

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-09 17:38:44  
 Date of Next Testing: 2027-03-08 17:38:44  
 Product Name: **D-Luciferin sodium salt**  
 CAS Number: 103404-75-7  
 Specifications & Purity:  $\geq 98\%$   
 Lot #: F1525038  
 SKU #: **D115509**  
 Version: **1**  
 Analysis #: **196673**  
 Storage Temperature: Protected from light, Store at  $-20^{\circ}\text{C}$ , Argon charged

| Parameter                                                    | Limit Values                                               | Result                                                     |
|--------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| Purity(HPLC)                                                 | 98-100 (%)                                                 | 98.10500 %                                                 |
| Water by Karl Fischer                                        | 0-11 (%)                                                   | 5.80000 %                                                  |
| Nitrogen by Elemental Analysis                               | 9-9.8 (%)                                                  | 9.30000 %                                                  |
| Sodium (Na)(anhydrous)                                       | 7.2-8 (%)                                                  | 7.50000 %                                                  |
| Carbon by Elemental Analysis(anhydrous)                      | 42.8-46.5 (%)                                              | 44.30000 %                                                 |
| Appearance (D115509)                                         | Off-white to Grey to Yellow to Dark Yellow powder or solid | Off-white to Grey to Yellow to Dark Yellow powder or solid |
| Proton NMR spectrum                                          | Conforms to Structure                                      | Conforms to Structure                                      |
| Solubility, Yellow to Green Clear(10mg/mL, H <sub>2</sub> O) | pass                                                       | Pass                                                       |



John Su  
QA & QC Manager