



PT. SINKONA INDONESIA LESTARI

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CERTIFICATE OF ANALYSIS

No.: 247/1601/KN/09/17

Name of Product: Quinine Sulfate EP Grade			
Manufacturer : PT. Sinkona Indonesia Lestari Batch No. : KS.1709013 Mfg. Date : September 13, 2017 Expiry Date : September 13, 2022 Quantity : 500 kgs		DELIVERED TO: ARNOLD SUHR NETHERLANDS B.V. STEIJNLAAN 26 1217 JS HILVERSUM THE NETHERLANDS TEL. : +31 30 2481010 ; FAX. : +31 30 2414636 PURCHASE ORDER NO.: 7170257 DATED 12-09-2017	
TEST RESULT ACCORDING TO THE EUROPEAN PHARMACOPOEIA 8.6			
No.	TEST	SPECIFICATION	RESULT
1.	Appearance	White or almost white, crystalline powder or fine, colourless needles.	Conform
2.	Solubility	Slightly soluble in water, sparingly soluble in boiling water and in ethanol (96 per cent).	Conform
3.	Identification		Conform
	A. Test Chromatogram TLC	The principal spot sample similar with the reference solution	
	B. Test Bromine and Ammonia	A green colour develops	Conform
	C. Test Fluorescence	An intense blue fluorescence appears which disappear on addition of hydrochloric acid	Conform
	D. Test of sulfates	The solution gives the reaction of sulphates	Conform
4.	Appearance of Solution Solution S (0.5 g in 25 ml 0.1 M hydrochloric acid)	Solution is clear and not more intensely coloured than reference solution GY _s .	Conform
5.	Acidity pH (1% suspension in water)	5.7 to 6.6	6.27
6.	Specific Optical Rotation. (2%w/v solution in 0.1M HCl)	-237° to -245° Calculated on the dried basis.	-240.21°
7.	Other Cinchona Alkaloids By HPLC		
	A. Dihydroquinine	A. Max. 10%	A. 3.98%
	B. Any impurity eluted before quinine	B. Max. 5%	B. 1.58%
	C. Any other impurity	C. Max. 0.2%	C. 0.00%
	D. Disregard limit	D. Max. 0.2%	D. 0.00%
8.	Loss on drying (105°C for 3 h)	3.0% to 5.0%	3.37%
9.	Sulfated Ash	Max. 0.10%	0.03%
10.	Assay By non-aqueous titration with 0.1N HClO ₄	99.0% to 101.0% Calculated on the dried basis.	99.66%
11.	Residual Solvent		
	A. Toluene	Max. 5 ppm	0.00 ppm
	B. Benzene	Max. 2 ppm	0.00 ppm

Ciater, September 19, 2017

PT. Sinkona Indonesia Lestari
Ciater - Subang

Bangbang Budiman

Assistant Manager of QC

