

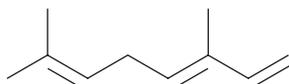
# PRODUCT INFORMATION



## *trans*- $\beta$ -Ocimene

Item No. 29393

CAS Registry No.: 3779-61-1  
Formal Name: (3E)-3,7-dimethyl-1,3,6-octatriene  
Synonym: (E)- $\beta$ -Ocimene  
MF: C<sub>10</sub>H<sub>16</sub>  
FW: 136.2  
Purity:  $\geq 90\%$   
Supplied as: A solution in methanol  
Storage: -20°C  
Stability:  $\geq 2$  years  
Item Origin: Synthetic



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

### Laboratory Procedures

*trans*- $\beta$ -Ocimene is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as methanol and chloroform purged with an inert gas can be used. *trans*- $\beta$ -Ocimene is slightly soluble in methanol and chloroform.

### Description

*trans*- $\beta$ -Ocimene is a monoterpene and isomer of  $\beta$ -ocimene (Item No. 23466) that has been found in a variety of plants, including *Cannabis*.<sup>1-3</sup> It is a volatile compound involved in plant-plant signaling and plant defense against pests. Emission of *trans*- $\beta$ -ocimene from *L. japonicus* plants is induced within 24 hours of spider mite (*T. urticae*) infestation.<sup>2</sup> Conditioning of tomato plants using volatile organic compounds (VOCs) from transgenic tobacco plants overexpressing *trans*- $\beta$ -ocimene synthase increases production of VOCs and reduces the number of aphids (*M. euphorbiae*) that settle on the plant and the number of nymphs produced by the aphids that settle, as well as increases the number of landings of the aphid parasitoid *A. ervi* compared with conditioning using wild-type tobacco VOCs.<sup>3</sup>

### References

1. Marchini, M., Charvoz, C., Dujourdy, L., *et al.* Multidimensional analysis of cannabis volatile constituents: Identification of 5,5-dimethyl-1-vinylbicyclo[2.1.1]hexane as a volatile marker of hashish, the resin of *Cannabis sativa* L. *J. Chromatogr. A*. **1370**, 200-215 (2014).
2. Arimura, G., Ozawa, R., Kugimiya, S., *et al.* Herbivore-induced defense response in a model legume. Two-spotted spider mites induce emission of (E)- $\beta$ -ocimene and transcript accumulation of (E)- $\beta$ -ocimene synthase in *Lotus japonicus*. *Plant Physiol.* **135(4)**, 1976-1983 (2004).
3. Cascone, P., Iodice, L., Maffei, M.E., *et al.* Tobacco overexpressing  $\beta$ -ocimene induces direct and indirect responses against aphids in receiver tomato plants. *J. Plant Physiol.* **173**, 28-32 (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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