



MP Biomedicals, LLC

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Certificate of Analysis

Product Description: L-Proline, cell culture reagent
Catalog Number: 194728
Lot: R26225

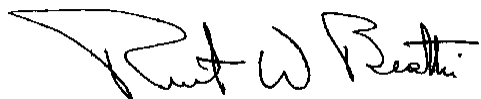
Formula: C₅H₉NO₂
CAS #: 147-85-3
Physical Description: White Powder

Formula Weight: 115.10
Storage: Room Temperature

Test	Specification	Result
Identity Test	Passes	Passes
Purity	≥99%	100.2%
FTIR	Conforms to Standard	Conforms to Standard
Loss on Drying	≤0.4%	0.1%
Optical Rotation (c=1.6, water)	-82° to -85°	-85.0°
Hydroxy-L-proline	Free	Free

Chloride: <0.020%
Chromatographic Impurity: <0.5% for individual;
<2.0% for total impurities
Other Amino Acids: Chromatographically undetectable:
Residual Solvents: Pass
Residue on Ignition: 0.05%
Sulfate: <0.020%
Transmittance: 99.0%
Iron: <10 ppm
E.coli: Negative
Salmonella: Negative
Total Plate Count: <1,000 cfu/g
Yeast & Mold: <100 cfu/g
Mesh Size: 60-80 mesh
pH Value: 6.4
Heavy Metals: <10 ppm
Ammonium: <0.02%
Melamine: Negative

Arsenic: <1 ppm

A handwritten signature in black ink that reads "Robert W. Beattie". The signature is written in a cursive style with a large, sweeping initial "R".

12/28/2009 - Robert Beattie

MP Biomedicals, LLC.

Technical Director

This is an electronically generated document

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<http://www.mpbio.com>

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)