

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2026-06-02 10:45:18
 Date of Next Testing: 2028-05-22 10:45:18
 Product Name: (R)-(+)-2,2'-Bis(diphenylphosphino)-1,1'-binaphthalene
 CAS Number: 76189-55-4
 Specifications & Purity: ≥98%
 Lot #: E2621104
 SKU #: B106732
 Version: 1
 Analysis #: 716369
 Storage Temperature: Room temperature, Argon charged

Parameter	Limit Values	Result
Melting point	240-243 (°C)	241.84000 °C
Purity(HPLC)	98-100 (%)	98.04100 %
Optical purity(HPLC)(ee)	99-100 (%)	99.20000 %
Specific rotation [α] _{20/D} (C=0.3% , Toluene)	218 - 248 (°)	247.66700 °
Appearance (B106732)	white to beige powder or crystals	white to beige powder or crystals
Phosphorus NMR Spectra	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager