

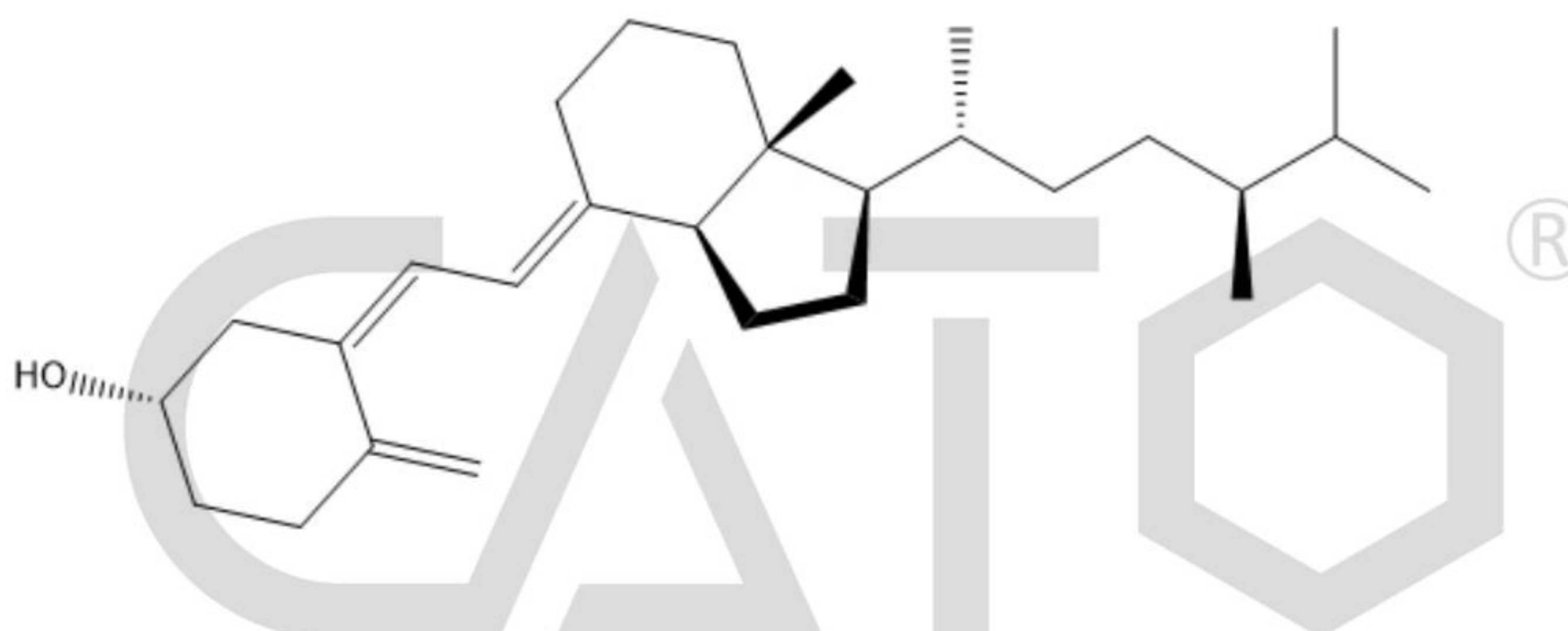
Certificate of Analysis

Reference Material & Standard

Product Name:	Vitamin D4	Catalogue Number:	CCFD200494
Synonyms:	N/A	Lot Number:	0616-RG-0026
CAS Number:	511-28-4	Expiry Date:	Mar 27, 2028
Molecular Formula:	C ₂₈ H ₄₆ O	Storage:	-80°C ± 5°C Protected from light and Sealed
Molecular Weight:	398.66	Warning:	



Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	HRMS&UV&HNMR	Confirmed
Purity	HPLC	97.462%
Water Content	Karl Fischer	0.09%
Residual Solvents	NMR	Not detected in NMR
Assay		97.4%
Uncertainty		±0.5%

Comment:

1. The calculation of the 100% method follows the formula (calculated on the non-dried basis):

$$\text{Assay (\%)} = (100\% - \text{Water Content} - \text{Residual Solvents}) * \text{Purity HPLC (\%)} / 100\%$$

Water Content and Residual Solvents are considered as absolute effect, HPLC purity is considered as relative effect.

2. 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:

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Reviewed by:

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Approved by General Manager:

David

Date: Jun 16, 2025

Date: Jun 16, 2025

Date: Jun 16, 2025

