

Certificate of Analysis

Product Name:

L-Methionine

Product Number:

M8439

Batch Number:

CDBG5957

Brand:

SIGMA

CAS Number:

63-68-3

Formula:

C₅H₁₁NO₂S

Formula Weight:

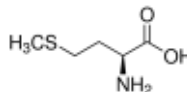
149.21 g/mol

Quality Release Date:

07 JAN 2025

Expiration Date:

JUL 2027



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Appearance of Solution (Color)	Colorless	Colorless
Appearance of Solution (Turbidity)	Clear	Clear
Appearance of Solution (Form)	Solution	Solution
Heavy Metals	≤ 10 ppm	< 10 ppm
Identification A (USP)	Pass	Pass
Identification A (EP)	Pass	Pass
Identification B (EP)	Pass	Pass
Iron (Fe)	≤ 10 ppm	< 10 ppm
Loss on Drying	≤ 0.20 %	0.05 %
Ammonium	≤ 0.02 %	< 0.02 %
Assay	99.0 - 101.0 %	100.2 %
Chloride (Cl)	≤ 0.020 %	< 0.020 %
Related Compounds	Pass	Pass
Clarity & Color of Solution	Pass	Pass
Clear, colorless solution		
Cytotoxicity	Pass	Pass
Residue on Ignition	≤ 0.10 %	0.00 %
Related Substances	Pass	Pass
Specific Rotation (USP)	22.4 - 24.7 °	23.4 °
C=2, 6N HCl, dried basis, 25°C		
pH	5.6 - 6.1	5.8

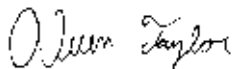
Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



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Test	Specification	Result
pH	5.5 - 6.2	5.8
2.5% in water		
Endotoxin Assay	≤ 1.0 EU/mg	< 1.0 EU/mg
Residual Solvents	Meets Requirements	Meets Requirements
Arsenic (As)	≤ 1 ppm	< 1 ppm
Specific Rotation (EP)	23.0 - 24.0 °	23.4 °
C=2, 6N HCl, dried basis, 20°C		
Sulfate (SO ₄)	≤ 0.020 %	< 0.020 %



Alvin Taylor, QA Operations
Quality Assurance
Cleveland, OH US

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