

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-07-04 10:32:31  
Date of Next Testing: 2027-07-03 10:32:31  
Product Name: **N,N'-Diphenyl-p-phenylenediamine**  
CAS Number: 74-31-7  
Specifications & Purity: 98%  
Lot #: F2316075  
SKU #: **D102501**  
**Analysis: 083124**  
Storage Temperature: Argon charged

| Parameter                   | Limit Values                          | Result                                |
|-----------------------------|---------------------------------------|---------------------------------------|
| Purity(HPLC)                | 98-100 (%)                            | 98.27800 %                            |
| Melting point               | 143-145 (°C)                          | 143.80000 °C                          |
| Purity(NonaqueousTitration) | 97.5-102.5 (%)                        | 99.54 %                               |
| Appearance (D102501)        | White to Gray to Brown powder to lump | White to Gray to Brown powder to lump |
| Solubility in Toluene       | almost transparency                   | almost transparency                   |
| Proton NMR spectrum         | Conforms to structure                 | Conforms to Structure                 |



John Su  
QA & QC Manager