

## Certificate of Analysis

Date of Testing: 2025-04-09 10:45:11

Date of Next Testing: 2029-04-08 10:45:11

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

CAS Number: 97-67-6

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

Lot #: G2110010

SKU #: **M119455**

Version: **1**

Analysis #: **491485**

Storage Temperature: Protected from light, Argon charged, Desiccated

| Parameter                                                                     | Limit Values             | Result                   |
|-------------------------------------------------------------------------------|--------------------------|--------------------------|
| Purity (Titration by NaOH)                                                    | 97.5-102.5 (%)           | 99.40 %                  |
| Specific Rotation $[\alpha]_{20/D}(c=8.5 \text{ in H}_2\text{O})$             | -2.6--1.6 (°)            | -1.90 °                  |
| 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 <sub>2</sub> O , Colorless, clear to slightly hazy, 100 mg/ml | pass                     | Pass                     |



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