

## Certificate of Analysis

Date of Testing: 2023-04-21 19:12:13  
Date of Next Testing: 2025-04-10 19:12:13  
Product Name: **N-Methyl morpholine**  
CAS Number: 109-02-4  
Specifications & Purity: reagent grade,98%  
Lot #: D23181229  
SKU #: **M104641**  
**Analysis:** **214502**  
Storage Temperature: Protected from light,Room temperature

| Parameter                          | Limit Values | Result |
|------------------------------------|--------------|--------|
| Water by Karl Fischer              | 0-1 (%)      | 0.09%  |
| Sulfate(SO42-)                     | 0-0.05 (%)   | 0.02%  |
| Refractive index n20/D             | 1.433-1.437  | 1.44   |
| Assay                              | 98-100 (%)   | 99.86% |
| Density (20°C)                     | 0.917-0.922  | 0.92   |
| Ignition Residue (as sulfate)      | 0-0.01 (%)   | 0.00%  |
| Solubility in EtOH , clear,50mg/ml | pass         | Pass   |



John Su  
QA & QC Manager