

## Certificate of Analysis

Date of Testing: 2024-03-07 13:43:59  
Date of Next Testing: 2028-03-06 13:43:59  
Product Name: **L-Cystine**  
CAS Number: 56-89-3  
Specifications & Purity: 99%  
Lot #: C2405290  
SKU #: **C108225**  
**Analysis:** **322347**  
Storage Temperature: Protected from light,Desiccated

Parameter	Limit Values	Result
Specific Rotation [a] <sub>D</sub> 20/D(c=1 in 1mol/L HCl)	-230--215 (°)	-221.00 °
Sulfate Ash	0-0.1 (%)	0.03 %
Heavy metal (as Pb)	0-10 (ppm)	1.36 ppm
Loss on drying(105°C, 3h)	0-0.5 (%)	0.10 %
Carbon by Elemental Analysis	29.4-30.6 (%)	29.41 %
Nitrogen by Elemental Analysis	11.4-11.9 (%)	11.45 %
Purity(HPLC)	99-100 (%)	99.80000 %
Infrared spectrum	Conforms to Structure	Conforms to Structure
Appearance (C108225)	White to Off-White Powder	White to Off-White Powder
Solubility in 1 M HCl , Colorless to Light Yellow,Clear,50 mg/mlpass		Pass



John Su  
QA & QC Manager