

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by TUV SUD America Inc.  
 Certificate Number. 951001163

Catalogue Number	033341
Lot Number	Q10M019
Description	Manganese(II) sulfate monohydrate, ACS, 98.0-101.0%
CAS Number	10034-96-5
Quality Test/Release Date	10/Apr/2026
Suggested retest date	10/Apr/2031
Country of Origin	India
Declaration of Origin	Synthetic
BSE/TSE	Not directly derived from or manufactured with any animal byproducts in any way (including but not limited to fermentation or nutrient broth, catalysts, enzymes).

Result Name	Units	Specifications	Test Value
Assay (unspecified)	%	98.0-101.0% MnSO <sub>4</sub> •H <sub>2</sub> O	99.40
Impurity content	%	Ca 0.005%	<0.005
Impurity content	%	Cl 0.005%	<0.005
Impurity content	%	Fe 0.002%	<0.002
Impurity content	%	K 0.01%	<0.01
Impurity content	%	Mg 0.005%	<0.005
Impurity content	%	Na 0.05%	<0.05
Impurity content	%	Ni 0.02%	<0.02
Impurity content		Substances reducing permanganate P.T.	Passes test
Impurity content	%	Zn 0.005%	<0.005
Insoluble material	%	0.01%	0.004
Loss on ignition	%	10.0-12.0%	10.60
Trace Metals	%	(as Pb) 0.002%	<0.002



Derek Roy  
 Quality Manager, LCD

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.