

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

## Certificate of Analysis

Date of Testing: 2026-06-11 17:14:52  
 Date of Next Testing: 2030-06-10 17:14:52  
 Product Name: **L(+)-Glutamic acid**  
 CAS Number: 56-86-0  
 Specifications & Purity: Animal Free, USP, JP, Ph.Eur., for cell culture, ≥98.5%  
 Lot #: F2609402  
 SKU #: **G107510**  
 Version: **4**  
 Analysis #: **712664**  
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
(As)Arsenic	0-1 (ppm)	0.00000 ppm
PH test	3-3.5	3.12000
Loss on drying	0-0.1 (%)	0.09400 %
Endonuclease Detection	0-0.1 (EU/g)	0.02520 EU/g
Iron(Fe)	0-10 (ppm)	0.00000 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.00400 %
Chloride	0-0.02 (%)	0.00020 %
Heavy metal (as Pb)	0-10 (ppm)	0.00000 ppm
Sulfate(SO42-)	0-0.02 (%)	0.00780 %
Ammonia (NH4)	0-0.02 (%)	0.02000 %
Assay(dry basis)	98.5-101 (%)	100.55000 %
Specific Rotation [α] <sub>20</sub> /D(c=10 in 2N HCl)	31.5-32.5 (°)	31.52000°
Appearance (G107510)	White powder	White powder
Solubility,Colorless , Clear , 1.0 g to 10 ml of 2 M HCl	pass	Pass
Cell Culture Test	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure
Ninhydrin-positive substances (other amino acids)	Conforms	Conforms
Residual solvents	complies	complies



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A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager