

① AUTOSAL ANALYSIS LOGSHEET

908.

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd mmm yyyy): <u>NOV 25 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6027.</u>	Ratio After Standardization: <u>24+6027.</u>	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard <u>0.000003</u>	Before: <u>no adjustment needed</u> After: <u>no adjustment needed</u> Notes: <u>no adjustment needed</u>	K ₁₅ VALUE: 0.999 <u>87</u> Batch #: <u>P161</u> Batch Date: <u>May 3, 2020</u>
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.1</u> °C Room Temperature: <u>21.8</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
5	CPB-02	1	1.85084	1.85084		4 fl. stand. bottle.
6		2	1.85061	1.85063		
7		3	1.84886	1.84888		
8		4	1.84824	1.84823		
9		5	1.84808	1.84809		
10		6	1.84776	1.84775		
11		7	1.83134	1.83134		
12		8	1.81350	1.81352		
14		10	1.77728	1.77728		
15		11	1.71408	1.71409		
16		12	1.66277	1.66278		
18	CPB-03.	1	1.97125	1.97125		4 fl.
19		2	1.95231	1.95231		
20		3	1.90193	1.90192		
21		4	1.87931	1.87931		
* 21		4	1.87905	1.87906		
22		5	1.87475	1.87475	1.87475	
23		6	1.86956	1.86957		
24		7	1.85895	1.85896		
25		8	1.84215	1.84215		
26		9	1.82894	1.82892		
28		11	1.79515	1.79515		
29		12	1.75365	1.75366		
30		13	1.68154	1.68154		
31		14	1.67413	1.67412		Final Standby Value:

Notes:	1	CPB-01	1	1.75755	1.75758	1.75753	4 fl.	HM Bottle
	2	"	2	1.73049	1.73050			" "
	3	"	3	1.73390	1.73373	1.73373		" "

AUTOSAL ANALYSIS LOGSHEET

10:07 am

②

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd-mm-yyyy): <u>NOV 25 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6027</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____	K ₁₅ VALUE: 0.999
	After: <u>same</u>	Batch #: <u>same</u>
	Notes: _____	Batch Date: _____
		Bath Temperature: <u>24</u> °C
		Sample Temperature: <u>21.2</u> °C
		Room Temperature: <u>22.7</u> °C
		Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
33	CPB-06	1	1.98940	1.98940		4 fl.
34		2	1.96462	1.96462		
35		3	1.92280	1.92280		
36		4	1.90313	1.90314		
37		5	1.88809	1.88810		
37		5	1.88814	1.88812		
38		6	1.87905	1.87905		
39		7	1.87443	1.87441		
40		8	1.86464	1.86464		
41		9	1.84730	1.84730		
43		11	1.83245	1.83245		
44		12	1.79692	1.79692		
45		13	1.77335	1.77336		
46		14	1.74665	1.74666		
47		15	1.63592	1.63595	1.63596	
49	CPB-07	1	1.99085	1.99085		4 fl.
50		2	1.98836	1.98875	1.98888	1.98896
51		3	1.97216	1.97217		
52		4	1.94130	1.94129		bubble dialogue
53		5	1.90351	1.90350		
54		6	1.89988	1.89990		
54		6	1.89998	1.89995		
55		7	1.88570	1.88570		
56		8	1.87892	1.87893		
						Jumpy
						Final Standby Value:

Notes: _____

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10:54

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
57	CPB-07	9	1.87281	1.87287	1.87292	Jump
58		10	1.86311	1.86312		
59		11	1.85320	1.85320		
60		12	1.84041	1.84040		
62		14	1.80042	1.80041		
64		16	1.72859	1.72860		
65	CPB-08	1	1.99025	1.99025		4f1
66		2	1.98859	1.98858		
67		3	1.97786	1.97785		
68		4	1.95161	1.95161		
69		5	1.91344	1.91342		
70		6	1.90250	1.90250		
71		7	1.89983	1.89981		
72		8	1.89285	1.89286		
73		9	1.88681	1.88680		
74		10	1.87826	1.87827		
76		12	1.87245	1.87245		
77		13	1.85977	1.85979		
78		14	1.77021	1.77023		
79		15	1.72582	1.72582		
80		16	1.67030	1.67030		
81	CPB-09	1	1.98000	1.97999		4f1
82		2	1.97856	1.97855		
						Final Standby Value:

Notes: 063 CPB-07 15 1.74614 1.74613.

④

AUTOSAL ANALYSIS LOGSHEET

12 noon

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd-mm-yyyy): <u>NOV 25 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24 +6027.</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____ After: _____ Notes: _____	K ₁₅ VALUE: 0.999 _____ Batch #: _____ Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.1</u> °C Room Temperature: <u>22.8</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
83	CPB-09	3	1.93913	1.93913		
84		4	1.91288	1.91288		
84		4	1.91296	1.91294		
85		5	1.90368	1.90369		
86		6	1.88723	1.88725		
87		7	1.87418	1.87419		
88		8	1.86519	1.86522	1.86523	
89		9	1.85275	1.85274		
90		10	1.83555	1.83556		
92		12	1.81702	1.81703		
93		13	1.79205	1.79207		
94		14	1.77471	1.77473		
95		15	1.70254	1.70255		
96		16	1.70223	1.70223		
96	CPB-10	1	1.97221	1.97221		4 fl.
97		2	1.94782	1.94781		
98		3	1.91097	1.91101	1.91100	
99		4	1.90291	1.90292		
100		5	1.88187	1.88186		
101		6	1.87016	1.87017		
102		7	1.86154	1.86153		
103		8	1.84726	1.84726		
104		9	1.83061	1.83061		
106		11	1.81380	1.81380		
						Final Standby Value: _____

Notes: 2nd #96 is not dup but mistake when numbering the samples taken

AUTOSAL ANALYSIS LOGSHEET

12:50 pm

⑤

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST 1</u>	Analysis Date (dd-mm-yyyy): <u>NOV 25 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6027</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____ After: _____ Notes: _____	K ₁₅ VALUE: <u>0.999</u> Batch #: _____ Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.0</u> °C Room Temperature: <u>22.5</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth / Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
107	CPB-10	12	1.79245	1.79246		
108		13	1.76801	1.76801		
109		14	1.73486	1.73485		
111		16	1.69926	1.89926		
112	CPB-11	1	1.93833	1.93833		4f1
113		2	1.92389	1.92389		
114		3	1.90746	1.90745		
115		4	1.88899	1.88898		
116		5	1.87442	1.87442		
117		6	1.86213	1.86213		
118		7	1.84875	1.84874		
119		8	1.82499	1.82501		
121		10	1.79463	1.79462		
122		11	1.78544	1.78544		
123		12	1.77032	1.77032		
124		13	1.74426	1.74427		
125		14	1.72427	1.72428		
126		15	1.72442	1.72443		
127	KUG-05	1	1.99193	1.99192		4f1
128		2	1.98564	1.98563		
129		3	1.95586	1.95585		
130		4	1.90254	1.90255		
131		5	1.86686	1.86685		
132		6	1.85635	1.85638	1.85637	
						Final Standby Value: _____

Notes: _____

1:42 pm

Final Standby Value:

Version: 20 April 2016

AUTOSAL ANALYSIS LOGSHEET

2:26 pm

Cruise ID: <u>2019-86</u>		Cast/Station Name: <u>FROST1</u>		Analysis Date (dd mmm yyyy): <u>Nov 25 2019</u>	
Autosal Model: <u>8400B</u>		Serial Number: <u>86572</u>			
Initial Standby Value: _____		Ratio After Standardization: _____			
Cell Standardization (Daily)	Standardization Values:	Standard Info.		Bath Temperature: <u>24.</u> °C	
Conductivity must be ± 0.00001 compared to Standard 	Before: _____	K ₁₅ VALUE: <u>0.999</u>		Sample Temperature: <u>21.1</u> °C	
	After: <u>same</u>	Batch #: <u>same</u>		Room Temperature: <u>22.2</u> °C	
	Notes: _____	Batch Date: _____		Analyst: <u>Mary Steel</u>	

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
157	KUG-07	11	1.62880	1.62880		
158	↓	12	1.59700	1.59700		
161	KUG-06.	1	1.99300	1.99302		4f1
162	↓	2	1.99187	1.99188		
163	↓	3	1.98537	1.98537		
184	—dup	8	1.85245	1.85245		Kug-04
202	—dup	4	1.85193	1.85195		Kug-08
228	-dup	1	1.85171	1.85171		
237	-dup	2	1.84331	1.84332		
270	-dup	8	1.85464	1.85464		DUS-4??
333	-dup	7	1.85510	1.85509		DUS-09
362	-dup	7	1.71877	1.71877		no station on label
396	-dup	7	1.61719	1.61717		CPY-1
422	-dup	3	1.87630	1.87630		AMG-01
452	-dup	2	1.98746	1.98750	1.98747	AMG-03
493	-dup	2	1.95315	1.95315		AMG-04
525	-dup	4	1.90371	1.90385	1.90387	AMG-06
544	-dup	1	1.82016	1.82018		FRN-05
570	-dup	7	1.86129	1.86128		FRN-02
584	-dup	2	1.96998	1.97000		MTI-05
599	-dup	2	1.90513	1.90573		MTI-06
611	-dup	1	1.95837	1.95837		MTI-04
						Final Standby Value:

Notes:

→ #159 - Kug-07. (12) 1.59108 1.59108.

8 AUTOSAL ANALYSIS LOGSHEET

321 pm

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd mmm yyyy): <u>Nov 25 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6027</u>	Ratio After Standardization: <u> </u>	
Cell Standardization (Daily) Conductivity must be ± 0.00001 compared to Standard	Standardization Values: Before: <u> </u> After: <u> </u> Notes: <u> </u>	Standard Info. K ₁₅ VALUE: <u>0.999</u> Batch #: <u> </u> Batch Date: <u> </u>
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.8</u> °C Room Temperature: <u>22.4</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
164	KUG-06	4	1.95353	1.95359	1.95359	4 f
165		5	1.90528	1.90528		
166		6	1.86774	1.86726	1.86776	?? jumped!
167		7	1.85554	1.85555		
168		8	1.84726	1.84726		
169		9	1.83915	1.83916		
170		10	1.83557	1.83558		
171		11	1.82673	1.82672		
172		12	1.79961	1.79961		
173		13	1.76395	1.76396		
174		14	1.68699	1.68700		
175		15	1.60199	1.60199		
176		16	1.63189	1.60194	1.60196	
177	KUG-04	1	1.98871	1.98871		4 f
178		2	1.98687	1.98688		
179		3	1.95025	1.95026		
180		4	1.90562	1.90561		
181		5	1.88443	1.88441		
182		6	1.85716	1.85716		
183		7	1.85365	1.85366		
184		8	1.85231	1.85232		
185		9	1.84346	1.84345		
186		10	1.82999	1.83001		
187		11	1.82076	1.82076		
						Final Standby Value: <u>24+6027</u>

Notes: <u>4:07 pm</u>

AUTOSAL ANALYSIS LOGSHEET

9:00 am

①

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROSTI</u>	Analysis Date (dd-mm-yyyy): <u>NOV 26 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6027</u>	Ratio After Standardization: <u>24+6025</u>	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: <u>6027</u> After: <u>6025</u> Notes:	K ₁₅ VALUE: 0.999 <u>87</u> Batch #: <u>PK01</u> Batch Date: <u>May 3/2020</u>
Correction: <u>-0.000003</u>		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.0</u> °C Room Temperature: <u>21.5</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
189	KUG-04	13	1.74715	1.74715		4f1
190		14	1.68150	1.68149		
191		15	1.60666	1.60667		
192		16	1.60657	1.60659		
193	KUG-08	1	1.99493	1.99499	1.99497	4f1
194		2	1.99383	1.99383		
195		3	1.99306	1.99306		
196		4	1.99175	1.99176		
197		5	1.98566	1.98563		
198		6	1.95770	1.95770		
199	KUG-08	1	1.90259	1.90259		4f1
200		2	1.87238	1.87238		
201		3	1.86041	1.86040		
202		4	1.85187	1.85187		
203		5	1.84233	1.84233		
204		6	1.83003	1.83004		
205		7	1.81870	1.81871		
207		9	1.80566	1.80566		
208		10	1.75582	1.75583		
209		11	1.61608	1.61608		
210		12	1.59890	1.59890		
211		13	1.59912	1.59912		
213	KUG-03	1	1.93077	1.93077		4f1
214		2	1.89290	1.89290		
						Final Standby Value:

Notes: _____

3⁰ out
store

Water Properties Group

Institute of Ocean Sciences, Ocean Sciences Division

AUTOSAL ANALYSIS LOGSHEET

10 am

Cruise ID: 2019-86 Cast/Station Name: FROST1 Analysis Date (dd-mm-yyyy): Nov 26 2019
 Autosol Model: 8400B Serial Number: 68572
 Initial Standby Value: 24+6025 Ratio After Standardization:

Cell Standardization (Daily)	Standardization Values:	Standard Info.	Bath Temperature: <u>24</u> °C
Conductivity must be ± 0.00001 compared to Standard	Before: <u> </u>	K ₁₅ VALUE: <u>0.999</u>	Sample Temperature: <u>20.5</u> °C
	After: <u> </u>	Batch #: <u> </u>	Room Temperature: <u>21.8</u> °C
	Notes: <u> </u>	Batch Date: <u> </u>	Analyst: <u>mary steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
215	KUG-03.	3.	1.89259	1.89259		
216		4	1.86172	1.86173		
217		5	1.85065	1.85066		
218		6	1.84287	1.84288		
219		7	1.83424	1.83424		
220		8	1.82453	1.82452		
222		10	1.79938	1.79938		
223		11	1.75236	1.75237		
224		12	1.66116	1.66121	1.66120	
225		13	1.60949	1.60948		
226		14	1.60562	1.60563		
228	KUG-01c	1	1.85181	1.85182		4 fl.
229		2	1.84052	1.84050		
231		3	1.78080	1.78078	1.78078	
232		5	1.71634	1.71635		
233		6	1.61992	1.61992		
234		7	1.61481	1.61480		
236	DHS-02.	1	1.86189	1.86193	1.86194	4 fl.
237		2	1.84343	1.84348	1.84345	
238		3.	1.82721	1.82722		
239		4	1.79248	1.79247		
241		6.	1.72456	1.72457		
242		7	1.69149	1.69149		
243		8	1.68758	1.68759		
						Final Standby Value:

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

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(3)

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd-mm-yyyy): <u>Nov 26 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6025</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____ After: _____ Notes: _____	K ₁₅ VALUE: 0.999 _____ Batch #: _____ Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.0</u> °C Room Temperature: <u>21.8</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
244	DUS-02	9	1.68575	1.68576		
245		10	1.68552	1.68557		
246		11	1.68554	1.68553		
248	DUS-03	1	1.92584	1.92584		481
249		2	1.90309	1.90311		
250		3	1.89248	1.89249		
251		4	1.86321	1.86323		
252		5	1.84387	1.84386		
253		6	1.82551	1.82550		
254		7	1.80744	1.80744		
255		8	1.75716	1.75715		
256		9	1.70702	1.70701		
258		11	1.68478	1.68479		
259		12	1.68456	1.68455		
260		13	1.68469	1.68467		
261		14	1.68473	1.68471		
263	DUS-04	1	1.98582	1.98583		481
264		2	1.97903	1.97902		
265		3	1.92094	1.92092		
266		4	1.90339	1.90339		
267		5	1.88870	1.88872		
268		6	1.87405	1.87404		
269		7	1.86464	1.86465		
270		8	1.85459	1.85460		
						Final Standby Value: _____

Notes: Break 11am-11:25

(24)

AUTOSAL ANALYSIS LOGSHEET

12 noon

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd/mm/yyyy): <u>Nov 25 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6024</u>	Ratio After Standardization: _____	
Cell Standardization (Daily) Conductivity must be ± 0.00001 compared to Standard	Standardization Values: Before: _____ After: _____ Notes: _____	Standard Info. K ₁₅ VALUE: 0.999 Batch #: _____ Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.0</u> °C Room Temperature: <u>22.3</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
271	DUS-04	7	1.84367	1.84366		
272		10	1.82667	1.82668		
273		11	1.79946	1.79947		
274		12	1.77743	1.77743		
276		14	1.70708	1.70709		
277		15	1.68455	1.68456		
278		16	1.68428	1.68426		
279	DUS-05	1	1.98734	1.98733		4 fl.
280		2	1.98273	1.98272		
281		3	1.93773	1.93774		
282		4	1.90495	1.90496		
283		5	1.89411	1.89411		
284		6	1.87603	1.87602		
285		7	1.86715	1.86715		
286		8	1.86233	1.86234		
287		9	1.85075	1.85075		
288		10	1.83207	1.83208		
289		11	1.81508	1.81509		
290		12	1.78854	1.78851	1.78855	
291		14	1.77249	1.77249		
293		15	1.70527	1.70528		
294		16	1.68794	1.68794		
295	DUS-07	1	1.98748	1.98748		4 fl.
296		2	1.98205	1.98203		
						Final Standby Value: _____

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

12:45 pm

Cruise ID: 2019-86 Cast/Station Name: FROST1 Analysis Date (dd|mmm|yyyy): Nov|26|2019
 Autosal Model: 8400B Serial Number: 68572
 Initial Standby Value: 24+6024 Ratio-After Standardization: _____
 Cell Standardization (Daily) Standardization Values: Standard Info. Bath Temperature: 24 °C
 Conductivity must be ± 0.00001 Before: _____ K₁₅ VALUE: 0.999 Sample Temperature: 21.0 °C
 compared to Standard After: _____ Batch #: _____ Room Temperature: 22.7 °C
 Notes: _____ Batch Date: _____ Analyst: Mary Steel

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
297	DUS-07	3	1.95346	1.95342	1.95349	Jumpy
298		4	1.91602	1.91602		
299		5	1.90463	1.90463		
300		6	1.88488	1.88488		
301		7	1.87570	1.87570		
302		8	1.86992	1.86991		
303		9	1.86243	1.86342		
304		10	1.83410	1.83410		
306		12	1.81837	1.81836		
307		13	1.79678	1.79678		
308		14	1.76942	1.76940		
309		15	1.74199	1.74198		
310		16	1.73009	1.73009		
311	DUS-08	1	1.98454	1.98455		481
312		2	1.98134	1.98135		
313		3	1.94643	1.94643		
314		4	1.91655	1.91655		
315		5	1.90479	1.90495	1.90496	
316		6	1.88415	1.88414		
317		7	1.87039	1.87039		
318		8	1.86281	1.86279		
319		9	1.85284	1.85284		
320		10	1.83413	1.83412		
323		13	1.78592	1.78592		
Final Standby Value:						

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

1:37 pm

Cruise ID: 2019-86 Cast/Station Name: FROST1 Analysis Date (dd | mmm | yyyy): Nov | 26 | 2019
 Autosol Model: 8400B Serial Number: 68572
 Initial Standby Value: 24+6024 Ratio After Standardization: _____
 Cell Standardization (Daily) Standardization Values: Standard Info. Bath Temperature: 24 °C
 Conductivity must be ± 0.00001 compared to Standard Before: _____ K₁₅ VALUE: 0.999 _____ Sample Temperature: 21.0 °C
 After: _____ Batch #: _____ Room Temperature: 23.0 °C
 Notes: _____ Batch Date: _____ Analyst: Mary Steel

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
324	DUS-08	14	1.75060	1.75059		
325		15	1.72250	1.72250		
326		16	1.72053	1.72052		
327	DUS-09	1	1.94266	1.94269	1.94269	4 fl.
328		2	1.90398	1.90398		
329		3	1.89169	1.89170		
330		4	1.87813	1.87814		
331		5	1.87029	1.87029		
332		6	1.86076	1.86077		
333		7	1.85522	1.85522		
334		8	1.83629	1.83629		
335		9	1.82222	1.82222		
337		11	1.77577	1.77605	1.77605	
338		12	1.73492	1.73491		
339		13	1.71803	1.71802		
340		14	1.71777	1.71777		
342	DUS-10	1	1.87682	1.87682		4 fl.
343		2	1.85756	1.85755		
344		3	1.82920	1.82920		
345		4	1.80599	1.80599		
346		5	1.79640	1.79640		
347		6	1.77815	1.77816		
349		8	1.76939	1.76939		
350		9	1.74154	1.74153		
Final Standby Value:						

Notes: _____

Break again

⑦

AUTOSAL ANALYSIS LOGSHEET

2:55

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd-mm-yyyy): <u>NOV 26 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6024</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard 	Before: _____ After: _____ Notes: _____	K ₁₅ VALUE: 0.999 Batch #: _____ Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.2</u> °C Room Temperature: <u>22.4</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
356	DUS-10	10	1.72177	1.72178		should be #351 ✓
357		11	1.71921	1.71922		" " #352 ✓
354	BPT-01	1	1.79696	1.79695		no station
356		3	1.78740	1.78740		" "
357		4	1.76022	1.76022		" "
358		5	1.73835	1.73834		" "
359		6	1.71972	1.71972		" "
362		7	1.71916	1.71915		" "
364		11	1.66431	1.66431		" "
365		12	1.66264	1.66265		" "
367	BPT-03	1	1.86849	1.86850		
369		3	1.84829	1.84830		
370		4	1.82809	1.82809		
371		5	1.81778	1.81779		
372		6	1.79363	1.79364		
373		7	1.78361	1.78361		
375		9	1.72550	1.72550		
377		11	1.71050	1.71049		
378		12	1.68108	1.68108		
379		13	1.66976	1.66976		
380		14	1.66963	1.66963		
382	BPT-05	1	1.68678	1.68678		4 fl
384		3	1.68627	1.68627		
387		6	1.68396	1.68396		
Final Standby Value: _____						

Notes: sample # 356 + #357
same sample # used but different Niskin Bottle #'s.

AUTOSAL ANALYSIS LOGSHEET

10:45

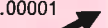
①

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>Frosti</u>	Analysis Date (dd-mm-yyyy): <u>Nov 28 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6026</u>	Ratio After Standardization: <u>24+6026</u>	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard <i>connection +0.000006</i>	Before: <u>1.99986</u> After: <u>1.99966</u> Notes: <u>no adjustment</u>	K ₁₅ VALUE: 0.999 <u>83</u> Batch #: <u>P162</u> Batch Date: <u>April 16/2021</u>
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.0</u> °C Room Temperature: <u>21.6</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Misk#	Salinity 1	Salinity 2	Salinity 3	Comments
388	BPT-05	7	1.68384	1.68384		4fl. #M bottles
390	CPY-01	1	1.66746	1.66746		4fl. start here
391		2	1.65377	1.65378		
393		4	1.62534	1.62535		
395		6	1.61951	1.61952		
396		7	1.61726	1.61726		
397	CPY-03	1	1.95129	1.95132	1.95131	4fl.
398		2	1.91749	1.91774	1.91781	jumpy
399		3	1.89038	1.89038		
400		4	1.87178	1.87177		
401		5	1.87031	1.87031		
402		6	1.87036	1.87037		jumpy
403		7	1.85506	1.85505		
404		8	1.84674	1.84686	1.84689	
405		9	1.81683	1.81683		
406		10	1.78527	1.78527		
408		12	1.74534	1.74518	1.74518	
409		13	1.65903	1.65904		
410		14	1.65761	1.65761		
411	CPY-02	1	1.83108	1.83108		4fl.
413		3	1.80399	1.80399		
414		4	1.76504	1.76505		
415		5	1.69280	1.69296	1.69296	
416		6	1.64656	1.64657		
						Final Standby Value:

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

Cruise ID: <u>2019-86</u>		Cast/Station Name: <u>FROST 1</u>		Analysis Date (dd mmm yyyy): <u>NOV 28 2019</u>	
Autosal Model: <u>8400 B</u>		Serial Number: <u>68572</u>			
Initial Standby Value: <u>24+6025</u>		Ratio After Standardization: _____			
Cell Standardization (Daily)	Standardization Values:	Standard Info.		Bath Temperature: <u>24</u> °C	
Conductivity must be ± 0.00001 compared to Standard 	Before: _____	K ₁₅ VALUE: <u>0.999</u>		Sample Temperature: <u>21.1</u> °C	
	After: _____	Batch #: <u>same</u>		Room Temperature: <u>22.1</u> °C	
	Notes: _____	Batch Date: _____		Analyst: <u>Mary Steel</u>	

[illegible]

Notes: _____

_____ Lunch _____

AUTOSAL ANALYSIS LOGSHEET

1:17

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST 1</u>	Analysis Date (dd mmm yyyy): <u>Nov 28 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24 + 6025</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____ After: <u>same</u> Notes: _____	K ₁₅ VALUE: 0.999 Batch #: <u>same</u> Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>21.0</u> °C Room Temperature: <u>22.0</u> °C Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
443	AMG-02	9	1.85333	1.85334		4f1
444		10	1.83670	1.83671		
445		11	1.80486	1.80485		
446		12	1.76313	1.76314		
448		14	1.70836	1.70835		
449		15	1.69525	1.69526		
450		16	1.63461	1.63462		
451	AMG-03	1	1.98758	1.98758		4f1
452		2	1.98749	1.98749		
453		3	1.98429	1.98430		
454		4	1.96608	1.96608		
455		5	1.92973	1.92974		
456	AMG-03	1	1.90384	1.90385		4f1
457		2	1.89211	1.89212		
458		3	1.88264	1.88262		
459		4	1.87596	1.87596		
460		5	1.86651	1.86651		
461		6	1.85973	1.85974		
462		7	1.84511	1.84511		
463		8	1.82677	1.82685	1.82685	Jumpy
465		10	1.81741	1.81739		
466		11	1.73626	1.73627		
467		12	1.73023	1.73024		
468		13	1.72997	1.72995		
Final Standby Value: _____						

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

2 pm

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd mmm yyyy): <u>Nov 28 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6025</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: <u>Same</u>	K ₁₅ VALUE: <u>0.999</u>
	After: _____	Batch #: <u>Same</u>
	Notes: _____	Batch Date: _____
		Bath Temperature: <u>24</u> °C
		Sample Temperature: <u>21.0</u> °C
		Room Temperature: <u>22.5</u> °C
		Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
469	FKN-07	1	1.84345	1.84348	1.84348	4 fl
470		2	1.79538	1.79538		
471		3	1.62003	1.62003		
472		4	1.59822	1.59820		
473		5	1.59171	1.59172		
474		6	1.59626	1.59639	1.59654	Jumpy
475		7	1.57775	1.57774		
477		9	1.57750	1.57749		
478	FKN-03	1	1.94713	1.94714		4 fl
479		2	1.89794	1.89795		
480		3	1.87255	1.87256		
481		4	1.86158	1.86155	1.86159	Jumpy
482		5	1.84295	1.84295		
483		6	1.83132	1.83132		
484		7	1.79777	1.79778		
485		8	1.75840	1.75839		
486		9	1.63090	1.63089		
487		10	1.59112	1.59114		
488		11	1.58073	1.58070		
489		12	1.53627	1.53639	1.53639	Jumpy
491		14	1.47408	1.47409		
492	AMG-04	1	1.98187	1.98187		4 fl
493		2	1.95310	1.95311		
494		3	1.90320	1.90340	1.90342	Jumpy
						Final Standby Value: _____

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

2:56pm

Cruise ID: <u>2019-86</u>	Cast/Station Name: <u>FROSTI</u>	Analysis Date (dd mmm yyyy): <u>Nov 28 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6025</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____	K ₁₅ VALUE: 0.999 _____
	After: _____	Batch #: _____
	Notes: _____	Batch Date: _____
	Bath Temperature: <u>24</u> °C	Sample Temperature: <u>21.1</u> °C
	Room Temperature: <u>22.6</u> °C	Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
495	AMG-04	4	1.89215	1.89216		
496		5	1.87143	1.87144		
497		6	1.86949	1.86950		
498		7	1.85989	1.85989		
499		8	1.85004	1.85003		
500		9	1.83503	1.83501		
501		10	1.81569	1.81569		
502		11	1.77744	1.77745		
503		12	1.67385	1.67389	1.67389	
505		14	1.61084	1.61083		
506		15	1.58638	1.58637		
507	AMG-05	1	1.98228	1.98227		4f
508		2	1.93857	1.93858		
509		3	1.90345	1.90342		
510		4	1.89129	1.89129		
511		5	1.86872	1.86873		
512		6	1.86392	1.86392		
513		7	1.85873	1.85874		
514		8	1.84739	1.84740		
515		9	1.83714	1.83716	1.83715	
516		10	1.81765	1.81762		
518		12	1.78574	1.78574		
519		13	1.72835	1.72836		
520		14	1.60278	1.60278		
						Final Standby Value: _____

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

3:40 pm

Cruise ID: <u>2018-86</u>	Cast/Station Name: <u>FROST1</u>	Analysis Date (dd mmm yyyy): <u>Nov 28 2019</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+6025</u>	Ratio After Standardization: <u> </u>	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: <u>Same</u>	K ₁₅ VALUE: 0.999
	After: <u>Same</u>	Batch #: <u>Same</u>
	Notes: <u> </u>	Batch Date: <u> </u>
		Bath Temperature: <u>24</u> °C
		Sample Temperature: <u>21.0</u> °C
		Room Temperature: <u>22.8</u> °C
		Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
522	AM6-06	1	1.98906	1.98906		
523		2	1.98881	1.98881		
524		3	1.96710	1.96710		
525		4	1.90395	1.90394		
526		5	1.89146	1.89146		
527		6	1.86973	1.86972		
528		7	1.86355	1.86356		
529		8	1.86014	1.86014		
530		9	1.85554	1.85555		
531		10	1.84460	1.84461		
532		11	1.83591	1.83592		
534		15	1.67593	1.67593		2 bottle 15
535		14	1.75142	1.75142		
536		15	1.80835	1.80836		2 bottle 15
537		16	1.61958	1.61959		
538	FKN-06	1	1.65429	1.65428		4/1
539		2	1.62061	1.62062		
540		3	1.58382	1.58382		
541		4	1.50595	1.50595		
543		6	1.47450	1.47450		
544	FKN-05	1	1.82094	1.82097	1.82094	4/1
545		2	1.79541	1.79542		
546		3	1.64720	1.64720		
547		4	1.60125	1.60124		
548		5	1.58898	1.58890		Final Standby Value:
549		6	1.57266	1.57280	1.57276	

Notes:

notes: all HM types had abit of salt on neck. - leakage?

Final Standby Value:

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

10:50 am

Cruise ID: <u>2019-86</u>		Cast/Station Name: <u>FROST1</u>	Analysis Date (dd mmm yyyy): <u>Nov 29, 2019</u>
Autosal Model: <u>8400B</u>		Serial Number: <u>68572</u>	
Initial Standby Value: <u>24+60285</u>		Ratio After Standardization: <u>24+6027</u>	
Cell Standardization (Daily)	Standardization Values:	Standard Info.	Bath Temperature: <u>24</u> °C
Conductivity must be ± 0.00001 compared to Standard	Before: <u>Correction</u>	K ₁₅ VALUE: 0.999 <u>83</u>	Sample Temperature: <u>21.0</u> °C
	After: <u>0.000004</u>	Batch #: <u>P162</u>	Room Temperature: <u>22.2</u> °C
	Notes: _____	Batch Date: <u>April 16/2021</u>	Analyst: <u>Mary Steel</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
557	FKN-04	5	1.63184	1.63184		4f.
558		6	1.59796	1.59796		
559		7	1.58843	1.58844		
560		8	1.57531	1.57531		
561		9	1.54033	1.54035		
563		11	1.47499	1.47504	1.47502	
564	FKN-02	1	1.92211	1.92212		4f.
565		2	1.90417	1.90418		
566		3	1.88720	1.88720		
567		4	1.87377	1.87377		
568		5	1.87006	1.87016	1.87014	
569		6	1.86736	1.86736		
570		7	1.86135	1.86135		
571		8	1.85190	1.85190		
572		9	1.85160	1.85160		
573		10	1.83909	1.83909		
574		11	1.58790	1.58794	1.58792	
575		13	1.47985	1.47985		
577	FKN-01	1	1.87300	1.87301		4f.
578		2	1.87287	1.87287		
579		3	1.87045	1.87045		
580		4	1.86921	1.86920		
581		5	1.67430	1.67431		
						Final Standby Value:

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

11:32 am

Cruise ID: 2019-86 Cast/Station Name: FROST1 Analysis Date (dd | mmm | yyyy): NOV | 29 | 2019
 Autosol Model: 8400B Serial Number: 68572
 Initial Standby Value: 24+6026 Ratio After Standardization: _____
 Cell Standardization (Daily) Standardization Values: Standard Info. Bath Temperature: 24 °C
 Conductivity must be ± 0.00001 compared to Standard Before: _____ K₁₅ VALUE: 0.999 _____
 After: _____ Batch #: _____ Sample Temperature: 21.3 °C
 Notes: _____ Batch Date: _____ Room Temperature: 23.0 °C
 Analyst: Mary Steel

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
583	MTI-05	1	1.97478	1.97479		481
584		2	1.97004	1.97003		
585		3	1.91241	1.91243		
586		4	1.91056	1.91056		
587		5	1.86209	1.86208		
588		6	1.82793	1.82793		
589		7	1.80474	1.80474		
590		8	1.78639	1.78639		
592		10	1.77226	1.77227		
593		11	1.76206	1.76207		
594		12	1.75483	1.75482		
595		13	1.72591	1.72592		
596		14	1.70411	1.70410		
597		15	1.68565	1.68566		
598	MTI-06	1	1.916803	1.916813	1.916801	48 Supply
599		2	1.90631	1.90639	1.90644	Supply
600		3	1.85216	1.85216		
601		4	1.82605	1.82605		
602		5	1.81445	1.81446		
603		6	1.79862	1.79862		
606		9	1.75714	1.75714		
608		11	1.72590	1.72591		
609		12	1.67292	1.67293		
610		13	1.61213	1.61211		
Final Standby Value:						

Notes: _____

AUTOSAL ANALYSIS LOGSHEET

12:30 PM

Cruise ID: <u>2019-86</u>		Cast/Station Name: <u>FROST1</u>		Analysis Date (dd mmm yyyy): <u>Nov 29 2019</u>	
Autosal Model: <u>8400B</u>		Serial Number: <u>68572</u>			
Initial Standby Value: <u>24+6.026</u>		Ratio After Standardization: _____			
Cell Standardization (Daily) Conductivity must be ± 0.00001 compared to Standard 	Standardization Values:		Standard Info.		Bath Temperature: <u>24</u> °C
	Before: _____		K ₁₅ VALUE: <u>0.999</u>		Sample Temperature: <u>21.3</u> °C
	After: _____		Batch #: _____		Room Temperature: <u>23.0</u> °C
	Notes: _____		Batch Date: _____		Analyst: <u>Mary Steel</u>

[illegible]

Notes: _____

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