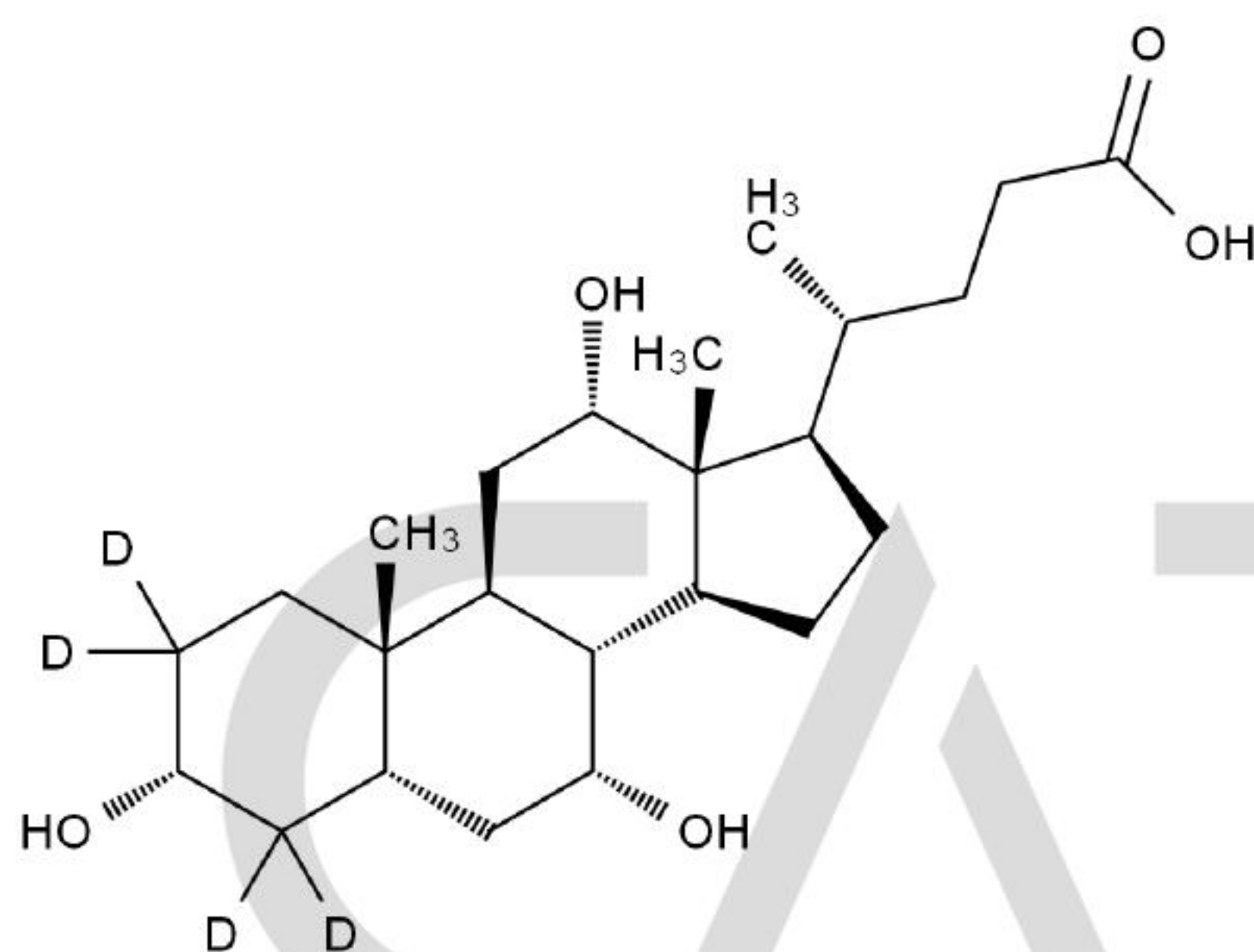


Certificate of Analysis

Reference Material & Standard

Product Name:	Cholic-2,2,4,4-d4 Acid	Catalogue Number:	CCAD301434
Synonyms:	N/A	Lot Number:	1205-RG-0079
CAS Number:	116380-66-6	Expiry Date:	Dec 16, 2027
Molecular Formula:	C ₂₄ H ₃₆ D ₄ O ₅	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	412.60	Shipping Condition:	Shipping at Room Temperature

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&HNMR	Confirmed
Chemical Purity	NMR	98.0%
Isotopic Purity		98.74%, D4%: 94.94%, D3%: 5.06%
Uncertainty		±2.0%

Comment:

The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by:

Lisa

Reviewed by:

Hinlam

Approved by General Manager:

David

Date: Dec 22, 2025

Date: Dec 30, 2025

Date: Dec 30, 2025



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