

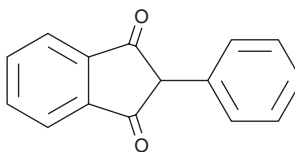
PRODUCT INFORMATION



Phenindione

Item No. 30060

CAS Registry No.: 83-12-5
Formal Name: 2-phenyl-1H-indene-1,3(2H)-dione
Synonyms: 2-Phenylindandione, 2-Phenyl-1,3-Indandione, NSC 41693, Phenylindandione
MF: C₁₅H₁₀O₂
FW: 222.2
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 254 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Phenindione is supplied as a crystalline solid. A stock solution may be made by dissolving the phenindione in the solvent of choice, which should be purged with an inert gas. Phenindione is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of phenindione in these solvents is approximately 30 mg/ml.

Phenindione is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phenindione should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Phenindione has a solubility of approximately 0.02 mg/ml in a 1:40 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Phenindione is an anticoagulant and vitamin K antagonist.^{1,3} It inhibits the reduction of vitamin K₁ epoxide to vitamin K₁ by vitamin K₁ epoxide reductase in rat liver homogenates in a concentration-dependent manner.¹ *In vivo*, phenindione (500 mg/kg) inhibits prothrombin synthesis and conversion of vitamin K₁ epoxide to vitamin K₁ in rats by 50 and 57%, respectively. Dietary administration of phenindione (4 mg/kg per day) inhibits aortic atherosclerosis or intracardial thrombosis in rat models of diet-induced atherosclerosis or intravascular thrombosis, respectively.³

References

1. Ren, P., Stark, P.Y., Johnson, R.L., *et al.* Mechanism of action of anticoagulants: correlation between the inhibition of prothrombin synthesis and the regeneration of vitamin K₁ from vitamin K₁ epoxide. *J. Pharmacol. Exp. Ther.* **201(3)**, 541-546 (1977).
2. De Caterina, R., Husted, S., Wallentin, L., *et al.* Vitamin K antagonists in heart disease: current status and perspectives (Section III). Position paper of the ESC working group on thrombosis - task force on anticoagulants in heart disease. *Thromb. Haemost.* **110(6)**, 1087-1107 (2013).
3. Davidson, E.J., Howard, A.N., and Gresham, G.A. The effect of phenindione on rats fed diets which produce thrombosis or experimental atherosclerosis. *Br. J. Exp. Pathol.* **43(4)**, 418-423 (1962).

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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