

Product Name: NR12S

Catalog No.: 7509

Batch No.: 1

CAS Number: 1221739-85-0

IUPAC Name: 3-((3-((9-(Diethylamino)-5-oxo-5H-benzo[a]phenoxazin-2-yl)oxy)propyl)(dodecyl)(methyl)ammonio)propane-1-sulfonate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₉H₅₇N₃O₆S·2¼H₂O

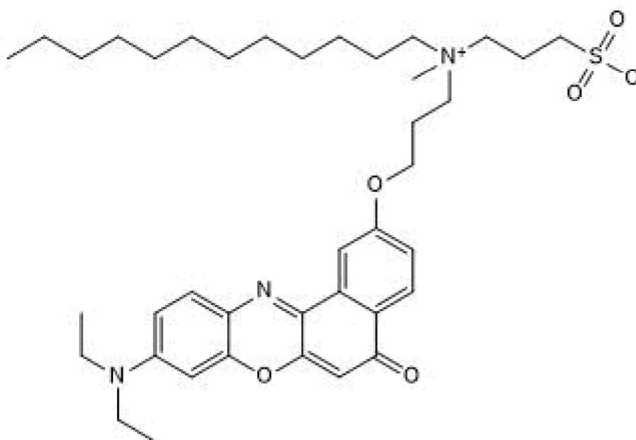
Batch Molecular Weight: 736.49

Physical Appearance: Black solid

Solubility: DMSO to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 96.9% purity at 565 nm

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 550 nm (DMSO)

λ_{ex}: 556 nm (DMSO)

λ_{em}: 627 nm (DMSO)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.6	8.42	5.71
Found	63.17	8.52	5.55

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Key information: NR12S is a fluorogenic lipid membrane dye that stains the outer leaflet of lipid vesicles and cell membranes. Suitable for live cell imaging. Used for: monitoring cholesterol and lipid order selectively at the outer leaflet of cell membranes. Application: fluorescence microscopy. Properties and Photophysical Data: NR12S is a conjugation of the Nile Red fluorophore with a long alkyl chain and a zwitterionic group, allowing strong interactions with the lipid membranes. Excitation and emission maxima (λ) are 554 nm and 627 nm in DMSO, respectively; quantum yield = 0.55.

Physical and Chemical Properties:

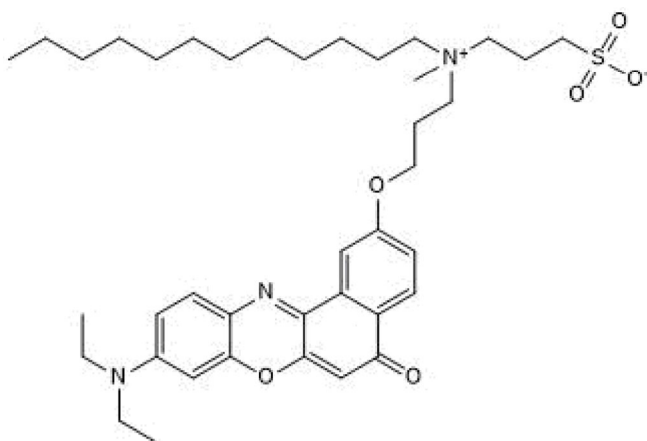
Batch Molecular Formula: C₃₉H₅₇N₃O₆S.2 $\frac{1}{4}$ H₂O

Batch Molecular Weight: 736.49

Physical Appearance: Black solid

Minimum Purity: $\geq 95\%$

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Kucherak et al (2010) Switchable Nile red-based probe for cholesterol and lipid order at the outer leaflet of biomembranes. *J.Am.Chem.Soc.* **132** 4907. PMID: 20225874.

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