

# 1-Iodoctane

sc-237573



The Power is Question

## Material Safety Data Sheet

Hazard Alert Code Key: **EXTREME** **HIGH** **MODERATE** **LOW**

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

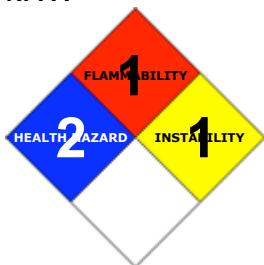
### PRODUCT NAME

1-Iodoctane

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C8-H17-I, CH<sub>3</sub>(CH<sub>2</sub>)<sub>6</sub>CH<sub>2</sub>I, "octane, 1-iodo-", "octyl iodide", "n-octyl iodide", "1-octyl iodide", "1-n-octyl iodide"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability:	1	
Toxicity:	2	
Body Contact:	2	
Reactivity:	1	
Chronic:	2	

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Forms very sensitive explosive metallic compounds.  
Irritating to eyes, respiratory system and skin.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

#### SWALLOWED

■ Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre-existing organ (e.g.

#### EYE

■ This material can cause eye irritation and damage in some persons.

#### SKIN

- This material can cause inflammation of the skin on contact in some persons.
- The material may accentuate any pre-existing dermatitis condition.
- Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

#### INHALED

- The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
- Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.
- Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.
- Inhalation hazard is increased at higher temperatures.
- Acute intoxication by halogenated aliphatic hydrocarbons appears to take place over two stages. Signs of a reversible narcosis are evident in the first stage and in the second stage signs of injury to organs may become evident, a single organ alone is (almost) never involved.
- Depression of the central nervous system is the most outstanding effect of most halogenated aliphatic hydrocarbons. Inebriation and excitation, passing into narcosis, is a typical reaction.
- In the case of iodised and brominated compounds, exposure effects cannot be described by simple central nervous system depression produced by other halogenated aliphatic hydrocarbons. Headache, nausea, ataxia (loss of muscle co-ordination), tremors, speech difficulties, visual disturbances, convulsions, paralysis, delirium, mania and apathy are all evidence of additional effects.

#### CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
1-iodooctane	629-27-6	>98
stabilised (typically) with copper		

## Section 4 - FIRST AID MEASURES

#### SWALLOWED

■ If poisoning occurs, contact a doctor or Poisons Information Center. · Avoid giving milk or oils. · Avoid giving alcohol. · If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

#### EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

#### SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

#### INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

#### NOTES TO PHYSICIAN

■ Treat symptomatically.

for intoxication due to Freons/ Halons;

A: Emergency and Supportive Measures

· Maintain an open airway and assist ventilation if necessary

· Treat coma and arrhythmias if they occur. Avoid (adrenaline) epinephrine or other sympathomimetic amines that may precipitate ventricular arrhythmias. Tachyarrhythmias caused by increased myocardial sensitization may be treated with propranolol, 1-2 mg IV or esmolol 25-100 microg/kg/min IV.

DO NOT administer sympathomimetic drugs as they may cause ventricular arrhythmias.

## Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG): Not available

Upper Explosive Limit (%): Not available

Specific Gravity (water=1): 1.330

Lower Explosive Limit (%): Not available

### EXTINGUISHING MEDIA

· Foam.

· Dry chemical powder.

### FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.

· Wear full body protective clothing with breathing apparatus.

### GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

· Combustible.

· Slight fire hazard when exposed to heat or flame.

Combustion products include: carbon dioxide (CO<sub>2</sub>), hydrogen iodide, other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

May emit corrosive fumes.

### FIRE INCOMPATIBILITY

■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

### PERSONAL PROTECTION

Glasses:

Chemical goggles.

Gloves:

Respirator:

Type A Filter of sufficient capacity

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

· Remove all ignition sources.

· Clean up all spills immediately.

### MAJOR SPILLS

■ Moderate hazard.

· Clear area of personnel and move upwind.

· Alert Emergency Responders and tell them location and nature of hazard.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

· DO NOT allow clothing wet with material to stay in contact with skin.

· Avoid all personal contact, including inhalation.

· Wear protective clothing when risk of exposure occurs.

### RECOMMENDED STORAGE METHODS

■ DO NOT use aluminum or galvanized containers.

· Metal can or drum

· Packing as recommended by manufacturer.

### STORAGE REQUIREMENTS

· Store in original containers.

· Keep containers securely sealed.

· No smoking, naked lights or ignition sources.

· Store in a cool, dry, well-ventilated area.

· Store away from incompatible materials and foodstuff containers.

· Protect containers against physical damage and check regularly for leaks.

· Observe manufacturer's storing and handling recommendations.

May discolour on exposure to light.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
US TSCA New Chemical Exposure Limits (NCEL)	1-iodooctane (Halogenated alkanes (P84-106/107))	1.0							
Canada - British Columbia Occupational Exposure Limits	1-iodooctane (Iodides, Inhalable Revised 2008)	0.01							
US ACGIH Threshold Limit Values (TLV)	1-iodooctane (Iodides)	0.01							TLV Basis: Hypothyroidism; upper respiratory tract irritation
Canada - Prince Edward Island Occupational Exposure Limits ENDOELTABLE	1-iodooctane (Iodides)	0.01							TLV Basis: Hypothyroidism; upper respiratory tract irritation

### PERSONAL PROTECTION



#### RESPIRATOR

Type A Filter of sufficient capacity  
Consult your EHS staff for recommendations

#### EYE

- Safety glasses with side shields.
- Chemical goggles.

#### HANDS/FEET

■ Wear chemical protective gloves, eg. PVC.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- Neoprene gloves.

#### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

#### ENGINEERING CONTROLS

■ Local exhaust ventilation usually required. If risk of overexposure exists, wear an approved respirator.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

## PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Sinks in water.

State	Liquid	Molecular Weight	240.13
Melting Range (°F)	32.8- - 45	Viscosity	Not Available
Boiling Range (°F)	437- 438.8	Solubility in water (g/L)	Immiscible
Flash Point (°F)	203	pH (1% solution)	Not applicable.
Decomposition Temp (°F)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapour Pressure (mmHG)	Not available
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	1.330
Lower Explosive Limit (%)	Not available	Relative Vapor Density (air=1)	Not available
Volatile Component (%vol)	Not available	Evaporation Rate	Not available

## APPEARANCE

Colourless to light gold liquid; does not mix with water. May discolour on standing.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

#### ■ Haloalkanes:

- are highly reactive:some of the more lightly substituted lower members are highly flammable; the more highly substituted may be used as fire suppressants, not always with the anticipated results.
  - may react with the lighter divalent metals to produce more reactive compounds analogous to Grignard reagents.
  - may produce explosive compounds following prolonged contact with metallic or other azides
  - may react on contact with potassium or its alloys - although apparently stable on contact with a wide range of halocarbons, reaction products may be shock-sensitive and may explode with great violence on light impact; severity generally increases with the degree of halocarbon substitution and potassium-sodium alloys give extremely sensitive mixtures .
- BRETHERRICK L.: Handbook of Reactive Chemical Hazards
- react with metal halides and active metals, eg. sodium (Na), potassium (K), lithium (Li),calcium (Ca), zinc (Zn), powdered aluminium (Al) and aluminium alloys, magnesium (Mg) and magnesium alloys.
  - may react with brass and steel.
  - may react explosively with strong oxidisers
  - may degrade rubber, and plastics such as methacrylate polymers, polyethylene and polystyrene, paint and coatings.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

1-iodooctane

### TOXICITY AND IRRITATION

1-iodooctane:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Intraperitoneal (rat) LD50: 1982 mg/kg	Nil Reported
Intraperitoneal (mouse) LD50: 1416 mg/kg	

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

## Section 12 - ECOLOGICAL INFORMATION

No data

## Ecotoxicity

Ingredient 1-iodooctane	Persistence: Water/Soil HIGH	Persistence: Air LOW	Bioaccumulation LOW	Mobility MED
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## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

‡ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.

## Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

**1-iodooctane (CAS: 629-27-6) is found on the following regulatory lists;**

"Canada Non-Domestic Substances List (NDSL)", "US Toxic Substances Control Act (TSCA) - Inventory"

## Section 16 - OTHER INFORMATION

### ND

Substance CAS Suggested codes 1- iodooctane 629- 27- 6

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■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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