

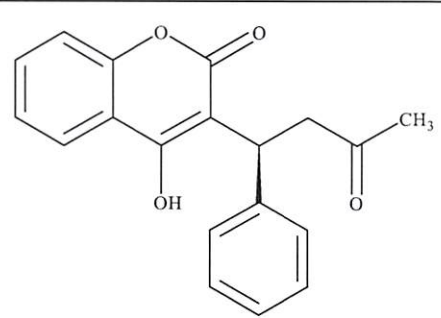
Certificate of Analysis

Certificate No.: **20260204510**



Date: February 4, 2026

Retest date: January 30, 2029

Compound Name: (S)-Warfarin	
Synonyms:	(S)-4-hydroxy-3-(3-oxo-1-phenylbutyl)-2H-chromen-2-one
TLC Catalogue Number:	W-017
CAS Number:	5543-57-7
Alternate CAS Number:	81-81-2 (Racemic)
Molecular Weight:	308.33
Molecular Formula:	C ₁₉ H ₁₆ O ₄
Source:	TLC Pharmaceutical Standards
Source Lot No.:	3380-012A2
Storage Conditions:	Store at 2-8 °C
Solubility:	Methanol, Acetonitrile, Isopropanol



Test Description	Specifications	Results
Visual Description	White to off-white solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹ H NMR	Conforms to structure	Conforms
Elemental Analysis	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	100.0%
Impurity (HPLC)	N/A	
Purity (Chiral HPLC)	Not less than 98.0%	99.9%
Water Content (KF)	N/A	0.1%
Optical Rotation	[α] _D ^{24.0} (c=1.20, isopropanol): +19.0°	[α] _D ^{20.0} (c=0.68, isopropanol): +23.4°
Residual Solvents (NMR)	0.1% methanol	
Assay (%)	Not less than 90.0%	99.7%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		02/04/2026
Approved by:	Quality Assurance		02/04/2026

Attachments: Peak Attribution Table, Assay Calculation, HPLC, IR, MS and NMR spectra.