

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2025-10-16 13:23:48

Date of Next Testing: 2029-10-15 13:23:48

Product Name: **L(+)-Glutamic acid**

CAS Number: 56-86-0

Specifications & Purity: Ultra pure, ≥99.5%(NT)

Lot #: J2509418

SKU #: **G103979**

Version: **1**

Analysis #: **582408**

Storage Temperature: Room temperature, Argon charged, Desiccated, Cool

Parameter	Limit Values	Result
Chloride (Cl-)	0-0.02 (%)	0.01250 %
Ignition Residue (as sulfate)	0-0.05 (%)	0.01000 %
Sulfate(SO42-)	0-200 (ppm)	12.53600 ppm
Loss on drying	0-0.5 (%)	0.08000 %
foreign amino acids	0-0.5 (%)	0.10200 %
Purity(Nonaqueous Titration)(As drybase)	99-101 (%)	99.70000 %
Nickel(Ni)	0-5 (ppm)	2.50000 ppm
Calcium(Ca)	0-200 (ppm)	150.00000 ppm
Cadmium(Cd)	0-5 (ppm)	4.80000 ppm
Zinc(Zn)	0-5 (ppm)	3.20000 ppm
Iron(Fe)	0-5 (ppm)	1.80000 ppm
Potassium(K)	0-50 (ppm)	35.50000 ppm
Bismuth(Bi)	0-5 (ppm)	3.10000 ppm
Magnesium(Mg)	0-5 (ppm)	3.60000 ppm
Lithium(Li)	0-5 (ppm)	3.20000 ppm
Barium(Ba)	0-5 (ppm)	2.50000 ppm
Sodium(Na)	0-200 (ppm)	136.00000 ppm
Aluminum(Al)	0-5 (ppm)	3.50000 ppm
Cobalt(Co)	0-5 (ppm)	1.50000 ppm
(Pb)Lead	0-5 (ppm)	2.90000 ppm
Molybdenum(Mo)	0-5 (ppm)	1.38000 ppm
Chromium(Cr)	0-5 (ppm)	2.60000 ppm
Strontium(Sr)	0-5 (ppm)	1.95000 ppm
Copper(Cu)	0-5 (ppm)	4.00000 ppm
Ammonia (NH4)	0-0.02 (%)	0.02000 %

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Parameter	Limit Values	Result
UV Absorbance 260nm	0-0.1	0.09000
UV Absorbance 280nm	0-0.1	0.08000
Specific Rotation [α] ₂₀ /D(c=5 in 5 M HCl)	30.5-32.5 (°)	30.60000 °
Manganese(Mn)	0-5	3.50000
Appearance (G103979)	white powder to crystal	White powder to crystal
Infrared spectrum	Conforms to Structure	Conforms to Structure
λ, 1 M in 1 M HCl	Pass	Pass
Insoluble matter	pass	Pass
Solubility 1M HCl , soluble 1 M at 20°C, clear, colorless	pass	Pass



John Su
QA & QC Manager