

## HEPES, FREE ACID BIOTECH LBLE, GMP HEPE-4250

$C_8H_{18}N_2O_4S$  F.W. 238.30 g/mol CAS# 7365-45-9

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

HEPES, Free Acid is used as a high purity, GMP Reagent grade product. 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 pKa 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.

### SPECIFICATIONS

ANALYSIS		SPECIFICATIONS
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)	≤ 5 ppm
Enzymes	DNase	None Detected
	RNase	None Detected
	Protease	None Detected
Absorbance (0.1M)	250 nm	0.0500 a.u. max
	260 nm	0.0500 a.u. max
	280 nm	0.0800 a.u. max
Absorbance (0.05M)	250 nm	0.0500 a.u. max
	260 nm	0.0500 a.u. max
	280 nm	0.0800 a.u. max
Appearance and Color		White / Crystals
Assay, Dried Basis		99.5% min
Chloride		≤ 500 ppm
Endotoxin		≤ 5 EU /g
Heavy Metals		1 ppm max

Identification (IR)		Passes Test
Insoluble Matter		0.01% max
Loss on Drying		0.5% max
Microbial Content	TAMC	≤ 100CFU/g
	TYMC	≤ 100CFU/g
pH (5% solution)		5.0 – 6.5
pKa		7.45 – 7.65
Residue on Ignition		0.1% max
Solubility (5%)		Passes Test
Solubility (0.05M)		Passes Test
Water (by Karl Fischer)		≤ 0.1 %
Sulfate		0.005% max

### General Product Description:

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

Molecular Weight: 238.30 g/mol

CAS Number: 7365-45-9

### HEPES, Free Acid Biotech:

- Appears as a white crystalline product.
- Is manufactured under an ICH-Q7 Quality Managed cGMP System
- Manufactured in an enzyme free, hormone free and animal free environment
- Has no known major food allergens (as defined by FDA and WHO)
- The final product nor its raw materials are not derived from nor come into contact with animals, animal parts, animal products, and/or animal byproducts or 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.

### Shelf Life Policy:

Three-year expiry from the date of manufacture.

### Storage and Shipping Conditions:

Please refer to the SDS for storage and shipping conditions.

### Package Size:

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