

HEPES

BET*, GMP, EXCIPIENT

CAS #: 7365-45-9

Formula: $C_8H_{18}N_2O_4S$

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		$\geq 99.5\%$
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		$\leq 0.01\%$
Loss on Drying		$\leq 0.5\%$
Microbial Content	TAMC	≤ 100 CFU/g
	TYMC	≤ 100 CFU/g
pH (5%)		5.0 – 6.5
pKa		7.45 – 7.65
Residue on Ignition		$\leq 0.1\%$
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

*Bioburden and Endotoxin Tested

General Product Overview

HEPES is a zwitterionic buffer used to maintain pH of media used in cell cultures. It is one of Good's 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 ICH Q1 Stability Study (if one is completed).

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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