

MATERIAL SAFETY DATA SHEET

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Version 1.4

Section 1 - Product and Company Information

Product Name YOHIMBINE HYDROCHLORIDE
Product Number Y3125
Brand SIGMA

Company Sigma-Aldrich Canada, Ltd
Address 2149 Winston Park Drive
Oakville ON L6H 6J8 CA

Technical Phone: 9058299500
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Emergency Phone: 800-424-9300

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
YOHIMBINE HYDROCHLORIDE	65-19-0	No

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

RTECS Number: ZG1015000

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: 3
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING

HEALTH: 3
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

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

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.

SPECIAL REQUIREMENTS

Light sensitive.

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	
Property	Value	At Temperature or Pressure
Molecular Weight	390.91 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	288.0 - 290.0 °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	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	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

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. Prolonged exposure can cause: Damage to the heart.

CONDITIONS AGGRAVATED BY EXPOSURE

May cause nervous system disturbances.

TOXICITY DATA

Intraperitoneal

Rat

55 MG/KG

LD50

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

Oral Oral

Mouse Mouse

40 mg/kg 40 mg/kg

LD50 LD50

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

Intraperitoneal Intraperitoneal

Mouse Mouse

45 MG/KG 45 MG/KG

LD50 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.
R: 23/24/25
Risk Statements: Toxic by inhalation, in contact with skin and if swallowed.
S: 22-36/37/39-45
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 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 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 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.