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MAR 26 1992

TO: Robert Forrest/Daniel Peacock
Product Manager 14
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 # :283097

Common Name :Methyl Anthranilate

Product Name :ReJeX-iT™

Company Name :ERM Program Management Company

Purpose :Clarification of Environmental Fate Data Requirements.

Product Type :Bird Aversion Agent Action Code: 400 EFGWB #(s): 92-0413 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

SUBJECT: Clarification of the environmental fate data requirements.
Methyl Anthranilate (Chemical #128725)

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

FROM: Mah T. Shamim, Ph.D., Chemist
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Environmental Fate and Effects Division (H7507C)

TO: Robert Forrest/Daniel Peacock
Product Manager 14
Insecticide-Rodenticide Branch
Registration Division (H7505C)

THRU: Emil Regelman, Supervisory Chemist
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Henry M. Jacoby, Chief
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MAR 26 1992

The Registrant, ERM Program Management Company, has asked for the clarification of environmental fate data requirements to support the registration and experimental use permit for methyl anthranilate, a bird aversion agent. The use of methyl anthranilate at national airports involves treatment of the puddles of water on the runways and in the vicinity to keep the birds away and out of air traffic (terrestrial nonfood use pattern). At the Oct. 11, 1991 preregistration meeting with the registrant, EFGWB requested a full set of data requirements for the terrestrial nonfood use pattern; however, after a more thorough review of the chemical and its use pattern it became apparent that the chemical may not pose a significant risk to the environment and therefore, all that data may not be necessary for the registration of the chemical.

A conversation with Hank Spencer (TB) indicated that the Toxicology Branch has no concerns regarding the use of methyl anthranilate as a bird aversion agent at national airports 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 puddles of water at the national airports (6.5 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 data requirements for the registration of methyl anthranilate except hydrolysis which is required for all the chemicals irrespective of their use pattern.



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 aversion agent at national airports.