

Certificate of Analysis

Date of Testing: 2023-05-04 15:43:52
 Date of Next Testing: 2027-05-03 15:43:52
 Product Name: **L-Cysteine hydrochloride monohydrate**
 CAS Number: 7048-04-6
 Specifications & Purity: from non-animal source, cell culture tested, meets EP, USP
 Lot #: D2324143
 SKU #: **C118575**
Analysis: **092637**
 Storage Temperature: Protected from light, Argon charged

Parameter	Limit Values	Result
Ignition Residue	0-0.1 (%)	0.03%
Purity(titration with AgNO ₃)(dry basis)	98.5-101 (%)	99.60%
Sulfate(SO ₄ ²⁻)	0-0.02 (%)	0.01%
Loss on drying	8.5-12 (%)	9.74%
Iron(Fe)	0-10 (ppm)	8.50 ppm
Ammonia (NH ₄)	0-0.02 (%)	0.01%
Heavy metal (as Pb)	0-10 (ppm)	9.10 ppm
Endotoxin Assay	0-1 (EU/mg)	0.80 EU/mg
Specific Rotation [α] ₂₀ /D(c=8 in 1 M HCl)	6.1-7.8 (°)	6.12°
PH(1% in Water)	1.5-2	1.56
Chloride (Cl ⁻)	19.89-20.29 (%)	19.92%
Appearance (C118575)	White Crystals, Powder or Crystalline Solid	White Crystals, Powder or Crystalline Solid
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 ₂ O , Colorless Clear 100 mg/ml	pass	Pass



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A handwritten signature in black ink that reads "John Su".

John Su
QA & QC Manager