

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-10-16 15:11:56  
Date of Next Testing: 2026-10-15 15:11:56  
Product Name: **Manganese(II) chloride tetrahydrate**  
CAS Number: 13446-34-9  
Specifications & Purity: meets USP testing specifications  
Lot #: J2311525  
SKU #: **M431933**  
**Analysis: 275689**

Parameter	Limit Values	Result
PH	3.5-6.0	5.19
Insoluble matter	0-0.005 (%)	0.00 %
Substances not ppt. by (NH <sub>4</sub> ) <sub>2</sub> S(as sulfate)	0-0.2 (%)	0.00000 %
Iron(Fe)	0-5 (ppm)	0.00 ppm
Loss on drying	36.0-38.5 (%)	37.18 %
Assay(dry basis)	98-101.0 (%)	98.22 %
Sulfate(SO <sub>4</sub> )	0-0.005 (%)	0.00500 %
Appearance(M431933)	Light red to Dark Red and Pink Powder or Crystal	Light red to Dark Red and Pink Powder or Crystal
Zinc	Pass	Pass
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager