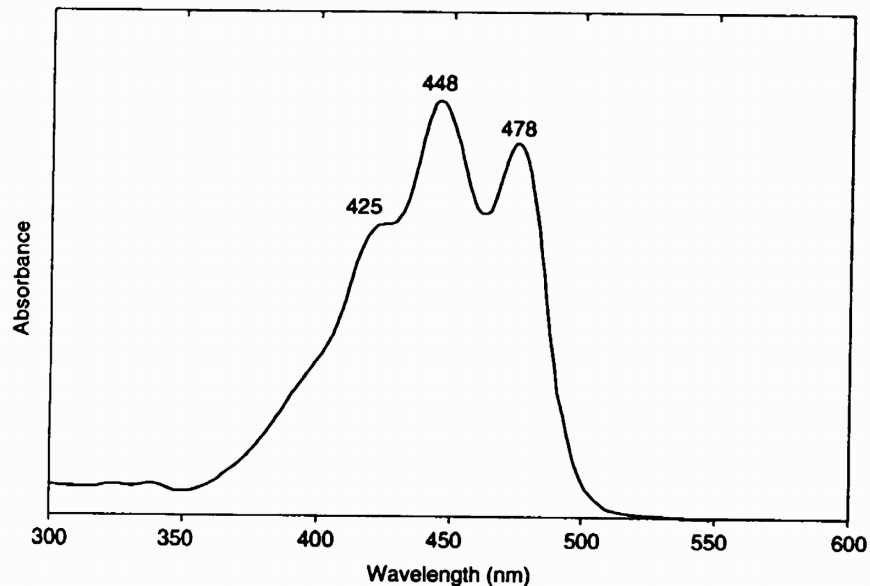


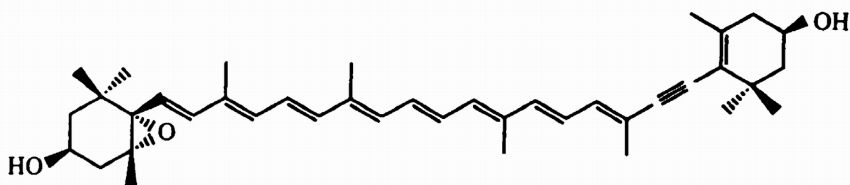
# Diadinoxanthin

HPLC peak 26

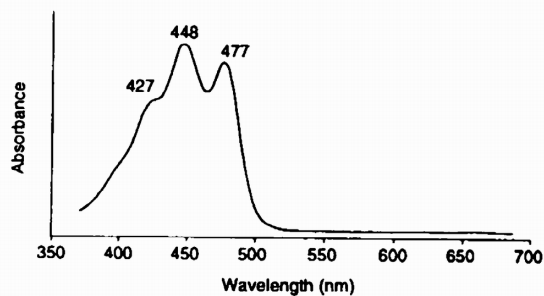
## Standard spectrum in reference solvent: acetone



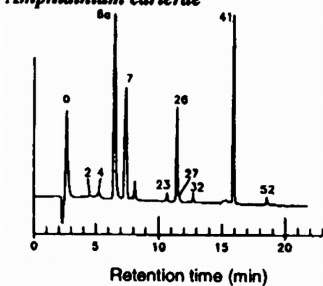
## Molecular structure



## Diode array spectrum in SCOR eluant



## HPLC: Diadinoxanthin, peak 26 *Amphidinium carterae*



# Diadinoxanthin

## Property

## Data

Name: (Trivial)  
(IUPAC)

**Diadinoxanthin**  
(3*S*,5*R*,6*S*,3'*R*)-5,6-Epoxy-7',8'-didehydro-5,6-dihydro- $\beta$ , $\beta$ -carotene-3,3'-diol

SCOR abbreviation:

Diadino

Occurrence:

Major pigment in diatoms, prymnesiophytes, some chrysophytes, dinoflagellates

Colour:

Yellow

Molecular formula:

C<sub>40</sub>H<sub>54</sub>O<sub>3</sub>

Molecular weight:

582.86

Specific extinction coefficient:

E<sub>1</sub><sup>1%</sup><sub>cm</sub> (100 ml g<sup>-1</sup> cm<sup>-1</sup>)

2230 (at 447.5 nm in acetone)  
2250 (at 444.5 nm in methanol)  
2110 (at 445.5 nm in hexane)  
Johansen *et al.* (1974)

Molar extinction coefficient:

$\epsilon$  (l mol<sup>-1</sup> cm<sup>-1</sup>)

130 x 10<sup>3</sup> (at 447.5 nm in acetone)  
131 x 10<sup>3</sup> (at 444.5 nm in methanol)  
123 x 10<sup>3</sup> (at 445.5 nm in hexane)  
Calculated from E<sub>1</sub><sup>1%</sup><sub>cm</sub> above

## UV-vis spectra:

Solvent	Maxima (nm)			Band ratio %III:II	Reference
	I	II	III		
Acetone	426	447.5	478	61	Johansen <i>et al.</i> (1974)
Acetone	(425)	448	478	63	Bjørnland (1990b)
Methanol		444.5	474	54	Johansen <i>et al.</i> (1974)
Ethanol	(424)	446	476	67	Loeblich & Smith (1968)
Ethanol	425	446	476		Stauber & Jeffrey (1988)
Hexane	(424)	445.5	474.5	57	Johansen <i>et al.</i> (1974)
HPLC Eluant	(421)	446	475	63	SCOR WG 78: Mantoura & Llewellyn (1983) method
HPLC Eluant	(427)	448	477	63	SCOR WG 78: Wright <i>et al.</i> (1991) method

Alteration products:

*Cis*-isomers; furanoids (diadinochromes)

Culture from which SCOR data were obtained:

*Amphidinium carterae* (dinoflagellate),  
*Phaeodactylum tricoratum* (diatom)

Additional reference(s):

Sransky & Hager (1970c); Stauber & Jeffrey (1988)