

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Proteinase K	Manufacturer:	Bionano Genomics
Description:	Protease Solution	Address:	9540 Towne Centre Drive, Ste. 100
Product Number:	20372		San Diego, CA 92121
SDS Issued:	April 17, 2019	Telephone:	(858) 888-7600

2 HAZARDS IDENTIFICATION

Hazard Class/Category: This product contains a hazardous material under Globally Harmonized System (GHS) classification schemes (29 CFR 1910, 1200 Appendix A and Appendix B; United Nations Globally Harmonized System of Classification and Labelling, Sixth Edition, Chapters 2 and 3). Respiratory Sensitization – H334

Label Elements: Hazard

Hazard Pictograms:



Signal Word: Danger

Hazard Statements: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements: P261 Avoid breathing vapors, mists or sprays. P271 Use only in a well-ventilated area. P280 Wear protective gloves/ eye protection/ face protection. P285 In case of inadequate ventilation wear respiratory protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor. P501 - Dispose of contents/container to approved waste facility.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Component:	CAS No.:	Percent Composition:
Proteinase K	39450-01-6	>1 to <10

4 FIRST AID MEASURES

Eye Contact: Remove contact lenses. Protect unharmed eye. Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician.

Skin Contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Ingestion: If accidentally swallowed obtain immediate medical attention. Rinse mouth with water. Never give anything by mouth to an unconscious person.

Inhalation: If unconscious place in recovery position and seek medical advice. Keep respiratory tract clear. If symptoms persist, call a physician.

Most Important Symptoms and Effects/Acute and Delayed: May cause allergy or asthma symptoms or breathing difficulties if inhaled. No information available.

Indication of Immediate Medical Attention/Special Treatment: Show this material safety data sheet to the doctor in attendance.

5 FIRE FIGHTING MEASURES

Flammability of the Product: Not flammable.

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Firefighting Procedures: In the event of fire and/or explosion do not breathe fumes.

Unusual Fire & Explosion Hazards: The products of thermal decomposition include irritating vapors, carbon monoxide, carbon dioxide.

6 ACCIDENTAL RELEASE MEASURES

<u>Personal precaution:</u>	Avoid generating splashes/sprays mist. Ensure adequate ventilation. Evacuate person to safe areas.
<u>Environmental precautions:</u>	Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
<u>Methods for cleaning up:</u>	Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves, lab coat, and safety glasses must be worn when cleaning-up spills. Use caution during clean-up; contaminated floors and items may be slippery. Wipe-up spilled material with polypad or other absorbent material. Place clean-up materials in appropriate waste container for proper disposal.

7 HANDLING AND STORAGE

<u>Handling:</u>	Avoid formation of aerosol. Avoid exposure - obtain special instructions before use. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of vapors, mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately. Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.
<u>Storage:</u>	Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid; therefore, empty containers should be handled with care.
<u>Incompatibilities:</u>	See Section 10 (Stability and Reactivity).

8 EXPOSURE CONTROLS, PERSONAL PROTECTION

<u>Eye Protection:</u>	Safety glasses or goggles.
<u>Hand Protection:</u>	Latex or nitrile I gloves.
<u>Respiratory Protection:</u>	None, if used according to directions. If concerned use respiratory mask.
<u>Ventilation:</u>	Use in a well-ventilated laboratory. If splashes, sprays, mists, or aerosols can be generated, use in a fume hood.
<u>Other Protective Equipment:</u>	Lab coat or apron. Safety shower and eye wash facilities should be made available in laboratory.
<u>Exposure Limits:</u> The following airborne exposure limits are applicable to components of this product.	
<u>Component:</u>	<u>ACGIH</u> <u>OSHA</u> <u>OTHER</u>
Proteinase K	N/A N/A N/A

9 PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance:</u>	Liquid
<u>Odor:</u>	Odorless
<u>Odor Threshold:</u>	No data available
<u>pH:</u>	7.5
<u>Melting Point/Freezing Point:</u>	No data available
<u>Initial Boiling Point/Boiling Range:</u>	No data available
<u>Flash Point:</u>	NA
<u>Evaporation Rate (Water = 1):</u>	No data available
<u>Flammability:</u>	NA
<u>Upper/Lower Explosive Limits:</u>	No data available
<u>Vapor Pressure:</u>	No data available
<u>Vapor Density:</u>	No data available
<u>Relative Density (Density):</u>	1.10 g/cm ³
<u>Solubility:</u>	Soluble
<u>Partition Coefficient/n-octanol/water:</u>	No data available
<u>Autoignition Temperature:</u>	Not determined
<u>Decomposition Temperature:</u>	No data available
<u>Viscosity:</u>	7.741 mm ² /s (20 °C) Method: DIN 51562

10 STABILITY AND REACTIVITY

<u>Reactivity:</u>	No additional information available
<u>Incompatibility:</u>	Strong oxidizers
<u>Stability:</u>	Stable under recommended storage conditions
<u>Hazardous Polymerization:</u>	No data available
<u>Conditions to Avoid:</u>	Strong oxidizing agents
<u>Hazardous Decomposition Products:</u>	Fume. Carbon monoxide. Carbon dioxide.

11 TOXICOLOGICAL INFORMATION

To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

Product Toxicity Data:

The following are calculated estimates for the product:

Acute Toxicity Estimate (Oral) > 2000 mg/kg

Acute Toxicity Estimate (Dermal) > 2000 mg/kg

Acute Toxicity Estimate (Inhalation) > 10 mg/L

Degree of Irritation: The product is not reported to cause skin or eye irritation.

Sensitization: This product contains a reported respiratory sensitizer.

Review of Acute Symptoms: See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for additional details.

Carcinogenicity Status: No component of this product is listed as a carcinogen according to the NTP (National Toxicology Program), IARC (International Agency for Research on Cancer), or OSHA (US Occupational Safety and Health Administration).

Reproductive Toxicity Information: The components of this product are not reported to cause reproductive effects under typical circumstances of exposure.

Mutagenic Effects: The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure.

Specific Target Organ Toxicity - Single Exposure: Not applicable.

Specific Target Organ Toxicity – Repeated Exposure: Not applicable.

Aspiration Hazard: Not applicable.

Toxicologically Synergistic Products: None known.

Additional Toxicology Information: Not applicable.

12 ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and Degradability: When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

Bioaccumulation Potential: The components of this product are not anticipated to bioaccumulate in any significant quantities.

Mobility in Soil: This product is anticipated to be mobile in soil.

13 DISPOSAL CONSIDERATIONS

Prepare, transport, treat, store, and dispose of waste product according to all applicable local, U.S. State and U.S. Federal regulations, the applicable Canadian standards, or other appropriate national standards.

14 TRANSPORTATION INFORMATION

Hazardous Materials Transportation Information: This material is not hazardous for shipment, per the Department of Transportation Hazardous Materials Regulations or International Air Transport Association/International Maritime Organization Dangerous Goods Codes. Please contact the manufacturer if there are questions pertinent to the shipment of this product

Environmental Hazards: None described, as related to transportation.

Special Precautions for Users: Not applicable.

15 REGULATORY INFORMATION

U.S. Environmental Health and Safety Regulations:

- * U.S. SARA HAZARD CATEGORIES (SECTION 311/312): Respiratory/Skin Sensitizer
- * U.S. CERCLA REPORTABLE QUANTITY (RQ): This material does not contain any components with a CERCLA RQ.
- * U.S. SARA SECTION 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- * U.S. TSCA INVENTORY STATUS: All components of this product are listed on the TSCA Inventory.
- * U.S. CLEAN AIR ACT (Section 112r): No component is designated as a Hazardous Air Pollutant.
- * CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

International Regulations:

- * CANADIAN Regulatory Status: The product is not classified as hazardous under Hazardous Products Regulations (SOR-2015-17).
- * WHMIS 2015: See section 2. This SDS contains all the information required by the Hazardous Products Regulations.
- *CANADIAN DSL/NDSL INVENTORY STATUS: The listed components of this product are on the DSL/NDSL Inventory.
- * CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The components of this product are not on the CEPA Priority Substances Lists.
- * EUROPEAN INFORMATION: Caution: Substance not yet fully tested.

16 OTHER INFORMATION

Limitations: The information and recommendations set forth in this SDS are believed to be correct as of this date. BioNano Genomics makes no warranty with respect to the content of this SDS and disclaims all liability from reliance thereon.

Documentation:

- Change Indicated: Prepared per OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Date of Publication: April 17, 2019
- Supersedes: Not applicable.

References for Development:

- * SAFETY DATA SHEETS FOR COMPONENT PRODUCTS.
- * RTECS – Registry of Effects of Toxic Chemicals
- * ECHA: European Chemical Hazards Agency <http://echa.europa.eu/en/information-on-chemicals/>
- *TOXNET: <http://toxnet.nlm.nih.gov/>