

# 10X DTNB Reaction Buffer

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
 Issue date: 1/23/2025 Version: 1.0

### SECTION 1 Identification

#### 1.1. Product identifier

Product form : Mixture  
 Product name : 10X DTNB Reaction Buffer  
 Product code : 1E0200

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : For laboratory use only  
 Restrictions on use : Not for food, drug or household use

#### 1.4. Supplier's details

Exocell  
 Ethos Biosciences, Inc.  
 2070 Center Square Road  
 Logan Township, New Jersey 08085  
 United States  
 T +1-856-224-0900; +1-800-441-0366 Technical Service; Monday-Friday: 8:00 AM-5:00 PM, Eastern US Time  
[www.ethosbiosciences.com](http://www.ethosbiosciences.com)

#### 1.5. Emergency phone number

Emergency number : 800-424-9300 CHEMTREC (USA) -- 24 Hours/Day, 7 Days/Week

### SECTION 2 Hazard Identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Serious eye damage/eye irritation, Category 2 H319 Causes serious eye irritation.  
 Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning  
 Hazard statements (GHS US) : H319 - Causes serious eye irritation  
 Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.  
 P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing 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.  
 P337+P313 - If eye irritation persists: Get medical advice or attention.

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### 2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

### 2.4. Hazards not otherwise classified

No additional information available

### 2.5. Unknown acute toxicity

No additional information available

## SECTION 3 Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	Conc.	GHS US classification
water	CAS-No.: 7732-18-5	> 65	Not classified
Tris-HCl (Tris Base, Trizma Base)	CAS-No.: 1185-53-1	12 – 17	Not classified
ethylenediaminetetraacetic acid (EDTA)	CAS-No.: 60-00-4	12 – 17	Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

## SECTION 4 First aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
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#### For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

#### For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions	: Avoid release to the environment.

### 6.2. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

For further information refer to section 13

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

### 7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep cool. Protect from sunlight.
Storage temperature	: 4 – 8 °C
Packaging materials	: Store always product in container of same material as original container.

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### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures, such as personal protective equipment

##### Personal protective equipment:

Wear recommended personal protective equipment.

<b>Hand protection:</b>
Protective gloves
<b>Eye protection:</b>
Safety glasses
<b>Skin and body protection:</b>
Wear suitable protective clothing
<b>Respiratory protection:</b>
In case of insufficient ventilation, wear suitable respiratory equipment

##### Personal protective equipment symbol(s):



### SECTION 9 Physical and chemical properties

#### 9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • Tris-HCl (Tris Base, Trizma Base): • ethylenediaminetetraacetic acid (EDTA): 0.04 g/100ml
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available

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Particle characteristics : No data available

Tris-HCl (Tris Base, Trizma Base)	
Boiling point	Not applicable
Flash point	Not applicable (solid)
Vapor pressure	0.00000027 hPa (20 °C, OECD 104: Vapour Pressure)
Particle characteristics	No data available

ethylenediaminetetraacetic acid (EDTA)	
Boiling point	Not applicable
Flash point	> 100 °C
Auto-ignition temperature	> 400 °C (1013 hPa, T2)
Vapor pressure	< 0.01 hPa (25 °C)
Particle characteristics	No data available

water	
Particle characteristics	No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11 Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

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Acute toxicity (inhalation) : Not classified

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
LD50 oral rat	4500 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
ATE US (oral)	4500 mg/kg body weight

Skin corrosion/irritation : Not classified

<b>Tris-HCl (Tris Base, Trizma Base) (1185-53-1)</b>	
pH	3.5 – 5 (8 %)

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
pH	2.5 (1 %)

Serious eye damage/irritation : Causes serious eye irritation.

<b>Tris-HCl (Tris Base, Trizma Base) (1185-53-1)</b>	
pH	3.5 – 5 (8 %)

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
pH	2.5 (1 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

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Viscosity, kinematic	No data available

<b>Tris-HCl (Tris Base, Trizma Base) (1185-53-1)</b>	
Viscosity, kinematic	No data available

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
Viscosity, kinematic	No data available

<b>water (7732-18-5)</b>	
Viscosity, kinematic	No data available

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

## SECTION 12 Ecological information

### 12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

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

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

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
LC50 - Fish [1]	159 mg/l (US EPA, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	140 mg/l (DIN 38412-11, 48 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence, GLP)

### 12.2. Persistence and degradability

<b>10X DTNB Reaction Buffer</b>	
Persistence and degradability	Not rapidly degradable

<b>Tris-HCl (Tris Base, Trizma Base) (1185-53-1)</b>	
Persistence and degradability	Biodegradability in water: no data available.

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.01 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.85 g O <sub>2</sub> /g substance
ThOD	1.09 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.0091

<b>water (7732-18-5)</b>	
Persistence and degradability	Not rapidly degradable

### 12.3. Bioaccumulative potential

<b>Tris-HCl (Tris Base, Trizma Base) (1185-53-1)</b>	
Bioaccumulative potential	No bioaccumulation data available.

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
BCF - Fish [1]	1.1 – 1.8 (28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Read-across, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	0.13 (Weight of evidence approach)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

<b>ethylenediaminetetraacetic acid (EDTA) (60-00-4)</b>	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.495 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

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### 12.5. Other adverse effects

Ozone : Not classified  
Fluorinated greenhouse gases : No

### SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.  
Additional information : Do not re-use empty containers.

### SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

#### 14.1. UN number

Not regulated for transport

#### 14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Not regulated  
Proper Shipping Name (TDG) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Proper Shipping Name (IATA) : Not regulated

#### 14.3. Transport hazard class(es)

**DOT**  
Transport hazard class(es) (DOT) : Not regulated

**TDG**  
Transport hazard class(es) (TDG) : Not regulated

**IMDG**  
Transport hazard class(es) (IMDG) : Not regulated

**IATA**  
Transport hazard class(es) (IATA) : Not regulated

#### 14.4. Packing group

Packing group (DOT) : Not regulated  
Packing group (TDG) : Not regulated  
Packing group (IMDG) : Not regulated  
Packing group (IATA) : Not regulated

#### 14.5. Environmental hazards

Other information : No supplementary information available.

#### 14.6. Transport in bulk

Not applicable

#### 14.7. Special precautions for user

**DOT**  
Not regulated



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### TDG

Not regulated

### IMDG

Not regulated

### IATA

Not regulated

## SECTION 15 Regulatory information

### 15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

#### ethylenediaminetetraacetic acid (EDTA) (60-00-4)

CERCLA RQ

5000 lb

### 15.2. International regulations

#### CANADA

#### Tris-HCl (Tris Base, Trizma Base) (1185-53-1)

Listed on the Canadian DSL (Domestic Substances List)

#### ethylenediaminetetraacetic acid (EDTA) (60-00-4)

Listed on the Canadian DSL (Domestic Substances List)

#### water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

#### ethylenediaminetetraacetic acid (EDTA) (60-00-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### water (7732-18-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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Component	State or local regulations
ethylenediaminetetraacetic acid (EDTA)(60-00-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

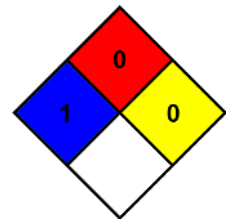
### SECTION 16 Other information

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Full text of hazard classes and H-statements	
H319	Causes serious eye irritation

- NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.
- NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Safety Data Sheet (SDS), USA

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