

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2026-04-27 17:52:02  
 Date of Next Testing: 2030-04-26 17:52:02  
 Product Name: (S)-(-)-1,1'-Binaphthyl-2,2'-diamine  
 CAS Number: 18531-95-8  
 Specifications & Purity: ≥99%  
 Lot #: D2621015  
 SKU #: S138404  
 Version: 0  
 Analysis #: 542566  
 Storage Temperature: Room temperature

| Parameter                                               | Limit Values                                      | Result                                            |
|---------------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| Purity(HPLC)                                            | 99-100 (%)                                        | 99.93900 %                                        |
| Specific Rotation [α] <sub>20</sub> /D(c=1 in Pyridine) | -158--154 (°)                                     | -157.20500 °                                      |
| Melting point                                           | 241-246 (°C)                                      | 241.66000 °C                                      |
| Appearance (S138404)                                    | White to Tan to Purple Powder, Crystals or Chunks | White to Tan to Purple Powder, Crystals or Chunks |
| Proton NMR spectrum                                     | Conforms to Structure                             | Conforms to Structure                             |



John Su  
QA & QC Manager