

## Certificate of Analysis

Date of Testing: 2024-02-23 13:16:27  
 Date of Next Testing: 2027-02-22 13:16:27  
 Product Name: **L-Ascorbic acid**  
 CAS Number: 50-81-7  
 Specifications & Purity: Ultrapure BioReagent, ≥99.5% (RT)  
 Lot #: B2421610  
 SKU #: **L432790**  
**Analysis:** **313169**  
 Storage Temperature: Protected from light

Parameter	Limit Values	Result
Loss on drying	0-0.05 (%)	0.01 %
Sulfated Ash	0-0.05 (%)	0.03800 %
Aluminium(Al)	0-5 (ppm)	0.00000 ppm
Barium(Ba)	0-5 (ppm)	0.00 ppm
Bismuth(Bi)	0-5 (ppm)	0.00 ppm
Calcium(Ca)	0-10 (ppm)	0.00 ppm
Cadmium(Cd)	0-5 (ppm)	0.00 ppm
Cobalt(Co)	0-5 (ppm)	0.00 ppm
Chromium(Cr)	0-5 (ppm)	0.00 ppm
Copper(Cu)	0-5 (ppm)	0.00 ppm
Iron(Fe)	0-5 (ppm)	0.00 ppm
Potassium(K)	0-50 (ppm)	0.00 ppm
Lithium(Li)	0-5 (ppm)	0.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Manganese(Mn)	0-5 (ppm)	0.00 ppm
Molybdenum(Mo)	0-5 (ppm)	0.00 ppm
Sodium(Na)	0-50 (ppm)	0.00 ppm
Nickel(Ni)	0-5 (ppm)	0.00 ppm
Lead(Pb)	0-5 (ppm)	0.00 ppm
Strontium(Sr)	0-5 (ppm)	0.00 ppm
Zinc(Zn)	0-5 (ppm)	0.00 ppm
Arsenic traces(MHS-AAS)	0-0.1 (ppm)	0.00 ppm
Chloride (Cl-)	0-50 (ppm)	0.00 ppm
PH(25 °C, 1 M in Water)	1.0-2.5	2.02
Sulfate(SO <sub>4</sub> )	0-20 (ppm)	0.00000 ppm
Specific Rotation [α] <sub>20</sub> /D(c=10 in H <sub>2</sub> O)	20.5-21.5 (°)	20.55°

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Parameter	Limit Values	Result
Purity(Iodometric Titration)	99.5-100.5 (%)	99.53 %
Appearance(L432790)	White To Off White Powder Or Crystals	White to Off White Powder or Crystals
Solubility in H2O,Colorless and clear(1M)	Pass	Pass
Residue (filter test)	no residue	no residue
Infrared spectrum	Conforms to Structure	Conforms to Structure

A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager