

Certificate of Analysis

Date of Testing: 2025-09-08 14:32:27

Date of Next Testing: 2029-09-07 14:32:27

Product Name: **D-(+)-Malic acid**

CAS Number: 636-61-3

Specifications & Purity: $\geq 99\%$

Lot #: K2117475

SKU #: **M109342**

Version: **0**

Analysis #: **567915**

Storage Temperature: Protected from light

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D(c=8.5 \text{ in H}_2\text{O})}$	1.6-2.6 (°)	2.07°
Sulfate Ash	0-0.1 (%)	0.04 %
Water by Karl Fischer	0-0.5 (%)	0.20 %
Melting point	99-105 (°C)	100.10000 °C
Purity(Neutralization titration)	98.5-101.5 (%)	98.80 %
Appearance (M109342)	White to Off-White Solid, Powder, or Crystals	White to Off-White Solid, Powder, or Crystals
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager