

ALADDIN SCIENTIFIC CORPORATION  
 14078 Meridian Parkway, Riverside, CA. 92518

### Certificate of Analysis

Date of Testing: 2026-06-16 16:48:18  
 Date of Next Testing: 2030-06-15 16:48:18  
 Product Name: **L-(+)-Lysine Monohydrochloride**  
 CAS Number: 657-27-2  
 Specifications & Purity: Ultra pure, ≥99.5%(AT)  
 Lot #: F2610038  
 SKU #: **L113005**  
 Version: **0**  
 Analysis #: **507571**  
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Strontium(Sr)	0-5 (ppm)	0.90000 ppm
Specific Rotation [a] <sub>20</sub> /D(c=5 in 5 M HCl)	20-21 (°)	20.15900 °
(Pb)Lead	0-5 (ppm)	1.20000 ppm
Iron(Fe)	0-5 (ppm)	0.60000 ppm
Molybdenum(Mo)	0-5 (ppm)	0.21000 ppm
foreign amino acids	0-0.3 (%)	0.00800 %
Chromium(Cr)	0-5 (ppm)	0.10000 ppm
Loss on drying	0-0.5 (%)	0.00400 %
Ammonia (NH <sub>4</sub> )	0-100 (ppm)	5.14100 ppm
UV Absorbance 280nm	0-0.1	0.00500
Lithium(Li)	0-5 (ppm)	0.50000 ppm
Magnesium(Mg)	0-5 (ppm)	0.90000 ppm
Barium(Ba)	0-5 (ppm)	1.08000 ppm
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-100 (ppm)	1.54000 ppm
(As)Arsenic	0-0.1 (ppm)	0.00900 ppm
Manganese(Mn)	0-5	1.08400
Aluminum(Al)	0-5 (ppm)	1.11000 ppm
Cobalt(Co)	0-5 (ppm)	0.05000 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.08000 %
Bismuth(Bi)	0-5 (ppm)	0.00540 ppm
UV Absorbance 260nm	0-0.1	0.08500
pH	5-6	5.10000
Zinc(Zn)	0-5 (ppm)	0.92100 ppm
Potassium(K)	0-50 (ppm)	0.09800 ppm
Nickel(Ni)	0-5 (ppm)	2.12000 ppm

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Sodium(Na)	0-50 (ppm)	0.94000 ppm
Cadmium(Cd)	0-5 (ppm)	2.62000 ppm
Copper(Cu)	0-5 (ppm)	1.06000 ppm
Calcium(Ca)	0-10 (ppm)	3.40000 ppm
Purity (Argentmetric Titration)	99.5-100 (%)	99.51000 %
Appearance (L113005)	White Powder or Crystals	White Powder or Crystals
Carbon NMR Spectrum	Conforms to Structure	Conforms to Structure
Insoluble matter	pass	Pass
Solubility in H <sub>2</sub> O , soluble , 1M , 20°C, clear, colorless	pass	Pass
$\lambda$ , 0.5 M in H <sub>2</sub> O	Pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure

John Su  
QA & QC Manager