Yellow Copy

MAY 17, 1991

Mr. Robert F. Bischoff
DowElanco
Quad IV, 9002 Purdue Road
Indianapolis, Indiana 46268-1189

Subject: Chlorpyrifos
Two-Generation Rat Reproduction
Study--Preliminary Results
Your Submission Dated March 20, 1990

Dear Mr. Bischoff:

This will acknowledge receipt of your submission of partial, preliminary, unaudited results from the first generation of a two-generation rat reproduction study with chlorpyrifos.

By way of background, the Agency had determined that the previously submitted rat reproduction studies were acceptable and satisfied all data requirements. However, the California Department of Food and Agriculture ruled that they did not consider the depression of plasma and RBC cholinesterase, alone, as an adequate effect for the high dose in a reproduction study and required a maximum dose of 5 mg/kg/day for a new study.

Results may be summarized as follows:

The doses of chlorpyrifos administered were 0 (control), 0.1, 1.0, and 5.0 mg/kg/day.

Cholinesterase values: there were statistically significant (0.05) decreases from control values in plasma and RBC values at 1.0 mg/kg/day as well as in plasma, RBC, and brain at 5.0 mg/kg/day (both adult sexes).

Pup body weights: there were statistically significant (0.05) decreases from control values in male and female group mean pup body weights at 5.0 mg/kg/day for weighing days 4, 7, 14, and 21.

Pup mortality: there were statistically significant (0.05) increases from control values in the total number of dead pups (combined sexes) at 5.0 mg/kg/day for observation days 14 and 21.

As noted above these data are from the first generation only. We will complete our review after submission of second-generation results.

Sincerely yours,

Dennis H. Edwards, Jr.
Product Manager (12)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

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CASWELL FILE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, DC 20460

APR 30 1990

OFFICE OF
PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: CHLORPYRIFOS - Preliminary Results of a Two-Generation Rat Reproduction Study - DowElanco

Caswell No.: 219AA
HED Project No.: 0-1081
Identifying No.: 62719-15

Record No.: 262778
MRID No.: none

FROM: Alan C. Levy, Ph. D., Toxicologist *Alan C. Levy 4/24/90*
Review Section I, Toxicology Branch II (HFAS)
Health Effects Division (H7509C)

TO: Dennis Edwards PM 12
Registration Division (H7505C)

THRU: Yiannakis M. Ioannou, Ph. D., Section Head *J.M. Ioannou 4/24/90*
Review Section I, Toxicology Branch II (HFAS)
Health Effects Division (H7509C)

and

Marcia van Gemert, Ph. D., Branch Chief
Toxicology Branch II (HFAS) *M van Gemert 4/26/90*
Health Effects Division (H7509C)

REQUEST: Review the submitted partial preliminary unaudited results from the first generation of a two-generation rat reproduction study with CHLORPYRIFOS.

Registrant: DowElanco

Background:

The Agency had determined that the previously submitted rat reproduction studies were acceptable and satisfied all data requirements. However, the California Department of Food and Agriculture ruled that they did not consider the depression of plasma and RBC cholinesterase, alone, as an adequate effect for the high dose in a reproduction study and required a maximum dose of 5 mg/kg/day for a new study.

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Preliminary Unaudited Submitted Results

The doses of CHLORPYRIFOS administered were 0 (control), 0.1, 1.0 and 5.0 mg/kg/day.

Cholinesterase Values: There were statistically significant (0.05) decreases from control values in plasma and RBC values at 1.0 mg/kg/day as well as in plasma, RBC and brain at 5.0 mg/kg/day (both adult sexes).

Pup Body Weights: There were statistically significant (0.05) decreases from control values in male and female group mean pup body weights at 5.0 mg/kg/day for weighing days 4, 7, 14 and 21.

Pup Mortality: There ware statistically significant (0.05) increases from control values in the total number of dead pups (combined sexes) at 5.0 mg/kg/day for observation days 14 and 21.

A copy of the report with data is attached.

ACKNOWLEDGEMENT: The Agency acknowledges receipt of the above data and notes that these are from the first generation only.