

Certificate of Analysis

Product Name:

L-Cysteine

Product Number:

C5360

Batch Number:

CDBG7534

Brand:

SIGMA

CAS Number:

52-90-4

Formula:

C₃H₇NO₂S

Formula Weight:

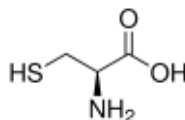
121.16 g/mol

Quality Release Date:

27 JUN 2025

Expiration Date:

DEC 2026



| Test | Specification | Result |
|--------------------------------|--------------------------------|--------------------------------|
| Not Derived From Animal Origin | Confirmed | Confirmed |
| Appearance (Color) | White | White |
| Appearance (Form) | Crystalline Powder | Crystalline Powder |
| Solubility (Turbidity) | Clear | Clear |
| 0.5 g in 20 mL water | | |
| Solubility (Color) | Colorless | Colorless |
| 0.5 g in 20 mL water | | |
| Solubility (Form) | Solution | Solution |
| 0.5 g in 20 mL water | | |
| pH | 4.5 - 5.5 | 5.2 |
| 1.25 g in 50 mL water | | |
| Endotoxin Assay | ≤ 1 EU/mg | < 1 EU/mg |
| Cytotoxicity | Pass | Pass |
| Infrared Spectrum | Conforms to Reference Spectrum | Conforms to Reference Spectrum |
| Specific Rotation | 8.3 - 9.5 ° | 9.0 ° |
| C = 8, 1N HCL/20°C | | |
| Residue on Ignition | ≤ 0.05 % | 0.03 % |
| Ninhydrin-Positive Substances | Conforms | Conforms |
| Chloride | ≤ 0.040 % | < 0.040 % |
| Ammonium | ≤ 0.02 % | < 0.02 % |
| Sulfate (SO ₄) | ≤ 0.028 % | < 0.028 % |
| Iron (Fe) | ≤ 10 ppm | < 10 ppm |
| Loss on Drying | ≤ 0.50 % | 0.00 % |

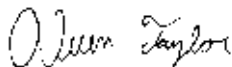
Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser 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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Batch Number: CDBG7534

| Test | Specification | Result |
|---|----------------|----------|
| TLC - Single Spot 4 Acetonitrile: 1 Acetic Acid: 1 Water Normal Phase (Silica on Aluminum) Ninhydrin | Conforms | Conforms |
| Assay | 98.0 - 101.0 % | 99.9 % |



Alvin Taylor, QA Operations
Quality Assurance
Cleveland, OH US

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