

Product Specification

Product Name :	HEPES EMPROVE® EVOLVE
Product Number:	137270
CAS Number:	7365-45-9
MDL Number :	MFCD00006158
Molecular Formula:	C ₈ H ₁₈ N ₂ O ₄ S
Formula Weight:	238.30 g/mol

Test	Specification
Appearance (Color)	White
Appearance (Form)	Powder
Solubility (Color)	Colorless
Solubility (Turbidity) 1 M in H ₂ O	Clear
Infrared Spectrum	Conforms to Structure
Water (by Karl Fischer)	≤ 0.5%
Assay (anhydrous basis)	≥ 99.5%
pH 1% in H ₂ O	4.7 - 5.5
Residue on ignition (Ash)	≤ 0.1%
UV Absorbance 260nm 1 M in H ₂ O	≤ 0.05
UV Absorbance 280nm 1 M in H ₂ O	≤ 0.04
Aluminum (Al)	≤ 5.0ppm
Bismuth (Bi)	≤ 5.0ppm
Lead (Pb)	≤ 5.0ppm
Barium (Ba)	≤ 5.0ppm

Sigma-Aldrich warrants that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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Product Name: HEPES, EMPROVE(R) EVOLVE

Product Number: 1372700000

Test	Specification
Cadmium (Cd)	≤ 5.0ppm
Copper (Cu)	≤ 5.0ppm
Zinc (Zn)	≤ 5.0ppm
Cobalt (Co)	≤ 5.0ppm
Calcium (Ca)	≤ 30.0ppm
Chromium (Cr)	≤ 5.0ppm
Magnesium (Mg)	≤ 5.0ppm
Manganese (Mn)	≤ 5.0ppm
Iron (Fe)	≤ 5.0ppm
Lithium (Li)	≤ 5.0ppm
Molybdenum (Mo)	≤ 5.0ppm
Nickel (Ni)	≤ 5.0ppm
Arsenic (As)	≤ 3.0ppm
Antimony (Sb)	≤ 5.0ppm
DNase, Exonuclease Detection	Pass
NICKase, Endonuclease Detection	Pass
RNase Detection	Pass
Protease Detection	Pass
Endotoxin	≤ 50EU/g
Total Aerobic Microbial Count	≤ 100CFU/g
Total Yeast and Mold	≤ 100CFU/g
Cytotoxicity	Pass

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Product Name: HEPES, EMPROVE(R) EVOLVE

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Test	Specification
TLC (One Spot)	Pass
Methanol (Solvent content by GC)	≤ 3000ppm
Recommended Retest Period 4 years	-----
NON COMPENDIAL STATEMENT Non-compendial, not intended for direct human or animal use	-----

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