

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

TRICHLORFON

Chronic Toxicity

CITATION: Stieglitz R, Gibels W, Werner W, Stabbe H. 1974. Experimental Study on Haematotoxic and Leukemaeogenic [sic] Effects of Trichlorphone and Dimethoate. Acta Hematol. 52:70-76.

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DATA EVALUATION RECORD

STUDY TYPE: Chronic toxicity—oral gavage and intramuscular injection in rats.

CITATION: Stieglitz R, Gibels W, Werner W, Stabbe H. 1974. Experimental Study on Haematotoxic and Leukemaeogenic [sic] Effects of Trichlorphone and Dimethoate. Acta Hematol. 52:70-76.

ACCESSION NUMBER: Not available.

MRID NUMBER: Not available.

LABORATORY: Central Institute of Cancer Research, Berlin.

TEST MATERIAL: Trichlorfon was the test material; purity was not stated.

PROTOCOL:

1. The test animals were 10-week-old Wistar rats.
2. The compound as an aqueous solution was administered to groups of 40 rats:
 - a. By stomach tube, twice a week, at 15 mg/kg.
 - b. By intramuscular injection, twice a week, at 15 mg/kg.
 - c. Controls were included (number not stated).
 - d. The duration of dosing was until spontaneous death.
3. The parameters measured were:
 - a. Total leukocyte count (repeated blood tests were given to some of the animals).
 - b. Cytological evaluation of femoral bone marrow smears.
 - c. Histology of bone marrow in femoral and vertebrae bodies.
 - d. Histology of liver and spleen.

RESULTS:

The average survival of rats administered trichlorfon orally was 93 weeks and after intramuscular dosing it was 81 weeks. Bone marrow smears and extraosseus tissue (liver and spleen) were histologically examined in 28/40 animals orally dosed and 27/40 animals intramuscularly dosed. Of those examined, 47 percent had pronounced myeloproliferation in the bone marrow

and 34 percent had extraosseous, myeloid metaplasia, mainly in the liver and spleen. Bone marrow hyperplasia preferentially involved granulocytes. In the peripheral blood, leukocytosis (involving mainly the granulocytes) was observed in 23 percent of the animals (oral and intramuscular groups combined). The highest leukocyte counts exceeded 50,000/ul; the mean value was $27,407 \pm 10,706$ in test animals compared to $12,212 \pm 2,531$ for controls.

CONCLUSIONS:

Trichlorfon was administered to Wistar rats twice a week, for lifetime, at levels of 15 mg/kg. There was a pronounced hemotoxic action including severe hyperplasia of the bone marrow and extraosseous myeloid metaplasia, particularly in the liver and spleen. Since only one dose level was used, a dose related trend could not be established. Insufficient data were present to determine the onset of granulocytosis.

CORE CLASSIFICATION:

The study is classified as Core ~~Invalid~~, since only summary data were presented.

SUPPLEMENTARY (Jla, 07-30-83)