

# SAFETY DATA SHEET

## Elution Solution A

### Section 1. Identification

<b>Product Identifier:</b>	Elution solution A
<b>Product code:</b>	17283, 17284, 90023, 90024, 90171, 90241, 90244, Dx90023, Dx90024, Dx90241, NBELSOLA-20ML, NBELSOLA-6ML
<b>Product Type:</b>	Liquid
<b>Supplier's details:</b>	Norgen Biotek Corporation 3430 Schmon Parkway Thorold, ON Canada L2V 4Y6 Tel: (905) 227-8848 Fax: (905) 227-1061 Toll Free: 1-866-667-4362 E-mail: <a href="mailto:techsupport@norgenbiotek.com">techsupport@norgenbiotek.com</a>
<b>Emergency telephone number (with hours of operation):</b>	CHEMTREC U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

<b>Classification of the Substance or mixture:</b>	Not applicable
<b><u>GHS label elements</u></b>	
<b>Hazard Pictograms:</b>	Not applicable
<b>Signal Word:</b>	Not applicable
<b>Hazard Statements:</b>	Not applicable
<b><u>Precautionary statements:</u></b>	
<b>Prevention:</b>	Not applicable
<b>Response:</b>	Not applicable
<b>Storage:</b>	Not applicable.
<b>Disposal:</b>	Not applicable.

**Section 3. Composition/information on ingredients**

**Substance/mixture:** Mixture

**Other means of identification:**

Ingredient name	% (w/w)	CAS number
GUanidine Hydrochloride	2-15	50-01-1

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First-aid measures**

**Description of necessary first aid measures**

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- Eye contact:** No known significant effects or critical hazards.
- Inhalation:** No known significant effects or critical hazards.
- Skin contact:** No known significant effects or critical hazards.
- Ingestion:** No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact:** No known significant effects or critical hazards.  
**Inhalation:** No known significant effects or critical hazards.  
**Skin contact:** No known significant effects or critical hazards.  
**Ingestion:** No known significant effects or critical hazards.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled  
**Specific treatments:** No specific treatments

**Protection of**

**first-aiders:** No actions shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to mouth resuscitation.

**See toxicological information (Section 11)**

**Section 5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media:** No information available

**Unsuitable extinguishing media:** No information available

**Specific hazards arising from the chemical:** Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty containers away from heat and sources of ignition

**Hazardous thermal decomposition products:** No information available

**Special protective actions for fire-fighters:** No information available

**Special protective equipment for fire-fighters:** No information available

**Section 6. Accidental release measures**

**Personal precautions, protective equipment, and emergency procedures**

**For non-emergency**

**personnel:** Use personal protective equipment as required. Ensure adequate ventilation.  
**For emergency responders:**

If specialized clothing is required to deal with the spillage, take note of any information in section 8 on suitable and unsuitable materials. See the information in “For non-emergency personnel”.

**Environmental precautions:**

Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental ;pollution(sewers, waterways, soil or air)

**Methods and materials for containment and cleaning up**

**Small spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**Section 7. Handling and storage**

**Precautions for safe handling**

**Protective measures:** Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container

**Advice on general occupational hygiene:**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including**

**incompatibilities:** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None known

### **Appropriate engineering**

**controls:** Good general ventilation should be sufficient to control worker exposure to airborne contaminants

### **Environmental**

**exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

**Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location

**Eye/face protection:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove

material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product

**Respiratory protection:** Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

**Physical State:** Liquid  
**Color:** Not available.  
**Odor:** Not available.  
**Odor threshold:** Not available.  
**pH:** Not available.  
**Melting point/  
 freezing point:** Not applicable.  
**Boiling point, initial  
 boiling point, and  
 boiling range:** Not available.  
**Flash point:** Not applicable.  
**Evaporation rate:** Not available.  
**Flammability:** Not available.  
**Lower and upper  
 explosion limit/  
 flammability limit:** Not available.  
**Vapor pressure:** Not available.  
**Relative vapor**

**density:** Not available.  
**Relative density:** Not available.  
**Solubility:** Miscible in water.  
**Partition coefficient:** Not applicable.  
**n-octanol/water**  
**Auto-ignition**  
**temperature:** Not available.  
**Decomposition**  
**temperature:** Not available.  
**Viscosity:** Not available.  
**Flow time**  
**(ISO 2431):** Not available.  
**Particle characteristics**  
**Median particle size:** Not applicable.

## **Section 10. Stability and reactivity**

**Reactivity:** No specific test data related to reactivity available for this product or its ingredients.  
**Chemical stability:** The product is stable.  
**Possibility of hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.  
**Conditions to avoid:** No specific data.  
**Incompatible materials:** Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.  
**Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **Section 11. Toxicology information**

### **Information on toxicology effects**

#### **Acute toxicity**

There is no data available.

#### **Irritation/Corrosion**

There is no data available.

#### **Sensitization**

There is no data available.

**Mutagenicity**

There is no data available.

**Carcinogenicity**

There is no data available.

**Reproductive toxicity**

There is no data available.

**Teratogenicity**

There is no data available.

**Specific target organ toxicity (single exposure)**

There is no data available.

**Specific target organ toxicity (repeated exposure)**

There is no data available.

**Aspiration hazard**

There is no data available.

**Information on the  
likely routes of**

**exposure:** Oral, dermal or inhalation

**Potential acute health effects**

**Eye contact:** No known significant effects or critical hazards

**Inhalation:** No known significant effects or critical hazards

**Skin contact:** No known significant effects or critical hazards

**Ingestion:** No known significant effects or critical hazards

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** Adverse symptoms may include the following :  
Pain or irritation  
Watering  
Redness

**Inhalation:** No known significant effects or critical hazards

**Skin contact:** No known significant effects or critical hazards

**Ingestion:** No known significant effects or critical hazards



**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate**

**effects:** No known significant effects or critical hazards

**Potential delayed**

**effects:** No known significant effects or critical hazards

**Long term exposure**

**Potential immediate**

**effects:** No known significant effects or critical hazards

**Potential delayed**

**effects:** No known significant effects or critical hazards

**Potential chronic health effects**

**General:** No known significant effects or critical hazards

**Carcinogenicity:** No known significant effects or critical hazards

**Mutagenicity:** No known significant effects or critical hazards

**Reproductive**

**toxicity:** No known significant effects or critical hazards

**Numerical measures of toxicity**

**Acute toxicity estimates**

There is no data available

**Section 12. Ecological information**

**Toxicity**

No known significant effects or critical hazards

**Persistence and degradability**

There is no data available.

**Mobility in soil**

**Soil/water partition**

**coefficient ( $K_{oc}$ ):** Not available.

**Other adverse effects:** No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and

any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	<b>TGD Classification</b>	<b>DOT Classification (US)</b>	<b>IMGD</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:**

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:**

Not available.

**Section 15. Regulatory information**

**Canadian lists**

**Canadian NPRI:** None of the components are listed.

**CEPA Toxic substances:** None of the components are listed.

**International regulations**

**Chemical Weapon Convention List Schedules I, II, & III Chemicals**

Not listed

**Montreal Protocol**

Not listed

**Stockholm Convention on Persistent Organic Pollutants**

Not listed

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed

**Inventory list**

**Canada:** All components are listed or exempted.

**Section 16. Other information**

**History**

**Date of issue/Date**

**of revision:** 07/11/2024

**Date of previous**

**issue:** 12/15/2021

**Version:** 00

**Prepared by:** Norgen Biotek Corp.

**Key to abbreviations:** ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
HPR = Hazardous Products Regulations  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogP<sub>OW</sub> = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships,  
1973 as modified by the Protocol of 1978 (Marpol = marine pollution)  
SGG = Segregation Group  
UN = United Nations

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**

**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**

# SAFETY DATA SHEET

## ExoC Buffer

### Section 1. Identification

<b>Product Identifier:</b>	<b>ExoC Buffer</b>
<b>Product code:</b>	<b>90205, 90206, 90207, 90210, 90245</b>
<b>Product Type:</b>	<b>Liquid</b>
<b>Supplier's details:</b>	Norgen Biotek Corporation 3430 Schmon Parkway Thorold, ON Canada L2V 4Y6 Tel: (905) 227-8848 Fax: (905) 227-1061 Toll Free: 1-866-667-4362 E-mail: <a href="mailto:techsupport@norgenbiotek.com">techsupport@norgenbiotek.com</a>
<b>Emergency telephone number (with hours of operation):</b>	CHEMTREC U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

<b>Classification of the Substance or mixture:</b>	Not a dangerous substance or mixture
<b><u>GHS label elements</u></b>	
<b>Hazard Pictograms:</b>	Not a dangerous substance or mixture
<b>Signal Word:</b>	Not a dangerous substance or mixture
<b>Hazard Statements:</b>	Not a dangerous substance or mixture
<b><u>Precautionary statements:</u></b>	
<b>Prevention:</b>	Not applicable
<b>Response:</b>	Not applicable
<b>Storage:</b>	Not applicable.
<b>Disposal:</b>	Not applicable.

### Section 3. Composition/information on ingredients

**Substance/mixture:** Mixture

**Other means of**

**identification:** THAM Tris (hydroxymethyl) amino methane, Trisamine, Trimethylol amino methane, Trisaminol, TRIS, 2-Amino-2-(hydroxymethyl)-1,3-propanediol, 1,1,1-Tris(hydroxy methyl) Methyl amine, Tromethamol

Ingredient name	% (w/w)	CAS number
Trimethylol amino methane	<5	77-86-1
Hydrochloric Acid	<10	7647-01-0

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First-aid measures

#### Description of necessary first aid measures

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

**Over-exposure signs/symptoms**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

**Indication of immediate medical attention and special treatment needed, if necessary**

Data not available.

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing**

**media:** Use water spray, dry chemical powder, carbon dioxide or alcohol-resistant foam.

**Unsuitable**

**extinguishing media:** Carbon oxides, nitrogen oxides, hydrogen chloride gas

**Specific hazards**

**arising from the**

**chemical:**

Not available

**Hazardous thermal**

**decomposition**

**products:**

Not available

**Special protective**  
**actions for**

**fire-fighters:**

Not available

**Special protective**

**equipment for**

**fire-fighters:**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Section 6. Accidental release measures**

**Personal precautions, protective equipment, and emergency procedures**

**For non-emergency**

**personnel:**

Not available

**For emergency**

**responders:**

Not available

**Environmental**

**precautions:**

Not available

**Methods and materials for containment and cleaning up**

Clean up spills immediately, observing precautions in the safety data sheet and label. Dispose into chemical waste container

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures:** Use with adequate ventilation as necessary or desired

### **Advice on general occupational hygiene:**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse

### **Conditions for safe storage, including incompatibilities:**

Not available

## Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

Ingredient name	Exposure limits
Hydrochloric Acid	5ppm/7.5mg/m <sup>3</sup>

### **Appropriate engineering controls:**

Handle in accordance with good industrial hygiene and safety practice.

### **Environmental exposure controls:**

Do not let product enter drains.

### Individual protection measures

**Hygiene measures:** If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario

**Eye/face protection:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin protection

**Hand protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body protection:** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

### **Other skin protection:**

Not applicable

### **Respiratory**

**protection:** Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

**Physical State:** Liquid  
**Color:** Clear  
**Odor:** Not available.  
**Odor threshold:** Not available.  
**pH:** 9-11  
**Melting point/  
freezing point:** Not applicable.  
**Boiling point, initial  
boiling point, and  
boiling range:** Not available.  
**Flash point:** Not applicable.  
**Evaporation rate:** Not available.  
**Flammability:** Not available.  
**Lower and upper  
explosion limit/  
flammability limit:** Not available.  
**Vapor pressure:** Not available.  
**Relative vapor  
density:** Not available.  
**Relative density:** Not available.  
**Solubility:** Miscible in water.  
**Partition coefficient:  
n-octanol/water** Not applicable.  
**Auto-ignition  
temperature:** Not available.  
**Decomposition  
temperature:** Not available.  
**Viscosity:** Not available.  
**Flow time  
(ISO 2431):** Not available.  
**Particle characteristics**  
**Median particle size:** Not applicable.



**Section 10. Stability and reactivity**

**Reactivity:** No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability:** The product is stable.

**Possibility of hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid:** No specific data.

**Incompatible materials:** Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.

**Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicology information**

**Information on toxicology effects**

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
--	-	-	-	-

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	-	-	-	-	-

**Sensitization**

There is no data available.

**Mutagenicity**

There is no data available.

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC..

**Reproductive toxicity**

There is no data available.

**Teratogenicity**

There is no data available.

**Specific target organ toxicity (single exposure)**

There is no data available.

**Specific target organ toxicity (repeated exposure)**

There is no data available.

**Aspiration hazard**

There is no data available.

**Information on the likely routes of exposure:**

There is no data available.

**Potential acute health effects**

**Eye contact:** There is no data available.

**Inhalation:** There is no data available.

**Skin contact:** There is no data available.

**Ingestion:** There is no data available.

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** There is no data available.

**Inhalation:** There is no data available.

**Skin contact:** There is no data available.

**Ingestion:** There is no data available.

**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate**

**effects:** There is no data available.

**Potential delayed**

**effects:** There is no data available.

**Long term exposure**

**Potential immediate**

**effects:** There is no data available.

**Potential delayed**

**effects:** There is no data available.

**Potential chronic health effects**

**General:** There is no data available.

**Carcinogenicity:** There is no data available.

**Mutagenicity:** There is no data available.

**Reproductive**

**toxicity:** There is no data available.

**Numerical measures of toxicity**

**Acute toxicity estimates**

There is no data available.

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
-	-	-	-

**Persistence and degradability**

There is no data available.

Product/ingredient name	LogPow	BCF	Potential
-	-	-	-

**Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>):**

Not available.

**Other adverse effects:**

No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	TGD Classification	DOT Classification (US)	IMGD	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-

<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:**

**Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:**

Not available.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI:** The following components are listed: Trimethylol amino methane, Hydrochloric Acid

**CEPA Toxic substances:** None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

#### Montreal Protocol

Not listed

#### Stockholm Convention on Persistent Organic Pollutants

Not listed

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

#### UNECE Aarhus Protocol on POPs and Heavy Metals

### Inventory list

**Canada:** All components are listed or exempted.

## Section 16. Other information

### History

**Date of issue/Date**

**of revision:** 07/11/2024

**Date of previous**

**issue:** 12/15/2021

**Version:** 00

**Prepared by:** Norgen Biotek Corp.  
**Key to abbreviations:** ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 HPR = Hazardous Products Regulations  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogP<sub>ow</sub> = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)  
 SGG = Segregation Group  
 UN = United Nations

**Procedure used to derive the classification**

<b>Classification</b>	<b>Justification</b>
Not a dangerous substance or mixture	-

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# SAFETY DATA SHEET

## ExoR Buffer

### Section 1. Identification

**Product Identifier:** ExoR Buffer  
**Product code:** 90208, 90249  
**Product Type:** Liquid

**Supplier's details:** Norgen Biotek Corporation  
3430 Schmon Parkway  
Thorold, ON  
Canada L2V 4Y6  
Tel: (905) 227-8848  
Fax: (905) 227-1061  
Toll Free: 1-866-667-4362  
E-mail: [techsupport@norgenbiotek.com](mailto:techsupport@norgenbiotek.com)

**Emergency telephone number (with hours of operation):** CHEMTREC  
U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

**Classification of the Substance or mixture:** Not classified as a hazardous substance or material

**GHS label elements**  
**Hazard Pictograms:**

**Signal Word:** Not classified as a hazardous substance or material  
**Hazard Statements:** Not classified as a hazardous substance or material

**Precautionary statements:**  
**Prevention:** Not classified as a hazardous substance or material

**Response:** Not classified as a hazardous substance or material  
**Storage:** Not applicable.  
**Disposal:** Not applicable.

### Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification:

Ingredient name	% (w/w)	CAS number
Sodium Chloride	<1	7647-14-5
Phosphoric acid, disodium salt	<0.5	7558-79-5
Phosphoric acid, potassium salt	<0.1	7778-77-0
Potassium chloride	<0.1	7447-40-7
Water	>99	7732-18-5

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First-aid measures

**Description of necessary first aid measures**

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Indication of immediate medical attention and special treatment needed, if necessary**

- Notes to physician:** Treat symptomatically
- Specific treatments:** No specific treatment required
- See toxicological information (Section 11)**

## Section 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing

media: No information available

#### Unsuitable

extinguishing media: No information available

#### Specific hazards

#### arising from the

#### chemical:

Keep product and empty containers away from heat and sources of ignition

#### Hazardous thermal

#### decomposition

#### products:

None known

#### Special protective

#### actions for

#### fire-fighters:

No special protective actions for fire-fighters

#### Special protective

#### equipment for

#### fire-fighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6. Accidental release measures

### Personal precautions, protective equipment, and emergency procedures

#### For non-emergency

#### personnel:

Use personal protective equipment as required. Ensure adequate ventilation.

#### For emergency

#### responders:

Use personal protective equipment as required. Ensure adequate ventilation.

#### Environmental

#### precautions:

See Section 12 for additional Ecological Information

### Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures:** Wear personal protective equipment/face protection. Ensure adequate ventilation.

#### Advice on general

#### occupational

#### hygiene:

No information available.

#### Conditions for safe

#### storage, including

#### incompatibilities:

Keep containers tightly closed in a dry, cool and well-ventilated place.



**Section 8. Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits:**

This product does not contain any hazardous materials with occupational exposure limit.

<b>Ingredient name</b>	<b>Exposure limits</b>
Sodium Chloride	Not applicable
Phosphoric acid, disodium salt	Not applicable
Phosphoric acid, potassium salt	Not applicable
Potassium chloride	Not applicable
Water	Not applicable

**Appropriate engineering**

**controls:** None under normal conditions

**Environmental**

**exposure controls:** Not applicable

**Individual protection measures**

**Hygiene measures:** ...

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

**Skin protection**

**Hand protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Body protection:** Wear appropriate clothing covering the body.

**Other skin**

**protection:** Not applicable

**Respiratory**

**protection:** Not protective equipments is needed under normal use conditions

**Section 9. Physical and chemical properties and safety characteristics**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

**Physical State:** Liquid

**Color:** Colourless

<b>Odor:</b>	Not available.
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	6
<b>Melting point/ freezing point:</b>	Not applicable.
<b>Boiling point, initial boiling point, and boiling range:</b>	Not available.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	Not available.
<b>Flammability:</b>	Not available.
<b>Lower and upper explosion limit/ flammability limit:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Relative vapor density:</b>	Not available.
<b>Relative density:</b>	Not available.
<b>Solubility:</b>	Miscible in water.
<b>Partition coefficient: n-octanol/water</b>	Not applicable.
<b>Auto-ignition temperature:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>Flow time (ISO 2431):</b>	Not available.
<b><u>Particle characteristics</u></b>	
<b>Median particle size:</b>	Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity:</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability:</b>	The product is stable.
<b>Possibility of hazardous reactions:</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid:</b>	No specific data.
<b>Incompatible materials:</b>	Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.
<b>Hazardous decomposition products:</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicology information

### Information on toxicology effects

#### Acute toxicity

There is no data available.

#### Irritation/Corrosion

There is no data available.

#### Sensitization

There is no data available.

#### Mutagenicity

There is no data available.

#### Carcinogenicity

There is no data available.

#### Reproductive toxicity

There is no data available.

#### Teratogenicity

There is no data available.

#### Specific target organ toxicity (single exposure)

There is no data available.

#### Specific target organ toxicity (repeated exposure)

There is no data available.

#### Aspiration hazard

There is no data available.

### **Information on the likely routes of exposure:**

There is no data available

### Potential acute health effects

**Eye contact:** There is no data available

**Inhalation:** There is no data available

**Skin contact:** There is no data available

**Ingestion:** There is no data available

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** There is no data available  
**Inhalation:** There is no data available  
**Skin contact:** There is no data available  
**Ingestion:** There is no data available

**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate**

**effects:** There is no data available

**Potential delayed**

**effects:** There is no data available

**Long term exposure**

**Potential immediate**

**effects:** There is no data available

**Potential delayed**

**effects:** There is no data available

**Potential chronic health effects**

**General:** There is no data available

**Carcinogenicity:** There is no data available

**Mutagenicity:** There is no data available

**Reproductive**

**toxicity:** There is no data available

**Numerical measures of toxicity**

**Acute toxicity estimates**

<b>Product/ingredient name</b>	<b>Oral (mg/kg) LD50</b>	<b>Dermal (mg/kg) LD50</b>	<b>Inhalation (mg/l) LC50</b>
Sodium Chloride	3000 (Rat)	>10000(Rabbit)	42(Rat)
Phosphoric acid, disodium salt	17000(Rat)	-	-
Phosphoric acid, potassium salt	3200(Rat)	>4640(Rabbit)	0.83(Rat)
Potassium chloride	2600(Rat)	-	-
1X Phosphate Buffered Saline	>2000	>2000	>20

**Section 12. Ecological information**

**Toxicity**

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Exposure</b>
Sodium chloride	LC50 -7650 mg/L	Fresh water fish	96h
	EC50 -1000 mg/L	Water Flea	48h
Potassium chloride	EC50 -2500mg/L	Algae	72h
	LC50 -1060mg/L	Fresh water fish	96h
	LC50 -1020mg/L	Fresh water fish	96h
	EC50 -825 mg/L	Water Flea	48h

**Persistence and degradability**

There is no data available.

**Mobility in soil**

**Soil/water partition**

**coefficient (K<sub>oc</sub>):** Not available.

**Other adverse effects:** No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	<b>TGD Classification</b>	<b>DOT Classification (US)</b>	<b>IMGD</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:**

**Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:**

Not available.

**Section 15. Regulatory information**

Canadian lists

**Canadian NPRI:** None of the components are listed.

**CEPA Toxic substances:** None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

Montreal Protocol

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed

Inventory list

**Canada:** All components are listed or exempted.

**Section 16. Other information****History****Date of issue/Date****of revision:** 07/15/2024**Date of previous****issue:** 12/15/2021**Version:** 00**Prepared by:** Norgen Biotek Corp.**Key to abbreviations:** ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labeling of Chemicals  
HPR = Hazardous Products Regulations  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogP<sub>ow</sub> = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)  
SGG = Segregation Group  
UN = United Nations**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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# SAFETY DATA SHEET

## Lysis Additive B

### Section 1. Identification

**Product Identifier:** Lysis Additive B  
**Product code:** 90148, 90178, 90209, 90246  
**Product Type:** Liquid

**Supplier's details:** Norgen Biotek Corporation  
3430 Schmon Parkway  
Thorold, ON  
Canada L2V 4Y6  
Tel: (905) 227-8848  
Fax: (905) 227-1061  
Toll Free: 1-866-667-4362  
E-mail: [techsupport@norgenbiotek.com](mailto:techsupport@norgenbiotek.com)

**Emergency telephone number (with hours of operation):** CHEMTREC  
U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

**Classification of the Substance or mixture:** ACUTE INHALATION TOXICITY - Category 2  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

**GHS label elements**  
**Hazard Pictograms:**



**Signal Word:** Danger



**Hazard Statements:** H330 - Fatal if inhaled  
H315 - Causes skin irritation  
H318 - Causes serious eye damage

**Precautionary statements:**

**Prevention:** P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response:** P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
P310 - Immediately call a POISON CENTER or doctor/physician

**Storage:** Not applicable.

**Disposal:** Not applicable.

**Section 3. Composition/information on ingredients**

**Substance/mixture:** Mixture

**Other means of identification:**

Ingredient name	% (w/w)	CAS number
Sodium lauroyl sarcosinate	10	137-16-6

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First-aid measures**

**Description of necessary first aid measures**

**Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery

position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### **Most important symptoms/effects, acute and delayed**

#### **Potential acute health effects**

**Eye contact:** Severe eye damage  
**Inhalation:** Not applicable  
**Skin contact:** Not applicable  
**Ingestion:** Not applicable

#### **Over-exposure signs/symptoms**

**Eye contact:** Not applicable  
**Inhalation:** Not applicable  
**Skin contact:** Not applicable  
**Ingestion:** Not applicable

### **Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician:** Treat symptomatically

**Specific treatments:** No specific treatments

#### **Protection of**

**first-aiders:** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

See toxicological information (Section 11)

## **Section 5. Fire-fighting measures**

### **Extinguishing media**

#### **Suitable extinguishing**

**media:** Water spray, Carbon dioxide, dry chemical, alcohol-resistant foam

#### **Unsuitable**

**extinguishing media:** No information available

#### **Specific hazards**

#### **arising from the**

#### **chemical:**

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous thermal decomposition products:**

Carbon Dioxide  
Carbon monoxide  
Nitrogen oxides  
Sodium oxides

**Special protective actions for fire-fighters:**

No special protective actions required

**Special protective equipment for fire-fighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**Section 6. Accidental release measures**

**Personal precautions, protective equipment, and emergency procedures**

**For non-emergency personnel:**

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**For emergency responders:**

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**Environmental precautions:**

Should not be released into the environment

**Methods and materials for containment and cleaning up:**

Use appropriate material to absorb liquid and discard following local regulations

**Section 7. Handling and storage**

**Precautions for safe handling**

**Protective measures:** Wear personal protective equipment/face protection. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

**Advice on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work

**Conditions for safe storage, including incompatibilities:**

Keep containers tightly closed in a dry, cool and well-ventilated place. To maintain product quality. Handle and store contents under nitrogen. Protect from moisture

**Section 8. Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering**

**controls:** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of processor equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Environmental**

**exposure controls:** No information available.

**Individual protection measures**

**Hygiene measures:** Do not eat, drink or smoke when using product.

**Eye/face protection:** Wear goggles/safety glasses (EN-166)

**Skin protection**

**Hand protection:** Protective gloves

**Body protection:** Wear long sleeved clothing.

**Respiratory protection:**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

<b>Physical State:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not available.
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Melting point/ freezing point:</b>	Not applicable.
<b>Boiling point, initial boiling point, and boiling range:</b>	Not available.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	Not available.
<b>Flammability:</b>	Not available.
<b>Lower and upper explosion limit/ flammability limit:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Relative vapor density:</b>	Not available.
<b>Relative density:</b>	Not available.
<b>Solubility:</b>	Miscible in water.
<b>Partition coefficient: n-octanol/water</b>	Not applicable.
<b>Auto-ignition temperature:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>Flow time (ISO 2431):</b>	Not available.
<b><u>Particle characteristics</u></b>	
<b>Median particle size:</b>	Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity:</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability:</b>	The product is stable.
<b>Possibility of hazardous reactions:</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid:</b>	No specific data.

**Incompatible materials:**

Reactive or incompatible with the following materials; oxidizing materials, acids and alkalies.

**Hazardous decomposition products:**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicology information**

**Information on toxicology effects**

**Acute toxicity**

There is no data available.

**Irritation/Corrosion**

There is no data available.

**Sensitization**

There is no data available.

**Mutagenicity**

There is no data available.

**Carcinogenicity**

There is no data available.

**Reproductive toxicity**

There is no data available.

**Teratogenicity**

There is no data available.

**Specific target organ toxicity (single exposure)**

There is no data available.

**Specific target organ toxicity (repeated exposure)**

There is no data available.

**Aspiration hazard**

There is no data available.

**Information on the likely routes of exposure:**

Dermal, oral, inhalation, eyes

**Potential acute health effects**

**Eye contact:** There is no data available.  
**Inhalation:** There is no data available  
**Skin contact:** There is no data available  
**Ingestion:** There is no data available

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** There is no data available  
**Inhalation:** There is no data available  
**Skin contact:** There is no data available  
**Ingestion:** There is no data available

**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate effects:** There is no data available  
**Potential delayed effects:** There is no data available

**Long term exposure**

**Potential immediate effects:** There is no data available  
**Potential delayed effects:** There is no data available

**Potential chronic health effects**

**General:** There is no data available  
**Carcinogenicity:** There is no data available  
**Mutagenicity:** There is no data available  
**Reproductive toxicity:** There is no data available

**Numerical measures of toxicity**

**Acute toxicity estimates**

<b>Product/ingredient name</b>	<b>Oral (mg/kg)</b>	<b>Dermal (mg/kg)</b>	<b>Inhalation (vapors) (mg/l)</b>
Sodium lauroyl sarcosinate	LD50 5000(RAT)	-	0.05 -0.5 (RAT)

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Sodium lauroyl sarcosinate	EC50 107 mg/L LC50 29.7 mg/L	Fresh water fish Water flea	96h 48h

**Persistence and degradability**

Readily biodegradable

**Mobility in soil**

**Soil/water partition**

**coefficient (K<sub>oc</sub>):** Not available.

**Other adverse effects:** No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	TGD Classification	DOT Classification (US)	IMGD	IATA
<b>UN number</b>	UN2811	UN2811	UN2811	UN2811
<b>UN proper shipping name</b>	TOXIC SOLID ORGANIC N.O.S. (Glycine, N-methyl-N-(1-oxododecyl), sodium salt	TOXIC SOLID ORGANIC N.O.S. (Glycine, N-methyl-N-(1-oxododecyl), sodium salt	TOXIC SOLID ORGANIC N.O.S. (Glycine, N-methyl-N-(1-oxododecyl), sodium salt	TOXIC SOLID ORGANIC N.O.S. (Glycine, N-methyl-N-(1-oxododecyl), sodium salt



<b>Transport hazard class(es)</b>	6.1	6.1	6.1	6.1
<b>Packing group</b>	II	II	II	II
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:** **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:** Not available.

**Section 15. Regulatory information**

**Canadian lists**

**Canadian NPRI:** The following components are listed: Sodium lauroyl sarcosinate  
**CEPA Toxic substances:** None of the components are listed.

**International regulations**

**Chemical Weapon Convention List Schedules I, II, & III Chemicals**

Not listed

**Montreal Protocol**

Not listed

**Stockholm Convention on Persistent Organic Pollutants**

Not listed

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed

**Inventory list**

**Canada:** All components are listed or exempted.

**Section 16. Other information**

**History**

**Date of issue/Date**

**of revision:** 07/15/2024

**Date of previous**

**issue:** 12/15/2021

**Version:** 00

**Prepared by:** Norgen Biotek Corp.

**Key to abbreviations:** ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HPR = Hazardous Products Regulations

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogP<sub>ow</sub> = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)

SGG = Segregation Group

UN = United Nations

**Procedure used to derive the classification**

<b>Classification</b>	<b>Justification</b>
ACUTE INHALATION TOXICITY - Category 2	Calculation methods
SKIN CORROSION/IRRITATION - Category 2	Calculation methods
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation methods

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# SAFETY DATA SHEET

## Lysis Buffer A

### Section 1. Identification

<b>Product Identifier:</b>	Lysis Buffer A
<b>Product code:</b>	28335, 90056, 90057, 90058, 90107, 90250, Dx90107, Dx90057, NBLBUFFA-100ML, NBLBUFFA-130ML, NBLBUFFA-30ML, T019
<b>Product Type:</b>	Liquid
<b>Supplier's details:</b>	Norgen Biotek Corporation 3430 Schmon Parkway Thorold, ON Canada L2V 4Y6 Tel: (905) 227-8848 Fax: (905) 227-1061 Toll Free: 1-866-667-4362 E-mail: <a href="mailto:techsupport@norgenbiotek.com">techsupport@norgenbiotek.com</a>
<b>Emergency telephone number (with hours of operation):</b>	CHEMTREC U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

<b>Classification of the Substance or mixture:</b>	ACUTE TOXICITY (oral) - Category 4 AQUATIC HAZARD(LONG-TERM) -Category 3 ACUTE INHALATION TOXOCITY (DUST AND MIST) Category 4 SERIOUS EYE IRRITATION/DAMAGE - Category 1
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**GHS label elements**  
**Hazard Pictograms:**



**Signal Word:** Danger  
**Hazard Statements:** Causes skin and eye irritation  
 Harmful if swallowed, in contact with skin or if inhaled

**Precautionary statements:**

**Prevention:** Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink, or smoke when using this product  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wear respiratory protection

**Response:** Immediately call a POISON CENTER or doctor/physician  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting

**Storage:** Not applicable.  
**Disposal:** Not applicable.

**Section 3. Composition/information on ingredients**

**Substance/mixture:** Mixture  
**Other means of identification:**

Ingredient name	% (w/w)	CAS number
Guanidine thiocyanate	10-50	593-84-0
Sodium citrate	<5	6132-04-3

Ranges listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First-aid measures**

**Description of necessary first aid measures**

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- Eye contact:** No known significant effects or critical hazards
- Inhalation:** No known significant effects or critical hazards
- Skin contact:** No known significant effects or critical hazards
- Ingestion:** No known significant effects or critical hazards

**Over-exposure signs/symptoms**

- Eye contact:** No known significant effects or critical hazards
- Inhalation:** No known significant effects or critical hazards
- Skin contact:** No known significant effects or critical hazards
- Ingestion:** No known significant effects or critical hazards

**Indication of immediate medical attention and special treatment needed, if necessary**

- Notes to physician:** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments:** No specific treatment.
- Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training
- See toxicological information (Section 11)**

## **Section 5. Fire-fighting measures**

### **Extinguishing media**

#### **Suitable extinguishing**

**media:** Use an extinguishing agent suitable for the surrounding fire

#### **Unsuitable**

**extinguishing media:** None known

#### **Specific hazards**

#### **arising from the**

#### **chemical:**

This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

#### **Hazardous thermal**

#### **decomposition**

#### **products:**

Decomposition products may include the following materials:

Carbon dioxide

Carbon mono dioxide

Nitrogen oxides

Sulfur oxides

Metal oxides/oxides

#### **Special protective**

#### **actions for**

#### **fire-fighters:**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

#### **Special protective**

#### **equipment for**

#### **fire-fighters:**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## **Section 6. Accidental release measures**

### **Personal precautions, protective equipment, and emergency procedures**

#### **For non-emergency**

#### **personnel:**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders:**

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions:**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

**Methods and materials for containment and cleaning up**

**Small spill:**

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill:**

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**Section 7. Handling and storage**

**Precautions for safe handling**

**Protective measures:** Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene:**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures

**Conditions for safe storage, including incompatibilities:**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Section 8. Exposure controls/personal protection****Control parameters****Occupational exposure limits**

None known.

**Appropriate engineering controls:**

Good general ventilation should be sufficient to control worker exposure to airborne

**contaminants.****Environmental****exposure controls:**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

**Individual protection measures****Hygiene measures:**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection:**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection****Hand protection:**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.



- Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection:** Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

- Physical State:** Liquid
- Color:** Colourless
- Odor:** Not available.
- Odor threshold:** Not available.
- pH:** 7
- Melting point/  
freezing point:** Not applicable.
- Boiling point, initial  
boiling point, and  
boiling range:** Not available.
- Flash point:** Not applicable.
- Evaporation rate:** Not available.
- Flammability:** Not available.
- Lower and upper  
explosion limit/  
flammability limit:** Not available.
- Vapor pressure:** Not available.
- Relative vapor  
density:** Not available.
- Relative density:** Not available.
- Solubility:** Miscible in water.
- Partition coefficient:** Not applicable.

**n-octanol/water**

**Auto-ignition**

**temperature:** Not available.

**Decomposition**

**temperature:** Not available.

**Viscosity:** Not available.

**Flow time**

**(ISO 2431):** Not available.

**Particle characteristics**

**Median particle size:** Not applicable.

**Section 10. Stability and reactivity**

**Reactivity:** No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability:** The product is stable.

**Possibility of**

**hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid:** No specific data.

**Incompatible**

**materials:** Reactive or incompatible with the following materials; oxidizing materials, acids and alkalies.

**Hazardous**

**decomposition**

**products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicology information**

**Information on toxicology effects**

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Guanidine Thiocyanate	LD50 oral	Rat	593 mg/kg	-

**Irritation/Corrosion**

There is no data available

**Sensitization**

There is no data available.

**Mutagenicity**

There is no data available.

**Carcinogenicity**

There is no data available.

**Reproductive toxicity**

There is no data available.

**Teratogenicity**

There is no data available.

**Specific target organ toxicity (single exposure)**

There is no data available.

**Specific target organ toxicity (repeated exposure)**

There is no data available.

**Aspiration hazard**

There is no data available.

**Information on the  
likely routes of**

**exposure:** Oral, dermal or inhalation

**Potential acute health effects**

**Eye contact:** No known significant effects or critical hazards

**Inhalation:** No known significant effects or critical hazards

**Skin contact:** No known significant effects or critical hazards

**Ingestion:** Harmful if swallowed

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** No known significant effects or critical hazards

**Inhalation:** No known significant effects or critical hazards

**Skin contact:** No known significant effects or critical hazards

**Ingestion:** No known significant effects or critical hazards

**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate**

**effects:** No known significant effects or critical hazards

**Potential delayed**

**effects:** No known significant effects or critical hazards

**Long term exposure**

**Potential immediate**

**effects:** No known significant effects or critical hazards

**Potential delayed**

**effects:** No known significant effects or critical hazards

**Potential chronic health effects**

**General:** No known significant effects or critical hazards

**Carcinogenicity:** No known significant effects or critical hazards

**Mutagenicity:** No known significant effects or critical hazards

**Reproductive**

**toxicity:** No known significant effects or critical hazards

**Numerical measures of toxicity**

**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Guanidine thiocyanate	593	1100	N/A	11	N/A
NPX2	1254.5	2327.1	N/A	23.3	N/A

**Section 12. Ecological information**

**Toxicity**

There is no available data

**Persistence and degradability**

There is no data available.

**Mobility in soil**

**Soil/water partition**

**coefficient (K<sub>oc</sub>):** Not available.

**Other adverse effects:** No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration

or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	<b>TGD Classification</b>	<b>DOT Classification (US)</b>	<b>IMGD</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:**

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:**

Not available.

**Section 15. Regulatory information**

**Canadian lists**

**Canadian NPRI:** None of the components are listed

**CEPA Toxic substances:** None of the components are listed.

**International regulations**

**Chemical Weapon Convention List Schedules I, II, & III Chemicals**

Not listed

**Montreal Protocol**

Not listed

**Stockholm Convention on Persistent Organic Pollutants**

Not listed

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed

**Inventory list**

**Canada:** All components are listed or exempted.

**Section 16. Other information**

**History**

**Date of issue/Date**

**of revision:** 07/12/2024

**Date of previous**

**issue:** 12/15/2021

**Version:** 00

**Prepared by:** Norgen Biotek Corp.

**Key to abbreviations:** ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 HPR = Hazardous Products Regulations  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogP<sub>OW</sub> = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)  
 SGG = Segregation Group  
 UN = United Nations

**Procedure used to derive the classification**

<b>Classification</b>	<b>Justification</b>
ACUTE TOXICITY (oral) - Category 4	Calculation method
AQUATIC HAZARD(LONG-TERM) -Category 3	Calculation method
ACUTE INHALATION TOXOCITY (DUST AND MIST) Category 4	Calculation method
SERIOUS EYE IRRITATION/DAMAGE - Category 1	Calculation method

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# SAFETY DATA SHEET

## Slurry E

### Section 1. Identification

**Product Identifier:** Slurry E  
**Product code:** 90204, 90248  
**Product Type:** Liquid

**Supplier's details:** Norgen Biotek Corporation  
3430 Schmon Parkway  
Thorold, ON  
Canada L2V 4Y6  
Tel: (905) 227-8848  
Fax: (905) 227-1061  
Toll Free: 1-866-667-4362  
E-mail: [techsupport@norgenbiotek.com](mailto:techsupport@norgenbiotek.com)

**Emergency telephone number (with hours of operation):** CHEMTREC  
U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

**Classification of the Substance or mixture:** Not classified as a hazardous substance or material

**GHS label elements**  
**Hazard Pictograms:**

**Signal Word:** Not classified as a hazardous substance or material  
**Hazard Statements:** Not classified as a hazardous substance or material

**Precautionary statements:**

**Prevention:** Not classified as a hazardous substance or material

**Response:** Not classified as a hazardous substance or material

**Storage:** Not applicable.

**Disposal:** Not applicable.

### Section 3. Composition/information on ingredients

Substance/mixture: Mixture  
Other means of identification:

Ingredient name	% (w/w)	CAS number
Sodium Chloride	<1	7647-14-5
Phosphoric acid, disodium salt	<0.5	7558-79-5
Phosphoric acid, potassium salt	<0.1	7778-77-0
Potassium chloride	<0.1	7447-40-7
Water	>99	7732-18-5

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First-aid measures

**Description of necessary first aid measures**

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Indication of immediate medical attention and special treatment needed, if necessary**

- Notes to physician:** Treat symptomatically
- Specific treatments:** No specific treatment required
- See toxicological information (Section 11)**



## Section 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing

media: No information available

#### Unsuitable

extinguishing media: No information available

#### Specific hazards

#### arising from the

#### chemical:

Keep product and empty containers away from heat and sources of ignition

#### Hazardous thermal

#### decomposition

#### products:

None known

#### Special protective

#### actions for

#### fire-fighters:

No special protective actions for fire-fighters

#### Special protective

#### equipment for

#### fire-fighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6. Accidental release measures

### Personal precautions, protective equipment, and emergency procedures

#### For non-emergency

#### personnel:

Use personal protective equipment as required. Ensure adequate ventilation.

#### For emergency

#### responders:

Use personal protective equipment as required. Ensure adequate ventilation.

#### Environmental

#### precautions:

See Section 12 for additional Ecological Information

### Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures:** Wear personal protective equipment/face protection. Ensure adequate ventilation.

#### Advice on general

#### occupational

#### hygiene:

No information available.

#### Conditions for safe

#### storage, including

#### incompatibilities:

Keep containers tightly closed in a dry, cool and well-ventilated place.

**Section 8. Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits:**

This product does not contain any hazardous materials with occupational exposure limit.

<b>Ingredient name</b>	<b>Exposure limits</b>
Sodium Chloride	Not applicable
Phosphoric acid, disodium salt	Not applicable
Phosphoric acid, potassium salt	Not applicable
Potassium chloride	Not applicable
Water	Not applicable

**Appropriate engineering**

**controls:** None under normal conditions

**Environmental**

**exposure controls:** Not applicable

**Individual protection measures**

**Hygiene measures:** ...

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

**Skin protection**

**Hand protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Body protection:** Wear appropriate clothing covering the body.

**Other skin**

**protection:** Not applicable

**Respiratory**

**protection:** Not protective equipments is needed under normal use conditions

**Section 9. Physical and chemical properties and safety characteristics**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

**Physical State:** Liquid

**Color:** Colourless

<b>Odor:</b>	Not available.
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	6
<b>Melting point/ freezing point:</b>	Not applicable.
<b>Boiling point, initial boiling point, and boiling range:</b>	Not available.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	Not available.
<b>Flammability:</b>	Not available.
<b>Lower and upper explosion limit/ flammability limit:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Relative vapor density:</b>	Not available.
<b>Relative density:</b>	Not available.
<b>Solubility:</b>	Miscible in water.
<b>Partition coefficient: n-octanol/water</b>	Not applicable.
<b>Auto-ignition temperature:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>Flow time (ISO 2431):</b>	Not available.
<b><u>Particle characteristics</u></b>	
<b>Median particle size:</b>	Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity:</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability:</b>	The product is stable.
<b>Possibility of hazardous reactions:</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid:</b>	No specific data.
<b>Incompatible materials:</b>	Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.
<b>Hazardous decomposition products:</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **Section 11. Toxicology information**

### **Information on toxicology effects**

#### **Acute toxicity**

There is no data available.

#### **Irritation/Corrosion**

There is no data available.

#### **Sensitization**

There is no data available.

#### **Mutagenicity**

There is no data available.

#### **Carcinogenicity**

There is no data available.

#### **Reproductive toxicity**

There is no data available.

#### **Teratogenicity**

There is no data available.

#### **Specific target organ toxicity (single exposure)**

There is no data available.

#### **Specific target organ toxicity (repeated exposure)**

There is no data available.

#### **Aspiration hazard**

There is no data available.

### **Information on the likely routes of**

**exposure:**                      There is no data available

### **Potential acute health effects**

**Eye contact:**                      There is no data available

**Inhalation:**                        There is no data available

**Skin contact:**                     There is no data available

**Ingestion:**                        There is no data available

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** There is no data available  
**Inhalation:** There is no data available  
**Skin contact:** There is no data available  
**Ingestion:** There is no data available

**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate**

**effects:** There is no data available

**Potential delayed**

**effects:** There is no data available

**Long term exposure**

**Potential immediate**

**effects:** There is no data available

**Potential delayed**

**effects:** There is no data available

**Potential chronic health effects**

**General:** There is no data available

**Carcinogenicity:** There is no data available

**Mutagenicity:** There is no data available

**Reproductive**

**toxicity:** There is no data available

**Numerical measures of toxicity**

**Acute toxicity estimates**

<b>Product/ingredient name</b>	<b>Oral (mg/kg) LD50</b>	<b>Dermal (mg/kg) LD50</b>	<b>Inhalation (mg/l) LC50</b>
Sodium Chloride	3000 (Rat)	>10000(Rabbit)	42(Rat)
Phosphoric acid, disodium salt	17000(Rat)	-	-
Phosphoric acid, potassium salt	3200(Rat)	>4640(Rabbit)	0.83(Rat)
Potassium chloride	2600(Rat)	-	-
1X Phosphate Buffered Saline	>2000	>2000	>20

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Sodium chloride	LC50 -7650 mg/L	Fresh water fish	96h
	EC50 -1000 mg/L	Water Flea	48h
Potassium chloride	EC50 -2500mg/L	Algae	72h
	LC50 -1060mg/L	Fresh water fish	96h
	LC50 -1020mg/L	Fresh water fish	96h
	EC50 -825 mg/L	Water Flea	48h

**Persistence and degradability**

There is no data available.

**Mobility in soil**

**Soil/water partition**

**coefficient (K<sub>oc</sub>):** Not available.

**Other adverse effects:** No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	<b>TGD Classification</b>	<b>DOT Classification (US)</b>	<b>IMGD</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:**

**Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:**

Not available.

**Section 15. Regulatory information**

Canadian lists

**Canadian NPRI:** None of the components are listed.

**CEPA Toxic substances:** None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

Montreal Protocol

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed

Inventory list

**Canada:** All components are listed or exempted.

## Section 16. Other information

### History

**Date of issue/Date**

**of revision:** 07/15/2024

**Date of previous**

**issue:** 12/15/2021

**Version:** 00

**Prepared by:** Norgen Biotek Corp.

**Key to abbreviations:** ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labeling of Chemicals  
HPR = Hazardous Products Regulations  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogP<sub>ow</sub> = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)  
SGG = Segregation Group  
UN = United Nations

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



# SAFETY DATA SHEET

## Wash Solution A

### Section 1. Identification

<b>Product Identifier:</b>	Wash Solution A
<b>Product code:</b>	17282, 24121, 28369, 90025, 90026, 90027, 90028, 90189, 90196, 90240, 90242, Dx90026, Dx90028, Dx90240, Dx90242, NBWASHA-18ML, NBWASHA-38ML
<b>Product Type:</b>	Liquid
<b>Supplier's details:</b>	Norgen Biotek Corporation 3430 Schmon Parkway Thorold, ON Canada L2V 4Y6 Tel: (905) 227-8848 Fax: (905) 227-1061 Toll Free: 1-866-667-4362 E-mail: <a href="mailto:techsupport@norgenbiotek.com">techsupport@norgenbiotek.com</a>
<b>Emergency telephone number (with hours of operation):</b>	CHEMTREC U.S. & Canada: 1-800-424-9300

### Section 2. Hazard Identification

<b>Classification of the Substance or mixture:</b>	Not a dangerous substance or mixture.
<b><u>GHS label elements</u></b>	
<b>Hazard Pictograms:</b>	Not a dangerous substance or mixture.
<b>Signal Word:</b>	Not a dangerous substance or mixture.
<b>Hazard Statements:</b>	Not a dangerous substance or mixture.
<b><u>Precautionary statements:</u></b>	
<b>Prevention:</b>	
<b>Response:</b>	Not a dangerous substance or mixture.
<b>Storage:</b>	Not applicable.
<b>Disposal:</b>	Not applicable.

**Section 3. Composition/information on ingredients**

**Substance/mixture:** Mixture  
**Other means of identification:**

Ingredient name	% (w/w)	CAS number
EDTAdisodium salt (Ethylenedinitrilo)tetraacetic aciddisodium salt	<2	6381 - 92 - 6
Trimethylol amino methane	<2	77-86-1
Hydrochloric Acid	<2	7647-01-0

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First-aid measures**

**Description of necessary first aid measures**

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- Eye contact:** Not applicable
- Inhalation:** Not applicable

**Skin contact:** Not applicable  
**Ingestion:** Not applicable

**Over-exposure signs/symptoms**

**Eye contact:** Not applicable  
**Inhalation:** Not applicable  
**Skin contact:** Not applicable  
**Ingestion:** Not applicable

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician:** Not applicable  
**Specific treatments:** Not applicable  
**Protection of first-aiders:** Not applicable

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media:**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Unsuitable**

**extinguishing media:** For this substance/mixture no limitations of extinguishing agents are given

**Specific hazards arising from the chemical:**

Not combustible. Ambient fire may liberate hazardous vapors.

**Hazardous thermal decomposition**

**products:**

Nature of decomposition products not known

**Special protective actions for fire-fighters:**

Prevent fire extinguishing water from contaminating surface water or the ground water system

**equipment for fire-fighters:**

In the event of fire, wear self-contained breathing apparatus

**Section 6. Accidental release measures**

**Personal precautions, protective equipment, and emergency procedures**

**For non-emergency personnel:**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert

**For emergency**

**responders:** Not available  
**Environmental precautions:** Do not let product enter drains

**Methods and materials for containment and cleaning up**

**Small spill:** Use inert material such as sand or earth to contain spill or leak Absorb spills with chemical absorbent or vermiculite and dispose of in accordance with local regulations. .  
**Large spill:** Do not let product enter drains.

**Section 7. Handling and storage**

**Precautions for safe handling**

**Protective measures:** Avoid prolonged or repeated exposure.

**Advice on general occupational**

**hygiene:** Do not get in eyes, on skin, on clothing

**Conditions for safe storage, including incompatibilities:**

Store sealed in original container in a cool well ventilated situation away from foods and other chemicals. Do not store in direct sunlight. Observe good hygiene and housekeeping practices.

**Section 8. Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits**

No data available

**Appropriate engineering**

**controls:** Not required with normal use.

**Environmental**

**exposure controls:** Not required with normal use.

**Individual protection measures**

**Hygiene measures:** Do not eat drink or smoke when handling product.

**Eye/face protection:** Use face shield, chemical goggles or safety glasses with side shield protection

**Skin protection**

**Hand protection:** Use of nitrile or neoprene gloves when handling.

**Body protection:**

**Other skin**

**protection:** Not required with normal use

**Respiratory**

**protection:** Not required with normal use

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance:**

<b>Physical State:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not available.
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not available.
<b>Melting point/ freezing point:</b>	Not applicable.
<b>Boiling point, initial boiling point, and boiling range:</b>	Not available.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	Not available.
<b>Flammability:</b>	Not available.
<b>Lower and upper explosion limit/ flammability limit:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Relative vapor density:</b>	Not available.
<b>Relative density:</b>	Not available.
<b>Solubility:</b>	Miscible in water.
<b>Partition coefficient: n-octanol/water</b>	Not applicable.
<b>Auto-ignition temperature:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>Flow time (ISO 2431):</b>	Not available.
<b><u>Particle characteristics</u></b>	
<b>Median particle size:</b>	Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity:</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability:</b>	The product is stable.
<b>Possibility of hazardous reactions:</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid:</b>	No specific data.
<b>Incompatible</b>	

**materials:** Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.

**Hazardous decomposition products:**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicology information**

**Information on toxicology effects**

**Acute toxicity**

There is no data available.

**Irritation/Corrosion**

There is no data available.

**Sensitization**

There is no data available.

**Mutagenicity**

There is no data available.

**Carcinogenicity**

There is no data available.

**Reproductive toxicity**

There is no data available.

**Teratogenicity**

There is no data available.

**Specific target organ toxicity (single exposure)**

There is no data available.

**Specific target organ toxicity (repeated exposure)**

There is no data available.

**Aspiration hazard**

There is no data available.

**Information on the likely routes of exposure:**

There is no data available.

**Potential acute health effects**

**Eye contact:** There is no data available.  
**Inhalation:** There is no data available.  
**Skin contact:** There is no data available.  
**Ingestion:** There is no data available.

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Eye contact:** There is no data available.  
**Inhalation:** There is no data available.  
**Skin contact:** There is no data available.  
**Ingestion:** There is no data available.

**Delayed and immediate effects and chronic effects from short- and long-term exposure**

**Short term exposure**

**Potential immediate effects:** There is no data available.  
**Potential delayed effects:** There is no data available.

**Long term exposure**

**Potential immediate effects:** There is no data available.  
**Potential delayed effects:** There is no data available.

**Potential chronic health effects**

**General:** There is no data available.  
**Carcinogenicity:** There is no data available.  
**Mutagenicity:** There is no data available.  
**Reproductive toxicity:** There is no data available.

**Numerical measures of toxicity**

**Acute toxicity estimates**

There is no data available.

**Section 12. Ecological information**

**Toxicity**

There is no data available.

**Persistence and degradability**

There is no data available.

**Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>):** Not available.

**Other adverse effects:** No known significant effect or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	<b>TGD Classification</b>	<b>DOT Classification (US)</b>	<b>IMGD</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG:** Not applicable.

**Special precautions for user:**

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments:**

Not available.



**Section 15. Regulatory information**

**Canadian lists**

**Canadian NPRI:** None of the components are listed.

**CEPA Toxic substances:** None of the components are listed.

**International regulations**

**Chemical Weapon Convention List Schedules I, II, & III Chemicals**

Not listed

**Montreal Protocol**

Not listed

**Stockholm Convention on Persistent Organic Pollutants**

Not listed

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed

**UNECE Aarhus Protocol on POPs and Heavy Metals**

**Inventory list**

**Canada:** All components are listed or exempted.

**Section 16. Other information**

**History**

**Date of issue/Date**

**of revision:** 07/15/2024

**Date of previous**

**issue:** 12/15/2021

**Version:** 00

**Prepared by:** Norgen Biotek Corp.

**Key to abbreviations:** ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HPR = Hazardous Products Regulations

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogP<sub>ow</sub> = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)

SGG = Segregation Group

UN = United Nations

**Procedure used to derive the classification**

None of the components are classified.

**Notice to reader**

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