

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-23 08:21:42  
 Date of Next Testing: 2027-03-22 08:21:42  
 Product Name: **Fast Black K Salt hemi(zinc chloride) salt**  
 CAS Number: 64071-86-9  
 Specifications & Purity:  
 Lot #: C23181092  
 SKU #: **F113033**  
**Analysis: 181117**

| Parameter  | Limit Values  | Result  |
|--|---|---|
| Absorbance(E1%1cm)(H2O, 450.0 to 460.0 nm)                 | ≥50   | 73.97   |
| λ max 2 (H2O)  | 450-460 (nm)  | 460.00 nm   |
| λ max 1 (H2O)  | 330-335 (nm)  | 335.00 nm   |
| Absorbance(E1%1cm)(H2O, 330.0 to 335.0 nm)                 | ≥110  | 110.11  |
| Appearance (F113033)                                       | Orange to Red to Brown Powder, Crystal, Crystalline Powder and/or Chunk | Orange to Red to Brown Powder, Crystal, Crystalline Powder and/or Chunk |
| ICP: Confirms Zinc Component                               | Confirmed   | Confirmed   |
| Solubility in H2O, Dark Red or Red-Brown Solution, 10mg/ml | pass  | Pass  |
| Proton NMR spectrum  | Conforms to Structure   | Conforms to Structure   |
| Titration by AgNO3   | Confirmed   | Confirmed   |



John Su  
QA & QC Manager