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Pursuit; CASRN 81335-77-5

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 Pursuit

File First On-Line 01/01/1990

| Category (section) | Assessment Available? | Last Revised |
|---|-----------------------|--------------|
| Oral RfD (I.A.) | yes | 01/01/1990 |
| 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)

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Last Revised — 01/01/1990

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 packed cell volume, hemoglobin, erythrocytes in females | NOEL: 1000 ppm (25 mg/kg/day) | 100 | 1 | 2.5E-1 mg/kg/day |
| 1-Year Dog Study Oral Exposure (diet) | LEL: 5000 ppm (125 mg/kg/day) | | | |
| American Cyanamid Co., 1987a | | | | |

* Conversion Factors: 1 ppm = 0.025 mg/kg/day (assumed dog food consumption)

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

American Cyanamid Company. 1987a. MRID No. 40429416. Available from EPA. Write to FOI, EPA, Washington, DC 20460.

Groups of 6 male and 6 female Beagle dogs/dose level were fed AC 263,499 (Technical Pursuit) for 12 months at the following dose levels: 0, 1000, 5000, or 10,000 ppm (0, 25, 125, 250 mg/kg/day). Significant decreases in packed cell volume, hemoglobin, and erythrocytes were seen in females at 5000 and 10,000 ppm. No effects were seen in males at dose levels up to 10,000 ppm.

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

UF — An uncertainty factor of 100 was used to account for the expected intra- and interspecies variability in response to the toxicity of this chemical.

MF — None

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

Data Considered for Establishing the RfD

- 1) 1-Year Feeding - dog: Principal study - see previous description; core grade guideline
- 2) 2-Year Feeding (oncogenic) - rat: Systemic NOEL=10,000 ppm (500 mg/kg/day) (HDT); core grade guideline for chronic toxicity (American Cyanamid, 1987b)
- 3) 2-Generation Reproduction - rat: Systemic and Reproductive NOEL=10,000 ppm (500 mg/kg/day) (HDT); core grade supplementary (not tested at high enough dose level) (American Cyanamid, 1987c)
- 4) Teratology - rat: Maternal toxicity NOEL=375 mg/kg/day; Maternal toxicity LEL=1000 mg/kg/day (clinical signs, increased incidence of resorptions, slight); Developmental toxicity NOEL=1125 mg/kg/day (HDT); core grade guideline (American Cyanamid, 1985a)
- 5) Teratology - rabbit: Maternal toxicity NOEL=300 mg/kg/day; Maternal toxicity LEL=1000 mg/kg/day (HDT; deaths, clinical signs); Developmental toxicity NOEL=1000 mg/kg/day (HDT); core grade minimum (too few litters at top dose) (American Cyanamid, 1986a)

Other Data Reviewed:

- 1) 2-Year Feeding (oncogenic) - mouse: Systemic NOEL=5000 ppm (750 mg/kg/day); Systemic LEL=10,000 ppm (1500 mg/kg/day) (HDT; decreased body weight gain in both sexes); core grade guideline (American Cyanamid, 1987d)
- 2) 91-Day Feeding - dog: NOEL=10,000 ppm (250 mg/kg/day) (HDT); LEL=none; core grade guideline (American Cyanamid, 1985b)
- 3) 90-Day Feeding - rat: NOEL=10,000 ppm (500 mg/kg/day) (HDT); LEL=none; core grade guideline (American Cyanamid, 1986b)

Data Gap(s): None

I.A.5. Confidence in the Oral RfD

Study — High

Database — High

RfD — High

The critical study is of good quality and is given a high confidence rating. Additional studies are supportive and of good quality; therefore, the data base is given a high confidence rating. High 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 — 01/18/1989, 10/19/1989

Verification Date — 10/19/1989

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 pursuit conducted in August 2003 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 — Pursuit

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Not available at this time.

II. Carcinogenicity Assessment for Lifetime Exposure

Substance Name — Pursuit

CASRN — 81335-77-5

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 — Pursuit
CASRN — 81335-77-5

VI.A. Oral RfD References

American Cyanamid Company. 1985a. MRID No. 40429417. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1985b. EPA Accession No. 262921. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1986a. EPA Accession No. 262923-262925. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1986b. MRID No. 262918-262920. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1987a. MRID No. 40429414. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1987b. MRID No. 40429416. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1987c. MRID No. 40429418. Available from EPA. Write to FOI, EPA, Washington DC 20460.

American Cyanamid Company. 1987d. MRID No. 40492415. 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 — Pursuit
CASRN — 81335-77-5

| Date | Section | Description |
|------------|---------|--|
| 01/01/1990 | I.A. | Oral RfD summary on-line |
| 10/28/2003 | I.A.6 | Screening-Level Literature Review Findings message has been added. |

VIII. Synonyms

Substance Name — Pursuit
CASRN — 81335-77-5
Last Revised — 01/01/1990

- 81335-77-5
- 3-Pyridinecarboxylic acid, 2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl)-5-ethyl-

- AC 263499
- Imazethapyr
- 5-Ethyl-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)nicotinic acid
- Pursuit

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