

Certificate of Analysis

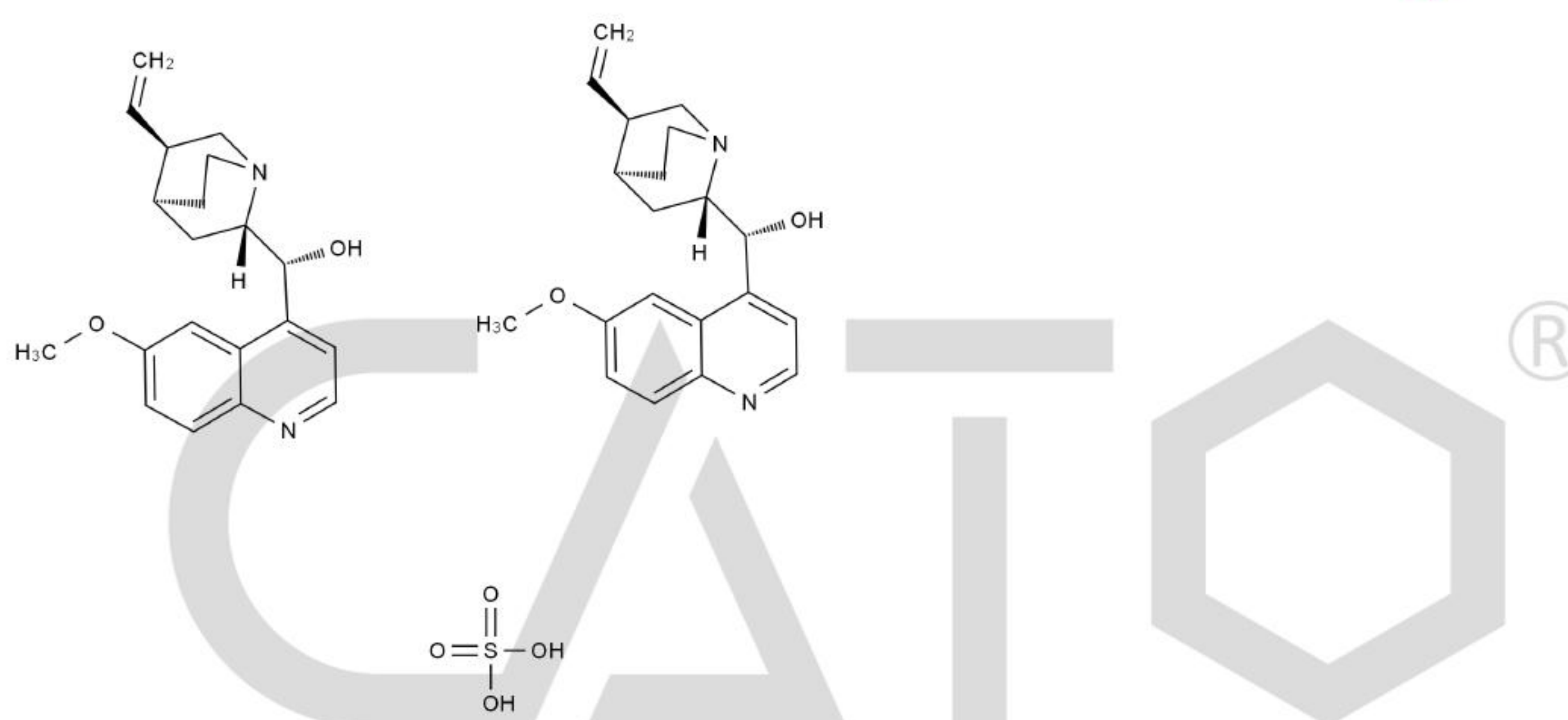
Reference Material & Standard

Product Name:	Quinine Sulfate	Catalogue Number:	CCFD201149
Synonyms:	N/A	Lot Number:	0528-RF-0003
CAS Number:	804-63-7	Expiry Date:	Jun 03, 2028
Molecular Formula:	2*C ₂₀ H ₂₄ N ₂ O ₂ ·H ₂ O ₄ S	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	2*324.42 98.08	Shipping Condition:	Shipping at Room Temperature

Warning:



Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	95.493%
Water Content	Karl Fischer	7.7156%
Assay		88.1%
Uncertainty		±2.0%

Comment:

1. The calculation of the mass balance method follows the formula (calculated on the non-dried basis):

$$\text{Assay (\%)} = (100\% - \text{Water Content}) * \text{Purity HPLC (\%)} / 100\%$$

Water Content is considered as absolute effect, HPLC purity is considered as relative effect.

2. The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by:

Nice

Reviewed by:

Lisa

Approved by General Manager:

David

Date: Jun 04, 2024

Date: Jun 04, 2024

Date: Jun 04, 2024



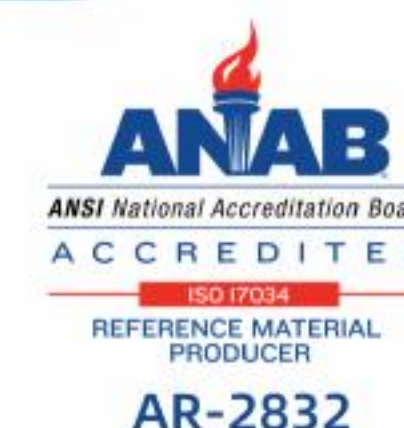
Add: 3rd Floor, Building B, No.179, Guangpu Rd East, Huangpu District, Guangzhou, China

Tel: +86-20-81960175

Email: supports@cato-chem.com

Web: <https://www.cato-chem.com>

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