

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

Catalogue Number	41878
Lot Number	A0479787
Description	Quinine sulfate dihydrate, specified according to the requirements of USP
CAS Number	6119-70-6
Quality Test/Release Date	21/Jan/2026
Suggested retest date	21/Jan/2031
Country of Origin	CHINA
Declaration of Origin	plant

Result Name	Units	Specifications	Test Value
Appearance (Color)		White	White
Appearance (Form)		Powder or crystals or needles	Powder
Identification A		Passes test	Passes test
Identification B		Passes test	Passes test
Identification C		Passes test	Passes test
Titration with HClO ₄	%	99.0 to 101.0 (on anhydrous basis)	100.4 (on anhydrous basis)
Water	%	4.0 to 5.5 (K.F.)	4.7 (K.F.)
Residue after ignition	%	=<0.1	none detected
Heavy metals	ppm	=<10	=<10
Insoluble matter	%	=<0.1 (in mixture of chloroform-alcohol (2:1))	=<0.1 (in mixture of chloroform-alcohol (2:1))
Organic impurities		Passes test	Passes test
Dihydroquinine sulfate	%	=<10.0	6.8
Specific optical rotation		-235° to -245° (20°C, 589 nm) (c=2, 0.1 N HCl)	-239° (20°C, 589 nm) (c=2, 0.1 N HCl)
Specific optical rotation		on anhydrous basis	on anhydrous basis

Geert Torfs
Supervisor, QC

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.