

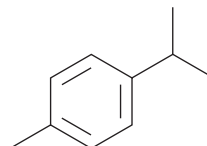
# PRODUCT INFORMATION



## *p*-Cymene

Item No. 23159

**CAS Registry No.:** 99-87-6  
**Formal Name:** 1-methyl-4-(1-methylethyl)-benzene  
**Synonyms:** 4-Cymene, *para*-Cymene, NSC 4162  
**MF:** C<sub>10</sub>H<sub>14</sub>  
**FW:** 134.2  
**Purity:** ≥98%  
**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.

### Description

*p*-Cymene is a monoterpene that is found in a variety of plants, including *C. sativa*, and has diverse biological activities, including antimicrobial, anticancer, antioxidant, anti-inflammatory, antinociceptive, and anxiolytic properties.<sup>1,2</sup> *p*-Cymene inhibits the growth of *S. typhimurium*, *E. coli*, *L. monocytogenes*, *S. epidermidis*, and *S. aureus* with MIC values ranging from 0.266 to 0.608% v/v.<sup>3</sup> It decreases the invasive activity of HT-1080 human fibrosarcoma cells *in vitro* by 87% when used at a concentration of 600 μM.<sup>4</sup> In mouse hippocampus, *p*-Cymene (50 mg/kg, i.p.) reduces lipid peroxidation and nitrite content by 65.5 and 71.2%, respectively, and increases superoxide dismutase (SOD) and catalase activities by 22.7 and 119.3%, respectively, compared to vehicle control animals.<sup>5</sup> Formulations containing *p*-cymene have been used as flavoring agents.

### Reference

1. Marchese, A., Arciola, C.R., Barbieri, R., *et al.* Update on monoterpenes as antimicrobial agents: A particular focus on *p*-cymene. *Materials (Basel)* **10(8)**, pii: E947 (2017).
2. 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).
3. Mitropoulou, G., Fitsiou, E., Stravropoulou, E., *et al.* Composition, antimicrobial, antioxidant, and antiproliferative activity of *Origanum dictamnus* (*dittany*) essential oil. *Microb. Ecol. Health Dis.* **26:26543** (2015).
4. Li, J., Liu, C., and Sato, T. Novel antitumor invasive actions of *p*-cymene by decreasing MMP-9/TIMP-1 expression ratio in human fibrosarcoma HT-1080 cells. *Biol. Pharm. Bull.* **39(8)**, 1247-1253 (2016).
5. de Oliveira, T.M., de Carvalho, R.B., da Costa, I.H., *et al.* Evaluation of *p*-cymene, a natural antioxidant. *Pharm. Biol.* **53(3)**, 423-428 (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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