

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-12-07 12:58:43

Date of Next Testing: 2026-12-06 12:58:43

Product Name: **1,4-Dimethylpiperazine**

CAS Number: 106-58-1

Specifications & Purity: $\geq 98\%$ (GC)

Lot #: L2201686

SKU #: **D124551**

Version: **1**

Analysis #: **150203**

Storage Temperature: Argon charged

Parameter	Limit Values	Result
Purity(NonaqueousTitration)	98-100 (%)	98.80 %
Refractive index n ₂₀ /D	1.445-1.448	1.45
Purity(GC)	98-100 (%)	99.63 %
Density (20°C)	0.852-0.855	0.85
Appearance (D124551)	Colorless to Light yellow clear liquid	Colorless to Light yellow clear liquid
Proton NMR spectrum	Conforms to structure	Conforms to Structure

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

John Su
QA & QC Manager