

## MIRAI MR02-K02 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

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

Cruise ID: [MR02-K02](#)

Bottle Sampling Water Chemical Analysis: Processed (DMO/PI)

Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen, Potential temperature, Density

Science Keywords:

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

### For Using Data

#### Principal Investigator

CTDTMP : Kentaro Ando (JAMSTEC)

CTDSAL : Kentaro Ando (JAMSTEC)

SALNTY : Kentaro Ando (JAMSTEC)

CTDOXY : Kentaro Ando (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



### 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 : SBE13, Sea-Bird Electronics, Inc.

Measurement range : 0-15ml/l (120% of surface saturation)

Accuracy : 0.1ml/l (2% of saturation)

Resolution : 0.01ml/l

### Information on Chemical and Biological data

#### 1. Salinity

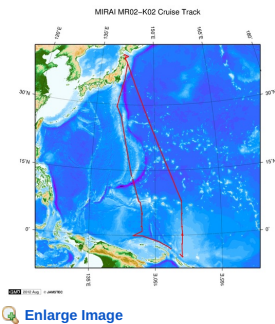
(1) Instruments: Autosol salinometer model 8400B (Guildline Instruments Ltd.)

(2) Methods : -

(3) Precision : -

(4) Reference Material/Calibration: IAPSO Standard Sea Water batch P139 (Ocean Scientific International Ltd.)

### Related Information



**MR02-K02**  
Ship Name: MIRAI  
Period: 2002-02-21 - 2002-03-30  
Chief Scientist: Kentaro Ando (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS)]

#### Update History

2017-07-28	An observation data was registerd.
2015-05-29	An observation data was registerd.
2013-08-23	An observation data was registerd.
2012-12-25	An observation data was registerd.

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#### Information of the Ships

NATSUSHIMA  
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YOKOSUKA  
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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

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Cruise ID:

#### Go to a Dive Information

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### 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	CTDPRS	DBAR	F9.1	Pressure
14	CTDPRS_FLAG_W		I1	Quality flag for CTD data
15	CTDTMP	ITS-90	F9.4	Temperature
16	CTDTMP_FLAG_W		I1	Quality flag for CTD data
17	CTDSAL	PSS-78	F9.4	CTD Salinity sensor
18	CTDSAL_FLAG_W		I1	Quality flag for CTD data
19	SALNTY	PSS-78	F9.4	Salinity
20	SALNTY_FLAG_W		I1	Quality flags for water samples
21	CTDOXY	UMOL/KG	F9.1	CTD Oxygen sensor
22	CTDOXY_FLAG_W		I1	Quality flag for CTD data
23	THETA	DEG C	F9.4	Potential temperature
24	SIG0	KG/CUM	F9.4	Density

### ODV Format

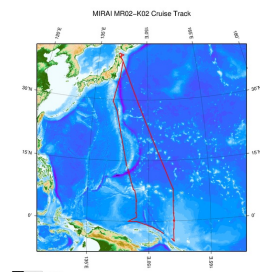
Please see the following link for details of ODV Format and ODV Software.

[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(Calculate from CTDPRS and LATITUDE)
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
19	CTDOXY[UMOL/KG]	CTD Oxygen sensor
20	QF	Quality flag for CTD data
21	THETA[DEG C]	Potential temperature
22	QF	Quality flag for CTD data
23	SIG0[KG/CUM]	Density
24	QF	Quality flag for CTD data
25	SAMPNO	Sample number
26	QF	Bottle quality flag

### Related Information



 [Enlarge Image](#)

#### MR02-K02

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Period: 2002-02-21 - 2002-03-30  
Chief Scientist: Kentaro Ando (JAMSTEC)  
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Dive ID:

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**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

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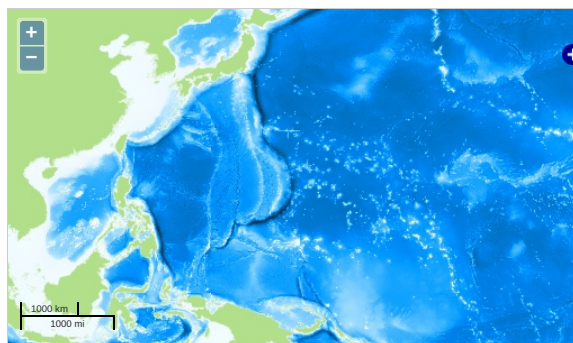
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OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

### Observation Map



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

Imagery reproduced from ...

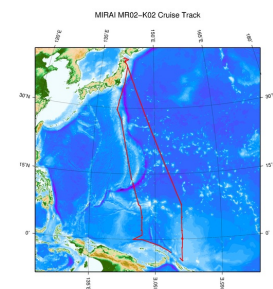
### Data List

☐ File names

☐ MR02K0200\_ex\_bot.csv

☐ MR02K0200\_odv\_bot.txt

### Related Information



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

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