

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2026-04-02 18:58:42

Date of Next Testing: 2029-04-01 18:58:42

Product Name: **L-Cysteine hydrochloride monohydrate**

CAS Number: 7048-04-6

Specifications & Purity: UltraBio™, Ultra pure, ≥99%(T)

Lot #: C2616843

SKU #: **L433360**

Version: **2**

Analysis #: **665427**

Storage Temperature: Protected from light, Room temperature, Argon charged

Parameter	Limit Values	Result
Specific Rotation [α] _{20/D} (c=5 in 5 M HCl)	5.3-5.9 (°)	5.50000 °
Sulfated Ash	0-0.05 (%)	0.02500 %
PH(1M Water)	0.8-1.0	0.90000
UV-ABS.at 260 nm	0-1	1.00000
UV-ABS.at 280 nm	0-0.3	0.20000
Aluminium(Al)	0-10 (ppm)	5.20000 ppm
Barium(Ba)	0-5 (ppm)	2.50000 ppm
Bismuth(Bi)	0-5 (ppm)	2.30000 ppm
Calcium(Ca)	0-10 (ppm)	0.60000 ppm
Cadmium(Cd)	0-5 (ppm)	1.21000 ppm
Cobalt(Co)	0-5 (ppm)	2.10000 ppm
Chromium(Cr)	0-5 (ppm)	1.62000 ppm
Copper(Cu)	0-5 (ppm)	1.55000 ppm
Iron(Fe)	0-5 (ppm)	2.10000 ppm
Potassium(K)	0-50 (ppm)	1.54200 ppm
Lithium(Li)	0-5 (ppm)	2.41000 ppm
Magnesium(Mg)	0-5 (ppm)	1.07400 ppm
Manganese(Mn)	0-5 (ppm)	1.85000 ppm
Molybdenum(Mo)	0-5 (ppm)	1.85000 ppm
Sodium(Na)	0-100 (ppm)	20.52000 ppm
Nickel(Ni)	0-5 (ppm)	1.41000 ppm
Lead(Pb)	0-5 (ppm)	1.51240 ppm
Strontium(Sr)	0-5 (ppm)	1.65200 ppm
Zinc(Zn)	0-5 (ppm)	0.85500 ppm
Arsenic traces(MHS-AAS)	0-0.5 (ppm)	0.22000 ppm

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Parameter	Limit Values	Result
Sulfate(SO ₄ ²⁻)	0-200 (ppm)	10.29000 ppm
Ion chromatography(NH ₄ ⁺)	0-500 (ppm)	3.65500 ppm
Purity(redox titration)	99-101.5 (%)	101.45000 %
Appearance(L433360)	Colorless or White Crystals	Colorless or White Crystals
NMR Spectrum 1H	Conforms to structure	Conforms to Structure

A handwritten signature in black ink that reads "John Su".John Su
QA & QC Manager