

## Certificate of Analysis

Date of Testing: 2023-06-15 17:15:51  
Date of Next Testing: 2027-06-14 17:15:51  
Product Name: **Choline chloride**  
CAS Number: 67-48-1  
Specifications & Purity: 99%  
Lot #: F23061102  
SKU #: **C108898**  
**Analysis:** **217839**  
Storage Temperature: Desiccated

Parameter	Limit Values	Result
Ammonia (NH <sub>4</sub> )	0-0.01 (%)	0.01 %
Loss on drying	0-1 (%)	0.50 %
Heavy metal (as Pb)	0-0.001 (%)	0.00 %
Purity(Titration by AgNO <sub>3</sub> )	98.5-101.5 (%)	99.51 %
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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QA & QC Manager