



## CERTIFICATE OF ANALYSIS

Product : **L-GLUTAMINE**  
Product number : G0708  
Batch number : 016598  
Date of production : 23-07-2021  
Date of expiry : 31-07-2024  
  
Packaging and storage : store at room temperature

	<b>SPECIFICATION</b>	<b>RESULT</b>	<b>UNITS</b>	<b>REMARKS</b>
Appearance	white crystals or crystalline powder	complies		
Solubility	soluble in water			18°C / 26 g/l
Identification	conform	complies		IR-spectrum
pH	4.35 – 6.0	4.41		
Specific rotation	+6.3 – +7.3	+6.52	°	HCl-solution
Heavy metals	< 10	< 10	ppm	
Loss on drying	≤ 0.3	0.09	%	
Residue on ignition	≤ 0.1	0.08	%	
Arsenic	≤ 1	< 1	ppm	
Lead	≤ 3	< 3	ppm	
Cadmium	≤ 1	< 1	ppm	
Mercury	≤ 0.1	< 0.1	ppm	
Microbiology:				
Total plate count	≤ 1000	< 1000	cfu/g	
Yeast and moulds	≤ 100	< 100	cfu/g	
Salmonella	negative	complies	/10 g	
Assay	≥ 98.5	99.9	%	

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: 17-11-2021

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

