

PRODUCT DATA SHEET

rac-5,7-Dimethyltolcol

Catalog No: 1074

Common Name: 2,5,7-trimethyl-2-(4,8,12-trimethyltridecyl)-6-chromanol

Source: synthetic

Solubility: hexane, ethyl ether, chloroform alcohols

CAS No: 493-35-6

Molecular Formula: C₂₈H₄₈O₂

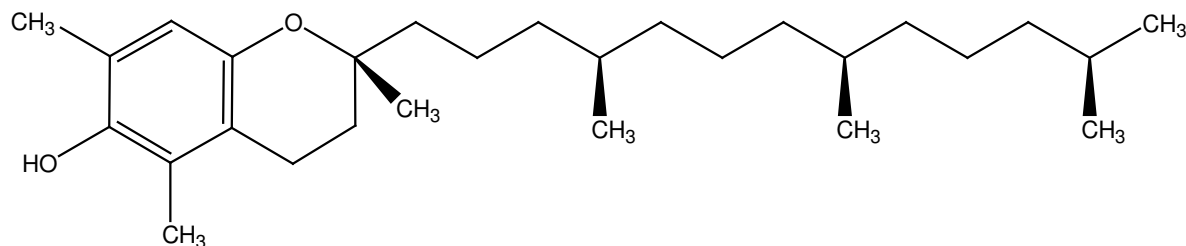
Molecular Weight: 417

Storage: -20°C

Purity: TLC > 95%, GC > 98%, HPLC >98%, identity confirmed by MS

TLC System: chloroform/methanol (97:3 by vol.)

Appearance: liquid



Application Notes:

This synthetic product is very similar in structure to tocopherol (vitamin E) and tocotrienol but is not found naturally and is therefore an ideal MS, HPLC, and GC internal standard for tocopherols and tocotrienols.¹ In experimental procedures it has been found that the functionality of *rac*-5,7-dimethyltolcol is different from tocopherols and tocotrienols. For example, *rac*-5,7-dimethyltolcol has less antioxidant activity than natural tocopherols² and contributes less to cellular microviscosity than other tocopherols.³ However, it has been shown that *rac*-5,7-dimethyltolcol (like most other tocopherols but not tocol) can be converted *in vitro* into α -tocopherol.

Selected References:

1. J. Kramer "A rapid method for the determination of vitamin E forms in tissues and diet by high-performance liquid chromatography using a normal-phase diol column" *Lipids*, Vol.32:3 pp. 323-330 1997
2. H. Olcott and J. Van der Veen "Comparison of antioxidant activities of tocol and its methyl derivatives" *Lipids*, Vol. 3:4 pp. 331-334, 1968
3. S. Urano et al. "Vitamin E: Inhibition of Retinol-induced Hemolysis and Membrane-stabilizing Behavior" *Journal of Biological Chemistry*, Vol. 267:26 pp. 18365-18370, 1992

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