

Certificate of Analysis

Date of Testing: 2022-06-09 18:50:24
Date of Next Testing: 2026-06-08 18:50:24
Product Name: **L-(-)-Malic acid**
CAS Number: 97-67-6
Specifications & Purity: reagent grade
Lot #: F2206340
SKU #: **M105696**
Analysis: 097342
Storage Temperature: Protected from light, Desiccated

Parameter	Limit Values	Result
Specific Rotation [a] _D (c=8.5 in H ₂ O)	-2.6--1.6 (°)	-1.94°
(As)Arsenic	0-2 (ppm)	0.36 ppm
Melting point	99-107 (°C)	105.67000 °C
Sulfate(SO ₄ ²⁻)	0-300 (ppm)	150.00 ppm
Chloride (Cl ⁻)	0-100 (ppm)	60.24 ppm
Purity(Neutralization titration)	98-102 (%)	98.30 %
fumaric acid	0-0.2 (%)	0.09 %
Sulfate Ash	0-0.2 (%)	0.02 %
Heavy metal (as Pb)	0-20 (ppm)	6.80 ppm
Appearance (M105696)	White Powder or Crystals	White Powder or Crystals
Solubility in H ₂ O , Solution transparent	pass	Pass



John Su
QA & QC Manager