

## HEPES, FREE ACID

BIOTECH, LBLE, GMP

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-4250**

**BIO PHARMA 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
Heavy Metals		≤ 1 ppm
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% solution)		5.0 - 6.5
pK <sub>a</sub>		7.45 - 7.65
Residue on Ignition		≤ 0.1%
Solubility (5%)		Passes Test
Solubility (0.05M)		Passes Test
Sulfate		≤ 50 ppm
Trace Metals	Arsenic (As)	≤ 5 ppm
	Aluminum (Al)	≤ 5 ppm
	Bismuth (Bi)	≤ 5 ppm
	Calcium (Ca)	≤ 10 ppm
	Copper (Cu)	≤ 5 ppm
	Iron (Fe)	≤ 5 ppm
	Lead (Pb)	≤ 5 ppm
	Lithium (Li)	≤ 5 ppm
	Molybdenum (Mo)	≤ 5 ppm
	Nickel (Ni)	≤ 5 ppm
	Potassium (K)	≤ 50 ppm
Water, KF		≤ 0.1%

**Country of Origin: USA**

### Intended for Use in Biopharmaceutical & Biotechnological Applications and Products

This is used as a high purity, GMP, Reagent Grade product, purified under full cGMP conditions. HEPES, Free Acid 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 pK<sub>a</sub> value similar to its pH value, making it an ideal buffer for pH maintenance. HEPES is used as a Good's buffer because it has low UV absorptivity, minimal reactivity, stable pH and is soluble in water.

### General Product Description

- Appears as a white crystalline product
- Manufactured under an ICH-Q7 Quality Managed cGMP System
- Manufactured in an enzyme free, hormone free and animal free environment
- 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/derivatives.
- Is not subject to genetic modification
- Synonyms: N-(2-Hydroxyethyl) piperazine-N'-2-ethane sulfonic acid, 2-[4-(2-hydroxyethyl) piperazin-1-yl] ethane sulfonic acid
- Visit the product page on our website ([www.biospectra.us](http://www.biospectra.us)) for additional information, supporting regulatory documents, and CofAs.

### Storage and Shipping Conditions

Refer to SDS.

### Standard Shelf Life Policy

Each Certificate of Analysis will contain a 2-year retest/recertification date supported by a 3-year ICH Q1 Stability Study (if one is completed).

### Package Sizes

100g, 500g, 1kg, 5kg, 10kg, 25kg, 50kg

### Standard Lead Time

1-2 weeks