

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by LRQA. Certificate Number. 10551915

Catalogue Number	A12505
Lot Number	10254256
Description	L-Glutamic acid hydrochloride, 99%
CAS Number	138-15-8
Quality Test/Release Date	28/Feb/2025
Suggested retest date	28/Feb/2030
Country of Origin	China
Declaration of Origin	Synthetic

Result Name	Units	Specifications	Test Value
Assay (Titration ex Chloride)	%	≥98.5 to ≤101.5% (non-U.S. specification)	99.87
Comment	ppm	Ammonium (NH ₄): ≤200 ppm (non-U.S. specification)	=<200
Comment	%	Other amino acids: ≤0.5% (TLC) (non-U.S. specification)	=<0.5
Comment	ppm	Sulfate (SO ₄): ≤200 ppm (non-U.S. specification)	=<200
Appearance (Color)		White	White
Form		Crystals or powder or crystalline powder	Crystalline powder or crystals
Identification (FTIR)		Conforms (non-U.S. specification)	Conforms
Impurity content	ppm	Arsenic (As): ≤1 ppm (non-U.S. specification)	=<1
Impurity content	ppm	Iron (Fe): ≤10 ppm (non-U.S. specification)	=<10
Loss on Drying	%	≤0.5% (105°C, 5 hrs) (non-U.S. specification)	0.15
Optical Rotation	°	+25.2° to +25.8° (c=10 in water) (non-U.S. specification)	+25.29
Heavy Metals (as Pb)	ppm	≤10 ppm (non-U.S. specification)	=<10
pH		1 to 2.5 (2.5% at 25°C) (non-U.S. specification)	1.71
Sulfated Ash	%	≤0.1% (non-U.S. specification)	0.05
UV Transmittance	%	≥95% [c=10, H ₂ O, 430nm] 1cm cell (non-U.S. specification)	99.4

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.



Paul Coleman
Site Quality Manager

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.

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