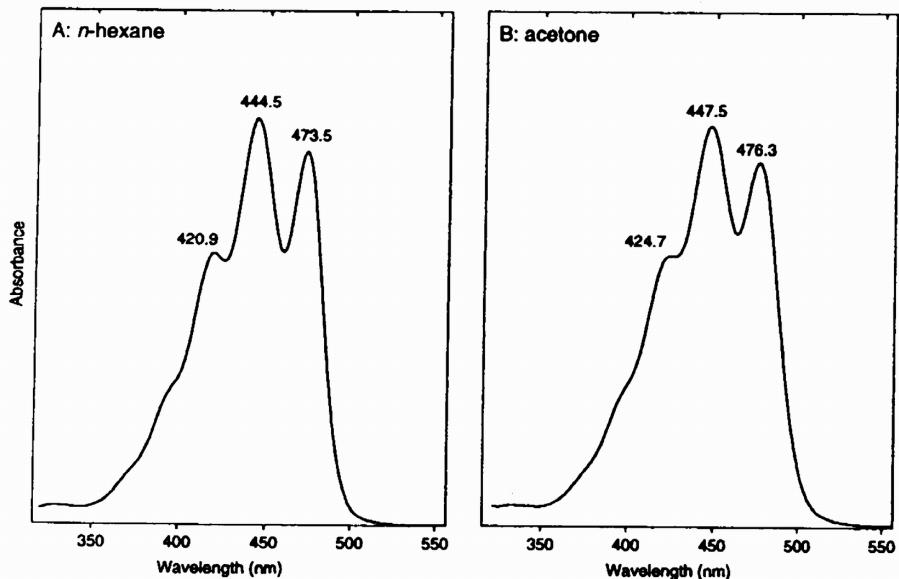
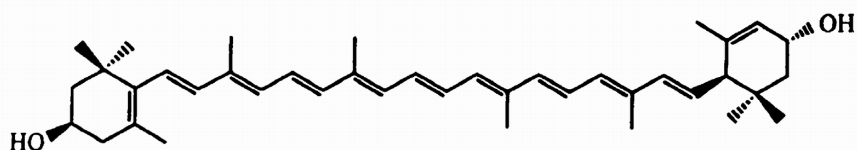


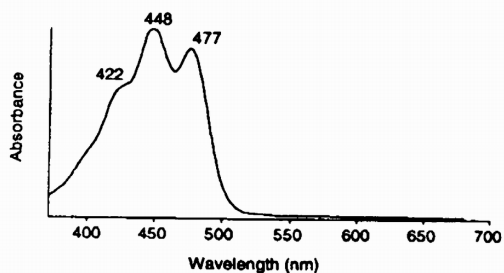
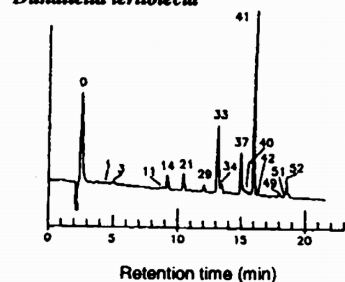
Standard spectrum in reference solvents



Molecular structure



Diode array spectrum in SCOR eluant

HPLC: Lutein, peak 33
Dunaliella tertiolecta

Property	Data
Name:	(Trivial) (IUPAC) Lutein (3 <i>R</i> ,3' <i>R</i> ,6' <i>R</i>)-β,ε-Carotene-3,3'-diol
SCOR abbreviation:	Lut
Occurrence:	Major pigment in red seaweeds, green algae, higher plants
Colour:	Yellow
Molecular formula:	C ₄₀ H ₅₆ O ₂
Molecular weight:	568.88
Specific extinction coefficient:	2550 (at 445 nm in ethanol) Strain (1938) 2480 (at 445 nm in diethyl ether) Goodwin (1955)
Molar extinction coefficient:	145 x 10 ³ (at 445 nm in ethanol) 141 x 10 ³ (at 445 nm in diethyl ether) Calculated from E _{1cm} ^{1%} above

UV-vis spectra:

Solvent	Maxima (nm)			Band ratio %III:II	Reference
	I	II	III		
Acetone	425	447.5	476	67	SCOR WG 78 data
Ethanol	422	445	474	62	Hager & Stransky (1970b)
Ethanol		447	475		Jeffrey (1968a)
Methanol	418	444	474		Karrer & Jucker (1948)
<i>n</i> -Hexane	421	444.5	473.5	76	SCOR WG 78 data
HPLC Eluant	(421)	446	474	59	SCOR WG 78: Mantoura & Llewellyn (1983) method
HPLC Eluant	(422)	448	477	54	SCOR WG 78: Wright <i>et al.</i> (1991) method

Alteration products:

Cis-isomers

Culture from which SCOR data were obtained:

Dunaliella tertiolecta (chlorophyte),
Tetraselmis suecica (prasinophyte)

Additional reference(s):

Hager & Stransky (1970b); Isler (1971);
Krinsky *et al.* (1989)