

## Certificate of Analysis

Date of Testing: 2024-03-29 10:17:54  
Date of Next Testing: 2026-03-19 10:17:54  
Product Name: **Tris(2-carboxyethyl)phosphine hydrochloride**  
CAS Number: 51805-45-9  
Specifications & Purity: 98%  
Lot #: F2210008  
SKU #: **T107252**  
**Analysis:** **332939**  
Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Carbon by Elemental Analysis(anhydrous)	37-40.2 (%)	38.92%
Purity(HPLC)	98-100 (%)	99.74800%
Water by Karl Fischer	0-6 (%)	3.69%
Appearance (T107252)	White Powder or Crystals	White Powder or Crystals
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless,Clear to Very Slightly Hazy,50mg/ml(5%)	pass	Pass



John Su  
QA & QC Manager