

CERTIFICATE OF ANALYSIS

Product : **ASPARAGINE MONOHYDRATE (L-)**
 Product number : **A0725**
 Batch number : **010405**
 Date of manufacturing : **12-11-2013**
 Date of analysis : **28-11-2013**
 Expiry date : **30-11-2017**

Packaging and storage : store at room temperature in a well-closed container

	SPECIFICATION	RESULT	UNITS
Appearance	white crystals or crystalline powder	complies	
Solubility	soluble in water (20°C / 30 g/l)		
Specific optical rotation	+34.3 – +36.5	+34.80	°
Loss on drying	11.5 – 12.5	11.83	%
Chloride (Cl)	≤ 0.020	< 0.020	ppm
Iron (Fe)	≤ 10	< 10	ppm
Transmittance	≥ 98.0	98.6	%
Sulphate (SO ₄)	≤ 0.020	< 0.020	ppm
pH	4.4 – 6.4	4.6	
Residue on ignition	≤ 0.10	0.074	%
Arsenic (As)	≤ 1	< 1	ppm
Heavy metals	≤ 10	< 10	ppm
Ammonium (NH ₄)	≤ 0.10	< 0.10	%
Other amino acids	≤ 1.0	0.81	%
Assay	≥ 98	99.4	%

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

Conclusion: approved

Released by:

drs. M. van Wissen, pharmacist
 Department of Quality Control Duchefa B.V.

Date: 05-05-2014



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