

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2026-01-29 14:45:35
 Date of Next Testing: 2028-01-29 14:45:35
 Product Name: **RuCl(p-cymene)[(R,R)-Ts-DPEN]**
 CAS Number: 192139-92-7
 Specifications & Purity: $\geq 98\%$
 Lot #: E2213053
 SKU #: **R138419**
 Version: **5**
 Analysis #: **644706**
 Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Carbon by Elemental Analysis	56.7-60.3 (%)	58.30 %
Purity(as N)	98-102 (%)	98.65 %
Specific rotation [α] ₂₅ /D(C=0.5mol/L CHCl ₃)	-178~-150 (°)	-160.50000 °
Appearance (R138419)	yellow to Orange to Brown solid to powder to crystal	yellow to Orange to Brown solid to powder to crystal
ICP: Confirms Ruthenium Component	Confirmed	Confirmed
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager