



## CERTIFICATE OF ANALYSIS

Product Name : MANGANESE (II) CHLORIDE TETRAHYDRATE 98% AR  
Lot No. : A375822107 Analyzed On : 14-Jul-2021  
Mol. Formula :  $MnCl_2 \cdot 4H_2O$  Mol. Weight : 197.90  
Code No. : 04504 CAS No. : 13446-34-9  
Mfg. Date : Jul-2021 Exp. Date : Jun-2026  
HAZ. / P.G. : 9 / III UN No. : 3077

Sr.	Tests	Specifications	Results
1	Appearance	Pale pink to pink crystalline powder	Pink crystalline powder
2	Assay	98 - 101%	98.09 %
3	Insoluble matter	Max 0.003%	<0.003%
4	Sulphate (SO <sub>4</sub> )	Max 0.0025%	0.0022%
5	Barium (Ba)	Max 0.01%	<0.01%
6	Calcium (Ca)	Max 0.04%	0.00010%
7	Copper (Cu)	Max 0.0002%	0.00012%
8	Iron (Fe)	Max 0.001%	0.00018%
9	Lead (Pb)	Max 0.0002%	Nil
10	Magnesium (Mg)	Max 0.04%	0.0031%
11	Nickel (Ni)	Max 0.002%	0.000046%
12	Potassium (K)	Max 0.01%	0.00010%
13	Sodium (Na)	Max 0.02%	0.00036%
14	Zinc (Zn)	Max 0.02%	0.00013%
15	Substance reducing iodine	Max 0.0065%	<0.0065%

**CONCLUSION** -This above product complies as per the specifications of **LOBA CHEMIE PVT. LTD.**

Shashikant Gaikwad  
QC Manager

**LOBA CHEMIE PVT. LTD.**

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LOBA/QC/FM/01

04/10.03.2021