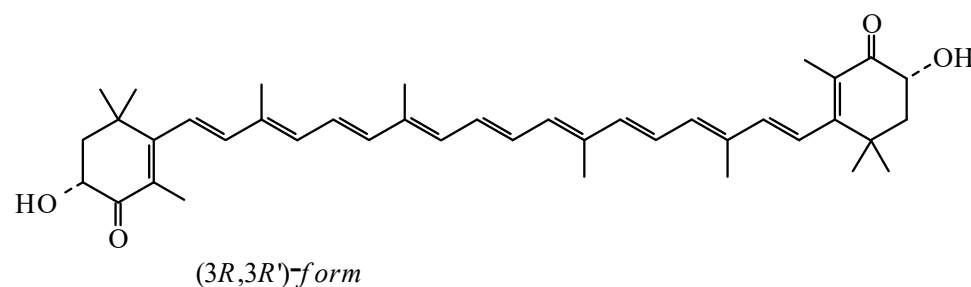




>>Entry Name: Astaxanthin

ENTRY UNDER REVIEW

Synonym(s): 3,3'-Dihydroxy- β,β -carotene-4,4'-dione. 3,3'-Dihydroxycanthaxanthin. 3,3'-Dihydroxy-4,4'-diketo- β -carotene. Ovoester



CAS Registry Number: 7542-45-2

Related CAS Registry Numbers(s): 74601-68-6

Molecular Formula: C₄₀H₅₂O₄

Molecular Weight: 596.848

Accurate Mass: 596.38656

Percentage Composition: C 80.50%; H 8.78%; O 10.72%

>>Variant: (3*R*,3'*R*)-form

CAS Registry Number: 60760-95-4

Molecular Formula: C₄₀H₅₂O₄

Molecular Weight: 596.848

Accurate Mass: 596.38656

Percentage Composition: C 80.50%; H 8.78%; O 10.72%

Biological Source: Isol. from the yeast *Phaffia rhodozyma*

Melting Point: Mp 222-223°

Other Data: $\lambda_{\max}$ 492 nm (CHCl₃). CD: $\Delta\epsilon_{385}$ -6.2, $\Delta\epsilon_{324}$ +24.0

>>Variant: (3*S*,3'*S*)-form

CAS Registry Number: 472-61-7

Molecular Formula: C₄₀H₅₂O₄

Molecular Weight: 596.848

Accurate Mass: 596.38656

Percentage Composition: C 80.50%; H 8.78%; O 10.72%

Biological Source: Prosthetic group of carotenoprotein *Alloporin* ex *Allopora californica*

Melting Point: Mp 223-225°

UV: [neutral] $\lambda_{\max}$ 472 () (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 466 () (hexane) (Berdy) [neutral] $\lambda_{\max}$ 485 () (CHCl₃) (Berdy)

Other Data: $\lambda_{\max}$ 492 nm (CHCl₃)

Sigma: A9335

>>Derivative: 3-*O*- β -D-Glucopyranoside

Molecular Formula: C₄₆H₆₂O₉

Molecular Weight: 758.99

Accurate Mass: 758.439385

Percentage Composition: C 72.79%; H 8.23%; O 18.97%

Biological Source: Constit. of *Agrobacterium aurantiacum*

Other Data: $\lambda_{\max}$ 487 nm (C₆H₆)

>>Variant: (3'*RS*,3'*SR*)-form

CAS Registry Number: 71772-51-5

Molecular Formula: C₄₀H₅₂O₄

Molecular Weight: 596.848

Accurate Mass: 596.38656

Percentage Composition: C 80.50%; H 8.78%; O 10.72%

Biological Source: Isol. from lobster shells and lobster eggs along with both enantiomers. 85% of carotenoid content of alga *Pleurastrum tercioideum*

Use/Importance: Used in fish farming to induce trout flesh colouring

Melting Point: Mp 216-219°

Other Data: Meso-isomer