

# HEPES, FREE ACID

## LBLE, GMP

CAS #: 7365-45-9

Formula:  $C_8H_{18}N_2O_4S$

F.W.: 238.30 g/mol

HEPE-4250

BIO PHARMA GRADE

ANALYSIS		SPECIFICATIONS
Absorbance (0.1M)	250 nm	$\leq 0.0500$ a.u.
	260 nm	$\leq 0.0500$ a.u.
	280 nm	$\leq 0.0800$ a.u.
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	260 nm	$\leq 0.0500$ a.u.
	280 nm	$\leq 0.0800$ a.u.
Appearance and Color		White Crystals
Assay, Dried Basis		$\geq 99.5\%$
Chloride		$\leq 50$ ppm
Endotoxin		$\leq 5$ 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	$\leq 100$ CFU/g
	TYMC	$\leq 100$ CFU/g
pH (5%)		5.0 – 6.5
pK <sub>a</sub>		7.45 – 7.65
Residue on Ignition		$\leq 0.1\%$
Solubility	Solubility (5%)	Passes Test
	Solubility (0.05M)	Passes Test
Sulfate		$\leq 50$ ppm
Trace Metals	Arsenic (As)	$\leq 5$ ppm
	Aluminum (Al)	$\leq 5$ ppm
	Bismuth (Bi)	$\leq 5$ ppm
	Calcium (Ca)	$\leq 10$ ppm
	Copper (Cu)	$\leq 5$ ppm
	Iron (Fe)	$\leq 5$ ppm
	Lead (Pb)	$\leq 5$ ppm
	Lithium (Li)	$\leq 5$ ppm
	Molybdenum (Mo)	$\leq 5$ ppm
	Nickel (Ni)	$\leq 5$ ppm
	Potassium (K)	$\leq 50$ ppm
Water, KF		$\leq 0.1\%$

## 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 IPEC 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

Country of Origin: USA

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