

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

| | |
|--------------------------|----------------------|
| Date of Testing: | 2024-09-27 16:59:15 |
| Date of Next Testing: | 2028-09-26 16:59:15 |
| Product Name: | L-Histidine |
| CAS Number: | 71-00-1 |
| Specifications & Purity: | Ultra pure, ≥99.5% |
| Lot #: | I2418292 |
| SKU # | H108262 |
| Version | 1 |
| Analysis #: | 415505 |
| Storage Temperature: | Protected from light |

| Parameter | Limit Values | Result |
|---|--------------|-------------|
| Barium(Ba) | 0-5 (ppm) | 0.00 ppm |
| Nickel(Ni) | 0-5 (ppm) | 0.00 ppm |
| Purity(HPLC) | 99.5-100 (%) | 100.00000 % |
| Assay(Nonaqueous Titration) | 99.5-100 (%) | 99.87 % |
| Lithium(Li) | 0-5 (ppm) | 0.00 ppm |
| Lead(Pb) | 0-5 (ppm) | 0.00 ppm |
| Molybdenum(Mo) | 0-5 (ppm) | 0.00 ppm |
| Specific Rotation [α] ₂₀ /D(c=2 in H ₂ O) | -40--38 (°) | -38.10 ° |
| A ₂₆₀ UV Absorbance(0.1M,H ₂ O) | 0-0.05 | 0.04 |
| Ignition Residue (as sulfate) | 0-0.1 (%) | 0.00 % |
| Cobalt(Co) | 0-5 (ppm) | 0.00 ppm |
| Aluminum(Al) | 0-5 (ppm) | 0.00 ppm |
| Ammonia (NH ₄) | 0-500 (ppm) | 0.00 ppm |
| Calcium(Ca) | 0-10 (ppm) | 0.00 ppm |
| foreign amino acids | 0-0.5 (%) | 0.41 % |
| Sulfate(SO ₄ ²⁻) | 0-100 (ppm) | 0.00 ppm |
| Magnesium(Mg) | 0-5 (ppm) | 0.00 ppm |
| Iron(Fe) | 0-5 (ppm) | 0.00 ppm |
| Chloride (Cl ⁻) | 0-100 (ppm) | 40.00 ppm |
| Cadmium(Cd) | 0-5 (ppm) | 0.00 ppm |
| Copper(Cu) | 0-5 (ppm) | 0.00 ppm |
| Potassium(K) | 0-50 (ppm) | 2.00 ppm |
| Sodium(Na) | 0-50 (ppm) | 19.00 ppm |
| loss on drying, 110 °C | 0-0.5 (%) | 0.04 % |
| Bismuth(Bi) | 0-5 (ppm) | 0.00 ppm |

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|--|---|---|
| Zinc(Zn) | 0-5 (ppm) | 0.00 ppm |
| Chromium(Cr) | 0-5 (ppm) | 0.00 ppm |
| PH(25 °C, 0.1 M in Water) | 7-8 (%) | 7.53 % |
| Manganese(Mn) | 0-5 (ppm) | 0.00 ppm |
| Strontium(Sr) | 0-5 (ppm) | 0.00 ppm |
| (As)Arsenic | 0-0.1 (ppm) | 0.00 ppm |
| Appearance (H108262) | White to Off-White Solid, Powder, or Crystals | White to Off-White Solid, Powder, or Crystals |
| Infrared spectrum | Conforms to Structure | Conforms to Structure |
| Insoluble matter | pass | Pass |
| Solubility in H ₂ O,soluble,0.1M,20°C,clear,colorless | Pass | Pass |

John Su
QA & QC Manager