

AUTOSAL ANALYSIS LOGSHEET

1 of 7

Cruise ID: <u>2023-088</u>	Cast/Station Name: <u>many</u>	Analysis Date (dd mmm yyyy): <u>05 Sept 2023</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>73274</u>	
Initial Standby Value: <u>24.5928</u>	Ratio After Standardization: <u>24.5979</u>	

Cell Standardization (Daily)	Standardization Values:	Standard Info.	Bath Temperature: <u>24</u> °C
Conductivity must be ± 0.00001 compared to Standard	Before: <u>4.80</u>	K ₁₅ VALUE: 0.999 <u>86</u>	Sample Temperature: <u>~22</u> °C
	After: <u>4.76</u>	Batch #: <u>P165</u>	Room Temperature: <u>22.3</u> °C
	Notes: _____	Exp. Date: <u>15 Apr. 1 2024</u>	Analyst: <u>KS</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
P165	IAPSO std.	calibration	1.99978	1.99974		accepted
P165	as a sample		1.99974	1.99974		34.9945 PS = 34.994 ✓
280	P16	9	1.96379	1.96378		
436	P22	11	1.94653	1.94652		
301	P16	1	1.89131	1.89127		
348A	P18	3	1.98222	1.98223		
458	P23	8	1.85720	1.85718		
DWR			1.97831	1.97832		
424	P21	1	1.85820	1.85819		
429	P22	4	1.98091	1.98092		
440	P22	15	1.93151	1.93152		
462A	P24	3	1.98239	1.98238		
273B	P16	2	1.98288	1.98286		
5063	Loop		1.85818	1.85819		
484	P25	1	1.85888	1.85890		
354	P18	9	1.96308	1.96305		
406	P20	7	1.96299	1.96298		
5053	P17	24	1.85637	1.85640		
404	P20	5	1.97842	1.97843		
5069	Loop	1	1.85883	1.85880		
462B	P24	3	1.98240	1.98241		
466	P24	7	1.97150	1.97149		
113B	P8	5	1.96291	1.96299	1.962302	
5023	P5	loop	1.85256	1.85255		~ full to brim. Empty
112	P8	4	1.96839	1.96838		Final Standby Value: same before analysis.
5008	JF4	loop	1.87290	1.87291		

Notes:

DWR

1.97830 1.97831

AUTOSAL ANALYSIS LOGSHEET

Cruise ID: <u>2023-088</u>	Cast/Station Name: <u>Mary</u>	Analysis Date (dd mmm yyyy): <u>05 Sep 2023</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>73274</u>	
Initial Standby Value: <u>24.5979</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 #: <u>see pg. 1</u> Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>~22</u> °C Room Temperature: <u>22.3</u> °C Analyst: <u>KS</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
344	P17	22	1.85640	1.85639		
109B	P8	1	1.97884	1.97885		
350	P18	5	1.97863	1.97864		
407	P20	8	1.96736	1.96746	1.96745	
107	P7	1	1.85369	1.85370		- sample ID 104 crossed off
276B	P16	5	1.97882	1.97884		on table and replaced to
5065	Loop		1.85860	1.85864		107.
278	P16	7	1.97168	1.97169		
110	P8	2	1.97474	1.97478		
113A	P8	5	1.96273	1.96274		
133	P9	1	1.84769	1.84767		- Full to brim. Emptied
351	P18	6	1.97410	1.97409		some after shaking
68	P4	4	1.96797	1.96798		as best as possible
451	P23	2	1.97863	1.97866		
275	P16	4	1.98092	1.98091		
353	P18	8	1.96700	1.96699		
464	P24	5	1.97857	1.97858		
105	P6	1	1.85346	1.85348		- Full to brim.
467	P24	8	1.96744	1.96745		
5066	P23	12	1.85719	1.85717		
349	P18	4	1.98093	1.98095		
5007	JF3	Loop	1.86788	1.86791		
66B	P4	2	1.97202	1.97200		
103	P5	1	1.85244	1.85246		
5025	P7	Loop	1.85375	1.85373		Final Standby Value:
296	P16	1	1.96417	1.96420		

Notes: DWR 1.97828 1.97827

AUTOSAL ANALYSIS LOGSHEET

Cruise ID: <u>2023-088</u>	Cast/Station Name: <u>Many</u>	Analysis Date (dd mmm yyyy): <u>05 Sept 2023</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>73274</u>	
Initial Standby Value: <u>2475979</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 #: <u>see pg. 1</u> Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>22</u> °C Room Temperature: <u>22.1</u> °C Analyst: <u>KS</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
279	P16	8	1.96798	1.96800		
348B	P18	3	1.98224	1.98225		
366	P18	21	1.86226	1.86225		
363	P18	18	1.87762	1.87761		
362	P18	17	1.91833	1.91832		
269	P15	22	1.86362	1.86361		
402	P20	3	1.98230	1.98229		
465	P24	6	1.97423	1.97425		
358	P18	13	1.93852	1.93856		
364	P18	19	1.87049	1.87050		
274	P16	3	1.98228	1.98231		
67	P4	3	1.97335	1.97337		
365	P18	20	1.86921	1.86923		
372	P20	1	1.87161	1.87162		
403B	P20	4	1.98083	1.98082		
273A	P16	2	1.98288	1.98289		
5087	Loop		1.85723	1.85721		
547	P26	1	1.93641	1.93638		
367	P18	22	1.85708	1.85709		
5084	Loop		1.85854	1.85856		
361	P18	16	1.92720	1.92722		
408	P20	9	1.96299	1.96302		
517A	P26	7	1.97464	1.97468	1.97466	- measurements were quite noisy.
111	P8	3	1.97208	1.97213		
513	P26	3	1.98325	1.98324		Final Standby Value: _____
5090	Loop		1.86264	1.86265		

Notes: DWR 1.97831 1.97830

AUTOSAL ANALYSIS LOGSHEET

Cruise ID: <u>2023-088</u>	Cast/Station Name: <u>Many</u>	Analysis Date (dd mmm yyyy): <u>05 Sept 2023</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>73274</u>	
Initial Standby Value: <u>245979</u>	Ratio After Standardization: _____	
Cell Standardization (Daily)	Standardization Values:	Standard Info.
Conductivity must be ± 0.00001 compared to Standard	Before: _____	K ₁₅ VALUE: <u>0.999</u>
	After: _____	Batch #: <u>see pg. 1</u>
	Notes: _____	Batch Date: _____
		Bath Temperature: <u>24</u> °C
		Sample Temperature: <u>22</u> °C
		Room Temperature: <u>21.7</u> °C
		Analyst: <u>KS</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
93	P4	1	1.96293	1.96295		
405	P20	6	1.97395	1.97399		
277	P16	6	1.97460	1.97459		
515	P26	5	1.98103	1.98102		
5085	Loop		1.85890	1.85892		
5086	Loop		1.86060	1.86063		
5005	Loop	1	1.81919	1.81921		
401A	P20	2	1.98315	1.98314		
518	P26	8	1.97181	1.97183		
370	P19	1	1.85850	1.85852		
5089	Loop		1.86526	1.86528		
356	P18	11	1.94645	1.94646		
357	P18	12	1.94073	1.94072		
347	P18	2	1.98296	1.98297		
5055	Loop		1.85944	1.85945		
5093	Loop		1.86214	1.86216		
5030	P9	4	1.84776	1.84778		- Full to brim
463	P24	4	1.98096	1.98097		
368	P18	23	1.85699	1.85700		
355	P18	10	1.95654	1.95656		
227	P14	4	1.97908	1.97910		
352	P18	7	1.97103	1.97106		
221	P13	23	1.85878	1.85875		
138	P11	1	1.85388	1.85389		
403A	P20	4	1.98083	1.98082		Final Standby Value:
145	P12	6	1.97236	1.97237		

Notes:

DWR

1.97831

1.97828

1.97829

AUTOSAL ANALYSIS LOGSHEET

Cruise ID: <u>2023-088</u>	Cast/Station Name: <u>Many</u>	Analysis Date (dd mmm yyyy): <u>06 Sept 2023</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>73274</u>	
Initial Standby Value: <u>24.8979</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 #: <u>see page 1</u> Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>22</u> °C Room Temperature: <u>21.9</u> °C Analyst: <u>KS</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
69	P4	5	1.96338	1.96339		
452	P23	3	1.97864	1.97861		
395	P20	1	1.96338	1.96341		
276A	P16	5	1.97888	1.97889		
175	P12	1	1.96290	1.96291		
360	P18	15	1.93378	1.93380		
5068	P25	4	1.85881	1.85879		
230	P14	7	1.97170	1.97171		
167	P12	1	1.87686	1.87686		
226A	P14	3	1.98097	1.98099		
144B	P12	5	1.97442	1.97441		
5056	P19	Loop	1.85858	1.85869	1.85880	1.85874 → readings extremely variable
66A	P4	2	1.97200	1.97205		Discarded 1 but should still be flagged!
228	P14	5	1.97708	1.97709		
5092	Loop		1.84646	1.84647		
461	P24	2	1.98313	1.98314		
5044	P15	Loop	1.86365	1.86368		
5042	P13	Loop	1.85872	1.85873		
5043	Loop		1.86259	1.86260		
538	P26	1	1.97499	1.97497		
516	P26	6	1.97850	1.97852		
147	P12	8	1.96319	1.96317		
143	P12	4	1.97889	1.97886		
109A	P8	1	1.97893	1.97892		
486	P35	1	1.85696	1.85693		Final Standby Value:
141A	P12	2	1.98196	1.98193		

Notes: DWR 1.97831 1.97830 - started this day with a DWR.
DWR 1.97830 1.97831

AUTOSAL ANALYSIS LOGSHEET

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Cruise ID: <u>2023-088</u>	Cast/Station Name: <u>Mary</u>	Analysis Date (dd mmm yyyy): <u>06 Sept 2023</u>
Autosal Model: <u>8400B</u>	Serial Number: <u>73274</u>	
Initial Standby Value: <u>24 + 5979</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: <u>0.999</u> Batch #: <u>see page 1</u> Batch Date: _____
		Bath Temperature: <u>24</u> °C Sample Temperature: <u>~22</u> °C Room Temperature: <u>22.8 21.8</u> °C Analyst: <u>KS</u>

Sample	Station Name	Depth/Nisk#	Salinity 1	Salinity 2	Salinity 3	Comments
359	P18	14	1.93567	1.93565		
514B	P26	4	1.98239	1.98237		
136	P10	2	1.85357	1.85357		
517B	P26	7	1.97470	1.97471		
514A	P26	4	1.98238	1.98238		
226B	P14	3	1.98100	1.98096		
141B	P12	2	1.98175	1.98174		
146	P12	7	1.96915	1.96917		
225	P14	2	1.98215	1.98216		
401B	P20	2	1.98310	1.98311		
519	P26	9	1.96816	1.96815		
5088	Loop	1	1.85660	1.85656		
5091	Loop	1	1.84844	1.84845		
142	P12	3	1.98094	1.98095		→ lost communication w software. Did not affect measurements
229	P14	6	1.97486	1.97484		
144A	P12	5	1.97436	1.97438		
5082	Loop		1.85849	1.85850		
231	P14	8	1.96793	1.96794		
No label, mystery sample.			1.97863	1.97865		
436B	P22	5	1.97856	1.97859		
433	P22	8	1.96733	1.96735		
427A	"	2	1.98316	1.98317		
444	"	19	1.87012	1.87011		
438	"	13	1.93841	1.93836		
432	"	7	1.97123	1.97122		Final Standby Value: _____
446	"	21	1.86146	1.86144		

Notes:

DWR

1.97832 1.97835 1.97833

2023-088 Line P salinity labels

05 Sept 2023

1 of 3

280 Sal P16 2023-088 800 m bot 9	436 Sal P22 2023-088 400 m bot 11	301 SAL P16 2023-088 100 m bot 1	348A Sal P18 2023-088 3000 m bot 3	458 SAL P23 2023-088 5 m bot 8	424 SAL P21 2023-088 5 m bot 1	429 Sal P22 2023-088 2500 m bot 4	440 Sal P22 2023-088 175 m bot 15	462A Sal P24 2023-088 3000 m bot 3	273B Sal P16 2023-088 3500 m bot 2
5063 SAL P21 2023-088 Loop m bot 4	484 SAL P25 2023-088 5 m bot 1	354 Sal P18 2023-088 800 m bot 9	406 Sal P20 2023-088 1250 m bot 7	5053 SAL P17 2023-088 Loop m bot 24	404 Sal P20 2023-088 2000 m bot 5	5069 Sal loop 2023-088 Loop m bot 1	462B Sal P24 2023-088 3000 m bot 3	466 Sal P24 2023-088 1250 m bot 7	113B Sal P8 2023-088 800 m bot 5
5023 SAL P5 2023-088 Loop m bot 4	112 Sal P8 2023-088 1000 m bot 4	5008 Sal JF4 2023-088 Loop m bot 1	344 SAL P17 2023-088 5 m bot 22	109B Sal P8 2023-088 2000 m bot 1	350 Sal P18 2023-088 2000 m bot 5	407 Sal P20 2023-088 1000 m bot 8	104 107 SAL P7 2023-088 5 m bot 1	276B Sal P16 2023-088 2000 m bot 5	5065 Sal loop 2023-088 Loop m bot 1
278 Sal P16 2023-088 1250 m bot 7	110 Sal P8 2023-088 1500 m bot 2	113A Sal P8 2023-088 800 m bot 5	133 SAL P9 2023-088 5 m bot 1	351 Sal P18 2023-088 1500 m bot 6	68 SAL P4 2023-088 1000 m bot 4	451 SAL P23 2023-088 2005 m bot 2	275 Sal P16 2023-088 2500 m bot 4	353 Sal P18 2023-088 1000 m bot 8	464 Sal P24 2023-088 2000 m bot 5
105 103 SAL P6 2023-088 5 m bot 1	467 Sal P24 2023-088 1000 m bot 8	5066 SAL P23 2023-088 Loop m bot 12	349 Sal P18 2023-088 2500 m bot 4	5007 Sal JF3 2023-088 Loop m bot 1	66B SAL P4 2023-088 1250 m bot 2	103 SAL P5 2023-088 5 m bot 1	5025 SAL P7 2023-088 Loop m bot 4	296 SAL P16 2023-088 800 m bot 1	279 Sal P16 2023-088 1000 m bot 8
348B Sal P18 2023-088 3000 m bot 3	366 Sal P18 2023-088 25 m bot 21	363 Sal P18 2023-088 100 m bot 18	362 Sal P18 2023-088 125 m bot 17	269 SAL P15 2023-088 5 m bot 22	402 Sal P20 2023-088 3000 m bot 3	465 Sal P24 2023-088 1500 m bot 6	358 Sal P18 2023-088 250 m bot 13	364 Sal P18 2023-088 75 m bot 19	274 Sal P16 2023-088 3000 m bot 3
67 SAL P4 2023-088 1000 m bot 3	365 Sal P18 2023-088 50 m bot 20	372 SAL P20 2023-088 100 m bot 1	403B Sal P20 2023-088 2500 m bot 4	273A Sal P16 2023-088 3500 m bot 2	5087 Sal loop 2023-088 Loop m bot 1	547 SAL P26 2023-088 200 m bot 1	367 Sal P18 2023-088 10 m bot 22	5084 Sal loop 2023-088 Loop m bot 1	361 Sal P18 2023-088 150 m bot 16

2023-088 Line P Salinity Labels 05 Sept 2023 2 of 3

408 Sal P20 2023-088 800 m bot 9	517A Sal P26 2023-088 1500 m bot 7	111 Sal P8 2023-088 1250 m bot 3	513 Sal P26 2023-088 3500 m bot 3	5090 Sal loop 2023-088 Loop m bot 1	93 SAL P4 2023-088 800 m bot 1	405 Sal P20 2023-088 1500 m bot 6	277 Sal P16 2023-088 1500 m bot 6	515 Sal P26 2023-088 2500 m bot 5	5085 Sal loop 2023-088 Loop m bot 1
5086 Sal loop 2023-088 Loop m bot 1	5005 Sal Loop 2023-088 Loop m bot 1	401A Sal P20 2023-088 3500 m bot 2	518 Sal P26 2023-088 1250 m bot 8	370 SAL P19 2023-088 5 m bot 1	5089 Sal loop 2023-088 Loop m bot 1	356 Sal P18 2023-088 400 m bot 11	357 Sal P18 2023-088 300 m bot 12	347 Sal P18 2023-088 3500 m bot 2	5055 Sal loop 2023-088 Loop m bot 1
5093 Sal loop 2023-088 Loop m bot 1	5030 SAL P9 2023-088 Loop m bot 4	463 Sal P24 2023-088 2500 m bot 4	368 Sal P18 2023-088 5 m bot 23	355 Sal P18 2023-088 600 m bot 10	227 Sal P14 2023-088 2000 m bot 4	352 Sal P18 2023-088 1250 m bot 7	221 SAL P13 2023-088 5 m bot 22	138 SAL P11 2023-088 5 m bot 1	403A Sal P20 2023-088 2500 m bot 4
145 Sal P12 2023-088 1250 m bot 6	Sept 6 2023	69 SAL P4 2023-088 800 m bot 5	452 SAL P23 2023-088 2005 m bot 3	395 SAL P20 2023-088 800 m bot 1	276A Sal P16 2023-088 2000 m bot 5	175 SAL P12 2023-088 800 m bot 1	360 Sal P18 2023-088 175 m bot 15	5068 SAL P25 2023-088 Loop m bot 4	230 Sal P14 2023-088 1250 m bot 7
167 SAL P12 2023-088 100 m bot 1	226A Sal P14 2023-088 2500 m bot 3	144B Sal P12 2023-088 1500 m bot 5	5056 SAL P19 2023-088 Loop m bot 4	66A SAL P4 2023-088 1250 m bot 2	228 Sal P14 2023-088 1750 m bot 5	5092 Sal loop 2023-088 Loop m bot 1	461 Sal P24 2023-088 3500 m bot 2	5044 SAL P15 2023-088 Loop m bot 24	5042 SAL P13 2023-088 Loop m bot 24
5043 Sal loop 2023-088 Loop m bot 1	538 SAL P26 2023-088 1500 m bot 1	516 Sal P26 2023-088 2000 m bot 6	147 Sal P12 2023-088 800 m bot 8	143 Sal P12 2023-088 2000 m bot 4	109A Sal P8 2023-088 2000 m bot 1	486 SAL P35 2023-088 5 m bot 1	141A Sal P12 2023-088 3000 m bot 2	359 Sal P18 2023-088 200 m bot 14	514B Sal P26 2023-088 3000 m bot 4
136 SAL P10 2023-088 5 m bot 2	517B Sal P26 2023-088 1500 m bot 7	514A Sal P26 2023-088 3000 m bot 4	226B Sal P14 2023-088 2500 m bot 3	141B Sal P12 2023-088 3000 m bot 2	146 Sal P12 2023-088 1000 m bot 7	225 Sal P14 2023-088 3000 m bot 2	401B Sal P20 2023-088 3500 m bot 2	519 Sal P26 2023-088 1000 m bot 9	5088 Sal loop 2023-088 Loop m bot 1

3.73

Notes: _____