

SECTION 1: IDENTIFICATION
1.1. Product Identifier
Product Form: Mixture

Product Name: Proteinase K Solution

Product Code: MLD505A

1.2. Intended Use of the Product
Use of the Substance/Mixture: For Laboratory Use

1.3. Name, Address, and Telephone of the Responsible Party
Company

Molecular Designs, LLC

2 Perimeter Park South

Birmingham, AL 35243

1-240-793-3660

www.moleculardesigns.com
jseth@moleculardesigns.com
1.4. Emergency Telephone Number
Emergency Number

 : Call VelocityEHS for emergency support 24/7/365
 (800)255-3924 (North America)
 +1 (813)248-0585 (International)

SECTION 2: HAZARDS IDENTIFICATION
2.1. Classification of the Substance or Mixture
GHS-US Classification

Respiratory sensitization, Category 1

H334

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US)

:



GHS08

Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

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

Precautionary Statements (GHS-US)

 : P261 - Avoid breathing vapors, mist, or spray.
 P284 - [In case of inadequate ventilation] wear respiratory protection.
 P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	%	GHS US classification
1,2,3-Propanetriol	Propane-1,2,3-triol / Glycerine / Glycerin / GLYCERIN / 1,2,3-Trihydroxypropane / Glycerol	(CAS-No.) 56-81-5	25 – 50	Not classified
Proteinase, tritirachium album serine	Proteinase K / Tritirachium album serine proteinase	(CAS-No.) 39450-01-6	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334

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Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Not expected to present a significant hazard under anticipated conditions of normal use. If irritation occurs, wash affected areas with soap and water. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/Injuries After Inhalation: Exposure may produce cough, mucous secretions, shortness of breath, chest tightness or other symptoms indicative of an allergic/sensitization reaction.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Exposure may produce an allergic reaction.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Acrolein.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Wear appropriate personal protective equipment. Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

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6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Spilled material may present a slipping hazard.

Precautions for Safe Handling: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures and incompatible materials. Protect from light.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Storage Temperature: $\geq -20\text{ }^{\circ}\text{C}$ ($-4\text{ }^{\circ}\text{F}$)

7.3. Specific End Use(s)

For Laboratory Use

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

1,2,3-Propanetriol (56-81-5)		
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m ³ (mist, total particulate) 5 mg/m ³ (mist, respirable fraction)

8.2. Exposure Controls

Appropriate Engineering Controls

: Ensure adequate ventilation, especially in confined areas. Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection. Protective goggles or glasses.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Colorless
Odor	: Not specified
Odor Threshold	: No data available
pH	: 7.2 at 20 °C (68 °F)
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: 100 °C (212 °F)
Flash Point	: 160 °C (320 °F)
Auto-ignition Temperature	: No data available

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Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor Pressure	: < 0.1 hPa at 20 °C (68 °F)
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Density	: 1.13146 g/cm ³ (9.44203 lbs/gal)
Solubility	: Water: Fully miscible
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

10.4. Conditions to Avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products

Thermal decomposition may produce: Carbon oxides (CO, CO₂). Nitrogen oxides. Acrolein.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

1,2,3-Propanetriol (56-81-5)	
LD50 Oral Rat	12600 mg/kg
LD50 Dermal Rabbit	> 10 g/kg

Skin Corrosion/Irritation: Not classified

pH: 7.2 at 20 °C (68 °F)

Serious Eye Damage/Irritation: Not classified

pH: 7.2 at 20 °C (68 °F)

Respiratory or Skin Sensitization: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Exposure may produce cough, mucous secretions, shortness of breath, chest tightness or other symptoms indicative of an allergic/sensitization reaction.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Exposure may produce an allergic reaction.

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

1,2,3-Propanetriol (56-81-5)	
LC50 Fish 1	54000 (51000 – 57000) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and Degradability

Proteinase K Solution	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Proteinase K Solution	
Bioaccumulative Potential	Not established.

1,2,3-Propanetriol (56-81-5)	
BCF Fish 1	(no bioaccumulation)
Partition coefficient n-octanol/water (Log Pow)	-1.75 at 25 °C (at pH 7.4)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Treatment Methods: Product contaminated with biological materials should preferably be incinerated.

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Not regulated for transport

14.2. In Accordance with IMDG

Not regulated for transport

14.3. In Accordance with IATA

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Proteinase K Solution	
SARA Section 311/312 Hazard Classes	Health hazard - Respiratory or skin sensitization
1,2,3-Propanetriol (56-81-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	

15.2. US State Regulations

1,2,3-Propanetriol (56-81-5)	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	
U.S. - Massachusetts - Right To Know List	

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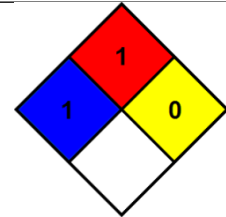
SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 03/24/2023
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

H315	Causes skin irritation
H319	Causes serious eye irritation
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled

NFPA Health Hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA Fire Hazard : 1 - Materials that must be preheated before ignition can occur.
NFPA Reactivity Hazard : 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating
Health : 1 Slight Hazard
* Chronic - Chronic (long-term) health effects may result from repeated overexposure
Flammability : 1 Slight Hazard
Physical : 0 Minimal Hazard

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Proteinase K Solution SDS (DOC-2053) Ver. 1

Approved By:

[\(CO-178\) Implementation of Safety Data Sheets](#)

Description

First- time addition and Implementation of Safety Data Sheets

Justification

First- time addition and Implementation of Safety Data Sheets to Greenlight Guru

Assigned To:

Lara Self

Initiated By:

Lara Self

Priority:

Medium

Impact:

Minor

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