

**1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Name:	RNase A (20 mg/ml)	Manufacturer:	Bionano Genomics
Description:	Enzyme	Address:	9540 Towne Centre Drive, Ste. 100
Product Number:	20373		San Diego, CA 92121
SDS Issued:	April 17, 2019	Telephone:	(858) 888-7600

**2 HAZARDS IDENTIFICATION**

**Hazard Class/Category:** This product is not classified as 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).

Label Elements:

Hazard Pictograms: Not applicable.

Signal Word: Not applicable.

Hazard Statements: Not applicable.

Precautionary Statements:

- \* Prevention – None specified. See sections 7 and 8 for details.
- \* Response – None specified. See sections 4, 5 and 6 for details.
- \* Storage – None specified. See section 7 for details.
- \* Disposal – None specified. See section 13 for details.

**3 COMPOSITION/INFORMATION ON INGREDIENTS**

Component:	CAS No.:	Percent Composition:
No component contributes physical or Health hazards at the concentrations present in the product.	Not applicable.	100%

**4 FIRST AID MEASURES**

**Eye Contact:** Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

**Skin Contact:** Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

**Inhalation:** Assure fresh air breathing. Allow the victim to rest.

**Most Important Symptoms and Effects/Acute and Delayed:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Indication of Immediate Medical Attention/Special Treatment:** No additional information available

**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:** Wear self-contained breathing apparatus and protective clothing. Avoid direct contact with runoff from fire fighting.

**Unusual Fire & Explosion Hazards:** Combustion products include carbon dioxide, carbon monoxide, and other oxide compounds.

**6 ACCIDENTAL RELEASE MEASURES**

**Personal precaution:** Avoid generating splashes/sprays mist. Ensure adequate ventilation. Evacuate person to safe areas.

**Environmental precautions:** Do not let product enter drains.

**Methods for cleaning up:** 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**

Handling: 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.

Storage: 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.

Incompatibilities: See Section 10 (Stability and Reactivity).

**8 EXPOSURE CONTROLS, PERSONAL PROTECTION**

<u>Eye Protection:</u>	Safety glasses or goggles.
<u>Hand Protection:</u>	Latex, nitrile or vinyl 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.
<u>Other Protective Equipment:</u>	Lab coat or apron. Safety shower and eye wash facilities should be made available in laboratory.

Airborne Occupational Exposure Limits: Not applicable.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

<u>Appearance:</u>	Liquid
<u>Odor:</u>	No data available
<u>Odor Threshold:</u>	No data available
<u>pH:</u>	6-8
<u>Melting Point/Freezing Point:</u>	°C Mixture has not been tested
<u>Initial Boiling Point/Boiling Range:</u>	°C Mixture has not been tested
<u>Flash Point:</u>	°C Mixture has not been tested
<u>Evaporation Rate (Water = 1):</u>	No data available
<u>Flammability:</u>	No data available
<u>Upper/Lower Explosive Limits:</u>	Mixture has not been tested
<u>Vapor Pressure:</u>	Mixture has not been tested
<u>Vapor Density:</u>	Mixture has not been tested
<u>Relative Density (Density):</u>	Mixture has not been tested
<u>Solubility:</u>	No data available
<u>Partition Coefficient/n-octanol/water:</u>	No data available
<u>Autoignition Temperature:</u>	Mixture has not been tested
<u>Decomposition Temperature:</u>	Mixture has not been tested
<u>Viscosity:</u>	No data available

**10 STABILITY AND REACTIVITY**

<u>Reactivity:</u>	None known
<u>Incompatibility:</u>	No dangerous reaction known under conditions of normal use.
<u>Stability:</u>	Stable under normal conditions
<u>Hazardous Polymerization:</u>	Hazardous reaction has not been reported.
<u>Conditions to Avoid:</u>	No information available.
<u>Hazardous Decomposition Products:</u>	Fume. Carbon monoxide. Carbon dioxide.

**11 TOXICOLOGICAL INFORMATION**

<u>Product Toxicity Data:</u>	
The following are calculated estimates for the product:	
Acute Toxicity Estimate (Oral) > 5000 mg/kg	
Acute Toxicity Estimate (Dermal) > 5000 mg/kg	
Acute Toxicity Estimate (Inhalation) > 30 mg/L	
<u>Degree of Irritation:</u> The product is not anticipated to cause significant eye irritation or skin irritation.	
<u>Sensitization:</u> This product does not contain any compound reported to be either a skin or respiratory sensitizer.	
<u>Review of Acute Symptoms:</u> See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for additional details.	
<u>Carcinogenicity Status:</u> 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).	
<u>Reproductive Toxicity Information:</u> The components of this product are not reported to cause reproductive effects under typical circumstances of exposure.	
<u>Mutagenic Effects:</u> The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure.	
<u>Specific Target Organ Toxicity - Single Exposure:</u> Not applicable.	
<u>Specific Target Organ Toxicity – Repeated Exposure:</u> Not applicable.	
<u>Aspiration Hazard:</u> Not applicable.	
<u>Toxicologically Synergistic Products:</u> None known.	
<u>Additional Toxicology Information:</u> Not applicable.	

**12 ECOLOGICAL INFORMATION**

<u>Ecotoxicity:</u> Based on available data, this product is not anticipated to be harmful to contaminated terrestrial or aquatic lifeforms
<u>Persistence and Degradability:</u> 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.
<u>Bioaccumulation Potential:</u> The components of this product are not anticipated to bioaccumulate in any significant quantities.
<u>Mobility in Soil:</u> This product will have mobility 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**

<u>Hazardous Materials Transportation Information:</u> 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.	
<u>Environmental Hazards:</u> None described, as related to transportation.	
<u>Special Precautions for Users:</u> Not applicable.	

**15 REGULATORY INFORMATION**

<u>U.S. Environmental Health and Safety Regulations:</u>	
* U.S. SARA HAZARD CATEGORIES (SECTION 311/312):	Not applicable.
* 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.	

**15 REGULATORY INFORMATION (Continued)**

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 HPR (SOR 2017-17).
- \*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/>