

US EPA ARCHIVE DOCUMENT



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

MAY 4 1982

MEMORANDUM

TO: Orville E. Paynter, Chief
Toxicology Branch/HED (TS-769)

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: Expedited Summary of Teratogenicity Studies Available
for Diazinon Tox. Chem. 342

Both positive and negative teratogenic findings have been reported for diazinon. In the opinion of this reviewer, the most reliable study (see #2, below) does not indicate Diazinon to induce teratogenic effects. The following is a summary of available data:

1. Rat Teratogenicity

Reviewed by Coberly on 1/30/76. Not teratogenic at 100 mg/kg/day (HDT). Raw data was requested from Ciba-Geigy and they cannot furnish the raw data on this study. It is therefore classified as Supplementary Data.

2. Rabbit Teratogenicity

Reviewed by Dykstra on 1/2/81. Not teratogenic at 100 mg/kg/day (HDT). Core-Minimum Data.

3.a. Beagle Dog Teratogenicity

Published by Earl et al in Pesticides and the Environment: A Containing Controversy, published Symposium Specialists, Miami, 1973. Not teratogenic at 5 mg/kg/day (HDT).

b. Miniature Swine Teratogenicity

"One pig in three different litters was considered abnormal" (compared to none in the controls). "The significance of this finding is not known at this time" (author's conclusion).

Both of the above studies are considered inadequate by Toxicology Branch.

4. Rat Teratogenicity

Published by Kimbrough et al. "Effect of Organic Phosphorus Compounds and Alkylating Agents on the Rat Fetus" Arch. Environ. Health 16:805-08, 1968.

Diazinon injected i.p. on 11th day of gestation.

Authors concluded that compound was "slightly teratogenic" with 6/30 fetuses from 100 mg/kg with dilated renal pelvis and 3/6 showing either hydrocephalus (1/6), missing first distal phalanx (1/6) or ectromelia (1/6).

Comments - The route of exposure and other aspects of study design are not considered appropriate to assess teratogenic potential. Study is considered inadequate.

5.a. Hamster Teratology

Published by Jame F. Robens "Teratologic Studies of Carbaryl, Diazinon, Norea, Disulfiram and Thiram in Small Laboratory Animals" Tox. and Appl. Pharm., 15, 152-163 (1969).

Not teratogenic at 0.125 and .25 mg/kg administered by gavage on days 6, 7, 8 and 7, 8 respectively of gestation (HDT).

Comment - Inadequate study design.

b. Rabbit Teratology

Not teratogenic at 7 and 30 mg/kg administered by gavage on days 5-15 of gestation.

Comment - Inadequate study design.

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