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Napropamide; CASRN 15299-99-7

Human health assessment information on a chemical substance is included in the IRIS database only after a comprehensive review of toxicity data, as outlined in the [IRIS assessment development process](#). Sections I (Health Hazard Assessments for Noncarcinogenic Effects) and II (Carcinogenicity Assessment for Lifetime Exposure) present the conclusions that were reached during the assessment development process. Supporting information and explanations of the methods used to derive the values given in IRIS are provided in the [guidance documents located on the IRIS website](#).

STATUS OF DATA FOR Napropamide

File First On-Line 07/01/1989

Category (section)	Assessment Available?	Last Revised
Oral RfD (I.A.)	yes	07/01/1989
Inhalation RfC (I.B.)	not evaluated	
Carcinogenicity Assessment (II.)	not evaluated	

I. Chronic Health Hazard Assessments for Noncarcinogenic Effects

I.A. Reference Dose for Chronic Oral Exposure (RfD)

Substance Name — Napropamide
CASRN — 15299-99-7
Primary Synonym — Devrinol
Last Revised — 07/01/1989

The oral Reference Dose (RfD) is based on the assumption that thresholds exist for certain toxic effects such as cellular necrosis. It is expressed in units of mg/kg-day. In general, the RfD is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. Please refer to the Background Document for an elaboration of these concepts. RfDs can also be derived for the noncarcinogenic health effects of

substances that are also carcinogens. Therefore, it is essential to refer to other sources of information concerning the carcinogenicity of this substance. If the U.S. EPA has evaluated this substance for potential human carcinogenicity, a summary of that evaluation will be contained in Section II of this file.

I.A.1. Oral RfD Summary

Critical Effect	Experimental Doses*	UF	MF	RfD
Decreased body weight gain in parental animals and pups	NOEL: 30 mg/kg/day LEL: 100 mg/kg/day	300	1	1E-1 mg/kg/day
3-Generation Rat Reproduction Study				
Stauffer Chemical Co., 1978a				

*Conversion Factors: Actual dose tested

I.A.2. Principal and Supporting Studies (Oral RfD)

Stauffer Chemical Corporation. 1978a. MRID No. 00072685, 00081615. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

Groups of 15 male and 30 female Charles River CD rats were administered diets containing 0, 10, 30, or 100 mg/kg/day of napropamide for 3 generations. At approximately 100 days of age, rats were mated, 1 male with 2 females within the same treatment group, for 15 consecutive days to produce the F1a litters. Following weaning of the F1a litters, the F0 female rats were rested for a minimum of 10 days prior to mating with different partners to the F1b litters. From the second litter, rats were selected as parents of the next generation. Feeding of test diet, mating, and production of two litters were repeated with the F1 rats. From the second F2 litter, rats were selected again to produce two F3 litters.

The parental NOEL value was 30 mg/kg/day and the parental LEL value was 100 mg/kg/day, based on a decrease in body weight gain in F1 and F2 mothers. The reproductive NOEL value

was 30 mg/kg/day and the reproductive LEL value was 100 mg/kg/day based on a decrease in absolute body weight of F1a, F1b, F2a, and F3a male and female weanlings.

I.A.3. Uncertainty and Modifying Factors (Oral RfD)

UF — An uncertainty factor of 100 was used to account for the inter- and intraspecies differences. An additional UF of 3 was used to account for the lack of a chronic feeding study in a second species.

MF — None

I.A.4. Additional Studies/Comments (Oral RfD)

- 1) 3-Generation Reproduction - rat: Principal study - see previous description; core grade minimum (Stauffer Chemical Co., 1978a)
- 2) 2-Year Feeding (oncogenic) - rat: NOEL=30 mg/kg/day; LEL=100 mg/kg/day (HDT; 8% decrease in body weight gain in female rats); core grade minimum (Stauffer Chemical Co., 1978b)
- 3) Teratology - rat: Maternal NOEL=110 mg/kg/day; Maternal LEL=400 mg/kg/day (HDT; decrease in body weight gain during gestation days 6-9); Developmental NOEL and LEL=400 mg/kg/day based on lack of overt signs of fetal toxicity; core grade minimum (Stauffer Chemical Co., 1982)

Other Data Reviewed:

- 1) 13-Week Feeding - rat: NOEL=25 mg/kg/day; LEL=50 mg/kg/day (decreased mean relative uterine weights); core grade minimum (Stauffer Chemical Co., 1970a)
- 2) 13-Week Feeding - dog: NOEL=40 mg/kg/day; LEL=100 mg/kg/day (increased mean absolute and relative liver weights in male dogs); core grade minimum (Stauffer Chemical Co., 1970b)

Data Gap(s): Chronic Dog Feeding Study; Rabbit Teratology Study

I.A.5. Confidence in the Oral RfD

Study — Medium
Database — Medium
RfD — Medium

The critical study is of adequate quality and is given a medium confidence rating. Since a chronic feeding study in another species is lacking, the data base is given a medium confidence rating. Medium confidence in the RfD follows.

I.A.6. EPA Documentation and Review of the Oral RfD

Source Document — This assessment is not presented in any existing U.S. EPA document.

Other EPA Documentation — Pesticide Registration Files

Agency Work Group Review — 04/20/1989

Verification Date — 04/20/1989

Screening-Level Literature Review Findings — A screening-level review conducted by an EPA contractor of the more recent toxicology literature pertinent to the RfD for Napropamide conducted in November 2001 did not identify any critical new studies. IRIS users who know of important new studies may provide that information to the IRIS Hotline at hotline.iris@epa.gov or (202)566-1676.

I.A.7. EPA Contacts (Oral RfD)

Please contact the IRIS Hotline for all questions concerning this assessment or IRIS, in general, at (202)566-1676 (phone), (202)566-1749 (FAX) or hotline.iris@epa.gov (internet address).

I.B. Reference Concentration for Chronic Inhalation Exposure (RfC)

Substance Name — Napropamide
CASRN — 15299-99-7
Primary Synonym — Devrinol

Not available at this time.

II. Carcinogenicity Assessment for Lifetime Exposure

Substance Name — Napropamide

CASRN — 15299-99-7

Primary Synonym — Devrinol

This substance/agent has not undergone a complete evaluation and determination under US EPA's IRIS program for evidence of human carcinogenic potential.

III. [reserved]

IV. [reserved]

V. [reserved]

VI. Bibliography

Substance Name — Napropamide

CASRN — 15299-99-7

Primary Synonym — Devrinol

VI.A. Oral RfD References

Stauffer Chemical Company. 1978a. MRID No. 00072685, 00081615. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

Stauffer Chemical Company. 1978b. MRID No. 00081614. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

Stauffer Chemical Company. 1982. MRID No. 00128104. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

Stauffer Chemical Company. 1970a. MRID No. 00091008. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

Stauffer Chemical Company. 1970b. MRID No. 00113810. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

VI.B. Inhalation RfC References

None

VI.C. Carcinogenicity Assessment References

None

VII. Revision History

Substance Name — Napropamide

CASRN — 15299-99-7

Primary Synonym — Devrinol

Date	Section	Description
07/01/1989	I.A.	Oral RfD summary on-line
12/03/2002	I.A.6.	Screening-Level Literature Review Findings message has been added.

VIII. Synonyms

Substance Name — Napropamide

CASRN — 15299-99-7

Primary Synonym — Devrinol

Last Revised — 07/01/1989

- 15299-99-7

- DEVRINOL
- N,N-DIETHYL-2-(1-NAPHTHALENYLOXY)PROPIONAMIDE
- N,N-DIETHYL-2-(1-NAPHTHYLOXY)PROPIONAMIDE
- 2-(alpha-NAPHTHOXY)-N,N-DIAETHYL-PROPIONSÄUREAMID (German)
- 2-(alpha-NAPHTHOXY)-N,N-DIETHYLPROPIONAMIDE
- NAPROPAMIDE
- PROPIONAMIDE, N,N-DIETHYL-2-(1-NAPHTHYLOXY)-
- R-7465
- R-7475

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