

上海伊卡生物技术有限公司

Sodium pentanesulfonate

Product Number **M0200**

Store at Room Temperature

Product Description

Molecular Formula: $C_5H_{11}O_3SNa$

Molecular Weight: 174.2

CAS Number: 22767-49-3

Synonym: 1-pentanesulfonic acid sodium salt

Trace elemental analyses have been performed on the SigmaUltra sodium pentanesulfonate. The Certificate of Analysis provides lot-specific results. SigmaUltra sodium pentanesulfonate is for applications which require tight control of elemental content.

Sodium pentanesulfonate is used as an ion pairing reagent for HPLC and as an anionic surfactant.¹ The anionic sulfonate counterion permits the separation and resolution of positively charged analytes.² Sodium pentanesulfonate is utilized in the analysis of small organic molecular compounds, pharmaceutical products and metabolites, and peptides by such techniques as RP-HPLC and micellar electrokinetic chromatography.^{3,4,5,6,7,8}

Sonochemical and sonoluminescent studies by EPR and spin-trapping techniques have been reported on various ion-pairing reagents, including sodium pentanesulfonate.⁹

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (50 mg/ml), yielding a clear, colorless solution.

References

1. Bidlingmeyer, B. A., et al., in *Advances in Chromatography*, Vol. 14, Giddings, J. C., ed., Marcel Dekker (Houston, TX: 1979), p. 435.
2. Hancock, W. S., et al., *High-Pressure Liquid Chromatography of Peptides and Proteins*. VI. Rapid Analysis of Peptides by High-Pressure Liquid Chromatography with Hydrophobic Ion-Pairing of Amino Groups. *J. Chromatogr.*, **161**, 291-298 (1978).
3. Stewart, J. T., and Clark, S. S., Liquid chromatographic determination of guanethidine salts and hydrochlorothiazide using electrochemical detection and ion-pair techniques. *J. Pharm. Sci.*, **75(4)**, 413-415 (1986).
4. Kennedy, J. H., and Olsen, B. A., Investigation of perchlorate, phosphate and ion-pairing eluent modifiers for the separation of cephalosporin epimers. *J. Chromatogr.*, **389(2)**, 369-377 (1987).
5. Sciacchitano, C. J., et al., Identification and separation of five cephalosporins by micellar electrokinetic capillary chromatography. *J. Chromatogr. B Biomed. Appl.*, **657(2)**, 395-399 (1994).
6. Grimm, R., et al., Effect of different surfactants on the separation by micellar electrokinetic chromatography of a complex mixture of dipeptides in urine of prolidase-deficient patients. *J. Chromatogr. B Biomed. Sci. Appl.*, **698(1-2)**, 47-57 (1997).
7. Pichette, A., et al., Analysis of human parathyroid hormone (1-84) products. Separation of a major impurity in synthetic products by ion-pairing reversed-phase high-performance liquid chromatography. *J. Chromatogr. A*, **890(1)**, 127-133 (2000).

8. Galvez, R., et al., Oil-in-water emulsions as suitable working media for the direct polarographic determination of aziprotryne and desmetryne from its organic extracts in water samples. Fresenius J. Anal. Chem., **367(5)**, 454-460 (2000).
9. Sostaric, J. Z., and Riesz, P., Sonochemistry of surfactants in aqueous solutions: an EPR spin-trapping study. J. Am. Chem. Soc., **123(44)**, 11010-11019 (2001).

GCY/RXR 5/06

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.