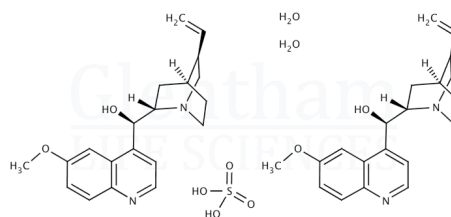


## Certificate of Analysis

Product Name	Quinine sulfate hydrate
Glentham Code	GE0921
CAS Number	6119-70-6
EINECS	212-359-2
MDL Number	MFCD00150792
Additional CAS	207671-44-1
PubChem SID	310279543
Batch Number	344FVU
Molecular Weight	391.47
Molecular Formula	$C_{20}H_{24}N_2O_2 \cdot 0.5H_2O_4S \cdot H_2O$
Storage Temp.	+20°C



Property	Specification	Batch 344FVU
Physical Description	White or almost white, crystalline powder or fine, colourless needles	White crystalline powder
Identification	Identification tests A, B, C, D, E	Conforms
Appearance of Solution	Clear, and colour $\leq$ GY6	Conforms
pH (1% solution)	5.7 - 6.6	6.3
Specific Optical Rotation	-237 - -245 °	-242°
Other Cinchona Alkaloids	Dihydroquinine Sulphate: $\leq$ 10.0%	6.1%
	Any impurity eluted before Quinine: $\leq$ 5.0%	2.5%
	Any other impurity: $\leq$ 2.5%	Conforms
Loss on Drying	3.0 - 5.0 %	4.7%
Sulphated Ash	$\leq$ 0.1%	$\leq$ 0.1%
Heavy Metals	$\leq$ 10ppm	Conforms
Residual Solvents	Conforms to requirements	Conforms
Content	99.0 - 101.0 % (alkaloid monosulphates, dried 99.8% basis)	
Pharmacopoeia Specification(s)	Conforms to BP, EP	Conforms
Specification Version	v1.0	
Manufacture Date	2017-08-17	
Re-Test Date	2029-03-24	

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glentham.com](http://www.glentham.com) or contact us using the details above for the current version of this document.

This document was generated electronically and is therefore valid without signature. © Glentham Life Sciences Ltd, 2024