

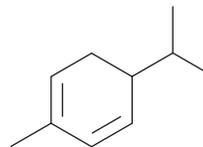
PRODUCT INFORMATION



α -Phellandrene

Item No. 23179

CAS Registry No.: 99-83-2
Formal Name: 2-methyl-5-(1-methylethyl)-1,3-cyclohexadiene
Synonyms: *p*-Mentha-1,5-diene, (\pm)- α -Phellandrene
MF: C₁₀H₁₆
FW: 136.2
Purity: \geq 80%
Supplied as: An oil
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

α -Phellandrene is supplied as an oil. A stock solution may be made by dissolving the α -phellandrene in the solvent of choice, which should be purged with an inert gas. α -Phellandrene is soluble in organic solvents such as chloroform and benzene.

Description

α -Phellandrene is a cyclic monoterpene that has been found in various plants, including *Cannabis*, and has diverse biological activities.¹ *In vivo*, α -phellandrene (50, 100, and 200 mg/kg, p.o.) reduces carrageenan-induced neutrophil accumulation and leukocyte rolling and adhesion as well as inhibits production of the pro-inflammatory cytokines TNF- α and IL-6 in a rat model of air pouch inflammation.² It decreases spleen weight and increases macrophage phagocytosis and natural killer (NK) cell cytotoxic activity in a murine WEHI-3 leukemia model.³ α -Phellandrene has antinociceptive effects in mouse models of pain, reducing acetic acid-induced writhing, paw licking in the capsaicin test, and glutamate-induced licking and biting behavior, as well as increases the paw withdrawal threshold following carrageenan-induced inflammation.⁴

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. Siqueira, H.D., Neto, B.S., Sousa, D.P., *et al.* α -Phellandrene, a cyclic monoterpene, attenuates inflammatory response through neutrophil migration inhibition and mast cell degranulation. *Life Sci.* **160**, 27-33 (2016).
3. Lin, J.-J., Lu, K.-W., Ma, Y.-S., *et al.* Alpha-phellandrene, a natural active monoterpene, influences a murine WEHI-3 leukemia model *in vivo* by enhancing macrophage phagocytosis and natural killer cell activity. *In Vivo* **28(4)**, 583-588 (2014).
4. Lima, D.F., Brandão, M.S., Moura, J.B., *et al.* Antinociceptive activity of the monoterpene α -phellandrene in rodents: Possible mechanisms of action. *J. Pharm. Pharmacol.* **64(2)**, 283-292 (2012).

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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