bio-techne
TOCRIS

Print Date: Jun 17th 2024

Certificate of Analysis

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Product Name: **C-Laurdan** **Catalog No.: 7273** **Batch No.: 1**

CAS Number: 959839-06-6

IUPAC Name: *N*-Methyl-*N*-[6-(1-oxododecyl)-2-naphthalenyl]glycine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{25}H_{35}NO_3.¼H_2O$

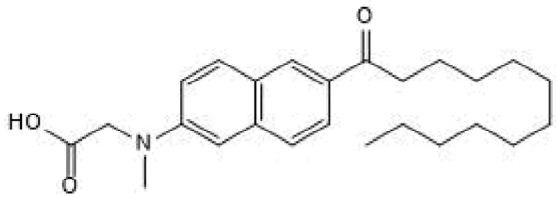
Batch Molecular Weight: 402.06

Physical Appearance: Beige solid

Solubility: DMF to 100 mM
ethanol to 10 mM
DMSO to 20 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 355 nm (Chloroform)

λ_{ex}: 347 nm (Chloroform)

λ_{em}: 426 nm (Chloroform)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	74.68	8.9	3.48
Found	74.78	8.94	3.57

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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Description:

Key information: C-Laurdan is a polarity-sensitive lipid membrane probe. Used for: lipid raft imaging and cell membrane imaging. Application: One and two-photon microscopy for membrane polarity. Properties and Photophysical Data: C-laurdan carry a carboxylic group which can be partially ionized which contributes to its good water solubility and fast membrane incorporation. Two photon excitation spectra = 780 nm. One photon excitation and emission maxima (λ) are 348 nm and 423 nm, respectively; quantum yield = 0.43; extinction coefficient = 12,200 $M^{-1}cm^{-1}$.

Physical and Chemical Properties:

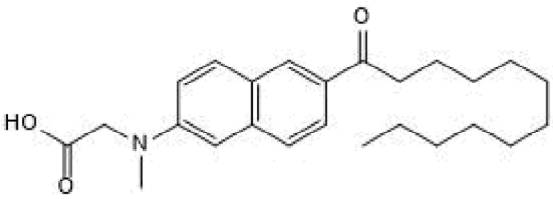
Batch Molecular Formula: $C_{25}H_{35}NO_3.¼H_2O$

Batch Molecular Weight: 402.06

Physical Appearance: Beige solid

Minimum Purity: ≥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:

DMF to 100 mM
ethanol to 10 mM
DMSO to 20 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:

Mazeres *et al* (2014) Characterization of M-laurdan, a versatile probe to explore order in lipid membranes. F1000Res. ***3*** 172. PMID: 25485094.

Barucha-Kraszewska *et al* (2013) Will C-Laurdan dethrone Laurdan in fluorescent solvent relaxation techniques for lipid membrane studies? Langmuir ***29*** 1174. PMID: 23311388.

Kim *et al* (2007) A two-photon fluorescent probe for lipid raft imaging: C-laurdan. Chembiochem ***8*** 553. PMID: 17300111.

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