



MATERIAL SAFETY DATA SHEET

Company	ELPIS-Biotech. Inc.
Address	123-12 Jeonglim-dong, Seo-gu, Daejeon, Korea
Emergency Telephone NO	+82-42-581-8448
Fax	+82-42-581-8449
e-mail address	elpis@elpisbio.com

SECTION 1. CHEMICAL INFORMATION

Product name	10x TBE Buffer
Cat. No.	EBA-1047

Volume of product package: 1 L.

Product Use : Laboratory Reagent. For R&D use only. Not for drug, household or other uses.

Manufacturer/ Supplier information

Supply company : ELPIS-Biotech. Inc.
Address : 123-12 Jeonglim-dong, Seo-gu, Daejeon, Korea
Information service or emergency call : +82-42-581-8448 (042-581-8448, Korea)
Department in charge : Research Department

SECTION 2. HAZARDOUS IDENTIFICATION



Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, .
Non-corrosive for skin. Non-corrosive to the eyes. Non-corrosive for lungs.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs. The substance may be toxic to skin. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Buffer's Components in Water:

Reagent	CAS#	Concentration, %
Tris-HCl	77-86-1	< 10
EDTA	6381-92-6	< 1
Boric acid	10043-35-3	< 10

SECTION 4. FIRST AID MEASURES

After skin contact

Generally the product does not irritate the skin. Wash skin with water and soap and rinse thoroughly.

After eye contact

Rinse opened eyes for several minutes under running water. Get medical attention if eyes become irritating.

After swallowing (ingestion)

Rinse mouth. Drink plenty of water. Get medical attention if irritating or symptoms occur

After inhalation

Supply fresh air; consult doctor in case of complaints.

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing media

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special firefighting procedures

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Prevent contact with skin and eyes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Not required.

Environmental precautions

Do not allow entering sewers, surfaces or ground water.

Measures for cleaning / collecting

Collect spilled liquid with liquid-binding material or inert absorbent and place it in container for disposal. Wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Handling

No special measures necessary. Good laboratory technique should be used when handling.

Storage

No special measures necessary. Store at room temperature.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION □

Ingredients 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 valid during the making were used as basis.

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no preparation/ the chemical mixture recommendation to the glove material can be given for the product/ the Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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: Goggles recommended during refilling

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid.
Color	Colorless
Odor	Odorless.
Flash point	> 392 F, > 200° C
Explosive properties	No data available.
Vapor pressure	< 1 MMHG @ 20°C

SECTION 10. STABILITY AND REACTIVITY

Stability	Stable.
Hazardous polymerization	Will not occur
Materials to Avoid	Strong oxidizing agents, strong bases.
Hazardous Decomposition Products:	Carbon Monoxide, Carbon Dioxide
Protect from heat	

SECTION 11. TOXICOLOGICAL INFORMATION

Eye Contact:	No Irritating effect.
Skin Contact	No Irritating effect.
Sensitization	No sensitizing effects known.

Additional toxicological information

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

SECTION 12. ECOLOGICAL INFORMATION

Data not yet available

SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service to dispose of this material.

Observe all federal, state and local environmental regulations

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

SECTION 14. TRANSPORT INFORMATION

Contact ELPIS Biotech, Inc. Company for Transportation Information.

SECTION 15. REGULATORY INFORMATION

Federal and State Regulations: TSCA 8(b) inventory: Water; Tromethamine

Other Regulations: Not available. or of its ingredients

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R25- Toxic if swallowed. R36/38- Irritating to eyes and skin. S1/2- Keep locked up and out of the reach of children. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S46- If swallowed, seek medical advice immediately and show this container or label.

Protective Equipment : Not applicable. Lab coat. Not applicable. Safety glasses.

SECTION 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

ELPIS Biotech Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of preparation of the first version : 2008. 11. 11.

Revised frequency and Date of preparation of the latest version : 2013. 04. 12. (2nd version)