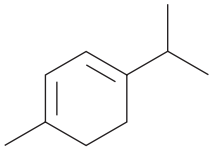
PRODUCT INFORMATION

α-Terpinene

Item No. 23178

CAS Registry No.: 99-86-5
Formal Name: 1-methyl-4-(1-methylethyl)-1,3-cyclohexadiene
Synonym: *p*-Mentha-1,3-diene
MF: $C_{10}H_{16}$
FW: 136.2
Purity: ≥95%
Supplied as: A liquid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

α-Terpinene is supplied as a liquid. A stock solution may be made by dissolving the α-terpinene in the solvent of choice, which should be purged with an inert gas. α-Terpinene is soluble in the organic solvent ethanol at a concentration of approximately 100 mg/ml.

Description

α-Terpinene is a terpenoid that has been found in *Cannabis* and has diverse biological activities, including acaricidal, antiprotozoal, and antioxidant properties.[1,2] α-Terpinene induces 99 and 46% mortality of male and female *T. putrescentiae* larvae, respectively, when administered at a dose of 32.3 µl/L *via* inhalation.[3] In mice infected with *T. evansi*, it increases longevity when used alone and decreases mortality when used in combination with diminazene aceturate (Item No. 18678).[4] It also scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals when used at a concentration of 10 mM.[5]

References

1. Giese, M.W., Lewis, M.A., Giese, L., *et al*. Development and validation of a reliable and robust method for the analysis of cannabinoids and terpenes in Cannabis. *J. AOAC Int*. **98(6)**, 1503-1522 (2015).
2. 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).
3. Sánchez-Ramos, I. and Castañera, P. Acaricidal activity of natural monoterpenes on *Tyrophagus putrescentiae* (Schrank), a mite of stored food. *J. Stored Prod. Res.* **37(1)**, 93-101 (2000).
4. Baldissera, M.D., Grando, T.H., Souza, C.F., *et al*. *In vitro* and *in vivo* action of terpinen-4-ol, γ-terpinene, and α-terpinene against *Trypanosoma evansi*. *Exp. Parasitol*. **162**, 43-48 (2016).
5. Kim, H.J., Chen, F., Wu, C., *et al*. Evaluation of antioxidant activity of Australian tea tree (*Melaleuca alternifolia*) oil and its components. *J. Agric. Food Chem*. **52(10)**, 2849-2854 (2004).

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