

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2024-08-23 10:04:59  
Date of Next Testing: 2026-08-23 10:04:59  
Product Name: **1,4-Bis(2-hydroxyethyl)piperazine**  
CAS Number: 122-96-3  
Specifications & Purity:  $\geq 98\%$   
Lot #: H2420189  
SKU #: **W136083**  
Version: **1**  
Analysis #: **352412**

Parameter	Limit Values	Result
Purity(GC)	98-100 (%)	99.46 %
Melting point	136-140 (°C)	138.59000 °C
Purity(NonaqueousTitration)	97.5-102.5 (%)	100.32 %
Appearance (W136083)	White to pale yellow Crystal to Powder	White to pale yellow Crystal to Powder
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager