

## Certificate of Analysis

Date of Testing: 2022-08-31 17:11:20  
 Date of Next Testing: 2026-08-30 17:11:20  
 Product Name: **Quinine sulfate dihydrate**  
 CAS Number: 6119-70-6  
 Specifications & Purity: biological reagent grade , 99.0%,BioReagent, suitable for fluorescence  
 Lot #: H2229518  
 SKU #: **Q110176**  
**Analysis: 116096**  
 Storage Temperature: Store at 2-8°C

Parameter	Limit Values	Result
Water by Karl Fischer	2-6 (%)	5.20 %
Specific Rotation [α] <sub>20</sub> /D(c=2 in 0.1 M HCl)	-235--225 (°)	-226.03 °
Purity (Titration by NaOH)(anhydrous)	98.5-101.5 (%)	99.41 %
dihydroquinine sulfate (HPLC)	0-10 (%)	7.06 %
Appearance (Q110176)	White to Off-White Powder	White to Off-White Powder
Fluorescence, λ <sub>ex</sub> 347 nm; λ <sub>em</sub> 448 nm in 0.5 M sulfuric acid	Conforms	Conforms
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
suitability for fluorescence	pass	Pass



John Su  
QA & QC Manager