

MATERIAL SAFETY DATA SHEET

LUGOL SOLUTION
CAROLINA BIOLOGICAL

Revised: 05/15/08
Replaces: 07/10/07
Printed: 05/20/08

1. PRODUCT DESCRIPTION

Product Name: Lugol Solution
Product Code(s): 87-2793, 87-2795
Size: 100 ML, 500 ML
Chemical Name: Product is mixture
CAS Number: See section 2
Formula: See section 2
Synonyms: Donaldson's Amoeba Stain 2
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principal Hazardous Components:
Potassium Iodide(CAS# 7681-11-0)10%
Iodine(CAS# 7553-56-2)5%

TLV and PEL units:
Potassium Iodide: No information found
Iodine: ACGIH-TLV Ceiling 0.1 ppm
OSHA-PEL Ceiling 0.1 ppm, Ceiling 1 mg/m3

3. HAZARD IDENTIFICATION

Emergency Overview: Harmful if swallowed, inhaled or absorbed through the skin. May cause irritation to eyes, skin and mucous membranes. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.

Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion - If swallowed, if conscious, give plenty of water to dilute, and get medical attention immediately. Never give anything by mouth to an unconscious person.

Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm and quiet, and get medical attention.

5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): No information available.

NFPA Rating: None established

Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: No information available

Autoignition Temperature: No information available.

MATERIAL SAFETY DATA SHEET

LUGOL SOLUTION
CAROLINA BIOLOGICAL

Revised: 05/15/08
Replaces: 07/10/07
Printed: 05/20/08

Special Firefighting Procedures:

Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: When heated to excessive temperatures may emit toxic and corrosive fumes of iodine.

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and containerize for disposal.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store tightly closed in a cool, dry, well ventilated area away from incompatible materials. Suitable for storage in any general chemical storage area.

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection(Specify Type):

A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

Ventilation:

Local Exhaust:	Preferred
Mechanical(General):	Acceptable
Special:	No
Other:	No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab apron, eye wash, and safety shower.

9. PHYSICAL DATA

Molecular Weight:	No information available
Melting Point:	No information available
Boiling Point:	Approximately 100C
Vapor Pressure:	Approximately 17.535 @ 20C
Vapor Density(Air=1):	No information available
Specific Gravity(H2O=1):	1.0
Percent Volatile by Volume:	98%
Evaporation Rate(H2O=1):	1
Solubility in Water:	Complete, product is aqueous solution
Appearance and Odor:	Deep amber liquid with characteristic odor of iodine.

10. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: High temperatures or excessive heat.

Incompatibility(Materials to Avoid): Contact with ammonia fumes may cause formation of explosive nitroiodide.

Hazardous Decomposition Products: Free Iodine

Hazardous Polymerization: Will not occur

11. TOXICITY DATA

MATERIAL SAFETY DATA SHEET

LUGOL SOLUTION
CAROLINA BIOLOGICAL

Revised: 05/15/08
Replaces: 07/10/07
Printed: 05/20/08

Toxicity Data: Mixture has not been thoroughly evaluated. Data is listed for individual components.

Potassium Iodide: orl-mus LCLo: 1862 mg/kg

Iodine: orl-rat LD50: 14g/kg

Effects of Overexposure:

Acute: See section 3

Chronic:

Potassium Iodide and Iodine: Mutation data cited. Reproductive data cited. Not listed as causing by IARC, NTP, OR OSHA

Conditions Aggravated by Overexposure: Preexisting conditions of the eyes, skin, nose and throat.

Target Organs: No information available.

Primary Route(s) of Entry: Inhalation, ingestion, irritation in eyes or skin contact.

12. ECOLOGICAL DATA

EPA Waste Numbers: None

13. DISPOSAL INFORMATION

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations.

Always contact a permitted waste disposer (TSD) to assure compliance.

14. TRANSPORT INFORMATION

Non-regulated

15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name List	Chemical Category		
Potassium Iodide	No	No	No	No	No
Iodine	No	No	No	No	No

16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH.....American Conference of Governmental Industrial Hygienists

CAS Number..Chemical Abstracts Service Number

CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act

DOT.....U.S. Department of Transportation

IARC.....International Agency of Research on Cancer

mppcf.....million particles per cubic foot

MATERIAL SAFETY DATA SHEET

LUGOL SOLUTION
CAROLINA BIOLOGICAL

Revised: 05/15/08
Replaces: 07/10/07
Printed: 05/20/08

N/A.....Not Available
NTP.....National Toxicology Program
OSHA.....Occupational Safety and Health Administration
PEL.....Permissible Exposure Limit
ppm.....parts per million
RCRA.....Resource Conservation and Recovery Act
SARA.....Superfund Amendments and Reauthorization Act
TLV.....Threshold Limit Value
TSCA.....Toxic Substances Control Act