

Composition and degradation of marine particles with different settling velocities in the northwestern Mediterranean Sea

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Web Appendix 1. Table A1.1 Initial composition of NetTrap particle samples. Abbreviations in manuscript Table 1.

	NetTrap 1 settling velocity (m d ⁻¹)				NetTrap 2 settling velocity (m d ⁻¹)				NetTrap 3 settling velocity (m d ⁻¹)			
	>230 (A)	115–230 (B)	57–115 (C)	29–57 (D)	>230 (A)	115–230 (B)	57–115 (C)	29–57 (D)	>230 (A)	115–230 (B)	57–115 (C)	29–57 (D)
BSiO ₂ (μmol L ⁻¹)	26.9	16.9	10.5	12.2	101.9	13.9	24.7	17.1	nd*	nd	nd	nd
POC (μmol L ⁻¹)	224.9	135.2	57.7	60.9	740.7	85.3	218.2	169.3	nd	nd	nd	nd
Total hydrolyzed amino acids (μmol L ⁻¹ C)	72.0	58.4	82.3	26.4	192.3	20.4	70.3	60.0	nd	nd	nd	nd
%ASP	11.0	10.0	8.8	7.7	11.4	10.3	10.4	9.9	10.1	10.6	12.4	9.6
%GLU	13.4	12.0	11.6	11.0	11.6	10.6	11.2	11.2	13.4	13.0	13.1	13.8
%HIS	1.8	1.3	2.3	2.2	1.9	1.6	2.2	2.1	2.1	2.5	2.2	2.4
%SER	3.5	4.4	4.8	5.3	9.0	6.3	7.5	6.4	6.0	5.7	5.7	5.8
%ARG	4.0	3.9	4.1	4.6	3.8	4.0	3.8	4.3	4.1	4.1	4.0	4.5
%GLY	12.1	14.4	17.5	15.5	12.5	10.0	13.3	12.6	12.9	12.0	11.4	12.5
%THR	5.6	5.9	5.5	6.6	7.7	6.7	7.1	7.1	6.1	5.8	5.9	6.2
%BALA	bd	bd	0.1	0.2	**bd	bd	bd	bd	bd	bd	bd	bd
%ALA	11.6	10.6	11.1	12.4	13.1	12.0	12.4	12.4	10.9	10.7	11.1	12.2
%TYR	3.9	3.2	3.7	4.2	3.7	3.9	3.9	4.0	3.6	3.8	3.7	4.2
%GABA	0.2	0.2	0.1	0.2	0.8	0.7	0.4	0.4	bd	bd	0.1	0.0
%MET	0.6	0.3	0.4	0.5	0.6	0.4	0.5	0.5	2.3	2.7	0.7	0.5
%VAL	7.1	6.1	5.8	7.5	5.9	5.9	5.9	6.8	6.5	6.3	6.4	7.4
%PHE	3.1	2.9	2.8	3.5	3.1	3.6	3.2	3.6	3.0	3.2	3.3	3.3
%ILE	4.7	4.3	4.0	5.1	3.7	4.2	3.7	4.5	4.3	4.0	4.4	4.8
%LEU	7.5	6.8	6.9	8.1	6.6	6.3	6.5	7.5	7.3	7.5	8.1	8.4
%LYS	10.0	13.6	10.5	5.5	4.8	13.5	8.0	6.9	7.2	8.1	7.5	4.4
Total lipid classes (μmol L ⁻¹ C)	72.0	38.9	29.1	19.8	64.3	14.0	55.4	25.9	nd	nd	nd	nd
%TG	7.3	8.7	0.0	5.5	0.0	0.0	0.0	0.0	nd	nd	nd	nd
%WE	6.1	0.0	4.6	0.0	0.0	0.0	0.0	0.0	nd	nd	nd	nd
%PG	3.5	6.2	7.0	3.5	4.4	2.9	1.1	2.0	nd	nd	nd	nd
%PG+PE+PC	3.5	7.7	11.6	8.6	7.1	2.9	2.3	3.4	nd	nd	nd	nd
%CL	55.5	41.0	35.8	61.5	35.4	72.0	74.2	50.3	nd	nd	nd	nd
%METAB	25.2	36.7	45.2	27.3	42.1	23.2	22.0	41.2	nd	nd	nd	nd
Total sugars (μmol L ⁻¹ C)	8.1	3.8	2.7	3.7	118.9	7.5	20.7	18.5	nd	nd	nd	nd
%fuc	4.1	1.4	0.0	1.9	4.3	2.8	3.9	3.4	nd	nd	nd	nd
%rha	5.3	3.4	1.6	7.6	6.1	4.3	3.5	3.5	nd	nd	nd	nd
%ara	12.2	7.6	4.7	6.2	8.5	10.4	8.1	8.4	nd	nd	nd	nd
%gal-am	0.0	1.9	1.0	0.6	0.7	1.3	0.5	0.5	nd	nd	nd	nd
%glucosa	1.0	2.1	2.3	0.6	0.8	0.6	0.9	0.8	nd	nd	nd	nd
%galact	14.6	17.4	12.6	13.5	14.1	13.4	12.3	11.0	nd	nd	nd	nd
%glucose	14.0	20.3	23.1	35.5	12.7	11.5	10.5	9.6	nd	nd	nd	nd
%man	5.4	4.4	4.8	6.8	5.5	3.0	3.0	3.8	nd	nd	nd	nd
%xyl	17.1	12.8	14.3	13.0	11.6	12.3	10.7	10.9	nd	nd	nd	nd
%fru	7.7	7.8	6.5	6.9	10.1	22.1	22.3	20.2	nd	nd	nd	nd
%rib	18.4	20.9	29.2	7.5	25.5	18.2	24.2	28.0	nd	nd	nd	nd
Total pigments (μmol L ⁻¹ C)	0.3	0.5	0.3	0.2	4.1	1.3	0.2	0.7	nd	nd	nd	nd
%Chl <i>a</i>	22.6	21.2	15.8	20.3	18.2	3.1	16.2	17.6	13.8	12.4	15.4	16.6
%Chl <i>b</i>	5.7	8.9	5.2	4.0	4.8	1.2	3.6	4.5	2.7	5.2	2.0	3.2
%phide	3.5	5.3	6.3	6.7	4.1	0.9	4.9	9.0	6.8	6.1	7.4	6.9
%pyrophide	13.5	14.1	17.2	13.7	8.8	2.3	12.0	9.5	26.1	28.0	22.3	19.0
%phytin	37.5	31.6	26.1	38.8	36.7	5.9	39.7	35.1	20.7	19.9	21.0	22.8
%fuco	17.2	18.8	29.5	16.5	27.5	86.8	23.7	24.5	30.1	28.4	31.9	31.4

Web Appendix 1. Table A1. Continued.

	NetTrap 1 settling velocity (m d ⁻¹)				NetTrap 2 settling velocity (m d ⁻¹)				NetTrap 3 settling velocity (m d ⁻¹)			
	>230 (A)	115–230 (B)	57–115 (C)	29–57 (D)	>230 (A)	115–230 (B)	57–115 (C)	29–57 (D)	>230 (A)	115–230 (B)	57–115 (C)	29–57 (D)
Lipids biomarkers												
%14:0	5.6	5.6	6.3	7.5	7.4	4.0	9.2	5.5	7.3	6.8	7.4	4.9
%i-15:0	0.7	0.7	0.7	1.9	0.4	0.4	0.7	0.4	0.4	0.7	0.5	0.5
%a-15:0	0.3	0.3	0.3	0.4	0.0	0.8	1.2	0.3	0.3	0.5	0.4	0.4
%15:0	1.7	1.7	1.3	2.4	2.0	1.4	3.2	1.4	1.2	0.8	1.1	0.7
%16:1	6.6	8.3	7.4	9.4	8.7	2.4	4.8	4.5	7.1	5.8	7.4	7.6
%16:0	25.3	26.2	24.3	27.4	36.6	17.5	35.7	30.8	21.6	19.7	21.6	29.3
%18:4	0.9	2.0	3.7	3.6	1.0	0.8	0.2	0.4	4.6	6.7	5.5	2.7
%18:2	3.8	17.5	4.3	4.8	4.9	0.0	3.6	2.3	2.1	2.5	2.3	2.0
%18:1 ω 9	15.3	8.3	21.9	15.7	9.5	3.5	13.6	9.5	7.9	10.7	10.8	9.0
%18:1 ω 7	7.3	2.6	6.5	4.1	2.9	0.5	1.4	1.4	5.5	2.5	2.3	2.4
%18:0	7.3	8.3	7.8	6.8	11.5	64.0	19.9	35.1	6.5	5.3	4.7	25.2
%20:5	2.4	7.0	7.2	4.4	5.0	0.8	1.7	1.9	6.0	8.2	8.9	2.0
%20:1	13.2	2.6	1.3	3.4	0.8	0.5	0.7	1.0	6.5	2.0	1.2	4.4
%20:0	4.2	3.6	6.5	1.7	1.2	1.2	0.1	1.2	3.3	2.7	0.4	3.7
%22:6	4.9	4.6	0.7	6.1	7.5	2.0	3.7	4.2	17.9	24.5	25.2	4.4
%22:0	0.5	0.7	0.0	0.3	0.7	0.3	0.4	0.5	1.7	0.7	0.4	1.0
%16ROH	12.3	13.9	20.9	19.3	nd	nd	nd	nd	39.1	46.2	49.0	44.6
%18ROH	2.8	1.5	5.9	2.1	nd	nd	nd	nd	1.9	3.1	3.4	5.6
%phytol	5.4	7.0	8.1	8.1	nd	nd	nd	nd	1.6	1.9	3.4	4.7
%27(5,22)	5.0	4.1	3.7	4.1	nd	nd	nd	nd	3.0	3.0	3.4	2.3
%27(5,22) isomer	11.0	8.3	7.7	10.1	nd	nd	nd	nd	7.1	6.4	5.7	5.9
%27(22)	1.3	2.0	0.6	1.0	nd	nd	nd	nd	1.4	0.1	0.4	0.7
%27(5)	22.5	24.6	21.5	27.4	nd	nd	nd	nd	24.1	23.1	23.1	23.0
%27(0)	1.1	2.8	2.2	1.0	nd	nd	nd	nd	1.2	0.3	0.4	1.0
%28(5,22)	14.3	11.3	3.0	11.2	nd	nd	nd	nd	9.0	8.6	6.5	7.2
%28(5,24/28)	4.4	3.7	2.9	4.1	nd	nd	nd	nd	2.4	1.9	1.6	1.1
%29(5,22)	0.3	0.9	0.4	0.5	nd	nd	nd	nd	2.1	1.2	0.8	1.6
%29(5)	8.0	6.1	9.3	6.1	nd	nd	nd	nd	4.0	2.3	1.6	0.4
%30(22)	2.7	2.6	3.7	2.0	nd	nd	nd	nd	1.2	0.7	0.4	0.6
%alken	8.8	11.3	9.9	3.0	nd	nd	nd	nd	1.9	1.1	0.4	1.3

* Total hydrolyzed amino acids are not determined (nd) in NT3 because we measured flux not concentration as in the first 2 NetTraps.

** bd, below detection limit.

Web Appendix 1. Table A1.2 Composition of NetTrap particle samples at the various incubation times. Abbreviations in manuscript Table 1.

	Time (h)	Dissolved ($\mu\text{mol L}^{-1}$)		Particulate ($\mu\text{mol L}^{-1}$)									
		BSiO ₂	SD _{BSiO2}	OC	*SD _{OC}	TPig-C	*SD _{TPig-C}	THAA-C	*SD _{THAA-C}	TLip-C	**SD _{TLip-C}	TCHOH-C	**SD _{TCHOH-C}
NT1-A	0	0.0	0.3	224.9	4.5	0.343	0.03	72.0	7.2	71.1	0.4	8.1	0.5
	6	0.2	0.4	273.3	5.5	0.560	0.06	129.8	13.0	82.0	3.9		
	12	0.6	0.5	252.9	5.1	0.612	0.06	69.6	7.0	74.7	2.0		
	24	0.5	0.0	275.4	5.5	0.578	0.06	70.2	7.0	101.9	4.8		
	48	0.8	0.3	299.0	6.0	0.614	0.06	93.2	9.3	67.5	2.9		
	48	1.0	0.5	378.4	7.6	0.661	0.07	157.3	15.7	75.1	0.1		
	120	1.4	0.3	434.4	8.7	0.783	0.08	84.8	8.5	53.4	2.0	6.8	0.4
NT1-B	0	0.0	0.1	135.2	2.7	0.456	0.05	58.4	5.8	38.9	0.2	3.8	0.2
	6	0.9	0.0	153.7	3.1	0.464	0.05	84.3	8.4	28.6	2.0		
	12	-0.5	0.2	111.8	2.2	0.564	0.06	68.1	6.8	19.3	0.7		
	24	-0.7	0.3	125.1	2.5	0.409	0.04	45.0	4.5	27.8	0.6		
	48	-0.5	0.1	131.5	2.6	0.450	0.04	48.4	4.8	52.6	4.1		
	48	-0.2	0.1	168.8	3.4	0.395	0.04	114.4	11.4	22.3	1.1		
	120	0.0	0.0	127.0	2.5	0.379	0.04	38.8	3.9	22.0	0.7	3.6	0.2
NT1-C	0	0.0	0.1	57.7	1.2	0.284	0.03	82.3	8.2	29.1	0.0	2.7	0.2
	6	-0.1	0.3	105.2	2.1	0.214	0.02	50.4	5.0	11.3	0.7		
	12	-0.8	0.0	54.5	1.1	0.239	0.02	30.5	3.1	20.0	0.0		
	24	0.0	0.3	49.9	1.0	0.219	0.02	34.7	3.5	16.0	0.9		
	48	-0.8	0.2			0.226	0.02	31.3	3.1	10.4	0.4		
	48	-0.6	0.6	67.0	1.3	0.266	0.03	45.5	4.5	11.4	0.4		
	120	-0.1	0.3	53.5	1.1	0.191	0.02	31.0	3.1	26.8	0.6	0.2	0.0
NT1-D	0	0.0	0.1	60.9	1.2	0.173	0.02	26.4	2.6	19.8	0.1	3.7	0.2
	6	0.5	0.0	74.3	1.5	0.237	0.02	27.4	2.7	19.5	0.5		
	12	0.6	0.0	80.7	1.6	0.216	0.02	27.0	2.7	19.6	2.5		
	24	0.9	0.0	64.0	1.3	0.224	0.02	25.7	2.6	14.8	0.1		
	48	1.1	0.1	46.6	0.9	0.233	0.02	22.7	2.3	18.1	0.6		
	48	1.4	0.1	52.2	1.0	0.221	0.02	19.6	2.0	13.1	0.1		
	120	1.2	0.2	59.2	1.2	0.175	0.02	19.2	1.9	10.7	0.7	3.8	0.2
NT2-A	0	0.0	0.1	740.7	14.8	4.101	0.41	192.3	19.2	64.3	1.4	118.9	7.1
	6	0.9	0.1	673.2	13.5	3.885	0.39	290.5	29.0	106.6	9.4		
	12	1.2	0.0	1383.4	27.7	5.180	0.52	277.0	27.7	71.6	2.6		
	24	1.3	0.1	1383.5	27.7	4.492	0.45	176.2	17.6	63.1	1.7		
	48	3.5	0.3	1049.5	21.0	4.735	0.47	288.7	28.9	104.7	8.7		
	48	2.2	0.1	1160.7	23.2	5.045	0.50	255.9	25.6	69.0	4.4		
	120	12.1	0.0	952.5	19.0	3.951	0.40	275.9	27.6	81.5	13.1	109.9	6.6
NT2-B	0	0.0	0.0	85.3	1.7	1.288	0.13	20.4	2.0	14.0	0.1	7.5	0.4
	6	0.9	0.6	87.9	1.8	1.923	0.19	52.2	5.2	16.1	0.0		
	12	0.7	0.0	112.2	2.2	3.326	0.33	27.9	2.8	19.5	0.8		
	24	0.5	0.0	107.3	2.1	1.259	0.13	16.8	1.7	15.1	1.7		
	48	1.8	0.0	93.0	1.9	1.499	0.15	21.3	2.1	14.7	0.1		
	48	1.6	0.1	97.5	1.9	1.676	0.17	33.1	3.3	14.6	1.0		
	120	2.6	0.5	106.7	2.1	1.258	0.13	22.7	2.3	32.4	0.2	nd	
NT2-C	0	0.0	0.0	218.2	4.4	0.231	0.02	70.3	7.0	55.4	3.6	20.7	1.2
	6	0.1	0.0	207.4	4.1	0.637	0.06	81.5	8.2	51.4	2.0		
	12	0.2	0.1	243.9	4.9	0.923	0.09	63.4	6.3	50.8	0.6		
	24	4.9	0.3	227.1	4.5	0.872	0.09	60.1	6.0	44.9	3.0		
	48	1.1	0.1	215.3	4.3	0.763	0.08	58.3	5.8	29.9	0.6		
	48	1.4	0.4	195.7	3.9	0.780	0.08	64.5	6.4	39.2	1.9		
	120	3.0	0.3	183.8	3.7	0.759	0.08	45.4	4.5	31.1	0.9	17.0	1.0
NT2-D	0	0.0	0.2	169.3	3.4	0.721	0.07	60.0	6.0	25.9	0.3	18.5	1.1
	6	0.4	0.2	163.3	3.3	0.607	0.06	48.9	4.9	21.0	0.2		
	12	0.9	0.0	201.6	4.0	0.670	0.07	49.5	5.0	21.2	0.0		
	24	0.6	0.2	183.2	3.7	0.838	0.08	47.0	4.7	25.2	0.7		
	48	0.8	0.5	185.4	3.7	0.544	0.05	48.3	4.8	22.0	1.2		
	48	0.8	0.3	170.0	3.4	0.537	0.05	51.5	5.1	22.9	0.5		
	120	6.1	0.3	143.6	2.9	0.634	0.06	36.5	3.7	20.0	0.1	14.3	0.9

Web Appendix 1. Table A1.2 Continued.

		% of total lipids													
	Time (h)	WE	TG	FFA	ALC	1,3DG	ST	1,2DG	PIG	MG	MGDG	DGDG	PG	PE	PC
NT1-A	0	6.14	7.27	16.93	0.00	0.00	10.70	0.00	6.80	8.25	40.37	0.00	3.47	0.10	0.00
	6	4.23	15.12	17.27	0.00	0.00	8.73	0.00	4.43	6.33	40.53	0.00	1.99	1.28	0.00
	12	4.06	9.44	17.41	0.00	0.00	12.00	0.00	0.00	0.00	53.12	0.00	1.84	1.85	0.00
	24	3.22	8.37	21.90	0.00	0.00	11.32	0.00	5.08	5.03	42.36	0.00	1.39	1.03	0.00
	48	0.00	2.68	17.80	1.65	0.90	7.58	0.00	8.21	6.13	52.33	0.00	2.05	0.67	0.00
	48	0.00	0.00	24.02	1.61	0.97	9.94	0.00	7.61	8.92	42.80	0.00	2.00	1.70	0.00
120	4.78	0.00	11.68	4.26	0.73	6.91	0.00	13.30	6.34	47.83	0.00	1.50	1.83	0.00	
NT1-B	0	0.00	8.66	17.24	12.67	6.74	5.98	0.00	11.87	0.00	25.29	3.83	6.25	1.45	0.00
	6	0.00	6.33	12.29	3.27	3.85	9.08	3.56	15.80	0.00	33.59	6.12	2.67	3.44	0.00
	12	0.00	0.00	12.76	1.97	5.39	5.28	0.00	10.78	0.00	47.42	10.45	4.47	1.48	0.00
	24	0.00	5.52	20.57	0.00	3.15	7.15	0.00	5.76	5.71	37.35	7.54	4.49	2.76	0.00
	48	0.00	0.00	36.44	0.00	2.42	3.25	2.64	5.59	3.52	41.40	0.00	4.09	0.65	0.00
	48	0.00	0.00	17.25	0.00	4.14	13.74	0.00	7.26	5.41	40.05	5.71	3.83	2.62	0.00
120	0.00	3.78	23.42	0.00	5.12	8.04	0.00	5.63	5.56	41.71	3.66	1.50	1.58	0.00	
NT1-C	0	4.55	0.00	29.11	5.13	3.67	6.92	3.24	8.89	4.10	22.79	0.00	7.04	4.57	0.00
	6	0.00	0.00	7.55	6.65	0.00	4.36	0.00	9.32	9.28	39.96	11.85	6.33	4.69	0.00
	12	0.00	0.00	25.73	0.00	9.48	7.51	0.00	7.64	4.36	28.22	0.00	8.73	8.33	0.00
	24	0.00	6.93	26.19	2.37	0.00	6.52	0.00	4.11	5.38	26.09	6.33	4.40	5.45	6.22
	48	0.00	0.00	21.49	4.75	0.00	7.04	0.00	6.57	7.42	35.05	9.40	2.41	4.14	1.72
	48	0.00	0.00	37.28	2.26	0.00	3.55	0.00	7.12	5.14	27.77	9.55	2.90	2.09	2.33
120	4.85	0.00	16.92	4.69	0.00	2.58	3.01	5.32	6.55	42.50	9.48	2.09	1.11	0.89	
NT1-D	0	0.00	5.51	11.77	7.51	0.00	5.11	0.00	8.71	8.02	33.91	10.86	3.48	2.05	3.07
	6	0.00	0.00	12.76	2.52	0.00	5.72	3.56	8.07	7.80	35.94	10.88	2.56	4.02	6.18
	12	0.00	0.00	20.05	3.63	0.00	5.38	4.20	7.61	5.60	30.18	9.61	6.37	2.72	4.65
	24	0.00	0.00	28.63	7.76	0.00	7.82	0.00	8.00	5.83	28.93	6.85	3.07	1.60	1.51
	48	0.00	0.00	23.11	8.22	0.00	5.24	0.00	5.69	4.50	44.31	0.00	3.60	3.72	1.61
	48	0.00	0.00	18.72	7.75	0.00	8.90	0.00	5.05	12.78	26.79	8.37	3.83	4.97	2.85
120	0.00	0.00	20.57	0.00	0.00	0.00	0.00	34.64	18.49	14.91	0.00	3.34	8.05	0.00	
NT2-A	0	0.00	0.00	32.06	10.06	0.00	15.30	0.00	2.18	1.13	32.14	0.00	4.45	2.69	0.00
	6	0.00	0.00	25.70	0.00	0.00	15.90	0.00	1.33	2.42	46.48	0.00	5.47	3.19	0.00
	12	0.00	0.00	38.97	0.00	0.00	17.89	0.00	0.77	1.85	36.80	0.00	3.74	0.00	0.00
	24	0.00	0.00	22.16	0.00	0.00	18.73	0.00	0.76	1.81	47.42	0.00	6.34	2.60	0.00
	48	0.00	0.00	37.50	8.46	0.00	18.48	0.00	0.52	1.52	26.84	0.00	5.16	1.48	0.00
	48	0.00	0.00	29.89	6.56	0.00	18.81	0.00	0.67	3.41	30.43	0.00	7.50	2.70	0.00
120	0.00	0.00	43.82	0.00	0.00	15.99	0.00	0.63	2.72	26.88	0.00	7.19	2.74	0.00	
NT2-B	0	0.00	0.00	11.02	7.02	0.00	7.03	0.00	27.19	5.16	39.65	0.00	2.93	0.00	0.00
	6	0.00	0.00	9.72	0.00	0.00	6.28	0.00	18.72	12.14	43.66	6.85	2.63	0.00	0.00
	12	0.00	0.00	10.81	2.13	0.00	7.96	0.00	13.17	10.10	45.37	8.97	1.50	0.00	0.00
	24	0.00	0.00	8.88	0.00	0.00	7.87	0.00	16.53	12.04	45.58	7.82	1.27	0.00	0.00
	48	6.93	0.00	6.64	11.39	2.67	6.23	0.00	15.30	6.74	42.37	0.00	1.74	0.00	0.00
	48	0.00	0.00	16.83	0.00	0.00	6.46	0.00	19.31	8.21	45.61	0.00	2.01	1.58	0.00
120	5.11	0.00	11.58	12.54	1.60	3.19	2.04	34.59	4.30	23.77	0.00	1.29	0.00	0.00	
NT2-C	0	0.00	0.00	15.27	2.94	0.00	5.26	0.00	15.41	3.77	55.04	0.00	1.14	1.17	0.00
	6	0.00	0.00	11.82	0.00	0.00	4.61	0.00	14.83	5.00	61.69	0.00	2.05	0.00	0.00
	12	0.00	0.00	17.18	3.40	0.00	5.31	0.00	30.18	2.89	39.66	0.00	1.39	0.00	0.00
	24	0.00	0.00	18.19	0.00	0.00	5.26	0.00	31.86	3.86	38.64	0.00	1.31	0.88	0.00
	48	0.00	0.00	24.31	4.64	1.83	9.16	0.00	11.16	4.01	40.37	0.00	2.92	1.59	0.00
	48	0.00	0.00	21.61	3.61	3.53	10.02	0.00	10.05	3.25	41.62	0.00	3.37	2.93	0.00
120	0.00	3.55	12.92	3.02	2.44	5.79	0.00	28.11	3.17	39.05	0.00	1.96	0.00	0.00	
NT2-D	0	0.00	0.00	31.79	5.69	0.00	8.78	0.00	14.11	3.67	32.55	0.00	2.02	1.38	0.00
	6	0.00	0.00	29.87	4.61	0.00	9.44	0.00	15.04	4.53	33.04	0.00	2.60	0.86	0.00
	12	0.00	0.00	33.64	2.55	0.00	8.40	0.00	12.18	4.15	33.00	0.00	2.93	3.15	0.00
	24	0.00	0.00	30.33	4.16	0.00	7.68	0.00	13.17	3.24	35.94	0.00	3.53	1.96	0.00
	48	0.00	0.00	18.14	7.56	0.00	8.42	0.00	21.65	0.00	40.37	0.00	3.86	0.00	0.00
	48	0.00	0.00	17.46	9.83	0.00	8.47	0.00	19.45	0.00	40.34	0.00	4.46	0.00	0.00
120	0.00	0.00	5.97	0.00	0.00	0.00	0.00	44.01	0.00	40.26	0.00	3.81	5.94	0.00	

Web Appendix 1. Table A1.2 Continued.

	Time (h)	% of total pigments					
		Chl <i>a</i>	Chl <i>b</i>	phide	pyropheide	phytin	fuco
NT1-A	0	25.6	6.5	2.6	9.2	41.6	14.4
	6	24.7	7.3	4.3	11.7	38.1	13.8
	12	22.1	7.5	4.7	15.0	39.3	11.4
	24	21.1	6.2	4.4	14.9	39.4	14.0
	48	23.6	6.3	4.2	15.6	37.3	13.0
	48	22.5	5.5	4.5	17.6	33.2	16.7
NT1-B	120	22.1	5.5	4.5	18.8	34.0	15.1
	0	24.4	10.4	4.1	9.7	35.5	16.0
	6	23.7	8.7	5.2	11.0	36.5	14.8
	12	21.8	9.7	3.8	15.5	35.2	14.1
	24	22.7	10.2	4.1	12.2	37.2	13.7
	48	24.1	8.0	6.3	14.1	32.4	15.1
NT1-C	48	22.9	7.3	7.0	12.7	36.5	13.6
	120	23.7	8.9	4.8	8.9	41.4	12.2
	0	19.1	6.4	5.1	12.4	30.8	26.3
	6	26.2	8.4	4.7	11.4	33.0	16.3
	12	21.5	7.3	5.3	11.7	40.2	14.0
	24	24.0	7.5	6.2	11.6	39.5	11.2
NT1-D	48	26.2	6.4	7.1	10.0	37.4	12.8
	48	23.2	4.7	5.4	11.7	43.7	11.3
	120	28.5	7.0	5.5	9.9	49.1	0.0
	0	23.4	4.7	5.1	9.5	43.4	13.9
	6	24.9	5.1	5.2	9.7	40.4	14.8
	12	23.8	5.1	5.0	7.1	39.6	19.4
NT2-A	24	26.3	4.4	5.5	7.3	38.9	17.5
	48	24.8	6.1	6.8	8.2	38.6	15.5
	48	26.5	4.7	6.6	8.4	39.6	14.2
	120	26.7	5.4	3.6	6.0	40.5	17.7
	0	20.9	5.5	3.1	6.0	41.1	23.3
	6	15.0	4.0	2.7	4.8	29.2	44.3
NT2-B	12	18.1	5.5	2.9	6.7	35.3	31.4
	24	16.3	5.5	2.7	5.5	31.6	38.4
	48	17.7	5.5	2.8	5.1	30.4	38.5
	48	17.8	5.3	2.7	4.9	30.5	38.8
	120	12.7	3.0	2.9	3.9	26.9	50.7
	0	4.1	1.5	0.8	1.8	7.5	84.3
NT2-C	6	4.8	1.9	0.9	1.4	12.1	78.8
	12	2.0	0.7	0.3	0.5	3.7	92.8
	24	6.7	3.3	1.3	3.6	12.8	72.3
	48	3.4	2.2	0.6	2.1	7.8	83.8
	48	3.8	1.0	0.7	1.5	8.2	84.8
	120	4.4	2.4	1.0	2.6	11.0	78.6
NT2-D	0	18.7	4.2	3.7	8.3	44.9	20.3
	6	18.9	3.6	4.1	9.5	41.7	22.3
	12	19.5	2.7	3.8	8.2	43.0	22.9
	24	18.4	4.2	3.9	9.3	39.5	24.7
	48	19.9	7.5	4.1	9.5	40.1	18.9
	48	19.1	4.1	4.6	10.7	41.8	19.7
NT2-D	120	18.2	9.2	4.0	9.7	40.2	18.7
	0	20.4	5.3	6.9	6.6	39.8	21.0
	6	21.3	5.7	3.7	6.3	40.5	22.4
	12	21.3	7.9	3.8	5.7	38.9	22.3
	24	19.1	7.8	3.8	6.8	40.4	22.1
	48	22.5	5.4	3.6	6.3	41.6	20.6
NT2-D	48	24.1	5.3	3.4	5.7	39.9	21.6
	120	28.6	6.1	3.4	5.6	38.6	17.6

Web Appendix 1. Table A1.2 Continued.

	Time (h)	mole % total hydrolyzed amino acids																
		ASP	GLU	HIS	SER	ARG	GLY	THR	BALA	ALA	TYR	GABA	MET	VAL	PHE	ILE	LEU	LYS
NT1-A	0	11.0	13.4	1.8	3.5	4.0	12.1	5.6	bd	11.6	3.9	0.15	0.57	7.1	3.1	4.7	7.5	10.0
	6	8.2	12.2	2.0	4.7	3.9	13.8	5.5	bd	12.4	3.9	0.10	0.49	6.7	3.0	4.4	7.6	11.2
	12	10.8	13.2	1.8	5.2	4.1	13.1	6.2	bd	11.2	3.4	0.20	0.50	7.0	3.4	4.7	7.2	7.9
	24	11.0	13.9	1.7	4.0	4.0	11.9	5.9	bd	11.7	3.5	0.14	0.46	7.5	3.4	5.1	7.8	7.9
	48	10.4	12.8	2.0	4.7	3.8	12.9	6.0	bd	12.3	3.8	0.16	0.39	8.1	3.1	4.9	7.5	7.2
	48	11.7	15.1	1.8	4.3	3.2	11.9	6.1	bd	11.6	3.1	0.12	0.46	7.4	2.9	5.2	6.5	8.8
	120	10.5	12.6	1.9	5.6	3.8	11.6	6.5	bd	12.7	3.3	0.24	0.24	8.3	3.3	4.8	6.6	8.0
NT1-B	0	10.0	12.0	1.3	4.4	3.9	14.4	5.9	bd	10.6	3.2	0.18	0.30	6.1	2.9	4.3	6.8	13.6
	6	8.8	11.4	1.7	5.1	3.5	16.0	5.8	bd	10.7	3.2	0.16	0.40	6.0	2.6	4.1	5.7	14.9
	12	9.1	11.5	1.5	4.4	3.5	15.6	5.7	bd	10.6	3.1	0.20	0.40	6.2	2.7	3.9	6.4	15.0
	24	10.2	12.7	1.7	4.9	3.5	13.7	6.7	bd	11.6	3.1	0.34	0.43	7.1	2.9	4.4	6.9	9.8
	48	9.8	12.0	1.6	4.7	3.5	14.1	6.5	bd	11.6	2.9	0.20	0.41	6.2	3.1	4.0	6.7	12.8
	48	9.6	12.3	1.7	5.6	2.7	15.6	6.1	bd	11.2	2.5	0.14	0.31	5.8	2.4	3.9	4.7	15.4
	120	10.5	11.2	1.8	5.6	3.4	14.8	7.0	bd	13.5	3.3	0.35	0.24	6.2	2.7	3.7	5.3	10.5
NT1-C	0	8.8	11.6	2.3	4.8	4.1	17.5	5.5	0.1	11.1	3.7	0.10	0.37	5.8	2.8	4.0	6.9	10.5
	6	9.1	12.0	2.2	5.8	4.0	16.1	5.8	0.1	11.3	3.6	0.13	0.39	5.8	2.9	3.8	6.8	10.1
	12	9.6	12.8	2.1	5.6	3.4	14.7	6.3	0.1	11.7	3.4	0.22	0.30	6.4	2.9	4.1	6.9	9.4
	24	9.2	12.1	2.3	5.4	3.5	16.1	6.3	0.1	12.2	3.9	0.22	0.27	6.1	2.9	3.9	6.6	8.9
	48	10.0	13.1	2.0	5.1	3.5	14.1	6.4	0.1	12.7	3.5	0.14	0.35	7.1	3.0	4.6	7.1	7.2
	48	8.3	12.2	2.3	5.8	4.1	16.8	6.4	0.1	12.1	3.6	0.14	0.40	6.5	2.8	4.3	7.1	7.1
	120	9.9	13.0	2.0	6.3	4.1	16.4	7.1	0.8	12.9	3.5	0.16	0.30	7.2	2.8	3.8	5.7	3.9
NT1-D	0	7.7	10.9	2.2	5.3	4.6	15.5	6.6	0.2	12.4	4.2	0.19	0.49	7.5	3.5	5.1	8.1	5.5
	6	10.0	12.5	2.1	4.7	4.1	14.0	6.5	0.1	12.5	3.8	0.16	0.34	7.1	3.2	4.8	7.6	6.4
	12	8.0	11.7	2.1	5.7	3.9	15.8	6.5	0.1	12.4	3.8	0.22	0.36	7.1	3.2	4.8	7.6	6.7
	24	10.3	13.5	2.0	5.7	3.8	13.2	6.5	0.1	12.2	3.5	0.27	0.29	6.8	3.2	4.5	7.4	6.8
	48	9.3	13.1	2.4	6.8	3.7	16.0	6.5	0.1	12.4	3.3	0.28	0.27	6.7	2.8	4.4	6.4	5.5
	48	11.1	13.9	2.2	6.3	3.3	13.0	6.7	0.2	13.1	3.5	0.26	0.60	7.1	3.0	4.4	5.9	5.5
	120	10.8	13.4	2.2	6.5	3.6	13.0	6.7	1.2	13.0	3.3	0.26	0.22	6.8	3.0	4.2	6.4	5.5
NT2-A	0	11.4	11.6	1.9	9.0	3.8	12.5	7.7	bd	13.1	3.7	0.77	0.55	5.9	3.1	3.7	6.6	4.8
	6	11.4	11.8	1.8	8.1	3.8	12.9	7.7	bd	13.1	3.9	0.62	0.55	6.3	3.1	4.1	6.6	4.2
	12	12.8	12.6	1.7	7.8	3.9	12.1	7.7	bd	13.3	3.7	0.63	0.39	6.4	3.0	4.2	6.6	3.3
	24	10.6	12.7	2.0	7.9	3.9	12.5	8.2	bd	12.8	3.8	0.67	0.49	6.9	3.2	4.5	7.1	2.8
	48	10.8	12.0	2.1	8.8	3.6	13.0	7.7	bd	12.6	3.8	0.58	0.44	6.6	3.2	4.1	6.9	3.8
	48	11.3	11.7	2.1	9.0	3.5	12.0	8.0	bd	12.7	3.6	0.62	0.47	6.1	3.3	3.8	6.7	5.3
	120	7.5	8.0	1.9	9.9	3.9	13.3	8.7	bd	13.9	4.0	0.69	0.49	6.7	3.5	4.1	6.8	6.0
NT2-B	0	10.3	10.6	1.6	6.3	4.0	10.0	6.7	bd	12.0	3.9	0.66	0.41	5.9	3.6	4.2	6.3	13.5
	6	9.4	9.6	3.0	5.4	3.5	14.0	6.1	bd	14.4	5.3	0.34	0.25	7.5	2.6	3.7	6.3	8.7
	12	12.1	11.6	1.6	5.8	3.8	12.8	6.7	bd	11.9	3.4	0.53	0.37	6.9	3.3	4.8	6.6	7.8
	24	11.9	10.5	1.7	6.1	4.3	11.4	7.8	bd	13.9	4.3	0.60	0.50	7.5	3.6	4.9	6.9	3.9
	48	10.6	11.5	1.6	6.3	3.8	10.3	7.2	bd	13.0	3.5	0.65	0.52	6.9	3.8	4.7	6.8	9.0
	48	11.4	11.9	1.9	6.3	3.5	11.4	6.8	bd	12.2	3.6	0.41	0.49	6.6	3.2	4.5	6.6	9.3
	120	9.6	11.5	1.7	6.4	3.6	10.8	7.2	bd	13.2	3.3	0.64	0.35	7.3	3.6	5.0	6.5	9.4
NT2-C	0	10.4	11.2	2.2	7.5	3.8	13.3	7.1	bd	12.4	3.9	0.43	0.47	5.9	3.2	3.7	6.5	8.0
	6	8.7	10.8	2.5	7.3	3.9	14.6	7.0	bd	13.0	4.1	0.34	0.54	6.3	3.1	3.8	6.4	7.4
	12	11.1	12.4	2.3	7.0	3.8	13.4	7.2	bd	12.5	3.6	0.39	0.55	6.7	2.8	4.1	6.3	5.9
	24	10.8	12.5	2.1	6.8	3.9	12.7	7.3	bd	12.8	3.6	0.38	0.52	6.8	3.0	4.3	6.6	5.7
	48	9.9	12.2	2.1	7.6	4.0	13.7	7.6	bd	13.1	3.5	0.38	0.48	6.5	3.0	4.1	6.5	5.2
	48	7.1	9.6	2.3	8.1	4.0	13.0	8.1	bd	14.8	3.9	0.36	0.41	7.4	3.3	4.7	6.9	6.1
	120	11.4	11.4	2.2	7.0	3.7	13.1	7.4	bd	13.6	3.8	0.51	0.37	6.7	3.2	3.8	6.2	5.6
NT2-D	0	9.9	11.2	2.1	6.4	4.3	12.6	7.1	bd	12.4	4.0	0.38	0.50	6.8	3.6	4.5	7.5	6.9
	6	10.9	12.4	2.1	6.1	3.9	12.3	6.7	bd	12.0	3.7	0.34	0.49	7.1	3.3	4.8	7.5	6.1
	12	8.7	11.3	2.1	6.4	3.7	13.0	6.9	bd	12.9	4.0	0.43	0.57	7.8	3.4	5.0	7.8	6.0
	24	10.2	12.4	1.8	6.4	3.6	12.2	7.3	bd	13.7	3.7	0.42	0.41	7.5	3.4	4.7	7.4	4.9
	48	10.3	12.8	2.1	6.5	3.5	11.7	7.3	bd	13.8	3.6	0.40	0.44	7.0	3.3	4.5	7.3	5.3
	48	10.2	12.5	2.2	7.4	3.6	12.8	7.2	bd	13.1	3.6	0.38	0.43	6.6	3.1	4.0	7.0	5.9
	120	10.9	11.9	2.2	7.6	3.5	12.8	7.4	bd	14.0	3.6	0.49	0.40	6.8	3.2	3.7	6.4	5.3

Web Appendix 1. Table A1.2 Continued.

	Time (h)	% total sugars										
		fuc	rha	ara	gal-am	glucosa	galact	glucose	man	xly	fru	rib
NT1-A	0	4.1	5.3	12.2	0.0	1.0	14.6	14.0	5.4	17.1	7.7	18.4
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	3.4	5.9	10.0	0.0	0.8	16.0	13.8	5.5	19.4	7.4	17.9
NT1-B	0	1.4	3.4	7.6	1.9	2.1	17.4	20.3	4.4	12.8	7.8	20.9
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	1.7	4.0	6.0	1.7	3.0	14.9	15.0	4.6	13.1	7.7	28.2
NT1-C	0	0.0	1.6	4.7	1.0	2.3	12.6	23.1	4.8	14.3	6.5	29.2
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	0.0	0.0	0.0	0.0	17.8	16.3	31.3	0.0	34.6	0.0	0.0
NT1-D	0	1.9	7.6	6.2	0.6	0.6	13.5	35.5	6.8	13.0	6.9	7.5
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	1.4	7.8	6.2	2.2	0.7	16.2	20.7	7.5	13.2	4.7	19.4
NT2-A	0	4.3	6.1	8.5	0.7	0.8	14.1	12.7	5.5	11.6	10.1	25.5
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	5.6	5.2	9.2	0.9	1.1	15.6	12.0	6.0	13.1	7.8	23.6
NT2-B	0	2.8	4.3	10.4	1.3	0.6	13.4	11.5	3.0	12.3	22.1	18.2
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NT2-C	0	3.9	3.5	8.1	0.5	0.9	12.3	10.5	3.0	10.7	22.3	24.2
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	4.2	5.5	7.7	0.8	0.9	11.2	7.8	3.0	10.7	24.6	23.6
NT2-D	0	3.4	3.5	8.4	0.5	0.8	11.0	9.6	3.8	10.9	20.2	28.0
	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	48	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	120	3.8	5.8	6.9	0.6	0.8	11.0	8.4	4.2	11.4	18.7	28.4

Web Appendix 1. Table A1.2 Continued.

* same analytical error for all samples

** variability within duplicate analysis; nd means not determined because not analyzed; bd means below detection limit