

## Certificate of Analysis

Date of Testing: 2022-11-19 12:03:56  
Date of Next Testing: 2026-11-18 12:03:56  
Product Name: **HEPES**  
CAS Number: 7365-45-9  
Specifications & Purity:  $\geq 99.5\%$ (T)  
Lot #: K22171001  
SKU #: **H109407**  
**Analysis:** **150149**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Water by Karl Fischer	0-1 (%)	0.23 %
Heavy metal (as Pb)	0-5 (ppm)	0.20 ppm
Purity (Titration by NaOH)(anhydrous)	99.5-100.5 (%)	100.07 %
UV Absorbance 290nm(33%,H <sub>2</sub> O)	0-0.05	0.01
Appearance (H109407)	White Powder or Crystals	White Powder or Crystals
Carbon NMR Spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , clear colorless ,500mg/ml in water	pass	Pass



John Su  
QA & QC Manager