

# CERTIFICATE OF ANALYSIS

Product : **L-GLUTAMINE**  
 Product number : G0708  
 Batch number : 018980  
 Date of production : 28-06-2024  
 Date of expiry : 30-06-2027

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
pH	4.35 – 6.0	4.48		
Specific rotation	+6.3 – +7.3	+6.51	°	HCl-solution
Heavy metals	≤ 10	< 10	ppm	
Loss on drying	≤ 0.3	0.09	%	
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	≥ 99.0	99.8	%	

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

Conclusion: approved

Released by:

Q. de Hoog, MSc, pharmacist  
 Department of Quality Control Duchefa B.V.

Date: 08-01-2025

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

Duchefa Biochemie B.V.