DATE

SUBJECT

EPA Registration Number 239-2458
Orthocide Vitavax 20-20 Seed Protectant

FROM

Deloris F. Graham
FH5/TSS

TO

Henry Jacoby
Product Manager (31)

Applicant: Chevron Chemical Company
Ortho Agricultural Chemicals Division
940 Hensley Street
Richmond, California 94804

Active Ingredients
- Captain....................... 19%
- Related Derivatives............. 1%
- Carbosan................. 20%
- Inert Ingredients........... 60%


Recommendation

(1) FH5/TSS finds the data acceptable to support the conditional registration of this product in compliance with the carbosan registration standard. However, for future submissions please note:

   (a) In the Eye Irritation study, nine rabbits (six with treated unwashed eyes and three with treated washed eyes) must be used.

   (b) In the Primary Dermal Study, four test sites (2 abraded and 2 intact) per animal must be used.

(2) Based on the Eye Irritation study the appropriate signal used is WARNING.

Label:

(1) Proposed labeling is acceptable.

Review:

(1) Acute Oral Toxicity Study: Chevron: Socal 1074/31:56; December 1, 1977.

Procedure: Five groups. Three of the groups consisted of 5M and 5F Sprague-Dawley rats, one consisted of 10M and 5F and one consisted of 10M and 10F. Each received one of the following doses: 3.3, 5.0, 7.5, 10, 15 g/kg. The rats weighed between 200-277 g. Observations were made daily for 14 days. Necropsy performed on all animals.
Results: At 3 g/kg, 1/10 M died; at 7.5 2/5 F died; at 10 g/kg, 7/10 M and 9/10 F died; at 15 g/kg, 5/5 M and 5/5 F died.

Toxic signs observed included diarrhea, depression, weakness, convulsions, chewing of extremities, reduce food consumption, and weight loss.

Necropsy revealed enlarged liver and spleen; reduced body fat; kidneys which appeared necrotic had small masses attached to them.

LD₅₀ for males was 8.4 g/kg with confidence limits between 5.8 and 12 g/kg. 
LD₅₀ for females was 7.3 g/kg with confidence limits between 5.0 and 11 g/kg.

Study Classification: Core Guideline Data

Toxicity Category: IV - CAUTION

(1) Eye Irritation Study: Chevron; Socal 1072/30:74; October 10, 1977.

Procedure: A 0.1 ml of the test material was applied to one eye each of 6 rabbits. Observations were made at 1, 24, 48, 72 hours and 7, 10 and 14 days.

Results: At day 1, 2/6 animals had corneal opacity (1/6 = 5, 1/6 = 10); 6/6 iris irritation (6/6 = 5), redness (1/6 = 2, 5/6 = 3), chemosis (1/6 = 2, 2/6 = 2, 3/6 = 1), discharge (2/6 = 2, 4/6 = 1). Roughened cornea also observed.

At day 3, 4/6 had corneal opacity (3/4 = 5, 1/6 = 10), iris irritation (4/6 = 5): 6/6 redness (2/6 = 2, 4/6 = 1); 5/6 chemosis (2/6 = 2, 3/6 = 2), discharge (1/6 = 2, 4/6 = 2).

At day 7, 2/6 corneal opacity (1/6 = 5, 1/6 = 10); 5/6 redness (1/6 = 1, 4/6 = 2); 4/6 discharge (1/6 = 1, 1/6 = 2). Roughened cornea and pannus also observed.

At day 14, pannus present and roughened cornea; 1/6 redness (1/6 = 2).

Study Classification: Core Minimum Data. Nine rabbits (6 with treated unwashed eyes and 3 with treated washed eyes) must be used.

Toxicity Category: II - WARNING

(1) Primary Dermal Irritation Study: Chevron; Socal 1073/30:75; October 13, 1977.

Procedure: Each of six rabbits received 0.5 g of the test material at one intact and one abraded skin site under occlusive wrap for 24-hour exposure under occlusive wrap. Observations made at 24, 48, 72 hours and at 7 days.
Results: At 24 hours, slight to moderate erythema (scores 1 to 3) and slight to well defined erythema (scores 1 to 2) in all six rabbits. At 72 hours, 2/6 slight erythema (score of 1). At day 7, no irritation present. Primary irritation score was 1.8.

Study Classification: Core minimum data. Four test sites (2 abraded and 2 intact) per animal must be used.

Toxicity Category: IV - CAUTION
Carboxin science review

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