

Safety Data Sheet

Version 1.1

Revision date: June 4, 2018



Lysis Buffer LB-GD1

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier: Lysis Buffer LB-GD1

Product code: #NKR152

Manufacturer's name and address: Luna Nanotech Inc., 439 University Avenue, Suite 500
Toronto, ON M5G 1Y8

Business telephone number: 1-800-474-4055

Emergency telephone numbers: Canada: Canutec 1-888-226-8832
USA: Chemtrec 1-800-424-9300

Product use: For research use only. Not intended for human or animal diagnostic or therapeutic uses.

SECTION 2: HAZARDS IDENTIFICATION

Ingredients: Guanidine Hydrochloride

CAS #: 50-01-1

GHS classification

Acute toxicity (Oral):	Category 4
Skin irritant:	Category 2
Eye irritant:	Category 2

Signal word: Warning

Hazard statements:

H302 + H332:	Harmful if swallowed/ inhaled
H315:	Causes skin irritation
H319:	Causes serious eye irritation



Precautionary statements

P261:	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264:	Wash skin thoroughly after handling.
P270:	Do not eat, drink or smoke when using this product.
P280:	Wear protective gloves and eye protection.
P301 + P312 + P330:	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352:	IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313:	If skin irritation occurs: Get medical advice/ attention.
P337 + P313:	If eye irritation persists: Get medical advice/ attention.
P501:	Dispose of contents/ container to an approved waste disposal plant.

HMIS classification

Safety Data Sheet

Version 1.1

Revision date: June 4, 2018



Lysis Buffer LB-GD1

Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazards: 0

Potential health effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: Toxic if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Hazardous ingredients

Chemical name: Guanidine hydrochloride
CAS number: 50-01-1
EC number: 200-002-3
Concentration: 3 – 5 % w/v

Chemical name: Triton X-100
CAS number: 9002-93-1
EC number: N/A
Concentration: 1 – 5 % w/v

Chemical name: Sodium dodecyl sulfate
CAS number: 151-21-3
EC number: 205-788-1
Concentration: 0.1 – 1% w/v

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Lysis Buffer LB-GD1

SECTION 5: FIREFIGHTING MEASURES

Conditions of flammability:	Not Flammable or combustible
Flash point:	Not determined
Means of extinction:	Use water spray, alcohol-resistant foam, dry chemical or CO ₂
Special protective equipment for firefighters:	Wear self-contained breathing apparatus for firefighting if necessary.
Explosion data	
Sensitivity to mechanical impact:	Not sensitive
Sensitivity of static discharge:	Not sensitive
Hazardous decomposition products formed under fire conditions:	Carbon oxides, Nitrogen oxides (NO _x), Hydrogen chloride gas

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use personal protective equipment. Avoid contact with the skin and the eyes. Use personal protective equipment. Ensure adequate ventilation.
Environmental precautions:	Do not let product enter drains.
Methods and materials for containment and cleaning up:	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 7. HANDLING AND STORAGE

Handling:	Wear personal protective equipment. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection:	If exposure limits are exceeded or irritation is experienced, respiratory protection approved under NIOSH/MSHA must be worn. For high airborne contaminant concentration positive-pressure supplied air respirators may be required.
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Safety Data Sheet

Version 1.1

Revision date: June 4, 2018



Lysis Buffer LB-GD1

Eye protection:	Wear safety glasses with side shields conforming to EN166. Avoid contact with the eyes.
Skin and body protection:	Wear protective gloves and clothing.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.
Specific engineering controls:	Use appropriate mechanical exhaust or laboratory fume hood to avoid exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Clear
Odor:	Characteristic.
Taste:	Not available
pH:	8
Boiling point:	Not available
Melting point:	Not available
Flash point:	Not available
Evaporation rate:	Not available
Explosion limits:	Not available
Specific gravity:	1.09 g/cm ³
Vapor pressure:	Not available
Vapor density:	Not available
Volatility:	Not available
Solubility in water:	Not available
Solubility in other solvents:	Not available
Thermal decomposition:	Not available
Viscosity:	Not available

SECTION 10: STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions
Incompatible products:	Strong oxidizing agents
Conditions to avoid:	Not available.
Hazardous decomposition products	
Under fire conditions:	Carbon oxides, nitrogen oxides, hydrogen chloride gas

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Product

Acute oral toxicity: Not available

Safety Data Sheet

Version 1.1

Revision date: June 4, 2018



Lysis Buffer LB-GD1

Acute inhalation toxicity: Not available
Acute dermal toxicity: Not available

Ingredients

Guanidine hydrochloride

LD50 oral rat: 1,120 mg/kg
LD50 dermal rabbit: 2,000 mg/kg

Triton X-100

LD50 oral rat: 1,800 mg/kg

Sodium dodecyl sulfate

LD50 oral rat: 1,200 mg/kg, 1,783 mg/kg

Skin corrosion/irritation

Product:

Guanidine hydrochloride: Corrosive and destructive to tissue. Causes skin burns.

Serious eye damage/eye irritation

Product:

Respiratory or skin sensitization: May cause irreversible eye damage.

Germ cell mutagenicity: Not available

Carcinogenicity: Not available

Reproductive toxicity: Not available

STOT-singe exposure: Not available

STOT-repeated exposure: Not available

Aspiration toxicity: Not available

Further information: Not available

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Harmful to aquatic organisms

Persistence and degradability: Not readily biodegradable

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Guanidine hydrochloride	No data available	No data available	Leuciscus idus (Golden orfe) – 1,759 mg/L	No data available	logPow<=-1.7
Triton X-100	EC50: 0.21 mg/L (96hr)	No data available	No data available	No data available	No data available
sodium dodecyl sulfate	Desmodesmus subspicatus	Daphnia magna EC50=21.2 mg/L (24	No data available	No data available	logPow1.6

Safety Data Sheet

Version 1.1

Revision date: June 4, 2018



Lysis Buffer LB-GD1

	EC50=42 mg/L (96 h) Desmodesmus subspicatus EC50=53 mg/L (72 h) Desmodesmus subspicatus EC5030 - 100 mg/L (96 h) Pseudokirchneriella subcapitata EC50=117 mg/L (96 h) Pseudokirchneriella subcapitata EC503.59 - 15.6 mg/L (96 h)	h) Daphnia magna EC50=1.8 mg/L (48 h)			
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SECTION 13: DISPOSAL CONSIDERATIONS

Product: The product should not be allowed to enter drains, watercourses or the soil. Disposing should be performed in compliance with local and national regulation by a licensed waste management company.

Contaminated packaging: Dispose of as unused product. Do not reuse empty containers.

SECTION 14: TRANSPORT INFORMATION

DOT (US): Not regulated as dangerous good.

UNRTG: Not regulated as dangerous good.

IATA: Not regulated as dangerous good.

IMDG: Not regulated as dangerous good.

SECTION 15: REGULATORY INFORMATION

WHMIS Classification

D1B Toxic Material Causing Immediate and Serious Toxic Effects Toxic by injection

D2B Toxic Material Causing Other Toxic Effects Moderate skin irritant
Moderate eye irritant

SECTION 16: OTHER INFORMATION

The above information provided in this Materials Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed only as a guidance for safe handling, processing, use, transportation, storage, disposal and release. This information is not to be considered a

Safety Data Sheet

Version 1.1

Revision date: June 4, 2018



Lysis Buffer LB-GD1

warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Material Safety Data Sheet