# SAFETY DATA SHEETS

## This SDS packet was issued with item:

078024463

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

078024166

SDS

# Safety Data Sheet

## 1. IDENTIFICATION

**Product Identifier:** **Gram's Stain Kit #1 – Crystal Violet**

**Product Code(s):** J0323D1

**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:** This product is classified as not hazardous under OSHA's Hazard Communication Standard, 29 CFR 1910.1200 (HCS) and the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). However, all chemicals handled and used in the workplace should be treated with caution.

**Signal Word:** Not applicable.

**Hazard Statements:** Not applicable.

**Pictograms:** Not applicable.

**Precautionary Statements:**

**Prevention:** Not applicable.

**Response:** Not applicable.

**Storage:** Not applicable.

**Disposal:** Not applicable.

**Hazards Not Otherwise Classified:** May cause adverse reproductive effects based on animal data.
May cause cancer based on animal data.

**Toxicity Statement:** Not applicable.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Component | Common Name / Synonyms | CAS# | Chemical Formula | % by Weight |
|---|---|---|---|---|
| Water | Water | 7732-18-5 | $H_2O$ | >89 |
| Ethanol | Ethyl Alcohol | 64-17-5 | $C_2H_5OH$ | <8 |
| Methanol | Methyl Alcohol | 67-56-1 | $CH_3OH$ | <0.5 |
| Isopropanol | Isopropyl Alcohol | 67-63-0 | $C_3H_7OH$ | <0.5 |
| Crystal Violet | Basic Violet #3 | 548-62-9 | $C_{25}H_{30}N_3Cl$ | <1.0 |
| Ammonium Oxalate, Monohydrate | Oxalic Acid, Diammonium Salt, Monohydrate | 6009-70-7 | $(NH_4)_2C_2O_4 \bullet H_2O$ | <1.0 |

**Trade Secret Statement:** The exact concentrations of each component have been withheld under a trade secret. These components are either nonhazardous or are present at sufficiently low concentrations such that they do not affect the hazard classification of this product.

## 4. FIRST AID MEASURES

**First Aid Procedures:**

**Inhalation:** If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately if you feel unwell or are concerned.

**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:** May cause irritation to eyes, skin, respiratory tract, and gastrointestinal tract. Absorption through skin may cause visual disturbances and metabolic acidosis. Inhalation of vapors may cause dizziness, suffocation, nervous system effects, and cardiovascular effects. May affect the blood, brain, urinary system, liver, spleen, and eyes. Ingestion may cause nausea, vomiting, diarrhea, abdominal pain, constipation, nervous system effects, blindness, and respiration effects. May affect the blood, liver, kidneys, cardiovascular system, brain, pancreas, and eyes.

**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:** Carbon oxides, nitrogen oxides.

**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:** Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the 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. 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. Store in a segregated and approved area away from incompatible materials (see Section 10). Store in original container. 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.

| | | | |
|---|---|---|---|
| Ethanol: | ACGIH: | STEL: | 1000 ppm |
| | OSHA: | PEL: | 1000 ppm |
| | | | 1900 mg/m$^3$ |
| Methanol: | ACGIH: | TWA: | 200 ppm |
| | | STEL: | 250 ppm |
| | | BEL: | 15 mg/L |
| | OSHA: | PEL: | 200 ppm |
| | | | 260 mg/m$^3$ |
| Isopropanol: | ACGIH: | TWA: | 200 ppm |
| | | STEL: | 400 ppm |
| | | BEL: | 40 mg/L |
| | OSHA: | PEL: | 400 ppm |
| | | | 980 mg/m$^3$ |
| Crystal Violet: | No information found. | | |
| Ammonium Oxalate, Monohydrate: | No information found. | | |

**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 safety goggles. Wear 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

*Unless otherwise indicated, all properties are given at 25 °C and standard pressure.*

**Appearance:** Violet, opaque liquid.

**Odor:** Faint, alcoholic.

**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, ether, acetone, benzene, acetic acid. |
| **Vapor Pressure:** | No information found. |
| **Vapor Density:** | No information found. |
| **Specific Gravity:** | 0.98 (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:** | Stable under normal conditions. |
| **Conditions to Avoid:** | Heat, incompatible materials. |
| **Incompatible Materials:** | Oxidizing agents, strong acids. |
| **Hazardous Decomposition Products:** | Carbon oxides, nitrogen oxides. |
| **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 or fatal if swallowed, inhaled, or absorbed through the skin. Causes irritation to the eyes, skin, respiratory tract, and gastrointestinal tract. May cause blindness or visual disturbances if absorbed into the blood stream. May affect the blood, brain, urinary system, liver, spleen, eyes, kidneys, cardiovascular system, and pancreas.

**Chronic Effects:** May cause central nervous system effects. May cause damage to eyesight. Prolonged or repeated exposure may cause liver, kidney, brain, cardiovascular system, blood, spleen, and heart damage. Prolonged or repeated exposure may cause adverse reproductive effects, birth defects, mutagenic effects, cancer, and dermatitis.

**Toxicological Data:**

| | | |
|---|---|---|
| Water: | Not applicable. | |
| Ethanol: | $LD_{50}$ Oral, Rat: | 7060 mg/kg |
| | $LC_{50}$ Inhalation, Rat: | 124.7 mg/L 4 h |
| | Causes reproductive effects based on animal data. | |

| | | | |
|---|---|---|---|
| | Methanol: | $LD_{50}$ Oral, Rat: | 5628 mg/kg |
| | | $LC_{50}$ Inhalation, Rat: | 87.5 mg/L 6 h |
| | | $LD_{50}$ Dermal, Rabbit: | 15,800 mg/kg |
| | | Causes reproductive effects based on animal data. | |
| | Isopropanol: | $LD_{50}$ Oral, Rat: | 5045 mg/kg |
| | | $LC_{50}$ Inhalation, Rat: | 72.6 mg/L 4 h |
| | | $LD_{50}$ Dermal, Rabbit: | 12,800 mg/kg |
| | Crystal Violet: | $LD_{50}$ Oral, Mouse: | 96 mg/kg |
| | | May cause cancer based on animal data. | |
| | Ammonium Oxalate, Monohydrate: | No information found. | |

**Symptoms of Exposure:** Irritation, unconsciousness, visual disturbances, metabolic acidosis, drowsiness, dizziness, suffocation, shortness of breath, nervous system effects, cardiovascular effects, cough, nausea, vomiting, diarrhea, abdominal pain, constipation, blindness, and respiration effects.

**Carcinogenic Effects:** No component of this product is considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

| | | |
|---|---|---|
| **ACGIH:** | Isopropanol: | A4 – Not classifiable as a human carcinogen |
| **IARC:** | Isopropanol: | 3 – Not classifiable to humans |

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Data:**

Water:
Not applicable.

Ethanol:

| | |
|---|---|
| EC50, Water Flea (Daphnia magna): | 7.7 mg/L 48 h |
| LC50, Fathead Minnow (Pimephales promelas): | > 100 mg/L 96 h |

Methanol:

| | |
|---|---|
| EC50, Water Flea (Daphnia magna): | > 10,000 mg/L 48 h |
| LC50, Fathead Minnow (Pimephales promelas): | > 100 mg/L 96 h |

Isopropanol:

| | |
|---|---|
| LC50, Western Mosquitofish (Gambusia affinis): | >1400 mg/L 96 h |

Crystal Violet:

| | |
|---|---|
| EC50, Water Flea (Daphnia magna): | < 5 mg/L 48 h |

Ammonium Oxalate, Monohydrate:
No information found.

**Persistence and Degradability:** Some components of this product are not readily biodegradable.

**Environmental Effects:** Hazardous 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 not 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 | No |
| Immediate Hazard | No |
| Delayed Hazard | No |
| Fire Hazard | No |
| Pressure Hazard | No |
| Reactivity Hazard | No |

**Section 313:** Isopropyl Alcohol, Methanol: De Minimis Concentration: 1.0%

**CERCLA Reportable Quantities:** Methanol: 5000 lb
Ammonium Oxalate, Anhydrous: 5000 lb

**Canada WHMIS:** This SDS is prepared in compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Therefore, it complies with the 2015 Workplace Hazardous Materials Information System (WHMIS) as well.

**International Inventories:**

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

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

## 16. OTHER INFORMATION

**Disclaimer:** Jorgensen Laboratories provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Jorgensen Laboratories makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Jorgensen Laboratories assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

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**Reason for Revision:** Update of Sections 8, 9, 11, 12, and 15 over 04/06/2015 version.