DATA EVALUATION RECORD

TRICHLORFON

Subchronic Inhalation Toxicity in Rats

CITATION: Bonashevskaya TI, Tabakova SA. 1972. Morphological changes in the organs of white rats induced by inhalation of trace concentrations of chlorofos. Farmakol. Toksikol. 35(2):240-241 [Translation].

REVIEWED BY:

William L. McLellan, Ph.D.
Project Scientist
Dynamac Corporation
11140 Rockville Pike
Rockville, MD 20852
301-468-2500

Signature: William L. McLellan

Date: Aug. 5, 1983

Cipriano Cueto, Ph.D.
Program Manager
Dynamac Corporation
11140 Rockville Pike
Rockville, MD 20852
301-468-2500

Signature: Cipriano Cueto

Date: 5 August 1983

APPROVED BY:

Irving Mauer, Ph.D.
EPA Scientist

Signature: Irving Mauer

Date: 08-05-83

DATA EVALUATION RECORD

STUDY TYPE: Subchronic inhalation toxicity in rats.

CITATION: Bonashevskaya TI, Tabakova SA. 1972. Morphological changes in the organs of white rats induced by inhalation of trace concentrations of chlorofos. Farmacol. Toksikol. 35(2):240-241.

ACCESSION NUMBER: Not available.

MRID NUMBER: Not available.

LABORATORY: Sysin Institute of General and Public Health, Mosco, USSR.

TEST MATERIAL: The test chemical was identified as chlorofos (trichlorfon). The source and purity was not stated.

PROTOCOL:

The animals were male white rats, strain , weight, and age unspecified. There were 15 rats per group.

The following groups of animals were exposed continuously by the inhalation route for 90 days:

- o Control
- o 0.02 mg/m^3
- o 0.2 mg/m^3
- o 1.0 mg/m^3

After 90 days the animals were sacrificed by decapitation. Liver, lungs, kidneys, and thyroid were fixed in formalin and stained with hematoxylin-eosin. Liver sections were also frozen and stained with Sudan III for detection of fat.

RESULTS:

There were no histopathologic changes at 0.02 mg/m^3 in the tissues examined. At 0.2 mg/m^3 there was swelling of alevolar epithelium of the lungs and dilation of capillaries. In the liver, there was dilation of sinusoids and an increase in lymphoid tissue in the perivascular spaces;

there was hypertrophy and hyperplasia of the bile ducts. In the kidneys there was tubular dilation and deposition of protein. In the thyroid there was deformation of follicles in the parenchyma.

The histopathologic changes were similar but more pronounced at 1 mg/m^3 than at 0.2 mg/m^3.

CONCLUSIONS:

Exposure of rats to 0.2 mg/m^3 trichlorfon by continuous inhalation for 90 days caused histopathologic changes in lungs, kidneys, and thyroid which were attributed to altered disturbed vascular permeability. At 0.02 mg/m^3 no effects were seen.

Histopathologic examination was limited to a few tissues. No information was presented on possible lipid changes in the liver although liver sections were stained with Sudan III. No histopathologic examination of nervous tissue was performed. No observations for toxic signs, body weights, or clinical parameters were presented.

CORE CLASSIFICATION: Supplementary.

The study is classified as Supplementary since it gives NOEL and LEL, whether it is correct cannot be determined since only summary information is present and incidences of histologic changes were not presented.