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Product Information

MOBS

Product Number **M 3295**
Store at Room Temperature

Product Description

Molecular Formula: $C_8H_{17}NO_4S$

Molecular Weight: 223.3

CAS Number: 115724-21-5

pK_a : 7.6¹

Synonym: 4-(N-morpholino)butanesulfonic acid

MOBS is a zwitterionic buffer that is a butane analog of the Good buffers MOPS [3-(N-morpholino)propanesulfonic acid] and MES [2-(N-morpholino)ethanesulfonic acid]. The Good buffers were developed in the 1960's to provide buffers in the pH range of 6.15 - 8.35 for wide applicability to biochemical studies.² MOBS and a series of other butanesulfonic acids were in turn prepared to give a series of buffers with a more alkaline pH range of activity. The useful pH range of MOBS is 7.0 - 8.3.¹

The other butane analog buffers are as follows:

- CABS, 4-(cyclohexylamino)-1-butanefulfonic acid [related to CAPS, 3-(cyclohexylamino)-1-propanesulfonic acid] (Product No. C 5580)
- HEPBS, N-(2-hydroxyethyl)piperazine-N'-(4-butanefulfonic acid) [related to EPPS, N-(2-hydroxyethyl)piperazine-N'-3-propanesulfonic acid, and to HEPES, 4-(2-hydroxyethyl)piperazine-1-ethanesulfonic acid] (Product No. H 6903)
- TABS, N-tris-(hydroxymethyl)methyl-4-aminobutanefulfonic acid [related to TAPS, [(2-Hydroxy-1,1-bis(hydroxymethyl)ethyl)amino]-1-propanesulfonic acid, and to TES, N-[tris(hydroxymethyl)methyl]-2-aminoethanesulfonic acid] (Product No. T 1302)

MOBS has been tested for applicability in the growth of various bacterial strains, and for use in assaying the activity of β -galactosidase and esterase.¹

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).

References

1. Thiel, T., et al., New zwitterionic butanesulfonic acids that extend the alkaline range of four families of Good buffers: evaluation for use in biological systems. *J. Biochem. Biophys. Methods*, **37(3)**, 117-129 (1998).
2. Good, N. E., et al, Hydrogen ion buffers for biological research. *Biochemistry*, **5(2)**, 467-477 (1966).

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