

# Safety Data Sheet

Version 1.1

Revision date: Mar 8, 2017



Lysis Buffer - #N131 (for #SG081, #SG083, #N051, #N053)

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product identifier:** Lysis Buffer (for #SG081, #SG083, #N051, #N053)

**Product code:** #N131

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

**Business telephone number:** +1-416-716-9941

**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.

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## HMIS classification

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: 30 – 50 % 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.

## 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<sub>2</sub>

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**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 (NOx), 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.

**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

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exposure.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Liquid
<b>Color:</b>	Clear
<b>Odor:</b>	Characteristic.
<b>Taste:</b>	Not available
<b>pH:</b>	7
<b>Boiling point:</b>	Not available
<b>Melting point:</b>	Not available
<b>Flash point:</b>	Not available
<b>Evaporation rate:</b>	Not available
<b>Explosion limits:</b>	Not available
<b>Specific gravity:</b>	1.09 g/cm <sup>3</sup>
<b>Vapor pressure:</b>	Not available
<b>Vapor density:</b>	Not available
<b>Volatility:</b>	Not available
<b>Solubility in water:</b>	Not available
<b>Solubility in other solvents:</b>	Not available
<b>Thermal decomposition:</b>	Not available
<b>Viscosity:</b>	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
Acute inhalation toxicity:	Not available
Acute dermal toxicity:	Not available

### Ingredients

Guanidine hydrochloride

LD50 oral rat: 1,120 mg/kg

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LD50 dermal rabbit: 2,000 mg/kg

## Skin corrosion/irritation

**Product:** 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

**Toxicity to fish:** Leuciscus idus (Golden orfe) – 1,759 mg/L

**Persistence and degradability:** Not readily biodegradable

## 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.

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**IATA:** Not regulated as dangerous good.

**IMDG:** Not regulated as dangerous good.

## SECTION 15: REGULATORY INFORMATION

### WHMIS Classification

<b>D1B</b>	Toxic Material Causing Immediate and Serious Toxic Effects	Toxic by injection
<b>D2B</b>	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 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**