

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2026-06-10 17:04:33

Date of Next Testing: 2029-06-09 17:04:33

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

CAS Number: 7048-04-6

Specifications & Purity: PharmPure™, USP, JP, Ph.Eur.

Lot #: GMF2608470

SKU #: **L433361**

Version: **3**

Analysis #: **722141**

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

Parameter	Limit Values	Result
Assay(alkalimetric , calculated on dried substance)	98.5-101 (%)	99.17000 %
PH(10g/l,CO2-free water)	1.3- 2.3	1.73000
Specific Rotation [α] ₂₀ /D(C=8 in hydrochloric acid R1,calc.on dried substance)	5.5-7 (°)	6.46000 °
Specific Rotation [α] ₂₀ /D(C=8 in 6N HCl,calc. on dried substance)	6-7.5 (°)	6.46000 °
Specific Rotation [α] ₂₅ /D(C=8 in 6N HCl , calc.on dried substance)	5.7-6.8 (°)	6.20000 °
Related Compounds(Individual impurities)	0-0.5 (%)	0.00000 %
Related Compounds(Total impurities)	0-2 (%)	0.00000 %
Ninhydrin-positive substances(LC)(impurity A(570nm)	0-0.5 (%)	0.20000 %
Ninhydrin-positive substances(LC)(any ninhydrin-positive impurity)	0-0.2 (%)	0.05000 %
Ninhydrin-positive substances(LC) (ammonium(570nm)	0-0.02 (%)	0.00000 %
Ninhydrin-positive substances(LC)(total impurities)	0-1 (%)	0.20000 %
Sulfate(SO ₄)	0-210 (ppm)	15.50552 ppm
Heavy metals	0-10 (ppm)	0.00000 ppm
Fe(iron)	0-10 (ppm)	4.64000 ppm
Residue on Ignition	0-0.1 (%)	0.02400 %
Loss on drying (Vacuum< 2,0 kPa, P ₂ O ₅ ,20 h)	8.5-12.0 (%)	10.27000 %
Bacterial endotoxins	0-6 (IU/g OR u/g)	0.00000 IU/g OR u/g

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Parameter	Limit Values	Result
Microbiological test(total aerobic microbial count(TAMC))	0-100 (CFU/g)	0.00000 cfu/g
Microbiological test(total yeast and mould count(TYMC))	0-100 (CFU/g)	0.00000 cfu/g
Appearance(L433361)	white or almost white, crystalline powder or colourless crystals	White or almost white, crystalline powder or colourless crystals
Solubility:freely soluble in water, slightly soluble in ethanol (96 per cent)	Pass	Pass
Identity (IR-spectrum)	conforms	Conforms
Identity(specific rotation)	Pass	Pass
Identity(TLC)	Passes test	Passes test
Identify(EP)(D)	Pass	Pass
Identity(EP)(E)	conforms	Conforms
Appearance of solution,clear and not more intense in color than reference solution BY6	Pass	Pass
Residual solvents (ICH (Q3C))excluded by manufacturing process	pass	Pass



John Su
QA & QC Manager