

MIRAI MR15-03 Leg1 Bottle Sampling Water Chemical Analysis

Last Modified: 2018-05-08

[ReadMe](#) [Observation Data](#) [Data Format](#) [Quality Information](#)

Cruise ID: [MR15-03 Leg1](#)

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen, Fluorescence, Chlorophyll, Transmittance, PAR, Silicate, Nitrate, Nitrite, Phosphate, Ammonia, Total inorganic carbon, Alkalinity, POC, Potential temperature, Density

Science Keywords:

OCEANS	> OCEAN CHEMISTRY	> AMMONIA
OCEANS	> OCEAN CHEMISTRY	> INORGANIC CARBON
OCEANS	> OCEAN CHEMISTRY	> NITRATE
OCEANS	> OCEAN CHEMISTRY	> NUTRIENTS
OCEANS	> OCEAN CHEMISTRY	> OXYGEN
OCEANS	> OCEAN CHEMISTRY	> PHOSPHATE
OCEANS	> OCEAN CHEMISTRY	> SILICATE
OCEANS	> OCEAN CHEMISTRY	> SALINITY
OCEANS	> OCEAN CHEMISTRY	> CHLOROPHYLL
OCEANS	> OCEAN TEMPERATURE	> WATER TEMPERATURE
OCEANS	> SALINITY/DENSITY	> SALINITY
BIOSPHERE	> AQUATIC ECOSYSTEMS	> PLANKTON
OCEANS	> OCEAN OPTICS	> PHOTOSYNTHETICALLY ACTIVE RADIATION
BIOSPHERE	> ECOLOGICAL DYNAMICS	> ECOSYSTEM FUNCTIONS
OCEANS	> OCEAN CHEMISTRY	> ALKALINITY
BIOSPHERE	> ECOLOGICAL DYNAMICS	> ECOSYSTEM FUNCTIONS
OCEANS	> OCEAN CHEMISTRY	> CARBON
OCEANS	> OCEAN OPTICS	> FLUORESCENCE
OCEANS	> OCEAN TEMPERATURE	> POTENTIAL TEMPERATURE

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR15-03_leg1_all.pdf

For Using Data

Principal Investigator

CTDTMP : Shigeto Nishino(JAMSTEC)
 SBE35 : Shigeto Nishino(JAMSTEC)
 CTDSAL : Shigeto Nishino(JAMSTEC)
 SALNTY : Shigeto Nishino(JAMSTEC)
 CTDOXY : Shigeto Nishino(JAMSTEC)
 OXYGEN : Shigeto Nishino(JAMSTEC)
 XMISS : Shigeto Nishino(JAMSTEC)
 FLUOR : Shigeto Nishino(JAMSTEC)
 PAR : Shigeto Nishino(JAMSTEC)
 SILCAT : Michio Aoyama(JAMSTEC/Fukushima Univ.)
 NITRAT : Michio Aoyama(JAMSTEC/Fukushima Univ.)
 NITRIT : Michio Aoyama(JAMSTEC/Fukushima Univ.)
 PHSPHT : Michio Aoyama(JAMSTEC/Fukushima Univ.)
 AMMONIA : Michio Aoyama(JAMSTEC/Fukushima Univ.)
 TCARBN : Shigeto Nishino(JAMSTEC)
 ALKALI : Shigeto Nishino(JAMSTEC)
 CHLWEL : Shigeto Nishino(JAMSTEC)
 SIZECHL : Shigeto Nishino(JAMSTEC)

Use Constraints

See [Terms and Conditions](#) about constrain of use.

Data Citation

See [Terms and Conditions](#) about data citation.

Instrument

Instrument:

Salinity measurement system



Instrument:

Nutrient analyzer(5ch) (MR09-02 -)



Instrument:

Total dissolved inorganic carbon measurement system (MR11-05 Leg1 -)



Instrument:

Titration for DO Dissolved oxygen titration equipment (MR11-06 -)



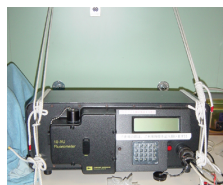
Instrument:

Titration for total alkalinity (MR14-03 -)



Instrument:

Fluorometer (TURNER DESIGNS)





Information on CTD data

Pressure sensor

Model : SBE9plus, Sea-Bird Electronics, Inc.
Measurement range : 0 to 10500 m
Accuracy : $\pm 0.015\%$ of full scale range
Resolution : 0.001% of full scale

Temperature sensor

Model : SBE03-04/F, Sea-Bird Electronics, Inc.
Measurement range : -5 to +35 °C
Accuracy : ± 0.001 °C
Resolution : 0.0002 °C

Deep Ocean Standards Thermometer

Model : SBE35, Sea-Bird Electronics, Inc.
Measurement range : -5 to +35 °C
Accuracy : 0.001 °C
Resolution : 0.000025 °C

Salinity sensor

Model : SBE04C, Sea-Bird Electronics, Inc.
Measurement range : 0 to 7 S/m
Accuracy : ± 0.0003 S/m
Resolution : 0.00004 S/m

DO sensor

Model : SBE43, Sea-Bird Electronics, Inc.
Measurement range : 120% of surface saturation
Accuracy : $\pm 2\%$ of saturation

DO sensor

Model : RINKO III, JFE Advantech Co. Ltd.
Measurement range : 0 to 200 % of surface saturation
Accuracy : $\pm 2\%$ FS, non linearity
Resolution : 0.01 to 0.04 %

Transmissometer

Model : C-Star, WET Labs, Inc.
Linearity : 99% R^2

Fluorometer

Model : Seapoint Sensors, Inc.
Measurement range : 0 - 5 $\mu\text{g/l}$
Resolution : 0.02 $\mu\text{g/l}$

PAR sensor

Model : Satlantic, Inc.
Measurement range : 0 - 5000 $\mu\text{mol photons m}^{-2} \text{s}^{-1}$
Accuracy : -

Information on Chemical and Biological data

Salinity

Instruments : Autosol salinometer model 8400B (Guildline Instruments Ltd.)
Methods : -
Precision : average of the double conductivity ratio 1.99970, standard deviation of the double conductivity ratio 0.00001 (34 bottles)
Reference Material/Calibration : IAPSO Standard Sea Water P157 (Ocean Scientific International Ltd.)

Dissolved Oxygen

Instruments : Burette: APB-510/APB-620 manufactured by Kyoto Electronic Co. Ltd. /10 cm³ of titration vessel
Detector and Software: Automatic photometric titrator DOT-01X manufactured by Kimoto Electronic Co. Ltd
Methods : Winkler method/photometric methods
Precision : 0.1 $\mu\text{mol kg}^{-1}$
Reference Material/Calibration : NMIJ/AIST Potassium Iodate CRM, Lot No. : 3006-1 No.028

Silicate

Instruments : BL TEC K.K QuAAtro 2-HR
Methods : Molybdenum blue method
Precision : C.V. 0.12 %
Reference Material/Calibration : RMNS, Silicon standard solution SiO_2 in NaOH 0.5 mol/L CertiPUR® (Merck KGaA)

Nitrate

Instruments : BL TEC K.K QuAAtro 2-HR
Methods : Diazotization method (reduced to nitrite by Cd - Cu tube)
Precision : C.V. 0.11 %
Reference Material/Calibration : RMNS, potassium nitrate 99.995 suprapur® (Merck KGaA)

Nitrite

Instruments : BL TEC K.K QuAAtro 2-HR
Methods : Diazotization method
Precision : C.V. 0.16 %
Reference Material/Calibration : RMNS, sodium nitrite (Wako Pure Chemical Industries, Ltd.)

Phosphate

Instruments : BL TEC K.K QuAAtro 2-HR
Methods : Molybdenum blue method
Precision : C.V. 0.12 %
Reference Material/Calibration : RMNS, potassium dihydrogen phosphate anhydrous 99.995 suprapur® (Merck KGaA)

Ammonia

Instruments : BL TEC K.K QuAAtro 2-HR
Methods : Indophenol method
Precision : C.V. 0.39 %
Reference Material/Calibration : ammonium chloride (NMIJ CRM)

Total inorganic carbon

Instruments : TCO2 measuring system (Nippon ANS, Inc.) equipped with coulometer Model 3000 (Nippon ANS, Inc.)
Methods : coulometry
Precision : average of the differences 0.68 $\mu\text{mol kg}^{-1}$, standard deviation of the differences 0.62 $\mu\text{mol kg}^{-1}$

Reference Material/Calibration : JAMSTEC DIC reference material

Total alkalinity

Instruments : Spectrophotometric system (Nippon ANS, Inc.). The system comprises of a spectrophotometer (Carry 50 Scan, Varian)

Methods : Single step acid additional procedure/spectrophotometry

Precision : average of the differences 2.19 $\mu\text{mol kg}^{-1}$, standard deviation of the differences 1.93 $\mu\text{mol kg}^{-1}$

Reference Material/Calibration : CRM (SiO)

Chlorophyll a

Instruments : Fluorophotometer model 10-AU (Turner design)

Methods : Extract in N, N-dimethylformamide /fluorometric determination (Welschmeyer non-acidification method)

Precision : C.V. 2.6 % (n = 156)

Reference Material/Calibration : Pure chlorophyll a (Sigma-chemical Co.)

Carbon uptake rate (Simulated in-situ incubation method)

Instruments : ANCA-SL SYSTEM (SerCon Ltd. (IIPDZ Europa Ltd.))

Methods : Dumas method, Mass spectrometry

Precision : -

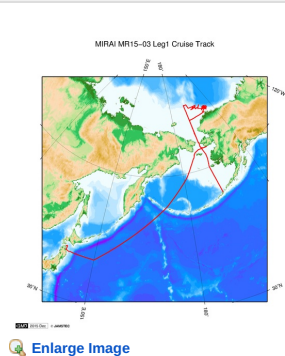
Reference Material/Calibration : -

About this data

There are some description error for nutrient data of this cruise.

Please refer to the errata of the cruise report.

Related Information



MR15-03 Leg1

Ship Name: MIRAI

Period: 2015-08-23 - 2015-10-06

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Research]

Proposal ▶ Observational studies on the Arctic Ocean climate and ecosystem variability

Title:

Update History

2018-05-08	An observation data was registered.
2017-12-31	An observation data was registered.

JAMSTEC

Site Policy

Privacy Policy

Application for Data and Samples

Data Policy

What's New

Update History

Feeds

Lists

Publication List

Amount of Public Info.

Data

Map Search

Data Tree

Detailed Search

Information of the Ships

NATSUSHIMA

KAIYO

YOKOSUKA

MIRAI

KAIREI

CHIKYU

KAIMEI

SHINSEI MARU

HAKUHO MARU

Information of the Submersibles

KAIKO

SHINKAI 2000

SHINKAI 6500

DEEP TOW

HYPER-DOLPHIN

URASHIMA

YOKOSUKA DEEP TOW

6K Camera DEEP TOW

6K Sonar DEEP TOW

KM-ROV

POWER GRAB SAMPLER

(SHELL)

POWER GRAB SAMPLER

(CLOW)

BMS

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

国立研究開発法人
海洋研究開発機構

MIRAI MR15-03 Leg1 Bottle Sampling Water Chemical Analysis

Last Modified: 2018-05-08

[ReadMe](#)
[Observation Data](#)
[Data Format](#)
[Quality Information](#)

Cruise ID: [MR15-03 Leg1](#)

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: [JAMSTEC](#)

Exchange Format

Provided in the Exchange Format of CCHDO (CLIVAR and Carbon Hydrographic Data Office).

Please see the following link for details of Exchange Format.

[CCHDO | CLIVAR & Carbon Hydrographic Data Office](#)

Format Information

Column No.	Column Heading Mnemonic	Units Mnemonic	Reporting Precision FORTRAN Format	Comments
1	EXPCODE		A14	ExpoCode
2	SECT_ID		A6	Section ID
3	STNNBR		A6	Station Number
4	CASTNO		I3	Cast Number
5	SAMPNO		A7	Sample Number
6	BTLNBR		A7	Bottle Number (S/N fixed to the sampling device)
7	BTLNBR_FLAG_W		I1	Bottle quality flags
8	BOTTLE		A7	bottle
9	DATE		I8	Cast date
10	TIME	UTC	A4	Cast time
11	LATITUDE	DEG	F8.4	Latitude
12	LONGITUDE	DEG	F9.4	Longitude
13	DEPTH	METERS	I5	Bottom depth
14	CTDDPT	METERS	F9.1	Depth
15	CTDDPT_FLAG_W		I1	Quality flags for CTD data
16	CTDPRS	DBAR	F9.1	Pressure
17	CTDPRS_FLAG_W		I1	Quality flags for CTD data
18	CTDTMP	ITS-90	F9.4	Temperature
19	CTDTMP_FLAG_W		I1	Quality flags for CTD data
20	CTDTMP_1	ITS-90	F9.4	Temperature (secondary sensor)
21	CTDTMP_1_FLAG_W		I1	Quality flags for CTD data
22	SBE35	ITS-90	F10.5	Temperature from Deep Ocean Standards Thermometer
23	SBE35_FLAG_W		I1	Quality flags for CTD data
24	CTDSAL	PSS-78	F9.4	Salinity
25	CTDSAL_FLAG_W		I1	Quality flags for CTD data
26	CTDSAL_1	PSS-78	F9.4	Salinity (secondary sensor)
27	CTDSAL_1_FLAG_W		I1	Quality flags for CTD data
28	CTDCND	S/M	F11.6	Conductivity (primary sensor)
29	CTDCND_FLAG_W		I1	Quality flags for CTD data
30	CTDCND_1	S/M	F11.6	Conductivity (secondary sensor)
31	CTDCND_1_FLAG_W		I1	Quality flags for CTD data
32	CTDOXY	UMOL/KG	F9.2	CTD-oxygen (primary sensor of RINKO)
33	CTDOXY_FLAG_W		I1	Quality flags for CTD data
34	CTDOXY_1	UMOL/KG	F9.2	CTD-oxygen (secondary sensor of RINKO)
35	CTDOXY_1_FLAG_W		I1	Quality flags for CTD data
36	CTDOXY_s	UMOL/KG	F9.2	CTD-oxygen (primary sensor of RINKO using secondary T and S)
37	CTDOXY_s_FLAG_W		I1	Quality flags for CTD data
38	CTDOXY_1_s	UMOL/KG	F9.2	CTD-oxygen (secondary sensor of RINKO using secondary T and S)
39	CTDOXY_1_s_FLAG_W		I1	Quality flags for CTD data
40	CTDOXY_2	UMOL/KG	F9.2	CTD-oxygen (primary sensor of SBE43)
41	CTDOXY_2_FLAG_W		I1	Quality flags for CTD data
42	CTDOXY_3	UMOL/KG	F9.2	CTD-oxygen (secondary sensor of SBE43)
43	CTDOXY_3_FLAG_W		I1	Quality flags for CTD data
44	CTDOXV	V	F9.4	CTD-oxygen voltage (primary sensor of RINKO)
45	CTDOXV_FLAG_W		I1	Quality flags for CTD data
46	CTDOXV_1	V	F9.4	CTD-oxygen voltage (secondary sensor of RINKO)
47	CTDOXV_1_FLAG_W		I1	Quality flags for CTD data
48	CTDOXV_2	V	F9.4	CTD-oxygen voltage (primary sensor of SBE43)
49	CTDOXV_2_FLAG_W		I1	Quality flags for CTD data
50	CTDOXV_3	V	F9.4	CTD-oxygen voltage (secondary sensor of SBE43)
51	CTDOXV_3_FLAG_W		I1	Quality flags for CTD data
52	THETA	DEG C	F9.4	Potential temperature
53	THETA_FLAG_W		I1	Quality flags for CTD data
54	THETA_1	DEG C	F9.4	Potential temperature (secondary sensor)
55	THETA_1_FLAG_W		I1	Quality flags for CTD data
56	SIG0	KG/CUM	F9.4	Density
57	SIG0_FLAG_W		I1	Quality flags for CTD data
58	SIG0_1	KG/CUM	F9.4	Density (secondary sensor)
59	SIG0_1_FLAG_W		I1	Quality flags for CTD data
60	XMISS	%TRANS	F9.3	Transmissometer
61	XMISS_FLAG_W		I1	Quality flags for CTD data
62	XMISSCP	/METER	F9.4	Beam attenuation coefficient
63	XMISSCP_FLAG_W		I1	Quality flags for CTD data

Column No.	MISSV_FLAG_W Column Heading Mnemonic	Units Mnemonic	Reporting Precision FORTRAN Format	Comments Quantity flags for CTD data Transmissometer voltage
65	XMISSV_FLAG_W		I1	Quality flags for CTD data
66	FLUOR	MG/CUM	F9.3	Fluorescence
67	FLUOR_FLAG_W		I1	Quality flags for CTD data
68	FLUOR_1	MG/CUM	F9.3	Fluorescence (replicate)
69	FLUOR_1_FLAG_W		I1	Quality flags for CTD data
70	PAR	UE/SQM/S	F9.3	PAR
71	PAR_FLAG_W		I1	Quality flags for CTD data
72	SALNTY	PSS-78	F9.4	Bottle Salinity
73	SALNTY_FLAG_W		I1	Quality flags for water samples
74	SALNTY_1	PSS-78	F9.4	Bottle Salinity (duplicate)
75	SALNTY_1_FLAG_W		I1	Quality flags for water samples
76	OXYGEN	UMOL/KG	F9.2	Bottle Oxygen
77	OXYGEN_FLAG_W		I1	Quality flags for water samples
78	OXYGEN_1	UMOL/KG	F9.2	Bottle Oxygen (duplicate)
79	OXYGEN_1_FLAG_W		I1	Quality flags for water samples
80	SILCAT	UMOL/KG	F9.2	Silicate
81	SILCAT_FLAG_W		I1	Quality flags for water samples
82	SILUNC	UMOL/KG	F9.2	Uncertainty of Silicate data
83	SILCAT2	UMOL/KG	F9.2	Silicate (duplicate)
84	SILCAT2_FLAG_W		I1	Quality flags for water samples
85	SILCAT_AVE	UMOL/KG	F9.2	Silicate (average)
86	SILCAT_AVE_FLAG_W		I1	Quality flags for water samples
87	NITRAT	UMOL/KG	F9.2	Nitrate
88	NITRAT_FLAG_W		I1	Quality flags for water samples
89	NRAUNC	UMOL/KG	F9.2	Uncertainty of Nitrate data
90	NITRAT2	UMOL/KG	F9.2	Nitrate (duplicate)
91	NITRAT2_FLAG_W		I1	Quality flags for water samples
92	NITRAT_AVE	UMOL/KG	F9.2	Nitrate (average)
93	NITRAT_AVE_FLAG_W		I1	Quality flags for water samples
94	NITRIT	UMOL/KG	F9.2	Nitrite
95	NITRIT_FLAG_W		I1	Quality flags for water samples
96	NRIUNC	UMOL/KG	F9.2	Uncertainty of Nitrite data
97	NITRIT2	UMOL/KG	F9.2	Nitrite (duplicate)
98	NITRIT2_FLAG_W		I1	Quality flags for water samples
99	NITRIT_AVE	UMOL/KG	F9.2	Nitrite (average)
100	NITRIT_AVE_FLAG_W		I1	Quality flags for water samples
101	PHSPHT	UMOL/KG	F9.3	Phosphate
102	PHSPHT_FLAG_W		I1	Quality flags for water samples
103	PHPUNC	UMOL/KG	F9.3	Uncertainty of Phosphate data
104	PHSPHT2	UMOL/KG	F9.3	Phosphate (duplicate)
105	PHSPHT2_FLAG_W		I1	Quality flags for water samples
106	PHSPHT_AVE	UMOL/KG	F9.3	Phosphate (average)
107	PHSPHT_AVE_FLAG_W		I1	Quality flags for water samples
108	NH4UNC	UMOL/KG	F9.2	Uncertainty of Ammonium data
109	AMMONIA	UMOL/KG	F9.2	Ammonium
110	AMMONIA_FLAG_W		I1	Quality flags for water samples
111	AMMONIA2	UMOL/KG	F9.2	Ammonium (duplicate)
112	AMMONIA2_FLAG_W		I1	Quality flags for water samples
113	AMMONIA_AVE	UMOL/KG	F9.2	Ammonium (average)
114	AMMONIA_AVE_FLAG_W		I1	Quality flags for water samples
115	TCARBN	UMOL/KG	F9.1	Total Carbon CT
116	TCARBN_FLAG_W		I1	Quality flags for water samples
117	TCARBN_1	UMOL/KG	F9.1	Total Carbon CT (duplicate)
118	TCARBN_1_FLAG_W		I1	Quality flags for water samples
119	ALKALI	UMOL/KG	F9.1	Total alkalinity
120	ALKALI_FLAG_W		I1	Quality flags for water samples
121	ALKALI_1	UMOL/KG	F9.1	Total alkalinity (duplicate)
122	ALKALI_1_FLAG_W		I1	Quality flags for water samples
123	d-POC_C1	mgC/m^3/day	F9.4	Carbon uptake rate
124	d-POC_C1_FLAG_W		I1	Quality flags for water samples
125	d-POC_C2	mgC/m^3/day	F9.4	Carbon uptake rate (duplicate)
126	d-POC_C2_FLAG_W		I1	Quality flags for water samples
127	d-POC_C1-Dark	mgC/m^3/day	F9.4	Carbon uptake rate (dark)
128	d-POC_C1-Dark_FLAG_W		I1	Quality flags for water samples
129	d-POC_C2-Dark	mgC/m^3/day	F9.4	Carbon uptake rate (dark)(duplicate)
130	d-POC_C2-Dark_FLAG_W		I1	Quality flags for water samples
131	CHLWEL	UG/L	F9.2	Chlorophyll a
132	CHLWEL_FLAG_W		I1	Quality flags for water samples
133	CHLWEL_1	UG/L	F9.2	Chlorophyll a (duplicate)
134	CHLWEL_1_FLAG_W		I1	Quality flags for water samples
135	SIZECHL>20um	UG/L	F9.2	Chlorophyll a > 20um
136	SIZECHL>20um_FLAG_W		I1	Quality flags for water samples
137	SIZECHL10-20um	UG/L	F9.2	Chlorophyll a 10-20um
138	SIZECHL10-20um_FLAG_W		I1	Quality flags for water samples
139	SIZECHL2-10um	UG/L	F9.2	Chlorophyll a 2-10um
140	SIZECHL2-10um_FLAG_W		I1	Quality flags for water samples
141	SIZECHL<2um	UG/L	F9.2	Chlorophyll a < 2um
142	SIZECHL<2um_FLAG_W		I1	Quality flags for water samples
143	SIZECHL2-20um	UG/L	F9.2	Chlorophyll a 2-20um

Column No.	Column Heading Mnemonic	Units Mnemonic	Reporting Precision	FORTAN Format	Comments
	TEMP[DEG_C]				Quality flags for water samples

ODV Format

Please see the following link for details of ODV Format and ODV Software.

[Ocean Data View \(ODV\)](#)

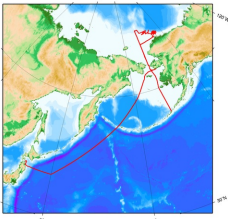
Format Information


Column No.	Column Heading	Comments
1	EXPOCODE	Cruise Label
2	Cruise	Cruise
3	STNNBR	Station number_Cast number
4	Station	Station
5	Type	Station type
6	Bottle	bottle
7	mon/day/yr	Cast date
8	hh:mm	Cast time
9	Latitude[degrees_north]	Latitude
10	Longitude[degrees_east]	Longitude
11	Bot. Depth[METERS]	Bottom depth
12	CTDDPT[METERS]	Depth
13	QF	Quality flags for CTD data
14	CTDPRS[DBAR]	Pressure
15	QF	Quality flags for CTD data
16	CTDTMP[ITS-90]	Temperature
17	QF	Quality flags for CTD data
18	CTDTMP_1[ITS-90]	Temperature (secondary sensor)
19	QF	Quality flags for CTD data
20	SBE35[ITS-90]	Temperature from Deep Ocean Standards Thermometer
21	QF	Quality flags for CTD data
22	CTDSAL[PSS-78]	Salinity
23	QF	Quality flags for CTD data
24	CTDSAL_1[PSS-78]	Salinity (secondary sensor)
25	QF	Quality flags for CTD data
26	CTDCND[S/M]	Conductivity (primary sensor)
27	QF	Quality flags for CTD data
28	CTDCND_1[S/M]	Conductivity (secondary sensor)
29	QF	Quality flags for CTD data
30	CTDOXY[UMOL/KG]	CTD-oxygen (primary sensor of RINKO)
31	QF	Quality flags for CTD data
32	CTDOXY_1[UMOL/KG]	CTD-oxygen (secondary sensor of RINKO)
33	QF	Quality flags for CTD data
34	CTDOXY_s[UMOL/KG]	CTD-oxygen (primary sensor of RINKO using secondary T and S)
35	QF	Quality flags for CTD data
36	CTDOXY_1_s[UMOL/KG]	CTD-oxygen (secondary sensor of RINKO using secondary T and S)
37	QF	Quality flags for CTD data
38	CTDOXY_2[UMOL/KG]	CTD-oxygen (primary sensor of SBE43)
39	QF	Quality flags for CTD data
40	CTDOXY_3[UMOL/KG]	CTD-oxygen (secondary sensor of SBE43)
41	QF	Quality flags for CTD data
42	CTDOXV[V]	CTD-oxygen voltage (primary sensor of RINKO)
43	QF	Quality flags for CTD data
44	CTDOXV_1[V]	CTD-oxygen voltage (secondary sensor of RINKO)
45	QF	Quality flags for CTD data
46	CTDOXV_2[V]	CTD-oxygen voltage (primary sensor of SBE43)
47	QF	Quality flags for CTD data
48	CTDOXV_3[V]	CTD-oxygen voltage (secondary sensor of SBE43)
49	QF	Quality flags for CTD data
50	THETA[DEG C]	Potential temperature
51	QF	Quality flags for CTD data
52	THETA_1[DEG C]	Potential temperature (secondary sensor)
53	QF	Quality flags for CTD data
54	SIG0[KG/CUM]	Density
55	QF	Quality flags for CTD data
56	SIG0_1[KG/CUM]	Density (secondary sensor)
57	QF	Quality flags for CTD data
58	XMISS[%TRANS]	Transmissometer
59	QF	Quality flags for CTD data
60	XMISSCP[METER]	Beam attenuation coefficient
61	QF	Quality flags for CTD data
62	XMISSV[V]	Transmissometer voltage
63	QF	Quality flags for CTD data
64	FLUOR[MG/CUM]	Fluorescence
65	QF	Quality flags for CTD data
66	FLUOR_1[MG/CUM]	Fluorescence (replicate)
67	QF	Quality flags for CTD data
68	PAR[UE/SQM/S]	PAR
69	QF	Quality flags for CTD data
70	SALNTY[PSS-78]	Bottle Salinity
71	QF	Quality flags for water samples
72	SALNTY_1[PSS-78]	Bottle Salinity (duplicate)
73	QF	Quality flags for water samples
74	OXYGEN[UMOL/KG]	Bottle Oxygen

Column No.	Column Heading	Comments
75	OXYGEN_1[UMOL/KG]	Oxygen for water samples
76	OXYGEN_1[UMOL/KG]	Bottle Oxygen (duplicate)
77	QF	Quality flags for water samples
78	SILCAT[UMOL/KG]	Silicate
79	QF	Quality flags for water samples
80	SILUNC	Uncertainty of Silicate data
81	QF	Quality flags for water samples
82	SILCAT2[UMOL/KG]	Silicate (duplicate)
83	QF	Quality flags for water samples
84	SILCAT_AVE[UMOL/KG]	Silicate (average)
85	QF	Quality flags for water samples
86	NITRAT[UMOL/KG]	Nitrate
87	QF	Quality flags for water samples
88	NRAUNC	Uncertainty of Nitrate data
89	QF	Quality flags for water samples
90	NITRAT2[UMOL/KG]	Nitrate (duplicate)
91	QF	Quality flags for water samples
92	NITRAT_AVE[UMOL/KG]	Nitrate (average)
93	QF	Quality flags for water samples
94	NITRIT[UMOL/KG]	Nitrite
95	QF	Quality flags for water samples
96	NRIUNC	Uncertainty of Nitrite data
97	QF	Quality flags for water samples
98	NITRIT2[UMOL/KG]	Nitrite (duplicate)
99	QF	Quality flags for water samples
100	NITRIT_AVE[UMOL/KG]	Nitrite (average)
101	QF	Quality flags for water samples
102	PHSPHT[UMOL/KG]	Phosphate
103	QF	Quality flags for water samples
104	PHPUNC	Uncertainty of Phosphate data
105	QF	Quality flags for water samples
106	PHSPHT2[UMOL/KG]	Phosphate (duplicate)
107	QF	Quality flags for water samples
108	PHSPHT_AVE[UMOL/KG]	Phosphate (average)
109	QF	Quality flags for water samples
110	NH4UNC	Uncertainty of Ammonium data
111	QF	Quality flags for water samples
112	AMMONIA[UMOL/KG]	Ammonium
113	QF	Quality flags for water samples
114	AMMONIA2[UMOL/KG]	Ammonium (duplicate)
115	QF	Quality flags for water samples
116	AMMONIA_AVE[UMOL/KG]	Ammonium (average)
117	QF	Quality flags for water samples
118	TCARBN[UMOL/KG]	Total Carbon CT
119	QF	Quality flags for water samples
120	TCARBN_1[UMOL/KG]	Total Carbon CT (duplicate)
121	QF	Quality flags for water samples
122	ALKALI[UMOL/KG]	Total alkalinity
123	QF	Quality flags for water samples
124	ALKALI_1[UMOL/KG]	Total alkalinity (duplicate)
125	QF	Quality flags for water samples
126	d-POC_C1[mgC/m^3/day]	Carbon uptake rate
127	QF	Quality flags for water samples
128	d-POC_C2[mgC/m^3/day]	Carbon uptake rate (duplicate)
129	QF	Quality flags for water samples
130	d-POC_C1-Dark[mgC/m^3/day]	Carbon uptake rate (dark)
131	QF	Quality flags for water samples
132	d-POC_C2-Dark[mgC/m^3/day]	Carbon uptake rate (dark)(duplicate)
133	QF	Quality flags for water samples
134	CHLWEL[UG/L]	Chlorophyll a
135	QF	Quality flags for water samples
136	CHLWEL_1[UG/L]	Chlorophyll a (duplicate)
137	QF	Quality flags for water samples
138	SIZECHL>20um[UG/L]	Chlorophyll a > 20um
139	QF	Quality flags for water samples
140	SIZECHL10-20um[UG/L]	Chlorophyll a 10-20um
141	QF	Quality flags for water samples
142	SIZECHL2-10um[UG/L]	Chlorophyll a 2-10um
143	QF	Quality flags for water samples
144	SIZECHL<2um[UG/L]	Chlorophyll a < 2um
145	QF	Quality flags for water samples
146	SIZECHL2-20um[UG/L]	Chlorophyll a 2-20um
147	QF	Quality flags for water samples
148	SAMPNO	Sample Number
149	QF	Bottle quality flags

Related Information

MR15-03 Leg1 Cruise Track



 [Enlarge Image](#)

MR15-03 Leg1

Ship Name: MIRAI

Period: 2015-08-23 - 2015-10-06

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Observational studies on the Arctic Ocean climate and ecosystem variability

Title:

Update History	
2018-05-08	An observation data was registerd.
2017-12-31	An observation data was registerd.

JAMSTEC

Site Policy

Privacy Policy

Application for Data and Samples

Data Policy

What's New

Update History

Feeds

Lists

Publication List

Amount of Public Info.

Data

Map Search

Data Tree

Detailed Search

Information of the Ships

NATSUSHIMA

KAIYO

YOKOSUKA

MIRAI

KAIREI

CHIKYU

KAIMEI

SHINSEI MARU

HAKUHO MARU

Information of the Submersibles

KAIKO

SHINKAI 2000

SHINKAI 6500

DEEP TOW

HYPER-DOLPHIN

URASHIMA

YOKOSUKA DEEP TOW

6K Camera DEEP TOW

6K Sonar DEEP TOW

KM-ROV

POWER GRAB

SAMPLER (SHELL)

POWER GRAB

SAMPLER (CLOW)

BMS

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

 **JAMSTEC** 国立研究開発法人 海洋研究開発機構

JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

MIRAI MR15-03 Leg1 Bottle Sampling Water Chemical Analysis

Last Modified: 2018-05-08

[ReadMe](#) [Observation Data](#) [Data Format](#) [Quality Information](#)

Cruise ID: [MR15-03 Leg1](#)

Bottle Sampling Water Chemical Analysis: Processed (PI)

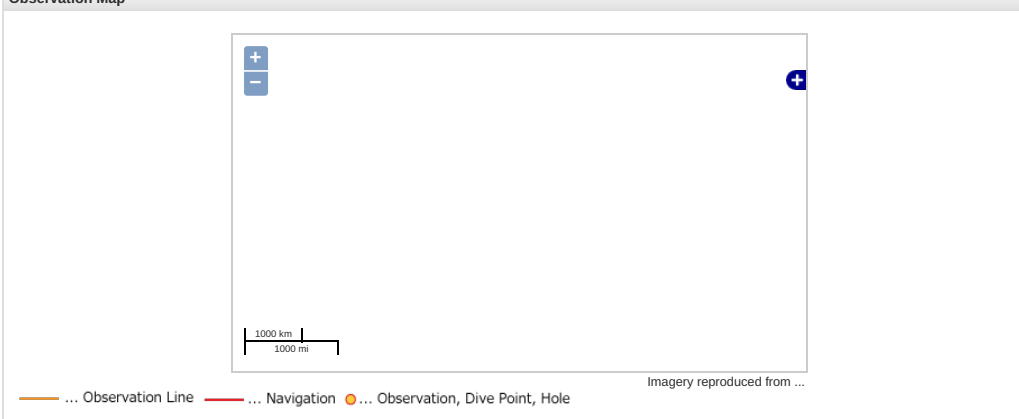
Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen, Fluorescence, Chlorophyll, Transmittance, PAR, Silicate, Nitrate, Nitrite, Phosphate, Ammonia, Total inorganic carbon, Alkalinity, POC, Potential temperature, Density

Science Keywords:

OCEANS	> OCEAN CHEMISTRY	> AMMONIA
OCEANS	> OCEAN CHEMISTRY	> INORGANIC CARBON
OCEANS	> OCEAN CHEMISTRY	> NITRATE
OCEANS	> OCEAN CHEMISTRY	> NUTRIENTS
OCEANS	> OCEAN CHEMISTRY	> OXYGEN
OCEANS	> OCEAN CHEMISTRY	> PHOSPHATE
OCEANS	> OCEAN CHEMISTRY	> SILICATE
OCEANS	> OCEAN CHEMISTRY	> SALINITY
OCEANS	> OCEAN CHEMISTRY	> CHLOROPHYLL
OCEANS	> OCEAN TEMPERATURE	> WATER TEMPERATURE
OCEANS	> SALINITY/DENSITY	> SALINITY
BIOSPHERE	> AQUATIC ECOSYSTEMS	> PLANKTON
OCEANS	> OCEAN OPTICS	> PHOTOSYNTHETICALLY ACTIVE RADIATION
BIOSPHERE	> ECOLOGICAL DYNAMICS	> ECOSYSTEM FUNCTIONS
OCEANS	> OCEAN CHEMISTRY	> ALKALINITY
BIOSPHERE	> ECOLOGICAL DYNAMICS	> ECOSYSTEM FUNCTIONS
OCEANS	> OCEAN CHEMISTRY	> CARBON
OCEANS	> OCEAN OPTICS	> FLUORESCENCE
OCEANS	> OCEAN TEMPERATURE	> POTENTIAL TEMPERATURE

Observation Map



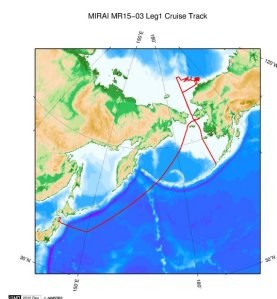
Data List

☐ File names

☐ MR150301_ex_bot.csv

☐ MR150301_odv_bot.txt

Related Information



[Enlarge Image](#)

MR15-03 Leg1

Ship Name: MIRAI

Period: 2015-08-23 - 2015-10-06

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Research]

Proposal ▶ Observational studies on the Arctic Ocean climate and ecosystem variability

Title:

Update History

2018-05-08	An observation data was registered.
2017-12-31	An observation data was registered.

JAMSTEC

Site Policy
Privacy Policy
Application for Data and Samples
Data Policy
What's New
Update History
Feeds

Lists

Publication List
Amount of Public Info.
Data
Map Search
Data Tree
Detailed Search

Information of the Ships

NATSUSHIMA
KAIYO
YOKOSUKA
MIRAI
KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

Information of the Submersibles

KAIKO
SHINKAI 2000
SHINKAI 6500
DEEP TOW
HYPER-DOLPHIN
URASHIMA
YOKOSUKA DEEP TOW
6K Camera DEEP TOW
6K Sonar DEEP TOW
KM-ROV
POWER GRAB SAMPLER (SHELL)
POWER GRAB SAMPLER (CLOW)
BMS

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



JAMSTEC

国立研究開発法人
海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY