

Certificate of Analysis

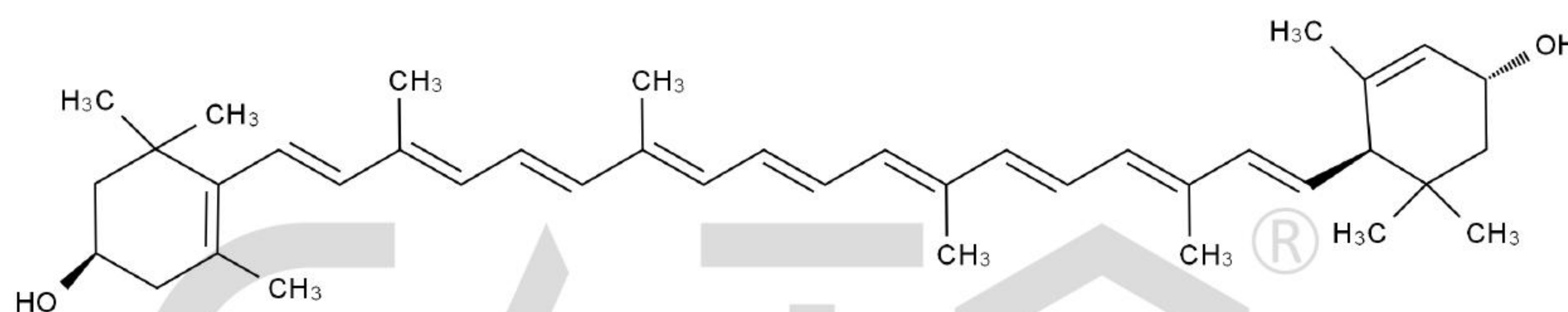
Reference Material & Standard

Product Name:	Xanthophyll	Catalogue Number:	CCPE901801
Synonyms:	N/A	Lot Number:	0311-RG-0059
CAS Number:	127-40-2	Expiry Date:	Nov 21, 2027
Molecular Formula:	C ₄₀ H ₅₆ O ₂	Storage:	-80°C±5°C Protected from light and Sealed
Molecular Weight:	568.87	Shipping Condition:	Shipping with Dry Ice

Warning:



Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Dark Orange to Dark Red Solid
Identification	HRMS&HNMR	Confirmed
Purity	HPLC	99.247%
Loss on Drying	TGA	1.2953%
Assay		98.0%
Uncertainty		±0.2%

Comment:

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

$$\text{Assay (\%)} = (100\% - \text{Loss on Drying}) * \text{Purity HPLC (\%)} / 100\%$$

Loss on Drying is 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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Approved by General Manager:

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Date: May 20, 2026

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