

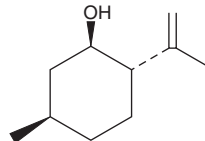
# PRODUCT INFORMATION



## (-)-Isopulegol

Item No. 23161

**CAS Registry No.:** 89-79-2  
**Formal Name:** 5R-methyl-2S-(1R-methylethenyl)-cyclohexanol  
**Synonym:** l-Isopulegol  
**MF:** C<sub>10</sub>H<sub>18</sub>O  
**FW:** 154.3  
**Purity:** ≥98%  
**Supplied as:** A liquid  
**Storage:** Room temperature  
**Stability:** ≥2 years



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

### Laboratory Procedures

(-)-Isopulegol is supplied as a liquid. (-)-Isopulegol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (-)-isopulegol in these solvents is approximately 30 mg/ml.

### Description

(-)-Isopulegol is a monoterpene that has been found in the essential oils of several aromatic plants, including *Cannabis*, with diverse biological activities.<sup>1-5</sup> It has antibacterial activity against *S. aureus*, *E. faecium*, *E. coli*, and *M. smegmatis* (MICs = 0.78, 12.5, 0.78, and 1.56 µl/ml, respectively, in an agar diffusion assay) and antifungal activity against *C. albicans* and *A. niger* (MIC = 1.56 µl/ml for both in an agar diffusion assay).<sup>2</sup> (-)-Isopulegol inhibits *C. albicans* morphogenesis, adhesion, and biofilm formation (MICs = 0.125, 4, and 0.25 mg/ml, respectively).<sup>3</sup> *In vivo*, (-)-isopulegol (50 mg/kg, i.p.) increases immobility time in the forced swim and tail suspension tests and increases the number of head dips in a hole board test and time spent in the open arms of the elevated plus maze in mice, indicating depressant- and anxiolytic-like activity.<sup>4</sup> It reduces the size of ulcerated lesions in the stomach in mouse models of ethanol- and indomethacin-induced gastric lesions when administered at a dose of 100 mg/kg.<sup>5</sup>

### References

1. Fletcher, R.S. and McKay, J. Industrial hemp cannabis cultivars and seeds with stable cannabinoid profiles. US2017/039907A1 (2006).
2. Naigre, R., Kalck, P., Rogues, C., et al. Comparison of antimicrobial properties of monoterpenes and their carbonylated products. *Planta Med.* **62(3)**, 275-277 (1996).
3. Raut, J.S., Shinde, R.B., Chauhan, N.M., et al. Terpenoids of plant origin inhibit morphogenesis, adhesion, and biofilm formation by *Candida albicans*. *Biofouling* **29(1)**, 87-96 (2013).
4. Silva, M.I., de Aquino Neto, M.R., Teixeira Neto, P.F., et al. Central nervous system activity of acute administration of isopulegol in mice. *Pharmacol. Biochem. Behav.* **88(2)**, 141-147 (2007).
5. Silva, M.I., Moura, B.A., Neto, M.R., et al. Gastroprotective activity of isopulegol on experimentally induced gastric lesions in mice: Investigation of possible mechanisms of action. *Naunyn Schmiedeberg's Arch. Pharmacol.* **380(3)**, 233-245 (2009).

#### 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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