

[illegible]

Autosal Analysis

Net

2009-20 LSSL

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Standby before calibration: 24.6074

CB 10a2

Date: 4 Oct 09

after calibration:

Salinometer

Analyst: Kelly Young/H.M.

Vial Infor.: $K_{15} = 0.99978$

24+6074

Model # 8400B

Bath temp.: 24

Batch # A 150

Serial # 69086

Sample temp.:

Batch Date: 22 MAY 108

Zero: 0.0001-2

Room temp.: 22.5

Cells rinsed with isopropyl + CLR to clear bubble. Rinsed MQ + old std.

Autosal Conductivity Reading

Salinity ppt

Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
Deepwater std #3			1.99784	1.99782	1.99782			
635	031 CB-10a2		1.99652	1.99650				
636			1.99623	1.99621				
637			1.99555	1.99554				looks like sm. bubble is back
638			1.99430	1.99428				
639			1.99355	1.99353				leaky plug
640			1.99287	1.99292	1.99290			
641			1.99232	1.99230				
642			1.99168	1.99172				bubble in 3rd + 4th now.
643			1.99099	1.99101				stopped run due to problems
644			1.98591	1.98595				with bubbles.
645			1.98119	1.98119				NEW CALIBRATION 643/644
646			1.97163	1.97165				
647			1.95065	1.95066				
648			1.93095	1.93094				
649			1.90786	1.90789				
650			1.89701	1.89702				
651			1.88901	1.88901				
652			1.89016	1.89019				
653			1.85422	1.85424				
654			1.85350	1.85350				
655			1.81173	1.81174				
656			1.76642	1.76642				
657			1.65576	1.65575				
658			1.57263	1.57263				

1.99962 1.999663 ↑
P 150Δw³ 1.99785
1.99786

D.W. #3 1.99786 1.99784

Standby before calibration: 24 + 6074								Date: OCT 4/09
after calibration:			Salinometer					Analyst: H.M.
Vial Infor.: K ₁₅ = 0.99978			Model # 840B		Bath temp.: 24		DUPLICATES	
Batch # P150			Serial # 69086		Sample temp.: 22.5			
Batch Date: 22 MAY/08			Zero: 0 + 0001		Room temp.: 22.5			
			Autosal Conductivity Reading				Salinity ppt	
Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
476	024 CB-5	BOT 8	1.99160	1.99163				
489	"	BOT 21	1.79104	1.79104				
485	"	BOT 17	1.89860	1.89858				
510	025 CB-4	BOT 18	1.81150	1.81152				
513	"	BOT 21	1.64958	1.64956				
515	"	BOT 23	1.46154	1.46154				
520	026 CB7	BOT 5	1.99542	1.99544				
528	"	BOT 13	1.98547	1.98547				
539	"	BOT 24	1.50858	1.50859				
545	027 CB8	BOT 6	1.99338	1.99338				
548	"	BOT 9	1.99174	1.99177				
554	"	BOT 15	1.92655	1.92654				
565	028 CB9	BOT 2	1.98524	1.98524				
570	"	BOT 7	1.92631	1.92634				
572	"	BOT 9	1.89453	1.89455				
586	"	BOT 23	1.53695	1.53697				
448	023 CB4	BOT 4	1.99785	1.99789				
455	"	BOT 11	1.99779	1.99782				
465	"	BOT 21	1.98820	1.98820				
588	029 CB9	BOT 2	1.99785	1.99785				
593	"	BOT 7	1.99787	1.99787				
603	"	BOT 17	1.99224	1.99221				
616	030 CB10	BOT 6	1.99296	1.99296				
625	"	BOT 15	1.90589	1.90588				

DW#3- 1.99764 1.99768

Autosomal Analysis

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LSSL

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Δw ST. - 1.99768 1.99770

1.99770

Standby before calibration: 24+6075

Date: Oct 5, 2009.

after calibration:

Salinometer

Analyst: Glenn Cooper

Vial Infor.: K₁₅ = 0.99978

Model # 84008

Bath temp.: 24°C

Lots of little bubbles between the coats of electrodes #1, 2 + #3 (#1 equals bottom electrode)

Batch # PND

Serial # 69086

Sample temp.: 22.5°C

Batch Date: 22/10/08

Zero: 000002

Room temp.: 22.5°C

Autosal Conductivity Reading

Salinity ppt

Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
659	CB-10m; 032		1.99410	1.99409				
660	"		1.99302	1.99308				
661	"		1.99266	1.99268				
662	"		1.99224	1.99224				
663	"		1.99187	1.99187				
664	"		1.99055	1.99053				
665	"		1.98540	1.98544				
666	"		1.98135	1.98137				
667	"		1.97134	1.97133				
668	"		1.95200	1.95200				
669	"		1.93101	1.93105				
670	"		1.90574	1.90604	1.90604			
671	"		1.89598	1.89597				
672	"		1.87995	1.87995				
673	"		1.86773	1.86774				
674	"		1.84877	1.84878				No 675 sample
676	"		1.81579	1.81578				
677	"		1.72165	1.72163				
678	"		1.67127	1.67132	1.67132			
679	"		1.58164	1.58161				
680	"		1.57238	1.57235				
681	"		1.57210	1.57211				
Deepwater St. #3			1.99789	1.99794	1.99792			

Autosal Analysis

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Standby before calibration: 24.6075

CB-11b

Date: 6 Oct 09

after calibration:

Salinometer

Analyst: Kelly Young

Vial Infor.: K₁₅ =

Model # 8400B

Bath temp.: 24

Batch #

Serial # 69086

Sample temp.: 22.1

Batch Date:

Zero: 0.00002

Room temp.: 22.5

4th arm still slow to fill, some bubbles
+3rd

IAPSO run < 24 hr prior by H.M.

Autosal Conductivity Reading

Salinity per

Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
Deepwater std #3			1.99784	1.99785	temp -	19.9	34.9566	reading high, but calc value
730	035 CB-11b		1.99787	- reading	messed up	cell no. 3 not filled	cancelled	acceptable
730	re-read		1.99787	1.99790				may be slightly high
731	035 CB-11b		1.99791	1.99791				
732			1.99787	1.99786				
733			1.99768	1.99769				bubbles on 4th arm
734			1.99715	1.99717				
735			1.99585	1.99584				slowly leaking plug
736			1.99379	1.99379				
737			1.99306	1.99308				
738			1.99242	1.99245				
739			1.99171	1.99172				
740			1.98829	1.98827				
741			1.98027	1.98025				
742			1.97075	1.97075				
743			1.95180	1.95184				
744			1.93040	1.93042				
745			1.90781	1.90782				
746			1.89779	1.89782				
747			1.87899	1.87897				
748			1.86279	1.86280				
749			1.84602	1.84601				
750			1.82409	1.82407				
751			1.76206	1.76206				
752			1.73420	1.73421				
753			1.61403	1.61402				

Autosomal Analysis

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Autosal Analysis

Set 2009-20 LSSL

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Standby before calibration: 24.6074		Salinometer		Date: Oct 8, 2009				
after calibration: 24.6055				Analyst: Glen Cooper				
Vial Infor.: K ₁₅ = 0.99978		Accepted New std reading.	Model # 8400 B	Bath temp.: 24°C	Original Standard setting 90.5 changed to 64.5 Standby = 24.6055			
Batch # P150			Serial # 69096	Sample temp.:				
Batch Date: 2/1/2008			Zero: 10.00002	Room temp.: 22.5°C				
Autosal Conductivity Reading			Salinity ppt					
Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
Calibrated	P150 IAPSO STD					99.9830		Accepted @ 0.000009
IAPSO std	reading		1.99966	1.99975			39.993	
December std #3			1.99763	1.99764				
764	CB-11; 037		1.99769	1.99769				
765	"		1.99769	1.99772				
766	"		1.99754	1.99753				
768	"		1.99646	1.99650				
767	"		1.99694	1.99696				
769	"		1.99553	1.99554				
770	"		1.99369	1.99370				
771	"		1.99288	1.99285				
772	"		1.99203	1.99200				
773	"		1.99147	1.99148				
774	"		1.99018	1.99021				
775	"		1.98590	1.98596	1.98596			
776	"		1.98245	1.98246				
777	"		1.97499	1.97500				
778			1.95830	1.95832				
779			1.93977	1.93978				
780			1.91478	1.91480				
781			1.91151	1.91156				
782			1.89235	1.89236				
783			1.86386	1.86385				
784			1.83484	1.83482				
785			1.76040	1.76044				
786			1.60069	1.60070				
787			1.58084	1.58085				
avg December std #3			1.99756	1.99762	1.99766			

G20
K12
M1

lots of bubbles in between #1, 2, + #3 electrodes. Flushed cell with iso propenal x3 + then air flush cell. All bubbles removed. Flush cell 10x with M.I.I.Q. Ran a new deep water std (next page)

Autosal Analysis

Set

2009-20 LSSL

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Standby: before calibration: 24+6055		Date: 8 Oct 09	
after calibration: 24+6055		Analyst: Glenn Cooper	
Vial Infor.: K ₁₅ = 0.99973	Salinometer	Model # 8400 B	Bath temp.: 24°C
Batch # P150		Serial # 69086	Sample temp.: 22.5°C
Batch Date: 22 Aug 08		Zero: +0.00002	Room temp.: 22.5°C
Autosal Conductivity Reading			Salinity ppt
Sample #	Station Id	Depth m	Remarks
Repetitions	Std #3		
788	CB-126; 038		
789	"		
790	"		
791	"		
792	"		
793	"		
794	"		
795	"		
796	"		
797	"		797/798 out of order in
798	"		salinity curve
799	"		
800	"		
801	"		
802	"		
803	"		
804	"		
805	"		
806	"		
807	"		
808	"		
809	"		
810	"		
811	"		
Repetitions	Std #3		

DUPLICATES

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Autosal Analysis

set 2009-20 LSSL

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Standby before calibration: 24.6055
after calibration:

Date: 9 Oct 09

Analyst: Kelly Young

Vial Infor.: K₁₅ =
Batch #
Batch Date:

Model # 84008
Serial # 69086
Zero: 0.0001
Bath temp.: 24
Sample temp.:
Room temp.: 22.0

Autosal Conductivity Reading								
Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
Deepwater std			1.99759	1.99770	1.99764		34.9530	bouncing around
633	030 CB-10		1.66215	1.66219				
638	031 CB-10a2		1.99426	1.99425				
646	031 CB-10a2		1.97158	1.97160				
653	031 CB-10a2		1.85404	1.85405				
662	032 CB-10a		1.79211	1.79211				
671	032 CB-10a		1.89559	1.89564	1.89565			
678	032 CB-10a		1.67107	1.67112	1.67115			
729	034 CB-61		1.58056	1.58057				
732	035 CB-11b		1.99767	1.99771				
740	035 CB-11b		1.98814	1.98821	1.98817			
752	035 CB-11b		1.73192	1.73195				
768	037 CB-11		1.99648	1.99652	1.99655			
772	037 CB-11		1.99204	1.99204				
783	037 CB-11		1.86387	1.86389				
789	038 CB-12b		1.99769	1.99771				
801	038 CB-12b		1.97012	1.97011				
809	038 CB-12b		1.79419	1.79423				
812	039 CB-16		1.99763	1.99765				
823	039 CB-16		1.98103	1.98104				
833	039 CB-16		1.72187	1.72184				
836	040 PP-7a		1.99766	1.99773	1.99776			leaky plug
846	040 PP-7a		1.99020	1.99024				
858	040 PP-7a		1.62629	1.62632				
Deepwater std			1.99760	1.99762	1.99762		34.9528	

Autosomal Analysis Sheet

2009-20 LSSL

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Standby:		before calibration:		after calibration:		Salinometer		Date: 9 Oct 09		Analyst: Kelly Young	
Vial Infor.:		K ₁₅ =		Batch #		Batch Date:		Model # 8400B		Bath temp.: 24	
								Serial # 69086		Sample temp.: 22.0	
								Zero: 0.0002		Room temp.: 22.0	
										rinsed 3x isopropyl before run to clear bubbles. Flow rate really slow. Rinsed 10x dmo, 5x old std water. - bubbles stay on 4th arm	
Sample #		Station Id		Depth m		Autosal Conductivity Reading		Salinity ppt		Remarks	
						#1 #2 #3 Average		Computed			
Deepwater standard #3						1.99770 1.99775 1.99786		34.9561			
817-1	039 CB16					1.99383 1.99386				salt test	
817-2						1.99380 1.99383					
817-3						1.99386 1.99389					
817-4						1.99378 1.99378					
817-5						1.99381 1.99382					
817-6						1.99378 1.99381					
817-7						1.99383 1.99382					
817-8						1.99383 1.99383					
826-1						1.92551 1.92547					
826-2						1.92550 1.92547					
826-3						1.92559 1.92562					
826-4						1.92566 1.92563					
826-5						1.92583 1.92579					
826-6						1.92576 1.92577					
826-7						1.92574 1.92575					
826-8						1.92626 1.92628				leaky plug	
833-1						1.72171 1.72170					
833-2						1.72164 1.72171 1.72170					
833-3						1.72174 1.72177					
833-4						1.72176 1.72177					
833-5						1.72198 1.72197					
833-6						1.72206 1.72211 1.72212				leaky plug	
833-7						1.72198 1.72205					
833-8						1.72188 1.72197 1.72194 1.72193				bouncing around	

Autosal Analysis

set 2009-20 LSSL

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Standby before calibration: 24.6055

after calibration:

Date: 9 Oct 09

Analyst: Kelly Young

Vial Infor.: K₁₅ =

Batch #

Batch Date:

Model # 8400B

Bath temp.: 24

Serial # 69086

Sample temp.:

Zero: 0.0003

Room temp.: 22.5

bubbles

Autosal Conductivity Reading

Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
Deepwater std # 3			1.99772	1.99768	1.99772			
836	040 PP-7a		1.99762	1.99761				
837			1.99770	1.99774	1.99778			
838			1.99761	1.99756	1.99759			reading bouncing around
839			1.99703	1.99706				
840			1.99580	1.99584				
841			1.99407	1.99408				
842			1.99340	1.99338				
843			1.99259	1.99263				
844			1.99212	1.99216				
845			1.99145	1.99145				
846			1.99020	1.99021				
847			1.98151	1.98156	1.98157			
848			1.97072	1.97073				
849			1.95386	1.95390				
850			1.92885	1.92889				
851			1.90718	1.90711	1.90715			
852			1.89603	1.89600				
853			1.88128	1.88130				
854			1.86214	1.86218				
855			1.84536	1.84536				
856			1.81048	1.81049				
857			1.79100	1.79101				
858			1.62630	1.62631				
859			1.62314	1.62317				

Autosal Analysis Sheet

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Standby	before calibration: 24: 6056
	after calibration:

Date: Oct 9 / 2009

Analyst: Glenn Cooper

Vial Infor.:	K ₁₅ = .99978
	Batch # P150
	Batch Date: 22/1/2008

Model #	8400B	Bath temp.:	24
Serial #	69036	Sample temp.:	22.5
Zero:		Room temp.:	~22.5

Bubbles (small) in between electrode coils.

Autosal Conductivity Reading

Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
Deepwater Stn #3			1.99785	1.99785				Within 150 if all previous runs.
860	PP-7a; 841		1.98214	1.98220				
861	"		1.97881	1.97880				
863	"		1.97318	1.97320				No 862 sample
864	"		1.96853	1.96850				
865	"		1.96482	1.96494	1.96509			Very strong a's, unreliable.
866	"		1.96113	1.96116				
867	"		1.95644	1.95642				
868	"		1.94996	1.94995				
869	"		1.93644	1.93644				
870	"		1.92068	1.92072				
871	"		1.90086	1.90087				
872	"		1.88931	1.88929				
873	"		1.87941	1.87940				
874	"		1.87077	1.87072				
875	"		1.86445	1.86444				
876	"		1.85000	1.85000				
877			1.83014	1.83015				
878			1.79065	1.79065				
879			1.75330	1.75330				
880			1.67070	1.67070				
881			1.62843	1.62842				
882			1.62393	1.62396				End of cruise.

Autosal Analysis

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Standby before calibration: 24-6056

after calibration:

Date: Oct 9/2009

Analyst: Glen Cooper

Vial Infor.: K₁₅ = 0.99978

Batch # P150

Batch Date: 22 May 20

Model # 8400B

Bath temp.: 24

Serial # 67086

Sample temp.: 22.5

Zero: +0.00001

Room temp.: 22.5

Small bubbles between electrode coils on electrodes (#1, 2, & 3) #1 electrode is fastest right electrode in cell

Autosal Conductivity Reading

Sample #	Station Id	Depth m	#1	#2	#3	Average	Computed	Remarks
883	08-15; 042		1.99750	1.99752				
884	"		1.99768	1.99770				
885	"		1.99768	1.99768				
886	"		1.99750	1.99754				
887	"		1.99696	1.99695				
888	"		1.99563	1.99571	1.99574			
889	"		1.99396	1.99395				
890	"		1.99308	1.99309				
891	"		1.99226	1.99227				
892	"		1.99146	1.99148				
893	"		1.99063	1.99064				
894	"		1.98589	1.98592				Plug not fully inserted + cap not tightened
895	"		1.98046	1.98046				
896	"		1.97049	1.97053				
897	"		1.95255	1.95258				
898	"		1.92898	1.92898				Plug not fully inserted
899	"		1.90693	1.90695				
900	"		1.89449	1.89448				
901	"		1.87925	1.87925				
902	"		1.85455	1.85454				
903	"		1.83616	1.83618				
904	"		1.79297	1.79297				
905	"		1.71658	1.71654				
906	"		1.67542	1.67541				
			1.59048	1.59048				End of case

get

2009-20 LSSL

LSSL

4-

Standby

after calibration:

Date: Oct 9 / 2007

Analyst: Glen Lopez

Vial Infor.: $K_{15} = 0.95578$

Model # 8400 B

Bath temp.: 24°C

Batch # 19520

Serial #

Sample temp.: ~22.5°C

Batch Date: 22 May 08

Zero: + 0.00002

Room temp.: 22 °C

Autosomal Conductivity Reading

[illegible]