11-8-89

Reviewed By: Pamela Hurley, Ph.D. P Hurley 11/8/89
Section I, Tox. Branch, IRS (H7509C)
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DATA EVALUATION REPORT

STUDY TYPE: Acute Dermal Toxicity - rabbit (81-2)

TOX. CHEM. NO.: 510A

ACCESSION NUMBER/MRID NO.: 410137-04

TEST MATERIAL: Chlorpropham Technical (SX-1817)

STUDY NUMBER(S): CEHC 2994

LABORATORY PROJECT I.D.: S-3174

SPONSOR: Chevron Chemical Company, Ortho Agricultural Chemicals Division, 15049 San Pablo Avenue, Richmond, California

TESTING FACILITY: Chevron Environmental Health Center, Inc., 15299 San Pablo Avenue, Richmond, California

TITLE OF REPORT: The Acute Dermal Toxicity of Chlorpropham Technical (SX-1817) in Adult Male and Female Rabbits

AUTHOR(S): K.K. Dougherty

REPORT ISSUED: February 8, 1989

CONCLUSION: Technical Chlorpropham was tested in an acute dermal toxicity study in male and female rabbits using a single dermal application of 5.0 g/kg (limit test). The acute dermal LD_{50} was greater than 5.0 g/kg.

Toxicity Category: IV

Classification: Core Guideline

A. MATERIALS AND METHODS:

1. Test Compound(s):

Chemical Name: 1-methylethyl 3-chlorocarbanilate

Description: micronized white powder
Batch #(s), Other #(s): SX-1817
Purity: 99.9%
Source: Chevron Chemical Company
Vehicle (if applicable): Physiological saline

2. Test Animals:

Species and Strain (sexes): Young adult male and female New Zealand White rabbits

Age: 15-17 weeks
Weight(s): 2.80-3.01 kg (M), 2.83-3.11 kg (F)
Source(s): R and R Rabbitry, Stanwood, Washington

3. Procedure:

a. Preparation of Animals and Dosing Mixtures: The test material was mixed 1:1 with physiological saline immediately prior to dosing. The fur on the trunks of 5 animals/sex was clipped the day before dosing. Five grams/kg of the test material was applied to the trunk of each animal and covered with gauze patches secured by porous tape. The trunk of each animal was then wrapped with a sheet of plastic film and paper toweling. The animals were fitted with plastic collars. After a 24 hour exposure period, the wrappings were removed and the remaining test material was wiped off using gauze pads and mineral oil. The collars remained on the animals an additional 24 hours. The skin at the application site was scored for irritation at 1, 7 and 14 days after treatment using the Draize method.

b. Clinical Observations and Mortality: The animals were observed frequently for clinical signs of toxicity and for mortality on the first day after treatment and at least once daily for 14 days after treatment.

c. Bodyweights: The animals were weighed immediately before dosing and at 2, 7, and 14 days after treatment.

d. Gross Necropsy: A complete gross examination was conducted on all animals.

e. Histopathology: Sections of skin from each animal were collected and preserved for possible microscopic examination.

B. RESULTS:

1. Clinical Signs of Toxicity and Mortality: No animals died during the study. Reduced food intake was observed on day 2 with 2 animals of each sex. The authors stated that this was probably due to the wrapping procedure. No other clinical signs of toxicity were observed. All animals showed well-defined erythema with slight edema (some animals) one hour after unwrapping. Slight erythema was observed on day 7. Except for some flakiness, the irritation cleared by day 14.

2. Body weight: Slight decreases in mean body weight were observed on day 2. By day 7, the animals had recovered and gained weight through day 14. The authors stated that early weight loss is

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common in animals dosed by this method and was probably not compound-related.

3. Gross Pathology: Two females showed flaky skin at necropsy. No other abnormalities were observed.

4. Histopathology: Not conducted.

5. Quality Assurance Measures: Signed Good Laboratory Practice Statement and Quality Assurance Statements were provided.

C. DISCUSSION: This was a limit test. The acute dermal LD_{50} was greater than 5.0 g/kg. The study is Core Guideline and the toxicity category is IV.

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DATA EVALUATION REPORT

STUDY TYPE: Primary Eye Irritation - rabbit (81-4)

TOX. CHEM. NO.: 510A

ACCESSION NUMBER/MRID NO.: 410137-05

TEST MATERIAL: Chlorpropham Technical (SX-1817)

STUDY NUMBER(S): CEHC 2995

LABORATORY PROJECT I.D.: S-3175

SPONSOR: Chevron Chemical Company, Ortho Agricultural Chemicals Division, 15049 San Pablo Avenue, Richmond, California

TESTING FACILITY: Chevron Environmental Health Center, Inc., 15299 San Pablo Avenue, Richmond, California

TITLE OF REPORT: The Acute Eye Irritation Potential of Chlorpropham Technical (SX-1817) in Adult Albino Rabbits

AUTHOR(S): K.K. Dougherty

REPORT ISSUED: January 27, 1989

CONCLUSION: Technical Chlorpropham was tested in a primary eye irritation study in rabbits. One-tenth milliliter was tested on each rabbit. The mean primary eye irritation score was 2.7, corresponding to a rating of minimally irritating.

Toxicity Category: III

Classification: Core Guideline

A. MATERIALS AND METHODS:

1. Test Compound(s):

Chemical Name: 1-methylethyl 3-chlorocarbanilate

Description: micronized white powder
Batch #(s), Other #(s): SX-1817
Purity: Not given
Source: Chevron Chemical Company

2. Test Animals:

Species and Strain (sexes): Young adult New Zealand White rabbits
Age: 13-15 weeks and 7-8 months
Weight(s): Not given
Source(s): R and R Rabbitry, Stanwood, Washington

3. Procedure:

One-tenth milliliter of the test material was placed in the conjunctival sac of one eye of each of 9 rabbits. After a 30-second exposure, both eyes of 3 of the rabbits were then rinsed with distilled water for 1 minute at a rate of 250 milliliters/minute. Reported control eyes were taken from the animals that were rinsed. All the eyes were examined for ocular irritation at 1, 24, 48, and 72 hours after treatment and graded according to the method of Draize.

All animals were examined once daily for clinical signs of toxicity. At the end of the study, all animals were examined externally and then sacrificed.

B. RESULTS:

Treated Unrinsed Eyes: No effects on either the cornea or the iris were observed. Slight to moderate conjunctival redness was observed in 5/6 animals 1 hour after treatment. By 24 hours, only slight redness was observed in 2 animals. At 48 hours, this redness was found in one animal and at 72 hours, no effects remained on any of the rabbits. Slight chemosis was observed in one animal at 1 hour. This had disappeared by 24 hours. The highest mean irritation score was 2.7 at 1 hour. This corresponds to a classification of minimally irritating.

Treated Rinsed Eyes: No effects were observed on either the cornea or the iris. Slight to moderate conjunctival redness was observed in 3 rabbits at 1 hour. At 24 and 48 hours, slight redness was observed in one animal. This had cleared by 72 hours. The highest mean irritation score was 3.3 at 1 hour. This corresponds to a classification of minimally irritating. In 3 control eyes, slight to moderate conjunctival redness was observed at 1 hour. This disappeared by 24 hours. The mean irritation score was identical to that of the treated animals.

Quality Assurance Measures: Signed Good Laboratory Practice Statement and Quality Assurance Statements were provided.

C. DISCUSSION: It is interesting to note that the score for the control eyes was identical to that for the rinsed animals (slightly higher than unrinsed animals, probably due to the smaller number of animals tested). This is an acceptable study and the classification is Core Guideline. The mean irritation score for unrinsed eyes is 2.7, corresponding to a classification of minimally irritating.

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