

## Certificate of Analysis

Date of Testing: 2024-01-16 16:18:03  
Date of Next Testing: 2028-01-15 16:18:03  
Product Name: **Piperazine DL-Malate**  
CAS Number: 14852-14-3  
Specifications & Purity: >98.0%(T)  
Lot #: A2411743  
SKU #: **P160725**  
**Analysis:** **314924**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Purity(Neutralization titration)	97.5-102.5 (%)	100.70 %
Appearance (P160725)	White to off-white solid	White to off-white solid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager