



MATERIAL SAFETY DATA SHEET

Conforms to 93/112/EC and ISO 11014-1

Responsible Name: Diazyme Administration
Effective 08/06/08

SECTION 1: PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAME:	CATALOG #
Direct Enzymatic HbA1c Assay	DZ168A
Lysis Buffer	60211
Reagent R1a	60200
Reagent R1b	60199
Reagent R1b	60201

Supplier: **Diazyme Laboratories**
12889 Gregg Court
Poway, CA 92064, USA
858-455-4754

Manufacturer: **Diazyme Laboratories**
12889 Gregg Court
Poway, CA 92064, USA
858-455-4754

Authorized Representative: **MDSS GmbH**
Schiffgraben 41
30175 Hannover
Germany

In case of Emergency: Please call local authorities. Diazyme Laboratories (858-455-4754) will assist with any questions on product safety.

Intended Use: Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

SECTION 2: HAZARDOUS INGREDIENTS

Product	Ingredient	Amount	CAS #	EINECS #	Symbols	R-Phrase	S-Phrase
Lysis Buffer	Triton X-100	2%	9002-93-1	None	Xn-N	22-41-51/53	26-36/39-61
Lysis Buffer	CHES	2%	103-47-9	None	Xi	36	26
Reagent 1a	None	None	None	None	None	None	None
Reagent 1b	None	None	None	None	None	None	None
Reagent 2	D-Trehalose anhydrous	5%	99-20-7	202-739-6	Xi	38	26,37/39

NOTE: Physical and health hazard information on reagent mixtures has not been determined. Any physical and health information noted is based on 1) evaluation of data for the pure ingredients from the chemical vendors, and 2) concentration of ingredients as packaged.

SECTION 3: HAZARD IDENTIFICATION

CHES:

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin. The toxicological properties of this material have not been fully investigated. Hygroscopic (absorbs moisture from the air).

Potential Health Effects

Eye: Causes eye irritation.
Skin: Possible skin irritation.
Ingestion: May cause irritation of the digestive tract. Expected to be a low ingestion hazard.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.
Chronic: Not known.

TREHALOSE:

EMERGENCY OVERVIEW

Irritating to skin.

Potential Health Effects

Eye: May cause eye irritation.
Skin: Causes moderate skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. Expected to be a low ingestion hazard.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.
Chronic: No information available.

TRITON X-100:

EMERGENCY OVERVIEW

Irritating to skin.

Potential Health Effects

Eye: Risk of serious damage to eyes.
Skin: No information available.
Ingestion: Harmful if swallowed.
Inhalation: No information available.
Chronic: No information available.

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Effective 08/06/08**SECTION 4: FIRST AID MEASURES****CHES:****Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.**Ingestion:** Wash mouth out with water. Get medical aid.**Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.**TREHALOSE:****Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.**Ingestion:** Get medical aid. Wash mouth out with water.**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.**Notes to Physician:** Treat symptomatically and supportively.**TRITON X-100:****Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.**Ingestion:** Get medical aid. Wash mouth out with water.**Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.**Notes to Physician:** Treat symptomatically and supportively.**SECTION 5: FIRE FIGHTING MEASURES****CHES:****General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.**TREHALOSE:****General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or

combustion. Dangerous fire hazard in the form of dust when exposed to heat or flame.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.**TRITON X-100:****General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dangerous fire hazard in the form of dust when exposed to heat or flame.**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.**SECTION 6: ACCIDENTAL RELEASE MEASURES****CHES:****General Information:** Use proper personal protective equipment as indicated in Section 8.**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.**TREHALOSE:****General Information:** Use proper personal protective equipment as indicated in Section 8.**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Do not let this chemical enter the environment.**TRITON X-100:****General Information:** Use proper personal protective equipment as indicated in Section 8.**Spills/Leaks:** Absorb on sand or vermiculite and place into a suitable disposal container. Ventilate area. Do not let this chemical enter the environment.

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General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

TREHALOSE:

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Keep container closed when not in use.

TRITON X-100:

Handling: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged and repeated exposure.

Storage: Store in a cool, dry place. Keep container closed when not in use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**CHES:**

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eye-wash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 103-47-9:

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

TRITON X-100:**Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eye-wash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

1ppm (ACGIH, TLV).

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

TREHALOSE:**Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eye-wash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 99-20-7: Not available.

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Physical State: Fine Crystals
Color: White
Odor: Not available
pH: 3.0-5.0
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Auto ignition Temperature: Not available.
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Moderately Soluble
Specific Gravity/Density: Not available.
Molecular Formula: (CH₂OH)₃CNH₂
Molecular Weight: 121.14

TREHALOSE:

Physical State: Crystalline powder
Color: white to off-white
Odor: Not available
pH: Not available
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available

Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: Not available
Molecular Formula: C₈H₁₇NO₃S
Molecular Weight: 209.29

TRITON X-100:

Physical State: Clear Liquid
Color: Faintly yellow
Odor: Not available
pH: 9.7
Vapor Pressure: <1 mmHG
Viscosity: Not available
Boiling Point: >200°C
Freezing/Melting Point: 6°C
Autoignition Temperature: Not available
Flash Point: 485°F or 251°C
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: 1.07 g/cm³
Molecular Formula: (C₂H₄O)_nC₁₄H₂₂O

SECTION 10: STABILITY AND REACTIVITY**CHES:**

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, Nitrogen oxides, sulfur oxides.
Hazardous Polymerization: Will not occur.

TREHALOSE:

Chemical Stability: Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid: Incompatible materials, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

TRITON X-100:

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

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SECTION 11: TOXICOLOGICAL INFORMATION

CHES:

RTECS#: CAS# 77-86-1: TY2900000

LD50/LC50: RTECS:
CAS# 103-47-9: Not known

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

TREHALOSE:

RTECS#: CAS# 99-20-7: None listed

LD50/LC50: RTECS: Not available.

Carcinogenicity: D-Trehalose anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

TRITON X-100:

RTECS#: MD0907700

LD50/LC50: Oral rat female LD50 = 707 mg/kg. Oral rat male LD50 = 500 mg/kg

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: Complete toxicological properties may have not been fully investigated. See actual entry in RTECS for complete information.

SECTION 12: ECOLOGICAL INFORMATION

CHES:

Other: No information available.

TREHALOSE:

Other: Do not empty into drains.

TRITON X-100:

Other: Do not empty into drains.

SECTION 13: DISPOSAL CONSIDERATIONS

CHES:

Dispose of in a manner consistent with federal, state, and local regulations.

TREHALOSE:

Dispose of in a manner consistent with federal, state, and local regulations.

TRITON X-100:

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14: TRANSPORTATION INFORMATION

CHES, TREHALOSE:

	IATA RID/ADR	IMO	
Shipping Name:	Not regulated.	Not regulated.	Not regulated.
Hazard Class:			
UN Number:			
Packing Group:			

TRITON X-100:

	IATA RID/ADR	IMO	
Shipping Name:	Regulated.	Not regulated.	Not regulated.
Hazard Class:	9		
UN Number:	3082		
Packing Group:	III		

SECTION 15: REGULATORY INFORMATION

CHES:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Risk Phrases:

R 36

Safety Phrases:

S 26

WGK (Water Danger/Protection)

Not available

Canada

Is listed on Canada's NDSL List

US Federal

Not listed on SARA

TREHALOSE:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Risk Phrases:

R 38 Irritating to skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

Not available



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Canada
Is listed on Canada's DSL List

US Federal
Is listed on the TSCA Inventory.

TRITON X-100:

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols: Xn-N
Risk Phrases:

R 22-41-51/53

Safety Phrases:

S 26-36/39-61

WGK (Water Danger/Protection)

Not available

Canada

Listed on Canada's DSL List

US Federal

TSCA Inventory Item: Yes

SECTION 16: OTHER INFORMATION

PREPARED BY: Diazyme Administration

PHONE NO: 858-455-4754

DATE PREPARED: 28 March 2007

The information provided on this Material Safety Data Sheet is provided in the interest of promoting safe handling of the material. While this information is believed to be correct, Diazyme makes no warranty in respect to any of the information disclosed. Observe all federal, provincial, state and local laws concerning health and environmental pollution.