

**1. Product and Company Identification**

**Material name** RNAgard Blood Solution  
**Version #** 01  
**Issue date** 05-16-2012  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product use** Stabilize RNA in Whole Blood.  
**Manufacturer/Supplier** Biomatrixa, Inc.  
 5627 Oberlin Drive, Suite 120  
 info@biomatrixa.com  
 Contact Person: Scott Whitney  
 (858) 550-0308  
**Emergency** 1-866-379-6879 (NORTH AMERICA)

**2. Hazards Identification**

**Physical state** Liquid.  
**Appearance** Colorless to light yellow liquid.  
**Emergency overview** WARNING  
 Harmful if swallowed. Causes skin, eye and respiratory tract irritation.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Ingestion. Skin contact. Eye contact. Inhalation.  
**Eyes** Causes eye irritation.  
**Skin** Causes skin irritation.  
**Inhalation** Causes respiratory tract irritation.  
**Ingestion** Harmful if swallowed.  
**Signs and symptoms** Exposed individuals may experience eye tearing, redness, and discomfort. Irritation.  
**Potential environmental effects** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**3. Composition / Information on Ingredients**

Components	CAS #	Percent
Chlorine compound	Proprietary	30 - 45

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First Aid Measures**

**First aid procedures**  
**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.  
**Skin contact** Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention if irritation persists after washing.  
**Inhalation** Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.  
**Ingestion** Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if any discomfort occurs.  
**Notes to physician** Provide general supportive measures and treat symptomatically.

**General advice** Get medical attention if any discomfort develops.

## 5. Fire Fighting Measures

**Flammable properties** The product is not flammable.

### Extinguishing media

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** No restrictions known.

### Protection of firefighters

**Specific hazards arising from the chemical** No unusual fire or explosion hazards noted.

**Protective equipment and precautions for firefighters** Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials.

**Hazardous combustion products** None known.

## 6. Accidental Release Measures

**Personal precautions** Avoid inhalation of vapors/spray and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.

**Environmental precautions** Environmental manager must be informed of all major releases.

**Methods for cleaning up** Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Clean surface thoroughly to remove residual contamination. Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.

Never return spills to original containers for re-use.

**Other information** Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

**Handling** Avoid inhalation of vapors/spray and contact with skin and eyes. Local exhaust is recommended. Wear appropriate personal protective equipment (See Section 8). Observe good laboratory hygiene practices.

**Storage** Avoid high temperatures. Store away from incompatible materials.

## 8. Exposure Controls / Personal Protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Exposure guidelines** Follow standard monitoring procedures. No exposure standards allocated.

**Engineering controls** Ensure adequate ventilation, especially in confined areas. Provide adequate general and local exhaust ventilation.

### Personal protective equipment

**Eye / face protection** Wear approved safety goggles.

**Skin protection** Wear appropriate chemical resistant gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory protection** In case of inadequate ventilation use suitable respirator.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical & Chemical Properties

**Appearance** Colorless to light yellow liquid.

**Physical state** Liquid.

**Form** Liquid.

<b>Color</b>	Colorless to light yellow.
<b>Odor</b>	Burnt Rubber smell
<b>Odor threshold</b>	Not available.
<b>pH</b>	3.7 - 3.9
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Not available.
<b>Specific gravity</b>	1.125 (25°C)
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Other data</b>	
<b>Flammability (solid, gas)</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	This product is stable under expected conditions of use.
<b>Conditions to avoid</b>	Freezing. Excessive heat.
<b>Incompatible materials</b>	Strong oxidizing agents. Water reactive materials.
<b>Hazardous decomposition products</b>	None known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Chlorine compound (Proprietary)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	475 mg/kg
<b>Sensitization</b>	No data available.	
<b>Acute effects</b>	Harmful if swallowed.	
<b>Local effects</b>	Causes skin, eye and respiratory tract irritation.	
<b>Carcinogenicity</b>	Not classified.	

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

<b>Mutagenicity</b>	No data available.
<b>Reproductive effects</b>	No data available.
<b>Symptoms and target organs</b>	Exposed individuals may experience eye tearing, redness, and discomfort. Irritation. Defatting of the skin.

## 12. Ecological Information

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	No data available.

**Bioaccumulation / Accumulation** No data available.

**Mobility in environmental media** The product is water soluble and may spread in water systems.

### 13. Disposal Considerations

**Disposal instructions** Dispose of in accordance with local regulations.

**Waste from residues / unused products** Do not allow this material to drain into sewers/water supplies. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

**DOT**  
Not regulated as a hazardous material by DOT.

**IATA**  
Not regulated as dangerous goods.

**IMDG**  
Not regulated as dangerous goods.

**TDG**  
Not regulated as dangerous goods.

### 15. Regulatory Information

**US federal regulations** This product is hazardous according to OSHA 29 CFR 1910.1200. CERCLA/SARA Hazardous Substances - Not applicable.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
Not regulated.

**CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)**  
None

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance (40 CFR 355, Appendix A)** No

**Section 311/312 (40 CFR 370)** Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)** Not controlled

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status** Controlled

**WHMIS classification** D2B - Other Toxic Effects-TOXIC

**WHMIS labeling**



#### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**  
Not listed.

**US. Massachusetts RTK - Substance List**  
Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**  
Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**  
Not regulated.

**Mexico regulations** This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**  
Health: 2  
Flammability: 0  
Physical hazard: 0

**NFPA ratings**  
Health: 2  
Flammability: 0  
Instability: 0

**Disclaimer** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

## 1. Product and Company Identification

**Material name** BioMaxi RNA Purification Kit - RP (Precipitation Buffer)  
**Version #** 01  
**Issue date** 11-09-2012  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product use** Purification of RNA from Stabilized Blood.  
**Manufacturer/Supplier** Biomātrica, Inc.  
 5627 Oberlin Dr Suite 120 San Diego,  
 CA 92121  
 info@biomatrica.com  
 Contact Person: Scott Whitney  
 (858) 550-0308  
**Emergency** 1-866-379-6879 (NORTH AMERICA)

## 2. Hazards Identification

**Physical state** Liquid.  
**Appearance** Clear, colorless liquid.  
**Emergency overview** DANGER  
 May be fatal if inhaled. Causes skin, eye and respiratory tract irritation.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Ingestion. Skin contact. Eye contact. Inhalation.  
**Eyes** Causes eye irritation.  
**Skin** Causes skin irritation.  
**Inhalation** May be fatal if inhaled. Causes respiratory tract irritation.  
**Ingestion** May cause discomfort if swallowed.  
**Signs and symptoms** Exposed individuals may experience eye tearing, redness, and discomfort. In high concentrations, mists/vapors may irritate throat and respiratory system and cause coughing.  
**Potential environmental effects** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Amino alcohol	Proprietary	1-10
Anionic surfactant	Proprietary	1-<5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

**First aid procedures**  
**Eye contact** Rinse the eye with water immediately. Get medical attention if irritation develops and persists.  
**Skin contact** Remove contaminated clothing immediately and wash skin with water. Get medical attention immediately.  
**Inhalation** Move injured person into fresh air and keep person calm under observation. Get medical attention immediately.

<b>Ingestion</b>	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Only induce vomiting at the instruction of medical personnel. Get medical attention immediately.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	The product is not flammable.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	No restrictions known.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	No unusual fire or explosion hazards noted.
<b>Protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Hazardous combustion products</b>	Carbon oxides. Nitrogen oxides.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Avoid inhalation of vapors/spray and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.
<b>Environmental precautions</b>	Environmental manager must be informed of all major releases.
<b>Methods for cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Clean surface thoroughly to remove residual contamination. Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.  Never return spills to original containers for re-use.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

<b>Handling</b>	Avoid inhalation of vapors/spray and contact with skin and eyes. Provide adequate ventilation. Local exhaust is recommended. Wear appropriate personal protective equipment (See Section 8). Observe good laboratory hygiene practices.
<b>Storage</b>	Store in a cool, well-ventilated, dark place. Store away from incompatible materials.

## 8. Exposure Controls / Personal Protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Exposure guidelines</b>	Follow standard monitoring procedures.
<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas. Provide adequate general and local exhaust ventilation.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear approved safety goggles.
<b>Skin protection</b>	Wear appropriate chemical resistant gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Respiratory protection</b>	In case of inadequate ventilation use suitable respirator. If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Clear, colorless liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless, clear.
<b>Odor</b>	Low.
<b>Odor threshold</b>	Not available.
<b>pH</b>	9 - 9.4
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Completely soluble in water.
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other data</b>	
<b>Flammability (solid, gas)</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable at normal conditions.
<b>Conditions to avoid</b>	Freezing. Excessive heat. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids. Strong bases. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides. Nitrogen oxides.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Amino alcohol (CAS Proprietary)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	5900 mg/kg
Anionic surfactant (CAS Proprietary)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	0.05 - 0.5 mg/l/4h
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
<b>Sensitization</b>	No data available.	
<b>Acute effects</b>	Harmful if inhaled.	
<b>Local effects</b>	Causes skin, eye and respiratory tract irritation.	
<b>Carcinogenicity</b>	Not classified.	
<b>Mutagenicity</b>	No data available.	



<b>Reproductive effects</b>	No data available.
<b>Teratogenicity</b>	No data available.
<b>Symptoms and target organs</b>	Exposed individuals may experience eye tearing, redness, and discomfort. In high concentrations, mists/vapors may irritate throat and respiratory system and cause coughing.
<b>Further information</b>	No other specific acute or chronic health impact noted.

## 12. Ecological Information

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation / Accumulation</b>	No data available.
<b>Partition coefficient</b> Amino alcohol	-2.31 (20°C)
<b>Mobility in environmental media</b>	The product is water soluble and may spread in water systems.

## 13. Disposal Considerations

<b>Disposal instructions</b>	Dispose of in accordance with local regulations.
<b>Waste from residues / unused products</b>	Do not allow this material to drain into sewers/water supplies. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport Information

<b>DOT</b>	Not regulated as a hazardous material by DOT.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>TDG</b>	Not regulated as dangerous goods.

## 15. Regulatory Information

<b>US federal regulations</b>	This product is hazardous according to OSHA 29 CFR 1910.1200.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.
<b>Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List</b>	Not regulated.
<b>CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)</b>	None
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	
<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
<b>Section 302 extremely hazardous substance (40 CFR 355, Appendix A)</b>	No
<b>Section 311/312 (40 CFR 370)</b>	Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)**

Not controlled

**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**

Controlled

**WHMIS classification**

D1A - Immediate/Serious-VERY TOXIC  
D2B - Other Toxic Effects-TOXIC

**WHMIS labeling**



**Inventory status**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

**State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**Mexico regulations**

This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

**16. Other Information**

**Further information**

HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**

Health: 2  
Flammability: 0  
Physical hazard: 0

**NFPA ratings**

Health: 3  
Flammability: 0  
Instability: 0

**Disclaimer**

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

**1. Product and Company Identification**

**Material name** BioMaxi RNA Purification Kit - RS (Resuspension Buffer)  
**Version #** 01  
**Issue date** 11-09-2012  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product use** Purification of RNA from Stabilized Blood.  
**Manufacturer/Supplier** Biomātrica, Inc.  
 5627 Oberlin Dr Suite 120 San Diego,  
 CA 92121  
 info@biomatrica.com  
 Contact Person: Scott Whitney  
 (858) 550-0308  
**Emergency** 1-866-379-6879 (NORTH AMERICA)

**2. Hazards Identification**

**Physical state** Liquid.  
**Appearance** Clear, yellow liquid.  
**Emergency overview** WARNING  
 Harmful if inhaled, absorbed through skin, or swallowed. May cause eye, skin and respiratory tract irritation.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Ingestion. Skin contact. Eye contact. Inhalation.  
**Eyes** May cause eye irritation on direct contact.  
**Skin** Harmful if absorbed through skin. May cause skin irritation.  
**Inhalation** Harmful if inhaled. May cause respiratory tract irritation.  
**Ingestion** Harmful if swallowed.  
**Signs and symptoms** May cause abdominal pain with vomiting, nausea, diarrhea, or dizziness. Contact may cause irritation and redness.  
**Potential environmental effects** Harmful to aquatic life with long lasting effects.

**3. Composition / Information on Ingredients**

Components	CAS #	Percent
Salt of thiocyanic acid	Proprietary	40 - 60
Polyoxyethylenesorbitan monooleate	Proprietary	10 - 20

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First Aid Measures**

**First aid procedures**  
**Eye contact** Rinse the eye with water immediately. Get medical attention if irritation develops and persists.  
**Skin contact** Remove contaminated clothing immediately and wash skin with water. Get medical attention immediately.  
**Inhalation** Move injured person into fresh air and keep person calm under observation. Get medical attention immediately.

<b>Ingestion</b>	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Only induce vomiting at the instruction of medical personnel. Get medical attention immediately.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	The product is not flammable.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	No restrictions known.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	No unusual fire or explosion hazards noted.
<b>Protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Hazardous combustion products</b>	Carbon oxides. Nitrogen oxides. Sulfur oxides.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Avoid inhalation of vapors/spray and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.
<b>Environmental precautions</b>	Environmental manager must be informed of all major releases.
<b>Methods for cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Clean surface thoroughly to remove residual contamination. Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.  Never return spills to original containers for re-use.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

<b>Handling</b>	Avoid inhalation of vapors/spray and contact with skin and eyes. Provide adequate ventilation. Local exhaust is recommended. Wear appropriate personal protective equipment (See Section 8). Observe good laboratory hygiene practices.
<b>Storage</b>	Store in a cool, well-ventilated, dark place. Do not store together with acids. Protect from light. Store away from incompatible materials.

## 8. Exposure Controls / Personal Protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Exposure guidelines</b>	Follow standard monitoring procedures.
<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas. Provide adequate general and local exhaust ventilation.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear approved safety goggles.
<b>Skin protection</b>	Wear appropriate chemical resistant gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Respiratory protection</b>	If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Clear, yellow liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Clear. Yellow.
<b>Odor</b>	Low.
<b>Odor threshold</b>	Not available.
<b>pH</b>	5.8 - 6.2
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Completely soluble in water.
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other data</b>	
<b>Flammability (solid, gas)</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Contact with acids liberates very toxic gas.
<b>Conditions to avoid</b>	Contact with acids. Freezing. Excessive heat. Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Cyanides. Strong bases. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides. Nitrogen oxides. Sulfur oxides.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

<b>Sensitization</b>	No data available.
<b>Acute effects</b>	Harmful if inhaled, absorbed through skin, or swallowed.
<b>Local effects</b>	May cause eye, skin and respiratory tract irritation.
<b>Carcinogenicity</b>	Not classified.
<b>Mutagenicity</b>	No data available.
<b>Reproductive effects</b>	No data available.
<b>Teratogenicity</b>	No data available.
<b>Symptoms and target organs</b>	May cause abdominal pain with vomiting, nausea, diarrhea, or dizziness. Contact may cause irritation and redness.
<b>Further information</b>	No other specific acute or chronic health impact noted.

## 12. Ecological Information

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation / Accumulation</b>	No data available.

**Mobility in environmental media** The product is water soluble and may spread in water systems.

### 13. Disposal Considerations

**Disposal instructions** Dispose of in accordance with local regulations.  
**Waste from residues / unused products** Do not allow this material to drain into sewers/water supplies. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).  
**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

#### DOT

Not regulated as a hazardous material by DOT.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

#### TDG

Not regulated as dangerous goods.

### 15. Regulatory Information

**US federal regulations** This product is hazardous according to OSHA 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance (40 CFR 355, Appendix A)** No

**Section 311/312 (40 CFR 370)** Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)** Not controlled

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status** Controlled

**WHMIS classification** D2B - Other Toxic Effects-TOXIC

#### WHMIS labeling



#### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**Mexico regulations** This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**  
Health: 2  
Flammability: 0  
Physical hazard: 0

**NFPA ratings**  
Health: 2  
Flammability: 0  
Instability: 0

**Disclaimer** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

**1. Product and Company Identification**

**Material name** BioMaxi RNA Purification Kit - RW1 (Wash Buffer 1)  
**Version #** 01  
**Issue date** 11-08-2012  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product use** Purification of RNA from Stabilized Blood.  
**Manufacturer/Supplier** Biomātrica, Inc.  
 5627 Oberlin Drive, Suite 120  
 CA 92121  
 info@biomatrica.com  
 Contact Person: Scott Whitney  
 (858) 550-0308  
**Emergency** 1-866-379-6879 (NORTH AMERICA)

**2. Hazards Identification**

**Physical state** Liquid.  
**Appearance** Clear, colorless liquid.  
**Emergency overview** WARNING  
 Harmful if swallowed. Causes skin, eye and respiratory tract irritation.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Ingestion. Skin contact. Eye contact. Inhalation.  
**Eyes** Causes eye irritation.  
**Skin** Causes skin irritation.  
**Inhalation** Causes respiratory tract irritation.  
**Ingestion** Harmful if swallowed.  
**Signs and symptoms** Exposed individuals may experience eye tearing, redness, and discomfort. Irritation.  
**Potential environmental effects** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**3. Composition / Information on Ingredients**

Components	CAS #	Percent
Lithium chloride	7447-41-8	30 - 60

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First Aid Measures**

**First aid procedures**  
**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.  
**Skin contact** Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention if irritation persists after washing.  
**Inhalation** Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.  
**Ingestion** Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if any discomfort occurs.



**Notes to physician** Provide general supportive measures and treat symptomatically.  
**General advice** Get medical attention if any discomfort develops.

## 5. Fire Fighting Measures

**Flammable properties** The product is not flammable.

### Extinguishing media

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** No restrictions known.

### Protection of firefighters

**Specific hazards arising from the chemical** No unusual fire or explosion hazards noted.

**Protective equipment and precautions for firefighters** Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials.

**Hazardous combustion products** None known.

## 6. Accidental Release Measures

**Personal precautions** Avoid inhalation of vapors/spray and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.

**Environmental precautions** Environmental manager must be informed of all major releases.

**Methods for cleaning up** Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Clean surface thoroughly to remove residual contamination. Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.

Never return spills to original containers for re-use.

**Other information** Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

**Handling** Avoid inhalation of vapors/spray and contact with skin and eyes. Local exhaust is recommended. Wear appropriate personal protective equipment (See Section 8). Observe good laboratory hygiene practices.

**Storage** Avoid high temperatures. Store away from incompatible materials.

## 8. Exposure Controls / Personal Protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Exposure guidelines** Follow standard monitoring procedures.

**Engineering controls** Ensure adequate ventilation, especially in confined areas. Provide adequate general and local exhaust ventilation.

### Personal protective equipment

**Eye / face protection** Wear approved safety goggles.

**Skin protection** Wear appropriate chemical resistant gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory protection** In case of inadequate ventilation use suitable respirator.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical & Chemical Properties

**Appearance** Clear, colorless liquid.

**Physical state** Liquid.

**Form** Liquid.

<b>Color</b>	Clear. Colorless.
<b>Odor</b>	Low.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other data</b>	
<b>Flammability (solid, gas)</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	This product is stable under expected conditions of use.
<b>Conditions to avoid</b>	Freezing. Excessive heat.
<b>Incompatible materials</b>	Strong oxidizing agents. Water reactive materials.
<b>Hazardous decomposition products</b>	None known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Lithium chloride (CAS 7447-41-8)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	757 mg/kg
<b>Sensitization</b>	No data available.	
<b>Acute effects</b>	Harmful if swallowed.	
<b>Local effects</b>	Causes skin, eye and respiratory tract irritation.	
<b>Carcinogenicity</b>	Not classified.	
<b>Mutagenicity</b>	No data available.	
<b>Reproductive effects</b>	No data available.	
<b>Symptoms and target organs</b>	Exposed individuals may experience eye tearing, redness, and discomfort. Irritation. Defatting of the skin.	

## 12. Ecological Information

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	No data available.

**Bioaccumulation / Accumulation** No data available.

**Mobility in environmental media** The product is water soluble and may spread in water systems.

### 13. Disposal Considerations

**Disposal instructions** Dispose of in accordance with local regulations.

**Waste from residues / unused products** Do not allow this material to drain into sewers/water supplies. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

#### DOT

Not regulated as a hazardous material by DOT.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

#### TDG

Not regulated as dangerous goods.

### 15. Regulatory Information

**US federal regulations** This product is hazardous according to OSHA 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance (40 CFR 355, Appendix A)** No

**Section 311/312 (40 CFR 370)** Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)** Not controlled

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status** Controlled

**WHMIS classification** D2B - Other Toxic Effects-TOXIC

#### WHMIS labeling



#### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**Mexico regulations** This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

**16. Other Information**

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**  
 Health: 2  
 Flammability: 0  
 Physical hazard: 0

**NFPA ratings**  
 Health: 2  
 Flammability: 0  
 Instability: 0

**Disclaimer** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

## 1. Product and Company Identification

**Material name** BioMaxi RNA Purification Kit - RW2 (Wash Buffer 2)  
**Version #** 01  
**Issue date** 11-08-2012  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product use** Purification of RNA from Stabilized Blood.  
**Manufacturer/Supplier** Biomātrica, Inc.  
 5627 Oberlin Drive, Suite 120  
 CA 92121  
 info@biomatrica.com  
 Contact Person: Scott Whitney  
 (858) 550-0308  
**Emergency** 1-866-379-6879 (NORTH AMERICA)

## 2. Hazards Identification

**Physical state** Liquid.  
**Appearance** Clear, colorless liquid.  
**Emergency overview** WARNING  
 Causes skin, eye and respiratory tract irritation.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Ingestion. Skin contact. Eye contact. Inhalation.  
**Eyes** Causes eye irritation.  
**Skin** Causes skin irritation.  
**Inhalation** Causes respiratory tract irritation.  
**Ingestion** May cause discomfort if swallowed.  
**Signs and symptoms** Exposed individuals may experience eye tearing, redness, and discomfort. Irritation.  
**Potential environmental effects** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Tris-(hydroxymethyl)aminomethane	77-86-1	1 - 2.5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

**First aid procedures**  
**Eye contact** Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Immediately flush with plenty of water for up to 15 minutes.  
**Skin contact** Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention if irritation persists after washing.  
**Inhalation** Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.  
**Ingestion** Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if any discomfort occurs.

**Notes to physician** Provide general supportive measures and treat symptomatically.  
**General advice** Get medical attention if any discomfort develops.

## 5. Fire Fighting Measures

**Flammable properties** The product is not flammable.

### Extinguishing media

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** No restrictions known.

### Protection of firefighters

**Specific hazards arising from the chemical** No unusual fire or explosion hazards noted.

**Protective equipment and precautions for firefighters** Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials.

**Hazardous combustion products** None known.

## 6. Accidental Release Measures

**Personal precautions** Avoid inhalation of vapors/spray and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.

**Environmental precautions** Environmental manager must be informed of all major releases.

**Methods for cleaning up** Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Clean surface thoroughly to remove residual contamination. Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.

Never return spills to original containers for re-use.

**Other information** Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

**Handling** Avoid inhalation of vapors/spray and contact with skin and eyes. Local exhaust is recommended. Wear appropriate personal protective equipment (See Section 8). Observe good laboratory hygiene practices.

**Storage** Avoid high temperatures. Store away from incompatible materials.

## 8. Exposure Controls / Personal Protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Exposure guidelines** Follow standard monitoring procedures. No exposure standards allocated.

**Engineering controls** Ensure adequate ventilation, especially in confined areas. Provide adequate general and local exhaust ventilation.

### Personal protective equipment

**Eye / face protection** Wear approved safety goggles.

**Skin protection** Wear appropriate chemical resistant gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory protection** In case of inadequate ventilation use suitable respirator.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical & Chemical Properties

**Appearance** Clear, colorless liquid.

**Physical state** Liquid.

**Form** Liquid.

<b>Color</b>	Clear. Colorless.
<b>Odor</b>	Low.
<b>Odor threshold</b>	Not available.
<b>pH</b>	7 - 7.5
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Other data</b>	
<b>Flammability (solid, gas)</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	This product is stable under expected conditions of use.
<b>Conditions to avoid</b>	Freezing. Excessive heat.
<b>Incompatible materials</b>	Strong oxidizing agents. Water reactive materials.
<b>Hazardous decomposition products</b>	None known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Tris-(hydroxymethyl)aminomethane (CAS 77-86-1)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	5900 mg/kg
<b>Sensitization</b>	No data available.	
<b>Acute effects</b>	May cause discomfort if swallowed.	
<b>Local effects</b>	Causes skin, eye and respiratory tract irritation.	
<b>Carcinogenicity</b>	Not classified.	
<b>Mutagenicity</b>	No data available.	
<b>Reproductive effects</b>	No data available.	
<b>Teratogenicity</b>	No data available.	
<b>Symptoms and target organs</b>	Exposed individuals may experience eye tearing, redness, and discomfort. Irritation. Skin irritation.	

## 12. Ecological Information

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation / Accumulation</b>	No data available.

**Partition coefficient**

Tris-(hydroxymethyl)aminomethane -2.31 (20°C)

**Mobility in environmental media**

The product is water soluble and may spread in water systems.

**13. Disposal Considerations****Disposal instructions**

Dispose of in accordance with local regulations.

**Waste from residues / unused products**

Do not allow this material to drain into sewers/water supplies. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport Information****DOT**

Not regulated as a hazardous material by DOT.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**TDG**

Not regulated as dangerous goods.

**15. Regulatory Information****US federal regulations**

This product is hazardous according to OSHA 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No**Section 302 extremely hazardous substance (40 CFR 355, Appendix A)**

No

**Section 311/312 (40 CFR 370)**

Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)**

Not controlled

**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**

Controlled

**WHMIS classification**

D2B - Other Toxic Effects-TOXIC

**WHMIS labeling****Inventory status****Country(s) or region**  
Canada**Inventory name**  
Domestic Substances List (DSL)**On inventory (yes/no)\***  
Yes



Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**  
Not listed.

**US. Massachusetts RTK - Substance List**  
Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**  
Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**  
Not regulated.

**Mexico regulations** This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**  
Health: 2  
Flammability: 0  
Physical hazard: 0

**NFPA ratings**  
Health: 2  
Flammability: 0  
Instability: 0

**Disclaimer** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Date of Initial Issue: 19 Nov 2012

Revision Date: N/A

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT: DNase I (RNase-Free), 1500 units**

Biomatrica, Inc.  
5627 Oberlin Drive  
Suite 120  
San Diego, CA 92121  
(858) 550-0308 (USA)

EMERGENCY CONTACT:  
1-866-379-6879 (NORTH AMERICA)  
WEB ADDRESS: [www.biomatrica.com](http://www.biomatrica.com)  
MAIL: [info@biomatrica.com](mailto:info@biomatrica.com)

PRODUCT USE: For Research Use Only. Not for use in diagnostic procedures.

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

**Chemical characterization**

**Description:** Deoxyribonuclease I

Components	CAS/EC No.	Concentration
Deoxyribonuclease I, from bovine pancreas	CAS-No. 9003-98-9 EC No. 3.1.21.1	100%

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:** This product has been classified as non-hazardous.

**Classification according to Regulation (EC) No 1272-2008, GHS:**  
This product is not classified.

**Classification according to EU Directive 67/548/EEC:**  
No applicable. This product has been classified as non-hazardous.

**OSHA Hazard Overview (29CFR1910.1200):** Not applicable.

**Classification system:**  
**NFAP ratings** (scale 0-4)  
Health = 0

Fire = 0  
Reactivity = 0

**HMIS ratings** (scale 0-4)

Health = 0  
Fire = 0  
Reactivity = 0

**WHMIS Classification:** Not a WHMIS controlled product.

**Potential Health Effects:**

**Inhalation:** May be harmful if inhaled.

**Ingestion:** May be harmful if swallowed.

**Skin Contact:** May cause skin irritation.

**Eye Contact:** May cause eye irritation, redness and pain.

**4. FIRST AID MEASURES**

**General:** No special measures required.

**Inhalation:** Remove exposed person from source of exposure to fresh air. If not breathing, trained personnel should begin artificial respiration (AR). Get medical aid if cough or other symptoms appear.

**Skin contact:** Generally the product does not irritate the skin.

**Eye contact:** Rinse opened eye for several minutes under running water.

**5. FIRE FIGHTING MEASURES**

**Flammable properties:** Does not burn.

**Suitable extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** Not applicable.

**Specific Hazards arising from the chemicals:** Not known.

**Special protective equipment and precaution for fire fighters:** No special measures required.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Do not eat, drink or smoke while cleaning up. Wear protective clothing, safety glasses and impervious gloves. Ensure adequate ventilation, avoid all sources of ignition hot surfaces and open flames.

**Environmental precautions:** No special measures required.

**Methods for containment and Clean-up:** Wipe up with absorbent material.

**7. HANDLING AND STORAGE**

**Handling:** Keep container closed. Use good personal hygiene practices. Wash hands thoroughly before eating, drinking or smoking. Remove contaminated clothing and clean them before re-use.

**Storage:** Keep in a tightly closed container, stored in a cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid storage at direct sunlight. Keep container tightly closed and upright when not in use. Protect against physical damage.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure limit:** Contains no substances with occupational exposure limit values.

### **Personal protective equipment (PPE)**

**General Hygiene considerations:** Do not eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering or leaving work areas. Wash hands thoroughly after handling this product and before eating using the restroom or leaving work area.

**Eye protection:** Use chemical safety goggles and/or full face shield.

**Skin protection:** Avoid skin contact. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls.

**Respiratory protection:** Not normally required if product is used as directed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid

**Appearance:** white

**Odour:** enzyme odor

**Odour threshold:** Not available

**Boiling point:** decomposes

**Freezing point:** Not available

**Density (water = 1):** Not available

**pH:** 5

**Partition coefficient n-Octanol/water:** Not available

**Vapour pressure:** Not available

**Vapour density:** Not available

**Evaporation rate:** Not available

**Solubility:** readily miscible in water

**Flash point:** Not available

**Lower flammable/Explosive limit:** Not available

**Upper flammable/Explosive limit:** Not available

**Auto-ignite temperature:** Product is not self-igniting.

**Decomposition temperature:** Not available

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Normally stable, if used according to specifications.

**Possibility of hazardous reactions:** Not applicable.

**Conditions to avoid:** Not applicable.

**Incompatible materials:** Not applicable.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11. TOXICOLOGICAL INFORMATION

### **Acute Toxicity Values**

**Oral LD50:** No data available

**Inhalation LC50:** No data available

**Dermal LD50:** No data available

### **Acute Effects**

**Inhalation:** Not applicable.

**Ingestion:** Not applicable.

**Skin Contact:** Not applicable.

**Eye Contact:** Not applicable.

**Chronic effects:** No data available

**Respiratory/Skin Sensitization:** No data available

**Carcinogenicity:** No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, IARC and ACGIH®.

**Teratogenicity/Embryotoxicity:** No data available

**Reproductive Toxicity:** No data available

**Mutagenicity:** No data available

## **12. ECOLOGICAL INFORMATION**

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Bioaccumulative potential:** Not known

## **13. DISPOSAL CONSIDERATIONS**

This product can be disposed of as waste water. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of products characteristics at time of disposal.

## **14. TRANSPORT INFORMATION**

Shipping information: Not regulated under US Department of Transportation (DOT) and International Air Transport Association (IATA).

## **15. REGULATORY INFORMATION**

### **SARA:**

No chemical in this product are subject to the reporting requirements of SARA Title III, Section 302 Extremely Hazardous Substances.

No chemical in this product are subject to the reporting requirements of SARA Title III: Section 313 Toxic Chemicals

**CERCLA Hazardous Substance:** No chemical in this product are subject to the reportable quantity (RQ).

**Clean Air Act, Section 112(r):** This product does not contain any hazardous air pollutants.

**California Proposition 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA (Toxic Substances Control Act):** All ingredients are listed on the TSCA Inventory List.

None of the chemicals are listed under TSCA Section 12(b).

**OSHA:** None of the ingredients are listed.

**WHMIS Canada:** Listed on Canada’s DSL/NDSL List. Not a WHMIS controlled product.

<b>16. OTHER INFORMATION</b>
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For Research Use Only. Not for use in diagnostic procedures.

This information in the above document is based on our present knowledge and believed to be correct but may not be construed to be all inclusive and should only be used as a guide. However, this information shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship nor shall Biomatrix be held liable for any damage resulting from handling or from contact with the above product.

Date of Initial Issue: 19 Nov 2012

Revision Date: N/A

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT: DNase I Buffer**

Biomatrica, Inc.  
5627 Oberlin Drive  
Suite 120  
San Diego, CA 92121  
(858) 550-0308 (USA)

EMERGENCY CONTACT:  
1-866-379-6879 (NORTH AMERICA)  
WEB ADDRESS: [www.biomatrica.com](http://www.biomatrica.com)  
MAIL: [info@biomatrica.com](mailto:info@biomatrica.com)

PRODUCT USE: For Research Use Only. Not for use in diagnostic procedures.

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

**Chemical characterization**

**Description:** DNase I Buffer

Components	CAS/EC No.	Concentration
Tris-HCl	CAS-No. 1185-53-1	<1%
Sodium Chloride	CAS-No. 7647-14-5	<1%
Magnesium chloride	CAS-No. 7786-30-3	<1%

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:** This product has been classified as non-hazardous.

**Classification according to Regulation (EC) No 1272-2008, GHS:**

This product is not classified.

**Classification according to EU Directive 67/548/EEC:**

No applicable. This product has been classified as non-hazardous.

**OSHA Hazard Overview (29CFR1910.1200):** Not applicable.

**Classification system:**

**NFAP ratings** (scale 0-4)

Health = 0

Fire = 0  
Reactivity = 0

**HMIS ratings** (scale 0-4)

Health = 0  
Fire = 0  
Reactivity = 0

**WHMIS Classification:** Not a WHMIS controlled product.

**Potential Health Effects:**

**Inhalation:** May be harmful if inhaled.

**Ingestion:** May be harmful if swallowed.

**Skin Contact:** May cause skin irritation.

**Eye Contact:** May cause eye irritation, redness and pain.

**4. FIRST AID MEASURES**

**General:** No special measures required.

**Inhalation:** Remove exposed person from source of exposure to fresh air. If not breathing, trained personnel should begin artificial respiration (AR). Get medical aid if cough or other symptoms appear.

**Skin contact:** Generally the product does not irritate the skin.

**Eye contact:** Rinse opened eye for several minutes under running water.

**5. FIRE FIGHTING MEASURES**

**Flammable properties:** Does not burn.

**Suitable extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** Not applicable.

**Specific Hazards arising from the chemicals:** Not known.

**Special protective equipment and precaution for fire fighters:** No special measures required.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Do not eat, drink or smoke while cleaning up. Wear protective clothing, safety glasses and impervious gloves. Ensure adequate ventilation, avoid all sources of ignition hot surfaces and open flames.

**Environmental precautions:** No special measures required.

**Methods for containment and Clean-up:** Wipe up with absorbent material.

**7. HANDLING AND STORAGE**

**Handling:** Keep container closed. Use good personal hygiene practices. Wash hands thoroughly before eating, drinking or smoking. Remove contaminated clothing and clean them before re-use.



**Storage:** Keep in a tightly closed container, stored in a cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid storage at direct sunlight. Keep container tightly closed and upright when not in use. Protect against physical damage.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure limit:** Contains no substances with occupational exposure limit values.

### **Personal protective equipment (PPE)**

**General Hygiene considerations:** Do not eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering or leaving work areas. Wash hands thoroughly after handling this product and before eating using the restroom or leaving work area.

**Eye protection:** Use chemical safety goggles and/or full face shield.

**Skin protection:** Avoid skin contact. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls.

**Respiratory protection:** Not normally required if product is used as directed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid

**Appearance:** Colorless

**Odour:** Odourless

**Odour threshold:** Not available

**Boiling point:** Not available

**Freezing point:** Not available

**Density (water = 1):** Not available

**pH:** ~7

**Partition coefficient n-Octanol/water:** Not available

**Vapour pressure:** Not available

**Vapour density:** Not available

**Evaporation rate:** Not available

**Solubility:** completely miscible

**Flash point:** Not available

**Lower flammable/Explosive limit:** Not available

**Upper flammable/Explosive limit:** Not available

**Auto-ignite temperature:** Product is not self-igniting.

**Decomposition temperature:** Not available

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Normally stable, if used according to specifications.

**Possibility of hazardous reactions:** Not applicable.

**Conditions to avoid:** Not applicable.

**Incompatible materials:** Not applicable.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity Values

**Oral LD50:** No data available

**Inhalation LC50:** No data available

**Dermal LD50:** No data available

### **Acute Effects**

**Inhalation:** May cause respiratory tract irritation. .

**Ingestion:** Not applicable.

**Skin Contact:** Not applicable.

**Eye Contact:** Not applicable.

**Chronic effects:** No data available

**Respiratory/Skin Sensitization:** No data available

**Carcinogenicity:** No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, IARC and ACGIH®.

**Teratogenicity/Embryotoxicity:** No data available

**Reproductive Toxicity:** No data available

**Mutagenicity:** No data available

## 12. ECOLOGICAL INFORMATION

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Bioaccumulative potential:** Not known

## 13. DISPOSAL CONSIDERATIONS

This product can be disposed of as waste water. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of products characteristics at time of disposal.

## 14. TRANSPORT INFORMATION

Shipping information: Not regulated under US Department of Transportation (DOT) and International Air Transport Association (IATA).

## 15. REGULATORY INFORMATION

### **SARA:**

No chemical in this product are subject to the reporting requirements of SARA Title III, Section 302 Extremely Hazardous Substances.

No chemical in this product are subject to the reporting requirements of SARA Title III: Section 313 Toxic Chemicals

**CERCLA Hazardous Substance:** No chemical in this product are subject to the reportable quantity (RQ).

**Clean Air Act, Section 112(r):** This product does not contain any hazardous air pollutants.

**California Proposition 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA (Toxic Substances Control Act):** All ingredients are listed on the TSCA Inventory List.

None of the chemicals are listed under TSCA Section 12(b).

**OSHA:** None of the ingredients are listed.

**WHMIS Canada:** Listed on Canada's DSL/NDSL List. Not a WHMIS controlled product.

<b>16. OTHER INFORMATION</b>
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This information in the above document is based on our present knowledge and believed to be correct but may not be construed to be all inclusive and should only be used as a guide. However, this information shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship nor shall Biomatrix be held liable for any damage resulting from handling or from contact with the above product.

Date of Initial Issue: 19 Nov 2012

Revision Date: N/A

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT: Sterile Water (DNase I Resuspension Water)**

Biomatrica, Inc.  
5627 Oberlin Drive  
Suite 120  
San Diego, CA 92121  
(858) 550-0308 (USA)

EMERGENCY CONTACT:  
1-866-379-6879 (NORTH AMERICA)  
WEB ADDRESS: [www.biomatrica.com](http://www.biomatrica.com)  
MAIL: [info@biomatrica.com](mailto:info@biomatrica.com)

PRODUCT USE: For Research Use Only. Not for use in diagnostic procedures.

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

**Chemical characterization**

**Description:** DEPC Treated Water

Components	Common Name/ Synonyms	CAS/EC No.	Concentration
Water	Water, Pure	CAS-No. 7732-18-5 EC-No. 231-791-2	99%

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:** This product has been classified as non-hazardous.

**Classification according to Regulation (EC) No 1272-2008, GHS:**  
This product is not classified.

**Classification according to EU Directive 67/548/EEC:**  
No applicable. This product has been classified as non-hazardous.

**OSHA Hazard Overview (29CFR1910.1200):** Not applicable.

**Classification system:**  
**NFAP ratings** (scale 0-4)  
Health = 0

Fire = 0  
Reactivity = 0

**HMIS ratings** (scale 0-4)

Health = 0  
Fire = 0  
Reactivity = 0

**WHMIS Classification:** Not a WHMIS controlled product.

**Potential Health Effects:**

**Inhalation:** May be harmful if inhaled.

**Ingestion:** May be harmful if swallowed.

**Skin Contact:** May cause skin irritation.

**Eye Contact:** May cause eye irritation, redness and pain.

**4. FIRST AID MEASURES**

**General:** No special measures required.

**Inhalation:** Remove exposed person from source of exposure to fresh air. If not breathing, trained personnel should begin artificial respiration (AR). Get medical aid if cough or other symptoms appear.

**Skin contact:** Generally the product does not irritate the skin.

**Eye contact:** Rinse opened eye for several minutes under running water.

**5. FIRE FIGHTING MEASURES**

**Flammable properties:** Does not burn.

**Suitable extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** Not applicable.

**Specific Hazards arising from the chemicals:** Not known.

**Special protective equipment and precaution for fire fighters:** No special measures required.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Do not eat, drink or smoke while cleaning up. Wear protective clothing, safety glasses and impervious gloves. Ensure adequate ventilation, avoid all sources of ignition hot surfaces and open flames.

**Environmental precautions:** No special measures required.

**Methods for containment and Clean-up:** Wipe up with absorbent material.

**7. HANDLING AND STORAGE**

**Handling:** Keep container closed. Use good personal hygiene practices. Wash hands thoroughly before eating, drinking or smoking. Remove contaminated clothing and clean them before re-use.

**Storage:** Keep in a tightly closed container, stored in a cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid storage at direct sunlight. Keep container tightly closed and upright when not in use. Protect against physical damage.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure limit:** Contains no substances with occupational exposure limit values.

### **Personal protective equipment (PPE)**

**General Hygiene considerations:** Do not eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering or leaving work areas. Wash hands thoroughly after handling this product and before eating using the restroom or leaving work area.

**Eye protection:** Use chemical safety goggles and/or full face shield.

**Skin protection:** Avoid skin contact. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls.

**Respiratory protection:** Not normally required if product is used as directed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid

**Appearance:** Colorless

**Odour:** Odourless

**Odour threshold:** Not available

**Boiling point:** 100 °C (212 °F)

**Freezing point:** 0 °C (32 °F)

**Density (water = 1):** 1.000 g/cm<sup>3</sup> at 68°F

**pH:** 6-8

**Partition coefficient n-Octanol/water:** Not available

**Vapour pressure:** Not available

**Vapour density:** Not available

**Evaporation rate:** Not available

**Solubility:** completely miscible

**Flash point:** Not available

**Lower flammable/Explosive limit:** Not available

**Upper flammable/Explosive limit:** Not available

**Auto-ignite temperature:** Product is not self-igniting.

**Decomposition temperature:** Not available

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Normally stable, if used according to specifications.

**Possibility of hazardous reactions:** Not applicable.

**Conditions to avoid:** Not applicable.

**Incompatible materials:** Not applicable.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11. TOXICOLOGICAL INFORMATION

### **Acute Toxicity Values**

**Oral LD50:** No data available

**Inhalation LC50:** No data available

**Dermal LD50:** No data available

### **Acute Effects**

**Inhalation:** Not applicable.

**Ingestion:** Not applicable.

**Skin Contact:** Not applicable.

**Eye Contact:** Not applicable.

**Chronic effects:** No data available

**Respiratory/Skin Sensitization:** No data available

**Carcinogenicity:** No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, IARC and ACGIH®.

**Teratogenicity/Embryotoxicity:** No data available

**Reproductive Toxicity:** No data available

**Mutagenicity:** No data available

## 12. ECOLOGICAL INFORMATION

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Bioaccumulative potential:** Not known

## 13. DISPOSAL CONSIDERATIONS

This product can be disposed of as waste water. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of products characteristics at time of disposal.

## 14. TRANSPORT INFORMATION

Shipping information: Not regulated under US Department of Transportation (DOT) and International Air Transport Association (IATA).

## 15. REGULATORY INFORMATION

### **SARA:**

No chemical in this product are subject to the reporting requirements of SARA Title III, Section 302 Extremely Hazardous Substances.

No chemical in this product are subject to the reporting requirements of SARA Title III: Section 313 Toxic Chemicals

**CERCLA Hazardous Substance:** No chemical in this product are subject to the reportable quantity (RQ).

**Clean Air Act, Section 112(r):** This product does not contain any hazardous air pollutants.

**California Proposition 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA (Toxic Substances Control Act):** All ingredients are listed on the TSCA Inventory List.

None of the chemicals are listed under TSCA Section 12(b).

**OSHA:** None of the ingredients are listed.

**WHMIS Canada:** Listed on Canada's DSL/NDSL List. Not a WHMIS controlled product.

<b>16. OTHER INFORMATION</b>
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