

MIRAI MR07-03 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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Cruise ID: **MR07-03**

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: **JAMSTEC**

Observation Items: Temperature, Salinity, Dissolved oxygen, Silicate, Nitrate, Nitrite, Phosphate, Ammonia, Potential temperature, Density

Science Keywords:

OCEANS > OCEAN CHEMISTRY > AMMONIA
OCEANS > OCEAN CHEMISTRY > NITRITE
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 TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR07-03_all.pdf

For Using Data

Principal Investigator

CTDTMP : Iwao Ueki (JAMSTEC)
CTDSAL : Iwao Ueki (JAMSTEC)
SALNTY : Iwao Ueki (JAMSTEC)
CTDOXY : Iwao Ueki (JAMSTEC)
OXYGEN : Iwao Ueki (JAMSTEC)
DWNPRS : Iwao Ueki (JAMSTEC)
DWNNOXY : Iwao Ueki (JAMSTEC)
SILCAT : Kiminori Shitashima (Central Research Institute of Electric Power Industry)
NITRAT : Kiminori Shitashima (Central Research Institute of Electric Power Industry)
NITRIT : Kiminori Shitashima (Central Research Institute of Electric Power Industry)
PHSPHT : Kiminori Shitashima (Central Research Institute of Electric Power Industry)
NH4 : Kiminori Shitashima (Central Research Institute of Electric Power Industry)

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:

Titration for DO (- MR11-05 Leg2)



Notice

· In many other cruises unit of SILCAT, NITRAT, NITRIT, PHSPHT and NH4 is umol/kg, however in this cruise they are measured in umol/l.

Information on CTD data

(1) Temperature sensor

Model: SBE3, Sea-Bird Electronics, Inc.
Measurement range: -5.0 to +35degC
Accuracy: 0.001degC
Resolution: 0.0002degC

(2) Salinity sensor

Model: SBE4, Sea-Bird Electronics, Inc.
Measurement range: 0.0 to 7S/m
Accuracy: 0.0003S/m
Resolution: 0.00004S/m

(3) Pressure sensor

Model: SBE9plus, Sea-Bird Electronics, Inc.
Measurement range: up to 10500m
Accuracy: 0.015%F.S.
Resolution: 0.001%F.S.

(4) DO sensor

Model: SBE43, Sea-Bird Electronics, Inc.
Measurement range: 0-15ml/l
Accuracy: 0.1ml/l
Resolution: 0.01ml/l

Information on Chemical and Biological data

1. Dissolved Oxygen

- (1) Instruments: Burette:APB-510 manufactured by Kyoto Electronic Co. Ltd. / 10 cm3 of titration vessel
Detector and Software: Automatic photometric titrator manufactured by Kimoto Electronic Co. Ltd
- (2) Methods: Winkler method/photometric methods
- (3) Precision: 0.07 umol kg-1
- (4) Reference Material/Calibration: 0.001667M KIO3 solution

2. Salinity

- (1) Instruments: Autosal salinometer model 8400B(Guildline Instruments Ltd.)
- (2) Methods: -
- (3) Precision: 0.0004 PSU
- (4) Reference Material/Calibration: IAPSO Standard Sea Water batch P147 and P148 (Ocean Scientific International Ltd.)

3. Silicate

- (1) Instruments: TRAACS2000 (Bran+Luebbe)
- (2) Methods: Molybden-yellow method
- (3) Precision: -
- (4) Reference Material/Calibration: -

4. Nitrate

- (1) Instruments: TRAACS2000 (Bran+Luebbe)
- (2) Methods: Diazotization method (reduced to nitrite by Cd - Cu tube)
- (3) Precision: -
- (4) Reference Material/Calibration: -

5. Nitrite

- (1) Instruments: TRAACS2000 (Bran+Luebbe)
- (2) Methods: Diazotization method
- (3) Precision: -
- (4) Reference Material/Calibration: -

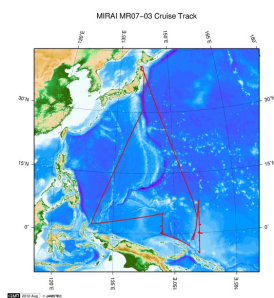
6. Phosphate

- (1) Instruments: TRAACS2000 (Bran+Luebbe)
- (2) Methods: Molybden-blue method
- (3) Precision: -
- (4) Reference Material/Calibration: -

7. Ammonia

- (1) Instruments: -
- (2) Methods: -
- (3) Precision: -
- (4) Reference Material/Calibration: -

Related Information



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MR07-03

Ship Name: MIRAI
Period: 2007-05-31 - 2007-07-14
Chief Scientist: Iwao Ueki (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History

2017-07-28	An observation data was registered.
2015-05-29	An observation data was registered.
2013-08-29	An observation data was registered.
2012-10-30	An observation data was registered.
2012-10-26	An observation data was registered.

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Cruise ID:

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Dive ID:

POWER GRAB SAMPLER
(CLOW)
BMS

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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

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Cruise ID: **MR07-03**

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	Expedition code
2	SECT		A6	For WOCE data the WHP section identifier
3	STNNBR		A6	Station number
4	CASTNO		I3	Cast number
5	SAMPNO		A7	Sample number
6	BTLNBR		A7	Bottle identification number
7	BTLNBR_FLAG_W		I1	Bottle quality flag
8	DATE		I8	Cast date(UTC)
9	TIME	UTC	I4	Cast time (UTC)
10	LATITUDE	DEG	F8.4	LATITUDE
11	LONGITUDE	DEG	F9.4	LONGITUDE
12	DEPTH	M	I5	Reported depth to bottom.
13	CTDDPT	M	F9.1	Depth
14	CTDDPT_FLAG_W		I1	Quality flag for CTD data
15	CTDPRS	DBAR	F9.1	Pressure
16	CTDPRS_FLAG_W		I1	Quality flag for CTD data
17	CTDTMP	ITS-90	F9.4	Temperature
18	CTDTMP_FLAG_W		I1	Quality flag for CTD data
19	CTDSAL	PSS-78	F9.4	CTD Salinity sensor
20	CTDSAL_FLAG_W		I1	Quality flag for CTD data
21	SALNTY	PSS-78	F9.4	Salinity
22	SALNTY_FLAG_W		I1	Quality flags for water samples
23	CTDOXY	UMOL/KG	F9.2	CTD Oxygen sensor
24	CTDOXY_FLAG_W		I1	Quality flag for CTD data
25	OXYGEN	UMOL/KG	F9.2	Oxygen
26	OXYGEN_FLAG_W		I1	Quality flags for water samples
27	DWNPRS	DBAR	F9.1	Down-cast pressure at the same density of the up-cast CTD data
28	DWNPRS_FLAG_W		I1	Quality flag for CTD data
29	DWNOXY	UMOL/KG	F9.2	Down-cast CTD oxygen at pressure of DWNPRS
30	DWNOXY_FLAG_W		I1	Quality flag for CTD data
31	SILCAT	UMOL/L	F9.2	Silicate
32	SILCAT_FLAG_W		I1	Quality flags for water samples
33	NITRAT	UMOL/L	F9.2	Nitrate
34	NITRAT_FLAG_W		I1	Quality flags for water samples
35	NITRIT	UMOL/L	F9.2	Nitrite
36	NITRIT_FLAG_W		I1	Quality flags for water samples
37	PHSPHT	UMOL/L	F9.2	Phosphate
38	PHSPHT_FLAG_W		I1	Quality flags for water samples
39	NH4	UMOL/L	F9.2	Ammonium
40	NH4_FLAG_W		I1	Quality flags for water samples
41	THETA	DEG C	F9.4	Potential temperature
42	SIG0	KG/CUM	F9.4	Density

ODV Format

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

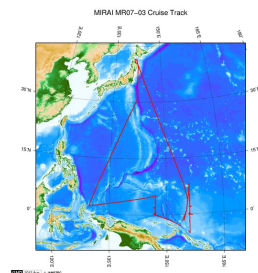
[Ocean Data View \(ODV\)](#)

Format Information

Column No.	Column Heading	Comments
1	Cruise	Cruise Label
2	Station	Station number_Cast number
3	Type	Station type
4	mon/day/yr	Cast date(UTC)
5	hh:mm	Cast time (UTC)
6	Latitude [degrees_north]	LATITUDE
7	Longitude [degrees_east]	LONGITUDE
8	Bot. Depth [m]	Reported depth to bottom.
9	CTDDPT[M]	Depth
10	QF	Quality flag for CTD data
11	CTDPRS[DBAR]	Pressure
12	QF	Quality flag for CTD data
13	CTDTMP[ITS-90]	Temperature
14	QF	Quality flag for CTD data
15	CTDSAL[PSS-78]	CTD Salinity sensor
16	QF	Quality flag for CTD data

Column No.	Column Heading	Comments
17	SALNTY[PSS-78]	Salinity
18	QF	Quality flags for water samples
19	CTDOXY[UMOL/KG]	CTD Oxygen sensor
20	QF	Quality flag for CTD data
21	OXYGEN[UMOL/KG]	Oxygen
22	QF	Quality flags for water samples
23	DWNPRS[DBAR]	Down-cast pressure at the same density of the up-cast CTD data
24	QF	Quality flag for CTD data
25	DWNOXY[UMOL/KG]	Down-cast CTD oxygen at pressure of DWNPRS
26	QF	Quality flag for CTD data
27	SILCAT[UMOL/L]	Silicate
28	QF	Quality flags for water samples
29	NITRAT[UMOL/L]	Nitrate
30	QF	Quality flags for water samples
31	NITRIT[UMOL/L]	Nitrite
32	QF	Quality flags for water samples
33	PHSPHT[UMOL/L]	Phosphate
34	QF	Quality flags for water samples
35	NH4[UMOL/L]	Ammonium
36	QF	Quality flags for water samples
37	THETA[DEG C]	Potential temperature
38	QF	Quality flag for CTD data
39	SIG0[KG/CUM]	Density
40	QF	Quality flag for CTD data
41	SAMPNO	Sample number
42	QF	Bottle quality flag

Related Information



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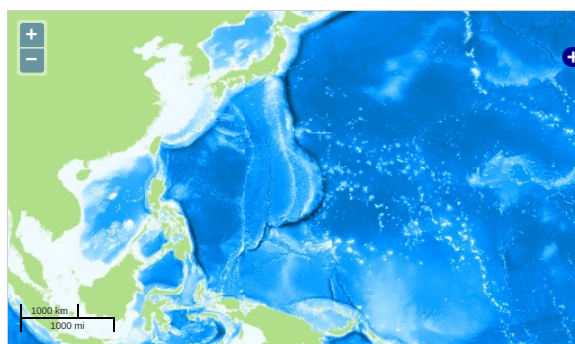
Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen, Silicate, Nitrate, Nitrite, Phosphate, Ammonia, Potential temperature, Density

Science Keywords:

OCEANS > OCEAN CHEMISTRY > AMMONIA
OCEANS > OCEAN CHEMISTRY > NITRITE
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 TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

Observation Map

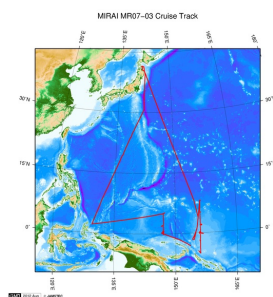


... Observation Line ... Navigation ... Observation, Dive Point, Hole

Data List

☐ File names
☐ MR070300_ex_bot.csv
☐ MR070300_odv_bot.txt

Related Information



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