

MATERIAL SAFETY DATA SHEET**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**PRODUCT NAME: **TAE Buffer 50X**

PRODUCT NUMBER: EC-872

CHEMICAL NAMES/
DESCRIPTION: Aqueous solution of buffer salts (EDTA < 1%)MANUFACTURER: National Diagnostics, Inc
305 Patton Drive
Atlanta, GA 30336TELEPHONE NUMBER:
(800) 526-3867
(404) 699-2121EMERGENCY NUMBER:
CHEMTREC (800) 424-9300**2. COMPOSITION / INFORMATION ON INGREDIENTS**

Component	% Comp	CAS #	EINECS #	TLV (units)
Tris-Base	24	77-86-1		none established
Acetic Acid	5.7	64-19-7		10 ppm (TWA)
EDTA	.74	64-02-8		10 mg/m3

3. HAZARDS IDENTIFICATION

APPEARANCE AND ODOR: Clear, colorless solution

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING

CHRONIC DERMATITIS MAY FOLLOW SKIN CONTACT.

POTENTIAL HEALTH EFFECTS**INHALATION**

Causes irritation to the respiratory tract.

INGESTION

Causes irritation and reddening to the mucous membranes of the mouth, esophagus, and gastrointestinal tract.

SKIN

Causes irritation to the skin.

EYES

Causes irritation to the eyes.

SIGNS AND SYMPTOMS OF OVEREXPOSURE**INHALATION**

Coughing, shortness of breath.

INGESTION

Symptoms may include nausea, vomiting, and diarrhea. Large oral doses may cause weakness, collapse, blood clotting, and coma. The estimated lethal dose of Tris Base is 50 grams dry solid.

SKIN

Redness, itching, and pain.

EYES

Redness, itching, and pain.

CARCINOGENICITY

Not listed as a carcinogen by NTP or IARC.

MUTAGENICITY

No information found.

REPRODUCTIVE TOXICITY

No information found.

TERATOGENIC EFFECTS

No information found.

ROUTES OF ENTRY

Ingestion.

TARGET ORGAN STATEMENT

No information available.

4. FIRST AID MEASURES

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

INGESTION:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

SKIN:

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

EYES:

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

5. FIRE FIGHTING MEASURES

FLASH POINT: N.A. FLAMMABLE LIMITS: N.A.

FLASH POINT METHOD: N.A. AUTOIGNITION TEMPERATURE: N.A.

EXTINGUISHING MEDIA

Use media appropriate to the primary cause of fire.

PROTECTIVE EQUIPMENT

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Not considered an explosion hazard.

NFPA CODES: Health: 1 Flammability: 0 Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

WASTE DISPOSAL METHOD

Disposal must be made in accordance with applicable federal, state, and local regulations.

PERSONAL PRECAUTIONS

Wear appropriate protective equipment as specified in section 8.

7. HANDLING AND STORAGE

HANDLING

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

STORAGE

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

STORAGE TEMPERATURE: Room Temperature

DISPOSAL

Observe all national, state, and local regulations regarding disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

Component: Tris-Base

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

ENGINEERING CONTROLS

A system of local and/or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

RESPIRATORY PROTECTION

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

EYE PROTECTION

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SKIN PROTECTION

Wear protective gloves and clean body covering clothing.

OTHER CONTROL MEASURES

N.A.

9. PHYSICAL PROPERTIES

Boiling Point	220 F	Evaporation Rate	1.0
Melting Point	N.A.	Solubility in Water	Soluble
Vapor Pressure mm Hg	Water	pH	8.3
Vapor Density Air = 1	N.A.	Specific Gravity (H2O = 1)	.98
% Volatile by Volume	81		

10. STABILITY AND REACTIVITY

STABILITY

Stable under ordinary conditions of use and storage.

CONDITIONS TO AVOID

Heat, incompatibles.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

HAZARDOUS POLYMERIZATION

Will not occur

INCOMPATIBLES

Tris-Base

Copper, brass, aluminum, and oxidizing agents.

Acetic Acid

Chromic acid, nitric acid, ethylene glycol, perchloric acid, phosphorous trichloride, oxidizers, sodium peroxide, strong caustics, most metals (except aluminum), carbonates, hydroxides, oxides, and phosphates.

EDTA

Oxidizing agents.

11. TOXICOLOGICAL INFORMATION

PRODUCT LD50 VALUES

TAE Buffer 50X	Oral Rat LD50 (mg/kg):	24583
TAE Buffer 50X	Dermal Rabbit LD50 (mg/kg):	N.A.

COMPONENT CANCER LIST STATUS

Component	NTP Carcinogen		IARC Category
	Known	Anticipated	
Tris-Base	No	No	None
Acetic Acid	No	No	None
EDTA	No	No	None

12. ECOLOGICAL INFORMATION

Tris-Base

No information found on either the environmental fate or environmental toxicity of this material.

Acetic Acid

If released to water, acetic acid will biodegrade readily. If released to soil, it will biodegrade readily. Standard dilution BOD water, 5-day 57.7% theoretical BOD average. Acetic acid shows no potential for biological accumulation or food chain contamination. BCF estimated <1. For glacial acetic acid: EC50 (wheat fumigation) = 23.3 mg/m³/2-hr, effect: leaf injury. LC50 (shrimp) = 100 - 300 mg/1/48-hr. LC50 (fathead minnow) = 99 mg/1/96-hr. This material may be toxic to aquatic life.

EDTA

No information found for either the environmental fate or environmental toxicity of this material.

13. DISPOSAL CONSIDERATIONS

Observe all national, state, and local regulations regarding disposal.

14. TRANSPORT INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

International (I.A.T.A. / I.M.O.)

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

15. REGULATORY INFORMATION

UNITED STATES

TSCA Regulatory:

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Tris-Base	No	No	No	Yes	No
Acetic Acid	Yes	No	Yes	Yes	Yes
EDTA	No	No	No	Yes	No

EUROPE

EEC Regulatory:

All intentional ingredients are listed on the European EINECS Inventory.

16. OTHER INFORMATION

NFPA CODES: Health: 1 Flammability: 0 Reactivity: 0

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.