

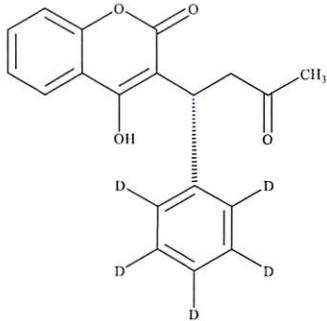
Certificate of Analysis

Certificate No.: **20250423023**



Date: April 23, 2025

Retest date: April 22, 2028

Compound Name: (R)-Warfarin-d ₅	
Synonyms:	(R)-4-hydroxy-3-(3-oxo-1-(phenyl-d ₅)butyl)-2H-chromen-2-one
TLC Catalogue Number:	W-019
CAS Number:	773005-79-1
Alternate CAS Number:	5543-58-8 (non-labelled)
Molecular Weight:	313.36
Molecular Formula:	C ₁₉ H ₁₁ D ₅ O ₄
Source:	TLC Pharmaceutical Standards
Source Lot No.:	1217-043A1
Storage Conditions:	Store at 2-8 °C
Solubility:	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
Purity (HPLC)	Not less than 95.0%	99.5%
Impurity (HPLC)	RT 15.56, 0.40%	
Purity (Chiral HPLC)	Not less than 98.0%	98.2%
Isotopic Enrichment	Not less than 98.0%	99.4%
Water Content (KF)	N/A	1.2%
Optical Rotation	[α] _D ^{24.0} (c=1.20, isopropanol): -19.0°	[α] _D ^{24.0} (c=0.26, isopropanol): -16.7°
Residual Solvents (NMR)	No residual solvent	
Assay (%)	Not less than 90.0%	96.5%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		04/23/2025
Approved by:	Quality Assurance		04/23/2025

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