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Product Information

Trifluoroacetic acid

Product Number **T 6508**

Store at Room Temperature

Product Description

Molecular Formula: $C_2HF_3O_2$

Molecular Weight: 114.0

CAS Number: 76-05-1

pK_a : 0.3;¹ 0.23 (water at 25 °C)²; 0.50 (water at 25 °C)³

Melting Point: -15.4 °C¹

Boiling Point: 72.4 °C;¹ 70.5-72 °C²

Density: 1.489 g/mL (20 °C)⁴; 1.535 g/mL (20 °C)¹

This product has a molarity of 12.98 M based on a density of 1.48 g/ml. This product is moisture sensitive and hygroscopic.⁵ The method of preparation is well documented⁶ and detailed spectral information is available.⁷ This product can be used for the purification of peptides by reverse phase HPLC.^{8,9}

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in ethanol at 0.33 ml/ml. This acid is miscible with ether, acetone, ethanol, benzene, carbon tetrachloride, and hexane.¹

References

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4. Lange's Handbook of Chemistry, 13th ed., p. 7-660.
5. Chem. Non-aqueous Solvents, **5B**, Lagowski, J. J., ed., Academic Press (New York, NY: 1978), pp. 1-52.
6. Henne, A. L., et al., The Alkaline Condensation of Fluorinated Esters with Esters and Ketones. J. Am. Chem. Soc., **69**, 1820 (1947).
7. Berney, C. V., Spectroscopy of CF_3CO_2 compounds. V. Vibrational spectra and structure of solid trifluoroacetic acid. J. Am. Chem. Soc., **95**, 708 (1973).
8. Mahoney, W. C., and Hermodson, M. A., Separation of Large Denatured Peptides by Reverse Phase High Performance Liquid Chromatography. Trifluoroacetic Acid as a Peptide Solvent. J. Biol. Chem., **255(23)**, 11199-11203 (1980).
9. Yuan, P. M., Microsequence Analysis of Peptides and Proteins. I. Preparation of Samples by Reverse-Phase Liquid Chromatography. Anal. Biochem., **120(2)**, 289-301 (1982).

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