

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-09 09:47:02  
Date of Next Testing: 2027-03-08 09:47:02  
Product Name: **Dichloro(p-cymene)ruthenium dimer**  
CAS Number: 52462-29-0  
Specifications & Purity:  $\geq 97\%$ (T)  
Lot #: E1922095  
SKU #: **D102667**  
Version: **0**  
Analysis #: **196074**  
Storage Temperature: Protected from light, Room temperature, Desiccated, Cool

Parameter	Limit Values	Result
Purity (Argentometric Titration)	96.5-103.5 (%)	96.92000 %
Carbon by Elemental Analysis	37.8-40.6 (%)	39.20000 %
Ruthenium (Ru)	32.5-33.5 (%)	32.90000 %
Appearance (D102667)	Red to brown crystals or chunks	Red to brown crystals or chunks
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager