SECTION 1: IDENTIFICATION
1.1.  Product Identifier
Product Form: Mixture
Product Name: Lysis Solution
Product Code: 4250-050-01

1.2.  Intended Use of the Product
No use specified.

1.3.  Name, Address, and Telephone of the Responsible Party
Company
Trevigen Inc.
8405 Helgerman Court
20877 Gaithersburg, MD 20877
T 1-800-TREVIGEN

1.4.  Emergency Telephone Number
Emergency Number: 301-216-2800

SECTION 2: HAZARDS IDENTIFICATION
2.1.  Classification of the Substance or Mixture
Classification (GHS-US)
Eye Irrit. 2A  H319
Full text of H-phrases: see section 16

2.2.  Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Warning
Hazard Statements (GHS-US): H319 - Causes serious eye irritation.
Precautionary Statements (GHS-US):
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, and eye protection.
P305+P315+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3.  Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4.  Unknown Acute Toxicity (GHS-US)  No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.1.  Substances
Not applicable

3.2.  Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
</table>
| Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)], disodium salt, dihydrate | (CAS No) 6381-92-6 | 3.72 | Acute Tox. 4 (Oral), H302
| Acute Tox. 4 (Dermal), H312 |
| Acute Tox. 4 (Inhalation:dust,mist), H332 |
| Skin Irrit. 2, H315 |
| Eye Irrit. 2A, H319 |
| STOT SE 3, H335 |
| Aquatic Chronic 3, H412 |
SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water or soap and water for at least 5 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if redness, pain, or irritation occurs.

Ingestion: Do not induce vomiting. Rinse mouth. Get medical advice and attention if you feel unwell.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation.

Inhalation: May cause respiratory irritation.

Skin Contact: May cause skin irritation.

Eye Contact: Causes serious eye irritation. Symptoms may include redness, pain, swelling, itching, burning, tearing, and blurred vision.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.


Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Not available

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).


6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
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6.3. Methods and Material for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections
See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations.
Storage Conditions: Store in a dry, cool, and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures, and incompatible materials.

7.3. Specific End Use(s)
No use is specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

8.2. Exposure Controls
Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical safety goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Consumer Exposure Controls: Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
</tbody>
</table>
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- Decomposition Temperature: Not available
- Flammability (solid, gas): Not available
- Lower Flammable Limit: Not available
- Upper Flammable Limit: Not available
- Vapor Pressure: Not available
- Relative Vapor Density at 20 °C: Not available
- Relative Density: Not available
- Specific Gravity: Not available
- Solubility: Not available
- Partition Coefficient: N-Octanol/Water: Not available
- Viscosity: Not available

Explosion Data – Sensitivity to Mechanical Impact: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge: Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Incompatible materials.
10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product
- Acute Toxicity: Not classified
- LD50 and LC50 Data: Not available
- Skin Corrosion/Irritation: Not classified
- Serious Eye Damage/Irritation: Causes serious eye irritation
- Respiratory or Skin Sensitization: Not classified
- Germ Cell Mutagenicity: Not classified
- Teratogenicity: Not classified
- Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause respiratory irritation
Symptoms/Injuries After Skin Contact: May cause skin irritation
Symptoms/Injuries After Eye Contact: Causes serious eye irritation. Symptoms may include redness, pain, swelling, itching, burning, tearing, and blurred vision

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects

Acute Toxicity: Not classified

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Oral Rat</th>
<th>LC50 Oral Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)l, disodium salt, dihydrate (6381-92-6)</td>
<td>1800 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>500.00 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1,100.00 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>1.50 mg/l/4h</td>
<td></td>
</tr>
<tr>
<td>Poly[oxy-1,2-ethanediyl], .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl] -.omega.-hydroxy- (9002-93-1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity No additional information available
12.2. Persistence and Degradability Not available
12.3. Bioaccumulative Potential
12.4. Mobility in Soil Not available
12.5. Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport
14.2. In Accordance with IMDG Not regulated for transport
14.3. In Accordance with IATA Not regulated for transport
14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations
Lysis Solution
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt, dihydrate (6381-92-6)
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard
n-Dodecylsarcosine, sodium salt (7631-98-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard
Poly(oxy-1,2-ethanediyl), .alpha.-[4-{1,1,3,3-tetramethylbutyl}phenyl]-.omega.-hydroxy- (9002-93-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

15.2. US State Regulations
The product and/or its components does not appear on any state Right to Know lists or the Canadian Ingredient Disclosure List (IDL) at or above the reporting threshold.

15.3. Canadian Regulations
Lysis Solution
WHMIS Classification Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt, dihydrate (6381-92-6)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
n-Dodecylsarcosine, sodium salt (7631-98-3)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Poly(oxy-1,2-ethanediyl), .alpha.-[4-{1,1,3,3-tetramethylbutyl}phenyl].omega.-hydroxy- (9002-93-1)

| Listed on the | Listed on the | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
| DSL (Domestic Substances List) | Canadian IDL (Ingredient Disclosure List) | Class E - Corrosive Material |

IDL Concentration 1 %

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 03/17/2015
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

| Acute Tox. 4 (Dermal) | Acute toxicity (dermal) Category 4 |
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment - Chronic Hazard Category 2 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment - Chronic Hazard Category 3 |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H411 | Toxic to aquatic life with long lasting effects |
| H412 | Harmful to aquatic life with long lasting effects |

Party Responsible for the Preparation of This Document
Trevigen INC. 8405 Helgerman Court Gaithersburg, MD 20877 T: 301-216-2800

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2