

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2024-07-23 17:09:37  
Date of Next Testing: 2026-07-23 17:09:37  
Product Name: **1,4-Bis(2-hydroxyethyl)piperazine**  
CAS Number: 122-96-3  
Specifications & Purity: 98%  
Lot #: G2415800  
SKU #: **W136083**  
Version: **1**  
Analysis #: **352411**

Parameter	Limit Values	Result
Melting point	136-140 (°C)	137.60000 °C
Purity(NonaqueousTitration)	97.5-102.5 (%)	99.31 %
Purity(GC)	98-100 (%)	98.10 %
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