

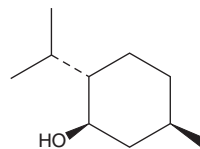
PRODUCT INFORMATION



(-)-Menthol

Item No. 30384

CAS Registry No.: 2216-51-5
Formal Name: (1R,2S,5R)-5-methyl-2-(1-methylethyl)-cyclohexanol
Synonyms: L-Menthol, (1R,2S,5R)-(-)-Menthol, NSC 62788
MF: C₁₀H₂₀O
FW: 156.3
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Mentha arvensis*



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

Laboratory Procedures

(-)-Menthol is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-menthol in the solvent of choice, which should be purged with an inert gas. (-)-Menthol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (-)-menthol in ethanol and DMF is approximately 30 mg/ml and approximately 10 mg/ml in DMSO.

(-)-Menthol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (-)-menthol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (-)-Menthol has a solubility of approximately 0.33 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(-)-Menthol is a monoterpene that has been found in cornmint oil and has diverse biological activities.¹ It inhibits acetylcholinesterase (AChE; K_i = 1.25 mM for the bovine enzyme).² (-)-Menthol (1.6 mM) decreases expression of the genes encoding topoisomerase I, II α , and II β in, and cell viability of, SNU-5 gastric cancer cells.³ It reduces acetic acid-induced writhing and increases latency to paw licking in a hot plate test in mice when administered at doses ranging from 3-10 mg/kg.⁴

References

1. Kamatou, G.P., Vermaak, I., Viljoen, A.M., *et al.* Menthol: A simple monoterpene with remarkable biological properties. *Phytochemistry* **96**, 15-25 (2013).
2. Miyazawa, M., Watanabe, H., and Kameoka, H. Inhibition of acetylcholinesterase activity by monoterpenoids with a *p*-menthane skeleton. *J. Agric. Food Chem.* **45(3)**, 677-679 (1997).
3. Lin, J.P., Lu, H.F., Lee, J.H., *et al.* (-)-Menthol inhibits DNA topoisomerases I, II α and β and promotes NF- κ B expression in human gastric cancer SNU-5 cells. *Anticancer Res.* **25(3B)**, 2069-2074 (2005).
4. Galeotti, N., Di Cesare Mannelli, L., Mazzanti, G., *et al.* Menthol: A natural analgesic compound. *Neurosci. Lett.* **322(3)**, 145-148 (2002).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 08/25/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM