

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: SIDate: 1/28/23G₁Time Sampled: 15:05Cast #: 1 Event #: 20Sampler Names: Hana, William, Julius, Amelia

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	110	053C ✓	/	A-41 ✓	✓	✓	✓	✓
5	115	*054D ✓ 055C ✓	/	A-42 ✓	✓	✓	✓	✓
4	120	056C ✓	/	A-151 ✓	✓	✓	✓	✓
3	125	/	/	A-153 ✓	✓	✓	/	✓
2	130	/	/	A-154 ✓	/	✓	/	✓
1	135	057C ✓	C-28 ✓	A-155 ✓	/	/	✓	✓

NOTES:

Sulfide smelled from Niskins: 1, 2Time Mn spiked with acid: 16:30Time NH4 spiked with working reagent: 16:45NH4 Standards: Vial #: A-165 Vial #: A-167 Vial #: A-168 Vial #: A-166 Vial #: A-174NH4 Standards: Conc: 0 μM Conc: 2.09 μM Conc: 5.18 μM Conc: 10.23 μM Conc: 15.16 μM

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: S1Date: Jan 28th, 2023Time Sampled: 3:55 PMCast #: #2 Event #: 21Sampler Names: William Gompert, Hana, Julius, Amelia

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	058C ✓	C-29 ✓	A-156 ✓	✓	✓	✓	✓
7	5	059C ✓	✓	A-158 ✓	✓	✓	✓	✓
6	10	* 060E ✓ 061C ✓	C-30 ✓	A-159 ✓	✓	✓	✓	✓
5	20	062C ✓	✓	A-160 ✓	missing	✓	✓	✓
4	40	064C ✓	C-31 ✓	A-161 ✓	✓	✓	✓	✓
3	60	065E ✓	✓	A-162 ✓	✓	✓	✓	✓
2	80	066C ✓	✓	A-163 ✓	✓	✓	✓	✓
1	100	067C ✓	C-32 ✓	A-164 ✓	✓	✓	✓	✓

NOTES: NO3 Niskin 5 missed

Sulfide smelled from Niskins: none

Time Mn spiked with acid: 16:30

Time NH4 spiked with working reagent: 16:45

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling			Crusie: EOS 312 Jan 2023			202301		
Station Name: <u>1.5</u>		Date: <u>27 Jan 2023</u>		Time Sampled: <u>10:30</u>				
Cast #: <u>1</u>		Event #: <u>3</u>		Sampler Names: <u>Muddy M., Meyen J., Matthew T</u>				
Niskin Bottle	Target Depth (m)	^{take 1st!!} Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	120	0010	C-01	A-01	✓	✓	✓	✓
7	125	0020	C-02	A-02	✓	✓	✓	✓
6	120	0010 ✓	C-01 ✓	A-01 ✓	✓	✓	✓	✓
5	125	0020 / 0030 ^{take two} ✓	C-02	A-02 ✓	✓	✓	✓	~
4	130	0040 ✓	C-02 ✓	A-03 ✓	✓	✓	✓	✓
3	135	0050 ✓	C-03	A-04 ✓	✓	✓	✓	✓
2	145	0060	C-04	A-05 ✓	✓	✓	✓	✓
(49 cast 3) 1	195	0060 ✓	C-03 ✓	A-06 ✓	✓	✓	✓	✓

NOTES: Niskin #1 - 195m didn't close first try - changed to #9 on Cast 3
 Sulfide smelled from Niskins: Niskin #3 Smelled like egg @. & #2 + #9
 Time Mn spiked with acid: _____ Time NH4 spiked with working reagent: 17:15
 NH4 Standards: Vial #: A-16 Vial #: A-58 Vial #: A-15 Vial #: A-56 Vial #: A-34
 NH4 Standards: Conc: 0 Conc: 2.09 μM Conc: 5.18 μM Conc: 10.23 μM Conc: 15.16 μM

Event 5
 Cast 3
 next

202301 420 mM

Water Chemistry Sampling			Crusie: EOS 312 Jan 2023			202301		
Station Name: <u>1.5</u>			Date: <u>Jan 27 2023</u>			Time Sampled: _____		
Cast #: <u>2</u> Event #: <u>4</u>			Sampler Names: <u>Maddy M, Megan J, Matthew T</u>					
Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8 (14)	0	007C ✓ ^{take two} 008D ✓	C05 ✓	A07 ✓	✓	✓	✓	✓
7 (13)	5	009E ✓	X	A08 ✓	✓	✓	✓	X
6 (12)	10	010F ✓	X	A09 ✓	✓	✓	✓	X
5 (11)	15	011C ✓	X	A-10 ✓	X	✓	X	✓
4 (10)	40	012C ✓	C07 ✓	A-11 ✓	✓	X	✓	X
3 (9)	80	013C ✓	X	A-12 ✓	X	✓	X	✓
2 (8)	105	014C ✓	X	A-13 ✓	✓	✓	✓	✓
1 (7)	115	015C ✓	X	A-14 ✓	✓	✓	✓	✓

Event 5
Cast 3

Event 5
Cast 3

Event 5
Cast 3

NOTES: Niskins 1, 2, 4 did not fire. Moved to Event 5
Cast 3
no separate sheet

Sulfide smelled from Niskins:

Time Mn spiked with acid: 12:15

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 2023

202301

Station Name: 52Date: Jan 29, 2023Time Sampled: 9:00Cast #: 1 Event #: 23Sampler Names: Carter, Alec, Andi

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	130	68E ✓		A-108 ✓				
5	135	69E, 70C ✓		A-109 ✓				
4	140	71C ✓		A-110 ✓				
3	145			A-111 ✓				
2	150			A-112 ✓				
1	160			A-113 ✓				

NOTES:

Sulfide smelled from Niskins: 1-3

Time Mn spiked with acid: 11:15

Time NH4 spiked with working reagent: 16:15

NH4 Standards: Vial #: A-128 Vial #: A-137 Vial #: A-144 Vial #: A-157 Vial #: ~~15~~ A-182NH4 Standards: Conc: 0 μM Conc: 2.09 μM Conc: 5.18 μM Conc: 10.23 μM Conc: 15.16 μM

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: 52Date: Jan 29, 2023Time Sampled: 10:34Cast #: 2 Event #: 24Sampler Names: Carter, Alec, Andi

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	73C, 97C		A114				
7	15	98E, 99C		A115				
6	30	100C		A116				
5	55	101C		A117				
4	75	102C		A118				
3	95	103F		A119				
2	120	104E		A120				
1	125	105D		A121				

NOTES:

Sulfide smelled from Niskins: Time Mn spiked with acid: 11:15Time NH4 spiked with working reagent: 16:15

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling				Crusie: EOS 312 Jan 2023		202301		
Station Name: <u>S2.5</u>		Date: <u>Jan 28, 2023</u>		Time Sampled: <u>12:40</u>				
Cast #: <u>11</u>		Event #: <u>17</u>		Sampler Names: <u>Lynn, Emily, Kaeden</u>				
Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	/	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/
6	135	38c	C23	A-65	/	/	/	
5	140	39c + 44c	/	A-66				
4	145	41c	/	A-67				
3	155	42c	C24	A-68				
2	180	/	/	A-69	/	/	/	
1	220	/	/	A-70				

NOTES: 20° wine angle

Sulfide smelled from Niskins: 1-4

Time Mn spiked with acid: 14:30

Time NH4 spiked with working reagent: 16:45

NH4 Standards: Vial #: A134 A136 A165 A167 A168 A174 A176 A177

NH4 Standards: Conc: 0 μ M 2.09 μ M 5.18 μ M 10.23 μ M 15.16 μ M

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: S 2.5Date: Jan 28, 2023Time Sampled: 14:00Cast #: 2 Event #: 18Sampler Names: Lynn, Emily, Kaeden

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	✓ 43C	✓ C25	✓ A-152				✓
7	10	✓ 32C	✓	✓ A-73				✓
6	20	✓ 46D	✓ C-26	✓ A-132				✓
5	60	✓ 47C	✓	✓ A-141				✓
4	90	✓ 45F	✓	✓ A-145				
3	115	✓ 50E	✓ C-27	✓ A-147				
2	125	✓ 51C	✓	✓ A-148				
1	130	^{x2} ✓ 52C + 49C	✓	✓ A-186				

NOTES:

Sulfide smelled from Niskins:

Time Mn spiked with acid: 14:36

Time NH4 spiked with working reagent:

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Interface 140m?

Bikini Bottomers  

Water Chemistry Sampling			Cruise: EOS 312 Jan 2023			202301		
Station Name: <u>S3</u>			Date: <u>Jan 27th 2023</u>			Time Sampled: <u>1:</u>		
Cast #: <u>1</u> Event #: <u>7</u>			Sampler Names: <u>Taylor G. Sophia C. Morgan U. William S</u>					
Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	Ammonium NH4 Vial #	Nitrate NO3	Nitrite NO2	Phosphate PO4	Manganese Mn
8	/	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/
6	140	016F ✓	/	A-20 ✓	✓	✓	✓	✓
5	145	017C + 018C ✓	C-08 ✓	A-21 ✓	✓	✓	✓	✓
4	150	019C ✓	/	A-22 ✓	/	✓	/	✓
3	175	/	/	A-23 ✓	✓	✓	✓	✓
2	200	/	/	A-24 ✓	/	/	/	✓
1/9	215	020C ✓	C-09 ✓	A-25 ✓	✓	✓	✓	✓

NOTES: Niskin #1 did not fire, moved to the next event as Niskin #9

Sulfide smelled from Niskins: maybe 4, definitely #3 & #2

Time Mn spiked with acid:

Time NH4 spiked with working reagent: 17:15

NH4 Standards: Vial #: A-18 Vial #: A-19 Vial #: A-37 Vial #: A-62 Vial #: A-55

NH4 Standards: Conc: 0 μ M Conc: 2.09 μ M Conc: 5.18 μ M Conc: 10.23 μ M Conc: 15.16 μ M

Morgan: Ammonium, Nitrate, Nitrite, Phosphate, Manganese

Sophia: Carbon (DIC)

William: Oxygen

Taylor: BOMG "social worker"

Water Chemistry Sampling			Crusie: EOS 312 Jan 2023			202301												
Station Name: <u>S3</u>			Date: <u>Jan 27th 2023</u>			Time Sampled: <u>2:45</u>												
Cast #: _____ Event #: <u>8</u>			Sampler Names: <u>Taylor G, Sophia C, Morgan U, Williams S</u>															
Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn										
8	0	021C ✓	C-10 ✓	A-26 ✓	✓	✓	✓	/										
7	20	022C ✓	C-11 ✓	A-27 ✓	✓	✓	✓	/										
6	40	023C ✓	/	A-28 ✓	✓	/	✓	/										
5	60	024C ✓	/	A-29 ✓	✓	✓	✓	/										
4	80	1 074C ✓	/	A-30 ✓	✓	✓	✓	✓										
3	100	1 075C ✓	/	A-31 ✓	✓	✓	✓	✓										
2	120	1 076C ✓	/	A-32 ✓	✓	✓	✓	✓										
1	135	2 077D+ ✓ 078C ✓	C-12 ✓	A-33 ✓	✓	✓	✓	✓										
NOTES: Sulfide smelled from Niskins: Time Mn spiked with acid: <u>3:07</u> Time NH4 spiked with working reagent: <table style="width: 100%;"> <tr> <td>NH4 Standards: Vial #:</td> <td>Vial #:</td> <td>Vial #:</td> <td>Vial #:</td> <td>Vial #:</td> </tr> <tr> <td>NH4 Standards: Conc:</td> <td>Conc:</td> <td>Conc:</td> <td>Conc:</td> <td>Conc:</td> </tr> </table> Morgan: Nutrients Taylor: DIC Will: Oxygen Sophia: "Social Worker"									NH4 Standards: Vial #:	Vial #:	Vial #:	Vial #:	Vial #:	NH4 Standards: Conc:	Conc:	Conc:	Conc:	Conc:
NH4 Standards: Vial #:	Vial #:	Vial #:	Vial #:	Vial #:														
NH4 Standards: Conc:	Conc:	Conc:	Conc:	Conc:														

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: 3.5Date: JAN 29, 2023Time Sampled: 12:15 PMCast #: 1 Event #: 27Sampler Names: JAMES, KRISTYN, MADDIE M

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	125	106 C ✓		A122 ✓	✓	✓	✓	✓
5	130	107 F ✓	C35 ✓	A123 ✓	✓	✓	✓	✓
4	135	108 C ✓		A124 ✓	✓	✓	✓	✓
3	140	109 C ✓	C36 ✓	A125 ✓		✓		✓
2	180			A126 ✓	✓	✓	✓	✓
1	210	110 F ✓	C37 ✓	A127 ✓		✓		✓

NOTES:

Sulfide smelled from Niskins: 1, 2

Time Mn spiked with acid: 14:05Time NH4 spiked with working reagent: 16:15NH4 Standards: Vial #: A-130 Vial #: A-138 Vial #: A-143 Vial #: A-178 Vial #: A-183NH4 Standards: Conc: 0 μ M Conc: 2.09 μ M Conc: 5.18 μ M Conc: 10.23 μ M Conc: 15.16 μ M

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: 3.5Date: JAN 29, 2023Time Sampled: 1:00Cast #: 2 Event #: 28Sampler Names: JAMES, KRISTYN, MADDIE M

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	111D ✓	C-38 ✓	A170 ✓	✓	✓	✓	✓
7	5	112C/113D ✓	C-39 ✓	A171 ✓	✓	✓	✓	✓
6	10	114C ✓	C-40 ✓	A172 ✓	✓	✓	✓	✓
5	20	115C ✓	C-41 ✓	A173 ✓	✓	✓	✓	✓
4	40	116E ✓	C-42 ✓	A175 ✓	✓	✓	✓	✓
3	70	117C ✓	C-43 ✓	A176 ✓	✓	✓	✓	✓
2	100	118C ✓	✓	A180 ✓	✓	✓	✓	✓
1	120	119E ✓	C-44 ✓	A129 ✓	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins:

Time Mn spiked with acid: 14:05Time NH4 spiked with working reagent: 16:15

NH4 Standards: Vial #:

Vial #:

Vial #:

Vial #:

Vial #:

NH4 Standards: Conc:

Conc:

Conc:

Conc:

Conc:

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: 54Date: 28 Jan 2023Time Sampled: 10:00amCast #: 1 Event #: 13Sampler Names: Lydia, Taylor R, Ulana, Kate

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	125	095C + 025C ✓		A-36 ✓	✓	✓	✓	✓
5	130	026C ✓		A-38 ✓	✓	✓	✓	✓
4	135	027C ✓	C-18 ✓	A-54 ✓	✓	✓	✓	✓
3	145			A-64 ✓	✓	✓	✓	✓
2	175			A-77 ✓				
1	190	028C ✓	C-19 ✓	A-78 ✓	✓	✓	✓	✓

NOTES: Wire angle - shallower 5°

Sulfide smelled from Niskins: 1, 2Time Mn spiked with acid: 11:45Time NH4 spiked with working reagent: 16:45NH4 Standards: Vial #: A-75
A-134Vial #: A-76Vial #: A-92Vial #: A-93Vial #: A-133NH4 Standards: Conc: 0 μ MConc: 2.09 μ MConc: 3.18 μ MConc: 10.23 μ MConc: 15.16 μ M

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: S4Date: 28 Jan 2023Time Sampled: 11:10amCast #: 2 Event #: 14Sampler Names: Lydia, Taylor E, Uiana, Kate

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	00	029C✓-030C✓	C20✓	A-71✓	✓	/	✓	✓
7	5	031C✓	/	A-80✓	✓	✓	✓	/
6	15	040E✓	/	A-81✓	✓	✓	✓	/
5	35	033C✓	C21✓	A-82✓	✓	✓	✓	✓
4	65	/	/	A-83✓	/	✓	/	/
3	95	034D✓	/	A-84✓	✓	✓	✓	✓
2	115	035C✓	C22✓	A-107✓	✓	✓	✓	✓
1	120	036C✓-037C✓	/	A-109✓	✓	✓	✓	✓

NOTES: wire angle → shallower → 5°

Sulfide smelled from Niskins:

Time Mn spiked with acid: 11:45 AM

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 2023

202301

Station Name: S4.25Date: 27 Jan 2023Time Sampled: 16:00Cast #: 1 Event #: 10

Sampler Names: _____

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8								
7								
6	116	079C		A39	✓	✓	✓	✓
5	126	080C, 081C	C13	A40	✓	✓	✓	✓
4	130	082C		A43			✓	✓
3	140	083C		A44	✓	✓	✓	✓
2	150	084C	C14	A45			✓	✓
1	160			A46	✓	✓	✓	✓

NOTES:

Sulfide smelled from Niskins:

Time Mn spiked with acid: 17:00

Time NH4 spiked with working reagent:

NH4 Standards: Vial #: A-61 Vial #: A-17 Vial #: A-57 Vial #: A-52 Vial #: A-63NH4 Standards: Conc: 0 Conc: 2.09 Conc: 5.18 Conc: 10.23 Conc: 15.16

Water Chemistry Sampling

Crusie: EOS 312 Jan 2023

202301

Station Name: 54.25Date: 27 JAN 2023

Time Sampled: _____

Cast #: 2 Event #: 11

Sampler Names: _____

Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	085C	C15	A47 ✓				
7	10	087E	X	A48 ✓			X	X
6	20	088C 089C	C16	A49 ✓				
5	30	090C	X	A50 ✓			X	X
4	50	091C	X	A51 ✓				
3	70	092D	C17	A53 ✓				X
2	80	093	X	A59 not readable				X
1	90	094C	X	A60 ✓				

NOTES:

Sulfide smelled from Niskins:

Time Mn spiked with acid:

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 2023		202301		
Station Name: <u>54.5</u>		Date: <u>JAN 29</u>		Time Sampled: <u>14:26</u>				
Cast #: <u>1</u>		Event #: <u>30</u>		Sampler Names: <u>SARLOSAN Noah, Kye, Maya</u>				
Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	/	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/
6	85	/	/	A-46	/	✓	✓	/
5	95	120 c ✓	C-45 ✓	A-47	/	✓	✓	/
4	105	121 c ✓	/	A-48	/	✓	✓	/
3	115	122 c ✓	/	A-49	/	✓	✓	/
2	125	/	/	A-90	/	✓	✓	/
1	135	123 c ✓, 124 c ✓	/	A-91	/	✓	✓	/
NOTES: Sulfide smelled from Niskins: None Time Mn spiked with acid: 16:00 Time NH4 spiked with working reagent: 16:15 NH4 Standards: Vial #: A-131 Vial #: A-140 Vial #: A-179 Vial #: A-181 Vial #: A-189 NH4 Standards: Conc: 0 μM Conc: 2.09 μM Conc: 5.18 μM Conc: 10.23 μM Conc: 15.16 μM								

Water Chemistry Sampling			CRUISE Crusie: EOS 312 Jan 2023		202301			
Station Name: <u>S4.5</u>		Date: <u>JAN 29</u>		Time Sampled: <u>15:16</u>				
Cast #: <u>2</u> Event #: <u>31</u>		Sampler Names: <u>SARVOSHA, Nouch, Kyle, Maya</u>						
Niskin Bottle	Target Depth (m)	Oxygen Bottle #s	DIC Bottle #	NH4 Vial #	NO3	NO2	PO4	Mn
8	0	125E, 126C	C-46	A-94	✓	✓	✓	✓
7	15	127E	/	A-95	✓	✓	✓	/
6	25	128C, 129C	C-47	A-96	/	/	/	/
5	35	130C	/	A-97	✓	✓	✓	/
4	45	131C	C-48	A-98	✓	✓	✓	✓
3	55	132D	/	A-99	✓	✓	✓	/
2	65	133D	C-06	A-100	✓	✓	✓	✓
1	75	134D	/	A-101	✓	✓	✓	/
NOTES: Valve open #4 Niskin Sulfide smelled from Niskins: <u>NO</u> Time Mn spiked with acid: <u>16:00</u> Time NH4 spiked with working reagent: <u>16:15</u> NH4 Standards: Vial #: Vial #: Vial #: Vial #: NH4 Standards: Conc: Conc: Conc: Conc:								