

## CERTIFICATE OF ANALYSIS

Product : **L-GLUTAMINE**  
 Product number : G0708  
 Batch number : 018338  
 Date of production : 19-10-2023  
 Date of expiry : 31-10-2026  
 Packaging and storage : store at room temperature

	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	white crystals or crystalline powder	complies		
Solubility	soluble in water			18°C / 26 g/l
Identification	conform	complies		
pH	4.35 – 6.0	4.52		
Specific rotation	+6.3 – +7.3	+6.68	°	HCl-solution
Heavy metals	≤ 10	< 10	ppm	
Loss on drying	≤ 0.1	0.05	%	
Residue on ignition	≤ 0.1	0.09	%	
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	
- E. coli	negative	complies	/1 g	
- Salmonella	negative	complies	/10 g	
- Staphylococcus aureus	negative	complies	/1 g	
Assay	≥ 98.5	99.6	%	

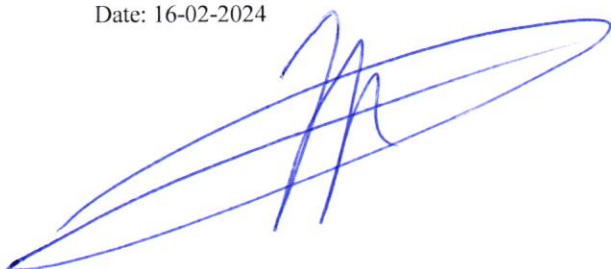
This certificate of analysis is conform the results of the manufacturer.

Conclusion: approved

Released by:

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

Date: 16-02-2024



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