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Measurements of Photosynthetic Production  
in the Baltic

by

Rabin Sen Gupta

Institute of Oceanography,  
University of Gothenburg

August 1972



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## Measurements of Photosynthetic Production in the Baltic

Measurement period June 1969 to August 1971.

Series run by Fil.lic. R. Sen Gupta, Ing. Stig Carlberg, Fil.stud. Kristina Hansson and Ass. Albrechtsen.

- Methods applied
- 1) Incubation in light and dark bottles of Jena glass under cover of filters supplied by the International Agency for  $^{14}\text{C}$  Determination, Copenhagen, approximately equivalent to 33% and 11% incident light respectively, in a plastic tub on deck under running water from the sea surface.
  - 2) Incubation "in situ" under ambient light conditions.
  - 3) Incubation under constant light intensity (4000 lux) and under running surface water for a fixed period (12 hours) regulated by a pre-set timer. Incubation box constructed after Steemann-Nielsen et.al. (1959). Incubation cells were cuvettes made of plexiglass and painted black on all sides except the front which was covered by Kodak neutral density gelatine filters placed between two transparent plexiglass sheets. Ordinary plexiglass was used as 100% transmission. The filters were placed in descending order of transparency after Yentsch et.al. (1966).
  - 4) Incubation on deck in the cuvettes with filters as in method 3 under running surface water.

Gears used

PVC water samplers (Jonasson type, Hydro Bios type and NIO type), pressure filtration unit (Steemann-Nielsen type) with a cycle pump and suction pump with multifiltration unit. 1 ml of 1%  $\text{H}_2\text{Cl}_2$  solution was added to each sample after incubation. Standardised ampouled and filter holders were obtained from International Agency for  $^{14}\text{C}$  Determination, Copenhagen. Filters were dried over silica gel and preserved between paper rings. Counting were carried out in an end-window Geiger counter in Copenhagen.



## Calculations

Titration alkalinity was determined according to the method of Gripenberg (1937). Carbon dioxide content of the water was computed from the nomogram of Buch (1945). The dark assimilation was subtracted to correct for respiration and bacterial activities.

Formula used is as follows (Steemann Nielsen 1957):

$$\frac{(a_1 - a_2) \times 1.1 \times \sum C \times 10^3}{A \times t} \quad \text{mgC/m}^3/\text{hour}$$

$a_1$  = counts per minute on filters from light bottles

$a_2$  = counts per minute on filters from dark bottles

1.1 = correction for  $^{12}\text{C}$  and other carbon isotopes

$\sum C$  = total amount of inorganic carbon in the sample in mg/l

A = counts per minute per ampoule

t = time of incubation in hours

Values for  $\text{mgC/m}^3/\text{hour}$  have been converted to  $\text{mgC/m}^2/\text{day}$  by extrapolating the line between the last two observation depths to the depth axis thereby obtaining the approximate 0-value for the production, and then integrating the area enclosed by the curve with the help of a planimeter. The values " $\text{mgC/m}^2/\text{day}$  corrected" stand for values converted to euphotic production (methods 1 and 3 only) as explained in Sen Gupta (1972).

## General remarks

Carbon produced by respiration in the 0% plexiglass cuvette under method 3 has been represented as bacteriological carbon production and has been termed as chemosyntheses. A few bacterial chemosyntheses at the deepest sampling point at a few stations during August 1971 were measured according to the standard procedure for that purpose (Vollenweider, 1969).

## Financial support

Swedish Environment Protection Board's contracts with laborator Artur Svansson and docent Stig Fonselius of the hydrographic department of the Fishery Board of Sweden.



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Data of photosynthetic pigments often determined simultaneously with the production measurements is published by Stig Carlberg in this MHL series in the number preceding this one. Corresponding physical and chemical data of the "Skagerak" cruises is also published in the MHL series.



## POSITION LIST

5.

BY	1	N 55°00'	E 13°18'
	2	55°00'	14°05'
	3	55°17.5'	14°24'
	4	55°23'	15°20'
	5	55°15'	15°59'
	6	54°42'	15°15'
	7	55°13'	17°04'
	8	55°38'	18°36'
	9	56°07.5'	19°17'
	10	56°38'	19°35'
	11	57°04'	19°50'
	12	57°25.5'	19°07.5'
	13	57°23.5'	19°26'
	14	57°21.5'	19°44'
	15	57°20'	20°03'
	16	57°17.5'	20°21'
	17	57°15.5'	20°38.5'
	18	57°13.2'	20°56'
	19	57°37'	20°10'
	20	58°00'	19°57'
	21	58°26.5'	20°20'
	22	59°55'	25°36'
	23	59°51'	24°50'
	24	59°41'	24°00'
	25	59°35'	23°18'
	26	59°22'	22°28'
	27	59°17.8'	21°34'
	28	59°02'	21°05'
	29	58°53'	20°19'
	30	58°47'	19°06'
	31	58°35'	18°14'
	32	58°00'	18°00'
	33	57°38.5'	18°11.5'
	34	57°40'	17°56'
	35	57°41.5'	17°39'
	36	57°43'	17°22'
	37	57°44'	17°05.5'
	38	57°07'	17°40'
	39	56°07'	16°32'

## PHOTOSYNTHESIS IN THE BALTIC SEA

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	ARANDA	m			
690617	BY 2	0	1.36	123.6	
		5	0.94	273.2	1
		7	1.03		
690617	BY 3	0	0.84	90.0	
		5	1.19	198.9	1
		10	0.01		
690618	BY 8	0	1.80	165.8	
		5	2.59	366.5	1
		7	0.48		
690618	BY 9	0	2.01	125.4	
		5	1.63	277.1	1
		7	0.25		
690619	BY 15	0	0.56	49.4	
		6	0.76	109.3	1
		9	--		
690620	BY 20	0	1.12	49.4	
		5	0.40	109.3	1
		7	0.09		
690627	BY 22	0	3.72	252.2	
		5	3.22	557.4	1
		7	1.13		
690627	LL 3	0	3.77	231.2	
	N60°08' E26°20'	5	2.41	511.0	1
		7	1.11		
690626	BY 27	0	1.08	69.0	
		5	0.69	152.5	1
		7	0.96		



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
ARANDA		m			
690625	BY 29	0	0.94	45.8	
		5	0.41	101.3	1
		7	0.17		
690625	F 69	0	1.61	130.4	
	N59°47' E19°56'	5	1.45	288.3	1
		7	0.84		
690624	BY 31	0	1.28	156.8	
		5	2.79	346.6	1
		7	0.46		
690624	BY 32	0	1.18	134.0	
		5	1.21	296.2	1
		7	0.95		
690622	BY 35	0	1.27	118.2	
		5	0.18	261.2	1
		7	1.69		
690621	BY 38	0	0.54	35.4	
		6	0.47	78.2	1
		9	--		
DANA					
690817	BY 1	0	2.39	75.0	
		4	0.14	165.7	1
		6	0.45		
690817	BY 2	0	1.57	46.8	
		4	0.10	103.4	1
		6	0.15		
690819	BY 8	0	1.13	24.6	
		3	0.11	54.4	1
		5	0.11		
690820	BY 15	0	0.05	12.3	
		3	0.12	27.2	1
		4	0.05		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	DANA	m			
690822	BY 23	0	0.42	7.5	
		2	0.13	16.6	1
		3	0.04		
690821	BY 25	0	0.17	19.5	
		3	0.27	43.1	1
		5	0.21		
690821	BY 26	0	0.68	17.7	
		4	0.08	39.1	1
		6	0		
690821	BY 29	0	0.11	6.0	
		3	0.11	13.3	1
		5	0.01		
690825	N59°12.5' E21°36.5'	0	1.11	24.6	
		3	0.09	54.4	1
		5	0.11		
690826	BY 36	0	0.05	3.6	
		3	0.01	9.3	1
		5	0.01		
	SKAGERAK				
691126	N55°43' E15°18'	0	0.49	26.5	
		5	0.13	56.4	1
		10	0.06		
691115	BY 10	0	0.34	24.6	
		9	0.03		
		13	0.01	52.4	1
691124	BY 15	0	--	12.7	
		5	0.12	27.1	1
		8	0.01		
691125	BY 15	0	0.15	6.3	
		5	0.02	13.4	1
		8	0.01		
691125	BY 15	0	0.21	13.4	
		5	0.08	13.4	2
		8	0.06		



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
691116	BY 20	0	0.35	13.4	
		5	0.05	28.6	1
		8	0.03		
691116	BY 22	0	0.86	14.8	
		5	0.07	31.6	1
		8	0.04		
691116	BY 37	0	0.18	9.5	
		5	0.07	20.3	1
		7	0.04		
700114	N55°10.4' E16°20'	0	0.14	8.8	
		10	0.03	18.8	1
		15	0.005		
700123	BY 15	0	0.19	15.8	
		10	0.06	33.7	1
		13	0.03		
700123	BY 15	10	0.03		
		13	0.02	--	2
700125	BY 15	0	0.13	11.3	
		11	0.04	24.0	1
		14	0.02		
700125	BY 15	11	0.02		
		14	0.02	--	2
700125	N57°18' E17°47.7'	0	0.09	7.1	
		10	0.03	15.1	1
		14	0.01		
	ALKOR				
700414	Stolpe Sill	0	2.62	141.1	
	N55°16.5' E16°31'	7	0.63	172.2	1
		10	0.28		
700415	BY 8	0	0.23	18.4	
		10	0.08	22.4	1
		13	0.04		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day	Method
	ALKOR	m		uncorrected	
				corrected	
700416	BY 15	0	0.25	24.6	
		9	0.09	30.0	1
		12	0.08		
700417	BY 15	0	0.47		
		3	0.20	30.0	
		6	0.09	30.0	2
		9	0.11		
		12	0.09		
700418	BY 15	0	0.28		
		3	0.16	24.6	
		6	0.28	24.6	2
		9	0.11		
		12	0.05		
700420	BY 15	0	0.24	24.6	
		8	0.19	30.0	1
		11	0.06		
700421	BY 15	0	0.10	19.4	
		9	0.16	23.7	1
		12	0.08		
700422	BY 15	0	0.26	14.2	
		7	0.06	24.3	1
		9	0.04		
700427	BY 26	0	1.54	82.9	
		3	1.57	101.2	1
		5	0.53		
700427	BY 31	0	0.68	28.2	
		5	0.18	34.4	1
		8	0.06		
700430	Gedser Rev (off the Lightpship)	0	0.12	15.8	
	N54°27.2' E12°11'	5	0.18	19.3	1
		8	0.06		
	SKAGERAK				
700611	N56°24' E12°25'	0	0.73	59.3	
		6	0.49	131.0	1
		8	0.31		



Date	Station	Depth m	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day		Method
				uncorrected	corrected	
700526	SKAGERAK N55°18.4' E13°16'	0	0.09	15.8		
		6	0.09	35.0		1
		9	0.08			
700527	N55°45' E15°56'	0	0.20	25.8		
		7	0.26	57.0		1
		10	0.15			
700610	N55°00' E15°20'	0	1.23	78.4		
		9	0.19	173.2		1
		12	0.01			
700610	BY 5	0	0.34	55.1		
		9	0.44	121.7		1
		12	0.18			
700528	BY 8	0	1.59	71.6		
		6	0.55	158.3		1
		8	0.05			
700608	BY 15	0	0.20			
		2	0.24			
		4	0.26	57.1		
		6	0.93	57.1		2
		8	0.84			
		10	0.05			
700609	BY 15	0	0.09	25.8		
		7	0.39	57.1		1
		9	0.07			
700609	BY 20	0	0.66	29.6		
		7	0.05	65.5		1
		9	0.04			
700605	BY 21	0	1.57	122.4		
		7	1.03	270.5		1
		10	0.11			
700604	BY 24	0	2.13	167.6		
		3	4.48	370.3		1
		5	0.22			
700603	BY 25	0	3.33	88.9		
		3	0.92	196.5		1
		5	0.28			

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
700603	BY 26	0	3.72	217.3	
		3	4.41	480.3	1
		5	1.51		
700602	BY 31	0	1.88	104.0	
		5	0.99	229.9	1
		7	0.42		
700601	BY 33	0	1.22	60.4	
		6	0.22	133.4	1
		9	0.15		
700601	BY 34	0	1.22	76.2	
		6	0.68	168.4	1
		8	0.22		
700529	BY 38	0	0.15	33.8	
		6	0.48	74.8	1
		8	0.61		
700818	N58°43.4' E12°53'	0	0.21	19.4	
		7	0.15	43.0	1
		10	0.15		
700909	N55°40.5' E14°57.5'	0	1.11	95.6	
		5	1.53	211.4	1
		7	0.23		
700908	BY 9	0	1.70	91.0	
		4	1.22	201.1	1
		6	0.31		
700903	När III N57°05' E18°42'	0	0.37	12.4	
		4	0.05	27.3	1
		6	0.04		
700903	BY 15	0	0.72	28.9	
		4	0.25	63.9	1
		6	0.29		
700831	BY 23	0	2.04	56.8	
		4	0.25	25.4	1
		6	0.05		



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
700831	BY 25	0	0.80	31.4	
		4	0.32	69.5	1
		6	0.02		
700901	BY 27	0	0.16	10.2	
		5	0.08	22.5	1
		7	0.26		
700902	BY 32	0	0.28	13.8	
		5	0.10	30.5	1
		7	0.12		
700904	BY 35	0	0.48	19.4	
		4	0.13	43.0	1
		6	0.26		
700819	BY 5	0	0.22	12.7	
		5	0.08	28.1	1
		7	0.12		
700907	N57°37.8' E17°02'	0	0.78	34.6	
		4	0.40	76.4	1
		6	0.11		
700820	N58°46.8' E18°12'	0	2.14	71.6	
		5	0.26	151.3	1
		7	0.10		
700821	N61°53' E19°11'	0	0.08	9.5	
		5	0.11	21.0	1
		8	0.15		
700825	N63°54.8' E21°08.6'	0	0.26	16.6	
		5	0.15	36.6	1
		7	0.11		
700826	F 8	0	0.29	15.8	
	N64°40.5' E22°44'	5	0.13	35.0	1
		7	0.07		
700827	F 12	0	1.33	47.0	
	N64°13' E22°04'	4	0.31	104.0	1
		6	0.08		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
700829	MS 6 N61°59' E19°10'	0	0.20	18.0	
		5	0.24	39.8	1
		7	0.23		
700830	F 31 N61°04.5' E18°37'	0	0.19	9.1	
		4	0.08	20.1	1
		6	0.10		
701013	W Landskrona N55°51.8' E12°45.2'	0	1.15		
		2.5	0.87	69.7	
		5	0.68	117.0	3
		7.5	0.24		
701028	BY 4	0	0.22	15.7	
		5	0.09	20.5	3
		10	0.03		
		15	0		
701014	BY 5	0	0.74		
		5	0.39	51.7	
		10	0.09	72.5	3
		15	0		
701014	BY 9	0	0.45		
		5	0.18	30.2	
		10	0.07	48.3	3
		15	0		
701015	BY 15	0	0.61		
		2.5	1.01		
		5	0.44	72.7	
		7.5	0.36	73.8	3
		10	0.19		
		15	0		
		20	0.01 (bacterial chemosynthesis)		
701026	BY 21	0	0.20		
		5	0.17	17.6	
		10	0.03	29.0	3
		15	0.005		



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
701025	BY 22	0	0.81		
		2.5	2.63		
		5	0.29	115.5	
		7.5	0.46	107.1	3
		10	0.04		
		15	0		
		20	0.012 (bacterial chemosynthesis)		
701026	BY 26	0	0.43		
		5	0.29	38.6	
		10	0.08	42.5	3
		15	0		
701021	BY 31	0	0.77		
		2.5	0.94		
		5	0.44	74.3	
		7.5	0.43	119.0	3
		10	0.14		
		15	0.005		
		20	0.014 (bacterial chemosynthesis)		
701023	F 31	0	0.42		
	N61°04.5' E18°37'	5	0.23	29.3	
		10	0.06	41.0	3
		15	0		
701016	BY 35	0	1.04		
		5	0.23	58.5	
		10	0.21	114.4	3
		15	0		
701027	BY 38	0	0.69		
		5	0.29	47.6	
		10	0.12	100.9	3
		15	0.01		
	DANA				
701202	Halskov (off the Light-ship)	0	0.30		
		2.5	0.73		
		5	0.11	38.8	
		7.5	0.36	31.1	3
		10	0.05		
		15	0.01		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
701203	DANA BY 1	0	0.31		
		2.5	0.37		
		5	0.02	21.8	
		7.5	0.16	21.1	3
		10	0.05		
		15	0		
		701204	BY 6	0	0.54
2.5	0.91				
5	0.23			50.8	
7.5	0.24			35.7	3
10	0.07				
15	0				
701205	BY 7			0	1.67
		2.5	1.99		
		5	0.26	108.0	
		7.5	0.34	153.4	3
		10	0.12		
		15	0.01		
		701205	BY 10	0	4.34
2.5	1.32				
5	0.54			135.1	
7.5	0.14			381.6	3
10	0.12				
15	0.01				
701206	BY 16			0	1.62
		2.5	0.84		
		5	0.45	84.4	
		7.5	0.26	92.3	3
		10	0		
		15	0.06 (bacterial chemosynthesis)		
		701207	BY 22	0	1.56
2.5	1.24				
5	0.11			64.9	
7.5	0.11			90.0	3
10	0.04				
15	0				



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	DANA	m			
701208	BY 26	0	0.08		
		2.5	0.14		
		5	0.03	11.6	
		7.5	0.04	7.8	3
		10	0.01		
		15	0.005		
701206	BY 28	0	1.02		
		2.5	0.95		
		5	0.10	52.2	
		7.5	0.13	88.0	3
		10	0.02		
		15	0.005		
701209	BY 31	0	0.60		
		2.5	0.62		
		5	0.06	30.0	
		7.5	0.02	52.0	3
		10	0.02		
		15	0.002		
701209	BY 38	0	1.13		
		2.5	0.82		
		5	0.24	55.7	
		7.5	0.19	96.7	3
		10	0.02		
		15	0.01		
	SKAGERAK				
710112	W Landskrona	0	0.002 (?)		
	N55°51.8'	2.5	0.34		
	E12°45.2'	5	0.13	17.6	
		7.5	0.02	31.6	3
		10	0.004		
		15	0.008		
710112	BY 5	0	0.06		
		2.5	0.09		
		5	0.05	6.4	
		7.5	0.04	4.1	3
		10	0.02		
		15	0		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
SKAGERAK					
710113	BY 9	0	0.05		
		2.5	0.07		
		5	0.04	5.5	
		7.5	0.03	6.5	3
		10	0.02		
		15	0.005		
710114	BY 15	0	0.02		
		2.5	0.09		
		5	0.02	5.5	
		7.5	0.03	3.7	3
		10	0.02		
		15	0.003		
710120	BY 20	0	0.01		
		2.5	0.01		
		5	0.01	1.1	
		7.5	—	1.6	3
		10	0.005		
		15	0.003		
710119	BY 27	0	0.03		
		2.5	0.06		
		5	0.02	4.1	
		7.5	0.02	2.5	3
		10	0.01		
		15	0		
710118	BY 32	0	0.11		
		2.5	0.04		
		5	0.02	4.6	
		7.5	0.02	11.1	3
		10	0.005		
		15	0.004		
710115	BY 34	0	0.01		
		2.5	0.12		
		5	0.03	6.0	
		7.5	0.02	1.9	3
		10	0.01		
		15	0.002		



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
710121	Segerstad II	0	0.04		
	N56°29.5' E16°52'	2.5	0.07		
		5	0.03	4.9	
		7.5	0.02	6.0	3
		10	0.02		
		15	0.004		
710420	W Landskrona	0	0.03		
	N55°51.8'	2.5	0.12		
	E12°45.2'	5	0.004	7.7	
		7.5	0.06	8.2	3
		10	0.02		
		15	0.002		
710420	BY 4	0	0.73		
		2.5	0.86		
		5	0.39	62.8	
		7.5	0.43	116.2	3
		10	0.14		
		15	0		
710421	BY 7	0	0.82	68.8	
		5	1.08	83.9	1
		7	0.19		
710421	BY 8	0	0.26		
		2.5	0.31		
		5	0.16	23.8	
		7.5	0.09	60.5	3
		10	0.04		
		15	0.004		
710422	BY 15	0	0.16	50.4	
		7.5	0.75	61.5	1
		10	0.11		
710422	BY 15	0	0.20		
		2.5	0.32		
		5	0.20	24.7	
		7.5	0.11	56.0	3
		10	0.06		
		15	0.002		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
710427	BY 21	0	3.92	213.1	
		4	3.35	260.0	1
		6	0.37		
710427	BY 27	0	0.50		
		2.5	1.20		
		5	0.45	66.0	
		7.5	0.34	82.3	3
		10	0.10		
		15	0		
710423	BY 31	0	0.83	72.7	
		2.5	2.08	88.7	1
		5	0.17		
710423	BY 31	0	0.57		
		2.5	0.63		
		5	0.48	55.4	
		7.5	0.31	144.2	3
		10	0.14		
		15	0.004		
710426	BY 32	0	0.59		
		2.5	0.64		
		5	0.26	43.4	
		7.5	0.18	95.2	3
		10	0.10		
		15	0		
710423	BY 33	0	0.76		
		2.5	0.70		
		5	0.32	47.6	
		7.5	0.18	109.3	3
		10	0.05		
		15	0		
710428	BY 38	0	0.70		
		2.5	0.59		
		5	0.34	44.8	
		7.5	0.21	108.8	3
		10	0.08		
		15	0		



Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
710428	BY 39	0	0.53	209.9	
		8	3.20	256.0	1
		10	0.35		
710817	W Landskrona	0	0.40	152.2	
	N55°51.8'	8	2.10		1
	E12°45.2'	10	0.53		
710817	BY 2	0	1.32		
		2.5	1.59		
		5	0.75	108.7	
		7.5	0.39	202.8	3
		10	0.15		
		15	0		
710817	BY 5	0	0.40	54.4	
		5	1.01	120.1	1
		7	0.12		
		80	0.055 (bacterial chemosynthesis)		
710818	BY 7	0	0.13		
		2.5	0.18		
		5	0.20	23.6	
		7.5	0.18		4
		10	0.04		
		15	0.03		
710819	BY 15	0	0.11		
		2.5	0.16		
		5	0.13	16.9	
		7.5	0.09		4
		10	0.09		
		15	0		
710819	BY 15	0	0.59	51.1	
		7.5	0.39	112.9	1
		10	0.11		
		230	0.43 (bacterial chemosynthesis)		

Date	Station	Depth	mgC/m <sup>3</sup> /hour	mgC/m <sup>2</sup> /day uncorrected corrected	Method
	SKAGERAK	m			
710824	BY 27	0	0.80		
		2.5	0.89		
		5	0.36	58.4	
		7.5	0.28		4
		10	0.18		
		15	0		
710820	BY 31	0	0.11		
		2.5	0.16		
		5	0.13	17.1	
		7.5	0.07		4
		10	0.11		
		15	0		
710820	BY 31	0	0.27	98.6	
		7.5	1.45	213.4	1
		10	0.13		
710824	BY 29	0	0.48	24.6	
		4	0.52	55.4	1
		6	0.005		
710825	BY 36	0	0.27	63.8	
		4	1.45	140.9	1
		6	0.34		
710825	BY 38	0	0.21		
		2.5	0.12		
		5	0.14	15.0	
		7.5	0.09	31.7	3
		10	0.03		
		15	0		
710826	N55°37' E14°52'	0	0.18	26.5	
		5	0.32	58.4	1
		10	0.04		



