

US EPA ARCHIVE DOCUMENT

DP Barcode: D173664, D173679  
 PC Code No.: 128725  
 EFGWB Out: MAR 26 1992

TO: Rebecca Cool/Andrea Beard  
 Product Manager 41  
 Registration Division (H7505C)

FROM: Emil Regelman, Supervisory Chemist  
 Environmental Chemistry Review Section #2  
 Environmental Fate & Ground Water Branch/EFED (H7507C)

THRU: Henry Jacoby, Chief  
 Environmental Fate & Ground Water Branch/EFED (H7507C)

Attached, please find the EFGWB review of...

Reg./File # :92WA0006 & 92WA0007

Common Name :Methyl Anthranilate

Product Name :Bird Shield

Company Name :State of Washington

Purpose :Response to Emergency Exemption Request.

Product Type :Bird Repellent Action Code: 500 EFGWB #(s): 92-448-9 Review Time: 2.0 days

EFGWB Guideline/MRID/Status Summary Table: The review in this package contains...

161-1	162-4	164-4	166-1
161-2	163-1	164-5	166-2
161-3	163-2	165-1	166-3
161-4	163-3	165-2	167-1
162-1	164-1	165-3	167-2
162-2	164-2	165-4	201-1
162-3	164-3	165-5	202-1

Y = Acceptable (Study satisfied the Guideline)/Concur P = Partial (Study partially satisfied the Guideline, but additional information is still needed)  
 S = Supplemental (Study provided useful information, but Guideline was not satisfied) N = Unacceptable (Study was rejected)/Non-Concur



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

MEMORANDUM

OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

SUBJECT: Response to Emergency Exemption Request.  
Methyl Anthranilate (Chemical #128725)

FROM: Mah T. Shamim, Ph.D., Chemist  
Review Section #2  
Environmental Fate and Groundwater Branch  
Environmental Fate and Effects Division (H7507C)

TO: Rebecca Cool/Andrea Beard  
Product Manager 41  
Emergency Response Section  
Registration Division (H7505C)

THRU: Emil Regelman, Supervisory Chemist  
Review Section #2  
Environmental Fate and Groundwater Branch  
Environmental Fate and Effects Division (H7507C)

Henry M. Jacoby, Chief  
Environmental Fate and Groundwater Branch  
Environmental Fate and Effects Division (H7507C)

MAR 26 1992

The State of Washington has requested Emergency Exemption under section 18 of amended FIFRA for use of methyl anthranilate as a bird repellent on blueberries and cherries. Methyl Anthranilate has been applied to blueberries under an exemption from EUP on Washington State's research facilities during the past three years and has shown no noticeable adverse effects including damage to the crop, targeted species or aquatic organisms. Based on a telephone conversation with Hank Spencer (TB) it appears that the Toxicology Branch has no concerns regarding the use of methyl anthranilate as a bird repellent on blueberries and cherries since much higher concentration of methyl anthranilate (2000 to 3000 ppm) is consumed by humans in drugs, candy, bubble gum and soft drinks than is used to treat blueberries and cherries (up to 11.8 ppm). There are no apparent ecological concerns associated with its use since methyl anthranilate does not kill or harm the birds but is only used to repel them. EFGWB, therefore, has no objections against the issuance of Emergency Exemption for the use of this chemical on blueberries and cherries.



Methyl anthranilate occurs naturally in concord grapes and in the essential oils of a number of plants including neroli, bergamot, lemon, jasmine, and mandarin. It is used as a perfume in ointments and as a flavoring agent in drugs, candies, bubble gum and soft drinks. Methyl anthranilate at concentrations of 2000 to 3000 ppm imparts pleasant flavor but at higher concentrations begins to taste bitter and peppery. Birds, however, reject methyl anthranilate at very low concentration levels. When feeding on fruits, birds spare concord grapes which have methyl anthranilate as a major ingredient. It has been shown that fruits treated with methyl anthranilate were rejected by the birds after initial sampling as they associated the taste with the odor.

Methyl anthranilate has been shown to rapidly photodegrade under natural sunlight. Gas Chromatographic and Mass Spectrometric analysis of methyl anthranilate at Washington State University Microbiology facility has shown that little or no methyl anthranilate remains after seven days of exposure to sunlight. Methyl anthranilate apparently undergoes hydrolysis under acidic and basic conditions to presumably yield anthranilic acid and methanol. The amino group in the parent compound as well as in the degradation product is capable of condensing with aldehyde and carboxylic acid moieties and, therefore, may bind with the organic matter of the soil with little or no mobility in the soil. EFGWB, therefore, foresee no adverse impact of methyl anthranilate on the environment when used as a bird repellent on blueberries and cherries.