

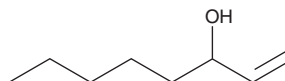
PRODUCT INFORMATION



1-Octen-3-ol

Item No. 35550

CAS Registry No.: 3391-86-4
Synonyms: NSC 87563, Octenol
MF: C₈H₁₆O
FW: 128.2
Purity: ≥98%
Supplied as: A neat oil
Storage: -20°C
Stability: ≥2 years
Item Origin: Synthetic



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

Laboratory Procedures

1-Octen-3-ol is supplied as a neat oil. A stock solution may be made by dissolving the 1-octen-3-ol in the solvent of choice, which should be purged with an inert gas. 1-Octen-3-ol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1-octen-3-ol in these solvents is approximately 33 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 1-octen-3-ol can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of 1-octen-3-ol in PBS (pH 7.2) is approximately 0.30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

1-Octen-3-ol is a volatile organic compound (VOC) that has been found in fungi and plants.¹ It has also been found in oxen breath and human sweat and is an attractant for *Ochlerotatus*, *Psorophora*, *Anopheles*, and *Coquillettidia* mosquitoes but a repellent for *Culex* mosquitoes.^{1,2} 1-Octen-3-ol (3 and 10 ppm) inhibits dopamine uptake in HEK cells expressing the human dopamine transporter (HEK-DAT cells).³ It induces dopaminergic neuron loss and locomotor deficits in, as well as reduces survival of, *D. melanogaster* when administered *via* inhalation at a dose of 0.5 ppm.

References

- Xu, P., Zhu, F., Buss, G.K., *et al.* 1-Octen-3-ol – the attractant that repels. *F1000Res.* **4**, 156 (2015).
- Kline, D.L., Allan, S.A., Bernier, U.R., *et al.* Evaluation of the enantiomers of 1-octen-3-ol and 1-octyn-3-ol as attractants for mosquitoes associated with a freshwater swamp in Florida, U.S.A. *Med. Vet. Entomol.* **21(4)**, 323-331 (2007).
- Inamdar, A.A., Hossain, M.M., Bernstein, A.I., *et al.* Fungal-derived semiochemical 1-octen-3-ol disrupts dopamine packaging and causes neurodegeneration. *Proc. Natl. Acad. Sci. USA* **110(48)**, 19561-19566 (2013).

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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