

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-06-23 11:06:08  
Date of Next Testing: 2024-06-22 11:06:08  
Product Name: (S)-RuCl[(p-cymene)(T-BINAP)]Cl  
CAS Number: 228120-95-4  
Specifications & Purity: 95%  
Lot #: F2218321  
SKU #: S138527  
Analysis: 093999  
Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Purity(HPLC)	95-100 (%)	95.60000 %
Specific rotation $[\alpha]_{20/D}(C=0.5g/100mL CHCl_3)$	-545° ~ -445°	-513.10000 °
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager