



**ChemPure* Brand
Chemicals**

...Pure Quality

Certificate of Analysis

Product:	Manganese Chloride Tetrahydrate	Meets USP/ACS
Cat:	CP-A1640D/CP-B1640D	
Lot:	G-0324702	
CAS:	13446-34-9	
Molecular Formula:	MnCl ₂ ·4H ₂ O	
Molecular Weight:	197.91	
Manufacture Date:	11/2/17	
Retest Date:	11/1/20	

Test

Appearance
Assay (on dried basis)
Identification
Loss on drying (3 hrs. @ 105°C)
pH (5% solution in H₂O)
Insoluble Matter
Substances not ppt'd by Ammonium Sulfide
Sulfate
Heavy Metals
Iron
Zinc
Organic Volatile Impurities
Lead
Sodium
Potassium
Magnesium
Calcium

Specification

<u>Min.</u>	<u>Max.</u>	<u>Result</u>
Pink, slightly deliquescent		Conforms
98.0%	101.0%	99.86%
To pass test		Passes
36.0%	38.5%	36.32%
4.0	6.0	4.54
	0.005%	0.003%
	0.2%	0.17%
	0.005%	<0.005%
	5 ppm	<5 ppm
	5 ppm	<5 ppm
	To pass test	Passes
	To pass test	Passes
	4 mg/kg	2 mg/kg
	0.05%	0.0004%
	0.01%	0.0011%
	0.005%	0.0041%
	0.005%	0.0008%

Quality Control Approval
Vyto Mekesa
QC Director
May 9, 2018

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