

## Certificate of Analysis

Date of Testing: 2024-11-26 14:32:10  
Date of Next Testing: 2028-11-25 14:32:10  
Product Name: **(+)-Cinchonine**  
CAS Number: 118-10-5  
Specifications & Purity:  $\geq 98\%$   
Lot #: K2425024  
SKU #: **C106926**  
Version: **0**  
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