

# CERTIFICATE OF ANALYSIS

Product Description L-MALEIC ACID  
Product Number M471  
Lot Number 02C47101  
Storage Temperature Room Temperature  
Molecular Weight 116.07  
Formula C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>  
CAS Number 110-16-7

## Physiochemical Specifications:

| TEST                                     | SPECIFICATION                           | RESULTS                          |
|--|---|----------------------------------|
| Solubility                               | Soluble in Water @ 10 mg/mL             | Passes                           |
| pH                                       | Under Development                       | 1.6                              |
| Physical Appearance<br>Color*<br>Texture | PM-1 to PM-4<br>Crystalline Powder      | PM-4 White<br>Crystalline Powder |
| Solution Appearance<br>Clarity<br>Color  | Clear<br>Colorless                      | Clear<br>Colorless               |
| Average Time to Dissolve                 | For Information Only<br>(Approx. 1 min) | Passes                           |
| Insolubles                               | None                                    | Passes                           |
| Purity                                   | Minimum 98.0%                           | 99.5%                            |
| FTIR                                     | Conforms to Structure                   | Passes                           |

\* Product color based upon comparisons between sample and standardized color wheel (Benjamin Moore® Color Preview™).

## Biological Testing:

Test Concentration: 50.0 mg/L

| TEST SPECIFICATION   | PLANT CELL LINE | RESULTS |
|--|-----------------|---------|
| Supports and/or facilitates plant growth and/or shoot proliferation in two or more plant tissue cultured lines with no morphological aberrations to plants | B73 Corn Callus | Passes  |
|  | Tobacco callus  | Passes  |

The material described in this certificate is synthetic. No animal- or plant-derived components were used in the manufacture of this product.

PhytoTech Labs Inc. provides the above information intended to be used only as a guide to the appropriate handling of this material by a properly trained person. PhytoTech Labs Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.

Date of Release: 11 January 2021

Recommended Shelf Life Date: January 2026



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