

MATERIAL SAFETY DATA SHEET

Clzyme™ Collagenase MA

MSDS DATE: 9/17/2009

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Clzyme™ Collagenase MA
SYNONYMS: Collagenase 60:40, Collagenase Blend
CATALOG NUMBERS: 001-2000, 001-2010, 001-2020, 001-2030, 001-2040, 001-2050, 001-2070

MANUFACTURER: VitaCyte LLC
ADDRESS: 1102 Indiana Ave.
Indianapolis, IN 46202
TECHNICAL PHONE: 888-664-2687 or 317-917-3457
FAX PHONE: 317-917-3459

CHEMICAL NAME: Lyophilized *C. histolyticum* Collagenase enzyme blend

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>
Collagenase Purified	9001-12-1	>98%
Glycylglycine	556-50-3	<1%
Calcium Chloride	10035-04-8	<1%

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Harmful.

Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation.

ROUTES OF ENTRY: Ingestion, inhalation, skin and/or eye contact.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.

SKIN: May cause irritation.

INGESTION: May cause gastrointestinal irritation.

INHALATION: May cause allergic respiratory reaction.

ACUTE HEALTH HAZARDS: None known

CHRONIC HEALTH HAZARDS: None known

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known

SECTION 4: FIRST AID MEASURES

EYES:

In case of contact, immediately wash eyes with copious amounts of water for at least 15 minutes.

SKIN:

In case of contact, wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes.

INGESTION:

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION 4 NOTES: None

SECTION 5: FIRE-FIGHTING MEASURES

AUTOIGNITION TEMPERATURE: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: 2 **FLAMMABILITY:** 0 **REACTIVITY:** 1

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OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 1
PROTECTION:

EXTINGUISHING MEDIA:

Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered to be a fire or an explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS: Nature of decomposition products not known.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Ventilate area and evacuate personnel to safe areas. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves during clean up. Soak up liquid with absorbent material and place contaminated material in appropriate sealed container for waste disposal. Wash spill site after material pick-up is complete.

SECTION 7: HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

STORAGE: Keep in a tightly closed container at -20 °C or colder.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Safety shower, eye wash station and mechanical exhaust system.

RESPIRATORY PROTECTION: Respiratory protection is not required under normal use of this product. If respiratory protection is needed use a government approved respirator.

EYE PROTECTION: Chemical safety goggles or appropriate eye protection

SKIN PROTECTION: Compatible chemical-resistant gloves

WORK HYGIENIC PRACTICES: Wash thoroughly after handling

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White to off-white lyophilized cake or powder

PHYSICAL STATE: Solid

pH AS SUPPLIED: pH 7-8

BOILING POINT: Not determined

MELTING POINT: Not determined

FREEZING POINT: Not determined

VAPOR PRESSURE (mmHg): Not determined

VAPOR DENSITY (AIR = 1): Not determined

SPECIFIC GRAVITY (H₂O = 1): Not determined

EVAPORATION RATE: Not determined

SOLUBILITY IN WATER: Not determined

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

Stable under ordinary conditions of storage and use.

CONDITIONS TO AVOID (STABILITY): Heat and extreme pH levels

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents, strong acids and bases.

POLYMERIZATION: None under normal processing

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Nature of decomposition products not known.

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SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Route of Exposure:

Skin Contact – Causes skin irritation
Skin Absorption – May be harmful if absorbed through the skin.
Eye Contact – Causes eye irritation.
Ingestion – May be harmful if swallowed.

Signs and Symptoms of Exposure:

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

RTECS NUMBER: N/A

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available on this product

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: None

NON-HAZARDOUS FOR TRANSPORT: This substance is considered to be non-hazardous for transport.

AIR TRANSPORTATION

PROPER SHIPPING NAME: None

NON-HAZARDOUS FOR AIR TRANSPORT: This substance is considered to be non-hazardous for transport.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): NO

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): NO

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): NO

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: None

STATE REGULATIONS:

CANADIAN REGULATIONS:

DSL: No

NDSL: No

SECTION 16: OTHER INFORMATION

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CHEMICAL NAME: Liquid *C. histolyticum* Collagenase enzyme blend

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>
Collagenase Purified	9001-12-1	2-4%
Glycylglycine	556-50-3	<1%
Calcium Chloride	10035-04-8	<1%
Water	7732-18-5	95-98%

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Harmful.

Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation.

ROUTES OF ENTRY: Ingestion, inhalation, skin and/or eye contact.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.

SKIN: May cause irritation.

INGESTION: May cause gastrointestinal irritation.

INHALATION: May cause allergic respiratory reaction.

ACUTE HEALTH HAZARDS: None known

CHRONIC HEALTH HAZARDS: None known

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known

SECTION 4: FIRST AID MEASURES

EYES:

In case of contact, immediately wash eyes with copious amounts of water for at least 15 minutes.

SKIN:

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INGESTION:

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION:

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SECTION 4 NOTES: None

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AUTOIGNITION TEMPERATURE: N/A

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HEALTH: 2 **FLAMMABILITY:** 0 **REACTIVITY:** 1
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EYE PROTECTION: Chemical safety goggles or appropriate eye protection

SKIN PROTECTION: Compatible chemical-resistant gloves

WORK HYGIENIC PRACTICES: Wash thoroughly after handling

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, slightly tan or beige colored liquid

PHYSICAL STATE: Liquid

pH AS SUPPLIED: pH 7-8

BOILING POINT: Not determined

MELTING POINT: Not determined

FREEZING POINT: Not determined

VAPOR PRESSURE (mmHg): Not determined

VAPOR DENSITY (AIR = 1): Not determined

SPECIFIC GRAVITY (H₂O = 1): Not determined

EVAPORATION RATE: Not determined

SOLUBILITY IN WATER: Not determined

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PROPER SHIPPING NAME: None

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