



# 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

<b>PRODUCT NAME:</b>	<b>CATALOG #</b>
<b>N-Acetyl-β-D-glucosidase (NAG) Assay</b>	<b>DZ062A</b>
<b>Reagent R1</b>	<b>DZ062A-R1</b>
<b>Reagent R2</b>	<b>DZ062A-R2</b>
<b>Reagent R3</b>	<b>DZ062A-R3</b>
<b>Calibrator</b>	<b>DZ062A-CAL</b>
<b>Control</b>	<b>DZ062A-CON</b>

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: Call Diazyme Laboratories (858-455-4754)

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
Reagent R1	Non Hazardous	N/A	N/A	N/A	N/A	N/A	N/A
Reagent R2	Citric Acid, monohydrate	2%	5949-29-1	None Listed	Xi	37/38-41	26-36/37/39
Reagent R3	Sodium Carbonate	3%	497-19-8	None Listed	Xi	36	22-26
Calibrator	Potassium Phosphate - dibasic	2%	7758-11-4	None Listed	None Listed	None Listed	24/25-22
	Potassium Phosphate - monobasic	1%	7778-77-0	None Listed	None Listed	None Listed	None Listed
	Bovine Serum Albumin	2%	9048-46-8	None Listed	None Listed	None Listed	None Listed
Control	Potassium Phosphate - dibasic	2%	7758-11-4	None Listed	None Listed	None Listed	24/25-22
	Potassium Phosphate - monobasic	1%	7778-77-0	None Listed	None Listed	None Listed	None Listed
	Bovine Serum Albumin	2%	9048-46-8	None Listed	None Listed	None Listed	None Listed

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, and 2) concentration of ingredients in the reagents. All information listed below has been obtained from the manufacturers of the raw materials.

## SECTION 3: HAZARD IDENTIFICATION

### CITRIC ACID, MONOHYDRATE:

#### EMERGENCY OVERVIEW

*Irritating to respiratory system and skin. Risk of serious damage to eyes. Possible sensitizer.*

#### Potential Health Effects

- Eye:** Causes severe eye irritation.
- Skin:** Causes skin irritation. May be harmful if absorbed through the skin.
- Ingestion:** May be harmful if swallowed.
- Inhalation:** May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
- Chronic:** Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

### SODIUM CARBONATE:

#### EMERGENCY OVERVIEW

*Irritating to respiratory system and skin. Risk of serious damage to eyes. Severe eye irritant.*

#### Potential Health Effects

- Eye:** Causes severe eye irritation.
- Skin:** Causes skin irritation. May be harmful if absorbed through the skin.
- Ingestion:** May be harmful if swallowed.
- Inhalation:** May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
- Chronic:** No information available.

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**POTASIUM PHOSPHATE - DIBASIC:****EMERGENCY OVERVIEW**

*Caution: Avoid contact and inhalation.*

**Potential Health Effects**

**Eye:** May cause eye irritation.  
**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.  
**Ingestion:** May be harmful if swallowed.  
**Inhalation:** Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
**Chronic:** No information available.

**POTASIUM PHOSPHATE - MONOBASIC:****EMERGENCY OVERVIEW**

*Not available. For additional information on toxicity, please refer to Section 11*

**BOVINE SERUM ALBUMIN:****EMERGENCY OVERVIEW**

*Not available. For additional information on toxicity, please refer to Section 11*

**SECTION 4: FIRST AID MEASURES****CITRIC ACID, MONOHYDRATE:**

**Eyes:** In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.  
**Skin:** In case of contact, immediately wash skin with soap and copious amounts of water.  
**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.  
**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.  
**Notes to Physician:** Exposure can cause vomiting, diarrhea, damage to tooth enamel, dermatitis.

**SODIUM CARBONATE:**

**Eyes:** In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.  
**Skin:** In case of contact, immediately wash skin with soap and copious amounts of water.  
**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.  
**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.  
**Notes to Physician:** Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

**POTASIUM PHOSPHATE - DIBASIC:**

**Eyes:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.  
**Skin:** In case of contact, immediately wash skin with soap and copious amounts of water.  
**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.  
**Inhalation:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.  
**Notes to Physician:** Causes a fall in blood pressure. Additional pain, nausea, vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**POTASIUM PHOSPHATE - MONOBASIC:**

**Eyes:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.  
**Skin:** In case of contact, immediately wash skin with soap and copious amounts of water.  
**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.

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**Inhalation:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

**Notes to Physician:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**BOVINE SERUM ALBUMIN:**

**Eyes:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Skin:** In case of contact, immediately wash skin with soap and copious amounts of water.

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

**Inhalation:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

**Notes to Physician:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SECTION 5: FIRE FIGHTING MEASURES****CITRIC ACID, MONOHYDRATE:**

**Explosion Data:** Dust potential: This material, like most materials in powder form, is capable of creating a dust explosion.

**Flash Point:** 345°F 173.9° C Method: closed cup

**Extinguishing Media:** Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**Firefighting:** Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s); Emits toxic fumes under fire conditions.

**SODIUM CARBONATE:**

**Extinguishing Media:** Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

**Firefighting:** Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s); Emits toxic fumes under fire conditions.

**POTASIU M PHOSPHATE - DIBASIC:**

**Extinguishing Media:** Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**Firefighting:** Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s); Emits toxic fumes under fire conditions.

**POTASIU M PHOSPHATE - MONOBASIC:**

**Extinguishing Media:** Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**Firefighting:** Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s); Emits toxic fumes under fire conditions.

**BOVINE SERUM ALBUMIN:**

**Extinguishing Media:** Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**Firefighting:** Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s); Emits toxic fumes under fire conditions.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****CITRIC ACID, MONOHYDRATE:**

**Personal Precaution(s):** Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Clean Up Methods:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**SODIUM CARBONATE:**

**In Case of Leak or Spill:** Evacuate area.

**Personal Precaution(s):** Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Clean Up Methods:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**POTASIU M PHOSPHATE - DIBASIC:**

**Personal Precaution(s):** Exercise appropriate precautions to minimize direct contact with the skin or eyes and prevent inhalation of dust.

**Clean Up Methods:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**POTASIU M PHOSPHATE - MONOBASIC:**

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**Personal Precaution(s):** Exercise appropriate precautions to minimize direct contact with the skin or eyes and prevent inhalation of dust.

**Clean Up Methods:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**BOVINE SERUM ALBUMIN:**

**Personal Precaution(s):** Exercise appropriate precautions to minimize direct contact with the skin or eyes and prevent inhalation of dust.

**Clean Up Methods:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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**SECTION 7: HANDLING AND STORAGE****CITRIC ACID, MONOHYDRATE:**

**Handling:** User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

**SODIUM CARBONATE:**

**Handling:** User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:** Suitable: Keep lid tightly closed.

**POTASSIUM PHOSPHATE-DIBASIC**

**Handling:** User Exposure: Avoid Inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:** Suitable: Keep lid tightly closed.

**Special Requirements:** Hygroscopic.

**POTASSIUM PHOSPHATE-MONOBASIC**

**Handling:** User Exposure: Avoid Inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:** Suitable: Keep lid tightly closed.

**Special Requirements:** Hygroscopic.

**BOVINE SERUM ALBUMIN:**

**Handling:** User Exposure: Avoid Inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:** Suitable: Keep lid tightly closed. Store at 0-4°C. Store at 2-8°C.

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**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION****CITRIC ACID, MONOHYDRATE:****ENGINEERING CONTROLS**

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

**Hand:** Compatible chemical-resistant gloves.

**Eye:** Chemical safety goggles.

**GENERAL HYGIENE MEASURES**

Wash thoroughly after handling.

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**SODIUM CARBONATE:****ENGINEERING CONTROLS**

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.  
**Hand:** Compatible chemical-resistant gloves.  
**Eye:** Chemical safety goggles.

**GENERAL HYGIENE MEASURES**

Wash thoroughly after handling.

**POTASSIUM PHOSPHATE DIBASIC:****ENGINEERING CONTROLS**

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.  
**Hand:** Protective gloves.  
**Eye:** Chemical safety goggles.

**GENERAL HYGIENE MEASURES**

Wash thoroughly after handling.

**POTASSIUM PHOSPHATE MONOBASIC:****ENGINEERING CONTROLS**

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.  
**Hand:** Protective gloves.  
**Eye:** Chemical safety goggles.

**GENERAL HYGIENE MEASURES**

Wash thoroughly after handling.

**BOVINE SERUM ALBUMIN:****ENGINEERING CONTROLS**

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

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**Eye:** Chemical safety goggles.**GENERAL HYGIENE MEASURES**

Wash thoroughly after handling.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****CITRIC ACID, MONOHYDRATE:**

**Appearance Physical State:** Solid  
**Color:** White  
**Form:** Fine crystals  
**Molecular Weight:** 210.14 AMU  
**pH:** 1.8 (at 20 °C Concentration: 50 g/l)  
**BP/BP Range:** N/A  
**MP/MP Range:** N/A  
**Freezing Point:** N/A  
**Vapor Pressure:** N/A  
**Vapor Density:** 1.54 g/l (at 20 °C)  
**Saturated Vapor Conc.:** N/A  
**SG/Density:** N/A  
**Bulk Density:** 900 kg/l (at 20 °C)  
**Odor Threshold:** N/A  
**Volatile%:** N/A  
**VOC Content:** N/A  
**Water Content:** N/A  
**Solvent Content:** N/A  
**Evaporation Rate:** N/A  
**Viscosity:** N/A  
**Surface Tension:** N/A  
**Partition Coefficient:** N/A  
**Decomposition Temp.:** N/A  
**Flash Point:** 345 °F (173.9 °C) Method: closed cup  
**Explosion Limits:** N/A  
**Flammability:** N/A  
**Autoignition Temp:** N/A  
**Refractive Index:** N/A  
**Optical Rotation:** N/A  
**Miscellaneous Data:** N/A  
**Solubility:** N/A

N/A = not available

**SODIUM CARBONATE:**

**Appearance Physical State:** Solid  
**Color:** White  
**Form:** Powder  
**Molecular Weight:** 105.99 AMU  
**pH:** 12  
**BP/BP Range:** N/A  
**MP/MP Range:** 851°C  
**Freezing Point:** N/A  
**Vapor Pressure:** N/A  
**Vapor Density:** N/A  
**Saturated Vapor Conc.:** N/A  
**SG/Density:** 2.532 g/cm<sup>3</sup>  
**Bulk Density:** N/A  
**Odor Threshold:** N/A  
**Volatile%:** N/A  
**VOC Content:** N/A  
**Water Content:** N/A  
**Solvent Content:** N/A  
**Evaporation Rate:** N/A  
**Viscosity:** N/A  
**Surface Tension:** N/A  
**Partition Coefficient:** N/A  
**Decomposition Temp.:** N/A  
**Flash Point:** N/A  
**Explosion Limits:** N/A  
**Flammability:** N/A  
**Autoignition Temp:** N/A  
**Refractive Index:** N/A  
**Optical Rotation:** N/A  
**Miscellaneous Data:** N/A  
**Solubility:** Solubility in Water: complete, colorless 1M in H<sub>2</sub>O, 20 °C

N/A = not available



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## SODIUM PHOSPHATE - DIBASIC:

**Appearance Physical State:** Solid  
**Color:** White  
**Form:** Granules  
**Odor:** Odorless  
**Molecular Weight:** 174.2 AMU  
**pH:** 8.7 – 9.3  
**BP/BP Range:** N/A  
**MP/MP Range:** 340 °C  
**Freezing Point:** N/A  
**Vapor Pressure:** N/A  
**Vapor Density:** N/A  
**Saturated Vapor Conc.:** N/A  
**SG/Density:** 2.3 g/cm<sup>3</sup>  
**Bulk Density:** 1300 kg/l  
**Odor Threshold:** N/A  
**Volatile%:** N/A  
**VOC Content:** N/A  
**Water Content:** N/A  
**Solvent Content:** N/A  
**Evaporation Rate:** N/A  
**Viscosity:** N/A  
**Surface Tension:** N/A  
**Partition Coefficient:** N/A  
**Decomposition Temp.:** N/A  
**Flash Point:** N/A  
**Explosion Limits:** N/A  
**Flammability:** N/A  
**Autoignition Temp:** N/A  
**Refractive Index:** N/A  
**Optical Rotation:** N/A  
**Miscellaneous Data:** N/A  
**Solubility:** Solubility in Water: Soluble

N/A = not available

## BOVINE SERUM ALBUMIN

**Appearance Physical State:** Solid  
**pH:** N/A  
**BP/BP Range:** N/A  
**MP/MP Range:** N/A  
**Freezing Point:** N/A  
**Vapor Pressure:** N/A  
**Vapor Density:** N/A  
**Saturated Vapor Conc.:** N/A  
**SG/Density:** N/A  
**Bulk Density:** N/A  
**Odor Threshold:** N/A  
**Volatile%:** N/A  
**VOC Content:** N/A  
**Water Content:** < 5%  
**Solvent Content:** N/A  
**Evaporation Rate:** N/A  
**Viscosity:** N/A  
**Surface Tension:** N/A  
**Partition Coefficient:** N/A  
**Decomposition Temp.:** N/A  
**Flash Point:** N/A  
**Explosion Limits:** N/A  
**Flammability:** N/A  
**Autoignition Temp:** N/A  
**Refractive Index:** N/A  
**Optical Rotation:** N/A  
**Miscellaneous Data:** N/A  
**Solubility:** Solubility in Water: 50 mg/ml H<sub>2</sub>O very slightly hazy, yellow

## SODIUM PHOSPHATE - MONOBASIC:

**Appearance Physical State:** Solid  
**Color:** White  
**Form:** Crystals  
**Molecular Weight:** 136.09 AMU  
**pH:** N/A  
**BP/BP Range:** N/A  
**MP/MP Range:** 252.6 °C  
**Freezing Point:** N/A  
**Vapor Pressure:** N/A  
**Vapor Density:** N/A  
**Saturated Vapor Conc.:** N/A  
**SG/Density:** 2.338 g/cm<sup>3</sup>  
**Bulk Density:** N/A  
**Odor Threshold:** N/A  
**Volatile%:** N/A  
**VOC Content:** N/A  
**Water Content:** N/A  
**Solvent Content:** N/A  
**Evaporation Rate:** N/A  
**Viscosity:** N/A  
**Surface Tension:** N/A  
**Partition Coefficient:** N/A  
**Decomposition Temp.:** N/A  
**Flash Point:** N/A  
**Explosion Limits:** N/A  
**Flammability:** N/A  
**Autoignition Temp:** N/A  
**Refractive Index:** N/A  
**Optical Rotation:** N/A  
**Miscellaneous Data:** N/A  
**Solubility:** N/A

N/A = not available

N/A = not available

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**Skin Contact:** Causes skin irritation.  
**Skin Absorption:** May be harmful if absorbed through the skin.  
**Eye Contact:** Causes severe eye irritation.  
**Inhalation:** May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.  
**Ingestion:** May be harmful if swallowed.

**SENSITIZATION**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**SIGNS AND SYMPTOMS OF EXPOSURE**

Exposure can cause: Vomiting. Diarrhea. Damage to tooth enamel. Dermatitis.

**SIGNS AND SYMPTOMS OF EXPOSURE**

Exposure can cause: Vomiting. Diarrhea. Damage to tooth enamel. Dermatitis.

**TOXICITY DATA**Intraperitoneal  
Rat  
375 MG/KG  
LD50**IRRITATION DATA**Eyes  
Rabbit  
5 mg  
30S  
Remarks: Rinsed**SODIUM CARBONATE:****ROUTE OF EXPOSURE**

**Skin Contact:** Causes skin irritation.  
**Skin Absorption:** May be harmful if absorbed through the skin.  
**Eye Contact:** Causes severe eye irritation.  
**Inhalation:** May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.  
**Ingestion:** May be harmful if swallowed.

**SIGNS AND SYMPTOMS OF EXPOSURE**

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

**TOXICITY DATA**Oral  
MSDS 1026 Rev C**POTASSIUM PHOSPHATE DIBASIC:****ROUTE OF EXPOSURE**

**Skin Contact:** May cause skin irritation.  
**Skin Absorption:** May be harmful if absorbed through the skin.  
**Eye Contact:** May cause eye irritation.  
**Inhalation:** Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
**Ingestion:** May be harmful if swallowed.

**SIGNS AND SYMPTOMS OF EXPOSURE**

Causes a fall in blood pressure. Abdominal pain, nausea, vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**POTASSIUM PHOSPHATE DIBASIC:****ROUTE OF EXPOSURE**

**Skin Contact:** May cause skin irritation.  
**Skin Absorption:** May be harmful if absorbed through the skin.  
**Eye Contact:** May cause eye irritation.  
**Inhalation:** Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
**Ingestion:** May be harmful if swallowed.

**SIGNS AND SYMPTOMS OF EXPOSURE**

Causes a fall in blood pressure. Abdominal pain, nausea, vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**BOVINE SERUM ALBUMIN:****ROUTE OF EXPOSURE**

**Skin Contact:** May cause skin irritation.  
**Skin Absorption:** May be harmful if absorbed through the skin.  
**Eye Contact:** May cause eye irritation.  
**Inhalation:** Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
**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.

Rat  
4090 MG/KG  
LD50Inhalation  
Rat  
2,300 mg/m<sup>3</sup>  
LC50Remarks: Lungs, Thorax, or Respiration:Dyspnea.  
Gastrointestinal:Other changes.Oral  
Mouse  
6600 mg/kg  
LD50

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Inhalation  
Mouse  
1,200 mg/m<sup>3</sup>  
LC50  
Remarks: Lungs, Thorax, or Respiration:Dyspnea.  
Gastrointestinal:Other changes.

Intraperitoneal  
Mouse  
117 MG/KG  
LD50

Subcutaneous  
Mouse  
2210 MG/KG  
LD50

Inhalation  
Guinea pig  
800 mg/m<sup>3</sup>  
LC50  
Remarks: Lungs, Thorax, or Respiration:Dyspnea.  
Gastrointestinal:Other changes.

**IRRITATION DATA**

Skin  
Rabbit  
500 mg  
24H  
Remarks: Mild irritation effect

Eyes  
Rabbit  
100mg  
24H  
Remarks: Moderate irritation effect

Eyes  
Rabbit  
100 mg  
30S  
Remarks: Rinsed

Eyes  
Rabbit  
50 mg  
Remarks: Severe irritation effect

**CHRONIC EXPOSURE - REPRODUCTIVE HAZARD**

Species: Mouse  
Dose: 84800 NG/KG  
Route of Application: Intrauterine  
Exposure Time: (4D PREG)  
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).

**SECTION 12: ECOLOGICAL INFORMATION****CITRIC ACID MONOHYDRATE:**

No Data Available

**POTASSIUM PHOSPHATE DIBASIC**

No Data Available

**POTASSIUM PHOSPHATE MONOBASIC**

No Data Available

**BOVINE SERUM ALBUMIN**

No Data Available

**SODIUM CARBONATE:****ACUTE ECOTOXICITY TESTS**

Test Type: EC50 Daphnia  
Species: Daphnia magna  
Time: 48 h  
Value: 265 mg/l

Test Type: LC50 Fish  
Species: Lepomis macrochirus (Bluegill)  
Time: 96 h  
Value: 300 mg/l

**SECTION 13: DISPOSAL CONSIDERATIONS****APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION**

Observe all federal, state, and local environmental regulations in the country of use when disposing of this product.

**SECTION 14: TRANSPORTATION INFORMATION****DOT**

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

**IATA**

Non-Hazardous for Air Transport: Non-hazardous for air transport.

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

Responsible Name: Diazyme Administration  
Effective 08/06/08**SECTION 15: REGULATORY INFORMATION****CITRIC ACID MONOHYDRATE:****EU ADDITIONAL CLASSIFICATION**

Symbol of Danger: Xi

Indication of Danger: Irritant.

R:37/38-41

Risk Statements: Irritating to respiratory system and skin. Risk of serious damage to eyes.

S: 26-36/37/39

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

**US CLASSIFICATION AND LABEL TEXT**

Indication of Danger: Irritant.

Risk Statements: Irritating to respiratory system and skin. Risk of serious damage to eyes.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

US Statements: Possible sensitizer.

**UNITED STATES REGULATORY INFORMATION**

SARA LISTED: No

**CANADA REGULATORY INFORMATION**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

**POTASSIUM PHOSPHATE DIBASIC:****EU ADDITIONAL CLASSIFICATION**

S: 24/25-22

Safety Statements: Avoid contact with skin and eyes. Do not breath dust.

**US CLASSIFICATION AND LABEL TEXT**

US Statements: Caution: Avoid contact and inhalation.

**UNITED STATES REGULATORY INFORMATION**

SARA LISTED: No

**CANADA REGULATORY INFORMATION**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

**BOVINE SERUM ALBUMIN:****UNITED STATES REGULATORY INFORMATION**

SARA LISTED: No

**CANADA REGULATORY INFORMATION**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

MSDS 1026 Rev C

**SODIUM CARBONATE:****EU ADDITIONAL CLASSIFICATION**

Symbol of Danger: Xi

Indication of Danger: Irritant.

R:36

Risk Statements: Irritating to eyes.

S: 22-26

Safety Statements: Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**US CLASSIFICATION AND LABEL TEXT**

Indication of Danger: Irritant.

Risk Statements: Irritating to respiratory system and skin. Risk of serious damage to eyes.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. Do not breathe dust.

US Statements: Severe eye irritant.

**UNITED STATES REGULATORY INFORMATION**

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

**CANADA REGULATORY INFORMATION**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

**POTASSIUM PHOSPHATE MONOBASIC:****UNITED STATES REGULATORY INFORMATION**

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

**CANADA REGULATORY INFORMATION**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

NDSL: No



## MATERIAL SAFETY DATA SHEET

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

Responsible Name: Diazyme Administration  
Effective 08/06/08

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### SECTION 16: OTHER INFORMATION

PREPARED BY: Diazyme Administration  
PHONE NO: 858-455-4754  
DATE PREPARED: 04 April 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 pollution.