

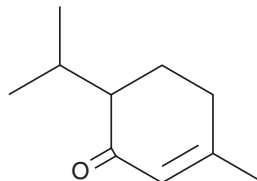
PRODUCT INFORMATION



Piperitone

Item No. 33490

CAS Registry No.: 89-81-6
Formal Name: 3-methyl-6-(1-methylethyl)-2-cyclohexen-1-one
Synonyms: 3-Carvomenthenone, NSC 251528
MF: $C_{10}H_{16}O$
FW: 152.2
Purity: $\geq 90\%$
UV/Vis.: λ_{max} : 234 nm
Supplied as: A liquid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years
Item Origin: Plant/*Ocimum gratissimum*



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

Laboratory Procedures

Piperitone is supplied as a liquid. A stock solution may be made by dissolving the piperitone in the solvent of choice, which should be purged with an inert gas. Piperitone is soluble in the organic solvent ethanol at a concentration of approximately 30 mg/ml.

Piperitone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, piperitone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Piperitone has a solubility of approximately 0.14 mg/ml in a 1:6 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Piperitone is a monoterpenoid that has been found in *Mentha* and has diverse biological activities.¹⁻⁴ It is active against *E. coli*, *P. aeruginosa*, *S. typhimurium*, *S. aureus*, *R. leguminosarum*, and *B. subtilis* in agar diffusion assays.¹ Piperitone enhances the antibacterial activity of nitrofurantoin (Item No. 23510) against several nitrofurantoin-resistant species of *Enterobacteriaceae*, including *C. freundii*, *E. coli*, and *S. marcescens*, by 3- to 20-fold.² It exhibits feeding deterrent and repellent activities against ants (*Crematogaster*) with 80% deterrence index (D_{80}) and 80% repellent index (R_{80}) values of 0.13 $\mu\text{g}/\mu\text{l}$ and 8.9 $\mu\text{g}/\text{cm}^2$, respectively.³ Piperitone is insecticidal against *C. maculatus* eggs, larvae, and adults.⁴

References

1. Sivropoulou, A., Kokkini, S., Lanaras, T., et al. Antimicrobial activity of mint essential oils. *J. Agric. Food Chem.* **43**(9), 2384-2388 (1995).
2. Shahverdi, A.R., Rafii, F., Tavassoli, F., et al. Piperitone from *Mentha longifolia* var. *chorodictya* Rech F. reduces the nitrofurantoin resistance of strains of *Enterobacteriaceae*. *Phytother. Res.* **18**(11), 911-914 (2004).
3. Bowers, W.S., Ortego, F., You, X., et al. Insect repellents from the Chinese prickly ash *Zanthoxylum bungeanum*. *J. Nat. Prod.* **56**(6), 935-938 (1993).
4. Ketoh, G.K., Koumaglo, H.K., Glitho, I.A., et al. Comparative effects of *Cymbopogon schoenanthus* essential oil and piperitone on *Callosobruchus maculatus* development. *Fitoterapia* **77**(7-8), 506-510 (2006).

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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