

PRODUCT INFORMATION



(-)-β-Pinene

Item No. 21577

CAS Registry No.: 18172-67-3
Formal Name: (1S,5S)-6,6-dimethyl-2-methylene-bicyclo[3.1.1]heptane
Synonym: (S)-β-Pinene
MF: C₁₀H₁₆
FW: 136.2
Purity: ≥97%
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

(-)-β-Pinene is supplied as a neat oil. A stock solution may be made by dissolving the (-)-β-pinene in the solvent of choice, which should be purged with an inert gas. (-)-β-Pinene is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (-)-β-pinene in these solvents is approximately 20 mg/ml.

(-)-β-Pinene is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (-)-β-pinene should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (-)-β-Pinene has a solubility of approximately 0.33 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(-)-β-Pinene is a bicyclic monoterpene that has been found in various plants, including *C. sativa*, with antiviral and antidepressant effects.¹⁻³ It inhibits infectious bronchitis virus (IBV) replication (IC₅₀ = 1.32 mM) and exhibits a cytotoxic concentration (CC₅₀) value of greater than 10 mM in Vero cells.² *In vivo*, (-)-β-pinene (100 mg/kg) decreases immobility time in the forced swim test in mice, an effect that can be reversed by the serotonin (5-HT) receptor subtype 5-HT_{1A} antagonist WAY-100635 (Item No. 14599).³

References

1. Nigam, M.C., Handa, K.L., Nigam, I.C., et al. Essential oils and their constituents: XXIX. The essential oil of marihuana: Composition of genuine indian *Cannabis sativa* L. *Can. J. Chem.* **43**(12), 3372-3376 (1965).
2. Yang, Z., Wu, N., Zu, Y., et al. Comparative anti-infectious bronchitis virus (IBV) activity of (-)-pinene: Effect on nucleocapsid (N) protein. *Molecules* **16**(2), 1044-1054 (2011).
3. Guzmán-Gutiérrez, S.L., Bonilla-Jaime, H., Gómez-Cansino, R., et al. Linalool and β-pinene exert their antidepressant-like activity through the monoaminergic pathway. *Life Sci.* **128**, 24-29 (2015).

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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