

Certificate of Analysis

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Product Name: HEPES Sodium salt

Catalog No.: 3174

Batch No.: 4

CAS Number: 75277-39-3

EC Number: 278-169-7

IUPAC Name: 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

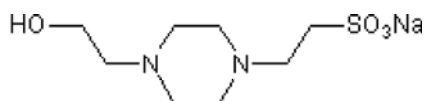
Batch Molecular Formula: C₈H₁₇N₂NaO₄S

Batch Molecular Weight: 260.29

Physical Appearance: White solid

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

Heavy metal content: <5 ppm

pKa: 7.6

pH of a 1% solution: 9.8

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Information

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Batch No.: 4

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IUPAC Name: 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid sodium salt

Description:

Multi purpose buffer used in biological research. Working pH range in aqueous solution: 6.8 - 8.2. Does not form complexes with metal ions. Used in cell culture media.

Physical and Chemical Properties:

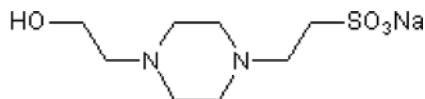
Batch Molecular Formula: C₈H₁₇N₂NaO₄S

Batch Molecular Weight: 260.29

Physical Appearance: White solid

Minimum Purity: ≥99.5%

Batch Molecular Structure:



Storage: Store at RT

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Medzon and Gedies (1971) Substitution of 4-(2-hydroxyethyl)-1-piperazineethane sulfonic acid (HEPES) for bicarbonate in protein-free animal cell culture medium: application to vaccinia virus quantitation and fluorogenic acetylerase assay in living LM cells. *Canadian J. Microbiol.* **17** 651.

Good et al (1966) Hydrogen ion buffers for biological research. *Biochemistry* **5** 467. PMID: 5942950.

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