



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION,  
PESTICIDES, AND TOXIC SUBSTANCES

DATE: June 8, 2006

**ACTION MEMORANDUM**

**SUBJECT:** Inert Reassessments: One Exemption from the Requirement of a Tolerance for Wintergreen oil (CAS Reg. No. 119-36-8)

**FROM:** Pauline Wagner, Chief *Pauline Wagner 6/8/06*  
Inert Ingredient Assessment Branch  
Registration Division (7505P)

**TO:** Lois A. Rossi, Director  
Registration Division (7505P)

**I. FQPA REASSESSMENT ACTION**

**Action:** Reassessment of one inert exemption from the requirement of a tolerance. The reassessment decision is to maintain the inert tolerance exemption "as-is."

**Chemical:** Wintergreen oil

**CFR and CAS Registry Number and Name:**

Citation as it Appears in the CFR				CAS Registry Numbers and Names
40 CFR	Tolerance Exemption Expression	Limits	Uses	
180.910	Wintergreen oil	---	Attractant	119-36-8 Oil of wintergreen; Methyl Salicylate

**Use Summary:** Wintergreen oil has a long history of use in consumer products such as lotions, perfumes, and it is used as an analgesic in the treatment of muscles and joint pain. It is widely used as a flavoring in foods, including baked goods, beverages, candy, chewing gum, ice cream, syrups, and toothpastes, and is considered to be Generally Recognized As Safe (GRAS) (59 FR 49400; 09/28/94).

**FQPA Safety Finding:** EPA examined wintergreen oil in the Reregistration Eligibility Decision (RED) for Methyl Salicylate dated September 27, 2005. Wintergreen oil and

methyl salicylate are synonymous. As an active ingredient in pesticide products, methyl salicylate is used as an insect repellent in food packaging (40 CFR 180.1189). The following information is abstracted from the methyl salicylate RED.

Methyl salicylate is moderately acutely toxic by the oral route, but non-toxic by the dermal route. It is a severe skin and eye irritant. In multidose oral studies, the only effect seen in rats and dogs was decreased body weight gain at 500 mg/kg in both species. The NOELs for these studies were 50 and 250 mg/kg, respectively for rats and dogs. In a mouse continuous breeding study, the NOEL for reproductive effects was established at 250 mg/kg based on the decreased number of litters per breeding pair and reduced live litter size. Effects (retarded bone growth and total litter loss) were seen in other developmental studies in rats and hamsters, but only at the limit dose of 1000 mg/kg or higher. Mutagenicity studies were negative. Several 2-year feeding studies to assess the carcinogenic potential of methyl salicylate were negative.

The RED document concluded that “development, reproduction and chronic toxicity studies of methyl salicylate have not indicated significant effects of relevant endpoints”.

The World Health Organization (WHO) has recommended an Acceptable Daily Intake (ADI) of 0.5mg/kg/day for methyl salicylate.

The evaluation and conclusions of the RED apply to the use of wintergreen oil as an inert ingredient in pesticide products. The RED did not include the inert ingredient tolerance exemption, therefore the FQPA safety findings are provided below.

**Special Considerations for Infants and Children:** In a mouse continuous breeding study, the NOEL for reproductive effects was established at 250 mg/kg based on the decreased number of litters per breeding pair and reduced live litter size. Effects (retarded bone growth and total litter loss) were seen in other developmental studies in rats and hamsters, but only at the limit dose of 1000 mg/kg or higher. Therefore, there is no concern for potential sensitivity to infants and children. Based on this available information, a safety factor analysis has not been used to assess the risks resulting from the use of wintergreen oil, therefore, an additional tenfold safety factor for the protection of infants and children is unnecessary.

**Aggregate Exposure:** In examining aggregate exposure, FFDCA section 408 directs EPA to consider available information concerning exposures from the pesticide residue in food and all other non-occupational exposures, including drinking water from ground water or surface water and exposure through pesticide use in gardens, lawns, or buildings (residential and other indoor uses). In developing this assessment for wintergreen oil, a qualitative assessment for all pathways of human exposure (food, drinking water, and residential) is appropriate given the lack of human health concerns associated with exposure to this chemical.

**Cumulative Exposure:** Section 408(b)(2)(D)(v) of the FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider

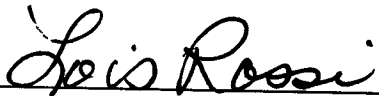
"available information" concerning the cumulative effects of a particular pesticide's residues and "other substances that have a common mechanism of toxicity." Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, EPA has not made a common mechanism of toxicity finding as to wintergreen oil and any other substances, and these chemicals do not appear to produce a toxic metabolite produced by other substances. For the purpose of this tolerance action, therefore, EPA has not assumed that wintergreen oil has a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see the policy statements released by EPA's Office of Pesticide Programs concerning common mechanism determinations and procedures for cumulating effects from substances found to have a common mechanism on EPA's website at <http://www.epa.gov/pesticides/cumulative/>

**Human Health Risk Characterization:** Taking into consideration the available information on wintergreen oil, there is a reasonable certainty that no harm to any population subgroup will result from aggregate exposure when considering dietary exposure and all other non-occupational sources of pesticide exposure for which there is reliable information. Therefore, it is recommended that the one exemption from the requirement of a tolerance established for wintergreen oil in/on raw agricultural commodities under 40 CFR §180.910 can be considered reassessed as safe under section 408(q) of the FFDCFA.

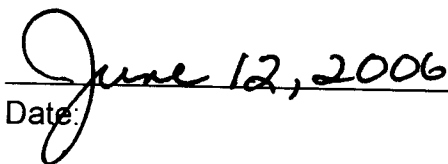
**List Reclassification Determination:** The current List Classification for wintergreen oil is 4A. No change to the List Classification resulted from reassessment.

## II. MANAGEMENT CONCURRENCE

I concur with the reassessment of the one exemption from the requirement of a tolerance for the inert ingredient wintergreen oil (CAS Reg. No. 119-36-8), and with the List classification determination, as described above. I consider the one exemption established in 40 CFR part 180.910 to be reassessed for purposes of FFDCFA's section 408(q) as of the date of my signature, below. A Federal Register Notice regarding this tolerance exemption reassessment decision will be published in the near future.



Lois A. Rossi, Director  
Registration Division



Date:

cc: Debbie Edwards, SRRD  
Joe Nevola, SRRD