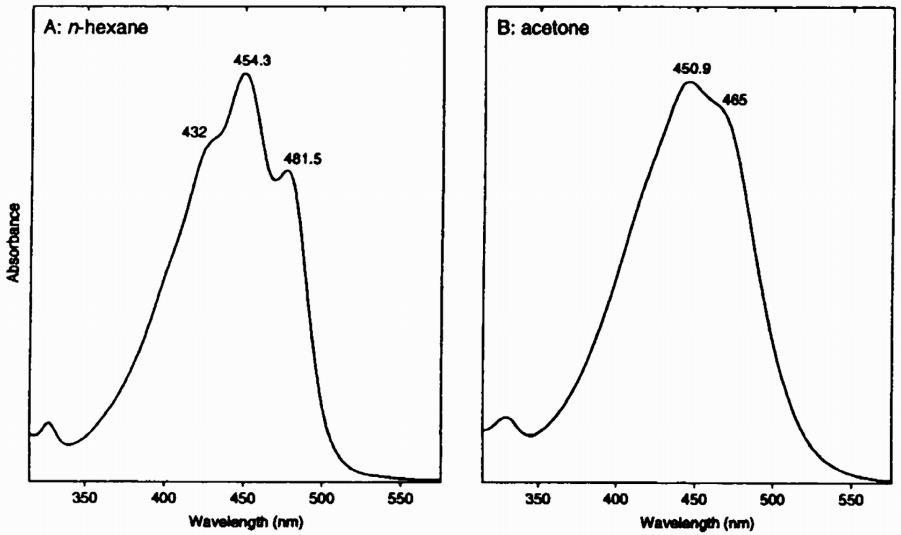
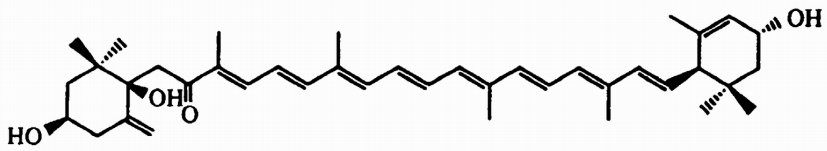
Prasinoxanthin — HPLC peak 19

Standard spectrum in reference solvents

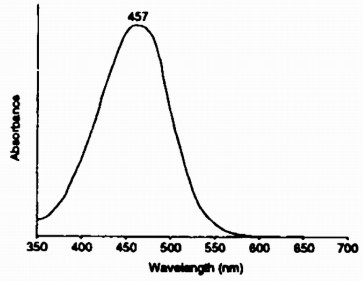


Molecular structure



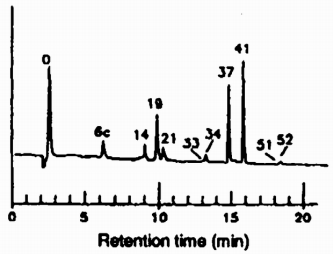
The chiralities at C-3 and C-6 are tentative and are based on biochemical arguments.

Diode array spectrum in Mantoura & Llewellyn* eluant



HPLC: Prasinoxanthin, peak 19

Pycnococcus provasolii



*Mantoura and Llewellyn (1983)

Prasinoxanthin

Property	Data
Name: (Trivial)	**Prasinoxanthin** Formerly Xanthophyll K, Ricketts (1970)
(IUPAC)	(3'*R*,6'*R*)-3,6,3'-Trihydroxy-7,8-dihydro-γ, ε-caroten-8-one
SCOR abbreviation:	Pras
Occurrence:	Major pigment in some prasinophytes (e.g. some Micromonadophyceae)
Colour:	Deep pink
Molecular formula:	$C_{40}H_{56}O_4$
Molecular weight:	600.88
Specific extinction coefficient: $E^{1\%}_{1\,cm}$ (100 ml g^{-1} cm^{-1})	2500 (at 446 nm in diethyl ether) Not determined; recommended by Foss *et al.* (1984)
Molar extinction coefficient: ε (l mol^{-1} cm^{-1})	150×10^3 (at 446 nm in diethyl ether) Calculated from $E^{1\%}_{1\,cm}$ above

UV-vis spectra:

Solvent	Maxima (nm) I	II	III	Band ratio %III:II	Reference
Acetone		450.9	(465)	0	SCOR WG 78 data
Diethyl ether		446	(466)	0	Foss *et al.* (1984)
Hexane	(432)	454.3	481.5	9	SCOR WG 78 data
HPLC Eluant		457		0	SCOR WG 78: Mantoura & Llewellyn (1983) method
HPLC Eluant		450	(470)		SCOR WG 78 ; Wright *et al.* (1991) method

Alteration products:	*Cis*-isomers
Culture from which SCOR data were obtained:	*Pycnococcus provasolii* (prasinophyte)
Additional reference(s):	Ricketts (1970); Foss *et al.* (1984); Foss *et al.* (1986); Hooks *et al.* (1988)