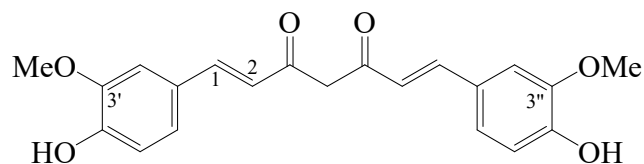




>>Entry Name: Curcumin

ENTRY UNDER REVIEW

Synonym(s): 1,7-Bis(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione, 9CI. Diferuloylmethane. Curcuma yellow. E 100. FEMA 3085. C.I. Natural Yellow 3



CAS Registry Number: 458-37-7

Related CAS Registry Numbers(s): 24939-16-0 33171-05-0

Molecular Formula: C₂₁H₂₀O₆

Molecular Weight: 368.385

Accurate Mass: 368.12599

Percentage Composition: C 68.47%; H 5.47%; O 26.06%

Biological Source: Isol. from *Curcuma zedoaria* (turmeric), other *Curcuma* spp. and other spp.

Use/Importance: Natural colouring matter used extensively in Indian curries etc. Used as 0.1% soln. in AcOH for photometric detn. of B ($\lambda_{\max}$ 550 nm, ϵ 180000) and of Ni (indirectly)

Biological Use/Importance: Antiedemic, antiinflammatory agent. Bile stimulant showing hepatoprotective props. Possesses bactericidal and fungicidal props. Antitumour agent functioning through apoptosis. Cytotoxic agent

Physical Description: Orange prisms

Melting Point: Mp 183°

Calculated Log P Data: Log P 2.05 (calc)

Aldrich: 23838-4

Fluka: 28260

Rare Chemicals Library: S56772-8

Sigma: C1386

>>Derivative: Di-Ac

Molecular Formula: C₂₅H₂₄O₈

Molecular Weight: 452.46

Accurate Mass: 452.14712

Percentage Composition: C 66.37%; H 5.35%; O 28.29%

Physical Description: Cryst.

Melting Point: Mp 170-171°

>>Derivative: Dibenzoyl

Molecular Formula: C₃₅H₂₈O₈

Molecular Weight: 576.601

Accurate Mass: 576.17842

Percentage Composition: C 72.91%; H 4.89%; O 22.20%

Physical Description: Cryst.

Melting Point: Mp 210°

>>Derivative: O-De-Me

Synonym(s): 1-(3,4-Dihydroxyphenyl)-7-(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione

CAS Registry Number: 149732-51-4

Molecular Formula: C₂₀H₁₈O₆

Molecular Weight: 354.359

Accurate Mass: 354.11034

Percentage Composition: C 67.79%; H 5.12%; O 27.09%

Biological Source: Constit. of the rhizomes of *Curcuma domestica*

Physical Description: Orange powder