

MOPS Free acid

Cell Culture Tested

Product Code: TC067

Product Description :

Molecular Formula: $C_7H_{15}NO_4S$

Molecular Weight: 209.3

CAS No.: 1132-61-2

Synonyms: 3-[N-Morpholino] propanesulfonic acid

pKa at 25°C: 7.20

MOPS, Morpholinopropanesulfonic acid is a zwitterionic biological buffer. It is a structural analog of MES, Morpholinoethanesulfonic acid. It has a pKa of 7.20 at 25°C which is much closer to physiological pH of 7.4 than MES which is 6.1. This makes it a more suitable buffer than MES. It offers a useful buffering range of 6.50- 7.90. MOPS is one of the 'Good' buffers selected by Dr. Norman Good and colleagues in 1966 and has the following properties.

1. Maximum solubility in water and minimum solubility in other buffers.
2. Low contribution of ions to the medium.
3. pKa is minimally influenced by buffer concentration, temperature and ionic constitution of the medium.
4. Forms soluble complexes with metal.
5. Resists enzymatic and non-enzymatic alterations and does not react with any component of the medium.
6. Does not absorb light at wavelength longer than 230nm.
7. Easy to prepare and easy to purify.
8. Allows more strict control of pH in the biological system.

MOPS buffer is used in biochemistry, cell culture and molecular biology. MOPS free acid is added to mammalian cell culture media. MOPS is found to interfere with Folin-Lowry assay of protein estimation.

MOPS containing cell culture media can be used as a diluent for antifungal agents because MOPS does not antagonize effect of antifungal agents.

Directions :

Preparation instructions:

MOPS is soluble in water (100mg/ml). The concentration in culture medium should not exceed 20mM as it can be toxic to cells.

MOPS solutions should be sterilized by filtering through a sterile membrane filter with porosity of 0.22 microns or less. MOPS solutions should not be autoclaved in presence of glucose as it leads to its decomposition.

Quality Control:

Appearance

White crystalline powder.

Solubility

Clear colorless solution at 10 gm in 100ml of water .

pH

3.00 -5.00

Loss on drying

NMT 1.0%

Assay

NLT 99%

Cell Culture Test

Passes

Storage and Shelf Life:

Store at 15-30°C.

Shelf life of the product is 48 months.

Use before expiry date given on the product label.

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ Publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.