

## Material Safety Data Sheet

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

**Product Code:** 10084, 100100

**Product Name:** Revolution cfDNA Wash Buffer Solution

**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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**Support:** [info@nrichdx.com](mailto:info@nrichdx.com)

**Website:** [www.nrichdx.com](http://www.nrichdx.com)

**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:** WARNING

**Hazard pictograms:**



#### **Health Hazards:**

**Acute Oral Toxicity:** Category 4

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Skin corrosion/irritation: Category 2  
Serious eye damage/eye irritation: Category 2A

**Physical Hazards:** Not Hazardous

**Environmental Hazards:** Not classified

### Hazard Statements

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 – Causes serious eye irritation

### Precautionary Statements

#### Prevention:

P264 - Wash hands thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection

#### Response:

P330 - Rinse mouth.

P332 + P313 – If skin irritation occurs, get medical attention.

P305 + P351 + P338 – If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P310 – If swallowed, immediately call a POISON Center for doctor/physician.

P302 + P352 – If on skin, wash with plenty of soap and water.

#### Storage:

Not Applicable.

#### Disposal:

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

#### Other hazards:

Contains a known or suspected endocrine disruptor

#### HMIS

Health 2

Flammability 0

Reactivity 0

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### Section 3: Composition/Information on Ingredients

Component	CAS No.	EC-No.	Concentration
Guanidinium thiocyanate	539-84-0	209-812-1	1 – 24%
Guanidinium isothiocyanate			
Nonionic surfactants	-	Not Listed	<1%

### Section 4: First Aid Measures

#### Description of First Aid Measures

**Skin contact:** Rinse with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including inside, before reuse. Immediate medical attention is required.

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

**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.

H315 - Causes skin irritation.

H319 – Causes serious eye irritation.

**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: Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention/advice if you feel unwell.

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### Section 5: Firefighting Measures

**Suitable extinguishing media:** Water, Carbon Dioxide (CO<sub>2</sub>), Dry chemical.

**Special hazards arising from the substance or mixture:** Not known.

**Advice for fire-fighters:** Wear self-contained breathing apparatus and protective suit.

**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. Avoid contact with skin, eyes, and clothing. Use personal protection equipment. See Section 8 for more detail.

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

**Methods and material for containment and cleaning up:** Soak up with inert absorbent material and dispose of as hazardous waste.

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

### Section 7: Handling and Storage

**Precautions for safe handling:** Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing. Do not ingest. If during normal use the material represents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.

**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.

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### 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.

**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:** No special environmental precautions required.

### 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>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>	No data available.
<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.

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**Other information:** No data available.

### Section 10: Stability and Reactivity

**Reactivity:** No data available.

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

**Possibility of hazardous reactions:** Hazardous reaction has not been reported.

**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 known hazardous decomposition product.

### 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
Nonionic surfactants	= 1800 mg/kg (Rat) = 4190 mg/kg (Rat) = 1700 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.

**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.

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### Section 12: Ecological Information

**Ecotoxicity:** The environmental impact of this product has not been fully investigated

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
Nonionic surfactants	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:** Contains a known or suspected endocrine disruptor.

### 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.

### Section 14: Transport Information

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

**Not regulated in the meaning of transport regulations**

**UN number:** Not applicable

**UN proper shipping name:** Not applicable

**Transport hazard class(es):** Not applicable

**Packing group:** Not applicable

**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.

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### Section 15: Regulatory Information

Component	US TSCA
Guanidinium thiocyanate 593-84-0 (1-24)	Listed
Nonionic surfactants (<1)	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:**

D2B – Toxic Materials



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.

### Section 16: Other Information

**Reason for revision:** Original version

**Revision number:** A

**Revision date:** 17-December- 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>

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The



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information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

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END OF SAFETY DATA SHEET