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ProductInformation

MOPSO sodium salt

Product Number **M 8767**
Store at Room Temperature

Product Description
Molecular Formula: $C_7H_{14}NO_5SNa$
Molecular Weight: 247.2
CAS Number: 79803-73-9
pK_a: 7.2 (25 °C)
Melting Point: 270 - 290 °C
Synonyms: 3-morpholino-2-hydroxypropanesulfonic acid sodium salt, 3-(N-morpholinyl)-2-hydroxypropanesulfonic acid sodium salt

MOPSO is a zwitterionic aminosulfonate buffer that is very similar in structure to MOPS (3-morpholinopropanesulfonic acid), differing by the presence of a hydroxyl group on C-2 of the propane moiety. MOPSO falls into the class of Good buffers, which Good et al. developed to provide buffers in the pH range of 6.15 - 8.35 for wide applicability to biochemical studies.[1] The useful pH range for MOPSO is 6.5 - 7.9.

MOPSO has been utilized as a buffer component in the analysis of copper by two distinct methods: (1) a flow injection micellar technique of the catalytic reaction of the reaction between 3-methyl-2-benzothiazolinone hydrazone with N-ethyl-N-(2-hydroxy-3-sulfopropyl)-3,5-dimethoxyaniline;[2] (2) an electrospray-ionization quadrapole time-of-flight mass spectroscopy technique to measure the formation of chelating complexes of MOPSO with copper.[3] The effect of MOPSO and other Good buffers on the resolution of DNA using discontinuous electrophoresis on rehydratable polyacrylamide gels has been examined.[4]

MOPSO has been utilized as a component of buffered charcoal yeast extract medium.[5] The fixation of cells from urine in a buffered alcohol that contains MOPSO has been described.[6] The testing of crude oil bioremediation products in marine environments in MOPSO buffer has been reported.[7]

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

Preparation Instructions
This product is soluble in water (500 mg/ml), yielding a clear, colorless solution.

References
1. Good, N. E., et al, Hydrogen ion buffers for biological research. Biochemistry, **5(2)**, 467-477 (1966).
2. Kawashima, T., et al., Flow-injection determination of copper(II) based on its catalytic effect on the oxidative coupling of 3-methyl-2-benzothiazolinone hydrazone with *N*-Ethyl-*N*-(2-hydroxy-3-sulfopropyl)-3,5-dimethoxyaniline in a micellar medium. Anal. Sci., **15**, 835-839 (1999).
3. Mash, H. E., et al., Complexation of copper by zwitterionic aminosulfonic (Good) buffers. Anal. Chem., **75(3)**, 671-677 (2003).
4. Allen, R. C., et al., Resolution of DNA in the presence of mobility modifying polar and nonpolar compounds by discontinuous electrophoresis on rehydratable polyacrylamide gels. Appl. Theor. Electrophor., **3(3-4)**, 173-181 (1993).
5. Edelstein, P. H., and Edelstein, M. A., Comparison of three buffers used in the formulation of buffered charcoal yeast extract medium. J. Clin. Microbiol., **31(12)**, 3329-3330 (1993).

6. Wojcik, E. M., et al., Influence of season on the incidence of DNA hypodiploidy in urinary cytology. Cytometry., **42(3)**, 218-220 (2000).

7. Haines, J. R., et al., Protocol for laboratory testing of crude-oil bioremediation products in freshwater conditions. J. Ind. Microbiol. Biotechnol., **30(2)**, 107-113 (2003).

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