

Certificate of Analysis

Date of Testing: 2022-10-20 11:18:14

Date of Next Testing: 2026-10-19 11:18:14

Product Name: 5,5'''-Didecyl-2,2':5',2'':5'',2'''-quaterthiophene

CAS Number: 514188-77-3

Specifications & Purity: $\geq 95\%$ (HPLC)

Lot #: J2214398

SKU #: D155891

Version: 2

Analysis #: 091370

Parameter	Limit Values	Result
Carbon by Elemental Analysis	67.1-74.3 (%)	69.10 %
Sulfur by Elemental Analysis	19.9-22.0 (%)	21.98 %
Proton NMR spectrum	Conforms to structure	Conforms to Structure
Appearance(D155891)	Light yellow to Amber to Dark green to Red brown powder to crystal	Light yellow to Amber to Dark green to Red brown powder to crystal



John Su
QA & QC Manager