



## CERTIFICATE OF ANALYSIS

**PRODUCT NAME : MANGANESE (II) CHLORIDE (TETRAHYDRATE) PURIFIED**  
(Manganous Chloride)

**CAS No : 13446- 34- 9**  
**Mol. Formula : MnCl<sub>2</sub>.4H<sub>2</sub>O**  
**Mol. WT : 197.90**  
**Date of analysis : 09/07/19**

**Product code : 15590**  
**Batch No : MCR-19129**  
**Mfd. : July 2019**  
**Exp. : June 2024**

| S. R | Test                             | Specification                       | Observation             |
|------|----------------------------------|-------------------------------------|-------------------------|
| 1    | <b>Description</b>               | Pink crystals or crystalline powder | Pink crystalline powder |
| 2    | <b>Assay</b>                     | 97 – 101% w/w                       | 97.30% w/w              |
| 3    | <b>Sulphate (SO<sub>4</sub>)</b> | 0.05% max                           | < 0.05%                 |
| 4    | <b>Barium (Ba)</b>               | 0.05% max                           | < 0.05%                 |
| 5    | <b>Iron (Fe)</b>                 | 0.005% max                          | < 0.005%                |
| 6    | <b>Potassium (K)</b>             | 0.025% max                          | < 0.025%                |
| 7    | <b>Sodium (Na)</b>               | 0.05% max                           | < 0.05%                 |
| 8    | <b>Zinc (Zn)</b>                 | 0.05% max                           | < 0.05%                 |

**REMARK:** THE PRODUCT COMPLIES WITH THE ABOVE SPECIFICATIONS

[Tested By]

[QC Incharge]

**HEAD-QUALITY ASSUARANCE**  
(G.G.Salian)

**Note:** Computer generated image requires no sign.

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