

## Certificate of Analysis

Date of Testing: 2022-06-09 23:21:48

Date of Next Testing: 2026-06-08 23:21:48

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

CAS Number: 97-67-6

Specifications & Purity: 98%

Lot #: F2206341

SKU #: **M105695**

**Analysis:** **083174**

Storage Temperature: Argon charged

| Parameter                                                         | Limit Values             | Result                   |
|-------------------------------------------------------------------|--------------------------|--------------------------|
| Melting point                                                     | 101-105 (°C)             | 104.51000 °C             |
| Purity(Neutralization titration)                                  | 98-102 (%)               | 98.30 %                  |
| Specific Rotation [α] <sub>20/D</sub> (c=8.5 in H <sub>2</sub> O) | -2.6--1.6 (°)            | -1.94 °                  |
| Appearance (M105695)                                              | White Powder or Crystals | White Powder or Crystals |
| Infrared spectrum                                                 | Conforms to Structure    | Conforms to Structure    |
| Solubility in H <sub>2</sub> O                                    | Almost transparency      | almost transparency      |



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