

Certificate of Analysis

Date of Testing: 2023-04-14 10:15:02

Date of Next Testing: 2027-04-13 10:15:02

Product Name: **Choline chloride**

CAS Number: 67-48-1

Specifications & Purity: Analytical Reagent, 98%

Lot #: D2308831

SKU #: **C108896**

Analysis: **203573**

Storage Temperature: Argon charged

Parameter	Limit Values	Result
Assay(as Cl)	25-25.75 (%)	25.36 %
Assay(as N)	9.8-10.1 (%)	9.93 %
Ignition Residue (as sulfate)	0-0.05 (%)	0.03 %
Heavy metal (as Pb)	0-0.002 (%)	0.00 %
Ammonia (NH ₄)	0-0.1 (%)	0.03 %
Assay	98-100 (%)	99.79 %
Appearance (C108896)	White Powder or Crystals	White Powder or Crystals
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H ₂ O , 500 mg/ml in H ₂ O	pass	Pass
Trimethylamine	pass	Pass



John Su
QA & QC Manager