PRODUCT INFORMATION

Product Type: Bottle product (500ml)

Cat No. BP519/500D - TRIS 1M PH=8.0, 500 ML

Intended Use:

This medium is intended for use as a Tris-HCl buffering solution in microbiological, molecular biology, biochemical, and analytical laboratory applications. The medium provides a stable pH environment for the preparation, dilution, suspension, and handling of biological materials and laboratory reagents.

For laboratory use only.

BP519/500D - TRIS 1M PH 8.0 - is RNAse + DNAse free.

Principle and Uses

The medium is based on a Tris-HCl buffer system prepared from Tris Base (tris(hydroxymethyl)aminomethane) and hydrochloric acid. Tris is a widely used biological buffer that exhibits effective buffering capacity in the physiological and slightly alkaline pH range.

Protonation & pH Stabilization:

The addition of Hydrochloric acid fuming partially protonates the Tris amine groups. This creates a conjugate acid-base pair that strongly resists pH shifts. Stable pH conditions are essential for maintaining the activity of biological molecules, enzymes, cells, and microorganisms.

Liquid Matrix Customization:

This clear liquid formulation acts as a versatile stock concentrate. It can be easily automated, diluted, or supplemented with specialized nutrients, sugars, or salts to meet specific protocol needs.

This medium may be used for:

- Preparation and dilution of laboratory reagents
- Suspension and washing of microbial or cellular samples
- Molecular biology procedures
- Biochemical and enzymatic assays
- General laboratory applications requiring controlled pH conditions

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Limitations

- This medium is a buffer solution and does not contain nutrients necessary to support microbial growth.
- Osmotic Shock: In its undiluted 1.0 M state, this solution exerts high osmotic pressure. It cannot be used directly as a living cell or microbial growth medium without substantial dilution (typically down to 10–100 mM).
- It is not intended for the isolation, cultivation, identification, or differentiation of microorganisms.
- The buffering capacity may be exceeded by the addition of excessive amounts of acidic or alkaline substances.
- Chemical Interference: Tris is a primary amine. It chemically cross-reacts with aldehyde fixatives (like formaldehyde) and can cause background interference in colorimetric protein assays (such as Bradford or BCA).
- The pH of Tris-based buffers is temperature dependent; therefore, pH should be verified at the intended working temperature.
- Performance for specific applications should be validated by the user.

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Version Number: 01

Reference

1. Green, M. R., & Sambrook, J. (2012). *Molecular Cloning: A Laboratory Manual* (4th ed.). Cold Spring Harbor Laboratory Press. (Standard preparation protocols for 1.0 M Tris-HCl buffers).
2. ITW Reagents / AppliChem. *Technical Data Sheet: TRIS Base Ultrapure (A1086)*.
3. Merck KGaA. *Safety Data Sheet: Hydrochloric acid fuming 37% (1003172500)*

Composition:
Tris Base Ultrapure - 121.1 g/L
Hydrochloric Acid, Fuming 37% - 42 mL/L

Storage: 15-25°C
pH: 7.9 - 8.1
Appearance: Clear, colorless solution

Exp. Date: Printed on label and on the item.
Required materials not supplied: Laboratory equipment as required.

Warning and Precautions:
Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Bottles if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Bottles may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

Waste Disposal
After interpretation all items should be destroyed by standard incineration methods.

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