

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2024-03-22 14:36:47

Date of Next Testing: 2028-03-21 14:36:47

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

CAS Number: 56-86-0

Specifications &amp; Purity: 99%

Lot #: C2414609

SKU #: **G103978****Analysis: 325310**

Parameter	Limit Values	Result
Specific Rotation [a] <sub>D</sub> 20/D(c=10 in 2N HCl)	30.5-32.5 (°)	31.90°
Purity(as dry basis)	99-100 (%)	99.00%
Loss on drying	0-0.5 (%)	0.30%
As <sub>2</sub> O <sub>3</sub>	0-1 (ppm)	0.40 ppm
Iron(Fe)	0-30 (ppm)	10.00 ppm
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-300 (ppm)	20.00 ppm
Sulfate Ash	0-0.1 (%)	0.02%
Ammonia (NH <sub>4</sub> )	0-200 (ppm)	30.00 ppm
Chloride (Cl <sup>-</sup> )	0-200 (ppm)	40.00 ppm
Heavy metal (as Pb)	0-10 (ppm)	2.00 ppm
Appearance (G103978)	white powder	White powder
Infrared spectrum	Conforms to Structure	Conforms to Structure
Other amino acids	Not detected	Not detected

John Su  
QA & QC Manager