CERTIFICATE OF ANALYSIS

Product	:	**ALANINE (L-)**
Product number	:	A0703
Batch number	:	011519
Date of production	:	18-06-2014
Date of analysis	:	05-12-2014
Date of expiry	:	30-06-2018
Packaging and storage	:	in a well closed container, protected from light

	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	white or almost white crystalline powder, or colourless crystals	complies		
Identification:				
- A (specific optical rotation)	13.7 – 15.1	14.7	°	dried substance
- B (IR-spectrum)	conform	complies		
Appearance of solution	clear and colour ≤ ref.sol. BG_6	complies		
pH	5.7 – 6.7	6.1		
Ninhydrin-positive substances	≤ 0.5	complies		TLC
Chlorides	≤ 200	complies	ppm	
Sulphates	≤ 200	complies	ppm	
Ammonium	≤ 200	complies	ppm	
Iron	≤ 10	complies	ppm	
Heavy metals	≤ 10	complies	ppm	
Loss on drying	≤ 0.2	0.0	%	105 °C
Sulphated ash	≤ 0.1	0.0	%	
Assay	98.5 – 101.0	100.4	%	dried substance
Endotoxines	≤ 6.0	< 6.0	IU/g	LAL-test

This certificate of analysis is conform the results of the supplier.

Conclusion: approved
Released by: drs. M. van Wissen, pharmacist
Department of Quality Control Duchefa B.V.

Date: 17-09-2015

The buyer is responsible to test each batch to ensure the product is suitable for their specific purpose.

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