

## Certificate of Analysis

Date of Testing: 2022-01-24 16:45:45  
Date of Next Testing: 2024-01-14 16:45:45  
Product Name: **p-Toluenesulfonyl chloride(PTSC)**  
CAS Number: 98-59-9  
Specifications & Purity: reagent grade,99%  
Lot #: A2217062  
SKU #: **T104623**  
**Analysis: 070148**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Purity(Titration by AgNO <sub>3</sub> )	99-101 (%)	100.00 %
Melting point	67-71 (°C)	70.98000 °C
Purity(GC)	99-100 (%)	99.14 %
Appearance (T104623)	White to Off-White Crystals, Powder or Granular	White to Off-White Crystals, Powder or Granular
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in EtOH , Clear Colorless to Very Faint Yellow,10%	pass	Pass



John Su  
QA & QC Manager