

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: Cystatin C Assay Reagent R2 Reagent R1 Calibrator Control	CATALOG # DZ133A DZ133A-R2 DZ133A-R1 DZ133A-Cal DZ133A-Con
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Supplier: **Diazyme Laboratories**
12889 Gregg Court
Poway, CA 92064, USA
858-455-4754Manufacturer: **Diazyme Laboratories**
12889 Gregg Court
Poway, CA 92064, USA
858-455-4754Authorized 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	Tris(hydroxymethyl)aminomethane		77-86-1	201-064-4	XI	36/37/38	None Listed
Reagent R1, R2, Calibra- tor & Control	Sodium Azide	0.09%	26628-22-8	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 as packaged.

SECTION 3: HAZARD IDENTIFICATION**TRIS(HYDROXYMETHYL)AMINOMETHANE:****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: Causes skin irritation.

Ingestion: May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May cause liver and kidney damage. The toxicological properties of this substance have not been fully investigated. May cause metabolic changes including hypoglycemia, and hyperkalemia. May depress respiratory center.

Inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. The toxicological properties of this substance have not been fully investigated.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage.

SODIUM AZIDE:**EMERGENCY OVERVIEW***POISON! DANGER! MAY BE FATAL IF SWALLOWED OR ABSORBED THROUGH SKIN. HARMFUL IF INHALED. HAZARDOUS SOLID. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSION. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM, KIDNEYS, AND CARDIOVASCULAR SYSTEM.***SAF-T-DATA**^(tm) Ratings (Provided here for your convenience)-----
Health Rating: 4 - Extreme (Poison)
Flammability Rating: 1 - Slight
Reactivity Rating: 4 - Extreme (Explosive)
Contact Rating: 4 - Extreme (Life)
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON;
VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER
Storage Color Code: Yellow Stripe (Store Separately)**Potential Health Effects**

Inhalation:
May cause irritation to the respiratory tract and mucous membranes, sore throat, coughing, dizziness, shortness of breath, and fainting. May be absorbed through inhalation. Symptoms may parallel ingestion.

Ingestion:
Highly Toxic! May cause breathlessness, pulmonary edema and rapid heart beat within 5 minutes. Nausea, vomiting, headache, restlessness, and diarrhea may occur within 15 minutes. Other symptoms may include low blood pressure, abnormal breathing, reduced body temperature, reduced body pH, con-

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vulsions, collapse and death.

Skin Contact:

Highly Toxic! Causes irritation, redness, and pain. May be absorbed through

the skin; symptoms may parallel ingestion.

Eye Contact:

Causes irritation, redness, pain, and blurred vision.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

		Tris(hydroxymethyl)aminomethane
HMIS RATING	HEALTH:	2
	FLAMMABILITY:	0
	REACTIVITY:	0
NFPA RATING	HEALTH:	2
	FLAMMABILITY:	0
	REACTIVITY:	0
HAZARD SYMBOLS:		XI
R-Phrase:		36/37/38
S-Phrase:		26-37/39

SECTION 4: FIRST AID MEASURES
TRIS(HYDROXYMETHYL)AMINOMETHANE:

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

SODIUM AZIDE:
Inhalation:

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

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Wipe off excess material from skin then immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Accidental ingestion of sodium azide is potentially life threatening. Treatment includes gastric lavage, followed by saline catharsis. EKG and blood pressure monitoring and support are recommended.

SECTION 5: FIRE FIGHTING MEASURES
TRIS(HYDROXYMETHYL)AMINOMETHANE:

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.

SODIUM AZIDE:
Fire:

Combustible solid. May pose a fire hazard upon heating, shock, concussion, or friction.

Explosion:

Decomposes explosively upon heating, shock, concussion, or friction. Reacts with both copper and lead to produce explosive azides. Explosions in laboratory plumbing containing these metals is possible. Sensitive to mechanical impact.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-

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contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray may be used to keep fire

exposed containers cool. Poisonous gases are produced in fire, including nitrogen oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

TRIS(HYDROXYMETHYL)AMINOMETHANE:

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 or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

SODIUM AZIDE:

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

SECTION 7: HANDLING AND STORAGE

TRIS(HYDROXYMETHYL)AMINOMETHANE:

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Discard contaminated shoes.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. Keep containers tightly closed. Store protected from moisture. Store at room temperature.

SODIUM AZIDE:

Store in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect container from physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

TRIS(HYDROXYMETHYL)AMINOMETHANE:

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# 77-86-1:

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.

SODIUM AZIDE:

Airborne Exposure Limits:
-NIOSH Recommended Exposure Limit (REL):
0.1 ppm skin as HN3, 0.3 mg/m3 skin as NaN3 (Ceilings)

-ACGIH Threshold Limit Value (TLV):
0.11 ppm as HN3, 0.29 mg/m3 as Na N3 (Ceilings), A4 Not classifiable as a human carcinogen.

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134).

Skin Protection:
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:
Use chemical safety goggles and/or full face shield where dusting or splashing

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of solutions is possible. Maintain eye wash fountain and quick-drench faci-

ties in work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
TRIS(HYDROXYMETHYL)AMINOMETHANE:
SODIUM AZIDE

Physical State: Solid
Color: white
Odor: amine-like
pH: 10.36(aq. solution)
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: 219-220 deg C @ 10 mm Hg
Freezing/Melting Point: 171.2-172.3 deg C
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: Moderately Soluble
Specific Gravity/Density: Not available.
Molecular Formula: (CH₂OH)₃CNH₂
Molecular Weight: 121.14

Appearance:
 Colorless crystals.
Odor:
 Odorless.
Solubility:
 42 g/100 g water @ 17C (63F)
Specific Gravity:
 1.85
pH:
 No information found.
% Volatiles by volume @ 21C (70F):
 0
Boiling Point:
 Not applicable.
Melting Point:
 275 (decomposes to sodium and nitrogen)
Vapor Density (Air=1):
 2.2
Vapor Pressure (mm Hg):
 No information found.
Evaporation Rate (BuAc=1):
 No information found.

SECTION 10: STABILITY AND REACTIVITY
TRIS(HYDROXYMETHYL)AMINOMETHANE:

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 Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization Will not occur.

SODIUM AZIDE:

Stability:
 Stable under ordinary conditions of use and storage. Decomposes explosively upon heating, shock, concussion, or friction.
Hazardous Decomposition Products:
 Explodes upon decomposition liberating nitrogen gas (N₂) and sodium (Na).
Hazardous Polymerization:
 Will not occur.
Incompatibilities:
 Benzoyl chloride plus potassium hydroxide, bromine, carbon disulfide, chromyl chloride, copper, dibromalonnitrile, dimethyl sulfate, lead, barium carbonate, sulfuric acid, water, and nitric acid.
Conditions to Avoid:
 Heat, flames, ignition sources and incompatibles.

SECTION 11: TOXICOLOGICAL INFORMATION
TRIS(HYDROXYMETHYL)AMINOMETHANE:

RTECS#: CAS# 77-86-1: TY2900000
LD50/LC50: RTECS:
CAS# 77-86-1: Oral, rat: LD50 = 5900 mg/kg;.
Carcinogenicity: Tris (hydroxymethyl) aminomethane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

SODIUM AZIDE:

Oral rat LD50: 27 mg/kg Skin rabbit LD50: 20 mg/kg.
 Inhalation rat LC50: 37 mg/m³ Investigated as a tumorigen and mutagen.
 -----Cancer Lists-----
 ---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Sodium Azide (26628-22-8)	No	No	None

SECTION 12: ECOLOGICAL INFORMATION



MATERIAL SAFETY DATA SHEET

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TRIS(HYDROXYMETHYL)AMINOMETHANE:

Other: No information available.

SODIUM AZIDE:

Environmental Fate:

When released into the soil, this material is not expected to biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the air, this material may be moderately degraded by

photolysis.

Environmental Toxicity:

Dangerous to the environment. Very toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment. Freshwater Fish Species Data:

96 Hr LC50 *Oncorhynchus mykiss*: 0.8 mg/L;

96 Hr LC50 *Lepomis macrochirus*: 0.7 mg/L;

96 Hr LC50 *Pimephales promelas*: 5.46 mg/L [flow-through]

SECTION 13: DISPOSAL CONSIDERATIONS

TRIS(HYDROXYMETHYL)AMINOMETHANE:

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

SODIUM AZIDE:

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste 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: TRANSPORTATION INFORMATION

TRIS(HYDROXYMETHYL)AMINOMETHANE

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

SODIUM AZIDE

Domestic (Land, D.O.T.)

Proper Shipping Name: SODIUM AZIDE

Hazard Class: 6.1

UN/NA: UN1687

SECTION 15: REGULATORY INFORMATION

TRIS(HYDROXYMETHYL)AMINOMETHANE:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and 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)

CAS# 77-86-1: 1

Canada

CAS# 77-86-1 is listed on Canada's DSL List

US Federal

TSCA

CAS# 77-86-1 is listed on the TSCA Inventory.



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SODIUM AZIDE:

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
Sodium Azide (26628-22-8)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----				
--Canada--				
Ingredient	Korea	DSL	NDSL	Phil.
Sodium Azide (26628-22-8)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----	
-SARA 302- -----SARA 313-----	

Ingredient	RQ	TPQ	List	Chemical Catg.
Sodium Azide (26628-22-8)	1000	500	Yes	No

-----\Federal, State & International Regulations - Part 2\-----			
-RCRA- -TSCA-			
Ingredient	CERCLA	261.33	8(d)
Sodium Azide (26628-22-8)	1000	P105	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: Yes (Pure / Solid)

SECTION 16: OTHER INFORMATION

PREPARED BY: Diazyme Administration
PHONE NO: 858-455-4754
DATE PREPARED: 25 February 2008

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.