

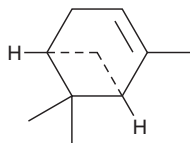
PRODUCT INFORMATION



(1S)-(-)- α -Pinene

Item No. 35693

CAS Registry No.: 7785-26-4
Formal Name: (1S,5S)-2,6,6-trimethyl-
bicyclo[3.1.1]hept-2-ene
Synonym: (-)- α -Pinene
MF: C₁₀H₁₆
FW: 136.2
Purity: $\geq 95\%$
Supplied as: A neat liquid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



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

Laboratory Procedures

(1S)-(-)- α -Pinene is supplied as a neat liquid. A stock solution may be made by dissolving the (1S)-(-)- α -pinene in the solvent of choice, which should be purged with an inert gas. (1S)-(-)- α -Pinene is soluble in chloroform and methanol.

Description

(1S)-(-)- α -Pinene is a bicyclic monoterpene that has been found in *S. boccone* and has diverse biological activities.¹⁻⁴ It inhibits infectious bronchitis virus (IBV) replication (IC₅₀ = 0.98 mM) and exhibits a 50% cytotoxic concentration (CC₅₀) value of greater than 10 mM in Vero cells.¹ (1S)-(-)- α -Pinene is active against several Gram-positive and Gram-negative bacteria, as well as the plant pathogenic fungus *F. culmorum*, and inhibits *C. jejuni* quorum sensing *in vitro*.^{2,3} It is cytotoxic to HCT116 colon cancer cells when used at concentrations ranging from 125 to 500 $\mu\text{g}/\text{ml}$.⁴ Oral administration of (1S)-(-)- α -pinene (4 ml of a 250 mg/L solution) reduces the colonization of fluoroquinolone-sensitive, but not fluoroquinolone-resistant, *C. jejuni* in broiler chicken cecum.³

References

1. Yang, Z., Wu, N., Zu, Y., *et al.* Comparative anti-infectious bronchitis virus (IBV) activity of (-)-pinene: Effect on nucleocapsid (N) protein. *Molecules* **16**(2), 1044-1054 (2011).
2. Lis-Balcnin, M., Ochocka, R.J., Deans, S.G., *et al.* Differences in bioactivity between the enantiomers of α -pinene. *J. Essent. Oil Res.* **11**(13), 393-397 (1999).
3. Šimunović, K., Sahin, O., Kovač, J., *et al.* (-)- α -Pinene reduces quorum sensing and *Campylobacter jejuni* colonization in broiler chickens. *PLoS One* **15**(4), e0230423 (2020).
4. Vaglica, A., Maggio, A., Badalamenti, N., *et al.* *Seseli boccone* Guss. and *S. tortuosum* subsp. *maritimum* Guss. essential oils inhibit colon cancer cell viability. *Fitoterapia* **170**, 105672 (2023).

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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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