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CERTIFICATE OF ANALYSIS

Product **TRETINOIN-USP34/EP7** Code N° **2610460** Batch N° **1240315**

Manufacturing date **Apr 2012** Retesting date (where applicable) **Apr 2014** Expiration date (where applicable)

Analysis Number M4PF042003		Limits		
Test	Results	M.U.	Min	Max
Description	Yellow, crystalline powder		Yellow, crystalline powder	Light orange
Identification				
- IR	Conforms to Standard		Conforms to Standard	
- UV	Conforms to Standard		Conforms to Standard	
Loss on drying	0,1	%		0,5
Residue on ignition	0,08	%		0,1
Heavy metals	< 20	ppm		20
Assay (TBAH)	101,9	%dried	98,0	102,0
Related Substances HPLC :				
- Isotretinoin	< 0,05	%		0,50
- Epoxy derivative	0,02	%		Less than 0,15
- Impurity a (4-methoxy retinoic acid)	< 0,02	%		Less than 0,15
- Largest unknown impurity	< 0,05	%		0,10
- Total Impurities (apart from Isotretinoin)	0,11	%		0,50
Residual Solvents (GC) :				
- ICH Class 1 solvents : Not used			Not tested	
- ICH Class 2 solvents :				
Chloroform	< 25	ppm		50
Methanol	64	ppm		100
- ICH Class 3 solvents :				
Ethyl Acetate	< 20	ppm		100
Isopropanol	693	ppm		2000
Related Substances (HPLC) EP :				
- Isotretinoin	< 0,05	%		0,50
- 4-Methoxyretinoic acid (Impurity a)	< 0,05	%		Less than 0,15
- (all-trans)-5,6-epoxy-5,6-dihydroretinoic acid	< 0,05	%		Less than 0,15
- Largest unknown impurity	< 0,05	%		0,10
- Total impurities (apart from isotretinoin)	0,12	%		0,50
Clarity of solution 2%				
- in chloroform (NTU)	0,7	NTU		3,0
- in THF	Clear		Clear	
Packaging and Storage		Preserve in airtight containers, protected from light.		

This batch has been manufactured, packaged and tested in accordance with EU GMP Guideline Volume 4 Part II (ICH Q7A)
Manufacturing site of the Active Pharmaceutical Ingredient : GARBAGNATE MIL se

Date

April 27, 2012

X Q.C. Manager (Roberto Quaglia)

R. Quaglia

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