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|-----------------------------|---|
| Version | 00 |
| Molecular weight | 197.91 |
| Quality Test / Release Date | 06/24/2020 |
| Molecular Formula | Cl ₂ Mn . 4 H ₂ O |
| CAS No | 13446-34-9 |
| Linear Formula | MnCl ₂ .4H ₂ O |
| Flash Point (°C) | |

Certificate of Analysis

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Acros Organics expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to human or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

| | | | |
|-----------------------|--|-----------------------------|------------|
| Catalog Number | 19345 | Quality Test / Release Date | 06/24/2020 |
| Lot Number | A0420271 | Suggested retest date | 06/24/2025 |
| Description | Manganese(II) chloride tetrahydrate, ACS reagent | | |
| Country of Origin | INDIA | | |
| Declaration of Origin | synthetic | | |

| | |
|----------|--|
| BSE/TSE | |
| Chemical | |

| Result name | Specifications | Test Value |
|----------------------------|-------------------------------|------------------------|
| Appearance (Color) | Pink | Pink |
| Appearance (Form) | Crystals | Crystals |
| Titration Complexometric | 98.0 to 101.0 % | 100.9 % |
| pH | 3.5 to 6.0 (5% soln. at 25°C) | 5.3 (5% soln. at 25°C) |
| Insoluble matter | =<0.005 % | =<0.005 % |
| Sulfate (SO ₄) | =<0.005 % | 0.002 % |
| Calcium (Ca) | =<0.005 % | % (none detected) |
| Magnesium (Mg) | =<0.005 % | 0.0001 % |
| Potassium (K) | =<0.01 % | 0.00002 % |
| Sodium (Na) | =<0.05 % | 0.000085 % |
| Zinc (Zn) | =<0.005 % | 0.00018 % |
| Iron (Fe) | =<5 ppm | 2.546 ppm |
| Heavy metals (as Pb) | =<5 ppm | 3 ppm |



C. Wygaerts, QA Manager

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Acros Organics
 ENA23, zone1, nr 1350, Janssen Pharmaceuticalalaan 3a, B-2440 Geel, Belgium
 Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: <http://www.acros.com>
 1 Reagent Lane, Fair Lawn, NJ 07410, USA Fax 201-796-1329