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ProductInformation

TRIZMA® Pre-set crystals

Product Number **T 5128**
Store at Room Temperature

Product Description

This product has been replaced by the Biotechnology Performance Certified grade of TRIZMA Pre-set crystal, pH 8.3 (Product Number T 8943).

This product is a pre-mixed combination of TRIZMA® base and TRIZMA HCl which may be used to prepare a 0.05 M solution with a pH of 8.3 at 25 °C. TRIZMA is the registered trademark for tris(hydroxymethyl) aminomethane, commonly called Tris.

Sigma Technical Bulletin 106B contains additional information on temperature and concentration effects, and on the use of pH electrodes with TRIZMA buffers.

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 (Product Nos. 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]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (666 mg/ml), yielding a clear, colorless solution.

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.

Thus it is necessary to choose the proper mixture to give the desired final pH at the desired temperature. The pH of 0.05 M solutions of this product at various temperatures is as follows:

5 °C = pH 8.88
25 °C = pH 8.30
37 °C = pH 8.01

References

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