

## 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	44768
Lot Number	A0483293
Description	Citric acid, diammonium salt,98+%,ACS reagent
CAS Number	3012-65-5
Quality Test/Release Date	27/May/2026
Suggested retest date	27/May/2031
Country of Origin	UNITED STATES OF AMERICA
Declaration of Origin	plant
BSE/TSE	Citric acid is made by fermentation of vegetable raw materials

Result Name	Units	Specifications	Test Value
Appearance (Color)		White	White
Appearance (Form)		Crystalline powder	Crystalline powder
Titration with NaOH	%	98.0 to 103.0	98.9
Insoluble matter	%	≤0.005	≤0.005
Residue after ignition	%	≤0.01	0.001
Chloride (Cl)	%	≤0.001	≤0.001
Heavy metals (ICP-OES)	ppm	≤5	≤2
Iron (Fe)	%	≤0.001	≤0.001
Oxalate (C <sub>2</sub> O <sub>4</sub> )		Passes test (Limit about 0.05%)	Passes test (Limit about 0.05%)
Phosphate (PO <sub>4</sub> )	ppm	≤5	≤5
Sulfur compounds (as SO <sub>4</sub> )	%	≤0.005	≤0.005

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.