

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-04-13 08:50:44  
Date of Next Testing: 2027-04-12 08:50:44  
Product Name: **1-(m-Tolyl)piperazine**  
CAS Number: 41186-03-2  
Specifications & Purity: >95.0%(GC)  
Lot #: D23061730  
SKU #: **M157889**  
Analysis: **203838**

Parameter	Limit Values	Result
Density (20°C)	1.043-1.047	1.04
Purity(GC)	95-100 (%)	98.93 %
Refractive index n <sub>20</sub> /D	1.576-1.58	1.58
Appearance (M157889)	Colorless to light yellow liquid	Colorless to light yellow liquid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager