

SAFETY DATA SHEETS

This SDS packet was issued with item:

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N/A

MSDS**Material Safety Data Sheet****JorVel™****Jorgensen Laboratories, Inc.**1450 North Van Buren Avenue
Loveland, CO 80538**2.1% Iodine Stain**Product Codes: J325FM
Effective Date: January 1, 2008
24 Hour Emergency Telephone:
CMB: (800)535-5053

All non-emergency questions may be directed to customer service @ (970)669-2500 or fax (970)663-5042

HAZARDOUS IDENTIFICATION

Hazardous Ingredient: Iodine, 2.1%

Synonyms: iodine crystals, iodine sublimed

CAS #: 7553-56-2

Molecular Weight: 253.81

Chemical Formula: I₂

Hazardous Ingredient: Potassium Iodide, 5%

Synonyms: potide, hydroiodic acid (potassium salt), iodic acid (potassium salt)

CAS #: 7681-11-0

Molecular Weight: 166.0

Chemical Formula: KI

EMERGENCY OVERVIEW

POISON! MAY BE FATAL IF SWALLOWED. MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. LIQUID AND VAPOR CAUSE IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE CARDIOVASCULAR AND CENTRAL NERVOUS SYSTEM. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION. May stain skin and clothing.

SAFETY RATINGS: Health: 2, Moderate Reactivity: 0, None
Flammability: 0, None Contact: 1, Slight

Protective Equipment: Safety Glasses or Goggles, Lab Coat or Apron, Gloves.

Storage Code: Green: Minimal Hazard.

POTENTIAL HEALTH EFFECTS**INHALATION:**

May cause irritation.

INGESTION:

May be fatal. May cause nausea, vomiting, abdominal pain and diarrhea.

SKIN CONTACT:

May cause irritation.

EYE CONTACT:

May cause irritation, redness or burns.

CHRONIC EXPOSURE:

No information available.

AGGRAVATION of PRE-EXISTING CONDITIONS:

No information available.

FIRST AID MEASURES**INHALATION:**

Remove to fresh air if effects occur. Get medical advice.

INGESTION:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SKIN CONTACT:

Wash with mild soap and water. Get medical advice if irritation develops.

EYE CONTACT:

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical advice if irritation develops.

FIRE FIGHTING MEASURES**FIRE:**

Not considered to be a fire hazard.

EXPLOSION:

Not considered to be an explosion hazard.

FIRE EXTINGUISHING MEDIA:

Use any means suitable for extinguishing surrounding fire.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

NFPA RATINGS: Health: 0 Flammability: 0 Reactivity: 0

ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment as specified in the Personal Protection Section. Collect liquid in an appropriate container or absorb with a paper towel for proper disposal. Wash area with soap and water.

HANDLING AND STORAGE

Store in a cool, dry, ventilated area away from flame, sources of ignition and heat. Keep containers tightly closed and upright. Protect from physical damage. Keep out of direct sunlight and separate from incompatible materials. Storage and use areas should be non-smoking.

PERSONAL PROTECTION**AIRBORNE EXPOSURE LIMITS:**

None established.

VENTILATION SYSTEM:

In general, dilution ventilation is a satisfactory health hazard control for this substance.

PERSONAL RESPIRATORS (NIOSH) APPROVED:

No information available.

SKIN PROTECTION:

Wear protective clothing, gloves, lab coat or apron, as appropriate, to prevent skin contact.

EYE PROTECTION:

Use chemical safety glasses or goggles. Maintain eye wash fountain in work area.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Dark Liquid.
ODOR:	Characteristic odor.
SOLUBILITY:	Miscible with water.
SPECIFIC GRAVITY:	No information available.
pH:	No information available.
% VOLATILES by VOLUME:	No information available.
BOILING POINT:	No information available.
MELTING POINT:	No information available.
VAPOR DENSITY (Air =1):	No information available.
VAPOR PRESSURE (mm Hg):	No information available.
EVAPORATION RATE (BuAc=1):	No information available.

STABILITY AND REACTIVITY**STABILITY:**

Stable under ordinary conditions of use and storage.

HAZARDOUS DECOMPOSITION PRODUCTS:

No information available.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Ammonia, powdered metals, alkali metals, or strong reducing agents. Reaction can be violent or explosive with acetaldehyde and acetylene. Reacts with ammonium hydroxide to form shock sensitive iodides on drying.

CONDITIONS to AVOID:

Heat, sunlight, poor ventilation and incompatibles.

TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:

Iodine: Oral rat LD50: 14 g/kg; Human LDLo: 28 mg/kg. Investigated as a reproductive effector.
Potassium Iodide: Investigated as a mutagen, reproductive effector.

ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY:

No information available.

DISPOSAL INFORMATION

Dispose of container and unused contents in accordance with federal, state and local requirements. State and local disposal regulation may differ from federal disposal regulations.

OTHER INFORMATION

TRANSPORT (Land, DOT):

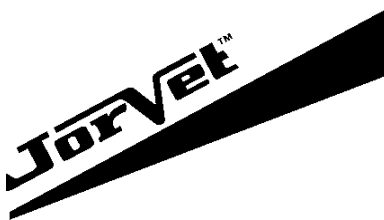
Not regulated.

PRODUCT USE:

Laboratory Reagent.

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**SDS**

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: Lugol's Iodine 2.1% Stain

Product Code(s): J0325FM

Synonyms: Mixture.

Recommended Use: For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

Supplier: Jorgensen Laboratories
1450 Van Buren Avenue, Loveland, CO 80538
Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

2. HAZARDS IDENTIFICATION

Hazard Classifications: Specific Target Organ Toxicity (Repeated Exposure): Category 1

Signal Word: DANGER

Hazard Statements: Causes damage to organs (thyroid) through prolonged or repeated exposure.

Pictograms:



Precautionary Statements:

Prevention: Do not breathe fumes, mists, vapors, or spray.
Wash thoroughly after handling.
Do not eat, drink, or smoke while using this product.

Response: Get medical attention if you feel unwell.

Storage: Not applicable.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified:

Exposure to this product may cause adverse reproductive effects.

Toxicity Statement:

Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H ₂ O	>93.9
Potassium Iodide	Iodic Acid, Potassium Salt	7681-11-0	KI	4.04
Iodine	Iodine	7553-56-2	I ₂	2.02

Trade Secret Statement:

Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately if symptoms occur.
- Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a physician or poison control center if symptoms occur.
- Skin Contact:** Remove contaminated clothing and shoes. Wash skin with soap and plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if symptoms occur.
- Eye Contact:** Check for and remove contact lenses if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician if symptoms occur.
- General Advice:** Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.
- Symptoms and Effects:** Irritation, coughing, sneezing, shortness of breath, fever, headache, nausea, vomiting, shock. May be harmful if swallowed, inhaled, or absorbed through the skin or eyes. Causes irritation to skin, eyes, and stomach. May cause irritation to respiratory tract. Prolonged or repeated exposure may cause iodism, thyroid damage, and reproductive effects.
- Immediate Medical Care/
Special Treatment:** If you feel unwell or are concerned, call a physician or poison control center immediately. Treat symptomatically.

5. FIREFIGHTING MEASURES

- Suitable Extinguishing Media:** Water spray, dry powder, alcohol resistant foam, carbon dioxide.
- Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream, as it may scatter and spread fire.
- Hazardous Combustion Products:** Potassium oxides, iodides.
- Specific Hazards:** Excessive thermal conditions may cause decomposition and yield hazardous combustion products listed above.

Special Protective Equipment/Precautions for Firefighters: As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of leak or spill. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be absorbed with acetone or alcohol. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Limit exposure to light. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area. Protect from light. Store in a segregated and approved area away from incompatible materials (see Section 10). Store in original container. Do not store in polymer or metal containers. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:	Water:	No information found.
	Potassium Iodide:	ACGIH: TLV: 0.01 ppm
	Iodine:	ACGIH: TWA: 0.01 ppm
		STEL: 0.1 ppm
		OSHA: PEL: 0.1 ppm
		NIOSH: REL: 0.1 ppm
		IDLH: 2 ppm

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls

to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or goggles and a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or in any other circumstances where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellowish brown, opaque liquid.

Odor: Faint, characteristic.

Odor Threshold: No information found.

Formula Weight: Mixture.

pH: No information found.

Melting/Freezing Point: No information found.

Boiling Point/Range: No information found.

Decomposition Temperature: No information found.

Flash Point: Not applicable.

Auto-ignition Temperature: Not applicable.

Flammability: Not flammable.

Flammability/Explosive Limits: Not applicable.

Solubility: Miscible with water, acetone, alcohol.

Vapor Pressure: No information found.

Vapor Density: No information found.

Specific Gravity: 1.04 (Water = 1)

Evaporation Rate: No information found.

Viscosity: No information found.

Partition Coefficient (n-octanol/water): No information found.

10. STABILITY AND REACTIVITY

Reactivity Data:	No information found.
Chemical Stability:	Degrades gradually and nonhazardously at standard conditions. Sensitive to light.
Conditions to Avoid:	Heat, light, incompatible materials.
Incompatible Materials:	Reducing agents, acids, metals, organic materials, combustible materials, halides.
Hazardous Decomposition Products:	Potassium oxides, iodides.
Possibility of Hazardous Reactions:	May react vigorously or violently if exposed to extreme thermal conditions or in contact with the incompatible materials listed above.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure:	Inhalation, ingestion, skin contact, eye contact.		
Acute Effects:	May be harmful if swallowed, inhaled, or absorbed through the skin or eyes. Causes irritation to skin, eyes, and stomach. May cause irritation to respiratory tract.		
Chronic Effects:	Prolonged or repeated exposure may cause iodism, thyroid damage, and reproductive effects.		
Toxicological Data:	Water:	No information found.	
	Potassium Iodide:	LD50 Oral, Rat:	2779 mg/kg
	Iodine:	LD50 Oral, Rat:	315 mg/kg
		LD50 Dermal, Rabbit:	1425 mg/kg
		LC50 Inhalation, Rat:	4.588 mg/L 4 h
		Causes skin and eye irritation based on animal data.	
Symptoms of Exposure:	Irritation, coughing, sneezing, shortness of breath, fever, headache, nausea, vomiting, shock.		
Carcinogenic Effects:	No component of this product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.		

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:	Water:	No information found.	
	Potassium Iodide:	LC50, Rainbow Trout (Oncorhynchus mykiss):	3200 mg/L 120 h
	Iodine:	LC50, Rainbow Trout (Oncorhynchus mykiss):	1.67 mg/L 96 h
		EC50, Water Flea (Daphnia magna):	0.55 mg/L 48 h
Persistence and Degradability:	This product may not be readily biodegradable. Not expected to have high bioaccumulation potential.		
Environmental Effects:	Toxic to aquatic organisms. Avoid release to the environment.		

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8).

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: No information found.

14. TRANSPORT INFORMATION

DOT: Not regulated.

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

Section 313: No information found.

CERCLA Reportable Quantities: No information found.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	N/A
Canada	Domestic Substances List (DSL)	N/A
Canada	Non-Domestic Substances List (NDSL)	N/A
China	Inventory of Existing Chemical Substances in China (IECSC)	N/A
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	N/A
Europe	European List of Notified Chemical Substances (ELINCS)	N/A
Japan	Inventory of Existing and New Chemical Substances (ENCS)	N/A
Korea	Existing Chemicals List (ECL)	N/A
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	N/A

*A "Yes" indicates that the listed component(s) of this product comply with the inventory requirements administered by the governing country(s).

16. OTHER INFORMATION**Disclaimer:**

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Issue Date:

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Reason for Revision:

Not applicable.