

## Certificate of Analysis

Date of Testing: 2024-08-20 16:26:56  
Date of Next Testing: 2028-08-19 16:26:56  
Product Name: **Copper(II) phthalocyanine**  
CAS Number: 147-14-8  
Specifications & Purity:  $\beta$ -form, >90.0%  
Lot #: J2029063  
SKU #: **C123345**  
Version: **1**  
Analysis #: **401799**

Parameter	Limit Values	Result
Molar extinction coefficient(H <sub>2</sub> SO <sub>4</sub> , 789.0 to 791.0 nm)	$\geq 220000$	220000.00
Nitrogen by Elemental Analysis	17.1-21.7 (%)	19.10%
Carbon by Elemental Analysis	58.7-74.7 (%)	66.48%
Purity(as Cu)	90-100 (%)	99.63%
Appearance (C123345)	Dark Blue to Violet to Purple Needles or Powder	Dark Blue to Violet to Purple Needles or Powder
ICP Assay	Confirmed to structure	Confirmed to structure
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in Pyridine , Turbid Dark Blue,c = 10 mg/ml	pass	Pass



John Su  
QA & QC Manager