

TN-368 CTD Cast Sheet

Station Number: A7 CTD cast #: 121 Transect #: 49
 Start time (UTC): 03:12 End time (UTC): 03:29 Bottom Depth: 104
 Start date (UTC): 2019-07-17 End date (UTC): 2019-07-17 Initials: WJ2

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
WS, HS umab	1	94		✓								✓		
	2	94												
WS, HS	3	80		✓								✓		
	4	80												
WS, HS	5	60		✓								✓		
	6	60												
WS	7	40										✓		
HS	8	40		✓		✓								
WS	9	27										✓		
HS	10	27		✓		✓			✓	✓			✓	✓
CS	11	27												
HS	12	20		✓		✓								
WS	13	20										✓		
CS	14	20												
WS	15	10										✓		
HS	16	10		✓		✓								
WS	17	sfc										✓		
WS, HS	18	sfc		✓		✓	✓		✓	✓			✓	✓
CS	19	sfc												
	20	sfc												
	21	sfc												
	22													
	23													
	24													
	Sampler													

Sampling depths – Fixed: ~~Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300~~
 Floating: Chl max, 10mab

0 10 20 27 40 60 80 94
 0 20 27 94
 0 27

TN-368 CTD Cast Sheet

Station Number: A8
 Start time (UTC): 04:11
 Start date (UTC): 2019-07-17

CTD cast #: 122
 End time (UTC): 04:25
 End date (UTC): 2019-07-17

Transect #: 49
 Bottom Depth: 120
 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSI	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
HS	1	110 ✓		✓										
WS, HS	2	100 ✓		✓								✓		
	3	100 ✓												
WS, HS	4	80 ✓		✓								✓		
	5	80 ✓												
WS, HS	6	60 ✓		✓		✓						✓		
	7	60 ✓												
WS, HS	8	40 ✓		✓		✓						✓		
	9	40 ✓												
WS, HS	10	34 ✓		✓		✓			✓	✓		✓	✓	✓
CS	11	34 ✓												
	12	34 ✓												
WS, HS	13	70 ✓		✓		✓						✓	✓	✓
CS	14	70 ✓												
	15	70 ✓												
WS, HS	16	10 ✓		✓		✓						✓		
	17	10 ✓												
ZS, WS, HS	18	Sfc ✓		✓		✓	✓		✓	✓		✓	✓	✓
CS	19	Sfc ✓												
	20	Sfc ✓												
	21	—												
	22	—												
	23	—												
	24	—												
	Sam pler													

Sampling depths – Fixed: Sfc, 10, 20, ³⁴30, 40, 60, 80, 100, ¹¹⁰120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: AS CTD cast #: 123 Transect #: 50
 Start time (UTC): 07:02 End time (UTC): 07:12 Bottom Depth: 82
 Start date (UTC): 2019-07-17 End date (UTC): 2019-07-17 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
WS, HS	1	70 ✓		✓								✓		
WS, HS	2	60 ✓		✓		✓						✓		
	3	60 ✓												
WS, HS	4	40 ✓		✓		✓						✓	✓	✓
	5	40 ✓												
WS, HS	6	26 ✓		✓		✓			✓	✓		✓	✓	✓
	7	26 ✓												
JT	8	26 ✓												
JT	9	26 ✓												
WS, HS	10	20 ✓		✓		✓						✓		
	11	20 ✓												
WS, HS	12	10 ✓		✓		✓						✓		
	13	10 ✓												
WS, HS	14	Sfc ✓		✓		✓	✓		✓	✓		✓	✓	✓
	15	Sfc ✓												
	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	Sampler													

Sampling depths – Fixed: Sfc, 10, 20, ²⁶30, 40, 60, ⁷⁰80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

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TN-368 CTD Cast Sheet

Station Number: AS CTD cast #: 124 Transect #: 50
Start time (UTC): 8:43 End time (UTC): 8:49 Bottom Depth: ~83
Start date (UTC): 19-07-17 End date (UTC): 19-07-17 Initials: HO

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
	1	26												
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	11													
	12													
	13													
	14													
	15													
	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	Sam pler													

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: A16 CTD cast #: 125 Transect #: 52
 Start time (UTC): 12:38 End time (UTC): 13:15 Bottom Depth: 1776
 Start date (UTC): 2019-07-17 End date (UTC): 2019-07-17 Initials: WZ

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
HS	1	300		✓										
HS	2	250		✓										
HS	3	200		✓										
HS	4	120		✓		✓								
HS, WS, ZS	5	100		✓		✓	✓		✓	✓		✓	✓	✓
WS, HS	6	80		✓		✓						✓		
WS, HS	7	60		✓		✓	✓		✓	✓		✓	✓	✓
CS	8	60												
culture	9	60												
	10	60												
	11	60												
WS, HS	12	53		✓		✓	✓		✓	✓		✓	✓	✓
CS	13	53												
culture	14	53												
	15	53												
	16	53												
	17	40										✓		
WS, ZS	18	40		✓		✓								
WS, HS	19	30		✓		✓						✓		
WS, HS	20	20		✓		✓						✓		
WS, HS	21	10		✓								✓		
CS	22	sfc												
WS, HS	23	sfc		✓		✓	✓		✓	✓		✓	✓	✓
ZS	24	sfc												
	Sampler													

Sampling depths – Fixed: ~~Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300~~
 Floating: Chl max, 10mab ~~ZS~~ ✓ ~~40~~ 53 ✓ ~~60~~ 53 ✓ ~~60~~ 53 ✓ ~~60~~ 53 ✓
 CS 0 ✓ 40 ✓ 60 ✓ 60 ✓ 60 ✓

TN-368 CTD Cast Sheet

Station Number: A15
 Start time (UTC): 14:39
 Start date (UTC): 2019-07-17

CTD cast #: 126
 End time (UTC): 15:16
 End date (UTC): 2019-07-17

Transect #: 52
 Bottom Depth: 1125
 Initials: W2

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
HS	1	300		✓										
HS	2	200		✓										
HS	3	150		✓										
WS, HS	4	100		✓		✓						✓		
culture	5	100												
WS, HS	6	80		✓		✓						✓		
ZS, culture	7	80												
culture	8	80												
WS, HS	9	72		✓		✓	✓		✓	✓		✓	✓	✓
CS	10	72												
culture	11	72												
WS, HS	12	60		✓		✓						✓		
ZS, culture	13	60												
WS, HS	14	50		✓		✓	✓		✓	✓		✓	✓	✓
ZS, culture	15	50												
CS	16	50												
culture	17	50												
WS, HS	18	40		✓		✓						✓		
WS, HS	19	30		✓		✓						✓		
ZS, WS, HS	20	20		✓		✓						✓		
WS, HS	21	10		✓								✓		
CS	22	sfc												
WS, HS	23	sfc		✓		✓	✓		✓	✓		✓	✓	✓
ZS	24	sfc												
Sampler														

Sampling depths – Fixed: sfc, 10, 20, 30, 40, 50, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab CS 0-
 ZS 0-
 50' 80'
 50' 80'

TN-368 CTD Cast Sheet

Station Number: A14 CTD cast #: 127 Transect #: 52
 Start time (UTC): 16:00 End time (UTC): 16:33 Bottom Depth: 694
 Start date (UTC): 2019-07-17 End date (UTC): 2019-07-17 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
HS	1	300 ✓		✓										
HS	2	250 ✓		✓										
HS	3	200 ✓		✓										
HS	4	150 ✓		✓										
HS	5	120 ✓		✓										
WS, HS	6	100 ✓		✓		✓						✓		
ZS	7	100 ✓												
HS	8	80 ✓		✓		✓								
WS	9	80 ✓										✓		
CS	10	80 ✓												
WS	11	60 ✓										✓		
HS	12	60 ✓		✓		✓								
Chl ^{WS}	13	44 ✓										✓		
HS	14	44 ✓		✓		✓			✓	✓			✓	✓
CS	15	44 ✓												
ZS	16	44 ✓												
WS, HS	17	30 ✓		✓		✓						✓		
HS	18	20 ✓		✓		✓								
WS	19	20 ✓										✓		
WS, HS	20	10 ✓		✓		✓						✓		
CS	21	Sfc ✓												
	22	Sfc ✓												
WS, HS	23	Sfc ✓		✓		✓	✓		✓	✓		✓	✓	✓
ZS	24	Sfc ✓												
	Sam pler													

Sampling depths – Fixed: Sfc, 10, 20, 30, ⁴⁴40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: A13 CTD cast #: 128 Transect #: 52
 Start time (UTC): 17:32 End time (UTC): 18:07 Bottom Depth: 475
 Start date (UTC): 2019-07-17 End date (UTC): 2019-07-17 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	14C	Chl a vol	Chl b vol	BSI	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
HS	1	300 ✓		✓										
HS	2	250 ✓	Bottle didn't fire. latch got stuck? salt?											
HS	3	200 ✓		✓										
HS	4	150 ✓		✓										
HS	5	120 ✓		✓										
HS	6	100 ✓		✓		✓							✓	
WS	7	100 ✓										✓		
ZS, HS	8	80 ✓		✓		✓							✓	
WS	9	80 ✓										✓		
ZS, HS	10	60 ✓		✓		✓							✓	
WS	11	60 ✓										✓		
HS	12	40 ✓		✓		✓							✓	
WS	13	40 ✓										✓		
CS	chl	33 ✓												
WS	15	33 ✓										✓		
ZS, HS	16	33 ✓		✓		✓			✓	✓			✓	✓
WS	17	23 ✓										✓		
ZS, HS	18	23 ✓		✓		✓							✓	
CS	19	23 ✓												
WS, HS	20	10 ✓		✓		✓						✓	✓	
CS	21	Sfc ✓												
	22	Sfc ✓												
WS	23	Sfc ✓												
ZS, WS	24	Sfc ✓		✓		✓	✓		✓	✓		✓	✓	✓
	Sampler													

23 32

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: A12
 Start time (UTC): 18:48
 Start date (UTC): 2019-07-17

CTD cast #: 129
 End time (UTC): 19:11
 End date (UTC): 2019-07-19

Transect #: 52
 Bottom Depth: 268
 Initials: TS

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
HS	1	258 ✓		✓										
	2	200 ✓												
HS	3	200 ✓		✓										
HS	4	150 ✓		✓										
HS	5	120 ✓		✓										
WS, HS	6	100 ✓		✓								✓		
WS	7	80 ✓										✓		
HS	8	80 ✓		✓		✓							✓	
WS	9	60 ✓										✓		
HS	10	60 ✓		✓		✓							✓	
WS	11	40 ✓										✓		
HS	12	40 ✓		✓		✓							✓	
WS	13	30 ✓										✓		
HS	14	30 ✓		✓		✓							✓	
CS	15	30 ✓												
chl HS	16	23 ✓		✓		✓			✓	✓			✓	✓
WS/CS chl	17	73 ✓										✓		
chl	18	73 ✓												
WS	19	10 ✓										✓		
HS	20	10 ✓		✓		✓							✓	
CS	21	sfc ✓												
	22	sfc ✓												
WS	23	sfc ✓										✓		
ZS, HS	24	sfc ✓		✓		✓	✓		✓	✓			✓	✓
	Sampler													

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

258

TN-368 CTD Cast Sheet

Station Number: A11 CTD cast #: 130 Transect #: 54
 Start time (UTC): 23:38 End time (UTC): 00:23 Bottom Depth: ~149
 Start date (UTC): 2019-07-17 End date (UTC): 2019-07-18 Initials: NO

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
10 mab	1	139 ✓		✓										
	2	120 ✓		✓										
	3	100 ✓		✓								✓		
	4	80 ✓										✓		
	5	80 ✓		✓								✓		
	6	61 ✓		✓		✓							✓	
	7	61 ✓										✓		
	8	61 ✓										✓		
	9	40 ✓										✓		
	10	40 ✓		✓		✓							✓	
	11	30 ✓										✓		
	12	30 ✓		✓		✓			✓	✓			✓	✓
	13	30 ✓												
	14	20 ✓		✓		✓							✓	
	15	20 ✓										✓		
	16	10 ✓		✓		✓							✓	
	17	10 ✓										✓		
	18	sfc		✓		✓			✓	✓			✓	✓
	19	sfc										✓		
	20	sfc												
	21	sfc												
	22													
	23													
	24													
	Sampler													

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Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: A10 CTD cast #: 131 Transect #: 54
 Start time (UTC): 00:42 End time (UTC): 00:57 Bottom Depth: 137
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: W2

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
10mab	1	127		✓										
	2	100												
	3	100		✓								✓		
	4	80											✓	
	5	80		✓								✓		
	6	60		✓		✓							✓	
	7	60										✓		
	8	40		✓		✓							✓	
	9	40										✓		
	10	30		✓		✓			✓	✓			✓	✓
	11	30										✓		
	12	30												
	13	20										✓		
	14	20		✓		✓							✓	
	15	20												
	16	10		✓		✓							✓	
	17	10										✓		
	18	Sfc		✓		✓	✓		✓	✓			✓	✓
	19	Sfc										✓		
	20	Sfc												
	21	Sfc												
	22													
	23													
	24													
	Sampler													

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Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab D 10 20 30 40 60 80 100 127
 CS 0' 20 30
 ZS 0'

TN-368 CTD Cast Sheet

Station Number: A9 CTD cast #: 132 Transect #: 54
 Start time (UTC): 0145 End time (UTC): 02:05 Bottom Depth: 129
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: W2

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
<i>10mab</i>	1	119		✓										
	2	100		✓										
	3	100										✓		
	4	80		✓									✓	
	5	80										✓		
	6	60		✓		✓							✓	
	7	60										✓		
	8	40		✓		✓							✓	
	9	40										✓		
<i>chlmax</i>	10	30		✓		✓			✓	✓			✓	✓
	11	30										✓		
	12	30												
	13	20										✓		
	14	20		✓		✓							✓	
	15	20												
	16	10		✓		✓							✓	
	17	10										✓		
	18	sfc		✓		✓	✓		✓	✓			✓	✓
	19	sfc										✓		
	20	sfc												
	21	sfc												
	22													
	23													
	24													
	Sam pler													

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Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
Floating: Chl max, 10mab
 0 10, 20, 30, 40, 60, 80, 100, 119
 0 20, 30
 0

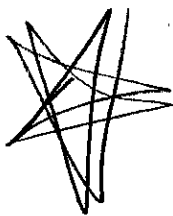
TN-368 CTD Cast Sheet

Station Number: A8 CTD cast #: 133 Transect #: 54
 Start time (UTC): 02:50 End time (UTC): 03:05 Bottom Depth: 122
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: WZ

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSI	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
10mab	1	110		✓										
	2	100												
	3	100		✓								✓		
	4	80												
	5	80		✓								✓		
	6	60												
	7	60		✓								✓		
	8	40		✓			✓							
	9	40										✓		
chlmax	10	29		✓		✓			✓	✓			✓	✓
	11	29										✓		
	12	20		✓		✓								
	13	20										✓		
	14	10		✓		✓								
	15	10										✓		
	16	SFC		✓		✓	✓		✓	✓			✓	✓
	17	SFC										✓		
	18	SFC												
	19	SFC												
	20													
21														
22														
23														
24														
Sampler														

Sampling depths – Fixed: ~~Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300~~
 Floating: Chl max, 10mab

0' 10' 20' 29' 40' 60' 80' 100' 110'
 29'



depths written incorrectly on cast sheet that assigned bottles, HS lab sample in wrong depths!

TN-368 CTD Cast Sheet

Station Number: A7 CTD cast #: 134 Transect #: 54
 Start time (UTC): 0351 End time (UTC): 04:05 Bottom Depth: 103
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: WJZ

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
10mab	1	93	1	✓										
	2	93		✓										
	3	80										✓		
	4	80		✓									✓	
	5	60										✓		
	6	60		✓		✓							✓	
	7	40										✓		
	8	40		✓		✓			✓	✓			✓	✓
Chl max	9	30										✓		
	10	30												
	11	30										✓		
	12	20		✓		✓							✓	
	13	20												
	14	20		✓		✓							✓	
	15	10										✓		
	16	10		✓		✓	✓		✓	✓			✓	✓
	17	Sfc										✓		
	18	Sfc												
	19	Sfc												
	20	Sfc												
	21	Sfc												
	22													
	23													
	24													
	Sampler													

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Sampling depths - Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300

Floating: Chl max, 10mab

Sfc 10 20 30 40 60 80 93
 0 20 30 93
 0

TN-368 CTD Cast Sheet

Station Number: A6 CTD cast #: 135 Transect #: 54
 Start time (UTC): 04:51 End time (UTC): 05:02 Bottom Depth: 89
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	°C	Chl a vol	Chl b vol	BSI	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB		
	1	79 ✓		✓								✓	✓			
	2	79 ✓														
	3	60 ✓		✓								✓				
	4	60 ✓														
	5	40 ✓		✓		✓						✓	✓			
	6	40 ✓														
	7	30 ✓		Did not fire --- Latch stuck									✓			
	8	30 ✓		✓		✓							✓			
	9	18 ✓		✓		✓			✓	✓		✓	✓	✓		
	10	18 ✓														
	11	10 ✓		✓		✓						✓	✓			
	12	10 ✓														
	13	Sfc ✓		✓		✓	✓		✓	✓		✓	✓	✓		
	14	Sfc ✓														
	15	/														
	16	/														
	17	/														
	18	/														
	19	/														
	20	/														
	21	/														
	22	/														
	23	/														
	24	/														
	Sam pler															

AP

AP

Sampling depths – Fixed: Sfc, 10, 20¹⁸, 30, 40, 60, 80⁷⁹, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: A5 CTD cast #: 136 Transect #: 54
 Start time (UTC): 05:46 End time (UTC): 05:57 Bottom Depth: 81
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
	1	70 ✓		✓								✓	✓	
	2	70 ✓												
	3	60 ✓		✓								✓		
	4	60 ✓												
	5	40 ✓		✓		✓						✓	✓	
	6	40 ✓												
	7	26 ✓		✓		✓		✓	✓			✓	✓	✓
	8	26 ✓												
	9	26 ✓												
	10	20 ✓		✓		✓						✓	✓	
	11	20 ✓												
	12	10 ✓		✓		✓						✓		
	13	10 ✓												
	14	Sfc ✓		✓		✓	✓		✓	✓		✓	✓	✓
	15	Sfc ✓												
	16	—												
	17	—												
	18	—												
	19	—												
	20	—												
	21	—												
	22	—												
	23	—												
	24	—												
	Sampler													

AP

AP
cdom

Sampling depths – Fixed: Sfc, 10, 20, ²⁶30, 40, 60, ⁷⁰80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: L4 CTD cast #: 137 Transect #: 54
 Start time (UTC): 07:28 End time (UTC): 07:37 Bottom Depth: 66
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: ZS

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
	1	56 ✓		✓		✓							✓	
	2	56 ✓												
	3	40 ✓		✓		✓							✓	
	4	40 ✓												
	5	28 ✓		✓		✓			✓	✓		AS ✓	✓	✓
	6	28 ✓												
	7	20 ✓		✓		✓							✓	
	8	20 ✓												
	9	11 ✓		✓		✓							✓	
	10	11 ✓												
	11	Sfc ✓		✓		✓	✓		✓	✓		AS ✓	✓	✓
	12	Sfc ✓												
	13	—												
	14	—												
	15	—												
	16	—												
	17	—												
	18	—												
	19	—												
	20	—												
	21	—												
	22	—												
	23	—												
	24	—												
	Sampler													

BP

30 down

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

Chl max = 28

TN-368 CTD Cast Sheet

Station Number: L3 CTD cast #: 138 Transect #: 54
 Start time (UTC): 08:46 End time (UTC): 08:57 Bottom Depth: 55
 Start date (UTC): 2019/07/18 End date (UTC): 2019/07/18 Initials: HO

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
	1	45		✓		✓							✓	
	2	45												
	3	27		✓		✓			✓	✓		HS ✓	✓	✓
	4	27												
	5	20		✓		✓							✓	
	6	20												
	7	11		✓		✓							✓	
	8	11												
	9	sfc		✓		✓	✓		✓	✓		HS ✓	✓	✓
	10	sfc												
	11													
	12													
	13													
	14													
	15													
	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	Sam pler													

AD

AD
colom

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab

TN-368 CTD Cast Sheet

Station Number: 12 CTD cast #: 139 Transect #: 54
 Start time (UTC): 10:06 End time (UTC): 10:18 Bottom Depth: 40
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: HO

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSI	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
	1	40		✓		✓							✓	
	2	40												
	3	30		✓		✓							✓	
	4	30												
	5	20		✓		✓							✓	
	6	20												
	7	11		✓		✓			✓	✓		HS ✓	✓	✓ AP
	8	11												
	9	sfc		✓		✓	✓		✓	✓		HS ✓	✓	✓ AP Calm
	10	sfc												
	11													
	12													
	13													
	14													
	15													
	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	Sam pler													

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
Floating: Chl max, 10mab

The last cast

TN-368 CTD Cast Sheet

Station Number: 21 CTD cast #: 140 Transect #: 54
 Start time (UTC): 11:40 End time (UTC): 11:45 Bottom Depth: 22
 Start date (UTC): 2019-07-18 End date (UTC): 2019-07-18 Initials: HO

Floater ID	Bottle	Target Depth	TOI	Nuts	¹⁴ C	Chl a vol	Chl b vol	BSi	HPLC ID	HPLC vol	CO ₂	C/N	FCM	IFCB
5mab	1	16		✓		✓							✓	
	2	16												
	3	10		✓		✓			✓	✓		HS✓	✓	✓
	4	10												
	5	sfc		✓		✓	✓		✓	✓		HS✓	✓	✓
	6	sfc												
	7													
	8													
	9													
	10													
	11													
	12													
	13													
	14													
	15													
	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	Sampler													

Sampling depths – Fixed: Sfc, 10, 20, 30, 40, 60, 80, 100, 120, 150, 200, 250, 300
 Floating: Chl max, 10mab