

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2025-07-15 16:50:07  
 Date of Next Testing: 2029-07-14 16:50:07  
 Product Name: **4-(3-Chloropropyl)morpholine**  
 CAS Number: 7357-67-7  
 Specifications & Purity:  $\geq 98\%$ (GC)  
 Lot #: J2115493  
 SKU #: **C124693**  
 Version: **1**  
 Analysis #: **541053**  
 Storage Temperature: Store at 2-8°C, Argon charged

| Parameter                           | Limit Values                    | Result                          |
|-------------------------------------|---------------------------------|---------------------------------|
| Refractive index n <sub>20</sub> /D | 1.4705-1.4765                   | 1.47320                         |
| Purity(Nonaqueous Titration)        | 97.5-102.5 (%)                  | 100.49800 %                     |
| Purity(GC)                          | 98-100 (%)                      | 98.42300 %                      |
| Density (20°C)                      | 1.077-1.081                     | 1.08060                         |
| Appearance (C124693)                | colorless to pale yellow liquid | colorless to pale yellow liquid |
| Proton NMR spectrum                 | Conforms to structure           | Conforms to Structure           |



John Su  
QA & QC Manager