

Certificate of Analysis

Date of Testing: 2023-07-07 14:04:07

Date of Next Testing: 2027-07-06 14:04:07

Product Name: **L-(-)-Malic acid**

CAS Number: 97-67-6

Specifications & Purity: for cell culture, for insect cell culture

Lot #: K1520164

SKU #: **M119455**

Analysis: **248505**

Storage Temperature: Protected from light, Argon charged, Desiccated

Parameter	Limit Values	Result
Purity (Titration by NaOH)	97.5-102.5 (%)	98.87 %
Specific Rotation $[\alpha]_{20/D}(c=8.5 \text{ in H}_2\text{O})$	-2.6--1.6 (°)	-1.64 °
Appearance (M119455)	White Powder or Crystals	White Powder or Crystals
Cell Culture Test	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure
Insect cell culture test	pass	Pass
Solubility in H ₂ O , Colorless, clear to slightly hazy, 100 mg/ml	pass	Pass



John Su
QA & QC Manager