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Cyfluthrin: 5-Month Oral Neurotoxicity Study in Rats
Mobay Chemical Company. 1982. MRID No. 00131529
HED Doc. No. 004461, 005128

A. FCR 1272 study for nerve damage effect on the rat after 5 months oral application.

Bayer, A.G., Institute of Toxicology, Report No. 10705, March 10, 1982.
EPA Acc. No. 072009, Tab. 3.3.5

B. The test material used for this study was FCR 1272 and was from batch 16001/79 and was stated as being of 83.3% purity.

C. The test animals used were Wistar TNO/W74 albino rats bred by Winkelmann Borchern. They were young at the initiation of the study (140-150 gm). 15 male and 15 female rats were dosed orally with the test material in Lutrol. They were dosed 7 days a week for 5 months by stomach tube. The dose level used was 60-80 mg/kg bw. This dose range was chosen so that the rats always showed symptoms. A solvent control group of 15 rats of each sex was also run.

D. Survival. 4 control rats died. 10 treated rats died. This indicates that deaths were likely due to the test material.

E. Behavioral reactions. The treated rats reportedly showed "non-specific behavior disturbances" (apathy, out-of-condition coat, troubled respiration). Digging and grooming, tremors, gait abnormalities and salivation were also noted. No indications of paralysis were noted.

F. Body weights. The males showed signs of lower weight gain. The females were apparently not affected.

G. No hematology was conducted.

H. Liver tissue was assessed for N-demethylase, O-demethylase and cytochrome P-450 activity. Increases in these enzymes were not observed following 5 months of treatment with FCR 1272.

I. Urinalysis was not performed.

J. Organ weights. (Only the liver, kidney and brains were evaluated for weight changes.) The liver (-11%) and kidney (-19%) were depressed for the males. The liver (+16%) was increased for the females.

K. Gross necropsy. No gross necropsy lesions were noted which were definitely related to the test material.

L. Histopathology. The liver, kidneys, adrenals, brain, spinal marrow and nn ischiadici (sciatic nerve) of 5 females and 5 males were prepared for histopathology. The brain and spinal marrow were stained with Nissel's method and Luxol Fast Blue respectively.

No test chemical lesions were noted by histological examination. There were no lesions reported in either the brain or sciatic nerve.

N. Conclusions.

1. This study is CORE MINIMUM.
2. No effects on the structure of the nervous system were noted.

Cited in
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