

Bacterial Freezing Kit - CRY 162-03

Section 1 – Chemical Product and Company Identification

OPS Diagnostics, LLC
291 US Highway 22 East
Building 6
Lebanon, NJ 08833
USA
TEL: (908) 253-3444

For Emergencies, Call (908) 253-3444

Product Name: Bacterial Freezing Kit
Synonyms: Bacterial Freezing Tubes
Chemical Formula: A formulation.
Molecular Weight: A formulation.

Section 2 – Composition, Information on Ingredients

Composition: 30% Glycerol (glycerin) solution
CAS#: 56-81-5
% by Weight: 30
Toxicological Data: Oral (LD50), acute: 1260 mg/kg (rat), 4090 mg/kg (mouse)
Dermal (LD50), acute: 10000 mg/kg (rabbit)

Section 3 – Hazards Identification

EMERGENCY OVERVIEW

Appearance: Clear liquid.

Caution! May cause eye and skin irritation.

Target Organs: None known. May be toxic to kidneys.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. Expected to be a low ingestion hazard.

Inhalation: Low hazard for usual industrial handling.

Chronic: Not Available.

Section 4 – First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid if irritation occurs.

Skin: Wash with soap and water. Rinse with plenty of water. Cover the irritated skin with an emollient. Get medical attention if irritated.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 5 – Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam. Do not use water jet.

Flash Point: Not applicable.

Auto-ignition Temperature: 370°C (698°C)

Flash Point: Closed Cup: 160°C (320°F). Open Cup: 177°C (350.6°F)

Explosion Limits, Lower: Not available. **Upper:** Not available.

Special Notes on Explosion Hazards: Glycerol is incompatible with strong oxidizers and may explode on contact with compounds such as potassium permanganate and potassium chlorate. Mixtures of glycerol, nitric acid, and sulfuric acid may make glyceryl nitrate which is explosive. Mixing perchloric acid, lead oxide, and glycerol may create explosive products. Glycerol and chlorine may lead to explosive compounds if heated.

Section 6 – Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or shovel up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Use absorbent materials to suck up spills.

Section 7 – Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion.

Storage: Store in a tightly closed container. Store the reagent in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 8 – Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

TWA: 10 (mg/m³) from ACGIH (TLV) (United States)(1999) Inhalation Total. TWA: 15 (mg/m³) from OSHA (PEL).

OSHA Vacated PELs: No OSHA Vacated PELs are listed for this chemical. D-Mannitol: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 – Physical and Chemical Properties

<p>Physical State: Viscous liquid</p> <p>Appearance: Clear</p> <p>Taste: Sweet</p> <p>Odor: Mild</p> <p>pH: Not Available</p> <p>Vapor Pressure: 0 kPa @ 20°C.</p> <p>Vapor Density: 3.17 (air = 1).</p> <p>Evaporation Rate: Negligible.</p> <p>Viscosity: Not available.</p> <p>Boiling Point: 290°C</p>	<p>Freezing/Melting Point: 19°C</p> <p>Decomposition Temperature: Not available</p> <p>Solubility: Soluble in water and alcohol. Partially soluble in acetone. Slightly soluble in ethyl ether. Limited solubility in ethyl acetate. Insoluble in carbon tetrachloride, benzene, chloroform, petroleum ether and oils.</p> <p>Specific Gravity/Density: 1.2636</p> <p>Molecular Formula: C₃H₅(OH)₃</p> <p>Molecular Weight: 92.09 g/mole</p>
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Section 10 – Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, strong oxidants.

Incompatibilities with Other Materials: Oxidizing agents.

Hazardous Polymerization: Has not been reported

Section 11 – Toxicological Information

Routes of Entry: Ingestion, absorbed through skin or eyes.

Toxicity to Animals: Dermal (LD50), acute: 10000 mg/kg (rabbit)

Oral (LD50), acute: 1260 mg/kg (rat), 4090 mg/kg (mouse)

Chronic Effects on Humans: May cause kidney damage.

Remarks on Chronic Effects on Humans: May be transferred across the placenta in small amounts. May cause reproductive effects based on animal testing. May effect testes, spermatogenesis, and genetic material.

Toxic Effects on Humans: May cause skin irritation and be slightly hazardous if ingested or inhaled.

Remarks on Toxic Effects on Humans: Low hazard though may cause irritation to skin and eyes. Ingestion of large amounts may cause gastrointestinal problems including nausea, vomiting, and diarrhea, and kidney damage.

Section 12 – Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 58.5 ppm 96 hours

BOD5: Not available.

COD: Not available.

Products of Biodegradation: Hazardous products are unlikely.

Toxicity of Biodegradation: Breakdown products are less hazardous than glycerol.

Section 13 – Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Section 14 – Transportation Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.

Section 15 – Regulatory Information

State Regulations: RTK/disclosure in Illinois, Rhode Island, Pennsylvania, Minnesota, Massachusetts, and Tennessee.

OSHA: Harardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: Glycerol/glycerin is on the European inventory of existing commercial chemical substances.

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): Not available. S24/25 – Avoid contact with skin and eyes.

HMIS (USA)

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: g

National Fire Protection Association

Health: 1

Flammability: 1

Reactivity: 0

Special Hazard:

Section 16 – Additional Information

MSDS Creation Date: 12/7/2012

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