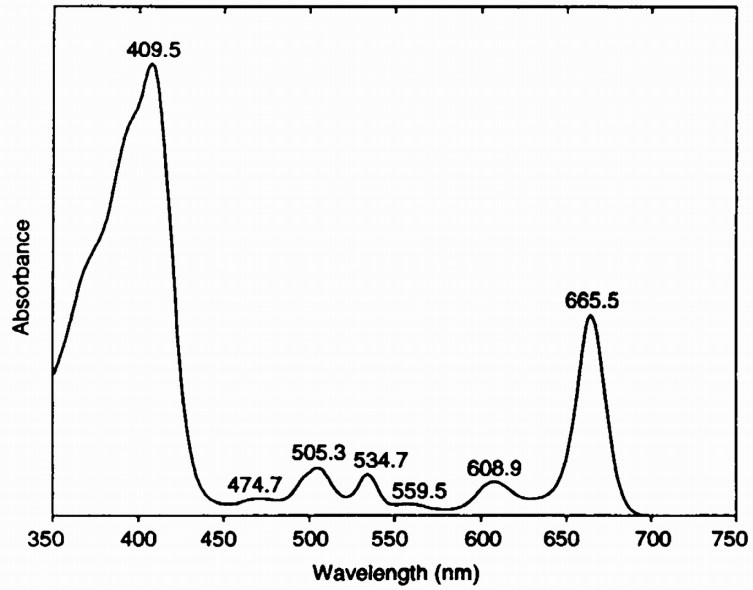
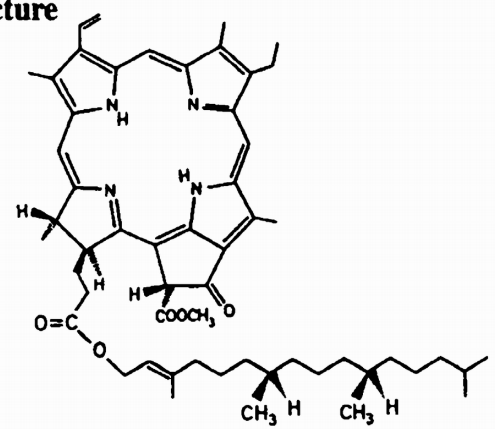
Pheophytin *a* — HPLC peak 48

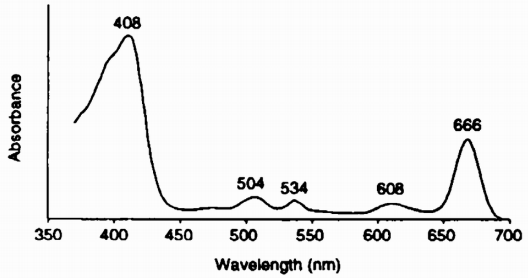
Standard spectrum in reference solvent: acetone (100%)



Molecular structure

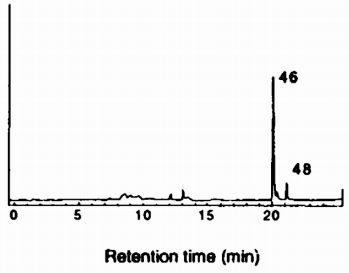


Diode array spectrum in SCOR eluant



HPLC: Pheophytin *a*, peak 48

Acidified chlorophylls from *Dunaliella*



Pheophytin *a*

Property		Data
Name:	(Trivial)	**Pheophytin *a***
	(IUPAC)	Trivial name sufficient, see Hynninen (1991)
SCOR abbreviation:		Phytin *a*
Occurrence:		Reaction centres of photosynthetic apparatus of higher plants; plant and algal detritus
Colour:		Grey (red fluorescence) on TLC; yellow-grey (concentrated solution)
Molecular formula:		$C_{55}H_{74}N_4O_5$
Molecular weight:		871.21
Specific extinction coefficient: α (l g^{-1} cm^{-1})		51.2 (at 667 nm in 90% acetone) Lorenzen & Jeffrey (1980)
Molar extinction coefficient: ε (l mol^{-1} cm^{-1})		44.6×10^3 (at 667 nm in 90% acetone) Calculated from α above

UV-vis spectra:

Solvent	Absorbance maxima (nm)						Band ratio*	Reference
100% Acetone	409.5	505.3	534.7	559.5	608.9	665.5	2.26	SCOR WG 78 data
Diethyl ether	408.5					667.0	2.07	Smith & Benitez (1955)
HPLC Eluant	408	504	534		608	666	2.34	SCOR WG 78: Wright *et al.* (1991) method
Tetrahydro-furan	411.4	505	534	560	609	668.0	2.15	Lötjönen & Hynninen (1983)

*Soret (blue maximum): red ratio

Fluorescence spectra:

Solvent	Excitation (nm)	Emission (nm)	Reference
Diethyl ether	409	673	Smith & Benitez (1955)
Diethyl ether	408	672	Boardman & Thorne (1971)

Alteration products:	Epimers and allomers
Origin:	Purified from Sigma chlorophyll *a* that had been acidified
Additional reference(s):	Scheer (1991)