

## Material Safety Data Sheet

### Section 1: Identification of the Substance or Mixture

**Product Code:** 10011, 10099

**Product Name:** Revolution cfDNA Lysis Buffer

**For *In Vitro* Diagnostic Use in conjunction with nRichDX Revolution cfDNA Max 20XL, Max 20, and Reagent 0.5 kits.**

#### Details of the supplier of the material safety data sheet



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**24 hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident, or Accident: Call CHEMTREC**

+1.703.741.5970 / 1.800.424.9300

### Section 2: Hazards Identification

#### GHS Classification

**Signal Word:** DANGER

**Hazard pictograms:**



#### **Health Hazards:**

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H412 - Harmful to aquatic life with long lasting effects

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### **Precautionary Statements**

#### **Prevention:**

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection

#### **Response:**

- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a POISON CENTER or doctor/physician
- P330 - Rinse mouth

**Storage:** Not Applicable.

#### **Disposal:**

P501 - Dispose of contents/ container to an approved waste disposal plant.

**Other hazards:** Not Applicable.

#### **HMIS**

Health	3
Flammability	0
Reactivity	0

### **Other Hazards**

**Hazards not otherwise classified (HNOC) or not covered by GHS:** Contact with acids or bleach liberates toxic gases. DO NOT ADD acids or bleach to any liquid wastes containing this product. We recommend handling all chemicals with caution.

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### Section 3: Composition/Information on Ingredients

Component	CAS No.	EC-No.	Concentration
Guanidinium thiocyanate	539-84-0	209-812-1	≥ 50 - <70%
Guanidinium isothiocyanate			

### Section 4: First Aid Measures

#### Description of First Aid Measures

**Skin contact:** Rinse with plenty of water. Immediate medical attention is not required.

**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Ingestion:** Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation:** Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

**Notes to Physician:** Treat Symptomatically.

#### **Most important symptoms and effects, both acute and delayed:**

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H412 - Harmful to aquatic life with long lasting effects.

**Indication of any immediate medical attention and special treatment needed:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Section 5: Firefighting Measures

**Suitable extinguishing media:** Dry powder. Dry Sand.

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**Special hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen cyanide (hydrocyanic acid), Ammonia.

**Advice for fire-fighters:** Standard procedure for chemical fires.

**Further information:** No data available.

### Section 6: Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

**Environmental precautions:** Should not be released into the environment.

**Methods and material for containment and cleaning up:** Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water.

**Reference to other sections:** See section 8.

### Section 7: Handling and Storage

**Precautions for safe handling:** Use personal protective equipment as required. No special handling advices are necessary.

**Conditions for safe storage, including any incompatibilities:** Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**Specific end use(s):** For in vitro diagnostic use in conjunction with nRichDX Revolution cfDNA Max 20XL, Max 20, and Reagent 0.5 kits.

### Section 8: Exposure Controls/Personal Protection

#### Control Parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	EINECS-No
Guanidinium thiocyanate	None	None	None

#### Personal protective equipment

**Respiratory protection:** In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

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**Hand protection:** Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

**Eye protection:** Tightly fitting safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### Section 9: Physical and Chemical Properties

#### Information on Basic Physical and Chemical Properties

<b>Appearance:</b>	Liquid, colorless
<b>Odor:</b>	No data available.
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/melting range:</b>	No data available.
<b>Boiling point/boiling range:</b>	No data available.
<b>Flash point:</b>	No data available.
<b>Autoignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper explosion limit:</b>	No data available.
<b>Lower explosion limit:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Relative density:</b>	1.100 g/cm <sup>3</sup>
<b>Specific gravity:</b>	No data available.
<b>Solubility</b>	Soluble in water.
<b>Partition coefficient n-octanol/water:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.
<b>Other information:</b>	No data available.

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### Section 10: Stability and Reactivity

**Reactivity:** No data available.

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** No data available.

**Conditions to avoid:** Contact with acids or bleach liberates toxic gases. DO NOT ADD acids or bleach to any liquid wastes containing this product.

**Incompatible materials:** No dangerous reaction known under conditions of normal use.

**Hazardous decomposition products:** No data available.

### Section 11: Toxicological Information

#### Information on Toxicological Effects

Chemical Name	LD50 (oral – rat/mouse)	LD50 (dermal – rat/mouse)	LC50 (inhalation – rat/mouse)
Guanidinium thiocyanate	593 mg/kg	No data available	No data available

#### Physical Routes of Exposure

**Acute toxicity:** Harmful if swallowed.

**Skin corrosion/irritation:** Data are conclusive but insufficient for classification.

**Respiratory/Skin Sensitization:** Data are conclusive but insufficient for classification.

**Specific Target Organ Toxicity – single exposure:** Data are conclusive but insufficient for classification.

**Specific Target Organ Toxicity – repeated exposure:** Data are conclusive but insufficient for classification.

**Carcinogenicity:** Data are conclusive but insufficient for classification.

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**Mutagenicity:** Data are conclusive but insufficient for classification.

**Reproductive toxicity:** Data are conclusive but insufficient for classification.

**Aspiration hazard:** Data are conclusive but insufficient for classification.

### Section 12: Ecological Information

#### Ecotoxicity

Chemical Name	Algae Toxicity	Daphnia and Other Aquatic Invertebrates Toxicity	Fish Toxicity	Microtox Data	Log Pow
Guanidinium thiocyanate	No data available	No data available	No data available	No data available	No data available

**Persistence and degradability:** No information available.

**Bioaccumulative potential:** No information available.

**Results of PBT and vPvB assessment:** No information available.

**Other adverse effects:** No information available.

### Section 13: Disposal Considerations

#### Waste Treatment Methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## Material Safety Data Sheet

### Section 14: Transport Information

**IAT/ADR/DOT-US/IMDG:**

**Classified as dangerous in the meaning of transport regulations**

**UN number:** 1760

**UN proper shipping name:** Corrosive liquid, n.o.s. (Guanidine Thiocyanate)

**Transport hazard class(es):** 8

**Packing group:** III

**Environmental hazards:** Not Hazardous.

**Special precautions for user:** Not Applicable,

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:** Not Applicable.

### Section 15: Regulatory Information

Component	US TSCA
Guanidinium thiocyanate	Listed

#### US Federal Regulations

**SARA 313:** This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61):** This product does not contain HAPs.

#### US State Regulations

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

**WHMIS Hazard Class:** E - Corrosive material.



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



## Material Safety Data Sheet

### Section 16: Other Information

**Reason for revision:** Original version

**Revision number:** A

**Revision date:** 11-October- 2019

**Use:** For *In Vitro* Diagnostic Use

**References:**

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

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