

## Certificate of Analysis

Date of Testing: 2022-06-17 17:31:04  
Date of Next Testing: 2026-06-16 17:31:04  
Product Name: **Choline chloride**  
CAS Number: 67-48-1  
Specifications & Purity: 99%  
Lot #: F2214619  
SKU #: **C108898**  
**Analysis:** **094480**  
Storage Temperature: Desiccated

Parameter	Limit Values	Result
Ammonia (NH <sub>4</sub> )	0-0.01 (%)	0.01 %
Loss on drying	0-1 (%)	0.51 %
Heavy metal (as Pb)	0-0.001 (%)	0.00 %
Melting point	302-310 (°C)	309.89000 °C
Purity(Titration by AgNO <sub>3</sub> )	98.5-101.5 (%)	101.32 %
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



John Su  
QA & QC Manager