

Material Safety Data Sheet

Section 1: Identification of the Substance or Mixture

Product Code: 10012, 100157

Product Name: Revolution cfDNA Protease Powder

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



Address: 15339 Barranca Parkway
Irvine, CA 92618 USA

Phone: +1.949.341.1980

Fax: +1.949.341.1982

Support: info@nrichdx.com

Website: 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: **DANGER!**

Hazard pictograms:



Health Hazards:

H315: Causes skin irritation

H319: Causes serious eye irritation

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335: May cause respiratory irritation

Material Safety Data Sheet

Precautionary Statements

Prevention:

P261: Avoid breathing dust, fume, gas, mist, vapors, spray

Response:

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Storage: Not Applicable

Disposal:

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

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

Section 3: Composition/Information on Ingredients

Component	CAS No.	EINECS-No.	Concentration
Proteinase K	39450-01-6	254-457-8	100%

Section 4: First Aid Measures

Description of First Aid Measures

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Eye contact: Immediately rinse out with water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Consult a physician.

Ingestion: Wash out mouth with water. Drink plenty of water. Consult a physician.

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

Notes to physician: Treat symptomatically

Indication of any immediate medical attention and special treatment needed:

May cause eye irritation. May be harmful if absorbed through skin. Causes skin irritation. May be harmful if swallowed. May be harmful if inhaled. Causes respiratory tract irritation.

Material Safety Data Sheet

Section 5: Firefighting Measures

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

Special hazards arising from the substance or mixture: During a fire, highly toxic gases may be generated by thermal decomposition or combustion – Unknown.

Advice 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: Use personal protective equipment.

Environmental precautions: Do not let product enter drains.

Methods and material for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections: Not applicable.

Section 7: Handling and Storage

Precautions for safe handling: 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, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.

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

Section 8: Exposure Controls/Personal Protection

Control Parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	EINECS-No
Proteinase K	No data available	No data available	No data available

Material Safety Data Sheet

Exposure Controls

Personal protective equipment: Wear appropriate protective clothing to prevent exposure.

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: 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

Appearance:	White, lyophilized powder
Odor:	Not available.
Odor Threshold:	Not available.
pH:	Not available.
Melting point/melting range:	Not available.
Boiling point/boiling range:	Not available.
Flash point:	Not available.
Autoignition temperature:	Not available.
Decomposition temperature:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Upper explosion limit:	Not available.
Lower explosion limit:	Not available.
Vapor pressure:	Not available.
Relative density:	Not available.
Specific gravity:	Not available.
Solubility:	Not available.
Partition coefficient n-octanol/water:	Not available.
Viscosity:	Not available.
Explosive properties:	Not available.

Material Safety Data Sheet

Oxidizing properties: Not available.
Other information: Not available.

Section 10: Stability and Reactivity

Reactivity: Not available.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Not available.

Conditions to avoid: Not available.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Unknown.

Section 11: Toxicological Information

Information on Toxicological Effects

Chemical Name	LD50 (oral – rat/mouse)	LD50 (dermal – rat/mouse)	LC50 (inhalation – rat/mouse)
Proteinase K	Not Available	Not Available	Not Available

Physical Routes of Exposure

Irritation: Not available.

Corrosivity: Not available.

Sensitization: May cause sensitization by inhalation.

Specific Target Organ Toxicity – single exposure: May cause respiratory irritation.

Specific Target Organ Toxicity – repeated exposure: Not available.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Mutagenicity: Not available.

Reproductive toxicity: Not available.

Aspiration hazard: Not available.

Material Safety Data Sheet

Potential adverse human health effects and symptoms: May cause serious eye irritation. May cause skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Dust from this product may cause respiratory irritation. Ingestion may cause irritation of the gastrointestinal tract.

Section 12: Ecological Information

Ecotoxicity

Chemical Name	Algae Toxicity	Daphnia and Other Aquatic Invertebrates Toxicity	Fish Toxicity	Microtox Data	Log Pow
Proteinase K	Not Available	Not Available	Not Available	Not Available	Not Available

Persistence and degradability: Not available

Bioaccumulative potential: Not available

Results of PBT and vPvB assessment: Not available

Other adverse effects: Not 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.

Section 14: Transport Information

IAT/ADR/DOT-US/IMDG: Not regulated.

UN number: Not regulated.

UN proper shipping name: Not regulated.

Transport hazard class(es): Not regulated.

Packing group: Not regulated.

Environmental hazards: Not regulated.

Material Safety Data Sheet

Special precautions for user: Not regulated.

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

Section 15: Regulatory Information

Component	US TSCA
Proteinase K	Not applicable

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: Not applicable.

Section 16: Other Information

Reason for revision: Original document

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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End of Safety Data Sheet