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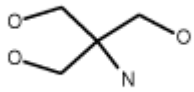
93349 93352 Trizma® Base ('TRIS Buffer', 2-Amino-2-hydroxymethyl-1,3-propanediol, Tris(hydroxymethyl)aminomethane, THAM, Trometamol)

CAS number: 77-86-1



Product Description:

Appearance:	Clear colorless to very faint yellow
Molecular formula:	$NH_2C(CH_2OH)_3$
Formula weight:	121.14 g/mol
Mp:	168 - 172°C[1]
Solubility:	4 M in H_2O, 20°C, complete, colorless
pH:	10.5-12.0 (4 M in H_2O, 25°C)
pK_a(20 °C):	8.3[1]

93352 BioChemika
93349 BioChemika Ultra

The BioChemika quality is for the usual biochemical applications. The products designated as BioChemika Ultra grade and are suitable for different applications like purification, precipitation, crystallisation and other applications which require tight control of elemental content. Trace elemental analyses have been performed for all qualities. The molecular biology qualities are also tested for absence of nucleases and for the luminescence quality spectroscopic tests are performed. The Certificate of Analysis provides lot-specific results.

Trizma is a registered trademark of Sigma-Aldrich for tris(hydroxymethyl)aminomethane, commonly called Tris.

Additional information on temperature and concentration effects, and on the use of pH electrodes with Trizma buffers is available from the technical service. Tris is an established basimetric standard and buffer used in biochemistry and molecular biology.[1] It may be used by itself as a buffer or as a component of mixed buffer formulations.[2] These different buffer formulations include:

- Tris-EDTA (TE) buffer
- Tris magnesium buffer
- Tris-acetate-EDTA (TAE) buffer
- Tris-borate-EDTA (TBE) buffer
- Tris-buffered saline (TBS)
- Tris-buffered saline with dextrose (TBS-D)
- Tris-glycine buffer
- Tris-phosphate EDTA buffer
- Tris-SDS buffer
- Tris-sucrose
- Tris-Tricine-SDS buffer

Tris salts are used in protein crystallization at various pH values (see crystallization kits 82009, 70437, 75403, 86684, 73513).[3,4,5,6] The use of low-ionic strength Tris buffers in the formation of intermediate filaments of lamin from *Caenorhabditis elegans* has been described.[7] Tris has been utilized in studies of double stranded complexes of peptide nucleic acids (PNA) and their complementary DNA sequences, by use of anion exchange HPLC.[8] The use of Tris in capillary electrochromatography and UV analysis of tocopherols and tocotrienols has been reported.[9]

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Preparation Instructions:
This product is soluble in water (4 mol/l), yielding a clear, colorless solution. When preparing Tris solutions at a given pH and temperature, it is necessary to choose the proper
mixture to give the desired final pH at the desired temperature.
For precise applications, use a carefully calibrated pH meter with a glass/calomel combination electrode.

Storage/Stability:
Trizma solutions can be autoclaved. Tris has a significant temperature coefficient:

- From 5 °C to 25 °C, the pH decreases an average of 0.03 pH units per °C.
- From 25 °C to 37 °C, the pH decreases an average of 0.025 pH units per °C.

Precautions and Disclaimer:
For Laboratory Use Only. Not for drug, household or other uses.

References

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