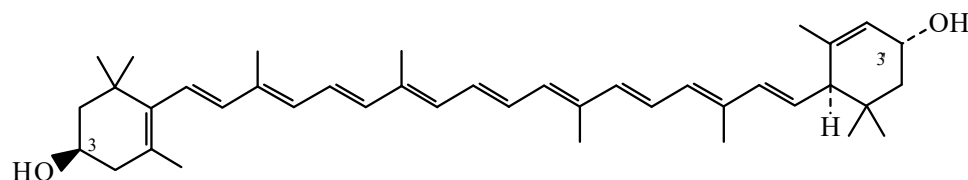




>>Entry Name: Lutein

ENTRY UNDER REVIEW

Synonym(s): Xanthophyll. β,ϵ -Carotene-3,3'-diol. Lutein A



CAS Registry Number: 127-40-2

Related CAS Registry Numbers(s): 15904-92-4 105452-20-8

Molecular Formula: $C_{40}H_{56}O_2$

Molecular Weight: 568.881

Accurate Mass: 568.42803

Percentage Composition: C 84.45%; H 9.92%; O 5.62%

Biological Source: Pigment from egg yolk and leaves. Found in all higher plants and also in microorganisms eg. *Staphylococcus aureus*

Use/Importance: Antioxidant

Physical Description: Coppery cryst. (MeOH)

Melting Point: Mp 196°

Optical Rotation: $[\alpha]_{H_g} +160$ (CHCl₃)

UV: [neutral] λ_{max} 420 (); 444 (); 472 () (MeOH) (Berdy)

Other Data: λ_{max} 420, 444, 472 nm. Other stereoisomers have been distinguished

Fluka: 95507

>>Derivative: Dihexadecanoyl

Synonym(s): Xantofyl palmitate, INN. Helenien, JAN. Adaptinol. Aptinol. Heligal. Xanthophyll dipalmitate. E 161b

CAS Registry Number: 547-17-1

Molecular Formula: $C_{72}H_{116}O_4$

Molecular Weight: 1045.706

Accurate Mass: 1044.88736

Percentage Composition: C 82.70%; H 11.18%; O 6.12%

Biological Source: Constit. of *Helenium autumnale* and other flowers, esp. in the Compositae

Use/Importance: Retinal oxygenizing agent

Physical Description: Red cryst. (EtOH)

Melting Point: Mp 92°

>>Derivative: 3'-Ketone

Synonym(s): 3-Hydroxy- β,ϵ -caroten-3'-one. Philosamixanthin. 3'-O-Didehydrolutein

CAS Registry Number: 97134-08-2

Molecular Formula: $C_{40}H_{54}O_2$

Molecular Weight: 566.865

Accurate Mass: 566.41238

Percentage Composition: C 84.75%; H 9.60%; O 5.64%

Biological Source: Isol. from marine fish eggs, silkworm haemolymph and other sources

Physical Description: Red needles (petrol)

Melting Point: Mp 168-170°

Other Data: λ_{max} 449, 477 nm (Me₂CO)

>>Derivative: 3'-Epimer

Synonym(s): 3'-Epilutein. Calthaxanthin

CAS Registry Number: 52842-48-5

Molecular Formula: $C_{40}H_{56}O_2$

Molecular Weight: 568.881

Accurate Mass: 568.42803

Percentage Composition: C 84.45%; H 9.92%; O 5.62%

Biological Source: Isol. from plants (eg. *Rosa* spp., flowers of the marsh marigold (*Caltha palustris*)) and animals (eg. *Potamon dehaari*, Yellowtail Fish)

Melting Point: Mp 162-163°

Optical Rotation: $[\alpha]_D^{20} +88$ (EtOH)

Other Data: λ_{max} 420, 444, 472 nm