

# HEPES, FREE ACID

## BLE, GMP, EXCIPIENT

CAS #: 7365-45-9

 Formula: C<sub>8</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S

F.W.: 238.30 g/mol

**HEPE-3220**
**Bio EXCIPIENT GRADE**

ANALYSIS	SPECIFICATIONS		
Absorbance (0.1M)	250 nm	< = 0.0500 a.u.	
	260 nm	< = 0.0500 a.u.	
	280 nm	< = 0.0800 a.u.	
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	260 nm	< = 0.0500 a.u.	
	280 nm	< = 0.0800 a.u.	
Appearance and Color	White Crystals		
Assay, Dried Basis	> = 99.5%		
Chloride	< = 50 ppm		
Endotoxin	< = 5 EU/g		
Enzymes	DNase	None Detected	
	RNase	None Detected	
	Protease	None Detected	
Identification, IR	Conforms to Reference Standard		
Insoluble Matter	< = 0.01%		
Loss on Drying	< = 0.5%		
Microbial Content	TAMC	< = 100 CFU/g	
	TYMC	< = 100 CFU/g	
pH (5%)	5.0 – 6.5		
pKa	7.45 – 7.65		
Residue on Ignition	< = 0.1%		
Solubility	Solubility (5%)	Passes Test	
	Solubility (0.05M)	Passes Test	
Sulfate	< = 50 ppm		
Trace Metals	Arsenic (As)	< = 5 ppm	
	Copper (Cu)	< = 5 ppm	
	Iron (Fe)	< = 5 ppm	
	Lead (Pb)	< = 1 ppm	

### General Product Overview

HEPES is a zwitterionic buffer used to maintain pH of media used in cell cultures. It is one of Good's twelve buffers that has a pKa value similar to its pH value, making it an ideal buffer for pH maintenance. A known limitation is its interference with the Folin protein assay. This buffer can form radicals so it is not suitable for redox studies. HEPES is a Good's buffer because it has low UV absorptivity, minimal reactivity, stable pH and is soluble in water.

### Industry Application

Suitable for use as a cGMP chemical in pharmaceutical manufacturing processes and products.

### Key Product Features

- The manufacturing of HEPES, HEPE-3220 is performed at BioSpectra's Bangor and Stroudsburg, PA facilities.
- Appears as white crystals
- Manufactured in accordance with ICH Q7
- Manufactured in an enzyme free, hormone free and animal free environment
- Contains no known major food allergens (as defined by FDA and WHO)
- The final product and its raw materials are not derived from nor come into contact with animal parts, animal products, and/or animal byproducts or derivatives.
- Is not subject to genetic modification
- Synonyms: N-(2-Hydroxyethyl) Piperazine-N'-2-Ethanesulfonic Acid, 4-(2-Hydroxyethyl); Piperazine-1-Ethanesulfonic Acid

### Storage and Shipping Conditions

Refer to SDS.

### Standard Shelf-Life Policy

Unless otherwise noted on the Shelf-Life Statement and CoA, this product has a 2-year retest date supported by a 3-year

### Package Sizes

10kg, 25kg and 50kg pails

[Click here to view SDS, CoAs and other supporting regulatory documents on our website.](#)

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