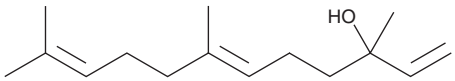
PRODUCT INFORMATION

trans-Nerolidol

Item No. 25778

CAS Registry No.: 40716-66-3
Formal Name: (6E)-3,7,11-trimethyl-1,6,10-dodecatrien-3-ol
MF: $C_{15}H_{26}O$
FW: 222.4
Purity: ≥98%
UV/Vis.: λ_{max}: 243 nm
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

trans-Nerolidol is supplied as a neat oil. A stock solution may be made by dissolving the *trans*-nerolidol in the solvent of choice. *trans*-Nerolidol is miscible in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas.

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

Description

trans-Nerolidol is a sesquiterpene that has been found in various plants, including *C. sativa*, and has diverse biological activities, including antimicrobial, antioxidant, anticancer, and insecticidal properties.[1-4] In a disc assay, *trans*-nerolidol inhibits the growth of *S. aureus*, *B. subtilis*, *E. coli*, and *S. cerevisiae* with zones of inhibition measuring 10, 9, 10, and 4 mm, respectively.[2] It reduces viability of CaCo-2 adenocarcinoma cells with an IC_{50} value of 28.7 mg/L and reduces production of reactive oxygen species (ROS).[3] *trans*-Nerolidol is insecticidal against *A. aegypti* larvae with a 24-hour LC_{50} value of 9 mg/L.[4]

References

1. Nissen, L., Zatta, A., Stefanini, I., *et al.* Characterization and antimicrobial activity of essential oils of industrial hemp varieties (*Cannabis sativa* L.). *Fitoterapia* **81(5)**, 413-419 (2010).
2. Skaltsa, H.D., Lazari, D.M., Mavromati, A.S., *et al.* Composition and antimicrobial activity of the essential oil of *Scutellaria albida* ssp. *albida* from Greece. *Planta Med.* **66(7)**, 672-674 (2000).
3. Ambrož, M., Boušová, I., Skarka, A., *et al.* The influence of sesquiterpenes from *Myrica rubra* on the antiproliferative and pro-oxidative effects of doxorubicin and its accumulation in cancer cells. *Molecules* **20(8)**, 15343-15358 (2015).
4. Chantraine, J.-M., Laurent, D., Ballivian, C., *et al.* Insecticidal activity of essential oils on *Aedes aegypti* larvae. *Phytother. Res.* **12(5)**, 350-354 (1998).

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