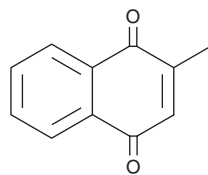


PRODUCT INFORMATION



Vitamin K₃ Item No. 15950

CAS Registry No.: 58-27-5
Formal Name: 2-methyl-1,4-naphthalenedione
Synonyms: Menadione, NSC 4170
MF: C₁₁H₈O₂
FW: 172.2
Purity: ≥95%
UV/Vis.: λ_{max}: 251, 332 nm
Supplied as: A crystalline solid
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

Vitamin K₃ is supplied as a crystalline solid. A stock solution may be made by dissolving the vitamin K₃ in the solvent of choice, which should be purged with an inert gas. Vitamin K₃ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of vitamin K₃ in these solvents is approximately 10, 20, and 30 mg/ml, respectively.

Vitamin K₃ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, vitamin K₃ should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Vitamin K₃ has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Vitamin K is a dietary nutrient essential for the normal biosynthesis of factors that are required for blood clotting. It has also been shown to inhibit cell growth. Vitamin K₃ is a synthetic form of vitamin K that acts as a precursor to vitamin K₂. It is capable of both redox cycling and arylating nucleophilic substrates by Michael addition and has been used as a model bifunctional quinone to study cellular stress induction.¹ Vitamin K₃ has been used as an antihemorrhagic agent and to inhibit the proliferation of various cancer cells.^{2,3}

References

1. Scott, G.K., Atsriku, C., Kaminker, P., *et al.* Vitamin K₃ (menadione)-induced oncosis associated with keratin 8 phosphorylation and histone H3 arylation. *Mol. Pharmacol.* **68**(3), 606-615 (2005).
2. Pinilla, I., Izaquirre, L.B., Gonzalvo, F., *et al.* *In vitro* vitamin K₃ effect on conjunctival fibroblast migration and proliferation. *ScientificWorldJournal* **2014**, (2014).
3. Chun, Y.J., Lee, B.Y., Yang, S.A., *et al.* Induction of cytochrome P450 1A1 gene expression by a vitamin K₃ analog in mouse hepatoma Hepa-1c1c7 cells. *Mol. Cells* **12**, 190-196 (2001).

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

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