

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-03-04 16:14:05  
 Date of Next Testing: 2026-03-03 16:14:05  
 Product Name: **L-(+)-Lysine Monohydrochloride**  
 CAS Number: 657-27-2  
 Specifications & Purity: Ultra pure, ≥99.5%(AT)  
 Lot #: B2226665  
 SKU #: **L113005**  
**Analysis:** **061020**  
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Strontium(Sr)	0-5 (ppm)	2.00 ppm
(Pb)Lead	0-5 (ppm)	2.30 ppm
Iron(Fe)	0-5 (ppm)	2.60 ppm
Molybdenum(Mo)	0-5 (ppm)	2.32 ppm
foreign amino acids	0-0.3 (%)	0.15 %
Chromium(Cr)	0-5 (ppm)	3.10 ppm
Loss on drying	0-0.5 (%)	0.25 %
Ammonia (NH4)	0-100 (ppm)	23.50 ppm
UV Absorbance 280nm	0-0.1	0.05
Lithium(Li)	0-5 (ppm)	3.00 ppm
Magnesium(Mg)	0-5 (ppm)	3.10 ppm
Barium(Ba)	0-5 (ppm)	2.32 ppm
Sulfate(SO42-)	0-100 (ppm)	20.56 ppm
(As)Arsenic	0-0.1 (ppm)	0.06 ppm
Manganese(Mn)	0-5	3.18
Aluminum(Al)	0-5 (ppm)	2.50 ppm
Cobalt(Co)	0-5 (ppm)	2.46 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.07 %
Bismuth(Bi)	0-5 (ppm)	2.01 ppm
UV Absorbance 260nm	0-0.1	0.05
PH	5-6	5.50
Zinc(Zn)	0-5 (ppm)	2.80 ppm
Potassium(K)	0-50 (ppm)	12.35 ppm
Nickel(Ni)	0-5 (ppm)	3.16 ppm
Sodium(Na)	0-50 (ppm)	12.58 ppm
Cadmium(Cd)	0-5 (ppm)	3.06 ppm

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Parameter	Limit Values	Result
Copper(Cu)	0-5 (ppm)	2.85 ppm
Calcium(Ca)	0-10 (ppm)	5.01 ppm
Specific Rotation [a] <sub>D</sub> 20/D(c=5 in 5 M HCl)	20-21 (°)	20.00°
Purity (Argentometric Titration)	99.5-100 (%)	99.96%
Appearance (L113005)	White Powder or Crystals	White Powder or Crystals
Infrared 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
λ, 0.5 M in H <sub>2</sub> O	Pass	Pass
Carbon NMR Spectrum	Conforms to Structure	Conforms to Structure

John Su  
QA & QC Manager