

## Certificate of Analysis

Date of Testing: 2023-03-12 22:33:39  
Date of Next Testing: 2027-03-11 22:33:39  
Product Name: **L-Cysteine hydrochloride monohydrate**  
CAS Number: 7048-04-6  
Specifications & Purity: 99%  
Lot #: C2306505  
SKU #: **C110436**  
**Analysis:** **108750**  
Storage Temperature: Protected from light,Argon charged,Desiccated

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D}(c=8 \text{ in } 1\text{mol/L HCl})$	5-7 (°)	5.56 °
Purity(Iodometric Titration)(calcd.on anh.substance)	99-100 (%)	99.11%
Loss on drying (P2O5 , vacuum drier)	8.5-12 (%)	8.52000 %
Appearance (C110436)	White Crystals, Powder or Crystalline Solid	White Crystals, Powder or Crystalline Solid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility,Colorless and clear(5% in H2O)	pass	Pass



John Su  
QA & QC Manager