

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-07-22 15:01:19
 Date of Next Testing: 2024-07-11 15:01:19
 Product Name: **HEPES**
 CAS Number: 7365-45-9
 Specifications & Purity: for molecular biology, ≥99.5%(T)
 Lot #: G2213181
 SKU #: **H109408**
Analysis: **104681**
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Cadmium(Cd)	0-5 (ppm)	0.39 ppm
(As)Arsenic	0-0.1 (ppm)	0.06 ppm
Sodium(Na)	0-50 (ppm)	44.30 ppm
Zinc(Zn)	0-5 (ppm)	3.96 ppm
Cobalt(Co)	0-5 (ppm)	4.32 ppm
Lithium(Li)	0-5 (ppm)	3.66 ppm
Magnesium(Mg)	0-5 (ppm)	4.65 ppm
Chromium(Cr)	0-5 (ppm)	3.33 ppm
Iron(Fe)	0-5 (ppm)	2.63 ppm
Nickel(Ni)	0-5 (ppm)	3.98 ppm
Barium(Ba)	0-5 (ppm)	4.12 ppm
Aluminum(Al)	0-5 (ppm)	2.96 ppm
useful PH range	6.8-8.2	7.15
Ignition Residue (as sulfate)	0-0.1 (%)	0.09 %
Sulfate(SO42-)	0-50 (ppm)	44.89 ppm
loss on drying, 110 °C	0-0.5 (%)	0.17 %
Calcium(Ca)	0-10 (ppm)	6.30 ppm
Molybdenum(Mo)	0-5 (ppm)	3.62 ppm
Strontium(Sr)	0-5 (ppm)	4.33 ppm
Copper(Cu)	0-5 (ppm)	3.88 ppm
(Pb)Lead	0-5 (ppm)	2.98 ppm
Chloride (Cl-)	0-50 (ppm)	33.96 ppm
Manganese(Mn)	0-5 (ppm)	4.05 ppm
Bismuth(Bi)	0-5 (ppm)	3.99 ppm
Potassium(K)	0-50 (ppm)	43.89 ppm
UV Absorbance 260nm(0.5 M in H2O)	0-0.1	0.05

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Parameter	Limit Values	Result
UV Absorbance 280nm(0.5 M in H ₂ O)	0-0.1	0.04
PH(25 °C, 1 M in Water)	5-6.5	5.39
Purity (T)	99.5-100.5 (%)	100.49 %
Appearance (H109408)	white crystalline powder	white crystalline powder
DNases	none detected	none detected
phosphatases	none detected	none detected
pKa	6.8	6.8
proteases	none detected	none detected
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
RNases	none detected	none detected
Insoluble matter	pass	Pass
Solubility in H ₂ O , soluble , 1M , 20°C, clear, colorless	pass	Pass

John Su
QA & QC Manager