

Supplement of Biogeosciences Discuss., 11, 18105–18143, 2014
<http://www.biogeosciences-discuss.net/11/18105/2014/>
doi:10.5194/bgd-11-18105-2014-supplement
© Author(s) 2014. CC Attribution 3.0 License.



Supplement of

Effects of CO₂ and iron availability on *rbcL* gene expression in Bering Sea diatoms

H. Endo et al.

Correspondence to: H. Endo (endo@ees.hokudai.ac.jp)

Table S1. Initial pigment:Chl-*a* ratios for CHEMTAX analysis. (A) True ratio matrix of Suzuki et al. (2002); (B) double and (C) half the ratios of (A); (D) assigned ratios of 0.75, 0.50 and 0.25 to each element following the method of Latasa (2007).

	Fucox	19'-But	19'-Hex	Peri	Diadinox	Allox	Violax	Prasinox	Chl- <i>b</i>	Zeax	Chl- <i>a</i>
(A)											
Diatoms	0.75	0	0	0	0.24	0	0	0	0	0	1
Hapto	0	0	1.4	0	0.16	0	0	0	0	0	1
Pelago	0.62	0.93	0	0	0.44	0	0	0	0	0	1
Chloro	0	0	0	0	0	0	0.03	0	0.28	0.06	1
Prasino	0	0	0	0	0	0	0.11	0.36	0.89	0	1
Crypto	0	0	0	0	0	0.14	0	0	0	0	1
Dino	0	0	0	0.53	0	0	0	0	0	0	1
Cyano	0	0	0	0	0	0	0	0	0	0.33	1
(B)											
Diatoms	1.5	0	0	0	0.48	0	0	0	0	0	1
Hapto	0	0	2.8	0	0.32	0	0	0	0	0	1
Pelago	1.24	1.86	0	0	0.88	0	0	0	0	0	1
Chloro	0	0	0	0	0	0	0.06	0	0.56	0.12	1
Prasino	0	0	0	0	0	0	0.22	0.72	1.78	0	1
Crypto	0	0	0	0	0	0.28	0	0	0	0	1
Dino	0	0	0	1.06	0	0	0	0	0	0	1
Cyano	0	0	0	0	0	0	0	0	0	0.66	1
(C)											
Diatoms	0.375	0	0	0	0.12	0	0	0	0	0	1
Hapto	0	0	0.7	0	0.08	0	0	0	0	0	1
Pelago	0.31	0.465	0	0	0.22	0	0	0	0	0	1
Chloro	0	0	0	0	0	0	0.015	0	0.14	0.03	1
Prasino	0	0	0	0	0	0	0.055	0.18	0.445	0	1
Crypto	0	0	0	0	0	0.07	0	0	0	0	1
Dino	0	0	0	0.265	0	0	0	0	0	0	1
Cyano	0	0	0	0	0	0	0	0	0	0.165	1
(D)											
Diatoms	0.75	0	0	0	0.25	0	0	0	0	0	1
Hapto	0	0	0.75	0	0.25	0	0	0	0	0	1
Pelago	0.75	0.75	0	0	0.5	0	0	0	0	0	1
Chloro	0	0	0	0	0	0	0.25	0	0.5	0.25	1
Prasino	0	0	0	0	0	0	0.25	0.5	0.75	0	1
Crypto	0	0	0	0	0	0.25	0	0	0	0	1
Dino	0	0	0	0.5	0	0	0	0	0	0	1
Cyano	0	0	0	0	0	0	0	0	0	0.5	1

Abbreviations: Hapto, Haptophytes; Pelago, Pelagophytes; Chloro, Chlorophytes; Crypto, Cryptophytes; Dino, Dinoflagellates; Cyano, Cyanobacteria; Fucox, Fucoxanthin; 19'-But, 19'-Butanoyloxyfucoxanthin; 19'-Hex, 19'-Hexanoyloxyfucoxanthin; Peri, Peridinin; Diadinox, Diadinoxanthin; Allox, Alloxanthin; Violax, Violaxanthin; Prasinox, Prasinoxanthin; Chl-*b*, Chlorophyll *b*; Zeax, Zeaxanthin; Chl-*a*, Chlorophyll *a*.

Table S2. Final pigment:Chl-*a* ratio matrices obtained by the CHEMTAX program. (A) Control and (B) Fe-added treatments.

	Fucox	19'-But	19'-Hex	Peri	Diadinox	Allox	Violax	Prasinox	Chl- <i>b</i>	Zeax	Chl- <i>a</i>
(A)											
Diatoms	1.6	0	0	0	0.27	0	0	0	0	0	1
Hapto	0	0	1.1	0	0.16	0	0	0	0	0	1
Pelago	0.56	0.72	0	0	0.37	0	0	0	0	0	1
Chloro	0	0	0	0	0	0	0.06	0	0.17	0.08	1
Prasino	0	0	0	0	0	0	0.03	0.28	1.2	0	1
Crypto	0	0	0	0	0	0.11	0	0	0	0	1
Dino	0	0	0	0.42	0	0	0	0	0	0	1
Cyano	0	0	0	0	0	0	0	0	0	0.35	1
(B)											
Diatoms	1.9	0	0	0	0.29	0	0	0	0	0	1
Hapto	0	0	0.86	0	0.18	0	0	0	0	0	1
Pelago	0.69	0.84	0	0	0.44	0	0	0	0	0	1
Chloro	0	0	0	0	0	0	0.01	0	0.24	0.03	1
Prasino	0	0	0	0	0	0	0.16	0.42	1.1	0	1
Crypto	0	0	0	0	0	0.14	0	0	0	0	1
Dino	0	0	0	0.64	0	0	0	0	0	0	1
Cyano	0	0	0	0	0	0	0	0	0	0.50	1

Abbreviations: as in Table S1.