

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by TUV SUD America Inc.  
 Certificate Number. 951001163

Catalogue Number	036237
Lot Number	R21M007
Description	L-(+)-Ascorbic acid, ACS, 99+%
CAS Number	50-81-7
Quality Test/Release Date	22/May/2026
Suggested retest date	22/May/2029
Country of Origin	United States
Declaration of Origin	Synthetic
BSE/TSE	Not directly derived from or manufactured with any animal byproducts in any way (including but not limited to fermentation or nutrient broth, catalysts, enzymes).

Result Name	Units	Specifications	Test Value
Assay	%	≥99.0%	99.2
Heavy Metals	%	≤0.002%	0.001
Residue on ignition	%	≤0.1%	0.07
Impurity content	%	Fe: ≤0.001%	0.001
Optical Rotation	°	A25/D +21.0 ±0.5°	+20.90

**Additional Information** This Certified Reference Material (CRM) was manufactured and certified by a Thermo Fisher Scientific approved supplier under the following Quality Management Systems and Standards: All laboratory equipment and instrumentation used for manufacturing and testing-including balances, glassware, gravimetric measurements, and environmental monitoring-are metrologically traceable to NIST. pH Buffer CRMs are fully SI-traceable and produced under a robust ISO 17034:2016 Quality Management System, accredited by the ANSI National Accreditation Board (ANAB) under Accreditation Number AR-2933. Gravimetric measurements are performed using balances calibrated by providers compliant with ISO/IEC 17025:2017 and ANSI/NCSL Z540.1-1994 / Z540.3-2006. Volumetric glassware complies with ASTM E542-01 and is made from Type 1, Class A Borosilicate Glass. Environmental conditions are monitored using NIST-traceable thermometers and hygrometers. Homogeneity: Solutions are mixed according to in-house procedures. Each batch is individually evaluated for homogeneity before release. Please refer to the Safety Data Sheet (SDS) for further information.



Derek Roy  
 Quality Manager, LCD

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.