

## CERTIFICATE OF ANALYSIS

Product : **L-GLUTAMIC ACID**  
 Product number : G0707  
 Batch number : 011099  
 Manufacturing date : 08-11-2013  
 Date of expiry : 30-11-2018  
 Packaging and storage : protected from light


	SPECIFICATION	RESULT	UNITS	REMARKS
Appereance	white or almost white, crystalline powder or colourless crystals	complies		
Identification	conform	complies		
Appereance of solution	clear and colourless	complies		
Appereance of solution	≥ 98.0	complies	%	transmittance
Specific rotation	+31.5 – +32.4	+32.0	°	
Chloride	≤ 0.020	complies	%	
Ammonium	≤ 0.02	complies	%	
Sulfate	≤ 0.020	complies	%	
Iron	≤ 10	complies	ppm	
Heavy metals	≤ 10	complies	ppm	
Arsenic	≤ 1	complies	ppm	
Related substances	conform	complies		TLC
Loss on drying	≤ 0.10	0.1	%	
Sulphated ash	≤ 0.10	0.0	%	
Assay	99.0 – 100.5	100.2	%	
pH	3.0 – 3.5	3.3		

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: 05-03-2015



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