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Product Information

Trizma[®] hydrochloride

Product Number **T3253**
Store at Room Temperature

Product Description

Molecular Formula: $C_4H_{11}NO_3 \cdot HCl$
Molecular Weight: 157.6
CAS Number: 1185-53-1
MW: 157.6
 $pK_a = 8.3$ (20 °C);¹ 7.82 (37 °C);¹ 8.08 (25 °C)²
Melting Point: 150-152 °C

The pH of Trizma[®] hydrochloride in water is dependent on the concentration. The pH of a 0.1 M aqueous solution is approximately 4.7 while the pH of a 40% (w/w) aqueous solution is typically 2.6-3.3. The buffering range of Trizma buffers is typically pH 7.0-9.0 (at 25 °C).^{4,5,6,7} Trizma is also very stable; the powder can be dried at 100 °C for up to 4 hours.³ However, in the presence of manganese salts, Trizma buffers will form precipitates. In addition, certain electrodes don't give accurate pH readings when used with Trizma buffers.⁸

This product is also reported to be used for the control of pH in fish transport.⁹

See Technical Bulletin 106B for information concerning the physical properties and uses of Trizma buffers. This also contains the Trizma mixing table and information on the effects of temperature and concentration on pH, the preset pH compounds, fish grades, electrodes, and additional references.

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (667 mg/ml).

Storage/Stability

Trizma buffer solutions can be autoclaved.¹⁰

References

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