

9-6-06

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SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 05/26/2006
Date Updated: 01/31/2006
Version: 1.30

Section 1 - Product and Company Information

Product Name	Yohimbine hydrochloride, minimum 98% TLC		
Product Number	Y3125		
Brand	Sigma Chemical		
Company	Sigma-Aldrich		
Street Address	3050 Spruce Street		
City, State, Zip, Country	SAINT LOUIS, MO 63103 US		
Technical Phone:	800-325-5832	Emergency Phone:	314-776-6555
Fax:	800-325-5052		

Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
YOHIMBINE HYDROCHLORIDE	65-19-0	No	200-600-4	

Formula	C21H26N2O3.ClH
Synonyms	Antagonil, Aphrodine hydrochloride, NIH 9689, Yohimban-16-alpha-carboxylic acid, 17-alpha-hydroxy-, methyl ester, monohydrochloride, Yohimbine hydrochloride, Yohimbine monohydrochloride, Yohimbin hydrochloride

Section 3 - Hazards Identification

Emergency Overview
Highly Toxic (USA) Toxic (EU).
Toxic by inhalation, in contact with skin and if swallowed.
Target organ(s): Heart. Nerves.

HMIS Rating
Health: 2 Flammability: 0 Reactivity: 0

NFPA Rating
Flammability: 0 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media

Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill

Evacuate area.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Use only in a chemical fume hood.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

General Hygiene Measures

Wash contaminated clothing before reuse. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance

Physical State

Solid

Molecular Weight: 390.91 AMU

pH N/A
BP/BP Range N/A
MP/MP Range 288 - 290 °C
Freezing Point N/A
Vapor Pressure N/A
Vapor Density N/A
Saturated Vapor Conc. N/A
SG/Density N/A
Bulk Density N/A
Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point °F N/A
Flash Point °C N/A

Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability

Stable

Stable.

Materials to Avoid

Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, and nitrogen oxides, Hydrogen chloride gas.

Hazardous Polymerization

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact

May cause skin irritation.

Eye Contact

May cause eye irritation.

Inhalation

Material may be irritating to mucous membranes and upper respiratory tract.

Multiple Routes

May be toxic by inhalation, in contact with skin, and if swallowed.

Target Organ(s) or System(s)

Heart. Nerves.

Signs and Symptoms of Exposure

Prolonged exposure can cause: Damage to the heart. Yohimbine produces competitive alphaadrenergic blockade and blocks 5-hydroxytryptamine receptors. It penetrates the CNS readily producing a complex pattern of responses which include antidiuresis, elevations of blood pressure and heart rate, increased motor activity, irritability and tremor, sweating, nausea, and vomiting. It is a selective inhibitor of alpha-2 adrenergic receptors enhancing neural release of norepinephrine. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Conditions Aggravated by Exposure

May cause nervous system disturbances.

RTECS Number: ZG1015000

Toxicity Data

Intraperitoneal - Rat: 55 MG/KG (LD50)

Remarks: Brain and Coverings:Recordings from specific areas of CNS.
Autonomic Nervous System:Central sympatholytic.

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Remarks: Brain and Coverings:Recordings from specific areas of CNS.
Autonomic Nervous System:Central sympatholytic.

Oral - Mouse: 40 mg/kg (LD50)

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Ptosis.
Behavioral:Muscle contraction or spasticity.
Lungs, Thorax, or Respiration:Respiratory depression.

Oral - Mouse: 40 mg/kg (LD50)

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Ptosis.
Behavioral:Muscle contraction or spasticity.
Lungs, Thorax, or Respiration:Respiratory depression.

Intraperitoneal - Mouse: 45 MG/KG (LD50)

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Subcutaneous - Mouse: 43900 UG/KG (LD50)

Remarks: Behavioral:Altered sleep time (Including change in righting reflex).
Behavioral:Convulsions or effect on seizure threshold.

Subcutaneous - Mouse: 43900 UG/KG (LD50)

Remarks: Behavioral:Altered sleep time (Including change in righting reflex).
Behavioral:Convulsions or effect on seizure threshold.

Intraperitoneal - Guinea pig: 42 MG/KG (LD50)

Intraperitoneal - Guinea pig: 42 MG/KG (LD50)

Subcutaneous - Frog: 34 MG/KG (LD50)

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Parenteral - Frog: 26 MG/KG (LD50)

Parenteral - Frog: 26 MG/KG (LD50)

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Alkaloids, solid, n.o.s. [or] Alkaloid salts, solid, n.o.s. [poisonous]

UN#: 1544

Class: 6.1

Packing Group: Packing Group II

Hazard Label: Toxic substances.

PIH: Not PIH

IATA

Proper Shipping Name: Alkaloid salts, solid, n.o.s.

IATA UN Number: 1544

Hazard Class: 6.1

Packing Group: II

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: T

Indication of Danger

Toxic.

Risk Statements R: 23/24/25

Toxic by inhalation, in contact with skin and if swallowed.

Safety Statements S: 22 36/37/39 45

Do not breathe dust. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text

Indication of Danger

Highly Toxic (USA) Toxic (EU).

Risk Statements

Toxic by inhalation, in contact with skin and if swallowed.

Safety Statements

Do not breathe dust. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements

Target organ(s): Heart. Nerves.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes Yes

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information

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required by the CPR.

DSL: No

NDSL: Yes

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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