

CERTIFICATE OF ANALYSIS

Product Description MES, MONOHYDRATE
2-(N-MORPHOLINO)ETHANESULFONIC ACID
Product Number M825
Lot Number HCG0825102
Storage Temperature Room Temperature
Molecular Weight 213.3
Formula C₆H₁₃NO₄S•H₂O
CAS Number 145224-94-8

Physiochemical Specifications:

| TEST | SPECIFICATION | RESULTS |
|---|---|----------------------------------|
| Solubility | Soluble in Water @ 100 mg/mL | Passes |
| pH | Under Development | 3.0 |
| Physical Appearance: Color* Texture | PM-1 to PM-4 Fine to Crystalline Powder that may have larger clumps | PM-1 White Crystalline Powder |
| Solution Appearance: Clarity Color | Clear Colorless | Clear Colorless |
| Insolubles | None | Passes |
| FTIR | Conforms to Structure | Passes |
| Purity | Minimum 98.0% | 99.50% |

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

Biological Testing:

Test Concentration: 1.0 g/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 | Perilla Fantasy | Passes |
| | Xanthi 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: 20-March-2026

Recommended Shelf-Life Date: March 2034

Prepared by: 
Alex Lambert
Lead Quality Control Laboratory Technician