

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-10-24 14:09:50  
Date of Next Testing: 2027-10-23 14:09:50  
Product Name: **1,4,8,11-Tetraazacyclotetradecane**  
CAS Number: 295-37-4  
Specifications & Purity: >98.0%  
Lot #: J2318772  
SKU #: **T130042**  
**Analysis:** **124850**  
Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Melting point	183-193 (°C)	191.02000 °C
Purity(Nonaqueous Titration)	97.5-102.5 (%)	99.60 %
Purity(GC)	98-100 (%)	98.30 %
Appearance (T130042)	White to Off-White Solid, Powder, or Crystals	White to Off-White Solid, Powder, or Crystals
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in MeOH , Very faint turbidity	pass	Pass



John Su  
QA & QC Manager