

US EPA ARCHIVE DOCUMENT

002639

PM

CASE

CHEM Chlorsulfuron

BRANCH TB

DISC

TOPIC Acute Oral LD₅₀ - Rat

FORMULATION Technical

FICHE/MASTER ID

CONTENT CAT

Oral LD₅₀ Test In Fasted Male and Female Rats, Haskell
Laboratory Report No. 399-79, Trivits, R. L.

SUBST. CLASS =

OTHER SUBJECT DESCRIPTORS

DIRECT RVW TIME = 45 minutes

START-DATE

END DATE

REVIEWED BY: J. C. Summers

TITLE: Research Associate

ORG: E. I. du Pont de Nemours & Co., Inc., Biochemicals Departmer

LOC/TEL: Wilmington, Delaware / (302) 772-2367

SIGNATURE: *J. C. Summers*

DATE: November 6, 195

APPROVED BY: *e. Frick*

TITLE:

ORG:

LOC/TEL:

SIGNATURE:

DATE: 10/13/52

Conclusion:

- A. Core Guideline
- B. Category IV
- C. Oral LD₅₀s are 5545 and 6293 mg/kg for male and female rats, respectively, for technical chlorsulfuron.
- D. This study conforms to EPA proposed guidelines in section 163.81-1 Acute oral toxicity study (43 Federal Register 37355, 8/22/78).

Methods:

The test material, as a suspension in corn oil, was administered by intragastric intubation in single doses to 4 groups of male and 6 groups of female fasted young adult ChR-CD® rats, 10 animals per group. Rats were observed for mortality and clinical signs. Survivors were weighed and observed over a 14-day recovery period and then sacrificed. All animals were sent to pathology for gross examination. The LD₅₀ was calculated from mortality data, using the method of D. J. Finney Probit Analysis, 3rd Ed., 1971, Cambridge University Press.

Results:

Chlorsulfuron when administered orally to fasted young adult rats, has an LD₅₀ of 5545 mg/kg of body weight for males and 6293 mg/kg of body weight for females, and is considered to have very low toxicity.

Dose (mg/kg)	Mortality Ratio	
	M	F
10,000	-	8/10
7,500	-	8/10
7,000	7/10	3/10
6,000	7/10	3/10
5,000	4/10	5/10
4,000	1/10	3/10

Rats at all dose levels showed stained faces and wet and/or stained perineal areas; humped posture was seen at all levels except 10,000 mg/kg females. Although not seen in all groups, eyes half closed, lethargy, chromodacryorrhea, salivation and diarrhea were generally present. Other signs observed frequently included prostration, hematuria, weakness, piloerection, lacrimation, stained underside, body and feet. All deaths occurred within 1 to 4 days after dosing with moderate weight losses for 1-4 days and sporadic weight losses through the 14th day in the survivors.

Gross pathological abnormalities were noted in the following organs of male and female rats dosed at 10,000 - 4,000 mg/kg: thymus, liver, lungs, brain, heart, spleen, kidney, eye, pancreas, testis, gastrointestinal tract, skin, uterus and stomach.

Discussion:

The methods and materials, scientific principles, validity of conclusions, and adequacy of data for conclusions were adequate for the study.