

Certificate of Analysis

Date of Testing: 2024-01-16 16:06:33

Date of Next Testing: 2028-01-15 16:06:33

Product Name: **Piperazine DL-Malate**

CAS Number: 14852-14-3

Specifications & Purity: >98.0%(T)

Lot #: A2411741

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 |



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QA & QC Manager