

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION			
Product Name:	1M DTT	Manufacturer:	Bionano Genomics
Description:	Laboratory Reagent	Address:	9540 Towne Centre Drive San Diego, CA 92121
Product Number:	20354	Telephone:	(858) 888-7600
MSDS Issued:	June 18, 2019		

2 COMPOSITION/INFORMATION ON INGREDIENTS			
Component	CAS No.	Percent Composition	Exposure Limit or Threshold Level
DL-Dithiothreitol	3483-12-3	[Proprietary]	N/A

3 HAZARDS IDENTIFICATION
Toxic by ingestion, irritant. Target organs: Central nervous system.

4 FIRST AID MEASURES	
<u>Eye Contact:</u>	Immediately flush with large quantities of water for at least fifteen minutes. Causes eye irritation.
<u>Skin Contact:</u>	Wash off with soap and plenty of water. Maybe harmful if absorbed through skin. Causes skin irritation.
<u>Ingestion:</u>	Wash out mouth with water if person is conscious. Do not give anything by mouth if victim is unconscious. Maybe harmful if swallowed.
<u>Inhalation:</u>	Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Maybe harmful if inhaled. Causes respiratory tract irritation. Consult a physician.

5 FIRE FIGHTING MEASURES	
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:	None

6 ACCIDENTAL RELEASE MEASURES	
<u>Personal precaution:</u>	Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.
<u>Environmental precautions:</u>	Do not let product enter drains.
<u>Methods for cleaning up:</u>	Pick up and arrange disposal without creating dust. Keep in suitable closed containers for disposal.

7 HANDLING AND STORAGE	
Handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Storage:	Keep container tightly closed in a dry well ventilated place. Recommended storage temperature 2-8C. Moisture sensitive: Store under inert gas.

8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection:	Safety glasses or goggles.
Hand Protection:	Latex, nitrile or vinyl gloves.
Respiratory Protection:	None, if used according to directions. If concerned use respiratory mask.
Ventilation:	Use in a well-ventilated laboratory.
Other Protective Equipment:	Lab coat or apron.
Hygiene measures:	Avoid contact with Skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Safety shower and eye wash facilities should be made available in laboratory.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder/White
Odor:	Unpleasant
Solubility:	15.4g/L at 20C.

10 STABILITY AND REACTIVITY

Incompatibility:	None.
Stability:	Store under recommended conditions. May decompose on exposure to moist air or water.
Hazardous Polymerization:	Materials to avoid: Bases, oxidizing agents, Reducing agents, Alkali metals.
Conditions to Avoid:	Hazardous decomposed material formed under fire conditions- carbon oxides, sulphur oxides, Hydrogen sulphide gas.

11 TOXICOLOGICAL INFORMATION

Acute toxicity: LD50-Oral-Rat- 400mg/Kg.
 Signs and symptoms of exposure: nausea, Headache, Vomiting, Central nervous system depression.
 No components greater than 0.1% of this product are listed in IARC and NTP.
 To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated

12 ECOLOGICAL INFORMATION

Toxicity to daphnia and other aquatic invertebrates: LC50-Daphnia magna (Water flea) - 27mg/L -48h

13 DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Observe all federal, state and local environmental conditions
 Contaminated packaging: Dispose off as unused product.

14 TRANSPORTATION INFORMATION

To the best of our knowledge, this product is not regulated as a hazardous material.

15 REGULATORY INFORMATION

OSHA hazards: Target Organ Effect, Irritant, Toxic by ingestion.

TSCA status: PVP-10: On TSCA inventory.

DSL status: All components of this product are on the Canadian DSL list.

SARA 302 components: PVP-10, TBE, Tween-20: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 components: PVP-10, TBE, Tween-20 : 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.

SARA 311/312 Hazards: Acute health hazard, chronic health hazard.

Massachusetts Right to know components: No components listed.

Pennsylvania Right to know components: (R*, R*)-1, 4-Dimercaptobutane-2,3-diol (CAS# 3483-12-3)

New Jersey Right to know components: (R*, R*)-1, 4-Dimercaptobutane-2,3-diol (CAS# 3483-12-3)

California Prop 65 components: This product does not contain any components known to the state of California to cause cancer, birth or any other reproductive defects

16 OTHER INFORMATION

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