

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments		Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Cruise Number:	2023-029		1		1	1490	10.9	0	Voltage Above Calibration - ANOMALY		1					
Event:	/		2		2	1445	10.7	0.704			2					
Station:	SI		3		3	179	11.0	0.921			3					
Event Date (Local):	2023-10-08		4		4	2019	10.9	0.724			4					
Analysis Date (Local):	Oct 8, 2023		5		5A	162	11.3	2.110	Aborted run - dispenser not in sample - RECALIBRATION		5	75B	1422	11.4	2.104	
Analyst:	DC		6		6	438	11.9	3.273			6					
Skidization Date (Local):	Oct 8, 2023		7		7A	163	12.1	3.415			7	7B	1421	12.1	3.416	
KIO ₃ N:	0.01183151		8		8	94	12.2	3.907			8					
Standard Titer:	0.4944		9		9	462	12.4	3.987			9					
Blank Titer:	0.000394		10		10	3048	12.5	4.254			10					
THIO N:	0.239627		11		11	1466	12.7	5.258			11					
Sample Flask Water Seal?	Yes		12		12	166	13.3	7.584	Ran out of OROCE		12					
Reagent Change?	MnCl ₂		13						Ran after Sample 1, to		13					
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH		14						Analyze with Temperature correction		14					
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄		15								15					
	KIO ₃		16								16					
	THIO		17								17					
Notes:			18								18					
			19								19					
			20								20					
			21								21					
			22								22					

Swallow.xlsx

1

OXY

SI

2023-029

OXY

SI

200 m

bot 1

2

OXY

SI

2023-029

OXY

SI

125 m

bot 2

3

OXY

SI

2023-029

OXY

SI

100 m

bot 3

4

OXY

SI

2023-029

OXY

SI

75 m

bot 4

5A

OXY

SI

2023-029

OXY

SI

75 m

bot 5

5B

OXY

SI

2023-029

OXY

SI

75 m

bot 6

6

OXY

SI

2023-029

OXY

SI

50 m

bot 7

7A

OXY

SI

2023-029

OXY

SI

40 m

bot 8

7B

OXY

SI

2023-029

OXY

SI

40 m

bot 9

8

OXY

SI

2023-029

OXY

SI

30 m

bot 10

9

OXY

SI

2023-029

OXY

SI

20 m

bot 11

10

OXY

SI

2023-029

OXY

SI

10 m

bot 12

11

OXY

SI

2023-029

OXY

SI

5 m

bot 13

12

OXY

SI

2023-029

OXY

SI

0 m

bot 14

**Institute of Ocean Sciences
Water Properties Group**



Last Updated: December 2019

Bottle integrity: First test the top vent (V) by opening the spigot (S) then test the spigot by opening the vent.

	bot 1	bot 8	bot 9	bot 10	bot 11
Mark x in one appropriate column if either fails the integrity check and explain the reason below.					

spigot (5) then test the spigot by opening the vent. Mark x in ure appropriate column if either fails the integrity check and explain the

bot 9

bot 10

bot 11

Dissolved Oxygen Analysis Log Sheet

Last Updated: December 2019

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Cruise Number:	2023-029		1		29	2086	8.6	1.7169		1					
Event:	6		2		30	919	8.5	1.249		2					
Station:	75		3		31	3008	8.7	1.594		3					
Event Date (Local):	2023-10-09		4		32	2069	8.8	1.975		4					
Analysis Date (Local):	2023-10-09		5		33	3132	8.9	1.028	-bad looking curve-over-thrust	5					
Analyst:	D.C		6		34A	611	9.1	2.340		6	34B	925	9.2	1.861	Over-thrust
Stratization Date (Local):	2023-10-08		7		35A	1481	10.0	4.824	-bad looking curve.	7	35B	149	10.1	2.822	
KIO ₃ N:	0.0119315		8		36	3164	10.2	3.122		8					
Standard Titer:	0.494434		9		37	3129	10.4	3.359		9					
Blank Titer:	0.000394		10		38	121	10.6	3.601		10					
THIO N:	0.239627		11		39	2056	11.1	4.495		11					
Sample Flask Water Seal?	Yes		12		40	3035	11.1	4.696	possible problem with Al/Nad	12					
Reagent Change?	No		13		41	144	11.1	4.706		13					
(Please circle reagent that was changed prior to sampling and standardization)	MnCl ₂		14		42	3091	11.2	4.697		14					
NOTE NEW BATCH IN LOG BOOK	NaI/NaOH		15							15					
	H ₂ SO ₄		16							16					
	KIO ₃		17							17					
	THIO		18							18					
Notes:			29							20					
Cap for NaI/NaOH			OXY		30					31					
Air locked & changed.			75		OXY					OXY					
Sword Fish.xlsx			2023-029		75					2023-029					
			Bot-5 m		200 m					175 m					
			bot 1		bot 2					bot 3					
										bot 4					
										bot 5					
										bot 6					
										bot 6					
										bot 7					
										bot 7					
										bot 8					
										bot 9					
										bot 10					

Bottle integrity: First test the top vent (V) by opening

bot (C) then test the spigot by opening

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information				OXY-1 Comments															
Cruise Number:	2023-029	Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)							Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Event:	10	1		43	3138	8.8	1.654							1					
Station:	72	2		44	1312	8.9	1.649							2					
Event Date (Local):	2023-10-09	3		45A	127	8.8	1.641							3	45B	1055	8.9	1.638	
Analysis Date (Local):	2023-10-09	4		46	2095	8.9	1.550							4					
Analyst:	MJS	5		47A	673	9.2	1.881							5	47B	985	9.3	1.886	
Standardization Date (Local):	8 Oct 2013	6		48	631	9.9	2.396							6					
KIO ₃ N:	0.0118315	7		49	3023	10.4	3.140							7					
Standard Titer:	0.4944	8		50	1309	10.7	3.253							8					
Blank Titer:	0.0004	9		51	3192	10.9	3.485							9					
THIO N:	0.239627	10		52	190	11.1	3.962							10					
Sample Flask Water Seal?	Yes	11		53	3057	11.2	4.029							11					
Reagent Change?	MnCl ₂	12		54	1306	11.3	4.077							12					
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH	13		55	141	11.4	4.367							13					
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄	14												14					
	KIO ₃	15		43	44	45A	45B	46	47A	47B	48	49	50	51	52	53	54	55	
	THIO	16		OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	
		17		72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	
		18		2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	
		19		Bot-5	175 f	150 m	150 r	125 f	100 r	100 m	75 r	50 m	40 m	30 m	20 m	10 m	5 m	0 m	
		20		bot	bot	bot 3	bot	bot	bot 4	bot 5	bot	bot	bot 8	bot 9	bot 10	bot 11	bot 12	bot 13	
Notes:		21																	
Shark.xlsx		22																	
		23																	
		24																	

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information				Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments	
Cruise Number:	2023-029	1		57	1490	9.3	1.568				1						
Event:	13	2		58	1445	9.2	1.564				2						
Station:	69	3		59	179	9.2	1.573				3						
Event Date (Local):	2023-10-09	4		60	2019	9.2	1.575				4						
Analysis Date (Local):	9 Oct 2023	5		61A	162	9.5	1.608				5	61B	1422	9.5	1.602		
Analyst:	WJ3	6		62A	438	10.7	3.189				6	62B	163	10.7	3.186		
Standardization Date (Local):	9 Oct 2023	7		63	1421	10.8	3.461				7						
KIO ₃ N:	0.4944	8		64	94	11.0	3.555			1483 Residual 11.1	8						
Standard Titer:		9		65	462	11.2	3.762				9						
Blank Titer:	0.0004	10		66	3048	11.3	3.819			996 Residual	10						
THIO N:	0.22922	11		67	1466	11.5	4.066				11						
Sample Flask Water Seal?	Yes	12		68	166	11.5	4.155				12						
Reagent Change?	MnCl ₂	14								Residual Residual Sample	13						
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH	15								TO AUTOMATIZE 9m + 90s	14						
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄	16		57	58	59	60	61A	61B	62A	62E	63	64	65	66	67	68
	KIO ₃	17		OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY
	THIO	18		69	69	69	69	69	69	69	69	69	69	69	69	69	69
Notes:		19		2023-0	2023-02	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0
		20		Bot-5	150 m	125 m	100 m	75 m	75 m	50 m	50 m	40 m	30 m	20 m	10 m	5 m	0 m
Swallow.xlsx		21		bot 1	bot 2	bot 3	bot 4	bot 5	bot 6	bot 7	bot 8	bot 9	bot 10	bot 11	bot 12		
Some Residual		22															
DIFFERENTIAL-SEC		23															
NOTE Bulk		24															

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

**Institute of Ocean Sciences
Water Properties Group**



Last Updated: December 2019

Cruise and Analysis Information	Misk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)		OXY-1 Comments	Misk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)		OXY-2 Comments
Cruise Number:	2023-029	1	69	3138	9.4	1.717			1						
Event:	16	2	70	1312	9.4	1.746			2						
Station:	adcp	3	71	127	9.9	1.841			3						
Event Date (Local):	2023-10-09	4	72	1055	10.7	2.943			4						
Analysis Date (Local):	2023-10-10	5	73	2095	11.1	3.337			5						
Analyst:	DE	6	74	673	11.2	3.437			6						
Standardization Date (Local):	2023-10-10	7	75	985	11.4	3.650			7						
KIO ₃ N:	0.0118315	8	76	631	11.8	3.936			8						
Standard Titer:	0.4941642	9	77A	3023	12.1	4.479			9	77B	1309	12.1	4.461		
Blank Titer:	0.000122	10	78	3192	12.1	4.502			10						
THIO N:	0.239514	11							11						
Sample Flask Water Seal?	(Yes) No	12							12						
Reagent Change?	MnCl ₂	13							13						
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH	14							14						
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄	15							15						
	KIO ₃	16							16						
	THIO	17							17						
		18							18						
		19							19						
Notes:	69	70	71	72	73	74	75	76	77A	77B	78				
Shark.xlsx	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp	OXY adcp				
Bottle integrity: First test ure cap with	bot 1	bot 2	bot 3	bot 4	bot 5	bot 6	bot 7	bot 8	bot 9	bot 9	bot 10				

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments		
Cruise Number: 2023-029			1		80	909	9.5	1.777		1							
Event: 20			2		81A	1495	9.6	2.000		2	81B	180	9.6	2.000			
Station: 65			3		82	3065	9.9	2.226		3							
Event Date (Local): 2023-10-09			4		83	1223	11.0	3.354		4							
Analysis Date (Local): 2023-10-10			5		84	3049	11.3	3.587		5							
Analyst: D.C.			6		85	3029	11.4	3.608		6							
Stdization Date (Local): 2023-10-10			7		86	136	11.6	3.720		7							
KIO ₃ N: 0.0118315			8		87	3076	11.8	3.855		8							
Standard Titer: 0.4941642			9		88	1407	11.8	3.925		9							
Blank Titer: 0.000122			10		89	998	11.9	3.979		10							
THIO N: 0.239514			11							11							
Sample Flask Water Seal? ☒ Yes			12							12							
Reagent Change? No			13							13							
(Please circle reagent that was changed prior to sampling and standardization) NOTE NEW BATCH IN LOG BOOK			14							14							
			15							15							
			16							16							
			17							17							
LOG BOOK			18							18							
Notes:			19							19							
80			81A	81B	82	83	84	85	86	87	88	89					
Loch Ness.xlsx			OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY				
65			65	65	65	65	65	65	65	65	65	65	65				
2023-029			2023-029	2023-029	2023-029	2023-029	2023-029	2023-029	2023-029	2023-029	2023-029	2023-029	2023-029				
Bot-5 m			100 m	100 m	75 m	50 m	40 m	30 m	20 m	10 m	5 m	0 m					
bot 1			bot 2	bot 2	bot 3	bot 4	bot 5	bot 6	bot 7	bot 8	bot 9	bot 10					
Bottle integrity:																	

in this in the comments column.

Last Updated: December 2015



105

[illegible]

Dissolved Oxygen Analysis Log Sheet

Last Updated: December 2019

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments					
Cruise Number:	2023-029		1		109	909	10.6	2.699		1										
Event:	32		2		110	1495	10.7	2.831		2										
Station:	59		3		111	180	10.7	2.912		3										
Event Date (Local):	2023-10-10		4		112	3065	10.9	3.096		4										
Analysis Date (Local):	10 Oct 2023		5		113	1223	11.0	3.167		5										
Analyst:	MS		6		114	3049	11.0	3.233		6										
Stratization Date (Local):	10 Oct 2023		7		115	3029	11.4	3.581		7										
KIO ₃ N:	0.0118315		8		116A	136	11.6	3.933		8	116B	3076	11.6	3.928						
Standard Titer:	0.49412		9		117	1407	11.9	4.320		9										
Blank Titer:	0.0001		10		118	998	11.9	4.344		10										
THIO N:	0.239514		11		119	18	11.9	4.391		11										
Sample Flask Water Seal?	Yes		12		120A	933	12.0	4.469		12	120B	425	12.0	4.463						
Reagent Change?	MnCl ₂		13		121	181	12.1	4.621		13										
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH		14		122	928	12.1	4.642		14										
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄		15		109	110	111	112	113	114	115	116A	116B	117	118	119	120	120E	121	122
	KIO ₃		16		OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY
	THIO		17		59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
			18		2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02
			19		Bot 5 m	200 m	175 m	150 m	125 m	100 m	75 m	50 m	50 m	40 m	30 m	20 m	10 m	10 m	5 m	0 m
			20		bot 1	bot 2	bot	bot 4	bot 5	bot	bot 7	bot	bot 8	bot 9	bot	bot 1	bot 1	bot 12	bot 1	bot 14
Notes:			21																	
			22																	
			23																	
			24																	

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

Loch Ness.xlsx

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Last Updated: December 2019

Cruise and Analysis Information				Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments		
Cruise Number:	2023-029	1		124	3078	10.9	29.04				1							
Event:	34	2		125	966	10.9	29.07				2							
Station:	56	3		126	1301	10.9	29.21				3							
Event Date (Local):	2023-10-10	4		127	906	10.9	29.77				4							
Analysis Date (Local):	10 Oct 2023	5		128	3055	11.2	3.232				5							
Analyst:	MB	6		129A	160	11.3	3.295				6	129B	1053	11.3	3.292			
Standardization Date (Local):	10 Oct 2023	7		130A	2063	11.5	3.492				7	130B	3088	11.5	3.504			
KIO ₃ N:	0.018315	8		131	622	11.6	3.639				8							
Standard Titer:	0.44942	9		132	1406	11.5	3.608				9							
Blank Titer:	0.0001	10		133	1317	11.6	3.672				10							
THIO N:	0.235514	11		134	1484	11.6	3.749				11							
Sample Flask Water Seal?	Yes	12		135	3036	11.7	3.874				12							
Reagent Change?	No	13		136	110	11.7	3.896				13							
(Please circle reagent that was changed prior to sampling and standardization) NOTE NEW BATCH IN LOG BOOK	MnCl ₂ NaI/NaOH H ₂ SO ₄ KIO ₃ THIO	14		137	3018	11.8	3.856				14							
Notes:		15	124	125	126	127	128	129A	129B	130A	130B	131	132	133	134	135	136	137
		16	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY
		17	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
		18	2023-0:	2023-0:	2023-0:	2023-0:	2023-0:	2023-02:	2023-02:	2023-02:	2023-02:	2023-0:	2023-0:	2023-02:	2023-02:	2023-0:	2023-02:	2023-029
		19	Bot 5 r	200 f	175 m	150 r	125 r	100 m	100 m	75 m	75 m	50 m	40 r	30 m	20 m	10 m	5 m	0 m
		20	bot 1	bot	bot 3	bot	bot	bot 6	bot 6	bot 7	bot 7	bot	bot	bot 10	bot 1	bot 12	bot 13	bot 14
Bender.xlsx		21																
		22																
		23																
		24																

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Cruise Number: 2023-029			1		139	3078	11.3	3.371		1					
Event: 42			2		140	966	11.4	3.420		2					
Station: 46			3		141A	1301	11.5	3.614		3	141B	906	11.5	3.614	
Event Date (Local): 2023-10-11			4		142A	3055	11.6	3.685		4	142B	160	11.6	3.616	
Analysis Date (Local): 2023-10-11			5		143	1053	11.7	3.752		5					
Analyst: D.C.			6		144	2063	11.6	3.913		6					
Standardization Date (Local): 2023-10-10			7		145	3088	11.5	3.681		7					
KIO ₃ N: 0.0118315			8		146	622	11.8	3.657		8					
Standard Titer: 0.4941642			9		147	1406	11.6	3.930		9					
Blank Titer: 0.000122			10		148	1317	11.5	3.912		10					
THIO N: 0.239514			11		149	1484	12.2	4.859		11					
Sample Flask Water Seal? ☒ Yes			12		150	3036	12.5	5.124		12					
Reagent Change? ☐ No			13		149		150			13					
(Please circle reagent that was changed prior to sampling and standardization)			14		OXY		OXY			14					
NaI/NaOH			15		46		46			15					
H ₂ SO ₄			16		2023-029		2023-029			16					
NOTE NEW BATCH IN LOG BOOK			17		5 m		0 m			17					
THIO			18		bot 11		bot 12			18					
Notes:			19		139		140		141A	19					
			20		OXY		OXY		141B	20					
Bender.xlsx			21		46		46		46	21					
			22		2023-029		2023-029		2023-029	22					
			23		Bot-5 m		150 m		125 m	23					
			24		bot 1		bot 2		bot 3	24					

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot 1, opening the

bot 1
bot 2
bot 3
bot 4
bot 5
bot 6
bot 7
bot 8
bot 9
bot 10

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Last Updated: December 2019

Cruise and Analysis Information										Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments								
Cruise Number:	2023-029										1		151	909	11.1	ABSENT	2 STRA GAGES, CANNOT NOT RECORD	1												
Event:	46										2		152	1495	11.1	2.844		2												
Station:	42										3		153	180	11.1	2.943		3												
Event Date (Local):	2023-10-11										4		154	3065	11.1	3.037		4												
Analysis Date (Local):	11 OCT 2023										5		155	1223	11.3	3.094		5												
Analyst:	MB										6		156	3049	11.5	3.335	6													
Standardization Date (Local):	10 OCT 2023										7		157	3029	11.5	3.549	7													
KIO ₃ N:	0.0118315										8		158	136	11.8	3.604	8													
Standard Titer:	0.1947										9		159	3076	11.8	3.653	9													
Blank Titer:	0.0001										10		160	1407	11.4	3.351	WAS TITRATED TO 114.1	10												
THIO N:	0.75514										11		161A	998	11.3	3.358		11	161B	18	11.3	3.358	Too Good							
Sample Flask Water Seal?	Yes										12		162	933	11.0	3.420		12												
Reagent Change?	MnCl ₂										13		163	425	11.0	3.498	13													
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH										14		164	181	11.4	3.774	14													
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄										15		165	928	12.0	4.208	15													
	KIO ₃										16		166A	3051	12.8	5.260	16	166B	3146	12.8	5.260	AMAZING								
	THIO										17		151	152	153	154	155	156	157	158	159	160	161A	161B	162	163	164	165	166	
Notes:											18		OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY		
											19		42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
											20		2023-029	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	
											21		Bot-5 m	300 m	250 m	200 m	175 m	150 m	125 m	100 m	75 m	50 m	40 m	40 m	30 m	20 m	10 m	10 m	10 m	
											22		bot 1	bot 2	bot 3	bot 4	bot 5	bot 6	bot 7	bot 8	bot 9	bot 10	bot 11	bot 12	bot 13	bot 14	bot 15	bot 16		
Loch Ness.xlsx											23																			
											24																			

Bottle integrity: First test the top vent (V) by opening it

the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

166B
OXY
42
2023-029
0 m
bot 16

Dissolved Oxygen Analysis Log Sheet
Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information				OXY-1 Comments				OXY-2 Comments			
Cruise Number:	2023-029	Misk ID	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	Misk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)
Event:	53	1	168	3078	11.4	2.900	1				
Station:	39	2	169	966	11.3	2.943	2				
Event Date (Local):	2023-10-11	3	170	1301	11.3	3.015	3				
Analysis Date (Local):	11 Oct 2023	4	171	906	11.1	3.076	4				
Analyst:	MRB	5	172A	3055	11.4	3.037	5	172B	160	11.5	3.033
Standardization Date (Local):	10 Oct 2023	6	173	1053	11.5	3.029	6				
KIO ₃ N:	0.018315	7	174	2063	11.4	3.077	7				
Standard Titer:	0.1442	8	175	3088	11.4	3.026	8				
Blank Titer:	0.0001	9	176	622	11.5	3.132	9				
THIO N:	0.239514	10	177	1406	11.8	3.595	10				
Sample Flask Water Seal?	Yes	11	178	1317	11.2	3.484	11				
Reagent Change?	No	12	179	1484	11.0	3.538	12				
(Please circle reagent that was changed prior to sampling and standardization)		13	180	3036	11.3	3.895	13				
NOTE NEW BATCH IN LOG BOOK		14	181	110	12.0	4.461	14				
		15	182	3018	14.0	5.990	15				
		16	183	1409	14.2	6.133	16				
		17	184A	156	14.2	6.142	17	184B	1335	14.3	6.143
Notes:		18	168	169	170	171	172A	172B	173	174	175
		19	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY
		20	39	39	39	39	39	39	39	39	39
Bender.xlsx		21	2023-0	2023-0	2023-0	2023-0	2023-02	2023-02	2023-0	2023-0	2023-0
		22	Bot-5	350 r	300 r	250 r	200 m	200 m	175 r	150 r	125 m
		23	bot 1	bot 1	bot 1	bot 1	bot 5	bot 5	bot 1	bot 8	bot 8
		24					bot 1	bot 10	bot 1	bot 1	bot 1

Bottle integrity: First test the top vent (V) by of 184A OXY 39 2023-029 0 m bot 17

then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments 184B OXY 39 2023-029 0 m bot 17

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Last Updated: December 2019

Cruise and Analysis Information				OXY-1 Comments										OXY-2 Comments									
Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)													
1		193	3078	11.1	2.902	1																	
2		194A	966	11.1	2.959	2	194B	1301	11.1	2.954													
3		195	906	10.9	3.062	3																	
4		196	3055	11.2	3.057	4																	
5		197	160	11.3	3.060	5																	
6		198	1053	11.3	3.122	6																	
7		199	2063	11.5	3.143	7																	
8		200	3088	11.5	3.022	8																	
9		201	622	11.3	3.148	9																	
10		202	1406	10.9	3.388	10																	
11		203	1317	11.0	3.607	11																	
12		204	1484	11.3	3.821	12																	
13		205	3036	11.8	4.351	13																	
14		206	110	13.3	5.563	14																	
15		207	3018	13.8	6.029	15																	
16		208A	1409	14.0	6.138	16	208B	156	14.0	6.141													
17	193	194A	194B	195	196	197	198	199	200	201	202	203	204	205	206	207							
18	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY							
19	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27							
20	2023-02-1	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02	2023-02							
21	bot 5 m	300 m	300 m	250	200 m	175 m	150 m	125 m	100 m	75 m	50 m	40 m	30 m	20 m	10 m	5 m							
22	bot 1 208A	bot 2 208B	bot 2	bot 1	bot 4	bot 5	bot 6	bot 7	bot 1	bot 3	bot 10	bot 11	bot 11	bot 11	bot 14	bot 15							
23	OXY	OXY																					
24	27	27																					

Bottle integrity: First test the top vent (V) by opening the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

2023-029 2023-029
0 m 0 m
bot 16 bot 16

**Institute of Ocean Sciences
Water Properties Group**



Last Updated: December 2015

Cruise and Analysis Information									
Cruise Number:	2023-029								
Event:	65								
Station:	2								
Event Date (Local):	2023-10-12								
Analysis Date (Local):	2023-10-12								
Analyst:	DE								
Stdization Date (Local):	2023-10-12								
KIO ₃ N:	0.6118315								
Standard Titer:	0.4941608								
Blank Titer:	0.0000222								
THIO N:	0.239501								
Sample Flask Water Seal?	Yes								
Reagent Change?	No								
(Please circle reagent that was changed prior to sampling and standardization)	MnCl ₂								
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄								
	KIO ₃								
	THIO								
Notes:									
Bender.xlsx									
Bottle integrity: First test the top vent (V, bot-5 m, bot 1									

**Institute of Ocean Sciences
Water Properties Group**



Last Updated: December 2019

Cruise and Analysis Information					Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Cruise Number:	2023-029				1		230	909	10.5	3.640		1					
Event:	67				2		231	1495	10.5	3.085		2					
Station:	3				3		232	180	10.3	3.214		3					
Event Date (Local):	2023-10-12				4		233	3065	10.7	3.151		4					
Analysis Date (Local):	2023-10-12				5		234	1223	11.2	3.028		5					
Analyst:	OC				6		235A	3049	11.1	3.093		6	235B	3029	11.1	3.090	
Standardization Date (Local):	2023-10-12				7		236	136	11.2	2.968	return - forgot display	7					
KIO ₃ N:	0.0118315				8		237	3076	11.0	3.005		8					
Standard Titer:	0.04941608				9		238	1407	10.6	3.108		9					
Blank Titer:	-0.00000222				10		239	998	11.0	3.917		10					
THIO N:	0.239501				11		240	18	11.2	4.114		11					
Sample Flask	Yes				12		241	933	11.4	4.245		12					
Water Seal?	No				13		242A	425	11.9	4.683		13	242B	181	11.9	4.686	
Reagent Change?	MnCl ₂				14		243	928	13.0	5.582		14					
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH				15		244	3051	13.1	5.125		15					
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄				16		245	3146	13.1	5.197		16					
	KIO ₃				17							17					
	THIO				18							18					
Notes:					19							19					
					20							20					
					21							21					
					22							22					
					23							23					
					24							24					
					25							25					
					26							26					
					27							27					
					28							28					
					29							29					
					30							30					
					31							31					
					32							32					
					33							33					
					34							34					
					35							35					
					36							36					
					37							37					
					38							38					
					39							39					
					40							40					
					41							41					
					42							42					
					43							43					
					44							44					
					45							45					
					46							46					
					47							47					
					48							48					
					49							49					
					50							50					
					51							51					
					52							52					
					53							53					
					54							54					
					55							55					
					56							56					
					57							57					
					58							58					
					59							59					
					60							60					
					61							61					
					62							62					
					63							63					
					64							64					
					65							65					
					66							66					
					67							67					
					68							68					
					69							69					
					70							70					
					71							71					
					72							72					
					73							73					
					74							74					
					75							75					
					76							76					
					77							77					
					78							78					
					79							79					
					80							80					
					81							81					
					82							82					
					83							83					
					84							84					
					85							85					
					86							86					
					87							87					
					88							88					
					89							89					
					90							90					
					91							91					
					92							92					
					93							93					
					94							94					
					95							95					
					96							96					
					97							97					
					98							98					
					99							99					
					100							100					
					101							101					
					102							102					
					103							103					
					104							104					
					105							105					
					106							106					
					107							107					
					108							108					
					109							109					
					110							110					
					111							111					
					112							112					
					113							113					
					114							114					
					115							115					
					116							116					
					117							117					
					118							118					
					119							119					
					120							120					
					121							121					
					122							122					
					123							123					
					124							124					
					125							125					
					126							126					
					127							127					
					128							128					
					129							129					
					130							130					
					131							131					
					132							132					
					133							133					
					134							134					
					135							135					
					136							136					
					137							137					
					138							138					
					139							139					
					140							140					
					141							141					
					142							142					
					143							143					
					144							144					
					145							145					
					146							146					
					147							147					
					148							148					
					149							149					
					150							150					
					151							151					
					152							152					
					153							153					
					154							154					
					155							155					
					156							156					
					157							157					
					158							158					
					159												

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information										Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments										Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Cruise Number:	2023-029										1		246	3078	16.7	3.101									1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Last Updated: December 2019

Cruise and Analysis Information				OXY-1 Comments				OXY-2 Comments					
Cruise Number:	2023-029	Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	
Event:	74	1		259A	909	10.4	3.03	1	259B	1495	10.5	3.000	
Station:	9	2		260	180	10.4	3.51	2					
Event Date (Local):	2023-10-12	3		261	3065	10.6	2.979	3					
Analysis Date (Local):	12 Oct 2023	4		262A	1223	10.6	2.962	4	262B	3049	10.6	2.958	
Analyst:	MB	5		263	3029	10.7	3.354	5					
Standardization Date (Local):	12 Oct 2023	6		264	136	11.4	4.023	6					
KIO ₃ N:	0.0118315	7		265	3076	11.5	4.123	7					
Standard Titer:	0.49412	8		266	1407	11.8	4.543	8					
Blank Titer:	0.000	9		267	998	12.0	4.681	9					
THIO N:	0.739561	10		268	18	12.0	4.735	10					
Sample Flask Water Seal?	Yes	11		269	933	12.2	4.819	11					
Reagent Change?	MnCl ₂	12		270	425	12.7	5.151	12					
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH												
NOTE NEW BATCH IN LOG BOOK	KIO ₃												
	THIO												
Notes:													
Loch Ness.xlsx													

2023-02

2023-0

2023-0

2023-0

2023-02

2023-02

2023-0

2023-0

2023-02

2023-02

2023-0

2023-0

2023-0

2023-029

9

9

9

9

9

9

9

9

9

9

9

9

9

9

Bot-5 n

Bot-5

150 n

125 n

100 n

100 m

75 m

50 n

40 m

30 m

20 m

10 n

5 r

0 m

bot 1

bot

bot 2

bot 3

bot 4

bot 4

bot 5

bot

bot 7

bot 8

bot 9

bot 11

bot

bot 12

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Last updated: December 2019

Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Cruise Number: 2023-029			1		271	3078	10.6	3.144		1					
Event: 78			2		272	966	10.5	3.217	OT	2					
Station: 12			3		273	1301	10.6	3.22		3					
Event Date (Local): 2023-10-12			4		274A	906	10.5	3.196		4	274B	3055	10.6	3.194	
Analysis Date (Local): 12 Oct 2023			5		275	160	10.7	3.158		5					
Analyst: MB			6		276	1053	10.8	3.139		6					
Skidization Date (Local): 12 Oct 2023			7		277	2063	10.9	3.010		7					
KIO ₃ N: 0.0118315			8		278	3088	10.9	3.006		8					
Standard Titer: 0.4942			9		279	622	10.6	3.018		9					
Blank Titer: 0.0000			10		280	1406	11.0	3.528		10					
THIO N: 0.239561			11		281	1317	11.5	3.991		11					
Sample Flask Water Seal? Yes			12		282	1484	12.1	4.780		12					
Reagent/Change? No			13		283	3036	13.0	5.440		13					
(Please circle reagent that was changed prior to sampling and standardization)			14		284	110	13.5	5.744		14					
NOTE NEW BATCH IN LOG BOOK			15		285A	3018	13.8	5.993		15	285B	1409	13.8	5.995	
H ₂ SO ₄			16		286	156	13.9	6.013		16					
KIO ₃			17							17					
THIO			18		271	272	273	274A	274B	275	276	277	278	279	280
Notes:			19	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY
			20	12	12	12	12	12	12	12	12	12	12	12	12
			21	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01	2023-01
Bender.xlsx			22	bot 5 i	300 r	250 n	200 r	200 m	175 r	150 m	125 n	100 m	75 m	50	40 n
			23	bot 1	bot 1	bot 3	bot 4	bot 4	bot 5	bot 6	bot 7	bot 8	bot 9	bot 10	bot 11
			24												

Bottle integrity: First test the top vent (V) by open

289 OXY 12 2023-029 0 m bot 16

First test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments	
Cruise Number: 2023-029			1		288	909	10.1	3.219		1						
Event: 82			2		289	1495	10.1	3.211		2						
Station: 16			3		290A	180	10.1	3.202		3	290B	3065	10.1	3.199		
Event Date (Local): 2023-10-12			4		291	1223	10.3	3.156		4						
Analysis Date (Local): 12 Oct 2023			5		292	3049	11.0	3.894		5						
Analyst: MB			6		293	3029	11.3	4.177		6						
Standardization Date (Local): 12 Oct 2023			7		294	136	11.5	4.400		7						
KIO ₃ N: 0.0118315			8		295	3076	11.6	4.557		8						
Standard Titer: 0.4942			9		296	1407	11.6	4.595		9						
Blank Titer: 0.0000			10		297	998	11.7	4.745	New flask # 181 redraw	10						
THIO N: 0.729561			11		298A	18	11.8	4.824		11	298B	933	11.8	4.843		
Sample Flask Water Seal? Yes			12							12						
Reagent Change? MnCl ₂			13		288	289	290A	290E	291	292	293	294	295	296	298A	298B
(Please circle reagent that was changed prior to sampling and standardization)			14		OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY	OXY
NOTE NEW BATCH IN LOG BOOK			15		16	16	16	16	16	16	16	16	16	16	16	
H ₂ SO ₄			16		2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-0	2023-029	
KIO ₃			17		Bot-5	125 m	100 r	100 n	75 m	50 m	40 n	30 m	20 n	10 m	5 m	
THIO			18		bot	bot 2	bot	bot 3	bot 4	bot 5	bot 6	bot 7	bot 8	bot 9	bot 10	
Notes:			19													
			20													
			21													
Loch Ness.xlsx			22													
			23													
			24													

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) then test the spigot by opening the vent. Mark 'x' in the appropriate column if either fails the integrity check and explain this in the comments column.

**Institute of Ocean Sciences
Water Properties Group**



Last Updated: December 2015

[illegible]

Dissolved Oxygen Analysis Log Sheet

Institute of Ocean Sciences
Water Properties Group



Last Updated: December 2019

Cruise and Analysis Information			Nisk ID	Nisk Int V S	Sample ID	Flask 1	Draw Temp 1 (°C)	OXY-1 (mL/L)	OXY-1 Comments	Nisk ID	Sample ID	Flask 2	Draw Temp 2 (°C)	OXY-2 (mL/L)	OXY-2 Comments
Cruise Number:	2023-029		1		315	909	10.1	3.226		1					
Event:	87		2		316A	1495	10.1	3.222		2	316B	180	10.1	3.225	
Station:	14		3		317A	3065	10.1	3.231		3	317B	1223	10.1	3.225	
Event Date (Local):	2023-10-13		4		318	3049	10.0	3.214		4					
Analysis Date (Local):	2023-10-13		5		319	3029	10.0	3.255		5					
Analyst:	de		6		320	136	10.2	3.191		6					
Standardization Date (Local):	2023-10-13		7		321	3076	10.1	3.090		7					
KIO ₃ N:	0.011835		8		322	1407	10.1	2.956		8					
Standard Titer:	0.4943801		9		323	998	10.3	2.985		9					
Blank Titer:	0.0000857		10		324	18	10.7	3.648		10					
THIO N:	0.239464		11		325	933	11	3.987		11					
Sample Flask Water Seal?	Yes		12		326	425	11.1	4.040		12					
Reagent Change?	MnCl ₂		13		327	181	11.7	4.176		13					
(Please circle reagent that was changed prior to sampling and standardization)	NaI/NaOH		14		328	928	12.0	5.068		14	325				
NOTE NEW BATCH IN LOG BOOK	H ₂ SO ₄		15		329	3051	13.0	5.646		15	OXY 14				
	KIO ₃		16		330	3146	13.1	5.113		16	2023-029 40 m				
	THIO		17							17	2023-029 30 m				
			18							18	bot 11				

Notes:

Loch Ness.xlsx

Bottle integrity: First test the top vent (V) by opening the lower spigot (S) without using the spigot

315	OXY	316A	OXY	316B	OXY	317A	OXY	317B	OXY	318	OXY	319	OXY	320	OXY	321	OXY	322	OXY	323	OXY	324	OXY
14		14		14		14		14		14		14		14		14		14		14		14	
2023-029		2023-029		2023-029		2023-029		2023-029		2023-029		2023-029		2023-029		2023-029		2023-029		2023-029		2023-029	
bot 5 m		300 m		300 m		250 m		250 m		200 m		175 m		150 m		125 m		100 m		75 m		50 m	
bot 1		bot 2		bot 2		bot 3		bot 3		bot 4		bot 5		bot 6		bot 7		bot 8		bot 9		bot 10	