

Ammonium analysis

Start time of Reaction

03 Sept 17

6:50 pm

End time of reaction

4 Sept

03:09 am

Cruise

2017-09

Date

3 Sept 17

Standards

ml 2°
φ S0

200 S1

400 S2

600 S3

800 S4

1000 S5

Conc.

Raw Fluor

Raw Fluor

φ	17.0	16.5
0.5	145.1	151.8
1.0	270.3	263.6
1.5	388.5	384.7
2.0	500.4	559.8
2.5	670.0	612.1

See method for collection of LNSW

Working Legend A

S₄ Sens factor = 26
empty = 2.2 fsu
2.5

Sample	Station	Raw Fluor	Sample	Station	Raw Fluor	Sample	Station	Raw Fluor
235 A	LD08	18.7	216 B	LD06	190.4	31 B	LB04	268.9
235 B		21.1	218 B		61.0	31 A		270.8
234 A		70.3	217 B		264.2	40 B	LB06	328.9
234 B		18.2	216 A		186.1	25 A	LB02	213.8
233 A		43.7	176 A	LC01	197.3	25 B		193.1
233 B		43.1	195 A		146.3	42 B	LB06	137.2
255 A	LD11	15.9	194 A		101.3	23 A	LB02	185.0
255 B		13.9	196 B		200.3	no label		198.0
254 B		14.3	195 B		152.5	42 A	LB06	69.3
254 A		15.7	194 B		99.5	22 A	LB02	242.3
253 B		13.3	186 B	LC02	123.0	22 B		247.4
253 A		11.2	187 B		28.8	40 A	LB06	298.2
200 A	LD01	579.1	189 A		36.5	16 B	LB01	179.9
200 B		589.7	186 A		129.0	16 A		182.5
199 A		635.0	187 A		34.0	41 A	LB06	172.1
199 B		648.3	189 B		26.9	17 B	LB01	182.8
198 A		301.5	179 B	LC04	97.0	17 A		183.6
198 B		296.5	178 A		122.6	41 B	LB06	136.4
205 A	LD02	312.0	180 B		48.4	19 B	LB01	177.9
205 B		317.0	179 A		101.7	19 A		200.7
203 A		208.4	180 A		50.9			
203 B		216.0	178 B		123.1			
204 A		423.2	167 B	LC06	147.8			
204 B		453.3	168 B		93.5			
208 B	LD04	335.2	167 B		25.3			
208 A		273.0	167 A		152.2			
210 A		132.5	168 A		79.5			
209 A		159.8	169 A		26.7			
209 B		165.5	33 B	LB04	323.1			
210 B		152.0	32 B		333.0			
218 A	LD06	55.6	32 A		346.4			
217 A		173.8	33 A		323.6			

23 B
NH4
LB02
10 m
2017-09
Bot 4

Pg 1/2

A 235 NH4 LD08 5 m 2017-09 Bot 17
B 235 NH4 LD08 5 m 2017-09 Bot 17
A 234 NH4 LD08 10 m 2017-09 Bot 16
B 234 NH4 LD08 10 m 2017-09 Bot 16
233 NH4 LD08 20 m 2017-09 Bot 15
A 233 NH4 LD08 20 m 2017-09 Bot 15
255 NH4 LD11 5 m 2017-09 Bot 20
255 B NH4 LD11 5 m 2017-09 Bot 20
254 B NH4 LD11 10 m 2017-09 Bot 19
254 A NH4 LD11 10 m 2017-09 Bot 19
253 B NH4 LD11 20 m 2017-09 Bot 18
253 A NH4 LD11 20 m 2017-09 Bot 18
200 A NH4 LD01 5 m 2017-09 Bot 4
200 B NH4 LD01 5 m 2017-09 Bot 4
199 A NH4 LD01 10 m 2017-09 Bot 3
199 B NH4 LD01 10 m 2017-09 Bot 3
198 A NH4 LD01 20 m 2017-09 Bot 2
198 B A NH4 LD01 20 m 2017-09 Bot 2
205 B NH4 LD02 5 m 2017-09 Bot 5
205 A NH4 LD02 5 m 2017-09 Bot 5
203 A NH4 LD02 20 m 2017-09 Bot 3
203 B NH4 LD02 20 m 2017-09 Bot 3
208 B NH4 LD04 20 m 2017-09 Bot 3
208 A NH4 LD04 20 m 2017-09 Bot 3
210 A NH4 LD04 5 m 2017-09 Bot 5
209 A NH4 LD04 10 m 2017-09 Bot 4
209 B NH4 LD04 10 m 2017-09 Bot 4
210 B NH4 LD04 5 m 2017-09 Bot 5
218 A NH4 LD06 5 m 2017-09 Bot 8
217 A NH4 LD06 10 m 2017-09 Bot 7
216 B NH4 LD06 20 m 2017-09 Bot 6
216 A NH4 LD06 20 m 2017-09 Bot 6
196 A NH4 LC01 5 m 2017-09 Bot 7
195 A NH4 LC01 10 m 2017-09 Bot 6
194 A NH4 LC01 20 m 2017-09 Bot 5
196 B NH4 LC01 5 m 2017-09 Bot 7
195 B NH4 LC01 10 m 2017-09 Bot 6
194 B NH4 LC01 20 m 2017-09 Bot 5
186 B NH4 LC02 20 m 2017-09 Bot 5
187 B NH4 LC02 10 m 2017-09 Bot 6
218 B NH4 LD06 5 m 2017-09 Bot 8
217 B NH4 LD06 10 m 2017-09 Bot 7
216 A NH4 LD06 20 m 2017-09 Bot 6
196 A NH4 LC01 5 m 2017-09 Bot 7
195 A NH4 LC01 10 m 2017-09 Bot 6
194 A NH4 LC01 20 m 2017-09 Bot 5
196 B NH4 LC01 5 m 2017-09 Bot 7
195 B NH4 LC01 10 m 2017-09 Bot 6
194 B NH4 LC01 20 m 2017-09 Bot 5
186 B NH4 LC02 20 m 2017-09 Bot 5
187 B NH4 LC02 10 m 2017-09 Bot 6
189 NH4 LC02 5 m 2017-09 Bot 8
186 A NH4 LC02 20 m 2017-09 Bot 5
187 A NH4 LC02 10 m 2017-09 Bot 6
179 NH4 LC04 10 m 2017-09 Bot 9
178 NH4 LC04 20 m 2017-09 Bot 8
180 NH4 LC04 5 m 2017-09 Bot 10
179 NH4 LC04 10 m 2017-09 Bot 9
180 NH4 LC04 5 m 2017-09 Bot 10
178 B NH4 LC04 20 m 2017-09 Bot 8
167 B NH4 LC06 20 m 2017-09 Bot 5
169 NH4 LC06 10 m 2017-09 Bot 6
169 B NH4 LC06 5 m 2017-09 Bot 7
167 NH4 LC06 20 m 2017-09 Bot 5
168 A NH4 LC06 10 m 2017-09 Bot 5
169 A NH4 LC06 5 m 2017-09 Bot 7
33 B NH4 LB04 5 m 2017-09 Bot 7
32 B NH4 LB04 10 m 2017-09 Bot 6
32 A NH4 LB04 10 m 2017-09 Bot 6
33 A NH4 LB04 5 m 2017-09 Bot 7
31 B NH4 LB04 20 m 2017-09 Bot 5
31 A NH4 LB04 20 m 2017-09 Bot 5
40 B NH4 LB06 20 m 2017-09 Bot 6
25 A NH4 LB02 5 m 2017-09 Bot 6
25 B NH4 LB02 5 m 2017-09 Bot 6
42 B NH4 LB06 5 m 2017-09 Bot 8
23 A NH4 LB02 10 m 2017-09 Bot 4
42 A NH4 LB06 5 m 2017-09 Bot 8
22 A NH4 LB02 20 m 2017-09 Bot 3
22 B NH4 LB02 20 m 2017-09 Bot 3
40 A NH4 LB06 20 m 2017-09 Bot 5
18 B NH4 LB01 20 m 2017-09 Bot 2
16 A NH4 LB01 20 m 2017-09 Bot 2
41 A NH4 LB06 10 m 2017-09 Bot 7
41 B NH4 LB06 10 m 2017-09 Bot 7
19 NH4 LB01 5 m 2017-09 Bot 5
19 B NH4 LB01 5 m 2017-09 Bot 5
17 A NH4 LB01 10 m 2017-09 Bot 3
17 B NH4 LB01 10 m 2017-09 Bot 3

Ammonium analysis

Start time of Reaction

End time of reaction

3 Sept

4 Sept

Cruise

2017-09

Date

4 sept 2017

Standards

Conc.

Raw Fluor

Raw Fluor

S0

S1

S2

S3

S4

S5

See method for collection of LNSW

Sample	Station	Raw Fluor	Sample	Station	Raw Fluor	Sample	Station	Raw Fluor
89 A	LB12	527.7	147 A	LC09	6.3			
90 A		121.3	147 B		6.8			
91 B		7.9	146 A		10.6			
89 B		529.6	146 B		12.1			
90 B		125.2	130 B	LC11	6.6			
91 A		12.6	132 A		9.7			
76 B	LB11	35.7	132 B		8.2			
75 B		16.1	130 A		6.2			
74 A		138.9	131 A		7.9			
76 A		18.1	131 B		6.5			
75 A		21.2	162 B	LC08	19.5			
74 B		137.8	160 B		46.0			
64 A	LB09	38.9	159 B		105.0			
63 B		35.4	162 A		10.8			
62 A		123.0	160 A		42.3			
64 B		38.0	159 A		104.6			
63 A		35.0			and 04:40			
62 B		122.6						
53 A	LB08	139.0						
53 B		133.4						
55 B		129.4						
52 A		86.7						
52 B		290.0						
55 A		125.9						
110 B	LB14	7.9						
109 B		5.2						
108 A		5.4						
110 A		10.0						
109 A		6.3						
108 B		8.0						
149 A	LC09	12.6						
149 B		13.2						

Pg 2/2

89 A NH4 LB12 20 m 2017-09 Bot 13	90 A NH4 LB12 10 m 2017-09 Bot 14	91 B NH4 LB12 5 m 2017-09 Bot 15	89 B NH4 LB12 20 m 2017-09 Bot 13	90 B NH4 LB12 10 m 2017-09 Bot 14	91 A NH4 LB12 5 m 2017-09 Bot 15	76 B NH4 LB11 5 m 2017-09 Bot 11	75 B NH4 LB11 10 m 2017-09 Bot 10	74 A NH4 LB11 20 m 2017-09 Bot 9
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76 NH4 LB11 5 m 2017-09 Bot 11	75 NH4 LB11 10 m 2017-09 Bot 10	74 NH4 LB11 20 m 2017-09 Bot 9	64 A NH4 LB09 5 m 2017-09 Bot 9	63 B NH4 LB09 10 m 2017-09 Bot 8	62 A NH4 LB09 20 m 2017-09 Bot 7	64 B NH4 LB09 5 m 2017-09 Bot 9	63 A NH4 LB09 10 m 2017-09 Bot 8	62 B NH4 LB09 20 m 2017-09 Bot 7	53 A NH4 LB08 10m 2017-09 Bot 8
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53 B NH4 LB08 10m 2017-09 Bot 8	55 E NH4 LB08 5m 2017-09 Bot 10	52 A NH4 LB08 20m 2017-09 Bot 7	52 B NH4 LB08 20m 2017-09 Bot 7	55 A NH4 LB08 5m 2017-09 Bot 10	110 NH4 LB14 5 m 2017-09 Bot 18	109 B NH4 LB14 10m 2017-09 Bot 17	108 A NH4 LB14 20m 2017-09 Bot 1	110 NH4 LB14 5 m 2017-09 Bot 18	109 A NH4 LB14 10m 2017-09 Bot 17
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108 NH4 LB14 20m 2017-09 Bot 16	149 A NH4 LC09 5 m 2017-09 Bot 17	149 B NH4 LC09 5 m 2017-09 Bot 17	147 A NH4 LC09 10 m 2017-09 Bot 15	147 B NH4 LC09 10 m 2017-09 Bot 15	146 A NH4 LC09 20 m 2017-09 Bot 14	146 B NH4 LC09 20 m 2017-09 Bot 14	130 NH4 LC11 20 m 2017-09 Bot 17	132 A NH4 LC11 5 m 2017-09 Bot 19
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132 NH4 LC11 5 m 2017-09 Bot 19	130 A NH4 LC11 20 m 2017-09 Bot 17	131 A NH4 LC11 10 m 2017-09 Bot 18	131 B NH4 LC11 10 m 2017-09 Bot 18	162 NH4 B LC08 5 m 2017-09 Bot 13	160 B NH4 LC08 10 m 2017-09 Bot 11	159 B NH4 LC08 20 m 2017-09 Bot 10	162 NH4 A LC08 5 m 2017-09 Bot 13	160 A NH4 LC08 10 m 2017-09 Bot 11
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159 A
NH4
LC08
20 m
2017-09
Bot 10

3:30 pm

Cruise Date

2017-09
8/9 Sept 17

 started reading @ 11:30pm

IOS standards + working reagent B.

Standards	Conc.	Raw Fluor	Raw Fluor
0 S0	0	11.3	13.8
200 S1	0.5	137.5	144.9
400 S2	1.0	252.5	278.7
600 S3	1.5	389.4	414.0
800 S4	2.0	492.3	540.3
1000 S5	2.5	620.1	708.1

See method for collection of LNSW

sensitivity factor $\bar{c} 54 = 29$
 $\bar{c} F4 \quad 500.3 \text{ fsu}$
 empty = ~~3.8~~ fsu
 4.7

[illegible]

300 A
NH4
LG01
10 m
2017-09
Bot 4

300 B
NH4
LG01
10 m
2017-09
Bot 4

301B
NH4
LG01
5 m
2017-09
Bot 5 7

301A no successful dihydrate

296 B
NH4
LG02
5 m
2017-09
Bot 8

← did not read, offscale
← Tamar lost tired

288 B
NH4
LG04
5 m
2017-09
Bot 9

288 A
NH4
LG04
5 m
2017-09
Bot 9

276 A
NH4
LG06
20 m
2017-09
Bot 15

277 A
NH4
LG06
10 m
2017-09
Bot 16

279 B
NH4
LG06
5 m
2017-09
Bot 18

279 A
NH4
LG06
5 m
2017-09
Bot 18

277 B
NH4
LG06
10 m
2017-09
Bot 16

276 B
NH4
LG06
20 m
2017-09
Bot 15

299 B
NH4
LG01
20 m
2017-09
Bot 3

299 A
NH4
LG01
20 m
2017-09
Bot 3

296 A
NH4
LG02
5 m
2017-09
Bot 8

294 A
NH4
LG02
10 m
2017-09
Bot 6

294 B
NH4
LG02
10 m
2017-09
Bot 6

293 A
NH4
LG02
20 m
2017-09
Bot 5

293 B
NH4
LG02
20 m
2017-09
Bot 5

287 B
NH4
LG04
10 m
2017-09
Bot 8

287 A
NH4
LG04
10 m
2017-09
Bot 8

286 B
NH4
LG04
20 m
2017-09
Bot 7

286 A
NH4
LG04
20 m
2017-09
Bot 7

Ammonium analysis

Start time of Reaction

End time of reaction

3:30pm

04:40 am

Cruise

2017-09

Date

9 Sept 2017

WR B

Standards

	Conc.	Raw Fluor	Raw Fluor	
S0	0	13.8	16.3	See method for collection of LNSW
S1	0.5	144.9	152.3	
S2	1.0	260.9	285.5	
S3	1.5	397.3	421.3	
S4	2.0	499.7	526.9	
S5	2.5	602.7	685.9	

S4
sens factor = 29
4.5 fsu standby

Sample	Station	Raw Fluor	Sample	Station	Raw Fluor	Sample	Station	Raw Fluor
429 A	CS09	94.4	350 B	LBP5	66.7	440 B	NL1	15.7
427 B		365.2	350 A		63.2	440 A		16.2
429 B		91.1	349 B		534.8	431 A	SS3	185.2
428 A		287.8	348 B		928.1	431 B		188.4
427 A		373.7	348 A		934.3			
428 B		285.3	349 A		537.6			
415 A	CS06	162.6	359 A	LBP3	over			
418 B		50.8	B		"			
416 A		51.3	358 A		961.8	S5 calibration sfac = 28 standby fsu = 3.9		
415 B		182.2	361 A		293.8			
418 A		25.6	361 B		387.1			
416 B		57.2	358 B		985.1			
410 A	CS04	93.7	380 A	CS00	17.2			
409 A		107.1	379 B		10.9	S0	10.4	12.2
408 B		445.9	379 A		10.2	S1	111.3	106.9
410 B		85.5	382 B		8.8	S2	207.4	190.8
409 B		134.8	382 A		10.3	S3	308.1	290.0
408 A		285.8	380 B		13.8	S4	385.8	366.2
401 B	CS02	141.7	441 A	NL1	15.6	S5	499.3	442.2
402 B		45.3	441 B		15.4			
400 B		294.7	442 A		14.2			
401 A		139.3	442 B		15.4			
402 A		53.3	436 A	SS1	18.2			
400 A		295.2	436 B		20.1			
329 A	LBP7	12.9	435 A		21.6			
328 B		45.0	435 B		19.6			
328 A		48.9	434 A		52.4			
331 B		33.3	434 B		83.6			
331 A		44.8	432 A	SS3	50.7			
329 B		14.2	432 B		54.7			
			433 A		36.7			
			433 B		30.5			

359 A
NH4
LBP3
10 m
2017-09
Bot 9

359 B
NH4
LBP3
10 m
2017-09
Bot 9

429 A NH4 CS09 5 m 2017-09 Bot 11	427 A NH4 CS09 20 m 2017-09 Bot 9	429 B NH4 CS09 5 m 2017-09 Bot 11	428 A NH4 CS09 10 m 2017-09 Bot 10	427 A NH4 CS09 20 m 2017-09 Bot 9	428 B NH4 CS09 10 m 2017-09 Bot 10	415 A NH4 CS06 20 m 2017-09 Bot 4	418 B NH4 CS06 5 m 2017-09 Bot 7	416 A NH4 CS06 10 m 2017-09 Bot 5
415 B NH4 CS06 20 m 2017-09 Bot 4	418 A NH4 CS06 5 m 2017-09 Bot 7	416 B NH4 CS06 10 m 2017-09 Bot 5	410 A NH4 CS04 5 m 2017-09 Bot 7	409 A NH4 CS04 10 m 2017-09 Bot 6	408 B NH4 CS04 20 m 2017-09 Bot 5	410 B NH4 CS04 5 m 2017-09 Bot 7	409 B NH4 CS04 10 m 2017-09 Bot 6	408 A NH4 CS04 20 m 2017-09 Bot 5
402 B NH4 CS02 5 m 2017-09 Bot 20	400 B NH4 CS02 20 m 2017-09 Bot 18	401 A NH4 CS02 10 m 2017-09 Bot 19	402 A NH4 CS02 5 m 2017-09 Bot 20	400 A NH4 CS02 20 m 2017-09 Bot 18	329 A NH4 LBP7 10 m 2017-09 Bot 19	328 B NH4 LBP7 20 m 2017-09 Bot 18	329 A NH4 LBP7 20 m 2017-09 Bot 18	331 B NH4 LBP7 5 m 2017-09 Bot 21
B 350 NH4 LBP3 5 m 2017-09 Bot 19	A 350 NH4 LBP5 5 m 2017-09 Bot 19	B 349 NH4 LBP5 10 m 2017-09 Bot 18	B 348 NH4 LBP5 20 m 2017-09 Bot 17	A 349 NH4 LBP5 20 m 2017-09 Bot 17	A 349 NH4 LBP5 10 m 2017-09 Bot 18	358 A NH4 LBP3 20 m 2017-09 Bot 8	361 A NH4 LBP3 5 m 2017-09 Bot 11	361 B NH4 LBP3 5 m 2017-09 Bot 11
A 390 NH4 CS00 10 m 2017-09 Bot 19	B 379 NH4 CS00 20 m 2017-09 Bot 18	A 379 NH4 CS00 20 m 2017-09 Bot 18	382 B NH4 CS00 5 m 2017-09 Bot 21	A 382 NH4 CS00 5 m 2017-09 Bot 21	380 B NH4 CS00 10 m 2017-09 Bot 19	A 441 NH4 NL1 10 m 2017-09 Bot 5	B 441 NH4 NL1 10 m 2017-09 Bot 5	A 442 NH4 NL1 5 m 2017-09 Bot 6
436 B NH4 SS1 5 m 2017-09 Bot 3	435 A NH4 SS1 10 m 2017-09 Bot 2	435 B NH4 SS1 10 m 2017-09 Bot 2	434 A NH4 SS1 20 m 2017-09 Bot 1	434 B NH4 SS1 20 m 2017-09 Bot 1	432 A NH4 SS3 10 m 2017-09 Bot 2	432 B NH4 SS3 10 m 2017-09 Bot 2	B 440 NH4 NL1 20 m 2017-09 Bot 4	433 A NH4 SS3 5 m 2017-09 Bot 3
431 A NH4 SS3 20 m 2017-09 Bot 4	431 B NH4 SS3 20 m 2017-09 Bot 4							433 B NH4 SS3 5 m 2017-09 Bot 3
								440 NH4 NL1 20 m 2017-09 Bot 4

Cruise
Date

UVic Samples

15:30 8 Sept
06:41

Standards

Conc.	Raw Fluor	Raw Fluor
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See method for collection of LNSW

Sy cal, sensfactor = 28

$$y = 240.92x + 19.717$$

[illegible]