Laurdan (6-Dodecanoyl-2-dimethylaminonaphthalene)

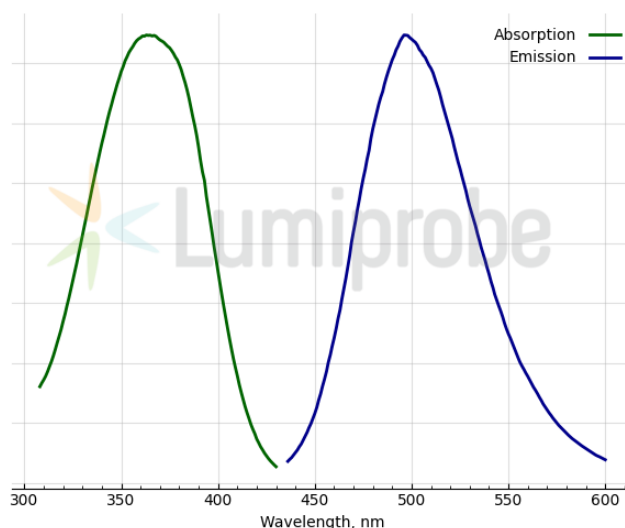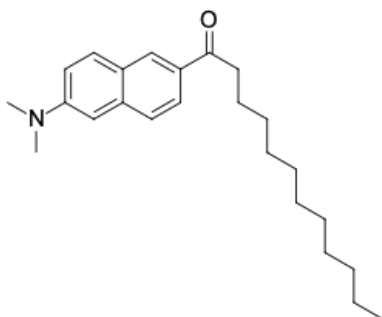http://hk.lumiprobe.com/p/laurdan-membrane-fluidity-probe

Laurdan (6-dodecanoyl-2-dimethylaminonaphthalene) is a membrane-permeable fluorescent probe highly sensitive to the physical state of the surrounding phospholipids.

Laurdan is composed of a chain of lauric acid linked to a naphthalene molecule. The hydrophobic tail of the fatty acid embeds the probe in the lipid bilayer. The naphthalene moiety of the molecule localizes at the level of the glycerol backbones of the membrane phospholipids. The chemical structure and membrane location of Laurdan makes it sensitive to the presence and mobility of water molecules in the lipid bilayer. Quantitation of the generalized polarization of Laurdan can be used to identify the phospholipid phase. When excited at 340 nm, generalized polarization values are 0.6 for the gel phase and −0.2 for the liquid crystalline phase. The generalized polarization changes only with phase state and does not change with a polar head group or pH in the range of 4-10.

Laurdan is suitable for generalized polarization imaging and scanning fluorescence correlation spectroscopy. It can also be used to image lipid rafts (lipid microdomains) in live and fixed cells and whole tissues with multiphoton microscopy. The emission maxima of Laurdan are 440 nm and 490 nm in gel and liquid phase membranes, respectively.

To make a concentrated Laurdan stock solution of up to 20 mM, dissolve it in either DMF or acetonitrile.

外观:	黃色晶體
分子量:	353.55
CAS 编号:	74515-25-6
分子式:	$C_{24}H_{35}NO$
IUPAC 名称:	1-[6-(Dimethylamino)naphthalen-2-yl]dodecan-1-one
溶解度:	DMF、乙腈、甲醇
质量控制:	NMR ^{1}H 和 HPLC-MS (95+%)
储存条件:	收到後 -20°C 避光保存 24 個月。運輸：室溫最多可保存3週。乾燥。
法律声明:	本產品僅供研究目的的提供和銷售。本產品並未經過食品、藥品、醫療器械、化妝品等領域的安全性和效力測試，且未經明示或暗示授權用於其他任何用途，包括但不限於體外診斷、人類或動物用途，以及商業用途。

激发/吸收极大值，纳米:	363
发射极大值，纳米:	496