

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-03-27 14:39:58  
Date of Next Testing: 2027-03-26 14:39:58  
Product Name: **1,10-Phenanthroline monohydrochloride monohydrate**  
CAS Number: 3829-86-5  
Specifications & Purity: reagent grade,97.0 %  
Lot #: C23231047  
SKU #: **P109272**  
Analysis: **204021**

Parameter	Limit Values	Result
Sulfate Ash	0-0.1 (%)	0.00 %
Water by Karl Fischer	0-8.5 (%)	7.21 %
Melting point	224-227 (°C)	225.60000 °C
Purity(HPLC area)	97-100 (%)	99.84 %
Appearance (P109272)	white to off-white powder, crystals and/or chunks	white to off-white powder, crystals and/or chunks
Solubility in H <sub>2</sub> O , 0.1 g/mL, transparent	pass	Pass
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager