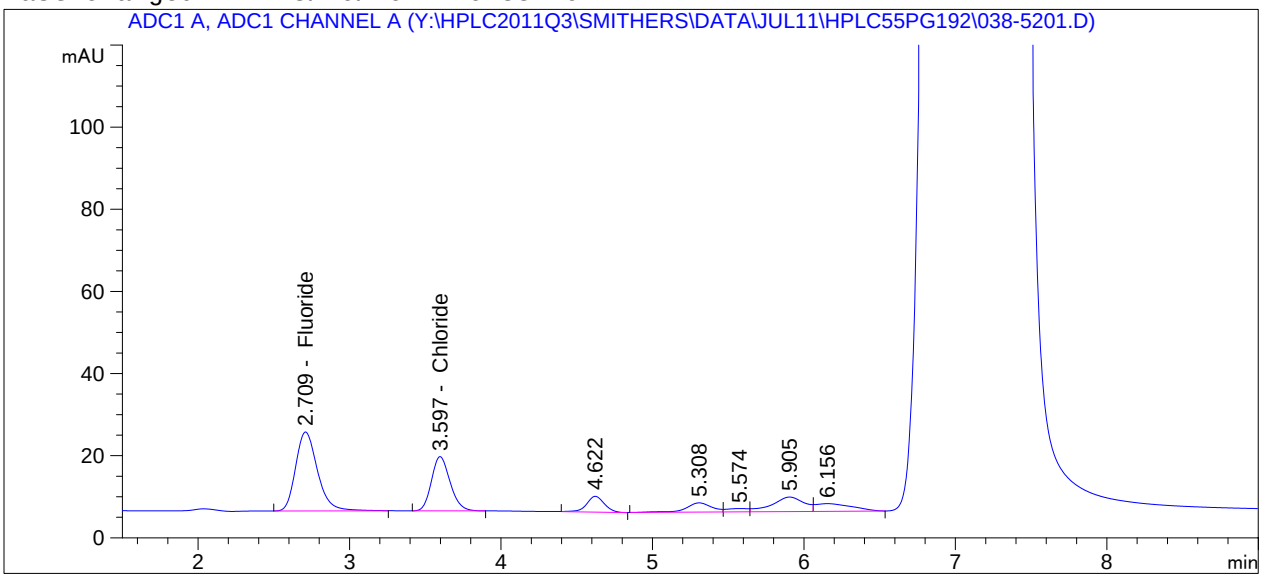
Warning : Calibrated compound(s) not found

==========================================================================
==========================================================================
                         Area Percent Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\038-5201.D
Sample Name: MS Run 1 *10 ~~acid~~ 0711-163 H2SO4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  52
Acq. Instrument : Smithers                        Location :   -
Injection Date  : 8/9/2011 11:39:45 AM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.709 BB      192.72560 1.67968e-2    3.23718    Fluoride
  3.597 BB      112.82912 2.56185e-2    2.89052    Chloride

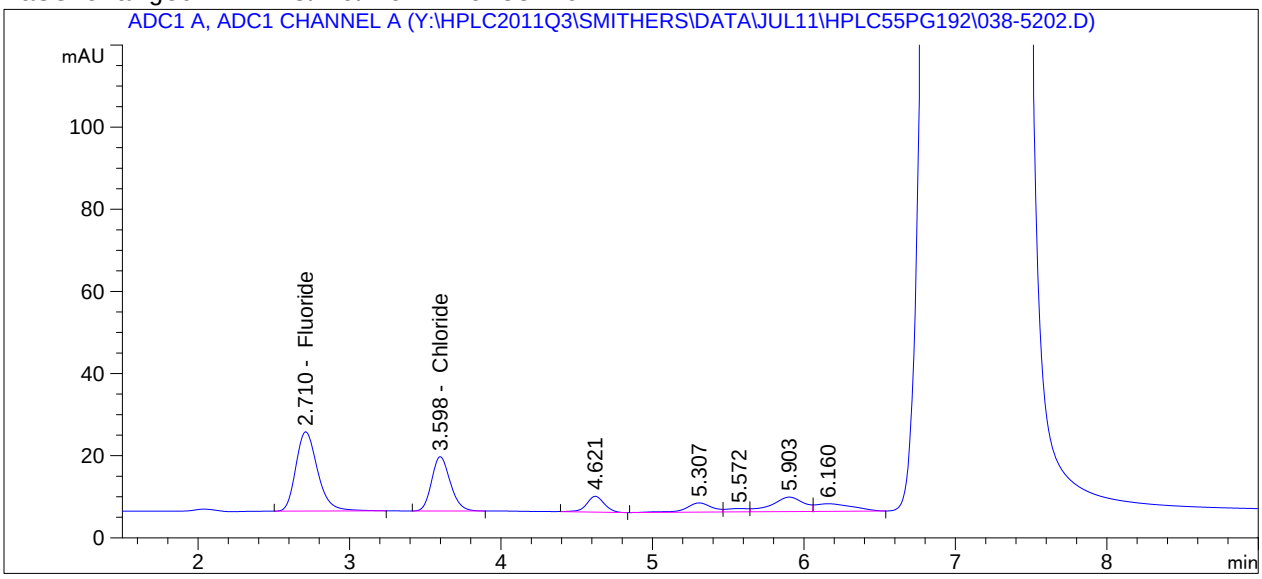
Totals :                                6.12769


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\038-5202.D
Sample Name: MS Run 1 *10 ~~acid~~ 0711-163 H2SO4

==========

Acq. Operator : EO Seq. Line : 52
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 11:51:01 AM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.710	BB	193.01335	1.67971e-2	3.24206		Fluoride
3.598	BB	112.86828	2.56185e-2	2.89152		Chloride

Totals : 6.13358

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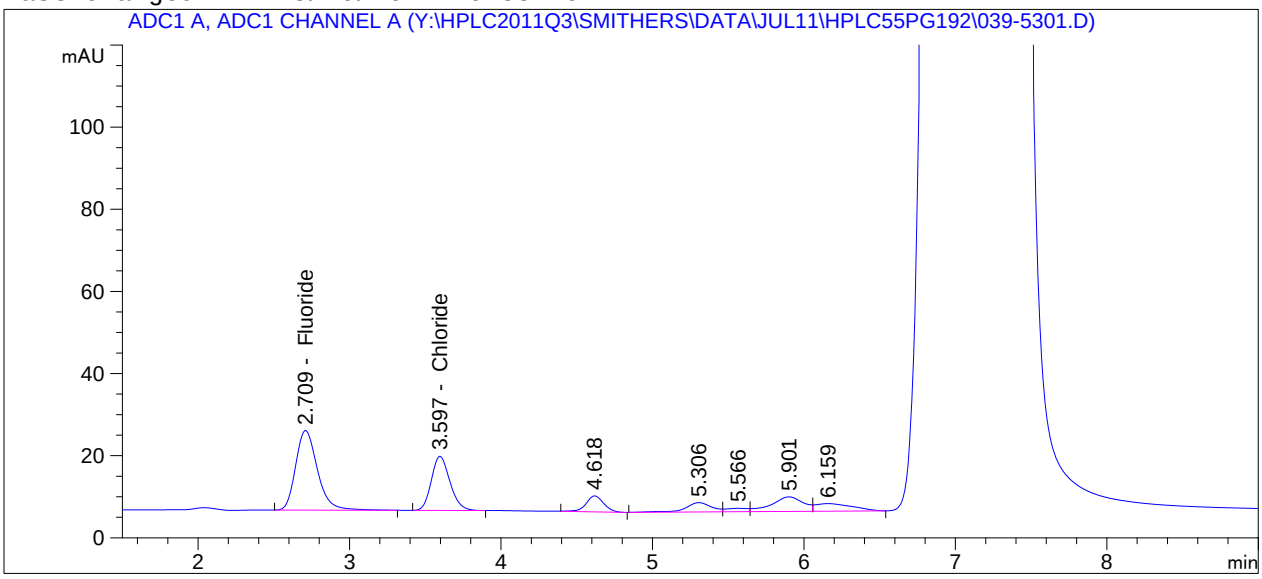
*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\039-5301.D
Sample Name: MSD Run 1 *10 ~~acid~~ 0711-163 H2SO4

==========

Acq. Operator : EO Seq. Line : 53
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 12:02:18 PM Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.709	BB	193.91849	1.67980e-2	3.25744		Fluoride
3.597	BB	112.25906	2.56187e-2	2.87593		Chloride

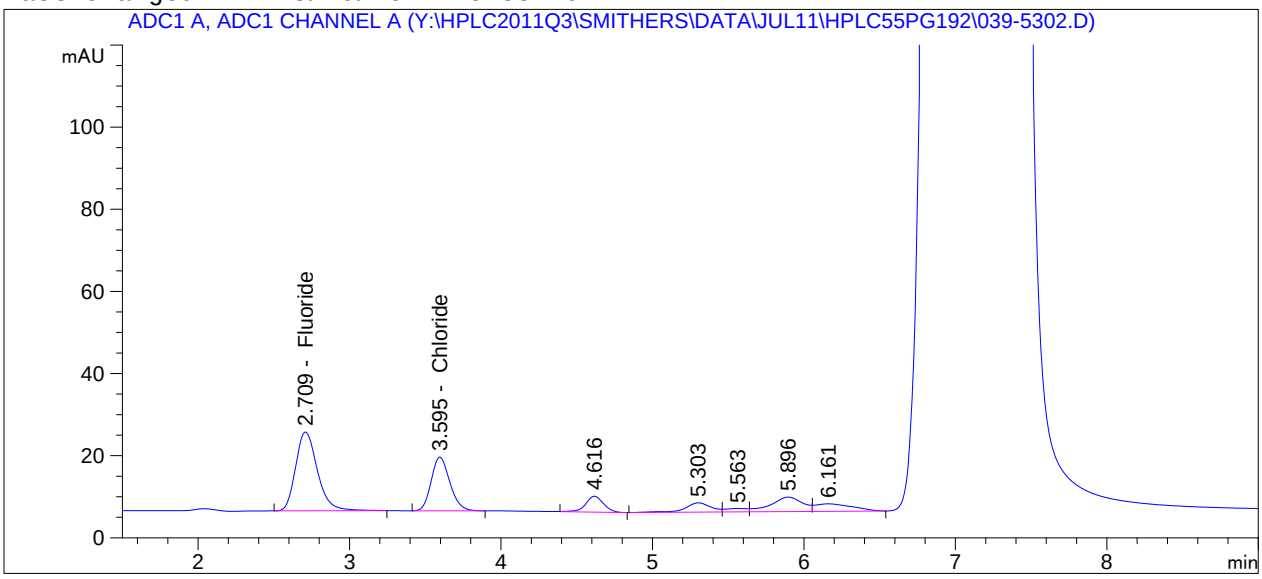
Totals : 6.13337

==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\039-5302.D
Sample Name: MSD Run 1 *10 ~~acid~~ 0711-163 H2SO4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  53
Acq. Instrument : Smithers                        Location :   -
Injection Date  : 8/9/2011 12:13:34 PM                 Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

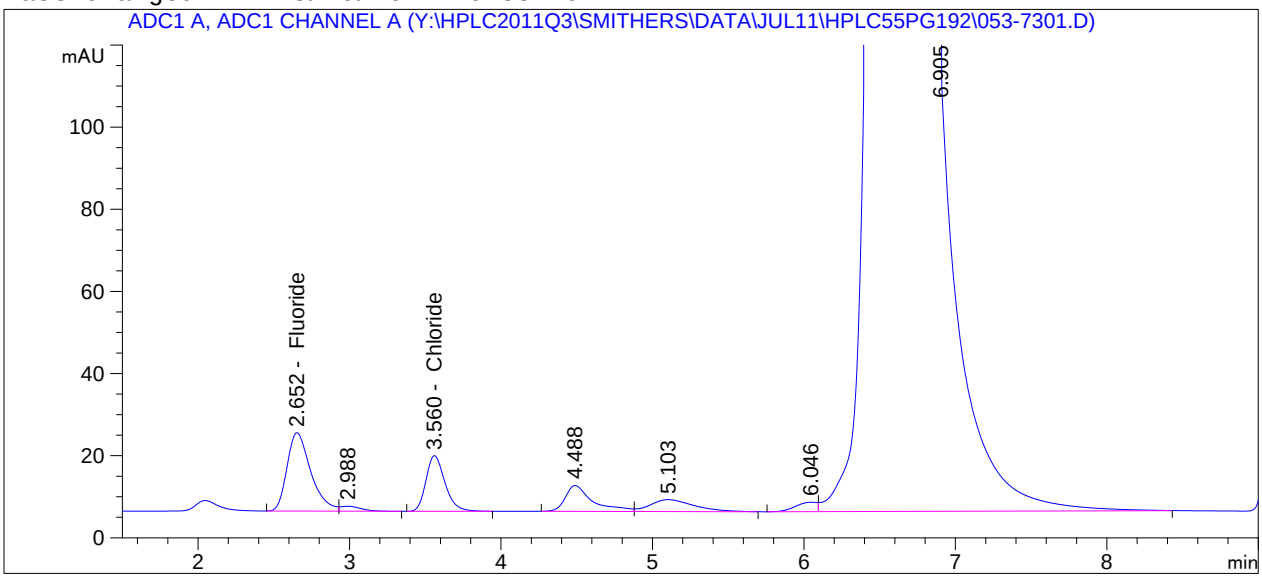
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.709 BB      192.20195 1.67963e-2    3.22828    Fluoride
  3.595 BB      111.90800 2.56188e-2    2.86695    Chloride

Totals :                                6.09523


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\053-7301.D
Sample Name: MS R1 *10 ~~base~~ 0711-163 NaOH

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  73
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 9:23:33 PM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.652 BV      207.93690 1.68106e-2    3.49555    Fluoride
  3.560 BB      118.36657 2.56170e-2    3.03220    Chloride

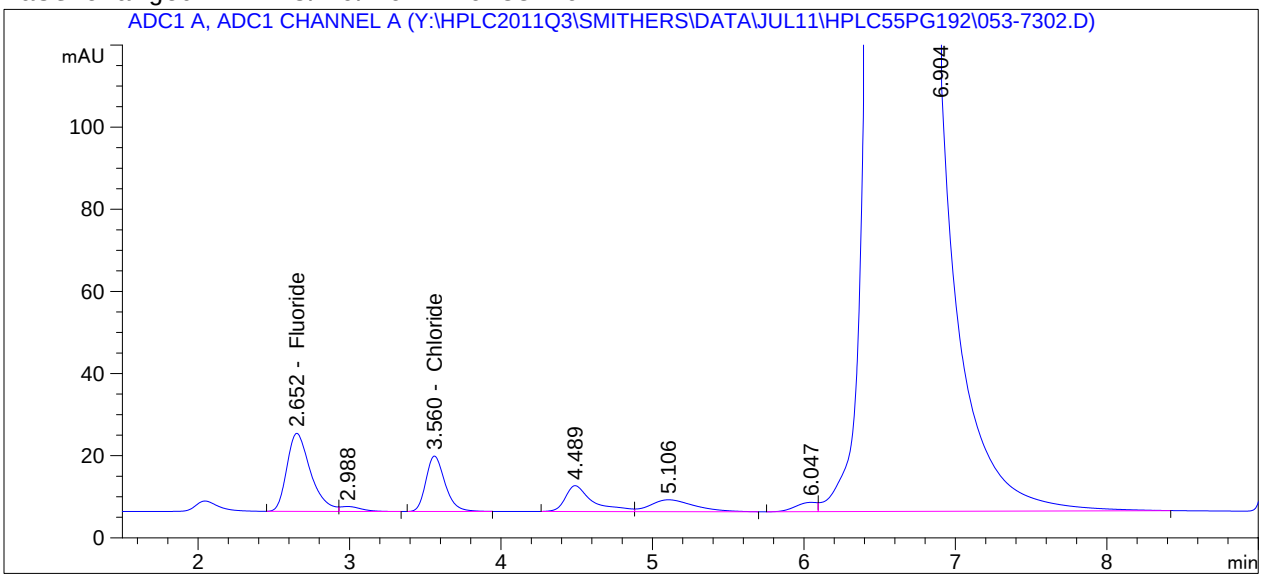
Totals :                                6.52775


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\053-7302.D
Sample Name: MS R1 *10 base 0711-163 NaOH

==========

Acq. Operator : EO Seq. Line : 73
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 9:40:21 PM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.652	BV	207.18504	1.68100e-2	3.48278		Fluoride
3.560	BB	118.00783	2.56171e-2	3.02302		Chloride

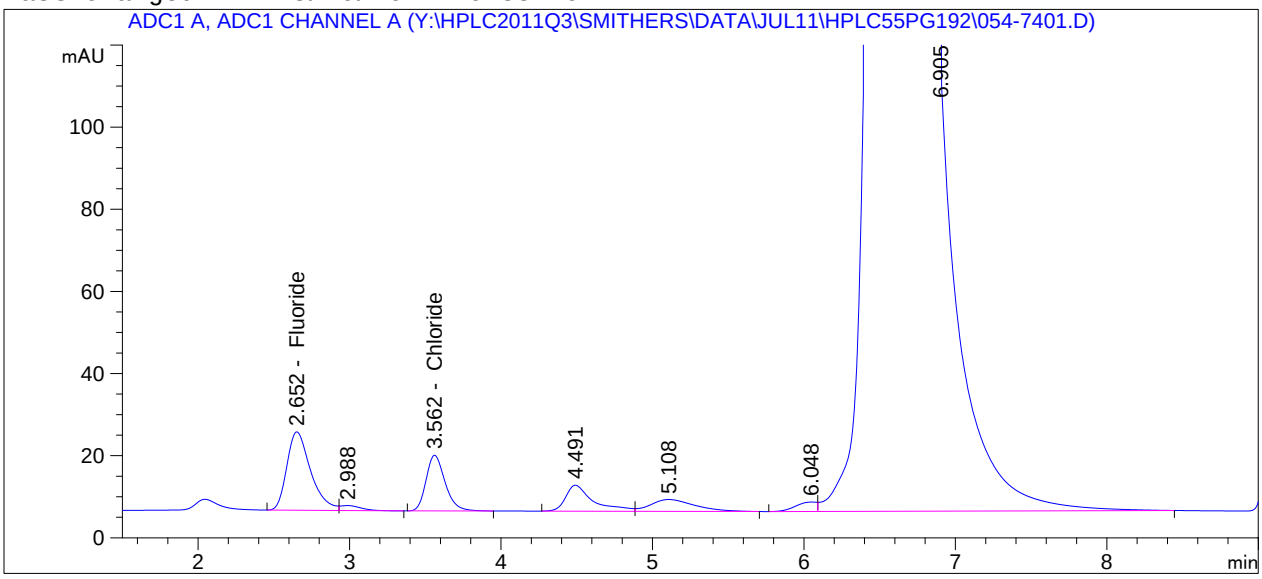
Totals : 6.50580

==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\054-7401.D
Sample Name: MSD R1 *10 ~~base~~ 0711-163 NaOH

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  74
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 9:57:09 PM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

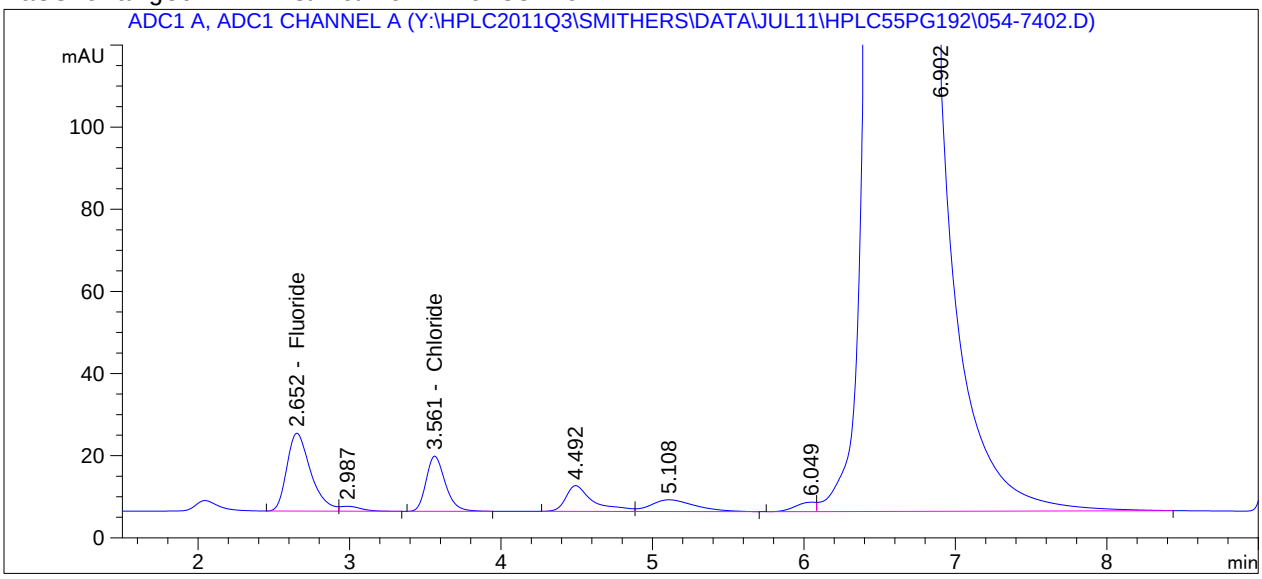
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.652 BV      208.17882 1.68108e-2    3.49966    Fluoride
  3.562 BB      118.45483 2.56170e-2    3.03446    Chloride

Totals :                                6.53412


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\054-7402.D
Sample Name: MSD R1 *10 ~~base~~ 0711-163 NaOH

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  74
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 10:13:56 PM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.652 BV      207.91399 1.68106e-2    3.49516    Fluoride
  3.561 BB      118.10841 2.56171e-2    3.02560    Chloride

Totals :                                6.52075


==========================================================================
                          *** End of Report ***
```

Calibration Curve Chromatograms

Calibration Table

Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Linear (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

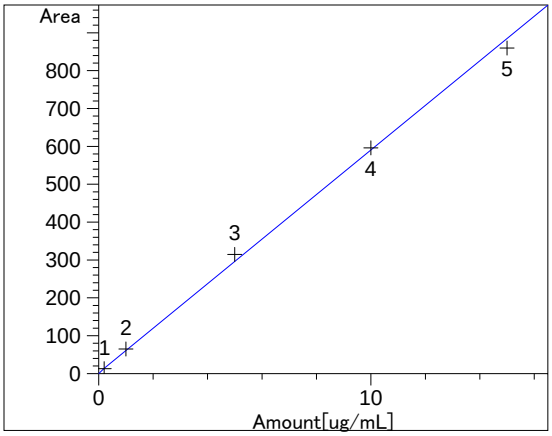
Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Sig	Lvl	Amount [ug/mL]	Area	Amt/Area	Ref	Grp	Name
2.743	1	1	2.00000e-1	12.69983	1.57482e-2			Fluoride
		2	1.00000	64.67591	1.54617e-2			
		3	5.00000	314.57018	1.58947e-2			
		4	10.00000	595.87531	1.67820e-2			
		5	15.00000	859.74925	1.74469e-2			
3.624	1	1	2.00000e-1	8.17308	2.44706e-2			Chloride
		2	1.00000	36.76020	2.72033e-2			
		3	5.00000	192.63766	2.59555e-2			
		4	10.00000	388.83371	2.57179e-2			
		5	15.00000	592.27608	2.53260e-2			

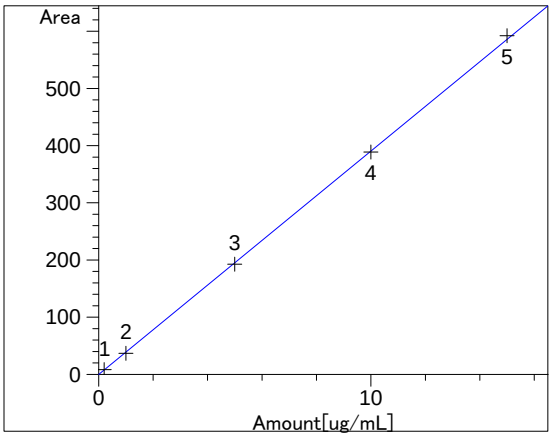
Peak Sum Table

No Entries in table

Calibration Curves



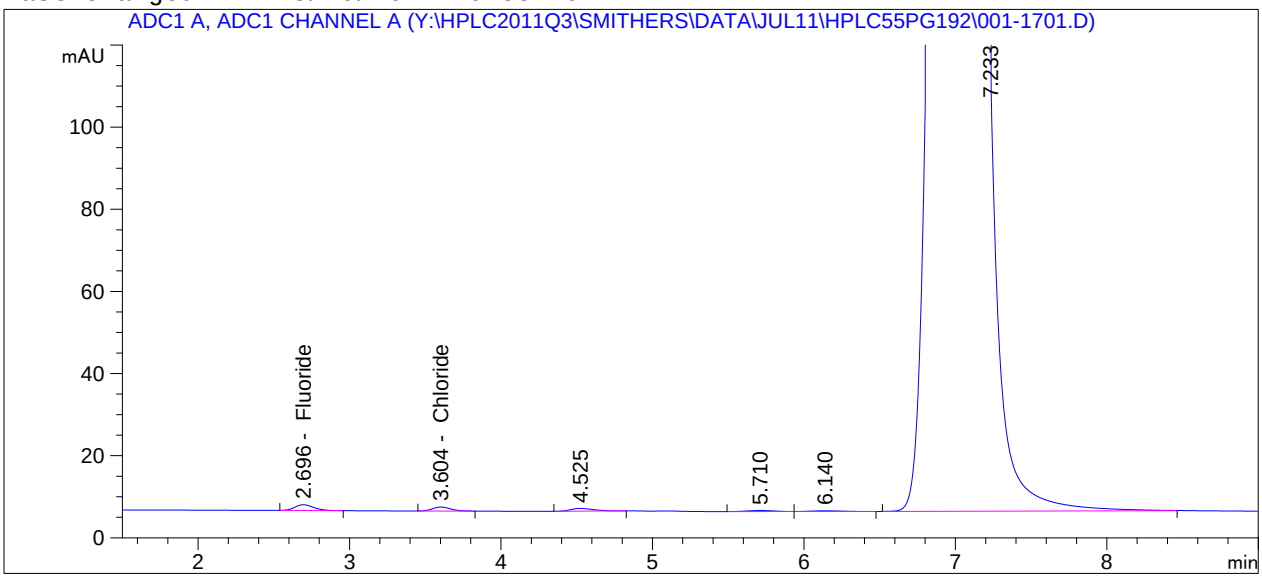
Fluoride at exp. RT: 2.743
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99930
Residual Std. Dev.: 18.40603
Formula: y = mx + b
m: 58.87410
b: 2.13970
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.2
Level 3 : 0.04
Level 4 : 0.02
Level 5 : 0.013333



Chloride at exp. RT: 3.624
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99988
Residual Std. Dev.: 4.22397
Formula: y = mx + b
m: 39.08274
b: -1.40125e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.2
Level 3 : 0.04
Level 4 : 0.02
Level 5 : 0.013333

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\001-1701.D
Sample Name: HPLC55pg192 #1

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  17
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/8/2011 10:30:56 PM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

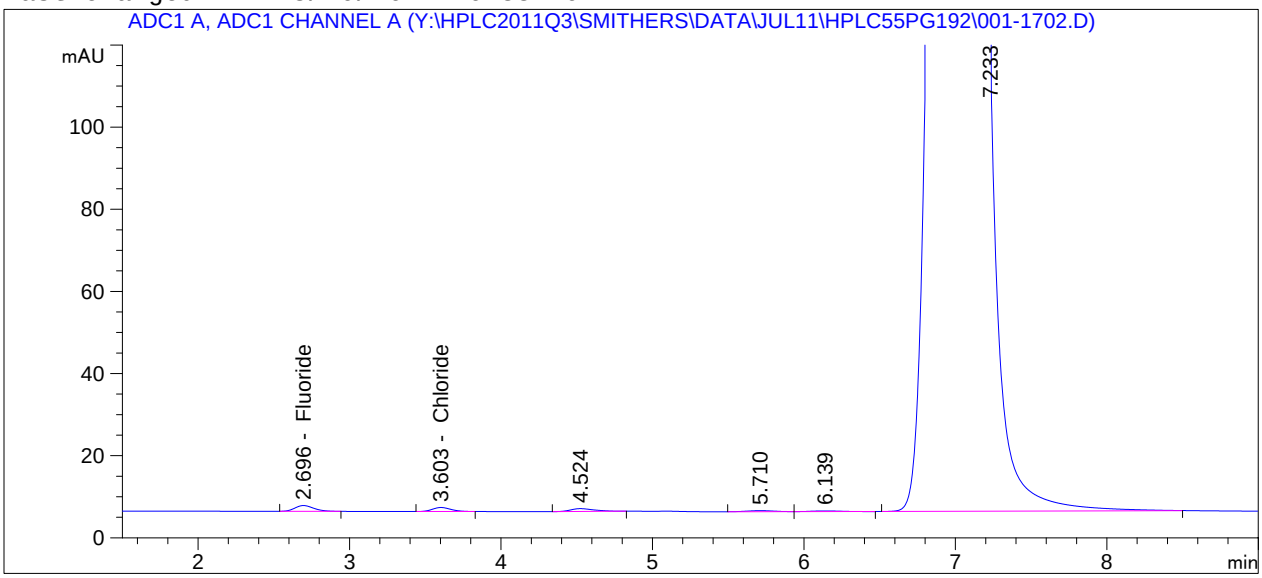
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.696 BB       12.33124 1.43735e-2 1.77243e-1    Fluoride
  3.604 BB        8.29277 2.60191e-2 2.15770e-1    Chloride

Totals :                              3.93013e-1


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\001-1702.D
Sample Name: HPLC55pg192 #1

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  17
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/8/2011 10:42:11 PM                 Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

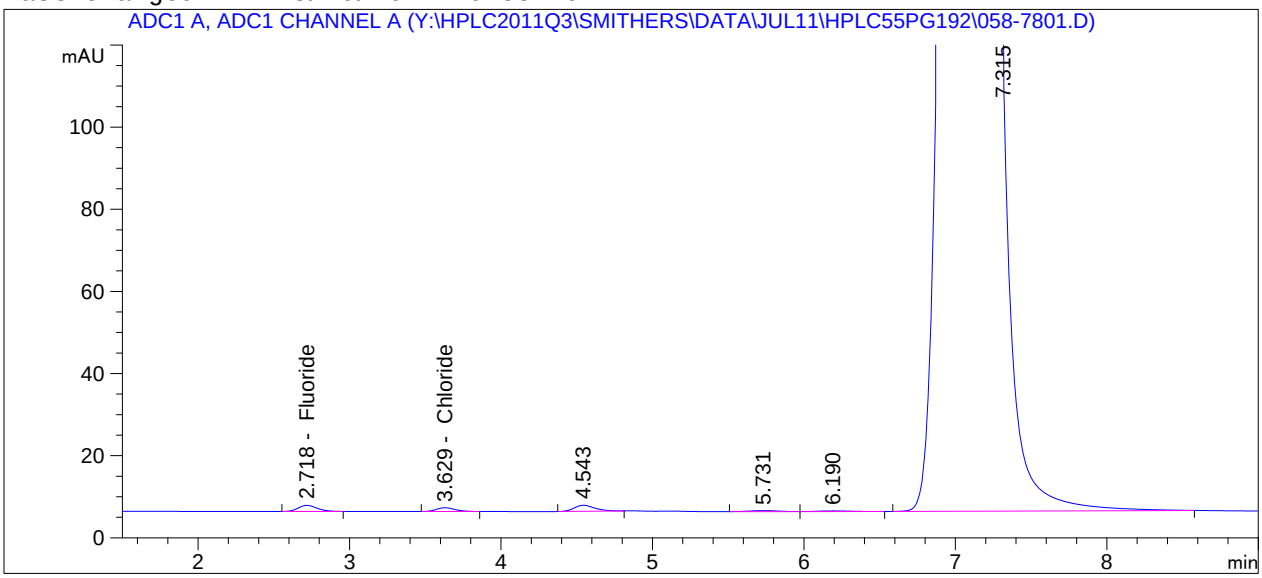
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.696 BB       12.34455 1.43735e-2 1.77434e-1    Fluoride
  3.603 BB        8.36075 2.60156e-2 2.17510e-1    Chloride

Totals :                              3.94944e-1


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\058-7801.D
Sample Name: HPLC55pg192 #1

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  78
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/10/2011 12:11:30 AM                  Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

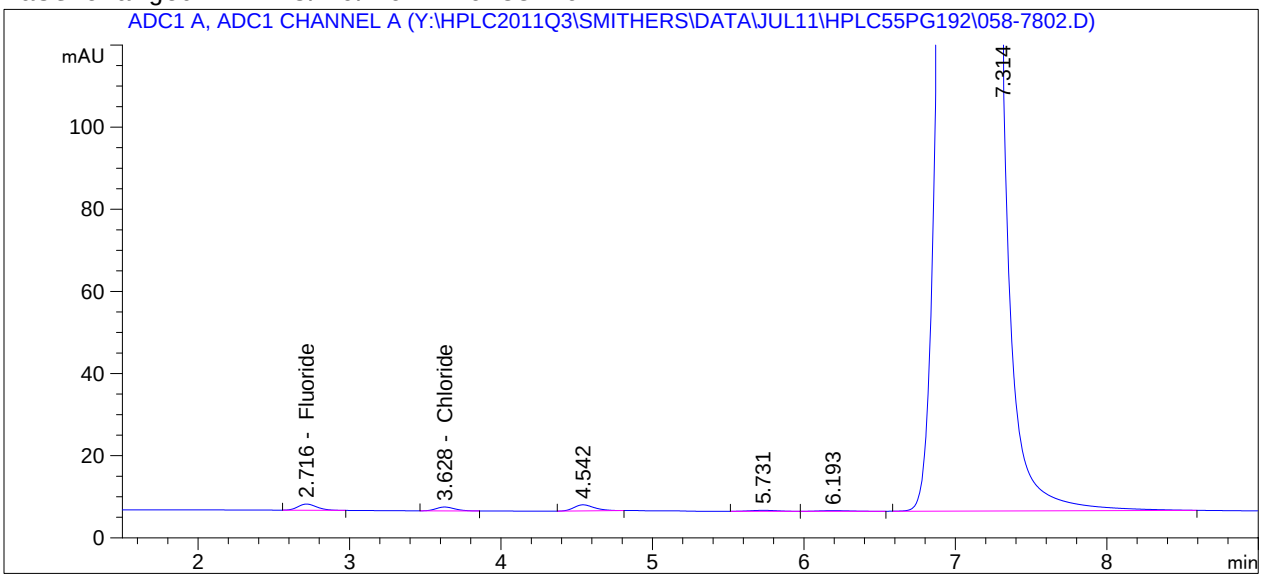
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.718 BB       12.95576 1.43735e-2 1.86219e-1    Fluoride
  3.629 BB        8.00435 2.60347e-2 2.08391e-1    Chloride

Totals :                              3.94610e-1


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\058-7802.D
Sample Name: HPLC55pg192 #1

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  78
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/10/2011 12:22:46 AM                Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

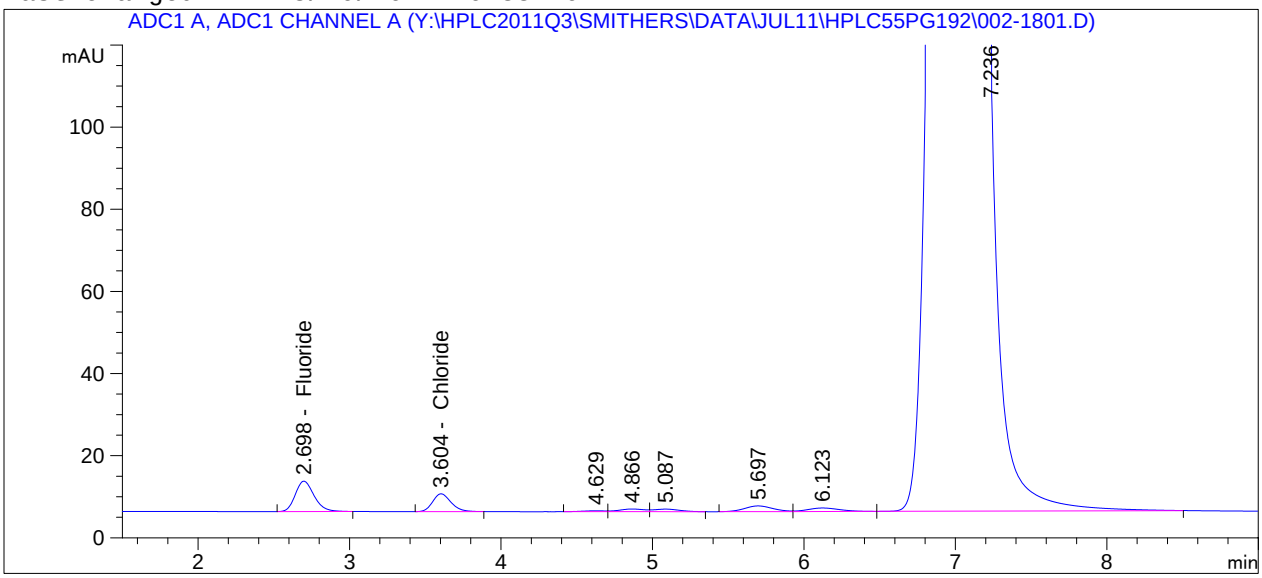
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.716 BB       13.16778 1.43735e-2 1.89267e-1    Fluoride
  3.628 BB        8.03442 2.60330e-2 2.09160e-1    Chloride

Totals :                              3.98427e-1


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\002-1801.D
Sample Name: HPLC55pg192 #2

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  18
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/8/2011 10:53:28 PM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

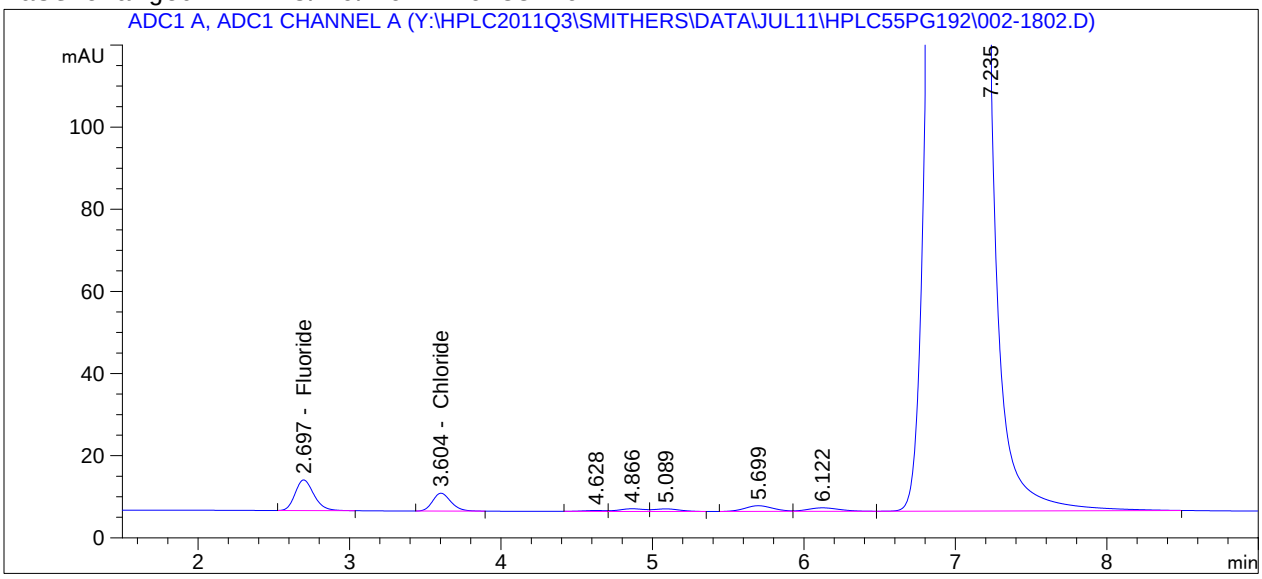
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.698 BB       63.99710 1.64175e-2    1.05067    Fluoride
  3.604 BB       36.54888 2.56848e-2 9.38752e-1    Chloride

Totals :                                1.98942


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\002-1802.D
Sample Name: HPLC55pg192 #2

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  18
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/8/2011 11:04:44 PM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

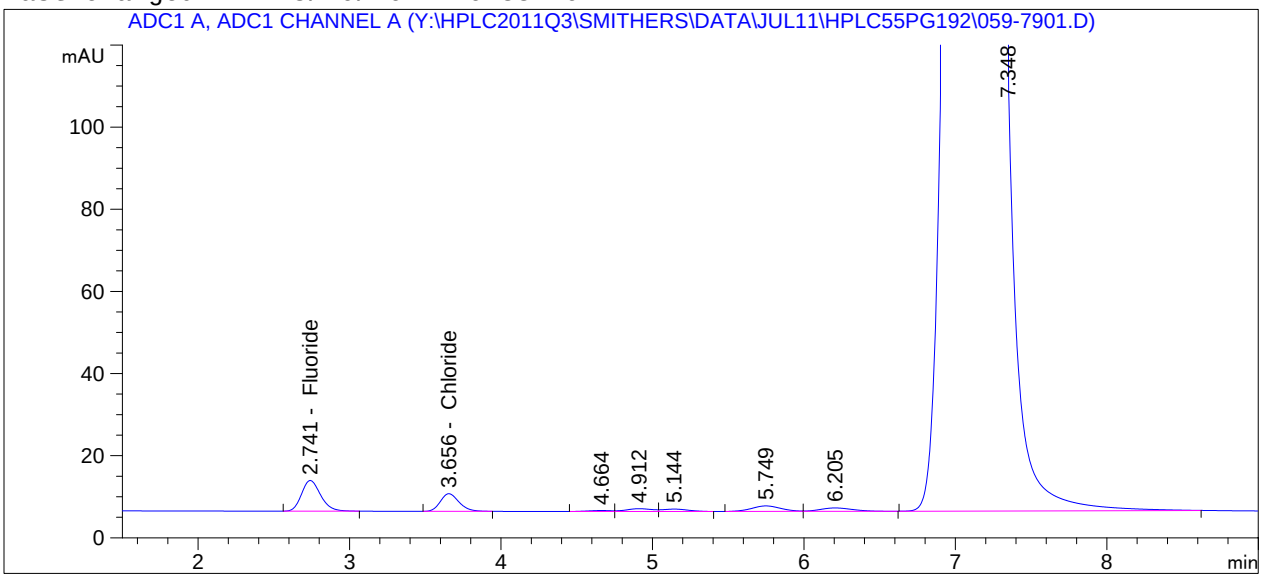
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.697 BB       64.42625 1.64213e-2    1.05796    Fluoride
  3.604 BB       36.73506 2.56843e-2 9.43516e-1    Chloride

Totals :                                2.00148


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\059-7901.D
Sample Name: HPLC55pg192 #2

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  79
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/10/2011 12:34:02 AM                Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

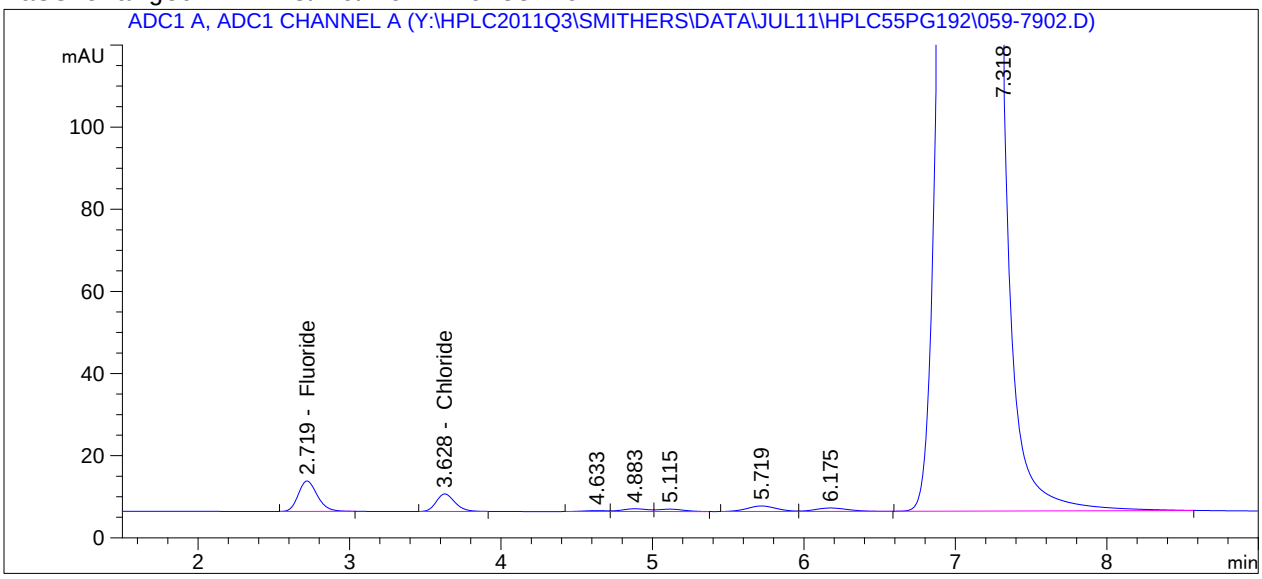
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.741 BB       65.52808 1.64308e-2    1.07668    Fluoride
  3.656 BB       37.01071 2.56836e-2 9.50569e-1    Chloride

Totals :                                2.02725


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\059-7902.D
Sample Name: HPLC55pg192 #2

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  79
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/10/2011 12:45:18 AM                Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

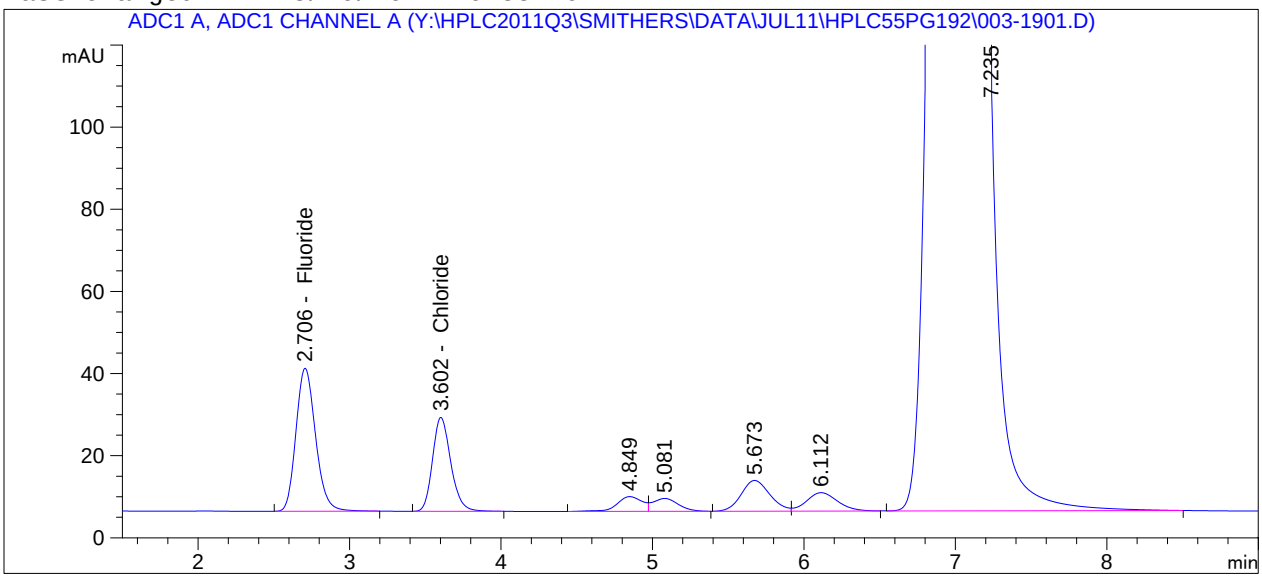
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.719 BB       64.75221 1.64241e-2    1.06350    Fluoride
  3.628 BB       36.74613 2.56843e-2 9.43799e-1    Chloride

Totals :                                2.00730


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\003-1901.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  19
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/8/2011 11:16:00 PM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

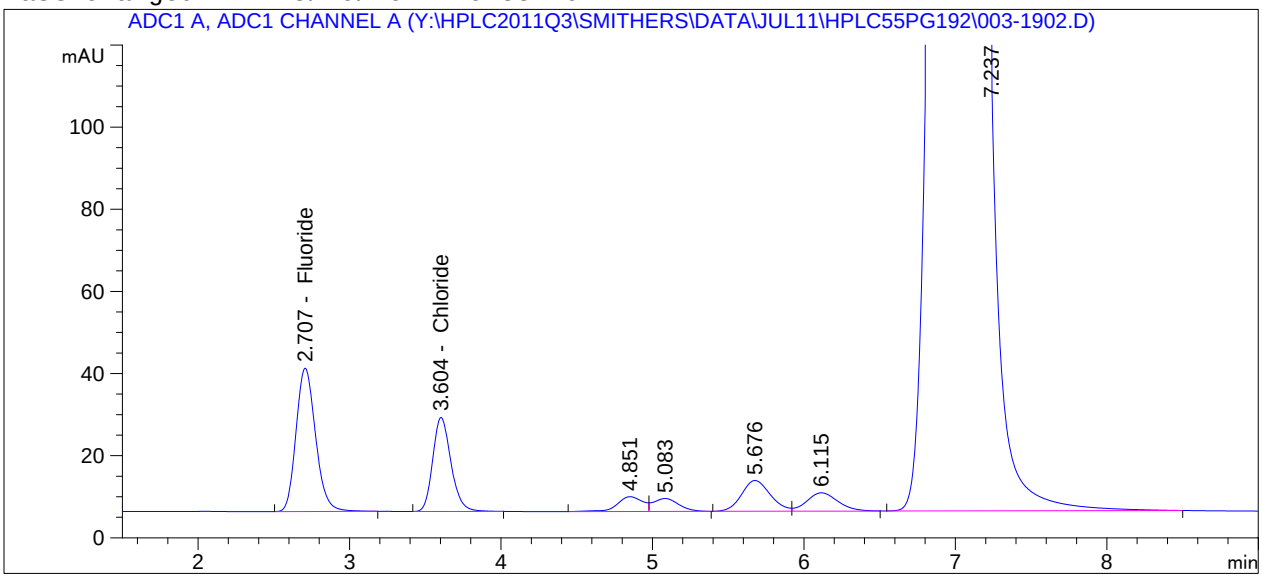
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.706 BB      313.19672 1.68694e-2    5.28343    Fluoride
  3.602 BB      191.76466 2.56054e-2    4.91022    Chloride

Totals :                                10.19365


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\003-1902.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  19
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/8/2011 11:27:16 PM                 Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

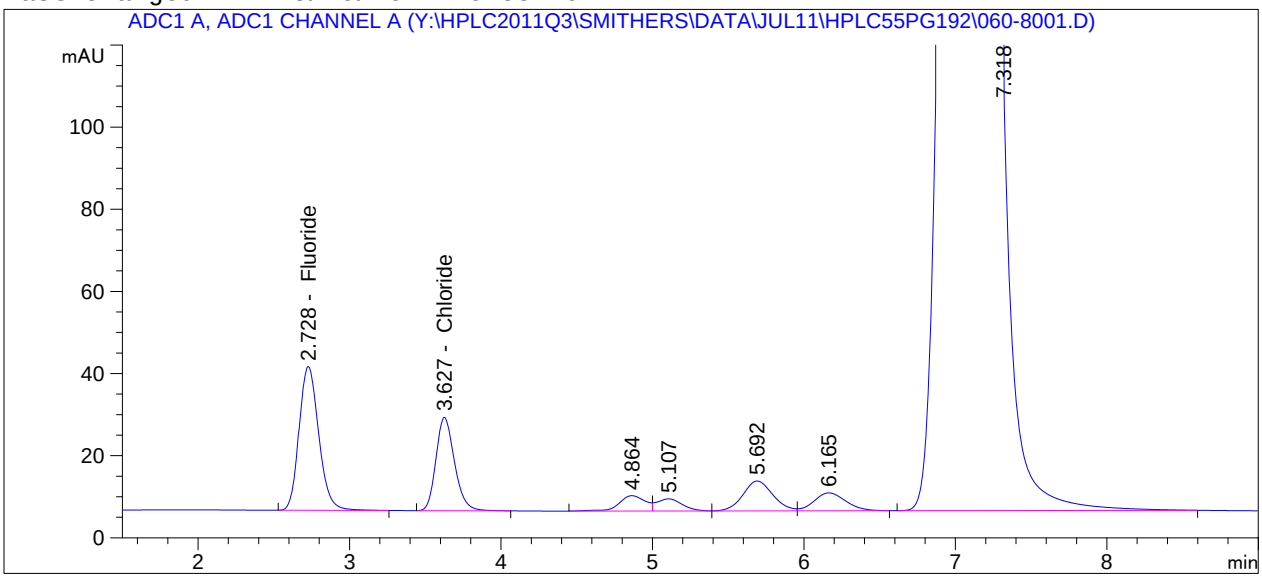
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.707 BB      312.84622 1.68692e-2    5.27747    Fluoride
  3.604 BB      191.74850 2.56054e-2    4.90981    Chloride

Totals :                                10.18728


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\060-8001.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  80
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/10/2011 12:56:35 AM                Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

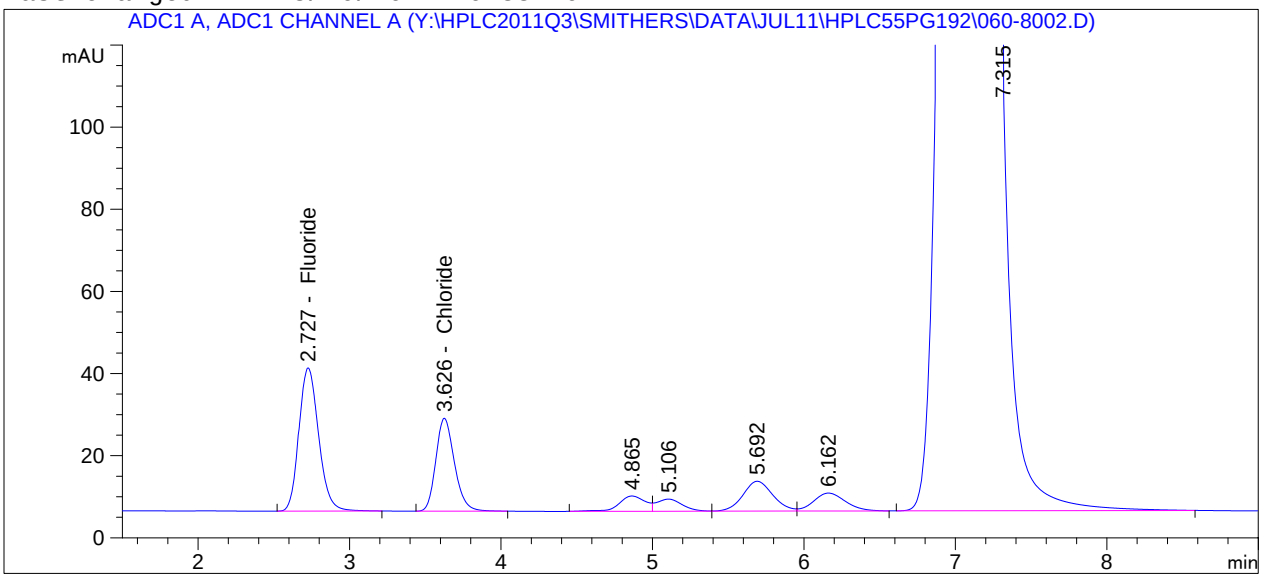
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.728 BB      316.55423 1.68706e-2    5.34046    Fluoride
  3.627 BB      193.77809 2.56052e-2    4.96174    Chloride

Totals :                                10.30219


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\060-8002.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  80
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/10/2011 1:07:51 AM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

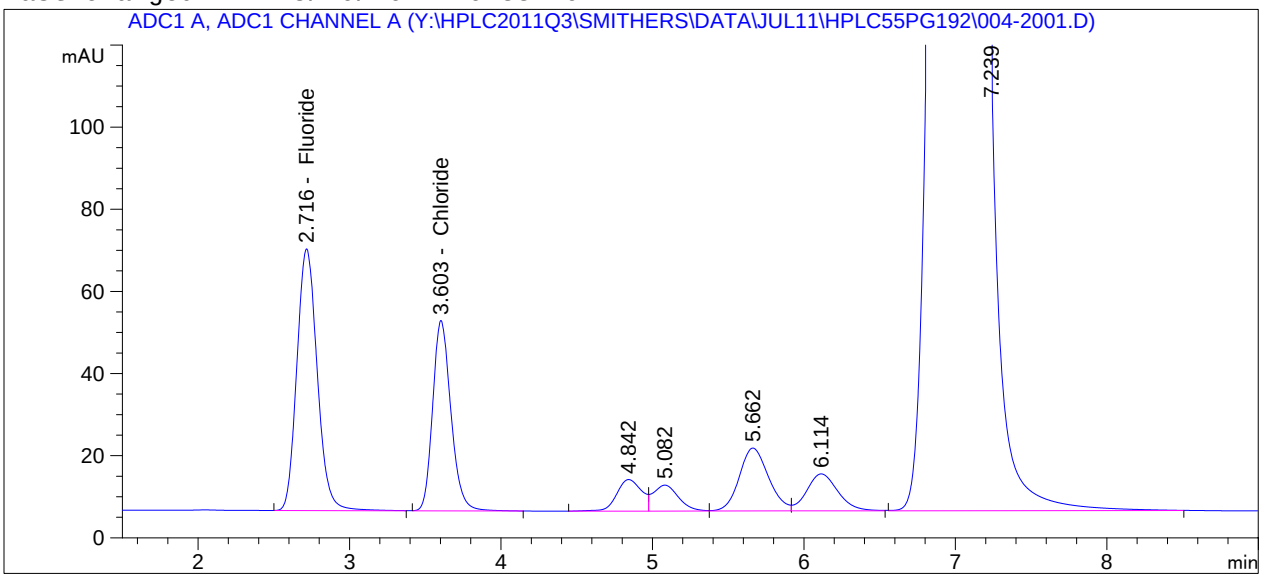
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.727 BB      315.68356 1.68703e-2    5.32567    Fluoride
  3.626 BB      193.25937 2.56053e-2    4.94846    Chloride

Totals :                                10.27413


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\004-2001.D
Sample Name: HPLC55pg192 #4

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  20
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/8/2011 11:38:33 PM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.716 BB      595.89343 1.69244e-2   10.08514    Fluoride
  3.603 BB      389.07352 2.55960e-2    9.95871    Chloride

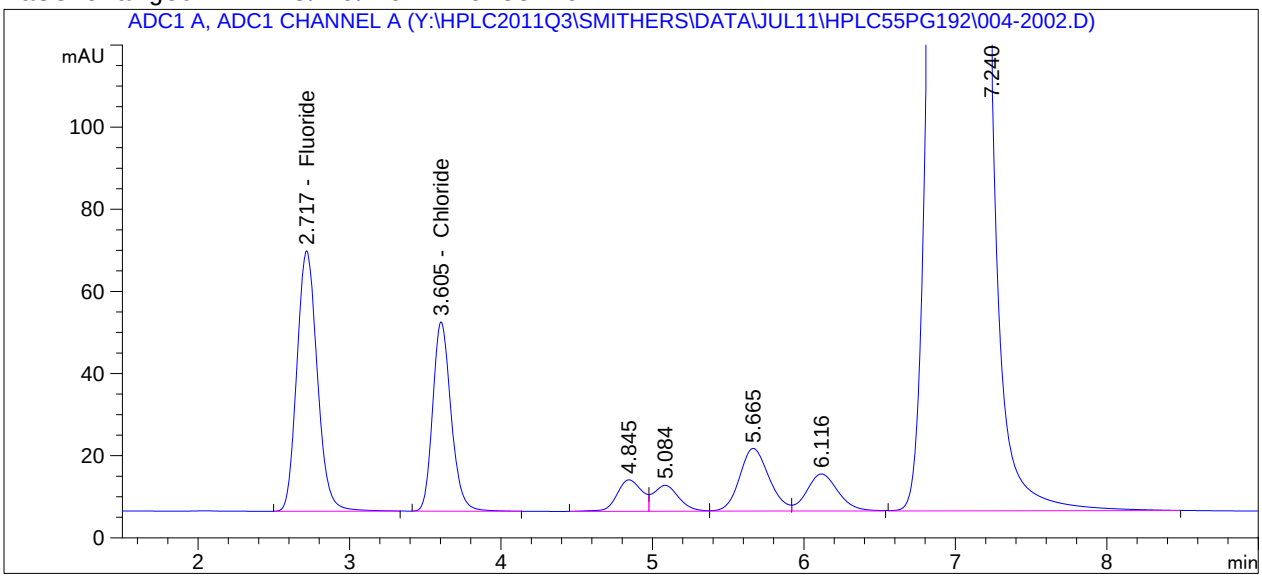
Totals :                                20.04385


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\004-2002.D
Sample Name: HPLC55pg192 #4

==========

Acq. Operator : EO Seq. Line : 20
Acq. Instrument : Smithers Location : -
Injection Date : 8/8/2011 11:49:48 PM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.717	BB	594.16113	1.69242e-2	10.05572		Fluoride
3.605	BB	387.57486	2.55960e-2	9.92036		Chloride

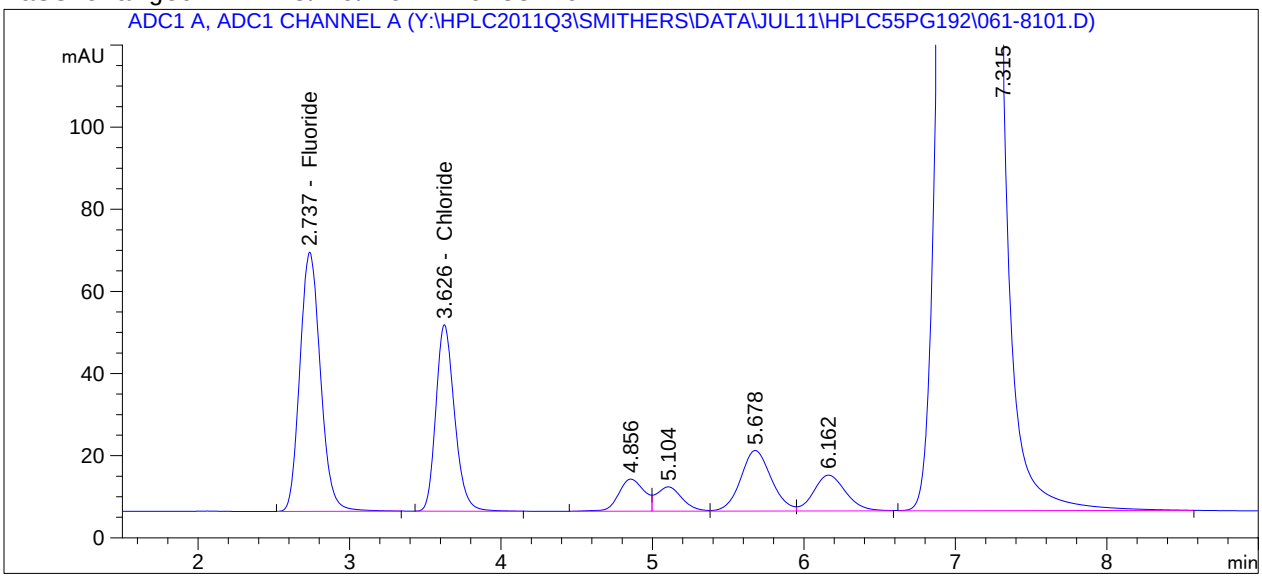
Totals : 19.97608

==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\061-8101.D
Sample Name: HPLC55pg192 #4

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  81
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/10/2011 1:19:06 AM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

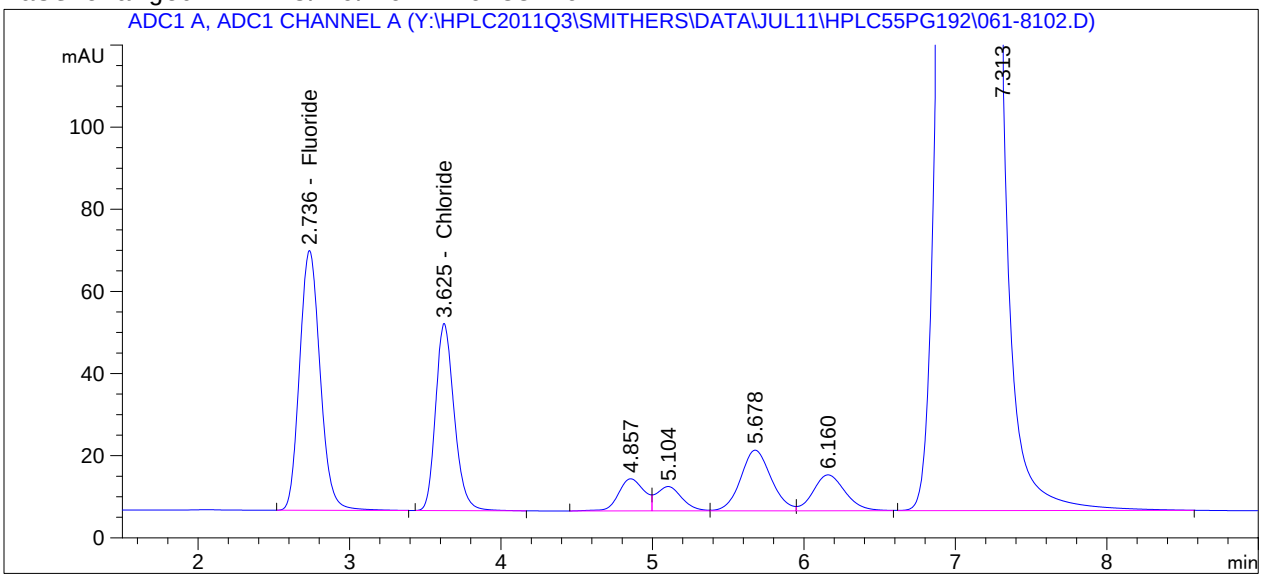
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.737 BB      596.24304 1.69244e-2   10.09108    Fluoride
  3.626 BB      388.91592 2.55960e-2    9.95468    Chloride

Totals :                                20.04576


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\061-8102.D
Sample Name: HPLC55pg192 #4

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  81
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/10/2011 1:30:22 AM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

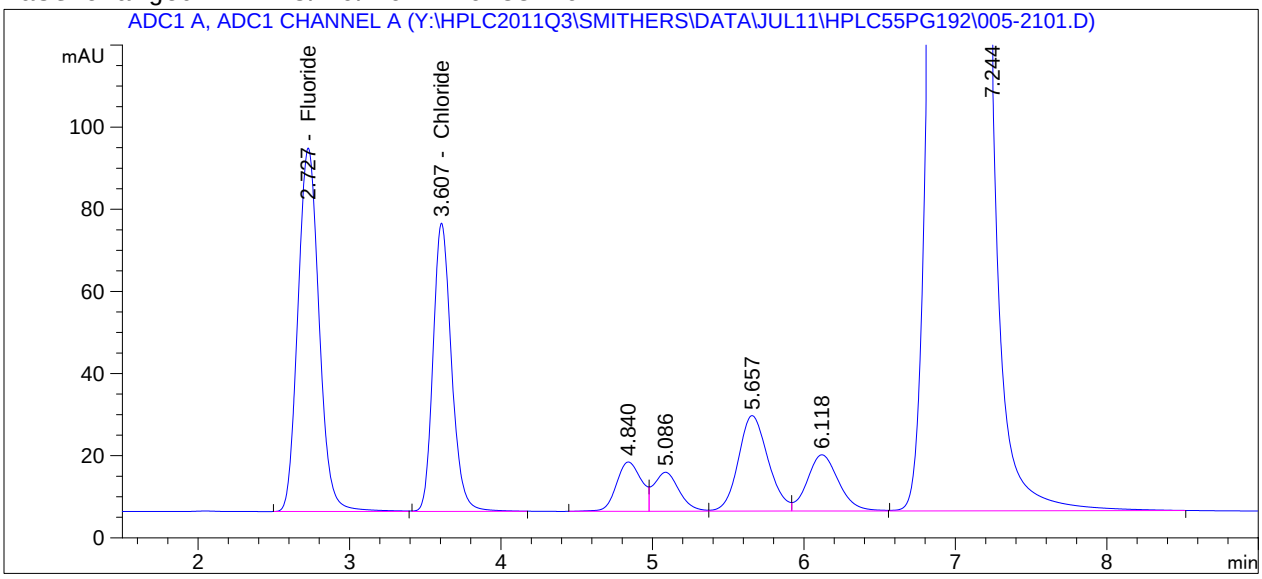
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.736 BB      597.20361 1.69245e-2   10.10740    Fluoride
  3.625 BB      389.77054 2.55959e-2    9.97654    Chloride

Totals :                               20.08394


==========================================================================
                           *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\005-2101.D
Sample Name: HPLC55pg192 #5

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  21
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 12:01:04 AM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

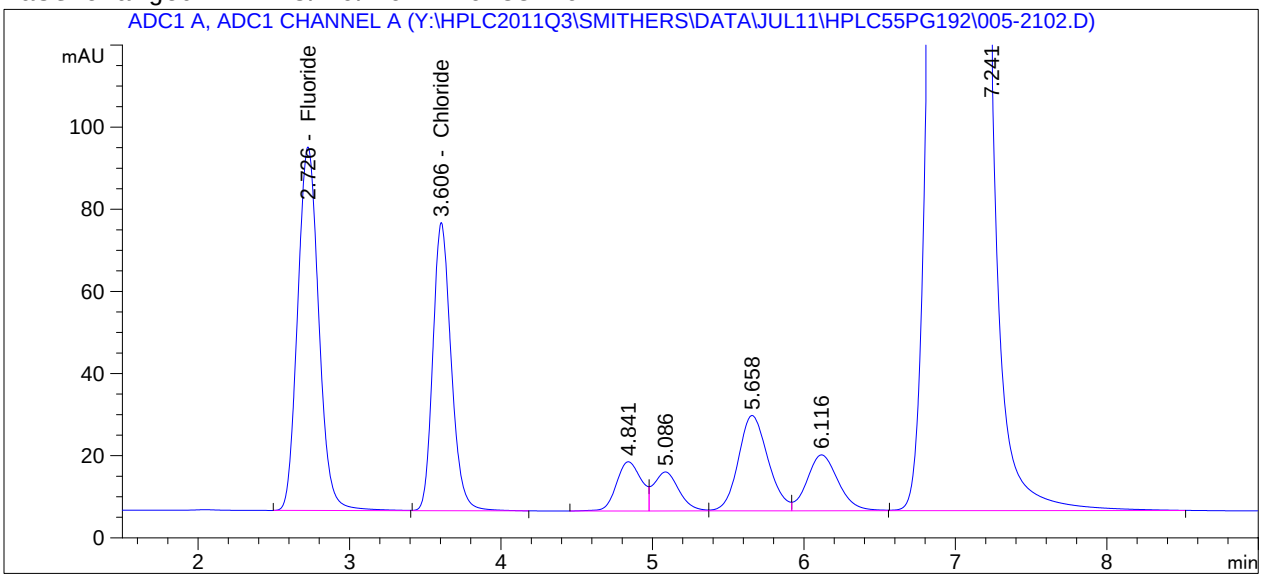
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.727 BB      859.11951 1.69431e-2   14.55614    Fluoride
  3.607 BB      591.59680 2.55928e-2   15.14062    Chloride

Totals :                               29.69676


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\005-2102.D
Sample Name: HPLC55pg192 #5

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  21
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 12:12:21 AM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

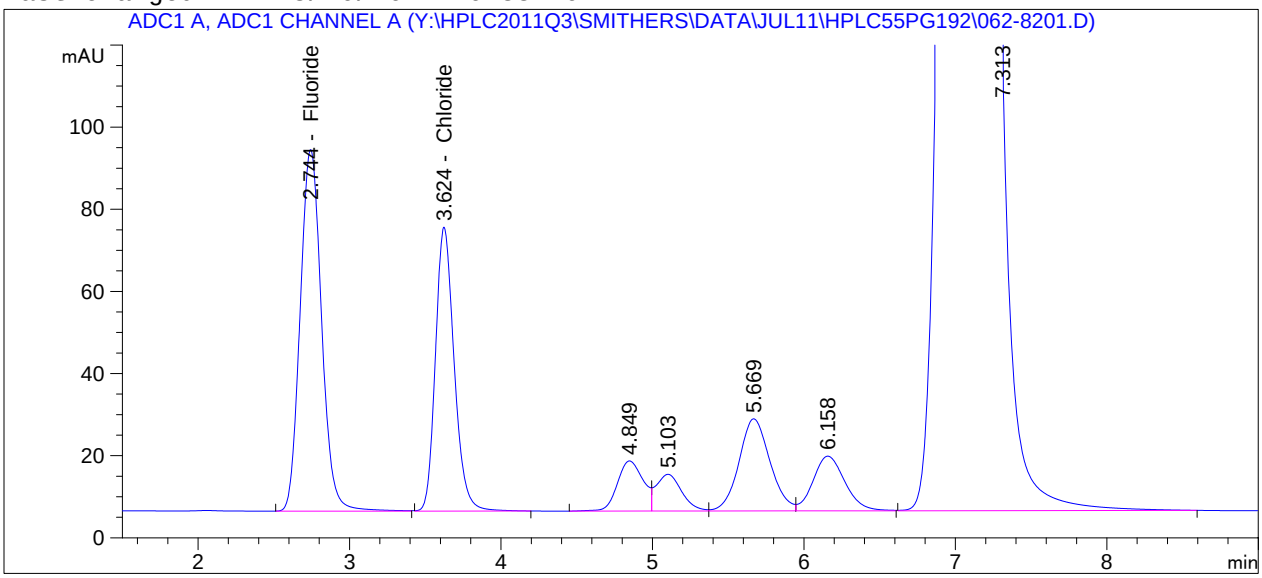
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.726 BB      856.92346 1.69430e-2   14.51884    Fluoride
  3.606 BB      590.49109 2.55928e-2   15.11233    Chloride

Totals :                               29.63117


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\062-8201.D
Sample Name: HPLC55pg192 #5

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  82
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/10/2011 1:41:39 AM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.744 BB      861.94916 1.69432e-2   14.60420    Fluoride
  3.624 BB      593.61475 2.55928e-2   15.19225    Chloride

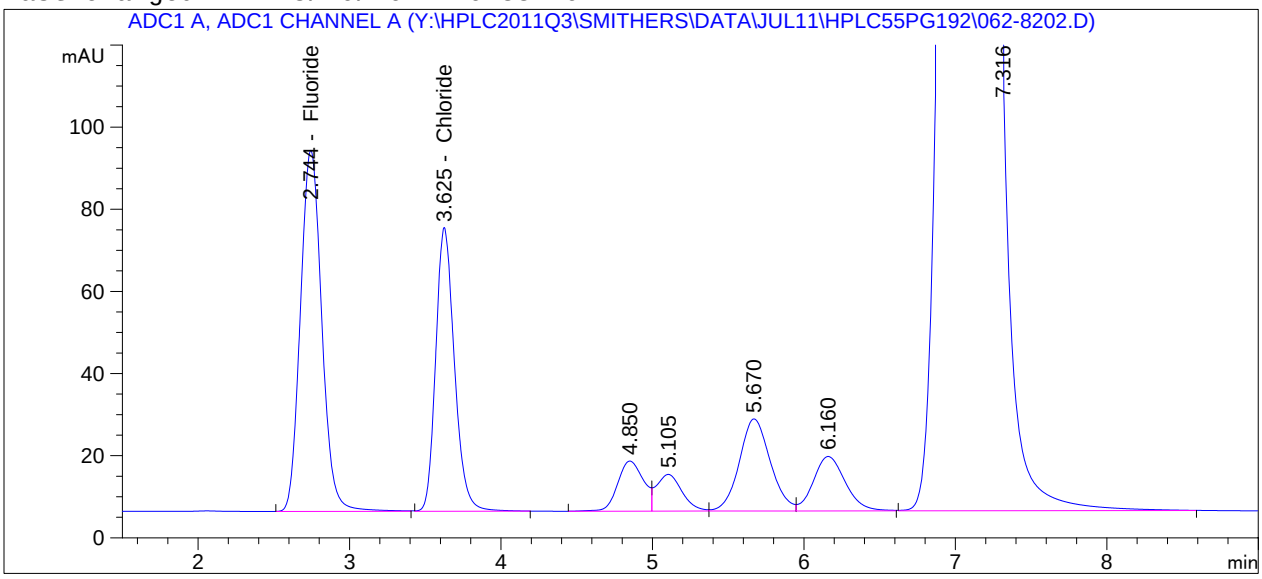
Totals :                               29.79646


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\062-8202.D
Sample Name: HPLC55pg192 #5

==========

Acq. Operator : EO Seq. Line : 82
Acq. Instrument : Smithers Location : -
Injection Date : 8/10/2011 1:52:55 AM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.744	BB	861.00488	1.69432e-2	14.58817		Fluoride
3.625	BB	593.40167	2.55928e-2	15.18680		Chloride

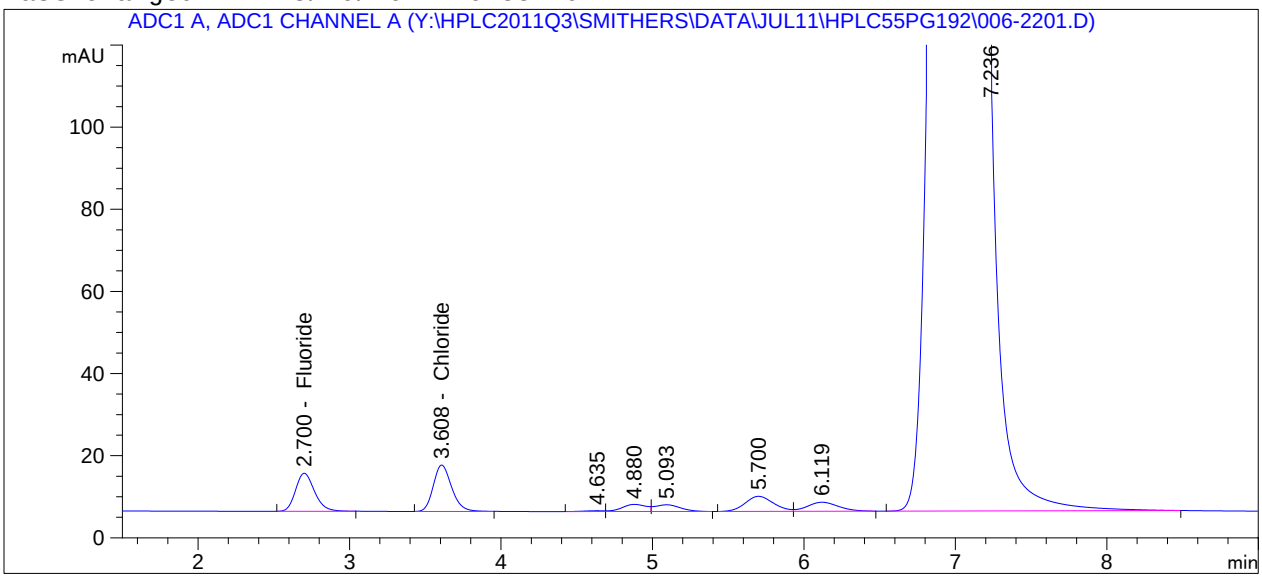
Totals : 29.77497

==========

*** End of Report ***

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\006-2201.D
Sample Name: HPLC55pg192 #SS

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  22
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 12:23:37 AM                 Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

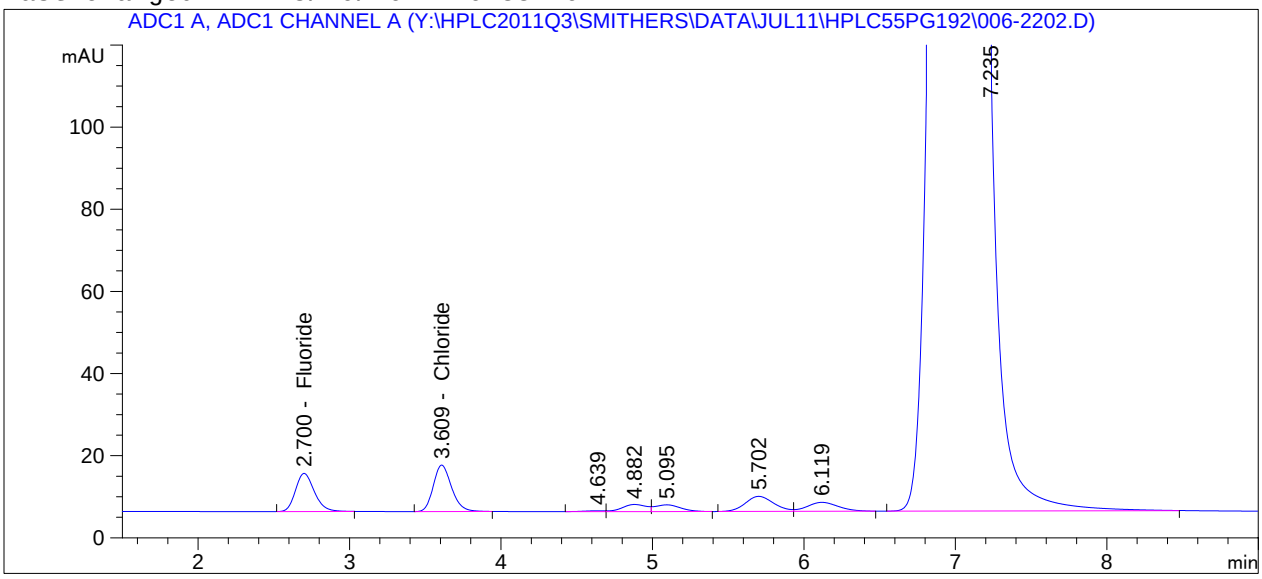
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.700 BB       80.60166 1.65345e-2    1.33271    Fluoride
  3.608 BB       95.09196 2.56244e-2    2.43668    Chloride

Totals :                                3.76939


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\006-2202.D
Sample Name: HPLC55pg192 #SS

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  22
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 12:34:53 AM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

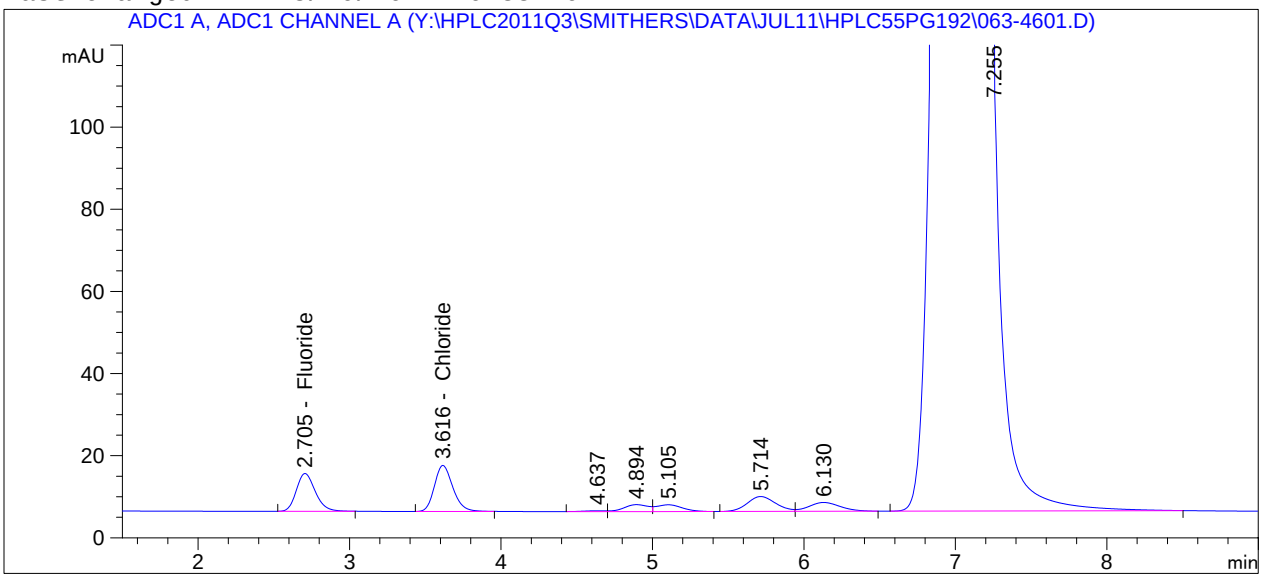
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.700 BB       80.28149 1.65327e-2    1.32727    Fluoride
  3.609 BB       94.87571 2.56245e-2    2.43115    Chloride

Totals :                                3.75842


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\063-4601.D
Sample Name: HPLC55pg192 #SS

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  46
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 9:24:32 AM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

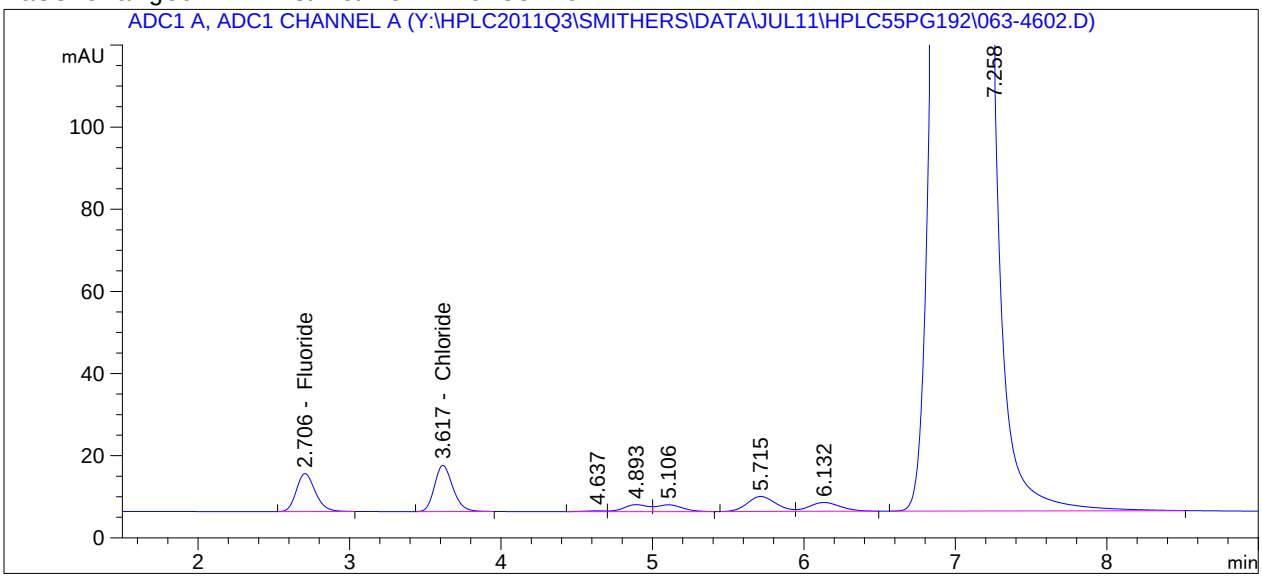
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.705 BB       79.97414 1.65310e-2    1.32205    Fluoride
  3.616 BB       94.65173 2.56246e-2    2.42542    Chloride

Totals :                                3.74746


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\063-4602.D
Sample Name: HPLC55pg192 #SS

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  46
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 9:35:48 AM                   Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

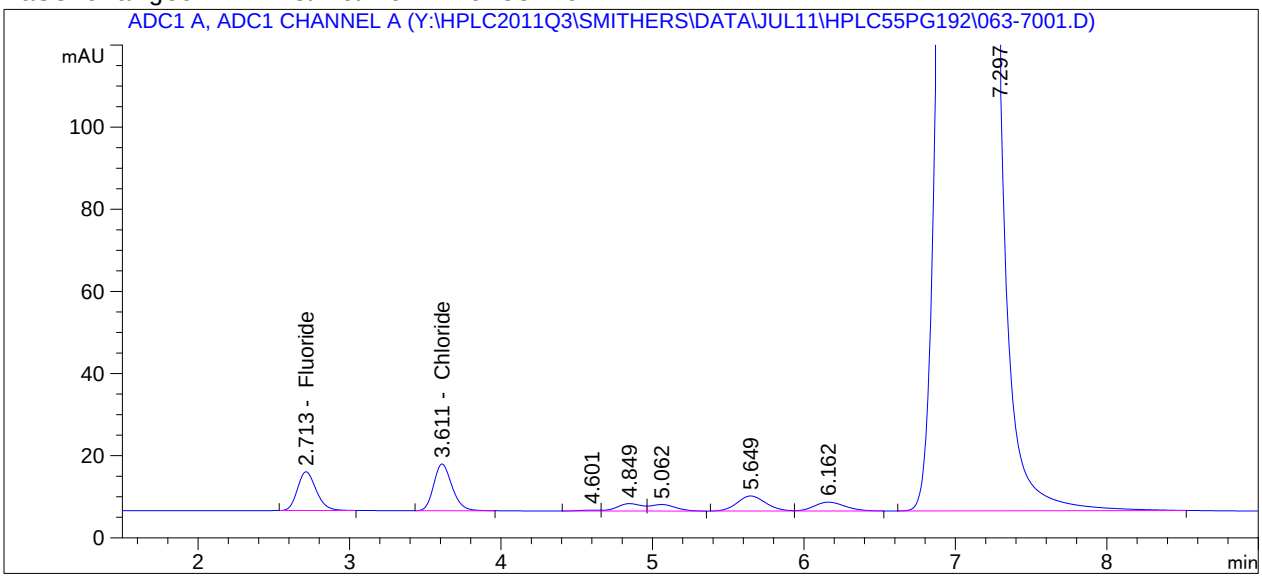
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.706 BB       80.31155 1.65329e-2    1.32778    Fluoride
  3.617 BB       95.05239 2.56245e-2    2.43567    Chloride

Totals :                                3.76345


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\063-7001.D
Sample Name: HPLC55pg192 #SS

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  70
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 8:04:53 PM                    Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

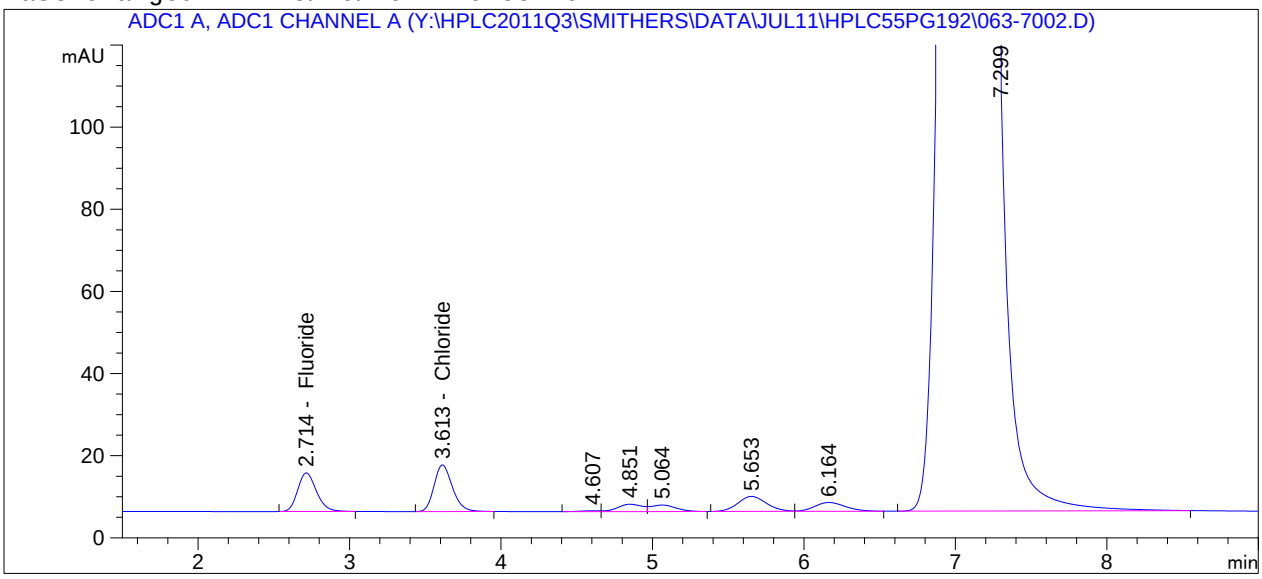
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.713 BB       81.24046 1.65380e-2    1.34356    Fluoride
  3.611 BB       95.96466 2.56241e-2    2.45901    Chloride

Totals :                                3.80257


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\063-7002.D
Sample Name: HPLC55pg192 #SS

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  70
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 8:16:10 PM                   Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

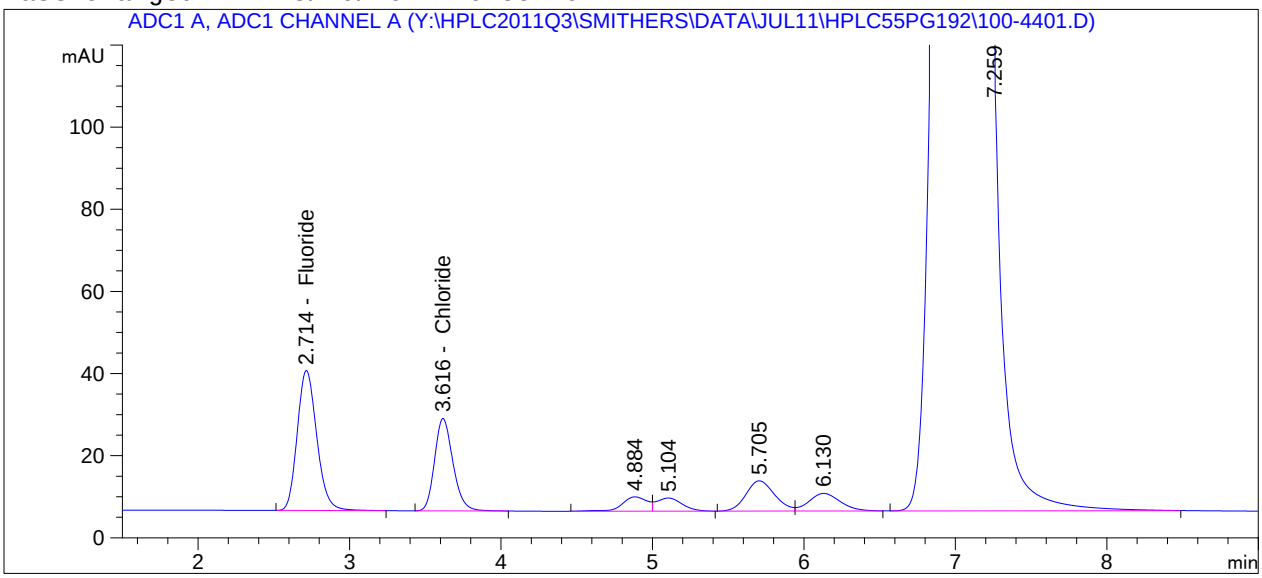
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.714 BB       80.90508 1.65362e-2    1.33786    Fluoride
  3.613 BB       95.72651 2.56242e-2    2.45292    Chloride

Totals :                                3.79078


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\100-4401.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  44
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 8:39:28 AM                   Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

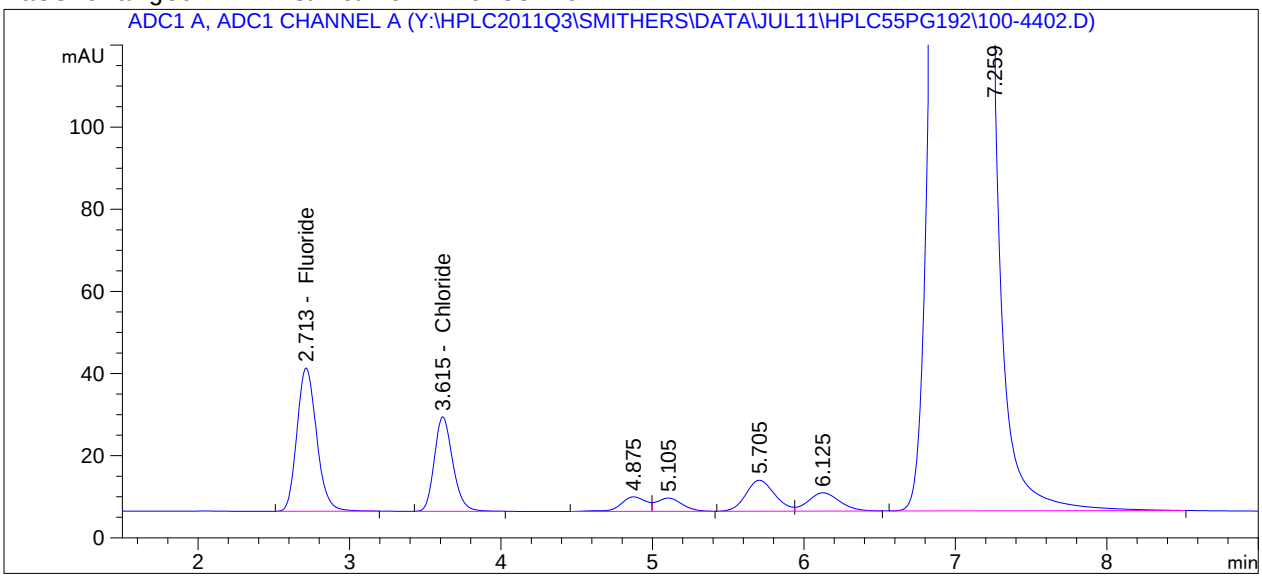
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.714 BB      305.69305 1.68665e-2    5.15597    Fluoride
  3.616 BB      189.75870 2.56056e-2    4.85889    Chloride

Totals :                                10.01487


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\100-4402.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  44
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 8:50:43 AM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

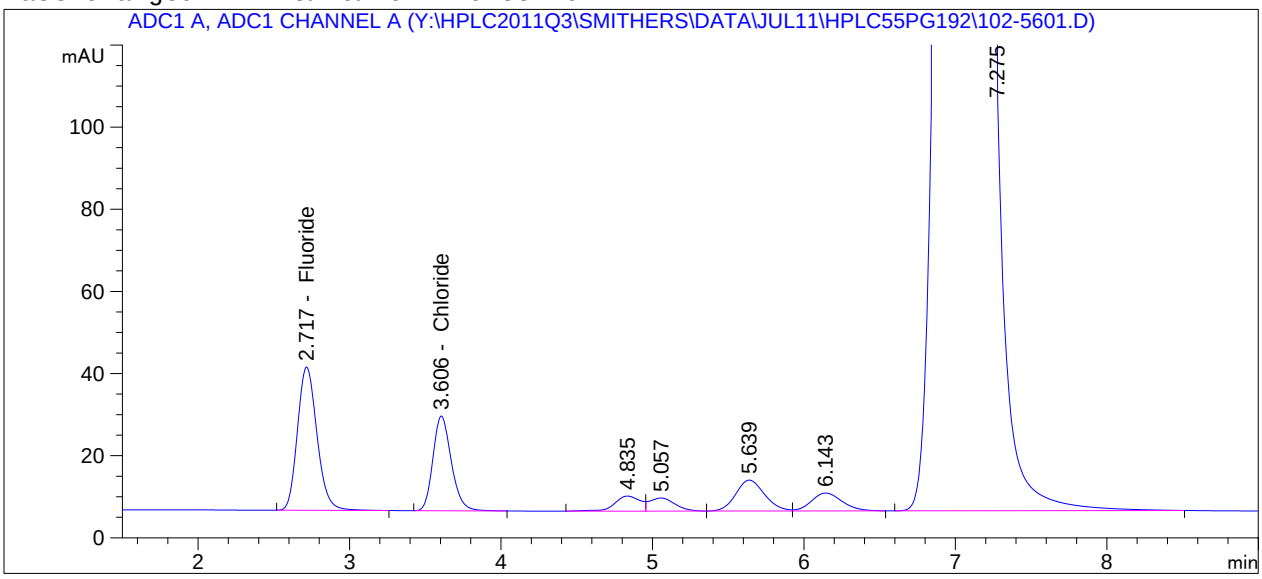
RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.713 BB      314.50198 1.68698e-2    5.30560    Fluoride
  3.615 BB      194.49799 2.56052e-2    4.98016    Chloride

Totals :                                10.28575


==========================================================================
                           *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\102-5601.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  56
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 1:09:54 PM                   Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

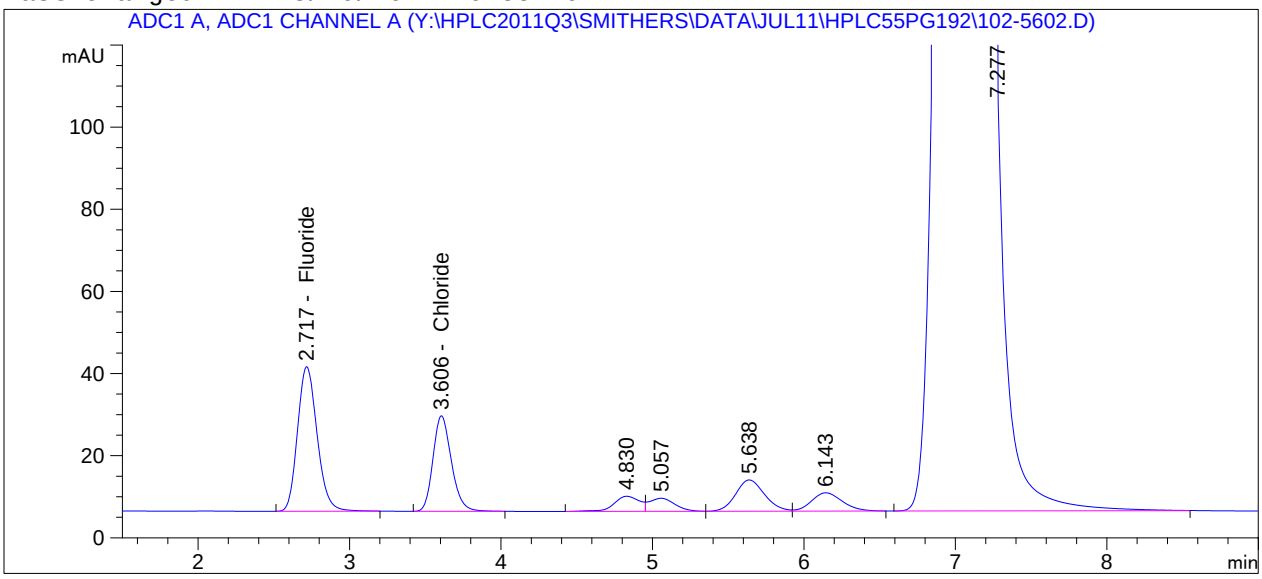
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.717 BB      313.21490 1.68694e-2    5.28374    Fluoride
  3.606 BB      194.59398 2.56052e-2    4.98261    Chloride

Totals :                                10.26635


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\102-5602.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                                Seq. Line :  56
Acq. Instrument : Smithers                           Location :   -
Injection Date  : 8/9/2011 1:21:10 PM                    Inj :   2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

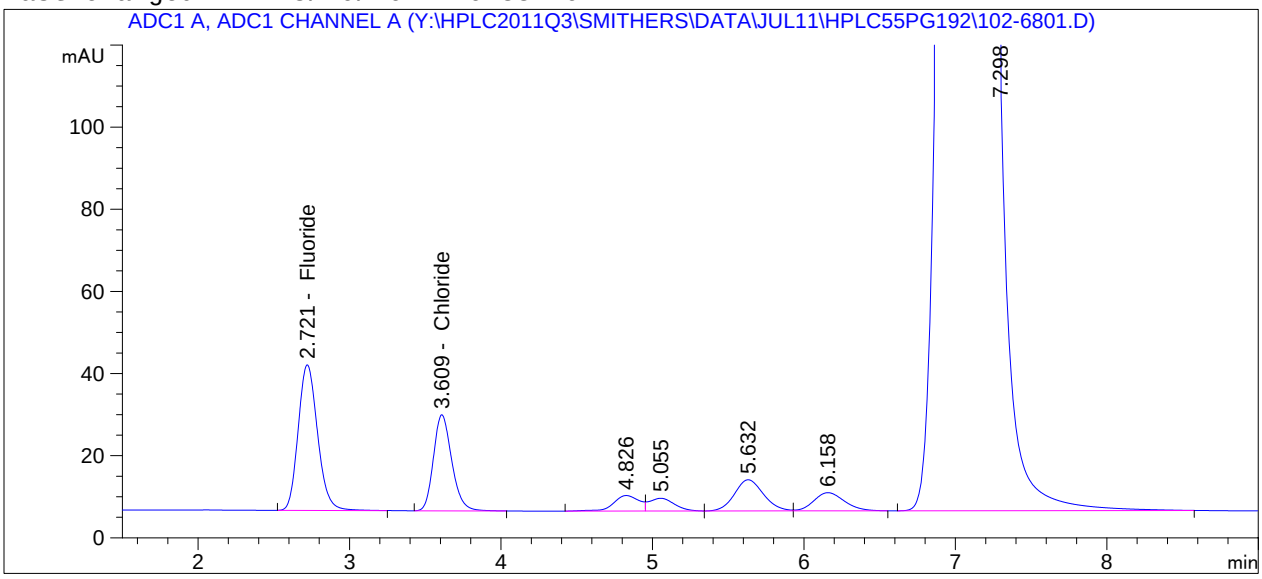
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.717 BB      316.90796 1.68707e-2    5.34646    Fluoride
  3.606 BB      196.58035 2.56050e-2    5.03344    Chloride

Totals :                                10.37990


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\102-6801.D
Sample Name: HPLC55pg192 #3

```
==========================================================================
Acq. Operator   : EO                              Seq. Line :  68
Acq. Instrument : Smithers                         Location :   -
Injection Date  : 8/9/2011 7:19:49 PM                   Inj :   1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed    : 8/10/2011 10:33:46 AM
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Wednesday, August 10, 2011 10:33:40 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]               [ug/mL]
-------|------|----------|----------|----------|--|------------------
  2.721 BB      315.59976 1.68702e-2    5.32424    Fluoride
  3.609 BB      196.40675 2.56050e-2    5.02899    Chloride

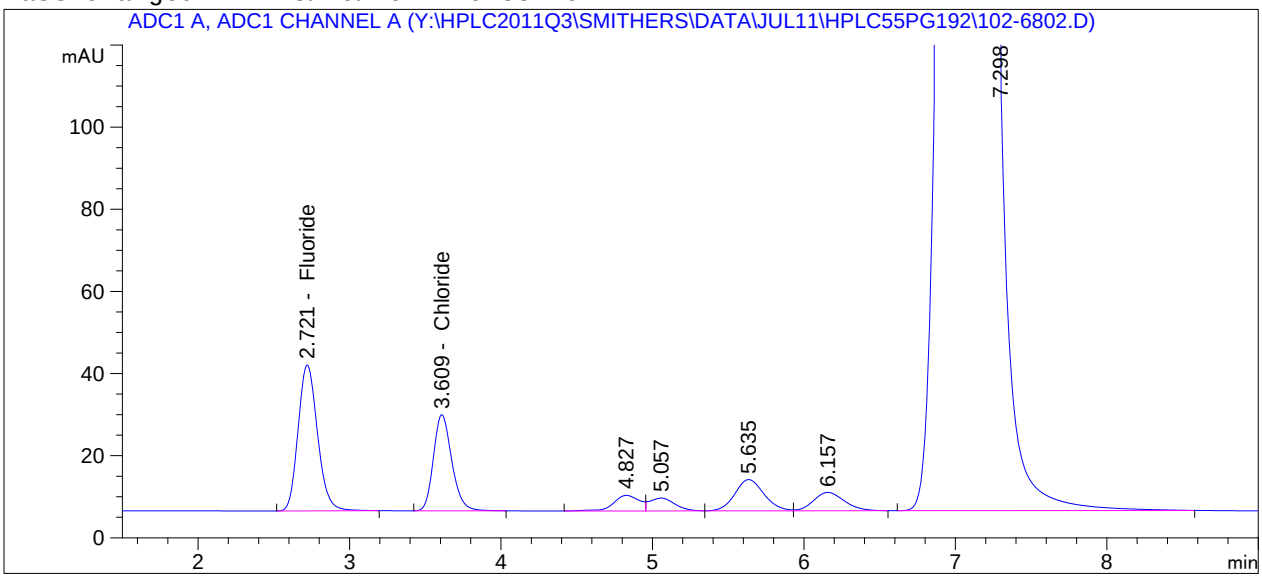
Totals :                                10.35324


==========================================================================
                          *** End of Report ***
```

Data File Y:\HPLC2011Q3\SMITHERS\DATA\JUL11\HPLC55PG192\102-6802.D
Sample Name: HPLC55pg192 #3

==========

Acq. Operator : EO Seq. Line : 68
Acq. Instrument : Smithers Location : -
Injection Date : 8/9/2011 7:31:05 PM Inj : 2
Acq. Method : C:\HPCHEM\1\METHODS\METROHM.M
Last changed : 8/8/2011 11:32:47 AM by AMP
Analysis Method : Y:\HPLC2011Q3\SMITHERS\METHODS\HPLC55PG192.M
Last changed : 8/10/2011 10:33:46 AM



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, August 10, 2011 10:33:40 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.721	BB	316.98175	1.68707e-2	5.34772		Fluoride
3.609	BB	197.25139	2.56049e-2	5.05061		Chloride

Totals : 10.39832

==========

*** End of Report ***

Method Information

Method: U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Modified: 1/13/2010 at 7:06:26 AM

ANALOG DIGITAL CONVERTER

	Signal 1
Description:	ADC1 A, Metrohm
Source:	Signal
Unit:	mAU
Units/Volt:	100.000
Peakwidth (Data Rate):	0.027 Min (10.00 Hz)
Stop Time:	No Limit
Data Storage:	All

Start Signal Source: External Device Will Start 35900

Timed Event Table:
<no events>

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 127	DI Rinse	METROHM	4	Sample	
2	Vial 1	HPLC55pg192 #1	METROHM	2	Sample	
3	Vial 2	HPLC55pg192 #2	METROHM	2	Sample	
4	Vial 3	HPLC55pg192 #3	METROHM	2	Sample	
5	Vial 4	HPLC55pg192 #4	METROHM	2	Sample	
6	Vial 5	HPLC55pg192 #5	METROHM	2	Sample	
7	Vial 6	HPLC55pg192 #SS	METROHM	2	Sample	
8	Vial 7	0.01N H2SO4/NaOH RB	METROHM	2	Sample	
9	Vial 8	MDL Study	METROHM	4	Sample	
10	Vial 9	MDL Study	METROHM	4	Sample	
11	Vial 10	Run 1 *10 0811-48	METROHM	2	Sample	
12	Vial 11	MS Run 1 *10 0811-48	METROHM	2	Sample	
13	Vial 12	MSD Run 1 *10 0811-48	METROHM	2	Sample	
14	Vial 13	Run 2 *10 0811-48	METROHM	2	Sample	
15	Vial 14	Run 3 *10 0811-48	METROHM	2	Sample	
16	Vial 15	H2SO4 RB *10 0811-48	METROHM	2	Sample	
17	Vial 1	HPLC55pg192 #1	METROHM	2	Sample	
18	Vial 2	HPLC55pg192 #2	METROHM	2	Sample	
19	Vial 3	HPLC55pg192 #3	METROHM	2	Sample	
20	Vial 4	HPLC55pg192 #4	METROHM	2	Sample	
21	Vial 5	HPLC55pg192 #5	METROHM	2	Sample	
22	Vial 6	HPLC55pg192 #SS	METROHM	2	Sample	
23	Vial 7	0.01N H2SO4/NaOH RB	METROHM	2	Sample	
24	Vial 16	K19 R1 *10 acid 0711-34	METROHM	2	Sample	
25	Vial 17	MS K19 R1 *10 acid 0711-34	METROHM	2	Sample	

EM-BTRF-002695

Sequence: Y:\HPLC2011Q3\SMITHERS\SEQUENCE\HPLC55PG192.S

Line	Location	SampleName / DataFile	Method / AutoBalance	Inj / LimsID	SampleType	InjVolume
26	Vial 18	MSD K19 R1 *10 acid 0711-34	METROHM	2	Sample	
27	Vial 19	K19 R2 *10 acid 071 1-34	METROHM	2	Sample	
28	Vial 20	K19 R3 *10 acid 071 1-34	METROHM	2	Sample	
29	Vial 21	K20 R1 *10 acid 071 1-34	METROHM	2	Sample	
30	Vial 22	K20 R2 *10 acid 071 1-34	METROHM	2	Sample	
31	Vial 23	K20 R3 *10 acid 071 1-34	METROHM	2	Sample	
32	Vial 100	HPLC55pg192 #3	METROHM	2	Sample	
33	Vial 101	HPLC55pg192 #4	METROHM	2	Sample	
34	Vial 24	K22 R1 *10 acid 071 1-34	METROHM	2	Sample	
35	Vial 25	K22 R2 *10 acid 071 1-34	METROHM	2	Sample	
36	Vial 26	K22 R3 *10 acid 071 1-34	METROHM	2	Sample	
37	Vial 27	K23 R1 *10 acid 071 1-34	METROHM	2	Sample	
38	Vial 28	K23 R2 *10 acid 071 1-34	METROHM	2	Sample	
39	Vial 29	K23 R3 *10 acid 071 1-34	METROHM	2	Sample	
40	Vial 30	H2SO4 FB *10 0711-3 4	METROHM	2	Sample	
41	Vial 31	H2SO4 RB *10 0711-3 4	METROHM	2	Sample	
42	Vial 32	DI H2O RB 0711-34	METROHM	2	Sample	
43	Vial 33	R1 *10 0711-173	METROHM	2	Sample	
44	Vial 100	HPLC55pg192 #3	METROHM	2	Sample	
45	Vial 101	HPLC55pg192 #4	METROHM	2	Sample	
46	Vial 63	HPLC55pg192 #SS	METROHM	2	Sample	
47	Vial 64	0.01N H2SO4/NaOH RB	METROHM	2	Sample	
48	Vial 34	MS R1 *10 0711-173	METROHM	2	Sample	

EM-BTRF-002696

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
~~49~~	~~Vial 35~~	~~MSD R1 *10 0711-173~~	~~METROHM~~	~~2~~	~~Sample~~	
~~50~~	~~Vial 36~~	~~R3 *10 0711-173~~	~~METROHM~~	~~2~~	~~Sample~~	
51	Vial 37	Run 1 *10 acid 0711 -163	METROHM	2	Sample	
52	Vial 38	MS Run 1 *10 acid 0 711-163	METROHM	2	Sample	
53	Vial 39	MSD Run 1 *10 acid 0711-163	METROHM	2	Sample	
54	Vial 40	Run 2 *10 acid 0711 -163	METROHM	2	Sample	
55	Vial 41	Run 3 *10 acid 0711 -163	METROHM	2	Sample	
56	Vial 102	HPLC55pg192 #3	METROHM	2	Sample	
~~57~~	~~Vial 103~~	~~HPLC55pg192 #4~~	~~METROHM~~	~~2~~	~~Sample~~	
58	Vial 42	H2SO4 Blank *10 071 1-163	METROHM	2	Sample	
~~59~~	~~Vial 43~~	~~K22 R1 *10 base 071~~ 1-34	~~METROHM~~	~~2~~	~~Sample~~	
60	Vial 44	MS K22 R1 *10 base 0711-34	METROHM	2	Sample	
61	Vial 45	MSD K22 R1 *10 base 0711-34	METROHM	2	Sample	
62	Vial 46	K22 R2 *10 base 071 1-34	METROHM	2	Sample	
63	Vial 47	K22 R3 *10 base 071 1-34	METROHM	2	Sample	
64	Vial 48	K23 R1 *10 base 071 1-34	METROHM	2	Sample	
65	Vial 49	K23 R2 *10 base 071 1-34	METROHM	2	Sample	
66	Vial 50	K23 R3 *10 base 071 1-34	METROHM	2	Sample	
~~67~~	~~Vial 51~~	~~NaOH Blank *10 0711~~ -34	~~METROHM~~	~~2~~	~~Sample~~	
68	Vial 102	HPLC55pg192 #3	METROHM	2	Sample	
~~69~~	~~Vial 103~~	~~HPLC55pg192 #4~~	~~METROHM~~	~~2~~	~~Sample~~	
70	Vial 63	HPLC55pg192 #SS	METROHM	2	Sample	
71	Vial 64	0.01N H2SO4/NaOH RB	METROHM	2	Sample	

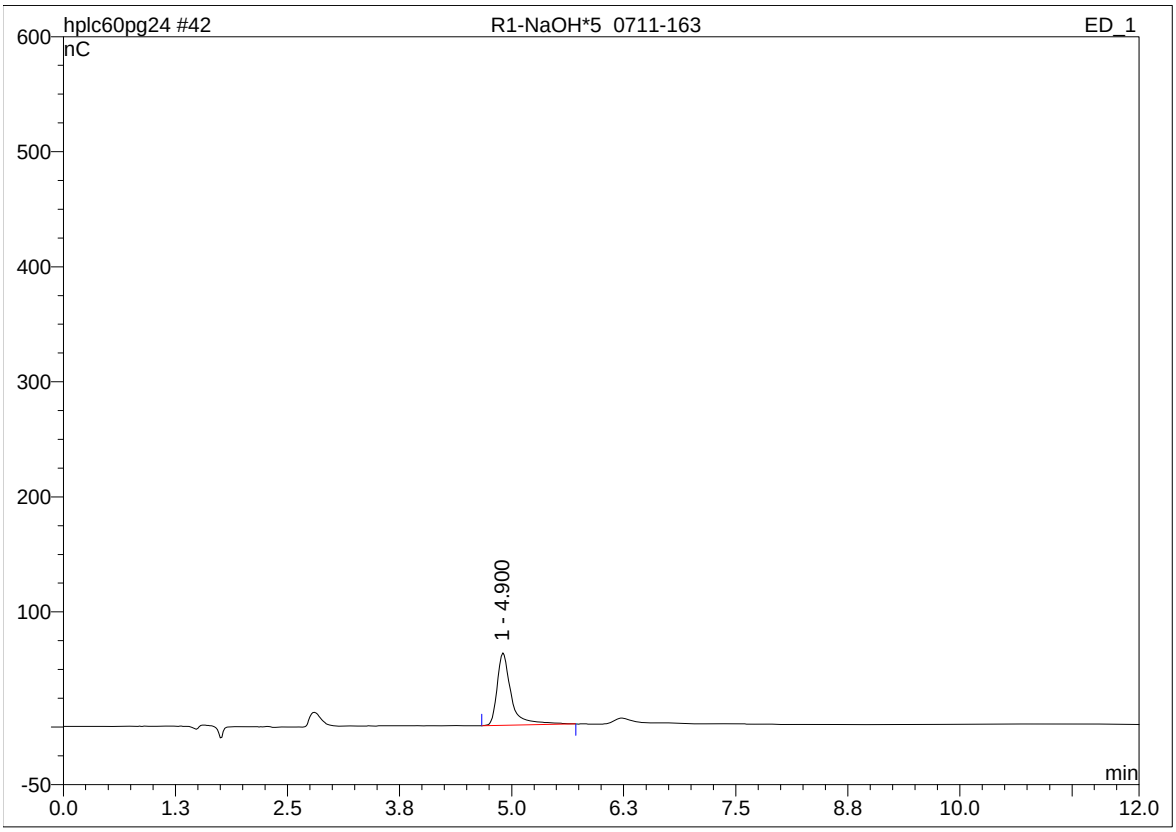
Sequence: Y:\HPLC2011Q3\SMITHERS\SEQUENCE\HPLC55PG192.S

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
72	Vial 52	R1 *10 base 0711-16 3	METROHM	2	Sample	
73	Vial 53	MS R1 *10 base 0711 -163	METROHM	2	Sample	
74	Vial 54	MSD R1 *10 base 071 1-163	METROHM	2	Sample	
75	Vial 55	R2 *10 base 0711-16 3	METROHM	2	Sample	
76	Vial 56	R3 *10 base 0711-16 3	METROHM	2	Sample	
77	Vial 57	NaOH Blank *10 0711 -163	METROHM	2	Sample	
78	Vial 58	HPLC55pg192 #1	METROHM	2	Sample	
79	Vial 59	HPLC55pg192 #2	METROHM	2	Sample	
80	Vial 60	HPLC55pg192 #3	METROHM	2	Sample	
81	Vial 61	HPLC55pg192 #4	METROHM	2	Sample	
82	Vial 62	HPLC55pg192 #5	METROHM	2	Sample	

Sample Chromatograms

42 R1-NaOH*5 0711-163

Injection Name	**R1-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**11**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 3:52**		
Run Time (min):	**12.00**		

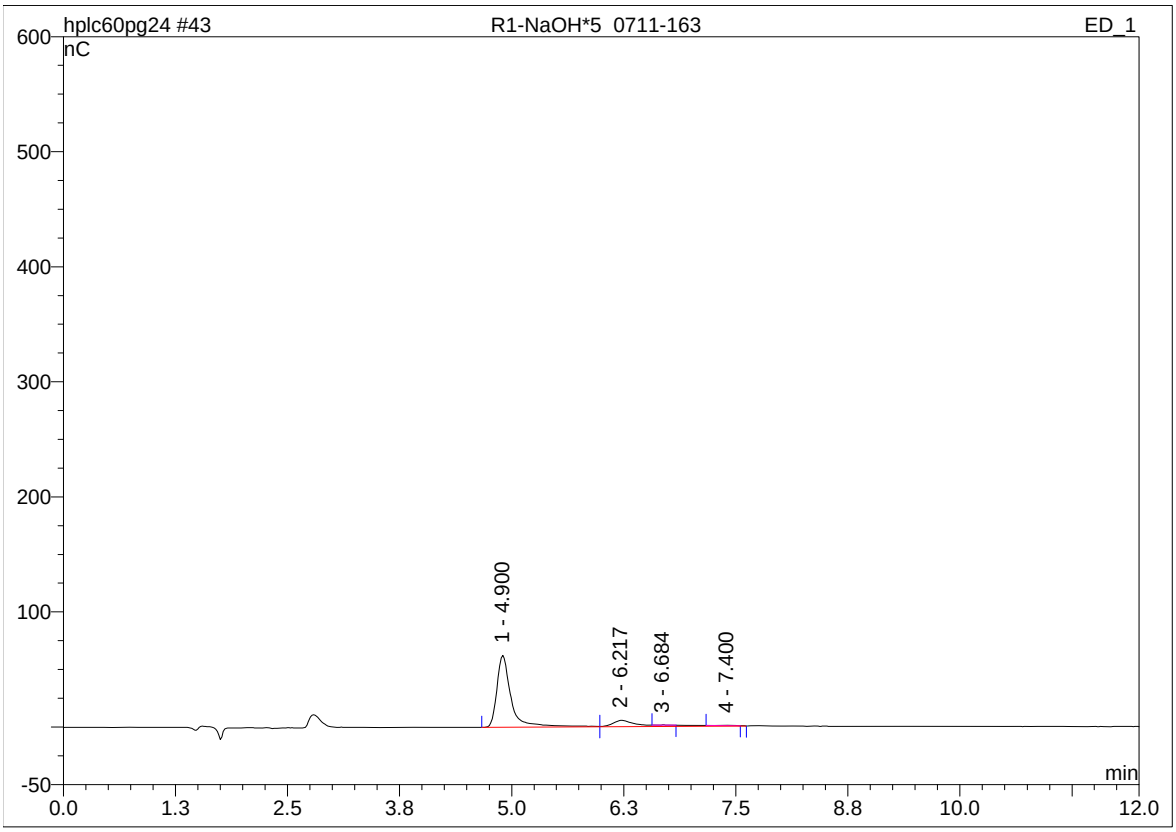


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

43 R1-NaOH*5 0711-163

Injection Name	**R1-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**11**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 4:08**		
Run Time (min):	**12.00**		

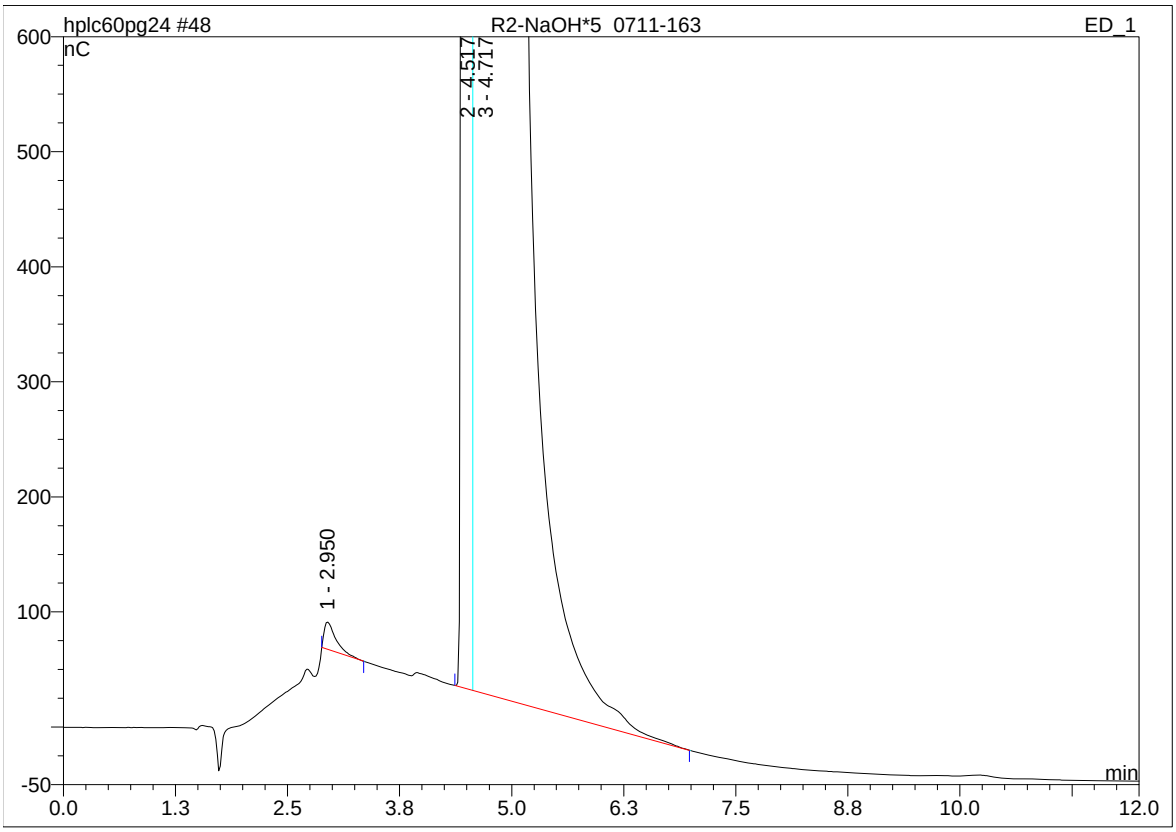


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

48 R2-NaOH*5 0711-163

Injection Name	**R2-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**14**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 5:32**		
Run Time (min):	**12.00**		

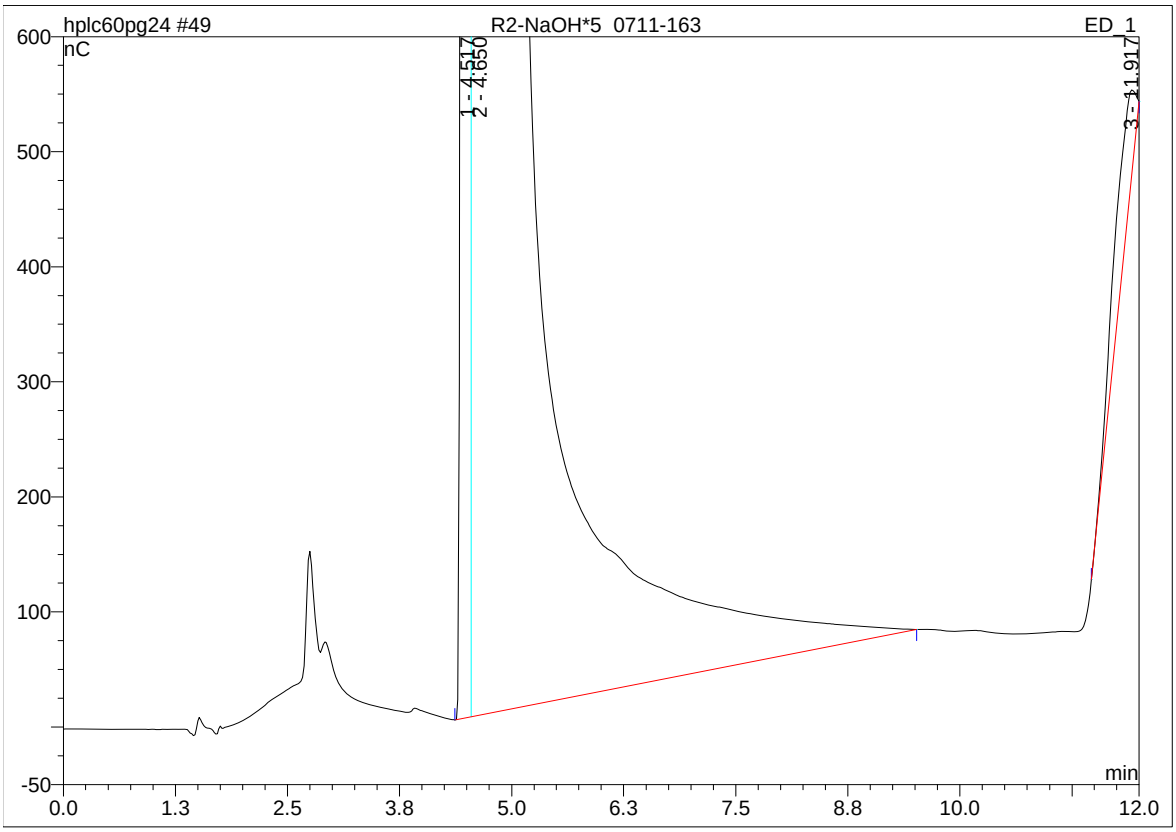


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

49 R2-NaOH*5 0711-163

Injection Name	**R2-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**14**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 5:49**		
Run Time (min):	**12.00**		

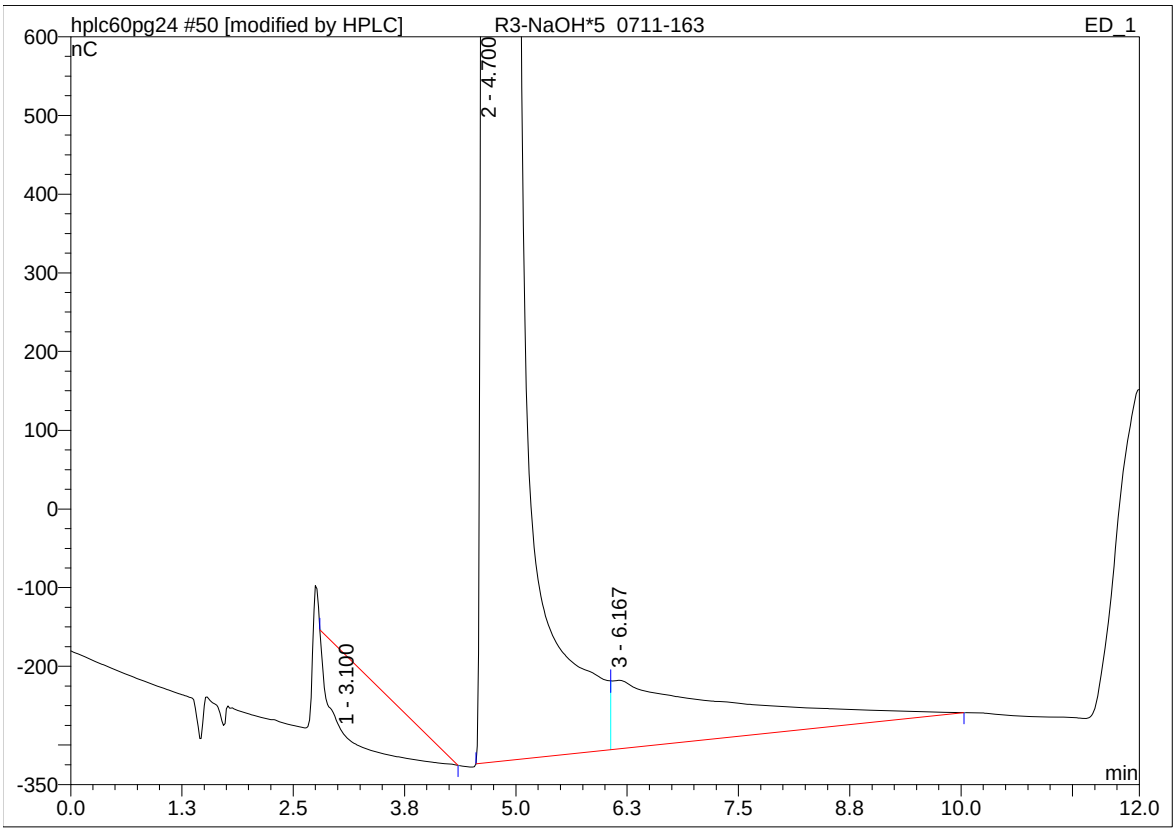


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

50 R3-NaOH*5 0711-163

Injection Name	**R3-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**15**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 6:06**		
Run Time (min):	**12.00**		

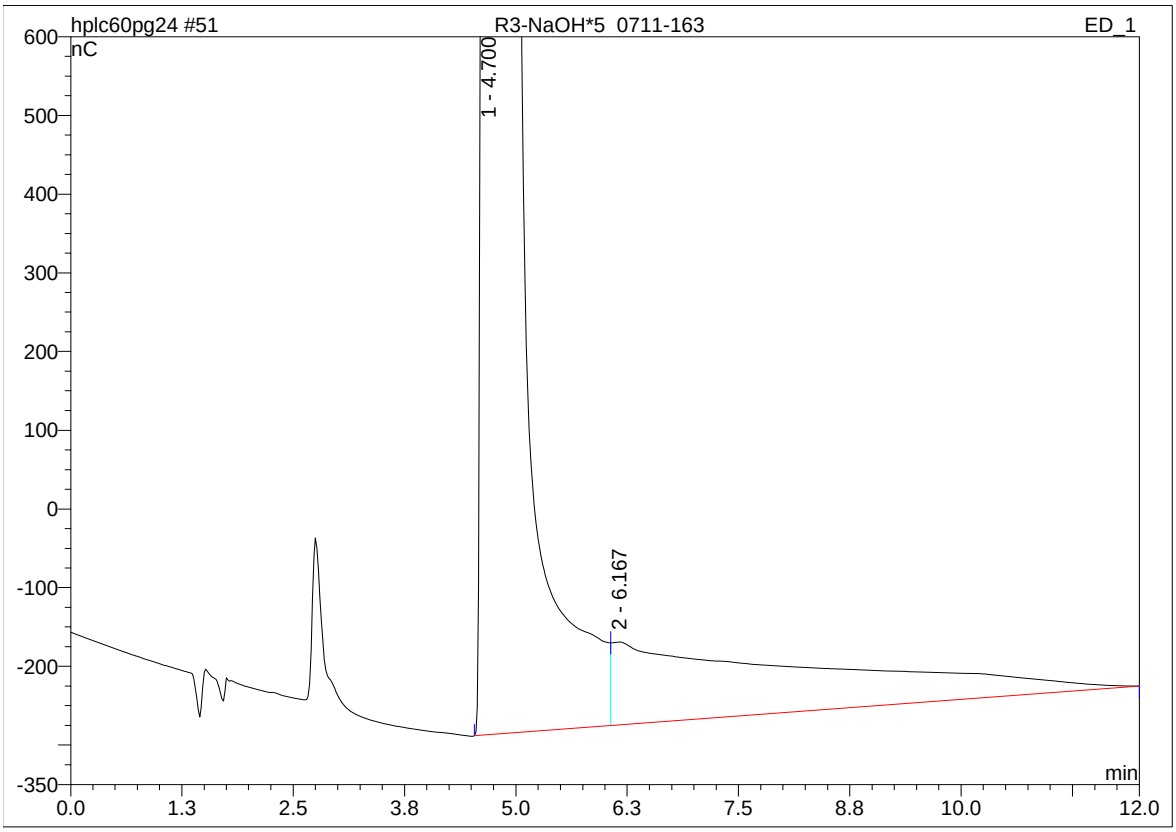


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

51 R3-NaOH*5 0711-163

Injection Name	**R3-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**15**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 6:22**		
Run Time (min):	**12.00**		

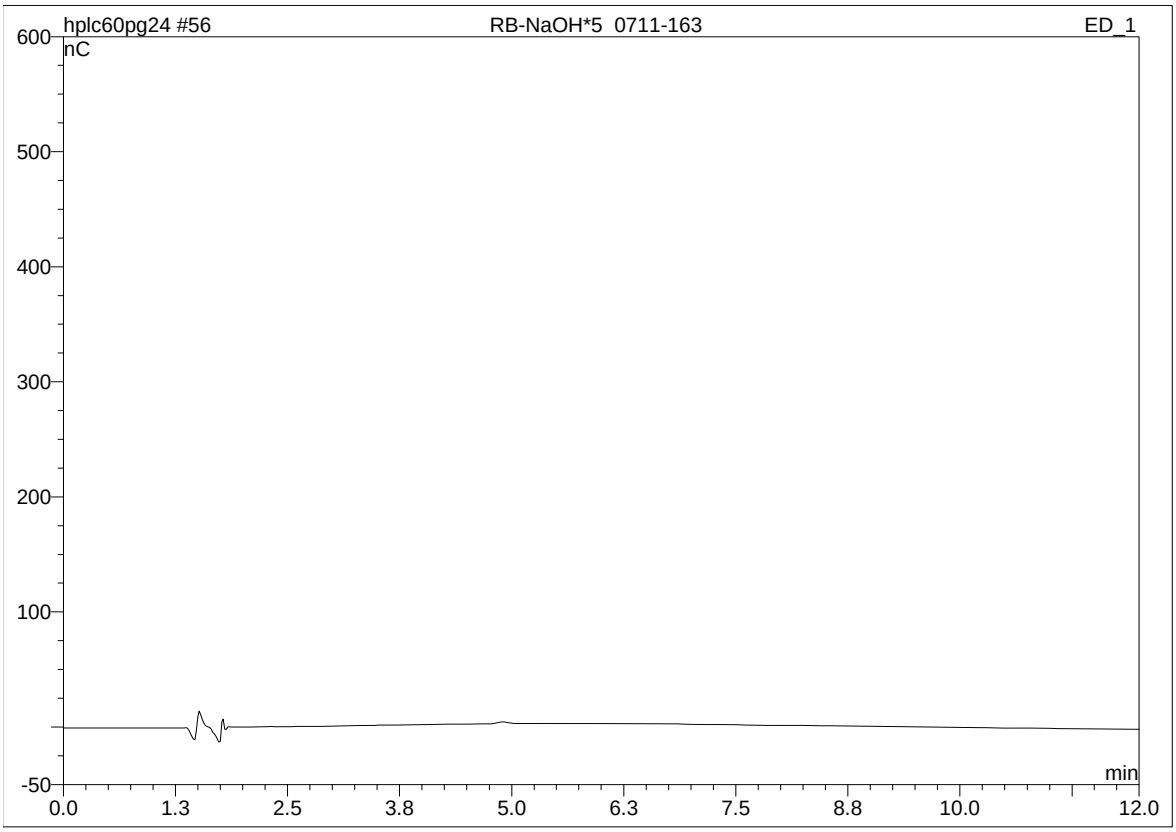


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

56 RB-NaOH*5 0711-163

Injection Name	**RB-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**16**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 7:46**		
Run Time (min):	**12.00**		

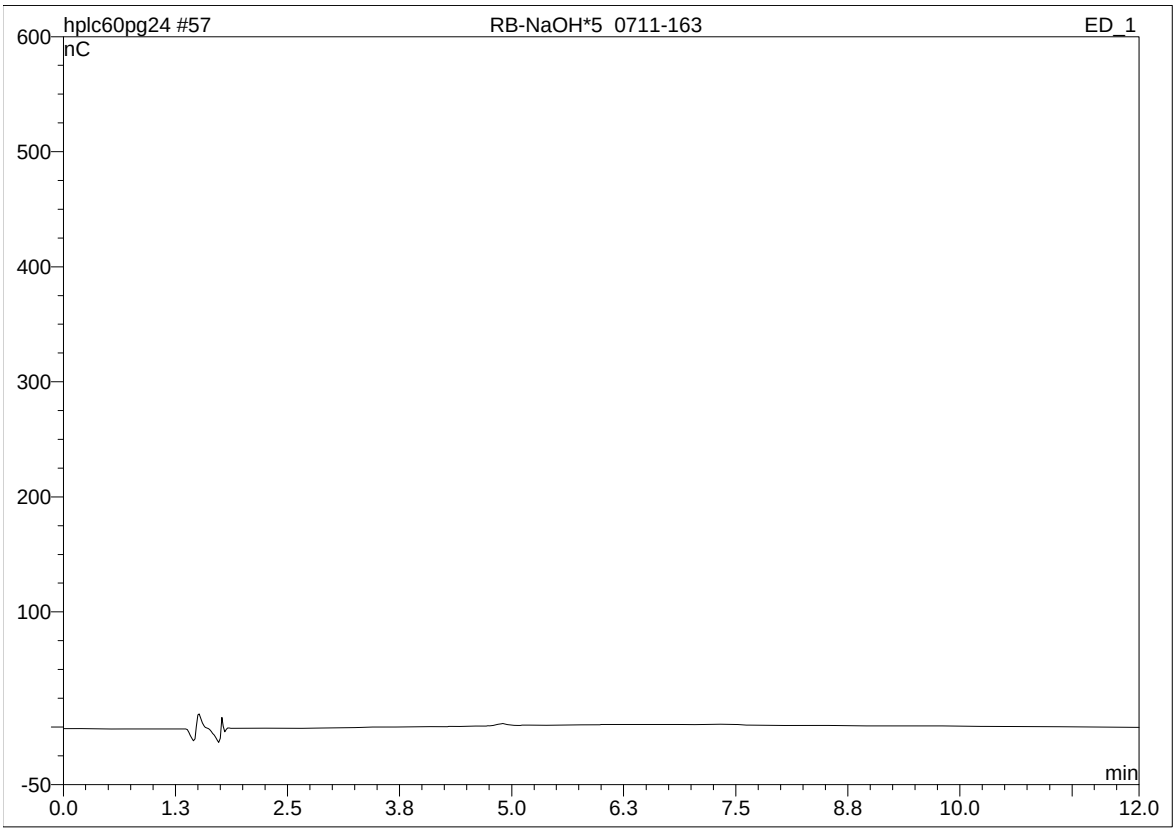


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

57 RB-NaOH*5 0711-163

Injection Name	**RB-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**16**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 8:03**		
Run Time (min):	**12.00**		

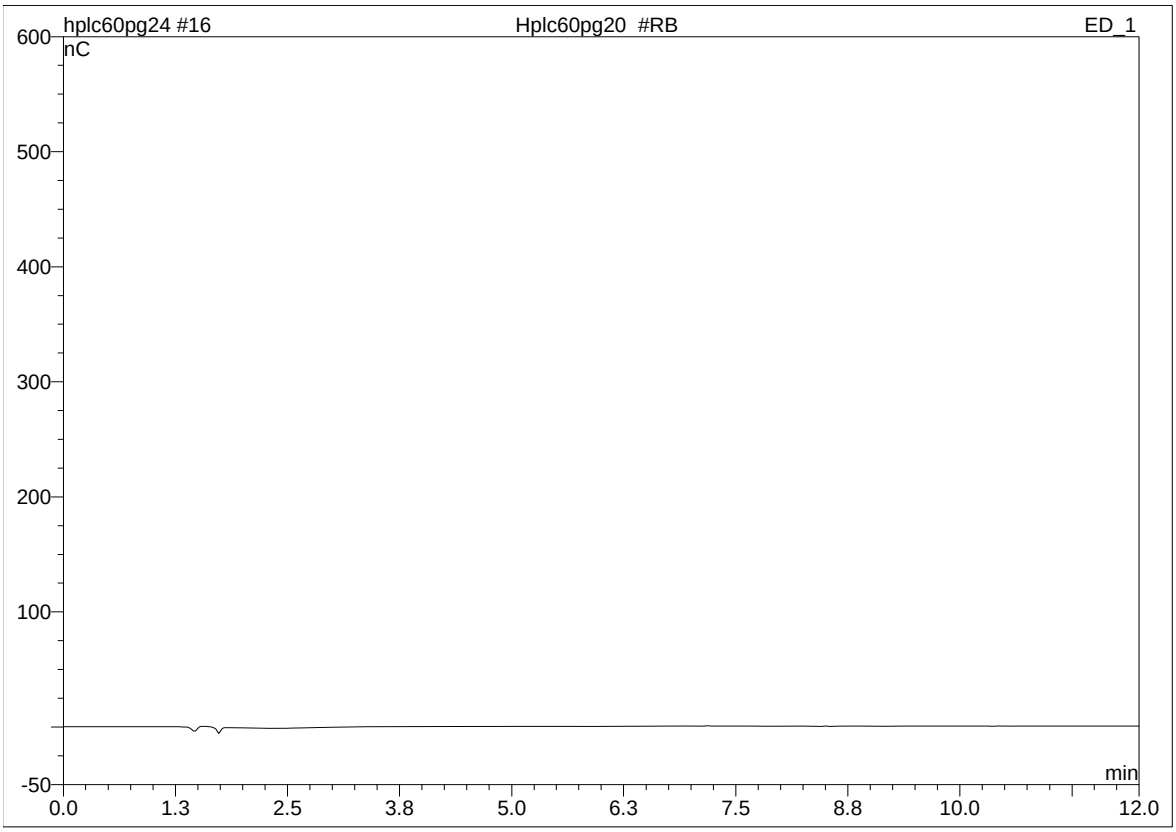


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

16 Hplc60pg20 #RB

Injection Name	**Hplc60pg20 #RB**	*Injection Volume:*	**100.0**
Vial Number:	**7**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 20:36**		
Run Time (min):	**12.00**		

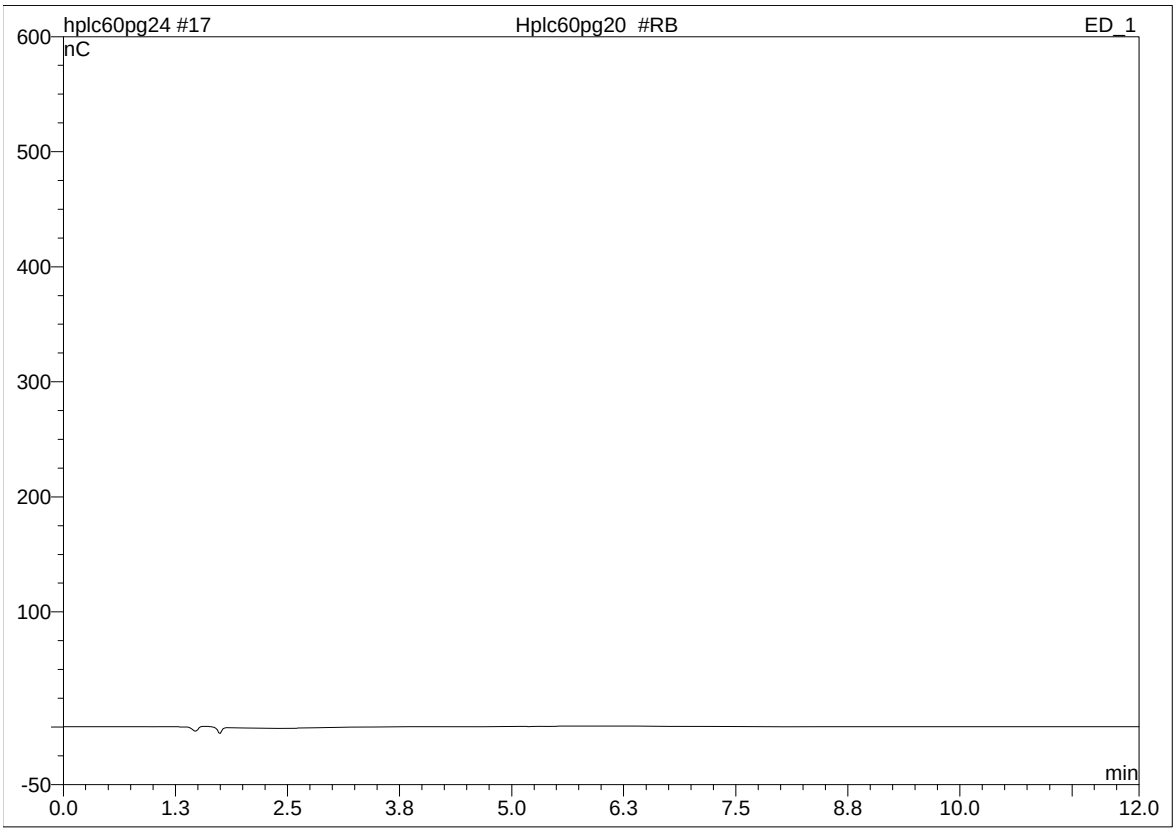


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

17 Hplc60pg20 #RB

Injection Name	**Hplc60pg20 #RB**	*Injection Volume:*	**100.0**
Vial Number:	**7**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 20:53**		
Run Time (min):	**12.00**		

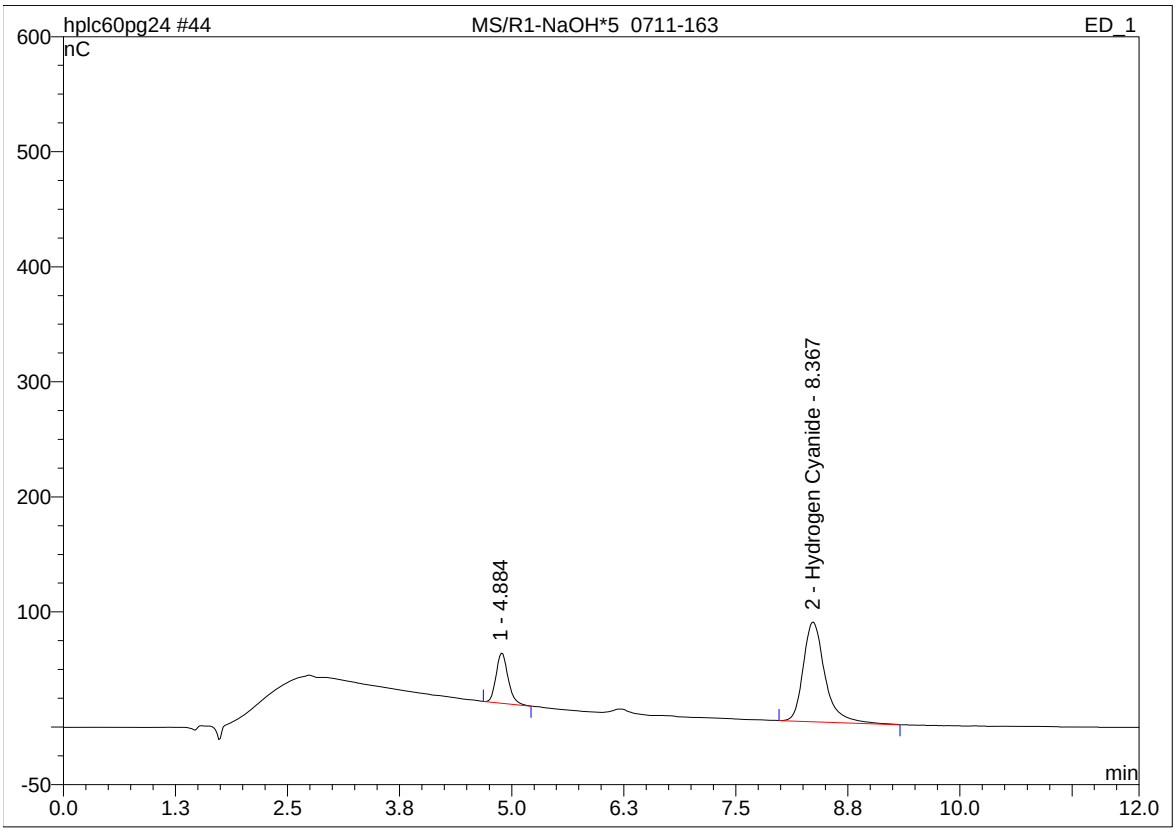


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL

* * * End of Report * * *

44 MS/R1-NaOH*5 0711-163

Injection Name	**MS/R1-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**12**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 4:25**		
Run Time (min):	**12.00**		

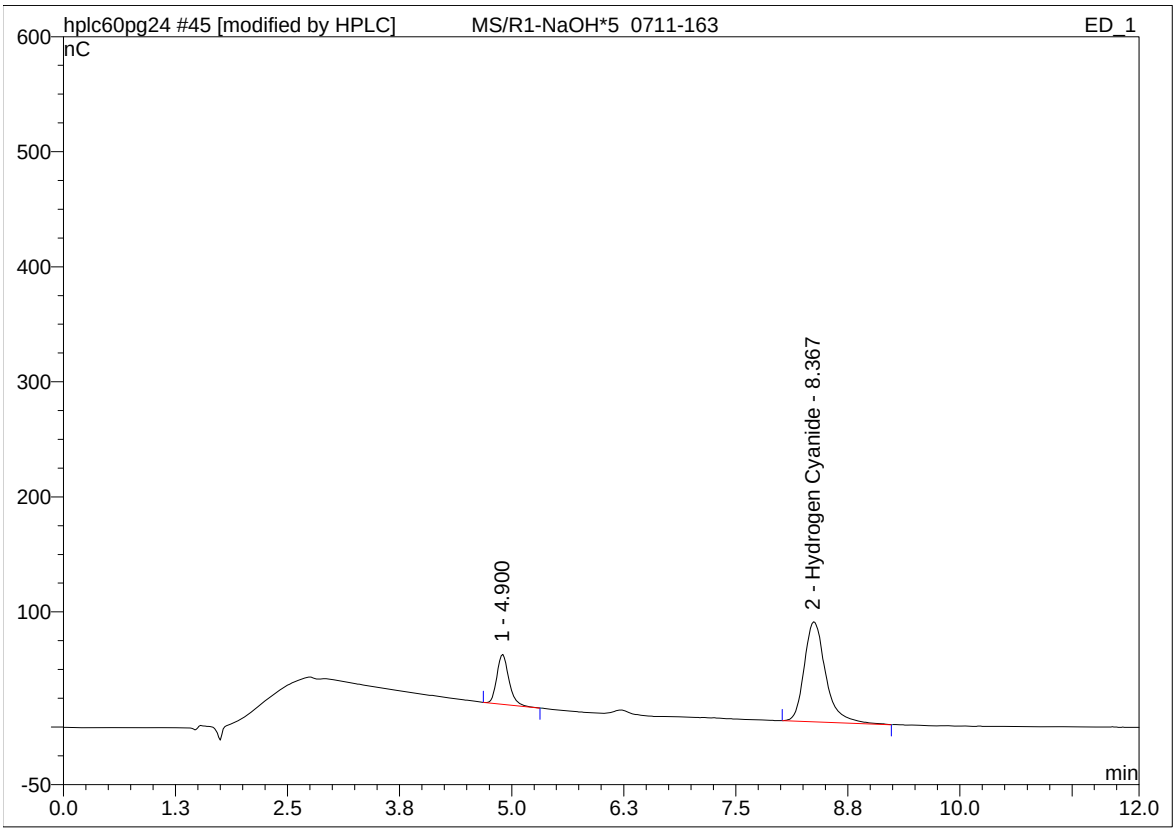


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
2	Hydrogen Cyanide	8.37	24.337	78.28	86.640	1.0141

* * * End of Report * * *

45 MS/R1-NaOH*5 0711-163

Injection Name	**MS/R1-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**12**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 4:42**		
Run Time (min):	**12.00**		

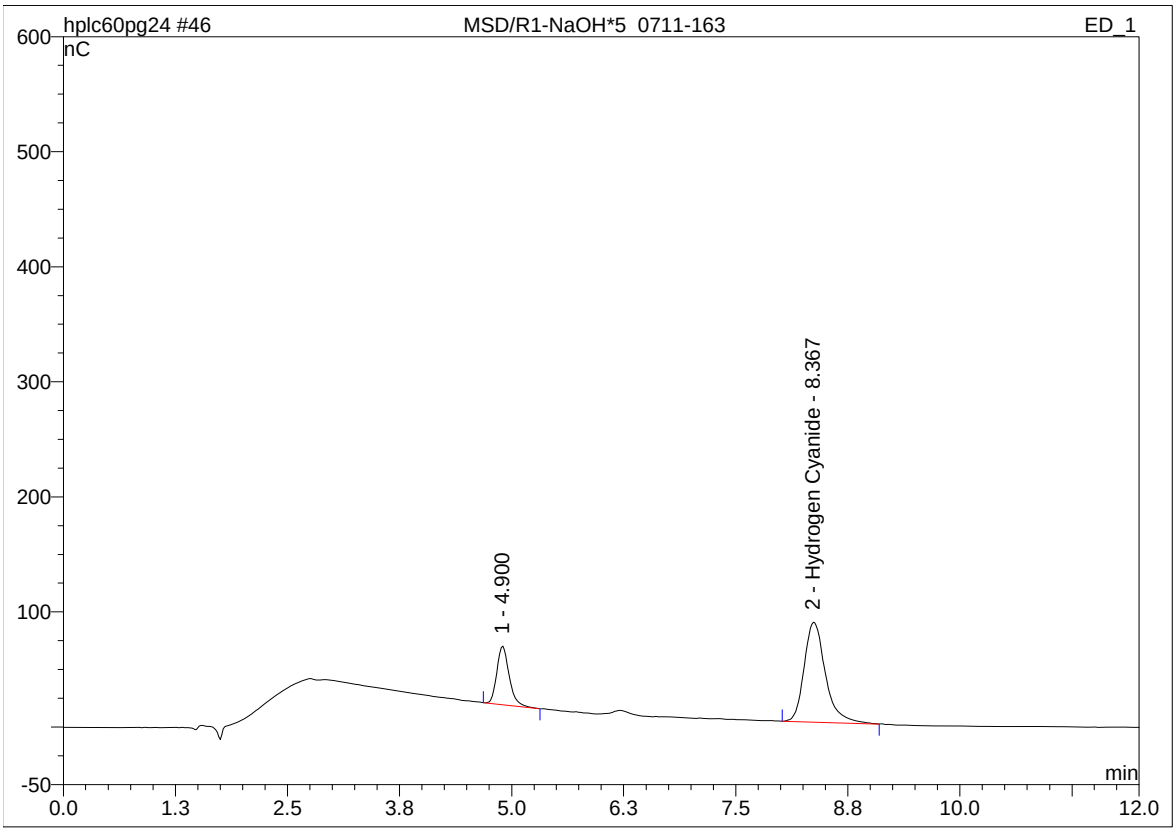


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
2	Hydrogen Cyanide	8.37	24.151	78.08	86.942	1.0063

* * * End of Report * * *

46 MSD/R1-NaOH*5 0711-163

Injection Name	**MSD/R1-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**13**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 4:59**		
Run Time (min):	**12.00**		

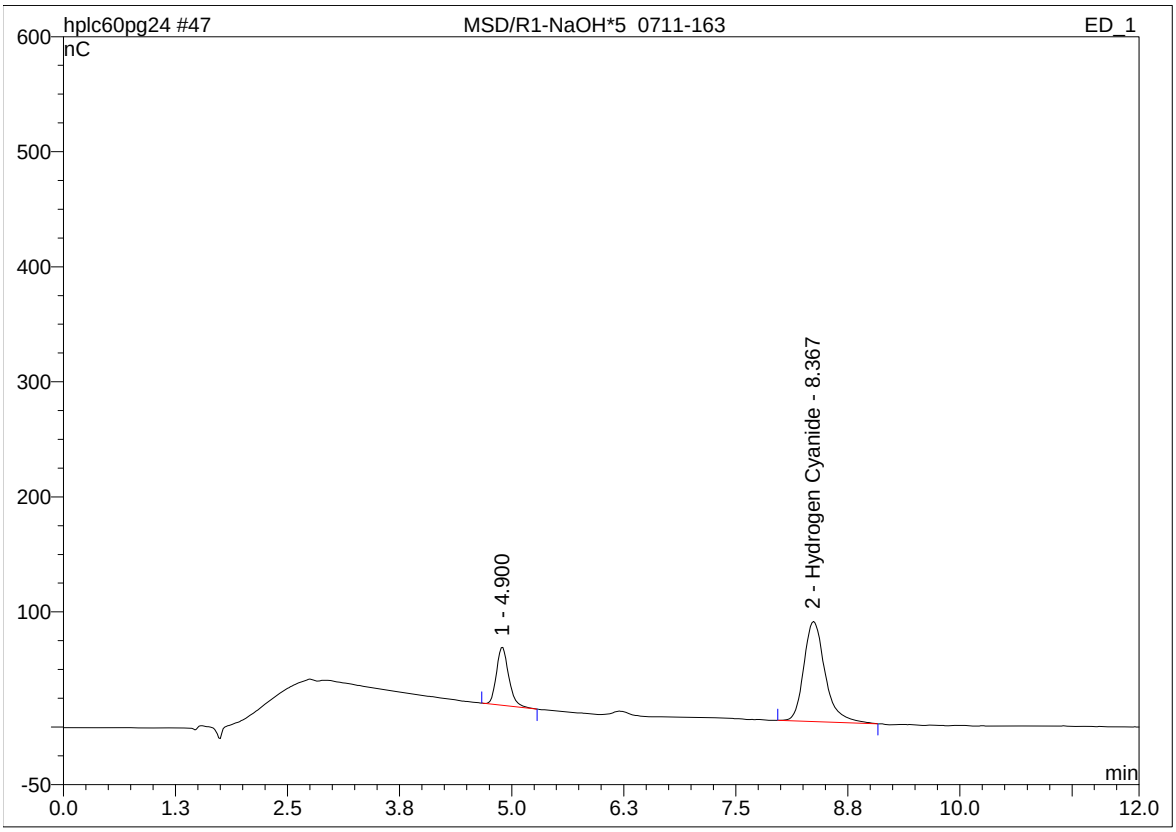


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
2	Hydrogen Cyanide	8.37	23.886	74.59	86.839	0.9953

* * * End of Report * * *

47 MSD/R1-NaOH*5 0711-163

Injection Name	**MSD/R1-NaOH*5 0711-163**	*Injection Volume:*	**100.0**
Vial Number:	**13**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 5:15**		
Run Time (min):	**12.00**		



No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
2	Hydrogen Cyanide	8.37	24.023	74.96	87.083	1.0010

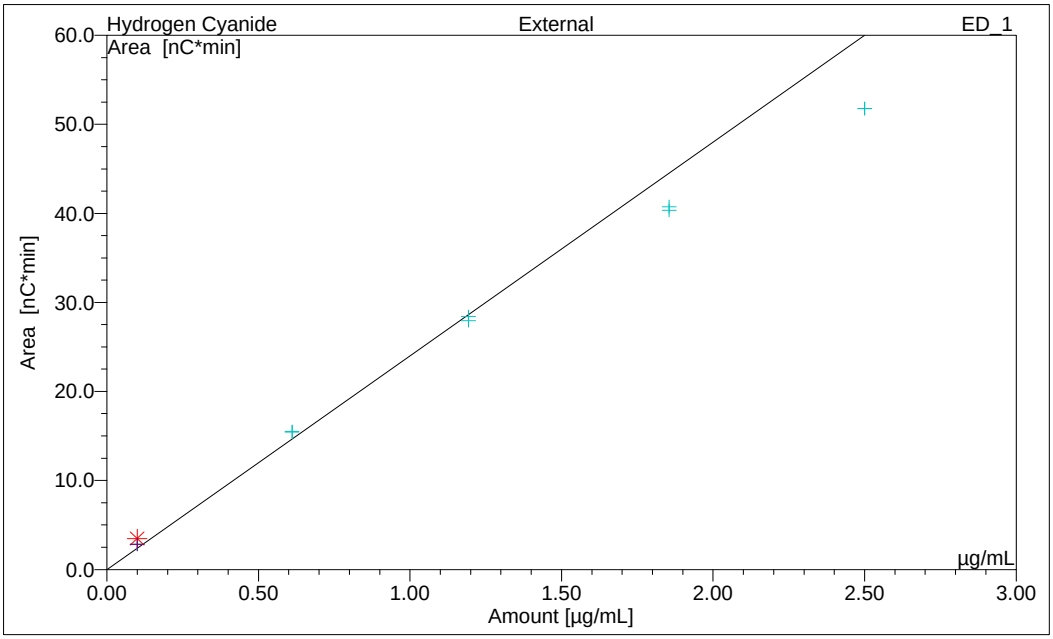
* * * End of Report * * *

Calibration Curve Chromatograms

Flanders-Back\2011 3rd Quarter\hplc60pg24

HCN-method

Sample Name:	**Hplc60pg20 #1**	*Injection Volume:*	**100.0**
Vial Number:	**1**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 16:42**		
Run Time (min):	**12.00**		



No.	No. min	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Slope
1	1	8.00	Hydrogen Cyanide	XXALin	10	99.7349	23.9992
	Average:					99.7349	23.9992

Title: Flanders-HCN-Back
Datasource: EA380-DIONEX_local
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Created: 9/9/2011 11:34:45 AM by HPLC
Last Update: 9/16/2011 6:32:33 AM by HPLC

Blank Run Subtraction: No Blank Run Subtraction

Detection Table:

No.	Ret. Time [min]	Param. Name	Param. Value	Channel
1	0.000	Minimum Width	0.04 min	ED_1
2	0.000	Maximum Area Reject	2.0 "[Signal]*min"	ED_1
3	0.000	Fronting Sensitivity Factor	2.0	ED_1
4	0.000	Inhibit Integration	On	ED_1
5	2.900	Inhibit Integration	Off	ED_1

Title: Flanders-HCN-Back
Datasource: EA380-DIONEX_local
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Created: 9/9/2011 11:34:45 AM by HPLC
Last Update: 9/16/2011 6:32:33 AM by HPLC

Peak Table:

Use Recently Detected Retention Times: Off
Peak Retention Time Determination: Absolute
Dead time:
Delay Time of 2'nd Detector: <None>
Delay Time of 3'rd Detector: <None>

No.	Peak Name	Ret.Time	Window	Standard	Int.Type	Cal.Type	Peak Type	Group	Amount Standard 1	Amount Standard 2
1	*Hydrogen Cyanide*	*8.200 min*	*0.200 AG*	*External*	*Area*	*XXALin*	*Auto*		*0.099800*	*0.610900*

Title: Flanders-HCN-Back
Datasource: EA380-DIONEX_local
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Created: 9/9/2011 11:34:45 AM by HPLC
Last Update: 9/16/2011 6:32:33 AM by HPLC

Peak Table:

Use Recently Detected Retention Times: Off
Peak Retention Time Determination: Absolute
Dead time:
Delay Time of 2'nd Detector: <None>
Delay Time of 3'rd Detector: <None>

No.	Peak Name	Ret.Time	Amount Standard 3	Amount Standard 4	Amount Standard 5	Comment
1	*Hydrogen Cyanide*	*8.200 min*	*1.193000*	*1.855000*	*2.500000*	

Title: Flanders-HCN-Back
Datasource: EA380-DIONEX_local
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Created: 9/9/2011 11:34:45 AM by HPLC
Last Update: 9/16/2011 6:32:33 AM by HPLC

Amount Table:

Dimension of Amounts: µg/mL
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 5
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Resp.Fact.	Amount Standard 1	Amount Standard 2	Amount Standard 3	Amount Standard 4	Amount Standard 5	Comment
1	*Hydrogen Cyanide*	*8.200 min*	*1.000000*	*0.099800*	*0.610900*	*1.193000*	*1.855000*	*2.500000*	

Title: Flanders-HCN-Back
Datasource: EA380-DIONEX_local
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Created: 9/9/2011 11:34:45 AM by HPLC
Last Update: 9/16/2011 6:32:33 AM by HPLC

Calibration:

Calibration Mode: Total
Auto Recalibrate: On
Curve Fitting Model: Normal
Dual-Column Separate Calibration: Off

No.	Enabled	Name	Smp.No.	Pos.	Inj. Vol.	Weight	ISTD Amount	Dil. Factor	Inj. Date/Time
1	☒	Hplc60pg20 #1	2	1	100.0	1.0000	1.0000	1.0000	9/15/2011 4:42:34 PM
2	☒	Hplc60pg20 #1	3	1	100.0	1.0000	1.0000	1.0000	9/15/2011 4:59:19 PM
3	☒	Hplc60pg20 #2	4	2	100.0	1.0000	1.0000	1.0000	9/15/2011 5:16:04 PM
4	☒	Hplc60pg20 #2	5	2	100.0	1.0000	1.0000	1.0000	9/15/2011 5:32:48 PM
5	☒	Hplc60pg20 #3	6	3	100.0	1.0000	1.0000	1.0000	9/15/2011 5:49:32 PM
6	☒	Hplc60pg20 #3	7	3	100.0	1.0000	1.0000	1.0000	9/15/2011 6:06:16 PM
7	☒	Hplc60pg20 #4	8	4	100.0	1.0000	1.0000	1.0000	9/15/2011 6:23:01 PM
8	☒	Hplc60pg20 #4	9	4	100.0	1.0000	1.0000	1.0000	9/15/2011 6:39:45 PM
9	☒	Hplc60pg20 #5	10	5	100.0	1.0000	1.0000	1.0000	9/15/2011 6:56:29 PM
10	☒	Hplc60pg20 #5	11	5	100.0	1.0000	1.0000	1.0000	9/15/2011 7:13:12 PM
11	☐	Hplc60pg20 #1	12	1	100.0	1.0000	1.0000	1.0000	9/15/2011 7:29:57 PM
12	☐	Hplc60pg20 #1	13	1	100.0	1.0000	1.0000	1.0000	9/15/2011 7:46:42 PM

Title: Flanders-HCN-Back
Datasource: EA380-DIONEX_local
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Created: 9/9/2011 11:34:45 AM by HPLC
Last Update: 9/16/2011 6:32:33 AM by HPLC

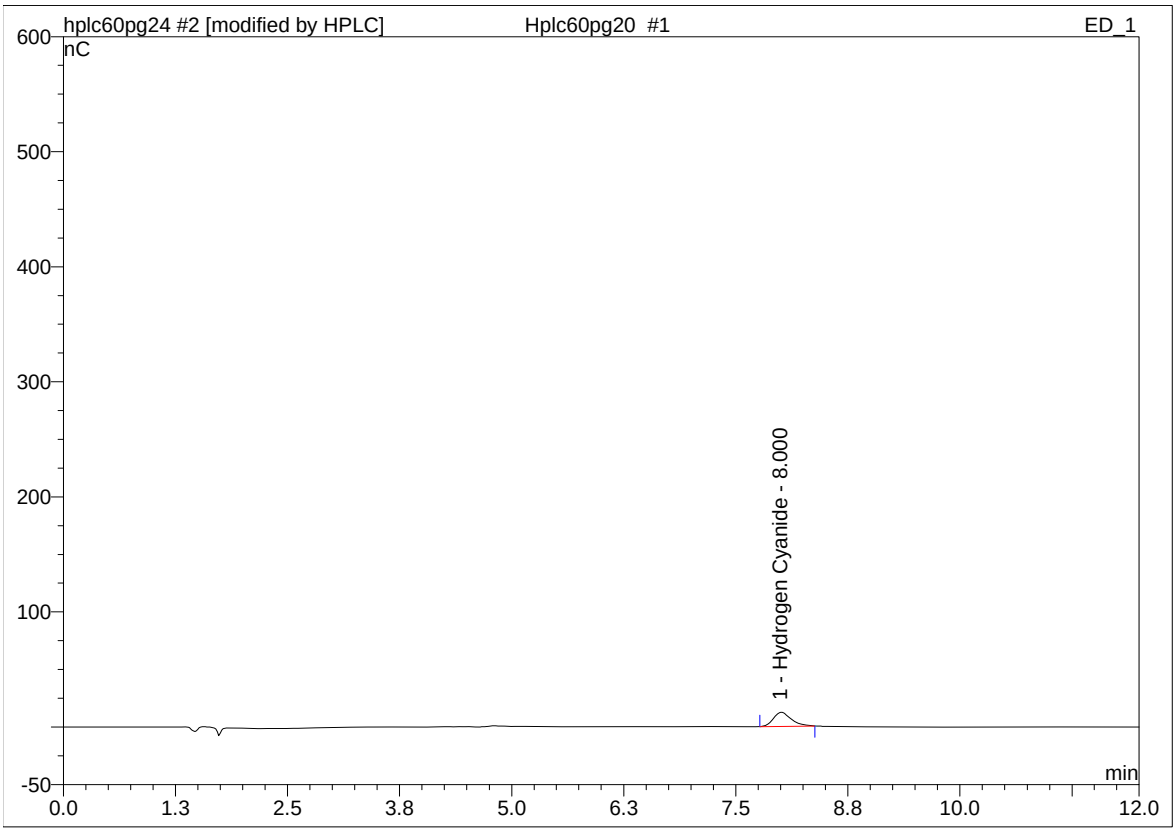
Calibration:

Calibration Mode: Total
Auto Recalibrate: On
Curve Fitting Model: Normal
Dual-Column Separate Calibration: Off

No.	Enabled	Name	Sample Comment	Calib. Comment
1	☒	Hplc60pg20 #1		Ok
2	☒	Hplc60pg20 #1		Ok
3	☒	Hplc60pg20 #2		Ok
4	☒	Hplc60pg20 #2		Ok
5	☒	Hplc60pg20 #3		Ok
6	☒	Hplc60pg20 #3		Ok
7	☒	Hplc60pg20 #4		Ok
8	☒	Hplc60pg20 #4		Ok
9	☒	Hplc60pg20 #5		Ok
10	☒	Hplc60pg20 #5		Ok
11	☐	Hplc60pg20 #1		Disabled
12	☐	Hplc60pg20 #1		Couldn't find the peak in the chromatogram.

2 Hplc60pg20 #1

Injection Name	**Hplc60pg20 #1**	*Injection Volume:*	**100.0**
Vial Number:	**1**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 16:42**		
Run Time (min):	**12.00**		

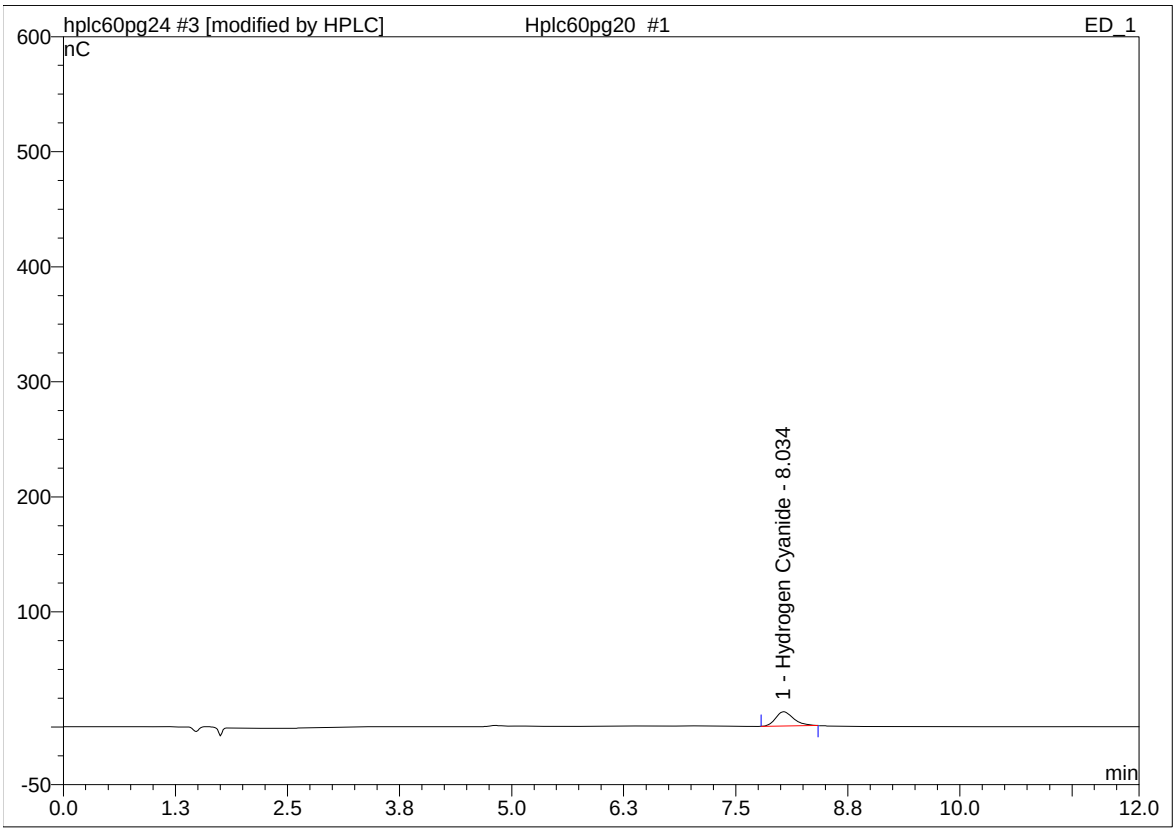


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.00	2.817	100.00	12.248	0.1174

* * * End of Report * * *

3 Hplc60pg20 #1

Injection Name	**Hplc60pg20 #1**	*Injection Volume:*	**100.0**
Vial Number:	**1**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 16:59**		
Run Time (min):	**12.00**		

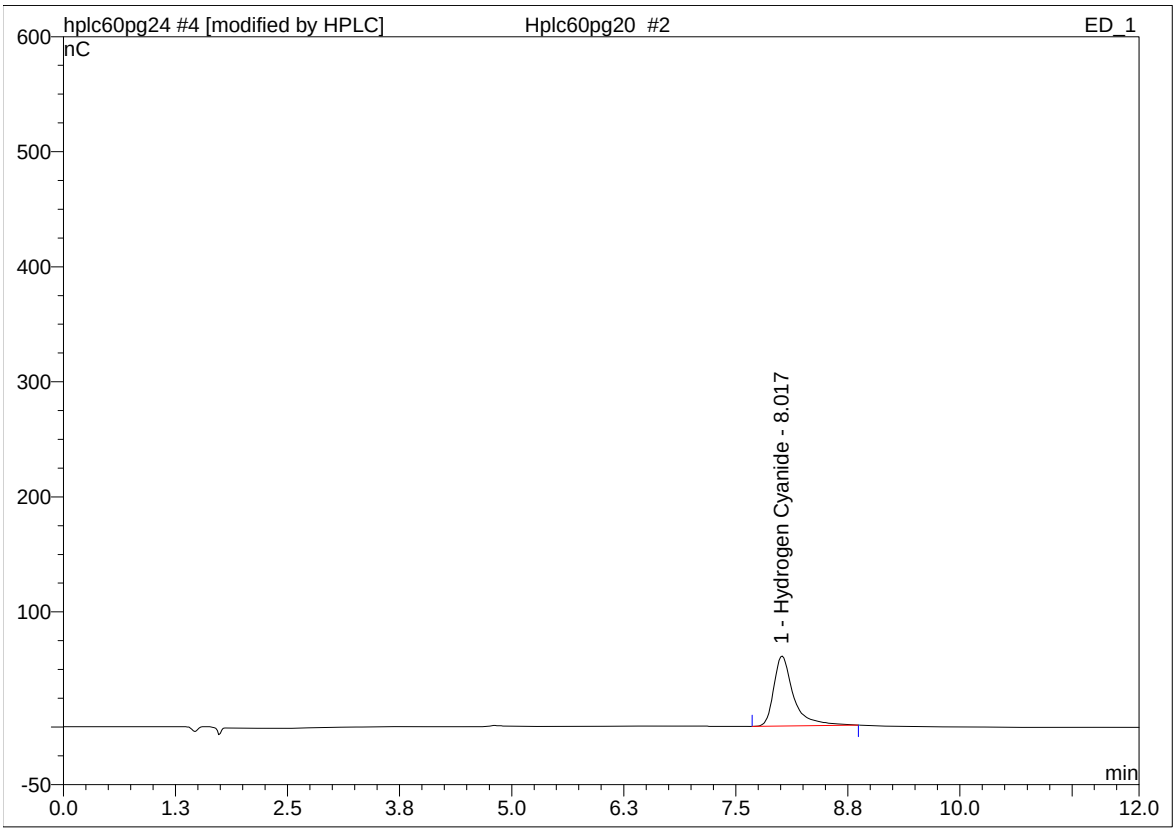


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.03	2.868	100.00	12.459	0.1195

* * * End of Report * * *

4 Hplc60pg20 #2

Injection Name	**Hplc60pg20 #2**	*Injection Volume:*	**100.0**
Vial Number:	**2**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 17:16**		
Run Time (min):	**12.00**		

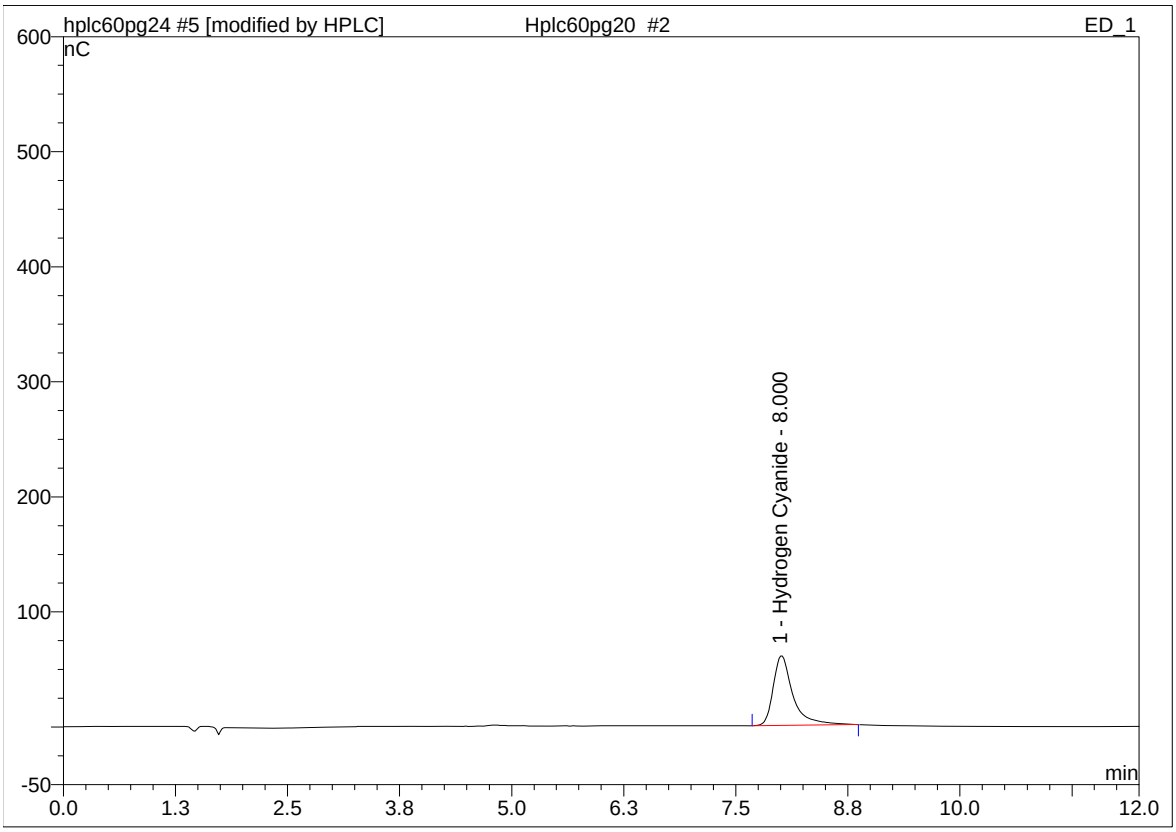


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.02	15.513	100.00	60.824	0.6464

* * * End of Report * * *

5 Hplc60pg20 #2

Injection Name	**Hplc60pg20 #2**	*Injection Volume:*	**100.0**
Vial Number:	**2**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 17:32**		
Run Time (min):	**12.00**		

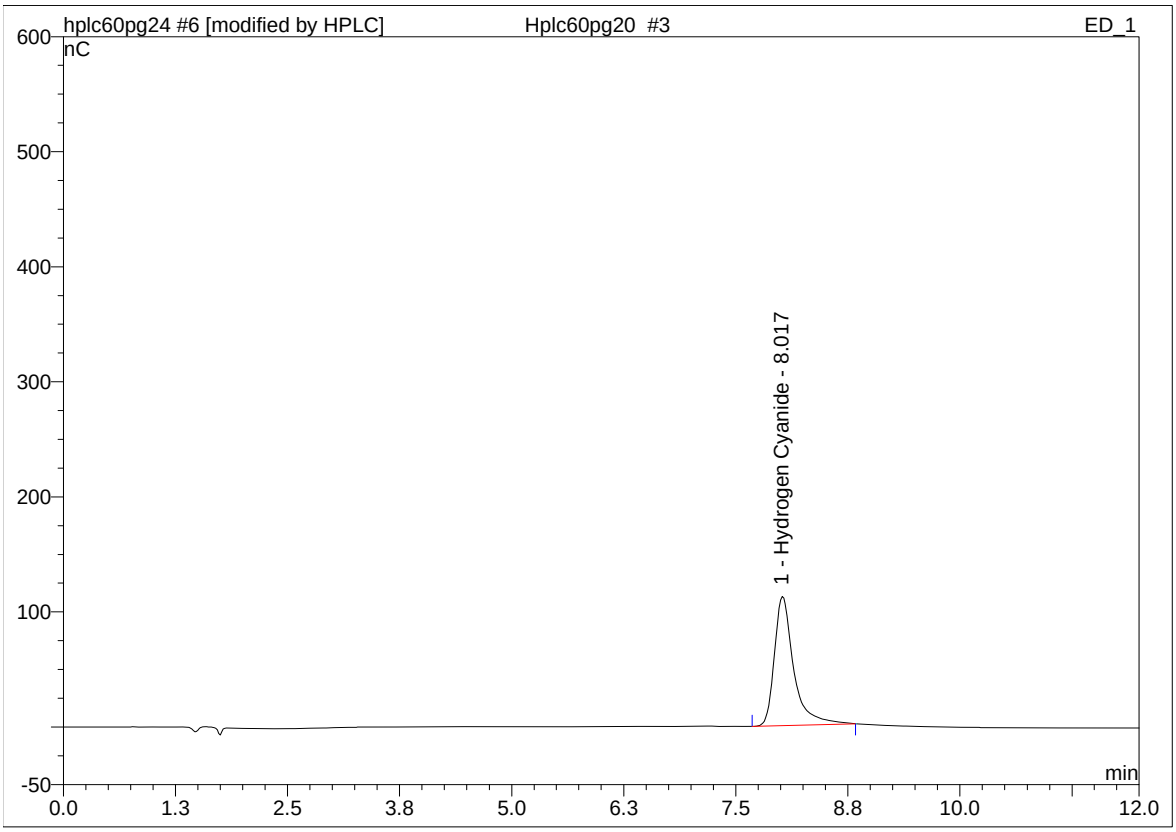


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.00	15.433	100.00	60.380	0.6431

* * * End of Report * * *

6 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**3**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 17:49**		
Run Time (min):	**12.00**		

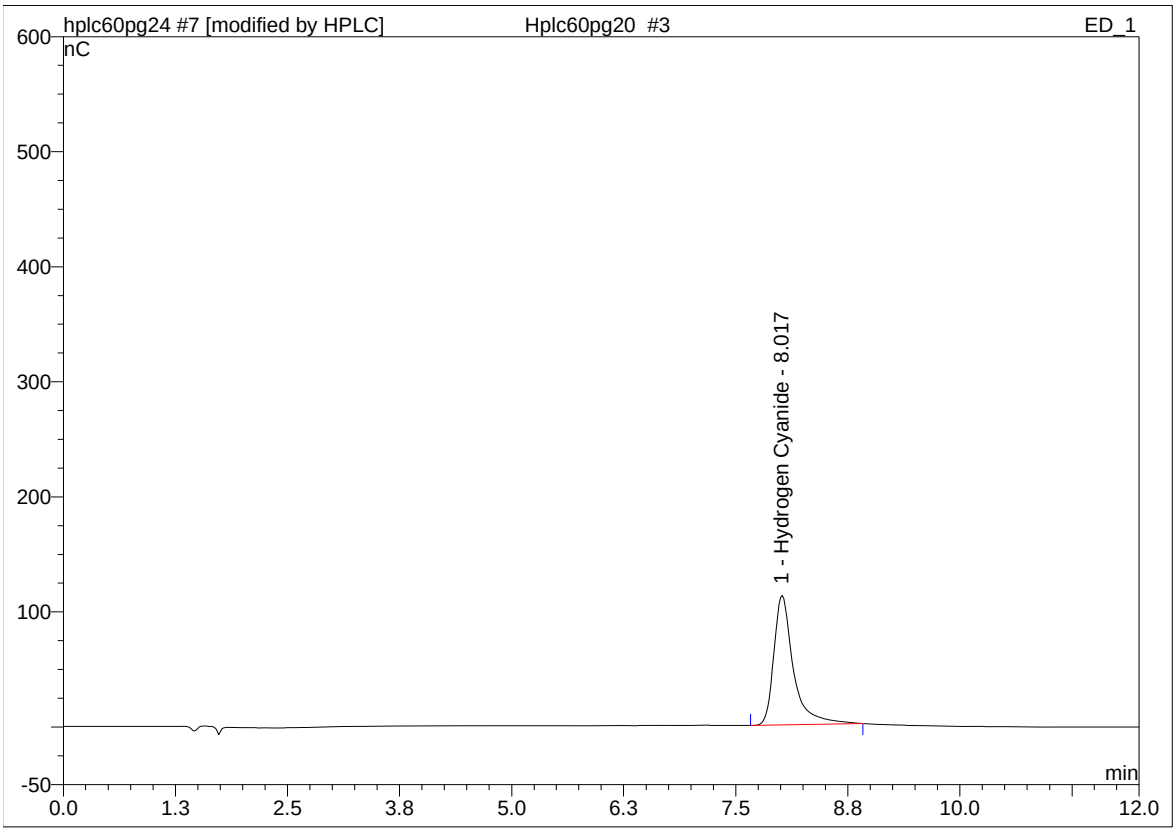


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.02	27.958	100.00	112.155	1.1649

* * * End of Report * * *

7 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**3**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 18:06**		
Run Time (min):	**12.00**		

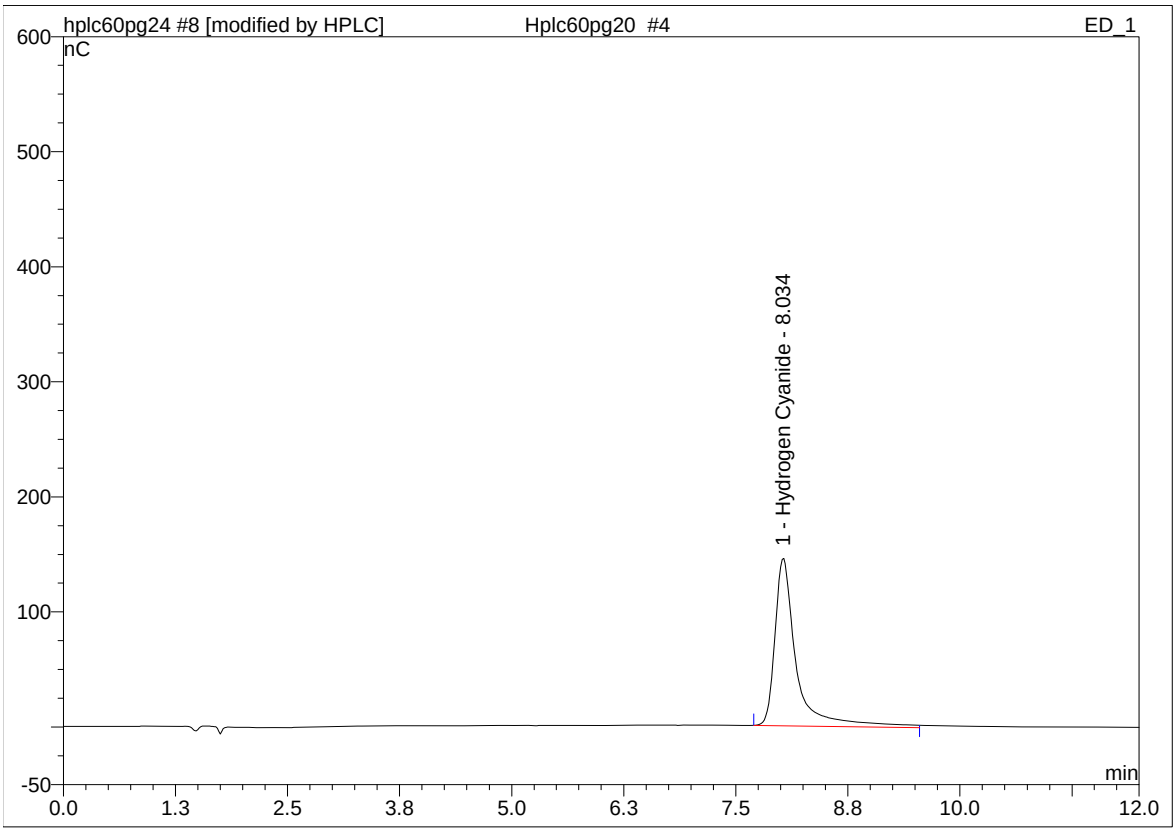


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.02	28.402	100.00	112.343	1.1835

* * * End of Report * * *

8 Hplc60pg20 #4

Injection Name	**Hplc60pg20 #4**	*Injection Volume:*	**100.0**
Vial Number:	**4**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 18:23**		
Run Time (min):	**12.00**		

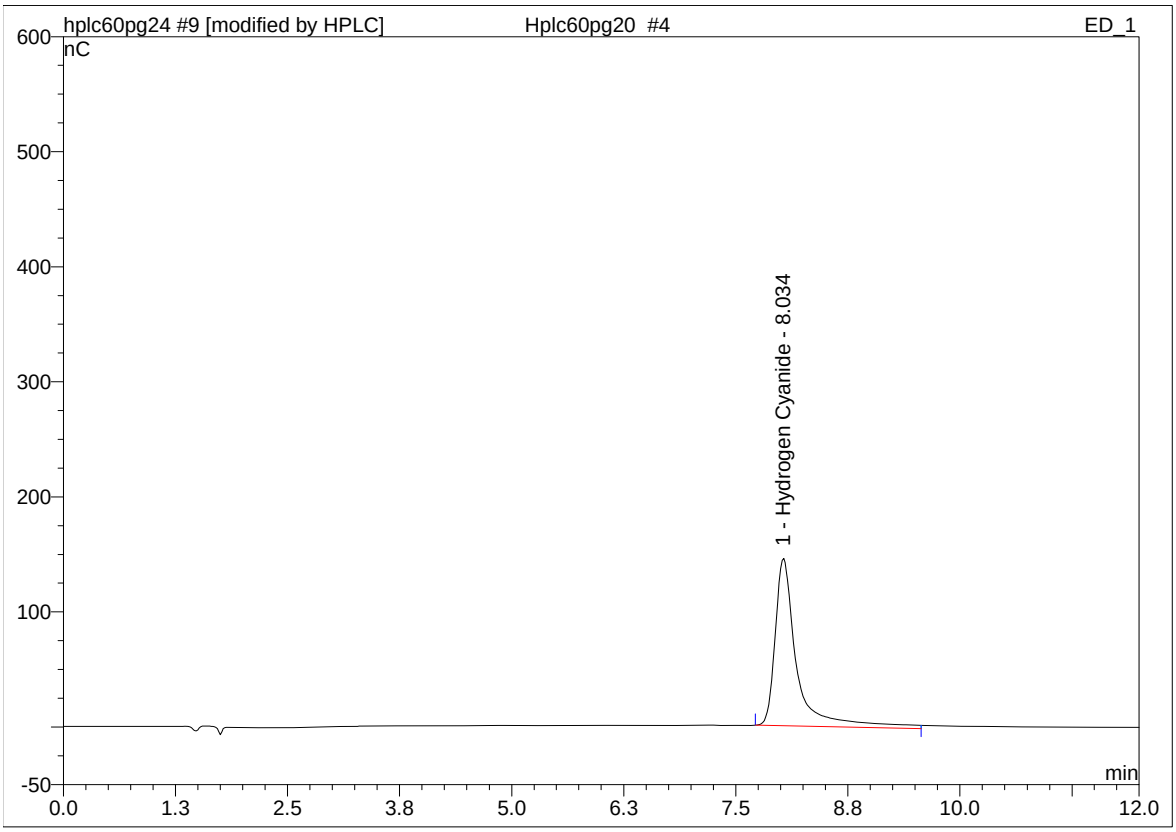


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.03	40.345	100.00	145.649	1.6811

* * * End of Report * * *

9 Hplc60pg20 #4

Injection Name	**Hplc60pg20 #4**	*Injection Volume:*	**100.0**
Vial Number:	**4**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 18:39**		
Run Time (min):	**12.00**		

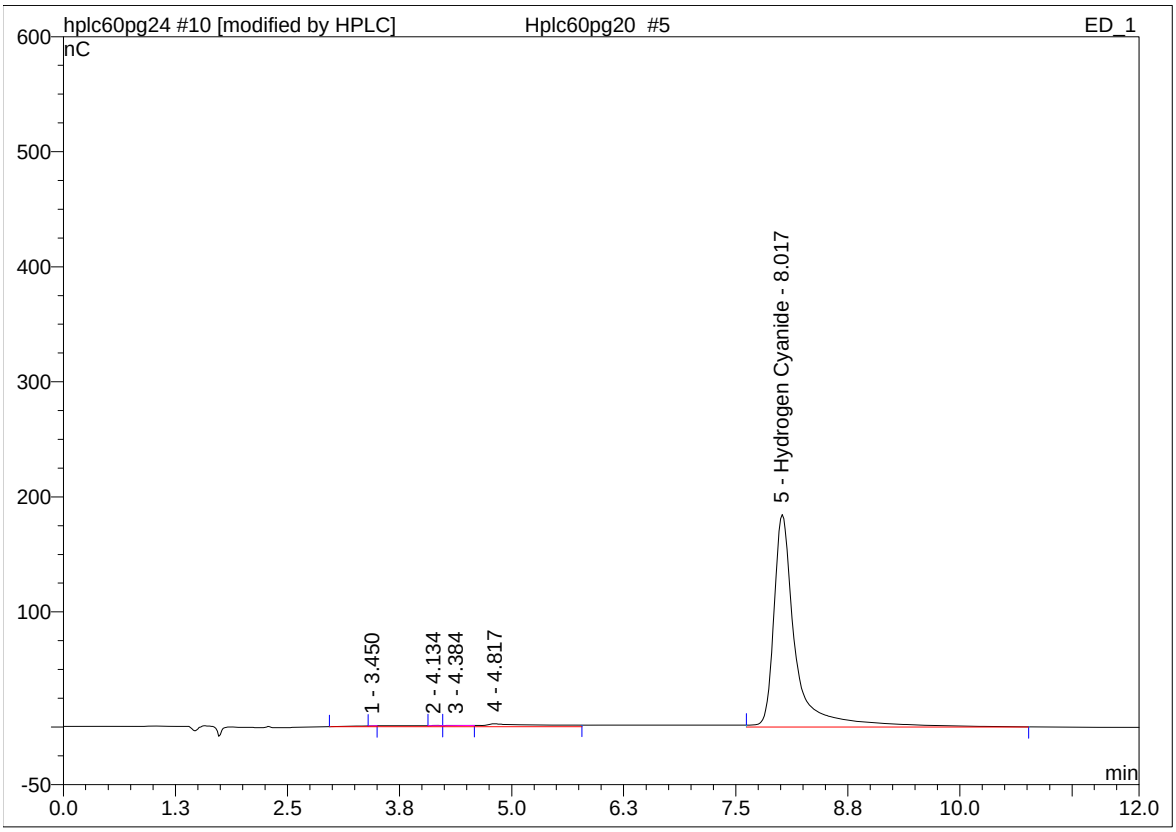


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.03	40.745	100.00	145.707	1.6977

* * * End of Report * * *

10 Hplc60pg20 #5

Injection Name	**Hplc60pg20 #5**	*Injection Volume:*	**100.0**
Vial Number:	**5**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 18:56**		
Run Time (min):	**12.00**		

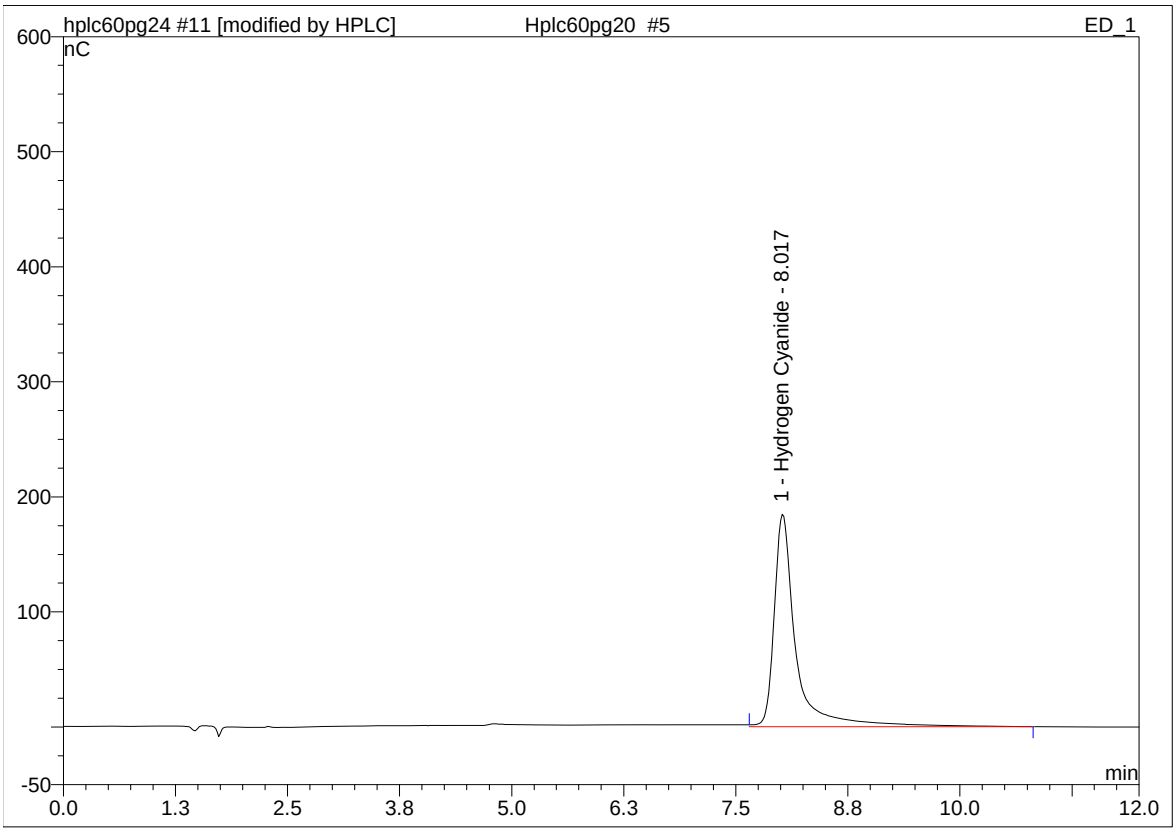


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
5	Hydrogen Cyanide	8.02	51.772	94.46	184.552	2.1572

* * * End of Report * * *

11 Hplc60pg20 #5

Injection Name	**Hplc60pg20 #5**	*Injection Volume:*	**100.0**
Vial Number:	**5**	*Channel:*	**ED_1**
Sample Type:	**standard**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 19:13**		
Run Time (min):	**12.00**		

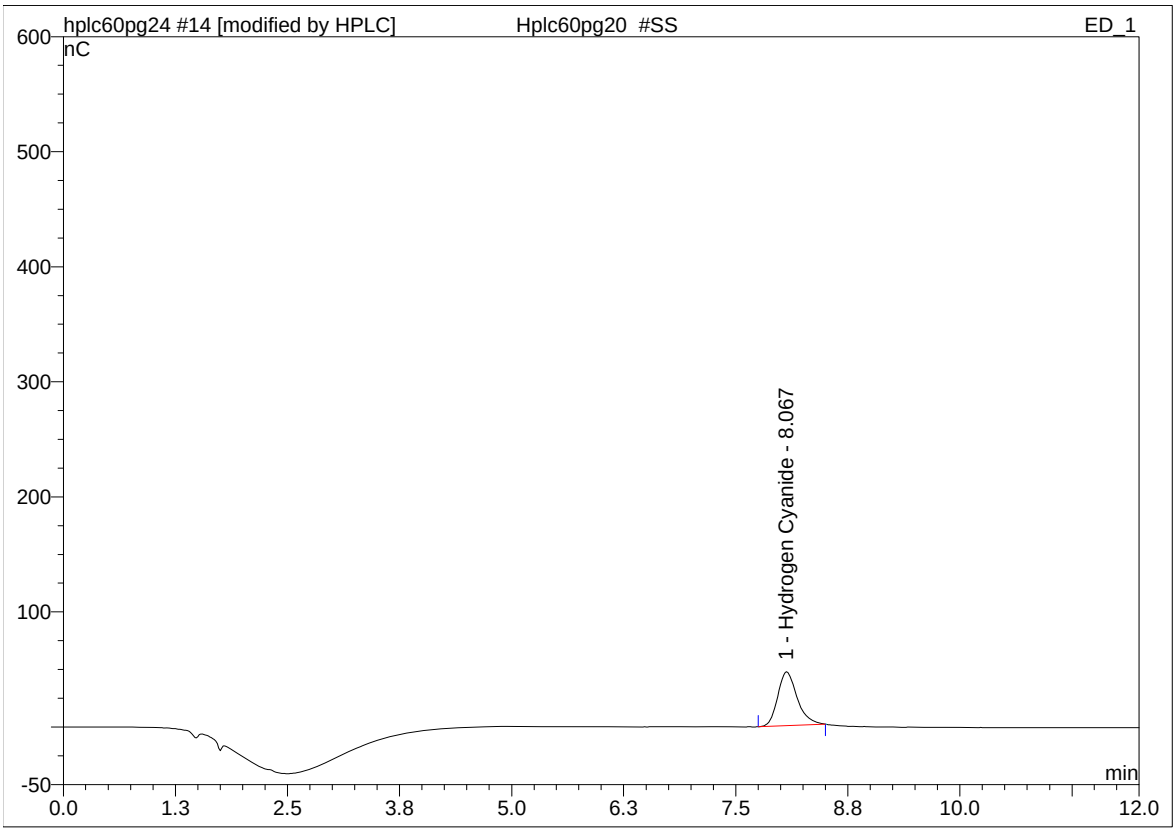


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.02	51.773	100.00	184.592	2.1573

* * * End of Report * * *

14 Hplc60pg20 #SS

Injection Name	**Hplc60pg20 #SS**	*Injection Volume:*	**100.0**
Vial Number:	**6**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 20:03**		
Run Time (min):	**12.00**		

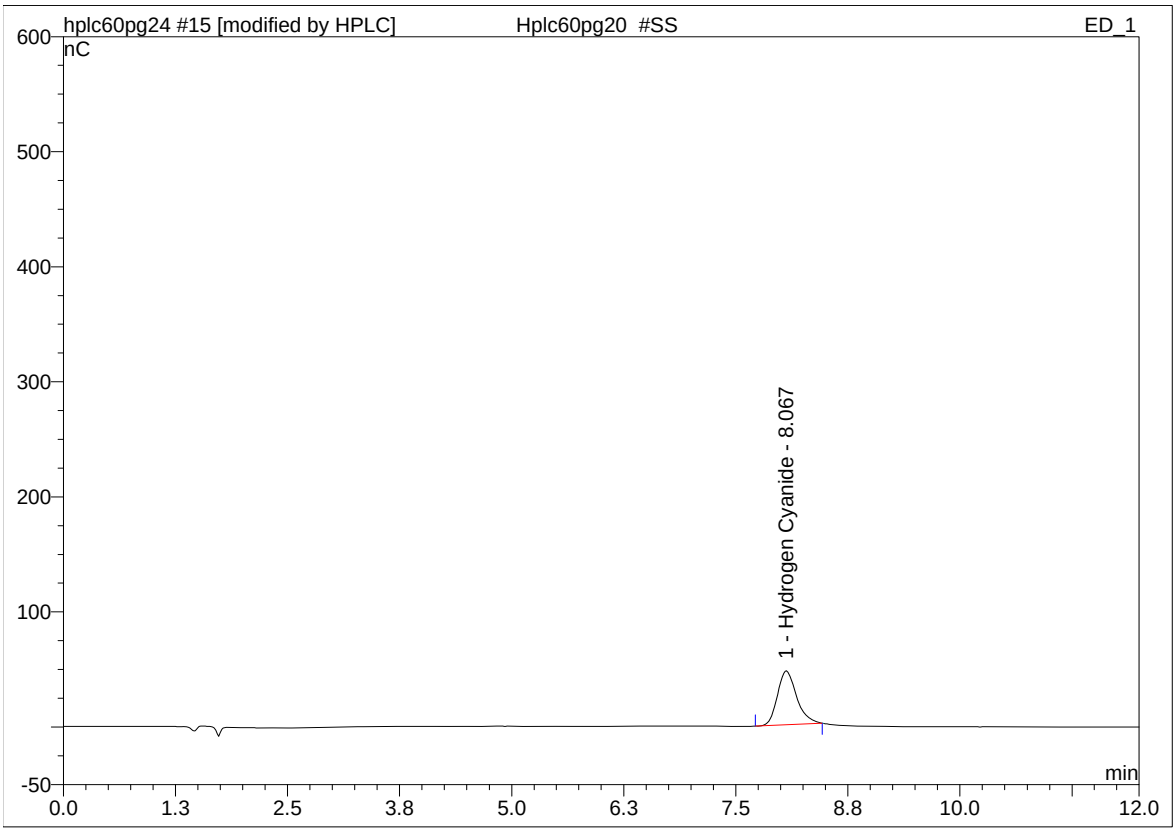


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.07	11.791	100.00	46.893	0.4913

* * * End of Report * * *

15 Hplc60pg20 #SS

Injection Name	**Hplc60pg20 #SS**	*Injection Volume:*	**100.0**
Vial Number:	**6**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 20:20**		
Run Time (min):	**12.00**		

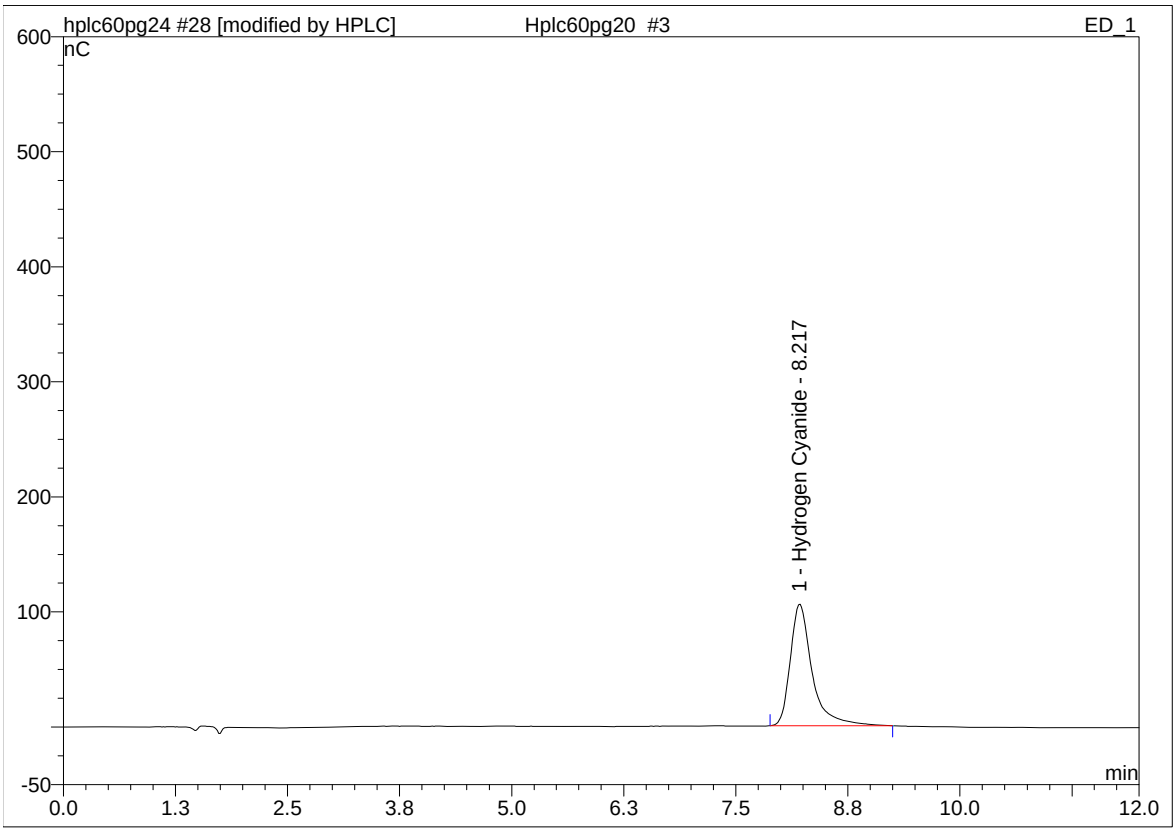


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.07	11.648	100.00	46.891	0.4853

* * * End of Report * * *

28 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**81**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/15/2011 23:57**		
Run Time (min):	**12.00**		

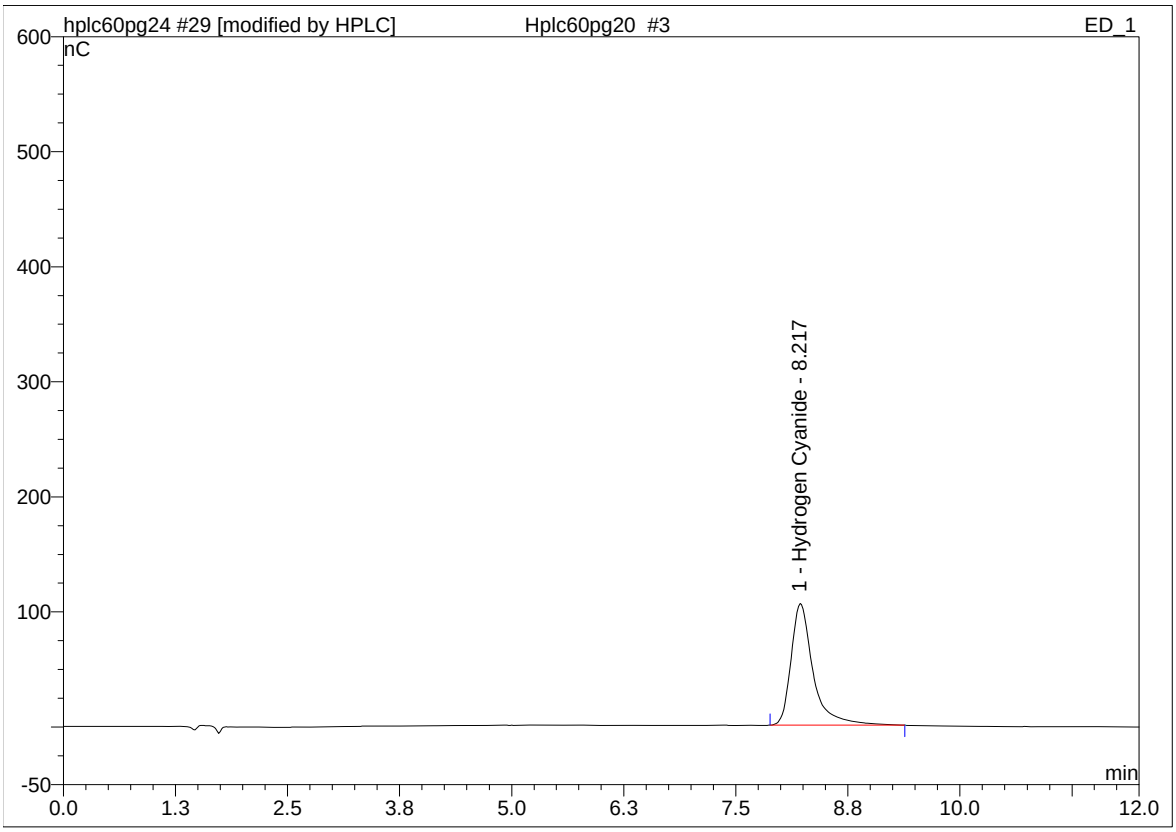


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.22	29.876	100.00	105.675	1.2449

* * * End of Report * * *

29 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**81**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 0:14**		
Run Time (min):	**12.00**		

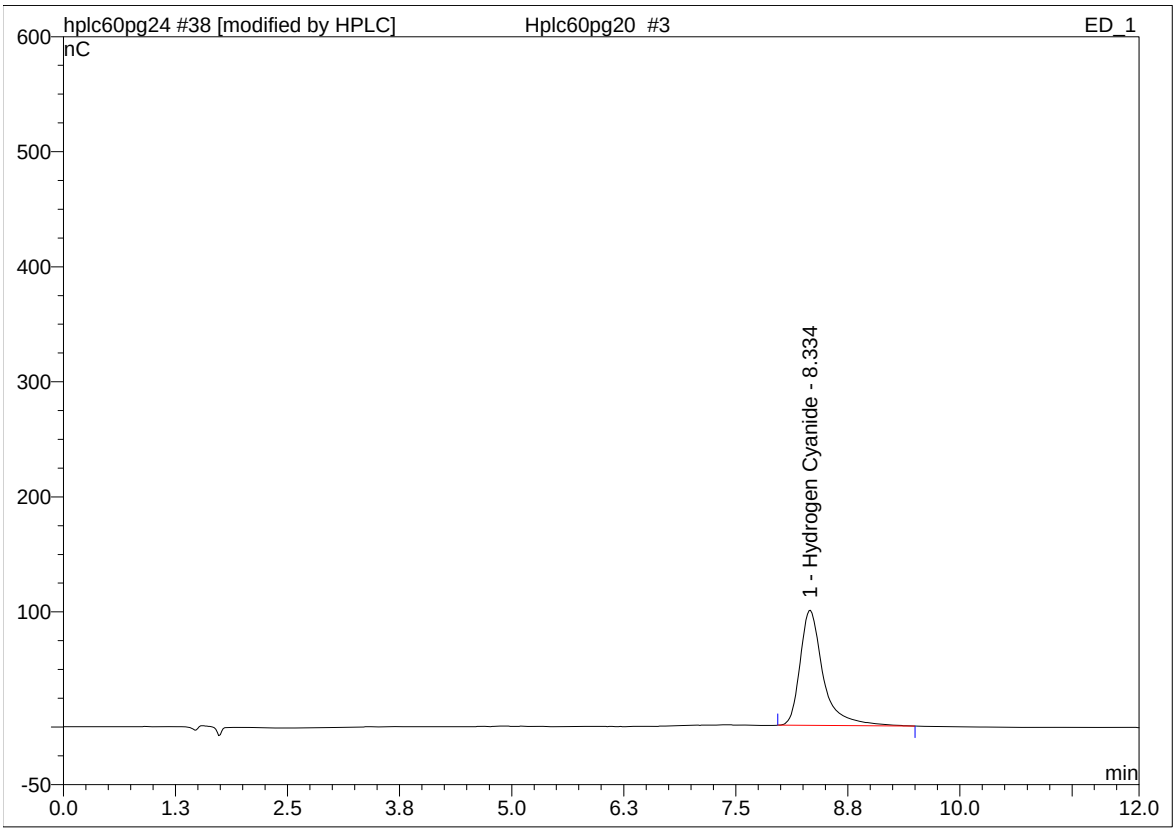


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.22	30.264	100.00	105.635	1.2610

* * * End of Report * * *

38 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**82**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 2:45**		
Run Time (min):	**12.00**		

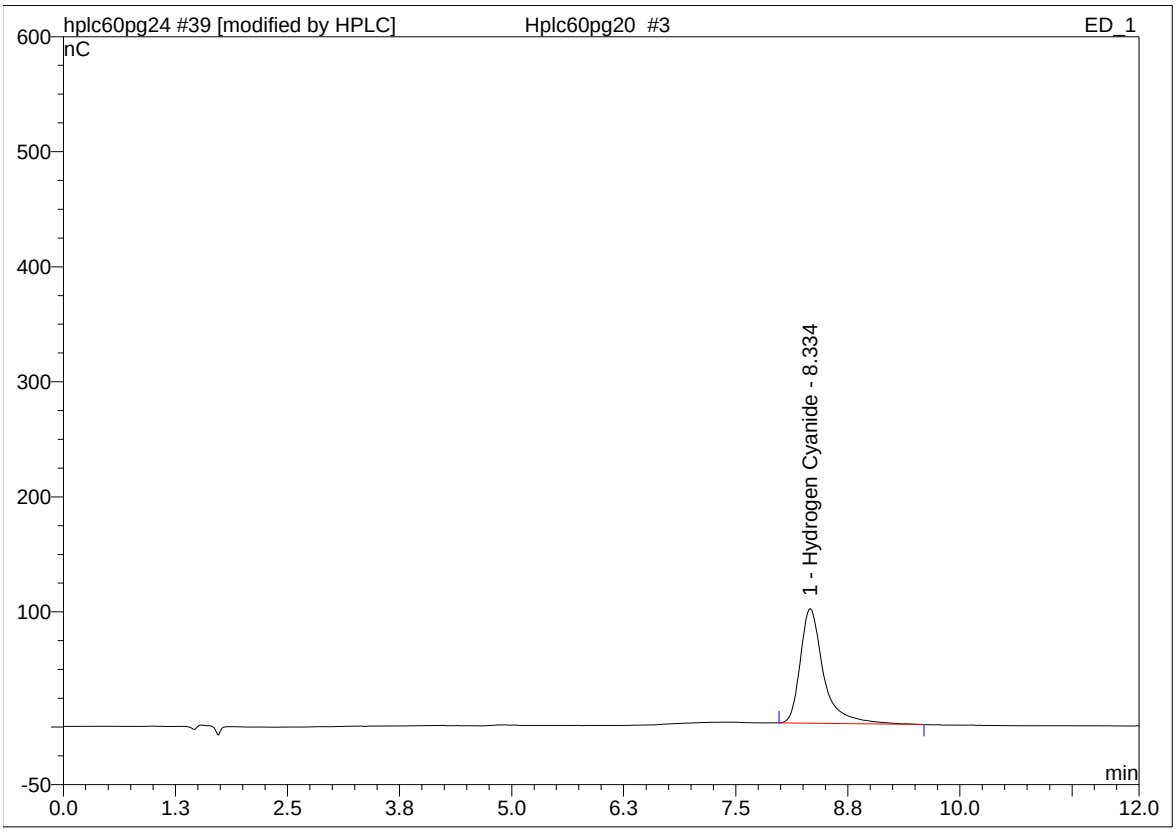


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.33	30.007	100.00	100.079	1.2503

* * * End of Report * * *

39 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**82**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 3:01**		
Run Time (min):	**12.00**		

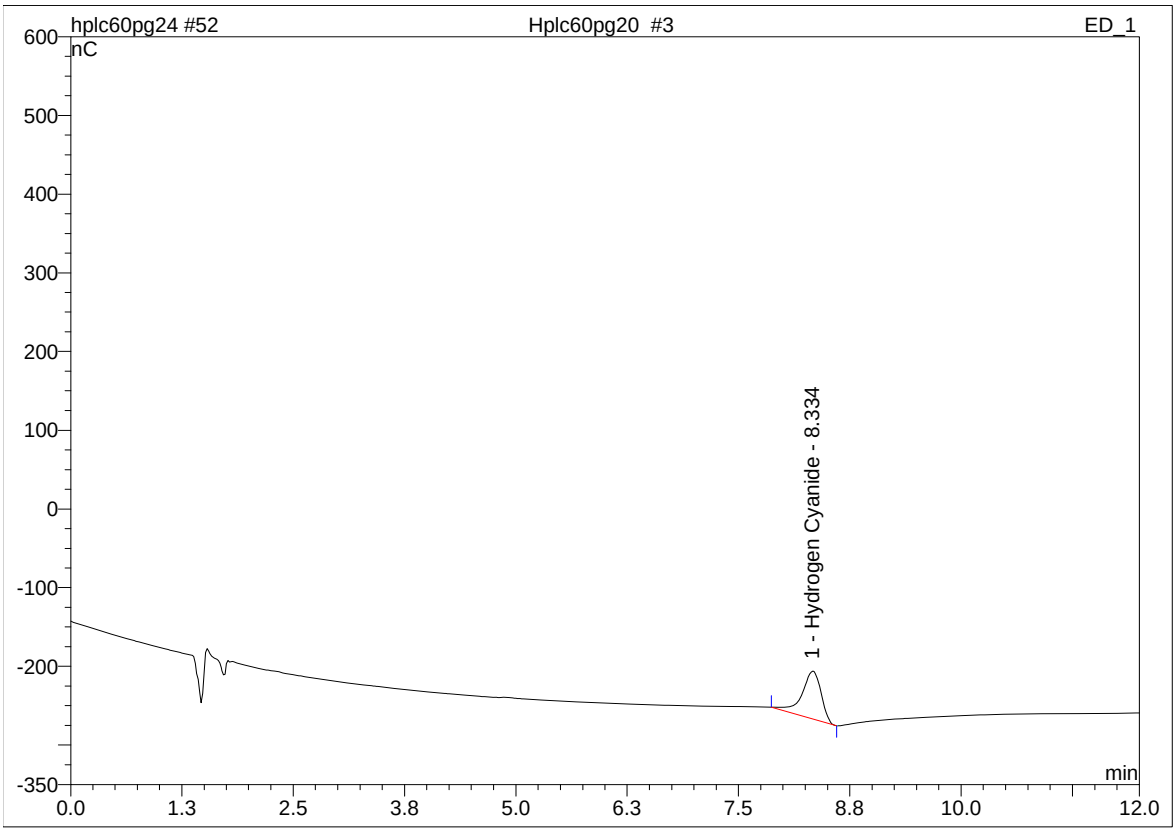


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.33	30.000	100.00	99.689	1.2500

* * * End of Report * * *

52 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**83**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 6:39**		
Run Time (min):	**12.00**		

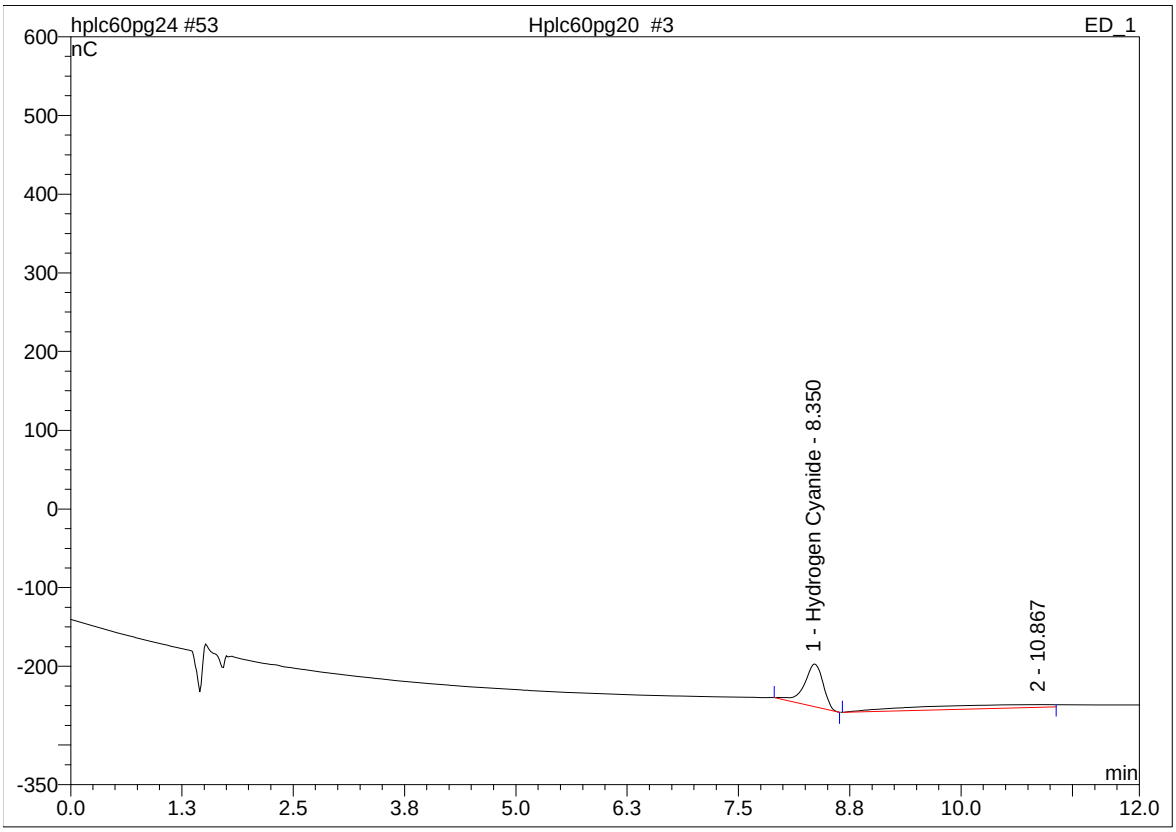


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.33	15.024	100.00	60.931	0.6260

* * * End of Report * * *

53 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**83**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 6:56**		
Run Time (min):	**12.00**		

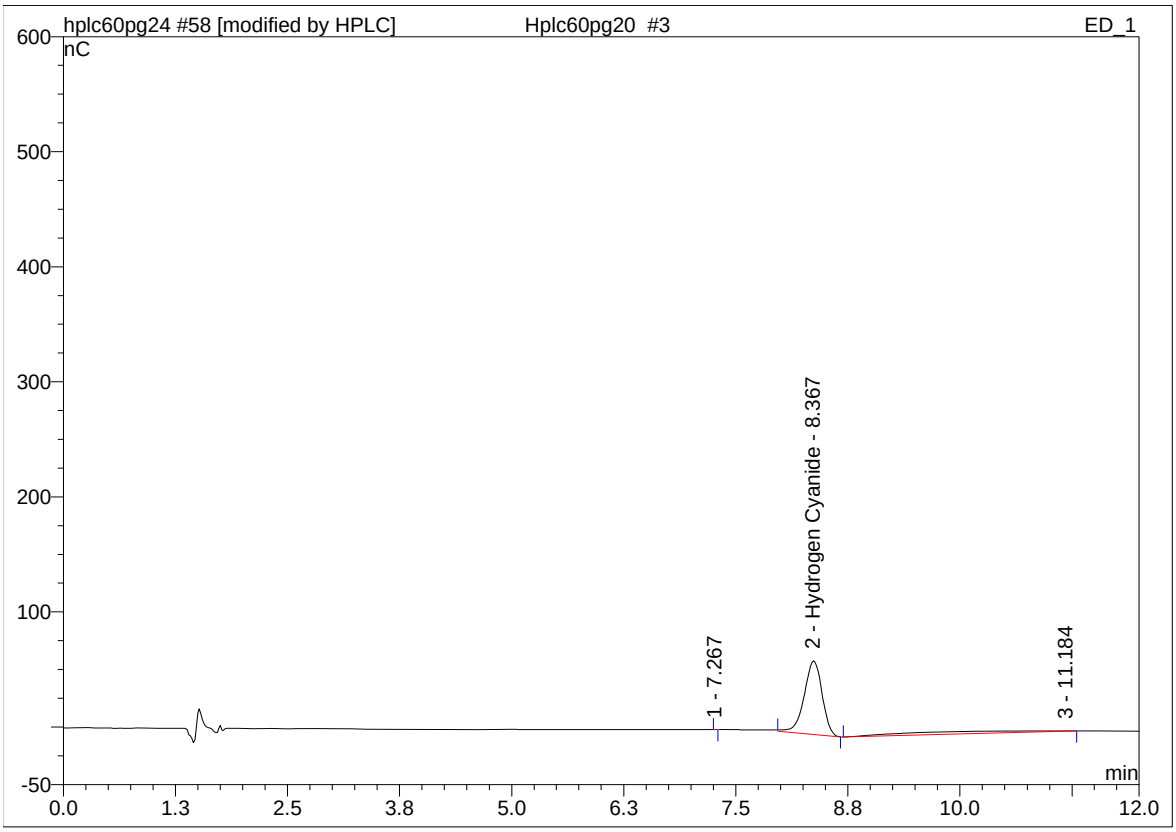


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
1	Hydrogen Cyanide	8.35	13.247	60.02	54.216	0.5520

* * * End of Report * * *

58 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**84**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 8:20**		
Run Time (min):	**12.00**		

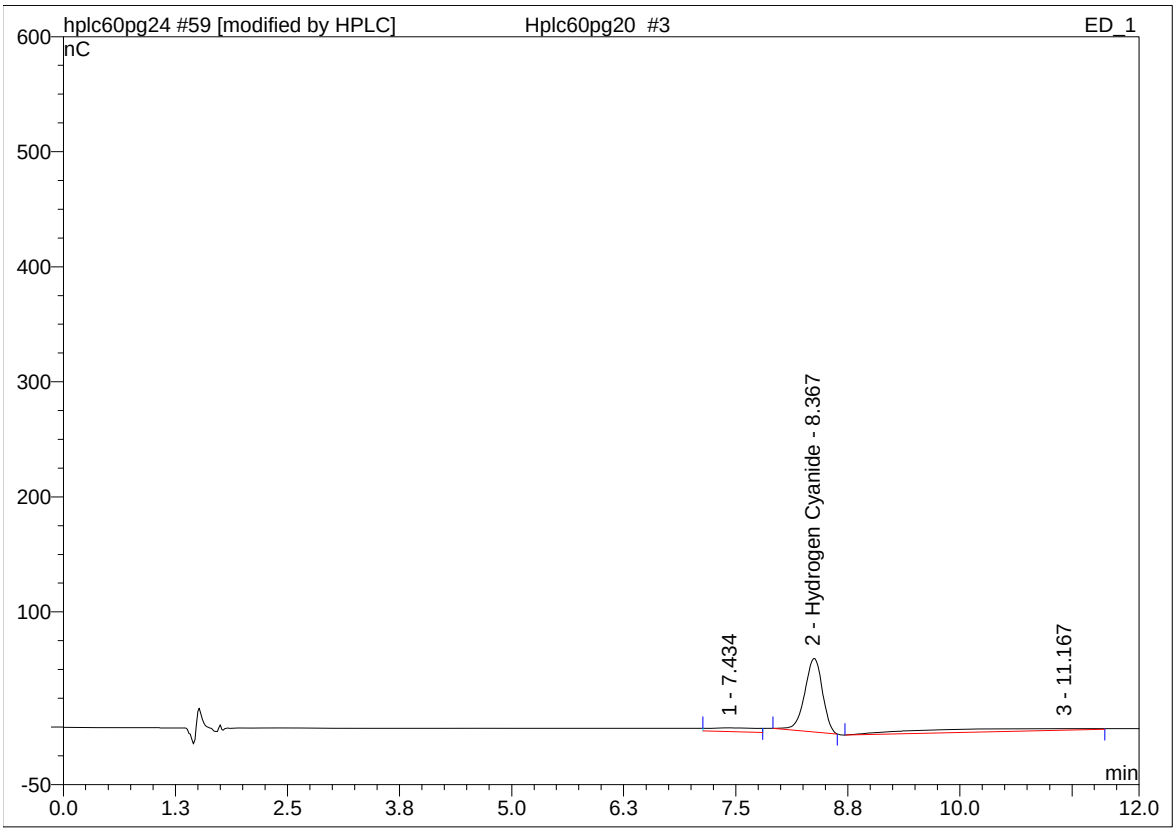


No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
2	Hydrogen Cyanide	8.37	14.871	80.09	63.930	0.6196

* * * End of Report * * *

59 Hplc60pg20 #3

Injection Name	**Hplc60pg20 #3**	*Injection Volume:*	**100.0**
Vial Number:	**84**	*Channel:*	**ED_1**
Sample Type:	**unknown**		
Control Program:	**HCN-Back**		
Quantif. Method:	**HCN-method**		
Recording Time:	**9/16/2011 8:36**		
Run Time (min):	**12.00**		



No.	Peak Name	Ret.Time (detected)	Area	Rel.Area	Height	Amount
		min	nC*min	%	nC	µg/mL
2	Hydrogen Cyanide	8.37	14.652	66.01	63.846	0.6105

* * * End of Report * * *

Title: HCN-Back
Datasource: EA380-DIONEX_local Created: 9/9/2011 11:34:45 AM by HPLC
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Timebase: Flanders-Back

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            Sampler_DiverterValve.Position_1
            Flush                               Volume = 250
            Wait                                FlushState
            Column_TC.AcquireExclusiveAccess
            Compartment_TC.AcquireExclusiveAccess
            Pressure.LowerLimit =               200 [psi]
            Pressure.UpperLimit =               3000 [psi]
            MaximumFlowRamp =                   1.00 [ml/min²]
            %A.Equate =                         "%A"
            %B.Equate =                         "%B"
            %C.Equate =                         "0.1N NaOH/0.5M Sodium
Acetate"
            %D.Equate =                         "%D"
            NeedleHeight =                      2 [mm]
            CutSegmentVolume =                  15 [µl]
            SyringeSpeed =                      4
            CycleTime =                         0 [min]
            WaitForTemperature =                False
            Pump_1_Pressure.Step =              Auto
            Pump_1_Pressure.Average =           On
            EDet1.Mode =                        IntAmp
            EDet1.CellControl                   = On
            Data_Collection_Rate =              1.00 [Hz]
            pH.UpperLimit =                     13.00
            pH.LowerLimit =                     10.00
            WaveformName = "HCN"
            WaveformDescription = "HCN"
            Electrode = AgCl
            Waveform Time = 0.000, Potential = -0.100, GainRegion = Off,
Ramp = On, Integration = Off
            Waveform Time = 0.093, Potential = -0.100, GainRegion = Off,
Ramp = On, Integration = Off
            Waveform Time = 0.200, Potential = -0.100, GainRegion = On,
Ramp = On, Integration = On
            Waveform Time = 0.900, Potential = -0.100, GainRegion = On,
Ramp = On, Integration = On
            Waveform Time = 0.910, Potential = -1.250, GainRegion = Off,
Ramp = On, Integration = Off
            Waveform Time = 0.930, Potential = -0.300, GainRegion = Off,
Ramp = On, Integration = Off
            Waveform Time = 1.000, Potential = -0.300, GainRegion = Off,
Ramp = On, Integration = Off, LastStep = On
            Flow =                              1.000 [ml/min]
```

Title: HCN-Back
Datasource: EA380-DIONEX_local Created: 9/9/2011 11:34:45 AM by HPLC
Location: Flanders-Back\2011 3rd Quarter\hplc60pg24\hplc60pg24.SEQ
Timebase: Flanders-Back

```
            %B =                                0.0 [%]
            %C =                                100.0 [%]
            %D =                                0.0 [%]
            Curve =                             5
            Column_TC.Mode =                    Off
            Compartment_TC.Mode =               Off
            Wait                                SampleReady

 0.000      EDet1.Autozero
            Load
            Wait                                CycleTimeState
            Inject
            Wait                                InjectState
            Pump_1_Pressure.AcqOn
            ED_1.AcqOn
            Sampler.ReleaseExclusiveAccess

12.000      Pump_1_Pressure.AcqOff
            ED_1.AcqOff
            Compartment_TC.ReleaseExclusiveAccess
            Column_TC.ReleaseExclusiveAccess

            End
```

This Is The Last Page Of This Report.

APPENDIX P: METALS LAB REPORT

ANALYSIS REPORT

NELAP Cert. No. 04053

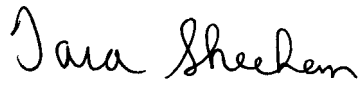
Method 29: Multi-metals

Project ID: ExxonMobil DCU ICR #182129

Prepared for:

TRC Environmental Corporation
5540 Centerview Drive Suite 100
Raleigh, NC 27606

Reviewed by:



Tara Sheehan
Laboratory Manager

August 9, 2011

Reviewed and Approved by:

Jennifer B. Feller
Quality Assurance Manager

August 9, 2011

This report meets the requirements of LAC33/NELAP.

CASE NARRATIVE

Project #: 110737 **Report Date**: 09-Aug-11
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Samples:

Three sets of samples were submitted for Method 29. The target elements were antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, and selenium. The samples were received in good condition with no apparent leakage or damage. All of the remaining amounts of the samples and digestates will be retained by the laboratory for six months and then discarded.

Preparation:

The metals samples were prepared according to EPA Method 29, *Determination of Metals Emissions from Stationary Sources*. The front and back halves were analyzed separately. The samples had a strong odor and an oily sheen to them.

Analysis:

Antimony, arsenic, lead, and selenium were determined by Graphite Furnace Atomic Absorption Spectrometry (GFAA). Beryllium, cadmium, chromium, cobalt, manganese, and nickel were determined by Inductively Coupled Plasma – Optical Emission Spectrometry (ICP-OES).

Results:

The metals results are presented as total micrograms of each element present in the whole analytical fraction indicated. Antimony, arsenic and beryllium were not detected in any of the samples. All other elements of interest were detected in most of the runs. Manganese had the highest amounts that ranged from about 1.9 µg to about 226 µg.

Quality Control:

No elements of interest were detected in the Laboratory Blank. All of the elements for the Laboratory Control Spike were within the acceptance limits of 80% to 120%. All of the Matrix Spike recoveries were within the acceptance range of 75% to 125%. Arsenic and selenium back half samples revealed a matrix interference which required dilutions to get the spikes to pass. All of the required duplicate samples had a relative percent difference of 20% or less or did not have an applicable calculation due to the result being five times less than the detection limit. All of the samples were analyzed at least in duplicate.

FIRST ANALYTICAL LABORATORIES
billing: PO Box 110372 - Research Triangle Park, NC 27709
shipping: 7517 Precision Drive, Suite 101 - Raleigh, NC 27617
TEL: 919 942 8607
FAX: 919 882 1603
www.firstanalyticallabs.com

ANALYSIS REPORT

Project #: 110737
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Report Date: 09-Aug-11
Date Received: 27-Jul-11

Total Micrograms in Sample

Sample	Sb µg	As µg	Be µg	Cd µg	Cr µg	Co µg
EXM-DCU-M29-R1 Front	< 1.0	< 0.5	< 0.05	2.9	11.3	< 1.0
EXM-DCU-M29-R1 Back	< 1.0	< 1.0	< 0.05	< 0.3	5.1	25.7
EXM-DCU-M29-R2 Front	< 1.0	< 0.5	< 0.05	2.8	3.5	< 1.0
EXM-DCU-M29-R2 Back	< 1.0	< 0.5	< 0.05	2.7	22.1	1.3
EXM-DCU-M29-R3 Front	< 1.0	< 0.5	< 0.05	2.8	2.5	< 1.0
EXM-DCU-M29-R3 Back	< 1.0	< 0.5	< 0.05	1.0	9.6	< 1.0

QC SUMMARY

Spike, %Rec. Front	104%	99%	80%	79%	83%	80%
Spike, %Rec. Back	105%	96%	86%	88%	90%	90%
Duplicate, %RPD Front	N/A	N/A	N/A	8%	N/A	N/A
Duplicate, %RPD Back	N/A	N/A	N/A	5%	2%	N/A

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www.firstanalyticallabs.com

ANALYSIS REPORT

Project #: 110737
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Report Date: 09-Aug-11
Date Received: 27-Jul-11

Total Micrograms in Sample

Sample	Pb µg	Mn µg	Ni µg	Se µg
EXM-DCU-M29-R1 Front	0.8	4.0	11.5	1.1
EXM-DCU-M29-R1 Back	0.6	4.7	3.3	19.5
EXM-DCU-M29-R2 Front	0.4	1.9	3.0	< 1.0
EXM-DCU-M29-R2 Back	1.4	226	86.8	7.6
EXM-DCU-M29-R3 Front	0.7	2.1	2.7	< 1.0
EXM-DCU-M29-R3 Back	0.8	87.7	32.3	< 1.0

QC SUMMARY

Spike, %Rec. Front	102%	83%	95%	111%
Spike, %Rec. Back	101%	90%	97%	112%
Duplicate, %RPD Front	N/A	2%	10%	N/A
Duplicate, %RPD Back	N/A	7%	2%	N/A

A N T I M O N Y

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11 & 05-Aug-11

MDL = 10 μg/L
Postdig'n spike conc. = 100 μg/L

Sample ID Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total μg
FRONT HALVES									
Run 1	110737.1-1	1.7	1.7	100	1			<	1.0
Run 2	110737.2-1	2.5	2.5	100	1			<	1.0
Run 3	110737.3-1	2.7	2.7	100	1			<	1.0
BACK HALVES									
Run 1	110737.1-2A	1.1	1.1	100	1	1044	1044	<	1.0
Run 2	110737.2-2A	2.6	2.6	100	1	2859	2859	<	1.0
Run 3	110737.3-2A	0.8	0.8	100	1	2409	2409	<	1.0
FRONT SPIKE	110737.1-1S	104.4				% REC =	104.4%		
BACK SPIKE	110737.1-2AS	105.4				% REC =	105.4%		

A R S E N I C

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 03-Aug-11 & 09-Aug-11

MDL = 5 µg/L
Postdig'n spike conc. = 100 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	-0.5	-0.5	100	1			<	0.5
Run 2	110737.2-1	-1.0	-1.0	100	1			<	0.5
Run 3	110737.3-1	-1.7	-1.7	100	1			<	0.5
BACK HALVES									
Run 1	110737.1-2A	0.5	1.0	100	2	1044	1044	<	1.0
Run 2	110737.2-2A	-1.4	-1.4	100	1	2859	2859	<	0.5
Run 3	110737.3-2A	0.0	0.0	100	1	2409	2409	<	0.5
FRONT SPIKE	110737.2-1S	98.8				% REC =	98.8%		
BACK SPIKE	110737.1-2AS	96.1				% REC =	96.1%		

B E R Y L L I U M

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 0.50 µg/L
Postdig'n spike conc. = 1000 µg/L

Sample ID Client	FAL	Test Sol'n µg/L	Dig'te Conc µg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total µg
FRONT HALVES									
Run 1	110737.1-1	0.32	0.32	100	1			<	0.05
Run 2	110737.2-1	-1.07	-1.07	100	1			<	0.05
Run 3	110737.3-1	-1.04	-1.04	100	1			<	0.05
BACK HALVES									
Run 1	110737.1-2A	-0.90	-0.90	100	1	1044	1044	<	0.05
Run 2	110737.2-2A	-0.10	-0.10	100	1	2859	2859	<	0.05
Run 3	110737.3-2A	-1.54	-1.54	100	1	2409	2409	<	0.05
FRONT SPIKE	110737.2-1S	798.57				% REC =	79.9%		
BACK SPIKE	110737.1-2AS	864.00				% REC =	86.4%		
FRONT DUP	110737.3-1D	-1.60				RPD =	N/A		
BACK DUP	110737.2-2AD	-1.74				RPD =	N/A		

C A D M I U M

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 3 μg/L
Postdig'n spike conc. = 1000 μg/L

Sample ID / Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total μg
FRONT HALVES									
Run 1	110737.1-1	28.7	28.7	100	1				2.9
Run 2	110737.2-1	27.7	27.7	100	1				2.8
Run 3	110737.3-1	28.1	28.1	100	1				2.8
BACK HALVES									
Run 1	110737.1-2A	0.1	0.1	100	1	1044	1044	<	0.3
Run 2	110737.2-2A	27.1	27.1	100	1	2859	2859		2.7
Run 3	110737.3-2A	10.4	10.4	100	1	2409	2409		1.0
FRONT SPIKE	110737.2-1S	818.2				% REC =	79.0%		
BACK SPIKE	110737.1-2AS	882.3				% REC =	88.2%		
FRONT DUP	110737.3-1D	26.0				RPD =	7.9%		
BACK DUP	110737.2-2AD	28.4				RPD =	4.7%		

C H R O M I U M

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 5 μg/L
Postdig'n spike conc. = 1000 μg/L

Sample ID Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total μg
FRONT HALVES								
Run 1	110737.1-1	113.0	113.0	100	1			11.3
Run 2	110737.2-1	34.6	34.6	100	1			3.5
Run 3	110737.3-1	24.8	24.8	100	1			2.5
BACK HALVES								
Run 1	110737.1-2A	51.2	51.2	100	1	1044	1044	5.1
Run 2	110737.2-2A	220.5	220.5	100	1	2859	2859	22.1
Run 3	110737.3-2A	96.1	96.1	100	1	2409	2409	9.6
FRONT SPIKE	110737.2-1S	865.7				% REC =	83.1%	
BACK SPIKE	110737.1-2AS	954.2				% REC =	90.3%	
FRONT DUP	110737.3-1D	24.3				RPD =	N/A	
BACK DUP	110737.2-2AD	224.2				RPD =	1.7%	

C O B A L T

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 10 μg/L
Postdig'n spike conc. = 1000 μg/L

Sample ID / Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total μg
FRONT HALVES									
Run 1	110737.1-1	-21.7	-21.7	100	1			<	1.0
Run 2	110737.2-1	-23.5	-23.5	100	1			<	1.0
Run 3	110737.3-1	-21.4	-21.4	100	1			<	1.0
BACK HALVES									
Run 1	110737.1-2A	257.3	257.3	100	1	1044	1044		25.7
Run 2	110737.2-2A	12.6	12.6	100	1	2859	2859		1.3
Run 3	110737.3-2A	6.7	6.7	100	1	2409	2409	<	1.0
FRONT SPIKE	110737.2-1S	795.5				% REC =	79.5%		
BACK SPIKE	110737.1-2AS	1154.3				% REC =	89.7%		
FRONT DUP	110737.3-1D	-22.4				RPD =	N/A		
BACK DUP	110737.2-2AD	12.4				RPD =	N/A		

L E A D

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 2 μg/L
Postdig'n spike conc. = 100 μg/L

Sample ID Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total μg
FRONT HALVES								
Run 1	110737.1-1	8.5	8.5	100	1			0.8
Run 2	110737.2-1	4.1	4.1	100	1			0.4
Run 3	110737.3-1	7.2	7.2	100	1			0.7
BACK HALVES								
Run 1	110737.1-2A	5.5	5.5	100	1	1044	1044	0.6
Run 2	110737.2-2A	13.9	13.9	100	1	2859	2859	1.4
Run 3	110737.3-2A	7.8	7.8	100	1	2409	2409	0.8
FRONT SPIKE	110737.2-1S	105.8				% REC =	101.7%	
BACK SPIKE	110737.1-2AS	106.1				% REC =	100.5%	

M A N G A N E S E

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation — MDL = 2 μg/L

Proj. #: 110737 — Postdig'n spike conc. = 1000 μg/L

Analysis Date: 04-Aug-11

Sample ID / Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total μg
FRONT HALVES								
Run 1	110737.1-1	40.5	40.5	100	1			4.0
Run 2	110737.2-1	18.7	18.7	100	1			1.9
Run 3	110737.3-1	21.4	21.4	100	1			2.1
BACK HALVES								
Run 1	110737.1-2A	46.9	46.9	100	1	1044	1044	4.7
Run 2	110737.2-2A	1131.4	2262.9	100	2	2859	2859	226.3
Run 3	110737.3-2A	877.1	877.1	100	1	2409	2409	87.7
FRONT SPIKE	110737.2-1S	847.9				% REC =	82.9%	
BACK SPIKE	110737.1-2AS	949.8				% REC =	90.3%	
FRONT DUP	110737.3-1D	20.9				RPD =	2.1%	
BACK DUP	110737.2-2AD	1209.9				RPD =	6.7%	

N I C K E L

ICP ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 04-Aug-11

MDL = 3 μg/L
Postdig'n spike conc. = 1000 μg/L

Sample ID Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml	Total μg
FRONT HALVES								
Run 1	110737.1-1	115.0	115.0	100	1			11.5
Run 2	110737.2-1	30.2	30.2	100	1			3.0
Run 3	110737.3-1	27.0	27.0	100	1			2.7
BACK HALVES								
Run 1	110737.1-2A	33.2	33.2	100	1	1044	1044	3.3
Run 2	110737.2-2A	868.2	868.2	100	1	2859	2859	86.8
Run 3	110737.3-2A	323.0	323.0	100	1	2409	2409	32.3
FRONT SPIKE	110737.2-1S	979.9				% REC =	95.0%	
BACK SPIKE	110737.1-2AS	998.3				% REC =	96.5%	
FRONT DUP	110737.3-1D	29.9				RPD =	10.0%	
BACK DUP	110737.2-2AD	886.9				RPD =	2.1%	

S E L E N I U M

GFAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
Proj. #: 110737
Analysis Date: 08-Aug-11

MDL = 10 μg/L
Postdig'n spike conc. = 100 μg/L

Sample ID Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total μg
FRONT HALVES									
Run 1	110737.1-1	10.6	10.6	100	1				1.1
Run 2	110737.2-1	2.9	2.9	100	1			<	1.0
Run 3	110737.3-1	2.1	2.1	100	1			<	1.0
BACK HALVES									
Run 1	110737.1-2A	97.7	195.5	100	2	1044	1044		19.5
Run 2	110737.2-2A	75.5	75.5	100	1	2859	2859		7.6
Run 3	110737.3-2A	9.4	9.4	100	1	2409	2409	<	1.0
FRONT SPIKE	110737.1-1S	111.0				% REC =	111.0%		
BACK SPIKE	110737.1-2AS	210.1				% REC =	112.3%		

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Box No.: 110737

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-M26A-R1-H2SO4	7-14-11	poly	Acidic	run 1	Cl, F	100ml aliquot of 143ml
EXM-DCU-M26A-R1-NaOH	↓	poly	Basic	run 1	Cl2,CN	27ml
EXM-DCU-M26A-R2-H2SO4	7-16-11	poly	Acidic	run 2	Cl, F	2760ml
EXM-DCU-M26A-R2-NaOH	↓	poly	Basic	run 2	Cl2,CN	345ml
EXM-DCU-M26A-R3-H2SO4	7-17-11	poly	Acidic	run 3	Cl, F	2242ml
EXM-DCU-M26A-R3-NaOH	↓	poly	Basic	run 3	Cl2,CN	341ml
EXM-DCU-M26A-Rgtblk-H2SO4	↓	poly	Acidic	1N H2SO4 reagent blank	Cl, F	enthalpy
EXM-DCU-M26A-Rgtblk-NaOH	↓	poly	Basic	1N NaOH reagent blank	Cl2,CN	
EXM-DCU-M29-R1-FHR	7-14-11	glass	Acidic	run 1	M29	M29: Sb, As, Be, Cd, Cr, Co, Pb, Mn, Ni, Se
EXM-DCU-M29-R1-Fil	↓	petri dish	filter	run 1	M29	
EXM-DCU-M29-R1-IMPs	↓	poly	Acidic	run 1 impingers and BHR	M29	1 container
EXM-DCU-M29-R2-FHR	7-16-11	glass	Acidic	run 2	M29	
EXM-DCU-M29-R2-Fil	↓	petri dish	filter	run 2	M29	
EXM-DCU-M29-R2-IMPs	↓	poly	Acidic	run 2 impingers and BHR	M29	3 containers
EXM-DCU-M29-R3-FHR	7-17-11	glass	Acidic	run 3	M29	
EXM-DCU-M29-R3-Fil	↓	petri dish	filter	run 3	M29	
EXM-DCU-M29-R3-IMPs	↓	poly	Acidic	run 3 impingers and BHR	M29	3 containers

Relinquished by: R Monson	**Date/Time:** 7-26-11 1600	**Relinquished by:**	**Date/Time:** 7/27 1500
Received by: Jennifer B. Fellen	**Date/Time:** 7/27/11 1300	**Received by:**	**Date/Time:**

Remarks (*):

Report & bill to TRC Austin

Mike Krall &

Randy Monson

TRC

Page 1 of 1

EM-BTF-02262

Sample ID	Elem	Date	Time	Abs (Corr)	Conc (Cali	RSD (Conc	Special Sa	Special Ca	Conc (Cali	Conc (Calib)2
Calib Blank	Sb	8/4/2011	12:47:38 PM	-0.0003542		0				
20 ppb Sb	Sb	8/4/2011	12:53:56 PM	0.015514		0				
50 ppb Sb	Sb	8/4/2011	1:00:14 PM	0.0372894		0				
100 ppb Sb	Sb	8/4/2011	1:06:32 PM	0.0722254		0				
200 ppb Sb	Sb	8/4/2011	1:12:48 PM	0.1405043		0				
ICV	Sb	8/4/2011	1:19:31 PM	0.0717433	99.3	0.839963			98.71549	99.89512
ICB	Sb	8/4/2011	1:25:57 PM	-0.0001145	-0.1	22.54236			-0.11773	-0.16238
110737.LB-1	Sb	8/4/2011	6:16:32 PM	-6.61E-05	-0.1	187.0792			-0.18776	0.026097
110737.LCS-1	Sb	8/4/2011	6:22:55 PM	0.0779578	108.3	2.005045			109.8569	106.7854
110737.1-1	Sb	8/4/2011	6:29:19 PM	0.0014031	1.7	0.579914			1.735215	1.721042
110737.1-1	Sb	8/4/2011	6:35:35 PM	0.0752575	104.4	2.824844	1	104.401	102.3157	106.4864
110737.2-1	Sb	8/4/2011	6:41:56 PM	0.0020168	2.5	18.8818			2.823227	2.158142
110737.3-1	Sb	8/4/2011	6:48:16 PM	0.002153	2.7	5.77897			2.551393	2.768794
110737.LB-2A	Sb	8/4/2011	6:54:37 PM	0.0005383	0.7	35.14228			0.824786	0.496464
CCV	Sb	8/4/2011	7:07:14 PM	0.0812019	113.0	0.667165			112.5037	113.5703
CCB	Sb	8/4/2011	7:13:40 PM	-0.0001381	-0.2	201.7956			0.07202	-0.40942
110737.1-2A	Sb	8/4/2011	7:19:58 PM	0.0009047	1.1	2.439656			1.131096	1.092733
110737.1-2A	Sb	8/4/2011	7:26:12 PM	0.0759323	105.4	0.065929	1	105.3796	105.4287	105.3305
110737.2-2A	Sb	8/4/2011	7:32:30 PM	0.0020655	2.6	58.32776			1.500925	3.608081
110737.3-2A	Sb	8/4/2011	7:38:48 PM	0.0006473	0.8	6.709161			0.832322	0.756926
CCV	Sb	8/4/2011	7:45:04 PM	0.0832493	116.0	5.268797			111.6965	120.3414
CCB	Sb	8/4/2011	7:51:30 PM	9.84E-05	0.1	383.4436			-0.20699	0.448889
CCV	Sb	8/5/2011	8:55:10 AM	0.0698308	96.5	3.1789			98.70707	94.36711
CCB	Sb	8/5/2011	9:01:35 AM	0.0004695	0.6	15.3637			0.638466	0.513337
110737.LCS-2A	Sb	8/5/2011	9:31:24 AM	0.0790837	110.0	1.334951			110.995	108.9191
CCV	Sb	8/5/2011	9:37:38 AM	0.0674936	93.2	2.948203			91.2146	95.09866
CCB	Sb	8/5/2011	9:44:02 AM	0.0003987	0.5	24.50581			0.573602	0.404171
Calib Blank	As	8/3/2011	5:10:39 PM	0.0030548		0				
10 ppb As	As	8/3/2011	5:16:26 PM	0.0141233		0				
50 ppb As	As	8/3/2011	5:22:12 PM	0.0758646		0				
100 ppb As	As	8/3/2011	5:27:58 PM	0.1443834		0				
200 ppb As	As	8/3/2011	5:33:41 PM	0.2634755		0				
ICV	As	8/3/2011	5:39:25 PM	0.1403833	99.1	0.803866			99.70597	98.57889
ICB	As	8/3/2011	5:45:19 PM	-0.002851	-1.9	24.493			-1.57786	-2.23888
110737.LB-1	As	8/3/2011	9:10:51 PM	-0.0030738	-2.1	18.29636			-1.79121	-2.32356
110737.LCS-1	As	8/3/2011	9:16:42 PM	0.1396674	98.6	0.342029			98.3711	98.84808
110737.1-1	As	8/3/2011	9:22:33 PM	-0.0008156	-0.5	177.5679			0.139579	-1.23176
110737.2-1	As	8/3/2011	9:28:21 PM	-0.0014426	-1.0	67.61779	1		-1.42798	-0.50416
110737.2-1S	As	8/3/2011	9:34:04 PM	0.1399836	98.8	0.703761	1	98.8	99.33686	98.35309
110737.3-1	As	8/3/2011	9:39:53 PM	-0.0025269	-1.7	20.62017			-1.93831	-1.445

Sample ID	Elem	Date	Time	Abs (Corr)	Conc (Cali	RSD (Conc	Special Sa	Special Ca	Conc (Cali	Conc (Calib)2
110737.LB-2A	As	8/3/2011	9:45:41 PM	-0.0022976	-1.5	11.48211			-1.66323	-1.41343
110737.LCS-2A	As	8/3/2011	9:51:29 PM	0.167237	119.3	2.262587			117.4306	121.2492
CCV	As	8/3/2011	10:02:57 PM	0.1534511	108.9	0.980412			109.6732	108.1631
CCB	As	8/3/2011	10:08:50 PM	-0.0025452	-1.7	13.44763			-1.86597	-1.54192
110737.2-2A	As	8/3/2011	10:26:11 PM	-0.0020305	-1.4	154.7333			-2.84464	0.127865
110737.3-2A	As	8/3/2011	10:31:57 PM	2.22E-05	0.0	1267.988			-0.11881	0.148636
CCV	As	8/3/2011	10:37:40 PM	0.1424405	100.7	0.523807			101.0476	100.3018
CCB	As	8/3/2011	10:43:34 PM	-0.0022326	-1.5	32.39761			-1.15233	-1.83718
Calib Blank	As	8/9/2011	10:57:05 AM	-0.0002984		0				
10 ppb As	As	8/9/2011	11:02:51 AM	0.0136975		0				
50 ppb As	As	8/9/2011	11:08:37 AM	0.0660975		0				
100 ppb As	As	8/9/2011	11:14:24 AM	0.1284987		0				
200 ppb As	As	8/9/2011	11:20:08 AM	0.2295791		0				
ICV	As	8/9/2011	11:29:14 AM	0.0004125	0.3				0.300357	
ICV	As	8/9/2011	11:36:34 AM	0.1219083	94.9	4.008597			92.1799	97.55804
ICB	As	8/9/2011	11:42:27 AM	-5.65E-05	0.0	1223.828			-0.39653	0.314376
110737.1-2A	As	8/9/2011	11:48:12 AM	0.0006332	0.5	63.06266	2		0.255509	0.666774
110737.1-2A	As	8/9/2011	11:53:57 AM	0.1233195	96.1	1.294473	2	96.05931	96.93857	95.18005
CCV	As	8/9/2011	11:59:41 AM	0.1280115	100.1	1.719921			98.84752	101.2814
CCB	As	8/9/2011	12:05:35 PM	0.0002386	0.2	469.5181			-0.40347	0.751294
Calib Blank	Pb	8/1/2011	10:13:00 AM	-0.0001418		0				
20 ppb Pb	Pb	8/1/2011	10:18:31 AM	0.0238224		0				
50 ppb Pb	Pb	8/1/2011	10:24:03 AM	0.0574378		0				
100 ppb Pb	Pb	8/1/2011	10:30:01 AM	0.1142801		0				
200 ppb Pb	Pb	8/1/2011	10:35:31 AM	0.2041593		0				
ICV	Pb	8/4/2011	10:24:43 AM	0.1137545	101.2	0.005779			101.2019	101.1936
ICB	Pb	8/4/2011	10:30:23 AM	2.92E-05	0.0	763.8404			-0.1057	0.153733
110737.LB-1	Pb	8/4/2011	10:36:00 AM	-0.0002946	-0.2	11.02758			-0.2236	-0.26142
110737.LCS-1	Pb	8/4/2011	10:41:36 AM	0.5505265						
110737.LCS-1	Pb	8/4/2011	10:49:32 AM	0.1207861	108.1	0.260401			107.9331	108.3313
110737.1-1	Pb	8/4/2011	10:55:08 AM	0.0102622	8.5	4.727769			8.780674	8.212583
110737.2-1	Pb	8/4/2011	11:00:44 AM	0.0049384	4.1	4.418763	1		4.204365	3.949592
110737.2-1	Pb	8/4/2011	11:06:15 AM	0.1184477	105.8	1.256798	1	101.7381	106.7555	104.8747
110737.3-1	Pb	8/4/2011	11:11:49 AM	0.0086854	7.2	7.167295			7.549092	6.820819
110737.LB-2A	Pb	8/4/2011	11:17:24 AM	-6.92E-05	-0.1	462.1428			0.129192	-0.24313
110737.LCS-2A	Pb	8/4/2011	11:22:58 AM	0.1221326	109.5	0.434804			109.1361	109.8092
110737.1-2A	Pb	8/4/2011	11:28:32 AM	0.0067125	5.5	3.324517	1		5.677267	5.416477
110737.1-2A	Pb	8/4/2011	11:34:01 AM	0.1187169	106.1	0.745708	1	100.5338	106.6401	105.5213
110737.2-2A	Pb	8/4/2011	11:39:35 AM	0.0167361	13.9	0.512014			13.85621	13.95691
CCV	Pb	8/4/2011	11:45:06 AM	0.1152793	102.7	2.668237			100.7589	104.6341

Sample ID	Elem	Date	Time	Abs (Corr)	Conc (Cali	RSD (Conc	Special Sa	Special Ca	Conc (Cali	Conc (Calib)2
CCB	Pb	8/4/2011	11:50:48 AM	-0.0001307	-0.1	431.1988			-0.43545	0.220361
110737.3-2A	Pb	8/4/2011	11:56:19 AM	0.0094289	7.8	1.129829			7.865408	7.740729
CCV	Pb	8/4/2011	12:01:50 PM	0.1138827	101.3	0.601182			101.7541	100.8927
CCB	Pb	8/4/2011	12:07:32 PM	-0.0008254	-0.7	9.693244			-0.63279	-0.72591
Calib Blank	Se	8/8/2011	11:44:12 AM	0.0001442		0				
20 ppb Se	Se	8/8/2011	11:51:11 AM	0.0191941		0				
50 ppb Se	Se	8/8/2011	11:58:09 AM	0.0476056		0				
100 ppb Se	Se	8/8/2011	12:05:11 PM	0.0933816		0				
200 ppb Se	Se	8/8/2011	12:12:12 PM	0.1850667		0				
ICV	Se	8/8/2011	12:19:56 PM	0.0917712	97.8	0.272517			97.63809	98.01511
ICB	Se	8/8/2011	12:27:02 PM	0.0002083	0.2	288.1096			0.65345	-0.22316
110737.LB-1	Se	8/8/2011	12:33:58 PM	-8.22E-05	-0.1	79.95554			-0.13277	-0.03686
110737.LCS-1	Se	8/8/2011	12:40:57 PM	0.1094087	117.0	0.513202			117.4727	116.6232
110737.1-1	Se	8/8/2011	12:47:51 PM	0.0102281	10.6	1.886964	1		10.75801	10.47471
110737.1-1	Se	8/8/2011	12:54:45 PM	0.1038418	111.0	1.543032	1	100.356	112.1832	109.7616
110737.2-1	Se	8/8/2011	1:01:39 PM	0.0028261	2.9	21.64077			2.475221	3.369617
110737.3-1	Se	8/8/2011	1:08:36 PM	0.0020374	2.1	1.6146			2.129852	2.081768
110737.LB-2A	Se	8/8/2011	1:15:30 PM	0.0005416	0.6	56.97508			0.784701	0.334003
110737.LCS-2A	Se	8/8/2011	1:22:24 PM	0.1111837	119.0	1.180979			119.9804	117.9931
110737.2-2A	Se	8/8/2011	1:43:16 PM	0.0711753	75.5	1.658302			74.61485	76.38548
CCV	Se	8/8/2011	1:50:12 PM	0.1002775	107.1	0.495136			106.7114	107.4613
CCB	Se	8/8/2011	1:57:18 PM	-0.0004011	-0.4	31.76901			-0.32098	-0.50698
110737.3-2A	Se	8/8/2011	2:04:14 PM	0.0090322	9.4	3.686964			9.125329	9.613875
110737.1-2A x 2	Se	8/8/2011	2:11:15 PM	0.0916892	97.7	0.475977	2		97.40846	98.06636
110737.1-2AS x 2	Se	8/8/2011	2:18:13 PM	0.1939659	210.1	1.040626	2	112.4	208.5059	211.5972
CCV	Se	8/8/2011	2:25:09 PM	0.1020907	109.1	2.461116			110.961	107.1651
CCB	Se	8/8/2011	2:32:15 PM	-0.0005693	-0.6	99.57289			-0.17384	-1.00108

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
Calib Blank 1	8/4/2011	12:48:01 PM	Be		51966.681	ug/L	0.442706	51719.9	52175.229	52004.913
Standard 1	8/4/2011	12:51:32 PM	Be		1687730.2	ug/L	1.093585	1666421.4	1698064.5	1698704.8
Standard 2	8/4/2011	12:52:22 PM	Be		3396599.4	ug/L	2.390876	3303568.3	3432930.3	3453299.7
ICV	8/4/2011	12:53:09 PM	Be	987.50	1674977.6	ug/L	0.363577	1673194	1681760.1	1669978.8
ICB	8/4/2011	12:54:08 PM	Be	0.79	1335.2134	ug/L	163.0684	3849.3237	67.042198	89.274441
ICB	8/4/2011	12:55:50 PM	Be	-0.09	-152.791	ug/L	63.44024	-58.93915	-252.5325	-146.9013
ICS	8/4/2011	12:56:46 PM	Be	-0.15	-249.7316	ug/L	27.24722	-240.5921	-321.8843	-186.7183
110737.LB-1	8/4/2011	12:57:46 PM	Be	-0.08	-134.0128	ug/L	185.6623	42.099993	-418.6532	-25.48525
110737.LCS-1	8/4/2011	12:58:30 PM	Be	1034.39	1754510	ug/L	3.587332	1723747.8	1712867.3	1826915
110737.1-1	8/4/2011	12:59:21 PM	Be	0.32	550.10751	ug/L	160.729	1571.0732	40.340558	38.90877
110737.2-1	8/4/2011	1:00:04 PM	Be	-1.07	-1812.149	ug/L	17.72998	-1443.966	-2035.744	-1956.736
110737.2-1S	8/4/2011	1:00:51 PM	Be	798.57	1354518.1	ug/L	1.288926	1338443.3	1352019.4	1373091.5
110737.3-1	8/4/2011	1:06:17 PM	Be	-1.04	-1769.072	ug/L	77.10363	-231.5506	-2241.915	-2833.752
110737.3-1D	8/4/2011	1:07:06 PM	Be	-1.60	-2721.72	ug/L	8.13137	-2511.772	-2952.872	-2700.515
CCV	8/4/2011	1:09:00 PM	Be	1049.64	1780392.8	ug/L	2.047427	1739371.2	1809069.8	1792737.5
CCB	8/4/2011	1:09:57 PM	Be	0.72	1217.1716	ug/L	178.1392	3719.3439	41.578121	-109.4073
CCB	8/4/2011	1:11:06 PM	Be	-0.22	-366.625	ug/L	44.01289	-381.4277	-198.3714	-520.0758
110737.LB-2A	8/4/2011	1:12:12 PM	Be	-0.05	-92.46439	ug/L	229.3868	73.016968	-18.84392	-331.5662
110737.LCS-2A	8/4/2011	1:12:58 PM	Be	990.65	1680320.1	ug/L	0.654084	1690216.9	1668491.6	1682251.8
110737.1-2A	8/4/2011	1:13:58 PM	Be	-0.90	-1524.575	ug/L	38.07684	-854.3381	-1868.551	-1850.837
110737.1-2AS	8/4/2011	1:14:48 PM	Be	864.00	1465496.6	ug/L	2.906921	1416430.5	1493066.2	1486993
110737.2-2A	8/4/2011	1:15:40 PM	Be	-0.10	-170.3697	ug/L	1856.55	3470.7645	-1743.614	-2238.26
110737.2-2AD	8/4/2011	1:16:24 PM	Be	-1.74	-2949.396	ug/L	10.75332	-2653.729	-3284.379	-2910.081
110737.3-2A	8/4/2011	1:17:55 PM	Be	-1.54	-2619.407	ug/L	5.006416	-2663.526	-2471.898	-2722.796
CCV	8/4/2011	1:21:59 PM	Be	1080.74	1833137.3	ug/L	0.828146	1819386.1	1830597.9	1849427.9
CCB	8/4/2011	1:23:42 PM	Be	-0.23	-391.1605	ug/L	10.07024	-426.4337	-398.3934	-348.6545
Calib Blank 1	8/4/2011	12:48:01 PM	Cd		-180.9081	ug/L	2.52221	-185.8624	-179.9838	-176.8782
Standard 1	8/4/2011	12:51:32 PM	Cd		7453.3389	ug/L	0.881992	7431.2839	7401.4645	7527.2683
Standard 2	8/4/2011	12:52:22 PM	Cd		14695.103	ug/L	0.612032	14592.004	14757.461	14735.845
ICV	8/4/2011	12:53:09 PM	Cd	991.9	7309.0156	ug/L	0.658801	7287.3027	7275.5436	7364.2005
ICB	8/4/2011	12:54:08 PM	Cd	1.0	7.1099598	ug/L	50.60891	7.636569	10.41591	3.2774
ICS	8/4/2011	12:56:46 PM	Cd	1.7	12.211878	ug/L	39.79746	12.47315	7.226495	16.935988
110737.LB-1	8/4/2011	12:57:46 PM	Cd	0.6	4.1957354	ug/L	209.1059	-5.633127	6.9841544	11.236179

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
110737.LCS-1	8/4/2011	12:58:30 PM	Cd	1057.6	7793.395	ug/L	4.085502	7515.7297	7723.5303	8140.925
110737.1-1	8/4/2011	12:59:21 PM	Cd	28.7	211.56671	ug/L	8.097944	222.20886	191.80324	220.68803
110737.2-1	8/4/2011	1:00:04 PM	Cd	27.7	204.12935	ug/L	6.136897	192.96286	217.67582	201.74935
110737.2-1S	8/4/2011	1:00:51 PM	Cd	818.2	6029.0042	ug/L	0.381534	6039.4065	6002.6378	6044.9683
110737.3-1	8/4/2011	1:06:17 PM	Cd	28.1	207.25458	ug/L	4.287489	216.43397	206.63545	198.69431
110737.3-1D	8/4/2011	1:07:06 PM	Cd	26.0	191.58629	ug/L	5.545181	181.13326	202.37301	191.2526
CCV	8/4/2011	1:09:00 PM	Cd	1063.5	7836.5654	ug/L	1.030196	7743.3985	7885.9058	7880.3918
CCB	8/4/2011	1:09:57 PM	Cd	2.4	17.864533	ug/L	47.25184	14.176255	27.522336	11.895008
110737.LB-2A	8/4/2011	1:12:12 PM	Cd	-0.9	-6.975459	ug/L	44.1872	-3.846475	-7.071134	-10.00877
110737.LCS-2A	8/4/2011	1:12:58 PM	Cd	1028.2	7576.7674	ug/L	2.774547	7468.9757	7442.3056	7819.0208
110737.1-2A	8/4/2011	1:13:58 PM	Cd	0.1	1.0951905	ug/L	1520.437	19.347478	-2.794627	-13.26728
110737.1-2AS	8/4/2011	1:14:48 PM	Cd	882.3	6501.2296	ug/L	0.715538	6448.2958	6535.6022	6519.7908
110737.2-2A	8/4/2011	1:15:40 PM	Cd	27.1	199.76317	ug/L	6.286386	210.10643	203.39285	185.79023
110737.2-2AD	8/4/2011	1:16:24 PM	Cd	28.4	209.34707	ug/L	1.359442	206.23854	209.9782	211.82448
110737.3-2A	8/4/2011	1:17:55 PM	Cd	10.4	76.391595	ug/L	11.90211	84.694869	77.804131	66.675786
CCV	8/4/2011	1:21:59 PM	Cd	1082.9	7979.2305	ug/L	0.219501	7994.1919	7983.5342	7959.9652
CCB	8/4/2011	1:23:42 PM	Cd	0.6	4.6568035	ug/L	173.3016	12.925119	4.2450352	-3.199744
Calib Blank 1	8/4/2011	12:48:01 PM	Co		-31.76526	ug/L	23.33544	-23.54743	-37.94698	-33.80137
Standard 1	8/4/2011	12:51:32 PM	Co		6115.0486	ug/L	1.016576	6079.0131	6079.3033	6186.8293
Standard 2	8/4/2011	12:52:22 PM	Co		12256.985	ug/L	2.302493	12100.11	12088.06	12582.786
ICV	8/4/2011	12:53:09 PM	Co	977.6	5988.5237	ug/L	0.680925	5976.8447	5954.8602	6033.8663
ICB	8/4/2011	12:54:08 PM	Co	2.1	12.702164	ug/L	116.2751	25.744963	-3.335052	15.69658
ICS	8/4/2011	12:56:46 PM	Co	0.9	5.6550412	ug/L	114.4737	0.2611169	12.833726	3.8702808
110737.LB-1	8/4/2011	12:57:46 PM	Co	0.3	2.122417	ug/L	458.5392	3.461432	-8.209871	11.11569
110737.LCS-1	8/4/2011	12:58:30 PM	Co	1061.5	6502.4354	ug/L	3.826312	6298.1309	6429.665	6779.5103
110737.1-1	8/4/2011	12:59:21 PM	Co	-21.7	-132.8341	ug/L	7.051845	-122.0509	-137.4923	-138.959
110737.2-1	8/4/2011	1:00:04 PM	Co	-23.5	-144.1458	ug/L	11.17176	-131.5252	-162.2827	-138.6297
110737.2-1S	8/4/2011	1:00:51 PM	Co	795.5	4872.8527	ug/L	0.565314	4868.9598	4847.4594	4902.139
110737.3-1	8/4/2011	1:06:17 PM	Co	-21.4	-131.1568	ug/L	8.991532	-119.2734	-131.3398	-142.8573
110737.3-1D	8/4/2011	1:07:06 PM	Co	-22.4	-137.0517	ug/L	10.76027	-122.3185	-151.8127	-137.0238
CCV	8/4/2011	1:09:00 PM	Co	1066.2	6531.3995	ug/L	1.300165	6438.3089	6551.2644	6604.6252
CCB	8/4/2011	1:09:57 PM	Co	-0.5	-3.316475	ug/L	297.6734	-4.609223	7.138475	-12.47868
110737.LB-2A	8/4/2011	1:12:12 PM	Co	-2.0	-11.98261	ug/L	3.068033	-11.61651	-11.97957	-12.35175

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
110737.LCS-2A	8/4/2011	1:12:58 PM	Co	1042.6	6386.9665	ug/L	3.04763	6302.7837	6248.5753	6609.5406
110737.1-2A	8/4/2011	1:13:58 PM	Co	257.3	1576.3575	ug/L	0.908762	1571.1346	1565.3765	1592.5615
110737.1-2AS	8/4/2011	1:14:48 PM	Co	1154.3	7071.2643	ug/L	0.352495	7052.3475	7099.5088	7061.9367
110737.2-2A	8/4/2011	1:15:40 PM	Co	12.6	77.019037	ug/L	7.796139	73.124	73.999094	83.934017
110737.2-2AD	8/4/2011	1:16:24 PM	Co	12.4	76.223942	ug/L	6.769913	81.788979	71.597131	75.285716
110737.3-2A	8/4/2011	1:17:55 PM	Co	6.7	41.316057	ug/L	40.87317	47.001142	54.627054	22.319975
CCV	8/4/2011	1:21:59 PM	Co	1076.9	6596.7461	ug/L	0.264674	6616.2152	6591.5465	6582.4767
CCB	8/4/2011	1:23:42 PM	Co	3.1	19.142841	ug/L	57.81557	29.276936	20.818611	7.3329762
Calib Blank 1	8/4/2011	12:48:01 PM	Cr		515.81506	ug/L	2.687138	500.5096	527.52057	519.41502
Standard 1	8/4/2011	12:51:32 PM	Cr		16732.844	ug/L	1.879914	16845.155	16377.541	16975.837
Standard 2	8/4/2011	12:52:22 PM	Cr		33500.933	ug/L	0.48543	33314.857	33615.835	33572.108
ICV	8/4/2011	12:53:09 PM	Cr	997.8	16710.461	ug/L	0.730434	16682.71	16604.666	16844.005
ICB	8/4/2011	12:54:08 PM	Cr	0.9	14.499883	ug/L	120.4277	31.730551	14.953454	-3.184355
ICS	8/4/2011	12:56:46 PM	Cr	-0.2	-2.718776	ug/L	965.989	13.026164	11.854729	-33.03722
110737.LB-1	8/4/2011	12:57:46 PM	Cr	0.4	7.5025593	ug/L	111.3191	8.5041672	15.308371	-1.30486
110737.LCS-1	8/4/2011	12:58:30 PM	Cr	1070.4	17926.111	ug/L	3.482982	17597.258	17534.911	18646.164
110737.1-1	8/4/2011	12:59:21 PM	Cr	113.0	1891.6183	ug/L	4.377494	1819.8312	1872.8153	1982.2083
110737.2-1	8/4/2011	1:00:04 PM	Cr	34.6	578.98697	ug/L	2.550185	591.75566	562.81832	582.38692
110737.2-1S	8/4/2011	1:00:51 PM	Cr	865.7	14497.457	ug/L	0.401848	14519.783	14431.338	14541.25
110737.3-1	8/4/2011	1:06:17 PM	Cr	24.8	414.67121	ug/L	1.549534	408.05191	415.0782	420.88351
110737.3-1D	8/4/2011	1:07:06 PM	Cr	24.3	407.62722	ug/L	3.315595	393.59921	408.71891	420.56352
CCV	8/4/2011	1:09:00 PM	Cr	1071.7	17947.129	ug/L	1.098326	17745.845	17955.744	18139.799
CCB	8/4/2011	1:09:57 PM	Cr	2.3	38.29265	ug/L	31.63546	50.045324	38.985663	25.846963
110737.LB-2A	8/4/2011	1:12:12 PM	Cr	2.0	34.325854	ug/L	8.867702	34.028239	37.507644	31.441679
110737.LCS-2A	8/4/2011	1:12:58 PM	Cr	1044.7	17494.764	ug/L	0.327915	17546.689	17504.424	17433.179
110737.1-2A	8/4/2011	1:13:58 PM	Cr	51.2	856.98295	ug/L	1.076913	865.93539	857.51315	847.50033
110737.1-2AS	8/4/2011	1:14:48 PM	Cr	954.2	15980.69	ug/L	2.508928	15519.045	16241.83	16181.194
110737.2-2A	8/4/2011	1:15:40 PM	Cr	220.5	3692.9977	ug/L	1.265626	3649.427	3742.3653	3687.2009
110737.2-2AD	8/4/2011	1:16:24 PM	Cr	224.2	3755.3449	ug/L	0.398753	3772.0763	3750.7584	3743.2
110737.3-2A	8/4/2011	1:17:55 PM	Cr	96.1	1609.9908	ug/L	0.60669	1614.6728	1616.5361	1598.7635
CCV	8/4/2011	1:21:59 PM	Cr	1091.4	18277.97	ug/L	0.443717	18184.477	18320.037	18329.397
CCB	8/4/2011	1:23:42 PM	Cr	1.1	18.503772	ug/L	57.68823	6.1867234	24.258982	25.065611
Calib Blank 1	8/4/2011	12:48:01 PM	Mn		105.16987	ug/L	28.97938	114.26502	130.06446	71.180123

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
Standard 1	8/4/2011	12:51:32 PM	Mn		207733.4	ug/L	1.62946	208953.89	203907.47	210338.82
Standard 2	8/4/2011	12:52:22 PM	Mn		418197.81	ug/L	0.676292	415087.91	420616.07	418889.46
ICV	8/4/2011	12:53:09 PM	Mn	990.6	206855.64	ug/L	0.658175	206001.65	206139.56	208425.72
ICB	8/4/2011	12:54:08 PM	Mn	0.5	112.46516	ug/L	106.3526	250.50445	47.359979	39.531044
ICS	8/4/2011	12:56:46 PM	Mn	0.1	19.837306	ug/L	56.29826	23.044779	7.4164717	29.050666
110737.LB-1	8/4/2011	12:57:46 PM	Mn	0.4	75.390177	ug/L	25.36891	74.817791	94.795614	56.557125
110737.LCS-1	8/4/2011	12:58:30 PM	Mn	1063.7	222133.43	ug/L	3.381724	218210.11	217395.47	230794.71
110737.1-1	8/4/2011	12:59:21 PM	Mn	40.5	8447.6912	ug/L	4.353071	8138.7074	8349.9431	8854.4231
110737.2-1	8/4/2011	1:00:04 PM	Mn	18.7	3904.0763	ug/L	1.306389	3864.6189	3885.9424	3961.6677
110737.2-1S	8/4/2011	1:00:51 PM	Mn	847.9	177066	ug/L	1.452402	174793.2	176547.26	179857.54
110737.3-1	8/4/2011	1:06:17 PM	Mn	21.4	4465.1087	ug/L	1.508939	4534.3187	4399.7308	4461.2765
110737.3-1D	8/4/2011	1:07:06 PM	Mn	20.9	4372.4498	ug/L	0.885322	4367.9272	4413.2227	4336.1994
CCV	8/4/2011	1:09:00 PM	Mn	1069.7	223371.84	ug/L	1.170707	220526.31	223919.64	225669.58
CCB	8/4/2011	1:09:57 PM	Mn	0.8	174.78172	ug/L	70.41738	316.81621	99.578194	107.95074
110737.LB-2A	8/4/2011	1:12:12 PM	Mn	2.9	606.16004	ug/L	5.335681	586.79966	588.18274	643.49771
110737.LCS-2A	8/4/2011	1:12:58 PM	Mn	1035.5	216246.96	ug/L	0.597065	217389.01	216505.89	214845.98
110737.1-2A	8/4/2011	1:13:58 PM	Mn	46.9	9786.7096	ug/L	0.98849	9677.8379	9819.4899	9862.801
110737.1-2AS	8/4/2011	1:14:48 PM	Mn	949.8	198336.03	ug/L	2.485897	192661.16	201568.42	200778.51
110737.3-2A	8/4/2011	1:17:55 PM	Mn	877.1	183159.84	ug/L	0.888866	182596.43	184994.75	181888.33
110737.2-2A x 2	8/4/2011	1:20:38 PM	Mn	1131.4	236272.71	ug/L	0.694101	236147.54	237971.68	234698.91
110737.2-2AD x 2	8/4/2011	1:21:09 PM	Mn	1209.9	252661.11	ug/L	0.400164	251792.61	252419.71	253771.02
CCV	8/4/2011	1:21:59 PM	Mn	1092.8	228198.59	ug/L	0.597509	226795.69	228281.11	229518.96
CCB	8/4/2011	1:23:42 PM	Mn	0.1	15.840176	ug/L	70.98029	28.797468	8.6575762	10.065484
Calib Blank 1	8/4/2011	12:48:01 PM	Ni		81.245937	ug/L	51.5296	127.38645	70.666752	45.684604
Standard 1	8/4/2011	12:51:32 PM	Ni		7869.7315	ug/L	1.330829	7803.5716	7815.1412	7990.4818
Standard 2	8/4/2011	12:52:22 PM	Ni		15383.288	ug/L	0.669327	15350.3	15498.703	15300.859
ICV	8/4/2011	12:53:09 PM	Ni	996.4	7699.3727	ug/L	0.886968	7628.6584	7704.5094	7764.9502
ICB	8/4/2011	12:54:08 PM	Ni	-0.5	-4.233673	ug/L	183.0467	1.2645145	-0.868541	-13.09699
ICS	8/4/2011	12:56:46 PM	Ni	-4.8	-36.98608	ug/L	56.77673	-25.74046	-61.21348	-24.00431
110737.LB-1	8/4/2011	12:57:46 PM	Ni	-3.8	-29.13832	ug/L	106.9478	-60.30548	2.0201084	-29.12958
110737.LCS-1	8/4/2011	12:58:30 PM	Ni	1104.1	8531.2975	ug/L	4.913528	8173.3564	8428.0854	8992.4506
110737.1-1	8/4/2011	12:59:21 PM	Ni	115.0	888.41862	ug/L	5.179784	835.63316	909.5252	920.09749
110737.2-1	8/4/2011	1:00:04 PM	Ni	30.2	233.14656	ug/L	3.229888	233.64091	225.38119	240.41757

Sample ID	Date	Time	Elem	Conc (Cali	Int (Corr)	Calib U	RSD (Corr	Int (Corr)1	Int (Corr)2	Int (Corr)3
110737.2-1S	8/4/2011	1:00:51 PM	Ni	979.9	7571.782	ug/L	0.646371	7595.7734	7515.4736	7604.0989
110737.3-1	8/4/2011	1:06:17 PM	Ni	27.0	208.88033	ug/L	5.990293	208.17831	196.73357	221.7291
110737.3-1D	8/4/2011	1:07:06 PM	Ni	29.9	230.84878	ug/L	15.41941	271.94524	210.89342	209.70768
CCV	8/4/2011	1:09:00 PM	Ni	1093.1	8446.5346	ug/L	1.069593	8342.2148	8498.6927	8498.6962
CCB	8/4/2011	1:09:57 PM	Ni	0.1	0.5041166	ug/L	1188.8	-0.38965	6.8937444	-4.991745
110737.LB-2A	8/4/2011	1:12:12 PM	Ni	0.0	0.3610469	ug/L	5500.329	-17.02814	-3.889731	22.001015
110737.LCS-2A	8/4/2011	1:12:58 PM	Ni	1119.9	8653.4716	ug/L	2.916795	8558.149	8462.6102	8939.6554
110737.1-2A	8/4/2011	1:13:58 PM	Ni	33.2	256.62808	ug/L	10.61289	267.56146	276.69815	225.62463
110737.1-2AS	8/4/2011	1:14:48 PM	Ni	998.3	7714.2509	ug/L	0.728492	7666.4265	7776.1473	7700.1789
110737.2-2A	8/4/2011	1:15:40 PM	Ni	868.2	6709.0655	ug/L	0.981633	6633.6271	6755.098	6738.4714
110737.2-2AD	8/4/2011	1:16:24 PM	Ni	886.9	6853.166	ug/L	0.085653	6858.243	6846.7385	6854.5164
110737.3-2A	8/4/2011	1:17:55 PM	Ni	323.0	2495.665	ug/L	0.946336	2501.2072	2469.7694	2516.0184
CCV	8/4/2011	1:21:59 PM	Ni	1089.7	8420.243	ug/L	0.077407	8424.761	8423.1967	8412.7711
CCB	8/4/2011	1:23:42 PM	Ni	-1.5	-11.28385	ug/L	77.10728	-16.90764	-15.68176	-1.262143

APPENDIX Q: MERCURY ONTARIO HYDRO LAB REPORT

ANALYSIS REPORT

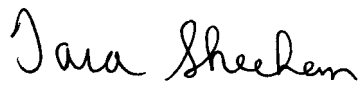
Mercury by Ontario Hydro Method

Project ID: ExxonMobil DCU ICR #182129

Prepared for:

TRC Environmental Corporation
9225 Hwy 183 South
Austin, TX 78747

Reviewed by:



Tara Sheehan
Laboratory Manager

August 9, 2011

Reviewed and Approved by:

Jennifer B. Feller
Quality Assurance Manager

August 9, 2011

CASE NARRATIVE

FAL Project #: 110738 Report Date: 09-Aug-11
Client: TRC Environmental Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Samples:

Four sets of samples were submitted, including a reagent blank, for the determination of mercury by the Ontario Hydro Method. The samples were received in good condition with no apparent leakage or damage, and custody seals intact. The Container 3 (KCl) samples did not retain any of their purple color after sampling. Run 2 from Container 5 ($KMnO_4$) samples also did not retain its purple color after sampling. An aliquot of each sample for Container 3 (KCl) was submitted since 1 to 3 liters were collected for this fraction.

All of the remaining amounts of the samples and digestates will be retained by the laboratory for six months and then discarded.

Preparation:

The Ontario Hydro mercury samples were prepared according to the ASTM Standard Test Method for *Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)*. Many of the samples had a strong, fumy odor and an oily sheen.

Analysis:

Mercury was determined by Cold Vapor Atomic Absorption Spectroscopy (CVAA).

Results:

The mercury results are presented as total micrograms of mercury found for each analytical fraction listed. Mercury was not detected above the reporting limit for most of the samples.

Quality Control:

The matrix spike for a Container 3 (KCl) sample revealed a matrix interference so the spike was not within the acceptable limits. The other matrix spike for a Container 5 ($KMnO_4$) sample was within the acceptable limits of 90% to 110%. All of the samples were analyzed in triplicate. All of the replicates agreed within the normal limit of 10%. A matrix spike QC sample was analyzed after every 10 samples.

FIRST ANALYTICAL LABORATORIES
billing: PO Box 110372 - Research Triangle Park, NC 27709
shipping: 7517 Precision Drive, Suite 101 - Raleigh, NC 27617
TEL: 919 942 8607
FAX: 919 882 1603
www.firstanalyticallabs.com

ONTARIO HYDRO ANALYSIS REPORT

FAL Project #: 110738
Client: TRC Corporation
Client Project ID: ExxonMobil DCU ICR #182129

Report Date: 09-Aug-11
Date Received: 27-Jul-11

Total Micrograms of Mercury in Analytical Fraction

Sample	Cont#1 µg	Cont#2 µg	Cont#3 µg	Cont#4 µg	Cont#5 µg
Reagent Blank	< 0.01	< 0.09	< 0.11	< 0.36	< 2.27
Run 1	< 0.01	< 0.07	< 1.56	< 0.26	< 3.33
Run 2	0.02	< 0.07	< 2.60	< 0.65	< 4.99
Run 3	< 0.01	< 0.08	< 2.65	< 0.25	< 3.88

QC SUMMARY

Spike-1, %Recovery	83%
Spike-2, %Recovery	91%

ONTARIO HYDRO MERCURY

CVAA ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: TRC Environmental Corporation
FAL Proj. #: 110738
Analysis Date: 08-Aug-11

MDL = 0.2 μg/L
Postdig'n spike conc. = 5.0 μg/L

Sample ID Client	FAL	Test Sol'n μg/L	Dig'te Conc μg/L	FV ml	Dil'n Factor	Total Volume ml	Volume Dig'd ml		Total μg
FRACTION 1 (Filter)									
Reagent Blank	110738.RB-1	0.15	0.15	50	1			<	0.01
Run 1	110738.R1-1	0.09	0.09	50	1			<	0.01
Run 2	110738.R2-1	0.35	0.35	50	1				0.02
Run 3	110738.R3-1	0.12	0.12	50	1			<	0.01
FRACTION 2 (FH Rinse: 0.1 N HNO_3)									
Reagent Blank	110738.RB-2	0.06	0.06	50	1	88.7	10	<	0.09
Run 1	110738.R1-2	0.06	0.06	50	1	71.7	10	<	0.07
Run 2	110738.R2-2	0.04	0.04	50	1	71.7	10	<	0.07
Run 3	110738.R3-2	0.04	0.04	50	1	75.2	10	<	0.08
FRACTION 3 (KCl)*									
Reagent Blank	110738.RB-3	0.05	0.05	50	1	105	10	<	0.11
Run 1	110738.R1-3	0.03	0.03	50	1	1560	10	<	1.56
Run 2	110738.R2-3	0.06	0.06	50	1	2600	10	<	2.60
Run 3	110738.R3-3	0.04	0.04	50	1	2650	10	<	2.65
SPIKE - 1	110738.R1-3S	4.16				% REC =	83.2% DQ1		
FRACTION 4 (HNO_3/H_2O_2)									
Reagent Blank	110738.RB-4	0.04	0.04	50	1	180	5	<	0.36
Run 1	110738.R1-4	0.07	0.07	50	1	132	5	<	0.26
Run 2	110738.R2-4	0.10	0.10	50	1	327	5	<	0.65
Run 3	110738.R3-4	0.05	0.05	50	1	123	5	<	0.25
FRACTION 5 ($KMnO_4$)^									
Reagent Blank	110738.RB-5	0.07	0.07	50	1	227	1	<	2.27
Run 1	110738.R1-5	0.08	0.08	50	1	333	1	<	3.33
Run 2	110738.R2-5	0.05	0.05	50	1	499	1	<	4.99
Run 3	110738.R3-5	0.04	0.04	50	1	388	1	<	3.88
SPIKE - 2	110738.R3-5S	4.56				% REC =	91.2%		

DQ1 - *The Matrix Spike QC sample was outside limits due to matrix interference; results are still valid.*

*Fraction 3 had no purple color upon receipt

^ Fraction 5, Container 2 had no purple color upon receipt

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 192129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Box No.: 110738

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-OntHyd-R1-FHR		250 amber glass	Acidic	Ontario Hydro run1 FHR	Hg	Ontario Hydro
EXM-DCU-OntHyd-R1-FIL		petri dish	filter	Ontario Hydro run1 filter	Hg	
EXM-DCU-OntHyd-R1-KCl		glass	Aqueous	Ontario Hydro run1 KCl soln	Hg	
EXM-DCU-OntHyd-R1-hno3/h2o2		glass	Acidic	Ontario Hydro run1 HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-R1-KMnO4		glass	Acidic	Ontario Hydro run1 KMnO3 soln	Hg	
EXM-DCU-OntHyd-R2-FHR		250 amber glass	Acidic	Ontario Hydro run2 FHR	Hg	
EXM-DCU-OntHyd-R2-FIL		petri dish	filter	Ontario Hydro run2 filter	Hg	
EXM-DCU-OntHyd-R2-KCl		glass	Aqueous	Ontario Hydro run2 KCl soln	Hg	
EXM-DCU-OntHyd-R2-hno3/h2o2		glass	Acidic	Ontario Hydro run2 HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-R2-KMnO4		glass	Acidic	Ontario Hydro run2 KMnO3 soln	Hg	
EXM-DCU-OntHyd-R3-FHR		250 amber glass	Acidic	Ontario Hydro run3 FHR	Hg	
EXM-DCU-OntHyd-R3-FIL		petri dish	filter	Ontario Hydro run3 filter	Hg	
EXM-DCU-OntHyd-R3-KCl		glass	Aqueous	Ontario Hydro run3 KCl soln	Hg	
EXM-DCU-OntHyd-R3-hno3/h2o2		glass	Acidic	Ontario Hydro run3 HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-R3-KMnO4		glass	Acidic	Ontario Hydro run3 KMnO3 soln	Hg	
		250 amber glass				

Relinquished by: R Monson **Date/Time:** 7/26/11 1600 **Relinquished by:** [signature] **Date/Time:** 7/27 1300

Received by: [signature] **Date/Time:** 7/27/11 - 1300 **Received by:** [signature] **Date/Time:**

Remarks (*):

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EM-BTEX-0228

TRC

CHAIN OF CUSTODY RECORD

Project Name: ExxonMobil DCU ICR

Project No.: 182129

Sampling Date(s): July 14-17, 2011

Laboratory: Enthalpy Analytical

Laboratory P.O.:

Shipping Date(s): 7/26/2011

Shipper's Name: R Monson

Box No.: 0738

Sample ID	Date Sampled	Container	Matrix	Description	Analyses	Comments
EXM-DCU-OntHyd-rgtblk-nitric	7/14/11	poly	Acidic	.1N NO3 reagent blank	Hg	Ontario Hydro
EXM-DCU-OntHyd-rgtblk-FIL	↓	petri dish	filter	reagent blank filter	Hg	↓
EXM-DCU-OntHyd-rgtblk-KCl		poly	Acidic	reagent blank 1N KCl	Hg	
EXM-DCU-OntHyd-rgtblk-HNO3		poly	Acidic	reagent blank HNO3/H2O2 soln	Hg	
EXM-DCU-OntHyd-rgtblk-KMnO4		poly	Acidic	reagent blank KMnO4/H2SO4 soln	Hg	

Relinquished by: K Monson	**Date/Time:** 7-26-11 1600	**Relinquished by:**	**Date/Time:** 7/27 1300
Received by:	**Date/Time:** 7/27/11 - 1300	**Received by:**	**Date/Time:**
Remarks (*):			

TRC

CHAIN OF CUSTODY RECORD

Project Name: Exxon Mobil DCU ICR
Project No.: 186129
Sampling Date(s): July 14-17, 2011
Laboratory: First Analytical
Laboratory P.O. #:
Shipping Airbill No.:
Shipping Date(s): 7-27-11
Shipper's Name: Randall Monson

Sample Code	Sampled Date	Container Size	Container G/P	Aqueous	Organic Solvent	Ash/Soil/Sediment	Acidic	Basic	Other	Source Description	Trace Metals*	Mercury	Hexavalent Chromium	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semi-Volatile Organics	Volatile Organics	Physical Parameters*	Mercury (Ontario Hydro)	Comments
EXM-DCU-OntHyd-R1-KCl	7-14-11	500	G	X						Refinery DCU											X	1560 ml original sample
EXM-DCU-OntHyd-R2-KCl	7-16-11	↓	↓	X						↓											X	2600 ml original sample
EXM-DCU-OntHyd-R3-KCl	7-17-11	↓	↓	X						↓											X	2650 ml original sample
EXM-DCU-OntHyd-Rg Blk-KCl	7-17-11	↓	↓	X																	X	

Relinquished by: R Monson | Date/Time: 7-27-11 1600 | Relinquished by: | Date/Time:
Received by: Jennifer B. Fella | Date/Time: 7/28/11 -1030 | Received by: | Date/Time:

REMARKS (1): samples have strong odor.

TRC Environmental Corporation

WHITE — LABORATORY YELLOW — LABORATORY COPY PINK — OFFICE COPY GOLD — FIELD COPY

Report Generated By CETAC QuickTrace
Analyst: Resolution
Worksheet file: C:\Jobs\110738.wsz
Date Started: 8/8/2011 10:52:28 AM
Comment: Calib Stds: JBF 8/8/11-1
ICV/CCV: JBF 8/8/11-2

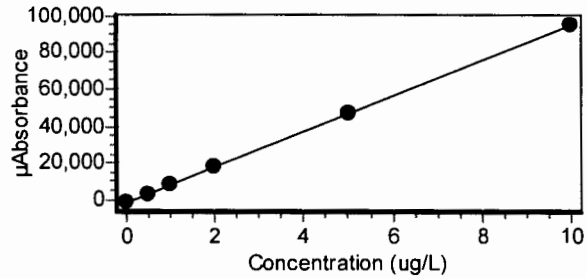
110738 Hg JBF
Instrument J

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
Calibration Blank					STD	08/08/11 11:02:19 am	0.00	-894	11.41	
Replicates	-764.4	-868.9	-944.1	-1000.3						
Standard #1					STD	08/08/11 11:04:21 am	0.50	3556	1.08	
Replicates	3587.9	3580.7	3549.9	3503.5						
Standard #2					STD	08/08/11 11:06:25 am	1.00	8571	0.86	
Replicates	8468.2	8566.7	8626.0	8623.7						
Standard #3					STD	08/08/11 11:08:28 am	2.00	18337	0.48	
Replicates	18217.3	18324.9	18406.6	18398.3						
Standard #4					STD	08/08/11 11:10:33 am	5.00	47704	0.62	
Replicates	47302.3	47662.2	47889.3	47963.5						
Standard #5					STD	08/08/11 11:12:37 am	10.00	95135	0.40	
Replicates	94617.5	95087.9	95381.9	95453.8						

Calibration

Equation: A = -970.664 + 9634.196C
R2: 0.99994
SEE: 320.2383
Flags:



ICV					ICV	08/08/11 11:14:43 am	5.19	49044	0.62	
Replicates	48609.5	49052.4	49279.2	49235.5						
% Recovery	103.83									
ICB					ICB	08/08/11 11:16:49 am	-0.05	-1446	4.23	
Replicates	-1367.1	-1433.2	-1475.5	-1508.8						

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
110738.RB-1				UNK	08/08/11 11:18:51 am	0.15	503	20.71	
Replicates	633.3	531.7	454.0	392.0					
110738.R1-1				UNK	08/08/11 11:20:53 am	0.09	-113	19.72	
Replicates	-83.8	-107.2	-128.3	-132.2					
110738.R2-1				UNK	08/08/11 11:24:29 am	0.35	2409	2.34	
Replicates	2485.9	2415.6	2377.6	2358.4					
110738.R3-1				UNK	08/08/11 11:26:32 am	0.12	150	20.33	
Replicates	187.0	162.1	132.7	118.7					
110738.RB-2				UNK	08/08/11 11:28:35 am	0.06	-417	7.43	
Replicates	-379.4	-407.7	-430.8	-451.5					
110738.R1-2				UNK	08/08/11 11:30:38 am	0.06	-365	6.07	
Replicates	-342.7	-353.6	-370.6	-393.6					
110738.R2-2				UNK	08/08/11 11:32:42 am	0.04	-629	1.42	
Replicates	-618.8	-624.9	-637.4	-635.9					
110738.R3-2				UNK	08/08/11 11:34:46 am	0.04	-557	3.15	
Replicates	-533.5	-553.4	-567.8	-572.6					
110738.RB-3				UNK	08/08/11 11:36:50 am	0.05	-486	3.02	
Replicates	-468.5	-481.5	-491.4	-503.0					
110738.R1-3				UNK	08/08/11 11:38:55 am	0.03	-686	0.86	
Replicates	-679.9	-683.4	-689.2	-693.2					
CCV				CCV	08/08/11 11:41:01 am	5.53	52275	1.50	Q
Replicates	51280.6	52059.3	52682.7	53075.8					
% Recovery	110.53								
CCB				CCB	08/08/11 11:43:14 am	0.00	-997	7.42	
Replicates	-906.7	-971.8	-1033.0	-1076.6					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
110738.R1-3S				MSK	08/08/11 11:45:19 am	4.16	39077	0.87	N
Replicates	38602.9	39060.0	39309.6	39335.3					
% Recovery	82.55								
110738.R2-3				UNK	08/08/11 11:47:24 am	0.06	-383	29.40	
Replicates	-236.8	-357.9	-445.3	-493.7					
110738.R3-3				UNK	08/08/11 11:49:26 am	0.04	-591	2.59	
Replicates	-570.1	-591.9	-596.4	-606.3					
110738.RB-4				UNK	08/08/11 11:51:27 am	0.04	-564	0.85	
Replicates	-557.5	-565.5	-568.8	-565.0					
110738.R1-4				UNK	08/08/11 11:53:30 am	0.07	-341	7.98	
Replicates	-308.3	-333.2	-350.7	-372.6					
110738.R2-4				UNK	08/08/11 11:55:32 am	0.10	-27	50.78	
Replicates	-9.0	-24.6	-34.0	-40.7					
110738.R3-4				UNK	08/08/11 11:57:35 am	0.05	-457	0.65	
Replicates	-453.7	-460.1	-456.3	-459.5					
110738.RB-5				UNK	08/08/11 11:59:38 am	0.07	-333	6.74	
Replicates	-306.2	-323.9	-344.7	-356.9					
110738.R1-5				UNK	08/08/11 12:01:41 pm	0.08	-170	1.81	
Replicates	-167.4	-167.8	-171.6	-173.8					
110738.R2-5				UNK	08/08/11 12:05:18 pm	0.05	-496	2.82	
Replicates	-477.1	-493.4	-503.3	-509.0					
CCV				CCV	08/08/11 12:07:24 pm	5.70	53973	0.79	Q
Replicates	53396.1	53916.1	54261.3	54320.4					
% Recovery	114.06								
CCB				CCB	08/08/11 12:09:38 pm	-0.01	-1050	4.34	
Replicates	-995.7	-1034.9	-1068.7	-1102.1					

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
110738.R3-5					UNK	08/08/11 12:11:42 pm	0.04	-587	2.92	
	Replicates	-566.9	-578.6	-595.5	-605.2					
110738.R3-5S					MSK	08/08/11 12:13:46 pm	4.56	42938	1.04	
	Replicates	42328.2	42888.3	43240.4	43294.6					
	% Recovery	90.35								
CCV					CCV	08/08/11 12:15:52 pm	5.40	51024	0.51	
	Replicates	50651.5	51059.5	51237.7	51146.1					
	% Recovery	107.94								
CCB					CCB	08/08/11 12:17:59 pm	-0.01	-1027	5.64	
	Replicates	-953.6	-1013.4	-1051.8	-1089.5					