

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-09-21 16:08:41

Date of Next Testing: 2026-09-20 16:08:41

Product Name: **N-Methyl morpholine**

CAS Number: 109-02-4

Specifications & Purity: for protein sequencing, ≥99.8%(GC)

Lot #: D2318298

SKU #: **M104644**

Version: **0**

Analysis #: **138240**

Storage Temperature: Protected from light, Room temperature

Parameter	Limit Values	Result
Refractive index n ₂₀ /D	1.433-1.437	1.43600
Sodium(Na)	0-50 (ppm)	4.80500 ppm
Chloride (Cl ⁻)	0-50 (ppm)	18.63000 ppm
Cadmium(Cd)	0-5 (ppm)	0.23000 ppm
Calcium(Ca)	0-10 (ppm)	1.35000 ppm
Manganese(Mn)	0-5 (ppm)	0.25600 ppm
Zinc(Zn)	0-5 (ppm)	0.49300 ppm
Iron(Fe)	0-5 (ppm)	0.62900 ppm
Potassium(K)	0-50 (ppm)	12.92300 ppm
Nickel(Ni)	0-5 (ppm)	1.62800 ppm
(Pb)Lead	0-5 (ppm)	1.29630 ppm
Magnesium(Mg)	0-5 (ppm)	0.92540 ppm
Purity(GC)	99.8-100 (%)	99.80000 %
Chromium(Cr)	0-5 (ppm)	0.61200 ppm
Sulfate(SO ₄ ²⁻)	0-50 (ppm)	25.82000 ppm
Cobalt(Co)	0-5 (ppm)	1.52600 ppm
Copper(Cu)	0-5 (ppm)	1.36000 ppm
Appearance (M104644)	Colorless Liquid	Colorless liquid
abs	cut-off	cut-off
Infrared spectrum	Conforms to Structure	Conforms to Structure
OPA-reagent reacting impurities	none detected (fluorimetric)	none detected (fluorimetric)
protein-analysis test	pass	Pass



QualityAssurance@aladdinsci.com

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

John Su
QA & QC Manager