



MATERIAL SAFETY DATA SHEET

MSDS No: 0031.010.00
Revision Date: December 16, 2011
Approved by: Darius Nicpon

17 Colt Court
Ronkonkoma, NY 11779
800-381-8003

Section 1 Chemical Product and Company Name		
Product	LUGOL'S SOLUTION	ITEM No: CASE-B019
Synonyms	Iodine-Iodide solution, 1.9% Lugol's.	
CHEMTREC	24 Hour Emergency Phone Number (800) 424-9300	

Section 2 Composition/Ingredients Information			
Chemical Name	CAS#	%	TLV Units
Water	7732-18-5	92.4%	Not established
Potassium iodide	7681-11-0	5.7%	Not established
Iodine	7553-56-2	1.9%	TWA: 1mg/m ³

Section 3 Hazards Identification											
WARNING! HARMFUL IF INHALED OR SWALLOWED. EYE IRRITANT. Target organs: Thyroid, blood, kidneys, liver, skin, eyes.		0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe	<table><tr><td>Health</td><td>2*</td></tr><tr><td>Flammability</td><td>0</td></tr><tr><td>Physical Hazard</td><td>0</td></tr><tr><td>Personal Protection</td><td>C</td></tr></table>	Health	2*	Flammability	0	Physical Hazard	0	Personal Protection	C
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HMIS											

Section 4 First Aid Measures	
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Induce vomiting by medical or experienced first-aid. Get medical attention immediately. INHALATION: Remove to fresh air. Get medical attention if necessary. EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention. SKIN CONTACT: Remove contaminated clothing. Flush thoroughly with mild soap and water. Get medical attention if irritation develops.	

Section 5 Fire Fighting Measures			
Non flammable liquid. Excessive heat produces corrosive vapors of iodine.			
Extinguishing Media: Use TriClass, dry chemical extinguisher or water spray for surrounding fires. Firefighters should use self-contained breathing apparatus and protective clothing.			
Flash point: N/A Autoignition temperature: N/A Explosion limits: Lower: N/A Upper: N/A	<table><tr><td>0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe</td><td></td></tr></table>	0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe	
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Section 6 Accidental Release Measures	
Restrict unprotected personnel from the area. Contain the spill with an inert absorbent material and deposit in a sealed bag or container. For small spill use paper towel. Place the wet medium in trash. Ventilate and wash spill area with soap and water.	

Section 7 Handling and Storage	
Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Handling: Use with adequate ventilation. Avoid breathing vapor. Wash hands thoroughly after handling. Storage: Keep container in cool, well-ventilated area. Keep away from heat.	

Section 8 Exposure Controls/ Personal Protection	
Engineering controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use hood or adequate ventilation to keep airborne concentrations below exposure limits. Respiratory protection: Non should be needed if normal laboratory handling at room temperature. Use a NIOSH-approved respirator with proper cartridge when handling this material in emergency situations.	

Section 9 Physical and Chemical Properties	
Physical state: Liquid Appearance: Dark brown color. Odor: Pungent pH: Not available Vapor Pressure (mm Hg): 2.3kPa at 20 °C Vapor Density: 0.63 (Air=1) Evaporation Rate: not available Viscosity: not available	Boiling point: 212°F/100°C Melting point: ~0 °C/32 °F Freezing point: 0 °C/32 °F Decomposition temp: not available Solubility: Miscible in water, ethanol. Specific gravity (H ₂ O = 1): 1.01 at 20°C Percent volatile (%): 92.4Wt% Molecular formula: Mixture Molecular weight: Mixture

Section 10 Stability and Reactivity	
Chemical Stability: Stable Conditions to Avoid: High temperatures and incompatible materials. Incompatibilities: Oxidizing agents, reducing agents, organic material, metals, acids, salts and alkaloids. Potassium iodide and Fluorine perchlorate will explode on contact. Hazardous decomposition: Not available. Hazardous polymerization: Will not occur.	

Section 11 Toxicological Information	
Effects of overexposure: Irritant to eyes. It may irritate skin. It may cause temporary brown stains on skin. Excessive inhalation of iodine vapors may cause respiratory tract irritation, that includes nasal cavity and mucus membrane irritation. Eye contact with excessive amount of iodine vapor may also cause blepharitis. Ingestion of large doses may cause irritation to mouth with thirst, nausea, vomiting, abdominal pain, hypomotility and diarrhea. It may also affect cardiovascular system. Chronic exposure to elevated concentration of Iodine may damage thyroid, eyes, skin, blood kidneys, liver. Potassium iodide may affect genetic material based on animal data. ORL LD ₅₀ : 14000mg/kg [Rat] (Iodine) ORL LD ₅₀ : 2-4g of free iodine [Human] (estimated acute iodine ingestion for an adult)	

Section 12 Ecological Information	
Data not available.	

Section 13 Disposal Considerations	
Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.	

Section 14 Transport Information	
UN number: Not available Shipping name: Not controlled. Hazard Class: N/A Packing group: N/A Exceptions: N/A	

Section 15 Regulatory Information	
TSCA-listed, DSCL (EEC) R36/38 Irritating to eyes and skin, WHMIS (Canada) not controlled.	

Section 16 Other Information	
The Material Safety Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).	