

**Material Safety Data Sheet**  
**Version No.: 3.0 (Rev. date: 2022-09-27)****50X TAE**

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**1. Product and company identification**

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- A. Product Name: 50X TAE
- B. Recommended Use: Research Use Only
- C. Supply Information
- Company: Bioneer
  - Address: 8-11, Munpyeongseo-ro, Daedeok-gu, Daejeon 306-220, Republic of Korea
  - Emergency telephone number: +82-42-930-8777

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**2. Hazards identification**

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- A. Classification of the substance or mixture
- No data available
- B. Label elements
- Hazard pictograms

Not applicable

  - Signal word

Not applicable

  - Hazard statements

Not applicable

  - Precautionary statements

Not applicable
- C. Hazards – Other hazards which do not result in classification – Hazard Risk
- Not applicable

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**3. Composition/information on ingredients**

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Chemical name	Synonyms	CAS No.	Weight (%)
Trizma base		77-86-1	< 30%
Acetic acid		64-19-7	< 10%
EDTA		6381-92-6	< 10%

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**4. First aid measures**

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- A. First-aid measures after eye contact  
Rinse eyes with water as a precaution.
  - B. First-aid measures after skin contact  
Wash skin with plenty of water.
  - C. First-aid measures after inhalation  
Remove person to fresh air and keep comfortable for breathing.
  - D. First-aid measures after ingestion  
Call a poison center or a doctor if you feel unwell.
  - E. Other medical advice or treatment  
Treat symptomatically.
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## 5. Fire-fighting measures

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- A. Suitable (and unsuitable) extinguishing media  
Suitable extinguishing media: Water spray, dry powder, foam, carbon dioxide.  
Unsuitable extinguishing media: No data available
  - B. Special hazards arising from the substance or mixture  
No data available
  - C. Special protective equipment and precautions for fire-fighters  
Protection during firefighting:  
Do not attempt to take action without suitable protective equipment.  
Self-contained breathing apparatus.  
Complete protective clothing.
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## 6. Accidental release measures

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- A. Personal precautions, protective equipment and emergency procedures  
Ventilate spillage area.  
Do not attempt to take action without suitable protective equipment.  
Dispose of materials or solid residues at an authorized site.
  - B. Environmental precautions and protective procedures  
Avoid release to the environment.
  - C. Methods and material for containment and cleaning up  
Take up liquid spill into absorbent material.
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## 7. Handling and storage

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- A. Precautions for safe handling
    - Precautions for safe handling  
Ensure good ventilation of the work station.  
Wear personal protective equipment.
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- Hygiene measures
    - Do not eat, drink or smoke when using this product.
    - Always wash hands after handling the product.

B. Conditions for safe storage

- Storage conditions
  - Store in a well-ventilated place.
  - Keep cool.

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## 8. Exposure controls / personal protection

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A. Occupational Exposure Limits

No data available

B. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

C. Personal protection

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

Eye protection: Safety glasses

Hand protection: Protective gloves

Skin and body protection: Wear suitable protective clothing

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## 9. Physical and chemical properties

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- A. Appearance: Liquid
  - B. Odor: No data available
  - C. Odor threshold: No data available
  - D. pH: No data available
  - E. Melting / freezing point: Not applicable / No data available
  - F. Initial boiling point and boiling range: No data available
  - G. Flash point: No data available
  - H. Evaporation rate: No data available
  - I. Flammability (solid, gas): Not applicable
  - J. Upper / lower flammability or explosive limits: No data available
  - K. Vapor pressure: No data available
  - L. Solubility: No data available
  - M. Vapor density: No data available
  - N. Relative density: No data available
  - O. Partition coefficient n-octanol/water: No data available
  - P. Auto-ignition temperature: No data available
  - Q. Decomposition temperature: No data available
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- R. Viscosity: No data available
  - S. Molecular mass: No data available
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## 10. Stability and Reactivity

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- A. Chemical stability and Possibility of hazardous reactions  
The product is non-reactive under normal conditions of use, storage and transport.  
Stable under normal conditions.  
No dangerous reactions known under normal conditions of use.
  - B. Conditions to avoid  
None under recommended storage and handling conditions.
  - C. Incompatible materials  
No data available
  - D. Hazardous decomposition products  
Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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## 11. Toxicological information

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- A. Information on exposure routes  
Oral: Not classified  
Skin and eyes contact: Not classified  
Inhalation: Not classified
  - B. Health hazards  
Acute toxicity (oral): Not classified  
Acute toxicity (dermal): Not classified  
Acute toxicity (inhalation): Not classified  
Skin corrosion/irritation: Not classified  
Serious eye damage/irritation: Not classified  
Respiratory sensitization: Not classified  
Skin sensitization: Not classified  
Carcinogenicity: Not classified  
Mutagenicity: Not classified  
Reproductive toxicity: Not classified  
STOT-single exposure: Not classified  
STOT-repeated exposure: Not classified
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Aspiration hazard: Not classified

## 12. Ecological information

### A. Exotoxicity

Ecology – general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified

Hazardous to the aquatic environment, long-term (chronic): Not classified

### B. Persistence and degradability

No data available

### C. Bioaccumulative potential

No data available

### D. Mobility in soil

No data available

### E. Other adverse effects

Ozone: Not classified

Other adverse effects: No additional information available

## 13. Disposal considerations

### A. Disposal method

Dispose of contents/container in accordance with licensed collector's sorting instructions.

### B. Disposal precaution

No data available

## 14. Transport information

UN RTDG	ADR	IMDG	IATA
A. UN number			
Not regulated for transport			
B. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
C. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
D. Packaging group			
Not applicable	Not applicable	Not applicable	Not applicable
E. Marine pollutant			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No

		Marine pollutant: No	
No supplementary information available			

F. Special precautions for user: No data available

## 15. Regulatory information

- A. Occupational Safety and Health Act  
 Hazardous Substances Prohibited for Manufacturing: Not applicable  
 Hazardous Substances Requiring Permission: Not applicable  
 Threshold Limit Values Chemicals: Not applicable  
 Hazardous Substances Below Permissible Level: Not applicable  
 Hazardous Substances Subject to Working Environment Measurement: Not applicable  
 Hazardous Substances Subject to Workers Requiring Health Examination: Not applicable  
 Hazardous Substances Subject to Control: Not applicable  
 Substance Subject to PSM Submission: Not applicable
- B. Chemicals Control Act  
 Toxic Chemicals: Not applicable  
 Prohibited Chemicals: Not applicable  
 Restricted Chemicals: Not applicable  
 Substance requiring preparation for accidents: Not applicable
- C. ACT ON REGISTRATION, EVALUATION, ETC. OF CHEMICALS (K-REACH)  
 Korea Existing Chemicals Inventory (KECI): Applicable  
 Priority Existing Chemical ('PEC') – subject to registration: Not applicable  
 Priority Control Substances (Korea): Not applicable  
 CMR Substances (Korea): Not applicable
- D. Safety Control of Dangerous Substances Act  
 Safety Control of Dangerous Substances Act: Not applicable
- E. Wastes Control Act  
 Hazardous Substances in Designated wastes: Not applicable  
 Types of wastes: No data available
- F. Other Domestic and International Regulatory Information
- Domestic
    - Persistent Organic Pollutants(POPs) Control Act: Not applicable
    - Ozone Depleting Substances(ODS): Not applicable
  - International (EU Regulatory Information)
    - EU Candidate list (SVHC): Contains no substance on the REACH candidate list
    - EU authorization list (REACH Annex XIV): Contains no REACH Annex XIV substances

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EU restriction list (REACH Annex XVII): Not applicable

US Regulatory Information

CERCLA Section 103 (40CFR302.4): Not applicable

EPCRA Section 302 (40CFR355.30): Not applicable

EPCRA Section 304 (40CFR355.40): Not applicable

EPCRA Section 313 (40CFR372.65): Not applicable

International agreements

No data available

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## 16. Other information

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Bioneer Corporation makes no warranty or representation to its completeness, accuracy or currency. This material is intended for use by persons with pertinent technical skills and at their discretion and risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. Disposal of hazardous material may be subject to federal, state or local laws or regulations.

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