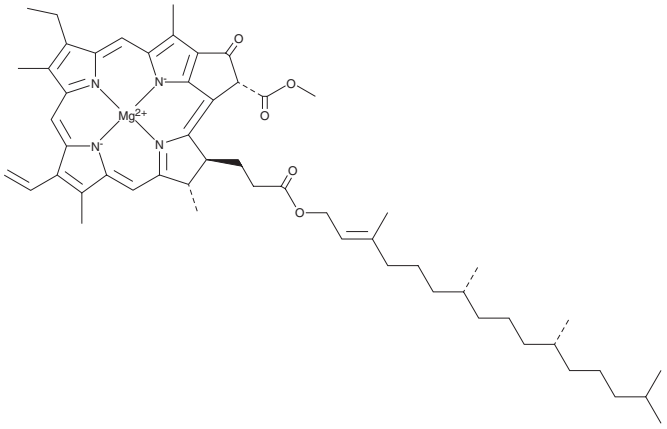
PRODUCT INFORMATION

Chlorophyll *a*

Item No. 33399



CAS Registry No.:	479-61-8
Formal Name:	(SP-4-2)-[(2E,7R,11R)-3,7,11,15-tetramethyl-2-hexadecenyl (3S,4S,21R)-9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-3-phorbinepropanoato(2-)-$\kappa N^{23},\kappa N^{24},\kappa N^{25},\kappa N^{26}$]-magnesium
MF:	$C_{55}H_{72}MgN_4O_5$
FW:	893.5
Purity:	≥60%
UV/Vis.:	λ_{max}: 338, 432, 665 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Bacterium/Spirulina

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Chlorophyll *a* is supplied as a solid. A stock solution may be made by dissolving the chlorophyll *a* in the solvent of choice, which should be purged with an inert gas. Chlorophyll *a* is soluble in organic solvents such as ethanol and acetone.

Description

Chlorophyll *a* is a pigment found in all oxygenic photosynthetic organisms that converts visible light to chemical energy.[1] It is located in chloroplasts within the thylakoid membrane and is a component of the light-harvesting complex and reaction center of photosystems I and II, where it has roles in both photon absorption and conversion to chemical energy.[1,2] Chlorophyll *a* fluorescence (ChlF) has commonly been used to monitor leaf photosynthetic performance in response to abiotic stressors, such as drought, nutrient deficiency, or herbicides, in agricultural, horticultural, and agrochemical industries.[3] It displays absorption maxima at 430 and 662 nM.[1]

References

1. Björn, L.O., Papageorgiou, G.C., Blankenship, R.E., *et al.* A viewpoint: Why chlorophyll *a*? *Photosynth. Res.* **99(2)**, 85-98 (2009).
2. Porcar-Castell, A., Tyystjärvi, E., Atherton, J., *et al.* Linking chlorophyll *a* fluorescence to photosynthesis for remote sensing applications: Mechanisms and challenges. *J. Exp. Bot.* **65(15)**, 4065-4095 (2014).
3. Baker, N.R. and Rosenqvist, E. Applications of chlorophyll fluorescence can improve crop production strategies: An examination of future possibilities. *J. Exp. Bot.* **55(403)**, 1607-1621 (2004).

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