

## Certificate of Analysis

Date of Testing: 2022-06-20 09:38:47  
 Date of Next Testing: 2026-06-19 09:38:47  
 Product Name: **(+)-Cinchonine**  
 CAS Number: 118-10-5  
 Specifications & Purity: 98%  
 Lot #: F2216249  
 SKU #: **C106926**  
**Analysis:** **077325**  
 Storage Temperature: Store at 2-8°C

Parameter	Limit Values	Result
Loss on drying	0-1 (%)	0.05 %
Purity(HPLC) (~85%Cinchonine+~15% dihydrocinchonine)	98-100 (%)	99.36 %
Quinidine	0-3 (%)	1.50 %
Sulfate Ash	0-0.1 (%)	0.06 %
Quinine	0-3 (%)	1.20 %
Purity(Nonaqueous Titration)	98-100 (%)	98.01 %
Specific Rotation $[\alpha]_{20/D}(c=0.5 \text{ in EtOH})$	218-228 (°)	227.56 °
Appearance (C106926)	white to grey powder or crystals	white to grey powder or crystals
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager