

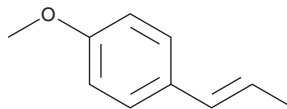
# PRODUCT INFORMATION



## Anethol

Item No. 31398

**CAS Registry No.:** 104-46-1  
**Formal Name:** 1-methoxy-4-(1-propen-1-yl)-benzene  
**Synonyms:** *p*-Propenylanisole, *p*-Anthole, NSC 4018  
**MF:** C<sub>10</sub>H<sub>12</sub>O  
**FW:** 148.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 258 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Illicium verum*



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

### Laboratory Procedures

Anethol is supplied as a crystalline solid. A stock solution may be made by dissolving the anethol in the solvent of choice, which should be purged with an inert gas. Anethol is soluble in the organic solvent DMSO. The solubility of anethol in DMSO is approximately 30 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 anethol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of anethol in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Anethol is a phenylpropanoid that has been found in anise and fennel oils and has diverse biological activities.<sup>1-4</sup> It decreases the production of reactive oxygen species (ROS) in and increases survival of primordial follicles in isolated goat ovarian fragments when used at a concentration of 30 µg/ml.<sup>1</sup> Anethol (62.5, 125, and 250 mg/kg) reduces paw swelling and the number of serum and synovial leukocytes, as well as prevents joint cartilage destruction in a rat model of adjuvant-induced arthritis.<sup>2</sup> It reduces TNF-α production in a rat model of LPS-induced periodontitis.<sup>3</sup> Anethol (125, 250, and 500 mg/kg) attenuates mechanical and thermal hyperalgesia in a mouse model of neuropathic pain induced by chronic constriction injury (CCI).<sup>4</sup>

### References

1. Sà, N.A.R., Bruno, J.B., Guerrero, D.D., *et al.* Anethole reduces oxidative stress and improves *in vitro* survival and activation of primordial follicles. *Braz. J. Med. Biol. Res.* **51(8)**, e7129 (2018).
2. Ritter, A.M.V., Hernandez, L., da Rocha, B.A., *et al.* Anethole reduces inflammation and joint damage in rats with adjuvant-induced arthritis. *Inflamm. Res.* **66(8)**, 725-737 (2017).
3. Aprotosoiaie, A.C., Costache, I.-I., and Miron, A. Anethole and its role in chronic diseases. *Adv. Exp. Med. Biol.* **929**, 247-267 (2016).
4. Wang, B., Zhang, G., Yang, M., *et al.* Neuroprotective effect of anethole against neuropathic pain induced by chronic constriction injury of the sciatic nerve in mice. *Neurochem. Res.* **43(12)**, 2402-2422 (2018).

#### 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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