

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

Catalogue Number	38585
Lot Number	A0481991
Description	Citric acid monohydrate,99+%,ACS reagent
CAS Number	5949-29-1
Quality Test/Release Date	26/Mar/2026
Suggested retest date	26/Mar/2031
Country of Origin	THAILAND
Declaration of Origin	plant
BSE/TSE	The product is made by fermentation of vegetable raw materials

Result Name	Units	Specifications	Test Value
Appearance (Color)		Colorless to white	White
Appearance (Form)		Powder or crystals	Crystals
Titration with NaOH	%	99.0 to 102.0	100.0
Insoluble matter	%	≤0.005	≤0.005
Residue after ignition	%	≤0.02	≤0.02
Chloride (Cl)	%	≤0.001	≤0.00002
Oxalate (C <sub>2</sub> O <sub>4</sub> )		(limit about 0.05%) Passes test	(limit about 0.05%) Passes test
Phosphate (PO <sub>4</sub> )	%	≤0.001	≤0.001
Sulfate (SO <sub>4</sub> )	%	≤0.002	≤0.001
Iron (Fe)	ppm	≤3	2
Lead (Pb)	ppm	≤2	≤2
Carboniz. sub. by hot H <sub>2</sub> SO <sub>4</sub>		Passes test	Passes test



Geert Torfs  
Supervisor, QC

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.