



Certificate of Analysis

L-Glutamic Acid JP

Catalog Number: GA1005
Lot Number: 1006601
CAS Number: 56-86-0
Synonym(s): (S)-2-Aminopentanedioic acid, Glu
Molecular Formula: C₅H₉O₄N
Molecular Weight: 147.13
Storage: 15°C – 30°C
Date of Manufacture: March 6, 2016
Retest Date: March 5, 2018

Test	Specification	Result
Appearance	White powder	Conforms
Assay	99.0 – 100.5%	99.74%
Identification (FTIR)	To match reference spectra	Conforms
Specific Rotation	+31.5° to +32.5°	+31.69°
State of Solution	Clear & colorless	Conforms
Transmittance	≥ 98.0%	99.1%
pH	3.0 – 3.5	3.3
Moisture (LOD)	≤ 0.2%	0.12%
Residue on Ignition	≤ 0.1%	0.04%
Other Amino Acids	To meet requirements	Conforms
Ammonium	≤ 0.02%	< 0.02%
Chloride	≤ 0.02%	< 0.02%
Sulfate	≤ 0.02%	< 0.02%
Heavy Metals	≤ 0.0015%	< 0.001%
Arsenic	≤ 1ppm	< 1ppm
Cadmium	≤ 1ppm	< 1ppm
Iron	≤ 10ppm	< 10ppm
Mercury	≤ 0.1ppm	< 0.1ppm
Total Plate Count	≤ 1,000cfu/g	< 1,000cfu/g
Yeast & Mold	≤ 100cfu/g	< 100cfu/g
Coliforms	≤ 100cfu/g	< 100cfu/g
<i>E. coli</i>	Negative/25g	Negative
<i>Salmonella</i>	Negative/25g	Negative
<i>S. aureus</i>	Negative/25g	Negative

Approved by:

Date: October 10, 2016



Gojira Fine Chemicals, LLC

Quality Products & Services Meeting Customer Needs
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