

Nutrient Analysis Log					
Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	Chemistry T ($^{\circ}\text{C}$):	NO ₃ :	NO ₃	SiO ₄	PO ₄
Cruise:	Thaw time:	SiO ₄ :	L		
Project:		PO ₄ :	M		
Tray #	Sample ID		H		
1	0				
2	0				
3	0				
4	L				
5	L				
6	L				
7	M				
8	M				
9	M				
10	H				
11	H				
12	H				
13	0				
14	0				
15	0				
16	AY 1035				
17	AY 1035				
18	AY 1035				
19	0				
20	MKT-352				
21	MKT-352				
22	MKT-352				
23	0				
24	1309				
25	1308				
26	1307				
27	1306				
28	1305				
29	1304				
30	1303				
31	1302				
32	1301				
33	1300				
34	1299				
35	1298				
36	1297				
37	1296				
38	1295				
39	1294				
40	1293				

Nutrient Analysis Log

Analyst:

Gain

Standard Ranges ($\mu\text{m/L}$)

Date: Oct 10/2010

Chemistry
T ($^{\circ}\text{C}$):

NO₃:

NO₃

SiO₄

PO₄

Cruise: 2010-07

Thaw time:

SiO₄:

L

M

H

Project: J015 C30

101010.003

PO₄:

Tray #

Sample ID

Comments

1

0

2

0

3

0

4

L

5

L

6

L

7

M

8

M

9

M

10

H

11

H

12

H

13

0

14

0

15

0

16

AY 1035

17

AY 1035

18

AY 1035

19

0

20

MKT-352

21

MKT-352

22

MKT-352

23

0

24

1309

25

1308

26

1307

27

1306

28

1305

29

1304

30

1303

31

1302

32

1301

33

1300

34

1299

35

1298

36

1297

37

1296

38

1295

39

1294

40

1293

Regression 1, 2, 3, 5

NEW BOTTLE #1035

Samples CB18/61

Nutrient Analysis Log

Analyst:

Gain

Standard Ranges ($\mu\text{m/L}$)

Date: Oct 10/10

Chemistry
T ($^{\circ}\text{C}$):

NO_3^- :

NO_3^-

SiO_4

PO_4

Cruise: 2010-07

Thaw time:

SiO_4 :

L

M

H

Project:

101010.003

PO_4 :

Tray #

Sample ID

Comments

1

1292

2

1291

3

1290

4

1289

5

1288

6

1287

7

1286

8

0

9

1307

10

1302

11

1294

12

0

13

Hck

14

Hck

15

Hck

16

0

17

352

18

352

19

352

20

0

21

0

22

0

23

L

24

L

25

L

26

M

27

M

28

M

29

H

30

H

31

H

32

0

33

0

34

0

35

1333

36

1332

37

1331

38

1330

39

1329

40

1328

Reps

2

Sampled

CB19/62

11:43 a.m. 21.6 $^{\circ}\text{C}$

2/5

Nutrient Analysis Log

Analyst:

Gain

Standard Ranges ($\mu\text{m/L}$)

Date:

Oct 10/10

Chemistry

T ($^{\circ}\text{C}$):

NO_3 :

NO_3

SiO_4

PO_4

Cruise:

2010-07

Thaw time:

SiO_4 :

L

M

PO_4 :

H

Project:

101010.493

Tray #

Sample ID

Comments

1

1327

2

1326

3

1325

4

1324

5

1323

6

1322

7

1321

8

1320

9

1319

10

1318

11

1317

12

1316

13

1315

14

1314

15

1313

16

1312

17

1311

18

1310

19

0

20

1332

21

1325

22

1311

23

0

24

Mck

25

Mck

26

Mck

27

0

28

0

29

0

30

L

31

L

32

L

33

M

34

M

35

M

36

H

37

H

38

H

39

0

40

0

Reps

3

21.4 $^{\circ}\text{C}$

13:19

3/5

Nutrient Analysis Log

Analyst:		Gain	Standard Ranges (µm/L)		
Date: Oct 10/10	Chemistry T (°C):	NO ₃ :	NO ₃	SiO ₄	PO ₄
Cruise: 2010-06	Thaw time: ~30min	SiO ₄ :	L		
Project: C30	101010.603	PO ₄ :	M		
			H		
Tray #	Sample ID	Comments			
1	0				
2	85	2010-06 FROZEN.			
3	84	BB10-01/5			
4	83				
5	82				
6	81				
7	80				
8	79				
9	78				
10	77				
11	76				
12	75				
13	74				
14	73				
15	72				
16	71				
17	70				
18	69				
19	0				
20	85	Rep			
21	Mck				
22	Mck				
23	Mck				
24	0				
25	MK-352				
26	MK-352				
27	MK-352				
28	0				
29	114	PS-1 2010-06			
30	113				
31	112				
32	111				
33	110				
34	109				
35	108				
36	107				
37	106				
38	105				
39	104				
40	103				

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Nutrient Analysis Log

Analyst:		Gain	Standard Ranges (µm/L)		
Date:	Chemistry T (°C):	NO ₃ :	NO ₃	SiO ₄	PO ₄
Cruise:	Thaw time:	SiO ₄ :	L		
Project:		PO ₄ :	M		
			H		
Tray #	Sample ID	Comments			
1	0				
2	114	Rep			
3	0				
4	0				
5	0				
6	L				
7	L				
8	L				
9	M	5			
10	M				
11	M				
12	H				
13	H				
14	H				
15	0				
16	0				
17	DD H ₂ O	22.4°C 16:54			
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

5/5

Nutrient Analysis Log				
Analyst:		Gain	Standard Ranges (µm/L)	
Date:	Chemistry T (°C):	NO ₃ :	NO ₃	SiO ₄
Cruise:	Thaw time:	SiO ₄ :	L	PO ₄
Project:		PO ₄ :	M	
Tray #	Sample ID		H	
1	0			
2	0			
3	0			
4	L			
5	L			
6	L			
7	M			
8	M			
9	M			
10	H			
11	H			
12	H			
13	0			
14	0			
15	0			
16	Wako N20			
17	"			
18	"			
19	0			
20	Wako Si 50			
21	"			
22	"			
23	0			
24	MK7-352			
25	"			
26	"			
27	1357			
28	1356			
29	1355			
30	1354			
31	1353			
32	1352			
33	1351			
34	1350			
35	1349			
36	1348			
37	1347			
38	1346			
39	1345			
40	1344			

Nutrient Analysis Log

Analyst:

Gain

Standard Ranges (µm/L)

Date: Oct. 11, 2010

Chemistry
T (°C):

NO₃: 1.00

NO₃

SiO₄

PO₄

Cruise: 2010-07

Thaw time:

SiO₄: 4.00

L 8.0

16.0

0.81

M 16.0

31.9

1.62

Project: Jois

11/10/10.443

PO₄: 7.00

H 24.0

47.9

2.41

Tray #

Sample ID

Comments

-15°C Outside

10:53 21.6°C

Samples CB6/63

22.2°C 12:47

Nutrient Analysis Log

Analyst:		Chemistry	Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	T ($^{\circ}\text{C}$):	NO ₃ :	NO ₃ :	SiO ₄ :	PO ₄ :	
Cruise:	Thaw time:	SiO ₄ :	L			
Project:		PO ₄ :	M			
			H			
Tray #	Sample ID	Comments				
1	1343					
2	1342					
3	1341					
4	1340					
5	1339					
6	1338					
7	1337					
8	1336					
9	1335					
10	1334					
11	0					
12	1353	Reps				
13	1346					
14	1338					
15	0					
16	McK					
17	McK					
18	McK					
19	0					
20	0					
21	0					
22	L					
23	L					
24	L					
25	M					
26	M					
27	M					
28	H					
29	H					
30	H					
31	0					
32	0					
33	0					
34	1405	CB 21/65				
35	1404					
36	1403					
37	1402					
38	1401					
39	1400					
40	1399					

2/5

Nutrient Analysis Log

Analyst:		Gain	Standard Ranges (µm/L)		
Date:	Chemistry T (°C):	NO ₃ :	NO ₃	SiO ₄	PO ₄
Cruise:	Thaw time:	SiO ₄ :	L		
Project:		PO ₄ :	M		
			H		

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Tray #	Sample ID	Comments
1	1398	
2	1397	
3	1396	
4	1395	
5	1394	
6	1393	
7	1392	
8	1391	
9	1390	
10	1389	Cap loose on sample taken from Niskin #14
11	1388	
12	1387	
13	1386	
14	1385	
15	1384	
16	1383	
17	1382	
18	0	Reps
19	1398	
20	1392	
21	1388	
22	0	
23	Mck	
24	Mck	
25	Mck	
26	0	
27	0	
28	0	
29	L	
30	L	
31	L	
32	M	
33	M	
34	M	
35	H	
36	H	
37	H	
38	0	
39	0	
40	0	

Nutrient Analysis Log

Analyst:		Chemistry	Gain	Standard Ranges (µm/L)		
Date:	T (°C):	NO ₃ :	NO ₃ :	SiO ₄ :	PO ₄ :	
Cruise:	Thaw time:	SiO ₄ :	L			
Project:		PO ₄ :	M			
Tray #	Sample ID	Comments				
1	1429	CB21/b6				
2	28					
3	27					
4	26					
5	25					
6	24					
7	23					
8	22					
9	21					
10	20					
11	1419					
12	18					
13	17					
14	16					
15	15					
16	14	Cap not screwed down tightly (loose)				
17	13					
18	12					
19	11					
20	10					
21	1409					
22	08					
23	07					
24	06					
25	0	Reps				
26	1422					
27	1415					
28	1412					
29	0					
30	MLK					
31	MLK					
32	MLK					
33	0					
34	MLK 352					
35	MLK 352					
36	MLK 352					
37	0					
38	0					
39	0					
40	L					

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Nutrient Analysis Log

Analyst:		Gain		Standard Ranges ($\mu\text{m/L}$)		
Date:	Chemistry T ($^{\circ}\text{C}$):	NO ₃ :		NO ₃	SiO ₄	PO ₄
Cruise:	Thaw time:	SiO ₄ :		L		
Project:		PO ₄ :		M		
	11/10/10			H		
Tray #	Sample ID	Comments				
1	L					
2	L					
3	M					
4	M					
5	M					
6	H					
7	H					
8	H					
9	O					
10	O					
11	O					
12	DMQ	Re-run for PO ₄ - peaks jagged Restarted - proper Line A/R in first 2 samples.				
13	1427					
14	26	pin on carousel popped up air in samples. Arrgh!				
15	25					
16	24					
17	23					
18	22	disconnected Si & N.				
19	21					
20	20					
21	19					
22	18					
23	17					
24	16					
25	15					
26	14					
27	O					
28	O					
29	DMQ					
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

5/5

Run These!

1/4

Nutrient Analysis Log					
Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	Chemistry	NO_3^-	NO_3^-	SiO_4	PO_4
Cruise:	T ($^{\circ}\text{C}$):	SiO_4	L		
Project:	Thaw time:	PO_4	M		
Tray #	Sample ID	Comments	H		
1	0	PHOSPHATE TURBIDITY			
2	DMQ	-21			
3	DMQ	-21			
4	1429	-5			
5	1405	-5			
6	1309	-3			
7	1285	-2			
8	1357	-6			
9	1067	+2			
10	1093	-1			
11	997	-2			
12	1069	-2			
13	1021 -1				
14	1165 -2	DMQ -24			
15	973 -1				
16	925	-2			
17	588	-2			
18	589	0			
19	709	-3			
20	733	-3			
21	757	0			
22	829	0			
23	805	-2			
24	DMQ	-22			
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

3.2% NaCl & ASC wetting agent

Nutrient Analysis Log

Analyst:

Gain

Standard Ranges ($\mu\text{m/L}$)

Date:

06/12/2010

Chemistry

T ($^{\circ}\text{C}$):

NO_3^- :

NO_3^-

SiO_4

PO_4

Cruise:

2010-07

Thaw time:

SiO_4 :

L

M

H

Project:

J015

121010.003
2xDDH₂O

PO_4 :

Comments

Tray #

Sample ID

1

0-

2

0

3

0

4

L

5

L

6

L

7

M

8

M

9

M

10

H

11

H

12

H

13

0

14

0

15

0

16

AY

17

AY

18

AY

19

0

20

MK352

21

"

22

"

23

0

24

1453

25

1452

26

1451

27

1450

28

1449

29

1448

30

1447

31

1446

32

1445

33

1444

34

1443

35

1442

36

1441

37

1440

38

1439

39

1438

40

1437

looks like probe missed the tube and
picked up AIR.

245

2/4

Nutrient Analysis Log

Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)		
Date: <i>Oct 12/2010</i>	Chemistry T ($^{\circ}\text{C}$):	NO_3^-	NO_3^-	SiO_4	PO_4
Cruise: <i>2010-07</i>	Thaw time:	SiO_4	L		
Project: <i>JOIS</i>		PO_4	M		
			H		

121010.443

Tray #	Sample ID	Comments
1	<i>1436</i>	
2	<i>1435</i>	
3	<i>1434</i>	
4	<i>1433</i>	
5	<i>1432</i>	
6	<i>1431</i>	
7	<i>1430</i>	
8	<i>0</i>	
9	<i>1442</i>	<i>Rep.</i>
10	<i>1436</i>	
11	<i>1431</i>	
12	<i>0</i>	
13	<i>Mk</i>	
14	<i>Mk</i>	
15	<i>Mk</i>	
16	<i>0</i>	
17	<i>MK-352</i>	<i>DWater Reference</i>
18	<i>MK-352</i>	
19	<i>MK-352</i>	
20	<i>0</i>	
21	<i>0</i>	
22	<i>0</i>	
23	<i>L</i>	
24	<i>L</i>	
25	<i>L</i>	
26	<i>M</i>	
27	<i>M</i>	
28	<i>M</i>	
29	<i>H</i>	
30	<i>H</i>	
31	<i>H</i>	
32	<i>0</i>	
33	<i>0</i>	
34	<i>0</i>	
35	<i>1477</i>	<i>Samples</i>
36	<i>1476</i>	
37	<i>1475</i>	
38	<i>1474</i>	
39	<i>1473</i>	
40	<i>1472</i>	

*CB 50/68 CALIBRATION
REPEAT CAST CAST*

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Nutrient Analysis Log					
Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	Chemistry $T(^{\circ}\text{C})$:	NO_3 :	NO_3	SiO_4	PO_4
Cruise:	Thaw time:	SiO_4 :	L		
Project:		PO_4 :	M		
			H		
Tray #	Sample ID	Comments			
1	1471				
2	1470				
3	1469				
4	1468				
5	1467				
6	1466				
7	1465				
8	1464				
9	1463				
10	1462				
11	1461				
12	1460				
13	1459				
14	1458				
15	1457				
16	1456				
17	1455				
18	1454				
19	0				
20	1473	Rep			
21	1465				
22	1456				
23	0				
24	MK7-352				
25	MK7-352				
26	MK7-350				
27	0				
28	1406/1407 DW	NEW DEEP WATER REFERENCE # 1406 + 1407			
29	1406/1407 DW				
30	1406/1407 DW				
31	0				
32	0				
33	0				
34	L				
35	L				
36	L				
37	M				
38	M				
39	M				
40	H				

000111

DNR

4/4

Nutrient Analysis Log				
Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)	
Date:	Chemistry T ($^{\circ}\text{C}$):	NO ₃ :	NO ₃	SiO ₄
Cruise:	Thaw time:	SiO ₄ :	L	
Project:		PO ₄ :	M	
Tray #	Sample ID		H	PO ₄
		Comments		
1	0			
2	0			
3	0			
4	L			
5	L			
6	L			
7	M			
8	M			
9	M			
10	H			
11	H			
12	H			
13	0			
14	0			
15	0			
16	MK-352	MK7 Niskin #2		2,600 m
17	MK-352			
18	MK-352			
19	0			
20	1500	Samples:		CB51/69
21	1499			
22	1498			
23	1497			
24	1496			
25	1495			
26	1494			
27	1493			
28	1492			
29	1491			
30	1490			
31	1489			
32	1487			
33	1486			
34	1485			
35	1484			
36	1483			
37	1482			
38	1481			
39	1480			
40	1479			

Nutrient Analysis Log

Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	Chemistry T ($^{\circ}\text{C}$):	NO ₃ :	NO ₃	SiO ₄	PO ₄
Cruise:	Thaw time:	SiO ₄ :	L:		
Project:		PO ₄ :	M:		
			H:		
Tray #	Sample ID	Comments			
1	1478				
2	0				
3	1492	Rep			
4	1485				
5	1482				
6	Mck				
7	Mck				
8	Mck				
9	0				
10	0				
11	0				
12	L				
13	L				
14	L				
15	M				
16	M				
17	M				
18	H				
19	H				
20	H				
21	0				
22	0				
23	0				
24	1525	Samples CB52 CB70/70			
25	1524				
26	1523				
27	1522				
28	1521				
29	1520				
30	1519				
31	1518				
32	1517				
33	1516				
34	1515				
35	1514				
36	1513				
37	1512				
38	1511				
39	1510				
40	1509				

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Nutrient Analysis Log

Analyst:		Gain	Standard Ranges ($\mu\text{m/L}$)		
Date: Oct 13/10	Chemistry T ($^{\circ}\text{C}$):	NO ₃ :	NO ₃	SiO ₄	PO ₄
Cruise: J015-07	Thaw time:	SiO ₄ :	L:		
Project: J015	13/10/10.962	PO ₄ :	M:		
			H:		

3/5

Tray #	Sample ID	Comments
1	1508	
2	1507	
3	1506	
4	1505	
5	1504	
6	1503	
7	1502	
8	0	
9	1524	Reps
10	1520	
11	1514	
12	0	
13	MCK	
14	MCK	
15	MCK	
16	0	
17	MK-352	
18	MK-352	
19	MK-352	
20	0	
21	0	
22	0	
23	L	
24	L	
25	L	
26	M	
27	M	
28	M	
29	H	
30	H	
31	H	
32	0	
33	0	
34	0	
35	1544	CB53/71 BANKS ISLAND
36	1543	
37	1542	
38	1541	
39	1540	
40	1539	

Nutrient Analysis Log

Analyst:		Chemistry	Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	T ($^{\circ}\text{C}$):	NO ₃ :	NO ₃	SiO ₄	PO ₄	
Cruise:	Thaw time:	SiO ₄ :	L			
Project:		PO ₄ :	M			
			H			
Tray #	Sample ID	Comments				
1	1538					
2	1537					
3	1536					
4	1535					
5	1534	no 1533				
6	1532					
7	1531					
8	1530	Repeat again				
9	1529					
10	1528 1528					
11	1527					
12	1526					
13	0	Repeat				
14	1544					
15	1538 1538					
16	1531					
17	0					
18	Mek					
19	Mek					
20	Mek					
21	1530	Repeat for phosphate				
22	0	Waiting for last test				
23	1559	CR 54/72				
24	1558					
25	1557					
26	1556					
27	1555					
28	1554					
29	1553					
30	1552					
31	1551					
32	1550					
33	0					
34	1555	Repeat				
35	1552					
36	0					
37	0					
38	0					
39	L					
40	L					

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Nutrient Analysis Log

Analyst:		Chemistry	Gain	Standard Ranges ($\mu\text{m/L}$)		
Date:	T (°C):	NO ₃ :	NO ₃	SiO ₄	PO ₄	
Cruise: 2010-07	Thaw time:	SiO ₄ :	L			
Project: J015	131010.443	PO ₄ :	M			
			H			
Tray #	Sample ID	Comments				
1	L					
2	M					
3	M					
4	M					
5	H					
6	H					
7	H					
8	O					
9	O					
10	DMQ					
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