

## Certificate of Analysis

Date of Testing: 2023-02-21 18:34:59  
 Date of Next Testing: 2027-02-20 18:34:59  
 Product Name: **L-Histidine**  
 CAS Number: 71-00-1  
 Specifications & Purity: Ultra pure, ≥99.5%  
 Lot #: B2317111  
 SKU #: **H108262**  
**Analysis: 190386**

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 (%)	99.60800 %
Assay(Nonaqueous Titration)	99.5-100 (%)	99.72 %
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] <sub>20</sub> /D(c=2 in H <sub>2</sub> O)	-40--38 (°)	-38.01 °
A <sub>260</sub> UV Absorbance(0.1M,H <sub>2</sub> O)	0-0.05	0.05
Ignition Residue (as sulfate)	0-0.1 (%)	0.06 %
Cobalt(Co)	0-5 (ppm)	0.00 ppm
Aluminum(Al)	0-5 (ppm)	0.00 ppm
Ammonia (NH <sub>4</sub> )	0-500 (ppm)	0.00 ppm
Calcium(Ca)	0-10 (ppm)	0.00 ppm
foreign amino acids	0-0.5 (%)	0.23 %
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-100 (ppm)	33.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Iron(Fe)	0-5 (ppm)	0.00 ppm
Chloride (Cl <sup>-</sup> )	0-100 (ppm)	53.00 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)	2.00 ppm
loss on drying, 110 °C	0-0.5 (%)	0.33 %
Bismuth(Bi)	0-5 (ppm)	0.00 ppm
Zinc(Zn)	0-5 (ppm)	0.00 ppm
Chromium(Cr)	0-5 (ppm)	0.00 ppm

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Parameter	Limit Values	Result
PH(25 °C, 0.1 M in Water)	7-8 (%)	7.67 %
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 H2O,soluble,0.1M,20°C,clear,colorless	Pass	Pass

John Su  
QA & QC Manager