

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-01-11 10:23:05  
Date of Next Testing: 2027-01-10 10:23:05  
Product Name: 4,4',4'',4'''-(Porphine-5,10,15,20-tetrayl) tetrakis(benzoic acid)  
CAS Number: 14609-54-2  
Specifications & Purity: Dye content 75 %  
Lot #: A23061004  
SKU #: P115337  
Analysis: 159419

Parameter	Limit Values	Result
Extinction Coefficient(408 - 414 nm)(5% Na <sub>2</sub> CO <sub>3</sub> )	≥125000	218947.95
Carbon by Elemental Analysis	53.5-74.4 (%)	69.88 %
Nitrogen by Elemental Analysis	5.1-7.2 (%)	6.92 %
Appearance (P115337)	Blue to Purple to Dark Purple to Black powder	Blue to Purple to Dark Purple to Black powder
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager