

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2024-03-11 10:47:11  
 Date of Next Testing: 2026-03-01 10:47:11  
 Product Name: **1,1'-Bis(diphenylphosphino)ferrocene (DPPF)**  
 CAS Number: 12150-46-8  
 Specifications & Purity:  $\geq 99\%$   
 Lot #: B2429157  
 SKU #: **B396443**  
 Version: **2**  
 Analysis #: **320447**  
 Storage Temperature: Store at 2-8°C, Argon charged

| Parameter                    | Limit Values                                                                         | Result                                                                               |
|------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Purity(HPLC)                 | 99-100 (%)                                                                           | 99.80000 %                                                                           |
| Carbon by Elemental Analysis | 70.9-74.7 (%)                                                                        | 72.56000 %                                                                           |
| Phosphorus NMR spectrum      | conforms to structure                                                                | Conforms to Structure                                                                |
| Proton NMR spectrum          | Conforms to structure                                                                | Conforms to Structure                                                                |
| ICP: Confirms Iron Component | Confirmed                                                                            | Confirmed                                                                            |
| Infrared spectrum            | Conforms to structure                                                                | Conforms to Structure                                                                |
| Appearance (B396443)         | Yellow to Dark Yellow and Orange to Dark Orange to Brown powder to crystalline solid | Yellow to Dark Yellow and Orange to Dark Orange to Brown powder to crystalline solid |



John Su  
QA & QC Manager