

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-08-11 16:28:15
 Date of Next Testing: 2027-08-10 16:28:15
 Product Name: **L-(+)-Lysine Monohydrochloride**
 CAS Number: 657-27-2
 Specifications & Purity: Ultra pure, ≥99.5%(AT)
 Lot #: K1912055
 SKU #: **L113005**
Analysis: **263122**
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Strontium(Sr)	0-5 (ppm)	3.05 ppm
Specific Rotation [α] ₂₀ /D(c=5 in 5 M HCl)	20-21 (°)	20.05°
(Pb)Lead	0-5 (ppm)	2.00 ppm
Iron(Fe)	0-5 (ppm)	1.99 ppm
Molybdenum(Mo)	0-5 (ppm)	3.00 ppm
foreign amino acids	0-0.3 (%)	0.01%
Chromium(Cr)	0-5 (ppm)	2.91 ppm
Loss on drying	0-0.5 (%)	0.10%
Ammonia (NH ₄)	0-100 (ppm)	50.91 ppm
UV Absorbance 280nm	0-0.1	0.01
Lithium(Li)	0-5 (ppm)	1.98 ppm
Magnesium(Mg)	0-5 (ppm)	2.00 ppm
Barium(Ba)	0-5 (ppm)	2.00 ppm
Sulfate(SO ₄ ²⁻)	0-100 (ppm)	81.30 ppm
(As)Arsenic	0-0.1 (ppm)	0.00 ppm
Manganese(Mn)	0-5	2.09
Aluminum(Al)	0-5 (ppm)	3.46 ppm
Cobalt(Co)	0-5 (ppm)	2.21 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.01%
Bismuth(Bi)	0-5 (ppm)	3.00 ppm
UV Absorbance 260nm	0-0.1	0.01
PH	5-6	5.38
Zinc(Zn)	0-5 (ppm)	2.00 ppm
Potassium(K)	0-50 (ppm)	23.81 ppm
Nickel(Ni)	0-5 (ppm)	2.51 ppm
Sodium(Na)	0-50 (ppm)	20.86 ppm

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Parameter	Limit Values	Result
Cadmium(Cd)	0-5 (ppm)	3.31 ppm
Copper(Cu)	0-5 (ppm)	0.04 ppm
Calcium(Ca)	0-10 (ppm)	5.60 ppm
Purity (Argentmetric Titration)	99.5-100 (%)	99.50%
Appearance (L113005)	White Powder or Crystals	White Powder or Crystals
Carbon NMR Spectrum	Conforms to Structure	Conforms to Structure
Infrared spectrum	Conforms to Structure	Conforms to Structure
Insoluble matter	pass	Pass
Solubility in H ₂ O , soluble , 1M , 20°C, clear, colorless	pass	Pass
λ, 0.5 M in H ₂ O	Pass	Pass

John Su
QA & QC Manager