

# Tryptone

sc-208474

## Material Safety Data Sheet



The Power is Question

Hazard Alert Code  
Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

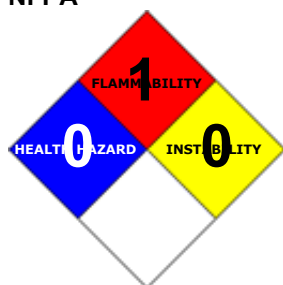
### PRODUCT NAME

Tryptone

### STATEMENT OF HAZARDOUS NATURE

Not considered a hazardous substance according to OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Company: Santa Cruz Biotechnology, Inc.

Address:

2145 Delaware Ave

Santa Cruz, CA 95060

Telephone: 800.457.3801 or 831.457.3800

Emergency Tel: CHEMWATCH: From within the US and  
Canada: 877-715-9305

Emergency Tel: From outside the US and Canada: +800 2436  
2255 (1-800-CHEMCALL) or call +613 9573 3112

### PRODUCT USE

An extremely rich source of amino acid nitrogen, may be recommended for the preparation of sterility test media, Dubos medium, media used in the canning industry; also for production of indole, the material having a high tryptophan content.

### SYNONYMS

"casein hydrolysate", "trypsin digest of casein", "pancreatic digest of proteins"

## Section 2 - HAZARDS IDENTIFICATION

### CANADIAN WHMIS SYMBOLS

None

### EMERGENCY OVERVIEW

#### RISK

### 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. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

#### EYE

■ Although the material is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

#### SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in

an occupational setting.






#### INHALED

■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

#### CHRONIC HEALTH EFFECTS

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

#### HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	0		
Body Contact:	0		
Reactivity:	0		Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4
Chronic:	0		

NAME	CAS RN	%
tryptone	None	>90

### Section 4 - FIRST AID MEASURES

#### SWALLOWED

- 
- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

#### 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.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

#### SKIN

- If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

#### INHALED

- 
- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

#### NOTES TO PHYSICIAN

- Treat symptomatically.
- Sterile isotonic saline is the preferred eye irrigant.

### Section 5 - FIRE FIGHTING MEASURES

Upper Explosive Limit (%):	Not available.
Specific Gravity (water=1):	Not available
Lower Explosive Limit (%):	Not available.
Relative Vapor Density (air=1):	Not applicable.

#### EXTINGUISHING MEDIA

- Carbon dioxide.
- Dry chemical powder.
- Foam.
- Water spray or fog.

#### FIRE FIGHTING

- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.

If safe to do so, remove containers from path of fire.

Cool fire exposed containers with water spray from a protected location.

Use fire fighting procedures suitable for surrounding area.

#### GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible.
- Not considered to be a significant fire risk.

May emit clouds of acrid smoke.  
Other decomposition products include: nitrogen oxides (NOx).

#### **FIRE INCOMPATIBILITY**

- Avoid contact with strong oxidizers.

#### **PERSONAL PROTECTION**

Glasses:

Safety Glasses.

| None required when handling small quantities.

Gloves:

When handling larger quantities:

General purpose rubber glove.

Respirator:

Particulate

## **Section 6 - ACCIDENTAL RELEASE MEASURES**

#### **MINOR SPILLS**

- Clean up all spills immediately.

Wear impervious gloves and safety glasses.

Use dry clean up procedures and avoid generating dust.

Place in suitable containers for disposal.

#### **MAJOR SPILLS**

- Wear impervious gloves and safety glasses.

If exposure to workplace dust is not controlled, respiratory protection is required; wear SAA approved dust respirator.

Prevent, by any means available, spillage from entering drains or watercourses.

Use dry clean up procedures and avoid generating dust.

Recover uncontaminated product in clean, dry, labelled containers.

Collect residues and seal in labelled drums for disposal.

Wash spill area with large quantities of water.

#### **ACUTE EXPOSURE GUIDELINE LEVELS (AEGL) (in ppm)**

AEGL 1: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

AEGL 2: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

AEGL 3: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

## **Section 7 - HANDLING AND STORAGE**

#### **PROCEDURE FOR HANDLING**

■

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

#### **RECOMMENDED STORAGE METHODS**

- Packaging as recommended by manufacturer.

- Check that containers are clearly labeled

#### **STORAGE REQUIREMENTS**

- Observe manufacturer's storing and handling recommendations.

Store in a cool, dry place.

Store away from strong oxidizers.

Protect containers against physical damage.

- Keep containers securely sealed

#### **SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS**



X: Must not be stored together

O: May be stored together with specific preventions

+: May be stored together

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
US - Oregon Permissible Exposure Limits (Z3)	tryptone (Inert or Nuisance Dust: (d) Total dust)		10						*
US OSHA Permissible Exposure Levels (PELs) - Table Z3	tryptone (Inert or Nuisance Dust: (d) Respirable fraction)		5						
US OSHA Permissible Exposure Levels (PELs) - Table Z3	tryptone (Inert or Nuisance Dust: (d) Total dust)		15						
US - Hawaii Air Contaminant Limits	tryptone (Particulates not other wise regulated - Total dust)		10						
US - Hawaii Air Contaminant Limits	tryptone (Particulates not other wise regulated - Respirable fraction)		5						
US - Oregon Permissible Exposure Limits (Z3)	tryptone (Inert or Nuisance Dust: (d) Respirable fraction)		5						*

### MATERIAL DATA

#### TRYPTONE:

■ These "dusts" have little adverse effect on the lungs and do not produce toxic effects or organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:

- the architecture of the air spaces remain intact,
- scar tissue (collagen) is not synthesised to any degree,
- tissue reaction is potentially reversible.

Extensive concentrations of P.N.O.C.s may:

- seriously reduce visibility,
- cause unpleasant deposits in the eyes, ears and nasal passages,
- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

This limit does not apply:

- to brief exposures to higher concentrations
- nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.

This exposure standard applies to particles which

- are insoluble or poorly soluble\* in water or, preferably, in aqueous lung fluid (if data is available) and
- have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload)

### PERSONAL PROTECTION



Consult your EHS staff for recommendations

#### EYE

■ None required when handling small quantities.

OTHERWISE:

- Safety glasses.

#### HANDS/FEET

■ No special equipment needed when handling small quantities.

OTHERWISE: Wear general protective gloves, eg. light weight rubber gloves.

#### OTHER

■ No special equipment needed when handling small quantities

OTHERWISE:

- Overalls
- Eyewash unit.

## RESPIRATOR

■

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x PEL	P1	-	PAPR-P1
	Air-line*	-	-
50 x PEL	Air-line**	P2	PAPR-P2
100 x PEL	-	P3	-
		Air-line*	-
100+ x PEL	-	Air-line**	PAPR-P3

\* - Negative pressure demand \*\* - Continuous flow

Explanation of Respirator Codes:

Class 1 low to medium absorption capacity filters.

Class 2 medium absorption capacity filters.

Class 3 high absorption capacity filters.

PAPR Powered Air Purifying Respirator (positive pressure) cartridge.

Type A for use against certain organic gases and vapors.

Type AX for use against low boiling point organic compounds (less than 65°C).

Type B for use against certain inorganic gases and other acid gases and vapors.

Type E for use against sulfur dioxide and other acid gases and vapors.

Type K for use against ammonia and organic ammonia derivatives

Class P1 intended for use against mechanically generated particulates of sizes most commonly encountered in industry, e.g. asbestos, silica.

Class P2 intended for use against both mechanically and thermally generated particulates, e.g. metal fume.

Class P3 intended for use against all particulates containing highly toxic materials, e.g. beryllium.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

Use appropriate NIOSH-certified respirator based on informed professional judgement. In conditions where no reasonable estimate of exposure can be made, assume the exposure is in a concentration IDLH and use NIOSH-certified full face pressure demand SCBA with a minimum service life of 30 minutes, or a combination full facepiece pressure demand SAR with auxiliary self-contained air supply. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

## ENGINEERING CONTROLS

■ None under normal operating conditions.

If exposure to workplace dust is not controlled, respiratory protection is required; wear SAA approved dust respirator.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Solid.

Mixes with water.

State	Divided solid	Molecular Weight	Not applicable
Melting Range (°F)	Not available	Boiling Range (°F)	Not available.
Solubility in water (g/L)	Miscible	Flash Point (°F)	Not applicable
pH (1% solution)	7, 2% autoclaved	Decomposition Temp (°F)	Not available.
pH (as supplied)	Not applicable	Autoignition Temp (°F)	Not available.
Vapour Pressure (mmHG)	Not applicable.	Upper Explosive Limit (%)	Not available.
Specific Gravity (water=1)	Not available	Lower Explosive Limit (%)	Not available.
Relative Vapor Density (air=1)	Not applicable.	Volatile Component (%vol)	Nil.
Evaporation Rate	Not applicable		

### APPEARANCE

Off-white powder. Characteristic odour. Miscible with water. A tryptic hydrolysate of casein. Complies with the specification for a pancreatic digest of casein in the US Pharmacopeia. Moisture 3.6% approx., ash 8.1% approx., total nitrogen 13.2%. The analysis of materials containing soluble degradation products of proteins presents considerable difficulties in the interpretation of results. Because of the overlap of nitrogen-containing fractions such as primary and secondary proteoses, peptones, polypeptides, and the non-specific nature of many analytical techniques - the results obtained are highly empirical and mean very little unless the nature of the sample and the method of analysis is known.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

■ Product is considered stable and hazardous polymerization will not occur.

### STORAGE INCOMPATIBILITY

■ Segregate from strong oxidizers.

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

## Section 11 - TOXICOLOGICAL INFORMATION

tryptone

## **TOXICITY AND IRRITATION**

- No data of toxicological significance identified in literature search.

## **Section 12 - ECOLOGICAL INFORMATION**

Refer to data for ingredients, which follows:

TRYPTONE:

## **Section 13 - DISPOSAL CONSIDERATIONS**

### **Disposal Instructions**

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

! Recycle wherever possible.

Bury residue in an authorized landfill.

Decontaminate empty containers with water.

Recycle containers if possible, or dispose of in an authorized landfill.

## **Section 14 - TRANSPORTATION INFORMATION**

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

## **Section 15 - REGULATORY INFORMATION**

**No data for tryptone (CW: 52116)**

## **Section 16 - OTHER INFORMATION**

*Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.*

- Classification of the mixture 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.

*This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.*

Issue Date: Mar-30-2006

Print Date: Apr-22-2010