

**MP Biomedicals, LLC**

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Certificate of Analysis

Product Description: Ala-Gln_

Catalog Number: 199619_

Lot: M4867_

Formula: $C_8H_{15}N_3O_4$

CAS #: 39537-23-0

Physical Description: White Powder

Formula Weight: 217.22

Storage: -0°C

Test	Specification	Result
Identity Test	Passes	Passes

Specific Rotation: +10.6°

FTIR: Conforms

Acidity: 5.7

Clarity and Color of Solution: Clear and Colorless

Chloride: #0.02%

Ammonium: #0.02%

Heavy Metals: #10 ppm

Residue on Ignition: 0.08%

Related substances:

- Cyclo(1-alanyl-L-glutamine)/N(2)-L-Alanyl-L-glutamine: 0.007%
- L-Pyroglutamyl-L-alanine/N(2)-L-Alanyl-L-glutamine: Not Detected
- L-Pyroglutamic acid/N(2)-L-Alanyl-L-glutamine: Not Detected
- D-Alanyl-L-glutamine (or L-Alanyl-D-glutamine): 0.02%
- L-Alanyl-L-glutamic acid/N(2)-L-Alanyl-L-glutamine: 0.01%
- Other Unknown Individual Impurities: #0.2%
- Other Unknown Total Impurities: #0.5%

Loss on Drying: 0.09%

Iron: #0.001%

Arsenic: #0.0001%

Sulfate: #0.02%

Bacterial Endotoxin: #2.5 EU/g

Assay: 103.4%

Christina Marotta

MP Biomedicals, LLC.

Technical Director

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Online Ordering, MSDSs, certificates of analysis and data sheets now available on our web site

Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)