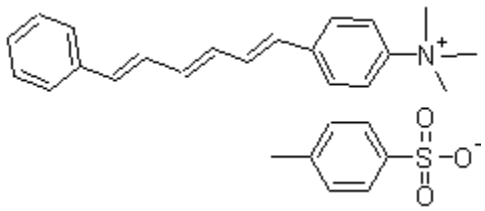
TMA-DPH

Ordering Information	*Storage Conditions*
Product Number: 21492 (5 mg)	Avoid light Keep at -20 °C and desiccated

Chemical and Physical Properties



Molecular Weight: 461,62
Appearance: Light yellow powder
Solvent: DMSO
Spectral Properties: Excitation = 355 nm; Emission = 430 nm.

Biological Applications

TMA-DPH is a fluorescent probe for membrane fluidity measurements. It is especially useful in the study of monolayer dynamics of lipoproteins and similar analogous systems. DPH and its derivatives (such as TMA-DPH) are cylinder-shaped and have fluorescence emission transition dipoles that are basically aligned parallel to their long molecular axis. As such, they are very sensitive to reorientation resulting from interactions with surrounding lipids. They are widely used in fluorescence polarization studies of rotational motion.

Sample Protocol for Staining Cells

The following procedure can be adapted for most cell types. Growth medium, cell density, the presence of other cell types and other factors may influence staining. Residual detergent on glassware may also affect real or apparent staining of many organisms, causing brightly stained material to appear in solutions with or without cells present.

1) Pellet cells by centrifugation and resuspend the cells in buffered salt solutions or media, with optimal dye binding at pH 7.4. Adherent cells in culture may be stained *in situ* on cover slips or in the cell culture wells.
2) Make a TMA-DPH DMSO stock solution at 10-50 mM.
3) Add TMA-DPH stain using the concentrations between 0.5 and 5 μM in Hanks and 20 mM Hepes buffer pH 7.4, and incubate it at 37 °C, 5% CO_2 incubator for 5 minutes. In initial experiments, it may be best to try several dye concentrations over the entire suggested range to determine the concentration that yields optimal staining.
4) Wash the cells and resuspended in the appropriate Hepes buffer pH 7.4.

Disclaimer: *This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact our technical service representative for more information.*

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