

ALADDIN SCIENTIFIC CORPORATION
 14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2025-06-14 13:16:03
 Date of Next Testing: 2029-06-13 13:16:03
 Product Name: **L-(+)-Tartaric acid**
 CAS Number: 87-69-4
 Specifications & Purity: pharmaceutical grade, PharmPure™
 Lot #: F2513620
 SKU #: **T112462**
 Version: **1**
 Analysis #: **521533**
 Storage Temperature: Room temperature

| Parameter | Limit Values | Result |
|--|-----------------------|-----------------------|
| Chloride (Cl-) | 0-100 (ppm) | 0.95200 ppm |
| Mercury(Hg) | 0-1 (ppm) | 0.06000 ppm |
| (Pb)Lead | 0-2 (ppm) | 0.01000 ppm |
| Copper(Cu) | 0-10 (ppm) | 0.08000 ppm |
| Specific Rotation [α] ₂₅ /D(c=20 in H ₂ O) | 12-13 (°) | 12.17000 ° |
| Heavy metal (as Pb) | 0-0.001 (%) | 0.00030 % |
| Ignition Residue (as sulfate) | 0-0.05 (%) | 0.00100 % |
| (As)Arsenic | 0-2 (ppm) | 0.60000 ppm |
| Zinc(Zn) | 0-10 (ppm) | 2.65000 ppm |
| Loss on drying | 0-0.2 (%) | 0.00400 % |
| Sulfate(SO ₄ ²⁻) | 0-100 (ppm) | 1.95000 ppm |
| Calcium(Ca) | 0-200 (ppm) | 5.11000 ppm |
| oxalate (as oxalic acid) | 0-100 (ppm) | 0.96000 ppm |
| Purity (dry basis) | 99.7-100.5 (%) | 99.82000 % |
| Appearance (T112462) | white powder | White powder |
| oxalate (C ₂ O ₄ ²⁻) | pass | Pass |
| Residual solvents | complies | complies |
| volatile organic substances | pass | Pass |
| Infrared spectrum | Conforms to Structure | Conforms to Structure |



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A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su
QA & QC Manager