

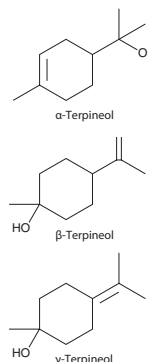
PRODUCT INFORMATION



Terpineol

Item No. 23173

CAS Registry No.: 8000-41-7
Formal Name: $\alpha,\alpha,4$ -trimethyl-3-cyclohexene-1-methanol,
1-methyl-4-(1-methylethenyl)-cyclohexanol,
1-methyl-4-(1-methylethylidene)-cyclohexanol
MF: $C_{10}H_{18}O$
FW: 154.3
Purity: $\geq 90\%$ (mixture of isomers)
Supplied as: An oil
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Terpineol is supplied as an oil. A stock solution may be made by dissolving the terpineol in the solvent of choice, which should be purged with an inert gas. Terpineol is slightly soluble in ethanol, methanol, and chloroform.

Description

Terpineol is a monoterpene alcohol that has been found in a variety of plants, including *Cannabis*, and has diverse biological activities.¹ α -Terpineol has antibacterial and antinociceptive properties.^{2,3} It is active against a variety of periodontopathic and cariogenic bacteria, including strains of *P. gingivalis*, *F. nucleatum*, and *A. actinomycetemcomitans* (MICs = 0.1-0.8 mg/ml), however, it is toxic to KB cells when used at a concentration of 0.8 mg/ml.² It also reduces mechanical hyperalgesia, as well as spontaneous and palpation-induced nociception, in a mouse model of cancer-induced pain beginning on day 5 when administered at a dose of 50 mg/kg per day.³ Terpinen-4-ol has anticonvulsant properties, inhibiting pentylenetetrazol-induced seizures in mice when used at doses ranging from 50 to 200 mg/kg.⁴ α -Terpineol and terpinen-4-ol also have anti-inflammatory properties, reducing LPS-induced production of IL-1 β , IL-6, and IL-10, but not TNF- α , in U937 cells.⁵ This product is a mixture of α -, β -, and γ -terpineol.

References

1. Ross, S.A. and ElSohly, M.A. The volatile oil composition of fresh and air-dried buds of *Cannabis sativa*. *J. Nat. Prod.* **59(1)**, 49-51 (1996).
2. Park, S.-N., Lim, Y.K., Freire, M.O., et al. Antimicrobial effect of linalool and α -terpineol against periodontopathic and cariogenic bacteria. *Anaerobe* **18(3)**, 369-372 (2012).
3. Gouveia, D.N., Costa, J.S., Oliveira, M.A., et al. α -Terpineol reduces cancer pain via modulation of oxidative stress and inhibition of iNOS. *Biomed. Pharmacother.* **105**, 652-661 (2018).
4. Nóbrega, F.F.F., Salvadori, M.G.S.S., Masson, C.J., et al. Monoterpenoid terpinen-4-ol exhibits anticonvulsant activity in behavioural and electrophysiological studies. *Oxid. Med. Cell. Longev.* 703848 (2014).
5. Nogueira, M.N.M., Aquino, S.G., Rossa Junior, C., et al. Terpinen-4-ol and alpha-terpineol (tea tree oil components) inhibit the production of IL-1 β , IL-6 and IL-10 on human macrophages. *Inflamm. Res.* **63(9)**, 769-778 (2014).

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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