

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2025-09-02 17:14:22  
 Date of Next Testing: 2029-09-01 17:14:22  
 Product Name: **N-Methyl morpholine**  
 CAS Number: 109-02-4  
 Specifications & Purity: for protein sequencing, ≥99.8%(GC)  
 Lot #: H2525147  
 SKU #: **M104644**  
 Version: **0**  
 Analysis #: **308410**  
 Storage Temperature: Protected from light, Room temperature

| Parameter                           | Limit Values                 | Result                       |
|-------------------------------------|------------------------------|------------------------------|
| Refractive index n <sub>20</sub> /D | 1.433-1.437                  | 1.43553                      |
| Sodium(Na)                          | 0-50 (ppm)                   | 0.00000 ppm                  |
| Chloride (Cl-)                      | 0-50 (ppm)                   | 0.32000 ppm                  |
| Cadmium(Cd)                         | 0-5 (ppm)                    | 0.00000 ppm                  |
| Calcium(Ca)                         | 0-10 (ppm)                   | 0.00000 ppm                  |
| Manganese(Mn)                       | 0-5 (ppm)                    | 0.00000 ppm                  |
| Zinc(Zn)                            | 0-5 (ppm)                    | 0.00000 ppm                  |
| Iron(Fe)                            | 0-5 (ppm)                    | 0.00000 ppm                  |
| Potassium(K)                        | 0-50 (ppm)                   | 0.00000 ppm                  |
| Nickel(Ni)                          | 0-5 (ppm)                    | 0.00000 ppm                  |
| (Pb)Lead                            | 0-5 (ppm)                    | 0.00000 ppm                  |
| Magnesium(Mg)                       | 0-5 (ppm)                    | 0.00000 ppm                  |
| Purity(GC)                          | 99.8-100 (%)                 | 99.83000 %                   |
| Chromium(Cr)                        | 0-5 (ppm)                    | 0.00000 ppm                  |
| Sulfate(SO <sub>4</sub> 2-)         | 0-50 (ppm)                   | 0.00500 ppm                  |
| Cobalt(Co)                          | 0-5 (ppm)                    | 0.00000 ppm                  |
| Copper(Cu)                          | 0-5 (ppm)                    | 0.00000 ppm                  |
| Appearance (M104644)                | Colorless Liquid             | Colorless liquid             |
| Infrared spectrum                   | Conforms to Structure        | Conforms to Structure        |
| OPA-reagent reacting impurities     | none detected (fluorimetric) | none detected (fluorimetric) |
| protein-analysis test               | pass                         | Pass                         |
| abs                                 | cut-off                      | cut-off                      |



QualityAssurance@aladdinsci.com

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A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager