

MATERIAL SAFETY DATA SHEET (MSDS)

50X TAE (Tris-acetate-EDTA) Electrophoresis Buffer

Company:

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1. Product Identification

Synonyms: TAE, Tris-acetate-EDTA solution, DNA running buffer

Product Codes: ID1521, ID1524

2. Composition/Information on Ingredients

Component	% Comp	CAS #	EINECS/ELINCS
Tris (Tris-hydroxy-methylaminomethane)	24%	77-86-1	201-064-4
Acetic acid	6%	64-19-7	229-939-6
EDTA (Ethylenediamine tetraacetic acid, disodium salt)	1.7%	6381-92-6	205-358-3
Water	65 – 70%	7732-18-5	231-791-2

3. Hazards Identification

GHS Classification

Skin corrosion/irritation (Category 3)
 Serious eye damage/eye irritation (Category 2A)

GHS Label elements, including precautionary statements

Pictogram



Signal word:
 Warning, Irritant

Hazard statement(s)

H316 Causes mild skin irritation.
 H319 Causes serious eye irritation.

HMIS Classification

Health hazard: 1
 Flammability: 0
 Physical hazards: 0
 Appearance: Clear liquid.

Caution! May cause eye, skin, and respiratory tract irritation. This is expected to be a low hazard for usual industrial handling.

Target Organs: None.

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause irritation with burning pain, itching and redness.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Low hazard for usual industrial handling.

Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.

Chronic: Prolonged or repeated skin contact may cause irritation.

Precautionary statement(s)

P264 Wash skin thoroughly after handling.

P280 Wear eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

4. First Aid Measures

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

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

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Wash mouth out with water. Get medical aid if irritation or symptoms occur.

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 if cough or other symptoms appear.

Notes to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

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. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

6. Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

7. Handling and Storage

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

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. No special precautions indicated. Keep containers tightly closed.

8. Exposure Controls/Personal Protection

Engineering Controls: Good general ventilation should be sufficient to control airborne levels.

OSHA Vacated PELs: Water: No OSHA Vacated PELs are listed for this chemical. Tris(hydroxymethyl)aminomethane: No OSHA Vacated PELs are listed for this chemical. Disodium EDTA anhydrous: No OSHA Vacated PELs are listed for this chemical. Acetate: No OSHA Vacated PELs are listed for this chemical.

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 minimize contact with skin.

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.

9. Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear

Odor: acetic odor

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: Soluble in water.

Specific Gravity/Density: Not available.

Molecular Formula: Mixture

Molecular Weight: Not available.

10. Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Decarboxylates above 150°C.

Conditions to Avoid: Incompatible materials, excess heat.

Incompatibilities with Other Materials: Strong acids, strong bases.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides (NOx) and ammonia (NH3), toxic fumes of sodium oxide.

Hazardous Polymerization: Has not been reported.

11. Toxicological Information

RTECS#:

CAS# 7732-18-5: ZC0110000

CAS# 77-86-1: TY2900000

CAS# 139-33-3: AH4375000

CAS# 6850-28-8 unlisted.

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg;

CAS# 77-86-1:

Oral, rat: LD50 = 5900 mg/kg;

CAS# 139-33-3:

Oral, mouse: LD50 = 2050 mg/kg;

Oral, rabbit: LD50 = 2300 mg/kg;

Oral, rat: LD50 = 2 gm/kg;

CAS# 6850-28-8:

Carcinogenicity:

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 77-86-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 139-33-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 6850-28-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies

12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

13. Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

14. Transport Information

Not regulated.

15. Regulatory Information

US FEDERAL

TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.

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

CAS# 139-33-3 is listed on the TSCA inventory.

CAS# 6850-28-8 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 77-86-1: immediate.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 77-86-1 is not present on state lists from CA, PA, MN, MA,

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.

CAS# 77-86-1: 1

CAS# 139-33-3: 2

CAS# 6850-28-8: 1

Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

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

FL, or NJ.

CAS# 139-33-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 6850-28-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

CAS# 139-33-3 is listed on Canada's DSL List.

CAS# 6850-28-8 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of Not controlled..

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

16. Other Information

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0**

Label Hazard Warning:

WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED OR INHALED.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Keep container closed.

Use only with adequate ventilation.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In all cases, get medical attention.

Product Use:

Laboratory Reagent.

Disclaimer:

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