

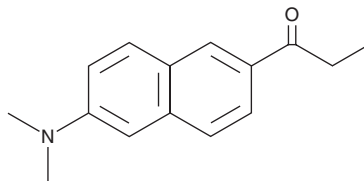
PRODUCT INFORMATION



Prodan

Item No. 27663

CAS Registry No.: 70504-01-7
Formal Name: 1-[6-(dimethylamino)-2-naphthalenyl]-1-propanone
Synonym: N,N-Dimethyl-6-propionyl-2-naphthylamine
MF: C₁₅H₁₇NO
FW: 227.3
Purity: ≥98%
UV/Vis.: λ_{max}: 231, 250, 259, 283, 359 nm
Abs./Em. Max: 347/416 nm in toluene; increases as solvent polarity increases
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Prodan is supplied as a crystalline solid. A stock solution may be made by dissolving the prodan in the solvent of choice, which should be purged with an inert gas. Prodan is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of prodan in these solvents is approximately 1, 5, and 10 mg/ml, respectively.

Prodan is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, prodan should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Prodan has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Prodan is a solvatochromic fluorescent probe.¹ It exhibits absorbance/emission maxima of 347/416 nm, respectively, in toluene, with both parameters increasing as solvent polarity increases. The emission maximum is also influenced by the phase state of membranes, such as in multilamellar vesicles containing 1,2-dipalmitoyl-*sn*-glycero-3-PC (DPPC; Item No. 10009473) wherein the emission maximum of prodan shifts from approximately 440 nm in the gel phase to approximately 490 nm in the liquid crystalline phase.² Prodan has been used to probe the microenvironmental conditions of biological and synthetic membranes.^{2,3}

References

1. Kucherak, O.A., Didier, P., Mély, Y., *et al.* Fluorene analogues of prodan with superior fluorescence brightness and solvatochromism. *J. Phys. Chem. Lett.* **1(3)**, 616-620 (2010).
2. Parasassi, T., Krasnowska, E.K., Bagatolli, L., *et al.* Laurdan and prodan as polarity-sensitive fluorescent membrane probes. *J. Fluoresc.* **8(4)**, 365-373 (1998).
3. Mennucci, B., Caricato, M., Ingrosso, F., *et al.* How the environment controls absorption and fluorescence spectra of PRODAN: A quantum-mechanical study in homogeneous and heterogeneous media. *J. Phys. Chem. B* **112(2)**, 414-423 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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