

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2024-08-22 11:06:03
Date of Next Testing: 2026-08-12 11:06:03
Product Name: **HEPES**
CAS Number: 7365-45-9
Specifications & Purity: for molecular biology, ≥99.5%(T)
Lot #: K2223487
SKU #: **H109408**
Version: **2**
Analysis #: **402601**
Storage Temperature: Room temperature

| Parameter | Limit Values | Result |
|-----------------------------------|--------------|-----------|
| Cadmium(Cd) | 0-5 (ppm) | 2.28 ppm |
| (As)Arsenic | 0-0.1 (ppm) | 0.03 ppm |
| Sodium(Na) | 0-50 (ppm) | 23.56 ppm |
| Zinc(Zn) | 0-5 (ppm) | 2.18 ppm |
| Cobalt(Co) | 0-5 (ppm) | 3.09 ppm |
| Lithium(Li) | 0-5 (ppm) | 2.56 ppm |
| Magnesium(Mg) | 0-5 (ppm) | 2.67 ppm |
| Chromium(Cr) | 0-5 (ppm) | 3.08 ppm |
| UV Absorbance 260nm(0.5 M in H2O) | 0-0.1 | 0.02 |
| Iron(Fe) | 0-5 (ppm) | 0.00 ppm |
| Nickel(Ni) | 0-5 (ppm) | 2.48 ppm |
| Barium(Ba) | 0-5 (ppm) | 2.58 ppm |
| UV Absorbance 280nm(0.5 M in H2O) | 0-0.1 | 0.02 |
| Aluminum(Al) | 0-5 (ppm) | 1.89 ppm |
| Ignition Residue (as sulfate) | 0-0.1 (%) | 0.00 % |
| Sulfate(SO42-) | 0-50 (ppm) | 25.28 ppm |
| loss on drying, 110 °C | 0-0.5 (%) | 0.16 % |
| Calcium(Ca) | 0-10 (ppm) | 5.28 ppm |
| Molybdenum(Mo) | 0-5 (ppm) | 1.78 ppm |
| Strontium(Sr) | 0-5 (ppm) | 2.08 ppm |
| Copper(Cu) | 0-5 (ppm) | 2.56 ppm |
| (Pb)Lead | 0-5 (ppm) | 2.67 ppm |
| Chloride (Cl-) | 0-50 (ppm) | 24.58 ppm |
| Manganese(Mn) | 0-5 (ppm) | 2.56 ppm |
| Bismuth(Bi) | 0-5 (ppm) | 1.67 ppm |

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| Parameter | Limit Values | Result |
|------------------------------------------------------------------------|--------------------------|--------------------------|
| PH(25 °C, 1 M in Water) | 5-6.5 | 5.27 |
| Potassium(K) | 0-50 (ppm) | 25.78 ppm |
| Purity (T) | 99.5-100.5 (%) | 100.47 % |
| Appearance (H109408) | white crystalline powder | white crystalline powder |
| DNases | none detected | none detected |
| Insoluble matter | pass | Pass |
| proteases | none detected | none detected |
| Proton NMR spectrum | Conforms to Structure | Conforms to Structure |
| RNases | none detected | none detected |
| Solubility in H ₂ O , soluble , 1M , 20°C, clear, colorless | pass | Pass |

John Su
QA & QC Manager