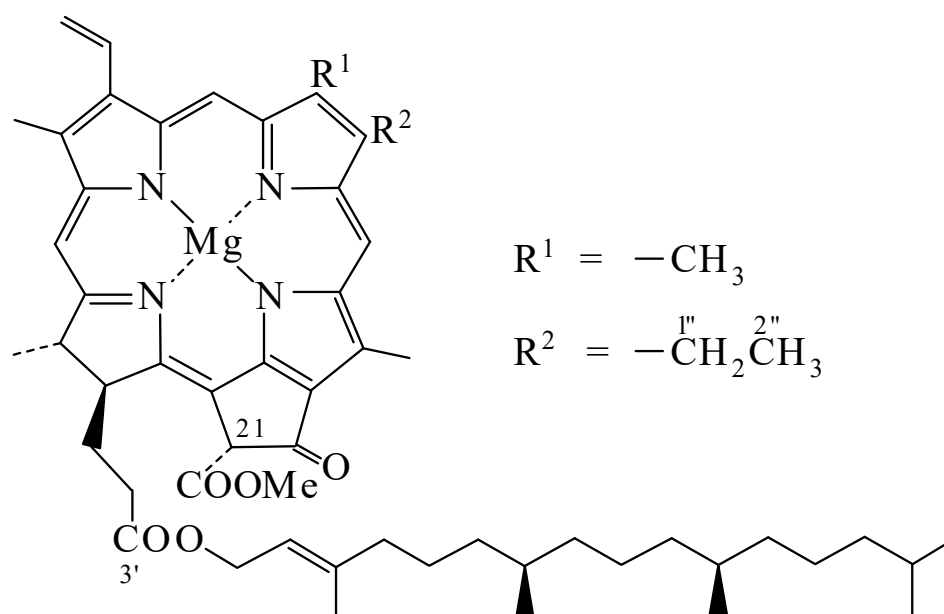




>>Entry Name: Chlorophyll a

ENTRY UNDER REVIEW

Synonym(s): [3,7,11,15-Tetramethyl-2-hexadecenyl 9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-3-phorbinepropanoato(2-)-*N*²³,*N*²⁴,*N*²⁵,*N*²⁶] magnesium, 9Cl



CAS Registry Number: 479-61-8

Related CAS Registry Numbers(s): 1406-65-1 117288-86-5 118626-30-5

Molecular Formula: C₅₅H₇₂MgN₄O₅

Molecular Weight: 893.503

Accurate Mass: 892.535313

Percentage Composition: C 73.93%; H 8.12%; Mg 2.72%; N 6.27%; O 8.95%

Biological Source: Green pigment of leaves of plants, occurring together with Chlorophyll b [CRR29-E](#). Can be obt. readily in pure form from the blue-green alga *Anacystis nidulans*

Use/Importance: Photosynthetic pigment

Physical Description: Dark green greasy powder (petrol) or leaflets

Melting Point: Mp 117-120°

Optical Rotation: [α]_D²⁰ -262 (Me₂CO)

Solubility: BERDY SOL: Sol. EtOAc, Et₂O; fairly sol. MeOH; poorly sol. hexane

UV: [neutral] λ_{max} 409 (); 429 (); 498 (); 537 (); 577 (); 613 (); 660 () (EtOH) (Berdy)

Other Data: Dilute acid removes Mg to form Phaeophytin a [CRS72-R](#). Hydrol. by Chlorophyllase (or warm acid) → Phaeophorbide a [KCS76-E](#). Acid catalysed methanolysis → see Phaeophorbide a [KCS76-E](#). Alkaline hydrol. → Chlorin e₆ [CRS24-E](#). Other esters e.g. geranylgeranyl are found in various microorganisms

Aldrich: 25825-3

Fluka: 25730

Sigma: C5753

>>Derivative: 21-Epimer

Synonym(s): Chlorophyll a'

CAS Registry Number: 22309-13-3

Molecular Formula: C₅₅H₇₂MgN₄O₅

Molecular Weight: 893.503

Accurate Mass: 892.535313

Percentage Composition: C 73.93%; H 8.12%; Mg 2.72%; N 6.27%; O 8.95%

Biological Source: Isol. from chlorophyll extracts

>>Derivative: 3'-Free acid

Synonym(s): Chlorophyllide a

CAS Registry Number: 14897-06-4

Molecular Formula: C₃₅H₃₄MgN₄O₅

Molecular Weight: 614.982

Accurate Mass: 614.237963

Percentage Composition: C 68.36%; H 5.57%; Mg 3.95%; N 9.11%; O 13.01%

Biological Source: Pigment from various spp.

Use/Importance: Intermed. in chlorophyll biosynthesis