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IRIS Integrated Risk Information System

Antimony (CASRN 7440-36-0)

Health assessment information on a chemical substance is included in IRIS only after a comprehensive review of toxicity data by U.S. EPA health scientists from several Program Offices, Regional Offices, and the Office of Research and Development.

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Status of Data for Antimony

File First On-Line: 01/31/1987
Last Significant Revision: 02/01/1991

Category	Status	Last Revised
Oral RfD Assessment	On-line	02/01/1991
Inhalation RfC Assessment	No data	
Carcinogenicity Assessment	No data	

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
Longevity, blood glucose, and cholesterol	LOAEL: 0.35 mg/kg-day	1000	1	4×10^{-4} mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Rat chronic oral bioassay, Schroeder et al., 1970

Confidence in the Oral RfD
Study -- Low
Database -- Low
RFD -- Low

Reference Concentration for Chronic Inhalation Exposure (RfC)

Not Assessed under the IRIS Program.

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Not Assessed under the IRIS Program.

AR 033810

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Exhibit-2123

Not Assessed under the IRIS Program.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Not Assessed under the IRIS Program.

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

7440-36-0
Antymon
Antimony
Antimony black
Antimony powder
Antimony, regulus
C.I. 77050
Stibium
UN 2871

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AR 033811

Arsenic, inorganic (CASRN 7440-38-2)

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Status of Data for Arsenic, inorganic

File First On-Line: 02/10/1988
Last Significant Revision: 06/01/1995

Category	Status	Last Revised
Oral RfD Assessment	On-line	02/01/1993
Inhalation RfC Assessment	No data	
Carcinogenicity Assessment	On-line	04/10/1998

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
Hyperpigmentation, keratosis and possible vascular complications	NOAEL: 0.0008 mg/kg-day	3	1	$3x10^{-4}$ mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Human chronic oral exposure, Tseng, 1977; Tseng et al., 1968

Confidence in the Oral RfD
Study -- Medium
Database -- Medium
RFD -- Medium

Reference Concentration for Chronic Inhalation Exposure (RfC)

Not Assessed under the IRIS Program.

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
A (Human Carcinogen)

AR 033812

Weight of Evidence Narrative:

Based on sufficient evidence from human data. An increased lung cancer mortality was observed in multiple human populations exposed primarily through inhalation. Also, increased mortality from multiple internal organ cancers (liver, kidney, lung, and bladder) and an increased incidence of skin cancer were observed in populations consuming drinking water high in inorganic arsenic.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Oral Slope Factor(s)	Drinking Water Unit Risk(s)	Extrapolation Method
1.5 per mg/kg-day	$5x10^{-2}$ per mg/L	Time- and dose-related formulation of the multistage model

Drinking Water Concentrations at Specified Risk Levels

Risk Level	Concentration
E-4 (1 in 10,000)	$2x10^{-3}$ mg/L
E-5 (1 in 100,000)	$2x10^{-4}$ mg/L
E-6 (1 in 1,000,000)	$2x10^{-5}$ mg/L

Dose-Response Data (Carcinogenicity, Oral Exposure)

Tumor Type: Skin cancer
Test Species: Human
Route: Oral, Drinking water
Reference: Tseng, 1977; Tseng et al., 1968; U.S. EPA, 1988

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Air Unit Risk(s)	Extrapolation Method
4.3 per mg/m3	Absolute-risk linear model

Air Concentrations at Specified Risk Levels

Risk Level	Concentration
E-4 (1 in 10,000)	$2x10^{-5}$ mg/m3
E-5 (1 in 100,000)	$2x10^{-6}$ mg/m3
E-6 (1 in 1,000,000)	$2x10^{-7}$ mg/m3

Dose-Response Data (Carcinogenicity, Inhalation Exposure)

Tumor Type: Lung cancer
Test Species: Human, male
Route: Inhalation, Occupational exposure
Reference: Brown and Chu, 1983a,b,c; Lee-Feldstein, 1983; Higgins, 1982; Enterline and Marsh, 1982

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

Arsenic
Arsenic, inorganic
7440-38-2
Gray-arsenic
Arsenic, inorganic

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AR 033814

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Beryllium and compounds (CASRN 7440-41-7)

Toxicological Review (PDF) Available

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For definitions of terms in the IRIS Web site, refer to the IRIS Glossary.

Status of Data for Beryllium and compounds

File First On-Line: 01/31/1997
Last Significant Revision: 04/03/1998

Category	Status	Last Revised
Oral RfD Assessment	On-line	04/03/1998
Inhalation RfC Assessment	On-line	04/03/1998
Carcinogenicity Assessment	On-line	04/03/1998

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
Small intestinal lesions	BMD_{10}: 0.46 mg/kg-day	300	1	$2x10^{-3}$ mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Dog dietary study, Morgareidge et al., 1976

Confidence in the Oral RfD
Study -- Medium
Database -- Low/Medium
RFD -- Low/Medium

Reference Concentration for Chronic Inhalation Exposure (RfC)

Critical Effect	Experimental Dose	UF	MF	RfC
Beryllium sensitization and progression to CBD	LOAEL (HEC): 0.0002 mg/m3	10	1	$2x10^{-5}$ mg/m3

The Experimental Dose listed serves as a basis from which the Inhalation RfC was derived. See Discussion of Conversion Factors and Assumptions for more details.

AR 033815

Principal Study
Occupational study, Kreiss et al., 1996

Confidence in the Inhalation RfC
Study -- Medium
Database -- Medium
RfC -- Medium

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
B1 (Probable human carcinogen - based on limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in animals)

Weight of Evidence Narrative:
Using the 1996 proposed Guidelines for Carcinogen Risk Assessment, inhaled beryllium would be characterized as a "likely" carcinogen in humans, and the human carcinogenic potential of ingested beryllium cannot be determined.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Information reviewed but value not estimated. Refer to Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Air Unit Risk(s)	Extrapolation Method
2.4 per mg/m3	Relative risk

Air Concentrations at Specified Risk Levels

Risk Level	Concentration
E-4 (1 in 10,000)	$4x10^{-5}$ mg/m3
E-5 (1 in 100,000)	$4x10^{-6}$ mg/m3
E-6 (1 in 1,000,000)	$4x10^{-7}$ mg/m3

Dose-Response Data (Carcinogenicity, Inhalation Exposure)
Tumor Type: Lung cancer
Test Species: Human, male
Route: Inhalation, Occupational exposure
Reference: Wagoner et al., 1980

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

7440-41-7
Beryllium
Beryllium-9
Glucinum
RCRA Waste Number p015
UN 1567
Beryllium and compounds

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AR 033816

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Cadmium (CASRN 7440-43-9)

Health assessment information on a chemical substance is included in IRIS only after a comprehensive review of toxicity data by U.S. EPA health scientists from several Program Offices, Regional Offices, and the Office of Research and Development.

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Status of Data for Cadmium

File First On-Line: 03/31/1987
Last Significant Revision: 01/01/1991

Category	Status	Last Revised
Oral RfD Assessment	On-line	02/01/1994
Inhalation RfC Assessment	No data	
Carcinogenicity Assessment	On-line	06/01/1992

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
Significant proteinuria	NOAEL: 0.005 mg/kg-day	10	1	$5x10^{-4}$ mg/kg-day (water)
	NOAEL: 0.01 mg/kg-day	10	1	$1x10^{-3}$ mg/kg-day (food)

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Human studies involving chronic exposures, U.S. EPA, 1985

Confidence in the Oral RfD
Study -- Not Available
Database -- High
RFD -- High

Study -- Not Available
Database -- High
RFD -- High

Reference Concentration for Chronic Inhalation Exposure (RfC)

Not Assessed under the IRIS Program.

AR 033818

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
B1 (Probable human carcinogen - based on limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in animals)

Weight of Evidence Narrative:
Limited evidence from occupational epidemiologic studies of cadmium is consistent across investigators and study populations. There is sufficient evidence of carcinogenicity in rats and mice by inhalation and intramuscular and subcutaneous injection. Seven studies in rats and mice wherein cadmium salts (acetate, sulfate, chloride) were administered orally have shown no evidence of carcinogenic response.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Not Assessed under the IRIS Program.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Air Unit Risk(s)	Extrapolation Method
1.8 per mg/m3	Two stage; only first affected by exposure; extra risk

Air Concentrations at Specified Risk Levels

Risk Level	Concentration
E-4 (1 in 10,000)	$6x10^{-5}$ mg/m3
E-5 (1 in 100,000)	$6x10^{-6}$ mg/m3
E-6 (1 in 1,000,000)	$6x10^{-7}$ mg/m3

Dose-Response Data (Carcinogenicity, Inhalation Exposure)
Tumor Type: Lung, trachea, bronchus cancer deaths
Test Species: Human/ white male
Route: Inhalation, Exposure in the workplace
Reference: Thun et al., 1985

Revision History

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Synonyms

Cadmium
7440-43-9
Kadmium
C.I. 77180

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AR 033819

Chromium(III), insoluble salts (CASRN 16065-83-1)

Toxicological Review (PDF) Available

Health assessment information on a chemical substance is included in IRIS only after a comprehensive review of toxicity data by U.S. EPA health scientists from several Program Offices, Regional Offices, and the Office of Research and Development.

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For definitions of terms in the IRIS Web site, refer to the IRIS Glossary.

Status of Data for Chromium(III), insoluble salts

File First On-Line: 01/31/1987
Last Significant Revision: 09/03/1998

Category	Status	Last Revised
Oral RfD Assessment	On-line	09/03/1998
Inhalation RfC Assessment	On-line	09/03/1998
Carcinogenicity Assessment	On-line	09/03/1998

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
No effects observed	NOAEL (ADJ): 1468 mg/kg-day	100	10	1.5 mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Rat chronic feeding study, Ivankovic and Preussman, 1975

Confidence in the Oral RfD
Study -- Low
Database -- Low
RFD -- Low

Reference Concentration for Chronic Inhalation Exposure (RfC)

Information reviewed but value not estimated. Refer to Full IRIS Summary.

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
D (Not classifiable as to human carcinogenicity)

AR 033820

Weight of Evidence Narrative:

Using the Proposed Guidelines for Carcinogen Risk Assessment (EPA, 1996), there are inadequate data to determine the potential carcinogenicity of trivalent chromium, as discussed below. However, the classification of hexavalent chromium as a known human carcinogen raises a concern for the carcinogenic potential of trivalent chromium.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Not Assessed under the IRIS Program.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Not Assessed under the IRIS Program.

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

Chromium (III)
Chromic ion
16065-83-1
7440-47-3
Chromium
Chromium (III) ion
Chromium, ion
Chromium(III), insoluble salts

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AR 033821

Chromium(VI) (CASRN 18540-29-9)

Toxicological Review (PDF) Available

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For definitions of terms in the IRIS Web site, refer to the IRIS Glossary.

Status of Data for Chromium(VI)

File First On-Line: 03/31/1987
Last Significant Revision: 09/03/1998

Category	Status	Last Revised
Oral RfD Assessment	On-line	09/03/1998
Inhalation RfC Assessment	On-line	09/03/1998
Carcinogenicity Assessment	On-line	09/03/1998

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
None reported	NOAEL (ADJ): 2.5 mg/kg-day	300	3	$3x10^{-3}$ mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Rat, 1-year drinking water study, MacKenzie et al., 1958

Confidence in the Oral RfD
Study -- Low
Database -- Low
RFD -- Low

Reference Concentration for Chronic Inhalation Exposure (RfC)

Critical Effect	Experimental Dose	UF	MF	RfC
Nasal septum atrophy	LOAEL (ADJ): 0.000714 mg/m3	90	1	$8x10^{-6}$ mg/m3 (Chromic acid mists and dissolved Cr(VI) aerosols)
Lactate dehydrogenase in bronchioalveolar lavage fluid	BMC_{10} (ADJ): 0.034 mg/m3	300	1	$1x10^{-4}$ mg/m3 (Cr(VI) particulates)

The Experimental Dose listed serves as a basis from which the Inhalation RfC was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Human subchronic occupational study, Lindberg and Hedenstierna, 1983

Rat subchronic study, Glaser et al., 1990; Malsch et al., 1994

Confidence in the Inhalation RfC
Study -- Low
Database -- Low
RfC -- Low

Study -- Medium
Database -- Not Available
RfC -- Medium

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
A (Human Carcinogen) (Inhalation route)

D (Not classifiable as to human carcinogenicity) (Oral route)

Weight of Evidence Narrative:
Under the proposed guidelines (EPA, 1996), Cr(VI) would be characterized as a known human carcinogen by the inhalation route of exposure.

The oral carcinogenicity of Cr(VI) cannot be determined. No data were located in the available literature that suggested that Cr(VI) is carcinogenic by the oral route of exposure.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Information reviewed but value not estimated. Refer to Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Air Unit Risk(s)	Extrapolation Method
$1.2x10^{1}$ per mg/m3	Multistage, extra risk

Air Concentrations at Specified Risk Levels

Risk Level	Concentration
E-4 (1 in 10,000)	$8x10^{-6}$ mg/m3
E-5 (1 in 100,000)	$8x10^{-7}$ mg/m3
E-6 (1 in 1,000,000)	$8x10^{-8}$ mg/m3

Dose-Response Data (Carcinogenicity, Inhalation Exposure)
Tumor Type: Lung cancer
Test Species: Human
Route: Inhalation, Occupational exposure
Reference: Mancuso, 1975

Revision History

Review Full IRIS Summary for complete Revision History.

AR 033823

Synonyms

Chromic ion
Chromium (VI)
18540-29-9
7440-47-3
Chromium
Chromium, ion
Chromium (VI) ion

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AR 033824

The United States Environmental Protection Agency

Integrated Risk Information System

Selenium and Compounds (CASRN 7782-49-2)

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For definitions of terms in the IRIS Web site, refer to the IRIS Glossary.

Status of Data for Selenium and Compounds

File First On-Line: 03/01/1991
Last Significant Revision: 06/01/1991

Category	Status	Last Revised
Oral RfD Assessment	On-line	09/01/1991
Inhalation RfC Assessment	No data	
Carcinogenicity Assessment	On-line	07/01/1993

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
Clinical selenosis	NOAEL: 0.015 mg/kg-day	3	1	$5x10^{-3}$ mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Human epidemiological study, Yang et al., 1989b

Confidence in the Oral RfD
Study -- Medium
Database -- High
RFD -- High

Reference Concentration for Chronic Inhalation Exposure (RfC)

Not Assessed under the IRIS Program.

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
D (Not classifiable as to human carcinogenicity)

AR 033825

Weight of Evidence Narrative:
Based on inadequate human data and inadequate evidence of carcinogenicity in animals. The evidence for various selenium compounds in animal and mutagenicity studies is conflicting and difficult to interpret; however, evidence for

selenium sulfide is sufficient for a B2 (probable human carcinogen) classification.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Not Assessed under the IRIS Program.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Not Assessed under the IRIS Program.

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

Elemental Selenium
Selenium dust
C.I. 77805
EPA Pesticide Chemical Code 072001
Selenium elemental
Selenic acid, disodium salt
Sodium selenate
Disodium selenium trioxide
7782-49-2
Selenium
Caswell No. 732
HSDB 4493
Selen [polish]
Selenio [Spanish]
Selenium
Selenium alloy
Selenium base
Selenium homopolymer
13410-01-0
Caswell No. 791
Natriumseleniat [German]
NSC 378348
Selenic acid, disodium salt
10102-18-8
Disodium selenite
HSDB 768
Natriumselenit [German]
Sodium selenite
UN 2630
7783-00-8
Selenious acid
Selenious acid
7783-08-6
Selenic acid
Acido selenico [Spanish]
HSDB 675
Selenic acid
Sodium selenide [na2se]
Disodium monoselenide
Monohydrated Selenium Dioxide
1313-85-5
Selenium and Compounds
UN 2658
Disodium selenate
Selenious acid, disodium salt
Selenious acid, disodium salt

HSDB 6065
Acide selenique [French]
UN 1905
Sodium selenide
EPA Pesticide Chemical Code 072002

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AR 033827

EPA The United States Environmental Protection Agency

IRIS Integrated Risk Information System

Silver (CASRN 7440-22-4)

Health assessment information on a chemical substance is included in IRIS only after a comprehensive review of toxicity data by U.S. EPA health scientists from several Program Offices, Regional Offices, and the Office of Research and Development.

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For definitions of terms in the IRIS Web site, refer to the IRIS Glossary.

Status of Data for Silver

File First On-Line: 01/31/1987
Last Significant Revision: 12/01/1991

Category	Status	Last Revised
Oral RfD Assessment	On-line	12/01/1996
Inhalation RfC Assessment	No data	
Carcinogenicity Assessment	On-line	06/01/1989

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
Argyria	LOAEL: 0.014 mg/kg-day	3	1	5×10^{-3} mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
2- to 9-year human i.v. study, Gaul and Staud, 1935

Confidence in the Oral RfD
Study -- Medium
Database -- Low
RFD -- Low

Reference Concentration for Chronic Inhalation Exposure (RfC)

Not Assessed under the IRIS Program.

Carcinogenicity Assessment for Lifetime Exposure

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
D (Not classifiable as to human carcinogenicity)

Weight of Evidence Narrative:
In animals, local sarcomas have been induced after implantation of foils and discs of silver. However, the interpretation of these findings has been questioned due to the phenomenon of solid-state carcinogenesis in which even insoluble solids

such as plastic have been shown to result in local fibrosarcomas.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Not Assessed under the IRIS Program.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Not Assessed under the IRIS Program.

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

Collargol
7440-22-4
Argentum crede
Silver

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AR 033829

Zinc and Compounds (CASRN 7440-66-6)

Health assessment information on a chemical substance is included in IRIS only after a comprehensive review of toxicity data by U.S. EPA health scientists from several Program Offices, Regional Offices, and the Office of Research and Development.

Disclaimer: This QuickView represents a snapshot of key information. We suggest that you read the Full IRIS Summary to put this information into complete context.

For definitions of terms in the IRIS Web site, refer to the IRIS Glossary.

Status of Data for Zinc and Compounds

File First On-Line: 02/01/1991
Last Significant Revision: 10/01/1992

Category	Status	Last Revised
Oral RfD Assessment	On-line	10/01/1992
Inhalation RfC Assessment	No data	
Carcinogenicity Assessment	On-line	02/01/1991

Chronic Health Hazard Assessments for Noncarcinogenic Effects

Reference Dose for Chronic Oral Exposure (RfD)

Critical Effect	Experimental Dose	UF	MF	RfD
47% decrease in erythrocyte superoxide dismutase (ESOD) concentration in adult females after 10 weeks of zinc exposure	LOAEL: 1.0 mg/kg-day	3	1	$3x10^{-1}$ mg/kg-day

The Experimental Dose listed serves as a basis from which the Oral RfD was derived. See Discussion of Conversion Factors and Assumptions for more details.

Principal Study
Human diet supplement study, Yadrick et al., 1989

Confidence in the Oral RfD
Study -- Medium
Database -- Medium
RFD -- Medium

Reference Concentration for Chronic Inhalation Exposure (RfC)

Not Assessed under the IRIS Program.

Carcinogenicity Assessment for Lifetime Exposure

AR 033830

Weight of Evidence Characterization

Weight of Evidence (1986 US EPA Guidelines):
D (Not classifiable as to human carcinogenicity)

Weight of Evidence Narrative:
Based on inadequate evidence in humans and animals.

This may be a synopsis of the full weight-of-evidence narrative. See Full IRIS Summary.

Quantitative Estimate of Carcinogenic Risk from Oral Exposure

Not Assessed under the IRIS Program.

Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure

Not Assessed under the IRIS Program.

Revision History

Review Full IRIS Summary for complete Revision History.

Synonyms

Zinc
Emanay zinc dust
UN 1436
Zinc, ashes
7440-66-6
Asarco l 15
Blue powder
Cinc [Spanish]
Granular zinc
HSDB 1344
Jasad
Lead refinery vacuum zinc
Merrillite
Zinc
Zinc dust
Zinc powder
Zinc, powder or dust, non-pyrophoric
Zinc, powder or dust, pyrophoric
Zinc and Compounds

List of IRIS Substances

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URL: http://www.epa.gov/iris/quickview.cfm
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