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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

#374A

OPP OFFICIAL RECORD
HEALTH EFFECTS DIVISION
SCIENTIFIC DATA REVIEWS
EPA SERIES 361

MEMORANDUM

SUBJECT: Amitraz-Evaluation of a Dermal Absorption Study Submitted by the Registrant

PC Code: 106201 DP Barcode: D209066
Caswell No.: 374A Submission: S475664

FROM: Yiannakis M. Ioannou, Ph.D., Section Head
Review Section I, Toxicology Branch II
Health Effects Division (7509C)

TO: Mario Fiol/Linda Propst, PM 73
Reregistration Division (7508H)

THRU: Marcia van Gemert, Ph.D., Branch Chief
Toxicology Branch II
Health Effects Division (7509C)

Registrant: AgrEvo USA Company

Action Requested: Review a dermal absorption study in the rat

Recommendations: Due to major deficiencies in the design and conduct of this study, no conclusions can be drawn as to the percent of Amitraz absorbed through the rat skin. The study was classified as unacceptable and does not satisfy the guideline requirement for a dermal absorption study (85-2) in the rat.

This study was evaluated by Dr. R. Zendzian (Toxicology Branch I) and his conclusions and abbreviated DER are attached.

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM December 1, 1994

SUBJECT: Amitraz, Dermal Absorption Study

TO: Mike Ioannou PhD
Head Rev Sec I
Toxicology Branch II
Health Effects Division (7509C)

12/1/94

FROM: Robert P. Zendzian Ph.D.
Senior Pharmacologist
Toxicology Branch I
Health Effects Division (7509C)

Action Requested

Review the following study:

Citation

(^{14}C)- Amitraz: Dermal absorption in the rat, F.P. Stewart, Hazleton Europe, Study No 194/69-1011, Nov 1, 1993, MRID 433968-01

Core Classification Unacceptable

Conclusions

Male rats were dosed with 0.1, 1.0 or 10.0 mg/animal. Exposure durations 0.5 1, 2, 4, 10, 24 and 120 hours per dose. Four rats per dose/duration. Application site was protected with a silicone ring and a nylon mesh and then wrapped with a porous bandage. Significant and variable portions of the dose was found in the bandage indicating bandage contact with the dosed surface and diffusion into bandage. From 10 to 31% of the dose was unavailable for skin penetration and absorption. Because the nature of dose transfer to the bandage is not clear, it is not possible to determine whether this study under or over estimated dermal entry and penetration either by dose or duration of exposure. In addition the report is very poorly written and several issues are not clear.

Attachment
DER

Data Evaluation Report

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Compound Amitraz

Study Type Dermal Absorption (85-3)

Citation

(^{14}C)- Amitraz: Dermal absorption in the rat, F.P. Stewart, Hazleton Europe, Study No 194/69-1011, Nov 1, 1993, MRID 433968-01

11/1/94

Reviewed by Robert P. Zendzian PhD
Senior Pharmacologist

Core Classification Unacceptable

Conclusions

Male rats were dosed with 0.1, 1.0 or 10.0 mg/animal. Exposure durations 0.5 1, 2, 4, 10, 24 and 120 hours per dose. Four rats per dose/duration. Application site was protected with a silicone ring and a nylon mesh and then wrapped with a porous bandage. Significant and variable portions of the dose was found in the bandage indicating bandage contact with the dosed surface and diffusion into bandage. From 10 to 31% of the dose was unavailable for skin penetration and absorption. Because the nature of dose transfer to the bandage is not clear, it is not possible to determine whether this study under or over estimated dermal entry and penetration either by dose or duration of exposure. In addition the report is very poorly written and several issues are not clear.

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