

MIRAI MR06-05 Leg3 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

Cruise ID: [MR06-05 Leg3](#)

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen, Fluorescence, 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 TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN OPTICS > FLUORESCENCE
OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR06-05_leg3_all.pdf

For Using Data

Principal Investigator

CTDTMP : Yuji Kashino (JAMSTEC)
CTDSAL : Yuji Kashino (JAMSTEC)
SALNTY : -
CTDOXY : Yuji Kashino (JAMSTEC)
OXYGEN : -
DWNPRS : Yuji Kashino (JAMSTEC)
DWNNOXY : Yuji Kashino (JAMSTEC)
FLUOR : Yuji Kashino (JAMSTEC)
SILCAT : Masahiro Imamura (CRIEPI)
NITRAT : Masahiro Imamura (CRIEPI)
NITRIT : Masahiro Imamura (CRIEPI)
PHSPHT : Masahiro Imamura (CRIEPI)

JAMSTEC / BPPT joint cruise in the Indonesian waters.

Use Constraints

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

Data Citation

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

Instrument

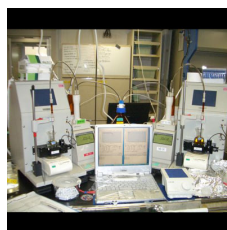
Instrument:

Salinity measurement system



Instrument:

Titration for DO (- MR11-05 Leg2)



Notice

- Data flags of FLUOR are Unknown (flag1) because of lack of the calibration.
- In many other cruises unit of SILCAT, NITRAT, NITRIT and PHSPHT 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(120% of surface saturation)

Accuracy : 0.1ml/(2% of saturation)
Resolution : 0.01ml/l
(5)Fluorometer
Model : Seapoint Sensors,Inc.
Measurement range : 0-5ug/l
Accuracy : 0.02ug/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 : 0.071 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 : 0.00016 PSU
(4) Reference Material/Calibration:IAPSO Standard Sea Water batch P145(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 : -

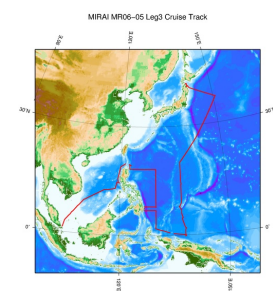
5. Nitrite

- (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 : -

Related Information



[Enlarge Image](#)

MR06-05 Leg3

Ship Name: MIRAI
Period: 2006-12-14 - 2007-01-19
Chief Scientist: Yuji Kashino (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History

2017-07-28	An observation data was registered.
2016-04-07	An observation data was registered.
2015-05-29	An observation data was registered.
2013-08-28	An observation data was registered.
2012-11-25	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

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

Optical history
Feeds

SHINSEI MARU
HAKUHO MARU

YOKOSUKA DEEP TOW
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

MIRAI MR06-05 Leg3 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

 Cruise ID: **MR06-05 Leg3**

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	FLUOR	UG/L	F9.3	Fluorometer
32	FLUOR_FLAG_W		I1	Quality flag for CTD data
33	SILCAT	UMOL/L	F9.1	Silicate
34	SILCAT_FLAG_W		I1	Quality flags for water samples
35	NITRAT	UMOL/L	F9.2	Nitrate
36	NITRAT_FLAG_W		I1	Quality flags for water samples
37	NITRIT	UMOL/L	F9.2	Nitrite
38	NITRIT_FLAG_W		I1	Quality flags for water samples
39	PHSPHT	UMOL/L	F9.2	Phosphate
40	PHSPHT_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.

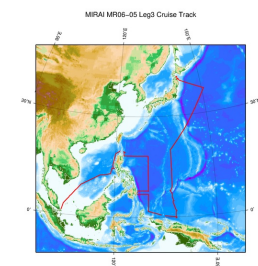
[Ocean Data View \(ODV\)](#)

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	FLUOR[UG/L]	Fluorometer
28	QF	Quality flag for CTD data
29	SILCAT[UMOL/L]	Silicate
30	QF	Quality flags for water samples
31	NITRAT[UMOL/L]	Nitrate
32	QF	Quality flags for water samples
33	NITRIT[UMOL/L]	Nitrite
34	QF	Quality flags for water samples
35	PHSPHT[UMOL/L]	Phosphate
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



MR06-05 Leg3

Ship Name: MIRAI
Period: 2006-12-14 - 2007-01-19
Chief Scientist: Yuji Kashino (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS)]

[Enlarge Image](#)

Update History

2017-07-28	An observation data was registered.
2016-04-07	An observation data was registered.
2015-05-29	An observation data was registered.
2013-08-28	An observation data was registered.
2012-11-25	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:

MIRAI MR06-05 Leg3 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

Cruise ID: [MR06-05 Leg3](#)

Bottle Sampling Water Chemical Analysis: Processed (PI)

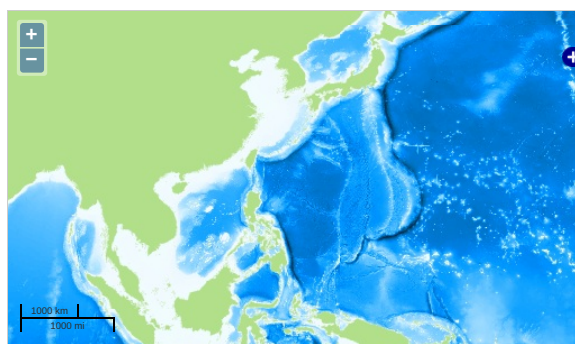
Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen, Fluorescence, 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 TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN OPTICS > FLUORESCENCE
OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

Observation Map



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

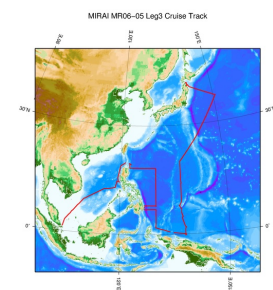
Data List

☐ File names

☐ MR060503_ex_bot.csv

☐ MR060503_odv_bot.txt

Related Information



[Enlarge Image](#)

MR06-05 Leg3

Ship Name: MIRAI

Period: 2006-12-14 - 2007-01-19

Chief Scientist: Yuji Kashino (JAMSTEC)

Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History

2017-07-28	An observation data was registered.
2016-04-07	An observation data was registered.
2015-05-29	An observation data was registered.
2013-08-28	An observation data was registered.
2012-11-25	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