

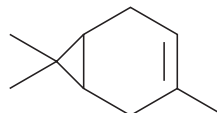
# PRODUCT INFORMATION



## (±)-3-Carene

Item No. 25768

CAS Registry No.: 13466-78-9  
Formal Name: 3,7,7-trimethyl-bicyclo[4.1.0]hept-3-ene  
Synonym: (±)- $\Delta^3$ -Carene  
MF:  $C_{10}H_{16}$   
FW: 136.2  
Purity:  $\geq 95\%$   
Supplied as: An oil  
Storage:  $-20^\circ C$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

(±)-3-Carene is supplied as an oil. A stock solution may be made by dissolving the (±)-3-carene in the solvent of choice. (±)-3-Carene is soluble in organic solvents such as chloroform and methanol.

### Description

(±)-3-Carene is a bicyclic monoterpene found in a variety of plants, including *Cannabis*.<sup>1</sup> It decreases phagocytosis by rat alveolar macrophages when used at a concentration of  $0.5 \mu M$  and decreases their viability at a concentration of  $5 \mu M$ .<sup>2</sup> (±)-3-Carene increases the expression and activity of alkaline phosphatase in mouse osteoblastic MC3T3-E1 subclone 4 cells, indicating induction of osteoblastic differentiation.<sup>3</sup> It also induces calcium formation and increases the expression of osteopontin and type I collagen, which are related to osteoblast mineralization. (±)-3-Carene induces bronchoconstriction in isolated guinea pig lungs when exposed at an air concentration of  $3,000 \text{ mg/m}^3$ .<sup>4,5</sup>

### References

- Hillig, K.W. A chemotaxonomic analysis of terpenoid variation in *Cannabis*. *Biochem. System. Ecol.* **32(10)**, 875-891 (2004).
- Johansson, A. and Lundborg, M. Effects of low concentrations of 3-carene on alveolar macrophages *in vitro*. *Toxicology* **120(2)**, 99-104 (1997).
- Jeong, J.-G., Kim, Y.S., Min, Y.K., *et al.* Low concentration of 3-carene stimulates the differentiation of mouse osteoblastic MC3T3-E1 subclone 4 cells. *Phytother. Res.* **22(1)**, 18-22 (2008).
- Låstbom, L., Falk-Filipsson, A., Boyer, S., *et al.* Mechanisms of 3-carene-induced bronchoconstriction in the isolated guinea pig lung. *Respiration* **62(3)**, 130-135 (1995).
- Låstbom, L., Boman, A., Camner, P., *et al.* Does airway responsiveness increase after skin sensitisation to 3-carene: A study in isolated guinea pig lungs. *Toxicology* **125(1)**, 59-66 (1998).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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