

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing:	2024-07-20 16:18:45
Date of Next Testing:	2028-07-19 16:18:45
Product Name:	<b>L-Cysteine hydrochloride monohydrate</b>
CAS Number:	7048-04-6
Specifications & Purity:	from non-animal source, cell culture tested, meets EP, USP
Lot #:	G2415169
SKU #	<b>C118575</b>
Version	<b>0</b>
<b>Analysis #:</b>	<b>342635</b>
Storage Temperature:	Protected from light, Argon charged

Parameter	Limit Values	Result
Ignition Residue	0-0.1 (%)	0.00%
Sulfate(SO42-)	0-0.02 (%)	0.01%
Loss on drying	8.5-12 (%)	9.04%
Iron(Fe)	0-10 (ppm)	0.00 ppm
Specific Rotation [α] <sub>20</sub> /D(c=8 in 1 M HCl)	6.1-7.8 (°)	6.24°
Ammonia (NH <sub>4</sub> )	0-0.02 (%)	0.01%
PH( 1% in Water)	1.5-2	1.81
Heavy metal (as Pb)	0-10 (ppm)	0.00 ppm
Purity(titration with AgNO <sub>3</sub> )(dry basis)	98.5-101 (%)	100.95 %
Endotoxin Assay	0-1 (EU/mg)	0.03 EU/mg
Chloride (Cl <sup>-</sup> )	19.89-20.29 (%)	19.89%
Appearance (C118575)	White Crystals, Powder or Crystalline	White Crystals, Powder or Crystalline
	Solid	Solid
Solubility in H <sub>2</sub> O , Colorless Clear 100 mg/ml	pass	Pass
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



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

John Su  
QA & QC Manager