

1 Identification

- Product identifier
- Trade name: **50X Tris/Acetic Acid/EDTA Buffer**
- Catalog or product number:
1610743, 1610773, 9704629, 9703686, 9702659, 1660742, 1660742EDU, 1610743EDU, 1610773EDU, 10040681
- Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
- Application of the substance / the mixture Laboratory chemicals
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
(510)741-1000
- Information department:
Technical services, customer support
tsg_techserv_us@bio-rad.com
- Emergency telephone number:
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Hazard(s) identification

- Classification of the substance or mixture
Eye Irrit. 2A H319 Causes serious eye irritation.
- Label elements
- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms



GHS07

- Signal word **Warning**
- Hazard statements
H319 Causes serious eye irritation.
- Precautionary statements
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
- Additional information: Contact with acids may cause release of toxic gases
- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.

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- vPvB: Not applicable.

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3 Composition/information on ingredients

- Chemical characterization: Mixtures
 - Description: Mixture of the substances listed below with non-hazardous additions.
 - Listing of dangerous and non-hazardous components:
- | | | |
|-----------|---|----------|
| 77-86-1 | Tris(hydroxymethyl)aminomethane | 20-35% |
| 127-09-3 | sodium acetate | 10-20% |
| 6387-92-6 | Ethylenediaminetetraacetic acid disodium salt dihydrate | 1.0-2.5% |
| 7732-18-5 | water | 50-100% |

- Additional information For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

- Description of first aid measures
- After inhalation Supply fresh air; consult doctor in case of complaints.
- After skin contact Generally the product does not irritate the skin.
- After eye contact Rinse opened eyes for several minutes under running water.
- After swallowing Induce vomiting and call for medical help.
- Information for doctor
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

7 Handling and storage

- Handling
- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage
- Requirements to be met by storerooms and receptacles: According to product specification
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment
- General protective and hygienic measures Wash hands before breaks and at the end of work.
- Breathing equipment: Not required.
- Protection of hands: Protective gloves.
- Material of gloves Synthetic gloves
- Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Safety glasses

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General information
- Appearance:
 - Form: Liquid
 - Colorless
 - Odorless
 - Odor: Not determined.
 - Odour threshold: 7.1
- pH-value at 20 °C: undetermined
- Change in condition
- Melting point/Freezing range: undetermined

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Boiling point/Boiling range:	undetermined
Flash point:	Not applicable
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits: Lower: Upper:	Not determined. Not determined.
Vapor pressure at 20 °C:	23 hPa
Density: Relative density Vapour density Evaporation rate	Not determined. Not determined. Not determined.
Solubility in / Miscibility with Water:	Fully miscible
Partition coefficient (n-octanol/water):	Not determined.
Viscosity: dynamic: kinematic:	Not determined. Not determined.
Solvent content: Organic solvents: Water:	0.0 % 60.3 %
Solids content: Other information	39.7 % No further relevant information available.

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known

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11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
 - LD₅₀ values for hazardous components per OSHA criteria:

Oral	LD50	5900 mg/kg (rat)
Oral	LD50	3530 mg/kg (rat)
 - Primary irritant effect:
 - on the skin: No irritant effect.
 - on the eye: Irritant effect.
 - Sensitization: No sensitizing effects known.
 - Additional toxicological information:
 - Carcinogenic categories
 - IARC (International Agency for Research on Cancer)
 - None of the ingredients is listed.
 - NTP (National Toxicology Program)
 - None of the ingredients is listed.
 - OSHA-Ca (Occupational Safety & Health Administration)
 - None of the ingredients is listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
 - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation
 - Hand over to hazardous waste disposers.
 - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Class	Void
· Packing group	Void
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	No
· Marine pollutant:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)
 - Section 302/304 (40CFR355.30 / 40CFR355.40):
 - None of the ingredients is listed.
 - Section 313 (40CFR372.65):
 - None of the ingredients is listed.
- TSCA (Toxic Substances Control Act):
 - 77-86-1 Tris(hydroxymethyl)aminomethane
 - 127-09-3 sodium acetate
 - 7732-18-5 water
- Carcinogenic categories
- EPA (Environmental Protection Agency)
 - None of the ingredients is listed.
- TLV (Threshold Limit Value established by ACGIH)
 - None of the ingredients is listed.

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· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· National regulations

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environmental Health and Safety.

· Contact:
Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· Date of preparation / last revision 06/10/2015 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

ATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

ECHA: European Chemical Agency

EINECS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

· * Data compared to the previous version altered.