

MIRAI MR08-03 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

Cruise ID: **MR08-03**

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: **JAMSTEC**

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

Science Keywords:

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 CHEMISTRY > CHLOROPHYLL
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/MR08-03_all.pdf

For Using Data

Principal Investigator

CTDTMP : Yuji Kashino (JAMSTEC)
CTDSAL : Yuji Kashino (JAMSTEC)
SALNTY : Yuji Kashino (JAMSTEC)
CTDOXY : Yuji Kashino (JAMSTEC)
DWNPRS : Yuji Kashino (JAMSTEC)
DWNNOXY : Yuji Kashino (JAMSTEC)
CHLORA : Naoki Nakatani (Osaka prefecture university)
SILCAT : Naoki Nakatani (Osaka prefecture university)
NITRAT : Naoki Nakatani (Osaka prefecture university)
NITRIT : Naoki Nakatani (Osaka prefecture university)
PHSPHT : Naoki Nakatani (Osaka prefecture university)

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(4ch) (- MR09-01)



Instrument:

Titration for DO (- MR11-05 Leg2)



Instrument:

Fluorometer (TURNER DESIGNS)



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. Salinity

- (1) Instruments : Autosal salinometer model 8400B(Guildline Instruments Ltd.)
(2) Methods : -
(3) Precision : 0.0002 PSU
(4) Reference Material/Calibration : IAPSO Standard Sea Water batch P148(Ocean Scientific International Ltd.)

2. Silicate

- (1) Instruments : TRAACS800 (Bran+Luebbe)
(2) Methods : Molybdenum blue method
(3) Precision : C.V. 0.07% (71uM)
(4) Reference Material/Calibration : RMNS [Aoyama et al., 2007] and Silicate standard solution, the silicate primary standard, was obtained from Merck, Ltd.
This standard solution, traceable to SRM from NIST was 1000 mg per liter.

3. Nitrate

- (1) Instruments : TRAACS800 (Bran+Luebbe)
(2) Methods : Diazotization method (reduced to nitrite by Cd - Cu tube)
(3) Precision : C.V. 0.06% (45uM)
(4) Reference Material/Calibration : KNO3 solution and RMNS [Aoyama et al., 2007]

4. Nitrite

- (1) Instruments : TRAACS800 (Bran+Luebbe)
(2) Methods : Diazotization method
(3) Precision : C.V. 0.07% (0.9uM)
(4) Reference Material/Calibration : NaNO2 solution and RMNS [Aoyama et al., 2007]

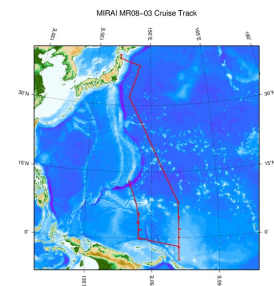
5. Phosphate

- (1) Instruments : TRAACS800 (Bran+Luebbe)
(2) Methods : Molybdenum blue method
(3) Precision : C.V. 0.08% (3.0uM)
(4) Reference Material/Calibration : KH2PO4 solution and RMNS [Aoyama et al., 2007]

6. Chlorophyll-a

- (1) Instruments:Fluorophotometer model 10-AU-005 (Turner design)
(2) Methods :extract in N,N-dimethylformamide/fluorometric determination (acidification method)
(3) Precision : -
(4) Reference Material/Calibration: -

Related Information



[Enlarge Image](#)

MR08-03

Ship Name: MIRAI
Period: 2008-07-02 - 2008-08-06
Chief Scientist: Yuji Kashino (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS),Station KEO]
Proposal Tropical Ocean Climate Study
Title:

Update History

2017-07-28	An observation data was registerd.
2015-05-29	An observation data was registerd.
2013-08-29	An observation data was registerd.
2012-10-30	An observation data was registerd.
2012-10-26	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 \(CLOW\)](#)

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:



MIRAI MR08-03 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

Cruise ID: **MR08-03**

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	F8.3	LATITUDE
11	LONGITUDE	DEG	F9.3	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	DWNPRS	DBAR	F9.1	Down-cast pressure at the same density of the up-cast CTD data
26	DWNPRS_FLAG_W		I1	Quality flag for CTD data
27	DWNOXY	UMOL/KG	F9.2	Down-cast CTD oxygen at pressure of DWNPRS
28	DWNOXY_FLAG_W		I1	Quality flag for CTD data
29	CHLORA	MG/CUM	F9.2	Chlorophyll a
30	CHLORA_FLAG_W		I1	Quality flags for water samples
31	SILCAT	UMOL/KG	F9.2	Silicate
32	SILCAT_FLAG_W		I1	Quality flags for water samples
33	NITRAT	UMOL/KG	F9.2	Nitrate
34	NITRAT_FLAG_W		I1	Quality flags for water samples
35	NITRIT	UMOL/KG	F9.2	Nitrite
36	NITRIT_FLAG_W		I1	Quality flags for water samples
37	PHSPHT	UMOL/KG	F9.3	Phosphate
38	PHSPHT_FLAG_W		I1	Quality flags for water samples
39	THETA	DEG C	F9.4	Potential temperature
40	SIG0	KG/CUM	F9.4	Density

ODV Format

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

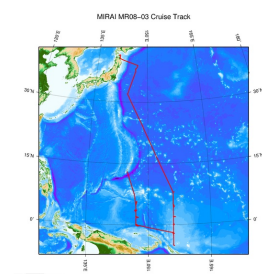
[Ocean Data View \(ODV\)](#)

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
17	SALNTY[PSS-78]	Salinity
18	QF	Quality flags for water samples

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

Related Information



[Enlarge Image](#)

MR08-03

Ship Name: MIRAI
 Period: 2008-07-02 - 2008-08-06
 Chief Scientist: Yuji Kashino (JAMSTEC)
 Project Name: [Tropical Ocean Climate Study (TOCS), Station KEO]
 Proposal Tropical Ocean Climate Study
 Title:

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.

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

MIRAI MR08-03 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

Cruise ID: [MR08-03](#)

Bottle Sampling Water Chemical Analysis: Processed (PI)

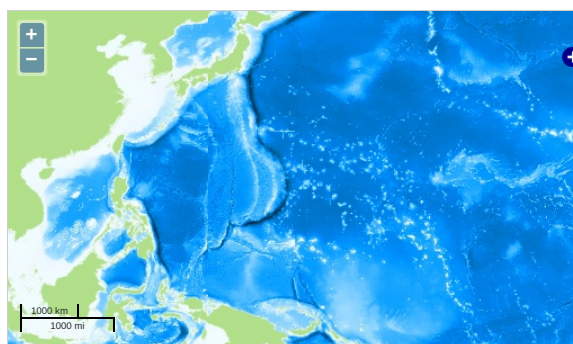
Data Policy: [JAMSTEC](#)

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

Science Keywords:

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 CHEMISTRY > CHLOROPHYLL
OCEANS > OCEAN TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

Observation Map

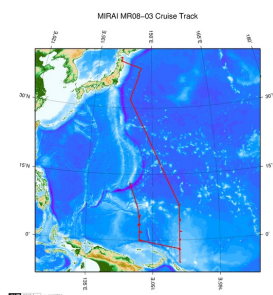


Imagery reproduced from ...

Data List

☐ **File names**
☐ MR080300_ex_bot.csv
☐ MR080300_odv_bot.txt

Related Information



[Enlarge Image](#)

MR08-03

Ship Name: MIRAI
Period: 2008-07-02 - 2008-08-06
Chief Scientist: Yuji Kashino (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS), Station KEO]
Proposal Tropical Ocean Climate Study
Title:

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.

JAMSTEC
[Site Policy](#)
[Privacy Policy](#)
[Application for Data and Samples](#)
[Data Policy](#)
What's New
[Update History](#)

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](#)

Information of the Submersibles
[KAIKO](#)
[SHINKAI 2000](#)
[SHINKAI 6500](#)
[DEEP TOW](#)
[HYPER-DOLPHIN](#)
[URASHIMA](#)
[YOKOSUKA DEEP TOW](#)

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

Feeds

SHINSEI MARU
HAKUHO MARU

6K Camera DEEP TOW
6K Sonar DEEP TOW
KM-ROV
POWER GRAB SAMPLER
(SHELL)
POWER GRAB SAMPLER
(CLOW)
BMS

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