



## **CERTIFICATE OF ANALYSIS**

**PRODUCT NAME : 1,10-PHENANTHROLINE AR MONOHYDRATE  
REDOX INDICATOR**

|                         |                                                                  |                     |                    |
|-------------------------|------------------------------------------------------------------|---------------------|--------------------|
| <b>CAS No</b>           | <b>: 5144- 89- 8</b>                                             | <b>Product code</b> | <b>: 24640</b>     |
| <b>Mol. Formula</b>     | <b>: C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>.H<sub>2</sub>O</b> | <b>Batch No</b>     | <b>: MCR-20827</b> |
| <b>Mol. WT</b>          | <b>: 198.23</b>                                                  | <b>Mfd.</b>         | <b>: Feb. 2020</b> |
| <b>Date of Analysis</b> | <b>: 12/02/20</b>                                                | <b>Exp.</b>         | <b>: Jan. 2025</b> |

| S. R. | Test                            | Specification                                                                                              | Observation          |
|-------|---------------------------------|------------------------------------------------------------------------------------------------------------|----------------------|
| 1     | Description                     | White to off white or beige crystals or needles or crystalline powder, becoming cream coloured on storage. | White needles.       |
| 2     | Assay                           | 99.5% min                                                                                                  | 99.64%               |
| 3     | Water                           | 8.8 – 9.5%                                                                                                 | 9.35%                |
| 4     | Sensitivity as reagent for iron | 1:10,000,000 min.                                                                                          | >1:10,000,000        |
| 5     | Sensitivity as redox indicator  | passes test                                                                                                | passes test          |
| 6     | Melting point                   | 100 -104 <sup>0</sup> C                                                                                    | 103.4 <sup>0</sup> C |
| 7     | Sulphated ash                   | 0.05% max                                                                                                  | 0.03%                |

**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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