

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2024-02-29 10:50:44
Date of Next Testing: 2028-02-28 10:50:44
Product Name: **Protoporphyrin IX**
CAS Number: 553-12-8
Specifications & Purity: $\geq 95\%$
Lot #: B2427528
SKU #: **P103197**
Analysis: 319833
Storage Temperature: Store at 2-8°C, Protected from light

Parameter	Limit Values	Result
EmM(in 3 M HCl,408-409nm)	200-300	251.40
Purity(HPLC)	95-100 (%)	97.90000%
Carbon by Elemental Analysis	68.6-76.6 (%)	69.60%
Nitrogen by Elemental Analysis	9.4-10.6 (%)	9.70%
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Appearance (P103197)	Red to Brown to Dark purple to Black Powder	Red to Brown to Dark purple to Black Powder
Solubility in DMF/MeOH (1/1) , Dark Red to Brown ,10 mg/mL	pass	Pass



John Su
QA & QC Manager