MSDS | **Material Safety Data**

Jorgensen Laboratories, Inc.
1450 North Van Buren Avenue
Loveland, CO 80538

JorVet™

Gram Stain Set

Product Codes: J323
Effective Date: SEP 15 2009
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 INFORMATION

Product Identification

Gram Stain Set Solution 2, Decolorizer
Hazardous Ingredient: Isopropanol, 75%
Synonyms: 2-propanol, sec-propyl alcohol, isopropyl alcohol, sec-propanol, dimethylcarbinol
CAS #: 67-63-0
Molecular Weight: 60.10 Chemical Formula: $(CH_3)_2$ CHOH

Hazardous Ingredient: Acetone, 25%
Synonyms: dimethyldetone, 2-propanone, dimethyketal
CAS #: 67-64-1
Molecular Weight: 58.08 Chemical Formula: $(CH_3)_2$ CO

Gram Stain Set Solutions 1, Crystal Violet & 4, Safranin
Hazardous Ingredient: Denatured Ethanol, 10%
Synonyms: doubly denatured ethanol, modified 3A alcohol, alcohol anhydrous
CAS #: 64-17-5
Molecular Weight: 46.07 Chemical Formula: CH_3CH_2OH

Gram Stain Set Solution 3, PVP Iodine
Hazardous Ingredient: Polyvinylpyrrolidone Iodine Complex, 1.9%
Synonyms: betadine, EFO-dine, isodine, povidone-iodine, PVP-iodine, 2-pyrrolidinone, 1-ethenyl-homopolymer-compd/with iodine, utradine, 1-vinyl-2-pyrrolidinone polymer-compd/with iodine
CAS #: 25655-41-8

Hazardous Ingredient: Potassium Iodide, 13%
Synonyms: potide, hydriocic acid (potassium salt), iodic acid (potassium salt)
CAS #: 7681-11-0
Molecular Weight: 166.0 Chemical Formula: KI

HAZARDS IDENTIFICATION

Emergency Overview

Gram Stain Set Solution 2, Decolorizer (Isopropanol & Acetone):

WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM. MAY BE HARMFUL IF ABSORBED THROUGH SKIN.

SAFETY RATINGS: Health: 2, Moderate — Reactivity: 1, Slight
Flammability: 4, Extreme (Flammable) — Contact: 2, Moderate
Protective Equipment: Goggles, Lab Coat or Apron, Gloves, Local or General Exhaust Ventilation.
Storage Code: Red: Flammable Hazard.

Gram Stain Set Solutions 1, Crystal Violet & 4, Safranin:

DENATURED ETHANOL 10% (contains METHANOL):

POISON! DANGER! MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. CANNOT BE MADE NONPOISONOUS. MAY CAUSE IRRITATION TO SKIN AND EYES. AFFECTS CENTRAL

NERVOUS SYSTEM, LIVER AND KIDNEYS. May stain skin and clothing.

SAFETY RATINGS:	Health: 2, Moderate	Reactivity: 0, None
	Flammability: 1, Slight	Contact: 1, Slight
Protective Equipment:	Safety Glasses or Goggles, Lab Coat or Apron, Gloves.	
Storage Code:	Green: Minimal Hazard.	

Gram Stain Set Solution 3, PVP-Iodine:

HARMFUL IF SWALLOWED!	Avoid contact with eyes, skin and clothing. Do not swallow. May stain skin and clothing.	
SAFETY RATINGS:	Health: 1, 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

Gram Stain Set Solution 2, Decolorizer:

INHALATION:
Irritating to mucous membranes. Exposure to high concentrations has a narcotic effect. Symptoms of overexposure may include headache, drowsiness, dizziness, nausea, staggering, unconsciousness, central nervous depression and possibly death.

INGESTION:
Toxic! Symptoms parallel inhalation. Can cause gastrointestinal pain, cramps, nausea, vomiting and diarrhea Usual fatal dose: about 250 milliliters. Aspiration of Acetone into lungs can produce severe lung damage and is a medical emergency.

SKIN CONTACT:
Irritating due to defatting action and can cause skin to become dry and cracked. May be absorbed through the skin with possible systemic effects.

EYE CONTACT:
Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

CHRONIC EXPOSURE:
Repeated or prolonged exposure may cause skin irritation or dermatitis.

AGGRAVATION of PRE-EXISTING CONDITIONS:
Persons with pre-existing skin disorders or impaired liver, kidney, or pulmonary function may be more susceptible to the effects of the substance.

Gram Stain Set Solutions 1, Crystal Violet & 4, Safranin:

INHALATION:
No known effects.

INGESTION:
May be harmful. May cause nausea, vomiting, diarrhea, headache and blindness.

SKIN CONTACT:
May cause irritation.

EYE CONTACT:
May cause irritation.

CHRONIC EXPOSURE:
No information available.

AGGRAVATION of PRE-EXISTING CONDITIONS:
No information available.

Gram Stain Set Solution 3, PVP-Iodine:

INHALATION:
No known effects.

INGESTION:
May be harmful. May cause nausea, vomiting, diarrhea and possible damage to kidneys and thyroid.

SKIN CONTACT:
May cause irritation.

EYE CONTACT:
May cause irritation.
CHRONIC EXPOSURE:
No information available.
AGGRAVATION of PRE-EXISTING CONDITIONS:
No information available.

FIRST AID MEASURES

Gram Stain Set Solution 2, Decolorizer:

INHALATION:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
INGESTION:
Acetone is an aspiration hazard. Vomiting may occur spontaneously, but NO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately
SKIN CONTACT:
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical advise 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 attention immediately.

Gram Stain Set Solutions 1, Crystal Violet & 4, Safranin:

INHALATION:
Remove to fresh air if effects occur.
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 advise 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 advise if irritation develops.

Gram Stain Set Solution 3, PVP-Iodine:

INHALATION:
Remove to fresh air if effects occur.
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 advise 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 advise if irritation develops.

FIRE FIGHTING MEASURES

FIRE:
Flash Point: No information available.
Autoignition Temperature: No information available.
Flammable Limits in Air % by Volume: No information available.
Flammable Liquid & Vapor (Decolorizer).

EXPLOSION:
Decolorizer: Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks or flames. Sensitive to static discharge.
FIRE EXTINGUISHING MEDIA:
Use alcohol foam, dry chemical or carbon dioxide. Water may be ineffective.
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. Vapors can flow along surfaces to distant ignition source and flash back.
NFPA RATINGS: Health: 2 Flammability: 3 Reactivity: 0

ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in the Personal Protection Section. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials such as saw dust.

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

Gram Stain Set:
AIRBORNE EXPOSURE LIMITS, ISOPROPANOL:
OSHA; Permissible Exposure Limit (PEL): 400 ppm (TWA).
ACGIH; Threshold Limit Value (TLV): 400 ppm (TWA).
500 ppm (STEL) skin.
AIRBORNE EXPOSURE LIMITS, ACETONE:
OSHA; Permissible Exposure Limit (PEL): 1000 ppm (TWA).
ACGIH; Threshold Limit Value (TLV): 500 ppm (TWA).
750 ppm (STEL) A4 Not classifiable as a human carcinogen.
AIRBORNE EXPOSURE LIMITS, ETHANOL:
OSHA; Permissible Exposure Limit (PEL): 1000 ppm (TWA).
ACGIH; Threshold Limit Value (TLV): 1000 ppm (TWA).
VENTILATION SYSTEM:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
PERSONAL RESPIRATORS (NIOSH) APPROVED:
If the exposure limit is exceeded, a full face piece respirator, air lined hood or full-face piece self-contained breathing apparatus.
SKIN PROTECTION:
Wear protective clothing, gloves, lab coat or apron, as appropriate, to prevent skin contact.
EYE PROTECTION:
Use chemical safety goggles. Maintain eye wash fountain in work area.

PHYSICAL AND CHEMICAL PROPERTIES
(Decolorizer)

APPEARANCE:	Clear Colorless Liquid.
ODOR:	Characteristic odor.
SOLUBILITY:	Miscible with water.
SPECIFIC GRAVITY:	No information available.
pH:	No information available.
% VOLATILES by VOLUME:	100% @ 21°C (70°F).
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
(Decolorizer)

STABILITY:
Stable under ordinary conditions of use and storage.
HAZARDOUS DECOMPOSITION PRODUCTS:
May form carbon dioxide and carbon monoxide when heated to decomposition.
HAZARDOUS POLYMERIZATION:
Will not occur.
INCOMPATIBILITIES:
Heat, flame, and sources of ignition. Strong oxidizers, acetaldehyde, acids, chlorine compounds, ethylene oxide, hydrogen-palladium combination, hydrogen peroxide-sulfuric acid combination, potassium t-butoxide,hypochlorous acid, isocyanates, nitroform, phosgene, aluminum, oleum, perchloric acid, chloroform, nitric acid and alkalies.
CONDITIONS to AVOID:
Heat, flames, ignition sources and incompatibles.

TOXICOLOGICAL INFORMATION

Isopropanol: Oral rat LD50: 5,045 mg/kg; Inhalation rat LC50: 16,000 ppm/8H; Skin rabbit LD50: 12,800 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector.
Acetone: Oral rat LD50: 5,800 mg/kg; Inhalation rat LC50: 100 mg/m^3. Irritation data: Standard Draize Test, Eye rabbit: 20 mg/24hr., severe. Investigated as a tumorigen, mutagen, reproductive effector.
Ethanol: Oral rat LD50: 7,060 mg/kg; Inhalation rat LC50: 20,000 ppm/10H; Irritation data: Standard Draize Test, Eye rabbit: 500 mg/24hr., moderate. Investigated as a mutagen, reproductive effector.
PVP-Iodine: Investigated as a mutagen, reproductive effector.

ECOLOGICAL INFORMATION

When released into the soil, this material may leach into ground water.
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

Gram Stain Set Solution 2, Decolorizer (Acetone, Isopropanol):
TRANSPORT (Land, DOT):
Flammable liquids, n.o.s. (acetone, isopropanol), 3, UN1993, II

Gram Stain Set Solutions 1, Crystal Violet 3, Safranin & 4, PVP Iodine:
TRANSPORT (Land, DOT):
Not regulated.

PRODUCT USE:
Laboratory Reagent.

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