

Calculations for HPLC Pigment Analyses

$$\text{Pigment Concentration in water sample } (\mu\text{g liter}^{-1}) = \left(\frac{a \times b}{c} \right) \times \left(\frac{d}{e} \right) \times f$$

a = peak area for the pigment in ng

b = response factor for pigment (see below)

c = injection volume (μl)

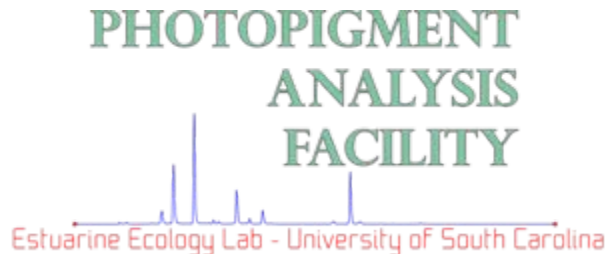
d = volume of extraction solvent used (ml)

e = volume of seawater filtered onto filter (liters)

f = ion-pairing ratio in sample vial

= (volume of solvent + volume of IP added) / volume of solvent

= 1.1



Response Factors

<i>Pigment</i>	<i>Estimated Coefficient</i>
Chlorophyll a	3.1447E-04
Chlorophyll b	3.4982E-04
Gyroxanthin-diester	7.5021E-05