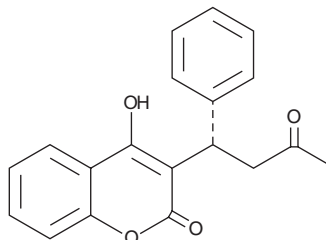


# PRODUCT INFORMATION



## (-)-Warfarin Item No. 13531

**CAS Registry No.:** 5543-57-7  
**Formal Name:** 4-hydroxy-3-[(1S)-3-oxo-1-phenylbutyl]-2H-1-benzopyran-2-one  
**Synonym:** (S)-Warfarin  
**MF:** C<sub>19</sub>H<sub>16</sub>O<sub>4</sub>  
**FW:** 308.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 206, 272, 283, 306 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

(-)-Warfarin is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-warfarin in the solvent of choice, which should be purged with an inert gas. (-)-Warfarin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (-)-warfarin in ethanol is approximately 5 mg/ml and approximately 25 mg/ml in DMSO and DMF.

### Description

(-)-Warfarin is a component of (±)-warfarin (Item No. 13566). It is an anticoagulant that interferes with interconversion of vitamin K and vitamin K epoxide and the role of vitamin K in carboxylation of several clotting cascade proteins, inhibiting the initiation of clotting.<sup>1</sup> *In vivo*, (-)-warfarin slows formation of the prothrombin complex and exhibits 6.6-fold more potent anticoagulant activity than (+)-warfarin (Item No. 13526) in rats.<sup>2</sup> (-)-Warfarin is primarily metabolized by the cytochrome P450 (CYP) isoform CYP2C9 and genetic polymorphisms in this enzyme, as well as other compounds metabolized by CYP2C9, increase the potential for catastrophic bleeding complications. Formulations containing warfarin have been used to treat and prevent blood clots in atrial fibrillation, heart valve replacement, venous thrombosis, and pulmonary embolism.

### References

- Hirsh, J., Fuster, V., Ansell, J., *et al.* American Heart Association/American College of Cardiology Foundation guide to warfarin therapy. *J. Am. Coll. Cardiol.* **41(9)**, 1633-1652 (2003).
- Breckenridge, A. and Orme, M.L. The plasma half lives and the pharmacological effect of the enantiomers of warfarin in rats. *Life Sci. II* **11(7)**, 337-345 (1972).

#### 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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