

## Certificate of Analysis

Date of Testing: 2025-03-25 18:27:46

Date of Next Testing: 2029-03-24 18:27:46

Product Name: **Choline chloride**

CAS Number: 67-48-1

Specifications & Purity: AR, ≥98%

Lot #: C2517060

SKU #: **C108896**

Version: **2**

Analysis #: **455018**

Storage Temperature: Argon charged

| Parameter                                                      | Limit Values             | Result                   |
|----------------------------------------------------------------|--------------------------|--------------------------|
| Ignition Residue (as sulfate)                                  | 0-0.05 (%)               | 0.00 %                   |
| Heavy metal (as Pb)                                            | 0-0.002 (%)              | 0.00 %                   |
| Ammonia (NH <sub>4</sub> )                                     | 0-0.1 (%)                | 0.01 %                   |
| Assay                                                          | 98-100 (%)               | 99.95 %                  |
| Appearance (C108896)                                           | White Powder or Crystals | White Powder or Crystals |
| Proton NMR 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                     |
| Trimethylamine                                                 | pass                     | Pass                     |



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