

TOTAL DISSOLVED SOLIDS (TDS)
EPA Method 160.1 (Gravimetric, Dried at 180EC)

Table 1. Summary of Contract Required Detection Limits, Holding Times, and Preservation for Total Dissolved Solids (TDS)

Analytical Parameter	Contract Required Detection Limit (CRDL)	Technical and Contract Holding Times	Preservation
Total Dissolved Solids (TDS)	20 mg/L	Technical: 7 days from collection; Contract: 5 days from receipt at laboratory	Cool to 4EC ±2EC

Follow the procedure outlined in EPA method 160.1 for the analysis of samples for TDS.

Weigh solid residue to a constant weight, defined as two consecutive weight measurements differing by less than 0.5 mg, or less than 4%, whichever is smaller.

Data Calculations and Reporting Units:

Calculate the sample results according to Section 8 of EPA Method 160.1.

Report sample results in concentration units of milligram per liter (mg/L) as total dissolved solids. Report TDS concentrations that are less than 100 mg/L to 2 significant figures, and TDS concentrations that are greater than or equal to 100 mg/L to 3 significant figures.

For rounding results, adhere to the following rules:

- a) If the number following those to be retained is less than 5, round down;
- b) If the number following those to be retained is greater than 5, round up; or
- c) If the number following the last digit to be retained is equal to 5, round down if the digit is even, or round up if the digit is odd.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QC results. Include an example calculation in the data package.

Table 2. Summary of Internal Quality Control Procedures for Total Dissolved Solids (TDS) by EPA 160.1

QC Element	Frequency	Acceptance Criteria	Corrective Action
Analytical Balance Check: Weights of 100 mg, 1 g, and 100 g	Daily	Difference < 0.5 mg	<ol style="list-style-type: none"> 1. Identify and document problem 2. Verify before sample analysis
Method Blank (MB)	One per Batch or SDG ^a (1 per 20 samples minimum)	< CRDL	<ol style="list-style-type: none"> 1. If lowest sample concentration is more than 10X the blank conc., no action 2. If samples are non-detected, no action 3. If detected sample concentrations are less than 10X blank conc., all associated samples must be prepared again with another method blank and reanalyzed
Duplicate Sample (DUP)	One per batch or SDG (1 per 20 samples minimum)	RPD <20% for samples >5X CRDL; ± CRDL for samples <5X CRDL	<ol style="list-style-type: none"> 1. Flag associated data with an "*"
One set (two concentration levels) mineral reference samples	One set per batch or SDG (1 set per 20 samples minimum)	± 15% from expected concentration	<ol style="list-style-type: none"> 1. Terminate analysis 2. Identify, document, and correct the problem 3. Reanalyze all associated samples

^a SDG - Sample Delivery Group - each case of field samples received; or each 20 field samples within a case; or each 14 calendar day period during which field samples in a case are received.

Use sample aliquots of 100 mL. If the residue in a sample is greater than 200 mg, repeat the analysis using

a smaller sample aliquot.