From PP# 6F755 6/10/76 R. Engler

6/10/76 (20)

9002
Fenvalerate
83-3b

relative liver weights increased for females at 500, 1000 and 2000 ppm and for males at 2000 ppm. The relative kidney weights increased in all experimental groups except for the males fed 125 ppm; the increases, however, were generally minor although statistically significant (95% level). On the other hand the histopathological examination of livers and kidneys did not reveal any pathological changes. BUN was increased on the groups fed 1000, and 2000 ppm. The histopathology of all examined organs was unremarkable. The NEL for this study can be set at ≤ 125 ppm.

b. 2-year rat feeding study (3 month interim report)
IBT 2541 1/6/76

The rats were fed 0, 1, 5, 25, 250, and 500 ppm in the diet. Males showed a reduced weight gain at 25, and 250 ppm (but not at 500 ppm). Females showed an increased weight gain at 25, and 250 ppm, and a reduced weight gain at 500 ppm. In other words there seems to be some random effects on the weight gains which does not allow a conclusion at this phase of the study. Hematology, blood chemistry, and urinalysis was normal for all animals. The histopathological examination was not completed for this study at the time of submission.

c. 90-day feeding study in dogs.
IBT 2541 Dec 31. 75

Dogs were fed 0.05, 0.25, 1.25, and 12.5 mg/kg/day (2, 10, 50, and 500 ppm). There were no effects noted in any of the parameters studied. Gross and histopathology for this study is complete. The NEL of this chemical for the dog in the subacute study therefore can be set at 500 ppm.

d. Teratology Study Tunstall 426.0064.75, 6+25.

Fenval

Rabbits were exposed to 12.5, 25, and 50 mg/kg/day on day 6-18 of pregnancy. 21 animals were used per group. All parameters of pregnancy and pup survival studied were normal with the exception that a 25 mg/kg the fetuses were shorter than the control, this effect, however, was not seen at the 50 mg/kg level. At the 50 mg/kg level the dames showed a reduced body weight gain. The chemical is not a teratogen as tested.

e. Mutagenic studies.

(i) Bone marrow analysis (Chinese hamster)
Tunstall Oct. 75 Oct. 75

The animals were exposed on two successive days to 12.5 and 25 mg/kg. A vehicle control (DSMO) and a positive control (Methyl methane sulphonate) were included in the

(5)

(77A)

Engler

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: March 10, 1977

009002

SUBJECT: Extension of temporary tolerance for Pydrin, 0.2 ppm on Cottonseed and 0.02 ppm in fat of milk.

FROM: Toxicology Branch (WH-567)

TO: Ms. Libby Zink
Special Registration Section (WH-567)

PP No.: 6G1755 and 201-EUP-50

Petitioner: Shell Chemical Co.

Recommendations:

1. Because of the unresolved questions relating to neuropathy, the temporary tolerance, and especailly the EUP should only be granted after the petitioner has reduced the total acreage to 5000 or less.

2. Several studies reviewed must be either repeated or additional information should be provided, see items 7, 14, 15, and 17 of review.

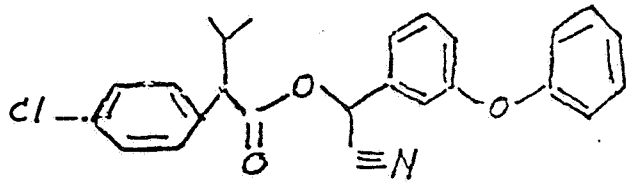
3. We suggest that the quantitative and qualitative aspect of neuropathy be further studied by (a) showing a NEL of Pydrin in the rat and also relating the clinical NEL with the histopathological NEL; acute and subacute (10-15 days) exposure should be used. (b) investigating the neuropathy in different animal species, such as the chicken, dog, and rabbit. In that these studies are of a qualitative nature it is important that doses at or near the LD-50 for the species are used. For the quantitative as well as the qualitative studies it will be important to compare the actions of Pydrin with the effects of Resmethrin and natural pyrethrins.

4. The NEL for neuropathy also should be conclusively demonstrated in subacute studies.

Substance Identification:

Benzeneacetic acid 4,-Chloro(α-1-methyl-ethyl) Cyano (3-phenoxyphenyl)methyl ester.
SD 43775
S5602
FMC 44713 — ?
WL 43775

No Prior Petitions.



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6/16/76

DER #13

Fenvalerate: Developmental Toxicity Study in Rabbits
Shell Chemical Company. 1975. MRID No. 00109819. HED Doc. No. 009002.