

US EPA ARCHIVE DOCUMENT

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TOXICOLOGY BRANCH: DATA REVIEW

J. M. ... 2/17/84

Caswell No.: 385
Shaughnessy No.: 057901

Chemical: Trichlorfon

Study Type: Neurotoxicity in hens

Citation: Lazarov, V.P. and A. Magat. 1975. Biochemical and physiopathological aspects of acute and moderate-term poisoning of chickens with trichlorfon. Bull. Soc. Sci. Vet. Med. Comp. Lyon 77: 89-96. (Translated from French).

Accession No./MRID No.: NA/GS0104100

Sponsor/Contracting Lab.: *n/a* ~~NA~~ (published study)

Report No./Date: *NA n/a*

Test Material: Neguvon (Bay^eor), purity not stated; prepared as 1% solution in water for oral administration.

Procedures: Two-month old "*broilers*" hens (1.3 kg) were intubated once at 40, 60 and 80 mg/kg, or for 28 days at 5, 10 and mg/kg/day; serially assayed for serum biochemical values (ChE, alkaline phosphatase, uric acid, proteins, electrolytes); observed for functional effects (appearance, appetite, motor signs, *etc.*); and certain organs of the acute study (heart, brain, kidneys) examined histologically.

Results: All acute doses of trichlorfon produced labored respiration, muscle weakness, salivation, ~~thrust~~ *thirst* and appetite depression, but no macroscopic or microscopic lesions in parenchymal organs (other than hyperemia). Dose-related inhibition in ChE were found, as well as ~~decreases in AP~~ *calcemia* (but no changes in magnesium), and electrolyte (but no protein) changes. In birds treated sub-chronically, 10 and 20 mg/kg/day depressed ChE, but all doses depressed AP and produced uricaciduria; no changes were found in proteins or electrolytes throughout the 28-day study. Body weights decreased after 14 days, but only at the HDT; no deaths occurred in the subchronic study.

Conclusions: Although biochemical changes ^{*as (other useful data)*} were reported, both the acute and the subchronic segments of this study are inadequate in procedures and reporting to qualify as acceptable assays of neurotoxicity in the hen. ~~Delayed neurological effects~~ (acute phase), if any, were not described; and subchronically treated birds were not autopsied. A NOEL = 5 mg/kg may be ~~considered~~ *ascertained* for repeat dosage.

Core: The study (both acute and subchronic segments) are judged SUPPLEMENTARY *DATA*

alkaline phosphatemia and