

CERTIFICATE OF ANALYSIS

Product Description MANGANESE SULFATE, MONOHYDRATE
Product Number M250
Lot Number HWE0250020
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	4.1
Physical Appearance Color* Texture	2092-70 to 2105-70 Fine Powder, may form clumps	2093-70 Light Pink Fine Powder
Solution Appearance Clarity Color	Clear Colorless	Clear Colorless
Average Time to Dissolve	For Information Only (Approx. 3 min)	Passes
Insolubles	None	Passes
Purity	Minimum 99%	99.40%
FTIR	Conforms to Structure	Passes
Atomic Absorption	For Information Only	0.462 AU

* 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	H38 Tobacco Callus	Passes
	Parrot Feather	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: 10-June-2024
Recommended Shelf-Life Date: June 2032



David Hart
Technical Director