

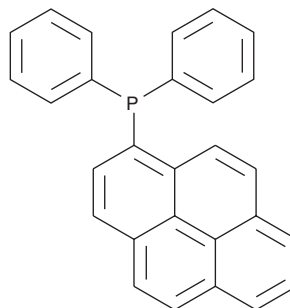
PRODUCT INFORMATION



DPPP

Item No. 62237

CAS Registry No.: 110231-30-6
Formal Name: diphenyl-1-pyrenylphosphine
Synonym: Diphenyl-1-pyrenylphosphine
MF: C₂₈H₁₉P
FW: 386.4
Purity: ≥98%
UV/Vis.: λ_{max}: 243, 280, 355 nm
Ex./Em. Max: 351/380 nm
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

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

Description

DPPP is a probe that reacts stoichiometrically with hydroperoxides to yield the fluorescent molecule diphenyl-1-pyrenylphosphine oxide (DPPP-O).¹ Plasma levels of lipid hydroperoxides of phosphatidylcholine, phosphatidylethanolamine, triglycerides, and cholesterol esters have been measured by HPLC with a post column detection system using DPPP.^{2,3} DPPP has also been used as a fluorescent probe for the detection of low-density lipoprotein and cellular oxidation.⁴ Fluorescence of DPPP-O can be monitor using excitation and emission wavelengths of 351 nm and 380 nm, respectively.

References

1. Okimoto, Y., Watanabe, A., Niki, E., *et al.* A novel fluorescent probe diphenyl-1-pyrenylphosphine to follow lipid peroxidation in cell membranes. *FEBS Lett.* **474**, 137-140 (2000).
2. Alasaka, K., Ijichi, S., Watanabe, K., *et al.* High performance liquid chromatography and post column derivatization with DPPP for fluorometric determination of triglycerol hydroperoxides. *J. Chromatogr.* **596**, 197-202 (1992).
3. Akassaka, K., Ijichi, S., Ohru, H., *et al.* Simultaneous determination of hydroperoxides of phosphatidylcholine, cholesterol esters and triglycerols by column-switching HPLC with a postcolumn detection system. *J. Chromatogr.* **622**, 153-159 (1993).
4. Okimoto, Y., Warabi, E., Wada, Y., *et al.* A novel method of following oxidation of low-density lipoprotein using a sensitive fluorescent probe, diphenyl-1-pyrenylphosphine. *Free Radic. Biol. Med.* **35(6)**, 576-585 (2003).

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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