

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2024-05-13 19:05:07  
 Date of Next Testing: 2028-05-12 19:05:07  
 Product Name: **L-Cystine**  
 CAS Number: 56-89-3  
 Specifications & Purity: Ultra pure , 99.5%  
 Lot #: D2428163  
 SKU #: **C108227**  
**Analysis:** **339783**  
 Storage Temperature: Protected from light, Desiccated

Parameter	Limit Values	Result
Zinc(Zn)	0-5 (ppm)	0.00 ppm
Potassium(K)	0-50 (ppm)	0.00 ppm
Calcium(Ca)	0-50 (ppm)	0.00 ppm
Cadmium(Cd)	0-5 (ppm)	0.00 ppm
Sodium(Na)	0-150 (ppm)	0.00 ppm
Purity(HPLC)	99.5-100 (%)	99.92400 %
(Pb)Lead	0-5 (ppm)	0.00 ppm
Chloride (Cl-)	0-500 (ppm)	0.00 ppm
Iron(Fe)	0-10 (ppm)	0.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Chromium(Cr)	0-5 (ppm)	0.00 ppm
Nickel(Ni)	0-5 (ppm)	0.00 ppm
Loss on drying	0-0.1 (%)	0.00 %
Manganese(Mn)	0-5	0.00
Cobalt(Co)	0-5 (ppm)	0.00 ppm
Sulfate(SO42-)	0-100 (ppm)	0.00 ppm
Copper(Cu)	0-6 (ppm)	0.00 ppm
Sulfate Ash	0-0.1 (%)	0.02 %
Specific Rotation [α] <sub>20</sub> /D(c=2 in 1 M HCl)	-224--214 (°)	-214.74 °
Insoluble matter	pass	Pass
Appearance(C108227)	Colorless or White Powder to Crystals	Colorless or White Powder to Crystals
Infrared spectrum	Conforms to Structure	Conforms to Structure



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

John Su  
QA & QC Manager