

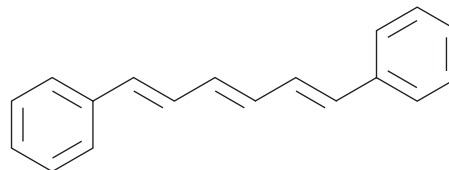
# PRODUCT INFORMATION



## 1,6-Diphenyl-1,3,5-hexatriene

Item No. 28277

CAS Registry No.: 1720-32-7  
Formal Name: 1,1'-(1,3,5-hexatriene-1,6-diyl)bis-benzene  
Synonyms: Diphenylhexatriene, DPH, NSC 90479  
MF: C<sub>18</sub>H<sub>16</sub>  
FW: 232.3  
Purity: ≥98%  
UV/Vis.: λ<sub>max</sub>: 243, 336, 352, 371 nm  
Ex./Em. Max: 360/430 nm  
Supplied as: A solid  
Storage: -20°C  
Stability: ≥2 years



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

### Laboratory Procedures

1,6-Diphenyl-1,3,5-hexatriene is supplied as a solid. A stock solution may be made by dissolving the 1,6-diphenyl-1,3,5-hexatriene in the solvent of choice, which should be purged with an inert gas. 1,6-Diphenyl-1,3,5-hexatriene is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 0.2 mg/ml.

1,6-Diphenyl-1,3,5-hexatriene is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1,6-diphenyl-1,3,5-hexatriene should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 1,6-Diphenyl-1,3,5-hexatriene has a solubility of approximately 0.5 mg/ml in a 5:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

1,6-Diphenyl-1,3,5-hexatriene is a probe for lipid mono- and bilayers.<sup>1-3</sup> It localizes to the hydrocarbon regions in lipid mono- and bilayers and displays excitation/emission maxima of 360/430 nm, respectively.<sup>1,2</sup> 1,6-Diphenyl-1,3,5-hexatriene has been used to characterize lipid membrane dynamics *in vitro* and *ex vivo* and in the determination of the critical micelle concentrations (CMCs) of anionic, cationic, uncharged, and zwitterionic detergents.<sup>1-3</sup>

### References

1. Chattopadhyay, A. and London, E. Fluorimetric determination of critical micelle concentration avoiding interference from detergent charge. *Anal. Biochem.* **139(2)**, 408-412 (1984).
2. Tang, D., Wieb van der Meer, B., and Simon Chen, S.-Y. Evidence for a regular distribution of cholesterol in phospholipid bilayers from diphenylhexatriene fluorescence. *Biophys J.* **68(5)**, 1944-1951 (1995).
3. Cohen, B.M. and Zubenko, G.S. In vivo effects of psychotropic agents on the physical properties of cell membranes in the rat brain. *Psychopharmacology (Berl)* **86(3)**, 365-368 (1985).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM