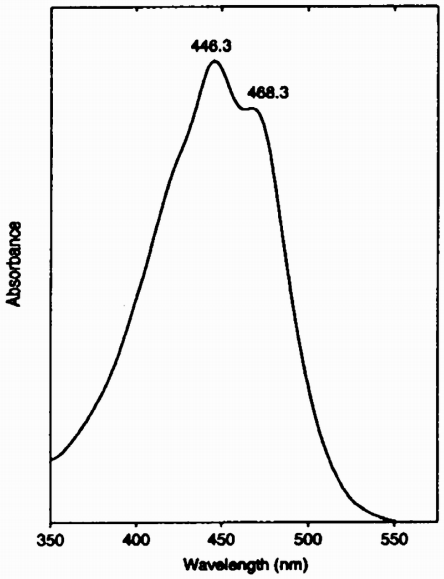
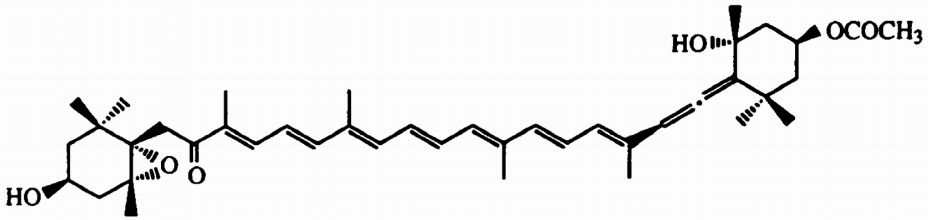
Fucoxanthin

HPLC peak 10

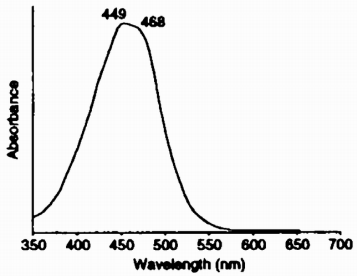
Standard spectrum in reference solvent: acetone



Molecular structure

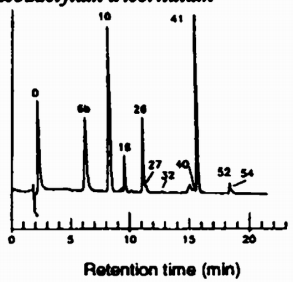


Diode array spectrum in SCOR eluant



HPLC: Fucoxanthin, peak 10

Phaeodactylum tricornutum



Property		Data
Name:	(Trivial)	**Fucoxanthin**
	(IUPAC)	(3*S*,5*R*,6*S*,3'*S*,5'*R*,6'*R*)-5,6-Epoxy-3,3',5'-trihydroxy-6',7'-didehydro-5,6,7,8,5',6'-hexahydro-β,β-caroten-8-one 3'-acetate
SCOR abbreviation:		Fuco
Occurrence:		Major pigment in diatoms, prymnesiophytes, brown seaweeds, raphidophytes, some dinoflagellates with endosymbionts.
Colour:		Orange
Molecular formula:		$C_{42}H_{58}O_6$
Molecular weight:		658.92
Specific extinction coefficient: $E^{1\%}_{1\,cm}$ (100 ml g^{-1} cm^{-1})		1660 (at 443 nm in acetone) Haugen & Liaaen-Jensen (1989) 1660 (at 453 nm in petroleum ether) Jensen (1966a)
Molar extinction coefficient: ε (l mol^{-1} cm^{-1})		109 x 10^3 (at 443 nm in acetone) 109 x 10^3 (at 453 nm in petroleum ether) Calculated from $E^{1\%}_{1\,cm}$ above

UV-vis spectra:

Solvent	Maxima (nm) I	II	III	Band ratio %III:II	Reference
Acetone		446	468	4	SCOR WG 78 data
Acetone		447	468		Berger *et al.* (1977)
Acetone	(420)	443	467		Haugan & Liaaen-Jensen (1989)
Acetone		446	470	3	Wright & Jeffrey (1987)
Ethanol		448	470	0	Wright & Jeffrey (1987)
Hexane	427	450	476		Bonnett *et al.* (1969)
HPLC Eluant		450	(467)	0	SCOR WG 78: Mantoura & Llewellyn (1983) method
HPLC Eluant		449	(468)	0	SCOR WG 78: Wright *et al.* (1991) method

Alteration products:	*Cis*-isomers
Culture from which SCOR data were obtained:	*Phaeodactylum tricornutum* (diatom)
Additional reference(s):	Berger *et al.* (1977); Wright & Jeffrey (1987); Haugan & Liaaen-Jensen (1989); Bjørnland & Liaaen-Jensen (1989); Jeffrey & Wright (1994)