

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2025-05-19 11:29:02  
Date of Next Testing: 2029-05-18 11:29:02  
Product Name: **L-(+)-Tartaric acid**  
CAS Number: 87-69-4  
Specifications & Purity: pharmaceutical grade, PharmPure™  
Lot #: E2514060  
SKU #: **T112462**  
Version: **1**  
Analysis #: **072141**  
Storage Temperature: Room temperature

Parameter	Limit Values	Result
Chloride (Cl-)	0-100 (ppm)	99.82000 ppm
Mercury(Hg)	0-1 (ppm)	0.09000 ppm
(Pb)Lead	0-2 (ppm)	0.18400 ppm
Copper(Cu)	0-10 (ppm)	5.83000 ppm
Heavy metal (as Pb)	0-0.001 (%)	0.00090 %
Ignition Residue (as sulfate)	0-0.05 (%)	0.00480 %
(As)Arsenic	0-2 (ppm)	1.94000 ppm
Zinc(Zn)	0-10 (ppm)	9.83000 ppm
Loss on drying	0-0.2 (%)	0.18700 %
Sulfate(SO42-)	0-100 (ppm)	99.30000 ppm
Calcium(Ca)	0-200 (ppm)	103.52000 ppm
oxalate (as oxalic acid)	0-100 (ppm)	97.48000 ppm
Purity (dry basis)	99.7-100.5 (%)	99.73000 %
Specific Rotation [a] <sub>D</sub> 25/D(c=20 in H <sub>2</sub> O)	12-13 (°)	12.00100 °
Appearance (T112462)	white powder	White powder
Infrared spectrum	Conforms to Structure	Conforms to Structure
oxalate (C <sub>2</sub> O <sub>4</sub> 2-)	pass	Pass
Residual solvents	complies	complies
volatile organic substances	pass	Pass



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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