

## Certificate of Analysis

Date of Testing: 2025-07-16 13:58:35

Date of Next Testing: 2029-07-15 13:58:35

Product Name: **Choline chloride**

CAS Number: 67-48-1

Specifications & Purity:  $\geq 99\%$

Lot #: F2526245

SKU #: **C108898**

Version: **1**

Analysis #: **519278**

Storage Temperature: Desiccated

| Parameter                                                      | Limit Values             | Result                   |
|----------------------------------------------------------------|--------------------------|--------------------------|
| Ammonia (NH <sub>4</sub> )                                     | 0-0.01 (%)               | 0.00 %                   |
| Loss on drying                                                 | 0-1 (%)                  | 0.33 %                   |
| Heavy metal (as Pb)                                            | 0-0.001 (%)              | 0.00 %                   |
| Purity(Titration by AgNO <sub>3</sub> )                        | 98.5-101.5 (%)           | 100.42 %                 |
| Appearance (C108898)                                           | White Powder or Crystals | White Powder or Crystals |
| Infrared spectrum                                              | Conforms to Structure    | Conforms to Structure    |
| Solubility in H <sub>2</sub> O , 500 mg/ml in H <sub>2</sub> O | pass                     | Pass                     |
| Proton NMR spectrum                                            | Conforms to Structure    | Conforms to Structure    |



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