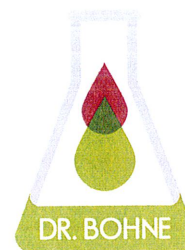


Certificate of Analysis

Dr. Bohne Nachf. GmbH & Co. KG
Kosm. / Pharm. Produkte
D - 58332 Schwelm

Mittelstr. 28-30
Phone : +49-2336/9183-0
Fax : +49-2336/918322



Quality Unit

Product	: Hydroquinone USP	CAS-Nr.	: 123-31-9
Quantity	: 100 kg	Batch No.	: 16/10170
Material No.	: 8478	Contract No.	: 9097
Customer No.	: 22102	Account No.	: 16194
Address	: Kraeber & Co. GmbH. Waldhofstr. 14, 25474 Ellerbek	Order No.	: 21665

3987
N/2

Productname	: Hydroquinone USP	ProductNo.	: 0280101025
Customer		Customer	Kraeber GmbH.

Test parameter	Method	Specification	Result
Appearance		fine, crystalline powder	fine, crystalline powder
Color		colorless - white	colorless - white
Solubility		soluble in water, alcohol and ether	soluble in water, alcohol and ether
Identity A	IR 197K	Corresponds to standard	complies
Identity B	TLC 621	Corresponds to standard	complies
Identity C	UV	max.293+/-2 nm	294 nm
Melting range	741	172 – 174 ° C	174 ° C
Residue on ignition	281	max. 0,5 %	0,0 %
Water	921 (K.F.)	max. 0,5 %	0,3 %
Assay (calc. on anhyd. basis)	USP monograph	99,0 – 100,5 %	100,2 %
Residual solvents	467	Methylenchloride $\leq$ 600 ppm	97 ppm
		Ethanol $\leq$ 5000 ppm	not detected
		Benzene $\leq$ 2 ppm	not detected
		Methylisobutylketone $\leq$ 5000 ppm	not detected

Additional tests

Microbiological contamination*

(*One batch per year.)

TAMC	61	$\leq 10^3$ CFU/g	<100 CFU/g
TYMC	61	$\leq 10^2$ CFU/g	<10 CFU/g
Related substances	DAC2013		
Impurity A		$\leq 0,2$ %	0,0 %
any other impurity		$\leq 0,10$ %	0,00 %
sum of all impurities		$\leq 0,3$ %	0,0 %

Manufacturing – date 10.2016

Expiry – date 09.2019

in exclusive cooperation with



KRAEBER & CO GMBH
PHARMAZEUTISCHE ROHSTOFFE
Waldhofstraße 14 · D-25474 Ellerbek · Germany

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E-Mail: info@kraeber.de

The product batch complies to USP 39/DAC2013.

Batch Release: 58332 Schwelm, November 14, 2016

Head of Quality Assurance

M. Spek

