

CERTIFICATE OF ANALYSIS

Product : **MALIC ACID**
 Product number : M1315
 Batch number : 015568
 Date of manufacturing : 26-12-2019
 Date of analysis : 03-03-2020
 Date of expiry : 31-12-2024
 Packaging and storage : store in a well-closed container at room temperature

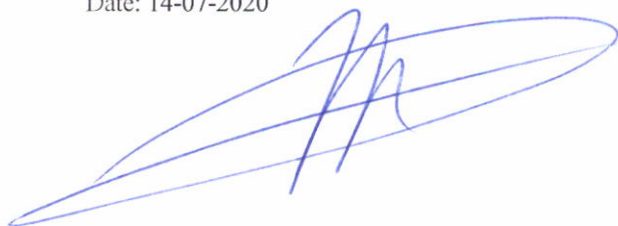
	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	white or almost white crystalline powder	complies		
Identification	conform	complies		
Appearance of solution	clear and colourless	complies		20% in H ₂ O
In water insoluble matter	≤ 0.1	< 0.1	%	
Melting point	128 – 132	131	°C	
Specific rotation	-0.10 – +0.10	0.00	°	
Heavy metals	≤ 0.0020	complies	%	as Pb
Arsenic	≤ 0.0003	complies	%	
Lead	≤ 0.0002	complies	%	
Copper	≤ 0.001	complies	%	
Mercury	≤ 0.0001	complies	%	
Zinc	≤ 0.001	complies	%	
Related substances	conform	complies		HPLC
Sulphated ash	≤ 0.1	0.1	%	
Water	≤ 2.0	0.1	%	Karl Fischer
Assay	99.0 – 101.0	100.1	%	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: 14-07-2020



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

Duchefa Biochemie B.V.