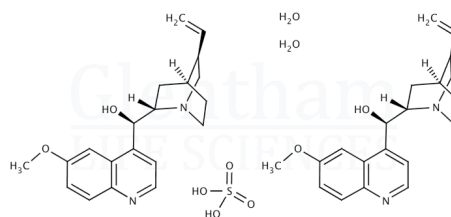


Certificate of Analysis

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 or contact us using the details above for the current version of this document.

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