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

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MAY 20 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Quinclorac (FACET®) - Evaluation of a Dermal Sensitization Study on the Technical - EPA Experimental Use Permit File Symbol 7969-EUP-EL

TOX Chem No.: 325A
Project No.: 8-0644

FROM: William B. Greear, M.P.H. William B. Greear 5/13/88
Section VII, Toxicology Branch
Hazard Evaluation Division (TS-769C)

TO: Robert J. Taylor/Joanne I. Miller, PM Team 25
Fungicide-Herbicide Branch
Registration Division (TS-76[illegible])

THRU: Albin B. Kocialski, Ph.D., Supervisory Pharmacologist
Section VII, Toxicology Branch
Hazard Evaluation Division (TS-769C) ABK 5/16/88

and

Theodore M. Farber, Ph.D.
Chief, Toxicology Branch
Hazard Evaluation Division (TS-769C)

Under a cover letter dated March 21, 1988, D.A. Beckemeyer of the BASF Corporation has submitted a study entitled "Report on the Maximization Test for the Sensitizing Potential of Reg. No. 150 732 (BAS 514.H) in Guinea Pigs" for evaluation. The purpose of this submission is to supplement the previously submitted dermal sensitization study on the formulation, FACET 50 WP Herbicide, in order to satisfy the requirement for a dermal sensitization study (i.e., the classification of the dermal sensitization study on the formulation would be raised from "supplementary" to "minimum data"). In addition, the precautionary labeling would be made to reflect the potential for the formulation to produce dermal sensitization.

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The sponsor has also rewritten the label to indicate the hazard associated with the inhalation route of exposure as requested in the Toxicology Branch (TB) memorandum of January 14, 1988 on EPA Experimental Use Permit (EUP) File Symbol 7969-EUP-EL.

The Data Evaluation Report is attached. It was concluded that the technical material produced dermal sensitization. The study was classified as "guideline." The dermal sensitization study on the formulation is raised from "supplementary" to "minimum data" with the submission of this additional study on the technical.

Conclusion

TB has no objection to the issuance of this EUP (with crop destruct). The label is adequate.

Attachment

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Reviewed By: William B. Greear, M.P.H.
Section VII, Toxicology Branch (TS-769C)
Secondary Reviewer: Albin B. Kocialski, Ph.D., Supervisory Pharmacologist 5/14/88
Section VII, Toxicology Branch (TS-769C)

DATA EVALUATION REPORT

Study Type: Sensitization Study - Guinea Pig

TOX Chem No.: 325A
MRID No.: 405733-01

Test Material: Quinclorac

Synonyms: FACET®

Study No.: BASF 86/0117

Sponsor: BASF Corporation
Agricultural Chemicals
Parsippany, NJ 07054

Testing Facility: BASF Aktiengesellschaft
Department of Toxicology
West Germany

Title of Report: Report on the Maximization Test for Sensitizing Potential of Reg. No. 150 732 (BAS 514.H) in Guinea Pigs

Authors: Dr. H.P. Gelbke, Dr. Kieczka, Dr. Kirsch

Report Issued: May 6, 1986

Conclusions: The test material produces sensitization.

Classification: Core-Guideline

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A. Materials:

1. Test Compound - Reg. No. 150 732/BAS 514.H (85/282), Description: solid, crystalline, Batch No.: III, N55, Purity: 97.38%, Contaminants: N/A.

2. Test Animals - Guinea pig, Strain: Pirbright White, Dunkin Hartley HOE DHPK [SPF-LAC] BO, Age: N/A, Weight: 240 to 292 g; Source: Lippische Versuchstierzucht, Hagemann GmbH & Company KG, D-4923 Extertal 1, FRG.

B. Methods:

Forty female Pirbright White, Dunkin Hartley HOE DHP K [SPF-LAC] BO guinea pigs were acclimated to laboratory conditions for at least 7 days prior to study initiation. The animals were housed five per cage in Makrolan type IV cages in a room maintained at a temperature of 20 to 24 °C and relative humidity of 30 to 70 percent. A 12-hour on/ 12-hour off light cycle was maintained. Food, Kliba 341, 4 mm (Kaninchen-Meerschweinchen-Haltungschlät) and water were available ad libitum. Two grams of ascorbic acid were added to 10 L of water twice a week. [The test protocol was the guinea pig maximization test as described by Magnussan and Kligman (1969).] Animals were clipped 3 to 5 hours before each test substance application and before each reading. In the pretest, approximately 0.15 g was placed on 2 x 2 cm filter paper strips which were applied to the skin of the flanks under an occlusive dressing. The test material was applied on four animals twice for 24 hours within a period of 96 hours in order to detect skin irritation not caused by a sensitization reaction. Skin readings were taken 24 and 48 hours after the beginning of application. In the main study there were 20 test animals and two control groups of 10 animals each. During the induction period each animal received six intradermal injections in groups of two per animal. In the test group the animals received: a) two injections each of 0.1 mL Freund's adjuvant without the test material emulsified with water in a 1:1 ratio in the front row, b) two injections each of 0.1 mL of the test material in the middle row, and c) two injections each of 0.1 mL Freund's adjuvant/water (1:1) with test material. The animals in the two control groups received the same injections but without the test material. Skin readings were made 24 hours after injection. Injection sites were treated with a 10 percent formulation of sodium dodecyl sulfate in white vaseline 24 hours prior to percutaneous induction. (Percutaneous induction was conducted 1 week after intradermal induction.) Approximately 0.3 g of the test material (50% in aqua dest) was placed on 2 x 4 cm filter paper strips which were applied to the skin of the shoulder under an occlusive dressing. The duration of exposure was 48 hours. Controls were not treated. Skin readings were taken

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at 48 hours. Challenge #1 was made 14 days after the percutaneous induction application. Approximately 0.15 g of the test material was placed on 2 x 4 cm filter paper strips which were applied to the skin of the shoulder under an occlusive dressing. This treatment was conducted on animals in the test group and control group #1. The second challenge was made 1 week later. This treatment was conducted on all three groups (as opposed to the test and control group #1 as in challenge #1). The application site was the intact clipped flank. The duration of exposure was 24 hours for each challenge. Skin readings were made about 24, 48, and 72 hours after each application. Skin reactions were scored using the Draize method. Body weights were recorded at intradermal induction and at challenge #2.

Results:

There were minor skin reactions in 2 of 10 animals in the first control group at the first challenge after 24 hours. No reaction was observed after 48 and 72 hours. Skin reactions (grade: 0-3) were observed in a majority of test animals at 24, 48, and 72 hours. At second challenge, many animals in control group #1 exhibited skin reactions at 24 hours. In control group #1, one animal each at 48 and 72 hours exhibited minor skin reactions (grade: 0-2). In control group #2, 3 of 10 animals had minor skin reactions (grade: 0-1) at 24 hours. No animal exhibited skin reactions at 48 and 72 hours. Several animals in the test group exhibited skin reactions (grade: 0-2+) at 24, 48, and 72 hours after second challenge. Body weight gain was not affected by treatment.

Conclusions:

Under the conditions of the test, application of the test material produced sensitization.

Classification: Core-Guideline

Reference:

Magnusson, B. and Kligman, A.M. (1969) The Identification of Contact Allergens by Animal Assay. The Guinea Pig Maximizatian Test. J. Invest. Dermatol. 52:268-276.