

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing:	2024-06-21 15:17:05
Date of Next Testing:	2028-06-20 15:17:05
Product Name:	<b>Manganese(II) Chloride Tetrahydrate</b>
CAS Number:	13446-34-9
Specifications & Purity:	Analytical Reagent,99.0%
Lot #:	F2418095
SKU #	<b>M112542</b>
Version	<b>0</b>
<b>Analysis #:</b>	<b>067241</b>
Storage Temperature:	Argon charged,Desiccated

Parameter	Limit Values	Result
Sodium(Na)	0-0.05 (%)	0.03 %
PH (5%, water) 25 ° C	3.5-6	5.35
Iron(Fe)	0-5 (ppm)	1.11 ppm
Insoluble matter(C = 20g in 150ml H2O)	0-0.005 (%)	0.00 %
Zinc(Zn)	0-0.005 (%)	0.00 %
Water by Karl Fischer	33-39 (%)	35.64 %
Heavy metals(as Pb)	0-50 (ppm)	28.98 ppm
Assay(Complexometric EDTA)	98.5-101.5 (%)	99.27 %
Potassium(K)	0-0.01 (%)	0.00 %
Sulfate(SO42-)	0-0.005 (%)	0.00 %
Magnesium(Mg)	0-0.005 (%)	0.00 %
Appearance (M112542)	Faint Red to Dark Red and Pink Powder or Crystals	Faint Red to Dark Red and Pink Powder or Crystals
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



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A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager