

Table 1: Simple linear regression statistics for potential controls on F_v/F_m (0-50 m) and $\Delta F_v/F_m$

Potential controlling variable for F_v/F_m	Correlation direction	R ²	p
DFe	ns	0.037	ns
Nitrate	negative	0.12 (0.38)	<0.0005 (<0.0001)
DFe: nitrate	positive	0.18 (0.51)	<0.01 (<0.0001)
Phosphate	negative	0.17 (0.33)	<0.0001 (<0.0001)
Silicate	ns	0.015	ns
Chlorophyll	ns	0.022	ns
19'-Hex: Σ AP	negative	0.23	<0.0001
Zeaxanthin: Σ AP	positive	0.22	<0.0001
19'-But: Σ AP	ns	0.00016	ns
Fucoxanthin: Σ AP	ns	0.015	ns
a_{ph}^* (440)	ns	0.041	ns
MLD	negative	0.22	<0.0001
Temperature	positive	0.46	<0.0001
Depth	positive	0.040	<0.05

Potential controlling variable for $\Delta F_v/F_m$	Correlation direction	R ²	p
F_v/F_m	negative	0.75	0.0001
DFe	ns	0.083	ns
Nitrate	positive	0.59 (0.79)	<0.005 (0.0001)
DFe: nitrate	negative	0.36 (0.73)	0.05 (<0.0005)

Note “ns” = “not significant” ($p>0.05$). Values in parenthesis are included for log transformation of the potential forcing variable where this significantly improved the correlation. AC = accessory pigments.