

## Certificate of Analysis

Date of Testing: 2021-12-24 16:26:17  
Date of Next Testing: 2025-12-23 16:26:17  
Product Name: **N-Methyl morpholine**  
CAS Number: 109-02-4  
Specifications & Purity: purified by redistillation , 99.5%  
Lot #: L2122533  
SKU #: **M104643**  
**Analysis:** **053989**  
Storage Temperature: Protected from light, Room temperature

Parameter	Limit Values	Result
Refractive index n <sub>20</sub> /D	1.434-1.437	1.44
Water by Karl Fischer	0-0.5 (%)	0.06 %
Density (20°C)	0.917-0.922	0.92
Purity(GC)	99.5-100 (%)	99.96 %
Appearance (M104643)	Colorless Liquid	Colorless liquid
Proton NMR spectrum	Conforms to structure	Conforms to Structure



John Su  
QA & QC Manager