

CERTIFICATE OF ANALYSIS

Product : **MALIC ACID**
 Product number : M1315
 Batch number : 011034
 Date of analysis : 15-08-2014
 Date of expiry : 31-08-2019
 Packaging and storage : store in a well-closed container at room temperature

	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	white or almost white crystalline powder	complies		
Identification	conform	complies		
Appearance of solution	clear and colourless	complies		20% in H ₂ O
In water insoluble matter	≤ 0.1	complies	%	
Melting point	128 – 132	132	°C	
Specific rotation	-0.10 – +0.10	0.00	°	
Heavy metals	≤ 0.001	complies	%	as Pb
Arsenic	≤ 0.0003	complies	%	
Lead	≤ 0.0005	complies	%	
Copper	≤ 0.001	complies	%	
Mercury	≤ 0.00001	complies	%	
Zinc	≤ 0.001	complies	%	
Fumaric acid	≤ 1.0	complies	%	HPLC
Maleic acid	≤ 0.05	complies	%	HPLC
Sulphated ash	≤ 0.1	< 0.1	%	
Water	≤ 2.0	0.1	%	Karl Fischer
Assay	99.0 – 101.0	100.2	%	anhydrous substance

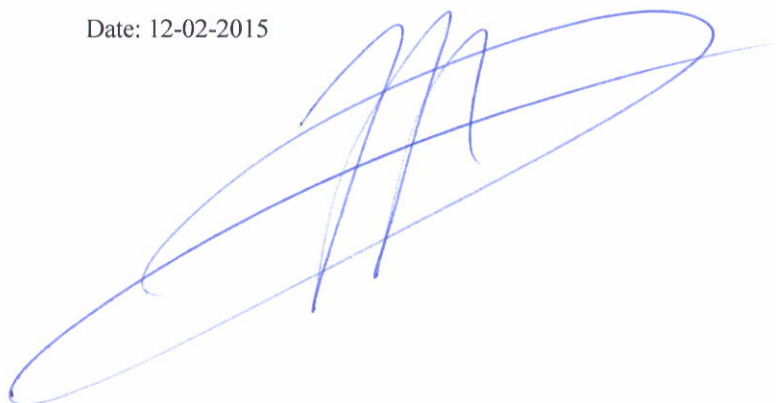
This certificate of analysis is conform the results of the manufacturer.

Conclusion: approved

Released by:

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

Date: 12-02-2015



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