

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-09 10:03:15  
 Date of Next Testing: 2027-03-08 10:03:15  
 Product Name: **(1S,2S)-(+)-1,2-Diaminocyclohexane**  
 CAS Number: 21436-03-3  
 Specifications & Purity:  $\geq 98\%$   
 Lot #: E1922090  
 SKU #: **D102251**  
 Version: **0**  
 Analysis #: **196103**  
 Storage Temperature: Store at 2-8°C, Argon charged

| Parameter                                                              | Limit Values                      | Result                            |
|------------------------------------------------------------------------|-----------------------------------|-----------------------------------|
| Specific Rotation $[\alpha]_{20/D(c=5 \text{ in } 1\text{mol/L HCl})}$ | 24-27 (°)                         | 24.60000 °                        |
| Purity(GC)                                                             | 98-100 (%)                        | 98.12200 %                        |
| Enantiometric Excess                                                   | 98.5-100 (%)                      | 98.60000 %                        |
| Melting point                                                          | 41-45 (°C)                        | 42.50000 °C                       |
| Purity(Nonaqueous Titration)                                           | 97.5-102.5 (%)                    | 98.30000 %                        |
| Appearance (D102251)                                                   | white to beige powder or crystals | white to beige powder or crystals |
| Infrared spectrum                                                      | Conforms to Structure             | Conforms to Structure             |



John Su  
QA & QC Manager