

Parameter	Symbol	Value	Units
Nutrient quotas			
Minimum phosphate : carbon quota	Q_P^{\min}	3.3×10^{-3}	mmol P (mmol C) ⁻¹
Maximum phosphate : carbon quota	Q_P^{\max}	1.1×10^{-2}	mmol P (mmol C) ⁻¹
Minimum iron : carbon quota	Q_{Fe}^{\min}	1.0×10^{-6}	mmol Fe (mmol C) ⁻¹
Maximum iron : carbon quota	Q_{Fe}^{\max}	4.0×10^{-6}	mmol Fe (mmol C) ⁻¹
Temperature			
Reference temperature	T_{ref}	20	°C
Temperature dependence	A	0.05	–
Photosynthesis			
Maximum Chl <i>a</i> : phosphorus ratio	θ_N^{\max}	48	mg Chl <i>a</i> (mmol P) ⁻¹
Initial slope of P–I curve	α	3.83×10^{-7}	mmol C (mg Chl <i>a</i>) ⁻¹ (μEin m ⁻²) ⁻¹
Cost of biosynthesis	ξ	37.28	mmol C (mmol P) ⁻¹
Grazing			
Optimum predator : prey length ratio	ϑ_{opt}	10	–
Geometric SD of ϑ	$\sigma_{\text{prey}}^{\text{graz}}$	2.0	–
Total prey half-saturation	k_C^{prey}	5.0	mmol C m ⁻³
Maximum assimilation efficiency	λ^{\max}	0.7	–
Grazing refuge parameter	Λ	–1	(mmol C m ⁻³) ⁻¹
Active switching parameter	s	2	–
Assimilation shape parameter	h	0.1	–
Other loss terms			
Plankton mortality	m	0.05	d ⁻¹
Light attenuation			
Light attenuation by water	k_w	0.04	m ⁻¹
Light attenuation by chlorophyll	k_{Chl}	0.03	m ⁻¹ (mg Chl) ⁻¹