

US EPA ARCHIVE DOCUMENT

CASE

PM

CHEM Chlorsulfuron

002633

BRANCH Toxicology DISC

TOPIC Mutagenicity

FORMULATION Technical (information known to reviewer)

FICHE/MASTER ID

CONTENT CAT

Dominant Lethal Evaluation in Rats

Haskell #12,700

Final Report

INW-4189

HLO-789-80

MR-3674

A. M. Hoberman et al. September 23, 1980

Hazleton Laboratories America, Inc.

SUBST. CLASS =

OTHER SUBJECT DESCRIPTORS

DIRECT RVW TIME = 2 hours

START-DATE

END DATE

REVIEWED BY: Ladd W. Smith

TITLE: Toxicologist

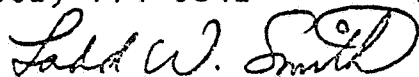
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Results

No mortalities occurred; clinical findings were considered incidental.

Males fed 500 and 5000 ppm chlorsulfuron had decreased weight gain compared to controls. Weight gain in the 100 ppm group was greater than that of the controls. No effects occurred in females.

No compound-related gross pathologic findings were noted.

The male performance index (% of females showing evidence of mating/number of females in breeding) was comparable between control and treatment groups.

Pregnancy rates for each week of mating were comparable among groups. Overall rates were slightly lower for the control and 100 ppm groups compared to the 500 and 5000 ppm groups.

No statistical differences occurred for implantation efficiency or mean incidence of fetal death. In the 5000 ppm group, the mean incidence of resorptions per litter was significantly increased and the mean incidence of fetal viability per litter was significantly decreased for the second week of mating. All mean values calculated on a per group basis were comparable and revealed no treatment-related effects.

Discussion

The study was conducted by acceptable methods and the collected data support the reported conclusions.

Conclusions

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This study is scientifically valid.

Chlorsulfuron, at dietary levels of up to 5000 ppm did not induce dominant lethal mutations in rats. Increased resorptions and decreased fetal viability were seen at 5000 ppm; these effects were not evident at 100 or 500 ppm.

This study generally conforms to EPA proposed guidelines in Sec. 163.84-3 (Fed. Reg. 43: 37391, 8/22/78).

Methods

Conduct:

Factor 10 50  
0.10  
0.05 — 5 75 250 mg/l

- 10 male ChR-CD® rats/group fed 0, 100, 500 and 5000 ppm sulfuron in Purina Rodent Laboratory Chow® for 10 weeks
- 2 virgin female rats fed basal diet placed with each male per week for 2 weeks
- daily clinical observations
- weekly body weights for males, body weights at initiation and termination for females
- dietary analysis

Examination:

- females sacrificed by CO<sub>2</sub> 17 days after first day of mating
- gross examination of uterine contents
- litter data included implantation sites, live and dead fetuses, corpora lutea, resorptions and abnormalities
- testes, uterus and contents, and ovaries preserved in formalin

Statistics:

- 0.05 probability level
- Barlett's test and 1-way ANOVA for male terminal body weights, female body weights and male body weight changes
- Wilcoxon's nonparametric comparison for resorptions, fetal deaths, dead implants, fetal viability and male fertility (combined data for 2 weeks)

OK