

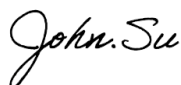
ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-06-28 10:33:14
 Date of Next Testing: 2027-06-27 10:33:14
 Product Name: **L(+)-Arginine hydrochloride**
 CAS Number: 1119-34-2
 Specifications & Purity: USP
 Lot #: F23251597
 SKU #: **L274353**
Analysis: 232132
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Assay(Perchloric acid titration, calc. on anhydrous substance)	98.5-101.5 (%)	100.28000 %
Ignition Residue (as sulfate)	0-0.1 (%)	0.07 %
Sulfate(SO42-)	0-0.03 (%)	0.00 %
Heavy metal (as Pb)	0-10 (ppm)	2.00 ppm
Chromatographic purity(Individual impurities)	0-0.5 (%)	0.40000 %
Chromatographic purity(Total impurities)	0-2 (%)	0.56800 %
Chloride (Cl-)	16.5-17.1 (%)	17.05 %
Specific Rotation [α] ₂₀ /D(c=80mg/mL in 6M HCl)	21.4-23.6 (°)	21.52000 °
Loss on drying	0-0.2 (%)	0.15 %
Arsenic(As)	0-1 (ppm)	0.00000 ppm
pH(1.0 g in 10 mL H ₂ O)	4.7-6.2	5.24000
Appearance(L274353)	white crystalline powder	white crystalline powder
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager