

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-14 18:18:02  
Date of Next Testing: 2025-03-13 18:18:02  
Product Name: (S)-RuCl[(p-cymene(BINAP)]Cl  
CAS Number: 130004-33-0  
Specifications & Purity: 98%  
Lot #: C2309692  
SKU #: S138141  
**Analysis: 167912**  
Storage Temperature: Store at 2-8°C, Argon charged

| Parameter                    | Limit Values  | Result  |
|------------------------------|---|---|
| Purity(HPLC)                 | 98-100 (%)  | 98.00000 %  |
| Carbon by Elemental Analysis | 67.00-72.58 (%)   | 67.21 %   |
| ICP: Confirms Ruthenium      | Confirmed   | Confirmed   |
| Component                    |   |   |
| Phosphorus NMR Spectra       | Conforms to Structure                                   | Conforms to Structure                                   |
| Appearance (S138141)         | Yellow to Dark Orange to Dark-Yellow crystalline Powder | Yellow to Dark Orange to Dark-Yellow crystalline Powder |



John Su  
QA & QC Manager