

# CERTIFICATE OF ANALYSIS

Product Description MANGANESE SULFATE, MONOHYDRATE  
Product Number M250  
Lot Number HCW0250016  
Storage Temperature Room Temperature  
Molecular Weight 169.02  
Formula  $MnSO_4 \cdot H_2O$   
CAS Number 10034-96-5

## Physiochemical Specifications:

TEST	SPECIFICATION	RESULTS
Solubility	Soluble in Water @ 10 mg/mL	Passes
pH	Under Development	3.5
Physical Appearance		
Color*	2092-70 to 2105-70	2093-70 Pale Pink
Texture	Fine Powder, may form clumps	Fine Powder
Solution Appearance		
Clarity	Clear	Clear
Color	Colorless	Colorless
Average Time to Dissolve	For Information Only (Approx. 3 min)	Passes
Insolubles	None	Passes
Purity	Minimum 99%	99.10 %

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

## Biological Testing:

Test Concentration: 16.0 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	Xanthi Tobacco Callus	Passes
	Achimenes	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.**

Product Release Date: 23-March-2023  
Recommended Shelf Life Date: March 2031



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