

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: S3.5Date: 25101Time Sampled: 11:56Cast #: 2 Event #: 84Sampler Names: Alvin, Robyn, Julia, Michael

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Squar Mn
8	0	^{2x} 004-C, 005-C ✓	C-02 ✓	A54 ✓	✓	✓	✓	✓
7	10	^{2x} 006-C, 007-C ✓	—	A58 ✓	✓	✓	✓	—
6	20	008-D ✓	—	A66 ✓	✓	✓	—	—
5	40	009-E ✓	—	A74 ✓	✓	✓	✓	—
4	60	010-F ✓	—	A77 ✓	✓	✓	✓	—
3	95	011-C ✓	—	A80 ✓	✓	✓	✓	✓
2	105	^{2x} 012-C, 013-C ✓	—	A83 ✓	✓	✓	✓	✓
1	110	^{2x} 014-C, 015-C ✓	C-03 ✓	A84 ✓	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins:

Time Mn spiked with acid: 12:33

Time NH4 spiked with working reagent:

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

5568

CTD @ 10:05
runs
2 mins down; 1st stop @ 10:08

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: S3.5

Date: 25/01

Time Sampled: 11:13

Cast #: 1 Event #: 13 Sampler Names: Arnell, Aaron, Robyn, Michael, Julia

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	tube NO3	bottle NO2	dark PO4	square Mn
8	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—
6	115	001D	—	A-30	✓	✓	✓	✓
5	125	—	—	A-37	✓	✓	✓	✓
4	135	002C	—	A-39	✓	✓	✓	✓
3	160	—	—	A-40	—	—	—	✓
2	180	—	—	A-42	✓	✓	✓	✓
1	210	003C	C-01	A-47	—	—	✓	✓

NOTES: Bathroom cleaning during spiking

Sulfide smelled from Niskins: 1 ~~3~~ 2

Time Mn spiked with acid: 12:33 Time NH4 spiked with working reagent: 17:30

NH4 Standards: Vial #: A107 Vial #: A105 Vial #: A125 Vial #: A115 Vial #: A120

NH4 Standards: Conc: 0.1M Conc: 2.26M Conc: 5.96M Conc: 14.47M Conc: 10.27M

1: deep first, 6. Niskin
[error 1 = CTD]
+2

CTD
10 for 1000
180 1-5
10:02
died 1 soon
10:38

Water Chemistry Sampling

Crusie: EOS 312 Jan 2019

201901

Station Name: 58.5Date: 25 Jan 2019Time Sampled: 14:03 GSTCast #: 2 Event #: 7Sampler Names: Anna-Liisa, Aaron, Laura, Johnny

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	6m	0216, 0220 ✓	C-08 ✓	A-60 ✓	✓	✓	✓	✓
7	5m	0230 ✓	C-09 ✓	A-62 ✓	✓	✓	✓	X
6	20m	0240, 0250 ✓	C-10 ✓	A-70 ✓	✓	✓	✓	X
5	40m	0260 ✓	X	A-76 ✓	✓	✓	✓	✓
4	60m	0270 ✓	X	A-81 ✓	✓	✓	✓	X
3	80m	0280 ✓	G-11 ✓	A-86 ✓	✓	✓	✓	✓
2	110m	0290, 0300 ✓	X	A-90 ✓	✓	✓	✓	✓
1	115m	0310 ✓	X	A-91 ✓	X	X	X	✓

NOTES: A-94 not collected

Sulfide smelled from Niskins:

Time Mn spiked with acid: 14:36

Time NH4 spiked with working reagent:

Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: 58.5Date: 05 Jan 2019Time Sampled: 13:20Cast #: 1 Event #: 6 Sampler Names: Analissa Aaron, Laura, Johnny

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	120m	016F ✓	C-05 ✓	A-06 ✓	✓	✓	✓	✓
5	125m	017C ✓	X	A-32 ✓	✓	✓	✓	✓
4	130m	020C ✓	C-06 ✓	A-34 ✓	✓	✓	✓	✓
3	160m	018C ✓	X	A-45 ✓	✓	✓	✓	✓
2	180m	X	C-07 ✓	A-56 ✓	X	X	X	X
1	220m	019C ✓	X	A-57 ✓	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins: ^{1,2} 3,4

Time Mn spiked with acid: 14:36

Time NH4 spiked with working reagent: 17:30

NH4 Standards: Vial #: A108

Vial #: A131

Vial #: A104

Vial #: A130

Vial #: A113

NH4 Standards: Conc: 0 μ MConc: 2.26 μ MConc: 5.96 μ MConc: 14.42 μ MConc: 10.27 μ M

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: 105Date: Jan 25/19Time Sampled: 16:00Cast #: 2 Event #: 10Sampler Names: Kirstyn, Tyler, Grant

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	①	②	Nitrate NO3	NO2	PO4	Mn
			DIC Bottle #	NH4 Vial #				
8	0	036C / 037C	C-14	A-72	✓	✓	✓	✓
7	10	038C / 039C	C-15	A-121	✓	✓	✓	✗
6	20	040E / 041C	✗	A-88	✓	✓	✓	✗
5	40	042C	✗	A-82	✓	✗	✓	✓
4	60	043	✗	A-50	✓	✗	✓	✗
3	85	044C	C-16	A-78	✓	✓	✓	✗
2	105	045F / 046D	✗	A-53	✓	✓	✓	✓
1	110	047C	✗	A-123	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins:

Time Mn spiked with acid: 16:25

Time NH4 spiked with working reagent:

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: 1.5Date: Jan 25/19Time Sampled: 15:15

Cast #:

Event #:

9Sampler Names: Kirstyn, Tyler, Grant

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	① DIC Bottle #	② NH4 Vial #	Nitrate NO3	NO2	Phosphate PO4	Mn
8								
7								
6	115	032C ✓ 033C ✓	C-12 ✓	A-91 ✓				
5	120	X	X	A-100 ✓				
4	130	034D ✓	X	A-63 ✓				
3	145	X	X	A-64 ✓				
2	160	X	X	A-95 ✓				
1	190	035C ✓	C-13 ✓	A-52 ✓				

NOTES:

Sulfide smelled from Niskins: 5-21Time Mn spiked with acid: 16:25Time NH4 spiked with working reagent: 17:30NH4 Standards: Vial #: A129Vial #: A71Vial #: A103Vial #: A79Vial #: A111NH4 Standards: Conc: 0.4MConc: 2.26MConc: 5.96MConc: 14.47Conc: 10.27M

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: 54Date: Apr. 26/19Time Sampled: 21:15Cast #: 2 Event #: 13Sampler Names: Brown, Franklin, Zank

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	056C / 057C	C-21	A12	✓	✓	✓	X
7	5	X	X	A13	✓	✓	✓	X
6	10	058C	X	A14	✓	✓	✓	X
5	15	059C	X	A15	✓	X	X	X
4	20	060E / 061C	C-22	A16	✓	✓	✓	✓
3	55	062C	X	A17	✓	X	✓	✓
2	80	X	X	A18	✓	✓	✓	✓
1	100	063C	C-23	A19	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins: noneTime Mn spiked with acid: 11:40

Time NH4 spiked with working reagent:

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling

Crusie: EOS 312 Jan 2019

201901

Station Name: 54Date: Jan. 26/19Time Sampled: 10:20amCast #: 1 Event #: 12Sampler Names: Franklin, Zack, & Alan

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	X							
7	X							
6	110	049C 050E	X	A002	✓	✓	✓	
5	115	051C 052C	C-19	A003	✓	✓	✓	
4	120	053C 054D	X	A004	✓	✓	✓	
3	125	X	X	A007	✓	✓	✓	
2	145	055C	C-20	A009	X	✓	X	
1	180	X	X	A10	X	✓	✓	

NOTES: 053C tank joint drip off NaI-NaOHSulfide smelled from Niskins: 1, 2 (less strong than 25 Jan)Time Mn spiked with acid: 11:46Time NH4 spiked with working reagent: 16:30NH4 Standards: Vial #: A20 Vial #: A21 Vial #: A24 Vial #: A25 Vial #: A67NH4 Standards: Conc: 0.2M Conc: 2.26uM Conc: 5.96uM Conc: 10.27uM Conc: 14.47uM

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: 53Date: 26 Jan 2019Time Sampled: 1:29Cast #: 2 Event #: 16Sampler Names: Thom Campbell

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	✓ 70C ✓ 71C	✓ C-30	✓ A-46	✓	✓	✓	X
7	5	✓ 72C ✓ 73C	✓ C-31	✓ A-59	✓	✓	✓	X
6	10	✓ 74C ✓ 75C	✓ C-28	✓ A-65	✓	✓	✓	X
5	20	✓ 76C	X	✓ A-85	✓	✓	✓	X
4	40	✓ 77D	X	✓ A-89	✓	✓	✓	X
3	60	✓ 78C	✓ C-33	✓ A-96	✓	✓	✓	✓
2	85	✓ 79C	✓ C-34	✓ A-97	✓	✓	✓	✓
1	105	✓ 80C ✓ 81C	✓ C-35	✓ A-106	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins: noneTime Mn spiked with acid: 14:00 Time NH4 spiked with working reagent:

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: 3Date: Jan 26/19Time Sampled: 12:30Cast #: 1 Event #: 15Sampler Names: Emma B, Thom C

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	115	✓ 0641C ✓ 065E	✓ C-24 ✓ C-25	✓ A-01	✓			
5	125	✓ 066C ✓ 067C	✓ C-26	✓ A-05	✓			
4	145	✓ 068E ✓ 069E	✓ X	✓ A-08	✓			
3	160	✓ X	✓ C-27	✓ A-26	✓			
2	180	✓ X	✓ X	✓ A-27	✓	✓	✓	
1	210	✓ X	✓ C-29	✓ A-33	✓	✓	✓	

NOTES:

Sulfide smelled from Niskins: 3, 2, 1

Time Mn spiked with acid: 14:00

Time NH4 spiked with working reagent: 16:30

NH4 Standards: Vial #: A128

Vial #: A127

Vial #: A126

Vial #: A124

Vial #: A122

NH4 Standards: Conc: 0.2M

Conc: 2.26uM Conc: 5.96uM

Conc: 10.23uM

Conc: 14.49uM

201901

Water Chemistry Sampling

Crusie: EOS 312 Jan 2019

Time Sampled: 15:17Station Name: S2Date: 26/01/19

Sampler Names: _____

Cast #: 2 Event #: _____

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	088 ✓ 089 ✓	✓	A-38 ✓	✓	✓	✓	✓
7	5	090 ✓	✓	A-41 ✓	✓	✓	✓	✓
6	15	091 ✓ 092 ✓	✓	A-43 ✓	✓	✓	✓	✓
5	35	093 ✓	✓	A-48 ✓	✓	✓	✓	✓
4	55	094 ✓	✓	A-49 ✓	✓	✓	✓	✓
3	70	X	X	A-51 ✓	✓	✓	✓	✓
2	95	095 ✓	✓	A-55 ✓	✓	✓	✓	✓
1	115	097 ✓ 098 ✓	✓	A-61 ✓	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins:

Time Min spiked with acid: 15:45

Time NH4 spiked with working reagent:

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling

Cruise: EOS 312 Jan 2019

201901

Station Name: S2Date: 26/07/19

Time Sampled: _____

Cast #: 1 Event #: _____

Sampler Names: _____

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	X		/		X	X	X	X
7	X		/		X	X	X	X
✓ 6	120	082 083	/	A-22	✓	✓	✓	✓
✓ 5	125	084	/	A-28	✓	✓	✓	✓
✓ 4	135	085	/	A-29	X	X	✓	✓
✓ 3	155	X	/	A-31	X	✓	✓	✓
✓ 2	185	086	/	A-35	X	X	✓	✓
✓ 1	205	087	/	A-36	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins: 4-1Time Mn spiked with acid: 15:45Time NH4 spiked with working reagent: 16:30

NH4 Standards: Vial #:

A-116

Vial #:

A110

Vial #:

A99

Vial #:

A93

Vial #:

A97

NH4 Standards: Conc:

0 µM

Conc:

2.26 µM

Conc:

5.96 µM

Conc:

10.23 µM

Conc:

14.47 µM