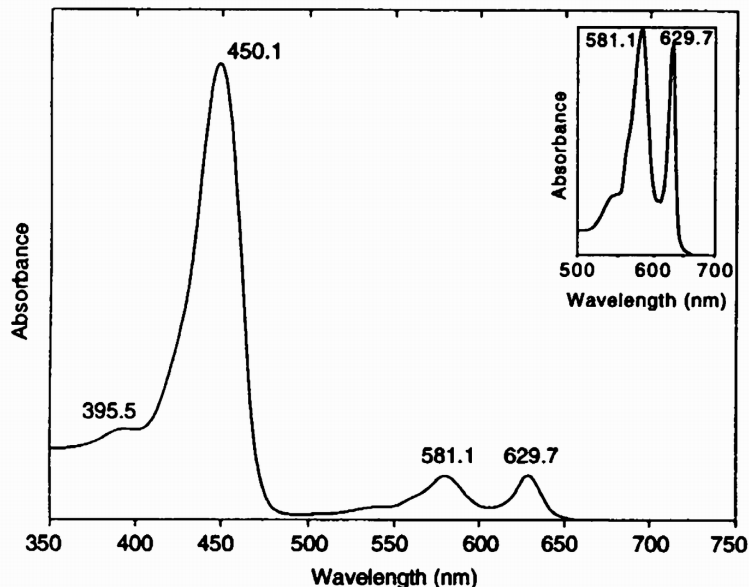


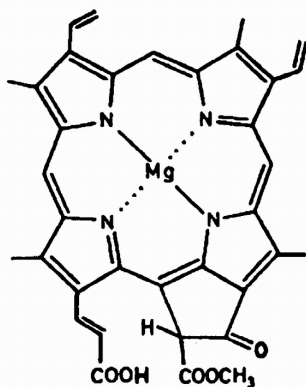
Chlorophyll *c*₂

HPLC peak 6a

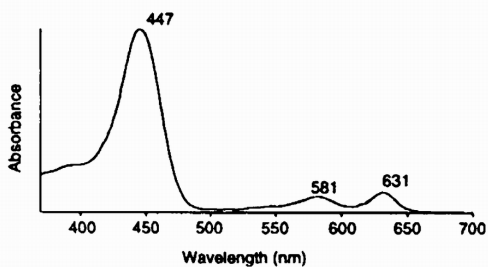
Standard spectrum in reference solvent: diethyl ether



Molecular structure

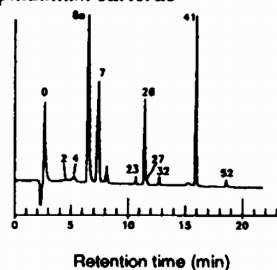


Diode array spectrum in SCOR eluant



HPLC: Chl *c*₂, peak 6a

Amphidinium carterae



Chlorophyll *c*₂

Property

Data

| | | |
|--|----------------------|--|
| Name: | (Trivial) (IUPAC) | Chlorophyll <i>c</i>₂ 3 ¹ ,3 ² ,8 ¹ ,8 ² ,17 ¹ ,17 ² -hexadehydro-13 ² -methoxycarbonyl-phytylporphyrinato-Mg(II); see Hynninen (1991) |
| SCOR abbreviation: | | Chl <i>c</i> ₂ |
| Occurrence: | | Chromophyte algae, brown seaweeds (Jeffrey, 1976, 1989) |
| Colour: | | Light green on TLC; emerald green (concentrated solution) |
| Molecular formula: | | C ₃₅ H ₂₈ N ₄ O ₅ Mg |
| Molecular weight: | | 608.94 |
| Specific extinction coefficient: † α (l g ⁻¹ cm ⁻¹) | | 374 (at 443.8 nm in 90% acetone + 1% pyridine) 40.4 (at 630.9 nm in 90% acetone + 1% pyridine) 37.2 (at 629.6 nm in 100% acetone + 1% pyridine) Jeffrey (1972) |

† Where chlorophylls *c*₁ & *c*₂ are not resolved, the mean of the extinction coefficients was used. In 90% acetone, α = (44.8 + 40.4)/2 = 42.6 l gm⁻¹ cm⁻¹.

| | |
|---|--|
| Molar extinction coefficient: ε (l mol ⁻¹ cm ⁻¹) | 227.7 × 10 ³ (at 443.8 nm in 90% acetone + 1% pyridine) 24.6 × 10 ³ (at 630.9 nm in 90% acetone + 1% pyridine) 22.7 × 10 ³ (at 629.6 nm in 100% acetone + 1% pyridine) Calculated from α above |
|---|--|

UV-vis spectra:

| Solvent | Absorbance maxima (nm) | Band ratio* | Reference |
|---------------|------------------------|-------------|--|
| 100% Acetone | 444.6 581.3 629.6 | 8.62 | Jeffrey (1972) |
| Diethyl ether | 450.1 581.1 629.7 | 10.35 | SCOR WG 78 data |
| HPLC Eluant | 447 581 631 | 8.48 | SCOR WG 78: Wright <i>et al.</i> (1991) method |

Fluorescence spectra:

*Soret (blue maximum): red ratio

| Solvent | Excitation (nm) | Emission (nm) | Reference |
|--------------|-----------------|---------------|----------------|
| 100% Acetone | 453 | 635, 696 | Jeffrey (1972) |
| 100% Ethanol | 450 | 638, 694 | Jeffrey (1972) |

Alteration products:

Corresponding phytylporphyrin

Culture from which SCOR data were obtained:

Amphidinium carterae (dinoflagellate)

Additional reference(s):

Jeffrey (1989); Scheer (1991)