



## MATERIAL SAFETY DATA SHEET

### Liquid N-geneous™ Lipase Reagent 2

#### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Liquid N-geneous™ Lipase Reagent 2

**Product Number:** 80-6669-00; 80-6688-00; 80-6690-00; 80-6693-00; 80-6701-00; 90-6706-141

**Synonym(s):** Lipase Reagent 2; R2

**Product Use:** For In Vitro Diagnostic Use Only. Component of Liquid N-geneous™ Lipase kit. For the quantitative measurement of lipase activity in serum and plasma.

**Description:** Aqueous solution containing buffers, co-enzyme, substrate, detergent, stabilizer, and solvent.

#### Corporate Headquarters

**Genzyme Corporation**

500 Kendall Street  
Cambridge, MA 02142  
USA

**Phone:** +1 617-252-7500

#### Distributor

**Genzyme Diagnostics**

50 Gibson Drive  
Kings Hill, West Malling  
Kent, ME19 4AF  
UK

**Phone:** +44 (0) 1732 220022

#### Distributor

**Genzyme Diagnostics**

One Kendall Square  
Cambridge, MA 02139  
USA

**Phone:** 1-800-332-1042

#### Emergency Telephone Numbers

**Genzyme (U.S.):** +1 617-562-4555

**CHEMTREC (U.S.):** 1-800-424-9300

**CHEMTREC (Outside U.S.):** +1 703-527-3887

#### 2. HAZARDS IDENTIFICATION

#### **Precautionary Statements:**

WARNING! The chemical, physical and toxicological properties of this preparation have not been thoroughly characterized. May be irritating to the skin or respiratory system. May be severely irritating to the eyes. Combustible liquid and vapor. Avoid contact with eyes and skin. Do not ingest or inhale. Preparation appearance: slightly turbid, orange liquid.

#### **Routes of Exposure:**

Occupational exposure routes may include inhalation, skin absorption, and eye and skin contact.

#### **Potential Health Effects:**

<b>Inhalation</b>	Prolonged vapor inhalation may cause drowsiness, dizziness, headache and irritation of the nasal passages and throat.
<b>Eye</b>	Eye contact or vapor may cause severe irritation, redness, watering, stinging, pain and blurred vision.
<b>Skin</b>	Skin contact may cause irritation, dryness, rash and burning sensation. Skin contact with significant chemical absorption may result in symptoms similar to those specified for inhalation and ingestion.
<b>Ingestion</b>	Ingestion may cause nausea, vomiting, diarrhea, cramps, drowsiness and sore throat.
<b>Chronic Effects</b>	Prolonged or repeated skin contact may cause dermatitis.
<b>Target Organs</b>	Central nervous system, eyes and skin.



## MATERIAL SAFETY DATA SHEET

### Liquid N-geneous™ Lipase Reagent 2

#### Regulatory Status:

This preparation is classified as hazardous under U.S. OSHA 29 CFR 1910.1200; E.C. Directive 1999/45/EC; Canadian R.S. 1985, c. H-3; U.K. CHIPS 2002 No. 1689; and/or U.N. GHS ST/SG/AC 10/30. Refer to Sec. 15, Regulatory Information, for details regarding hazard classification.

According to ACGIH, propanol is a confirmed animal carcinogen with unknown relevance to humans.

#### Potential Environmental Effects:

No data available.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS #	EC #	% (wt/wt)
Water	7732-18-5	231-791-2	85 - 90
<b>EC R-Phrases:</b> None	<b>EC Hazard Class:</b> None		
n-Propanol	71-23-8	200-746-9	10
<b>EC R-Phrases:</b> R11, R41, R67	<b>EC Hazard Class:</b> Xi, F		
Tartaric acid	87-69-4	201-766-0	< 2
<b>EC R-Phrases:</b> None	<b>EC Hazard Class:</b> None		
Colipase (pancreatic lipase cofactor)	55126-92-6	259-490-1	0.1 - 5
<b>EC R-Phrases:</b> None	<b>EC Hazard Class:</b> None		
Stabilizer	Trade Secret	Trade Secret	1
<b>EC R-Phrases:</b> None	<b>EC Hazard Class:</b> None		
Proprietary non-ionic detergent	Trade Secret	Trade Secret	< 1
<b>EC R-Phrases:</b> R22, R38, R41, R52	<b>EC Hazard Class:</b> Xn, N		
Sodium hydroxide	1310-73-2	215-185-5	< 0.1
<b>EC R-Phrases:</b> R35	<b>EC Hazard Class:</b> C		
1,2-o-Dilauryl-rac-glycero-3-glutaric acid-(6'-methylresorufin)-ester	Not Assigned	Not Assigned	< 0.1
<b>EC R-Phrases:</b> None	<b>EC Hazard Class:</b> None		
Proprietary preservative	Mixture	Mixture	< 0.1
<b>EC R-Phrases:</b> R10, R20/21/22, R34, R43, R50/53	<b>EC Hazard Class:</b> C, N		

### 4. FIRST AID MEASURES

#### Inhalation:

If inhaled, move from exposure area to fresh air. Seek immediate medical attention if breathing becomes difficult or if cough or other symptoms develop.

#### Eye Contact:

Immediately flush eyes with plenty of tepid water for 15 minutes while separating eyelids with fingers. Remove contact lenses if worn. Obtain immediate medical attention.

#### Skin Contact:

In case of contact, immediately flush skin with copious amounts of cool water and remove contaminated clothing. Obtain medical attention if needed or if irritation or other symptoms develop.



## MATERIAL SAFETY DATA SHEET

### Liquid N-geneous™ Lipase Reagent 2

#### Ingestion:

In case of ingestion, contact a poison control center and seek immediate medical attention. If vomiting occurs, lean sitting person forward, if lying down, roll them onto their left side (head-down position if possible), to maintain an airway and prevent aspiration.

## 5. FIRE FIGHTING MEASURES

#### Flammable Properties:

Combustible liquid and vapor.

#### Suitable Extinguishing Media:

Carbon dioxide, chemical foam, dry chemical or water spray.

#### Unsuitable Extinguishing Media:

Unknown.

#### Specific Hazards Arising from the Chemical:

Irritating or highly toxic gases may be generated by combustion, including carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).

#### Standard Protective Equipment and Precautions for Firefighters:

As in any fire, firefighters should wear NIOSH-approved or equivalent Self-Contained Breathing Apparatus and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precautions:

Wear Personal Protective Equipment (PPE) as indicated in Section 8. Ensure adequate ventilation. Avoid physical contact with material and avoid aerosol inhalation. Wash hands thoroughly after handling.

#### Environmental Precautions:

No information available.

#### Methods and Materials for Containment and Clean-Up:

Ventilate area. Eliminate sources of ignition. Absorb spill with inert sorbent. The use of a commercial, solvent spill absorbant product that contains activated carbon is recommended. These absorbants help to reduce vapors and decrease flammability by increasing the flash point. Use clean non-sparking tools to collect absorbed material. Decontaminate the spill site following standard procedures. Dispose of materials in accordance with all applicable federal, state, local and provincial environmental regulations, per Section 13.

## 7. HANDLING AND STORAGE

#### Handling:

Follow good laboratory hygiene practices. See Section 8, Engineering Controls. Minimize contact and contamination of personal clothing and skin. Wash hands thoroughly after handling.

#### Storage:

Store at 2-8°C (35-46°F). Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store with incompatible substances; see Section 10.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION



# MATERIAL SAFETY DATA SHEET

## Liquid N-geneous™ Lipase Reagent 2

### Exposure Guidelines:

#### ACGIH - Threshold Limits Values - Short Term Exposure Limits (TLV-STEL)

n-Propanol 71-23-8 400 ppm STEL

#### ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

n-Propanol 71-23-8 200 ppm TWA

#### Australia - Occupational Exposure Standards - STELs

n-Propanol 71-23-8 250 ppm STEL; 614 mg/m3 STEL

#### Australia - Occupational Exposure Standards - TWAs

n-Propanol 71-23-8 200 ppm TWA; 492 mg/m3 TWA

#### Canada - Quebec - Occupational Exposure Limits - STEVs

n-Propanol 71-23-8 250 ppm STEV; 615 mg/m3 STEV

#### Canada - Quebec - Occupational Exposure Limits - TWAEVs

n-Propanol 71-23-8 200 ppm TWAEV; 492 mg/m3 TWAEV

#### China - Occupational Exposure Limits - Permissible Concentration-Short Term (PC-STEL)

n-Propanol 71-23-8 300 mg/m3 STEL

#### China - Occupational Exposure Limits - Permissible Concentration-Time Weighted Average (PC-TWA)

n-Propanol 71-23-8 200 mg/m3 TWA

#### Korea - Occupational Exposure Limits - STELs

n-Propanol 71-23-8 250 ppm STEL; 625 mg/m3 STEL

#### Korea - Occupational Exposure Limits - TWAs

n-Propanol 71-23-8 200 ppm TWA; 500 mg/m3 TWA

#### OSHA - Final PELs - Time Weighted Averages (TWAs)

n-Propanol 71-23-8 200 ppm TWA; 500 mg/m3 TWA

### Engineering Controls:

Use local exhaust ventilation. Facilities storing or utilizing this preparation should be equipped with an eyewash fountain.

### Personal Protective Equipment (PPE):

<b>Respiratory</b>	A respiratory protection program that meets U.S. Federal OSHA 29 CFR 1910.134 and ANSI Z99.2, Canadian CSA Standard Z94.4-93, European Standard CR 529, or other applicable regulatory standards must be followed whenever exposure limits may be exceeded (if applicable), engineering controls are not feasible, or if insufficient ventilation or workplace conditions warrant respirator use. In such cases an air purifying respirator equipped with organic vapor cartridges selected to provide a filtration efficiency appropriate to your workplace is recommended.
<b>Eye/Face</b>	Wear appropriate protective chemical safety goggles.
<b>Skin</b>	Wear lab coat or other protective garments. Remove contaminated clothing promptly.
<b>Gloves</b>	Wear chemical resistant protective gloves.
<b>General</b>	Follow company-specific safety procedures.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Slightly turbid orange liquid	<b>pH:</b>	5.4 - 5.6 @ 25°C
<b>Odor:</b>	Mild alcohol odor	<b>Solubility:</b>	Water-miscible
<b>Specific Gravity:</b>	Not available	<b>Vapor Pressure:</b>	Not available
<b>Boiling Point:</b>	Not available	<b>Partition Coefficient (n-octanol/water):</b>	Not available
<b>Melting Point:</b>	Not applicable	<b>Vapor Density:</b>	Not available
<b>Freezing Point:</b>	Not available		



## MATERIAL SAFETY DATA SHEET

### Liquid N-geneous™ Lipase Reagent 2

**Flammability/Explosivity Limits in Air, Lower:** Not available  
**Flammability/Explosivity Limits in Air, Upper:** Not available  
**Auto-Ignition Temperature:** Not applicable  
**Flash Point:** 23 °C (73.4 °F) 74°F [n-Propanol]

## 10. STABILITY AND REACTIVITY

### Chemical Stability:

Stable under ordinary conditions of use and storage; (see handling and storage information in Section 7).

### Conditions to Avoid:

Avoid heat, flames, sparks and ignition sources.

### Incompatible Materials:

Avoid strong oxidizing agents.

### Hazardous Decomposition Products:

Thermal decomposition may lead to release of irritating gases and vapors.

### Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Effects:

#### Toxicology Data - Selected LD50s and LC50s

n-Propanol	71-23-8	Inhalation LC50 Rat: >9.8 mg/L/4H; Oral LD50 Rat: 1870 mg/kg; Dermal LD50 Rabbit: 4049 mg/kg
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### Chronic Effects:

Prolonged or repeated skin contact may cause dermatitis.

### Carcinogenicity:

#### ACGIH - Threshold Limits Values - Carcinogens

n-Propanol	71-23-8	A3 - Confirmed animal carcinogen with unknown relevance to humans
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### Mutagenicity:

No data available.

### Teratogenicity:

No data available.

### Reproductive Effects:

No data available.

### Sensitization:

No data available.

## 12. ECOLOGICAL INFORMATION



## MATERIAL SAFETY DATA SHEET

### Liquid N-geneous™ Lipase Reagent 2

#### Ecotoxicity:

##### Ecotoxicity - Freshwater Fish Species Data

n-Propanol 71-23-8 96 Hr LC50 Pimephales promelas: 4480 mg/L [flow-through]

##### Ecotoxicity - Microtox Data

n-Propanol 71-23-8 5 min EC50 Photobacterium phosphoreum: 17700 mg/L; 15 min EC50 Photobacterium phosphoreum: 8686 mg/L; 12 Hr EC50 Nitrosomonas: 980 mg/L; 5 Hr EC50 Escherichia coli: 45000 mg/L

##### Ecotoxicity - Water Flea Data

n-Propanol 71-23-8 48 Hr EC50 Daphnia magna: 3642 mg/L

#### Persistence and Degradability:

No data available.

#### Bioaccumulative Potential:

No data available.

#### Mobility in Environmental Media:

No data available.

### 13. DISPOSAL CONSIDERATIONS

#### Methods of Disposal:

Dispose of unused product, spilled material and waste in accordance with all applicable federal, state, local and provincial environmental and hazardous waste regulations.

#### Waste Classification:

##### California - 22 CCR - Presumed Hazardous Wastes

n-Propanol 71-23-8 Toxic; Ignitable

### 14. TRANSPORT INFORMATION

#### Basic Shipping Description:

Contact Genzyme's Logistics Department for shipping information.

### 15. REGULATORY INFORMATION

#### US Federal Regulations:

This preparation is a component of an FDA-regulated in vitro diagnostic device.

#### Inventory - United States - Section 8(b) Inventory (TSCA)

n-Propanol	71-23-8	Present
Tartaric acid	87-69-4	Present

#### US State Regulations:

##### California - 8 CCR Section 339 - Director's List of Hazardous Substances

n-Propanol	71-23-8	Present
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# MATERIAL SAFETY DATA SHEET

## Liquid N-geneous™ Lipase Reagent 2

**International Regulations:**

If approved for European Communities use, this product is regulated under the In Vitro Diagnostic Medical Devices Directive (98/79/EC).

**Canada - WHMIS - Classifications of Substances**

n-Propanol	71-23-8	B2, D2B
Tartaric acid	87-69-4	E

**Canada - WHMIS - Ingredient Disclosure List**

n-Propanol	71-23-8	1 %
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**EU - Dangerous Substances Directive (67/548/EEC) - Annex I - Classification**

n-Propanol	71-23-8	F;R11□Xi;R41□R67
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**EU - Dangerous Substances Directive (67/548/EEC) - Annex I - Safety Phrases**

n-Propanol	71-23-8	S:2-7-16-24-26-39
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**Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes**

n-Propanol	71-23-8	ID Number 176, hazard class 1 - low hazard to waters
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**Inventory - Australia - Inventory of Chemical Substances (AICS)**

n-Propanol	71-23-8	Present
Tartaric acid	87-69-4	Present

**Inventory - Canada - Domestic Substances List (DSL)**

n-Propanol	71-23-8	Present
Tartaric acid	87-69-4	Present

**Inventory - China**

n-Propanol	71-23-8	Present
Tartaric acid	87-69-4	Present

**Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)**

Colipase (pancreatic lipase cofactor)	55126-92-6	259-490-1
n-Propanol	71-23-8	200-746-9
Tartaric acid	87-69-4	201-766-0

**Inventory - Japan Existing and New Chemical Substances (ENCS)**

n-Propanol	71-23-8	2-207
Tartaric acid	87-69-4	2-1456

**Inventory - Korea - Existing and Evaluated Chemical Substances**

n-Propanol	71-23-8	KE-29362
Tartaric acid	87-69-4	KE-10801

**Canadian Hazardous Products:**

**WHMIS Status**                      Controlled

**Classification**

B2 - Flammable/Combustible

D2B - Other Toxic Effects-TOXIC



**European Communities Dangerous Substances/Preparations:**

**EC Hazard Class**                      Xi - Irritant

**Symbols**



**Risk Phrases**

R41    Risk of serious damage to eyes.

**Safety Phrases**

S26    In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S24/25                                      Avoid contact with skin and eyes.



## MATERIAL SAFETY DATA SHEET

### Liquid N-geneous™ Lipase Reagent 2

#### 16. OTHER INFORMATION

**Further Information:**

This MSDS has been prepared in accordance with the ANSI Z400.1 format. Every effort has been made to adhere to the hazard criteria and content requirements of the US OSHA Hazard Communication Standard, European Communities Safety Data Sheets Directive, Canadian Controlled Products Regulations, UK Chemical Hazard Information and Packaging Regulations, and UN Globally Harmonized System of Classification and Labelling of Chemicals.

**MSDS Origination Date:** March 31, 2005

**Version #:** 2

**Revision Date:** June 08, 2007

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