

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-03-10 18:54:06
 Date of Next Testing: 2027-03-09 18:54:06
 Product Name: **RuCl(p-cymene)[(S,S)-Ts-DPEN]**
 CAS Number: 192139-90-5
 Specifications & Purity: $\geq 97\%$
 Lot #: E1927024
 SKU #: **S118503**
 Version: **0**
 Analysis #: **197434**
 Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D(c=0.5 \text{ CHCl}_3)}$	160-178 (°)	165.30000 °
Carbon by Elemental Analysis	56.5-60.5 (%)	57.33000 %
Appearance (S118503)	Orange to Very Dark Brown Powder or Solid	Orange to Very Dark Brown Powder or Solid
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager