

## Certificate of Analysis

Date of Testing: 2022-09-19 10:07:38  
Date of Next Testing: 2026-09-18 10:07:38  
Product Name: **Rhodamine 110 chloride**  
CAS Number: 13558-31-1  
Specifications & Purity: laser grade,97%  
Lot #: I2212319  
SKU #: **R299349**  
**Analysis: 123872**  
Storage Temperature: Protected from light,Store at -20°C

Parameter	Limit Values	Result
$\lambda$ max(c=10mg/l in mEtOH)	498-504 (nm)	502.30 nm
Molar absorption coeff( $\lambda$ max.)	$\geq 77000$ (L/cm.g)	78620.30 L/cm.g
Purity(HPLC)	97-100 (%)	97.00000 %
Infrared spectrum	Conforms to Structure	Conforms to Structure
Suitability test(laser dye)	passes	passes
Appearance (R299349)	Red to Green to Dark Green Powder, Crystals or Solid	Red to Green to Dark Green Powder, Crystals or Solid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager