

CERTIFICATE OF ANALYSIS

Product : **L-GLUTAMINE**
 Product number : G0708
 Batch number : 012865
 Date of production : 26-12-2016
 Date of expiry : 31-12-2019

Packaging and storage : store at room temperature

	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	crystalline powder, whitish	complies		
Solubility	soluble in water			18°C / 26 g/l
Identification	conform	complies		IR-spectrum
pH	4.5 – 6.0	4.53		
Specific rotation	+6.3 – +7.3	+7.03	°	HCl-solution
Heavy metals	< 10	< 10	ppm	
Loss on drying	≤ 0.3	0.15	%	
Residue on ignition	≤ 0.3	0.08	%	
Arsenic	≤ 1	complies	ppm	
Lead	≤ 3	complies	ppm	
Cadmium	≤ 1	complies	ppm	
Mercury	≤ 0.1	complies	ppm	
Microbiology:				
Aerobic plate count	≤ 1000	complies	cfu/g	
Yeast and moulds	≤ 100	complies	cfu/g	
Coliforms	negative	complies	/1 g	
Salmonella	negative	complies	/10 g	
Assay	≥ 98.5	99.8	%	

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: 06-04-2017

i.o. [Signature]
 ✓ Kong Tse Lam

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