

**Product Name:** Nile Red

**Catalog No.:** 7387

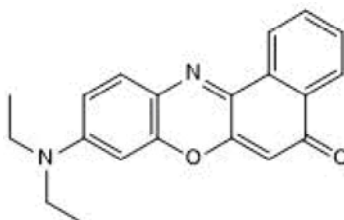
**Batch No.:** 1

CAS Number: 7385-67-3

IUPAC Name: 9-(Diethylamino)-5H-benzo[a]phenoxazin-5-one

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>20</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>.  
**Batch Molecular Weight:** 318.38  
**Physical Appearance:** Brown solid  
**Solubility:** DMSO to 10 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**UV Spectrum:** Consistent with structure  
**λ<sub>max</sub>:** 550 nm (MeOH)  
**λ<sub>ex</sub>:** 557 nm (MeOH)  
**λ<sub>em</sub>:** 635 nm (MeOH)

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	75.45	5.7	8.8
Found	75.29	5.69	8.76

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

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**Description:**

Nile red is a fluorogenic lipid membrane dye, which fluoresces in the hydrophobic environment of lipid membranes. Non-fluorescent in polar environments (e.g. water). Nile red is suitable for long-term monitoring of lipid dynamics in living cells. Excitation maximum = 552 nm; emission maximum = 636 nm in methanol.

**Physical and Chemical Properties:**

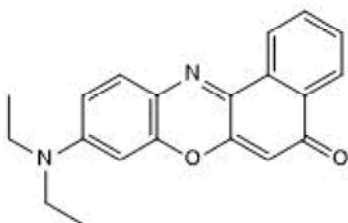
Batch Molecular Formula: C<sub>20</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>.

Batch Molecular Weight: 318.38

Physical Appearance: Brown solid

**Minimum Purity:** ≥98%

**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. Our standard recommendations are:

**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:**

**Zhanghao et al** (2020) High-dimensional super-resolution imaging reveals heterogeneity and dynamics of subcellular lipid membranes. *Nat. Commun.* **11** 5890. PMID: 33208737.

**Uribe-Etxebarria et al** (2019) Wnt signaling reprograms metabolism in dental pulp stem cells. *J. Cell Physiol.* **234** 13068. PMID: 30549037.

**Maes et al** (2017) A rapid-screening approach to detect and quantify microplastics based on fluorescent tagging with Nile red. *Sci. Rep* **16** 44501. PMID: 28300146.

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