

## Certificate of Analysis

Date of Testing: 2022-02-08 11:06:12  
 Date of Next Testing: 2026-02-07 11:06:12  
 Product Name: **L-Histidine**  
 CAS Number: 71-00-1  
 Specifications & Purity: EP,USP ,from non-animal source,for cell culture  
 Lot #: A2219458  
 SKU #: **H108261**  
**Analysis: 056534**

Parameter	Limit Values	Result
PH test	7-8.5	8.10
Ammonia (NH <sub>4</sub> )	0-0.02 (%)	0.01 %
Assay	98.5-100 (%)	99.85 %
Specific Rotation [a] <sub>20</sub> /D(c=11 in 6M HCl/EP)	12-12.8 (°)	12.02 °
Loss on drying	0-0.2 (%)	0.10 %
Chloride	0-0.02 (%)	0.00 %
(As)Arsenic	0-1 (ppm)	0.60 ppm
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-0.02 (%)	0.01 %
Ignition Residue (as sulfate)	0-0.1 (%)	0.05 %
Heavy metal (as Pb)	0-10 (ppm)	5.00 ppm
Endonuclease Detection	0-0.1 (EU/g)	0.06 EU/g
Specific Rotation [a] <sub>25</sub> /D(c=11 in 6M HCl/USP)	12.6-14 (°)	12.82 °
Appearance (h108261)	White to Off-White Powder	White to Off-White Powder
Cell Culture Test	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure
Ninhydrin-positive substances (other amino acids)	Conforms	Conforms
Origin	non-animal source	non-animal source
Residual solvents	complies	complies
Solubility in H <sub>2</sub> O , Colorless solution 0.5G/10MLwater	pass	Pass



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A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su  
QA & QC Manager