

Loop P6B TSG
leaked w/ no acetone

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 1 of 2

Dates of Cruise:

Time and date acetone added: 11:50 am 02 July 15

Analyst: Tamara

Time and date out of freezer: 9:35 am 03 July 15

Time analysis started: 10:35 am.

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.024			
STD			LOW	2-	11.978			
STD			HIGH	4-	64.979			
Blank				6-	0.002	8-	-0.001	
Loop 98B		332	10	1-	9.131	2-	5.125	TSG filt.
Loop 98A			10	3-	9.611	4-	5.551	unfilt.
Loop 98B			10	5-	9.459	6-	5.304	unfilt.
Loop 99A	MAN1		10	7-	3.823	8-	2.132	
Loop 99B	MAN1		10	1-	3.962	2-	2.218	TSG
Loop 99A			10	3-	3.965	4-	2.233	TSG
Loop 99B			10	5-	3.971	6-	2.266	TSG
Loop A	P7		10	7-	6.645	8-	3.750	TSG
Loop B	P7		10	1-	6.695	2-	3.759	TSG
563 A	P7		10	3-	14.548	4-	8.787	
563 B	P7		10	5-	14.826	6-	8.920	
564 A	P7		10	7-	6.731	8-	3.716	
564 B	P7		10	1-	7.128	2-	4.059	
Loop B	P7		10	3-	6.464	4-	3.607	Manif.
Loop A	P7		10	5-	6.94	6-	3.427	manif.
Loop	P6A		10	7-	8.627	8-	5.441	manif. * spill most of just before analysis
Loop	P6B		10	1-	7.777	2-	4.338	manif.
Loop	P6A		10	3-	7.697	4-	4.297	TSG
583B	P4		10	5-	12.823	6-	7.317	
Loop	P6B		10	7-	7.785	8-	4.319	TSG
566B	P6		10	1-	8.887	2-	4.947	
565B	P6		10	3-	68.324	4-	40.488	
566A	P6		10	5-	8.855	6-	4.929	
565A	P6		10	7-	72.636	8-		forgot to record Ra
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

LOOP 98 B	LOOP 98 A	LOOP 98 B	LOOP 99 A	LOOP 99 B	LOOP 99 A	LOOP 99 B	LOOP P7 A
CHL FILT TSG	CHL UN-FILT	CHL UN-FILT	CHL MANIF	CHL MANIF	CHL TSG	CHL TSG	CHL TSG
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09

LOOP P7 B	563 A Chl P7	563 B Chl P7	564 A Chl P7	564 B Chl P7	LOOP P7 B CHL MANIF	LOOP P7 A CHL MANIF	LOOP P6 A CHL MANIF
CHL TSG	30 / Max	30 / Max	5 m	5 m	2015-09	2015-09	2015-09
2015-09	Bot 1	Bot 1	Bot 2	Bot 2			

LOOP P6 B CHL MANIF	LOOP P6 A CHL TSG	563 B Chl P6	LOOP P6 B CHL TSG	565 B Chl P6	565 A Chl P6	566 A Chl P6	565 A Chl P6
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
		Bot 15	Bot 2	Bot 1	Bot 2	Bot 2	Bot 1

7210 white

20. 208- 4796

602A galley 2
Int @ extraction

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 2 of 2

Dates of Cruise:

Time and date acetone added: 2:30pm 02 July 15

Time and date out of freezer: 11:30am 03 July 15

Time analysis started: 12:50pm

Analyst: Tamara + a little help
from her friends

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.025			
STD			LOW	2-	11.980			
STD			HIGH	4-	64.795			
Blank				6-	8-			
567A	P5	332	10	1-	66.696	2-	39.213	
567B	P5		10	3-	62.255	4-	36.785	
568A	P5		10	5-	7.063	6-	4.070	
568B	P5		10	7-	6.756	8-	3.874	
583A	P4		10	1-	13.093	2-	7.542	
592A	P2		20	3-	242.049	4-	130.589	DF=2
592B	P2		20	5-	130.195	6-	74.665	DF=4
591B	P2		20	7-	122.182	8-	66.256	DF=4
591A	P2		20	1-	131.419	2-	71.195	DF=4
593 B	LC01		20	3-	168.954	4-	93.937	DF=2
601 A	P1		20	5-	93.278	6-	52.073	
601 B	P1		20	7-	87.100	8-	49.987	
602 A	LB08		20	1-	145.171	2-	83.015	
602 B	LB08		20	3-	143.156	4-	82.594	
603 A	LB01		20	5-	133.452	6-	73.033	DF=4
603 B	LB01		20	7-	132.518	8-	72.280	DF=4
593 A	LC01		20	1-	85.229	2-	47.460	DF=4 Found this after doing std by, std low, std high
				3-		4-		
				5-		6-		
				7-		8-		
				1-		2-		
				3-		4-		
				5-		6-		
				7-		8-		
Stand-by				1-	-0.026			Nothing in cell holder.
Std	Low			2-	11.888			
Std	High			4-	64.502			
Blank + acetone	by			6-	0.073	8-*	0.067	* Added HCL.

567 A	567 B	568 A	568 B	569 A	592 A	592 B	591 B
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
P5	P5	P5	P5	P4	P2	P2	P2
0 m	0 m	0 m	0 m	0 m	0 m	0 m	0 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 1	Bot 1	Bot 1	Bot 1	Bot 15	Bot 8	Bot 8	Bot 8

Handwritten notes:
 P2
 Sm
 Bot 7
 2015-09

591 A	593 B	601 A	601 B	602 A	602 B	602 A	603 A	593 A
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
LC01	LC01	LC01	LC01	LC01	LC01	LC01	LC01	LC01
0 m	0 m	0 m	0 m	0 m	0 m	0 m	0 m	0 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 1	Bot 1	Bot 1	Bot 1	Bot 1	Bot 1	Bot 1	Bot 1	Bot 1

Handwritten notes:
 P2
 Sm
 Bot 7
 2015-09

Done Transfer, capture text -> stop.

baked 158B

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 1 of 2

Dates of Cruise:

Time and date acetone added: 13 July 2015 12:10pm Analyst:

20ml: 24B, 25A, 3A,
25B

Time and date out of freezer: 14 July 15 10 a.m.

Tanner

Time analysis started: 14 July 15 11:10 a.m.

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.023			
STD			LOW	2-	11.991			
STD			HIGH	4-	65.372			
Blank				6-	-0.004	8-	-0.004	
		332						
158B	P9		10	1-	5.913	2-	3.243	
154A	P8		10	3-	18.172	4-	11.023	
132B	P4		10	5-	116.911	6-	65.947	
133A	P4		10	7-	129.904	8-	72.505	
101	P4		10	1-	71.184	2-	40.528	
24B	P2		20	3-	208.971	4-	120.685	DF = 2
17B	P4		10	5-	141.861	6-	77.877	DF = 2
2B	P1		10	7-	25.255	8-	17.686	
Loop A	FE1		10	1-	62.669	2-	36.529	
159A	P10		10	3-	17.169	4-	10.767	
154B	P8		10	5-	17.631	6-	10.841	
129	P4		10	7-	127.782	8-	71.339	
130	P4		10	1-	125.626	2-	70.199	
102	P4		10	3-	77.800	4-	45.087	
* 25A	P2		20	5-	202.007	6-	119.184	DF = 2
18	P2		10	7-	127.799	8-	68.921	DF = 2 x 2 = 4
3A	P1		20	1-	213.883	2-	119.203	
Loop B	FE1		10	3-	64.244	4-	37.864	
157B	P10		10	5-	15.647	6-	9.593	
155A	P8		10	7-	22.204	8-	13.333	
127A	P4		10	1-	123.904	2-	69.334	
132A	P4		10	3-	120.771	4-	68.980	
103	P4		10	5-	68.479	6-	39.518	
* 25B	P2		20	7-	233.830	8-	132.747	DF = 2
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

150A	154A	132B	133A	101	24B	17B	2B
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
P2	P2	P4	P4	P4	P2	P2	P1
5 m	50 / M	30 / M	15 / M	30 %	15m or M	25 m	30/Max
2015-09	2015-09	2015-09	2015-09	2015-09	2015-20	2015-20	2015-20
Bot 2	Bot 20	Bot 15	Bot 16	Bot 4	Bot 13	Bot 6	Bot 2

200A	159A	154B	129	130	102	25A	18
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
JF1	P10	P8	P4	P4	P4	P2	P2
Loop	50 / Max	50 / M	10 m	5 m	50 %	5 m	20 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-20	2015-20
Bot 1	Bot 1	Bot 20	Bot 12	Bot 13	Bot 5	Bot 14	Bot 7

3A	200A	159B	155A	127A	132A	103	25B
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
P1	JF1	P10	P8	P4	P4	P1	P2
5 m	Loop	50 / Max	20 / M	20 m	30 / M	100 %	5 m
2015-20	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-20
Bot 3	Bot 1	Bot 1	Bot 21	Bot 10	Bot 15	Bot 6	Bot 14

Chlorophyll Data Sheet

20ml: 19, 3B, 37A+B,
20, 21,

Cruise: 2015-09

Page: 2 of 2

Dates of Cruise:

Time and date acetone added: 13 July 2015 2:05pm

Analyst: Tamar

Time and date out of freezer: 14 July 2015 12:10pm

Time analysis started: 1:30pm

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.023			
STD			LOW	2-	12.125			
STD			HIGH	4-				
Blank				6-		8-		
19	P2		20	1-	185.913	2-	108.950	DF=2
3AB	P1		20	3-	110.181	4-	62.085	DF=2
160A	P10		10	5-	5.210	6-	2.975	
LOOP A	JF2		10	7-	53.646	8-	30.296	
155B	P8		10	1-	21.717	2-	12.731	
148	P8		10	3-	7.520	4-	4.867	
134A	P4		10	5-	125.833	6-	70.521	
125	P4		10	7-	114.723	8-	64.004	
37A	P3		20	1-	152.719	2-	92.491	
124	P4		10	3-	20.624	4-	14.914	acid contamination?
37B	P3		20	5-	179.771	6-	105.563	
149	P8		10	7-	17.987	8-	11.008	
126	P4		10	1-	125.997	2-	70.271	
160B	P10		10	3-	4.967	4-	2.780	
156A	P8		10	5-	9.436	6-	5.555	
12	P2		10	7-	15.675	8-	13.241	
LOOP B	JF2		10	1-	51.891	2-	29.539	
20	P2		20	3-	185.041	4-	108.301	DF=2
21	P2		20	5-	177.535	6-	101.334	DF=2
13	P2		10	7-		8-		forgot to record R ₅
LOOP	21B		10	1-7	6.569	82-	3.738	
LOOP	JF3A		10	3-	10.165	4-	6.123	loop JF3 =
156B	P8		10	5-	14.224	6-	8.368	108.092
150	P8		10	7-		8-		104.726
Stand-by				1-	-0.021			
Std	Low			2-	12.609			
Std	High			4-	64.951			
Blank	by			6-	0.000	8-		

29	3 R	160 A	200P	155 B	14b	134A	125
CHL	CHL	Chl	CHL A	CHL	CHL	CHL	CHL
P2	P1	P10	JF2	P8	P8	P4	P4
15 m	5 m	5 m	Loop	20 / M	100 m	5 m	30 m
2015-20	2015-20	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 3	Bot 3	Bot 2	Bot 1	Bot 21	Bot 14	Bot 17	Bot 8

37 A	124	37 B	149	126	160 B	156	12
Chl	CHL	Chl	CHL	CHL	Chl	CHL	CHL
P3	P4	P3	P8	P4	P10	P8	P2
5 m	40 m	5 m	75 m	25 m	5 m	5 m	100 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-20
Bot 12	Bot 7	Bot 12	Bot 15	Bot 9	Bot 2	Bot 22	Bot 1

Loop	20	21	13	Loop 21 B	Loop	156 B	150
CHL B	CHL	CHL	CHL	CHL A	CHL	CHL	CHL
JF2	P2	P2	P2	JF3	P8	P8	P8
Loop	10 m	5 m	75 m	Loop	5 m	50 m	50 m
2015-09	2015-20	2015-20	2015-20	2015-09	2015-09	2015-09	2015-09
Bot 1	Bot 9	Bot 10	Bot 2	Bot 1	Bot 22	Bot 16	

Chlorophyll Data Sheet

20ml: 22 Loop JF4A,
Loop JF4B.

Cruise: 2015-09

Page: 1 of 3

Dates of Cruise:

Time and date acetone added: 14 July 15 1105 a.m. Analyst: Tamara

Time and date out of freezer: 9:20 a.m. 15 July 15

Time analysis started: 10:20 a.m. 15 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.023			
STD			LOW	2-	12.169			
STD			HIGH	4-	65.495			
Blank				6-	0.001	8-		
121	P4	332	10	1-	19.505	2-	15.023	
127B	P4		10	3-	125.545	4-	70.036	
36A	P3		10	5-	12.536	6-	8.431	252
22	P2		20	7-	189.738	8-	109.649	DF=2
14	P2		10	1-	18.625	2-	14.462	
LOOP	JF3B		10	3-	185.179	4-	103.838	
LOOP	21A		10	5-	7.523	6-	4.406	filtered
157A	P9		10	7-	19.556	8-	11.501	
151	P8		10	1-	8.888	2-	5.157	
134B	P4		10	3-	130.511	4-	74.153	
36B	P3		10	5-	18.961	6-	12.792	399
23A	P2		10	7-	121.620	8-	70.247	
15	P2		10	1-	28.506	2-	20.765	
LOOP	21A		10	3-	5.273	4-	2.958	unfiltered
LOOP	JF4A		20	5-	201.322	6-	107.495	DF=2
157B	P9		10	7-	18.350	8-	10.716	
152	P8		10	1-	9.577	2-	5.665	
123	P4		10	3-	21.962	4-	17.358	
128A	P4		10	5-	124.856	6-	70.251	
133B	P4		10	7-	126.445	8-	71.582	
99	P4		10	1-	64.427	2-	37.535	
23B	P2		10	3-	120.479	4-	69.618	
16	P2		10	5-	125.154	6-	72.192	
LOOP	JF4B		20	7-	199.357	8-	105.697	DF=2
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

121	127 B	36	22	14	Loop	Loop 21	157 A
CHL	CHL	Chl A	CHL	CHL	CHL B	CHL	Chl
P4	P4	P2	P2	P2	JF3	CHL	P3
100 m	25 m	30 / Max	0 m	50 m	Loop	FILT	SO / Max
2015-09	2015-09	2015-09	2015-20	2015-20	2015-09	2015-09	2015-09
Bot 4	Bot 10	Bot 11	Bot 11	Bot 3	Bot 1		Bot 1

151	134 B	36	23 A	15	Loop 21	Loop	157 B
CHL	CHL	Chl B	CHL	CHL	CHL	CHL A	Chl
P8	P4	P3	P2	P2	JF4	JF4	P9
25 m	5 m	30 / Max	30m or M	40m	UNFILT	Loop	SO / Max
2015-09	2015-09	2015-09	2015-20	2015-20	2015-09	2015-09	2015-09
Bot 17	Bot 17	Bot 11	Bot 12	Bot 4	Bot 1		Bot 1

152	121	128 A	133 B	16	23 B	16	Loop
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL B
P8	P4	P4	P4	P2	P2	P2	JF4
10 m	50 m	15 m	15 / M	14	30m or M	30 m	Loop
2015-09	2015-09	2015-09	2015-09	2015-09	2015-20	2015-20	2015-09
Bot 18	Bot 6	Bot 11	Bot 16	Bot 2	Bot 12	Bot 5	Bot 1

20ml: 24A, 17A

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 2 of 3

Dates of Cruise:

Time and date acetone added: 12:25 pm 14 July 2015

Analyst: Tamara

Time and date out of freezer: 10:25 am 15 July 2015

Time analysis started: 11:30 a.m. 15 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.023			
STD			LOW	2-	12.030			
STD			HIGH	4-	65.342			
Blank				6-	0.004	8-	0.002	
LOOP	21B	332	10	1-	5.240	2-	2.912	unfiltered
158A	P9		10	3-	5.656	4-	3.174	
153	P8		10	5-	9.530	6-	5.551	
131	P4		10	7-	122.564	8-	69.530	
122	P4		10	1-	20.789	2-	17.006	
100	P4		10	3-	72.926	4-	41.426	
24A	P2		20	5-	212.846	6-	123.445	DF=2
17A	P2		20	7-	148.318	8-	81.669	
2A	P1		10	1-	22.235	2-	16.054	
379	P20		10	3-	21.521	4-	12.320	
Loop	58B		10	5-	17.683	6-	10.350	filtered
409B	P23		10	7-	22.183	8-	12.996	
411B	P24		10	1-	16.517	2-	10.089	
415B	P35		10	3-	14.878	4-	9.756	
Loop	75D		10	5-	17.190	6-	10.370	PA-COP unfiltered
534	P26		10	7-	17.443	8-	10.058	
558A	P26		10	1-	20.668	2-	13.231	
546	P26		10	3-	4.775	4-	3.368	
547	P26		10	5-	9.191	6-	6.440	
Loop	P26B		10	7-	17.031	8-	10.128	filtered
378	P26		10	1-	20.451	2-	11.661	
Loop	58A		10	3-	17.338	4-	10.152	filtered
409A	P23		10	5-	22.244	6-	13.083	
411A	P24		10	7-	16.224	8-	9.865	
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

Loop 21 2 CHL UNCLT 2015-09	153 A CHL P2 5 m 2015-09 Bot 2	153 CHL P2 5 m 2015-09 Bot 19	151 CHL P2 5 m 2015-09 Bot 14	122 CHL P2 75 m 2015-09 Bot 9	100 CHL P2 15 m 2015-09 Bot 3	24 A CHL P2 15m or M 2015-20 Bot 13	17 A CHL P2 25 m 2015-20 Bot 6
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2 A CHL P1 30/Max 2015-20 Bot 2	379 CHL P20 50 * 2015-09 Bot 5	Loop 28 CHL B P25 50m / M 2015-09 Bot 23 2015-09	211 B CHL P23 50 / Max 2015-09 Bot 1	415 CHL B P25 10 / Max 2015-09 Bot 1	Loop 75 CHL 2015-04 PA-009 UNCLT	534 CHL P28 15 * 2015-09 Bot 4
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558 A CHL P26 20 / M 2015-09 Bot 16	546 CHL P26 100 m 2015-09 Bot 4	547 CHL P26 75 m 2015-09 Bot 5	P26 Loop B Filt 2015-09	378 CHL P20 30 * 2015-09 Bot 4	Loop 58 CHL A P25 50m / M 2015-09 Bot 23 2015-09	409 A CHL P23 50m / M 2015-09 Bot 23	413 A CHL P24 50 / Max 2015-09 Bot 1
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Chlorophyll Data Sheet

~ 1ml spill 555

Cruise: 2015-09

Page: 3 of 3

Dates of Cruise:

Time and date acetone added: 14 July 15 1:25 pm

Analyst: Tamariz

Time and date out of freezer: 15 July 15 12:25 pm

Time analysis started: 15 July 15 1:35 pm

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.024			
STD			LOW	2-	11.988			
STD			HIGH	4-	65.205			
Blank				6-	0.005	8-	0.004	
415A	P35	332	10	1-	15.163	2-	9.788	
LOOP	75C		10	3-	16.830	4-	10.021	PA-009 unfiltered
532	P26		10	5-	21.925	6-	13.774	
552	P26		10	7-	16.790	8-	10.007	
374B	P20		10	1-	24.535	2-	13.864	
555	P26		10	3-	18.546	4-	10.953	~1ml spilled @ extraction
LOOP	58A		10	5-	18.275	6-	10.617	unfiltered
385A	P22		10	7-	15.638	8-	9.522	
374A	P20		10	1-	23.912	2-	13.484	
412B	P24		10	3-	23.487	4-	13.501	
LOOP	69B		10	5-	24.501	6-	13.951	unfiltered
LOOP	75B		10	7-	20.899	8-	12.721	PA-009 filtered
LOOP	88B		10	1-	15.737	2-	9.946	unfiltered
554	P26		10	3-	17.976	4-	10.983	
557B	P26		10	5-	18.821	6-	12.206	
LOOP	P26B		10	7-	17.329	8-	10.138	non-filtered
LOOP	58B		10	1-	19.095	2-	11.211	
385B	P22		10	3-	16.799	4-	10.331	
412A	P24		10	5-	22.579	6-	12.824	
LOOP	69A		10	7-	24.057	8-	13.766	unfiltered
LOOP	75A		10	1-	19.992	2-	12.133	PA-009 filtered
LOOP	88A		10	3-	15.280	4-	9.448 9.383	unfiltered
559B	P26		10	5-	17.369	6-	10.659	
557A	P26		10	7-	20.254	8-	13.315	
Stand-by				1-	-0.025			
Std	Low			2-	11.958			
Std	High			4-	65.155			
Blank	by			6-	-0.002	8-	-0.002	

415	LOOP 75	532	532	531 B	555	LOOP 58	385
CHL A	C	CHL	CHL	CHL	CHL	CHL A	CHL A
P26	CHL	P26	P26	P26	P26	P22	P22
50 / Max	2015-09	2015-09	2015-09	2015-09	2015-09	50 / Max	2015-09
Bot 1	PA-C09	Bot 2	Bot 10	Bot 17	Bot 13	Bot 1	Bot 1
	unfilter					2015-09	

314 A	412 D	Loop 69	LOOP 75	Loop 58	526	357 B	P26
CHL	CHL	CH B	B	B	CHL	CHL	Loop
P26	P26	CH B	CHL	CHL	P26	P26	B
5 m	5 m	unfilter	2015-09	unfilter	10 m	50 / M	NON
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	FILT
Bot 17	Bot 2	2015-09	PA-C09	2015-09	Bot 12	Bot 15	2015-09
			filter				

Loop 58	385	412 A	Loop 67	LOOP 75	Loop 20	357 B	557 A
CHL B	CHL B	CHL	CHL A	A	CHL A	CHL	CHL
unfilter	P22	P26	CHL	CHL	CHL A	P26	P26
2015-09	50 / Max	5 m	unfilter	2015-09	unfilter	5 m	50 / M
	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
	Bot 1	Bot 2	2015-09	PA-C09	2015-09	Bot 12	Bot 15
				filter			

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 1 of 2

Dates of Cruise:

Time and date acetone added: 255pm 16 July 15

Analyst: Tamariz

Time and date out of freezer: 1230pm 17 July 15

Time analysis started: 130pm 17 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.025			
STD			LOW	2-	11.981			
STD			HIGH	4-	65.138			
Blank				6-	8-			
373A	P20	332	10	1-	31.272	2-	17.757	
Loop A	P26	10	10	3-	19.433	4-	12.034	non-filtered
383B	P21		10	5-	19.747	6-	11.662	
386A	P22		10	7-	20.706	8-	12.286	
Loop B	P23		10	1-	19.340	2-	11.333	unfiltered
Loop	69B		10	3-	22.149	4-	12.611	filtered
Loop	73B		10	5-	22.216	6-	14.213	unfiltered
Loop	88B		10	7-	16.726	8-	10.350	filtered
550	P26		10	1-	21.740	2-	13.880	
559A	P26		10	3-	17.070	4-	10.068	
373B	P20		10	5-	32.348	6-	18.465	
Loop	P26A		10	7-	17.649	8-	10.651	filtered
383A	P21		10	1-	18.889	2-	11.129	
386B	P22		10	3-	20.444	4-	11.982	
Loop	P23A		10	5-	19.900	6-	11.728	unfiltered
Loop	69A		10	7-	22.908	8-	12.955	filtered
Loop	73A		10	1-	16.086	2-	9.777	unfiltered
Loop	88A		10	3-	14.969	4-	9.100	filtered
549B	P26		10	5-	19.165	6-	12.996	
548	P26		10	7-	11.832	8-	8.133	
372B	P20		10	1-	26.413	2-	15.418	
Loop	97B		10	3-	16.450	4-	9.668	filtered
384A	P21		10	5-	14.512	6-	8.425	
Loop	P22		10	7-	18.313	8-	10.743	filtered
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

371A	P26	383 B	386	Loop	Loop 69	Loop 73	Loop 85
CHL	Loop	CHL	CH1 A	P23	CH1 B	CH1 B	CH1 B
P26	A	P21	P22	B	Filt	Unfilt	Filt
50 / Max	NON	50 / Max	5 m	CHU			
2015-09	FILT	2015-09	2015-09	UNFILT	2015-09	2015-09	2015-09
Bot 16	2015-09	Bot 1	Bot 3	2015-09	2015-09	2015-09	2015-09

540	559A	573B	P26	383 A	386	Loop	Loop 69
CHL	CHL	CHL	Loop	CH1	CH1 B	P23	CH1 A
P26	P26	P20	A	P21	P22	A	Filt
50 m	5 m	50 / Max	FILT	50 / Max	5 m	CHL	
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	UNFILT	2015-09
Bot 8	Bot 17	Bot 18	2015-09	Bot 1	Bot 2	2015-09	2015-09

Loop 73	Loop 88	549B	549	372 B	Loop 77	384 A	Loop P22
CH1 A	CH1 A	CHL	CHL	CH1	CH1 B	CH1	CH1
	FILT	P26	P26	P21	Filt	P21	Filt
Unfilt		40 m	50 m	50 / Max		5 m	
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
		Bot 7	Bot 6	Bot 15	2015-09	Bot 2	

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 2 of 2

Dates of Cruise:

Time and date acetone added: 4:25pm 16 July 15

Analyst: Tamaraz

Time and date out of freezer: 2:28pm 17 July 15

Time analysis started: 3:30pm 17 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.024			
STD			LOW	2-	11.942			
STD			HIGH	4-	64.914			
Blank				6-	-0.006	8-		
LOOP	P23B	332	10	1-	16.512	2-	9.546	filtered
414B	P25		10	3-	21.009	4-	11.911	
LOOP	P3B		10	5-	16.200	6-	9.874	filtered
LOOP	81B		10	7-	13.660	8-	8.005	filtered
556	P26		10	1-	17.254	2-	10.367	
558B	P26		10	3-	22.127	4-	14.292	
LOOP	97A		10	5-	15.738	6-	9.272	unfiltered
1008	97A		10	7-	15.980	8-	9.395	filtered
372A	P20		10	1-	26.749	2-	15.729	
384B	P21		10	3-	14.367	4-	8.328	
LOOP	P22		10	5-	17.290	6-	10.091	filtered
LOOP	P23A		10	7-	16.491	8-	9.636	filtered
414A	P25		10	1-	21.594	2-	12.344	
LOOP	P3A		10	3-	15.677	4-	9.645	filtered
LOOP	81A		10	5-	14.361	6-	8.522	filtered
537	P26		10	7-	16.503	8-	9.503	
371	P20		10	1-	24.102	2-	13.720	
551	P26		10	3-	17.613	4-	10.721	
377	P20		10	5-	26.477	6-	15.158	
LOOP	P22		10	7-	19.959	8-	11.967	unfiltered
410B	P23		10	1-	17.464	2-	10.277	
413B	P25		10	3-	25.347	4-	15.511	
416B	P35		10	5-	21.235	6-	12.318	
LOOP	81B		10	7-	14.620	8-	8.623	unfiltered
Stand- by				1-	-0.025			
Std	Low			2-	11.943			
Std	High			4-	64.913			
Blank	by			6-	0.000	8- -	-0.003	

Loop
P23
B
CHL
FILT
2015-09

414 B
CHL
P23
5 m
2015-09
Bot 1

Loop73 Loop81
CHL B CHL B
FILT
2015-09 2015-09

556 558 B
CHL
P26
0 m 20 / M
2015-09 2015-09
Bot 14 Bot 16

Loop97 Loop97
CHL A CHL A
UnFilt
2015-09 2015-09

372A
CHL
P20
50 / M
2015-09
Bot 15

384 B
CHL
P21
5 m
2015-09
Bot 2

Loop P22 Loop
CHL P23
FILT A
2015-09 2015-09

414 A
CHL
P25
5 m
2015-09
Bot 2

Loop73 Loop81
CHL A CHL A
FILT
2015-09 2015-09

537
CHL
P26
100 m
2015-09
Bot 7

371
CHL
P20
0 m
2015-09
Bot 14

551
CHL
P26
25 m
2015-09
Bot 9

377
CHL
P20
15 m
2015-09
Bot 3

410 B
CHL
P23
5 m
2015-09
Bot 24

413 B
CHL
P25
50 / Max
2015-09
Bot 1

416
CHL B
P35
5 m
2015-09
Bot 2

Loop81
CHL B
UnFilt
2015-09

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 1 of 3

Dates of Cruise:

Time and date acetone added: 1140am 20 July 15

Analyst: Tamar

Time and date out of freezer: 938am 21 July 15

Time analysis started: 1115am 21 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.025			
STD			LOW	2-	11.974			
STD			HIGH	4-	65.132			
Blank				6-	-0.003	8-	-0.005	
536	P26	332	10	1-	16.811	2-	9.781	
549A	P26		10	3-	18.156	4-	12.170	
100P 97 B			10	5-	17.065	6-	10.220	unfiltered
370	P20		10	7-	24.453	8-	13.920	
380	P20		10	1-	22.912	2-	12.949	
100P	P22		10	3-	20.119	4-	11.861	unfiltered
410A	P23		10	5-	16.846	6-	9.725	
413A	P25		10	7-	27.035	8-	17.015	
416A	P35		10	1-	21.085	2-	12.638	
100P 81A			10	3-	16.318	4-	9.946	unfiltered
535	P26		10	5-	18.332	6-	11.247	
553	P26		10	7-	18.560	8-	11.393	
100P 98A			10	1-	9.119	2-	5.094	TSG filtered
369	P20		10	3-	23.478	4-	13.490	
368	P20		10	5-	23.359	6-	13.319	
367	P20		10	7-	24.703	8-	14.146	
366	P20		10	1-	33.833	2-	19.521	
364B	P20		10	3-	25.911	4-	15.346	
365	P20		10	5-	30.694	6-	18.042	
364A	P20		10	7-	26.741	8-	16.041	
363	P20		10	1-	23.277	2-	14.040	
362	P20		10	3-	10.309	4-	6.926	
361	P20		10	5-	5.132	6-	3.507	
330B	P18		10	7-	17.467	8-	11.165	
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

536	242A	Loop 297	370	380	Loop 22	410 A	412 A
CHL	CHL	CH B	CHL	CHL	CHL	CHL	CHL
P26	P26	CH	P26	P20	CH	P22	P25
50 m	40 m	unf	5 m	100 m	unf	5 m	50 / Max
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 6	Bot 7	2015-09	Bot 13	Bot 6	2015-09	Bot 24	Bot 1

410	Loop 81	532	542	Loop 98A	359	369	387
CHL A	CH A	CHL	CHL	CHL	CHL	CHL	CHL
P25	P25	P25	P25	CHL	P20	P20	P20
5 m	unf	50 m	15 m	FILT TSG	10 m	15 m	20 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 2	2015-09	Bot 3	Bot 11	2015-09	Bot 12	Bot 11	Bot 10

366	367 B	365	364A	363	362	361	359 B
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
P20	P20	P20	P20	P20	P20	P20	P18
25 m	40 m	30 m	40 m	50 m	75 m	100 m	50 / Max
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 9	Bot 2	Bot 8	Bot 7	Bot 5	Bot 5	Bot 4	Bot 1

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 2 of 3

278

Dates of Cruise:

Time and date acetone added: 1:50 pm 20 July 15

Analyst: Tamara

Time and date out of freezer: 12:02 pm 21 July 15

Time analysis started: 12:20 pm 21 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.023			
STD			LOW	2-	11.915			
STD			HIGH	4-	64.930			
Blank				6-	-0.000	8-		
333B	P19	332	10	1-	18.401	2-	10.488	
333A	P19		10	3-	18.578	4-	10.503	
332B	P19		10	5- 20.117	27.904	6-	16.746	
332A	P19		10	7-	26.295	8-	15.827	
LODP47B			10	1-	8.127	2-	4.619	filtered
LODP47A			10	3-	8.147	4-	4.596	filtered
LODP47B			10	5-	7.911	6-	4.434	unfiltered
LODP47A			10	7-	7.932	8-	4.455	unfiltered
LODP43A			10	1-	11.952	2-	6.748	filtered
331B	P18		10	3-	12.135	4-	6.892	
330A	P18		10	5-	16.768	6-	10.504	
331A	P18		10	7-	11.508	8-	6.540	
328B	P17		10	1-	14.244	2-	9.184	
328A	P17		10	3-	14.116	4-	9.068	
329A	P17		10	5-	11.065	6-	6.244	
329B	P17		10	7-	10.635	8-	6.043	
LODP43B			10	1-	11.839	2-	6.669	unfiltered
LODP43A			10	3-	12.175	4-	6.861	unfiltered
320	P16		10	5-	12.311	6-	6.760	
LODP43B			10	7-	11.447	8-	6.456	filtered
314	P16		10	1-	5.150	2-	3.491	
326B	P16		10	3-	12.597	4-	7.004	
324	P16		10	5-	11.750	6-	6.448	
321	P16		10	7-	11.853	8-	6.538	
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

333 B	333 A	332 B	332 A	Loop 47	Loop 47	Loop 47	Loop 47
Chl	Chl	Chl	Chl				
P19	P19	P19	P19	Chl B	Chl A	Chl B	Chl A
5 m	5 m	50 / Max	50 / Max	Filt	Filt	UnFill	UnFill
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 2	Bot 2	Bot 1	Bot 1				

Loop 43	331 B	330 A	331 A	328 B	328 A	329 A	329 B
A	Chl	Chl	Chl	Chl	Chl	Chl	Chl
CHL	P18	P18	P18	P17	P17	P17	P17
FILT	5 m	50 / Max	5 m	50 / Max	50 / Max	5 m	5 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
	Bot 2	Bot 1	Bot 2	Bot 1	Bot 1	Bot 2	Bot 2

Loop 43	Loop 43	320	Loop 43	314	326 B	324	321
B	A	CHL	B	CHL	CHL	CHL	CHL
CHL	CHL	P16	CHL	P16	P16	P16	P16
UN-	UN-	20 m	FILT	100 m	20 / M	0 m	15 m
FILT	FILT	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
2015-09	2015-09	Bot 10	Bot 4	Bot 16	Bot 14	Bot 14	Bot 11

Chlorophyll Data Sheet

Cruise:

Page: 3 of 3

Dates of Cruise:

Time and date acetone added: 3:50pm 20 July 15

Analyst:

Tamara

Time and date out of freezer: 1:10 pm 20 July 15

Time analysis started: 2:12 pm 21 July 15

278 ml spilled ~

2ml acetone @ extraction

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.022			
STD			LOW	2-	11.927			
STD			HIGH	4-	64.920			
Blank				6-	-0.000	8-	-0.004	
315	P16	332	10	1-	12.873	2-	8.328	
327A	P16		10	3-	12.938	4-	7.066	
326A	P16		10	5-	12.782	6-	6.999	
322	P16		10	7-	12.264	8-	6.764	
319A	P16		10	1-	11.687	2-	6.347	
325B	P16		10	3-	11.947	4-	7.355	
323	P16		10	5-	11.530	6-	6.400	
327B	P16		10	7-	12.417	8-	6.868	
325A	P16		10	1-	11.981	2-	7.304	
316	P16		10	3-	12.302	4-	7.576	
318	P16		10	5-	5.973	6-	3.451	
317	P16		10	7-	28.027	8-	15.746	
319 B	P16		10	1-	13.210	2-	7.375	
281	P16		10	3-	10.536	4-	5.801	
283	P16		10	5-	10.138	6-	5.515	
284	P16		10	7-	11.303	8-	6.178	
282	P16		10	1-	9.966	2-	5.413	
280	P16		10	3-	13.672	4-	8.128	
LOOP 37B			10	5-	7.850	6-	4.393	unfiltered
LOOP 37A			10	7-	7.888	8-	4.365	unfiltered
LOOP 37B			10	1-	7.673	2-	4.340	filtered
LOOP 37A			10	3-	7.908	4-	4.554	filtered
278B	P15		10	5-	8.248	6-	4.759	
278A	P15		10	7-	8.215	8-	4.759	forgot to record Ra
Stand-by				1-	-0.022			
Std	Low			2-	11.920			
Std	High			4-	64.902			
Blank	by			6-	-0.003	8-	-0.006	

315	322 A	326 A	322	319 A	325 B	323	327 D
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
P16	P16	P16	P16	P16	P16	P16	P16
75 m	5 m	20 / M	10 m	25 m	50 / M	5 m	5 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 5	Bot 17	Bot 16	Bot 12	Bot 9	Bot 15	Bot 13	Bot 17

282	280	278 B	278 A
CHL	CHL	Chl	Chl
P16	P16	P15	P15
30 %	I 4	5 m	5 m
2015-09	2015-09	2015-09	2015-09
Bot 4	Bot 2	Bot 2	Bot 2

Chlorophyll Data Sheet

Cruise: 2015-09

Page: 1 of 2

Dates of Cruise:

Time and date acetone added: 11 a.m. 21 July 15

Analyst: Tamara

Time and date out of freezer: 9:30 a.m. 22 July 15

Time analysis started: 10:50 am 22 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.023			
STD			LOW	2-	12.060			
STD			HIGH	4-	65.643			
Blank				6-	-0.000	8-	-0.000	
177B	P12	332	10	1-	20.174	2-	11.802	
178B	P12		10	3-	14.863	4-	8.419	
178A	P12		10	5-	15.217	6-	8.455	
179A	P12		10	7-	4.414	8-	2.451	
LOOP 30 B			10	1-	5.053	2-	3.044	filtered
LOOP 30A			10	3-	4.824	4-	2.783	filtered
LOOP 30A			10	5-	4.264	6-	2.412	unfiltered
LOOP 30B			10	7-	4.477	8-	2.654	unfiltered
266	P12		10	1-	10.109	2-	5.663	
267	P12		10	3-	4.036	4-	2.290	
269	P12		10	5-	4.060	6-	2.241	
268	P12		10	7-	3.957	8-	2.233	
290	P12		10	1-	3.955	2-	2.184	
179B	P12		10	3-	4.265	4-	2.342	
274A	P13		10	5-	10.984	6-	6.097	
274 B	P13		10	7-	11.364	8-	6.362	
273B	P13		10	1-	55.592	2-	31.848	
273A	P13		10	3-	56.579	4-	32.354	
275A	P14		10	5-	20.422	6-	11.796	
275B	P14		10	7-	20.065	8-	11.447	
276A	P14		10	1-	5.712	2-	3.160	
276B	P14		10	3-	5.606	4-	3.025	
277B	P15		10	5-	13.599	6-	8.482	
277A	P15		10	7-	13.698	8-	8.399	
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

177 B	178 B	179 A	179 A	Loop 30	Loop 30	Loop 30	Loop 30
CHL	CHL	CHL	CHL	CH1 B	CH1 A	CH1 A	CH1 B
P12	P12	P12	P12	F.H	F.H	un/H	un/H
30 / M	30 / M	30 / M	30 / M	2015-09	2015-09	2015-09	2015-09
2015-09	2015-09	2015-09	2015-09				
Bot 15	Bot 16	Bot 16	Bot 17				

266	267	269	268	270	273 B	274 A	274 B
CHL	CHL	CHL	CHL	CHL	CHL	Chl	Chl
P12	P12	P12	P12	P12	P12	P13	P13
1 %	15 %	50 %	30 %	100 %	5 m	5 m	5 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 2	Bot 3	Bot 5	Bot 4	Bot 6	Bot 17	Bot 2	Bot 2

273 B	273 A	275 A	275 B	276	276	277 B	277 A
Chl	Chl	Chl	Chl	Chl A	Chl B	Chl	Chl
P13	P13	P14	P14	P14	P14	P15	P15
50 / Max	50 / Max	50 / Max	50 / Max	5 m	5 m	50 / Max	50 / Max
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 1	Bot 1	Bot 1	Bot 1	Bot 2	Bot 2	Bot 1	Bot 1

Chlorophyll Data Sheet

Cruise:

Page: 2 of 2

Dates of Cruise:

Time and date acetone added: 1:20 pm 21 July 15 Analyst: Tamarz

Time and date out of freezer: 11:44 a.m. 22 July 15

Time analysis started: 1:10 pm 22 July 15

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	-0.024			
STD			LOW	2-	11.994			
STD			HIGH	4-	65.270			
Blank				6-	0.000	8-	-0.003	
161A	P11	332	10	1-	36.276	2-	20.671	
161B	P11	1	10	3-	34.894	4-	19.838	
162A	P11	1	10	5-	5.314	6-	2.896	
162B	P11	1	10	7-	5.347	8-	2.935	
168	P12	265	10	1-	13.532	2-	7.644	
167	P12	332	10	3-	20.833	4-	12.351	
173B	P12		10	5-	4.982	6-	2.717	
166	P12		10	7-	7.492	8-	4.546	
172A	P12		10	1-	4.220	2-	2.295	
169A	P12		10	3-	13.548	4-	7.490	
169B	P12		10	5-	14.261	6-	8.002	
170	P12		10	7-	5.023	8-	2.807	
174A	P12		10	1-	4.341	2-	2.373	
175	P12		10	3-	4.233	4-	2.337	
176	P12		10	5-	4.064	6-	2.237	
171B	P12		10	7-	5.635	8-	3.110	
177A	P12		10	1-	19.840	2-	11.479	
				3-		4-		
				5-		6-		
				7-		8-		
				1-		2-		
				3-		4-		
				5-		6-		
				7-		8-		
Stand-by				1-	-0.022			
Std	Low			2-	12.041			
Std	High			4-	65.163			
Blank	by			6-	-0.005	8-	-0.005	

161	161	162	162	168	167	171	166
Ch1 A	Ch1 B	Ch1 A	Ch1 B	CHL	CHL	CHL	CHL
P11	P11	P11	P11	P12	P12	P12	P12
50 / Max	50 / Max	5 m	5 m	50 m	25 m	15 m	100 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 1	Bot 1	Bot 2	Bot 2	Bot 1	Bot 5	Bot 11	Bot 4
				Only 265m Let 6			

172	169 A	169 B	170	172	173	176	171
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
P12	P12	P12	P12	P12	P12	P12	P12
20 m	40 m	40 m	20 m	10 m	5 m	0 m	25 m
2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09	2015-09
Bot 10	Bot 7	Bot 7	Bot 3	Bot 12	Bot 13	Bot 18	Bot 9

177 A
CHL
P12
50 / M
2015-09
Bot 15