

Chlorophyll Data Sheet

Chandler
Fraser

Cruise: 2016-71

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Dates of Cruise: Oct 30 - Nov 3 2016

Time and date acetone added: 7 Nov 2016 - 1:45pm

Analyst: TF

Time and date out of freezer: 8 Nov - 12:05pm

Time analysis started: 8 Nov - 1:10pm

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	0.005			
STD			LOW	2-	12.218			
STD			HIGH	4-	65.671			
Blank				6-	0.028	8-	0.027	
295A	2	300ml	10	1-	16.154	2-	10.323	DF=1
297B	2		10	3-	26.772	4-	17.131	DF=1
294A	2		10	5-	13.924	6-	9.415	DF=1
297A	2		10	7-	24.846	8-	15.446	DF=1
314A	27		10	1-	36.438	2-	22.421	DF=1
312B	27		10	3-	11.665	4-	7.914	DF=1
312A	27		10	5-	11.855	6-	8.132	DF=1
314B	27		10	7-	36.842	8-	22.536	DF=1
311B	27		10	1-	6.731	2-	4.993	DF=1
311A	27		10	3-	4.647	4-	3.470	DF=1
262B	6		10	5-	17.779	6-	11.936	DF=1
264A	6		10	7-	21.343	8-	14.073	DF=1
281A	3		10	1-	13.651	2-	8.902	DF=1
278B	3		10	3-	13.798	4-	9.022	DF=1
281B	3		10	5-	14.465	6-	9.424	DF=1
278A	3		10	7-	13.122	8-	8.562	DF=1
279A	3		10	1-	13.497	2-	8.853	DF=1
279B	3		10	3-	15.785	4-	10.930	DF=1
294B	2		10	5-	12.709	6-	8.390	DF=1
295B	2		10	7-	16.900	8-	11.180	DF=1
248B	9		10	1-	13.258	2-	13.258	DF=1
247B	9		10	3-	11.291	4-	7.775	DF=1
250A	9		10	5-	13.592	6-	9.351	DF=1
250B	9	x	10	7-	13.430	8-	9.069	DF=1
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

295 ^A CHL 2 2016-71 Bot 13	297 ^B CHL 2 2016-71 Bot 15	294 ^A CHL 2 2016-71 Bot 12	297 ^A CHL 2 2016-71 Bot 15	314 CHL 27 2016-71 Bot 16 ^A	312 CHL 27 2016-71 Bot 14 ^B	312 CHL 27 2016-71 Bot 14 ^A	314 CHL 27 2016-71 Bot 16 ^B
311 CHL 27 2016-71 Bot 13 ^B	311 CHL 27 2016-71 Bot 13 ^A	262 CHL 6 2016-71 Bot 11 ^B	264 CHL 6 2016-71 Bot 13 ^A	281 CHL 3 2016-71 Bot 16 ^A	278 CHL 3 2016-71 Bot 13 ^B	281 CHL 3 2016-71 Bot 16 ^B	278 CHL 3 2016-71 Bot 13 ^A
279 CHL 3 2016-71 Bot 14 ^A	279 CHL 3 2016-71 Bot 14 ^B	294 ^B CHL 2 2016-71 Bot 12	295 ^B CHL 2 2016-71 Bot 13	248 ^B CHL 9 2016-71 Bot 10	247 ^B CHL 9 2016-71 Bot 9	250 ^A CHL 9 2016-71 Bot 12	250 ^B CHL 9 2016-71 Bot 12

Chlorophyll Data Sheet

Cruise: 2016-71

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Dates of Cruise: Oct 30 - Nov 3

Time and date acetone added: 7 Nov - 3:35 pm Analyst: TP

Time and date out of freezer: 8 Nov - 2:05 pm

Time analysis started: 8 Nov - 3:10 pm

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	0.002			
STD			LOW	2-	12.082			
STD			HIGH	4-	65.215			
Blank				6-	0.026	8-		
54A	75	304	10	1-	50.225	2-	27.426	DF=1
80A	69	ma	10	3-	31.317	4-	18.028	DF=1
103B	56		10	5-	17.091	6-	11.508	DF=1
153A	39		10	7-	12.780	8-	8.946	DF=1
153B	39		10	1-	12.675	2-	8.910	DF=1
189B	B12		10	3-	7.728	4-	6.219	DF=1
192B	B12		10	5-	33.614	6-	20.660	DF=1
234B	14		10	7-	14.943	8-	10.362	DF=1
2A	SI		10	1-	11.963	2-	7.233	DF=1
22B	59		10	3-	16.487	4-	10.604	DF=1
52A	75		10	5-	39.705	6-	22.130	DF=1
78B	69		10	7-	27.139	8-	15.926	DF=1
103A	56		10	1-	17.665	2-	11.641	DF=1
155A	39		10	3-	20.249	4-	13.244	DF=1
155B	39		10	5-	20.308	6-	13.309	DF=1
190A	B12		10	7-	16.820	8-	10.899	DF=1
192A	B12		10	1-	32.644	2-	19.952	DF=1
237A	14		10	3-	15.638	4-	11.031	DF=1
264B	6		10	5-	21.182	6-	13.935	DF=1
262A	6		10	7-	18.050	8-	12.065	DF=1
261B	6		10	1-	14.388	2-	9.477	DF=1
261A	6		10	3-	14.703	4-	9.656	DF=1
247A	9		10	5-	11.662	6-	8.049	DF=1
248A	9	✓	10	7-	13.384	8-	9.192	DF=1
Stand-by				1-	0.003			
Std	Low			2-	12.012			
Std	High			4-	65.365			
Blank	by			6-	0.030	8-	0.030	

54 ^A	80 ^A	103 ^B	153 ^A	153 ^B	189 ^B	192 ^B	234 ^B
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
75	69	56	39	39	BI2	BI2	14
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 14	Bot 12	Bot 12	Bot 17	Bot 17	Bot 8	Bot 11	Bot 12

7	22 ^B	52 ^A	78 ^B	103 ^A	155 ^A	155 ^B	190 ^A
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
SI	59	75	69	56	39	39	BI2
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 7	Bot 12	Bot 12	Bot 10	Bot 12	Bot 19	Bot 19	Bot 9

192 ^A	237 ^A	264	262	261	261	247 ^A	248 ^A
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
BI2	14	6	6	6	6	9	9
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 11	Bot 15	Bot 13	Bot 11	Bot 10	Bot 10	Bot 9	Bot 10

1x use of 90% acetone
prepared 14 Nov 16

Chlorophyll Data Sheet

Cruise: 2016-71

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Dates of Cruise:

Time and date acetone added: 14 Nov 16 1225pm Analyst: TF

Time and date out of freezer: 15 Nov 16 1015am

Time analysis started: 15 Nov 16 1130am

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	0.005			
STD			LOW	2-	12.185			
STD			HIGH	4-	66.215			
Blank				6-	0.029	8-	0.025	
221A	16	↑	10	1-	15.653	2-	11.022	no DF
29A	16	304	10	3-	12.840	4-	8.953	spilled 30-50 ml @ filtration
178A	IA6		10	5-	14.707	6-	10.055	no DF
172B	IA2		10	7-	24.574	8-	14.572	no DF
115A	46		10	1-	8.258	2-	5.907	no DF
90B	66		10	3-	17.767	4-	11.014	no DF
78A	69		10	5-	29.109	6-	16.831	no DF
24A	59		10	7-	19.095	8-	11.806	no DF
51B	75		10	1-	18.421	2-	11.170	no DF
218A	16		10	3-	14.895	4-	10.387	no DF
207B	12		10	5-	18.999	6-	12.132	no DF
180A	IA6	~1	10	7-	17.048	8-	11.112	no DF
135B	42	60	10	1-	18.506	2-	11.096	no DF
169A	IA2	100%	10	3-	4.846	4-	3.354	no DF
118A	46		10	5-	42.443	6-	25.194	no DF
64A	72		10	7-	20.392	8-	12.731	no DF
37A	102		10	1-	21.927	2-	12.840	no DF
21A	59		10	3-	15.935	4-	10.093	no DF
177A	IA6		10	5-	12.286	6-	8.624	no DF
235A	14		10	7-	14.786	8-	10.054	no DF
105A	56		10	1-	18.825	2-	12.145	no DF
132A	42		10	3-	9.280	4-	6.665	no DF
105B	56		10	5-	19.425	6-	12.552	no DF
64B	72	↓	10	7-	20.156	8-	12.446	no DF
Stand-by				1-	0.007			
Std	Low			2-	12.116			
Std	High			4-				
Blank	by			6-		8-		

221 ^A CHL 16	219 ^A <i>Spilled</i> CHL ~30-50 16 ml	178 ^A CHL IA6	172 ^B CHL IA2	115 ^A CHL 46	90 ^B CHL 66	78 ^A CHL 69	24 ^A CHL 59
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 11	Bot 9	Bot 3	Bot 14	Bot 3	Bot 9	Bot 10	Bot 14

51 ^B CHL 75	218 ^A CHL 16	207 ^B CHL 12	180 ^A CHL IA6	135 <i>60ml</i> CHL <i>Bottle empty</i> 42	169 ^A CHL IA2	118 ^A CHL 46	64 ^A CHL 72
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 11	Bot 8	Bot 14	Bot 5	Bot 16 ^B	Bot 11	Bot 12	Bot 10

37 ^A CHL 102	21 ^A CHL 59	177 ^A CHL IA6	235 ^A CHL 14	105 ^A CHL 56	132 CHL 42	105 ^B CHL 56	64 ^B CHL 72
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 12	Bot 11	Bot 2	Bot 13	Bot 14	Bot 13 ^A	Bot 14	Bot 10

Chlorophyll Data Sheet

Cruise:

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Dates of Cruise: 2016-71

Time and date acetone added: 14 Nov 2016 4:20pm Analyst: JF

Time and date out of freezer: 15 Nov 16 225pm

Time analysis started: 15 Nov 16 350pm

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	0.007			
STD			LOW	2-	12.193			
STD			HIGH	4-	65.576			
Blank				6-	0.033	8-	0.031	
235B	14	204	10	1-	14.575	2-	10.069	no DF
206B	12		10	3-	17.412	4-	11.296	no DF
190B	012		10	5-	16.433	6-	10.593	no DF
157B	39		10	7-	53.095	8-	32.693	no DF
133B	42		10	1-	21.202	2-	13.937	not a freezer, for 30-40 minutes at the beginning no DF
102B	56		10	3-	17.466	4-	11.847	no DF
80B	69		10	5-	33.550	6-	19.112	no DF
52B	75		10	7-	41.593	8-	22.901	no DF
234A	14		10	1-	13.723	2-	9.377	no DF
206A	12		10	3-	17.274	4-	11.183	no DF
237B	14		10	5-	15.007	6-	10.574	no DF
209A	12		10	7-	20.844	8-	13.664	no DF
189A	012		10	1-	7.748	2-	6.315	no DF
157A	39		10	3-	50.827	4-	32.386	no DF
133A	42		10	5-	21.229	6-	14.000	same as 138B, no DF
102B	56		10	7-	17.215	8-	11.502	no DF
24B	59		10	1-	17.576	2-	11.020	no DF
6	SI		10	3-	4.168	4-	2.866	no DF
178B	IA6		10	5-	15.538	6-	10.692	no DF
169B	IA2		10	7-	4.761	8-	3.379	no DF
209B	12		10	1-	20.172	2-	13.143	no DF
132B	42		10	3-	9.076	4-	6.534	no DF
218B	16		10	5-	13.948	6-	9.624	no DF
207A	12		10	7-	18.991	8-	12.229	no DF
Stand-by				1-	0.007			
Std	Low			2-	12.116			
Std	High			4-	65.500			
Blank	by			6-	0.030	8-	0.028	

235 ^B	206 ^B	190 ^B	157 ^B	102 ^A	80 ^B	52 ^B
CHL	CHL	CHL	CHL	CHL	CHL	CHL
14	12	BI2	39	56	69	75
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 13	Bot 13	Bot 9	Bot 21	Bot 11	Bot 12	Bot 12

not in freezer
For 133
30-40 min
at CHL
the beginning
42

234 ^A	206 ^A	237 ^B	209 ^A	189 ^A	157 ^A	102 ^B
CHL	CHL	CHL	CHL	CHL	CHL	CHL
14	12	14	12	BI2	39	56
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 12	Bot 13	Bot 15	Bot 16	Bot 8	Bot 21	Bot 11

not in freezer
For 133
30-40 min
at CHL
the beginning
42

24 ^B	6	178 ^B	169 ^B	209 ^B	132	218 ^B	207 ^A
CHL	CHL	CHL	CHL	CHL	CHL	CHL	CHL
59	SI	IA6	IA2	12	42	16	12
2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71	2016-71
Bot 14	Bot 6	Bot 3	Bot 11	Bot 16	Bot 13	Bot 8	Bot 14

not in freezer
For 133
30-40 min
at CHL
the beginning
42

Chlorophyll Data Sheet

Cruise: 2016-71

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Dates of Cruise:

Time and date acetone added: 15 Nov 16 12:35pm Analyst: RF

Time and date out of freezer: 16 Nov 16 1:10pm

Time analysis started: 16 Nov 16 2:15pm

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	0.005			
STD			LOW	2-	12.214			
STD			HIGH	4-	66.496			
Blank				6-	0.025	8-	0.025	
115B	46	304	10	1-	8.692	2-	6.144	no DF
88B	66		10	3-	18.930	4-	11.915	no DF
219B	16		10	5-	15.094	6-	10.392	no DF
221B	16		10	7-	15.948	8-	11.093	no DF
177B	IA6		10	1-	13.193	2-	9.602	no DF
65A	72		10	3-	30.976	4-	17.889	no DF
135A	42		10	5-	86.199	6-	51.269	no DF
51A	75		10	7-	18.292	8-	11.073	no DF
116A	46		10	1-	12.130	2-	8.302	no DF
22A	59		10	3-	17.041	4-	10.710	no DF
90A	66		10	5-	17.917	6-	11.181	no DF
77A	69		10	7-	15.930	8-	9.794	no DF
180B	IA6		10	1-	18.514	2-	12.320	no DF
116B	46		10	3-	12.354	4-	8.276	no DF
172A	IA2		10	5-	24.415	6-	14.543	no DF
118B	46		10	7-	41.242	8-	25.280	no DF
170A	IA2		10	1-	7.192	2-	4.636	no DF
88A	66		10	3-	20.486	4-	12.684	no DF
39B	102		10	5-	27.649	6-	15.911	no DF
87B	66		10	7-	18.328	8-	11.837	no DF
65B	72		10	1-	32.296	2-	18.486	no DF
7B	SI		10	3-	10.415	4-	6.376	no DF
54B	75		10	5-	44.687	6-	24.475	no DF
39A	102		10	7-	26.022	8-		no DF
Stand-by				1-				
Std	Low			2-				
Std	High			4-				
Blank	by			6-		8-		

115 B CHL 46 2016-71 Bot 9	88 B CHL 66 2016-71 Bot 7	219 B CHL 16 2016-71 Bot 9	221 B CHL 16 2016-71 Bot 11	177 B CHL IA6 2016-71 Bot 2	85 A CHL 72 2016-71 Bot 11	135 CHL 42 2016-71 Bot 16 A	51 A CHL 75 2016-71 Bot 11
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116 A CHL 46 2016-71 Bot 10	22 A CHL 59 2016-71 Bot 12	90 A CHL 66 2016-71 Bot 9	77 A CHL 69 2016-71 Bot 9	180 B CHL IA6 2016-71 Bot 5	116 B CHL 46 2016-71 Bot 10	172 A CHL IA2 2016-71 Bot 14	118 B CHL 46 2016-71 Bot 12
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170 A CHL IA2 2016-71 Bot 12	88 A CHL stnbb 2016-71 Bot 7	39 B CHL 102 2016-71 Bot 14 16	87 B CHL stnbb 2016-71 Bot 6	65 B CHL 72 2016-71 Bot 11	7 CHL SI 2016-71 Bot 7 B	54 B CHL 75 2016-71 Bot 14	39 A CHL 102 2016-71 Bot 14 16
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Chlorophyll Data Sheet

Cruise: 2016-71 + HS201640 Page: 2 of 2

Dates of Cruise:

Time and date acetone added: 3:50pm 15 Nov 16 Analyst: Jasmine

Time and date out of freezer: 2:15 pm 16 Nov 16

Time analysis started: 3:25pm 16 Nov 16

Write out
2nd cruise
on separate
sheet

Sample #	Station	Vol filt	Vol acet		Rb		Ra	Comments
Stand-	by			1-	0.007			2016-71
STD			LOW	2-	12.256			
STD			HIGH	4-	65.895			
Blank				6-	0.024	8- 0.022		
170 B	JA2	330ml	10ml	1-	7.376	2- 4.682		
21 B	59	"	"	3-	15.407	4- 9.765		
87 A	66	"	"	5-	18.448	6- 11.848		
36 A	102	"	"	7-	21.531	8- 12.567		
77 B	69	"	"	1-	15.423	2- 9.550		
9 B	51	"	"	3-	57.277	4- 32.382		
37 B	102	"	"	5-	23.012	6- 13.471		
9 A	51	"	"	7-	55.663	8- 31.574		
36 B	102	"	"	1-	21.541	2- 12.597		
6 A	51	"	"	3-	4.275	4- 2.897		
100	QCST02	330ml	"	5-	14.331	6- 9.764		HS2016-40
046	EP03	"	"	7-	24.124	8- 14.171		
082	IVI 08	"	"	1-	18.002	2- 10.343		
094	IVI 12	"	"	3-	22.296	4- 13.523		
094	IVI 12	"	"	5-	22.076	6- 13.375		
070	IVI 04	"	"	7-	12.689	8- 8.836		
046	EP03	"	"	1-	23.919	2- 14.207		
049	EP04	"	"	3-	27.227	4- 15.934		
109	QCST05	"	"	5-	18.525	6- 11.713		
034	VI 06	"	"	7-	28.820	8- 17.116		
061	VI 09	"	"	1-	28.005	2- 15.921		
079	IVI 07	"	"	3-	40.746	4- 24.284		
079	IVI 07	"	"	5-	38.789	6- 23.755		
085	IVI 09	"	"	7-	27.752	8- 15.998		
Stand-by				1-	0.008			
Std	Low			2-	12.088			
Std	High			4-	65.600			
Blank	by			6-	0.024	8- 0.024		

170 CHL IA2 2016-71 Bot 12	21 CHL 59 2016-71 Bot 11	87A CHL 66 2016-71 Bot 6	36A CHL 102 2016-71 Bot 11	77 CHL 69 2016-71 Bot 9	9 CHL SI 2016-71 Bot 9 B	37B CHL 102 2016-71 Bot 12	9 CHL SI 2016-71 Bot 9 A	36B CHL 102 2016-71 Bot 11	6 CHL SI 2016-71 Bot 6 A
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← 201671

HS201640
 QEST 02 CHL
 CONS# 100

 HS201640
 EP02 CHL
 CONS# 046

 HS201640
 VI 12 CHL
 CONS# 094

 HS201640
 VI 12 CHL
 CONS# 094

 HS201640
 VI 14 CHL
 CONS# 070

 HS201640
 EP03 CHL
 CONS# 046

 HS201640
 EP04 CHL
 CONS# 044

 HS201640
 QEST 05 CHL
 CONS# 100

 HS 2016-40
 VI 06 CHL
 CONS# 034

 HS201640
 VI 09 CHL
 CONS# 061

2016-40

HS201640
 VI 07 CHL
 CONS# 079

 HS201640
 VI 07 CHL
 CONS# 079

 HS201640
 VI 09 CHL
 CONS# 085