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DATA EVALUATION REPORT

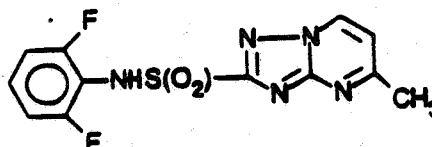
STUDY TYPE: Acute Dermal Toxicity in Rabbits (Guideline 81-2)

EPA IDENTIFICATION NOS.: MRID NO.: 419938-06
HED PROJECT NO.: 1-2384
CASWELL NO.: 889

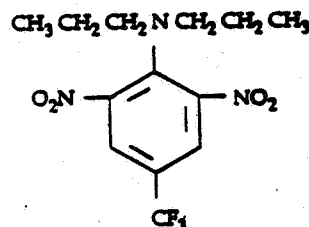
TEST MATERIAL: XRM-5313

SYNONYMS: Formulation containing: 2.6% XRD-498 [N-(2,6-difluorophenyl)-5-methyl(1,2,4)triazolo(1,5a)pyrimidine-2-sulfonamide] and 35.8% Trifluralin (Treflan; α,α,α -trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine)

XRD-498:



Trifluralin:



STUDY NUMBER: M-005313-002D

SPONSOR: DowElanco
9002 Purdue Road
Indianapolis, Indiana 44268-1189

TESTING FACILITY: The Toxicology Research Laboratory
Health and Environmental Sciences
The Dow Chemical Company
Midland, Michigan 48674

TITLE OF REPORT: XRM-5313: Acute Dermal Toxicity Study in New Zealand White Rabbits

AUTHORS: N.M. Berdasco
L.G. Lomax

DATE REPORT ISSUED: May 23, 1991

CONCLUSION:

Toxicity Category: At least III (from 2,000 through 5,000 mg/kg).

Median Lethal Dose: The LD₅₀ is greater than 2000 mg/kg in male and female New Zealand White rabbits.

Core Classification: Guideline

MATERIALS:

1. Test compound: Description: Orange liquid
 Sample reference: AGR 291670
 Source: DowElanco, Midland, Michigan
 Active ingredients: 2.6% XRD-498 and
 35.8% Trifluralin

2. Test animals: Species: Rabbit
 Strain: New Zealand White
 Source: Hazleton Research Products, Inc.
 Kalamazoo, Michigan
 Age: Not provided
 Weight: 2.8-3.3 kg

METHODS:

The trunks of ten rabbits (five per sex) were clipped free of fur approximately 24 hours prior to application of the test material. Undiluted test material was applied to the back of each animal and held in contact with the skin using a gauze dressing and non-irritating tape. The trunk of each animal was occluded by plastic wrap covered with a cloth bandage. The test material was allowed to remain in contact with the skin for 24 hours, after which time all remnants were removed from the skin with mild soap and water. The rabbits were fitted with a plastic collar to prevent ingestion of any residual test substance.

Although the report methods state that each animal was treated with 2000 ml/kg of body weight (report No. M-005313-002D, page 10), elsewhere in the report the dosage is expressed as 2000 mg/kg. It will be assumed for purposes of evaluation of this study that the weight measurement of test material was actually used, since it is supported by the majority of the report, it is recommended as a limit dose by EPA FIFRA Guideline 81-2, and it would represent a more reasonable dosage volume.

Animals were observed "frequently the day of dosing", and at least once each work day for a total of two weeks. Body weights were recorded on the day prior to treatment (Day -1), and on Days 1, 2, 8, and 15 of study. A complete gross necropsy was conducted by a veterinary pathologist on all animals that were sacrificed on Day 15; an examination of the eyes with a microscope slide and fluorescent illumination was included.

RESULTS:

Mortality data, clinical signs of toxicity, and gross necropsy observations:

No rabbits died during the course of the study. Signs of dermal toxicity reported included erythema and fissuring/scaling at the site of application for all male and female rabbits tested. In addition, edema at the application site was noted for one male and two females. The dermal crusts and erythema were

confirmed at necropsy, but no other macroscopic abnormalities were observed in rabbits at study termination. The investigators stated that "the observed erythema, fissuring, scaling, and crusting were consistent with the skin effects noted in the Material Safety Data Sheet for the solvent used in preparation of the formulation, [REDACTED]"

Body weight data:

Mean body weight data are presented in Table 1. All rabbits gained or maintained body weight over the course of the study.

Table 1. Mean body weight data - grams

Sex		Day -1	Day 1	Day 2	Day 8	Day 15
Males	Mean	3315	3139	3148	3094	3176
	S.D.	102	50	127	88	104
	N	5	5	5	5	5
Females	Mean	3070	2914	2902	2878	2954
	S.D.	41	65	62	46	60
	N	5	5	5	5	5

Note: Data were extracted from report No. M-005313-002D, pages 15 and 16.

STUDY DEVIATION:

The following information was not presented in the report: the approximate amount of test material applied per unit of skin exposed (calculated in mg per square cm of skin), as recommended in Guideline 81-2 (h)(3)(ix).

COMPLIANCE:

The following signed and dated statements were included:

Statement of No Data Confidentiality

GLP Compliance Statement

Flagging Statement (negative)

Quality Assurance Statement

DISCUSSION:

1. In view of the fact that FIFRA guideline 81-2 defines 2000 mg/kg as the limit dose for dermal acute studies, and since there was no mortality in rabbits dosed at that level, the dermal LD₅₀ of XRM-5313 is greater than 2000 mg/kg. Further acute dermal toxicity testing is not required.
2. Based upon the criteria presented in 40 CFR Part 156.10 and the results of this study, the test material, XRM-5313, is classified as at least Toxicity Category III (from 2,000 through 5,000 mg/kg).