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Certificate of Analysis

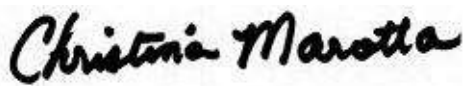
Product Description: L-Histidine Monohydrochloride Monohydrate
Catalog Number: 101957
Lot: M6791

Formula: $C_6H_9N_3O_2 \cdot HCl \cdot H_2O$
CAS #: 5934-29-2
Physical Description: White Powder

Formula Weight: 209.6
Storage: Room Temperature

Test	Specification	Result
Identity Test	Passes	Passes
FTIR	Conforms to Standard	Conforms to Standard
pH (2% aq soln)	3 - 5	3.8
Loss on Drying	$\leq 1\%$	0.12%
Optical Rotation	$+9.5^\circ \pm 1^\circ$ (c = 1, 6N HCl)	$+9.10^\circ$

Assay: 99.80%
Residue on Ignition: 0.02%
Chloride: 17.080%
Sulfate: <0.02%
Transmittance: >98.5%
Other Amino Acids: Meets the Requirement
Ammonia: <0.02%
Heavy Metals: ≤ 10 ppm
Arsenic: <1.000 ppm
Cadmium: <0.1000 ppm
Lead: <0.5000 ppm
Mercury: <0.3000 ppm
Iron: 7.0 ppm
Total Plate Count: <1,000 cfu/g
Yeast & Mold: <100 cfu/g
E. coli: Negative
Coliforms: <100 cfu/g
Salmonella: Negative
Staphylococcus aureus: Negative
Mesh Size:
- >90% thru 20 mesh
- 83.1% thru 40 mesh
Bulk Density: 0.73 g/ml
Tap Density: 0.80 g/ml



05/22/2013 - Christina Marotta
MP Biomedicals, LLC.
Technical Director

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