

海洋調査要報

第 11 号

DATA RECORD OF OCEANOGRAPHIC OBSERVATIONS

No.11

APRIL 1995 - MARCH 1996

北海道立水産試験場

平成 16 年 10 月

HOKKAIDO FISHERIES EXPERIMENTAL STATION

October 2004

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北海道立水産試験場による海洋観測結果の生データの印刷公表は昭和9年以降途絶えていましたが、昭和39年度より漁海況予報事業が発足してからは、その関係分は結果報告書に載るようになりました。その後、昭和51年度から中央水産試験場では石狩湾海域生態調査報告書に石狩湾付近の海洋観測結果を掲載するようになり、釧路水産試験場では昭和52年度から、稚内水産試験場では昭和58年度からそれぞれの事業報告書に当該年の全データを掲載公表してきました。このようにいくつかの報告書に掲載されていたデータについて、昭和60年度からは利用の便を図るため、5水産試験場及び1支場の海洋観測結果をまとめて「海洋調査要報」として印刷公表し、各方面の参考に供することになりました。また、今回の平成7年度版(1995年度)の各層水温・塩分データについては、電子ファイルによる配布を準備しています。ホームページをご覧ください。または E-mail にてお問い合わせください。

ホームページ URL <http://www.fishexp.pref.hokkaido.jp/exp/central/kaiyou/index.htm>

問い合わせ先 E-mail: ckaiyou@fishexp.pref.hokkaido.jp

本要報は平成7年度の各水産試験場における観測結果をまとめたものです。掲載した海洋観測結果を引用する場合には本要報によった旨を明記することをお願いいたします。また、データの品質管理には、(財)日本水路協会 海洋情報研究センターの海洋観測データ品質管理ソフト(POD-QC)を利用しました。また、作図には The Generic Mapping Tools を利用しました。

It is requested that due credit be given if data from this "DATA RECORD" are quoted, or if information taken herefrom is incorporated in other papers.

平成 16 年 10 月 October 2004

Table 1. Summary of oceanographic observations conducted by Hokkaido Fisheries Experimental Station from April 1995 to March 1996.

Period	Area	Station Nos. occupied	Number of obs Research staff on board	Equipments for hydrography	Referencial pages
Hokkaido Central Fisheries Experimental Station:Vessel Oyashio-Marui					
1995/4/11 - 1995/4/14	West of Hokkaido,Japan Sea	199504J31 - 199504JC11	30 I.Tanakat A.Nakata	SBE 9/11 725/1055	Table 3-1
1995/4/25 - 1995/4/27	West of Hokkaido,Japan Sea	199504CHA08 - 199504CHA06	6 Y.Watanabe	SBE 9/11 725/1055	Table 3-4
1995/5/8 - 1995/5/9	Ishikari Bay,Japan Sea	199505CIS03 - 199505CISTG1	21 A.Fujioka	SBE 9/11 725/1055	Table 3-4
1995/5/16 - 1995/5/17	West of Hokkaido,Japan Sea	199505JS31 - 199505JS47	10 H.Yagi A.Miyazono	SBE 9/11 725/1055	Table 3-6
1995/5/22 - 1995/5/23	West of Hokkaido,Japan Sea	199505COM03 - 199505COM05	37 H.Sasaki	SBE 9/11 725/1055	Table 3-7
1995/5/29 - 1995/6/4	West of Hokkaido,Japan Sea	199506J31 - 199506JW16	65 I.Tanaka A.Miyazono	SBE 9/11 725/1055	Table 3-11
1995/6/12 - 1995/6/15	West of Hokkaido,Japan Sea	199506CSH01 - 199506CSH04	4 A.Fujioka	SBE 9/11 725/1055	Table 3-17
1995/6/27 - 1995/7/4	West of Hokkaido,Japan Sea	199506CSR01 - 199506CSR17	17 J.Nakata	SBE 9/11 725/1055	Table 3-18
1995/7/10 - 1995/7/11	West of Hokkaido,Japan Sea	199507CIS008 - 199507CIS111	35 A.Fujioka	SBE 9/11 726/1055	Table 3-20
1995/7/17 - 1995/7/20	West of Hokkaido,Japan Sea	199507CHA01 - 199507CHA09	9 Y.Watanabe	SBE 9/11 726/1055	Table 3-23
1995/7/25 - 1995/8/1	Ishikari Bay,Japan Sea	199508J13 - 199508JC22	47 H.Yagi A.Nakata	SBE 9/11plus 690/1297	Table 3-24
1995/8/21 - 1995/8/23	West of Hokkaido,Japan Sea	199508CE101 - 199508CE112	12 K.Maeda	SBE 9/11plus 690/1297	Table 3-29
1995/8/29 - 1995/9/6	Ishikari Bay,Japan Sea	199508CSR101 - 199508CSR120	20 J.Nakata	SBE 9/11plus 690/1297	Table 3-30
1995/9/18 - 1995/9/21	West of Hokkaido,Japan Sea	199509CHA01 - 199509CHA13	13 Y.Watanabe	SBE 9/11plus 725/1055	Table 3-32
1995/9/25 - 1995/9/27	Ishikari Bay,Japan Sea	199509CTK01 - 199509CTK03	6 M.Yamaguchi	SBE 9/11plus 725/1055	Table 3-33
1995/10/2 - 1995/10/4	West of Hokkaido,Japan Sea	199510J31 - 199510J51	27 K.Hirano A.Miyazono	SBE 9/11plus 725/1055	Table 3-34
1995/10/12 - 1995/10/15	West of Hokkaido,Japan Sea	199510W01 - 199510W25	26 H.Yoshida	SBE 9/11plus 725/1055	Table 3-36
1995/10/23 - 1995/10/24	West of Hokkaido,Japan Sea	199510HA01 - 199510HA07	6 Y.Watanabe	SBE 9/11plus 725/1055	Table 3-39
1995/11/6 - 1995/11/7	West of Hokkaido,Japan Sea	199511H101 - 199511H105	4 J.Nakata	SBE 9/11plus 725/1055	Table 3-40
1995/12/4 - 1995/12/5	West of Hokkaido,Japan Sea	199512J31 - 199512J41	16 T.Watanabe K.Hirano	SBE 9/11plus 725/1055	Table 3-40
1995/12/17 - 1995/12/18	West of Hokkaido,Japan Sea	199512CW01 - 199512CW04	4 M.Furumaki	SBE 9/11plus 725/1055	Table 3-42
1996/2/3 - 1996/2/5	Ishikari Bay,Japan Sea	199602J51 - 199602J31	17 K.Hirano A.Miyazono	SBE 9/11plus 725/1055	Table 3-42
1996/2/19 - 1996/2/20	West of Hokkaido,Japan Sea	199602CW01 - 199602CW05	5 M.Furumaki	SBE 9/11plus 725/1055	Table 3-44
1996/3/11 - 1996/3/14	West of Hokkaido,Japan Sea	199603J31 - 199603J41	16 M.Furumaki	SBE 9/11plus 725/1055	Table 3-44
Hokkaido Hakodate Fisheries Experimental Station:Vessel Kinsei-Marui					
1995/4/17 - 1995/4/18	South of Hokkaido,Funka Bay	199504P64 - 199504P65	11 I.Kanomata	SBE 9/11plus	Table 4-1
1995/4/25 - 1995/4/25	Funka Bay	199505HKD001 - 199505HKD014	14 H.Shimada	SBE 9/11plus	Table 4-2
1995/5/9 - 1995/5/10	South of Hokkaido,Funka Bay	199505HGK001 - 199505HGK015	32 Y.Mihara	SBE 9/11plus	Table 4-3
1995/5/15 - 1995/5/18	South of Hokkaido,Funka Bay	199505HFK04 - 199505HTA41	68 Y.Nishida	SBE 9/11plus	Table 4-6
1995/5/22 - 1995/5/24	South of Hokkaido,Funka Bay	199505HKD101 - 199506P66	38 H.Shimada	SBE 9/11plus	Table 4-13
1995/5/31 - 1995/6/1	South of Hokkaido,Funka Bay	199505HKG203 - 199505HKG105	38 Y.Nishida	SBE 9/11plus	Table 4-17
1995/6/6 - 1995/6/13	West of Aomori,Japan Sea & Tsugaru Str.	199506HSR001 - 199506HAD101	27 I.Kanomata	SBE 9/11plus	Table 4-21

Table 1. Summary of oceanographic observations conducted by Hokkaido Fisheries Experimental Station from April 1995 to March 1996.

Period	Area	Station Nos. occupied	Number of obs Research staff on board	Equipments for hydrography	Referencial pages
1995/6/19 - 1995/6/21	South of Hokkaido,Funka Bay	199506HFK04 - 199506HTA22	51 Y.Nishida	SBE 9/11plus	Table 4-23
1995/6/26 - 1995/6/27	South of Hokkaido,Funka Bay	199506HKD102 - 199506HKD127	27 H.Shimada	SBE 9/11plus	Table 4-28
1995/7/4 - 1995/7/7	South of Hokkaido,North Pacific	199507HSR006 - 199507HSR007	15 K. Sazaki	SBE 9/11plus	Table 4-31
1995/7/10 - 1995/7/12	Japan Sea & Tsugaru Strait	199507HSR017 - 199507HSR016	2 K. Sazaki	SBE 9/11plus	Table 4-33
1995/7/17 - 1995/7/20	Funka Bay	199509HKG102 - 199509HKG104	4 K. Sazaki	SBE 9/11plus	Table 4-33
1995/7/25 - 1995/7/27	South of Hokkaido,Funka Bay	199508P65 - 199508P66	32 H.Shimada	SBE 9/11plus	Table 4-33
1995/8/1 - 1995/8/3	Tsugaru Strait & Funka Bay	199508HIK03 - 199508HIK01	2 K.Kanomata	SBE 9/11plus	Table 4-36
1995/8/21 - 1995/8/24	Funka Bay	199508HKG001 - 199508HKG003	3 K. Sazaki	SBE 9/11plus	Table 4-37
1995/8/29 - 1995/9/1	South of Hokkaido,North Pacific	199508HGK006 - 199508HGK007	15 I.Kanomata	SBE 9/11plus	Table 4-37
1995/9/19 - 1995/9/19	Tsugaru Strait	199509HAD101 - 199509HAD107	7 I.Kanomata	SBE 9/11plus	Table 4-38
1995/9/21 - 1995/9/21	Tsugaru Strait	199509HGK016 -	1 I.Kanomata	SBE 9/11plus	Table 4-39
1995/9/26 - 1995/9/29	Funka Bay	199509HKG001 - 199509HKG003	10 K. Sazaki	SBE 9/11plus	Table 4-39
1995/10/2 - 1995/10/4	South of Hokkaido,North Pacific	199510P64 - 199510P63	12 Y.Mihara	SBE 9/11plus	Table 4-40
1995/10/12 - 1995/10/14	Funka Bay	199510HKG001 - 199510HKG003	3 K. Sazaki	SBE 9/11plus	Table 4-41
1995/10/18 - 1995/10/19	Tsugaru Strait	199510HTK06 - 199510HTK27	26 Y.Nishida	SBE 9/11plus	Table 4-42
1995/10/23 - 1995/10/24	South of Hokkaido,Japan Sea	199510HW001 - 199510HW002	12 K. Sazaki	SBE 9/11plus	Table 4-44
1995/11/7 - 1995/11/7	Funka Bay	199511HFA07 - 199511HFA01	7 K. Sazaki	SBE 9/11plus	Table 4-46
1995/11/13 - 1995/11/13	Tsugaru Strait	199511HIK021 -	1 I.Kanomata M.Ito*1	SBE 9/11plus	Table 4-46
1995/11/21 - 1995/11/21	Tsugaru Strait	199511HIK101 -	1 Y. Ueda S. Konno*1	SBE 9/11plus	Table 4-46
1995/12/1 - 1995/12/2	South of Hokkaido,North Pacific	199512P66 - 199512P55	11 I.Kanomata	SBE 9/11plus	Table 4-46
1995/12/4 - 1995/12/5	Tsugaru Strait	199512HAD107 - 199512HAD108	8 K. Sazaki	SBE 9/11plus	Table 4-48
1996/2/20 - 1996/2/21	South of Hokkaido,North Pacific	199602P66 - 199602P55	11 I.Kanomata	SBE 9/11plus	Table 4-48
1996/2/26 - 1996/2/27	Tsugaru Strait & Funka Bay	199602HTK03 - 199602HT2	17 K. Sazaki	SBE 9/11plus	Table 4-49
1996/3/13 - 1996/3/13	Tsugaru Strait	199603HAD107 - 199603HAD101	7 K. Sazaki	SBE 9/11plus	Table 4-51
1996/3/28 - 1996/3/28	Tsugaru Strait	199603HTA7 - 199603HTA1	7 K. Sazaki	SBE 9/11plus	Table 4-52
Hokkaido Kushiro Fisheries Experimental Station:Vessel Hokushin-Maru					
1995/4/11 - 1995/4/19	South of Hokkaido, North Pacific	199504P11 - 199504PKA24	59 Y.Nakame	Niel Brown Mark	Table 5-1
1995/5/18 - 1995/5/24	South of Hokkaido, North Pacific	199505SU22 - 199505SU06	23 O.Shida	Niel Brown Mark	Table 5-6
1995/5/30 - 1995/6/6	South of Hokkaido, North Pacific	199506P31 - 199506PK24	59 T.Honma	Niel Brown Mark	Table 5-9
1995/6/14 - 1995/6/22	South of Hokkaido, North Pacific	199506IK04 - 199506IK05	13 A.Taka	Niel Brown Mark	Table 5-15
1995/6/27 - 1995/7/5	South of Hokkaido & Off Sanriku North Pacific	199506IW01 - 199506IW17	25 Y.Nakame	Niel Brown Mark	Table 5-16
1995/7/15 - 1995/7/24	South of Kuril , North Pacific	199507SM09 - 199507SM17	17 T.Honma	Niel Brown Mark	Table 5-18
1995/8/1 - 1995/8/4	South of Hokkaido, North Pacific	199508PK11 - 199508P31	40 A.Taka K.Hirano	Niel Brown Mark	Table 5-20

Table 1. Summary of oceanographic observations conducted by Hokkaido Fisheries Experimental Station from April 1995 to March 1996.

Period	Area	Station Nos. occupied	Number of obs Research staff on board	Equipments for hydrography	Referencial pages
1995/8/28 - 1995/8/31	South of Hokkaido, North Pacific	199508IK01 - 199508IK07	7 A.Taka	Niel Brown Mark	Table 5-24
1995/9/5 - 1995/9/12	South of Hokkaido, North Pacific	199509IW01 - 199509IW17	17 Y.Nakame	Niel Brown Mark	Table 5-25
1995/9/20 - 1995/9/26	South of Hokkaido, North Pacific	199509SM11 - 199509SM01	8 T.Honma	Niel Brown Mark	Table 5-27
1995/10/2 - 1995/10/6	South of Hokkaido, North Pacific	199510P31 - 199510P32	40 Y.Nakame	Niel Brown Mark	Table 5-27
1995/10/11 - 1995/10/18	Okhotsk Sea, Nemuro Strait & North Pacific	199510IK08 - 199510IK01	18 A.Taka	Niel Brown Mark	Table 5-31
1995/10/26 - 1995/10/30	South of Hokkaido, North Pacific	199510SM01 - 199510SM08	6 T.Honma	Niel Brown Mark	Table 5-33
1995/11/13 - 1995/11/16	South of Hokkaido, North Pacific	199511SU02 - 199511SU22	13 O.Shida	Niel Brown Mark	Table 5-34
1995/12/5 - 1995/12/8	South of Hokkaido, North Pacific	199512PK11 - 199512P31	38 A.Taka	Niel Brown Mark	Table 5-35
1996/2/19 - 1996/2/22	South of Hokkaido, North Pacific	199602PK11 - 199602P31	38 Y.Nakame	Niel Brown Mark	Table 5-39
Hokkaido Wakkanai Fisheries Experimental Station:Vessel Hokuyo-Maru					
1995/4/12 - 1995/4/13	Southwestern Okhotsk Sea	199504S4 - 199504O31	29 T. Suzuuchi	SBE 9/11plus	Table 6-1
1995/4/17 - 1995/4/19	North of Hokkaido, Japan Sea	199404J11 - 199404JW14	23 H. Miyake	SBE 9/11plus	Table 6-3
1995/5/15 - 1995/5/18	North of Hokkaido, Japan Sea	199505WHK01 - 199505WHK03	3 T. Kaneta	MSTD	Table 6-3
1995/6/14 - 1995/6/15	North of Hokkaido, Japan Sea	199506O44 - 199506O31	46 T. Suzuuchi	SBE 9/11plus	Table 6-6
1995/6/19 - 1995/6/23	Southwestern Okhotsk Sea	199506WKG107 - 199506WKG142	90 M. Torisawa, H.Kuwahara	SBE 9/11plus	Table 6-10
1995/7/31 - 1995/8/2	Southwestern Okhotsk Sea	199508S4 - 199508O14	40 T. Suzuuchi	SBE 9/11plus	Table 6-19
1995/8/7 - 1995/8/10	Soya Strait	199508S103 - 199508T210	27 H.Yagi I.Tanaka &*2	SBE 9/11plus	Table 6-23
1995/10/2 - 1995/10/4	Southwestern Okhotsk Sea	199510S4 - 199510O14	40 K. Kuratome	SBE 9/11plus	Table 6-26
1995/10/17 - 1995/10/19	North of Hokkaido, Japan Sea	199510J11 - 199510JW01	24 K. Kuratome	SBE 9/11plus	Table 6-30
1995/11/30 - 1995/12/1	Southwestern Okhotsk Sea	199512O35 - 199512OA05	6 M. Mitsunashi	SBE 9/11plus	Table 6-32
1995/12/5 - 1995/12/5	North of Hokkaido, Japan Sea	199512J11 - 199512J23	9 K. Kuratome	SBE 9/11plus	Table 6-33
1995/12/10 - 1995/12/13	Japan Sea & Okhotsk Sea	199512J14 - 199512O43	38 K. Kuratome	SBE 9/11plus	Table 6-34
1996/2/13 - 1996/2/14	North of Hokkaido, Japan Sea	199602J11 - 199602J26	11 K. Kuratome	SBE 9/11plus	Table 6-38
1996/3/11 - 1996/3/14	Soya Strait	199603J101 - 199603S101N	26 H.Yagi I.Tanaka A.Nakata	SBE 9/11plus	Table 6-39

*1:Fisheries Technology Training Center

*2:A. Samatov (Sakhalin Scientific Research Institute of Fisheries and Oceanography)

Table 2. Principal particulars of research vessels

Vessel	Call sign	Gross tonnage	Main engine	Number of crew	Captain	Affiliated institution
Oyashio Maru	JCMO	178	440 p.s.	19	Y. Nunokawa	Central Fisheries Experimental Station
Kinsei Maru	7LXI	68	290 p.s.	12	K. Sazaki	Hakodate Fisheries Experimental Station
Hokushin Maru	7LQV	214	440 p.s.	22	K. Kuratome	Kushiro Fisheries Experimental Station
Hokuyo Maru	JLSR	276	610 p.s.	25	M. Furumaki	Wakkanai Fisheries Experimental Station

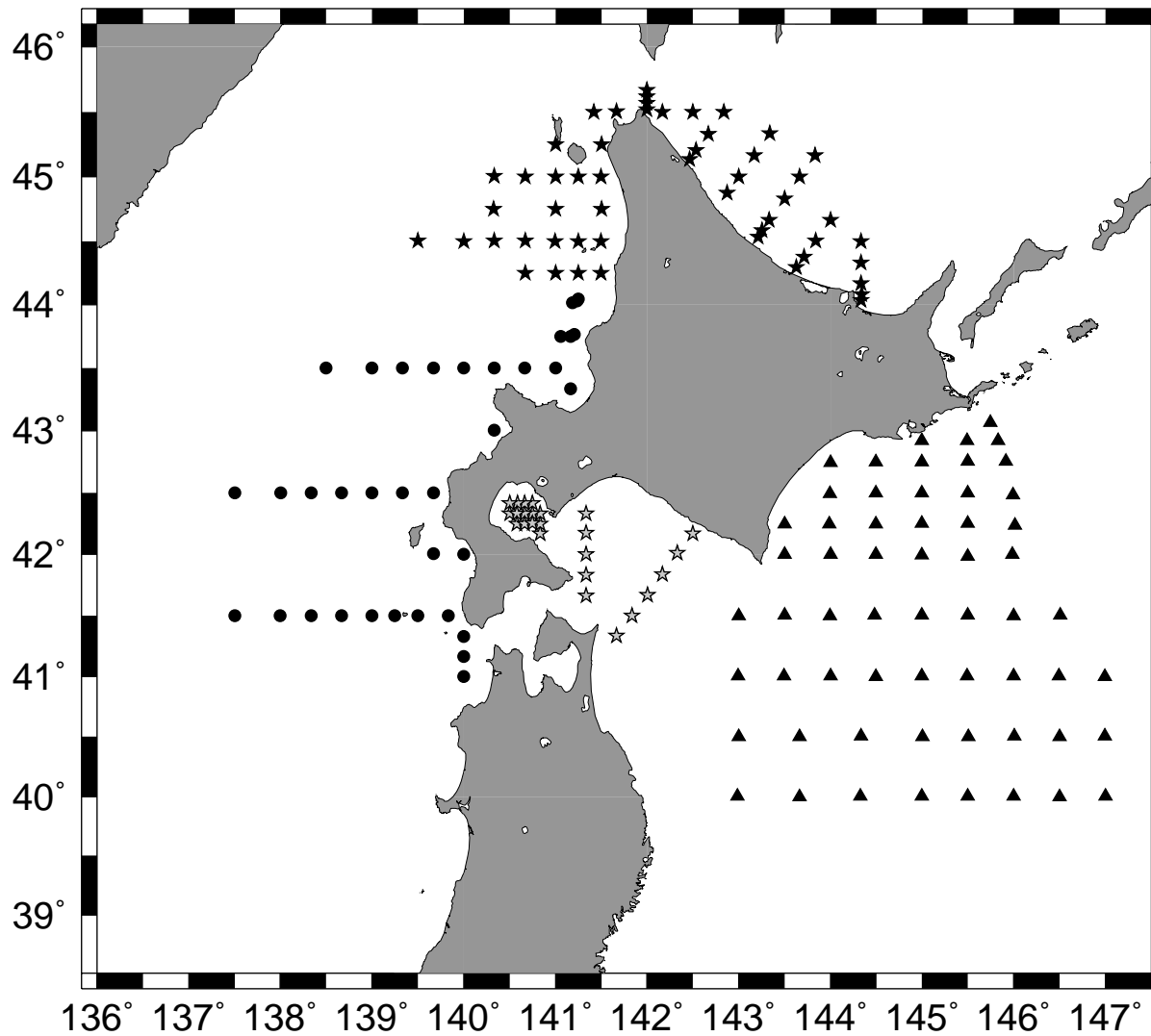


Fig. 1. Location of oceanographic stations covered in April 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

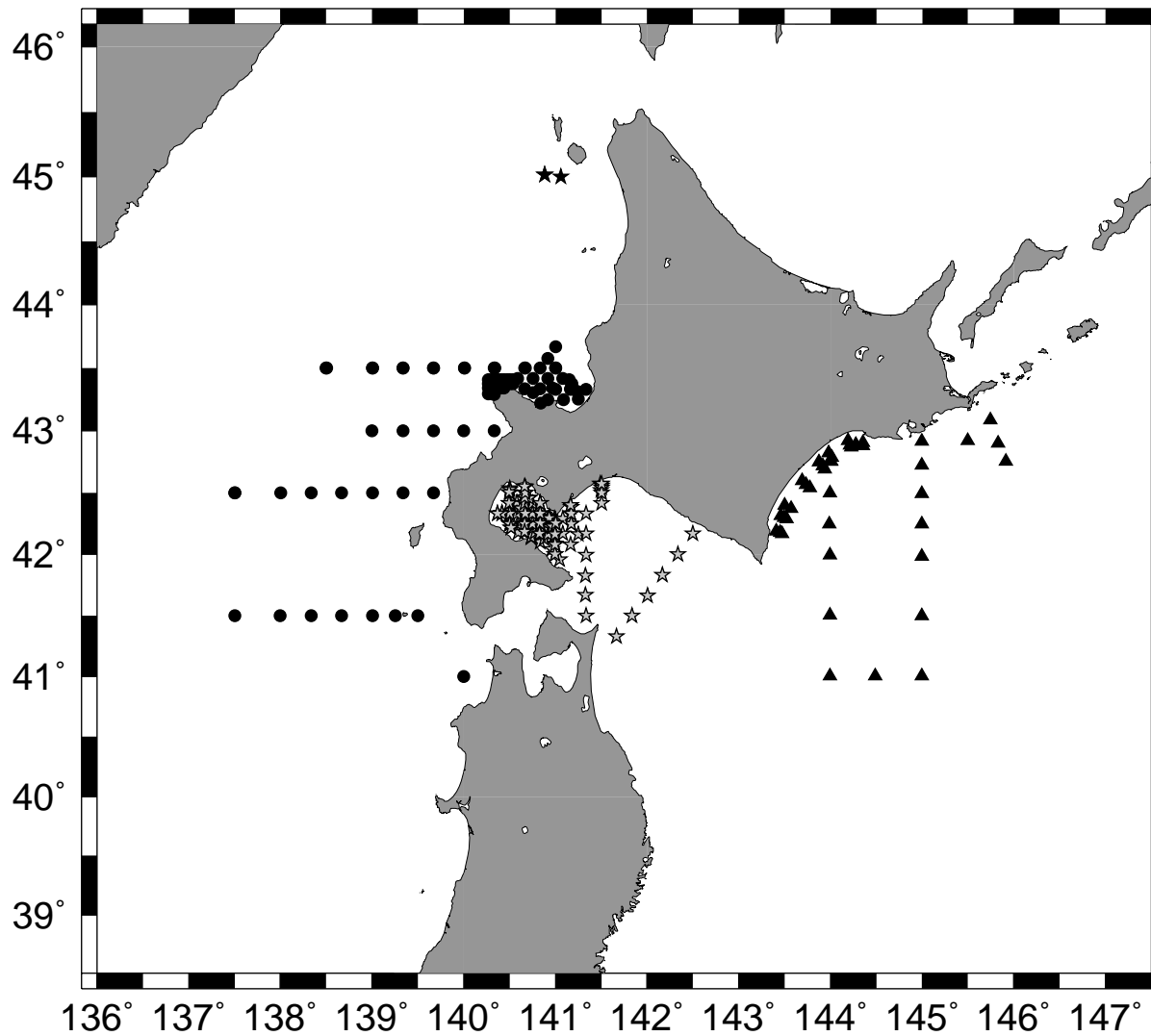


Fig. 2. Location of oceanographic stations covered in May 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

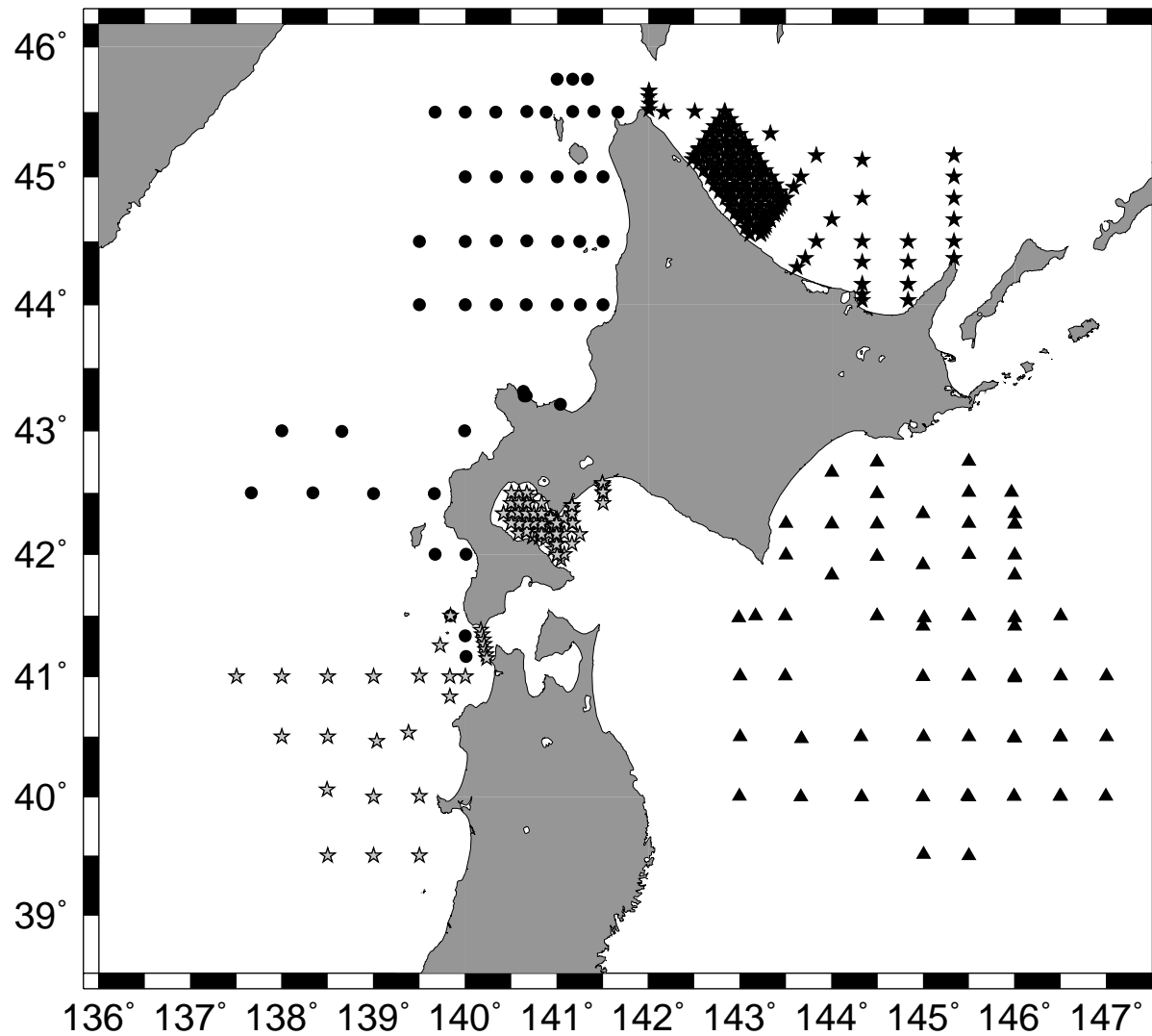


Fig. 3. Location of oceanographic stations covered in June 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

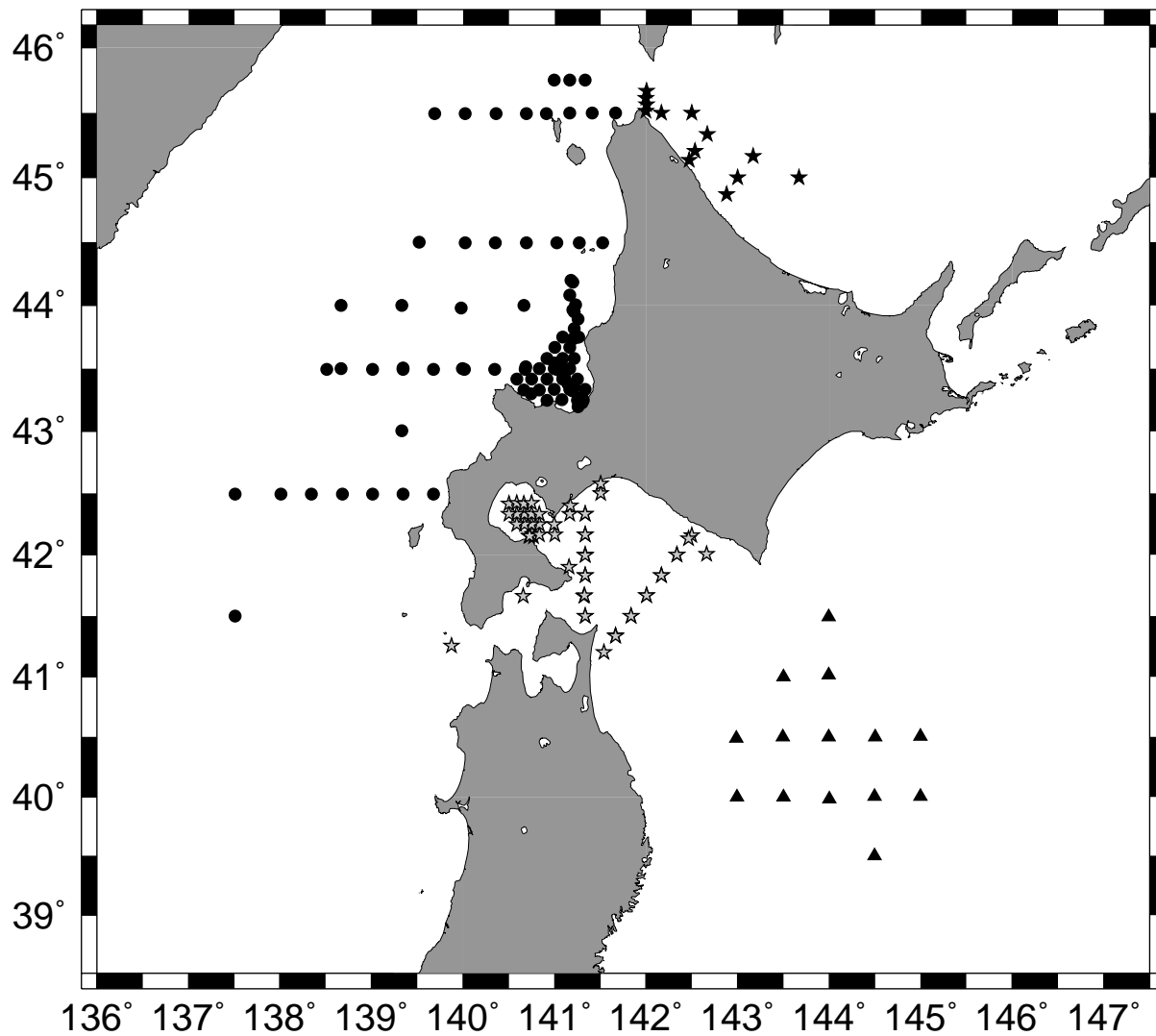


Fig. 4. Location of oceanographic stations covered in July 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

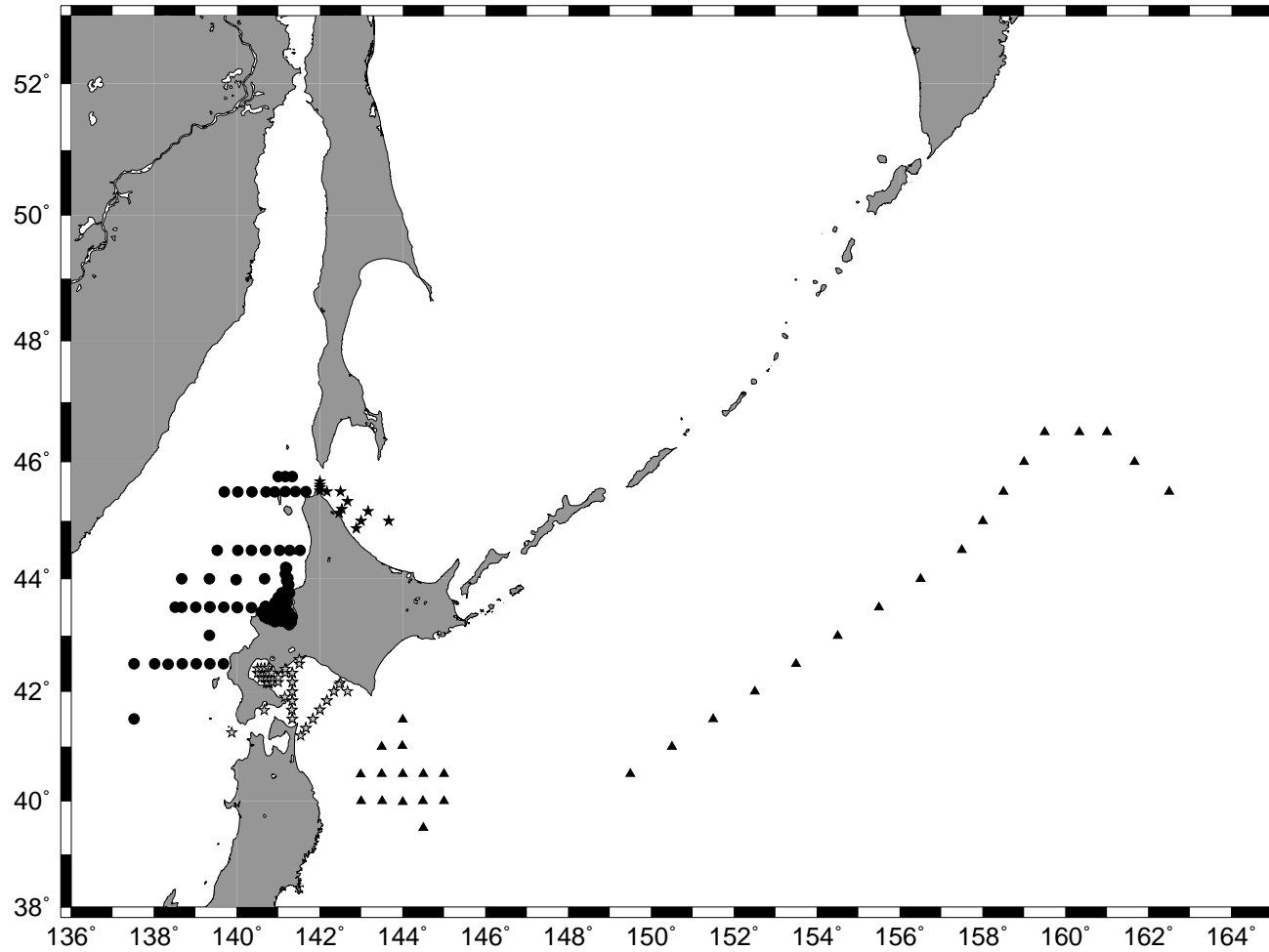


Fig. 4-2. Location of oceanographic stations covered in July 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

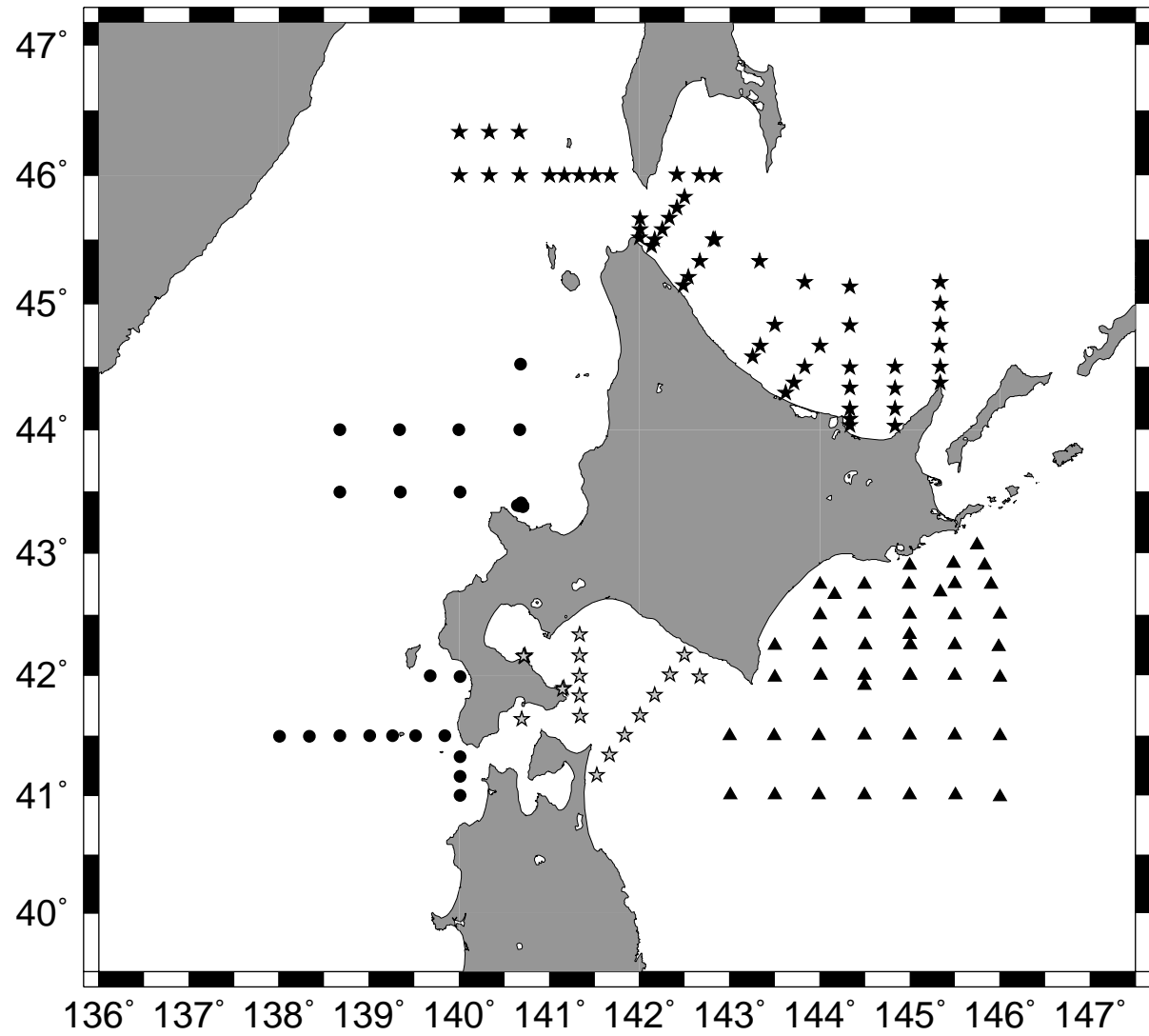


Fig. 5. Location of oceanographic stations covered in August 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

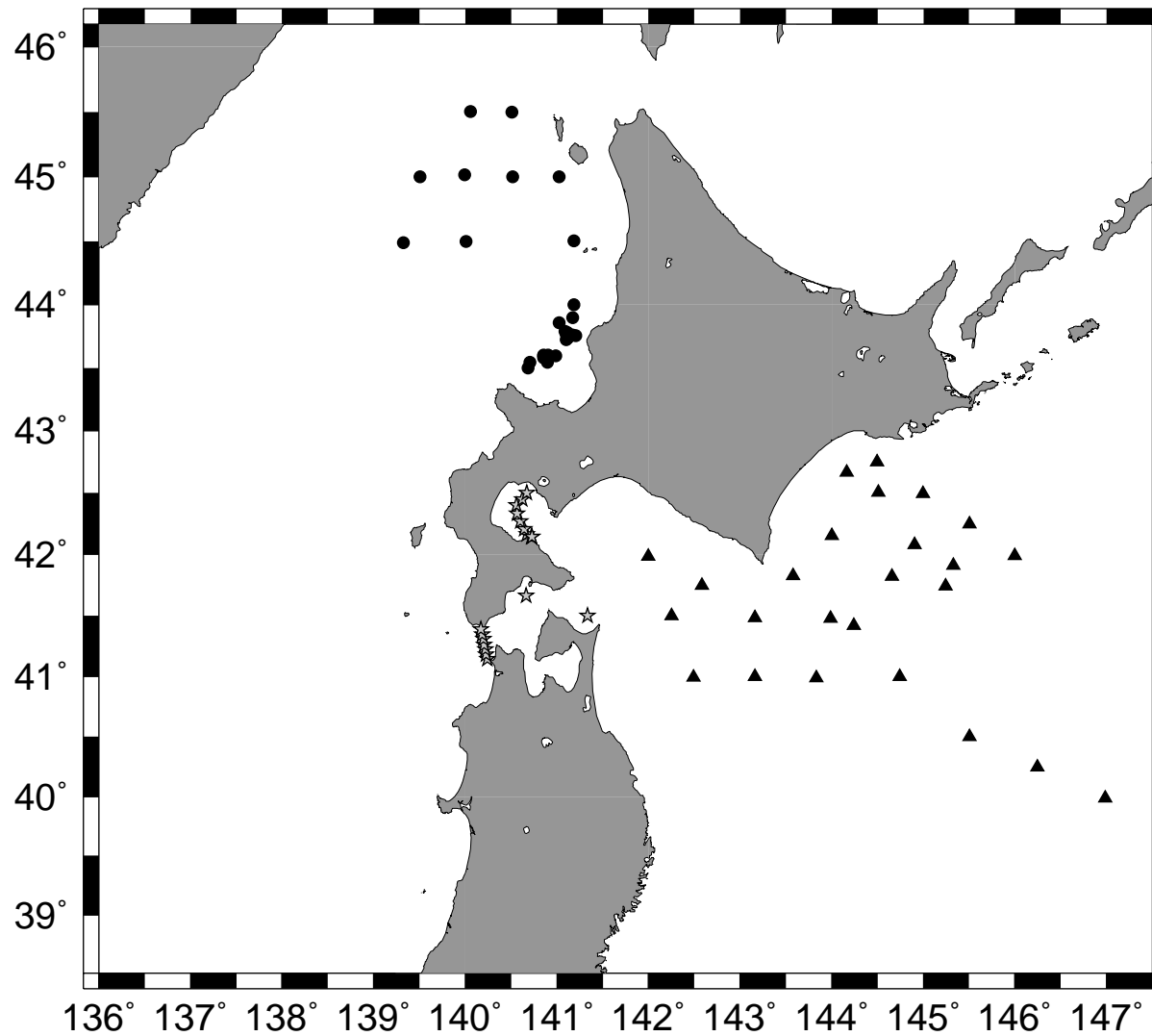


Fig. 6. Location of oceanographic stations covered in September 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

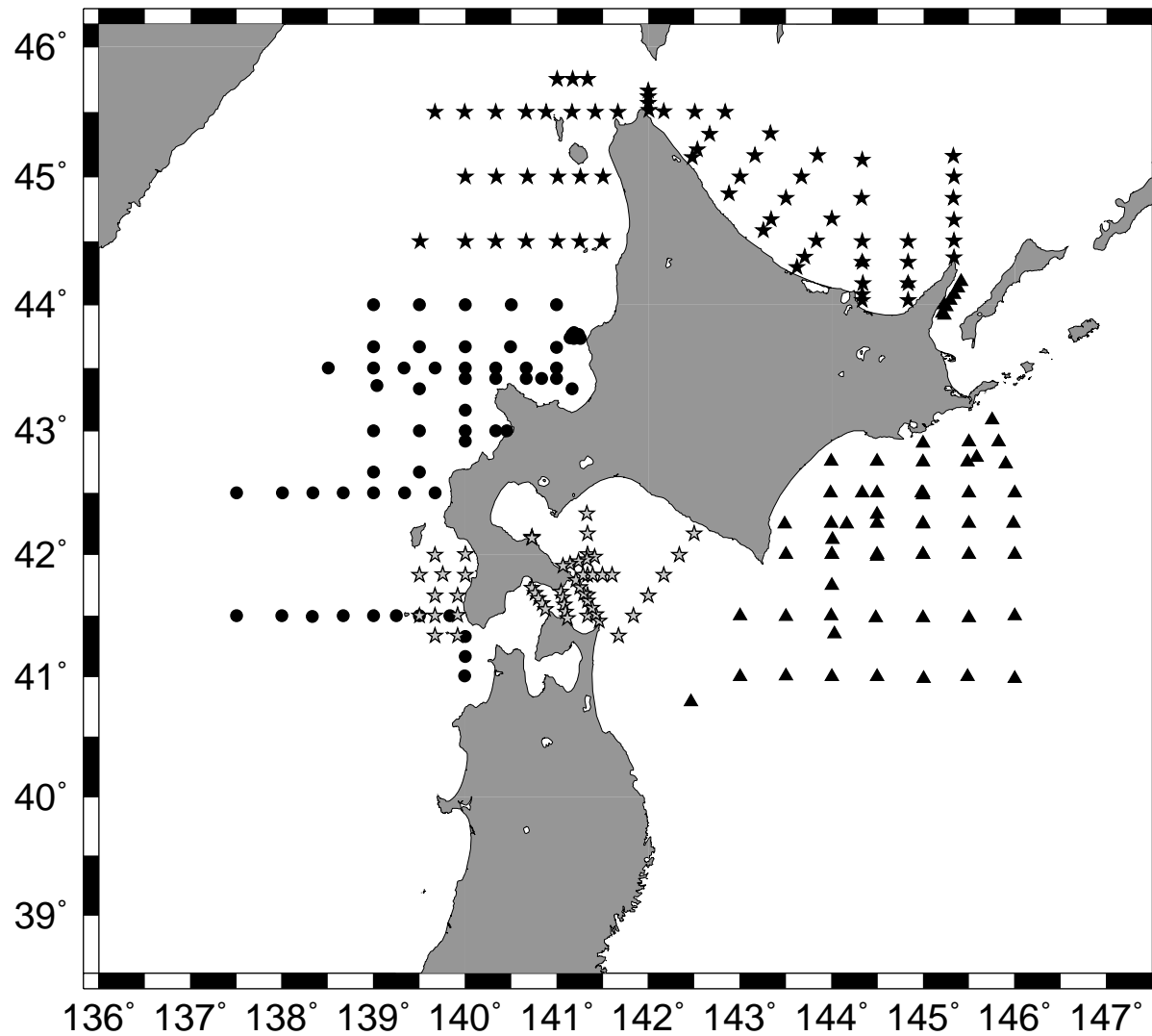


Fig. 7. Location of oceanographic stations covered in October 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

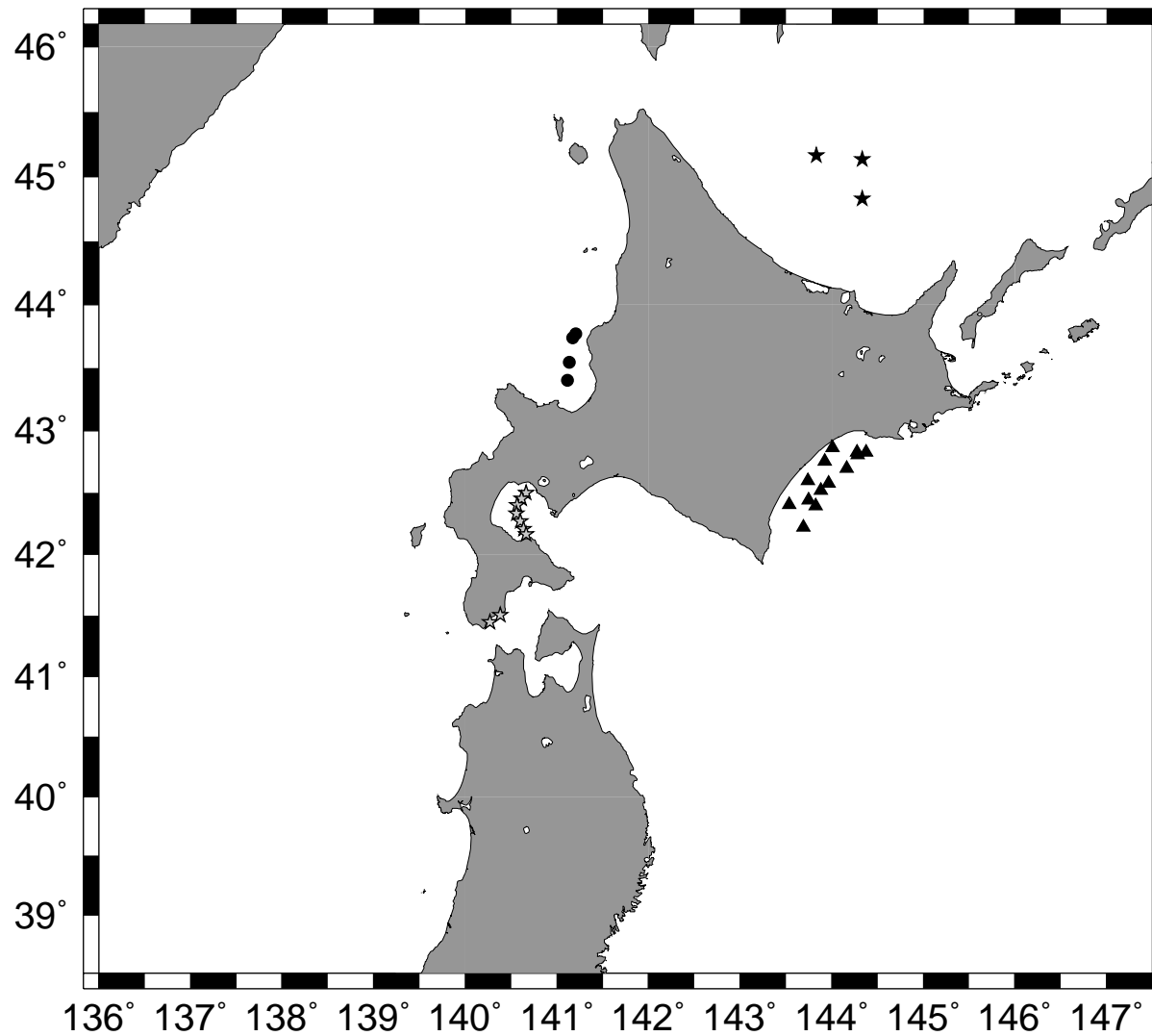


Fig. 8. Location of oceanographic stations covered in November 1995.
 :Oyasyhio-Marun :Hokuyo-Marun :Hokushin-Marun :Kinsei-Marun

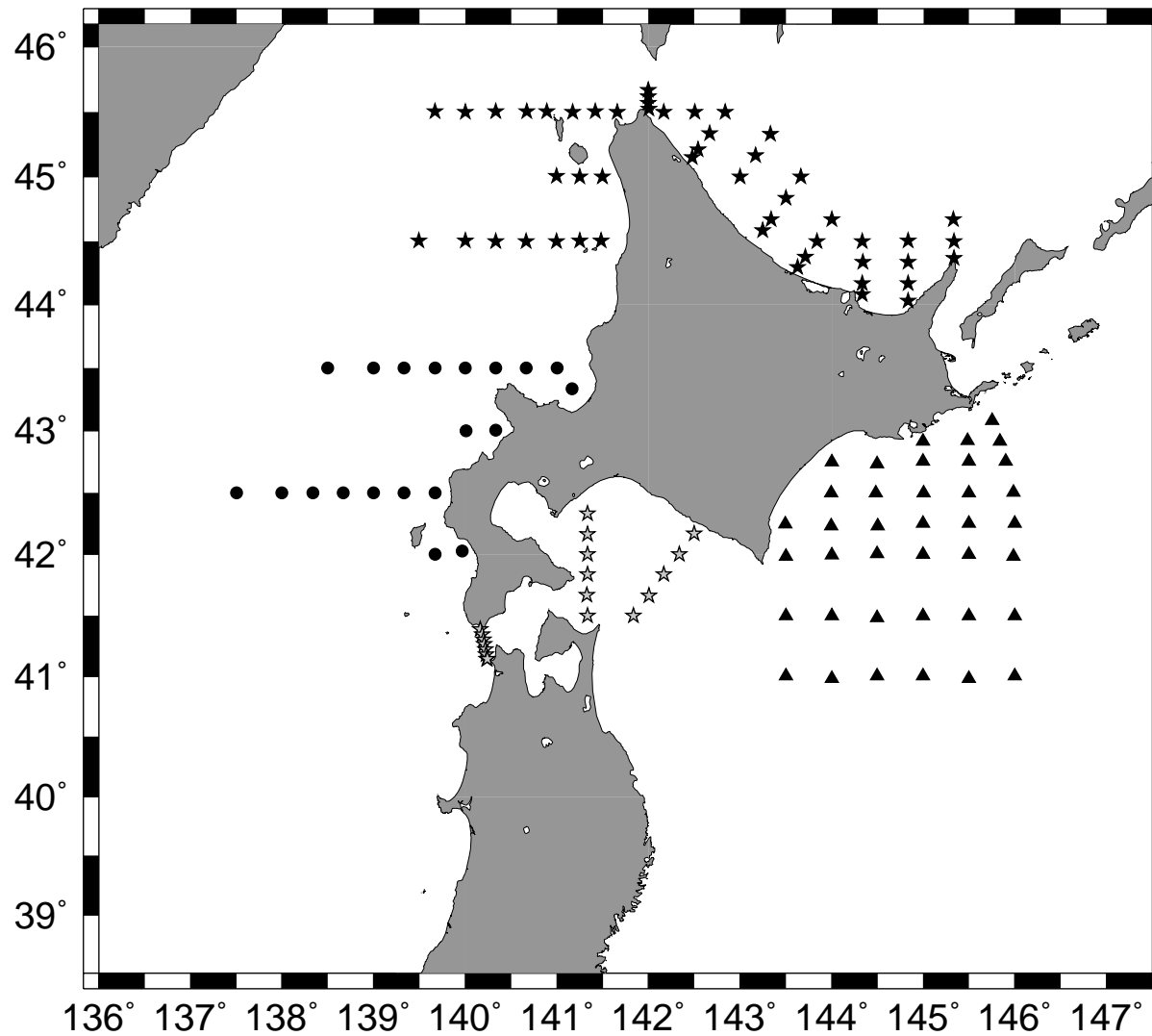


Fig. 9. Location of oceanographic stations covered in December 1995.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

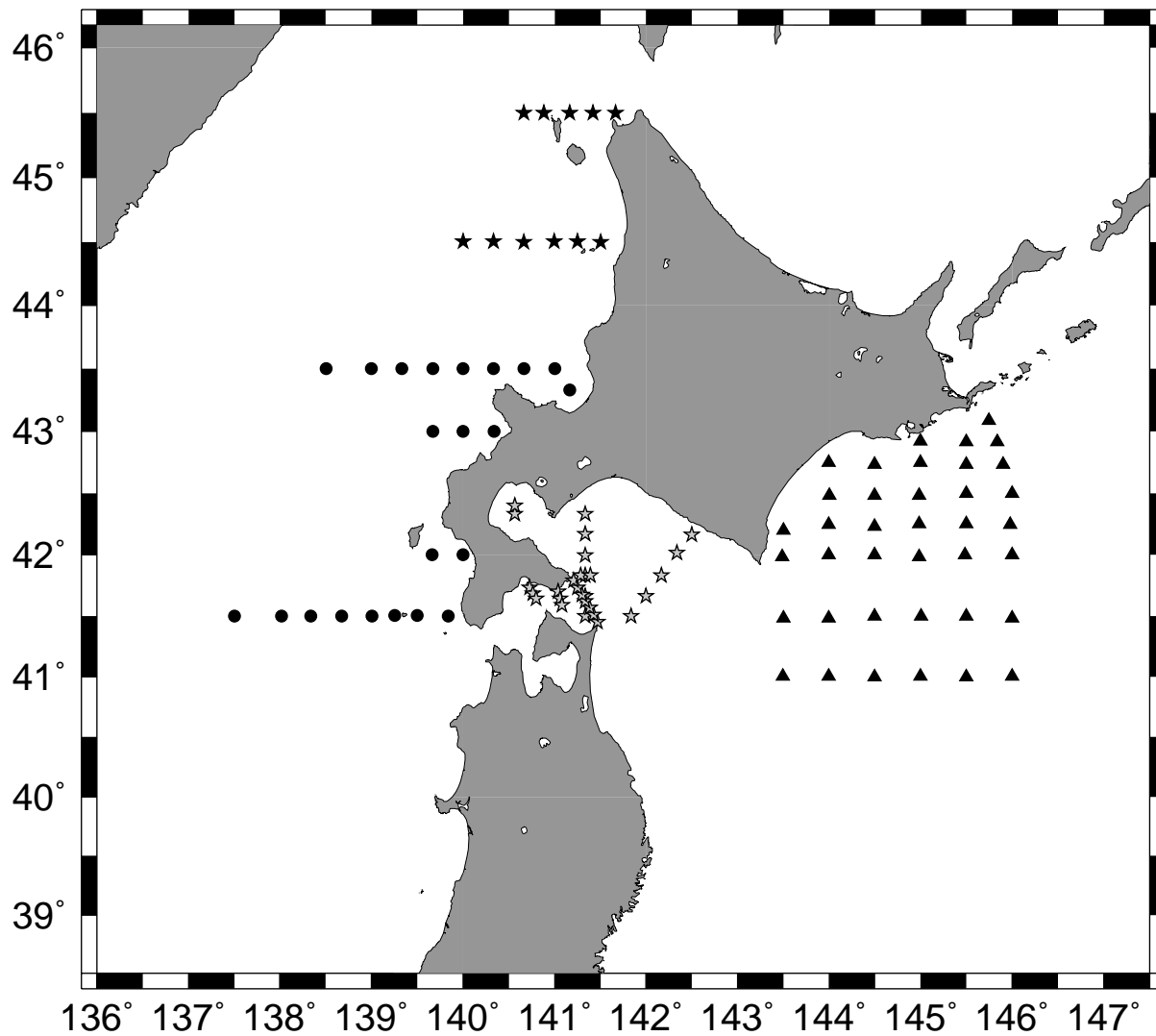


Fig. 10. Location of oceanographic stations covered in February 1996.
 :Oyasyhio-Maru :Hokuyo-Maru :Hokushin-Maru :Kinsei-Maru

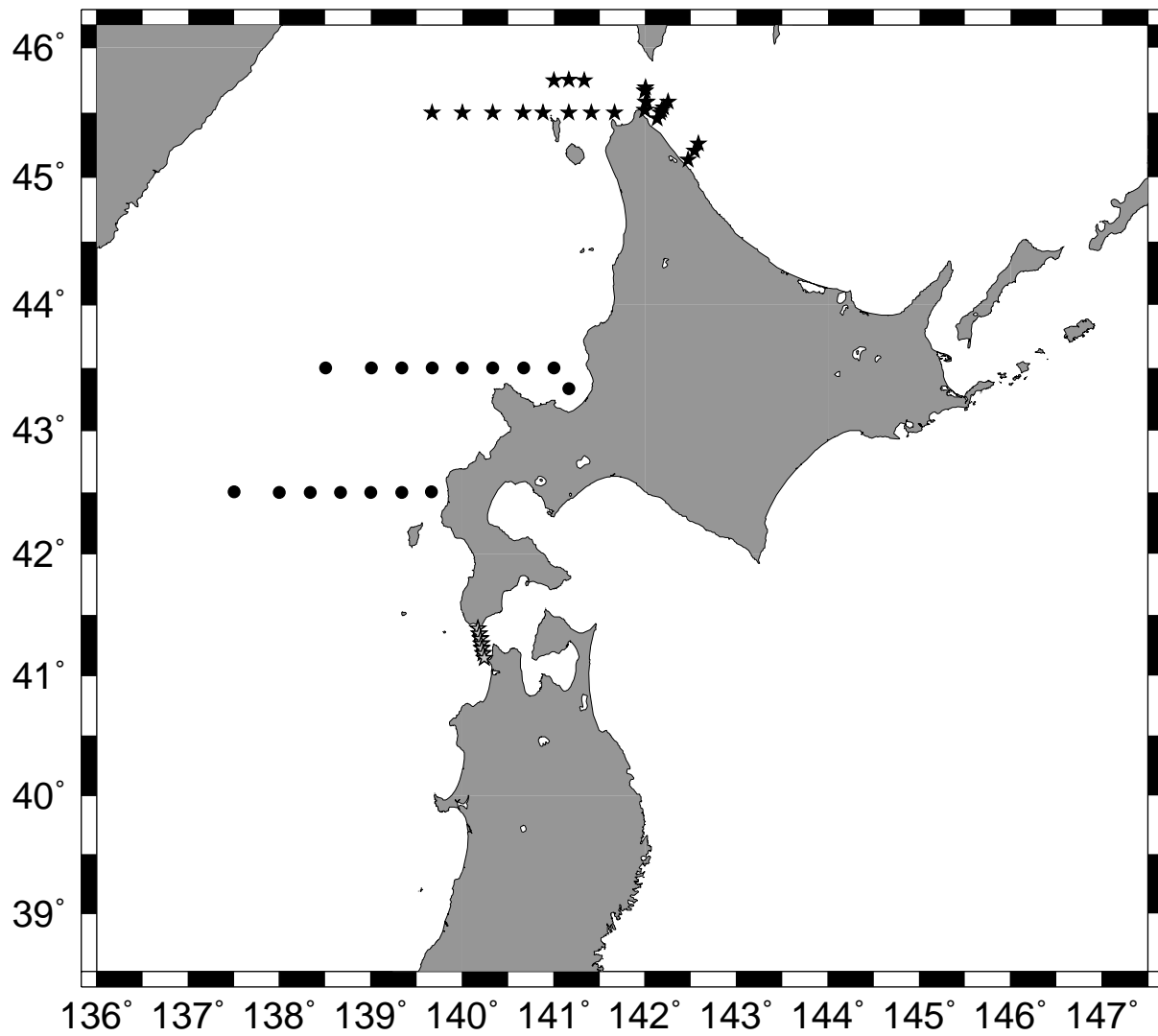


Fig. 11. Location of oceanographic stations covered in March 1996.
 :Oyasyhio-Marun :Hokuyo-Marun :Hokushin-Marun :Kinsei-Marun

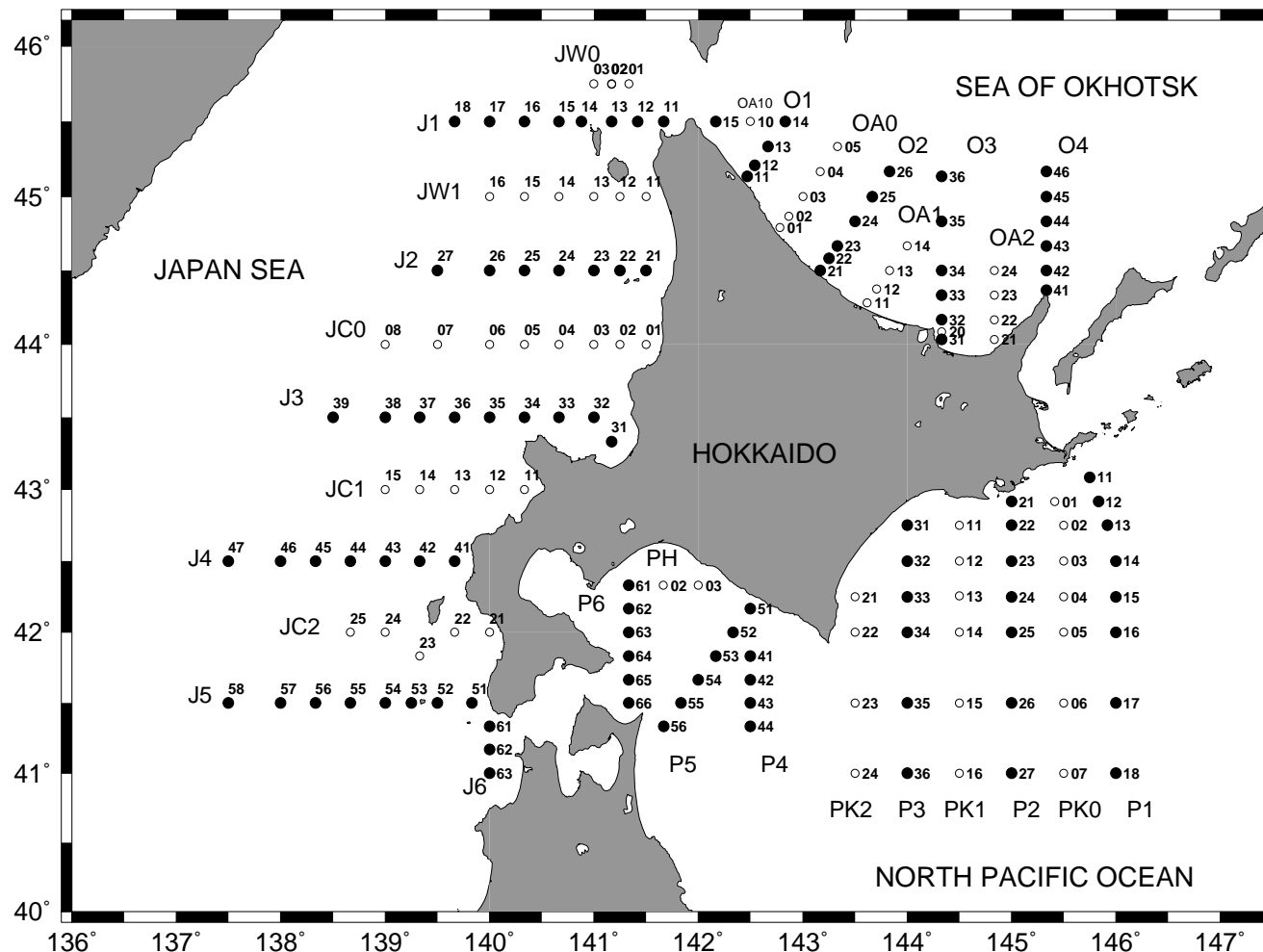


Fig. 12. Periodical observation of environmental research on fishing ground and adjacent waters off Hokkaido. Observed months: April, June, August, October, December and February except for Sea of Okhotsk (April to December only) and P4-Line (June, August and October only). ;Routine station ; Additional station

Part I. Summary of Serial Oceanographic Observations

Salinity was determined with Auto-Lab salinometer or CTD systems.

Tables 3 to 6 show results of serial oceanographic observations. Abbreviations used are as follows: LATITUDE, north latitude; LONGITUDE, east longitude; WEATHER, WMO code 4501; AIR TEMP, air temperature in °C; BAR, barometric pressure in hectopascal; WIND DIR, wind direction; WIND FORCE (F), wind force in Beaufort scale; WIND SPEED (S), wind speed in m/s; TR, transparency in meters with white Secci disc; COLOR, water color in Forel's scale; DEPTH, water depth in meters measured with an echo-sounder; STND. DEP, standard depth in meters; T, water temperature in °C; S, salinity (PSS-78).

Asterisks (*) at 0m row indicate the value of temperature or salinity with CTD at several meter under the sea surface and N.D. means No Data.

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	J31		J32		J33		J34		J35		J36		J37		J38		J39		J41	
Latitude:N	43-20.0		43-30.0		43-30.1		43-30.1		43-30.1		43-30.1		43-30.0		43-30.1		43-30.0		42-30.0	
Longitude:E	141- 9.9		141- 0.0		140-40.0		140-20.1		140- 0.0		139-40.0		139-20.0		139- 0.0		138-29.9		139-40.0	
Date	1995/04/11		1995/04/11		1995/04/11		1995/04/11		1995/04/11		1995/04/11		1995/04/11		1995/04/11		1995/04/12		1995/04/12	
Time(JST)	09:59		11:37		13:17		15:08		17:02		19:31		21:14		22:53		01:31		09:02	
Weather	C		BC		BC		BC		C		C		R		C		C		C	
Air Temp.	6.5		5.5		5.2		5.1		5.1		4.8		4.3		4.4		4.3		4.5	
Bar	1015.4		1015.7		1015.3		1014.5		1013.9		1013.6		1013.0		1012.1		1009.6		1005.6	
Wind Dir	WNW		WNW		W		WSW		WSW		SW		SW		SW		SW		E	
Wind Spd/F	S 11		S 9		S 9		S 9		S 6		S 8		S 10		S 9		S 8		S 9	
Transparency	6		9		10		10		12										12	
Depth	37		95		696		648		1234		2104		3300		3400				1870	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	6.7	34.115	7.0	34.160	6.6	34.173	7.6	34.156	7.7	34.156	5.3	34.172	5.6	34.189	5.5	34.176	5.8	34.168	8.8	34.162
10m	6.78	34.107	7.10	34.149	6.65	34.158	7.77	34.147	7.70	34.151	5.32	34.166	5.59	34.163	5.56	34.166	5.89	34.162	8.81	34.148
20m	6.77	34.107	7.07	34.149	6.56	34.159	7.73	34.145	7.66	34.147	5.26	34.166	5.57	34.163	5.56	34.166	5.89	34.162	8.81	34.149
30m	6.76	34.107	7.07	34.148	6.40	34.161	7.67	34.143	7.62	34.143	5.20	34.165	5.51	34.162	5.54	34.168	5.89	34.162	8.57	34.173
50m			6.99	34.148	6.16	34.159	7.65	34.142	7.61	34.147	5.19	34.164	5.43	34.160	5.51	34.164	5.72	34.160	8.18	34.195
75m			6.67	34.152	5.91	34.161	7.53	34.149	7.23	34.150	5.19	34.164	5.43	34.160	5.51	34.165	5.12	34.157	7.53	34.180
100m					5.64	34.160	7.48	34.150	5.44	34.152	4.86	34.161	5.36	34.159	5.50	34.165	4.89	34.147	6.25	34.166
125m					5.43	34.160	7.06	34.158	4.47	34.154	3.50	34.146	5.14	34.160	5.31	34.164	4.12	34.132	5.31	34.142
150m					5.08	34.172	6.58	34.148	3.43	34.112	2.71	34.102	4.69	34.154	5.08	34.167	2.55	34.092	3.77	34.105
200m					4.51	34.147	4.37	34.142	1.79	34.081	1.82	34.078	2.79	34.111	4.12	34.145	1.36	34.081	2.83	34.118
250m					3.40	34.149	2.25	34.090	1.29	34.075	1.20	34.078	1.48	34.080	2.43	34.095	1.10	34.078	1.93	34.086
300m					1.76	34.084	1.38	34.077	1.02	34.074	0.95	34.075	1.06	34.079	1.58	34.080	0.91	34.078	1.30	34.079
400m					1.03	34.076	0.80	34.073	0.63	34.074	0.64	34.074	0.67	34.075	0.93	34.077	0.62	34.079	0.83	34.080
500m					0.64	34.073	0.54	34.072	0.46	34.074	0.46	34.073	0.51	34.074	0.64	34.076	0.46	34.076	0.62	34.076
600m									0.34	34.073					0.48	34.075			0.43	34.074
700m																				
800m																				
900m																				
1000m																				

Table 3-1

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	J42		J43		J44		J45		J46		J47		J58		J57		J56		J55	
Latitude:N	42-30.1		42-30.0		42-29.9		42-29.9		42-30.1		42-30.1		41-30.1		41-30.0		41-30.1		41-30.1	
Longitude:E	139-20.0		139- 0.0		138-40.1		138-20.0		138- 0.1		137-30.0		137-30.1		138- 0.0		138-20.0		138-40.0	
Date	1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/13		1995/04/13		1995/04/13		1995/04/13	
Time(JST)	11:22		12:59		14:35		16:14		17:57		20:52		02:42		05:03		06:45		08:25	
Weather	C		C		C		C		C		BC		C		C		C		C	
Air Temp.	4.2		5.4		4.8		4.9		4.4		2.9		4.1		4.8		5.6		5.6	
Bar	1002.1		1002.0		1001.5		1001.7		1003.8		1005.7		1008.8		1010.0		1010.7			
Wind Dir	E		ENE		N		NNW		NW		NW		WSW		WNW		WNW		WNW	
Wind Spd/F	S 12		S 5		S 8		S 6		S 5		S 4		S 3		S 8		S 7		S 7	
Transparency	9		10		10		6		7								11		8	
Depth	3300		3608				3630		3686		3680				3695		3600		3100	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	7.4	34.179	5.7	34.161	5.5	34.163	5.5	34.163	5.1	34.169	4.0	34.152	4.5	34.157	7.4	34.177	7.1	34.180	8.1	34.188
10m	7.36	34.186	5.62	34.153	5.43	34.154	5.42	34.157	5.00	34.162	3.74	34.159	4.31	34.168	7.29	34.181	6.96	34.172	7.90	34.180
20m	6.41	34.200	5.62	34.153	5.44	34.154	5.42	34.157	4.99	34.161	3.66	34.157	4.31	34.168	7.18	34.186	6.96	34.172	7.89	34.180
30m	6.22	34.156	5.58	34.152	5.41	34.154	5.33	34.156	4.96	34.162	3.60	34.154	4.31	34.168	4.63	34.176	6.94	34.172	7.84	34.180
50m	5.86	34.148	5.26	34.170	5.26	34.153	5.29	34.154	4.64	34.160	3.43	34.151	4.30	34.168	4.07	34.167	4.98	34.138	7.49	34.182
75m	5.17	34.159	3.26	34.144	3.76	34.142	4.71	34.172	3.39	34.150	3.16	34.138	4.03	34.171	2.58	34.132	3.54	34.101	6.00	34.163
100m	3.48	34.108	2.53	34.124	2.36	34.110	2.59	34.105	2.51	34.124	2.72	34.129	3.43	34.168	2.17	34.113	2.44	34.085	4.17	34.119
125m	2.82	34.105	2.17	34.111	1.71	34.085	1.89	34.095	1.88	34.092	1.96	34.110	3.02	34.157	1.84	34.104	1.87	34.074	3.34	34.118
150m	1.96	34.077	1.61	34.081	1.38	34.074	1.46	34.079	1.43	34.077	1.69	34.099	2.81	34.141	1.46	34.087	1.46	34.075	2.21	34.091
200m	1.35	34.076	1.23	34.077	1.17	34.080	1.11	34.078	1.11	34.079	1.40	34.094	2.14	34.119	1.16	34.083	1.14	34.077	1.47	34.076
250m	1.03	34.077	1.04	34.084	0.96	34.079	0.99	34.081	0.93	34.080	1.11	34.084	1.66	34.098	0.99	34.081	0.95	34.079	1.05	34.075
300m	0.88	34.079	0.87	34.081	0.80	34.079	0.83	34.081	0.77	34.078	0.90	34.081	1.36	34.086	0.82	34.079	0.76	34.080	0.89	34.076
400m	0.64	34.080	0.61	34.078	0.59	34.078	0.63	34.079	0.55	34.077	0.63	34.079	0.91	34.081	0.57	34.078	0.56	34.078	0.58	34.075
500m	0.49	34.078	0.50	34.078	0.45	34.077	0.49	34.078	0.47	34.078	0.48	34.078	0.62	34.079	0.44	34.077	0.44	34.077	0.44	34.075
600m											0.38	34.077								
700m																				
800m																				
900m																				
1000m																				

Table 3-2

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	J54		J53		J52		J63		J62		J61		J51		JC21		JC22		JC11	
Latitude:N	41-30.1		41-30.1		41-30.1		41- 0.1		41-10.0		41-19.9		41-30.0		42- 0.1		42- 0.3		43- 0.1	
Longitude:E	139- 0.0		139-14.9		139-30.0		139-59.9		140- 0.0		140- 0.1		139-50.0		140- 0.0		139-40.0		140-20.0	
Date	1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/14		1995/04/14		1995/04/14	
Time(JST)	10:06		11:28		13:55		17:27		18:45		19:49		21:23		00:42		02:30		09:37	
Weather	C		C		C		BC		C		C		C		BC		BC		BC	
Air Temp.	6.2		7.0		8.0		8.6		7.5		7.3		6.6		5.8		5.8		8.0	
Bar	1012.3		1013.0		1014.0		1015.6		1015.8		1016.6		1017.6		1018.3		1018.7		1020.5	
Wind Dir	NW		WNW		WNW		WNW		WSW		WNW		WNW		WNW		NW		W	
Wind Spd/F	S 7		S 6		S 6		S 6		S 7		S 7		S 6		S 5		S 5		S 1	
Transparency	15		15		16		18												12	
Depth	1343		1136		1663		511		105		227		1360		653		875		471	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	9.6	34.067	9.4	34.080	9.8	34.101	9.8	33.970	9.4	34.080	9.2	34.134	8.6	34.094	8.4	34.115	9.2	34.136	8.4	34.006
10m	9.48	34.061	9.22	34.073	9.61	34.088	9.69	33.963	9.30	34.072	9.08	34.126	8.32	34.079	8.36	34.105	9.08	34.126	8.17	34.075
20m	9.48	34.063	9.19	34.074	9.58	34.088	9.69	34.023	9.23	34.076	9.08	34.126	8.20	34.065	8.33	34.102	9.08	34.127	8.14	34.094
30m	9.48	34.066	9.18	34.077	9.55	34.088	9.70	34.061	9.12	34.082	9.06	34.124	8.27	34.084	8.04	34.158	9.06	34.126	8.12	34.126
50m	9.83	34.197	9.20	34.089	9.55	34.089	9.65	34.067	9.09	34.097	8.82	34.135	8.38	34.124	6.41	34.159	9.03	34.127	8.09	34.161
75m	9.15	34.140	9.14	34.099	9.55	34.090	9.61	34.097	9.06	34.106	8.59	34.138	8.27	34.134	4.76	34.131	9.02	34.133	7.77	34.172
100m	8.87	34.160	9.11	34.095	9.21	34.099	9.39	34.087			8.28	34.204	7.01	34.175	3.85	34.114	8.77	34.142	7.07	34.161
125m	8.39	34.209	8.99	34.116	9.13	34.112	9.17	34.091			6.60	34.172	6.35	34.144	2.89	34.103	8.50	34.160	6.28	34.151
150m	6.83	34.166	8.82	34.164	9.00	34.150	9.07	34.098			6.38	34.149	4.97	34.134	2.56	34.094	7.41	34.157	5.11	34.133
200m	4.52	34.120	7.25	34.179	7.05	34.189	8.92	34.119			5.50	34.134	3.18	34.107	1.84	34.077	3.95	34.119	3.34	34.120
250m	2.11	34.079	3.61	34.104	4.25	34.116	3.04	34.109					2.02	34.099	1.48	34.073	2.55	34.093	2.20	34.089
300m	1.24	34.073	2.69	34.121	2.13	34.082	1.66	34.074					1.30	34.074	1.15	34.073	1.59	34.074	1.57	34.076
400m	0.77	34.072	1.12	34.075	0.97	34.074	0.81	34.071					0.85	34.074	0.75	34.073	0.87	34.072	0.79	34.073
500m	0.58	34.074	0.62	34.073	0.64	34.072							0.52	34.072	0.50	34.071	0.59	34.071		
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-3

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199505		199505		199505		199505	
Station No	CHA08		CHA09		CHA11		CHA04		CHA05		CHA06		CIS03		CIS04		CIS05		CIS014	
Latitude:N	43-45.8		43-45.0		43-45.0		44- 2.8		44- 2.0		44- 1.0		43-18.8		43-22.7		43-24.4		43-40.0	
Longitude:E	141-12.4		141-10.0		141- 3.6		141-15.1		141-14.1		141-11.2		141-14.3		141-10.7		141- 9.1		141- 0.2	
Date	1995/04/25		1995/04/26		1995/04/26		1995/04/27		1995/04/27		1995/04/27		1995/05/08		1995/05/08		1995/05/08		1995/05/08	
Time(JST)	13:14		08:13		11:43		08:13		09:34		10:59		11:37		12:34		13:14		21:33	
Weather													B		B		B		B	
Air Temp.													15.4		15.2		15.7		9.9	
Bar													1015.0		1014.9		1014.6		1015.0	
Wind Dir																			CALM	
Wind Spd/F																			S 0	
Transparency																				
Depth	160		198		300		156		200		291		30		42		57		292	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.4	33.93*	8.6	34.30*	8.6	34.08*	8.4	34.05*	8.4	34.03*	7.9	34.12*	11.2	33.33*	10.9	34.33*	11.0	0.03*	10.4	34.13*
10m	7.83	34.104	8.07	34.108	7.82	34.095	8.13	34.058	8.23	34.050	6.72	34.150	10.07	33.488	10.16	33.966	10.13	33.966	10.00	34.131
20m	7.70	34.125	7.91	34.108	7.78	34.100	7.91	34.128	7.66	34.140	6.55	34.141	9.97	33.590	9.74	33.968	9.83	33.977	9.82	34.119
30m	7.66	34.131	7.77	34.119	7.78	34.119	7.75	34.129	7.35	34.125	6.48	34.140			9.09	34.010	9.48	33.972	9.56	34.136
50m	7.60	34.140	7.58	34.137	7.62	34.137	6.95	34.133	6.59	34.141	5.88	34.146					8.34	34.096	9.22	34.136
75m	6.96	34.136	7.39	34.136	7.52	34.138	6.17	34.148	5.95	34.147	5.39	34.144							8.70	34.144
100m	6.70	34.146	6.96	34.144	7.44	34.143	5.60	34.155	5.62	34.155	5.01	34.145							7.98	34.176
125m	6.43	34.149	6.52	34.154	7.08	34.147	5.31	34.150	5.16	34.148	4.66	34.140							7.28	34.170
150m	5.93	34.151	5.86	34.158	5.62	34.159	4.82	34.148	4.36	34.124	3.92	34.125							6.45	34.153
200m					4.91	34.160					2.60	34.098							4.82	34.141
250m					2.93	34.104					1.67	34.072							2.80	34.102
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-4

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	CIS017		CIS019		CIS016		CIS021		CIS023		CIS022		CIS020		CIS018		CIS015		CIS012	
Latitude:N	43-34.7		43-30.0		43-25.0		43-24.9		43-25.0		43-20.0		43-18.1		43-20.0		43-14.9		43-19.9	
Longitude:E	140-54.9		140-50.0		140-55.0		140-45.2		140-35.0		140-40.0		140-45.2		140-50.0		140-55.1		141- 0.0	
Date	1995/05/08		1995/05/08		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09	
Time(JST)	22:28		23:09		00:03		00:48		01:36		02:30		03:05		03:38		04:29		05:10	
Weather	B		B		B		B		B		B		B		B		B		B	
Air Temp.	9.8		9.9		10.0		9.1		9.3		8.4		8.4		8.7		7.2		8.3	
Bar	1015.0		1015.5		1015.0		1014.0		1014.0		1014.0		1014.0		1014.0		1014.3		1014.5	
Wind Dir	CALM		ESE		ES		S		SE		SE		SSW		S		WSW		SE	
Wind Spd/F	S 0		S 4		S 3		S 3		S 2		S 1		S 3		S 2		S 1		S 5	
Transparency																				
Depth	124		476		87		153		186		105		76		80		37		49	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.4	33.94*	10.7	33.88*	10.9	33.47*	10.1	33.72*	10.6	34.01*	10.6	34.02*	10.7	33.35*	10.5	34.01*	10.9	32.67*	11.1	33.04*
10m	10.22	33.946	10.28	33.887	10.28	33.917	9.62	33.832	10.48	34.013	10.27	34.095	10.27	34.078	10.17	34.035	10.34	33.835	10.35	34.110
20m	10.13	33.967	10.06	33.955	9.94	33.916	9.49	33.871	10.13	34.052	9.88	34.060	9.93	34.117	10.04	34.087	10.29	33.963	10.21	34.115
30m	9.97	33.989	10.09	34.004	9.77	33.968	9.36	33.902	9.97	34.059	9.59	34.058	9.72	34.136	9.77	34.078	9.97	34.065	9.76	34.113
50m	9.83	34.024	9.91	34.074	8.43	34.087	9.10	33.941	9.70	34.093	9.47	34.148	9.36	34.134	8.64	34.080				
75m	9.60	34.120	9.77	34.080	8.02	34.119	8.48	34.062	9.39	34.139	8.61	34.144								
100m	9.11	34.114	9.22	34.107			8.03	34.119	8.67	34.146	8.28	34.114								
125m			9.00	34.127			7.79	34.128	7.99	34.133										
150m			8.70	34.148					7.05	34.171										
200m			2.18	34.091																
250m			1.46	34.070																
300m			1.07	34.068																
400m			0.72	34.066																
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-5

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	CIS009		CIS005		CIS000		CIS001		CIS008		CIS08		CISTG1		JS31		JS32		JS33	
Latitude:N	43-24.9		43-20.0		43-19.9		43-15.0		43-14.9		43-20.5		43-13.2		43-20.0		43-30.0		43-30.0	
Longitude:E	141- 4.8		141-10.1		141-20.1		141-15.1		141- 5.2		140-57.9		140-50.3		141-10.0		141- 0.0		140-40.0	
Date	1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/16		1995/05/16		1995/05/16	
Time(JST)	05:53		07:21		08:07		08:46		09:31		10:17		12:29		09:53		11:07		12:37	
Weather	B		B		B		B		B		B		B		C		C		C	
Air Temp.	8.6		13.1		11.0		14.3		17.8		18.5		15.8		12.6		12.6		13.2	
Bar	1015.1		1015.3		1015.3		1015.2		1015.2		1015.0		1015.1		1007.5		1007.5		1007.4	
Wind Dir	SE		ESE		SSW		E		CALM		E		WNW		NW		CALM		NE	
Wind Spd/F	S 6		S 5		S 2		S 4		S 0		S 4		S 7		S 1		S 0		S 2	
Transparency															13		13		13	
Depth	59		36		21		22		27		57		28		36		93		682	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.8	33.87*	11.0	31.66*	11.0	25.26*	10.9	32.86*	11.2	32.67*	10.9	34.06*	11.4	33.51*	11.8	33.115	11.2	33.746	11.5	33.895
10m	10.65	33.869	10.44	33.842	10.29	33.649	10.57	33.594	10.27	33.315	10.31	34.082	10.35	33.714	10.34	33.934	10.37	33.744	10.69	33.954
20m	9.93	33.919	10.08	33.902					9.98	33.497	10.12	34.112	9.92	33.901	8.92	34.038	10.04	33.903	10.52	33.964
30m	9.07	34.043	9.44	34.014							9.02	34.081			8.77	34.113	8.82	33.979	10.00	34.044
50m	8.35	34.092									8.51	34.075					8.64	34.110	9.48	34.103
75m																	7.71	34.155	8.47	34.150
100m																			7.83	34.174
125m																			6.75	34.154
150m																			5.94	34.147
200m																			2.33	34.101
250m																			1.52	34.069
300m																			1.04	34.064
400m																			0.69	34.061
500m																			0.51	34.061
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-6

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	JS34		JS35		JS36		JS37		JS38		JS39		JS47		COM03		COM04		COM09	
Latitude:N	43-30.0		43-30.0		43-30.0		43-29.9		43-29.9		43-29.9		42-29.9		43-22.5		43-22.6		43-22.8	
Longitude:E	140-20.0		140- 0.3		139-40.0		139-20.2		139- 0.2		138-30.2		137-30.3		140-32.2		140-30.4		140-28.1	
Date	1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/17		1995/05/22		1995/05/22		1995/05/22	
Time(JST)	14:14		15:51		17:28		19:03		20:40		22:58		05:54		14:10		14:25		14:43	
Weather	C		C		BC		BC		BC		BC		BC		C		C		C	
Air Temp.	13.2		13.5		12.7		10.3		9.8		9.5		8.9		12.4		12.4		12.5	
Bar	1007.0		1007.3		1006.8		1008.0		1008.3		1008.0				999.5		999.5		1000.0	
Wind Dir	ENE		NE		NE		NE		NE		NE		NNE		W		WNW		WNW	
Wind Spd/F	S 6		S 6		S 6		S 9		S 10		S 11		S 12		S 1		S 1		S 1	
Transparency	12		12		14								8							
Depth	642		1239		2021		3186		3000		3680		3682							
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.3	33.839	11.8	34.030	10.9	34.105	9.2	34.105	9.9	34.124	9.9	34.121	8.6	34.121	11.2	33.84*	11.1	33.90*	11.1	33.95*
10m	10.96	33.822	11.54	34.012	10.80	34.088	9.42	34.092	9.73	34.112	9.76	34.113	8.30	34.101	11.02	33.933	11.10	33.940	10.96	33.990
20m	10.65	34.040	10.69	34.072	8.91	34.167	8.36	34.160	8.93	34.166	8.66	34.151	6.81	34.212	10.86	33.985	10.82	33.988	10.89	34.011
30m	10.47	34.062	9.55	34.120	7.79	34.178	6.42	34.171	7.48	34.156	7.82	34.146	5.41	34.153	10.64	33.990	10.72	33.996	10.77	33.991
50m	9.91	34.076	8.11	34.157	6.47	34.152	5.20	34.147	5.65	34.157	6.22	34.147	3.99	34.155	9.99	34.083				
75m	8.66	34.159	6.25	34.153	4.59	34.133	3.88	34.125	4.80	34.143	5.07	34.147	2.75	34.141						
100m	6.90	34.160	4.72	34.135	3.51	34.119	3.27	34.110	4.15	34.131	3.72	34.119	1.77	34.089						
125m	5.17	34.135	3.15	34.114	2.55	34.087	2.60	34.096	3.34	34.108	3.07	34.118	1.48	34.080						
150m	4.28	34.112	2.48	34.098	1.85	34.072	1.94	34.080	2.72	34.095	2.31	34.087	1.34	34.079						
200m	2.84	34.089	2.33	34.113	1.41	34.071	1.26	34.069	1.44	34.069	1.57	34.076	1.12	34.078						
250m	2.15	34.100	1.57	34.079	1.07	34.069	1.03	34.066	1.14	34.070	1.14	34.068	0.94	34.075						
300m	1.36	34.069	1.22	34.068	0.86	34.068	0.80	34.065	0.94	34.071	0.92	34.069	0.80	34.075						
400m	0.85	34.064	0.74	34.065	0.58	34.064	0.57	34.066	0.65	34.067	0.62	34.061	0.60	34.074						
500m	0.57	34.062	0.57	34.066	0.45	34.065	0.43	34.065	0.46	34.066	0.47	34.068	0.48	34.073						
600m													0.40	34.072						
700m																				
800m																				
900m																				
1000m																				

Table 3-7

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	COM13		COM10		COM11		COM20		COM21		COM32		COM37		COM36		COM35		COM34		
Latitude:N	43-22.4		43-21.5		43-20.5		43-20.4		43-20.4		43-20.4		43-17.4		43-17.5		43-17.5		43-20.4		
Longitude:E	140-26.2		140-27.1		140-26.2		140-24.2		140-22.2		140-20.1		140-20.1		140-18.1		140-16.2		140-16.1		
Date	1995/05/22		1995/05/22		1995/05/22		1995/05/22		1995/05/22		1995/05/22		1995/05/22		1995/05/23		1995/05/23		1995/05/23		
Time(JST)	14:59		15:11		15:27		15:47		16:00		16:17		16:41		06:36		06:51		07:17		
Weather	C		C		C		C		C		C		C		C		C		C		
Air Temp.	13.6		12.2		12.4		12.4		12.5		12.6		12.5		11.9		11.9		12.0		
Bar	1000.0		1000.0		1000.0		1000.0		1000.0		1000.0		1000.0		1004.0		1004.0		1004.0		
Wind Dir	ENE		ENE		ENE		ENE		ENE		NE		N		SW		SW		WSW		
Wind Spd/F	S 1		S 3		S 4		S 4		S 4		S 4		S 5		S 4		S 4		S 4		
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	11.5	33.64*	11.3	33.87*	11.3	33.81*	11.4	33.84*	11.3	33.89*	11.4	33.78*	11.5	33.89*	11.6	33.80*	11.4	33.94*	11.4	33.94*	
10m	10.98	33.995	11.03	33.998	11.06	33.986	11.04	33.978	11.11	33.978	11.10	33.965	11.35	33.916	11.33	33.885	11.20	33.974	11.27	33.981	
20m	10.82	34.006	10.91	33.994			10.96	33.975	11.02	33.982	11.04	33.988	11.00	33.999	11.19	34.045	11.15	34.078	11.23	34.056	
30m	10.76	34.006							10.89	33.976	10.99	34.006			11.16	34.064	11.07	34.078	11.10	34.065	
50m	10.35	34.035													10.13	34.125	10.15	34.087	10.14	34.103	
75m															9.00	34.190	8.75	34.202	8.93	34.193	
100m																	7.88	34.216	7.88	34.215	
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 3-8

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	COM33		COM30		COM29		COM28		COM27		COM26		COM25		COM24		COM23		COM31		
Latitude:N	43-20.5		43-22.4		43-22.5		43-24.4		43-24.4		43-24.4		43-24.4		43-23.4		43-22.5		43-22.5		
Longitude:E	140-18.0		140-18.2		140-16.2		140-16.2		140-18.2		140-20.2		140-22.2		140-22.1		140-22.1		140-20.1		
Date	1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		
Time(JST)	07:35		07:49		08:09		08:30		08:49		09:05		09:24		09:37		09:50		10:04		
Weather	C		C		C		C		C		C		C		C		C		C		
Air Temp.	12.4		12.5		12.5		12.5		12.7		12.9		13.1		13.1		13.1		14.1		
Bar	1004.0		1005.0		1005.0		1005.0		1005.0		1005.0		1005.0		1005.5		1005.5		1005.5		
Wind Dir	W		WSW		WNW		ENE		E		SE		SW		SW		SW		SW		
Wind Spd/F	S 3		S 4		S 2		S 2		S 1		S 1		S 3		S 4		S 4		S 5		
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	11.5	33.88*	11.4	33.88*	11.5	33.94*	11.5	34.05*	11.5	33.88*	11.4	33.92*	11.6	33.93*	11.8	33.72*	11.6	33.97*	11.7	33.70*	
10m	11.14	33.959	11.14	33.946	11.29	33.949	11.31	33.971	11.26	33.924	11.14	33.972	11.16	33.967	11.22	33.927	11.19	33.930	11.16	33.941	
20m	11.08	34.004	11.16	33.957	11.29	34.052	11.14	34.065	11.29	34.053	11.06	33.988	11.17	33.976	11.15	33.966	11.26	34.020	11.09	33.971	
30m	11.01	34.006	11.03	33.998	11.17	34.062	11.06	34.083	11.16	34.046	11.04	34.001	11.29	34.058	11.28	34.048	11.12	34.023	11.07	33.972	
50m	10.60	34.018	10.63	34.003	10.55	34.104	9.95	34.119	10.37	34.052	10.73	34.021	10.48	34.093	10.78	34.011	10.42	34.054	10.63	34.043	
75m	8.87	34.207	8.53	34.213	8.91	34.188	9.07	34.198	9.22	34.220	9.30	34.212	9.10	34.176	9.18	34.215	8.71	34.195	8.72	34.187	
100m					7.84	34.213	8.03	34.215	8.14	34.210	7.89	34.219	7.94	34.218	7.95	34.216					
125m					5.08	34.205	7.11	34.212	6.88	34.205	6.32	34.202	6.18	34.136							
150m							4.29	34.195													
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 3-9

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505	199505	199505	199505	199505	199505	199505	199505	199505	199505	199505
Station No	COM22	COM19	COM12	COM18	COM17	COM16	COM15	COM14	COM08	COM07	
Latitude:N	43-21.4	43-21.5	43-21.5	43-22.4	43-23.5	43-24.5	43-24.5	43-23.4	43-23.5	43-24.5	
Longitude:E	140-22.3	140-24.2	140-26.2	140-24.2	140-24.1	140-24.2	140-26.2	140-26.1	140-28.2	140-28.2	
Date	1995/05/23	1995/05/23	1995/05/23	1995/05/23	1995/05/23	1995/05/23	1995/05/23	1995/05/23	1995/05/23	1995/05/23	
Time(JST)	10:24	10:37	10:51	11:07	11:33	11:47	12:03	12:18	12:34	12:47	
Weather	C	C	C	C	C	C	C	C	C	C	
Air Temp.	13.9	13.8	13.6	13.5	13.5	13.2	13.2	13.1	13.7	13.6	
Bar	1005.5	1005.5	1005.5	1005.5	1005.5	1005.5	1005.5	1005.5	1005.5	1005.5	
Wind Dir	SW	SW	WSW	WSW	WSW	WSW	WSW	SW	WSW	W	
Wind Spd/F	S 3	S 4	S 6	S 6	S 4	S 5	S 5	S 5	S 2	S 3	
Transparency											
Depth											
Equipment	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD
STND. Dep	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S
0m	11.6 33.85*	11.6 33.85*	11.6 33.92*	11.5 33.85*	11.8 33.93*	11.5 33.88*	11.6 33.80*	11.6 33.89*	11.7 33.98*	11.5 34.12*	
10m	11.30 34.001	11.31 33.983	11.30 33.974	11.31 33.974	11.40 34.010	10.87 33.895	11.05 33.918	11.11 33.994	11.19 33.964	11.05 33.942	
20m	10.97 34.011	10.91 34.004	11.03 33.992	11.31 34.049	11.34 34.031	10.81 33.975	10.91 33.970	11.16 34.034	10.92 33.992	10.90 33.977	
30m	10.81 34.004	10.80 34.002	10.85 33.977	11.13 34.050	11.25 34.050	10.67 33.987	10.82 33.973	10.82 34.007	10.80 33.989	10.75 33.983	
50m	10.45 34.019	10.48 34.012		10.52 34.019	10.20 34.072	10.19 34.065	9.93 34.093	10.17 34.065	10.21 34.051	10.24 34.052	
75m				8.90 34.201	9.13 34.221	8.38 34.221	8.59 34.243	8.79 34.207		8.42 34.217	
100m					7.60 34.214	7.12 34.221	7.53 34.210				
125m											
150m											
200m											
250m											
300m											
400m											
500m											
600m											
700m											
800m											
900m											
1000m											

Table 3-10

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199506		199506		199506		199506		199506		199506	
Station No	COM06		COM01		COM02		COM05		J31		J32		J33		J34		J35		J36	
Latitude:N	43-24.5		43-24.4		43-23.5		43-23.6		43-19.9		43-29.9		43-29.9		43-30.0		43-29.9		43-29.9	
Longitude:E	140-30.2		140-32.2		140-32.0		140-30.1		141-10.0		141- 0.0		140-40.3		140-20.3		140- 0.3		139-40.3	
Date	1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/29		1995/05/29		1995/05/29		1995/05/29		1995/05/29		1995/05/29	
Time(JST)	13:01		13:17		13:32		13:49		09:55		11:11		12:40		14:17		15:57		17:44	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	13.3		13.4		13.7		13.4		15.6		19.0		18.0		15.7		15.8		13.9	
Bar	1005.5		1005.5		1005.5		1005.5		1015.0		1014.2		1013.0		1012.0		1009.5		1008.0	
Wind Dir	W		NW		NW		W		E		ESE		E		NNE		NE		ENE	
Wind Spd/F	S 2		S 1		S 2		S 3		S 5		S 3		S 3		S 3		S 6		S 7	
Transparency									12		16		15		16		16		14	
Depth									38		94		691		644		1234		2021	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.7	33.81*	11.8	34.01*	12.2	33.87*	11.6	33.80*	12.4	33.588	12.2	34.002	12.3	33.855	12.6	33.900	11.9	34.062	11.1	34.100
10m	11.17	33.890	11.36	34.042	11.35	34.031	11.04	33.902	11.72	33.805	11.88	33.975	11.80	33.832	12.18	33.874	11.43	34.044	10.81	34.073
20m	10.89	33.967	11.10	34.041	11.09	34.049	10.88	33.983	10.70	33.894	11.56	33.984	11.54	33.826	12.02	33.976	11.37	34.038	10.60	34.073
30m	10.80	34.013	10.98	34.040	10.98	34.054	10.70	33.996	9.77	34.059	10.80	34.028	10.40	33.898	11.81	33.990	11.36	34.037	7.72	34.188
50m	10.34	34.063	10.61	34.044	10.37	34.031	10.37	34.023			9.73	34.102	9.75	34.052	10.47	34.026	7.42	34.192	5.81	34.158
75m	9.13	34.171	9.13	34.185	9.11	34.177					8.65	34.147	8.33	34.147	9.23	34.128	5.68	34.155	4.45	34.137
100m			8.48	34.198									7.46	34.162	8.26	34.158	4.43	34.148	3.30	34.110
125m													6.08	34.163	5.83	34.154	3.32	34.104	2.76	34.107
150m													5.04	34.157	5.35	34.144	2.58	34.085	2.09	34.093
200m													2.71	34.121	3.00	34.123	1.62	34.075	1.45	34.084
250m													1.59	34.092	1.85	34.097	1.23	34.075	1.11	34.080
300m													1.11	34.086	1.25	34.091	0.99	34.073	0.89	34.080
400m													0.72	34.070	0.75	34.089	0.67	34.071	0.63	34.080
500m													0.53	34.076	0.55	34.088	0.50	34.070	0.50	34.077
600m																	0.39	34.070		
700m																				
800m																				
900m																				
1000m																				

Table 3-11

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	J37		J38		J39		JC15		JC14		JC13		JC12		JC11		J41		J42	
Latitude:N	43-29.9		43-30.0		43-30.0		43- 0.0		42-59.9		42-59.9		43- 0.0		42-59.9		42-30.1		42-30.0	
Longitude:E	139-20.1		139- 0.2		138-30.0		138-59.9		139-20.2		139-40.1		140- 0.1		140-20.1		139-40.0		139-20.3	
Date	1995/05/29		1995/05/29		1995/05/29		1995/05/30		1995/05/30		1995/05/30		1995/05/30		1995/05/30		1995/05/30		1995/05/30	
Time(JST)	19:19		20:55		23:23		03:13		04:53		06:25		08:02		09:45		14:38		17:31	
Weather	C		C		C		C		R		R		R		C		C		C	
Air Temp.	13.4		12.4		12.3		12.9		12.7		12.9		12.9		13.7		12.8		12.1	
Bar	1007.8		1007.3		1004.0		1003.0		1001.9		1001.0		1001.0		1000.7		1003.6		1004.7	
Wind Dir	E		E		ESE		SE		ESE		ESE		SSE		SSE		SW		SW	
Wind Spd/F	S 6		S 3		S 8		S 7		S 4		S 8		S 10		S 9		S 8		S 9	
Transparency									12		14		10		12		13		12	
Depth	3195		3400		3400		3539		2343		3265		1270		523		1852		3234	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.4	34.104	11.2	34.111	11.3	34.095	12.6	34.002	12.6	33.931	12.3	33.993	11.8	34.058	12.4	33.616	12.9	33.973	12.8	34.010
10m	11.14	34.085	10.96	34.080	11.15	34.065	12.46	33.970	12.40	33.945	12.16	33.955	11.61	34.023	12.20	33.622	12.84	33.964	12.62	33.959
20m	10.44	34.114	10.45	34.101	10.88	34.071	11.35	34.050	10.63	34.046	12.15	33.958	11.60	34.024	11.53	33.814	12.33	34.077	10.78	34.183
30m	7.57	34.185	8.35	34.132	9.34	34.131	9.23	34.135	9.63	34.066	10.18	34.067	9.24	34.146	11.30	33.855	11.06	34.201	10.09	34.172
50m	5.18	34.169	5.94	34.151	6.06	34.156	7.05	34.151	9.27	34.089	8.80	34.141	5.71	34.161	10.64	33.990	8.51	34.239	8.63	34.199
75m	4.03	34.134	5.14	34.141	4.65	34.128	5.72	34.127	8.98	34.110	6.46	34.144	4.78	34.143	9.25	34.113	7.06	34.183	7.09	34.147
100m	3.11	34.116	4.26	34.121	3.87	34.104	4.38	34.107	8.41	34.126	5.08	34.128	3.18	34.103	8.17	34.152	6.37	34.140	5.84	34.124
125m	2.48	34.104	3.51	34.125	2.86	34.111	3.24	34.091	6.76	34.144	3.72	34.102	2.60	34.084	6.64	34.147	5.65	34.128	4.48	34.110
150m	1.92	34.087	2.66	34.100	2.47	34.103	2.56	34.081	5.70	34.115	2.91	34.088	2.13	34.082	5.65	34.128	4.70	34.108	3.44	34.091
200m	1.37	34.084	1.68	34.072	1.43	34.075	1.53	34.062	2.99	34.091	2.31	34.091	1.49	34.069	3.75	34.104	3.46	34.092	2.51	34.077
250m	1.00	34.084	1.19	34.068	1.15	34.085	1.20	34.062	2.49	34.097	1.54	34.066	1.08	34.073	2.49	34.084	2.76	34.090	1.79	34.071
300m	0.81	34.080	0.96	34.070	1.00	34.086	1.03	34.066	1.85	34.073	1.10	34.056	0.91	34.071	1.62	34.077	1.86	34.082	1.19	34.063
400m	0.57	34.079	0.67	34.070	0.64	34.086	0.72	34.062	1.00	34.058	0.68	34.056	0.60	34.070	0.81	34.071	0.92	34.077	0.83	34.063
500m	0.45	34.078	0.51	34.071	0.47	34.084	0.51	34.060	0.67	34.052	0.48	34.055	0.47	34.070			0.63	34.076	0.62	34.064
600m			0.40	34.068													0.46	34.077		
700m																				
800m																				
900m																				
1000m																				

Table 3-12

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	J43		J44		J45		J46		J47		J58		J57		J56		J55		J54	
Latitude:N	42-30.0		42-30.0		42-30.0		42-30.0		42-30.0		41-30.0		41-30.0		41-30.0		41-30.0		41-30.0	
Longitude:E	139- 0.2		138-40.0		138-20.1		138- 0.2		137-30.1		137-30.0		138- 0.0		138-20.1		138-40.0		139- 0.2	
Date	1995/05/30		1995/05/30		1995/05/30		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31	
Time(JST)	19:14		20:56		22:38		00:19		04:25		10:08		12:24		14:01		15:38		17:15	
Weather	R		C		C		C		R		BC		BC		BC		C		C	
Air Temp.	11.4		11.4		11.1		11.3		11.5		12.5		14.0		15.5		15.4		13.1	
Bar	1005.8		1006.5		1005.9		1005.2		1004.7		1005.5		1006.0		1006.2		1007.0		1007.5	
Wind Dir	WSW		WSW		SSW		SSW		S		WSW		WSW		W		W		W	
Wind Spd/F	S 8		S 7		S 5		S 4		S 4		S 6		S 8		S 7		S 6		S 5	
Transparency											13		13		12		11		13	
Depth	3600		3680		3643		3686		3691		3670		3691		1691		3082		1333	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.6	33.954	12.3	33.998	12.5	33.996	12.5	34.000	10.6	34.048	11.5	33.959	12.1	34.016	12.2	33.871	12.4	33.890	13.2	34.085
10m	12.07	33.973	12.20	33.960	12.36	33.956	12.41	33.962	10.41	34.028	11.02	34.023	11.41	34.017	11.61	33.888	11.83	33.924	13.01	34.052
20m	9.65	34.237	9.92	34.091	10.15	34.095	9.89	34.126	9.22	34.121	8.40	34.151	8.87	34.131	10.02	33.977	10.38	34.148	12.46	34.158
30m	7.80	34.186	9.18	34.114	9.13	34.144	7.15	34.121	6.76	34.152	5.55	34.180	6.72	34.176	5.14	34.100	7.57	34.208	11.28	34.226
50m	6.36	34.148	6.95	34.159	7.51	34.172	5.14	34.130	4.25	34.156	4.74	34.153	4.72	34.144	3.40	34.093	6.39	34.161	8.31	34.212
75m	4.65	34.113	5.35	34.124	6.51	34.138	3.78	34.099	3.46	34.145	4.26	34.150	3.70	34.110	2.30	34.078	4.68	34.127	6.98	34.166
100m	4.08	34.096	4.35	34.123	5.52	34.127	2.62	34.089	2.32	34.117	3.50	34.152	3.07	34.126	1.79	34.073	3.38	34.099	5.38	34.129
125m	3.80	34.090	2.80	34.095	4.26	34.111	1.96	34.076	1.72	34.097	3.18	34.147	2.52	34.116	1.56	34.076	2.60	34.083	3.81	34.095
150m	3.32	34.084	2.26	34.084	2.97	34.095	1.53	34.074	1.46	34.086	2.72	34.128	1.80	34.087	1.37	34.081	2.20	34.083	3.00	34.088
200m	2.30	34.081	1.41	34.067	2.02	34.078	1.24	34.076	1.27	34.081	2.12	34.109	1.30	34.079	1.31	34.085	1.65	34.081	1.98	34.084
250m	1.78	34.071	1.12	34.074	1.21	34.068	1.01	34.072	1.03	34.077	1.72	34.095	1.03	34.075	1.08	34.080	1.29	34.080	1.19	34.067
300m	1.26	34.070	0.94	34.074	0.96	34.070	0.81	34.072	0.88	34.077	1.41	34.083	0.88	34.074	0.88	34.077	1.07	34.084	0.91	34.069
400m	0.92	34.073	0.68	34.075	0.70	34.074	0.60	34.073	0.65	34.074	1.03	34.073	0.62	34.074	0.61	34.074	0.75	34.080	0.57	34.067
500m	0.64	34.067	0.51	34.073	0.50	34.072	0.47	34.072	0.49	34.072	0.69	34.070	0.47	34.073	0.48	34.072	0.53	34.070	0.38	34.067
600m							0.39		34.071											
700m																				
800m																				
900m																				
1000m																				

Table 3-13

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	J53		J52		J63		J62		J61		J51		JC22		JC21		JC07		JC06	
Latitude:N	41-30.0		41-30.0		41- 0.0		41- 9.9		41-20.0		41-29.9		42- 0.0		42- 0.0		44- 0.0		44- 0.0	
Longitude:E	139-15.1		139-30.1		140- 0.2		140- 0.3		140- 0.1		139-50.3		139-40.2		140- 0.3		139-30.0		140- 0.0	
Date	1995/05/31		1995/05/31		1995/05/31		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01	
Time(JST)	18:31		19:49		23:36		00:48		01:51		03:22		06:34		08:18		20:08		22:25	
Weather	C		C		BC		C		C		C		BC		C		C		C	
Air Temp.	12.2		12.3		12.8		12.2		12.4		11.8		12.2		13.0		9.7		10.5	
Bar	1008.0		1009.0		1009.3		1009.2		1009.2		1009.0		1010.5		1011.2		1014.5		1014.5	
Wind Dir	W		WSW		WSW		W		WNW		WNW		NW		CALM		N		NNW	
Wind Spd/F	S 5		S 7		S 8		S 7		S 8		S 7		S 3		S 0		S 4		S 4	
Transparency													20		16					
Depth	1133		1669		500		102		228		1330		916		680		1382		465	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	13.1	34.127	13.7	34.147	14.3	33.403	14.1	33.480	14.1	34.016	13.7	34.085	14.1	33.869	13.2	33.846	10.6	34.104	11.8	34.082
10m	13.07	34.078	13.54	34.075	14.18	33.328	14.03	33.781	13.77	33.982	13.64	34.063	13.59	33.926	12.87	33.965	10.16	34.085	10.09	34.104
20m	12.77	34.086	13.52	34.110	14.18	33.331	11.94	34.181	12.32	34.232	13.66	34.112	11.74	34.188	12.22	34.138	8.70	34.164	9.92	34.099
30m	11.40	34.167	10.94	34.268	13.32	33.691	11.78	34.188	11.94	34.244	12.60	34.318	9.49	34.241	11.09	34.247	6.38	34.204	9.32	34.121
50m	8.64	34.219	9.24	34.249	11.07	34.201	11.15	34.212	11.39	34.267	10.24	34.342	8.09	34.201	9.25	34.235	5.73	34.160	5.42	34.184
75m	6.20	34.156	7.94	34.198	10.80	34.235	10.48	34.267	10.69	34.266	8.90	34.238	6.46	34.146	7.84	34.197	5.58	34.158	4.42	34.155
100m	4.72	34.098	6.02	34.149	10.70	34.277			10.10	34.249	7.37	34.186	5.04	34.123	6.44	34.152	5.49	34.159	4.12	34.162
125m	3.77	34.099	4.37	34.094	10.48	34.274			9.80	34.243	6.28	34.137	4.19	34.102	4.66	34.103	5.38	34.158	3.59	34.139
150m	2.99	34.081	2.84	34.060	10.05	34.248			8.37	34.198	5.30	34.112	3.09	34.090	4.05	34.084	5.18	34.158	3.00	34.128
200m	1.60	34.073	2.08	34.076	9.11	34.222			6.76	34.158	2.99	34.085	2.08	34.073	3.01	34.079	4.52	34.153	1.75	34.096
250m	1.09	34.065	1.36	34.068	6.18	34.156					2.16	34.078	1.50	34.064	1.83	34.072	3.42	34.131	1.18	34.089
300m	0.89	34.066	1.02	34.063	1.81	34.085					1.47	34.069	1.15	34.066	1.26	34.067	2.12	34.096	0.97	34.089
400m	0.56	34.067	0.72	34.069	0.71	34.066					0.92	34.068	0.68	34.064	0.73	34.068	1.07	34.090	0.67	34.087
500m	0.38	34.067	0.49	34.069							0.64	34.069	0.47	34.064	0.52	34.065	0.66	34.088		
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-14

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	JC05		JC04		JC03		JC02		JC01		J21		J22		J23		J24		J25	
Latitude:N	44- 0.0		44- 0.0		43-59.9		44- 0.0		44- 0.1		44-29.9		44-29.9		44-29.8		44-30.1		44-30.1	
Longitude:E	140-20.2		140-40.0		141- 0.0		141-15.2		141-30.2		141-30.2		141-15.1		141- 0.4		140-40.3		140-20.3	
Date	1995/06/01		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02	
Time(JST)	23:58		01:32		03:05		04:17		05:25		08:12		09:42		11:10		12:59		14:45	
Weather	C		C		C		C		C		C		C		C		C		BC	
Air Temp.	10.9		11.2		10.6		10.5		11.8		10.7		13.8		14.6		12.6		13.8	
Bar	1004.0		1014.3		1004.5		1015.0		1015.0		1016.2		1016.4		1016.6		1016.8		1017.0	
Wind Dir	NW		NNW		N		CALM		NW		NNE		NNE		N		NNW		NNE	
Wind Spd/F	S 4		S 5		S 4		S 0		S 3		S 1		S 2		S 3		S 3		S 1	
Transparency							19		7		13		15		17		14		17	
Depth	509		572		403		157		48		77		117		194		147		239	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.4	34.038	11.7	33.981	12.2	33.980	12.6	33.741	12.8	33.415	12.2	33.800	12.4	34.019	12.0	33.939	12.3	34.008	11.9	34.077
10m	11.99	34.008	11.69	33.926	12.15	33.929	12.21	33.848	11.74	33.950	11.52	33.831	12.11	33.985	11.69	33.889	11.87	33.970	11.13	34.034
20m	11.74	34.017	11.21	33.964	11.27	33.936	11.59	33.956	11.58	33.945	11.18	33.911	11.34	34.030	11.30	33.917	11.53	33.972	10.52	34.066
30m	11.18	34.063	11.11	33.961	11.19	33.936	11.54	33.984	10.60	34.025	11.12	33.964	11.13	34.029	11.15	33.935	11.51	33.977	9.70	34.112
50m	9.17	34.134	10.35	34.067	10.36	34.070	10.37	34.079			9.88	34.092	9.38	34.119	9.75	34.076	8.49	34.146	7.10	34.177
75m	7.72	34.171	9.83	34.093	9.43	34.110	8.93	34.077					8.37	34.137	8.93	34.130	6.27	34.153	5.67	34.151
100m	5.83	34.152	9.11	34.107	8.92	34.122	8.46	34.097					7.42	34.156	7.62	34.159	5.11	34.139	4.23	34.131
125m	4.53	34.147	8.39	34.145	8.02	34.142	8.04	34.122							6.50	34.149	4.44	34.146	3.22	34.115
150m	3.43	34.113	6.79	34.153	7.36	34.152									5.14	34.133			2.77	34.107
200m	2.22	34.103	5.12	34.148	5.32	34.141													2.40	34.105
250m	1.42	34.090	3.76	34.132	3.92	34.140														
300m	1.07	34.088	2.55	34.098	1.61	34.092														
400m	0.64	34.089	1.08	34.079																
500m	0.42	34.088	0.55	34.076																
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-15

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	J26		J27		J18		J17		J16		J15		J14		JW03		JW02		JW01	
Latitude:N	44-30.0		44-30.0		45-29.9		45-30.0		45-30.0		45-30.1		45-30.0		45-45.0		45-45.0		45-45.0	
Longitude:E	140- 0.2		139-30.1		139-40.0		140- 0.0		140-20.0		140-40.1		140-53.0		141- 0.1		141-10.1		141-20.1	
Date	1995/06/02		1995/06/02		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03	
Time(JST)	16:11		18:30		00:09		01:43		03:16		04:46		06:16		08:09		09:28		10:38	
Weather	BC		C		C		F		C		C		C		C		C		C	
Air Temp.	11.4		11.8		10.9		10.2		10.1		11.1		11.0		11.1		11.6		11.9	
Bar	1016.8		1017.0		1016.0		1006.5		1017.0		1017.4		1017.7		1017.2		1016.7		1017.2	
Wind Dir	WSW		SSW		SSW		SW		SW		SW		SW		SW		SW		SW	
Wind Spd/F	S 2		S 3		S 5		S 6		S 5		S 5		S 5		S 6		S 7		S 8	
Transparency	19		14								13		23		14		14		15	
Depth	572		495		836		597		397		551		427		490		122		125	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.5	34.098	10.7	33.942	9.5	33.996	9.5	34.020	9.6	34.037	9.9	34.060	11.0	34.093	10.9	34.100	10.5	34.097	10.8	34.108
10m	9.97	34.095	9.20	33.942	8.97	33.968	9.12	33.994	9.08	34.000	9.34	34.032	10.89	34.057	10.81	34.068	10.30	34.063	10.26	34.101
20m	9.82	34.078	8.73	34.032	7.72	34.025	8.76	33.981	7.95	34.092	9.20	34.013	9.74	34.130	10.03	34.101	9.89	34.079	9.89	34.085
30m	9.30	34.112	6.77	34.087	4.83	34.148	5.97	34.121	5.25	34.177	5.73	34.188	9.06	34.124	9.72	34.077	9.83	34.079	9.81	34.087
50m	6.27	34.159	3.74	34.077	4.06	34.145	3.87	34.136	4.43	34.154	5.05	34.157	6.97	34.162	8.38	34.148	8.34	34.127	7.52	34.140
75m	5.08	34.150	2.97	34.120	3.26	34.128	3.20	34.137	3.58	34.133	4.45	34.147	5.89	34.152	7.06	34.116	6.75	34.152	6.48	34.135
100m	4.04	34.121	2.30	34.111	2.53	34.117	2.37	34.104	2.87	34.119	3.69	34.133	5.01	34.152	6.03	34.151	5.64	34.142	6.07	34.134
125m	3.36	34.118	1.95	34.099	2.17	34.107	2.15	34.107	2.32	34.110	3.05	34.120	4.40	34.146	5.12	34.148				
150m	2.68	34.110	1.65	34.096	1.81	34.101	1.89	34.106	1.92	34.106	2.33	34.105	3.97	34.134	4.60	34.136				
200m	1.64	34.088	1.26	34.090	1.39	34.096	1.41	34.098	1.31	34.089	1.89	34.105	3.35	34.122	3.86	34.136				
250m	1.28	34.085	0.97	34.087	1.06	34.092	1.03	34.089	1.05	34.086	1.36	34.094	2.83	34.118	2.73	34.121				
300m	0.91	34.084	0.78	34.089	0.88	34.089	0.81	34.089	0.85	34.086	1.03	34.091	1.21	34.097	1.88	34.102				
400m	0.57	34.082	0.57	34.085	0.55	34.088	0.55	34.086			0.62	34.087	0.61	34.085	0.96	34.087				
500m	0.45	34.083			0.39	34.086	0.45	34.086			0.43	34.084								
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-16

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	J13		J12		J11		JW11		JW12		JW13		JW14		JW15		JW16		CSH01	
Latitude:N	45-30.1		45-30.1		45-30.0		45- 0.0		45- 0.0		45- 0.0		44-59.9		44-59.9		44-59.9		43-16.7	
Longitude:E	141-10.1		141-24.1		141-40.1		141-30.0		141-15.2		141- 0.2		140-40.2		140-20.2		140- 0.2		140-38.7	
Date	1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/03		1995/06/04		1995/06/04		1995/06/12	
Time(JST)	12:35		13:57		15:24		19:00		20:19		21:36		23:16		01:08		02:32		11:46	
Weather	BC		B		BC		BC		BC		BC		C		C		C		C	
Air Temp.	12.3		14.2		15.5		13.0		11.6		12.1		11.7		11.6		11.8		11.8	
Bar	1016.5		1016.3		1016.5		1015.7		1015.7		1016.1		1014.3		1013.0		1011.5		1011.5	
Wind Dir	SSW		SW		WSW		S		SSE		ESE		ESE		ESE		ESE		ESE	
Wind Spd/F	S 8		S 7		S 6		S 2		S 1		S 3		S 4		S 5		S 4		S 4	
Transparency	14		16		10		19													
Depth	129		114		52		64		85		98		365		155		192			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.6	34.118	11.6	33.985	12.7	33.377	12.3	34.057	11.9	33.961	11.8	34.080	11.4	34.102	11.7	34.099	11.0	34.087	14.2	N.D.
10m	10.22	34.078	10.58	34.075	11.23	33.855	11.78	34.019	11.85	33.921	11.58	34.068	11.18	34.087	11.11	34.086	10.90	34.050	12.24	N.D.
20m	9.80	34.074	9.63	34.075	10.88	33.974	10.55	34.084	10.26	34.089	10.70	34.071	10.52	34.081	10.45	34.076	9.67	34.094	10.93	N.D.
30m	8.33	34.130	8.44	34.117	10.47	34.031	10.13	34.104	9.37	34.114	10.07	34.105	9.80	34.126	10.17	34.085	8.09	34.166	10.59	N.D.
50m	6.97	34.119	7.45	34.120			8.46	34.112	8.17	34.104	6.74	34.176	7.56	34.169	7.39	34.174	6.14	34.162	9.59	N.D.
75m	5.70	34.137	5.69	34.124					7.72	34.124	5.26	34.166	5.62	34.158	5.92	34.162	5.08	34.151		
100m	5.01	34.133	4.51	34.119									4.92	34.153	5.31	34.161	3.82	34.134		
125m	4.64	34.128											4.61	34.156	4.14	34.163	3.05	34.123		
150m													4.44	34.150			2.80	34.119		
200m													3.44	34.131						
250m													2.24	34.115						
300m													1.25	34.102						
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-17

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	CSH02		CSH03		CSH04		CSR01		CSR02		CSR03		CSR04		CSR05		CSR06		CSR07	
Latitude:N	43-18.7		43-12.6		43-16.6		42-59.9		42-29.8		42-29.8		42-30.0		42-30.0		42-59.9		42-59.7	
Longitude:E	140-38.3		141- 2.1		140-40.0		139-59.7		139-39.8		139- 0.0		138-20.1		137-40.0		137-59.8		138-39.3	
Date	1995/06/12		1995/06/14		1995/06/15		1995/06/27		1995/06/28		1995/06/29		1995/06/29		1995/06/30		1995/06/30		1995/06/30	
Time(JST)	19:52		18:07		16:26		19:07		17:46		14:08		17:42		10:41		13:57		18:21	
Weather							C		C		C		C		C		F		F	
Air Temp.							16.0		18.2		20.3		18.9		19.0		19.2		18.0	
Bar							1005.5		1007.6		1010.0		1010.0		1006.5		1005.5		1006.1	
Wind Dir							N		NNE		CALM		S		SSW		SSW		SSW	
Wind Spd/F							S 3		S 6		S 0		S 2		S 9		S 6		S 5	
Transparency																				
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.7	N.D.	13.7	N.D.	14.1	N.D.	15.9	N.D.	16.5	N.D.	17.3	N.D.	17.1	N.D.	16.5	N.D.	16.2	N.D.	16.8	N.D.
10m	11.69	N.D.	13.21	N.D.	13.23	N.D.	15.57	N.D.	16.07	N.D.	17.00	N.D.	16.62	N.D.	16.08	N.D.	16.02	N.D.	16.70	N.D.
20m	11.04	N.D.			12.28	N.D.	14.82	N.D.	13.62	N.D.	14.04	N.D.	12.65	N.D.	8.57	N.D.	9.05	N.D.	16.08	N.D.
30m	10.61	N.D.			11.83	N.D.	14.63	N.D.	12.31	N.D.	10.22	N.D.	6.98	N.D.	6.51	N.D.	7.47	N.D.	11.04	N.D.
50m	9.61	N.D.					12.11	N.D.	11.08	N.D.	8.32	N.D.	4.06	N.D.	4.52	N.D.	5.43	N.D.	7.26	N.D.
75m							9.23	N.D.	10.13	N.D.	5.83	N.D.	3.11	N.D.	3.40	N.D.	4.50	N.D.	5.06	N.D.
100m							8.66	N.D.	8.78	N.D.	4.36	N.D.	2.40	N.D.	2.75	N.D.	3.51	N.D.	3.59	N.D.
125m							7.92	N.D.	6.87	N.D.	3.00	N.D.	1.96	N.D.	2.05	N.D.	2.76	N.D.	2.77	N.D.
150m							6.63	N.D.	5.55	N.D.	2.32	N.D.	1.77	N.D.	1.66	N.D.	2.02	N.D.	2.35	N.D.
200m							4.65	N.D.	3.14	N.D.	1.71	N.D.	1.38	N.D.	1.27	N.D.	1.35	N.D.	1.67	N.D.
250m							2.83	N.D.	1.88	N.D.	1.32	N.D.	1.16	N.D.	1.00	N.D.	1.05	N.D.	1.35	N.D.
300m							1.77	N.D.	1.36	N.D.	1.06	N.D.	0.96	N.D.	0.84	N.D.	0.87	N.D.	1.01	N.D.
400m							0.97	N.D.	0.79	N.D.	0.77	N.D.	0.69	N.D.	0.56	N.D.	0.63	N.D.	0.62	N.D.
500m							0.60	N.D.	0.59	N.D.	0.55	N.D.	0.52	N.D.	0.47	N.D.	0.48	N.D.	0.47	N.D.
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-18

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	CSR08		CSR09		CSR10		CSR11		CSR12		CSR13		CSR14		CSR15		CSR16		CSR17	
Latitude:N	43- 0.1		43-29.9		43-30.3		43-29.9		43-59.9		43-59.9		43-58.9		43-59.9		44- 0.4		43-30.9	
Longitude:E	139-20.0		139-59.8		139-20.5		138-39.9		138-40.1		139-19.9		139-58.9		140-40.0		141-13.9		140-41.0	
Date	1995/07/01		1995/07/01		1995/07/01		1995/07/02		1995/07/02		1995/07/02		1995/07/02		1995/07/03		1995/07/03		1995/07/04	
Time(JST)	09:55		13:53		18:22		06:09		09:06		12:12		18:20		10:46		18:11		17:49	
Weather	C		C		F		C		C		C		C		C		C		C	
Air Temp.	18.3		20.7		19.4		16.3		15.6		16.3		17.3		17.6		19.3		17.5	
Bar	1005.0																			
Wind Dir	S		E		E		E		ENE		E		ENE		NE		NNE		ESE	
Wind Spd/F	S 5		S 2		S 2		S 7		S 8		S 4		S 4		S 3		S 1		S 5	
Transparency																				
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.0	N.D.	17.0	N.D.	16.3	N.D.	15.9	N.D.	15.8	N.D.	14.7	N.D.	16.5	N.D.	15.7	N.D.	16.9	N.D.	16.6	N.D.
10m	16.61	N.D.	16.45	N.D.	15.88	N.D.	15.87	N.D.	15.78	N.D.	14.18	N.D.	16.23	N.D.	15.50	N.D.	15.59	N.D.	16.06	N.D.
20m	12.11	N.D.	16.20	N.D.	13.37	N.D.	14.00	N.D.	12.03	N.D.	11.18	N.D.	12.75	N.D.	15.09	N.D.	13.95	N.D.	14.80	N.D.
30m	9.94	N.D.	12.83	N.D.	8.94	N.D.	8.73	N.D.	8.93	N.D.	7.02	N.D.	9.32	N.D.	13.23	N.D.	11.71	N.D.	13.99	N.D.
50m	9.54	N.D.	8.83	N.D.	6.97	N.D.	6.51	N.D.	6.53	N.D.	5.80	N.D.	7.73	N.D.	10.80	N.D.	10.07	N.D.	11.16	N.D.
75m	7.12	N.D.	7.16	N.D.	5.19	N.D.	5.03	N.D.	4.78	N.D.	5.57	N.D.	6.31	N.D.	8.45	N.D.	8.71	N.D.	8.61	N.D.
100m	5.87	N.D.	5.64	N.D.	3.89	N.D.	3.85	N.D.	3.80	N.D.	5.40	N.D.	5.29	N.D.	7.13	N.D.	7.43	N.D.	7.35	N.D.
125m	5.05	N.D.	4.55	N.D.	2.85	N.D.	3.02	N.D.	2.95	N.D.	5.21	N.D.	4.54	N.D.	5.78	N.D.	6.03	N.D.	6.28	N.D.
150m	4.34	N.D.	3.34	N.D.	2.31	N.D.	2.45	N.D.	2.37	N.D.	4.95	N.D.	3.40	N.D.	4.89	N.D.	5.12	N.D.	5.02	N.D.
200m	3.29	N.D.	2.32	N.D.	1.54	N.D.	1.50	N.D.	1.50	N.D.	3.91	N.D.	2.08	N.D.	3.64	N.D.			3.42	N.D.
250m	2.50	N.D.	1.52	N.D.	1.19	N.D.	1.16	N.D.	1.11	N.D.	2.44	N.D.	1.59	N.D.	2.34	N.D.			1.97	N.D.
300m	1.74	N.D.	1.05	N.D.	0.94	N.D.	0.94	N.D.	0.89	N.D.	1.71	N.D.	1.29	N.D.	1.41	N.D.			1.36	N.D.
400m	0.82	N.D.	0.75	N.D.	0.68	N.D.	0.62	N.D.	0.60	N.D.	1.02	N.D.	0.78	N.D.	0.80	N.D.			0.86	N.D.
500m	0.55	N.D.	0.58	N.D.	0.48	N.D.	0.49	N.D.	0.46	N.D.	0.71	N.D.	0.50	N.D.	0.54	N.D.			0.59	N.D.
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-19

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	CIS008		CIS001		CIS025		CIS005		CIS002		CIS009		CIS006		CIS003		CIS010		CIS007	
Latitude:N	43-15.0		43-14.9		43-20.0		43-20.0		43-24.9		43-24.9		43-29.9		43-34.9		43-34.8		43-40.1	
Longitude:E	141- 4.8		141-15.0		141-19.9		141-10.0		141-14.8		141- 5.2		141- 9.8		141-12.8		141- 5.1		141- 9.8	
Date	1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10	
Time(JST)	09:25		10:12		10:51		11:34		12:13		12:57		13:35		14:10		14:46		15:26	
Weather	BC		C		C		BC		BC		BC		C		BC		BC		BC	
Air Temp.	22.1		21.0		21.3		20.1		21.8		20.3		22.0		22.4		20.4		23.3	
Bar	1003.4		1004.1		1004.5		1004.3		1004.0		1002.9		1003.1		1003.4		1002.4		1002.9	
Wind Dir	ESE		SE		SSE		SE		SE		ESE		SSE		SE		ESE		SSE	
Wind Spd/F	S 8		S 10		S 7		S 11		S 11		S 11		S 8		S 5		S 7		S 8	
Transparency																				
Depth	28		21		21		35		40		61		61		62		91		84	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.6	N.D.	16.6	N.D.	16.4	N.D.	17.2	N.D.	16.9	N.D.	17.6	N.D.	17.3	N.D.	18.1	N.D.	17.7	N.D.	18.0	N.D.
10m	15.71	N.D.	14.36	N.D.	15.53	N.D.	14.92	N.D.	16.42	N.D.	13.98	N.D.	17.17	N.D.	17.76	N.D.	17.17	N.D.	17.71	N.D.
20m	13.27	N.D.					13.23	N.D.	13.56	N.D.	12.81	N.D.	15.94	N.D.	16.65	N.D.	16.63	N.D.	16.78	N.D.
30m							10.32	N.D.	13.00	N.D.	11.19	N.D.	13.96	N.D.	13.99	N.D.	13.89	N.D.	14.60	N.D.
50m											9.30	N.D.	9.86	N.D.	10.98	N.D.	10.89	N.D.	11.12	N.D.
75m																	8.44	N.D.	8.62	N.D.
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-20

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	CIS004		CIS011		CIS014		CIS017		CIS013		CIS019		CIS016		CIS021		CIS023		CIS022	
Latitude:N	43-45.0		43-45.0		43-40.0		43-35.0		43-30.0		43-29.9		43-24.9		43-25.0		43-25.0		43-19.9	
Longitude:E	141-14.8		141- 5.1		141- 0.0		140-55.1		140-59.9		140-50.1		140-55.0		140-45.0		140-35.0		140-40.0	
Date	1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10		1995/07/10	
Time(JST)	16:08		16:58		17:49		18:40		19:26		20:12		21:20		22:10		22:59		23:44	
Weather	BC		BC		C		C		C		C		C		C		C		C	
Air Temp.	23.8		20.7		19.8		20.0		19.7		19.6		19.2						19.7	
Bar	1002.6		1002.5		1002.5		1002.5		1002.6		1003.1		1003.0		1003.0		1002.0			
Wind Dir	SSE		ESE		ESE		ESE		E		SE		SE		ESE		ESE		ESE	
Wind Spd/F	S 6		S 8		S 10		S 8		S 7		S 5		S 6		S 7		S 4		S 2	
Transparency																				
Depth	117		274		310		125		95		475		80		173		171		103	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.2	33.61*	17.8	N.D.	17.2	N.D.	17.8	N.D.	17.9	N.D.	17.9	33.55*	18.5	N.D.	18.3	N.D.	18.7	N.D.	18.1	N.D.
10m	17.87	N.D.	17.54	N.D.	17.08	N.D.	14.37	N.D.	14.51	N.D.	17.22	N.D.	15.97	N.D.	17.30	N.D.	16.52	N.D.	16.16	N.D.
20m	16.38	N.D.	15.35	N.D.	15.66	N.D.	13.94	N.D.	13.44	N.D.	14.10	N.D.	13.29	N.D.	15.15	N.D.	14.78	N.D.	15.22	N.D.
30m	14.01	N.D.	13.31	N.D.	13.33	N.D.	12.61	N.D.	11.12	N.D.	12.21	N.D.	11.85	N.D.	13.12	N.D.	13.35	N.D.	13.08	N.D.
50m	10.77	N.D.	10.52	N.D.	10.80	N.D.	9.73	N.D.	9.46	N.D.	10.42	N.D.	9.41	N.D.	11.61	N.D.	10.50	N.D.	10.22	N.D.
75m	8.96	N.D.	9.06	N.D.	8.70	N.D.	8.11	N.D.	8.04	N.D.	8.01	N.D.	7.79	N.D.	9.00	N.D.	9.22	N.D.	9.06	N.D.
100m	7.12	N.D.	7.65	N.D.	7.33	N.D.	6.82	N.D.			6.43	N.D.			7.79	N.D.	7.97	N.D.		
125m			6.74	N.D.	5.84	N.D.					4.75	N.D.			6.01	N.D.	6.41	N.D.		
150m			6.11	N.D.	5.04	N.D.					4.27	N.D.			4.68	N.D.	5.32	N.D.		
200m			3.70	N.D.	3.43	N.D.					2.59	N.D.								
250m			1.94	N.D.	1.94	N.D.					1.80	N.D.								
300m											1.30	N.D.								
400m											0.78	N.D.								
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-21

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	CIS020		CIS018		CIS012		CIS015		CIS101		CIS102		CIS103		CIS104		CIS105		CIS106	
Latitude:N	43-17.8		43-19.7		43-20.1		43-14.9		43-11.6		43-13.7		43-14.8		43-16.5		43-20.9		43-22.9	
Longitude:E	140-44.6		140-49.9		140-59.6		140-55.1		141-15.4		141-18.0		141-18.9		141-17.8		141-12.9		141- 8.7	
Date	1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11	
Time(JST)	00:16		00:53		02:50		04:34		07:13		08:11		08:43		09:17		10:11		10:56	
Weather	C		C		C		C		C		C		C		BC		BC		BC	
Air Temp.	19.4		18.9		18.3		18.5		16.9		17.4		17.4		18.6		20.3		21.7	
Bar	1002.0		1002.0		1002.0		1002.5		1003.7		1004.0		1004.5		1004.2		1004.0		1003.8	
Wind Dir	SSE		E		E		ESE		ESE		E		ESE		ESE		E		ESE	
Wind Spd/F	S 4		S 6		S 5		S 1		S 5		S 4		S 9		S 8		S 7		S 8	
Transparency																				
Depth	76		81		49		36		11		15		17		21		34		46	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.5	N.D.	18.0	33.45*	18.0	33.38*	19.3	N.D.	15.3	N.D.	15.3	N.D.	15.6	N.D.	16.0	N.D.	16.9	33.85*	17.0	N.D.
10m	16.14	N.D.	16.12	N.D.	14.80	N.D.	16.28	N.D.			15.14	N.D.	15.47	N.D.	15.82	N.D.	15.60	N.D.	14.58	N.D.
20m	14.63	N.D.	14.28	N.D.	12.70	N.D.	15.38	N.D.									13.57	N.D.	12.63	N.D.
30m	13.22	N.D.	12.76	N.D.	11.46	N.D.	13.90	N.D.									11.69	N.D.	10.81	N.D.
50m	10.54	N.D.	10.26	N.D.																
75m																				
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-22

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	CIS107		CIS108		CIS109		CIS110		CIS111		CHA01		CHA02		CHA03		CHA04		CHA05	
Latitude:N	43-26.0		43-27.6		43-29.6		43-31.2		43-32.6		43-45.0		43-44.0		44- 5.0		44-11.0		44-11.9	
Longitude:E	141- 6.4		141- 5.2		141- 4.4		141- 2.6		140-59.9		141-16.0		141-12.0		141- 9.8		141-12.0		141-10.6	
Date	1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/11		1995/07/17		1995/07/17		1995/07/18		1995/07/18		1995/07/18	
Time(JST)	12:10		12:47		13:29		14:13		14:55		12:25		14:00		07:35		10:29		11:49	
Weather	C		C		C		C		C		BC		BC		BC		BC		B	
Air Temp.	21.6		21.3		22.0		22.4		21.3		20.5		19.2		18.1		23.4		22.9	
Bar	1003.4		1003.2		1003.0		1002.8		1002.6		1005.0		0.0		1004.5		1005.0		1004.5	
Wind Dir	E		ESE		ESE		SE		ESE		NNE		NNE		E		SSW		WSW	
Wind Spd/F	S 3		S 6		S 3		S 4		S 6		S 11		S 12		S 3		S 2		S 4	
Transparency																				
Depth	59		67		83		91		101		108		151		318		193		258	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.7	N.D.	17.8	N.D.	17.8	33.98*	17.6	33.60*	18.2	33.43*	17.7	N.D.	17.4	N.D.	18.3	N.D.	18.0	N.D.	18.1	N.D.
10m	15.62	N.D.	16.32	N.D.	16.02	34.459	16.84	33.755	17.27	33.652	16.23	N.D.	15.06	N.D.	18.17	N.D.	17.72	N.D.	17.77	N.D.
20m	13.77	N.D.	13.73	N.D.	13.17	N.D.	13.59	34.108	13.03	34.137	13.58	N.D.	13.59	N.D.	18.14	N.D.	16.47	N.D.	17.73	N.D.
30m	11.11	N.D.	11.69	N.D.	12.57	34.224	12.24	34.206	11.08	34.137	11.56	N.D.	12.31	N.D.	14.94	N.D.	14.07	N.D.	14.16	N.D.
50m	9.34	N.D.	9.33	N.D.	9.39	34.211	9.64	34.165	9.35	34.178	10.37	N.D.	10.42	N.D.	11.44	N.D.	11.11	N.D.	11.48	N.D.
75m					8.85	34.230	8.77	34.225	8.44	34.211	9.39	N.D.	8.46	N.D.	9.26	N.D.	9.31	N.D.	9.25	N.D.
100m											8.04	N.D.	7.92	N.D.	8.10	N.D.	8.40	N.D.	8.66	N.D.
125m													7.28	N.D.	7.11	N.D.	6.67	N.D.	7.10	N.D.
150m															5.94	N.D.	5.79	N.D.	6.32	N.D.
200m															4.38	N.D.			3.53	N.D.
250m															2.71	N.D.				
300m															1.20	N.D.				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-23

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199508		199508		199508		199508		199508		199508	
Station No	CHA06		CHA07		CHA08		CHA09		J13		JW03		JW02		JW01		J12		J11	
Latitude:N	43-58.0		43-56.9		43-53.5		43-49.0		45-30.0		45-45.0		45-45.0		45-45.0		45-30.0		45-30.0	
Longitude:E	141-12.0		141-13.0		141-15.2		141-13.0		141-10.0		140-59.9		141- 9.9		141-19.9		141-24.8		141-39.9	
Date	1995/07/20		1995/07/20		1995/07/20		1995/07/20		1995/07/25		1995/07/25		1995/07/26		1995/07/26		1995/07/26		1995/07/26	
Time(JST)	07:44		09:39		11:45		13:22		21:40		23:45		00:47		01:32		03:06		04:13	
Weather	BC		BC		BC		BC		B		BC		B		B		B		BC	
Air Temp.	19.9		20.5		21.4		21.5		20.0		19.8		19.9		19.9		19.2		19.2	
Bar	1004.0		1004.0		1003.0				1012.2		1012.2		1012.5		1012.5		1003.0		1012.9	
Wind Dir	SW		W		SW		W		SW		SSW		SSW		SSW		SE		S	
Wind Spd/F	S 8		S 4		S 3		S 3		S 3		S 6		S 7		S 7		S 8		S 7	
Transparency																			12	
Depth	238		204		156		172		124		488		119		124		110		50	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	19.7	N.D.	18.4	N.D.	19.8	N.D.	20.2	N.D.	18.8	33.598	18.8	33.554	19.0	33.547	19.1	33.494	18.9	33.650	18.9	33.399
10m	19.64	N.D.	17.40	N.D.	19.37	N.D.	19.71	N.D.	18.58	33.703	18.71	33.678	18.61	33.775	18.45	33.775	18.52	33.822	18.57	33.438
20m	19.44	N.D.	15.60	N.D.	17.66	N.D.	19.39	N.D.	18.48	33.855	15.64	34.014	14.05	34.031	15.33	33.986	18.13	33.913	18.05	33.695
30m	13.45	N.D.	12.82	N.D.	12.11	N.D.	13.86	N.D.	16.81	33.998	11.89	34.049	12.75	34.068	13.03	34.021	15.39	34.016	15.06	33.971
50m	10.07	N.D.	10.88	N.D.	9.94	N.D.	10.49	N.D.	11.52	34.129	10.32	34.337	11.32	34.177	11.20	34.161	10.05	34.166		
75m	8.67	N.D.	9.91	N.D.	9.12	N.D.	9.66	N.D.	8.86	34.168	8.29	34.234	9.02	34.191	9.75	34.253	7.82	34.183		
100m	7.89	N.D.	8.06	N.D.	8.30	N.D.	8.13	N.D.	7.19	34.160	6.28	34.170	8.33	34.214	7.12	34.158				
125m	7.21	N.D.	7.01	N.D.	7.59	N.D.	7.33	N.D.			5.31	34.149								
150m	6.21	N.D.	5.96	N.D.			6.77	N.D.			4.52	34.143								
200m	4.55	N.D.									2.96	34.115								
250m											2.15	34.097								
300m											1.78	34.090								
400m											1.00	34.080								
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-24

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	J14		J15		J16		J17		J18		J27		J26		J25		J24		J23	
Latitude:N	45-29.5		45-29.7		45-29.7		45-29.5		45-29.6		44-29.7		44-29.6		44-29.6		44-29.6		44-29.6	
Longitude:E	140-54.6		140-41.7		140-21.7		140- 1.5		139-41.5		139-31.4		140- 1.4		140-21.3		140-41.5		141- 1.4	
Date	1995/07/28		1995/07/28		1995/07/28		1995/07/28		1995/07/28		1995/07/29		1995/07/29		1995/07/29		1995/07/29		1995/07/29	
Time(JST)	12:32		13:33		15:21		16:59		18:43		00:46		02:58		04:35		06:09		07:39	
Weather	C		B		C		C		C		F		F		F		R		C	
Air Temp.	21.8		22.1		20.9		20.1		19.6		20.0		20.0		20.1		20.4		20.5	
Bar	1008.5		1008.0		1007.0		1007.4				1005.0		1003.5		1003.5		1002.8		1004.9	
Wind Dir	E		SSW		SSW		SW		SW		SW		S		S		SSW		SSW	
Wind Spd/F	S 4		S 1		S 4		S 4		S 3		S 6		S 6		S 8		S 10		S 10	
Transparency	19		21		17		22								17		18		15	
Depth	110		572		368		580		811		470		555		220		172		173	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	19.1	33.818	19.5	33.760	19.1	33.762	18.7	33.742	18.8	33.598	19.5	33.967	19.7	34.053	20.0	34.099	19.7	33.768	19.5	33.868
10m	18.83	33.836	18.84	33.795	18.78	33.770	18.21	33.751	18.16	33.604	18.91	33.981	19.48	34.061	19.88	34.106	19.53	33.781	19.45	33.875
20m	17.06	33.936	15.96	34.001	17.83	33.939	12.56	34.055	13.32	33.973	12.25	34.206	19.14	34.067	19.74	34.106	19.06	33.783	19.40	33.878
30m	12.52	34.072	12.80	34.118	12.64	34.278	7.49	34.111	8.50	34.083	6.71	34.240	11.14	34.265	13.77	34.284	15.72	33.976	17.25	33.992
50m	10.04	34.147	10.41	34.158	9.16	34.265	4.39	34.171	4.02	34.137	5.67	34.188	8.08	34.244	11.17	34.386	12.93	34.162	11.83	34.081
75m	9.33	34.156	9.07	34.173	5.76	34.170	2.93	34.129	2.90	34.129	5.24	34.173	6.45	34.174	9.06	34.296	9.58	34.156	9.76	34.153
100m	8.66	34.174	8.23	34.182	3.75	34.133	2.39	34.107	2.19	34.104	4.86	34.169	5.13	34.139	7.26	34.191	8.76	34.187	8.80	34.178
125m			7.08	34.177	2.95	34.122	2.14	34.097	1.84	34.100	4.18	34.173	4.21	34.124	5.88	34.166	7.85	34.181	7.76	34.193
150m			5.69	34.162	2.24	34.105	1.85	34.090	1.56	34.090	3.98	34.176	3.41	34.122	4.84	34.148	6.84	34.170	6.79	34.175
200m			3.63	34.133	1.57	34.085	1.58	34.082	1.21	34.081	3.73	34.171	2.01	34.098	3.86	34.134				
250m			2.46	34.103	1.26	34.083	1.41	34.079	0.96	34.079	3.25	34.148	1.32	34.079						
300m			1.90	34.093	0.91	34.078	1.24	34.077	0.77	34.078	2.75	34.124	1.01	34.077						
400m			1.06	34.080			0.75	34.078	0.54	34.076	1.47	34.086	0.62	34.075						
500m			0.69	34.077			0.45	34.075	0.39	34.075			0.45	34.074						
600m									0.33	34.075										
700m																				
800m																				
900m																				
1000m																				

Table 3-25

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	J22		J21		J32		J31		J33		J34		J35		J36		J37		J38	
Latitude:N	44-29.5		44-29.6		43-29.6		43-19.5		43-29.8		43-29.6		43-29.7		43-29.8		43-29.8		43-29.8	
Longitude:E	141-16.4		141-31.5		141- 1.5		141-11.5		140-40.7		140-20.7		140- 0.9		139-40.7		139-20.5		139- 0.6	
Date	1995/07/29		1995/07/29		1995/07/29		1995/07/29		1995/07/30		1995/07/30		1995/07/30		1995/07/30		1995/07/30		1995/07/30	
Time(JST)	08:46		09:52		16:01		17:17		09:27		11:14		13:08		14:59		16:40		18:13	
Weather	C		C		C		C		C		R		F		C		R		F	
Air Temp.	20.9		21.3		24.1		25.1		21.6		21.4		21.5		21.1		21.0		20.1	
Bar					1000.0		1000.0		1009.6		1001.0		1001.3		1001.8		1002.0		1002.1	
Wind Dir	SSW		S		S		SSE		SW		SSW		SSW		SW		WSW		SW	
Wind Spd/F	S 7		S 7		S 6		S 3		S 4		S 8		S 8		S 6		S 4		S 4	
Transparency	17		16		18		15		19		17		15		15		16		17	
Depth	107		67		87		33		275		620		1230				3226		3404	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	19.8	33.819	19.7	33.912	21.8	34.104	22.1	34.115	20.7	34.063	20.6	34.008	20.1	34.061	20.1	34.008	20.3	33.963	20.1	34.029
10m	19.69	33.827	19.57	33.911	21.69	34.104	20.84	34.108	20.54	34.050	20.48	34.014	20.02	34.066	20.02	34.011	20.28	33.969	18.63	34.138
20m	18.36	33.895	18.85	33.902	20.06	34.138	19.80	34.106	20.25	34.031	20.22	34.041	19.93	34.074	15.28	34.236	14.26	34.429	13.79	34.582
30m	14.93	34.008	17.04	33.955	16.19	34.267	18.88	34.193	20.23	34.034	18.79	34.125	17.89	34.155	13.25	34.328	12.99	34.569	11.04	34.428
50m	11.42	34.128	10.79	34.111	12.08	34.357			14.97	34.272	13.62	34.413	14.29	34.545	9.79	34.169	11.24	34.430	9.55	34.334
75m	10.03	34.099			9.72	34.300			11.00	34.319	10.67	34.388	10.47	34.357	9.25	34.138	10.08	34.360	7.25	34.204
100m	9.84	34.100							9.49	34.267	9.43	34.304	9.01	34.299	9.78	34.318	8.96	34.295	5.60	34.145
125m									8.47	34.248	8.26	34.247	6.70	34.184	9.19	34.292	6.56	34.188	4.07	34.113
150m									7.01	34.194	7.48	34.213	5.63	34.147	7.50	34.225	4.87	34.136	3.18	34.095
200m									4.95	34.136	5.19	34.143	3.39	34.115	4.19	34.115	2.80	34.090	2.00	34.084
250m											2.77	34.106	2.18	34.095	2.62	34.097	1.86	34.084	1.47	34.079
300m											1.77	34.085	1.53	34.084	1.74	34.084	1.32	34.081	1.08	34.079
400m											0.97	34.078	0.91	34.078	0.97	34.080	0.88	34.078	0.77	34.078
500m											0.54	34.077	0.74	34.077			0.60	34.074	0.56	34.078
600m																			0.41	34.077
700m																				
800m																				
900m																				
1000m																				

Table 3-26

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	J39		J41		J42		J43		J44		J45		J46		J47		J58		J57	
Latitude:N	43-29.8		42-29.7		42-29.7		42-29.7		42-29.7		42-29.6		42-29.7		42-29.8		41-30.1		41-29.6	
Longitude:E	138-30.5		139-40.4		139-20.7		139- 0.7		138-40.7		138-20.5		138- 0.7		137-30.6		137-30.5		138- 0.1	
Date	1995/07/30		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/08/01	
Time(JST)	20:44		04:18		06:48		08:32		10:11		11:47		13:22		16:24		22:49		01:03	
Weather	C		C		C		R		R		R		C		C		F		F	
Air Temp.	20.5		20.8		21.1		21.2		21.2		21.5		21.7		21.5		21.3		21.4	
Bar	1002.5		1005.3		1006.3		1005.6		1005.0		1004.4		1003.8		1004.3		1006.2		1006.4	
Wind Dir	SW		S		SSW		SSW		S		SW		SW		W		SW		SSW	
Wind Spd/F	S 3		S 5		S 7		S 5		S 7		S 9		S 7		S 4		S 4		S 5	
Transparency			20		21		20		16		16		15		19					
Depth	3400		1763		3178		3560		3680		3600		3000		3673		3600			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.0	34.016	20.4	34.017	21.1	33.951	20.8	33.840	20.8	33.828	20.6	33.820	20.8	33.912	20.8	33.865	20.7	33.844	20.8	33.842
10m	19.98	34.021	19.92	34.089	21.05	33.949	20.76	33.849	20.73	33.865	20.59	33.827	20.78	33.917	20.63	33.876	20.68	33.849	20.71	33.842
20m	14.58	34.297	16.09	34.346	17.77	34.245	20.20	34.032	19.07	33.923	13.28	34.096	13.15	34.169	8.94	34.297	12.40	34.187	11.17	34.225
30m	10.32	34.326	14.06	34.413	14.87	34.359	11.97	34.319	9.79	34.162	9.92	34.340	7.17	34.224	6.68	34.214	7.02	34.235	5.82	34.210
50m	7.58	34.226	12.42	34.482	11.86	34.421	8.81	34.271	6.07	34.178	5.98	34.182	4.21	34.150	4.95	34.172	4.52	34.175	4.05	34.157
75m	5.43	34.151	10.81	34.392	10.51	34.377	5.95	34.147	3.98	34.116	4.04	34.104	2.94	34.116	3.97	34.131	3.56	34.150	2.53	34.099
100m	4.14	34.114	9.85	34.336	8.79	34.298	4.49	34.125	2.97	34.085	2.89	34.090	2.12	34.094	3.16	34.127	2.66	34.123	2.13	34.105
125m	3.20	34.100	8.78	34.280	6.97	34.201	3.05	34.084	2.41	34.090	2.29	34.088	1.72	34.092	2.25	34.099	2.24	34.108	1.76	34.098
150m	2.79	34.095	7.76	34.236	5.53	34.149	2.39	34.081	2.03	34.087	1.99	34.099	1.45	34.083	1.75	34.088	1.80	34.098	1.50	34.091
200m	1.90	34.087	5.57	34.156	3.24	34.101	1.59	34.079	1.51	34.079	1.44	34.087	1.12	34.079	1.37	34.080	1.30	34.088	1.21	34.087
250m	1.43	34.080	3.77	34.103	1.78	34.083	1.39	34.087	1.25	34.086	1.10	34.080	0.99	34.082	1.13	34.081	1.08	34.085	1.06	34.084
300m	1.14	34.079	2.38	34.086	1.63	34.077	1.36	34.095	1.04	34.083	0.92	34.080	0.82	34.080	0.91	34.080	0.89	34.081	0.91	34.081
400m	0.81	34.078	1.17	34.078	1.27	34.086	0.90	34.082	0.75	34.080	0.70	34.080	0.58	34.079	0.65	34.078	0.64	34.079	0.62	34.079
500m	0.59	34.079	0.65	34.074	0.87	34.081	0.63	34.080	0.56	34.079	0.52	34.080	0.46	34.078	0.49	34.078	0.49	34.077	0.49	34.079
600m			0.45	34.074									0.38	34.078						
700m																				
800m																				
900m																				
1000m																				

Table 3-27

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	J56		J55		J54		J53		J52		J63		J62		J61		J51		JC21	
Latitude:N	41-29.7		41-29.8		41-29.9		41-30.0		41-29.9		40-59.8		41- 9.6		41-19.4		41-29.8		41-59.4	
Longitude:E	138-20.1		138-40.5		139- 0.5		139-15.5		139-30.7		140- 0.4		140- 0.3		140- 0.6		139-50.5		140- 0.4	
Date	1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01	
Time(JST)	02:45		04:32		06:20		07:41		09:00		12:35		13:44		14:48		16:21		19:21	
Weather	R		R		R		R		R		C		C		F		F		C	
Air Temp.	21.4		21.5		21.6		21.5		21.6		23.7		23.1		22.4		22.0		21.3	
Bar	1005.7		1005.4		1005.4		1005.9		1005.4		1004.7		1004.8		1004.3		1004.4		1004.3	
Wind Dir	SW		SW		SW		WSW		W		WSW		WSW		W		W		CALM	
Wind Spd/F	S 7		S 6		S 5		S 5		S 4		S 6		S 7		S 4		S 3		S 0	
Transparency					16		25		19		15		16		17		22			
Depth			3034		1331		1120		1639		494		89		242		1300		721	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	21.0	33.842	20.9	33.790	20.9	33.850	21.0	33.754	21.0	33.777	23.0	33.851	22.5	34.091	21.8	33.937	21.1	33.835	21.5	34.050
10m	21.01	33.854	20.85	33.791	20.84	33.857	21.06	33.759	20.96	33.795	22.97	33.860	22.50	34.095	21.65	33.965	17.25	34.422	21.44	34.053
20m	13.51	34.051	12.16	34.128	16.64	33.976	20.96	33.804	15.02	34.375	22.69	33.821	19.52	34.288	17.03	34.433	15.72	34.583	18.23	34.292
30m	6.87	34.109	7.44	34.197	8.18	34.196	14.19	33.965	13.53	34.485	18.91	34.339	16.58	34.487	16.18	34.478	14.69	34.619	14.96	34.511
50m	3.15	34.090	3.74	34.133	4.83	34.114	6.17	34.112	11.59	34.505	16.49	34.428	15.01	34.551	14.74	34.572	12.96	34.533	12.47	34.527
75m	2.14	34.087	2.68	34.086	3.36	34.104	4.71	34.139	8.36	34.237	14.86	34.475	13.49	34.575	13.76	34.583	11.76	34.446	11.11	34.414
100m	1.55	34.074	2.25	34.086	2.52	34.080	2.85	34.089	5.28	34.118	13.00	34.499			13.07	34.533	11.02	34.398	10.13	34.349
125m	1.34	34.079	1.75	34.079	2.06	34.079	2.31	34.084	3.55	34.089	12.15	34.479			12.08	34.463	9.40	34.320	8.87	34.288
150m	1.29	34.084	1.42	34.076	1.56	34.075	1.84	34.080	2.97	34.068	11.25	34.415			11.14	34.400	7.67	34.216	7.91	34.239
200m	1.10	34.083	1.03	34.077	1.12	34.072	1.32	34.073	1.71	34.075	9.91	34.336			10.18	34.333	3.97	34.091	5.39	34.144
250m	0.94	34.081	0.86	34.076	0.89	34.051	0.95	34.073	1.14	34.072	2.28	34.094					2.14	34.077	3.52	34.099
300m	0.79	34.080	0.75	34.077	0.71	34.074	0.84	34.074	0.90	34.073	1.50	34.079					1.48	34.074	2.12	34.086
400m	0.59	34.079	0.55	34.077	0.51	34.074	0.52	34.072	0.62	34.073	0.79	34.074					0.72	34.073	0.78	34.073
500m	0.46	34.078	0.42	34.076	0.38	34.074	0.40	34.072	0.39	34.073							0.45	34.073	0.51	34.071
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-28

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	JC22		CE101		CE102		CE103		CE104		CE105		CE106		CE107		CE108		CE109	
Latitude:N	41-59.8		43-22.9		43-23.5		43-23.8		43-24.7		43-23.3		43-23.9		43-23.4		43-23.3		43-23.2	
Longitude:E	139-40.6		140-42.2		140-39.9		140-40.0		140-41.3		140-41.2		140-41.7		140-40.5		140-40.0		140-41.3	
Date	1995/08/01		1995/08/21		1995/08/22		1995/08/22		1995/08/22		1995/08/22		1995/08/22		1995/08/22		1995/08/23		1995/08/23	
Time(JST)	21:11		20:07		00:03		04:07		08:13		12:19		15:54		19:57		00:00		04:03	
Weather	C		BC		BC		C		B		B		BC		BC		BC		BC	
Air Temp.	21.1		21.0		20.2		20.1		22.5		22.6		25.1		22.3		21.7		21.1	
Bar	1004.8		1011.0		1011.6		1012.1		1013.5		1012.5		1012.5		1013.1		1013.4		1012.8	
Wind Dir	NNW		W		CALM		S		SE		E		NW		WNW		SSE		SSE	
Wind Spd/F	S 2		S 2		S 0		S 3		S 2		S 3		S 2		S 3		S 2		S 5	
Transparency			22														6		7	
Depth	950		236		236		52		771		958		1050		1082		994		125	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	21.5	33.975	21.6	33.89*	21.6	33.93*	21.8	33.94*	21.7	33.89*	21.9	33.90*	22.3	33.86*	22.1	33.86*	22.0	33.89*	21.8	33.91*
10m	17.40	34.467	21.68	33.892	21.74	33.918	21.85	33.942	21.49	33.888	21.58	33.898	21.62	33.892	22.01	33.857	21.68	33.902	21.76	33.907
20m	16.05	34.605	21.51	33.914	21.53	33.905	21.60	33.954	21.45	33.913	21.48	33.898	21.52	33.920	21.52	33.910	21.56	33.937	21.49	33.955
30m	15.53	34.626	21.29	33.971	21.24	33.972	21.30	33.951	21.28	33.953	21.21	33.969	21.21	33.977	21.10	33.976	21.10	33.992	21.09	33.986
50m	13.55	34.563	14.67	34.475	15.63	34.374	16.68	34.323	16.77	34.349	14.61	34.465	15.38	34.405	15.86	34.387	15.95	34.377	15.25	34.403
75m	11.35	34.424	12.00	34.417	12.87	34.422	11.87	34.428	12.37	34.482	12.28	34.401	12.28	34.421	12.35	34.411	12.26	34.422	12.29	34.413
100m	10.46	34.360	10.87	34.382	11.19	34.399	11.24	34.398	11.35	34.427	11.08	34.405	11.28	34.414	11.01	34.388	11.09	34.406	11.06	34.382
125m	8.78	34.292	9.85	34.336	10.39	34.351	10.37	34.343	10.44	34.349	10.31	34.341	10.53	34.369	10.29	34.338	10.35	34.351	10.19	34.337
150m	6.45	34.186	8.79	34.284	9.59	34.311	9.46	34.302	9.63	34.310	9.60	34.308	9.48	34.318	9.44	34.304	9.57	34.312	9.41	34.307
200m	3.36	34.104	3.99	34.135	5.72	34.172	6.29	34.177	4.98	34.163	5.21	34.160	5.36	34.166	5.32	34.159	3.83	34.148	5.47	34.169
250m	2.24	34.085	2.16	34.097	2.31	34.102	2.40	34.104	2.30	34.102	2.55	34.105	2.50	34.103	2.24	34.097	1.83	34.096	2.52	34.107
300m	1.49	34.079	1.25	34.081	1.24	34.081	1.07	34.082	1.25	34.083	1.30	34.085	1.45	34.084	1.57	34.084	1.34	34.081	1.35	34.083
400m	0.79	34.074							0.72	34.076			0.81	34.077						
500m	0.57	34.073																		
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-29

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	CE110		CE111		CE112		CSR101		CSR102		CSR103		CSR104		CSR105		CSR106		CSR107	
Latitude:N	43-23.0		43-23.4		43-23.0		43-29.9		43-29.8		43-29.8		43-59.8		43-59.9		43-59.8		43-59.9	
Longitude:E	140-42.4		140-38.5		140-42.2		140- 0.5		139-20.7		138-40.6		138-40.4		139-20.3		139-59.7		140-40.4	
Date	1995/08/23		1995/08/23		1995/08/23		1995/08/29		1995/08/29		1995/08/30		1995/08/30		1995/08/30		1995/08/30		1995/08/31	
Time(JST)	07:58		12:07		16:09		13:48		18:10		07:48		11:00		13:57		18:02		09:38	
Weather	BC		B		B		C		BC		C		BC		BC		BC		BC	
Air Temp.	24.2		23.5		25.3		23.1		21.3		22.0		23.1		25.2		22.3		22.3	
Bar							1012.0		1011.5		1012.5		1011.0		1010.4		1011.0		1009.6	
Wind Dir	SSE		E		E		SSW		SW		SW		SW		SW		SW		SSE	
Wind Spd/F	S 3		S 5		S 3		S 10		S 11		S 7		S 9		S 7		S 5		S 5	
Transparency	9		12		10		22													
Depth	209		382		308		236		236		52		771		958		1050		1082	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	21.9	33.91*	22.1	33.91*	22.4	33.91*	23.0	33.64*	21.5	33.81*	20.8	33.86*	20.6	33.90*	21.3	33.93*	21.1	33.90*	22.5	33.68*
10m	21.75	33.905	21.80	33.905	21.89	33.915	23.02	33.644	21.57	33.808	20.75	33.855	20.56	33.901	21.17	33.940	20.98	33.896	22.52	33.691
20m	21.56	33.921	21.59	33.915	21.75	33.962	22.78	33.706	21.57	33.807	15.60	34.196	14.89	34.182	14.93	34.554	14.01	34.416	18.67	34.397
30m	20.98	33.990	21.29	33.953	20.93	34.010	18.38	34.341	14.06	34.120	10.79	34.317	9.78	34.354	12.54	34.524	11.05	34.444	16.39	34.526
50m	16.23	34.375	16.54	34.357	16.05	34.417	12.58	34.450	5.12	34.128	8.25	34.270	7.09	34.210	10.32	34.383	9.57	34.339	13.55	34.535
75m	12.38	34.415	12.72	34.411	12.15	34.425	9.19	34.320	3.57	34.113	5.84	34.165	4.66	34.129	7.96	34.262	6.77	34.202	11.60	34.454
100m	11.04	34.376	11.35	34.412	10.87	34.392	7.07	34.215	2.97	34.109	4.55	34.108	3.67	34.112	6.27	34.181	5.21	34.159	10.21	34.346
125m	10.22	34.341	10.60	34.356	10.09	34.335	5.41	34.147	2.50	34.103	3.46	34.103	2.87	34.114	4.87	34.135	4.35	34.132	9.32	34.318
150m	9.56	34.306	9.89	34.310	9.01	34.290	4.21	34.116	2.11	34.095	2.83	34.107	2.21	34.098	3.55	34.107	3.43	34.125	8.11	34.254
200m	6.32	34.178	6.01	34.167	4.73	34.149	2.42	34.091	1.45	34.082	1.81	34.085	1.47	34.083	1.99	34.078	2.44	34.102	5.34	34.145
250m	2.96	34.112	3.06	34.109	2.52	34.102	1.65	34.082	1.15	34.079	1.32	34.080	1.13	34.078	1.45	34.082	1.72	34.088	2.71	34.106
300m	1.63	34.087			1.41	34.083	1.25	34.080	0.93	34.079	1.06	34.080	0.93	34.078	1.09	34.078	1.35	34.082	1.79	34.089
400m							0.83	34.079	0.66	34.078	0.71	34.078	0.65	34.077	0.74	34.076	0.95	34.079	1.04	34.076
500m									0.48	34.076	0.50	34.077								
600m																				
700m																				
800m																				
900m																				
1000m																				

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Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	CSR108		CSR109		CSR110		CSR111		CSR112		CSR113		CSR114		CSR115		CSR116		CSR117	
Latitude:N	44-31.4		44-29.8		44-29.2		45- 0.8		44-59.9		45-29.8		45-30.2		45- 0.0		45- 0.0		44-30.1	
Longitude:E	140-40.6		140- 0.5		139-19.3		139-59.5		139-30.6		140-30.4		140- 3.3		141- 1.5		140-31.1		141-11.1	
Date	1995/08/31		1995/09/01		1995/09/01		1995/09/02		1995/09/02		1995/09/02		1995/09/02		1995/09/04		1995/09/05		1995/09/05	
Time(JST)	18:17		10:49		18:02		06:36		08:44		13:34		18:03		18:56		10:51		14:50	
Weather	BC		BC		BC		BC		BC		C		C		C		C		C	
Air Temp.	22.7		22.6		21.7		21.6		23.4		21.5		20.2		17.5		18.3		17.9	
Bar	1007.4		1008.5																	
Wind Dir	NNE		N		NNE		SSE		S		S		SSE		NNW		NNW		NW	
Wind Spd/F	S 7		S 4		S 4		S 2		S 7		S 6		S 6		S 4		S 9		S 9	
Transparency	6		7		9		12		10											
Depth	994		125		209		382		308		292		56		136		207		222	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	21.9	33.90*	21.0	33.90*	20.6	33.91*	20.9	33.90*	20.4	33.53*	20.7	33.96*	20.4	33.81*	21.1	33.77*	20.6	33.83*	21.1	33.74*
10m	21.67	33.929	20.91	33.906	20.50	33.913	20.87	33.896	20.23	33.531	20.52	33.968	20.37	33.823	21.17	33.786	20.58	33.846	21.06	33.755
20m	18.27	34.318	20.49	33.926	13.32	34.281	14.55	34.245	12.47	34.144	14.78	34.253	12.60	34.174	21.19	33.800	19.82	33.945	18.81	34.217
30m	15.80	34.440	11.47	34.252	10.57	34.403	10.50	34.302	7.81	34.126	11.48	34.274	8.41	34.238	18.45	34.153	14.19	34.290	16.08	34.424
50m	13.15	34.530	7.43	34.223	7.21	34.223	9.18	34.286	4.70	34.162	7.89	34.236	5.51	34.161	13.42	34.479	10.69	34.358	13.38	34.465
75m	11.02	34.430	5.54	34.159	5.89	34.176	7.83	34.227	3.64	34.129	6.02	34.166	4.53	34.140	11.70	34.435	7.70	34.216	12.54	34.490
100m	9.97	34.348	4.52	34.131	5.61	34.169	5.96	34.164	2.84	34.112	4.96	34.147	3.71	34.125			5.64	34.160	11.83	34.447
125m	8.09	34.250	3.66	34.114	5.46	34.166	4.58	34.140	2.30	34.093	4.42	34.137	2.91	34.112			4.10	34.124		
150m			3.18	34.112	5.24	34.163	3.69	34.118	1.86	34.085	3.85	34.122	2.35	34.097			3.69	34.119		
200m			2.02	34.092	4.57	34.159	2.19	34.094	1.53	34.080	2.50	34.103	1.60	34.082			2.18	34.105		
250m			1.39	34.079	4.15	34.163	1.55	34.080	1.22	34.077	1.79	34.082	1.13	34.076			1.07	34.076		
300m			0.99	34.076	2.63	34.122	1.20	34.075	0.96	34.075	1.36	34.079	0.89	34.073			0.75	34.071		
400m			0.67	34.074	1.11	34.078	0.82	34.072	0.69	34.073			0.60	34.071						
500m					0.70	34.074			0.49	34.072			0.43	34.070						
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-31

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199509		199509		199509		199509		199509		199509		199509	
Station No	CSR118		CSR119		CSR120		CHA01		CHA02		CHA03		CHA04		CHA05		CHA06		CHA07	
Latitude:N	44- 0.0		43-51.6		43-30.0		43-45.4		43-45.6		43-45.2		43-47.4		43-46.2		43-54.0		43-44.3	
Longitude:E	141-11.1		141- 1.3		140-41.2		141-12.6		141-10.3		141- 7.5		141- 5.2		141- 6.4		141-10.2		141- 7.2	
Date	1995/09/05		1995/09/05		1995/09/06		1995/09/18		1995/09/18		1995/09/19		1995/09/19		1995/09/19		1995/09/19		1995/09/20	
Time(JST)	17:43		18:59		04:35		13:03		14:25		06:07		07:34		09:09		12:06		09:06	
Weather	BC		BC		C		BC		BC		BC		BC		B		B		BC	
Air Temp.	18.7		18.4		17.3		19.6		18.6		14.7		18.6		18.9		22.5		19.4	
Bar							1014.0		1015.0		1019.5		1019.5		1020.0		1018.5		1017.5	
Wind Dir	NNW		NNW		E		N		N		CALM		NNE		N		CALM		S	
Wind Spd/F	S 7		S 6		S 5		S 8		S 5		S 0		S 1		S 1		S 0		S 6	
Transparency																				
Depth	251		141		63		143		195		245		280		264		245		241	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	21.5	33.75*	21.6	33.73*	21.7	33.59*	20.1	33.44*	19.9	33.86*	19.3	34.06*	19.6	34.07*	19.6	34.09*	20.5	33.14*	19.4	33.90*
10m	21.62	33.764	21.70	33.746	21.81	33.609	20.07	33.693	19.88	33.872	19.66	34.072	19.75	34.070	19.47	34.093	20.21	33.727	19.61	34.022
20m	21.63	33.765	21.72	33.747	21.81	33.610	19.79	33.944	19.46	34.005	19.43	34.098	19.65	34.083	19.46	34.095	19.86	34.015	19.53	34.094
30m	21.63	33.767	21.04	33.909	20.82	33.936	19.56	34.090	19.38	34.072	19.03	34.141	18.98	34.181	18.72	34.086	19.29	34.127	18.85	34.159
50m	16.26	34.478	14.74	34.515	15.39	34.540	15.03	34.558	14.51	34.491	14.88	34.535	14.72	34.542	14.83	34.553	14.46	34.542	13.98	34.533
75m	13.28	34.494	12.02	34.449	13.26	34.547	12.15	34.468	12.30	34.467	12.38	34.468	12.61	34.487	12.44	34.483	11.92	34.457	12.12	34.458
100m	11.64	34.444	11.19	34.404	11.26	34.427	10.73	34.383	10.68	34.374	10.91	34.389	11.31	34.429	11.25	34.427	10.76	34.385	10.80	34.380
125m	10.69	34.372	10.53	34.367	9.64	34.338	8.90	34.291	8.82	34.290	9.71	34.322	10.14	34.345	9.98	34.335	9.42	34.306	9.63	34.302
150m	9.79	34.331	9.52	34.319	7.52	34.221			5.24	34.154	5.99	34.174	7.81	34.245	5.88	34.172	6.51	34.186	6.30	34.185
200m	6.14	34.167	6.41	34.181	4.49	34.123					3.32	34.112	3.06	34.115	3.27	34.112	3.54	34.121	3.40	34.106
250m	3.59	34.116	3.82	34.113	2.21	34.096							1.73	34.087	1.58	34.085				
300m			2.66	34.098	1.31	34.075														
400m					0.79	34.071														
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-32

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199509		199509		199509		199509		19950C		199509		199509		199509		199509		199509	
Station No	CHA08		CHA09		CHA10		CHA11		9HA12		CHA13		CTK01		CTK06		CTK05		CTK02	
Latitude:N	43-46.9		43-45.8		43-46.0		43-43.6		43-32.6		43-36.0		43-35.8		43-32.8		43-36.2		43-35.2	
Longitude:E	141- 6.8		141- 8.0		141- 6.2		141- 5.9		140-53.7		140-54.4		140-59.5		140-42.3		140-51.3		140-52.8	
Date	1995/09/20		1995/09/20		1995/09/20		1995/09/21		1995/09/21		1995/09/21		1995/09/25		1995/09/25		1995/09/26		1995/09/26	
Time(JST)	10:25		12:21		13:58		06:23		09:24		11:31		12:12		14:05		11:43		14:19	
Weather	BC		B		B		BC		BC		B		BC		BC		BC		C	
Air Temp.	19.1		18.4		19.4		19.2		19.3		22.5		19.8		19.5		21.6		20.1	
Bar	1017.5		1016.5		1016.5		1017.5		1018.0		1018.0		1012.2		1012.4		1015.2		1014.8	
Wind Dir	S		SW		WSW		SW		S		WSW		N		NNW		SE		WSW	
Wind Spd/F	S 6		S 4		S 4		S 2		S 4		S 2		S 4		S 5		S 3		S 2	
Transparency																				
Depth	264		238		264		254		126		147		106		668		420		179	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.3	33.68*	20.3	33.58*	20.4	33.67*	20.0	33.51*	20.1	33.66*	20.1*	33.74*	19.9	33.77*	19.9	33.82*	20.3	34.10*	20.3	34.08*
10m	20.16	33.757	20.20	33.764	20.23	33.767	20.06	33.570	19.79	33.848	19.82	33.983	19.89	33.762	19.83	33.813	20.28	34.105	20.20	34.089
20m	19.97	33.827	20.18	33.774	20.13	33.787	20.24	33.747	19.58	34.048	19.67	34.019	19.72	34.072	19.77	33.820	20.25	34.103	20.04	34.095
30m	18.78	34.053	19.20	33.941	19.39	34.070	18.84	34.037	18.96	34.121	19.10	34.105	19.15	34.106	19.81	34.091	20.23	34.103	20.00	34.095
50m	15.26	34.500	14.98	34.468	14.84	34.522	14.71	34.436	14.68	34.515	14.99	34.487	15.32	34.398	14.72	34.451	15.58	34.513	14.99	34.539
75m	12.55	34.487	12.52	34.486	12.38	34.479	12.03	34.485	12.15	34.462	12.28	34.473	12.13	34.459	11.68	34.438	13.09	34.509	12.64	34.477
100m	11.20	34.422	11.26	34.420	11.24	34.425	10.41	34.368	10.87	34.386	11.44	34.432	9.82	34.340	9.16	34.308	11.35	34.424	11.10	34.402
125m	9.89	34.334	10.04	34.342	10.16	34.346	8.86	34.280			8.97	34.301			5.06	34.155	8.99	34.299	5.43	34.195
150m	7.60	34.221	6.22	34.191	8.28	34.251	5.20	34.156							3.90	34.111	3.48	34.135	2.76	34.111
200m	3.15	34.111	3.13	34.109	3.34	34.115	3.07	34.109							2.30	34.094	1.78	34.090		
250m	1.60	34.086			1.55	34.087									1.66	34.085	1.22	34.079		
300m															1.21	34.080	0.95	34.076		
400m															0.72	34.074	0.73	34.072		
500m															0.55	34.070				
600m															0.47	34.069				
700m																				
800m																				
900m																				
1000m																				

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Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199509		199509		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	CTK04		CTK03		J31		J32		J33		J34		J35		J36		J37		J38	
Latitude:N	43-35.9		43-35.0		43-20.0		43-29.9		43-29.9		43-30.0		43-30.0		43-29.9		43-30.0		43-30.0	
Longitude:E	140-51.4		140-51.2		141- 9.8		140-59.9		140-40.0		140-20.0		140- 0.1		139-40.1		139-20.0		139- 0.0	
Date	1995/09/27		1995/09/27		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02	
Time(JST)	08:47		10:52		10:13		11:25		12:48		14:26		16:08		18:37		20:19		21:59	
Weather	C		C		C		C		BC		BC		BC				BC			
Air Temp.	19.4		19.5		16.8		17.3		18.7		19.5		18.7		18.0		17.2		17.3	
Bar	1013.2		1011.2		1013.0		1012.2		1010.8		1010.1		1009.1		1009.0		1009.4		1008.9	
Wind Dir	SE		ESE		SE		SSE		CALM		SW		W		SW		WSW		W	
Wind Spd/F	S 10		S 10		S 5		S 2		S 0		S 5		S 3		S 5		S 6		S 9	
Transparency					7		14		20		19		17							
Depth	414		365		36		91		692		640		1247		2017		3200		3400	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	19.9	34.06*	19.6	33.97*	19.5	33.255	19.2	33.743	19.5	33.716	19.8	34.050	19.2	33.976	19.3	34.046	19.1	33.901	18.8	33.982
10m	19.88	34.058	19.56	33.988	19.55	33.367	19.21	33.753	19.68	34.045	19.64	34.041	19.11	33.982	19.26	34.078	19.11	33.914	18.81	33.981
20m	19.85	34.047	19.68	34.043	19.53	33.602	19.18	33.769	19.70	34.075	19.60	34.039	19.05	33.991	19.21	34.095	19.11	33.916	18.78	34.008
30m	19.60	33.985	19.55	34.038	19.40	33.766	19.08	33.932	19.47	34.053	19.61	34.047	15.91	34.538	19.17	34.124	19.01	33.973	18.73	34.006
50m	15.42	34.562	15.18	34.560			15.03	34.351	16.92	34.313	19.58	34.063	13.77	34.538	12.03	34.348	10.75	34.349	8.92	34.305
75m	12.50	34.500	12.39	34.474			9.64	34.333	12.34	34.486	13.04	34.513	11.87	34.460	8.84	34.301	7.72	34.222	4.99	34.101
100m	10.73	34.386	10.74	34.380					8.79	34.293	9.97	34.341	9.64	34.330	6.95	34.198	5.70	34.143	3.11	34.084
125m	8.76	34.290	9.03	34.287					5.27	34.142	5.54	34.163	7.43	34.218	4.89	34.120	3.63	34.079	2.15	34.079
150m	4.93	34.165	3.47	34.133					4.02	34.123	3.07	34.104	5.08	34.123	3.36	34.081	2.76	34.077	1.76	34.074
200m	1.62	34.088	1.81	34.088					1.96	34.089	1.94	34.089	2.56	34.085	2.06	34.082	1.75	34.081	1.24	34.076
250m	1.20	34.077	1.23	34.078					1.33	34.077	1.52	34.079	1.64	34.081	1.48	34.080	1.35	34.078	0.96	34.073
300m	0.94	34.075	0.98	34.075					0.99	34.076	1.17	34.076	1.25	34.079	1.10	34.076	1.16	34.082	0.87	34.075
400m	0.73	34.071							0.77	34.073	0.68	34.073	0.80	34.074	0.71	34.072	0.80	34.076	0.59	34.073
500m									0.65	34.071	0.54	34.070	0.53	34.071	0.51	34.070	0.59	34.074	0.47	34.072
600m													0.42	34.070					0.37	34.069
700m																				
800m																				
900m																				
1000m																				

Table 3-34

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	J39		J41		J42		J43		J44		J45		J46		J47		J58		J57	
Latitude:N	43-30.0		42-30.0		42-29.9		42-30.0		42-30.1		42-30.0		42-30.1		42-29.9		41-29.9		41-30.0	
Longitude:E	138-30.1		139-40.0		139-20.1		139- 0.0		138-40.0		138-20.1		138- 0.1		137-30.0		137-30.1		137-59.9	
Date	1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/04		1995/10/04	
Time(JST)	00:53		08:39		11:13		13:00		14:43		16:27		18:06		20:58		02:55		05:21	
Weather	C		C		C		C		C		C		R		C		C		C	
Air Temp.	16.5		16.8		15.1		14.6		14.6		14.3		13.8		13.1		14.8		16.1	
Bar	1008.2		1011.4		1011.9		1012.0		1012.0		1012.0		1012.0		1012.4		1010.5		1010.5	
Wind Dir	W		NNW		NNW		WNW		WNW		NW		NW		NE		SE		SE	
Wind Spd/F	S 8		S 8		S 6		S 4		S 4		S 2		S 1		S 2		S 2		S 2	
Transparency			16		13		16		18		18									
Depth	3413		1800		2191		3613		3673		3626		3673		3680		3669		3691	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.7	33.921	18.9	34.084	18.5	34.019	19.1	34.013	19.1	34.047	18.2	33.751	17.6	33.875	17.4	33.898	17.2	33.752	18.0	33.696
10m	17.72	33.920	18.91	34.083	18.52	34.017	19.10	34.008	19.14	34.049	18.28	33.750	17.84	33.877	17.63	33.893	17.24	33.753	17.94	33.696
20m	16.62	33.977	18.81	34.084	17.39	34.159	19.12	34.065	19.15	34.047	18.28	33.750	17.82	33.888	17.54	33.905	17.24	33.753	17.46	33.749
30m	16.35	33.998	18.36	34.123	15.60	34.309	19.23	34.115	19.13	34.047	10.95	33.988	8.51	34.280	16.27	33.930	8.63	34.077	6.64	34.237
50m	8.72	34.300	12.39	34.470	7.97	34.281	14.12	34.537	5.60	34.084	4.04	34.072	5.94	34.153	6.22	34.091	4.56	34.167	4.34	34.184
75m	5.91	34.149	9.52	34.321	5.02	34.163	11.27	34.422	3.76	34.093	2.45	34.039	3.86	34.099	3.25	34.081	3.34	34.134	3.46	34.171
100m	4.30	34.114	6.03	34.171	3.81	34.109	9.49	34.329	2.55	34.065	1.94	34.071	2.82	34.087	2.46	34.079	2.99	34.148	3.13	34.160
125m	3.38	34.100	4.28	34.118	2.98	34.093	7.28	34.200	2.03	34.061	1.67	34.075	2.15	34.082	2.00	34.080	2.43	34.123	2.24	34.121
150m	2.71	34.093	3.38	34.081	2.28	34.088	4.82	34.127	1.67	34.064	1.37	34.080	1.81	34.079	1.70	34.078	1.98	34.103	1.99	34.116
200m	1.90	34.086	1.80	34.078	1.41	34.076	2.35	34.077	1.33	34.082	1.16	34.083	1.40	34.077	1.24	34.073	1.54	34.096	1.69	34.111
250m	1.38	34.077	1.37	34.077	1.07	34.073	1.52	34.074	0.95	34.071	0.96	34.079	1.22	34.083	0.95	34.072	1.30	34.087	1.28	34.084
300m	1.09	34.076	1.18	34.084	0.88	34.075	1.06	34.072	0.77	34.071	0.81	34.077	0.99	34.078	0.79	34.070	1.05	34.081	1.09	34.081
400m	0.76	34.074	0.67	34.072	0.60	34.070	0.69	34.069	0.58	34.074	0.63	34.075	0.71	34.075	0.58	34.071	0.74	34.076	0.80	34.077
500m	0.55	34.071	0.49	34.069	0.43	34.069	0.49	34.069	0.46	34.072	0.50	34.073	0.53	34.073	0.46	34.070	0.56	34.074	0.58	34.074
600m			0.40	34.068									0.43	34.072						
700m																				
800m																				
900m																				
1000m																				

Table 3-35

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	J56		J55		J54		J53		J52		J63		J62		J61		J51		W01	
Latitude:N	41-29.8		41-30.0		41-30.0		41-30.0		41-30.0		41- 0.4		41-10.0		41-19.9		41-30.0		43-25.0	
Longitude:E	138-19.9		138-39.9		138-59.9		139-14.8		139-29.8		139-59.6		140- 0.2		140- 0.0		139-50.0		140-59.9	
Date	1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/12	
Time(JST)	07:02		08:42		10:22		11:43		13:07		16:54		18:01		18:58		20:20		08:22	
Weather	C		C		C		C		C		BC		BC		C				B	
Air Temp.	16.5		17.5		18.3		18.7		19.4		19.3		18.8		18.4		18.1		14.1	
Bar	1010.2		1010.6		1010.0		1009.1		1008.5		1008.3		1008.7		1008.7		1008.6		1024.0	
Wind Dir	S		SW		SSW		S		S		WNW		WNW		WNW		SW		SE	
Wind Spd/F	S 3		S 4		S 3		S 2		S 2		S 3		S 5		S 4		S 3		S 4	
Transparency	20		23		20		22		20											
Depth	3691		3200		1334		1133		1668		508		102		222		1345		72	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.4	33.668	18.4	33.609	19.6	34.003	19.6	33.945	19.3	33.906	22.0	33.512	20.8	33.914	20.8	33.854	20.0	33.896	17.6	33.86*
10m	18.37	33.675	18.34	33.612	19.57	34.005	19.56	33.945	19.22	33.912	21.86	33.864	20.73	33.910	20.65	33.874	19.57	33.887	17.80	33.868
20m	18.36	33.680	18.34	33.612	19.51	33.991	19.54	33.941	18.73	33.816	21.57	33.903	20.47	34.070	20.41	33.937	19.25	33.847	17.85	33.911
30m	8.36	34.123	12.21	33.995	13.08	34.323	15.96	34.134	14.80	34.224	21.23	33.925	18.13	34.458	20.30	33.976	18.13	33.899	17.85	33.982
50m	4.51	34.170	7.13	34.217	8.71	34.309	9.71	34.373	9.97	34.353	20.74	34.156	15.90	34.542	14.97	34.482	11.73	34.428	15.38	34.370
75m	3.07	34.119	4.64	34.103	5.67	34.139	7.05	34.214	6.91	34.202	15.98	34.573	12.80	34.506	9.95	34.356	9.89	34.359		
100m	2.22	34.095	3.32	34.086	3.29	34.068	4.69	34.088	4.93	34.103	13.46	34.536			7.51	34.231	6.38	34.187		
125m	1.76	34.089	2.46	34.072	2.40	34.062	3.27	34.082	3.56	34.083	10.61	34.380			6.78	34.199	4.88	34.127		
150m	1.49	34.085	1.74	34.062	1.85	34.067	2.58	34.080	2.61	34.069	8.87	34.290			6.23	34.178	4.21	34.102		
200m	1.28	34.086	1.36	34.075	1.36	34.081	1.63	34.077	1.61	34.072	6.16	34.167			5.70	34.156	2.70	34.079		
250m	1.08	34.080	1.21	34.084	0.96	34.072	1.09	34.075	1.13	34.072	3.21	34.083					1.77	34.076		
300m	0.94	34.080	1.02	34.079	0.79	34.071	0.81	34.073	0.86	34.070	1.45	34.076					1.10	34.075		
400m	0.66	34.076	0.70	34.076	0.50	34.071	0.51	34.070	0.57	34.068	0.75	34.070					0.75	34.070		
500m	0.49	34.073	0.50	34.071	0.41	34.068	0.38	34.068	0.40	34.067							0.56	34.068		
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-36

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	W02		W03		W04		W05		W06		W07		W08		W09		W10		W11	
Latitude:N	43-25.0		43-24.9		43-25.0		43-25.0		43-39.9		44- 0.0		43-59.9		43-40.0		43-40.0		43-59.9	
Longitude:E	140-49.9		140-40.0		140-19.9		139-59.9		140-59.9		140-59.9		140-30.0		140-29.8		140- 0.0		139-59.9	
Date	1995/10/12		1995/10/12		1995/10/12		1995/10/12		1995/10/12		1995/10/12		1995/10/12		1995/10/13		1995/10/13		1995/10/13	
Time(JST)	09:09		10:05		11:44		13:15		18:48		20:50		23:16		01:33		03:53		05:57	
Weather	B		B		B		B		B		B		B		BC		BC		BC	
Air Temp.	18.2		19.9		17.6		17.4		16.1		16.5		16.1		16.2		16.1		16.4	
Bar	1023.9		1023.5		1022.1		1021.5		1020.5		1019.8		1018.5		1018.7		1018.0		1016.5	
Wind Dir	SSE		SSE		SSW		S		WSW		SSW		SSW		SSW		SW		SW	
Wind Spd/F	S 5		S 3		S 7		S 6		S 1		S 3		S 7		S 8		S 7		S 8	
Transparency																				
Depth	353		477		177		636		305		400		733		999		999		474	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.0	33.76*	17.6	33.86*	17.9	34.01*	17.6	34.09*	17.8	34.16*	17.2	34.12*	17.7	34.07*	17.9	34.11*	17.5	34.18*	17.4	34.05*
10m	18.11	33.850	17.41	33.863	17.80	34.018	17.47	34.161	17.88	34.099	17.18	34.122	17.74	34.067	18.15	34.113	17.57	34.182	17.47	34.059
20m	18.04	33.845	17.39	33.865	17.77	34.044	17.44	34.158	17.74	34.114	17.16	34.123	17.70	34.058	18.12	34.112	17.57	34.183	17.47	34.059
30m	17.98	33.844	17.37	33.864	17.76	34.065	17.44	34.174	17.60	34.120	16.88	34.138	17.23	34.128	18.11	34.111	17.57	34.184	17.48	34.059
50m	15.50	34.413	12.53	34.404	15.59	34.442	15.86	34.494	14.80	34.501	16.01	34.173	15.46	34.161	18.09	34.108	14.61	34.446	14.55	34.433
75m	11.64	34.420	9.53	34.324	11.35	34.414	12.73	34.464	11.89	34.446	9.65	34.235	13.42	34.514	13.08	34.511	11.39	34.435	11.03	34.400
100m	8.83	34.286	7.36	34.224	7.75	34.245	10.70	34.384	10.06	34.339	6.76	34.199	10.38	34.368	11.27	34.414	8.50	34.271	8.15	34.260
125m	6.27	34.185	5.48	34.152	4.99	34.144	7.62	34.216	8.01	34.242	4.79	34.142	7.35	34.181	9.23	34.310	5.73	34.153	5.80	34.155
150m	5.10	34.144	4.22	34.120	4.17	34.117	5.48	34.141	6.37	34.163	3.60	34.117	5.30	34.136	7.37	34.211	4.02	34.096	4.06	34.104
200m	3.25	34.108	2.42	34.091			2.60	34.083	4.30	34.112	2.39	34.093	2.88	34.104	4.01	34.123	2.47	34.087	2.46	34.102
250m	2.01	34.089	1.64	34.082			1.76	34.082	1.94	34.091	1.44	34.081	1.85	34.086	2.06	34.096	1.67	34.083	1.81	34.086
300m	1.36	34.080	1.19	34.078			1.34	34.079			0.98	34.074	1.29	34.078	1.23	34.079	1.27	34.078	1.31	34.079
400m			0.72	34.073			0.90	34.074					0.78	34.073	0.72	34.073	0.79	34.073	0.84	34.074
500m							0.57	34.072					0.55	34.070	0.50	34.071	0.57	34.071		
600m							0.38	34.069					0.45	34.069	0.44	34.069	0.42	34.069		
700m																				
800m																				
900m																				
1000m																				

Table 3-37

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	W12		W13		W14		W15		W16		W17		W18		W19		W20		W21	
Latitude:N	44- 0.0		44- 0.0		43-40.0		43-40.1		43-20.0		43-21.5		43- 0.0		42-40.0		42-40.0		42-59.9	
Longitude:E	139-30.0		139- 0.0		138-59.9		139-29.8		139-29.8		139- 2.1		138-59.8		138-59.9		139-29.8		139-29.8	
Date	1995/10/13		1995/10/13		1995/10/13		1995/10/13		1995/10/13		1995/10/13		1995/10/13		1995/10/14		1995/10/14		1995/10/14	
Time(JST)	08:27		10:57		13:07		15:23		17:37		21:26		23:58		02:21		04:37		06:43	
Weather	C		BC		BC		BC		C		C		C		C		C		C	
Air Temp.	16.8		17.1		15.8		18.7		16.8		16.9		16.2		15.4		16.3		15.9	
Bar	1016.3		1015.8		1015.0		1014.5		1016.0		1015.2		1014.5		1015.3		1015.0		1015.1	
Wind Dir	SW		WSW		SW		WSW		SW		SW		SW		SW		SSW		SSW	
Wind Spd/F	S 9		S 8		S 7		S 8		S 8		S 8		S 8		S 6		S 7		S 9	
Transparency																				
Depth	1347		3300		3413		2869		3000		2878		3543		3695		3200		3300	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.0	34.05*	14.8	34.03*	15.2	33.97*	17.1	34.03*	17.7	34.09*	17.8	34.08*	17.7	34.11*	17.4	33.98*	17.6	34.15*	17.5	34.19*
10m	16.94	34.058	14.77	33.939	15.01	33.968	17.07	34.031	17.68	34.100	17.75	34.080	17.73	34.110	17.57	34.005	17.57	34.154	17.53	34.194
20m	16.89	34.055	14.70	33.947	14.83	33.954	17.07	34.031	17.68	34.100	17.81	34.107	17.73	34.111	17.30	34.169	17.58	34.154	17.52	34.196
30m	15.82	34.063	14.37	33.961	14.65	33.985	16.47	34.011	17.68	34.100	17.88	34.182	17.73	34.110	17.19	34.177	17.50	34.155	17.50	34.211
50m	11.44	34.388	9.59	34.336	9.03	34.292	7.69	34.261	16.40	34.409	14.31	34.550	14.81	34.538	13.41	34.509	14.20	34.457	14.85	34.562
75m	8.28	34.266	6.19	34.176	6.04	34.158	5.27	34.137	13.23	34.516	11.60	34.446	12.41	34.483	9.37	34.336	11.30	34.431	13.22	34.525
100m	5.99	34.154	3.92	34.078	3.79	34.088	3.48	34.089	11.38	34.431	9.48	34.319	10.31	34.373	6.59	34.168	9.34	34.314	11.81	34.446
125m	4.54	34.139	3.00	34.092	2.72	34.078	2.65	34.087	9.94	34.347	7.33	34.218	8.41	34.269	4.84	34.119	7.04	34.207	10.49	34.370
150m	3.58	34.121	2.36	34.091	1.96	34.081	2.16	34.087	8.09	34.253	4.04	34.067	6.01	34.154	3.19	34.086	4.72	34.122	9.09	34.298
200m	2.32	34.096	1.57	34.079	1.43	34.077	1.51	34.079	3.19	34.086	2.20	34.083	2.96	34.089	1.50	34.065	2.23	34.079	5.23	34.131
250m	1.59	34.082	1.24	34.080	1.13	34.079	1.27	34.080	2.01	34.076	1.50	34.077	1.94	34.085	1.28	34.078	1.41	34.076	2.58	34.081
300m	1.15	34.077	0.98	34.076	0.89	34.076	1.04	34.077	1.39	34.075	1.14	34.074	1.26	34.077	1.15	34.080	1.09	34.075	1.69	34.079
400m	0.78	34.073	0.68	34.074	0.65	34.074	0.68	34.073	0.94	34.076	0.78	34.075	0.89	34.077	0.83	34.076	0.70	34.071	1.05	34.077
500m			0.52	34.073	0.48	34.071	0.51	34.071	0.70	34.074			0.61	34.073	0.59	34.074	0.50	34.070	0.73	34.072
600m			0.41	34.071	0.40	34.071	0.40	34.069	0.51	34.072			0.47	34.072	0.46	34.072	0.40	34.069	0.52	34.070
700m																				
800m																				
900m																				
1000m																				

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	WF		W23		W24		W22		W25		HA01		HA02		HA03		HA04		HA05	
Latitude:N	42-55.0		43- 0.0		42-59.9		43- 0.0		43-10.0		43-44.1		43-46.0		43-44.0		43-44.5		43-47.0	
Longitude:E	139-59.9		140-19.8		140-27.0		140- 0.1		140- 0.2		141-15.5		141-10.0		141-11.0		141- 8.5		141-11.0	
Date	1995/10/14		1995/10/14		1995/10/14		1995/10/15		1995/10/15		1995/10/23		1995/10/23		1995/10/23		1995/10/24		1995/10/24	
Time(JST)	09:07		10:55		11:43		08:59		12:38		12:00		13:20		14:29		05:27		07:58	
Weather	BC		BC		BC		C		C		BC		BC		BC		C		C	
Air Temp.	17.6		19.2		18.1		17.3		19.1		19.1		17.2		16.1		14.1		14.9	
Bar	1015.5		1015.0		1014.4		1017.5		1017.2		1018.5		1018.5		1019.0		1017.5		1017.0	
Wind Dir	SW		S		N		SE		E						NNE		SSE		SSE	
Wind Spd/F	S 9		S 3		S 3		S 3		S 2						S 1		S 8		S 9	
Transparency																				
Depth	1000		478		76		1269		737		96		201		154		219		195	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.6	34.13*	17.9	33.99*	17.6	33.71*	17.7	34.01*	17.9	34.18*	16.8	33.17*	16.6	33.92*	17.4	34.10*	16.5	33.61*	16.6	34.01*
10m	17.53	34.130	17.77	33.985	17.39	33.766	17.62	34.006	17.73	34.177	17.35	34.041	16.52	34.146	16.51	34.145	16.82	34.130	16.67	34.071
20m	17.53	34.129	17.77	33.991	17.66	33.932	17.53	33.999	17.71	34.176	16.82	34.124	16.38	34.142	16.36	34.150	16.54	34.146	16.56	34.142
30m	17.53	34.130	17.77	33.993	17.59	34.035	17.52	34.007	17.60	34.188	16.53	34.143	16.33	34.144	16.33	34.147	16.46	34.167	16.49	34.151
50m	15.19	34.519	14.42	34.478	14.28	34.430	16.71	34.175	17.45	34.211	13.94	34.512	13.58	34.491	13.70	34.454	14.05	34.455	13.89	34.495
75m	12.38	34.480	11.27	34.411			13.47	34.453	13.54	34.529	10.67	34.376	10.29	34.360	10.31	34.353	10.89	34.385	10.70	34.371
100m	10.54	34.380	9.40	34.320			11.03	34.387	11.70	34.438			7.45	34.205	7.49	34.219	8.53	34.264	8.13	34.244
125m	8.64	34.282	7.30	34.224			8.13	34.265	9.28	34.317			5.05	34.151	5.33	34.152	6.35	34.167	5.88	34.162
150m	6.61	34.188	4.85	34.135			4.79	34.125	7.28	34.220			4.19	34.126			4.61	34.126	4.26	34.123
200m	3.23	34.102	3.22	34.093			2.57	34.097	3.71	34.107							2.45	34.098		
250m	1.79	34.088	2.07	34.086			1.67	34.084	2.13	34.092										
300m	1.24	34.076	1.37	34.079			1.22	34.078	1.43	34.078										
400m	0.72	34.071	0.80	34.072			0.76	34.072	0.87	34.074										
500m	0.49	34.070					0.50	34.070	0.63	34.070										
600m	0.37	34.069					0.38	34.068	0.48	34.069										
700m																				
800m																				
900m																				
1000m																				

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Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199510		199511		199511		199511		199511		199512		199512		199512		199512		199512	
Station No	HA07		H101		H102		H103		H105		J31		J32		J33		J34		J35	
Latitude:N	43-45.9		43-44.3		43-46.1		43-24.0		43-32.7		43-20.0		43-30.0		43-30.0		43-30.0		43-30.0	
Longitude:E	141-14.3		141-10.3		141-12.3		141- 7.0		141- 8.2		141-10.0		141- 0.0		140-40.0		140-20.0		140- 0.0	
Date	1995/10/24		1995/11/06		1995/11/06		1995/11/07		1995/11/07		1995/12/04		1995/12/04		1995/12/04		1995/12/04		1995/12/04	
Time(JST)	09:31		11:58		13:20		08:17		10:15		10:19		11:38		13:12		14:52		16:33	
Weather	C		BC		C		BC		C		C		C		C		C		C	
Air Temp.	15.6		14.6		13.5		11.9		13.9		7.3		8.0		8.0		8.2		8.3	
Bar	1016.0		1012.0		1011.0		1009.0		1008.0		1008.0		1007.5				1007.5		1007.6	
Wind Dir	SSE		SSE		S		SE		SE		N		NNE		NNE		NE		NE	
Wind Spd/F	S 9		S 10		S 7		S 7		S 6		F 4		F 3		F 3		F 3		F 4	
Transparency													11		18		20			
Depth	130		183		150		50		69						690		633		1243	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.9	33.74*	14.5	34.20*	14.4	34.22*	14.5	34.13*	14.7	34.14*	10.1	33.544	11.3	34.031	11.4	34.072	11.9	34.086	10.1	34.155
10m	16.98	33.802	14.53	34.202	14.52	34.218	14.59	34.126	14.69	34.146	10.22	33.546	11.38	34.029	11.45	34.071	11.97	34.083	10.17	34.151
20m	17.00	34.113	14.53	34.202	14.53	34.218	14.59	34.126	14.67	34.163	10.34	33.601	11.38	34.030	11.44	34.070	11.97	34.084	9.55	34.169
30m	16.61	34.158	14.50	34.203	14.53	34.218	14.59	34.126	14.62	34.179	11.18	33.924	11.37	34.042	11.45	34.070	11.98	34.085	9.08	34.208
50m	14.24	34.456	14.48	34.206	14.53	34.218			14.43	34.192			11.44	34.123	11.45	34.072	10.91	34.133	8.88	34.219
75m	10.98	34.391	12.55	34.464	12.68	34.467							11.01	34.198	10.60	34.287	10.01	34.124	8.85	34.221
100m	7.93	34.239	9.61	34.334	10.19	34.358									9.49	34.249	8.58	34.253	8.58	34.225
125m			7.67	34.226	8.00	34.242									7.08	34.201	5.67	34.153	6.41	34.172
150m			6.04	34.172											3.60	34.101	3.92	34.107	4.29	34.117
200m															2.35	34.084	2.24	34.081	2.52	34.085
250m															1.63	34.081	1.49	34.078	1.68	34.076
300m															1.15	34.075	1.13	34.075	1.25	34.074
400m															0.65	34.071	0.80	34.072	0.80	34.072
500m															0.53	34.069	0.58	34.070	0.58	34.070
600m																			0.41	34.068
700m																				
800m																				
900m																				
1000m																				

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Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	J36		J37		J38		J39		J47		J46		J45		J44		J43		J42	
Latitude:N	43-30.0		43-30.0		43-30.0		43-30.0		42-30.0		42-30.0		42-30.0		42-30.0		42-30.0		42-30.0	
Longitude:E	139-40.0		139-20.0		139- 0.0		138-30.0		137-30.0		138- 0.0		138-20.0		138-40.0		139- 0.0		139-20.0	
Date	1995/12/04		1995/12/04		1995/12/04		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05	
Time(JST)	19:15		21:09		22:45		01:09		07:59		10:35		12:30		14:19		16:00		18:08	
Weather	C		R		C		C		R		C		C		C		C		C	
Air Temp.	7.8		7.1		7.0		7.1		5.6		6.9		7.6		6.4		7.1		6.6	
Bar	1008.0		1008.0		1008.0		1007.0		1005.0		1003.5		1002.0		1007.0		1000.0		1000.7	
Wind Dir	NE		ENE		ENE		ENE		ENE		E		ENE		ESE		ENE		E	
Wind Spd/F	F 5		S 10		F 5		S 8		F 5		S 11		F 5		S 5		F 3		S 8	
Transparency									11		12		15		14		12			
Depth	2000										3700		3639		3678		3639		3286	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.1	34.081	11.6	34.051	11.0	34.061	9.7	34.103	7.2	34.051	8.9	34.040	8.3	34.030	10.0	34.100	11.5	34.076	11.5	34.075
10m	12.26	34.082	11.70	34.052	11.12	34.064	9.69	34.100	7.35	34.092	8.99	34.039	8.40	34.028	10.15	34.090	11.62	34.072	11.62	34.074
20m	12.25	34.081	11.70	34.051	11.12	34.063	9.69	34.101	7.35	34.090	8.99	34.039	8.28	34.025	8.31	34.035	11.62	34.073	11.07	34.099
30m	12.26	34.083	11.17	34.049	9.56	34.042	9.69	34.102	7.35	34.092	9.00	34.041	7.83	34.033	8.12	34.025	11.54	34.082	10.97	34.094
50m	12.27	34.082	8.42	34.005	8.33	34.235	8.31	34.162	4.86	34.075	6.93	33.924	7.60	34.018	3.79	34.125	8.60	34.080	10.89	34.093
75m	11.28	34.105	6.47	34.107	6.48	34.155	5.14	34.128	3.07	34.086	2.36	34.081	2.03	34.086	2.36	34.095	6.82	34.089	8.51	34.141
100m	9.02	34.031	4.64	34.095	4.59	34.104	3.65	34.101	2.32	34.088	1.81	34.068	1.58	34.081	1.87	34.085	3.16	34.072	5.86	34.140
125m	8.34	34.143	3.70	34.087	3.36	34.086	2.64	34.082	1.90	34.082	1.61	34.069	1.38	34.078	1.59	34.085	2.41	34.065	3.14	34.099
150m	5.59	34.149	2.85	34.075	2.81	34.089	2.22	34.086	1.54	34.082	1.33	34.073	1.30	34.082	1.37	34.081	1.86	34.072	1.93	34.074
200m	3.23	34.083	2.10	34.075	1.78	34.079	1.47	34.077	1.28	34.084	1.20	34.083	1.13	34.079	1.10	34.079	1.33	34.074	1.34	34.072
250m	2.27	34.082	1.39	34.076	1.30	34.077	1.24	34.079	1.09	34.081	1.01	34.078	0.87	34.073	0.96	34.080	1.19	34.079	1.09	34.071
300m	1.47	34.075	1.07	34.076	1.09	34.078	0.98	34.076	0.92	34.078	0.84	34.075	0.78	34.076	0.80	34.080	1.00	34.078	0.88	34.072
400m	0.86	34.072	0.72	34.072	0.74	34.070	0.70	34.073	0.68	34.076	0.62	34.074	0.57	34.074	0.59	34.077	0.73	34.075	0.51	34.069
500m	0.55	34.070	0.53	34.069	0.52	34.070	0.50	34.071	0.52	34.073	0.48	34.072	0.45	34.072	0.45	34.075	0.56	34.072	0.42	34.068
600m																				
700m																				
800m																				
900m																				
1000m																				

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Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199602		199602		199602		199602		199602	
Station No	J41		CW01		CW02		CW03		CW04		J51		J52		J53		J54		J55	
Latitude:N	42-30.0		42-59.9		43- 0.1		42- 1.6		42- 0.0		41-30.0		41-30.2		41-30.2		41-30.1		41-30.0	
Longitude:E	139-40.0		140- 0.3		140-20.1		139-57.8		139-40.1		139-50.2		139-30.1		139-15.2		139- 0.2		138-40.4	
Date	1995/12/05		1995/12/17		1995/12/18		1995/12/18		1995/12/18		1996/02/03		1996/02/04		1996/02/04		1996/02/04		1996/02/04	
Time(JST)	19:57		22:25		00:06		09:23		10:55		22:29		00:23		01:52		03:22		05:18	
Weather	C		S		S		C		0.4		S		S		S		C		C	
Air Temp.	6.0		-0.2		-0.2		0.4		0.4		-2.3		-2.0		-2.0		-1.3		-0.6	
Bar	1001.0		1014.5		1014.0		1018.0		1019.0		1013.3		1014.0		1014.2		1014.0		1014.5	
Wind Dir	SE		NW		WNW		WNW		WNW		WNW		WNW		W		W		WNW	
Wind Spd/F	F 6		S 8		S 11		S 11		S 11		S 11		S 9		S 11		S 11		S 9	
Transparency																				
Depth	1973		1100		460		428		907		1352		1660		1133		1339		3013	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.7	34.086	9.3	34.12*	9.1	34.16*	9.0	34.10*	9.0	34.04*	6.4	34.130	6.1	34.146	6.2	34.128	7.3	34.080	6.8	34.108
10m	11.85	34.081	9.61	34.123	9.45	34.163	9.45	34.100	9.38	34.045	6.89	34.130	6.15	34.144	6.26	34.128	7.53	34.078	6.79	34.108
20m	11.75	34.090	9.60	34.123	9.45	34.163	9.45	34.100	9.39	34.045	6.70	34.134	5.93	34.140	6.25	34.128	7.53	34.078	6.81	34.108
30m	11.69	34.105	9.60	34.123	9.45	34.163	9.45	34.101	9.39	34.045	6.54	34.133	5.73	34.139	6.18	34.128	7.53	34.079	6.81	34.107
50m	10.41	34.195	9.59	34.123	9.45	34.164	9.39	34.107	9.39	34.046	6.26	34.134	5.44	34.132	5.27	34.125	7.53	34.079	6.80	34.108
75m	8.62	34.143	9.45	34.147	9.44	34.162	9.36	34.109	7.95	34.119	6.01	34.134	3.71	34.094	4.36	34.099	7.21	34.106	6.71	34.109
100m	8.19	34.190	7.85	34.214	8.84	34.179	8.14	34.182	6.86	34.196	5.74	34.129	3.19	34.082	3.77	34.102	5.59	34.141	3.90	34.091
125m	6.76	34.179	6.76	34.181	7.10	34.174	7.10	34.176	5.47	34.142	5.17	34.122	2.52	34.079	3.09	34.085	4.40	34.094	3.29	34.073
150m	5.62	34.149	4.52	34.125	5.96	34.151	6.43	34.154	3.55	34.088	4.69	34.115	2.00	34.074	2.17	34.076	3.16	34.078	2.18	34.073
200m	3.44	34.093	2.55	34.085	3.47	34.098	4.76	34.122	1.95	34.066	3.69	34.104	1.21	34.074	1.47	34.074	1.84	34.073	1.41	34.074
250m	1.87	34.072	1.50	34.077	2.18	34.078	2.48	34.079	1.43	34.069	1.64	34.079	0.95	34.072	1.13	34.077	1.34	34.077	1.08	34.074
300m	1.17	34.071	1.09	34.075	1.52	34.077	1.63	34.072	1.09	34.070	1.16	34.075	0.74	34.071	0.95	34.076	1.09	34.079	0.85	34.072
400m	0.74	34.070	0.60	34.070	0.87	34.072	0.87	34.069	0.67	34.069	0.75	34.073	0.56	34.069	0.61	34.072	0.71	34.074	0.64	34.073
500m	0.53	34.068	0.47	34.069					0.48	34.068	0.61	34.072	0.43	34.069	0.43	34.070	0.48	34.072	0.49	34.074
600m			0.40	34.068					0.40	34.067										
700m																				
800m																				
900m																				
1000m																				

Table 3-42

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199602		199602		199602		199602		199602		199602		199602		199602		199602		199602	
Station No	J56		J57		J58		J39		J38		J37		J36		J35		J34		J33	
Latitude:N	41-30.1		41-29.9		41-30.1		43-30.0		43-30.1		43-30.1		43-30.0		43-30.1		43-30.1		43-30.0	
Longitude:E	138-20.2		138- 1.2		137-30.0		138-30.1		138-59.9		139-19.9		139-40.0		140- 0.1		140-19.9		140-40.0	
Date	1996/02/04		1996/02/04		1996/02/04		1996/02/04		1996/02/05		1996/02/05		1996/02/05		1996/02/05		1996/02/05		1996/02/05	
Time(JST)	07:23		09:10		11:35		23:06		01:19		02:57		04:34		06:08		07:40		09:17	
Weather	BC		BC		BC								B		BC		BC		BC	
Air Temp.	-0.7		1.0		1.4		-3.0		-1.7		-1.7		-1.7		-1.8		-1.9		-0.7	
Bar	1016.0		1016.0		1015.6		1015.0		1014.5		1014.5		1014.8		1014.7		1014.6		1014.1	
Wind Dir	WNW		W		SW		NW		WNW		NW		NW		NNW		NW		CALM	
Wind Spd/F	S 8		S 5		S 7		S 6		S 6		S 6		S 5		S 4		S 3		S 0	
Transparency	16		23		24												21		25	
Depth	3600		3700		3670		3400		3449		3191		2034		1247		642		690	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	6.2	34.129	3.6	34.106	2.4	34.116	4.1	34.106	4.7	34.100	5.0	34.088	4.8	34.105	6.8	34.065	6.8	34.040	6.9	34.042
10m	6.38	34.115	3.48	34.109	2.27	34.116	4.27	34.104	4.78	34.103	5.01	34.091	4.98	34.108	6.90	34.064	7.00	34.043	6.90	34.044
20m	6.39	34.115	3.48	34.109	2.26	34.117	4.26	34.105	4.78	34.103	5.02	34.090	4.98	34.109	6.89	34.064	6.99	34.043	6.90	34.044
30m	6.37	34.115	3.48	34.109	2.27	34.117	4.26	34.105	4.78	34.104	5.01	34.090	5.00	34.111	6.86	34.066	6.94	34.044	6.90	34.044
50m	5.64	34.134	3.48	34.109	2.26	34.116	4.04	34.101	4.71	34.109	4.93	34.091	5.00	34.115	5.43	34.095	6.77	34.047	6.90	34.045
75m	4.69	34.127	3.48	34.109	2.26	34.116	3.53	34.122	4.52	34.119	4.88	34.104	4.89	34.132	5.35	34.085	6.76	34.047	6.90	34.045
100m	4.14	34.110	3.48	34.109	2.23	34.116	3.47	34.120	4.47	34.119	4.32	34.084	4.74	34.143	5.19	34.084	6.75	34.050	6.91	34.044
125m	3.58	34.106	3.19	34.107	2.21	34.115	3.28	34.113	2.52	34.082	2.86	34.077	2.98	34.090	4.96	34.085	6.69	34.056	6.91	34.044
150m	2.12	34.071	2.69	34.102	2.15	34.113	2.11	34.083	1.80	34.079	2.14	34.073	2.12	34.071	3.90	34.082	6.62	34.058	6.92	34.045
200m	1.61	34.082	1.53	34.089	1.40	34.087	1.39	34.078	1.34	34.075	1.61	34.073	1.32	34.073	1.92	34.075	3.67	34.094	6.39	34.085
250m	1.14	34.078	1.32	34.085	1.24	34.084	1.06	34.076	1.01	34.075	1.25	34.073	1.08	34.074	1.38	34.072	1.96	34.077	2.73	34.089
300m	0.99	34.079	1.00	34.078	1.10	34.082	0.88	34.075	0.80	34.073	0.94	34.072	0.88	34.072	1.12	34.076	1.45	34.074	1.65	34.080
400m	0.72	34.077	0.72	34.077	0.84	34.079	0.63	34.073	0.59	34.072	0.65	34.071	0.62	34.071	0.70	34.071	0.85	34.073	0.88	34.074
500m	0.58	34.076	0.56	34.076	0.61	34.077	0.47	34.072	0.45	34.072	0.48	34.070	0.48	34.070	0.55	34.070	0.62	34.071	0.63	34.072
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 3-43

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199602		199602		199602		199602		199602		199602		199602		199603		199603		199603	
Station No	J32		J31		CW01		CW02		CW03		CW04		CW05		J31		J32		J33	
Latitude:N	43-30.0		43-19.9		43- 0.0		43- 0.0		43- 0.0		42- 0.0		42- 0.0		43-20.1		43-29.9		43-30.0	
Longitude:E	141- 0.0		141- 9.9		139-40.0		139-59.9		140-20.2		139-39.8		140- 0.2		141-10.0		141- 0.0		140-40.2	
Date	1996/02/05		1996/02/05		1996/02/19		1996/02/19		1996/02/19		1996/02/20		1996/02/20		1996/03/11		1996/03/11		1996/03/11	
Time(JST)	10:54		12:06		16:08		17:50		19:36		02:24		04:11		09:54		11:04		12:38	
Weather	C		C		C		C		C		BC		C		BC		BC		S	
Air Temp.	0.1		0.4		-4.3		-4.2		-3.3		-3.5		-2.7		1.7		3.8		1.4	
Bar	1013.9		1013.0		1026.5		1027.0		1026.5		1027.0		1025.7		1006.0		1004.5		1003.5	
Wind Dir	CALM		SE		WNW		WNW		WNW		WNW		WNW		SE				W	
Wind Spd/F	S 0		S 2		S 6		S 8		S 7		S 6		S 6		S 7				S 15	
Transparency	23		14		14										5		18		16	
Depth	93				5300		5100		512		885		712		36		93		693	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	6.3	34.064	6.1	34.038	5.4	34.12*	8.0	34.07*	7.8	34.06*	7.6	34.04*	7.4	34.07*	4.5	33.759	5.4	34.080	5.6	34.105
10m	6.30	34.066	5.96	34.030	5.66	34.113	8.04	34.059	7.90	34.063	7.76	34.043	7.70	34.072	4.57	33.835	5.28	34.079	5.65	34.108
20m	6.28	34.066	5.59	34.008	5.67	34.112	8.04	34.059	7.90	34.064	7.76	34.043	7.72	34.079	5.13	34.047	5.27	34.079	5.63	34.110
30m	6.11	34.069	5.47	34.001	5.68	34.112	8.04	34.059	7.91	34.064	7.77	34.043	7.71	34.100	5.15	34.054	5.27	34.079	5.61	34.110
50m	6.05	34.071			5.68	34.112	7.91	34.066	7.91	34.065	7.76	34.044	7.60	34.101			5.26	34.078	5.33	34.114
75m	6.05	34.072			5.65	34.111	7.27	34.080	7.91	34.071	7.84	34.083	6.83	34.131			5.15	34.065	4.81	34.124
100m					5.63	34.110	7.19	34.082	7.84	34.087	7.09	34.154	6.08	34.119					4.53	34.114
125m					5.57	34.109	7.05	34.108	7.34	34.138	6.18	34.135	4.67	34.106					4.03	34.107
150m					4.72	34.100	6.95	34.110	6.77	34.128	5.28	34.123	3.07	34.100					3.54	34.098
200m					3.01	34.079	4.38	34.109	4.99	34.113	2.92	34.089	1.84	34.083					2.41	34.078
250m					1.81	34.072	2.38	34.082	1.79	34.076	1.61	34.077	0.83	34.074					1.82	34.074
300m					1.34	34.075	1.48	34.075	1.36	34.073	1.24	34.075	0.67	34.072					1.26	34.076
400m					0.82	34.073	0.90	34.073	0.76	34.071	0.87	34.073	0.49	34.070					0.93	34.074
500m					0.57	34.071	0.69	34.076	0.58	34.071	0.55	34.071	0.39	34.069					0.77	34.073
600m							0.52	34.072			0.40	34.069	0.34	34.069						
700m																				
800m																				
900m																				
1000m																				

Table 3-44

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199603		199603		199603		199603		199603		199603		199603		199603		199603		199603	
Station No	J34		J35		J36		J37		J38		J39		J47		J46		J45		J44	
Latitude:N	43-30.0		43-30.1		43-30.1		43-30.0		43-30.0		43-30.1		42-30.2		42-30.1		42-30.1		42-30.1	
Longitude:E	140-20.1		140- 0.1		139-40.2		139-20.2		139- 0.2		138-30.1		137-30.2		137-59.9		138-20.0		138-40.0	
Date	1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/14		1996/03/14		1996/03/14		1996/03/14	
Time(JST)	09:50		11:51		14:46		16:48		18:39		21:13		05:47		08:04		10:18		11:58	
Weather	BC		BC		C		C		C		BC		C		C		C		C	
Air Temp.	4.8		3.8		3.4		3.7		3.4		3.5		4.0		3.1		5.4		5.7	
Bar	1018.0		1018.0		1018.0		1017.5		1017.0		1016.6		1013.0		1013.5		1013.0		1012.0	
Wind Dir	WSW		SW		SW		SW		SW		SSW		SW		SW		SW		SW	
Wind Spd/F	S 12		S 12		S 12		S 12		S 11		S 12		S 4		S 6		S 7		S 6	
Transparency	12		13				13						16		14		15			
Depth	650		1244		2176		3200		3440		3400		3674		3700		3700		3670	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.8	34.110	6.2	34.101	5.8	34.110	5.5	34.127	4.3	34.146	4.5	34.152	2.5	34.121	4.9	34.125	5.5	34.122	4.9	34.124
10m	5.80	34.105	6.11	34.100	5.77	34.106	5.32	34.127	4.19	34.132	4.57	34.137	2.46	34.121	4.82	34.125	5.36	34.125	4.62	34.120
20m	5.80	34.104	6.11	34.101	5.78	34.105	5.32	34.127	3.82	34.126	4.57	34.137	2.46	34.122	4.82	34.125	5.36	34.123	4.56	34.120
30m	5.71	34.106	6.11	34.101	5.77	34.105	5.30	34.126	3.68	34.125	4.57	34.137	2.46	34.122	4.82	34.125	5.34	34.123	4.55	34.120
50m	5.62	34.108	6.08	34.102	5.48	34.118	4.69	34.132	3.27	34.122	4.56	34.137	2.39	34.122	4.58	34.127	5.15	34.128	3.15	34.098
75m	5.55	34.111	5.97	34.101	4.88	34.114	3.83	34.107	3.18	34.128	4.46	34.138	2.37	34.122	2.97	34.126	3.44	34.103	2.21	34.084
100m	5.07	34.118	5.80	34.104	4.22	34.106	3.44	34.120	2.82	34.127	4.42	34.137	2.23	34.116	2.48	34.095	2.90	34.106	1.76	34.092
125m	4.63	34.121	5.32	34.121	3.04	34.091	3.30	34.126	1.89	34.087	3.36	34.113	2.04	34.115	1.86	34.091	2.03	34.082	1.52	34.086
150m	4.10	34.108	5.02	34.125	2.34	34.080	2.49	34.114	1.68	34.091	2.64	34.090	1.79	34.102	1.57	34.086	1.66	34.078	1.25	34.076
200m	2.44	34.077	3.12	34.084	1.42	34.076	1.36	34.075	1.26	34.077	1.40	34.079	1.20	34.081	1.19	34.077	1.19	34.076	0.97	34.076
250m	1.55	34.075	1.67	34.073	1.13	34.074	0.98	34.079	0.99	34.078	1.14	34.080	1.05	34.080	0.98	34.077	1.00	34.078	0.85	34.077
300m	1.29	34.074	1.33	34.077	0.94	34.076	0.90	34.078	0.83	34.076	0.95	34.078	0.88	34.079	0.85	34.077	0.85	34.078	0.77	34.077
400m	0.92	34.074	0.90	34.075	0.63	34.072	0.61	34.072	0.60	34.073	0.67	34.074	0.62	34.075	0.67	34.076	0.67	34.077	0.61	34.076
500m	0.76	34.073	0.65	34.074	0.46	34.071	0.48	34.070	0.45	34.072	0.50	34.072	0.50	34.074	0.49	34.074	0.49	34.074	0.49	34.074
600m			0.49	34.071											0.41	34.073				
700m																				
800m																				
900m																				
1000m																				

Table 3-45

Table 3 Results of serial oceanographic observations. Hokkaido Central Fisheries Experimental Station

Stn-prefix	199603		199603		199603													
Station No	J43		J42		J41													
Latitude:N	42-29.9		42-30.0		42-30.2													
Longitude:E	138-59.9		139-20.2		139-39.9													
Date	1996/03/14		1996/03/14		1996/03/14													
Time(JST)	13:36		15:18		16:52													
Weather	C		C		R													
Air Temp.	6.0		6.3		6.0													
Bar	1011.2		1010.5		1010.5													
Wind Dir	SSW		SSW		SSW													
Wind Spd/F	S 8		S 6		S 3													
Transparency	16		14		15													
Depth	3621		3302		1878													
Equipment	CTD		CTD		CTD													
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.4	34.133	6.4	34.130	6.5	34.116												
10m	6.13	34.128	6.26	34.115	6.44	34.118												
20m	6.00	34.124	6.23	34.114	6.44	34.117												
30m	5.63	34.122	6.20	34.113	6.44	34.117												
50m	5.21	34.121	6.06	34.112	6.40	34.111												
75m	3.31	34.102	4.59	34.118	6.37	34.109												
100m	2.67	34.090	3.40	34.093	5.66	34.125												
125m	1.82	34.077	2.76	34.085	4.93	34.120												
150m	1.56	34.071	2.14	34.081	3.60	34.097												
200m	1.30	34.077	1.70	34.090	2.30	34.081												
250m	0.99	34.076	1.28	34.076	1.73	34.071												
300m	0.87	34.079	1.03	34.075	1.31	34.073												
400m	0.67	34.078	0.75	34.072	0.82	34.072												
500m	0.54	34.075	0.53	34.071	0.65	34.070												
600m					0.55	34.070												
700m																		
800m																		
900m																		
1000m																		

Table 3-46

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	P64		P63		P62		P61		P51		P52		P53		P54		P55		P56	
Latitude:N	41-49.9		42- 0.1		42-10.4		42-20.1		42-10.1		42- 0.8		41-50.2		41-40.2		41-30.0		41-20.1	
Longitude:E	141-20.2		141-20.1		141-20.1		141-19.9		142-30.0		142-19.9		142- 9.9		142- 0.2		141-50.1		141-40.1	
Date	1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18	
Time(JST)	14:57		16:51		18:48		20:17		02:42		04:19		06:47		08:39		10:31		12:59	
Weather	BC		C		C		B		B		B		B		B		BC		C	
Air Temp.	4.0		3.0		2.0		1.0		0.0		0.0		4.0		6.0		3.5		4.0	
Bar	1018.0		1018.5		1019.5		1020.5		1022.0		1022.5		1022.0		1021.5		1020.0		1017.0	
Wind Dir	NNW		WNW		WNW		CALM		SE		SE		CALM		SE		SE		SE	
Wind Spd/F	S 9		S 7		S 7		S 0		S 2		S 4		S 0		S 4		S 4		S 5	
Transparency	10		8										7		8		7		14	
Depth	288		314		370		245		124		996		1000		1000		960		764	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	3.4	32.525	3.5	32.482	3.0	32.575	3.2	32.266	1.8	32.436	3.0	32.826	2.9	32.678	3.4	32.731	3.5	32.808	7.8	33.740
10m	3.22	32.531	3.15	32.393	2.90	32.559	3.14	32.272	1.81	32.501	3.01	32.875	2.52	32.714	3.05	32.782	3.15	32.868	7.59	33.791
20m	3.24	32.591	3.09	32.408	2.89	32.565	2.99	32.300	1.93	32.587	2.92	32.897	2.52	32.714	3.04	32.784	3.05	32.869	7.62	33.815
30m	3.06	32.624	2.52	32.697	2.90	32.588	1.59	32.807	1.60	32.623	2.61	32.979	2.42	32.785	3.12	32.923	2.72	32.903	7.89	33.888
50m	4.89	33.221	4.77	33.343	2.29	32.997	1.39	33.018	1.30	32.789	1.74	33.091	2.35	33.149	4.96	33.496	2.17	33.059	8.07	33.932
75m	7.55	33.850	5.21	33.545	4.32	33.377	1.38	33.041	1.30	33.021	2.33	33.201	2.22	33.235	6.63	33.853	2.73	33.250	7.92	33.985
100m	5.98	33.699	5.20	33.577	3.43	33.349	1.43	33.058	1.39	33.076	3.26	33.372	2.65	33.312	6.21	33.812	3.71	33.429	7.78	33.978
125m	6.27	33.771	4.81	33.545	3.55	33.372	1.47	33.075			3.54	33.451	2.33	33.333	6.41	33.867	3.96	33.488	7.70	33.989
150m	6.27	33.803	4.50	33.525	4.04	33.447	1.72	33.172			3.38	33.471	2.22	33.366	6.22	33.866	3.21	33.424	7.52	33.983
200m	5.66	33.802	3.94	33.504	3.47	33.450	2.14	33.279			3.08	33.517	2.37	33.449	3.66	33.575	2.64	33.441		
250m	3.61	33.610	3.16	33.526	3.48	33.533					1.84	33.465	2.05	33.480	3.00	33.551	2.56	33.506		
300m					2.72	33.543					2.45	33.597	1.81	33.514	2.00	33.490	2.54	33.576		
400m											2.72	33.743	2.22	33.653	2.40	33.648	3.12	33.792		
500m											2.83	33.846	2.72	33.795	2.82	33.833	3.54	33.950		
600m											2.91	33.967	3.09	33.972	3.29	34.035	3.55	34.065		
700m																				
800m																				
900m																				
1000m																				

Table 4-1

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199504		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	P65		HKD001		HKD002		HKD003		HKD004		HKD005		HKD006		HKD007		HKD008		HKD009	
Latitude:N	41-40.0		42-10.1		42-14.9		42-20.0		42-20.0		42-19.9		42-25.0		42-24.9		42-25.0		42-25.1	
Longitude:E	141-20.1		140-49.9		140-49.9		140-50.0		140-44.9		140-40.0		140-44.9		140-39.9		140-35.1		140-30.1	
Date	1995/04/18		1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/04/25	
Time(JST)	16:36		01:55		02:40		03:30		04:10		04:45		05:45		06:17		06:50		07:25	
Weather	C		B		B		BC		BC		BC		BC		BC		BC		BC	
Air Temp.	3.0		5.0		4.0		4.0		6.0		4.0		4.0		6.0		6.0		6.0	
Bar	1014.5		1016.5		1017.0		1017.0		1016.5		1016.5		1016.0		1016.5		1016.5		1016.0	
Wind Dir	E		CALM		CALM		E		E		CALM		CALM		CALM		CALM		SSE	
Wind Spd/F	S 5		S 0		S 0		S 2		S 2		S 0		S 0		S 0		S 0		S 2	
Transparency	12												14		21		21		19	
Depth	233		91		70		48		61		79		59		79		93		94	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	7.5	33.647	4.5	32.42*	5.5	32.31*	4.4	31.87*	5.3	32.02*	4.7	32.23*	4.5	32.23*	5.1	32.28*	5.1	32.22*	5.4	32.05*
10m	7.41	33.699	3.70	32.384	4.15	32.341	4.62	32.119	4.42	32.237	4.78	32.180	4.48	32.231	4.21	32.282	4.32	32.284	3.97	32.306
20m	7.47	33.748	3.53	32.422	3.33	32.425	4.04	32.275	3.84	32.293	4.04	32.291	3.88	32.300	3.98	32.272	3.91	32.293	3.83	32.317
30m	7.58	33.812	3.40	32.520	3.07	32.501	3.30	32.610	2.89	32.617	3.54	32.352	3.20	32.479	3.92	32.277	3.67	32.337	3.81	32.364
50m	7.90	33.962	4.06	33.208	3.29	33.013			3.59	33.099	3.76	33.186	3.94	33.200	3.45	33.021	3.37	33.014	3.62	33.101
75m	7.92	34.003	4.80	33.548					4.74	33.466			4.85	33.521	4.61	33.344	4.86	33.544		
100m	7.83	34.047																		
125m	7.27	34.000																		
150m	6.33	33.892																		
200m	6.35	33.896																		
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-2

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HKD010		HKD011		HKD012		HKD013		HKD014		HGK001		HGK002		HGK003		HGK004		HGK005	
Latitude:N	42-20.1		42-20.1		42-15.0		42-14.9		42-15.1		42-34.3		42-33.5		42-32.6		42-31.2		42-25.0	
Longitude:E	140-30.1		140-34.9		140-34.8		140-39.9		140-44.9		141-29.5		141-30.0		141-30.0		141-29.8		141-30.0	
Date	1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/04/25		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09	
Time(JST)	08:13		08:53		09:42		10:00		11:00		05:09		05:36		06:01		06:34		07:28	
Weather	BC		BC		BC		BC		BC		B		B		B		B		B	
Air Temp.	5.5		5.0		4.0		5.0		5.5		4.1		5.3		5.3		6.2		6.9	
Bar	1016.0		1015.5		1015.0		1014.4		1014.4		1018.0		1018.0		1018.0		1018.5		1018.5	
Wind Dir	ESE		ESE		ENE		E		SE		CALM		CALM		CALM		CALM		CALM	
Wind Spd/F	S 3		S 3		S 3		S 5		S 4		S 0		S 0		S 0		S 0		S 0	
Transparency	16		14		13		12		13		3		5		5		5		9	
Depth	95		96		94		90		81		34		51		61		78		185	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.4	32.08*	5.4	32.26*	5.3	32.38*	5.3	32.41*	5.1	32.31*	8.3	30.061	6.9	31.477	7.3	31.331	7.5	31.374	7.5	32.058
10m	4.50	32.209	4.68	32.188	4.72	32.279	4.31	32.318	4.60	32.309	3.24	32.528	3.50	32.583	3.96	32.440	4.84	32.304	3.85	32.503
20m	3.96	32.280	4.19	32.234	3.77	32.340	3.89	32.388	4.05	32.364	3.26	32.705	2.94	32.692	3.60	32.756	3.82	32.695	3.23	32.648
30m	3.54	32.310	3.91	32.438	3.22	32.397	3.47	32.483	3.07	32.481			2.54	32.777	2.61	32.760	2.73	32.704	2.99	32.766
50m	3.36	32.032	3.32	32.982	3.08	33.017	3.66	33.171	3.32	33.119					2.71	33.135	2.82	32.905	2.74	32.904
75m	4.82	33.536	4.55	33.425	4.72	33.437	4.82	33.522	3.90	33.295									2.38	33.013
100m																			3.32	33.250
125m																			4.81	33.532
150m																			4.59	33.559
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-3

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HGK006		HGK007		HGK008		HGK009		HGK010		HGK019		HGK018		HGK016		HGK026		HGK025	
Latitude:N	42-24.1		42-23.2		42-20.0		42-15.0		42-17.3		42-15.0		42-19.8		42-24.9		42-20.1		42-27.5	
Longitude:E	141- 9.9		141-10.2		141- 9.9		141-10.2		140-59.9		140-50.1		140-50.0		140-50.0		140-40.1		140-40.0	
Date	1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09		1995/05/09	
Time(JST)	09:35		10:07		10:45		11:38		12:53		14:02		14:54		15:49		17:12		18:51	
Weather	B		B		B		B		B		B		B		B		B		BC	
Air Temp.	11.1		9.8		9.8		10.4		12.9		10.1		11.3		10.6		9.9		7.0	
Bar	1018.5		1018.5		1019.0		1019.0		1018.5		1018.0		1018.0		1017.5		1018.0		1018.5	
Wind Dir	CALM		CALM		CALM		CALM		E		SE		SE		CALM		ESE		SE	
Wind Spd/F	S 0		S 0		S 0		S 0		S 2		S 2		S 2		S 0		S 4		S 5	
Transparency	8		9		10		10		6		11		8		12		12			
Depth	36		57		74		98		27		69		48		41		79		75	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	7.2	32.203	7.3	32.125	7.6	32.144	10.0	32.074	9.2	31.177	9.5	31.672	9.3	31.581	9.0	31.562	10.2	31.674	8.8	31.716
10m	4.79	32.445	5.06	32.381	5.39	32.394	5.64	32.436	3.72	32.532	7.15	31.770	6.42	31.968	5.85	32.016	6.67	31.882	7.42	31.760
20m	3.78	32.748	2.31	32.714	3.89	32.758	5.27	32.771	2.55	32.705	5.01	32.169	4.26	32.330	3.51	32.483	6.12	31.976	5.64	32.093
30m	2.75	32.768	1.86	32.683	3.10	32.808	4.97	33.194			3.71	32.440	3.29	32.558	3.22	32.860	4.92	32.198	4.32	32.315
50m			2.66	32.856	5.41	33.231	4.68	33.340			2.26	32.796					3.25	32.554	3.31	32.981
75m							5.79	33.650									4.47	33.390		
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-4

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HGK024		HGK022		HGK031		HGK032		HGK033		HGK034		HGK037		HGK038		HGK035		HGK036	
Latitude:N	42-30.1		42-32.7		42-32.1		42-30.1		42-25.1		42-20.1		42-20.2		42-20.0		42-15.1		42-13.1	
Longitude:E	140-40.3		140-40.2		140-29.9		140-30.0		140-29.9		140-30.0		140-25.0		140-22.1		140-29.9		140-30.8	
Date	1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10	
Time(JST)	04:14		05:13		06:39		07:00		07:58		09:02		09:48		10:23		11:43		12:21	
Weather	B		B		C		C		C		C		C		C		F		F	
Air Temp.	5.0		5.1		6.8		6.0		5.1		5.9		5.9		6.8		7.0		6.9	
Bar	1020.0		1020.5		1021.5		1021.5		1021.5		1021.5		1022.0		1022.0		1021.0		1020.5	
Wind Dir	SSE		N		SW		SSE		ESE		E		SE		E		ESE		E	
Wind Spd/F	S 3		S 2		S 2		S 5		S 7		S 9		S 4		S 4		S 7		S 5	
Transparency			11		12		11		9		10		10		8		8		11	
Depth	66		50		57		68		93		95		70		50		85		81	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	9.4	31.675	9.7	30.768	9.6	31.569	9.5	31.511	8.6	31.654	8.6	31.658	8.7	31.493	8.8	31.208	8.1	31.588	7.8	31.604
10m	9.31	32.752	6.12	31.980	6.47	31.959	6.64	31.784	8.21	31.655	8.29	31.642	8.28	31.511	6.49	31.721	7.50	31.844	6.28	32.040
20m	8.50	33.456	4.05	32.363	4.24	32.325	4.47	32.303	4.99	32.202	5.21	32.151	4.66	32.269	4.01	32.390	4.62	32.249	4.91	32.199
30m	7.00	N.D.	3.34	32.658	3.28	32.521	3.41	32.533	3.84	32.347	3.92	32.396	3.32	32.537	3.19	32.565	3.58	32.509	3.50	32.488
50m	3.58	33.174			3.56	33.074	3.71	33.129	3.37	33.007	3.21	32.981	3.63	33.094			3.74	33.115	3.77	33.132
75m									4.67	33.449	4.72	33.484					4.70	33.468	4.43	33.372
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-5

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HGK027		HGK029		HGK020		HGK021		HGK013		HGK014		HGK015		HFK03		HFK02		HFK01	
Latitude:N	42-15.1		42-10.9		42-10.0		42- 6.2		42-10.0		42- 5.1		42- 0.2		41-57.5		42- 5.0		42-10.0	
Longitude:E	140-39.8		140-39.7		140-49.8		140-50.0		140-59.7		140-59.8		140-59.8		141- 2.6		141- 9.9		141-15.1	
Date	1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/10		1995/05/15		1995/05/15		1995/05/15	
Time(JST)	13:43		14:42		16:05		16:54		18:10		19:04		19:52		18:59		20:22		21:16	
Weather	F		F		E		F		R		F		F							
Air Temp.	6.1		6.0		5.8		5.9		5.8		5.2		5.2							
Bar	1020.5		1020.5		1021.0		1021.5		1022.0		1022.0		1022.5							
Wind Dir	E		E		E		ENE		E		E		E							
Wind Spd/F	S 6		S 6		S 5		S 4		S 7		S 4		S 3							
Transparency	12		10		10		9		8											
Depth	90		89		92		56		82		85		89							
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.4	31.820	7.4	31.821	8.6	31.716	8.5	31.661	7.6	32.149	8.5	31.770	8.3	31.697	6.5*	32.28*	6.4*	32.48*	6.9*	32.53*
10m	7.93	31.704	6.30	31.951	7.53	31.808	6.57	31.874	5.32	32.512	7.66	32.031	5.40	32.130	5.84	32.392	6.20	32.494	6.56	32.569
20m	5.88	32.000	4.40	32.353	3.97	32.390	3.71	32.459	3.62	32.826	2.63	32.672	4.18	32.437	3.65	32.519	3.62	32.664	5.64	32.628
30m	4.91	32.185	3.30	32.539	2.75	32.605	2.48	32.646	2.53	32.800	2.80	32.828	2.91	32.785	3.20	32.696	3.43	32.967	2.50	32.805
50m	3.05	32.786	3.56	33.086	2.17	32.863	3.38	32.970	2.57	32.905	4.22	33.230	3.63	33.378	2.36	32.750	3.58	33.213	5.45	33.477
75m	4.43	33.363	4.57	33.419	2.64	33.216			2.48	33.129	3.36	33.374	3.67	33.472	3.88	33.255	4.63	33.513	5.12	33.569
100m															4.51	33.427	4.71	33.542	5.07	33.603
125m																			4.46	33.556
150m																			3.94	33.548
200m																			3.22	33.506
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-6

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	HFK08		HFK07		HFK06		HFK05		HFK12		HFK11		HFK10		HFK09		HFK16		HFK15		
Latitude:N	42-15.0		42-10.1		42- 5.1		42- 2.6		42- 7.6		42-10.0		42-15.1		42-17.5		42-17.8		42-15.0		
Longitude:E	141-10.1		141- 4.9		140-59.8		140-57.4		140-52.4		140-55.0		140-59.8		141- 4.9		140-52.5		140-50.1		
Date	1995/05/15		1995/05/15		1995/05/15		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		
Time(JST)	22:09		22:59		23:45		00:14		01:06		01:40		02:37		03:21		04:34		05:05		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	6.1*	32.30*	7.1*	32.48*	6.9*	32.49*	6.6*	32.33*	6.1*	32.35*	6.0*	32.37*	6.1*	32.20*	7.1*	31.76*	9.4*	31.60*	8.3*	31.67*	
10m	5.94	32.413	6.77	32.489	6.30	32.494	6.21	32.459	6.31	32.455	6.24	32.495	5.91	32.236	6.55	31.958	8.01	31.714	7.60	31.742	
20m	6.30	32.572	3.47	32.590	3.67	32.593	4.07	32.592	4.34	32.503	5.74	32.503	5.89	32.236	5.98	32.210	6.78	31.885	6.53	31.929	
30m	2.33	32.661	3.40	32.691	2.77	32.721	3.71	32.735	4.03	32.631	4.67	32.517	5.69	32.347	6.01	32.303	5.79	32.113	6.17	32.364	
50m	3.71	33.130	3.87	33.034	2.81	32.808	2.73	32.862	3.18	32.716	3.33	32.702	4.04	32.912	3.57	32.865	2.13	32.781	3.21	32.718	
75m	4.22	33.406	2.88	33.190	4.80	33.552	3.97	33.220	4.50	33.403	3.03	33.138									
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-7

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	HFK14		HFK13		HFK20		HFK19		HFK18		HFK17		HFK26		HFK25		HFK24		HFK23		
Latitude:N	42-12.8		42-10.8		42-10.7		42-14.9		42-19.9		42-24.9		42-27.4		42-25.0		42-22.6		42-20.2		
Longitude:E	140-47.4		140-45.7		140-35.5		140-40.0		140-44.9		140-49.9		140-42.6		140-40.2		140-37.3		140-35.0		
Date	1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/16		
Time(JST)	05:37		06:02		07:01		07:47		08:36		09:28		10:17		10:43		11:12		11:41		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.5*	31.68*	9.4*	32.60*	8.4*	31.68*	8.6*	31.65*	8.5*	31.57*	9.0*	31.59*	7.9*	31.66*	7.9*	31.67*	8.5*	31.62*	9.0*	31.59*	
10m	7.49	31.747	7.76	31.726	6.96	31.812	7.75	31.727	7.41	31.672	8.04	31.734	7.75	31.663	7.70	31.662	7.66	31.692	7.62	31.702	
20m	6.14	32.127	6.19	32.146	6.19	31.967	7.24	31.782	6.78	31.802	6.93	31.906	6.83	31.778	7.45	31.715	7.47	31.720	7.37	31.734	
30m	6.15	32.307	6.28	32.357	5.00	32.184	6.35	31.998	6.53	31.876	4.68	32.328	6.41	32.081	7.19	31.781	7.21	31.767	6.99	31.821	
50m	4.27	32.568	3.27	32.585	3.07	32.712	2.62	32.726	3.15	32.731			3.52	32.486	4.23	32.310	5.76	32.113	4.71	32.397	
75m	4.04	33.332	4.08	33.248	3.96	33.180	4.83	33.524									4.42	33.415	4.69	33.467	
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-8

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	HFK22		HFK21		HFK28		HFK27		HTA06		HTA05		HTA04		HTA03		HTA02		HTA01		
Latitude:N	42-17.5		42-15.1		42-20.1		42-24.9		42-13.6		42-18.3		42-15.8		42-13.3		42-10.8		42- 8.4		
Longitude:E	140-32.4		140-30.0		140-25.2		140-29.9		140-58.2		140-55.9		140-52.8		140-49.8		140-46.7		140-44.0		
Date	1995/05/16		1995/05/16		1995/05/16		1995/05/16		1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/17		
Time(JST)	12:18		12:50		13:42		14:28		15:21		16:13		16:47		17:20		17:55		18:31		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.7*	<i>N.D.</i>	9.5*	31.38*	8.0*	31.65*	8.8*	31.63*	7.9	31.60*	8.2	31.59*	8.7	31.63*	7.8	31.70*	7.7	31.75*	8.2	31.67*	
10m	7.81	31.729	8.74	31.437	7.22	31.723	8.07	31.733	6.53	31.978	7.65	31.696	8.06	31.708	6.81	32.065	6.88	32.099	7.72	31.740	
20m	7.08	31.827	5.73	32.064	6.32	32.027	7.75	31.761	6.08	32.273	6.38	32.060	7.03	31.849	5.57	32.360	5.59	32.325	7.19	31.844	
30m	6.22	32.128	4.29	32.325	4.22	32.330	6.84	31.851	6.07	32.376	5.20	32.457	5.75	32.303	5.80	32.441	5.72	32.431	6.71	32.196	
50m	3.08	32.589	2.92	32.743	2.95	32.844	3.41	32.490	3.53	32.682	3.54	32.838	3.53	32.632	4.10	32.513	4.18	32.549			
75m	4.16	33.268	3.87	33.159			3.99	33.206									4.04	33.227			
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-9

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	HTA07		HTA08		HTA09		HTA10		HTA11		HTA16		HTA15		HTA14		HTA13		HTA12		
Latitude:N	42-10.7		42-12.6		42-15.5		42-18.0		42-13.7		42-18.0		42-15.7		42-13.4		42-10.8		42- 8.5		
Longitude:E	140-46.7		140-49.2		140-52.8		140-56.1		140-58.2		140-55.8		140-53.1		140-50.1		140-46.9		140-43.9		
Date	1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/17		1995/05/18		1995/05/18		
Time(JST)	19:06		19:42		20:16		20:59		21:39		22:23		22:58		23:33		00:08		00:42		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.6	31.63*	8.5	31.62*	8.6	31.61*	8.0	31.63*	3.5	32.73*	7.9	31.61*	8.6	31.59*	8.5	31.64*	8.5	31.62*	9.8	31.11*	
10m	7.10	32.029	6.89	31.982	7.21	31.825	7.10	31.832			7.44	31.749	8.54	31.613	7.03	32.003	8.10	31.759	8.02	31.568	
20m	5.65	32.319	5.74	32.341	6.03	32.244	6.30	32.073			6.11	32.115	6.06	32.245	5.86	32.285	5.65	32.322	6.95	31.930	
30m	5.71	32.400	5.62	32.392	5.73	32.411	4.94	32.377			4.74	32.387	5.96	32.458	5.60	32.367	5.66	32.381	5.86	32.204	
50m	4.20	32.521	4.72	32.472	3.65	32.575			3.50	32.728	3.54	32.834	3.04	32.566	4.83	32.472	3.93	32.608			
75m	3.98	33.204															4.02	33.226			
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-10

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	HTA17		HTA18		HTA19		HTA20		HTA21		HTA26		HTA25		HTA24		HTA23		HTA22		
Latitude:N	42-10.8		42-13.2		42-15.6		42-18.0		42-13.7		42-17.4		42-15.7		42-13.3		42-10.8		42- 8.9		
Longitude:E	140-46.7		140-49.7		140-52.8		140-55.7		140-58.0		140-55.5		140-52.8		140-49.8		140-46.7		140-44.5		
Date	1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		
Time(JST)	01:20		01:53		02:28		03:05		03:49		04:52		05:16		05:45		06:19		06:48		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.4	31.64*	8.2	31.67*	8.5	31.60*	8.8	31.54*	7.7	31.73*	8.6	31.59*	8.3	31.66*	8.3	31.66*	8.1	31.70*	9.0	31.35*	
10m	7.30	31.944	7.03	32.043	8.27	31.661	6.90	31.910	6.67	32.026	6.97	31.866	7.23	32.059	6.82	32.149	7.48	31.762	8.57	31.602	
20m	5.70	32.310	5.79	32.295	5.86	32.281	5.14	32.221	5.56	32.237	6.25	32.266	5.92	32.331	5.64	32.384	5.78	32.302	7.03	32.060	
30m	5.71	32.401	5.62	32.365	6.12	32.426	5.02	32.453	4.82	32.503	5.54	32.419	5.87	32.472	5.45	32.480	5.77	32.440	6.20	32.379	
50m	4.05	32.579	4.04	32.536	4.41	32.533	3.57	32.802	2.73	32.961	3.38	32.877	3.34	32.596	3.94	32.550	3.94	32.604	3.81	32.691	
75m	3.89	33.195															3.77	33.163			
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-11

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505		
Station No	HTA27		HTA28		HTA29		HTA30		HTA31		HTA36		HTA35		HTA34		HTA33		HTA32		
Latitude:N	42-10.7		42-13.2		42-15.5		42-18.0		42-13.7		42-17.9		42-15.8		42-13.2		42-10.9		42- 8.5		
Longitude:E	140-46.8		140-49.7		140-52.8		140-55.9		140-58.0		140-55.8		140-53.0		140-49.9		140-46.8		140-43.9		
Date	1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		
Time(JST)	07:29		08:05		08:40		09:15		09:58		10:47		11:21		11:58		12:31		13:05		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.1	31.70*	8.1	31.70*	8.4	31.67*	8.3	31.62*	7.9	31.70*	7.2	31.83*	8.3*	31.69*	8.5	31.71*	8.6	31.66*	8.9	31.52*	
10m	8.03	31.707	7.24	31.831	7.45	31.888	6.42	31.981	6.86	31.980	6.39	32.031	7.70	31.810	7.00	31.919	7.28	31.832	8.69	31.590	
20m	6.65	32.197	5.77	32.376	5.81	32.375	5.78	32.368	6.23	32.311	6.29	32.426	6.16	32.238	6.07	32.353	5.91	32.317	7.21	31.915	
30m	5.86	32.417	5.62	32.470	5.77	32.473	4.71	32.479	5.76	32.473	4.84	32.481	5.91	32.483	5.91	32.486	5.88	32.451	6.11	32.246	
50m	3.99	32.585	4.19	32.572	3.01	32.740			3.61	32.922	3.49	32.851	2.62	32.709	3.82	32.579	3.85	32.622			
75m	4.00	33.224															4.06	33.242			
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-12

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199506		199506		199506		199505		199505	
Station No	HTA37		HTA38		HTA39		HTA40		HTA41		P65		P64		P63		HKD101		HKD102	
Latitude:N	42-10.8		42-13.2		42-15.5		42-17.9		42-13.6		41-40.1		41-49.8		41-59.9		42- 0.0		42- 5.0	
Longitude:E	140-46.6		140-49.8		140-52.7		140-55.7		140-57.9		141-19.8		141-19.8		141-20.0		140-59.9		140-59.9	
Date	1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/22		1995/05/22		1995/05/22		1995/05/22		1995/05/23	
Time(JST)	13:43		14:16		14:50		15:25		16:11		18:12		19:57		21:33		23:35		00:22	
Weather											R		R		R		R		R	
Air Temp.											6.0		6.0		6.0		6.0		6.5	
Bar											1001.0		1001.5		1002.5		1004.0		1004.0	
Wind Dir											NE		N		NW		W		NW	
Wind Spd/F											S 3		S 3		S 1		S 2		S 3	
Transparency											233		285		312		80		86	
Depth											CTD		CTD		CTD		CTD		CTD	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.6	31.66*	8.4	31.74*	9.4	31.64*	8.2	31.75*	8.4	31.87*	9.4	32.66*	9.0	32.11*	8.7	31.99*	8.6	31.32*	9.8	31.24*
10m	7.30	31.867	6.91	31.938	7.55	31.860	6.44	32.094	7.48	31.934	9.61	33.625	7.61	32.830	8.27	32.530	6.38	32.411	6.51	32.488
20m	6.30	32.210	5.58	32.176	5.96	32.316	6.44	32.242	6.44	32.389	9.80	33.986	3.98	33.144	8.42	32.848	6.86	32.626	6.03	32.490
30m	5.85	32.439	6.10	32.510	5.90	32.471	6.39	32.403	6.88	32.677	9.80	34.046	5.72	33.519	5.54	33.087	3.76	32.711	5.70	32.724
50m	3.93	32.604	3.07	32.649	3.20	32.625	3.70	32.745	3.67	32.671	9.46	34.123	6.09	33.676	4.41	33.352	3.26	32.837	2.91	32.960
75m	3.86	33.197									8.99	34.122	4.94	33.571	4.88	33.545	4.64	33.414	3.63	33.269
100m											7.88	34.016	4.45	33.527	4.38	33.529				
125m											7.01	33.894	4.81	33.609	4.12	33.530				
150m											6.35	33.809	4.95	33.650	3.91	33.532				
200m											3.76	33.544	3.61	33.531	3.38	33.559				
250m													2.78	33.496	2.93	33.600				
300m															2.53	33.617				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-13

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HKD103		HKD104		HKD105		HKD106		HKD107		HKD108		HKD109		HKD110		HKD111		HKD112	
Latitude:N	42- 9.9		42-14.8		42-14.9		42-15.0		42-15.0		42-15.0		42-17.5		42-19.9		42-20.0		42-24.9	
Longitude:E	140-50.0		140-49.9		140-45.0		140-40.1		140-35.0		140-30.0		140-32.4		140-35.0		140-30.2		140-30.1	
Date	1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23	
Time(JST)	01:38		02:38		03:13		03:54		04:33		05:14		05:43		06:15		06:55		07:45	
Weather	R		R		R		R		R		R		C		C		C		C	
Air Temp.	7.0		7.0		7.0		7.0		7.0		7.0		7.5		8.0		8.0		8.0	
Bar	1004.5		1005.0		1005.0		1005.5		1006.0		1006.5		1006.5		1007.0		1007.5		1007.5	
Wind Dir	W		NW		WNW		W		W		WNW		W		WNW		WNW		NW	
Wind Spd/F	S 4		S 2		S 3		S 2		S 1		S 3		S 6		S 5		S 3		S 2	
Transparency											9		10		9		9		9	
Depth	92		70		81		89		94		85		96		95		96		96	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.4	31.24*	10.6	31.24*	10.4	31.31*	9.8	31.37*	10.0	31.37*	10.4	31.22*	12.0	31.33*	10.0	31.44*	10.4	31.33*	10.6	31.29*
10m	7.89	31.794	7.72	31.786	8.22	31.695	8.15	31.694	8.09	31.684	8.71	31.084	8.09	31.678	8.53	31.662	8.59	31.657	9.25	31.608
20m	5.82	32.233	6.61	31.941	7.40	31.785	7.31	31.766	7.44	31.756	6.91	31.915	7.32	31.782	7.52	31.739	7.04	31.789	7.22	31.863
30m	6.29	32.542	6.02	32.229	6.36	31.989	6.90	31.846	6.67	31.903	5.86	32.326	6.74	31.895	6.96	31.829	6.35	32.031	5.67	32.199
50m	3.91	32.651	3.03	32.727	3.23	32.702	3.52	32.598	3.38	32.641	2.86	32.774	3.73	32.593	4.00	32.456	3.17	32.707	3.08	32.894
75m	3.86	33.311			3.46	33.198	4.25	33.311	4.08	33.253	4.22	33.283	4.09	33.265	4.17	33.283	4.39	33.344	4.04	33.218
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-14

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HKD113		HKD114		HKD115		HKD116		HKD117		HKD118		HKD119		HKD120		HKD121		HKD122	
Latitude:N	42-25.2		42-22.2		42-20.0		42-24.9		42-27.4		42-25.0		42-20.0		42-20.0		42-15.1		42-10.0	
Longitude:E	140-34.9		140-37.5		140-39.9		140-39.8		140-42.4		140-45.0		140-45.1		140-50.0		141- 0.0		140-59.8	
Date	1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23	
Time(JST)	08:24		08:58		09:30		10:20		10:55		11:25		12:08		12:40		13:53		14:39	
Weather	R		C		C		C		C		C		C		C		C		C	
Air Temp.	8.0		8.0		9.0		10.5		12.0		12.0		11.5		12.0		12.0		10.5	
Bar	1008.0		1008.0		1008.0		1008.0		1008.0		1008.0		1008.0		1008.0		1008.5		1009.0	
Wind Dir	WSW		CALM		W		SSW		CALM		CALM		CALM		CALM		CALM		CALM	
Wind Spd/F	S 1		S 0		S 1		S 1		S 0		S 0		S 0		S 0		S 0		S 0	
Transparency	8		9		11		9		11		11		7		8		7		10	
Depth	94		88		80		80		67		59		60		50		70		82	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.0	31.47*	10.0	31.40*	10.3	31.29*	11.0	31.12*	11.1	31.14*	10.8	30.04*	11.6	30.54*	11.6	31.21*	10.4	31.41*	10.8	31.19*
10m	8.51	31.662	8.50	31.653	8.45	31.658	8.65	31.645	8.22	31.683	8.17	31.674	8.80	31.648	6.88	31.905	6.37	32.254	6.41	32.043
20m	7.36	31.744	7.27	31.782	7.32	31.752	9.15	31.788	6.82	31.906	6.62	31.933	6.80	31.925	5.19	32.274	4.80	32.293	5.35	32.480
30m	6.81	31.844	6.89	31.858	7.01	31.827	6.71	31.894	5.66	32.212	5.48	32.238	5.54	32.165	3.36	32.586	6.08	32.758	4.91	32.518
50m	3.44	32.510	4.55	32.326	4.03	32.393	3.37	31.569	3.03	32.805	3.08	32.851	2.82	32.785			3.52	33.045	2.93	32.785
75m	4.06	33.234	3.82	33.196	3.59	33.211	4.46	33.436											3.47	33.247
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-15

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199505		199505		199505		199505		199506		199506		199506		199506	
Station No	P62		P61		HKD123		HKD124		HKD125		HKD126		P51		P52		P53		P54	
Latitude:N	42-10.1		42-19.9		42-20.1		42-24.1		42-30.0		42-34.4		42-10.1		42- 0.2		41-50.1		41-40.0	
Longitude:E	141-20.1		141-20.0		141-10.1		141-10.0		141-30.1		141-30.2		142-30.0		142-20.0		142- 9.8		142- 0.2	
Date	1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/24		1995/05/24		1995/05/24		1995/05/24	
Time(JST)	16:39		18:01		19:02		19:42		21:46		22:27		05:03		06:50		08:58		11:18	
Weather	C		C		C		C		C		C		R		R		R		C	
Air Temp.	8.0		8.0		8.0		6.5		6.0		5.5		4.0		5.0		5.0		8.0	
Bar	1009.5		1010.5		1010.5		1011.0		1011.5		1011.5		1011.5		1012.0		1012.0		1012.5	
Wind Dir	SSE		NE		CALM		ESE		SE		SE		ENE		E		E		CALM	
Wind Spd/F	S 2		S 1		S 0		S 1		S 3		S 3		S 3		S 3		S 3		S 0	
Transparency	12		8										8		10		11		10	
Depth	368		247		74		36		78		38		124		1000		1080		1040	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	9.8	32.35*	8.6	31.64*	8.8	31.65*	8.2	31.27*	8.6	31.64*	9.2	31.15*	7.2	31.56*	8.8	32.54*	7.9	32.81*	8.2	32.89*
10m	8.49	32.962	6.64	32.133	6.70	32.223	7.73	31.972	7.36	31.928	8.31	31.971	6.63	32.318	8.06	32.846	7.71	32.824	7.38	32.857
20m	4.87	33.041	6.77	32.810	6.05	32.429	6.56	32.623	7.09	32.290	5.75	32.589	3.63	32.471	7.97	33.277	8.09	33.254	8.77	33.280
30m	3.95	33.178	7.02	32.990	5.89	32.740	5.78	32.794	4.64	32.547	5.09	32.629	3.14	32.522	6.92	33.362	8.49	33.494	8.69	33.310
50m	4.70	33.433	3.69	32.943	2.60	32.916							2.32	32.670	5.38	33.432	8.38	33.798	4.76	33.327
75m	5.41	33.618	2.98	33.111									1.59	32.889	5.04	33.536	7.59	33.828	7.00	33.775
100m	4.64	33.549	3.31	33.273									1.69	33.009	3.89	33.461	7.90	33.953	6.93	33.837
125m	4.38	33.538	4.20	33.425											3.96	33.495	6.09	33.710	6.19	33.761
150m	4.08	33.531	5.51	33.631											3.93	33.520	4.61	33.540	5.79	33.727
200m	3.54	33.522	4.92	33.606											3.27	33.495	4.80	33.640	3.65	33.551
250m	3.20	33.560													2.61	33.493	2.78	33.470	2.34	33.468
300m	2.54	33.573													2.17	33.499	2.19	33.486	2.00	33.502
400m															2.23	33.625	2.33	33.611	2.12	33.614
500m															2.70	33.778	2.80	33.826	2.40	33.748
600m															3.04	33.959	3.07	33.984	3.06	33.996
700m																				
800m																				
900m																				
1000m																				

Table 4-16

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199505		199505		199505		199505		199505		199505		199505	
Station No	P55		P56		P66		HKG203		HKG204		HKG205		HKG206		HKG119		HKG118		HKG116	
Latitude:N	41-29.9		41-19.8		41-29.9		42-17.6		42-20.0		42-22.5		42-24.9		42-15.1		42-19.9		42-24.9	
Longitude:E	141-50.3		141-40.0		141-20.1		140-32.5		140-34.8		140-37.4		140-39.9		140-49.9		140-49.9		140-50.0	
Date	1995/05/24		1995/05/24		1995/05/24		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31	
Time(JST)	13:12		15:38		18:22		00:50		01:21		01:50		02:18		03:56		05:18		06:10	
Weather	B		B		B		B		B		B		B		BC		D		O	
Air Temp.	9.5		9.5		10.0		7.5		7.4		7.4		7.4		7.0		7.0		8.0	
Bar	1013.0		1013.0		1013.5		1009.5		1009.5		1009.5		1009.5		1009.5		1010.0		1009.6	
Wind Dir	NNW		CALM		CALM		ESE		CALM		CALM		CALM		NE		ENE		SE	
Wind Spd/F	S 7		S 0		S 0		S 5		S 0		S 0		S 0		S 5		S 5		S 5	
Transparency	10		8		11										9				10	
Depth	951		758		241		97		95		90		80		71		49		42	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.6	33.61*	11.2	33.91*	12.6	33.98*	9.0	31.600	9.4	31.601	9.2	31.582	9.4	31.554	10.3	31.396	10.5	31.155	10.7	31.261
10m	10.60	33.777	11.02	33.921	11.00	34.090	7.87	31.733	7.92	31.746	8.65	31.623	9.17	31.550	10.19	31.454	11.04	31.318	10.80	31.383
20m	9.70	33.762	11.00	33.944	10.56	34.165	6.94	31.889	7.24	31.831	7.45	31.771	7.97	31.715	5.73	32.447	7.94	31.827	7.42	31.893
30m	7.59	33.501	10.97	33.949	10.57	34.176	5.70	32.143	6.40	31.993	6.71	31.911	6.88	31.909	4.22	32.621	3.96	32.461	4.79	32.409
50m	9.37	33.995	10.93	33.993	10.44	34.173	3.19	32.736	3.22	32.660	3.49	32.678	3.82	32.562	3.68	33.049				
75m	8.51	34.008	10.82	34.038	10.35	34.177	4.20	33.270	4.43	33.401	4.36	33.337	3.56	33.173						
100m	7.68	33.976	10.75	34.031	10.32	34.178														
125m	7.91	34.024	10.35	34.053	10.09	34.211														
150m	7.86	34.020	10.29	34.054	9.94	34.210														
200m	6.38	33.815	9.46	33.960	9.19	34.227														
250m	3.58	33.522	7.84	33.816																
300m	2.88	33.511	6.72	33.847																
400m	2.41	33.612	3.20	33.621																
500m	2.64	33.775	2.75	33.775																
600m	3.10	33.994	3.09	33.932																
700m																				
800m																				
900m																				
1000m																				

Table 4-17

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HKG207		HKG125		HKG124		HKG122		HKG131		HKG132		HKG133		HKG134		HKG137		HKG138	
Latitude:N	42-27.5		42-27.8		42-29.9		42-33.0		42-31.7		42-30.2		42-25.1		42-20.1		42-20.1		42-20.1	
Longitude:E	140-42.6		140-40.0		140-40.2		140-40.0		140-30.0		140-29.8		140-29.7		140-30.1		140-25.0		140-22.1	
Date	1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31	
Time(JST)	07:05		07:34		08:05		08:42		09:49		10:22		11:20		12:19		13:07		13:45	
Weather	O		O		C		C		C		C		C		R		R			
Air Temp.	9.0		9.0		8.2		8.0		9.5		9.0		9.0		7.0		7.0		7.5	
Bar	1010.0		1010.0		1010.0		1010.0		1010.0		1009.5		1009.0		1011.0		1009.0		1009.5	
Wind Dir	E		SE		SES		SSE		SE		SE		ESE		S		E		ESE	
Wind Spd/F	S 4		S 4		S 3		S 5		S 5		S 5		S 5		S 6		S 3		S 3	
Transparency	12		12		11		3		10		11		8		9		8		7	
Depth	67		75		66		49		58		65		93		97		70		48	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.0	31.484	9.2	31.586	10.6	31.926	11.5	29.673	10.4	31.307	10.9	31.434	11.2	31.191	10.8	30.994	11.0	30.632	11.4	31.283
10m	9.60	31.489	8.95	31.584	9.85	31.496	10.40	31.426	10.18	31.423	10.34	31.406	11.04	31.177	10.59	31.390	10.93	31.078	10.55	31.394
20m	9.15	31.552	8.69	31.616	9.06	31.586	10.00	31.481	9.49	31.574	7.81	31.849	6.28	32.070	6.65	31.988	7.46	31.987	7.21	31.897
30m	8.17	31.777	8.06	31.788	6.13	32.076	5.07	32.279	5.29	32.251	5.51	32.183	4.63	32.322	5.53	32.282	5.06	32.289	5.44	32.172
50m	3.62	32.525	3.30	32.608	3.02	32.767			3.15	32.802	3.04	32.803	2.92	32.819	2.99	32.702	3.02	32.811		
75m													4.30	33.332	4.12	33.313				
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-18

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HKG135		HKG136		HKG127		HKG129		HKG120		HKG126		HKG121		HKG115		HKG114		HKG113	
Latitude:N	42-14.9		42-13.1		42-15.0		42-11.1		42-10.2		42-20.0		42- 8.3		42- 0.0		42- 4.9		42- 9.9	
Longitude:E	140-29.9		140-30.8		140-39.9		140-39.9		140-49.6		140-40.1		140-48.3		141- 0.0		140-59.9		141- 0.0	
Date	1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/06/01		1995/06/01		1995/06/01		1995/06/01	
Time(JST)	14:58		15:32		16:58		17:48		19:13		20:41		04:21		06:10		07:03		07:56	
Weather	BC		BC		BC		BC		BC		C		BC		BC		BC		BC	
Air Temp.	8.0		9.5		10.5		10.0		8.5		7.0		7.5		8.8		9.0		8.0	
Bar	1009.0		1009.0		1009.0		1010.0		1010.0		1010.5		1011.5		1012.0		1012.5		1012.5	
Wind Dir	ESE		E		E		E		E		E		CALM		WNW		CALM		WSW	
Wind Spd/F	S 2		S 5		S 4		S 4		S 3		S 2		S 0		S 1		S 0		S 3	
Transparency			11		12								10		12		12		10	
Depth	85		81		89		90		96		79		84		90		85		83	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.6*	31.32*	10.6	31.344	11.2	31.315	10.9	31.327	10.8	31.332	10.6	31.407	10.3	31.219	10.0	31.494	9.4	31.728	9.4	31.733
10m	9.30	31.595	7.89	31.838	10.80	31.339	7.85	31.829	10.13	31.425	10.68	31.358	7.05	31.970	8.04	31.918	9.03	31.790	6.75	32.267
20m	6.00	32.132	5.94	32.128	8.92	31.647	6.45	32.003	5.75	32.389	9.47	31.544	5.87	32.147	6.04	32.567	5.24	32.569	5.81	32.544
30m	4.74	32.339	5.28	32.256	6.64	32.000	5.85	32.346	5.41	32.755	7.37	31.799	6.14	32.534	5.92	32.845	5.03	32.693	5.42	32.670
50m	2.95	32.791	3.02	32.756	3.76	32.647	3.01	32.748	3.14	32.882	4.61	32.414	3.46	32.786	3.26	33.008	2.32	32.866	3.32	32.864
75m	3.80	33.124	3.47	33.011	3.99	33.218	4.28	33.302	4.40	33.424	3.79	33.244	3.59	33.092	4.26	33.375	4.53	33.391	3.86	33.204
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-19

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	HKG112		HKG110		HKG109		HKG108		HKG107		HKG106		HKG101		HKG102		HKG103		HKG104	
Latitude:N	42-12.4		42-17.2		42-15.0		42-20.0		42-22.4		42-23.9		42-34.4		42-33.6		42-32.6		42-30.1	
Longitude:E	141- 0.1		141- 0.1		141- 9.9		141- 9.9		141- 9.9		141-10.0		141-29.9		141-29.9		141-29.9		141-30.0	
Date	1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01	
Time(JST)	08:33		09:26		10:34		11:30		12:06		12:39		15:15		15:42		16:07		16:41	
Weather	BC		BC		BC		BC		BC		BC		BC		R		R		BC	
Air Temp.	8.0		9.3		9.5		12.0		11.5		12.5		11.5		10.5		10.0		11.0	
Bar	1013.0		1013.0		1013.0		1013.5		1013.0		1013.0		1013.0		1013.0		1013.0		1013.0	
Wind Dir	N		W		WNW		CALM		CALM		CALM		CALM		CALM		CALM		CALM	
Wind Spd/F	S 2		S 2		S 4		S 0		S 0		S 0		S 0		S 0		S 0		S 0	
Transparency	10		4		13		14		13		4		3		4		13		13	
Depth	77		33		97		72		58		39		37		50		61		77	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	9.4	31.684	10.2	30.882	9.8	31.837	10.4	31.896	10.2	31.950	9.6	30.948	10.6	30.410	10.2	31.002	10.1	31.296	9.0	32.006
10m	8.35	31.891	8.62	31.389	8.90	32.088	8.90	32.449	7.73	32.105	7.96	31.906	8.22	31.854	8.17	31.894	8.49	32.333	7.24	32.172
20m	5.78	32.500	7.62	31.960	4.52	32.483	7.73	32.521	7.11	32.285	7.40	32.125	7.89	32.087	8.28	32.257	7.00	32.391	8.24	32.591
30m	5.16	32.660			3.88	32.750	3.67	32.634	4.89	32.489	6.94	32.211	7.94	32.112	7.52	32.264	6.22	32.442	6.93	32.602
50m	2.54	32.737			2.55	32.917	2.91	32.841	3.37	32.730							3.58	32.590	2.51	32.716
75m					4.49	33.403														
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-20

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199505		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	HKG105		HSR001		HSR002		HSR003		HSR004		HSR005		HSR006		HSR007		HSR008		HSR009	
Latitude:N	42-25.1		41- 0.0		41- 0.1		41- 0.0		41- 0.0		40-30.0		40-30.0		40- 3.4		39-30.1		39-30.1	
Longitude:E	141-30.1		138-59.8		138-29.8		138- 0.0		137-30.0		137-59.8		138-29.8		138-29.5		138-29.9		139- 0.0	
Date	1995/06/01		1995/06/06		1995/06/07		1995/06/07		1995/06/07		1995/06/07		1995/06/07		1995/06/08		1995/06/08		1995/06/08	
Time(JST)	17:36		20:02		05:58		08:52		11:45		16:15		19:12		03:45		07:35		10:28	
Weather	BC		B		C		C		C		C		B		C		C		C	
Air Temp.	13.2		11.0		10.5		10.7		14.0		17.0		12.0		12.0		16.0		17.0	
Bar	1013.0		1014.5		1019.1		1020.0		1020.0		1020.5		1021.0		1020.0		1020.5		1020.0	
Wind Dir	CALM		NNW		N		NW		CALM		NNW		NNW		NE		NE		CALM	
Wind Spd/F	S 0		S 2		S 3		S 2		S 0		S 3		S 3		S 2		S 3		S 0	
Transparency	13												1				18		19	
Depth	171		2000		3370		1280		1000		1000		2000		2000		2000		556	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.6	32.167	14.0	34.016	14.6	34.023	13.0	33.970	12.3	33.894	13.8	33.939	14.6	34.049	15.4	34.254	15.4	34.181	15.8	34.221
10m	8.55	32.457	13.79	34.144	13.13	34.046	12.33	33.955	11.56	33.867	12.73	33.940	13.49	34.022	14.50	34.213	15.03	34.158	14.81	34.168
20m	7.68	32.677	12.62	34.144	10.71	34.296	8.67	34.069	6.28	34.128	8.51	34.316	11.28	34.142	14.08	34.191	13.92	34.223	13.06	34.295
30m	4.09	32.675	10.86	34.117	8.51	34.266	5.07	34.129	3.83	34.101	5.29	34.123	7.99	34.232	11.98	34.425	10.74	34.390	11.23	34.358
50m	2.50	32.878	6.83	34.156	6.17	34.154	3.11	34.097	2.25	34.094	3.85	34.094	6.27	34.169	9.27	34.326	8.48	34.291	10.70	34.342
75m	3.93	33.221	4.98	34.107	4.13	34.105	2.11	34.080	1.67	34.083	2.92	34.090	4.31	34.114	7.28	34.220	6.79	34.194	10.35	34.321
100m	5.18	33.569	3.76	34.071	3.25	34.100	1.69	34.076	1.30	34.076	1.98	34.080	3.21	34.094	5.38	34.134	5.05	34.128	9.84	34.298
125m	4.58	33.535	3.09	34.091	2.67	34.087	1.49	34.079	1.21	34.079	1.70	34.082	2.62	34.074	3.67	34.074	3.81	34.107	9.11	34.277
150m	4.64	33.554	2.50	34.083	2.03	34.078	1.34	34.081	1.17	34.082	1.42	34.077	2.01	34.072	2.63	34.071	2.67	34.088	8.66	34.259
200m			1.58	34.077	1.30	34.077	1.09	34.080	0.99	34.080	1.24	34.080	1.40	34.072	1.86	34.074	1.50	34.073	5.14	34.134
250m			1.10	34.074	1.03	34.077	0.98	34.084	0.85	34.081	1.09	34.082	1.04	34.073	1.25	34.073	1.02	34.072	2.60	34.086
300m			0.92	34.077	0.88	34.080	0.83	34.084	0.74	34.081	0.89	34.077	0.88	34.075	0.92	34.073	0.78	34.072	1.38	34.075
400m			0.64	34.076	0.64	34.081	0.62	34.082	0.57	34.081	0.62	34.078	0.65	34.078	0.58	34.072	0.52	34.074	0.86	34.071
500m			0.45	34.074	0.49	34.080	0.46	34.081	0.44	34.080	0.48	34.078	0.45	34.075	0.44	34.073	0.38	34.072	0.49	34.072
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-21

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	HSR100		HSR011		HSR012		HSR014		HSR015		HSR017		HSR016		HSR018		HSR019		HSR020	
Latitude:N	39-30.0		39-59.9		40- 0.2		40-27.9		40-32.1		40-49.9		41- 0.3		40-59.9		40-59.9		41-29.9	
Longitude:E	139-29.9		138-59.9		139-30.0		139- 2.1		139-22.7		139-50.0		139-30.1		139-49.8		139-59.9		139-50.1	
Date	1995/06/08		1995/06/08		1995/06/09		1995/06/11		1995/06/11		1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/12	
Time(JST)	13:12		17:50		05:55		15:18		18:49		06:51		09:15		11:25		12:40		17:06	
Weather	C		C		B		BC		B		B		B		B		BC		BC	
Air Temp.	18.5		16.5		14.0		12.0		14.0		12.1		18.5		17.0		18.0		16.0	
Bar	1019.0		1017.5		1014.6		1017.5		1018.0		1021.3		1021.5		1021.0		1020.0		1018.5	
Wind Dir	CALM		NNW		E		NE		NE		ENE		E		CALM		NW		NNW	
Wind Spd/F	S 0		S 2		S 2		S 7		S 7		S 4		S 2		S 0		S 1		S 2	
Transparency	16		18		16		12		17		18		19		19		18		16	
Depth	580		1800		1300		2000		1000		1300		2100		1800		520		1334	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.8	34.286	16.4	34.290	16.0	34.206	16.5	34.218	17.4	33.394	15.6	33.464	17.1	33.141	16.7	33.500	17.2	33.021	16.4	34.201
10m	15.93	34.282	15.06	34.302	15.76	34.181	15.80	34.162	17.43	33.367	15.59	33.389	15.64	34.177	15.67	33.616	15.73	33.287	15.60	34.240
20m	15.67	34.282	13.56	34.431	15.59	34.185	14.26	34.256	15.77	34.244	14.48	34.196	14.73	34.316	15.34	34.149	15.44	34.226	15.27	34.255
30m	15.35	34.338	12.52	34.530	14.74	34.217	12.43	34.437	15.08	34.317	13.51	34.195	12.96	34.384	12.36	34.216	15.20	34.230	13.62	34.355
50m	12.73	34.504	11.73	34.502	12.25	34.482	10.81	34.432	12.11	34.455	11.55	34.236	12.04	34.431	11.26	34.282	11.84	34.251	10.97	34.395
75m	11.75	34.447	10.77	34.399	11.09	34.399	8.39	34.289	11.22	34.438	10.97	34.286	11.34	34.414	10.76	34.303	11.13	34.319	9.34	34.296
100m	11.36	34.454	9.98	34.353	10.81	34.411	5.50	34.121	10.25	34.334	10.72	34.305	10.90	34.376	10.75	34.337	10.79	34.317	7.29	34.210
125m	10.72	34.378	8.88	34.285	9.91	34.353	3.95	34.084	9.70	34.333	10.42	34.295	10.31	34.321	10.54	34.322	10.59	34.307	5.63	34.154
150m	10.12	34.329	6.75	34.183	8.36	34.276	2.77	34.069	8.24	34.249	10.24	34.315	9.79	34.286	10.32	34.316	10.49	34.309	4.19	34.111
200m	8.42	34.257	3.21	34.086	5.24	34.147	1.95	34.069	4.42	34.103	9.34	34.292	7.52	34.212	9.10	34.256	9.32	34.286	2.14	34.085
250m	5.18	34.144	2.02	34.079	3.32	34.094	1.21	34.067	2.34	34.068	5.10	34.129	4.10	34.107	5.73	34.151	3.33	34.123	1.53	34.074
300m	3.06	34.093	1.34	34.072	2.13	34.077	0.91	34.067	1.70	34.064	1.58	34.086	2.54	34.082	2.68	34.088	1.21	34.074	1.05	34.068
400m	1.02	34.072	0.73	34.074	0.76	34.071	0.64	34.068	0.75	34.065	0.69	34.068	1.34	34.071	0.98	34.070	0.55	34.064	0.81	34.069
500m	0.52	34.071	0.48	34.071	0.51	34.070	0.46	34.067	0.51	34.065	0.49	34.068	0.85	34.069	0.54	34.066	0.41	34.064	0.55	34.067
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-22

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	HSR021		HAD106		HAD107		HAD105		HAD104		HAD103		HAD102		HAD101		HFK04		HFK03	
Latitude:N	41-15.2		41-23.1		41-20.8		41-18.2		41-15.9		41-13.5		41-10.7		41- 8.8		41-57.5		42- 0.0	
Longitude:E	139-43.5		140-10.4		140-11.1		140-11.8		140-12.4		140-13.1		140-13.6		140-14.2		141- 2.6		141- 4.9	
Date	1995/06/12		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/19		1995/06/19	
Time(JST)	19:33		06:20		06:48		08:06		08:38		09:10		09:46		10:12		15:27		15:56	
Weather	BC		BC																	
Air Temp.	14.0		12.9																	
Bar	1018.5		1017.7																	
Wind Dir	CALM		E																	
Wind Spd/F	S 0		S 2																	
Transparency			15																	
Depth	1061		64																	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.2	33.831	14.8*	34.02*	15.7*	33.88*	15.6*	33.84*	15.8*	33.66*	16.1*	33.57*	16.1*	33.52*	16.2*	32.97*	12.9*	31.40*	12.8*	32.41*
10m	15.78	33.908	14.35	34.019	15.19	33.981	15.38	33.896	15.16	33.874	15.20	34.047	14.78	33.814	15.97	33.240	11.86	32.717	12.49	32.563
20m	15.79	34.008	14.04	34.043	14.47	34.069	14.91	34.007	14.51	34.074	13.57	34.417	14.23	34.068	15.73	33.980	8.52	32.449	10.17	32.946
30m	13.31	34.387	14.10	34.039	12.15	34.195	14.28	34.143	13.22	34.301	12.43	34.420	12.50	34.193	14.66	34.289	7.32	32.654	4.95	32.882
50m	11.86	34.419	12.68	34.164	11.89	34.318	11.39	34.392	11.80	34.392	11.32	34.367	12.39	34.464	12.08	34.176	2.40	32.851	3.69	32.982
75m	11.51	34.424			10.45	34.257	10.31	34.341	10.96	34.364	11.00	34.354					4.69	33.377	4.67	33.349
100m	11.16	34.431			9.55	34.240	9.62	34.287	10.89	34.360	10.92	34.350					4.73	33.583	5.21	33.554
125m	10.00	34.332							9.56	34.311										
150m	9.41	34.298																		
200m	6.58	34.187																		
250m	3.28	34.091																		
300m	2.29	34.082																		
400m	1.14	34.067																		
500m	0.61	34.066																		
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-23

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	HFK02		HFK01		HFK08		HFK07		HFK06		HFK05		HFK12		HFK11		HFK10		HFK09		
Latitude:N	42- 5.2		42-10.0		42-15.1		42-10.1		42- 5.1		42- 2.6		42- 7.6		42-10.1		42-15.0		42-17.4		
Longitude:E	141- 9.8		141-14.8		141-10.1		141- 4.9		141- 0.1		140-57.6		140-52.6		140-54.8		141- 0.0		141- 4.9		
Date	1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/20		
Time(JST)	16:45		18:09		19:04		19:55		20:51		21:27		22:17		22:49		23:46		00:26		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	12.5*	32.59*	12.5*	32.46*	11.7*	31.98*	11.8*	31.83*	12.5*	32.43*	13.0*	31.85*	12.8*	31.76*	12.1*	31.88*	12.0*	31.71*	12.8*	31.54*	
10m	12.48	32.603	12.52	32.484	9.56	32.081	11.88	32.020	12.43	32.451	11.33	32.479	12.66	32.020	12.05	31.938	12.01	31.712	12.73	31.641	
20m	10.51	32.958	10.93	32.758	8.05	32.211	10.92	32.744	11.71	32.815	10.34	32.587	9.50	32.404	11.72	32.678	11.42	32.363	9.73	32.240	
30m	7.45	33.328	9.11	33.035	8.31	32.414	7.97	32.784	6.63	32.805	8.38	32.822	8.54	32.557	8.81	32.468	8.75	32.507	8.91	32.541	
50m	5.99	33.492	6.38	33.493	5.78	32.904	6.25	33.250	4.04	32.838	3.84	32.845	4.04	32.827	4.08	32.811	6.83	32.726	6.35	32.994	
75m	6.53	33.701	5.38	33.507	6.54	33.621	4.74	33.381	4.26	33.260			4.82	33.447							
100m	4.93	33.544	5.37	33.611																	
125m			4.93	33.589																	
150m			4.63	33.581																	
200m			4.02	33.551																	
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-24

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	HFK16		HFK15		HFK14		HFK13		HFK20		HFK19		HFK18		HFK17		HFK26		HFK25		
Latitude:N	42-17.6		42-15.2		42-13.0		42-10.1		42-10.1		42-15.0		42-20.1		42-25.1		42-28.0		42-25.2		
Longitude:E	140-52.6		140-50.0		140-47.7		140-44.9		140-34.9		140-39.9		140-44.8		140-50.0		140-42.5		140-40.0		
Date	1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		
Time(JST)	01:38		02:11		02:49		03:26		04:24		05:18		06:13		07:05		07:55		08:29		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	12.1*	31.37*	12.1*	31.37*	12.5*	31.56*	11.7*	31.42*	11.1*	31.40*	11.6*	31.36*	12.7*	31.28*	12.7*	31.28*	12.5*	31.35*	12.6*	31.33*	
10m	12.10	31.386	12.12	31.373	12.45	31.564	10.27	31.598	9.63	31.585	11.54	31.367	12.73	31.276	12.69	31.285	12.28	31.372	12.54	31.333	
20m	11.40	31.469	8.32	31.992	8.39	31.972	11.50	32.519	8.33	31.822	10.38	31.628	10.70	31.476	12.72	31.304	11.91	31.434	11.66	31.502	
30m	7.98	32.328	7.74	32.374	7.23	32.182	8.21	32.486	5.88	32.224	7.48	32.392	7.27	32.304	9.96	32.447	9.22	31.939	9.43	31.924	
50m	4.41	32.734	4.62	32.814	3.74	32.765	3.13	32.891	3.17	32.771	3.22	32.752	4.42	32.715			4.97	32.578	4.22	32.503	
75m					4.87	33.412	4.26	33.346			4.12	33.263							3.95	33.208	
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-25

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	HFK24		HFK23		HFK22		HN001		HFK29		HFK28		HFK27		HTA06		HTA05		HTA04		
Latitude:N	42-22.8		42-20.1		42-17.8		42-15.1		42-20.0		42-25.0		42-30.1		42-13.9		42-18.0		42-15.7		
Longitude:E	140-37.6		140-34.9		140-32.6		140-30.0		140-25.0		140-29.9		140-35.0		140-58.0		140-55.8		140-52.7		
Date	1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/21		1995/06/21		1995/06/21		
Time(JST)	09:01		09:33		10:02		11:04		11:51		12:42		13:35		01:16		02:03		02:41		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	12.8*	31.23*	13.1*	31.22*	12.9*	31.18*	12.4*	31.22*	13.2*	31.16*	12.6*	31.38*	13.6*	31.14*	12.2	31.72*	12.9	31.21*	12.1	31.48*	
10m	12.80	31.235	13.07	31.222	12.88	31.181	12.38	31.219	13.21	31.167	12.63	31.382	13.53	31.146	11.59	31.907	12.87	31.340	11.84	31.517	
20m	9.47	31.861	8.68	31.805	9.31	31.914	8.75	31.781	9.54	31.677	10.04	31.885	11.70	31.385	10.31	32.155	12.07	31.758	8.98	31.801	
30m	8.62	32.091	7.56	32.382	6.95	32.268	7.16	32.378	6.13	32.161	8.75	32.088	8.60	32.059	9.49	32.441	9.41	32.477	7.18	32.234	
50m	4.02	32.728	3.35	32.677	3.32	32.699	3.80	32.713	4.04	32.730	3.61	32.621	4.75	32.761	6.61	32.751	6.17	32.741	3.80	32.756	
75m	3.86	33.184	4.13	33.268	4.12	33.297	3.75	33.160			3.93	33.215									
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-26

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	HTA03		HTA02		HTA01		HTA07		HTA08		HTA09		HTA10		HTA11		HTA16		HTA15		
Latitude:N	42-13.4		42-11.0		42- 8.7		42-11.0		42-13.3		42-15.6		42-18.0		42-13.5		42-18.1		42-15.7		
Longitude:E	140-49.8		140-46.7		140-44.0		140-46.6		140-49.7		140-52.8		140-55.6		140-58.0		140-55.8		140-52.8		
Date	1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		
Time(JST)	03:16		03:51		04:25		04:59		05:35		06:09		06:43		07:33		08:16		08:55		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	12.0	31.66*	12.0	31.74*	10.2	31.65*	12.0	31.76*	12.1	31.64*	12.1*	31.56*	12.9	31.27*	12.6	31.54*	12.9	31.28*	12.2	32.70*	
10m	12.03	31.666	12.00	31.811	9.63	31.638	11.93	31.794	12.07	31.652	12.02	31.595	12.20	31.698	11.83	31.863	12.49	31.557	12.24	32.702	
20m	8.54	32.082	8.50	32.109	8.57	31.875	8.80	32.047	8.30	32.061	9.02	31.932	10.23	32.363	10.75	32.132	10.11	32.359	12.08	32.834	
30m	7.26	32.160	9.47	32.784	6.77	32.387	9.71	32.765	7.96	32.210	6.97	32.272	8.67	32.519	10.21	32.551	8.49	32.516	10.39	N.D.	
50m	3.88	32.676	4.35	32.837	3.40	32.736	4.14	32.842	4.15	32.744	4.04	32.748	7.48	32.683	6.58	32.762	7.64	32.657	7.17	N.D.	
75m			3.76	33.179			3.99	33.256													
100m																					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-27

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	HTA14		HTA13		HTA12		HTA17		HTA18		HTA19		HTA20		HTA21		HTA22		HKD101	
Latitude:N	42-13.4		42-11.1		42- 8.8		42-11.0		42-13.1		42-15.6		42-18.0		42-13.8		42-17.9		41-59.9	
Longitude:E	140-50.1		140-46.9		140-44.1		140-47.0		140-49.6		140-52.7		140-55.7		140-58.0		140-55.8		141- 0.1	
Date	1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/26	
Time(JST)	09:28		10:07		10:38		11:12		11:46		12:22		12:56		13:41		14:29		21:32	
Weather	C																			
Air Temp.	10.0																			
Bar	1002.5																			
Wind Dir	SW																			
Wind Spd/F	S 2																			
Transparency																				
Depth	89																			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.1	31.56*	12.5	31.88*	9.9	31.57*	12.6	32.87*	12.2	31.52*	12.3	31.67*	13.0*	31.28*	12.7	31.60*	13.0	31.27*	12.5	31.42*
10m	12.09	31.635	12.40	31.944	9.08	31.666	12.48	31.974	12.11	31.587	12.25	31.671	12.59	31.488	12.09	31.751	12.76	31.361	12.16	32.613
20m	7.89	32.102	10.53	32.124	10.63	32.369	10.76	32.061	8.64	32.048	9.07	31.799	10.10	32.232	11.14	31.974	11.03	32.191	11.17	32.776
30m	7.81	32.188	8.89	32.525	7.03	32.364	9.12	32.578	8.24	32.205	7.18	32.274	8.94	32.563	8.97	32.418	8.60	32.480	8.64	32.763
50m	3.99	32.628	4.87	32.775	3.92	32.532	5.33	32.670	4.01	32.741	4.26	32.642	6.10	32.738	6.91	32.746	6.02	32.742	3.37	32.894
75m			3.95	33.246			3.73	33.172											4.62	33.424
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-28

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	HKD102		HKD103		HKD104		HKD105		HKD106		HKD107		HKD108		HKD109		HKD110		HKD111	
Latitude:N	42- 4.9		42- 9.9		42-10.0		42-15.0		42-15.2		42-11.2		42-14.9		42-15.0		42-15.1		42-20.3	
Longitude:E	140-59.9		140-59.9		140-50.0		140-50.0		140-45.1		140-40.1		140-40.2		140-35.2		140-30.0		140-30.6	
Date	1995/06/26		1995/06/26		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27	
Time(JST)	22:20		23:05		00:06		00:53		01:41		02:38		03:19		03:56		04:38		05:34	
Weather	C		C		F		F		F		F		C		C		C		C	
Air Temp.	10.5		11.0		10.5		10.5		10.5		10.5		10.5		10.5		11.0		11.0	
Bar	1002.5		1002.5		1002.5		1002.5		1002.0		1002.5		1002.5		1002.5		1003.0		1003.5	
Wind Dir	SSW		S		CALM		CALM		W		W		W		WNW		WSW		W	
Wind Spd/F	S 3		S 2		S 0		S 0		S 1		S 2		S 1		S 2		S 1		S 1	
Transparency																	13		17	
Depth	85		82		91		70		80		91		89		93		85		96	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	13.6	31.86*	13.7	31.54*	13.5	31.30*	13.7	31.42*	13.2	31.39*	14.0	31.15*	14.0	31.16*	14.0	31.20*	13.6	31.19*	13.6	31.28*
10m	13.00	32.278	12.56	32.540	12.14	31.492	13.47	31.510	13.08	31.435	12.87	31.461	12.76	31.310	12.62	31.449	13.61	31.195	13.36	31.333
20m	10.83	32.701	10.90	32.772	11.41	32.684	12.14	31.828	11.60	31.660	9.34	31.977	8.43	31.887	11.80	32.551	9.81	31.794	11.34	31.671
30m	10.49	32.923	10.68	32.844	10.58	32.819	11.05	32.810	7.14	32.199	7.90	32.285	7.66	32.332	9.39	32.534	8.50	32.334	9.07	32.274
50m	6.42	33.265	5.29	32.975	6.97	33.076	4.85	32.797	3.64	32.607	3.47	32.686	3.93	32.731	3.59	32.677	3.95	32.654	4.06	32.638
75m	5.53	33.541	4.74	33.320	4.65	33.359			4.03	33.250	3.73	33.155	3.88	33.146	4.06	33.250	3.94	33.227	4.04	33.265
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-29

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	HKD112		HKD113		HKD114		HKD115		HKD116		HKD117		HKD118		HKD119		HKD120		HKD121	
Latitude:N	42-20.1		42-24.9		42-29.9		42-30.1		42-25.1		42-25.0		42-25.0		42-20.2		42-20.0		42-20.0	
Longitude:E	140-25.1		140-29.9		140-30.0		140-40.1		140-40.1		140-40.1		140-35.1		140-34.9		140-39.8		140-44.9	
Date	1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27	
Time(JST)	06:10		07:00		07:43		08:40		09:29		10:05		10:40		11:23		12:01		12:39	
Weather	C		C		C		C		C		C		C		BC		BC		BC	
Air Temp.	11.5		12.5		13.5		14.5		15.0		16.5		16.0		16.5		18.0		18.5	
Bar	1003.5		1004.0		1004.5		1005.0		1005.0		1005.5		1005.5		1005.5		1005.5		1006.0	
Wind Dir	WSW		WNW		NW		CALM		CALM		WNW		WNW		CALM		W		SW	
Wind Spd/F	S 1		S 2		S 2		S 0		S 0		S 3		S 1		S 0		S 1		S 2	
Transparency	15		18		18		15		16		13		16		17		17		16	
Depth	70		93		67		64		57		77		92		92		78		61	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.1	31.17*	13.7	31.30*	13.5	31.60*	14.5	<i>N.D.</i>	15.4	31.30*	14.2	31.30*	14.7	31.48*	16.2	31.76*	14.5	31.29*	16.3	31.14*
10m	14.00	31.204	13.33	31.335	12.98	31.483	13.02	31.350	13.09	31.402	13.33	31.324	13.39	31.333	13.53	31.330	13.28	31.347	13.26	31.444
20m	9.24	31.880	12.21	31.452	11.89	31.688	12.66	31.577	12.49	31.592	12.86	31.385	12.88	31.358	12.83	31.486	12.64	31.492	11.05	31.639
30m	6.89	32.215	9.01	32.152	8.04	32.195	8.38	31.964	8.77	32.249	9.51	31.927	9.33	31.930	8.12	32.119	9.10	32.164	8.14	32.174
50m	3.67	32.684	3.69	32.538	3.69	32.654	4.21	32.634	4.56	32.675	4.96	32.653	4.28	32.706	4.46	32.680	3.93	32.666	5.51	32.767
75m			3.91	33.239									3.65	33.106	3.75	33.144				
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-30

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199507		199507		199507		199507	
Station No	HKD122		HKD123		HKD124		HKD125		HKD126		HKD127		HSR006		HSR005		HSR004		HSR001	
Latitude:N	42-20.0		42-15.1		42-19.9		42-23.8		42-34.6		42-30.2		41-39.9		41-50.1		42- 0.1		41-54.2	
Longitude:E	140-49.9		140-59.8		141- 9.8		141- 9.8		141-29.8		141-30.0		141-19.3		141-20.1		141-20.1		141- 9.5	
Date	1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/06/27		1995/07/04		1995/07/04		1995/07/04		1995/07/04	
Time(JST)	13:16		14:28		15:41		16:21		18:38		19:17		13:33		14:54		16:18		18:55	
Weather	BC		B		B		C		C		C		BC		BC		B		B	
Air Temp.	19.0		18.0		20.5		18.5		14.0		13.5		16.5		16.0		13.0		12.5	
Bar	1006.0		1006.0		1006.5		1006.5		1007.5		1007.5		1012.3		1011.6		1012.0		1002.0	
Wind Dir	CALM		ENE		NE		CALM		CALM		WSW		SSE		SSE		SE		SE	
Wind Spd/F	S 0		S 3		S 1		S 0		S 0		S 1		S 2		S 3		S 4		S 5	
Transparency	11		13		15		7		5				15		13		12		12	
Depth	48		70		72		40		32		77		231		290		311		182	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.5	31.16*	15.2	31.22*	15.2	32.52*	14.3	31.34*	14.7	30.87*	13.1	33.16*	14.0	32.823	14.7	32.338	14.7	32.480	15.5	31.359
10m	12.60	31.421	12.33	32.120	11.67	32.725	12.43	31.952	10.91	32.378	12.26	32.738	12.79	33.260	12.78	32.508	14.04	32.434	13.32	32.475
20m	7.71	32.205	8.19	32.189	11.06	32.731	10.85	32.835	9.96	32.658	11.13	32.711	12.63	33.800	10.32	32.833	11.05	33.375	11.39	32.859
30m	7.85	32.553	9.61	32.826	10.15	32.949	8.84	32.963			11.28	32.900	12.78	34.028	10.97	33.265	9.72	33.417	10.48	32.923
50m			5.13	32.893	5.55	32.984					8.39	33.069	11.36	34.229	6.24	33.338	9.20	33.830	6.35	33.065
75m													9.38	33.960	5.53	33.524	4.36	33.389	4.32	33.199
100m													8.15	34.025	5.50	33.615	5.12	33.575	5.17	33.520
125m													7.93	34.035	5.32	33.633	4.81	33.584	5.08	33.529
150m													6.27	33.866	4.95	33.615	4.56	33.577	5.31	33.640
200m													2.72	33.523	4.01	33.548	3.96	33.551		
250m															3.30	33.522	3.11	33.521		
300m																	2.51	33.538		
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-31

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	HSR003		HSR002		HSR014		HSR015		HSR013		HSR012		HSR011		HSR010		HSR009		HSR008	
Latitude:N	42- 9.9		42-19.9		42- 9.6		42- 0.3		42- 0.1		41-50.1		41-40.1		41-30.1		41-20.3		41-12.2	
Longitude:E	141-19.9		141-19.9		142-29.8		142-39.8		142-20.1		142-10.0		142- 0.1		141-50.0		141-39.9		141-32.4	
Date	1995/07/05		1995/07/05		1995/07/05		1995/07/05		1995/07/06		1995/07/06		1995/07/06		1995/07/06		1995/07/06		1995/07/06	
Time(JST)	06:12		07:44		14:05		18:57		06:00		07:51		09:42		11:37		13:28		18:37	
Weather	F		F		C		C		F		F		C		C		F		F	
Air Temp.	13.0		14.5		18.5		14.5		14.0		16.0		14.0		18.0		17.5		14.5	
Bar	1013.5		1013.0		1012.6		1013.0		1015.0		1015.0		1014.5		1014.5		1013.7		1013.5	
Wind Dir	SSW		E		CALM		CALM		CALM		E		ESE		E		ENE		CALM	
Wind Spd/F	S 1		S 1		S 0		S 0		S 0		S 1		S 3		S 1		S 1		S 0	
Transparency	13		18		7		8		9		14		11		12		11		13	
Depth	363		240		122		530		1006		1007		1060		948		761		568	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	15.1	32.384	14.7	32.327	14.8	32.233	12.1	32.066	14.4	31.797	13.7	32.682	15.5	33.963	15.2	32.817	14.2	32.495	15.4	33.729
10m	14.12	32.776	11.85	32.744	12.96	32.642	10.26	32.193	11.74	32.211	12.87	33.241	14.72	34.101	13.13	32.908	12.31	32.740	15.76	34.031
20m	11.79	33.480	11.40	32.799	12.56	33.399	9.45	32.265	11.52	32.786	11.48	33.446	13.62	34.177	12.29	33.133	12.56	32.957	14.81	34.091
30m	8.51	33.379	10.36	32.807	12.45	33.604	8.20	32.265	11.56	33.179	9.86	33.590	13.29	34.191	12.82	33.703	11.73	33.058	14.36	34.160
50m	6.14	33.486	9.55	33.351	8.41	33.483	9.25	33.127	7.41	32.968	7.34	33.625	12.63	34.170	10.68	33.924	11.28	33.514	14.16	34.173
75m	5.90	33.636	5.39	33.317	8.06	33.794	7.43	33.707	5.41	33.443	7.47	33.744	11.21	34.084	9.44	33.960	8.06	33.248	13.65	34.201
100m	5.37	33.631	4.60	33.406	4.33	33.402	4.92	33.473	6.47	33.740	7.55	33.822	11.06	34.181	8.29	33.908	7.34	33.522	12.08	34.096
125m	4.86	33.601	5.24	33.567			4.76	33.528	5.12	33.600	7.06	33.827	10.51	34.187	3.64	33.285	5.86	33.456	10.84	33.982
150m	4.21	33.544	4.76	33.569			4.14	33.482	4.59	33.571	6.07	33.731	10.17	34.182	4.39	33.470	6.28	33.725	8.45	33.773
200m	3.56	33.528	4.40	33.573			4.04	33.551	3.83	33.537	4.67	33.608	4.34	33.398	1.20	33.171	3.39	33.444	2.93	33.219
250m	2.69	33.502					3.30	33.523	2.47	33.459	2.66	33.479	4.07	33.466	1.25	33.247	2.82	33.434	4.00	33.498
300m	2.31	33.520					2.47	33.513	2.43	33.496	2.67	33.554	2.29	33.411	1.40	33.326	1.62	33.386	3.19	33.532
400m							2.48	33.672	2.31	33.617	2.54	33.690	2.11	33.530	1.73	33.496	2.49	33.616	2.45	33.655
500m									2.91	33.843	2.88	33.846	2.53	33.719	2.46	33.683	2.82	33.823	2.96	33.868
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-32

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199509		199509		199509		199509		199508		199508		199508	
Station No	HSR007		HSR017		HSR016		HKG102		HKG101		HKG103		HKG104		P65		P64		P63	
Latitude:N	41-30.0		41-15.2		41-39.7		42- 8.9		42-10.1		42- 9.2		42- 9.4		41-40.2		41-49.9		41-59.9	
Longitude:E	141-20.1		139-52.3		140-39.4		140-46.1		140-45.5		140-43.3		140-43.5		141-19.7		141-20.1		141-20.0	
Date	1995/07/07		1995/07/10		1995/07/12		1995/07/17		1995/07/18		1995/07/19		1995/07/20		1995/07/25		1995/07/25		1995/07/25	
Time(JST)	04:28		18:40		19:02		16:09		10:36		10:44		10:17		19:43		21:04		22:33	
Weather	F		F		BC										C		BC		B	
Air Temp.	13.0		18.0		16.4										15.0		16.0		16.0	
Bar	1015.0		1005.0		1010.6										1015.5		1016.5		1017.0	
Wind Dir	CALM		S		SSW										W		CALM		NNW	
Wind Spd/F	S 0		S 5		S 4										S 7		S 0		S 4	
Transparency	18																			
Depth	240		716		108										231		286		309	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.7	34.082	20.5	34.079	18.0	33.767	18.0	30.84*	17.9	30.94*	18.8	30.84*	17.9	31.04*	15.1	34.053	18.2	32.846	17.6	32.451
10m	16.17	34.127	20.09	34.063	16.63	34.036	17.30	31.154	17.26	31.372	16.66	31.420	15.57	31.819	14.80	34.165	13.07	33.506	16.65	32.503
20m	16.15	34.158	18.13	34.318	15.02	34.136	10.41	32.037	10.74	31.970	11.14	31.957	10.37	32.149	12.08	34.225	13.06	34.165	12.96	33.416
30m	15.70	34.183	15.29	34.327	14.32	34.137	8.47	32.490	8.14	32.465	8.35	32.521	8.15	32.576	12.01	34.222	9.11	33.940	12.81	34.062
50m	13.45	34.329	11.78	34.417	12.54	34.254	4.44	32.717	4.39	32.722	4.52	32.657	4.08	32.737	11.64	34.211	8.14	33.908	11.49	34.228
75m	12.16	34.322	11.20	34.406	10.94	34.289	4.09	33.269	4.19	33.323					10.51	34.148	7.81	33.899	9.21	34.011
100m	12.09	34.317	11.05	34.393	9.96	34.286									9.92	34.101	6.62	33.742	8.04	33.939
125m	11.17	34.317	9.32	34.311											9.68	34.107	5.52	33.633	5.49	33.625
150m	11.00	34.327	8.83	34.267											9.64	34.102	4.93	33.588	3.99	33.508
200m	10.24	34.318	6.43	34.173											8.33	33.986	3.99	33.533	3.47	33.549
250m			4.46	34.119													3.15	33.527	2.44	33.502
300m			2.35	34.094																
400m			0.80	34.076																
500m			0.58	34.074																
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-33

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199508		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	P62		HKD001		HKD002		HKD003		HKD004		HKD005		HKD006		HKD007		HKD008		HKD009	
Latitude:N	42-10.0		42-10.0		42-10.0		42-14.8		42-14.8		42-15.0		42-15.0		42-20.1		42-20.1		42-20.1	
Longitude:E	141-20.0		141- 0.0		140-50.1		140-50.0		140-45.0		140-40.2		140-35.0		140-40.2		140-35.0		140-30.1	
Date	1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26	
Time(JST)	00:04		02:00		03:02		03:50		04:25		05:00		05:40		06:35		07:16		07:53	
Weather	B		B		B		B		BC		BC		BC		C		BC		BC	
Air Temp.	16.0		16.5		16.5		16.0		17.0		18.0		19.0		19.0		20.5		22.0	
Bar	1017.0		1017.5		1017.5		1017.5		1017.5		1018.0		1018.5		1019.0		1019.0		1017.0	
Wind Dir	CALM		W		SW		W		SSW		CALM		SW		SSE		CALM		CALM	
Wind Spd/F	S 0		S 2		S 2		S 1		S 1		S 0		S 1		S 1		S 0		S 0	
Transparency													17		15		18		16	
Depth	362		82		91		70		80		88		92		77		94		94	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.7	32.738	17.2	31.869	17.2	31.571	20.0	30.865	20.0	30.971	20.0	31.017	19.8	31.038	19.6	30.987	20.2	31.066	20.5	31.028
10m	13.85	33.139	12.90	32.609	12.26	32.036	17.33	31.441	18.30	31.150	19.52	31.021	19.53	31.059	18.63	31.126	19.58	31.033	19.16	31.034
20m	11.66	33.645	10.88	32.783	8.24	32.468	10.25	32.586	10.95	32.224	13.54	31.514	11.56	31.869	12.87	31.635	12.14	31.708	10.63	31.917
30m	12.53	34.204	9.76	33.016	7.16	32.706	9.82	33.142	6.90	32.569	8.19	32.373	7.99	32.459	8.53	32.326	8.65	32.367	7.63	32.575
50m	11.36	34.235	6.05	33.279	4.73	33.326	4.95	33.192	7.88	33.625	7.32	33.382	4.66	32.809	5.18	33.104	4.10	32.749	3.42	32.775
75m	10.66	34.201	4.67	33.363	5.04	33.507			5.68	33.508	5.56	33.508	3.98	33.256			4.10	33.284	4.47	33.403
100m	10.02	34.141																		
125m	8.69	34.037																		
150m	6.36	33.770																		
200m	3.80	33.524																		
250m	2.82	33.500																		
300m	2.18	33.527																		
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-34

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199508	
Station No	HKD010		HKD011		HKD012		HKD013		HKD014		HKD015		HKD016		HKD017		HKD018		P61	
Latitude:N	42-24.9		42-25.2		42-25.0		42-25.2		42-19.9		42-19.9		42-15.0		42-19.9		42-24.0		42-20.0	
Longitude:E	140-30.1		140-35.0		140-40.0		140-45.0		140-45.1		140-49.9		140-59.9		141- 9.9		141-10.1		141-19.9	
Date	1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26		1995/07/26	
Time(JST)	08:34		09:08		09:42		10:15		11:00		11:32		12:40		13:50		14:28		15:31	
Weather	C		BC		BC		BC		BC		C		BC		BC		BC		B	
Air Temp.	24.0		23.5		22.0		23.0		23.5		24.5		26.0		24.0		24.0		24.0	
Bar	1019.0		1019.0		1019.0		1019.0		1018.5		1019.0		1018.5		1018.0		1017.5		1017.5	
Wind Dir	CALM		CALM		CALM		CALM		CALM		CALM		WSW		S		S		S	
Wind Spd/F	S 0		S 0		S 0		S 0		S 0		S 0		S 1		S 3		S 3		S 3	
Transparency	18		18		18		17		16		13		11		9		6		10	
Depth	92		92		78		58		59		48		70		73		41		244	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.5	31.083	20.5	31.051	20.2	31.027	21.0	31.059	21.8	30.982	20.2	31.041	21.2	32.226	21.2	31.942	21.3	31.592	20.0	32.164
10m	17.60	31.247	18.73	31.072	18.71	31.057	16.53	31.281	16.40	31.250	15.18	31.471	13.91	32.568	13.36	32.673	14.40	32.634	13.65	33.233
20m	8.37	32.419	9.87	31.969	11.23	31.774	10.54	32.007	12.40	31.640	9.82	32.545	11.43	32.902	11.31	33.123	10.70	33.126	13.21	33.864
30m	6.31	32.549	7.60	32.544	7.23	32.525	7.14	32.507	8.15	32.452	8.97	32.930	11.65	33.551	9.65	33.287	9.93	33.432	11.38	33.939
50m	3.39	32.820	3.49	32.782	3.27	32.918	4.33	32.979	4.69	32.960			6.64	33.252	7.51	33.467			11.25	34.183
75m	4.31	33.290	4.39	33.375															9.60	34.058
100m																			8.73	34.008
125m																			7.85	33.899
150m																			5.91	33.643
200m																			4.08	33.539
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-35

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199507		199507		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	HKD019		HKD020		P51		P52		P53		P54		P55		P56		P66		HIK03	
Latitude:N	42-29.9		42-34.6		42- 7.9		42- 0.0		41-50.0		41-40.1		41-30.1		41-20.1		41-30.0		41-53.6	
Longitude:E	141-30.1		141-30.1		142-27.8		142-20.1		142-10.1		142- 0.1		141-50.1		141-39.9		141-20.1		141- 9.6	
Date	1995/07/26		1995/07/26		1995/07/26		1995/07/27		1995/07/27		1995/07/27		1995/07/27		1995/07/27		1995/07/27		1995/08/01	
Time(JST)	17:00		18:45		23:31		00:55		03:02		05:23		07:28		09:55		12:38		18:48	
Weather	B		B		F		F		F		C		BC		B		B		BC	
Air Temp.	26.0		25.5		19.0		17.0		16.5		18.0		20.0		22.0		25.0		19.0	
Bar	1017.0		1017.5		1019.0		1018.5		1017.5		1017.5		1017.5		1017.5		1016.0		1006.3	
Wind Dir	CALM		SSE		ESE		E		SSW		SSE		SSE		S		W		CAL	
Wind Spd/F	S 0		S 1		S 1		S 2		S 3		S 1		S 3		S 1		S 4			
Transparency	17		7								13		13		14		11			
Depth	76		32		425		1004		1082		1054		946		780		240		143	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.5	32.367	20.0	31.888	18.9	32.564	16.8	33.578	16.1	33.578	18.7	33.533	18.1	33.517	18.9	33.496	18.7	33.834	20.3	31.14*
10m	13.52	33.255	12.48	32.947	15.12	33.419	16.50	33.818	13.90	34.116	17.67	33.534	16.78	33.577	17.16	33.769	17.23	33.823	16.11	32.597
20m	11.03	33.397	9.75	33.235	11.94	33.539	15.54	33.868	13.80	34.135	14.90	33.825	15.54	34.014	16.66	33.903	17.20	33.816	13.33	33.700
30m	10.90	33.853	8.82	33.308	8.23	33.104	14.22	33.885	13.56	34.189	12.86	34.144	14.93	34.117	15.83	34.016	17.16	33.816	11.79	33.912
50m	7.34	33.653			4.68	33.070	12.59	34.150	13.07	34.235	12.00	34.198	12.81	34.103	15.39	34.085	15.44	34.027	11.39	34.224
75m					3.40	32.984	11.12	34.161	12.84	34.262	11.48	34.172	11.71	34.162	14.49	34.073	13.86	34.192	9.74	34.102
100m					7.75	33.748	11.12	34.265	12.33	34.280	10.92	34.156	10.74	34.119	4.79	33.089	12.66	34.280	8.13	33.915
125m					8.04	33.908	11.01	34.265	11.89	34.289	10.47	34.151	9.12	33.991	2.00	33.063	12.38	34.296	6.76	33.765
150m					6.24	33.675	10.56	34.234	11.26	34.215	9.65	34.073	7.04	33.778	1.79	33.092	11.40	34.317		
200m					3.52	33.437	5.59	33.592	8.42	33.954	5.10	33.577	1.75	33.170	1.38	33.140	10.41	34.221		
250m					3.03	33.480	2.13	33.340	1.66	33.182	1.40	33.209	1.77	33.217	1.26	33.198				
300m					2.43	33.478	2.56	33.498	1.55	33.273	1.38	33.270	1.39	33.264	1.44	33.301				
400m					2.60	33.706	2.11	33.594	1.84	33.495	1.56	33.402	1.46	33.368	1.64	33.465				
500m							2.89	33.839	2.68	33.740	2.29	33.630	1.81	33.547	2.57	33.722				
600m							3.20	34.033	3.10	33.957	3.02	33.905	2.75	33.810	3.08	33.933				
700m																				
800m																				
900m																				
1000m																				

Table 4-36

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	HIK01		HKG001		HKG002		HKG003		HGK006		HGK005		HGK001		HGK004		HGK003		HGK002	
Latitude:N	41-38.3		42- 9.7		42- 9.0		42- 9.6		41-39.8		41-50.0		41-53.1		41-59.8		42- 9.9		42-20.0	
Longitude:E	140-41.5		140-43.5		140-43.1		140-42.6		141-20.3		141-20.2		141- 8.5		141-19.9		141-19.9		141-19.9	
Date	1995/08/03		1995/08/21		1995/08/23		1995/08/24		1995/08/29		1995/08/29		1995/08/29		1995/08/30		1995/08/30		1995/08/30	
Time(JST)	18:44		16:39		08:56		10:10		17:22		18:57		20:27		01:31		03:01		04:28	
Weather	B								B		B		B		B		B		BC	
Air Temp.	19.0								21.0		20.0		19.0		17.5		17.5		20.0	
Bar	1010.5								1015.0		1015.5		1016.5		1016.0		1016.0		1016.0	
Wind Dir	W								W		CALM		CALM		SW		SW		SW	
Wind Spd/F	S 2								S 5		S 0		S 0		S 2		S 2		S 1	
Transparency									16											
Depth	149								230		288		97		307		359		238	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.2	33.96*	20.5	30.94*	19.6	31.45*	18.6	32.00*	25.7	33.600	20.5	32.217	21.4	29.578	19.6	32.718	19.6	33.399	20.2	31.608
10m	17.62	34.188	18.86	31.951	17.35	32.805	16.57	32.436	24.65	33.697	19.41	33.017	19.86	31.717	19.31	33.102	19.47	33.455	20.27	33.315
20m	15.40	34.351	15.10	32.625	9.74	32.417	13.74	32.816	24.22	33.785	17.24	34.192	18.75	32.699	16.49	34.312	17.39	33.954	17.11	33.863
30m	13.63	34.413	8.59	32.442	7.66	32.578	8.52	32.557	23.87	33.857	14.38	34.325	14.76	33.054	14.93	34.339	16.01	34.206	15.87	34.181
50m	12.93	34.404	4.60	32.745	4.40	32.787	5.25	32.740	19.72	34.141	12.98	34.282	11.62	33.522	13.37	34.304	14.97	34.337	14.55	34.343
75m	12.14	34.388	3.89	33.083					16.26	34.234	11.36	34.166	11.98	34.237	12.13	34.226	13.21	34.202	13.63	34.337
100m	11.94	34.403							13.16	34.251	10.25	34.110			10.70	34.135	12.07	34.221	12.17	34.246
125m	11.71	34.395							10.91	34.009	7.83	33.859			9.15	34.016	10.27	34.061	10.32	34.102
150m									9.22	33.910	5.55	33.627			4.85	33.565	5.05	33.489	7.79	33.858
200m											3.43	33.441			2.65	33.361	2.13	33.255	2.85	33.340
250m											2.79	33.431			2.71	33.455	2.42	33.431		
300m															2.53	33.469	2.29	33.490		
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-37

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199509	
Station No	HGK014		HGK013		HGK015		HGK012		HGK011		HGK010		HGK009		HGK008		HGK007		HAD101	
Latitude:N	42-10.2		42- 0.3		41-59.4		41-50.1		41-40.1		41-30.3		41-20.3		41-10.1		41-29.9		41- 8.6	
Longitude:E	142-30.1		142-20.2		142-40.2		142-10.1		142- 0.1		141-49.9		141-39.8		141-31.4		141-19.9		140-14.3	
Date	1995/08/30		1995/08/30		1995/08/30		1995/08/31		1995/08/31		1995/08/31		1995/08/31		1995/08/31		1995/09/01		1995/09/19	
Time(JST)	10:54		12:31		18:21		05:32		07:43		09:59		12:13		18:09		02:25		05:36	
Weather	BC		BC		BC		BC		C		C		C		R		C			
Air Temp.	21.0		22.0		20.0		19.5		20.5		19.5		19.5		18.0		17.0			
Bar	1017.0		1016.5		1014.5		1012.0		1011.5		1011.0		1009.5		1007.5		1008.0			
Wind Dir	CALM		CALM		SW		E		E		E		NE		SE		E			
Wind Spd/F	S 0		S 0		S 2		S 1		S 2		S 5		S 5		S 5		S 1			
Transparency	4		25		16		19		16		15		17							
Depth	120		990		561		1080				940		750		537		239			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.0	32.322	20.2	32.893	23.3	33.679	23.4	33.698	21.7	33.324	21.2	33.145	22.5	33.749	22.3	33.657	23.0	33.433	23.4*	33.30*
10m	16.49	32.873	19.57	32.905	21.93	33.895	21.79	33.552	21.69	33.665	20.95	33.313	22.63	33.691	22.18	33.620	23.81	33.606	23.41	33.298
20m	16.89	34.032	18.81	33.086	21.15	33.995	21.43	33.547	21.43	33.702	20.93	33.449	22.37	33.655	21.92	33.588	23.54	33.593	23.42	33.297
30m	15.53	34.279	16.20	33.696	18.32	33.985	21.19	33.676	21.22	33.739	20.59	33.416	22.27	33.641	21.85	33.594	21.27	33.693	23.40	33.292
50m	12.49	34.220	14.05	33.997	12.95	34.177	19.55	33.842	20.99	33.777	20.65	33.836	22.00	33.635	21.91	33.755	16.66	34.389	19.44	34.299
75m	11.22	34.136	12.56	34.131	11.77	34.210	17.55	33.997	18.47	33.980	18.34	34.020	21.22	33.852	20.11	33.956	15.57	34.438		
100m	8.40	33.924	10.75	34.110	9.82	34.024	15.18	34.321	15.93	34.166	17.25	34.250	18.10	34.160	16.69	34.272	13.98	34.475		
125m			9.20	33.992	8.87	33.965	15.11	34.398	14.34	34.191	15.04	34.212	15.51	34.102	15.29	34.190	13.49	34.443		
150m			7.54	33.844	7.95	33.874	12.97	34.264	13.62	34.336	13.91	34.298	14.70	34.158	13.25	33.994	13.45	34.440		
200m			4.25	33.530	4.21	33.482	10.07	34.018	10.45	34.044	6.09	33.332	5.64	33.298	9.82	34.044	11.87	34.335		
250m			2.85	33.458	2.86	33.427	3.25	33.356	2.87	33.194	2.12	33.188	3.17	33.292	3.52	33.370				
300m			2.35	33.500	2.28	33.479	2.22	33.466	1.93	33.260	1.58	33.278	2.52	33.403	2.56	33.391				
400m			2.61	33.743	2.47	33.668	2.89	33.713	1.76	33.429	2.01	33.500	2.36	33.582	2.43	33.640				
500m			3.07	34.020	3.01	33.930	2.96	33.873	2.52	33.681	1.99	33.653	2.37	33.738	3.02	33.915				
600m			3.07	34.209							3.07	33.943	3.13	34.072						
700m																				
800m																				
900m																				
1000m																				

Table 4-38

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199509		199509		199509		199509		199509		199509		199509		199509		199509		199509	
Station No	HAD102		HAD103		HAD104		HAD105		HAD106		HAD107		HGK016		HKG001		HFA02		HFA01	
Latitude:N	41-10.9		41-13.4		41-15.8		41-18.4		41-20.6		41-23.2		41-40.0		42- 8.7		42-10.0		42-12.3	
Longitude:E	140-13.7		140-13.2		140-12.5		140-12.0		140-11.1		140-10.1		140-40.0		140-43.3		140-40.2		140-38.5	
Date	1995/09/19		1995/09/19		1995/09/19		1995/09/19		1995/09/19		1995/09/19		1995/09/21		1995/09/26		1995/09/26		1995/09/26	
Time(JST)	06:10		06:41		07:10		07:41		08:16		08:52		18:04		05:50		07:22		09:03	
Weather												B								
Air Temp.												18.0								
Bar												1019.0								
Wind Dir												NNW								
Wind Spd/F												S 3								
Transparency												118								
Depth												118								
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	23.6*	33.29*	23.6*	32.31*	23.6*	33.30*	23.3*	33.26*	23.0*	33.36*	22.4*	33.43*	21.8	33.55*	18.1*	31.67*	18.1*	31.93*	18.0*	32.00*
10m	23.65	33.285	23.64	33.308	23.58	33.305	23.35	33.339	22.99	33.364	21.98	33.609	21.18	33.719	17.78	32.168	18.06	31.938	17.89	32.024
20m	23.65	33.286	23.65	33.309	23.59	33.312	22.68	33.929	22.67	33.939	21.65	33.963	19.19	34.142	15.84	32.748	16.63	32.572	14.26	32.943
30m	23.59	33.436	22.95	33.807	23.59	33.311	20.99	34.077	20.63	34.108	20.42	34.111	17.56	34.252	13.71	33.186	13.74	33.108	13.65	33.870
50m	19.40	34.363	19.83	34.259	23.13	33.820	14.18	34.545	14.32	34.514	16.36	34.492	13.59	34.405			11.90	33.529	12.51	33.926
75m	14.53	34.543	14.99	34.552	16.42	34.534	12.41	34.454	9.99	34.368			12.48	34.408			9.17	33.697	8.87	33.596
100m			12.75	34.472	13.10	34.491	10.37	34.354	8.27	34.243			12.33	34.399						
125m					10.53	34.357	9.23	34.285												
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-39

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199509		199509		199509		199509		199509		199509		199509		199510		199510		199510	
Station No	HFA03		HFA04		HFA05		HFA06		HFA07		HKG002		HKG003		P64		P65		P66	
Latitude:N	42-16.2		42-19.8		42-24.0		42-26.9		42-29.9		42- 8.5		42- 8.6		41-49.9		41-40.1		41-29.9	
Longitude:E	140-36.1		140-33.7		140-33.5		140-37.2		140-40.1		140-43.8		140-43.6		141-19.9		141-19.9		141-20.0	
Date	1995/09/26		1995/09/26		1995/09/26		1995/09/26		1995/09/26		1995/09/27		1995/09/29		1995/10/02		1995/10/02		1995/10/02	
Time(JST)	09:48		10:39		11:28		12:24		13:00		09:39		06:15		14:08		15:27		16:46	
Weather	C																			
Air Temp.	13.8																			
Bar	1011.1																			
Wind Dir	NE																			
Wind Spd/F	S 3																			
Transparency	10																			
Depth	285																			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.3*	32.76*	18.3*	32.76*	18.4*	33.20*	18.3*	32.74*	18.0*	32.50*	18.3*	31.84*	17.8*	31.95*	16.4	33.566	18.3	33.999	19.7	33.923
10m	18.34	32.855	18.10	32.954	18.31	33.212	18.58	33.161	17.98	32.833	18.13	31.949	17.85	31.995	17.32	33.531	18.07	34.043	19.82	33.899
20m	11.63	32.837	16.72	33.861	18.04	33.417	18.01	33.550	17.80	33.439	15.53	32.948	17.89	32.411	16.80	33.664	17.21	34.142	19.62	33.924
30m	9.57	32.981	10.91	33.185	15.52	33.900	17.15	33.698	17.18	33.708	13.78	33.288	17.26	32.695	15.03	34.107	16.06	34.234	19.19	33.966
50m	11.08	33.959	10.55	33.916	11.84	33.933	13.74	34.112	12.57	33.714					12.03	34.179	14.70	34.250	17.27	34.073
75m	7.59	33.591	7.29	33.606	5.66	33.419	6.49	33.374							11.07	34.131	11.78	34.090	15.39	34.179
100m															10.10	34.121	9.28	34.029	14.02	34.224
125m															6.35	33.707	7.85	34.040	13.57	34.243
150m															3.48	33.416	5.92	33.869	10.65	34.289
200m															2.70	33.411	2.94	33.577	9.35	34.191
250m															2.35	33.451				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-40

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	P56		P55		P54		P53		P52		P51		P61		P62		P63		HKG001	
Latitude:N	41-20.1		41-30.1		41-39.9		41-50.0		41-59.9		42-10.1		42-19.9		42-10.1		42- 0.1		42- 8.5	
Longitude:E	141-40.2		141-50.1		141-59.9		142-10.0		142-20.0		142-30.1		141-19.8		141-19.9		141-20.0		140-43.6	
Date	1995/10/02		1995/10/02		1995/10/02		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/04		1995/10/04		1995/10/12	
Time(JST)	19:12		21:38		23:47		03:02		05:09		07:11		13:30		10:04		11:25		11:10	
Weather	C		C		C		BC		BC		B		R		C		C			
Air Temp.	13.2		14.8		13.8		14.5		12.3		12.8		15.1		13.0		13.1			
Bar	1010.5		1010.5		1011.2		1010.5		1011.2		1011.6		1012.5		1013.0		1012.0			
Wind Dir	NW		NW		NW		NW		NW		NW		W		CALM		SE			
Wind Spd/F	S 3		S 4		S 4		S 5		S 5		S 5		S 5		S 0		S 5			
Transparency											8		13		21		16			
Depth	744		938		1045		1082		993		122		222		362		310			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	19.7	33.908	19.9	33.914	17.0	33.862	17.6	33.658	17.1	33.307	16.4	33.074	17.2	33.441	17.8	33.383	17.0	33.593	16.5*	32.76*
10m	19.68	33.878	20.12	33.898	17.16	33.769	17.76	33.622	17.20	33.323	16.38	33.265	18.07	33.406	17.91	33.408	16.93	33.619	16.62	33.083
20m	19.65	33.870	19.77	33.947	17.07	33.798	16.93	33.810	16.71	33.822	14.58	33.488	17.19	33.463	17.32	33.669	16.16	33.638	15.97	33.516
30m	19.59	33.884	18.90	33.984	16.45	33.867	15.37	33.948	14.65	34.157	13.54	33.580	15.62	34.042	13.77	33.949	14.24	33.897	13.18	33.783
50m	19.16	33.969	16.72	34.146	13.84	34.120	11.62	34.080	12.19	34.180	12.34	33.861	13.38	34.189	12.12	34.055	12.27	34.066		
75m	19.06	33.974	13.87	34.148	11.53	34.127	10.31	34.056	10.87	34.148	9.70	33.980	10.62	34.078	11.19	34.118	10.76	34.070		
100m	18.11	33.979	11.41	34.070	9.64	33.986	8.13	33.886	10.61	34.196	6.86	33.720	9.36	34.051	9.54	33.993	9.07	33.911		
125m	13.27	34.146	10.77	34.122	7.49	33.780	7.32	33.781	8.66	33.945			8.74	33.980	7.71	33.818	8.88	33.906		
150m	12.06	34.110	8.91	33.924	6.96	33.802	6.62	33.704	6.20	33.690			6.50	33.698	5.44	33.609	6.36	33.702		
200m	6.38	33.681	4.00	33.450	3.60	33.451	4.98	33.546	3.20	33.373			3.23	33.408	3.03	33.425	3.02	33.393		
250m	3.05	33.452	3.08	33.433	2.95	33.450	3.92	33.521	3.43	33.524					2.33	33.443	2.33	33.427		
300m	2.37	33.448	2.34	33.443	2.30	33.478	2.52	33.448	3.09	33.567					2.29	33.535	2.26	33.487		
400m	3.19	33.712			2.56	33.680	2.53	33.669	3.44	33.771										
500m	2.91	33.867			2.95	33.875	2.92	33.872	2.95	33.841										
600m	3.15	34.127			3.18	34.016	3.35	34.064	3.16	33.991										
700m																				
800m																				
900m																				
1000m																				

Table 4-41

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510		
Station No	HKG002		HKG003		HTK06		HTK05		HTK04		HTK03		HTK02		HTK07		HTK08		HTK09		
Latitude:N	42- 8.2		42- 8.1		41-43.7		41-41.2		41-38.5		41-35.9		41-33.1		41-41.9		41-38.8		41-35.3		
Longitude:E	140-43.8		140-43.8		140-43.5		140-45.8		140-48.0		140-50.4		140-52.6		141- 2.5		141- 3.8		141- 4.8		
Date	1995/10/13		1995/10/14		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		
Time(JST)	10:00		07:06		16:53		17:21		17:53		18:59		19:38		20:48		21:17		21:47		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	16.5*	32.87*	16.5*	32.90*	18.9*	33.86*	18.3*	33.90*	18.5*	33.91*	19.3*	33.79*	20.1*	33.66*	19.2*	33.83*	19.9*	33.66*	19.6*	33.69*	
10m	16.59	32.996	16.59	32.952	18.83	33.859	18.06	33.934	18.16	33.942	19.24	33.791	20.05	33.663	19.02	33.855	19.65	33.694	19.58	33.693	
20m	15.36	33.555	14.55	33.565	18.71	33.869	17.29	34.007	17.76	34.024	19.14	33.804	20.04	33.680	18.83	33.870	19.18	33.781	19.49	33.706	
30m	12.90	33.842	13.20	33.792	17.95	33.942	16.87	34.030	16.37	34.231	19.08	33.817	19.93	33.720	18.77	33.879	19.17	33.780	19.26	33.744	
50m					16.83	34.060	15.08	34.118	14.49	34.410	18.81	33.838			18.71	33.887	19.18	33.786	17.86	33.939	
75m							13.50	34.329	12.28	34.386	13.75	34.401					17.78	34.008	17.38	34.013	
100m							12.19	34.286	11.87	34.380									15.64	34.217	
125m							11.04	34.292	11.62	34.366									13.45	34.252	
150m									11.42	34.357											
200m									10.96	34.336											
250m									10.44	34.310											
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-42

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510		
Station No	HTK10		HTK11		HTK12		HTK13		HTK14		HTK15		HTK16		HTK17		HTK18		HTK19		
Latitude:N	41-32.0		41-28.8		41-27.3		41-30.5		41-33.9		41-37.3		41-40.7		41-44.0		41-47.3		41-49.9		
Longitude:E	141- 5.7		141- 7.1		141-27.8		141-25.4		141-22.8		141-20.1		141-17.7		141-15.0		141-12.3		141-17.2		
Date	1995/10/18		1995/10/18		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		
Time(JST)	22:22		23:06		01:05		01:38		02:20		03:09		03:57		04:57		05:42		06:19		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	18.8*	33.80*	18.8*	33.82*	18.9*	33.83*	19.2*	33.76*	18.9*	33.82*	19.2*	33.75*	19.1*	33.74*	18.7*	33.83*	17.4*	33.82*	15.5*	33.56*	
10m	18.81	33.811	18.71	33.831	18.88	33.828	19.06	33.786	18.85	33.821	19.19	33.752	19.06	33.757	18.69	33.834	16.40	33.787	15.33	33.531	
20m	18.77	33.823	18.01	33.903	18.89	33.830	18.78	33.821	18.86	33.821	19.16	33.758	18.82	33.812	17.86	33.874	15.26	33.776	15.07	33.522	
30m	17.86	33.917	16.74	34.031	18.88	33.828	17.45	33.994	18.86	33.821	18.98	33.792	18.36	33.859	16.97	33.892	14.49	33.923	14.74	33.565	
50m	16.49	34.064	15.00	34.169			17.16	33.999	18.60	33.858	18.85	33.811	18.31	33.871	14.96	33.993	12.80	33.955	12.93	33.949	
75m	15.99	34.109					16.49	34.039	16.58	34.027	17.92	33.928	14.34	34.017	10.83	33.958	11.54	34.009	10.71	33.910	
100m	15.56	34.179							14.23	34.133	14.88	34.051	12.30	34.116	9.42	33.945	8.72	33.901	9.12	33.914	
125m	12.78	34.321							13.57	34.273	13.12	34.065	9.42	33.954	8.14	33.841			7.90	33.856	
150m	12.11	34.311							12.91	34.295	9.56	34.025	7.97	33.836	7.28	33.760			5.89	33.672	
200m	10.78	34.221							10.96	34.292	4.71	33.608	3.78	33.470	3.81	33.497			3.14	33.469	
250m	10.08	34.183							10.82	34.283											
300m	9.64	34.181																			
400m	6.61	33.771																			
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-43

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	HTK20		HTK21		HTK22		HTK23		HTK24		HTK25		HTK26		HTK27		HW001		HW012	
Latitude:N	41-50.0		41-49.9		41-50.1		41-58.9		41-57.7		41-56.6		41-55.5		41-54.4		41-20.0		41-20.0	
Longitude:E	141-23.6		141-29.9		141-36.3		141-24.7		141-19.7		141-14.2		141- 8.8		141- 3.9		139-55.1		139-40.1	
Date	1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/19		1995/10/23		1995/10/23	
Time(JST)	07:03		07:46		08:36		10:23		11:08		11:51		12:31		13:05		19:22		20:56	
Weather																			B	B
Air Temp.																			13.5	13.7
Bar																			1021.0	1021.5
Wind Dir																			CALM	W
Wind Spd/F																			S 0	S 1
Transparency																			135	535
Depth																			CTD	CTD
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.0*	33.61*	15.8*	33.77*	17.2*	33.86*	16.9*	33.79*	15.8*	33.73*	15.8*	33.61*	15.5*	33.55*	15.5*	33.47*	20.3	33.524	19.7	33.825
10m	15.98	33.645	15.85	33.841	17.17	33.858	16.53	33.743	15.78	33.733	15.76	33.614	15.43	33.570	15.38	33.463	20.17	33.509	19.50	33.821
20m	15.74	33.794	16.07	33.950	16.19	33.665	16.18	33.780	15.50	33.924	15.72	33.634	15.22	33.572	15.28	33.471	20.16	33.522	19.47	33.820
30m	14.31	33.921	15.26	33.886	15.79	33.770	14.27	34.051	13.26	34.007	15.50	33.692	14.85	33.608	15.18	33.479	20.60	34.048	19.05	34.093
50m	11.98	34.112	12.81	34.117	13.90	34.037	11.20	34.053	11.61	34.113	12.16	34.089	13.06	34.038	14.27	33.632	15.62	34.514	15.46	34.518
75m	9.65	34.021	10.61	34.100	10.63	33.999	9.58	34.043	9.37	34.060	10.59	34.089	8.84	33.803	9.04	33.811	11.80	34.495	9.41	34.329
100m	8.63	33.909	8.77	33.989	9.15	33.910	8.33	33.942	7.86	33.906	7.65	33.838	8.16	33.857			8.41	34.310	7.00	34.222
125m	7.35	33.794	7.10	33.830	7.52	33.812	6.07	33.677	6.07	33.711	6.34	33.686	5.94	33.690			6.22	34.173	5.01	34.134
150m	5.56	33.617	5.90	33.716	6.98	33.823	4.79	33.553	4.66	33.571	5.59	33.633	3.60	33.468					3.69	34.093
200m	3.86	33.541	3.53	33.492	3.95	33.497	3.46	33.467	3.13	33.451	3.33	33.441							1.82	34.067
250m	2.42	33.478	2.88	33.460	2.79	33.452	3.12	33.494	2.77	33.477									1.31	34.070
300m	2.30	33.499	2.95	33.523	2.30	33.463	2.71	33.518											1.02	34.069
400m					2.38	33.601													0.73	34.069
500m					2.89	33.845													0.51	34.069
600m					3.13	34.006														
700m																				
800m																				
900m																				
1000m																				

Table 4-44

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	HW010		HW011		HW009		HW007		HW008		HW006		HW005		HW004		HW003		HW002	
Latitude:N	41-30.1		41-30.0		41-40.0		41-49.9		41-50.2		41-59.9		42- 0.0		41-50.0		41-40.0		41-30.2	
Longitude:E	139-29.9		139-40.1		139-40.0		139-29.9		139-45.2		139-40.0		140- 0.0		139-59.9		139-55.0		139-55.0	
Date	1995/10/23		1995/10/23		1995/10/24		1995/10/24		1995/10/24		1995/10/24		1995/10/24		1995/10/24		1995/10/24		1995/10/24	
Time(JST)	22:39		23:53		01:21		03:05		05:05		06:37		08:37		10:06		11:39		13:13	
Weather	B		B		C		C		C		C		C		C		R		R	
Air Temp.	12.4		11.9		11.8		11.5		12.0		12.0		12.5		14.0		15.2		13.0	
Bar	1021.1		1021.3		1020.6		1020.3		1020.0		1019.5		1019.6		1018.5		1016.5		1014.5	
Wind Dir	W		WNW		WSW		WSW		SW		SW		E		S		E		ESE	
Wind Spd/F	S 2		S 3		S 2		S 2		S 1		S 2		S 3		S 1		S 2		S 6	
Transparency													18		20		24		21	
Depth	1680		1440		1433		673		1396		926		960		902		1200		241	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	18.7	33.876	19.5	33.805	19.6	33.698	17.7	33.841	18.5	33.797	18.9	33.856	18.7	33.866	19.0	33.771	19.5	33.733	19.7	33.674
10m	18.63	33.761	19.38	33.812	19.62	33.673	17.53	33.805	18.38	33.827	18.63	33.839	18.45	33.837	18.79	33.771	19.18	33.766	19.68	33.650
20m	17.55	33.874	19.35	33.807	18.58	33.869	17.27	33.764	18.25	33.894	18.63	33.840	18.44	33.841	18.16	33.849	19.00	33.806	19.15	33.793
30m	17.01	33.778	19.31	33.815	17.77	33.855	17.02	33.772	17.17	33.816	17.75	33.975	18.18	33.859	16.84	34.250	18.24	33.855	17.93	33.861
50m	9.06	34.291	13.10	34.448	10.13	34.292	10.09	34.340	12.11	34.500	13.79	34.532	15.04	34.491	12.66	34.529	12.73	34.564	13.26	34.509
75m	5.17	34.145	8.14	34.305	6.48	34.162	6.46	34.218	9.51	34.362	10.28	34.397	10.98	34.449	9.65	34.339	8.08	34.302	9.62	34.368
100m	3.44	34.086	4.97	34.136	3.68	34.073	4.02	34.093	7.23	34.226	7.85	34.271	7.90	34.286	6.89	34.222	5.62	34.165	6.43	34.192
125m	2.77	34.076	3.61	34.064	2.62	34.068	2.79	34.075	4.90	34.144	5.47	34.159	5.82	34.183	5.01	34.128	4.32	34.116	5.16	34.136
150m	2.11	34.072	2.58	34.074	2.11	34.070	2.13	34.076	3.37	34.082	4.13	34.112	4.81	34.123	3.86	34.099	3.56	34.083	4.41	34.103
200m	1.38	34.071	1.61	34.066	1.46	34.069	1.56	34.069	1.95	34.072	2.48	34.075	2.80	34.078	2.56	34.073	2.35	34.056	2.42	34.074
250m	1.03	34.069	1.24	34.069	1.11	34.070	1.22	34.072	1.42	34.071	1.48	34.074	1.75	34.076	1.75	34.071	1.54	34.070		
300m	0.78	34.069	0.99	34.070	0.86	34.070	0.91	34.070	1.09	34.070	1.09	34.071	1.23	34.073	1.27	34.071	1.17	34.069		
400m	0.50	34.069	0.60	34.068	0.59	34.070	0.63	34.069	0.64	34.069	0.68	34.070	0.75	34.070	0.76	34.069	0.69	34.068		
500m	0.36	34.069	0.45	34.069	0.42	34.070	0.45	34.069	0.48	34.069	0.49	34.069	0.48	34.069	0.51	34.069	0.50	34.068		
600m	0.29	34.069																		
700m																				
800m																				
900m																				
1000m																				

Table 4-45

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199511		199511		199511		199511		199511		199511		199511		199511		199511		199512			
Station No	HFA07		HFA06		HFA05		HFA04		HFA03		HFA02		HFA01		HIK021		HIK101		P66			
Latitude:N	42-30.0		42-27.1		42-24.1		42-20.1		42-16.1		42-12.3		42- 9.9		41-26.9		41-30.3		41-30.1			
Longitude:E	140-40.0		140-37.0		140-33.7		140-33.6		140-36.0		140-38.3		140-39.7		140-16.0		140-23.0		141-20.0			
Date	1995/11/07		1995/11/07		1995/11/07		1995/11/07		1995/11/07		1995/11/07		1995/11/07		1995/11/13		1995/11/21		1995/12/01			
Time(JST)	07:58		08:56		09:32		10:33		11:36		12:44		13:19		16:52		17:08		13:49			
Weather																	C		C		C	
Air Temp.																	15.0				7.0	
Bar																	1021.0		1022.0		1002.5	
Wind Dir																	SW		N		ENE	
Wind Spd/F																	S 9		S 1		S 2	
Transparency																					17	
Depth																	33		51		240	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD			
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S		
0m	13.5*	33.53*	13.7*	33.39*	13.9*	33.41*	13.9*	33.43*	14.0*	33.44*	13.9*	33.32*	13.7*	33.37*	16.4	33.680	15.8	33.733	14.6	33.846		
10m	13.51	33.607	13.77	33.420	13.90	33.409	13.93	33.431	13.92	33.438	13.86	33.324	13.70	33.368	16.18	33.721	15.86	33.707	14.46	33.853		
20m	13.37	33.717	13.85	33.489	13.94	33.464	13.92	33.436	13.93	33.447	13.94	33.429	13.75	33.469	16.16	33.722	15.75	33.726	14.43	33.852		
30m	11.87	33.954	13.78	33.548	14.04	33.512	13.92	33.438	13.90	33.478	13.93	33.516	13.90	33.597	15.85	33.781	15.37	33.838	14.42	33.854		
50m	9.66	33.917	10.62	33.911	12.82	33.806	13.86	33.633	13.78	33.661	13.38	33.859	10.79	33.943					14.41	33.865		
75m			6.64	33.636	7.84	33.845	6.11	33.751	5.03	33.676	4.73	33.603	6.41	33.581					14.32	33.900		
100m																					14.22	33.948
125m																					14.14	33.960
150m																					13.95	34.006
200m																					13.50	34.034
250m																						
300m																						
400m																						
500m																						
600m																						
700m																						
800m																						
900m																						
1000m																						

Table 4-46

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	P65		P64		P63		P62		P61		P51		P52		P53		P54		P55	
Latitude:N	41-40.2		41-50.2		42- 0.0		42- 9.9		42-20.0		42-10.1		42- 0.2		41-50.2		41-40.0		41-30.0	
Longitude:E	141-19.7		141-19.9		141-20.0		141-20.0		141-20.0		142-30.0		142-20.0		142- 9.9		142- 0.1		141-50.2	
Date	1995/12/01		1995/12/01		1995/12/01		1995/12/01		1995/12/01		1995/12/02		1995/12/02		1995/12/02		1995/12/02		1995/12/02	
Time(JST)	15:12		16:31		17:47		19:08		20:31		02:57		04:40		06:33		09:51		11:49	
Weather	C		C		BC		C		BC		B		B		B		B		BC	
Air Temp.	4.0		3.0		3.0		2.0		2.0		2.0		2.0		2.0		2.0		3.0	
Bar	1003.0		1003.0		1003.5		1004.0		1004.0		1004.5		1004.5		1005.0		1006.0		1005.0	
Wind Dir	NNE		N		N		NE		N		NE		N		NW		NNW		NW	
Wind Spd/F	S 3		S 2		S 3		S 2		S 1		S 1		S 2		S 3		S 4		S 7	
Transparency	15														23		16		16	
Depth	233		286		308		361		245		121		997		1012		1054		948	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.0	33.975	13.0	33.942	12.0	33.929	12.0	34.000	10.8	33.967	12.0	33.97*	10.8	34.05*	11.3	33.94*	12.6	33.99*	14.0	34.08*
10m	13.86	33.966	12.87	33.915	12.58	33.867	13.20	33.929	10.99	33.857	13.21	33.884	11.86	33.896	11.48	33.866	11.49	33.862	13.62	33.967
20m	13.49	33.963	12.86	33.917	12.60	33.866	13.21	33.929	10.84	33.854	13.21	33.883	11.86	33.896	11.48	33.867	11.47	33.863	13.63	33.967
30m	12.85	33.945	12.88	33.916	12.60	33.866	13.21	33.928	10.67	33.845	13.21	33.883	11.62	33.888	11.48	33.868	11.44	33.862	13.56	33.964
50m	11.43	33.901	12.79	33.913	12.61	33.869	13.19	33.929	10.29	33.841	13.06	33.890	10.35	33.859	11.34	33.883	11.34	33.864	13.55	33.963
75m	8.40	33.833	12.25	33.922	11.90	33.860	11.82	33.983	10.27	33.844	12.90	33.896	9.89	33.894	9.48	33.902	10.92	33.920	13.23	33.950
100m	6.73	33.757	11.43	33.921	11.80	33.938	9.72	33.926	9.28	33.778	11.03	33.924	8.99	33.951	7.04	33.796	8.54	33.911	12.05	33.931
125m	5.62	33.673	9.63	33.931	9.94	33.915	9.13	33.938	8.61	33.857			7.34	33.820	5.18	33.656	6.50	33.743	10.12	33.885
150m	4.49	33.601	7.63	33.844	7.93	33.833	8.73	33.920	7.89	33.819			6.47	33.751	4.02	33.595	4.87	33.612	8.78	33.842
200m	3.91	33.650	4.59	33.574	5.82	33.713	8.13	33.875	6.83	33.769			3.82	33.604	3.20	33.621	3.47	33.601	6.26	33.733
250m			3.53	33.585	4.36	33.624	4.83	33.656					3.17	33.594	3.37	33.720	2.70	33.610	4.09	33.633
300m					3.53	33.688	3.81	33.654					3.15	33.666	3.36	33.797	2.85	33.714	3.52	33.678
400m													3.22	33.840	3.21	33.913	3.26	33.903	3.20	33.777
500m													3.29	33.989	3.39	34.068	3.23	34.055		
600m													3.29	34.099	3.20	34.138	3.21	34.181		
700m																				
800m																				
900m																				
1000m																				

Table 4-47

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199602		199602	
Station No	HAD107		HAD106		HAD105		HAD104		HAD103		HAD102		HAD101		HAD108		P66		P65	
Latitude:N	41-23.3		41-20.6		41-18.2		41-15.9		41-13.5		41-11.0		41- 8.6		41- 8.5		41-29.9		41-39.9	
Longitude:E	140- 9.9		140-11.0		140-11.7		140-12.3		140-13.0		140-13.6		140-14.1		140-14.4		141-20.0		141-20.0	
Date	1995/12/04		1995/12/04		1995/12/04		1995/12/04		1995/12/04		1995/12/04		1995/12/04		1995/12/05		1996/02/20		1996/02/20	
Time(JST)	14:50		15:23		15:50		16:22		16:54		17:27		17:55		12:39		15:20		16:51	
Weather																	C		C	
Air Temp.																	-7.0		-7.0	
Bar																	1025.0		1025.0	
Wind Dir																	NW		W	
Wind Spd/F																	S 7		S 5	
Transparency																	12		12	
Depth																	242		233	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	13.6*	33.96*	14.3*	33.66*	14.8*	33.72*	15.2*	33.83*	15.2*	33.80*	15.2*	33.79*	15.0*	33.65*	14.5*	33.30*	8.4	33.899	0.6	32.628
10m	13.56	33.969	13.93	33.898	14.83	33.727	15.17	33.834	15.18	33.803	15.19	33.788	15.08	33.720	14.75	33.489	8.61	34.024	0.92	32.576
20m	13.30	34.004	13.10	34.190	14.88	33.746	15.17	33.834	15.18	33.802	15.21	33.788	15.24	33.806	14.99	33.607	8.61	34.022	1.68	32.742
30m	13.09	34.021	12.75	34.155	14.98	33.801	15.18	33.833	15.18	33.803	15.20	33.788	15.25	33.811	15.10	33.668	8.61	34.022	3.36	33.051
50m	12.00	34.176	12.43	34.193	14.35	34.067	15.18	33.831	15.20	33.804	15.20	33.788	15.27	33.821	15.11	33.672	8.61	34.022	6.20	33.568
75m			12.26	34.139	13.96	34.226	15.17	33.831	15.26	33.840	15.22	33.793					8.62	34.023	6.79	33.688
100m			11.61	34.310	12.60	34.074	14.99	34.259	14.98	34.056							8.61	34.022	6.77	33.688
125m							11.82	34.214									8.62	34.022	6.61	33.730
150m																	8.62	34.021	6.20	33.687
200m																	8.63	34.028	3.91	33.506
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 4-48

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199602		199602		199602		199602		199602		199602		199602		199602		199602		199602	
Station No	P64		P63		P62		P61		P51		P52		P53		P54		P55		HTK03	
Latitude:N	41-50.1		41-59.9		42-10.1		42-19.9		42- 9.8		42- 0.9		41-50.1		41-40.0		41-30.0		41-43.9	
Longitude:E	141-19.9		141-20.1		141-20.0		141-20.0		142-29.8		142-20.0		142-10.2		141-59.9		141-50.1		140-43.5	
Date	1996/02/20		1996/02/20		1996/02/20		1996/02/20		1996/02/21		1996/02/21		1996/02/21		1996/02/21		1996/02/21		1996/02/26	
Time(JST)	18:21		19:48		21:12		22:36		04:12		05:52		08:05		09:52		11:34		10:01	
Weather	C		C		C		C		BC		BC		BC		S		C			
Air Temp.	-8.0		-8.0		-8.5		-9.0		-10.0		-8.0		-7.0		-8.0		-8.0			
Bar	1025.5		1025.5		1025.0		1024.5		1020.5		1020.0		1020.0		1020.0		1019.5			
Wind Dir	NW		WNW		NW		NW		CALM		W		W		NW		W			
Wind Spd/F	S 7		S 9		S 5		S 8		S 0		S 3		S 5		S 8		S 6			
Transparency													15		15		17			
Depth	288		316		367		250		126		1280		1280		1000		1280			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	0.7	32.643	0.7	32.595	0.0	32.747	0.1	32.506	0.6	32.663	0.6	32.716	0.1	32.631	0.8	32.658	1.9	32.809	2.2*	32.88*
10m	0.99	32.620	0.98	32.605	0.93	32.599	0.94	32.600	1.05	32.706	1.52	32.737	0.95	32.680	1.13	32.730	2.00	32.864	2.17	32.896
20m	0.98	32.620	1.04	32.613	0.95	32.602	0.96	32.603	1.22	32.733	1.55	32.739	0.97	32.682	1.21	32.743	2.01	32.864	6.59	33.912
30m	1.04	32.626	1.08	32.622	1.02	32.610	0.99	32.608	1.31	32.753	1.59	32.744	1.03	32.689	1.24	32.749	2.07	32.877	7.02	34.056
50m	1.20	32.658	1.46	32.681	1.47	32.684	1.49	32.681	1.39	32.795	1.71	32.760	2.70	32.977	1.62	32.828	3.31	33.083	7.05	34.093
75m	1.58	32.794	1.56	32.702	2.41	32.836	2.12	32.785	1.34	32.849	2.01	32.806	4.84	33.346	5.15	33.404	6.09	33.541		
100m	2.78	32.996	2.85	32.929	3.18	33.013	3.10	32.958	1.71	32.976	2.21	32.913	3.99	33.263	4.68	33.353	7.11	33.745		
125m	3.46	33.126	2.40	32.982	3.11	33.082	3.64	33.075			6.73	33.629	2.10	33.086	3.22	33.196	6.59	33.694		
150m	3.68	33.243	2.50	33.050	3.15	33.301	2.92	33.060			4.09	33.316	1.71	33.063	3.45	33.250	5.73	33.615		
200m	3.72	33.408	2.70	33.272	3.28	33.438	3.32	33.367			1.83	33.184	1.81	33.104	2.39	33.157	2.96	33.408		
250m	3.22	33.491	2.63	33.423	2.70	33.445					2.02	33.263	2.23	33.255	4.68	33.600	2.73	33.481		
300m			2.98	33.608	2.93	33.560					2.49	33.411	2.10	33.313	3.50	33.572	3.10	33.612		
400m											2.54	33.543	2.33	33.493	3.27	33.714	2.86	33.726		
500m											2.67	33.687	2.50	33.639	3.07	33.840	2.94	33.867		
600m											3.08	33.888	3.05	33.853	3.39	34.008	3.22	34.033		
700m																				
800m																				
900m																				
1000m																				

Table 4-49

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199602		199602		199603		199603		199603		199603		199603		199603		199603		199603		
Station No	HTK02		HTK01		HTK04		HTK05		HTK06		HTK07		HTK08		HTK09		HTK10		HTK11		
Latitude:N	41-41.1		41-38.5		41-42.0		41-38.7		41-35.4		41-27.2		41-30.6		41-34.1		41-37.2		41-40.6		
Longitude:E	140-45.7		140-48.0		141- 2.3		141- 3.5		141- 4.6		141-27.9		141-25.6		141-22.9		141-20.2		141-17.8		
Date	1996/02/26		1996/02/26		1996/02/26		1996/02/26		1996/02/26		1996/02/26		1996/02/26		1996/02/26		1996/02/26		1996/02/26		
Time(JST)	10:33		11:04		12:31		12:59		13:28		15:35		16:06		16:41		17:19		17:57		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	7.3*	33.07*	7.8*	34.01*	1.4*	32.68*	1.2*	32.65*	1.5*	32.72*	6.2*	33.57*	1.8*	32.76*	1.3*	32.64*	1.2*	32.63*	1.2*	32.65*	
10m	7.30	34.075	7.80	34.014	1.32	32.693	1.32	32.685	1.45	32.748	7.30	33.942	3.84	33.216	1.03	32.651	1.03	32.636	1.22	32.646	
20m	7.22	34.076	7.78	34.021	1.56	32.752	2.03	32.811	1.61	32.784	7.17	33.935	4.91	33.535	1.14	32.666	1.11	32.661	1.16	32.650	
30m	7.14	34.075	7.61	34.030	1.94	32.832	2.01	32.876	1.80	32.848	7.04	33.919	4.98	33.601	2.13	32.833	1.55	32.770	1.29	32.688	
50m	6.86	34.090	7.23	34.069	2.17	32.876	2.85	33.107	3.13	33.090			7.18	33.980	2.61	33.015	1.87	32.826	1.38	32.726	
75m	6.77	34.091	6.85	34.085			3.13	33.147	4.66	33.436			6.50	33.919	3.23	33.223	2.40	32.986	2.87	33.028	
100m	6.68	34.098	6.34	34.097					3.90	33.428					3.54	33.284	3.07	33.185	3.60	33.189	
125m	6.36	34.103	6.11	34.102					4.08	33.529					4.95	33.554	3.29	33.338	3.64	33.244	
150m			6.10	34.101											3.22	33.367	3.15	33.418	3.96	33.319	
200m			6.11	34.101											6.32	33.904	3.09	33.436	3.08	33.302	
250m			6.08	34.101											6.63	34.083					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-50

Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199603	199603	199603	199603	199602	199602	199603	199603	199603	199603										
Station No	HTK12	HTK13	HTK14	HTK15	HT1	HT2	HAD107	HAD106	HAD105	HAD104										
Latitude:N	41-43.9	41-47.4	41-49.9	41-49.9	42-20.1	42-24.0	41-23.2	41-20.8	41-18.4	41-16.0										
Longitude:E	141-15.0	141-12.5	141-16.9	141-23.4	140-33.7	140-33.7	140-10.3	140-11.0	140-11.7	140-12.6										
Date	1996/02/26	1996/02/26	1996/02/26	1996/02/26	1996/02/27	1996/02/27	1996/03/13	1996/03/13	1996/03/13	1996/03/13										
Time(JST)	18:33	19:11	19:46	20:32	01:38	02:31	12:53	13:19	14:00	14:30										
Weather																				
Air Temp.																				
Bar																				
Wind Dir																				
Wind Spd/F																				
Transparency																				
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD									
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S								
0m	1.1*	32.64*	1.5*	32.70*	1.3*	32.60*	1.2*	32.62*	2.7*	33.20*	15.1*	32.81*	6.6*	33.98*	7.4*	34.06*	7.9*	34.08*	8.4*	34.08*
10m	1.14	32.652	1.53	32.712	1.17	32.607	1.18	32.632	2.66	33.204	2.04	32.982	6.59	33.977	7.36	34.059	7.75	34.072	8.45	34.083
20m	1.21	32.672	1.51	32.723	0.89	32.604	1.09	32.637	2.65	33.207	2.50	33.170	6.60	33.982	6.73	34.042	7.68	34.068	8.45	34.084
30m	1.37	32.713	1.55	32.748	0.90	32.608	1.10	32.637	2.57	33.210	2.99	33.407	6.61	33.985	6.73	34.043	7.61	34.065	8.45	34.084
50m	1.59	32.764	2.18	32.920	1.00	32.628	1.22	32.657	3.08	33.406	3.25	33.488	6.63	33.989	6.73	34.045	7.54	34.064	8.44	34.086
75m	1.66	32.812	2.58	33.012	1.14	32.663	1.71	32.751	3.62	33.557	3.35	33.533			6.74	34.044	7.47	34.082	8.45	34.086
100m	2.29	32.922	2.78	33.061	1.89	32.812	3.12	32.990							6.74	34.046	7.18	34.120	8.44	34.088
125m	3.99	33.218			3.44	33.079	4.21	33.182											8.31	34.114
150m	3.62	33.308			4.17	33.241	2.96	33.103												
200m	2.97	33.292			3.13	33.271	3.13	33.245												
250m							2.90	33.344												
300m							2.85	33.461												
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

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Table 4 Results of serial oceanographic observations. Hokkaido Hakodate Fisheries Experimental Station

Stn-prefix	199603		199603		199603		199603		199603		199603		199603		199603		199603		199603		
Station No	HAD103		HAD102		HAD101		HTA7		HTA6		HTA5		HTA4		HTA3		HTA2		HTA1		
Latitude:N	41-13.6		41-11.1		41- 8.7		41-23.2		41-20.7		41-18.3		41-15.8		41-13.4		41-10.9		41- 8.5		
Longitude:E	140-12.9		140-13.5		140-14.3		140-10.0		140-11.0		140-11.7		140-12.3		140-12.9		140-13.6		140-14.3		
Date	1996/03/13		1996/03/13		1996/03/13		1996/03/28		1996/03/28		1996/03/28		1996/03/28		1996/03/28		1996/03/28		1996/03/28		
Time(JST)	15:02		15:32		16:01		11:55		12:24		12:59		13:33		14:05		14:36		15:07		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.6*	34.04*	8.5*	34.04*	8.3*	34.00*	7.8*	34.06*	7.9*	34.06*	7.9*	34.05*	8.0*	34.04*	8.2*	34.03*	8.2*	34.03*	7.1*	33.53*	
10m	8.58	34.039	8.55	34.036	8.31	34.002	7.75	34.063	7.89	34.056	7.92	34.052	8.00	34.044	8.15	34.035	8.17	34.030	7.17	33.562	
20m	8.58	34.040	8.55	34.037	8.30	34.005	7.72	34.063	7.89	34.056	7.90	34.053	7.94	34.043	8.15	34.035	8.16	34.029	7.54	33.823	
30m	8.58	34.040	8.55	34.036	8.28	34.010	7.66	34.066	7.78	34.061	7.87	34.053	7.93	34.045	8.14	34.035	8.16	34.029	7.50	33.829	
50m	8.57	34.040	8.54	34.035	8.25	34.016	7.60	34.067	7.64	34.082	7.81	34.057	7.88	34.055	8.14	34.035	8.09	34.026	7.51	33.842	
75m	8.58	34.047	8.54	34.036					6.82	34.133	7.57	34.116	7.84	34.075	8.13	34.035	8.09	34.026			
100m	8.57	34.066							6.57	34.133	7.02	34.135	7.53	34.109	8.10	34.052					
125m											6.63	34.132	7.50	34.130							
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 4-52

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	P11		P12		P13		P15		P14		P16		P17		P18		P27		P36	
Latitude:N	43- 4.1		42-55.1		42-45.3		42-14.4		42-29.1		42- 0.2		41-30.1		41- 0.3		41- 0.1		41- 0.2	
Longitude:E	145-44.9		145-49.7		145-54.7		146- 0.6		145-59.7		145-59.1		145-59.8		145-59.9		145- 0.0		144- 0.1	
Date	1995/04/11		1995/04/11		1995/04/11		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/13		1995/04/13		1995/04/13	
Time(JST)	17:01		19:33		22:58		05:00		07:01		10:09		14:02		14:28		19:15		23:38	
Weather	BC		B		B		C		C		C		R		BC		C		BC	
Air Temp.	3.7		2.2		1.9		2.5		2.7		5.0		5.3		3.2		3.9		3.2	
Bar	1012.0		1014.5		1015.5		1014.0		1013.0		1009.0		1002.2		1009.5		1015.0		1017.5	
Wind Dir	SW		ESE		CALM		WSW		ESE		ESE		ESE		NW		NW		W	
Wind Spd/F	F 1		F 1		F 0		F 1		F 4		F 4		F 6		F 4		F 5		F 4	
Transparency	6						16		13		12		15		13					
Depth	105		1381																	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	1.6	32.488	1.9	32.907	1.7	32.794	2.7	33.065	1.7	32.774	4.1	33.282	6.6	33.802	4.9	33.353	3.5	33.209	2.3	32.955
10m	1.36	32.476	1.92	32.916	1.62	32.803	2.76	33.069	1.49	32.780	4.04	33.283	6.72	33.819	4.87	33.502	3.50	33.194	2.22	32.955
20m	1.26	32.492	1.83	32.968	1.57	32.800	2.76	33.073	1.49	32.777	3.96	33.283	6.72	33.817	4.86	33.505	3.53	33.198	2.20	32.952
30m	1.27	32.587	1.80	32.980	1.52	32.798	2.75	33.078	1.46	32.776	3.95	33.279	6.73	33.823	4.85	33.503	3.59	33.206	2.20	32.970
50m	1.19	32.843	1.73	33.034	1.47	33.072	2.64	33.092	1.36	32.964	4.33	33.463	6.73	33.821	4.84	33.499	3.70	33.223	2.19	32.994
75m	1.07	33.026	1.49	33.167	1.30	33.142	2.04	33.189	1.30	33.097	4.92	33.565	6.72	33.827	4.73	33.487	3.67	33.314	2.35	33.154
100m			1.57	33.212	1.49	33.229	2.31	33.330	1.43	33.157	4.71	33.548	6.65	33.813	4.34	33.461	2.87	33.347	2.16	33.331
125m			2.17	33.352	2.55	33.430	2.29	33.402	1.46	33.265	3.48	33.420	4.54	33.539	3.28	33.423	2.60	33.387	2.47	33.496
150m			2.80	33.446	2.24	33.398	2.29	33.455	1.50	33.339	2.88	33.408	3.82	33.442	3.11	33.469	2.59	33.466	2.37	33.529
200m			2.32	33.444	1.76	33.412	2.39	33.566	1.66	33.442	2.91	33.552	3.82	33.498	3.00	33.555	2.55	33.589	2.83	33.703
250m			2.00	33.449	1.77	33.467	2.55	33.656	2.13	33.558	2.82	33.632	3.43	33.557	2.99	33.630	2.67	33.691	2.98	33.827
300m			1.71	33.468	1.82	33.504	2.84	33.780	1.85	33.598	2.66	33.694	2.79	33.580	3.06	33.731	2.86	33.787	2.92	33.922
400m			2.31	33.656	2.10	33.656	3.09	33.937	2.57	33.824	3.19	33.917	3.18	33.776	3.02	33.875	3.05	33.932	3.10	34.046
500m			2.76	33.864	3.54	33.987	3.22	34.068	3.05	34.009	3.31	34.048	3.93	34.047	3.38	34.073	3.25	34.097	3.05	34.122
600m			3.02	33.981	3.31	34.062	3.37	34.199	3.02	34.120	3.48	34.177	3.28	34.064	3.19	34.163	3.43	34.222	2.89	34.177
700m			2.98	34.078	2.89	34.119	3.24	34.278	2.91	34.202	3.27	34.257	3.25	34.186	3.13	34.248				
800m			3.04	34.185	2.95	34.221	3.07	34.317	2.93	34.285	2.87	34.278	3.07	34.262	3.02	34.315				
900m			2.89	34.251	2.84	34.282	2.70	34.342	2.81	34.315	2.73	34.335	3.01	34.315	2.89	34.361				
1000m			2.78	34.309	2.77	34.345	2.69	34.395	2.67	34.343	2.59	34.381	2.96	34.378	2.78	34.392				

Table 5-1

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	P35		P26		P25		P34		PK22		PK21		P33		P32		P31		P24	
Latitude:N	41-30.0		41-30.2		41-59.8		42- 0.0		42- 0.0		42-14.9		42-14.9		42-29.8		42-44.7		42-15.1	
Longitude:E	143-59.8		145- 0.0		144-59.9		144- 0.0		143-30.1		143-30.0		143-59.1		143-59.9		144- 0.0		144-59.8	
Date	1995/04/14		1995/04/14		1995/04/14		1995/04/14		1995/04/14		1995/04/14		1995/04/14		1995/04/14		1995/04/14		1995/04/15	
Time(JST)	02:39		06:47		09:33		13:32		15:53		17:15		19:14		20:48		22:18		02:52	
Weather	BC		B		B		B		BC		C		C		BC		C		C	
Air Temp.	2.9		4.3		5.9		4.5		3.5		4.1		3.2		3.0		2.7		4.0	
Bar	1018.2		1020.5		1021.5		1020.2		1018.0		1017.5		1019.0		1018.5		1018.0		1016.0	
Wind Dir	WSW		WSW		ESE		SW		SW		S		SSE		SSE		NE		ENE	
Wind Spd/F	F 3		F 2		F 3		F 2		F 4		F 3		F 5		F 4		F 1		F 1	
Transparency			18		19		9		6		5									
Depth									124		67		942		482		70			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	2.7	33.045	7.5	33.890	2.8	33.056	2.8	32.929	2.8	32.323	2.9	32.212	2.4	32.699	2.2	32.583	1.8	32.510	3.4	33.148
10m	2.70	33.049	7.57	33.895	2.50	33.048	1.90	32.927	2.47	32.292	2.11	32.220	2.28	32.697	1.72	32.551	1.64	32.500	3.36	33.153
20m	2.71	33.053	7.56	33.896	2.44	33.062	1.52	32.958	1.91	32.395	1.71	32.345	1.94	32.694	1.74	32.706	1.38	32.535	3.17	33.149
30m	2.71	33.053	7.56	33.895	2.44	33.063	1.46	33.138	1.54	32.642	1.43	32.506	1.86	32.816	1.59	32.770	1.29	32.581	3.13	33.161
50m	2.72	33.054	7.56	33.897	2.44	33.064	1.70	33.223	1.24	32.922	1.09	32.729	1.25	33.037	1.76	32.950	1.34	32.623	3.13	33.162
75m	2.80	33.217	7.55	33.888	2.28	33.087	2.11	33.314	1.20	33.020			1.29	33.106	1.32	33.056			2.89	33.241
100m	3.46	33.379	7.45	33.878	2.27	33.263	2.66	33.411	1.38	33.133			1.39	33.185	1.43	33.139			2.29	33.270
125m	2.75	33.338	6.34	33.727	2.25	33.399	2.58	33.429					1.40	33.214	1.61	33.205			2.50	33.351
150m	2.64	33.348	5.31	33.642	2.43	33.527	2.14	33.412					1.46	33.256	1.88	33.273			2.37	33.415
200m	2.53	33.534	4.45	33.663	2.44	33.622	2.19	33.473					1.87	33.360	2.67	33.442			2.41	33.562
250m	2.67	33.634	4.60	33.795	2.81	33.759	1.81	33.488					1.65	33.408	2.33	33.445			3.14	33.749
300m	2.77	33.779	2.82	33.674	2.75	33.817	1.92	33.590					1.78	33.464	1.85	33.434			3.31	33.843
400m	3.11	33.992	3.89	34.010	3.02	33.986	2.19	33.696					1.97	33.570	1.99	33.585			2.98	33.929
500m	3.01	34.114	3.43	34.078	3.07	34.110	2.72	33.859					2.44	33.787					3.35	34.097
600m	2.86	34.163	2.99	34.139	2.83	34.163	2.91	33.979					2.85	33.967					3.31	34.208
700m					2.87	34.254	3.07	34.050												
800m					2.70	34.306	3.01	34.193												
900m					2.84	34.406	2.91	34.233												
1000m					2.57	34.395	2.77	34.294												

Table 5-2

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	P23		P22		P21		PK11		PK12		PK13		PK14		PK01		PK02		PK03	
Latitude:N	42-30.1		42-45.1		42-55.2		42-45.1		42-30.1		42-14.9		42- 0.1		42-55.2		42-45.2		42-30.0	
Longitude:E	144-59.9		144-59.8		144-59.9		144-29.8		144-29.8		144-29.6		144-29.8		145-29.6		145-29.7		145-29.8	
Date	1995/04/15		1995/04/15		1995/04/15		1995/04/15		1995/04/15		1995/04/15		1995/04/15		1995/04/16		1995/04/16		1995/04/16	
Time(JST)	04:29		06:03		07:03		13:24		14:47		16:20		18:42		01:27		02:27		04:07	
Weather	C		C		C		C		BC		BC		BC		BC		BC		BC	
Air Temp.	3.5		3.2		3.0		4.4		3.5		3.9		3.2		1.7		2.0		2.4	
Bar	1015.5		1015.5		1015.5		1014.5		1014.0		1015.0		1016.0		1017.5		1018.2		1019.5	
Wind Dir	SE		SE		SSE		S		SSE		SSE		S		WSW		WNW		WNW	
Wind Spd/F	F 2		F 4		F 3		F 3		F 3		F 3		F 3		F 2		F 4		F 5	
Transparency			13		8		14		15		17									
Depth			166		63		130								143					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	2.4	32.977	1.9	32.841	1.4	32.524	3.4	32.823	2.6	32.896	4.0	33.168	3.3	33.033	1.2	32.636	1.7	32.900	2.9	33.105
10m	2.35	33.015	1.69	32.822	1.05	32.524	2.04	32.812	1.73	32.887	3.35	33.153	2.74	33.045	1.06	32.642	1.63	32.895	2.92	33.123
20m	2.39	33.058	1.65	32.879	1.05	32.528	1.73	32.827	1.53	32.901	3.22	33.172	2.61	33.067	1.28	32.718	1.21	32.919	2.69	33.112
30m	2.40	33.057	1.42	32.871	1.00	32.524	1.70	32.827	1.57	32.917	3.16	33.175	2.57	33.069	1.10	32.716	1.17	32.921	2.72	33.121
50m	2.33	33.043	1.42	32.984	0.81	32.543	1.57	32.963	1.38	32.938	3.30	33.204	3.13	33.146	1.35	32.826	1.16	32.918	3.46	33.231
75m	1.59	33.006	1.51	33.165			1.40	33.103	1.34	33.010	3.22	33.298	2.64	33.302	1.18	32.983	1.13	32.926	3.15	33.231
100m	1.30	33.061	1.73	33.225			1.46	33.145	1.28	33.128	2.56	33.317	2.71	33.366	1.37	33.127	1.20	33.149	3.05	33.436
125m	1.31	33.116	1.91	33.273					1.42	33.226	2.58	33.371	2.72	33.419	1.42	33.154	1.32	33.231	4.32	33.593
150m	1.66	33.271	1.91	33.273					1.44	33.275	2.72	33.444	2.40	33.477			1.41	33.286	2.44	33.423
200m	2.45	33.514							1.72	33.391	2.50	33.568	2.49	33.595			1.56	33.335	1.80	33.440
250m	2.74	33.656							2.62	33.592	2.56	33.669	2.93	33.778			1.58	33.398	2.50	33.574
300m	3.50	33.852							3.27	33.737	2.96	33.798	2.75	33.851			1.76	33.490	2.19	33.610
400m	3.19	33.946							3.01	33.815	3.26	33.962	3.19	34.029			2.42	33.714	2.73	33.836
500m	3.35	34.073							3.05	33.956	2.95	34.038	3.10	34.110			2.66	33.828	2.95	34.001
600m	3.03	34.134							3.10	34.056	3.00	34.148	2.90	34.170			2.91	33.969	2.89	34.088
700m													3.04	34.266						
800m													2.92	34.319						
900m													2.66	34.333						
1000m													2.60	34.377						

Table 5-3

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	PK04		PK05		PK06		PK15		PK23		PK31		PK32		PK24		PK16		PK07	
Latitude:N	42-15.2		41-59.1		41-30.3		41-30.2		41-30.4		41-30.0		41- 0.2		41- 0.1		40-59.9		41- 0.2	
Longitude:E	145-29.9		145-30.0		145-29.9		144-29.1		143-29.9		143- 0.2		142-59.8		143-29.7		144-29.8		145-29.4	
Date	1995/04/16		1995/04/16		1995/04/16		1995/04/16		1995/04/16		1995/04/16		1995/04/16		1995/04/17		1995/04/17		1995/04/17	
Time(JST)	05:45		07:21		10:16		14:11		18:21		20:30		23:23		01:46		06:24		10:43	
Weather	BC		B		B		BC		C		C		R		R		R		C	
Air Temp.	3.2		3.5		5.5		6.0		3.9		3.7		4.9		3.7		5.5		5.9	
Bar	1020.0		1020.5		1022.0		1021.4		1024.0		1018.0		1015.5		1013.5		1010.0		1009.5	
Wind Dir	NW		NNW		N		E		ESE		ESE		S		SE		S		SW	
Wind Spd/F	F 4		F 4		F 3		F 3		F 4		F 5		F 5		F 5		F 6		F 5	
Transparency	15		17		18		16													
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	4.2	33.329	3.2	33.065	5.6	33.549	3.2	33.025	2.9	33.041	3.0	32.696	3.1	32.803	2.4	32.723	5.2	33.450	3.2	33.071
10m	4.24	33.330	3.14	33.074	5.40	33.537	2.76	33.023	2.79	33.035	2.92	32.758	3.00	32.817	2.29	32.759	5.14	33.477	2.92	33.075
20m	4.23	33.329	3.60	33.208	5.20	33.548	2.55	33.022	2.38	33.027	2.70	32.790	2.90	32.850	1.96	32.770	5.14	33.483	2.92	33.075
30m	4.17	33.322	3.83	33.262	5.17	33.548	2.39	33.034	1.92	33.017	2.11	32.838	2.29	32.966	1.48	32.822	5.16	33.493	2.91	33.084
50m	4.11	33.339	4.79	33.436	5.19	33.553	2.36	33.038	1.57	33.182	2.64	33.080	2.04	32.995	1.39	33.015	5.30	33.549	2.86	33.148
75m	3.79	33.339	2.93	33.210	5.22	33.556	2.31	33.054	1.85	33.261	5.13	33.604	1.57	33.178	1.75	33.252	5.07	33.530	2.41	33.218
100m	3.51	33.377	3.73	33.458	4.99	33.542	2.27	33.277	2.31	33.373	6.41	33.836	1.69	33.226	2.12	33.353	3.92	33.444	2.33	33.309
125m	3.53	33.450	3.85	33.596	4.05	33.464	2.40	33.439	2.10	33.392	6.63	33.888	2.04	33.322	3.32	33.517	3.57	33.437	2.34	33.388
150m	3.34	33.490	2.57	33.425	3.34	33.444	2.44	33.519	2.37	33.441	6.87	33.943	2.44	33.393	3.12	33.494	3.47	33.491	2.29	33.459
200m	4.22	33.749	2.61	33.555	2.89	33.520	2.73	33.667	2.21	33.440	5.08	33.717	1.98	33.386	1.81	33.400	2.76	33.592	2.40	33.602
250m	3.40	33.749	3.04	33.756	2.61	33.605	2.91	33.785	2.03	33.442	3.96	33.619	1.76	33.448	2.08	33.504	3.00	33.720	2.63	33.707
300m	2.29	33.659	3.63	33.838	2.96	33.724	3.08	33.882	1.70	33.451	2.03	33.418	1.75	33.488	1.90	33.529	3.18	33.823	2.92	33.845
400m	2.74	33.862	3.44	33.958	3.21	33.890	3.10	34.007	2.11	33.569	2.06	33.548	1.96	33.584	2.57	33.745	3.56	34.011	3.27	34.037
500m	2.88	34.024	3.50	34.077	3.19	34.016	3.29	34.152	2.29	33.700	2.32	33.691	2.36	33.717	3.10	33.961	3.54	34.155	3.21	34.129
600m	3.06	34.144	3.72	34.211	3.11	34.116	2.98	34.202	3.08	33.949	2.52	33.809	2.57	33.826	3.02	34.067	3.36	34.225	3.11	34.210
700m			3.52	34.278																
800m			3.13	34.280																
900m			2.77	34.304																
1000m			2.63	34.343																

Table 5-4

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	PKA25		PKA26		PKA21		PKA18		PKA15		PKA12		PKA09		PKA06		PKA07		PKA10	
Latitude:N	41- 0.1		40-30.0		40-30.2		40-30.1		40-30.0		40-30.2		40-30.1		40-30.1		40- 0.2		39-59.9	
Longitude:E	146-29.8		146-29.9		146- 0.2		145-30.3		145- 0.1		144-20.0		143-39.9		143- 0.1		142-59.1		143-39.8	
Date	1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18	
Time(JST)	14:45		17:35		20:01		22:08		00:21		03:23		06:20		09:01		11:42		14:31	
Weather	BC		C		B		BC		BC		BC		B		B		BC		C	
Air Temp.	6.5		4.6		3.2		3.2		3.2		3.2		3.7		4.6		5.5		8.5	
Bar	1009.5		1011.7		1016.0		1018.0		1019.9		1021.0		1021.0		1020.5		1019.0		1017.0	
Wind Dir	W		NW		NW		N		N		ENE		SE		E		S		S	
Wind Spd/F	F 5		F 7		F 5		F 5		F 4		F 2		F 2		F 3		F 4		F 5	
Transparency	10												17		9		7		8	
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	3.6	33.397	5.4	33.549	3.4	33.175	3.7	33.205	4.1	33.254	6.4	33.720	3.0	33.000	2.2	32.828	3.4	32.888	6.0	33.280
10m	4.26	33.396	5.38	33.548	3.41	33.170	3.76	33.209	4.10	33.255	6.50	33.723	2.85	33.009	1.91	32.841	2.87	32.885	5.87	33.304
20m	4.18	33.392	5.34	33.546	3.41	33.168	3.76	33.207	4.10	33.257	6.50	33.724	2.86	33.009	1.93	32.861	2.61	32.936	5.85	33.407
30m	4.15	33.392	5.30	33.548	3.42	33.169	3.73	33.208	4.10	33.259	6.51	33.721	2.87	33.007	1.53	33.012	2.50	32.956	5.37	33.384
50m	4.03	33.377	5.09	33.555	3.50	33.252	3.69	33.209	4.06	33.282	6.30	33.735	2.87	33.085	1.54	33.193	2.26	32.956	4.90	33.490
75m	4.18	33.425	5.13	33.583	3.52	33.357	3.17	33.275	4.37	33.381	5.79	33.664	1.92	33.064	1.77	33.278	1.89	33.067	4.33	33.465
100m	4.19	33.440	4.91	33.561	3.60	33.406	2.34	33.338	3.11	33.346	4.85	33.571	2.77	33.361	2.70	33.433	1.90	33.164	3.99	33.475
125m	3.98	33.449	4.61	33.534	3.04	33.460	2.31	33.426	2.49	33.367	4.43	33.540	2.51	33.447	3.29	33.519	1.93	33.252	3.79	33.494
150m	3.93	33.578	3.61	33.501	2.55	33.477	2.44	33.498	2.46	33.422	4.14	33.557	2.43	33.515	2.67	33.482	2.21	33.409	3.94	33.544
200m	2.96	33.569	3.29	33.615	2.56	33.605	2.53	33.621	2.39	33.539	3.44	33.554	2.53	33.646	2.01	33.464	2.35	33.523	2.61	33.511
250m	2.39	33.613	3.47	33.708	2.74	33.714	2.86	33.743	2.66	33.666	3.04	33.693	2.98	33.790	1.99	33.481	2.33	33.580	2.42	33.560
300m	2.86	33.755	3.29	33.784	2.96	33.812	2.99	33.819	3.05	33.793	2.73	33.744	3.15	33.881	1.86	33.507	2.66	33.698	3.10	33.767
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-5

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199505	
Station No	PKA13		PKA16		PKA19		PKA22		PKA27		PKA30		PKA29		PKA28		PKA24		SU22	
Latitude:N	40- 0.1		40- 0.1		40- 0.1		40- 0.1		39-59.8		40- 0.1		40-30.2		40-59.8		41-30.2		42-52.6	
Longitude:E	144-19.6		144-59.8		145-29.8		145-59.8		146-29.9		147- 0.1		146-59.7		146-59.5		146-30.4		144-21.4	
Date	1995/04/18		1995/04/18		1995/04/18		1995/04/19		1995/04/19		1995/04/19		1995/04/19		1995/04/19		1995/04/19		1995/05/18	
Time(JST)	17:15		19:56		22:02		00:09		02:19		04:31		07:15		10:04		13:23		09:30	
Weather	C		C		C		C		R		C		C		R		R		B	
Air Temp.	6.9		6.9		6.6		5.3		6.6		6.3		6.3		6.0		7.5		13.2	
Bar	1017.0		1018.5		1018.0		1016.5		1015.2		1014.0		1012.0		1005.5		993.0		1015.0	
Wind Dir	S		S		SSE		S		S		S		SE		SE		SE		SSW	
Wind Spd/F	F 5		F 5		F 5		F 5		F 5		F 5		F 5		F 6		F 6		F 3	
Transparency	6												18		13		7		7	
Depth																			37	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	3.7	33.020	3.8	33.044	8.5	33.931	3.4	33.145	4.8	33.394	4.7	33.425	4.1	33.316	3.7	33.242	6.4	33.881	7.0	31.07*
10m	3.51	33.015	3.82	33.045	8.58	33.954	3.28	33.109	4.81	33.412	4.60	33.427	3.91	33.336	3.61	33.239	6.36	33.736	5.53	31.665
20m	3.03	33.035	3.59	33.064	8.58	33.955	3.06	33.136	5.26	33.536	4.53	33.419	3.91	33.335	3.61	33.248	6.37	33.750	5.23	31.814
30m	2.83	33.044	3.15	33.082	8.14	33.872	3.04	33.144	5.29	33.562	4.41	33.410	3.89	33.335	3.57	33.247	6.37	33.751	3.97	31.948
50m	2.65	33.074	2.75	33.129	7.67	33.820	2.97	33.178	5.45	33.579	4.36	33.419	3.85	33.353	3.69	33.288	6.35	33.756		
75m	2.12	33.135	2.56	33.167	7.58	33.861	2.88	33.186	5.49	33.636	4.26	33.436	3.93	33.373	3.60	33.311	6.33	33.752		
100m	2.36	33.275	2.21	33.236	6.65	33.780	2.73	33.248	5.43	33.634	4.23	33.444	3.99	33.425	3.54	33.425	6.32	33.752		
125m	2.69	33.336	2.05	33.327	5.55	33.721	2.48	33.398	4.18	33.537	4.03	33.431	3.80	33.419	2.53	33.347	6.22	33.736		
150m	2.96	33.413	3.23	33.512	5.64	33.777	2.50	33.447	3.45	33.544	3.41	33.439	3.36	33.431	3.06	33.483	5.87	33.691		
200m	1.90	33.413	2.60	33.507	4.49	33.777	2.81	33.575	3.39	33.635	2.60	33.580	2.89	33.588	2.76	33.574	4.07	33.495		
250m	2.21	33.484	2.24	33.560	4.78	33.909	2.54	33.644	3.02	33.704	3.29	33.728	3.02	33.734	2.79	33.658	3.72	33.569		
300m	2.04	33.591	1.97	33.588	3.59	33.793	3.19	33.784	3.17	33.799	3.04	33.779	2.81	33.771	3.03	33.770	2.79	33.554		
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-6

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	SU23		SU24		SU21		SU20		SU19		SU18		SU17		SU16		SU13		SU14	
Latitude:N	42-54.2		42-53.3		42-52.0		42-53.2		42-55.4		42-45.3		42-47.2		42-49.3		42-45.0		42-43.0	
Longitude:E	144-21.4		144-16.8		144-13.6		144-13.0		144-11.4		144- 0.6		144- 0.8		143-59.0		143-52.6		143-54.9	
Date	1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/18		1995/05/19		1995/05/19		1995/05/19		1995/05/19		1995/05/19	
Time(JST)	10:02		10:43		11:29		12:19		12:49		10:02		10:43		11:21		12:16		12:52	
Weather	B		B		B		B		B		C		C		C		BC		C	
Air Temp.	15.6		16.4		14.6		13.1		12.0		10.1		10.2		10.8		12.1		13.6	
Bar	1015.0		1015.0		1015.5		1015.5		1015.0		1016.0		1016.0		1015.5		1015.5		1015.5	
Wind Dir			SW		SSW		SSW		S		SSW		S		S		SSW		S	
Wind Spd/F																				
Transparency	8		12		11		13		12		14		12		11		17		13	
Depth	51		73		88		57		33		82		57		32		31		51	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	7.5	31.22*	6.2	31.26*	6.6	31.90*	6.9	31.96*	6.9	31.56*	6.0	32.19*	6.2	32.06*	6.4	31.91*	6.9	32.02*	7.1	32.07*
10m	5.44	31.907	5.37	31.958	5.17	N.D.	4.98	32.087	6.09	31.653	4.70	32.173	5.10	32.100	5.13	32.136	5.04	32.144	5.38	32.104
20m	4.95	32.101	4.67	32.155	4.19	N.D.	3.30	32.179	5.17	32.049	5.23	32.344	4.44	32.296	4.27	32.221			2.15	32.404
30m	3.06	32.294	2.06	32.457	1.59	N.D.	1.81	32.497			2.79	32.239	2.08	32.472	4.16	32.224			2.00	32.404
50m			1.24	32.730	1.28	N.D.	1.78	32.674					1.82	32.513						
75m					1.29	N.D.														
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-7

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199505		199505		199505		199505		199505		199505		199505		199505		199505		199505	
Station No	SU15		SU12		SU11		SU10		SU07		SU09		SU03		SU02		SU01		SU04	
Latitude:N	42-41.5		42-32.6		42-34.0		42-35.8		42-24.0		42-22.5		42-10.3		42-10.8		42-11.4		42-18.9	
Longitude:E	143-56.4		143-46.5		143-44.0		143-41.7		143-30.0		143-34.3		143-28.4		143-27.0		143-24.7		143-27.5	
Date	1995/05/19		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/23		1995/05/24		1995/05/24		1995/05/24		1995/05/24	
Time(JST)	13:34		11:58		12:40		13:20		14:56		15:50		03:58		04:37		05:10		06:11	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	12.4		7.2		8.2		8.1		8.1		7.9		6.6		6.5		6.8		6.8	
Bar	1015.0		1007.0		1006.5		1007.0		1007.5		1007.5		1010.0		1010.0		1010.0		1010.5	
Wind Dir	SSW		W		NNW		NNW		N		WNW		SSW		SSW		S			
Wind Spd/F																				
Transparency	14		13		11		13		8		1				12		10		5	
Depth	72		76		53		33		33		69		74		55		31		32	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	6.9	32.15*	5.7	31.95*	6.1	31.78*	6.5	31.66*	6.5	30.96*	6.1	32.14*	6.2	31.78*	6.2	31.78*	6.5	31.51*	7.0	29.34*
10m	5.13	32.166	5.26	32.245	5.71	31.955	5.96	31.947	6.27	31.249	5.85	32.237	5.93	32.279	6.01	32.034	6.64	32.133	5.24	32.026
20m	4.78	32.579	4.58	32.485	5.76	31.976	4.34	32.195	4.82	32.172	4.25	32.311	4.58	32.615	2.67	32.461	6.46	32.284	4.18	32.240
30m	1.43	32.526	3.18	32.423	4.46	32.313					2.28	32.489	3.64	32.755	2.47	32.481				
50m	1.26	32.601	2.25	32.443							1.67	32.585	1.78	32.705	1.98	32.644				
75m																				
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-8

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199505		199505		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	SU05		SU06		P31		P32		P33		P34		P35		P36		PK16B		P27	
Latitude:N	42-18.0		42-17.5		42-45.3		42-30.0		42-15.0		41-59.8		41-30.4		41- 0.1		41- 0.2		41- 0.2	
Longitude:E	143-29.8		143-31.3		144- 0.1		143-59.9		143-59.1		143-59.9		143-59.9		143-59.9		144-29.4		144-59.9	
Date	1995/05/24		1995/05/24		1995/05/30		1995/05/30		1995/05/30		1995/05/30		1995/05/30		1995/05/30		1995/05/31		1995/05/31	
Time(JST)	06:52		07:23		11:11		12:35		14:07		15:44		18:42		21:30		00:02		02:23	
Weather	C		C		R		R		R		C		F		F		F		F	
Air Temp.	6.9		6.8		8.8		8.6		8.3		9.1		8.6		9.1		9.1		10.0	
Bar	1010.5		1010.6		1010.0		1009.2		1008.0		1007.9		1009.0		1010.0		1010.0		1010.0	
Wind Dir					E		ENE		E		SE		ESE		S		S		S	
Wind Spd/F					F 3		F 3		F 4		F 3		F 3		F 2		F 3		F 3	
Transparency	12		11		10		8		9		10									
Depth	53		70		64		488													
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	6.5	31.31*	6.2	31.70*	8.1	31.621	8.7	31.797	6.4	32.536	9.3	33.182	7.6	32.798	8.1	32.840	8.3	32.782	9.2	32.886
10m	4.42	32.264	5.69	32.105	4.86	32.067	6.66	32.417	6.01	32.579	9.26	33.163	7.46	32.796	7.99	32.836	8.26	32.790	9.17	32.888
20m	1.94	32.505	3.15	32.464	3.74	32.355	4.41	32.603	4.68	32.635	9.21	33.241	6.88	32.817	7.27	32.885	6.68	32.779	7.64	32.827
30m	1.90	32.528	1.87	32.539	2.75	32.490	2.58	32.712	3.37	32.741	5.65	33.212	6.08	32.859	6.01	32.956	4.41	32.730	4.76	32.904
50m	1.88	32.543	1.75	32.769	1.94	32.743	1.40	32.906	1.28	32.936	4.78	33.280	2.37	33.088	3.83	33.164	1.65	32.905	3.75	33.221
75m							1.13	32.998	1.16	33.034	5.94	33.611	1.40	33.014	3.59	33.267	1.13	32.984	4.34	33.393
100m							1.08	33.054	1.24	33.150	5.50	33.664	2.35	33.225	2.92	33.322	2.77	33.250	3.68	33.398
125m							1.25	33.158	1.42	33.231	4.41	33.566	2.36	33.329	2.69	33.376	3.05	33.353	2.95	33.370
150m							1.43	33.223	1.72	33.306	4.05	33.540	1.94	33.327	2.55	33.439	2.56	33.388	2.98	33.464
200m							1.97	33.347	1.99	33.392	2.90	33.496	2.51	33.517	2.54	33.590	2.38	33.496	2.45	33.526
250m							2.02	33.392	1.79	33.427	2.82	33.563	2.66	33.636	2.74	33.693	2.41	33.617	2.82	33.675
300m							2.20	33.475	1.83	33.487	2.73	33.628	2.70	33.727	2.93	33.803	2.85	33.760	2.31	33.666
400m							2.07	33.566	2.21	33.655	2.51	33.746	3.28	33.920	3.20	33.961	3.38	33.966	2.95	33.885
500m									2.76	33.834	2.86	33.892	3.32	34.040	3.46	34.111	3.30	34.076	3.71	34.091
600m									2.99	33.970	3.04	34.033	3.60	34.183	3.26	34.214	3.25	34.196	3.33	34.178
700m											3.15	34.134								
800m											2.99	34.218								
900m											2.86	34.299								
1000m											2.83	34.314								

Table 5-9

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	P26		P25		P24		P23		P22		P21		PK01		P12		P11		P13	
Latitude:N	41-30.0		41-59.1		42-14.9		42-29.8		42-43.3		42-55.0		42-55.1		42-54.1		43- 5.3		42-45.2	
Longitude:E	144-59.9		145- 0.0		145- 0.0		145- 0.0		144-59.8		144-59.8		145-29.7		145-49.8		145-44.7		145-54.7	
Date	1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31		1995/05/31	
Time(JST)	05:13		08:02		09:49		11:24		12:51		13:59		16:04		17:30		20:16		23:23	
Weather	F		F		F		F		F		F		F		F		F		R	
Air Temp.	9.6		8.3		8.3		8.8		8.8		8.0		7.1		6.5		6.5		6.5	
Bar	1010.7		1012.0		1010.5		1011.5		1011.0		1010.5		1011.2		1015.0		1012.0		1011.5	
Wind Dir	S		SE		SE		SE		ESE		E		SE		SE		ESE		SE	
Wind Spd/F	F 3		F 3		F 3		F 3		F 3		F 3		F 1		F 3		F 4		F 3	
Transparency	11		6		8		8		10		10		14		9					
Depth									187		64		148		1425		103			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.8	32.747	6.9	32.567	6.8	32.609	6.6	32.605	6.3	32.390	6.6	32.187	5.6	32.334	5.6	32.529	5.7	32.556	5.6	32.675
10m	8.68	32.726	6.64	32.555	6.32	32.606	5.64	32.644	5.87	32.367	5.88	32.207	4.19	32.398	4.11	32.464	4.21	32.592	5.34	32.687
20m	6.67	32.769	4.88	32.617	3.83	32.676	4.68	32.737	3.54	32.488	3.49	32.337	4.95	32.754	2.71	32.677	3.22	32.621	3.12	32.783
30m	3.07	32.952	2.74	32.798	1.42	32.934	2.76	32.753	3.06	32.585	2.80	32.471	3.54	32.754	2.35	32.737	1.74	32.782	2.02	32.832
50m	2.49	33.022	1.18	32.974	1.19	33.106	1.57	32.898	1.33	32.808	2.27	32.516	1.27	32.782	1.18	32.798	1.25	32.856	1.21	32.971
75m	2.15	33.109	1.20	33.103	1.54	33.267	1.21	33.050	1.25	32.955			1.14	32.953	1.09	33.056	1.13	32.926	1.05	33.069
100m	2.14	33.219	1.35	33.203	1.68	33.336	1.30	33.143	1.32	33.066			1.26	33.116	1.26	33.167			1.15	33.142
125m	2.24	33.321	1.64	33.278	1.71	33.363	1.52	33.237	1.47	33.179			1.27	33.114	1.30	33.207			1.11	33.167
150m	2.30	33.446	1.62	33.306	1.71	33.403	1.88	33.320	1.53	33.225					1.23	33.228			1.43	33.247
200m	2.40	33.580	1.73	33.396	1.78	33.466	2.18	33.403							1.34	33.307			1.43	33.320
250m	2.61	33.690	1.81	33.454	1.83	33.505	1.80	33.412							1.44	33.361			1.69	33.418
300m	2.78	33.778	1.88	33.514	1.93	33.546	1.73	33.445							1.59	33.420			1.80	33.478
400m	3.28	33.964	2.22	33.656	2.20	33.653	1.99	33.567							2.05	33.579			2.08	33.609
500m	3.56	34.143	2.61	33.793	2.50	33.761	2.42	33.722							2.62	33.777			2.72	33.816
600m	3.37	34.223	2.91	33.929	2.70	33.826	2.79	33.865							2.95	33.959			2.91	34.006
700m			3.09	34.032											3.05	34.100			3.13	34.143
800m			3.12	34.121											2.99	34.213			3.02	34.242
900m			3.00	34.188											2.84	34.292			2.83	34.287
1000m			2.90	34.254											2.70	34.349			2.74	34.342

Table 5-10

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	P14		PK06		PK07		P18		P17		P16		P15		PK02		PK03		PK04	
Latitude:N	42-30.2		41-30.1		41- 0.1		41- 0.2		41-29.1		41-59.9		42-14.8		42-45.2		42-30.2		42-15.1	
Longitude:E	145-57.8		145-30.1		145-29.9		146- 0.1		146- 0.0		146- 0.1		146- 0.1		145-30.0		145-29.8		145-30.0	
Date	1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/01		1995/06/02		1995/06/02		1995/06/02	
Time(JST)	03:30		09:19		12:16		14:29		17:23		20:19		22:06		02:54		04:24		05:53	
Weather	F		F		BC		C		F		F		F				C		F	
Air Temp.	5.9		10.8		12.3		12.6		8.6		8.1		7.0		6.5		6.8		6.8	
Bar	1010.5		1011.5		1011.0		1010.5		1010.2		1011.5		1012.0		1012.7		1013.7		1014.0	
Wind Dir	SSE		NW		NW		NNW		NNW		CALM		N		NW		NNW		NNW	
Wind Spd/F	F 3		F 2		F 4		F 3		F 3		F 0		F 2		F 3		F 3		F 3	
Transparency			11		13		11		10								9		7	
Depth									1012								612			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	4.3	32.727	10.1	32.808	10.1	32.812	11.5	33.607	7.9	32.517	6.2	32.805	6.0	32.692	5.6	33.112	6.1	32.500	5.9	32.682
10m	3.41	32.806	9.26	32.855	9.39	32.852	11.40	33.654	5.55	32.487	6.27	32.796	4.84	32.763	4.72	32.541	4.99	32.499	4.47	32.731
20m	2.75	32.805	7.75	32.985	7.63	32.948	11.06	33.809	3.22	32.735	5.60	32.794	3.94	32.807	3.86	32.792	2.74	32.795	3.04	32.795
30m	1.99	32.851	4.41	33.043	4.91	32.957	11.34	33.923	1.67	32.818	4.26	32.810	3.46	32.771	2.81	32.824	1.66	32.975	2.45	32.840
50m	1.29	32.943	4.71	33.462	2.95	33.041	8.35	33.798	1.18	32.985	1.83	32.972	1.23	32.913	1.19	32.999	1.08	33.094	1.79	32.945
75m	0.96	33.080	5.13	33.537	3.13	33.176	7.55	33.855	1.09	33.078	1.06	33.030	0.97	32.965	1.22	33.121	1.10	33.169	1.11	33.051
100m	1.12	33.188	4.96	33.602	2.60	33.331	6.54	33.717	1.19	33.143	1.15	33.143	0.86	33.035	1.26	33.158	1.20	33.215	1.24	33.143
125m	1.25	33.247	4.83	33.615	2.40	33.457	5.00	33.591	1.40	33.213	0.99	33.229	0.88	33.109	1.20	33.205	1.29	33.256	1.29	33.180
150m	1.33	33.283	3.71	33.523	2.46	33.544	5.14	33.704	1.64	33.289	1.73	33.385	1.59	33.290	1.30	33.278	1.36	33.292	1.31	33.222
200m	1.69	33.409	3.03	33.550	2.64	33.653	4.40	33.704	1.88	33.385	2.46	33.539	2.68	33.578	1.53	33.357	1.41	33.311	1.51	33.350
250m	1.57	33.449	2.56	33.559	3.11	33.796	3.86	33.746	1.78	33.438	2.68	33.664	2.78	33.674	1.67	33.407	1.49	33.342	1.71	33.465
300m	2.02	33.609	2.74	33.681	3.12	33.872	3.61	33.802	2.00	33.531	3.00	33.805	2.95	33.802	1.76	33.454	1.57	33.375	1.95	33.576
400m	2.59	33.781	3.41	33.944	3.32	34.026	3.46	33.946	2.48	33.781	3.16	33.969	2.79	33.911	1.97	33.546	1.79	33.492	2.32	33.683
500m	2.66	33.936	3.26	34.036	3.35	34.116	3.56	34.082	3.33	34.019	3.21	34.066	3.17	34.051	2.54	33.741	1.99	33.621	2.74	33.825
600m	2.82	34.056	3.20	34.151	3.10	34.186	3.17	34.136	3.22	34.138	3.22	34.170	3.14	34.153	2.97	33.940	2.78	33.891	3.05	33.985
700m	3.06	34.183					3.04	34.208	2.89	34.206	3.01	34.230	2.97	34.226						
800m	2.91	34.261					2.98	34.296	2.79	34.246	2.85	34.288	2.81	34.296						
900m	2.81	34.326					2.87	34.346	2.73	34.281	2.72	34.332	2.73	34.353						
1000m	2.63	34.363					2.66	34.376	2.69	34.312	2.63	34.379	2.57	34.394						

Table 5-11

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	PK05		PK15		PK14		PK13		PK12		PK11		PK21		PK22		PK23		PK31	
Latitude:N	42- 0.2		41-30.0		41-59.1		42-15.0		42-29.8		42-44.9		42-15.2		41-59.8		41-29.9		41-29.1	
Longitude:E	145-30.1		144-29.8		144-29.8		144-30.0		144-29.9		144-29.9		143-30.0		143-29.9		143-29.8		142-59.1	
Date	1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/02		1995/06/03		1995/06/03		1995/06/03		1995/06/03	
Time(JST)	07:20		13:24		16:10		18:02		19:29		21:01		10:56		12:20		14:59		17:08	
Weather	F		C		BC		C		C		C		C		B		B		BC	
Air Temp.	6.9		11.3		11.5		10.5		9.8		9.0		10.6		10.6		11.3		10.6	
Bar	1015.5		1017.0		1017.0		1018.0		1018.5		1019.0		1021.4		1020.2		1020.2		1019.0	
Wind Dir	NNW		W		E		SE		SE		SE		S		SSE		SSE		ESE	
Wind Spd/F	F 4		F 2		F 1		F 2		F 2		F 3		F 3		F 3		F 3		F 4	
Transparency	8		13		10		11						15		13		11		13	
Depth													132		66		118			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.6	32.679	10.0	32.836	8.3	32.524	8.4	32.520	7.4	32.554	7.7	32.311	8.9	30.863	10.2	29.912	8.2	32.191	9.8	32.811
10m	5.12	32.687	8.53	32.724	5.72	32.519	6.57	32.557	6.31	32.545	5.53	32.227	5.78	32.034	7.00	32.268	5.10	32.491	9.63	33.086
20m	3.93	32.773	8.37	33.015	3.45	32.708	4.23	32.683	5.00	32.606	3.65	32.560	3.73	32.362	4.55	32.548	2.45	32.799	8.77	33.221
30m	3.10	32.752	6.88	33.087	2.00	32.833	3.03	32.735	3.85	32.623	2.50	32.683	2.48	32.578	2.55	32.683	1.35	32.903	8.44	33.529
50m	2.10	32.845	5.10	33.403	1.34	32.947	1.54	32.898	1.47	32.898	1.41	32.761	2.40	32.604	1.45	32.896	1.06	33.001	8.74	33.955
75m	1.42	32.922	4.79	33.454	1.03	33.037	1.16	32.979	1.17	32.985	1.33	32.936			1.32	32.987	0.95	33.059	7.94	33.886
100m	1.48	33.014	5.60	33.661	1.19	33.142	1.00	33.074	1.16	33.073	1.34	33.053			1.46	33.042	1.03	33.137	7.25	33.839
125m	1.31	33.066	4.55	33.566	1.37	33.223	1.14	33.156	1.33	33.174	1.35	33.061					1.20	33.204	6.48	33.757
150m	1.54	33.199	3.83	33.539	1.63	33.295	1.70	33.289	1.46	33.223							1.38	33.245	5.21	33.641
200m	2.05	33.414	2.91	33.501	1.79	33.384	2.08	33.385	1.85	33.339							1.78	33.363	2.57	33.377
250m	2.77	33.597	2.74	33.603	1.78	33.437	1.84	33.410	1.86	33.381							1.86	33.406	2.44	33.439
300m	2.70	33.676	3.14	33.748	1.88	33.505	1.91	33.484	1.81	33.440							2.11	33.471	2.28	33.493
400m	3.14	33.838	3.33	33.958	2.38	33.675	2.13	33.618	2.07	33.568							2.51	33.663	2.32	33.616
500m	2.99	33.928	3.21	34.037	2.71	33.819	2.61	33.778	3.21	33.868							2.89	33.835	2.80	33.763
600m	3.17	34.093	3.23	34.144	3.04	33.973	2.92	33.917	3.61	34.045							3.14	33.999	3.20	33.946
700m	3.14	34.165			3.38	34.152														
800m	2.98	34.229			3.31	34.237														
900m	2.89	34.282			3.22	34.299														
1000m	2.83	34.333			2.93	34.340														

Table 5-12

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	PK32		PKA06		PKA07		PKA10		PKA13		PKA16		PKA19		PKA22		PKA27		PKA30	
Latitude:N	41- 0.3		40-30.1		40- 0.1		39-59.7		39-59.9		39-59.8		40- 0.0		40- 0.0		40- 0.1		40- 0.1	
Longitude:E	143- 0.0		143- 0.1		142-59.7		143-39.7		144-19.8		144-59.9		145-29.1		145-59.6		146-29.6		146-59.8	
Date	1995/06/03		1995/06/03		1995/06/04		1995/06/04		1995/06/04		1995/06/05		1995/06/05		1995/06/05		1995/06/05		1995/06/05	
Time(JST)	20:00		23:07		02:48		19:37		22:07		00:37		02:45		05:01		07:20		09:39	
Weather	R		C		R		C		C		C		F		C		R		C	
Air Temp.	10.6		13.6		16.6		16.3		16.0		15.6		12.5		10.8		10.6		9.6	
Bar	1017.5		1015.0		1011.5		1000.5		1001.0		1000.5		1001.0		1002.0		1003.5		1004.0	
Wind Dir	SE		SSE		SSE		WSW		WSW		WSW		W		WSW		WSW		SW	
Wind Spd/F	F 4		F 5		F 6		F 4		F 3		F 4		F 3		F 3		F 4		F 3	
Transparency															13		14		12	
Depth																	313			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.9	32.810	11.8	33.443	15.9	34.471	16.5	34.441	15.1	34.442	14.2	33.997	10.3	33.060	8.3	32.871	8.0	32.734	7.8	32.774
10m	7.58	32.657	11.63	33.438	15.69	34.462	16.47	34.391	14.94	34.413	14.06	33.981	10.19	33.057	7.85	32.856	7.85	32.727	7.44	32.789
20m	6.47	32.794	9.37	33.657	15.69	34.462	16.01	34.365	14.93	34.413	13.44	33.820	9.98	33.085	6.54	32.893	7.04	32.771	7.28	32.809
30m	5.72	32.847	9.22	33.907	15.65	34.469	13.93	34.477	14.88	34.416	7.39	32.932	4.93	32.796	3.06	32.898	4.98	32.821	6.15	32.865
50m	3.30	33.084	9.41	34.076	13.44	34.496	12.72	34.526	13.14	34.479	1.97	32.925	4.10	33.215	1.01	32.991	2.72	33.020	3.53	33.015
75m	3.13	33.165	9.25	34.099	12.65	34.536	12.54	34.533	12.57	34.536	1.06	32.979	4.84	33.431	0.90	33.077	2.75	33.139	2.50	33.057
100m	3.83	33.342	9.18	34.105	12.46	34.529	12.46	34.535	12.50	34.538	0.94	33.045	3.95	33.410	1.14	33.187	2.66	33.253	2.46	33.150
125m	3.14	33.358	8.64	34.041	12.26	34.507	12.32	34.518	12.40	34.530	0.95	33.104	4.28	33.512	1.59	33.329	2.39	33.342	2.67	33.333
150m	2.69	33.350	8.06	34.004	11.92	34.465	12.12	34.494	12.24	34.510	1.10	33.159	3.26	33.444	2.07	33.467	2.37	33.442	2.77	33.372
200m	1.89	33.376	4.67	33.585	10.56	34.277	11.41	34.393	11.62	34.429	1.41	33.289	2.97	33.563	1.67	33.482	2.78	33.654	2.61	33.538
250m	2.40	33.518	2.71	33.425	8.41	34.014	10.27	34.227	9.92	34.176	2.10	33.428	2.85	33.645	2.96	33.736	3.01	33.788	2.92	33.719
300m	2.64	33.633	2.14	33.432	6.89	33.860	8.18	33.983	8.29	34.003	2.43	33.560	2.89	33.725	3.35	33.852	3.20	33.888	3.10	33.809
400m	3.08 33.827																			
500m	3.43 34.003																			
600m	3.18 34.083																			
700m																				
800m																				
900m																				
1000m																				

Table 5-13

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506	199506	199506	199506	199506	199506	199506	199506	199506	199506	199506
Station No	PKA29	PKA28	PKA24	PKA25	PKA26	PKA21	PKA18	PKA15	PKA12	PKA09	
Latitude:N	40-30.1	41- 0.2	41-29.9	41- 0.2	40-29.9	40-29.7	40-30.1	40-29.9	40-30.0	40-29.1	
Longitude:E	146-59.9	146-59.9	146-29.9	146-30.1	146-29.8	145-59.7	145-30.0	145- 0.1	144-19.1	143-40.2	
Date	1995/06/05	1995/06/05	1995/06/05	1995/06/05	1995/06/05	1995/06/06	1995/06/06	1995/06/06	1995/06/06	1995/06/06	
Time(JST)	12:20	15:02	18:12	21:04	23:41	01:56	04:02	06:04	09:00	11:53	
Weather	C	C	C	C	C	C	BC	C	C	C	
Air Temp.	10.6	9.1	7.6	8.1	9.1	11.6	10.3	10.3	12.0	12.1	
Bar	1004.0	1004.5	1005.5	1006.0	1006.0	1006.5	1006.5	1008.0	1010.0	1012.0	
Wind Dir	SW	W	WNW	NW	NW	NNE	N	NNE	NE	NE	
Wind Spd/F	F 2	F 3	F 3	F 2	F 2	F 2	F 2	F 3	F 3	F 4	
Transparency	15	15	11				11	16	11	15	
Depth											
Equipment	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD
STND. Dep	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S
0m	9.1 32.846	8.3 32.852	7.2 32.517	7.4 32.795	10.0 33.146	12.4 33.994	9.5 33.196	9.2 32.659	9.0 32.705	10.6 32.991	
10m	8.83 32.838	8.14 32.845	6.77 32.485	7.23 32.796	9.74 33.176	12.41 33.995	9.03 33.378	8.95 32.698	8.57 32.687	10.38 32.974	
20m	8.69 32.850	7.46 32.853	1.95 32.732	6.95 32.802	7.39 32.894	12.28 34.042	10.48 34.140	7.86 32.725	8.13 32.758	9.33 32.933	
30m	8.16 32.849	4.72 32.830	1.19 32.876	5.99 32.811	3.95 32.813	12.06 34.078	9.90 34.091	4.92 32.788	6.70 32.822	6.36 32.845	
50m	4.39 32.992	2.76 33.149	1.05 33.018	2.53 32.989	2.12 32.965	10.86 34.250	9.29 34.045	2.80 33.095	4.08 33.064	2.38 32.936	
75m	2.76 33.112	3.61 33.297	1.21 33.154	2.37 33.144	1.45 32.998	9.18 34.017	4.87 33.334	2.58 33.211	3.27 33.125	2.54 33.179	
100m	3.26 33.233	3.93 33.447	1.44 33.241	3.59 33.388	1.60 33.184	8.54 34.005	5.35 33.558	2.76 33.302	3.59 33.274	3.21 33.260	
125m	3.13 33.371	3.20 33.396	1.63 33.307	2.68 33.418	1.87 33.366	7.57 33.900	4.50 33.400	2.79 33.417	3.09 33.300	3.52 33.329	
150m	2.38 33.431	2.63 33.428	2.21 33.402	2.00 33.323	1.74 33.397	6.09 33.747	1.18 33.157	2.75 33.472	2.40 33.305	2.24 33.245	
200m	2.75 33.627	2.55 33.565	1.76 33.408	2.66 33.522	2.01 33.537	4.86 33.716	1.47 33.305	2.81 33.586	2.41 33.427	2.75 33.441	
250m	2.94 33.763	2.85 33.691	1.92 33.504	2.57 33.617	2.94 33.760	3.94 33.678	1.80 33.442	2.88 33.660	2.65 33.565	2.54 33.517	
300m	3.05 33.847	3.03 33.795	2.07 33.567	2.91 33.765	3.09 33.870	3.58 33.744	3.11 33.678	2.82 33.727	2.60 33.665	2.51 33.595	
400m											
500m											
600m											
700m											
800m											
900m											
1000m											

Table 5-14

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506	199506	199506	199506	199506	199506	199506	199506	199506	199506
Station No	PK24	IK04	IK03	IK02	IK01	IK13	IK12	IK11	IK10	IK09
Latitude:N	41- 0.2	41-30.0	41-50.0	42-15.0	42-40.0	42-20.0	42-15.0	41-50.0	41-25.0	41- 0.0
Longitude:E	143-29.6	143-10.0	144- 0.0	144- 0.0	144- 0.0	146- 0.0	146- 0.0	146- 0.0	146- 0.0	146- 0.0
Date	1995/06/06	1995/06/14	1995/06/15	1995/06/16	1995/06/16	1995/06/18	1995/06/19	1995/06/19	1995/06/20	1995/06/20
Time(JST)	14:52	17:39	18:00	05:31	17:58	18:15	05:23	18:00	06:17	17:55
Weather	BC	BC	R	C	C	BC	C	C	C	C
Air Temp.	11.8	10.6	10.3	9.9	11.4	7.8	9.1	9.6	9.5	10.4
Bar	1012.5	1020.2	1010.0	1006.0	1004.0	1007.5	1006.2	1006.0	1005.0	1005.5
Wind Dir	E	WSW	E	NE	NNW	WNW	SSW	E	NE	NE
Wind Spd/F	F 2	F 4	F 5	F 4	F 2	F 2	F 2	F 3	F 2	F 3
Transparency	10	11		12	12	13	7	15	13	11
Depth										
Equipment	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD
STND. Dep	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S
0m	9.4 32.462	9.8 33.04*	8.0 32.60*	8.8 32.13*	10.0 32.45*	6.1 32.60*	7.7 32.75*	9.6 32.72*	9.4 32.65*	11.3 32.88*
10m	7.66 32.566	9.79 33.048	7.82 32.636	8.05 32.262	9.59 32.475	4.79 32.780	7.08 32.740	9.58 32.748	8.82 32.690	11.89 33.140
20m	5.73 32.918	9.56 33.023	7.13 32.664	8.07 32.675	8.34 32.399	3.54 32.831	5.28 32.743	7.97 32.780	7.25 32.831	8.70 32.921
30m	2.63 32.824	5.90 33.143	3.33 32.727	6.67 33.327	4.13 32.417	2.72 32.844	3.39 32.854	4.79 32.790	6.22 32.866	5.24 32.891
50m	2.16 33.007	3.00 33.069	1.57 32.930	2.45 33.002	1.94 32.688	1.71 32.988	1.93 32.921	1.90 32.927	1.57 32.908	3.36 33.084
75m	1.05 33.071	2.65 33.153	1.01 33.009	1.29 33.029	1.37 32.885	1.41 33.097	1.62 32.976	1.26 33.033	1.06 33.017	3.46 33.255
100m	1.24 33.160	3.77 33.372	1.04 33.117	1.68 33.155		1.27 33.178	1.51 33.081	1.23 33.120	1.10 33.124	3.20 33.322
125m	1.37 33.230	3.28 33.369	1.11 33.152	1.24 33.148		1.48 33.234	1.78 33.206	1.21 33.166	1.18 33.186	2.78 33.365
150m	1.74 33.307	2.75 33.383	1.20 33.199	1.40 33.220		1.23 33.265	2.08 33.332	1.34 33.242	1.51 33.267	2.60 33.405
200m	1.98 33.400	1.90 33.373	1.35 33.277	1.82 33.324		1.50 33.357	2.73 33.557	1.69 33.400	1.92 33.400	2.53 33.547
250m	1.86 33.470	1.88 33.394	1.51 33.347	1.79 33.378		1.40 33.411	2.81 33.664	1.88 33.502	2.42 33.538	2.73 33.647
300m	2.18 33.584	2.26 33.466	1.61 33.414	1.84 33.440		1.30 33.459	2.13 33.645	2.34 33.645	3.06 33.734	2.85 33.737
400m	2.68 33.783									
500m	3.09 33.965									
600m	3.21 34.080									
700m										
800m										
900m										
1000m										

Table 5-15

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506			
Station No	IK08		IK07		IK06		IK05		IW01		IW02		IW03		IW04		IW05		IW06			
Latitude:N	41- 0.0		41-25.0		41-55.0		42-20.0		41-29.0		41-29.9		41- 0.2		40-59.3		40-29.5		40-30.0			
Longitude:E	145- 0.0		145- 0.0		145- 0.0		145- 0.0		145- 0.6		145-29.9		145-29.8		145-59.9		146- 0.1		146-30.0			
Date	1995/06/21		1995/06/22		1995/06/22		1995/06/22		1995/06/27		1995/06/28		1995/06/28		1995/06/28		1995/06/29		1995/06/29			
Time(JST)	16:47		05:27		08:24		17:57		18:15		06:32		09:48		18:07		07:47		10:23			
Weather	C		C		C		BC		F		F		C		F		C		F			
Air Temp.	10.5		8.7		10.0		10.8		11.7		11.4		14.1		12.0		13.1		13.2			
Bar	1009.0		1010.5		1011.2		1011.0		1005.5		1008.1		1008.5		1007.5		1011.6		1011.9			
Wind Dir	NE		NNE		ENE		E		W		NNE		NNW		N		NNW		NE			
Wind Spd/F	F 4		F 2		F 4		F 2		F 2		F 1		F 3		F 2		F 3		F 2			
Transparency	13		8		12		11		8		11		12				14		11			
Depth																						
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD			
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S		
0m	11.9	32.82*	8.2	32.74*	10.2	32.68*	10.2	32.72*	11.8	32.55*	11.3	32.66*	12.8	32.86*	13.6	32.86*	13.5	32.69*	13.5	32.85*		
10m	11.22	33.820	7.61	32.602	7.08	32.589	9.74	32.729	9.65	32.506	8.83	32.703	11.84	32.850	12.04	33.112	12.99	32.717	12.55	32.948		
20m	9.86	32.688	4.03	32.806	4.93	32.840	6.96	32.633	4.81	32.795	5.86	32.767	9.03	33.057	5.33	32.805	6.70	32.856	10.27	32.989		
30m	5.66	32.826	3.70	32.841	2.48	32.837	4.81	32.814	2.22	32.860	4.64	32.835	6.16	32.995	3.59	32.981	2.49	32.843	5.93	33.054		
50m	3.54	33.100	2.20	32.948	1.22	32.950	2.78	32.852	1.29	32.978	2.31	32.916	3.22	33.061	3.80	33.286	1.16	32.998	5.97	33.577		
75m	3.44	33.241	1.65	33.033	1.14	33.052	1.83	32.953	1.06	33.079	1.57	32.999	3.39	33.284	5.82	33.812	1.16	33.100	5.28	33.464		
100m	2.23	33.233	1.63	33.148	1.19	33.116	1.51	33.021	1.12	33.150	1.14	33.127	3.22	33.334	3.50	33.406	1.65	33.202	4.77	33.476		
125m	2.29	33.325	1.86	33.274	1.34	33.218	1.49	33.140	1.23	33.213	1.19	33.213	3.34	33.421	6.20	33.915	2.21	33.299	3.64	33.463		
150m	2.49	33.419	2.65	33.398	1.78	33.309	1.53	33.229	1.59	33.310	1.20	33.266	2.70	33.398	6.72	34.010	2.20	33.346	2.42	33.390		
200m	2.42	33.512	2.05	33.489	1.76	33.367	2.46	33.500	1.73	33.393	1.00	33.344	2.73	33.517	4.37	33.756	3.45	33.584	2.72	33.553		
250m	3.06	33.679	1.66	33.519	2.58	33.537	2.63	33.619	1.75	33.444	1.77	33.497	2.73	33.614	3.12	33.679	2.58	33.561	2.66	33.639		
300m	3.33	33.780	2.49	33.664	1.75	33.507	2.97	33.740	1.87	33.513	2.27	33.625	3.22	33.763	3.72	33.841	2.84	33.681	2.95	33.765		
400m																						
500m																						
600m																						
700m																						
800m																						
900m																						
1000m																						

Table 5-16

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506			
Station No	IW07		IW08		IW09		IW10		IW11		IW12		IW13		IW14		IW15		IW16			
Latitude:N	40- 0.1		40- 0.0		39-59.7		39-30.1		39-30.7		39-30.1		40- 0.0		40- 0.0		40-30.2		40-29.9			
Longitude:E	146-30.2		145-59.7		145-30.1		145-29.9		145- 0.2		144-29.9		144-29.7		145- 0.0		145- 0.0		144-30.1			
Date	1995/06/29		1995/06/29		1995/06/30		1995/06/30		1995/06/30		1995/07/01		1995/07/01		1995/07/01		1995/07/01		1995/07/02			
Time(JST)	13:46		18:09		07:10		10:22		18:07		09:02		12:23		14:53		18:11		06:53			
Weather	C		F		C		C		C		F		R		R		R		F			
Air Temp.	16.6		14.3		14.6		16.7		17.9		19.5		17.0		18.1		16.4		14.3			
Bar	1011.6		1012.7		1014.6		1014.4		1013.0		1008.6		1006.8		1005.1		1004.4		1009.0			
Wind Dir	NNW				NE		SE		SSE		SE		SSE		S		SW		NW			
Wind Spd/F	F 1				F 1		F 2		F 3		F 3		F 3		F 5		F 4		F 3			
Transparency	11		14		11		23		15		16		16		11		8		11			
Depth																						
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD			
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S		
0m	15.8	32.78*	15.8	33.72*	14.9	33.19*	18.2	34.40*	18.4	34.42*	18.3	34.38*	14.6	33.12*	16.5	33.56*	14.8	32.48*	14.1	32.79*		
10m	13.47	32.826	13.99	33.058	12.67	33.118	17.98	34.395	18.02	34.418	17.96	34.395	12.64	33.210	15.69	33.662	16.19	33.747	11.60	32.586		
20m	11.21	32.984	9.34	32.805	13.27	33.626	16.09	34.036	16.74	34.380	16.24	34.409	8.12	33.204	12.69	33.705	14.65	33.993	9.61	32.815		
30m	6.24	33.077	6.21	32.851	9.00	33.025	13.54	33.799	15.48	34.350	15.61	34.408	7.62	33.585	11.78	33.922	11.90	33.857	5.49	32.909		
50m	3.79	33.151	3.55	33.101	3.00	32.142	13.60	34.381	13.77	34.327	14.56	34.409	8.71	33.914	11.34	34.171	9.81	34.014	3.08	33.144		
75m	3.88	33.342	3.47	33.235	2.58	32.950	12.75	34.439	12.71	34.494	12.69	34.519	8.08	33.896	10.75	34.173	7.21	33.736	4.18	33.393		
100m	3.28	33.359	3.08	33.298	2.84	33.237	9.12	33.903	12.47	34.504	12.52	34.525	6.20	33.668	9.98	34.114	6.55	33.738	3.70	33.424		
125m	2.88	33.378	3.40	33.428	3.09	33.338	9.18	34.031	12.39	34.505	12.48	34.525	4.69	33.519	8.48	33.968	7.73	34.009	3.31	33.386		
150m	2.71	33.427	2.48	33.407	5.01	33.691	9.23	34.116	12.10	34.463	12.41	34.519	4.80	33.602	7.52	33.863	6.13	33.829	2.95	33.463		
200m	2.80	33.568	2.36	33.505	5.43	33.853	7.15	33.886	10.54	34.217	11.79	34.439	3.26	33.499	4.03	33.412	6.43	34.034	2.81	33.528		
250m	2.81	33.649	2.61	33.598	3.11	33.641	6.49	33.861	8.79	34.019	10.56	34.260	2.41	33.486	2.58	33.451	5.46	33.987	2.68	33.606		
300m	3.22	33.758	2.51	33.667	3.02	33.706	5.27	33.815	7.06	33.847	8.86	34.046	2.46	33.565	3.13	33.594	3.54	33.802	2.98	33.708		
400m																						
500m																						
600m																						
700m																						
800m																						
900m																						
1000m																						

Table 5-17

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199507	
Station No	IW21		IW22		IW23		IW24		IW25		IW20		IW19		IW18		IW17		SM09	
Latitude:N	40-30.1		39-58.9		39-59.9		39-59.9		40-29.3		40-30.1		40-59.9		41- 0.9		41-29.8		44-30.0	
Longitude:E	143-59.9		144- 0.3		143-30.1		142-59.8		142-59.1		143-29.8		143-29.9		143-59.8		143-59.9		157-30.0	
Date	1995/07/02		1995/07/02		1995/07/03		1995/07/03		1995/07/03		1995/07/04		1995/07/04		1995/07/04		1995/07/05		1995/07/15	
Time(JST)	09:19		18:08		08:56		11:43		18:09		07:28		10:52		18:10		06:58		18:11	
Weather	C		C		C		C		C		C		BC		C		C		F	
Air Temp.	16.2		19.8		20.3		19.8		13.5		13.6		17.3		15.0		14.2		12.1	
Bar	1010.0		1010.0		1000.4		998.9		1002.6		1010.5		1011.5		1011.6		1012.0		1013.6	
Wind Dir	NNE		ESE		SSW		SSW		NNE				SSE		SSE		SSE		ESE	
Wind Spd/F	F 1		F 2		F 4		F 4		F 4						F 2		F 3		F 5	
Transparency	10		15		11		15		8		12		8		13		13		13	
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.1	32.52*	18.8	34.37*	19.0	34.37*	17.4	33.77*	13.3	32.63*	13.2	32.81*	13.7	32.39*	14.4	32.68*	12.1	32.43*	12.2	32.852
10m	12.06	32.611	18.85	34.362	18.85	34.362	17.30	33.806	10.17	32.576	13.15	32.822	13.02	32.645	14.57	33.127	12.00	32.457	11.67	32.826
20m	9.98	32.757	16.98	34.398	16.98	34.398	15.91	34.035	5.33	32.778	8.61	32.669	9.15	32.844	13.20	33.332	8.40	32.495	8.49	32.833
30m	7.48	32.879	15.19	34.407	15.19	34.407	14.93	34.057	4.34	32.801	4.74	32.728	9.18	33.493	9.13	33.586	4.59	32.713	6.58	32.872
50m	4.49	33.024	13.33	34.473	13.33	34.473	11.15	33.803	3.06	33.034	3.17	33.152	8.18	33.764	7.91	33.740	1.55	32.917	4.62	32.908
75m	3.67	33.212	12.52	34.519	12.52	34.519	10.05	34.045	2.77	33.115	2.07	33.095	6.81	33.709	5.32	33.440	1.19	33.082	2.45	32.948
100m	3.34	33.275	12.31	34.501	12.31	34.501	7.71	33.762	3.60	33.344	1.21	33.153	6.28	33.707	3.43	33.292	1.24	33.159	2.43	32.999
125m	2.96	33.293	12.02	34.463	12.02	34.463	7.64	33.883	2.92	33.324	1.27	33.227	5.11	33.589	3.80	33.427	1.45	33.230	2.42	33.317
150m	2.30	33.341	11.36	34.369	11.36	34.369	6.57	33.712	2.02	33.311	1.36	33.299	4.70	33.598	3.11	33.426	1.61	33.281	2.85	33.626
200m	2.54	33.510	9.47	34.110	9.47	34.110	4.89	33.581	1.95	33.412	2.66	33.524	5.95	33.933	2.96	33.519	1.79	33.350	3.22	33.825
250m	2.71	33.623	7.78	33.927	7.78	33.927	3.97	33.600	1.73	33.481	2.99	33.688	3.40	33.675	2.71	33.596	1.75	33.398	3.32	33.918
300m	2.89	33.723	5.62	33.735	5.62	33.735	2.96	33.555	1.61	33.561	3.31	33.767	3.22	33.735	2.86	33.692	1.74	33.434	3.41	34.008
400m															3.15	33.864			3.25	34.106
500m															3.35	34.014			3.11	34.207
600m															3.30	34.113			2.96	34.256
700m																			2.82	34.308
800m																			2.72	34.354
900m																			2.58	34.396
1000m																			2.46	34.429

Table 5-18

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199507		199507		199507		199507	
Station No	SM08		SM07		SM06		SM05		SM04		SM03		SM02		SM01		SM10		SM11	
Latitude:N	45- 0.0		45-30.0		46- 0.0		46-30.0		46-30.0		46-30.0		46- 0.0		45-30.0		44- 0.0		43-30.0	
Longitude:E	158- 0.0		158-30.0		159- 0.0		159-30.0		160-20.0		161- 0.0		161-40.0		162-30.0		156-30.0		155-30.0	
Date	1995/07/16		1995/07/16		1995/07/17		1995/07/17		1995/07/18		1995/07/18		1995/07/19		1995/07/19		1995/07/21		1995/07/21	
Time(JST)	08:12		18:11		08:21		18:10		08:47		18:10		09:06		18:08		03:50		18:08	
Weather	C		C		R		F		R		F		F		C		C		C	
Air Temp.	12.4		11.9		11.4		11.5		12.0		12.1		12.0		11.1		14.1		14.1	
Bar	1010.5		1008.5		1005.0		1004.0		999.3		999.6		1002.6		1006.3		1007.5		1003.9	
Wind Dir	ESE		ESE		SE		SSE		SE		S		SSW		W		S		ESE	
Wind Spd/F	F 4		F 4		F 3		F 4		F 4		F 3		F 4		F 3		F 2		F 3	
Transparency	15				12				15				15				13			
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.4	32.829	10.8	32.894	10.2	32.783	9.7	32.664	10.6	32.863	11.0	32.852	10.7	33.065	10.8	33.050	13.6	32.784	15.5	33.299
10m	11.17	32.813	10.76	32.873	9.96	32.885	9.14	32.745	10.39	32.841	10.85	32.835	10.43	33.050	8.69	32.957	13.15	32.739	15.50	33.335
20m	7.44	32.767	8.70	32.787	9.87	32.891	5.72	32.927	6.04	32.827	10.59	32.820	8.60	33.101	7.70	33.078	7.82	32.910	12.79	33.359
30m	5.66	32.794	5.14	32.885	7.02	32.868	5.47	32.927	4.93	32.881	7.57	32.839	7.27	33.135	6.99	33.096	6.28	32.799	10.45	33.537
50m	2.75	32.955	4.00	32.945	4.38	32.895	3.24	32.977	3.33	32.919	5.15	32.927	6.13	33.220	5.91	33.177	3.17	32.950	8.21	33.797
75m	2.55	32.976	3.03	33.014	2.64	32.972	2.14	33.018	2.28	33.015	2.57	32.985	4.51	33.203	4.07	33.192	2.18	33.017	6.78	33.667
100m	2.03	32.974	2.67	33.048	2.11	32.997	1.76	33.065	1.93	33.065	2.54	33.141	4.53	33.354	4.30	33.342	1.95	33.080	5.48	33.575
125m	2.14	33.206	2.65	33.361	1.71	33.022	2.47	33.380	2.62	33.329	2.43	33.355	4.48	33.430	4.33	33.412	2.38	33.367	4.79	33.509
150m	2.72	33.538	2.95	33.676	2.27	33.276	3.01	33.560	2.66	33.575	2.53	33.490	4.74	33.534	4.01	33.473	2.56	33.518	5.10	33.632
200m	3.18	33.748	3.29	33.858	3.53	33.835	3.59	33.751	3.13	33.797	2.75	33.634	3.88	33.614	3.03	33.546	2.91	33.697	4.39	33.682
250m	3.19	33.857	3.33	33.931	3.55	33.932	3.59	33.914	3.24	33.906	3.14	33.785	3.53	33.678	2.82	33.609	3.37	33.856	3.80	33.703
300m	3.22	33.941	3.38	33.993	3.51	34.030	3.60	33.988	3.33	33.984	3.30	33.896	3.68	33.795	2.88	33.690	3.42	33.956	3.22	33.730
400m	3.23	34.083	3.38	34.122	3.41	34.127	3.51	34.091	3.41	34.099	3.30	34.022	3.62	33.922	3.65	33.944	3.37	34.093	3.56	33.921
500m	3.11	34.168	3.26	34.200	3.27	34.198	3.38	34.164	3.31	34.184	3.24	34.111	3.62	34.055	3.41	34.026	3.15	34.177	3.59	34.067
600m	3.00	34.247	3.08	34.273	3.12	34.255	3.23	34.229	3.19	34.242	3.12	34.190	3.59	34.160	3.43	34.146	2.97	34.240	3.65	34.192
700m	2.85	34.301	2.92	34.322	2.96	34.305	3.08	34.281	3.05	34.286	2.97	34.249	3.23	34.205	3.18	34.209	2.86	34.298	3.35	34.241
800m	2.75	34.348	2.78	34.358	2.80	34.354	2.91	34.325	2.89	34.330	2.79	34.297	3.09	34.277	3.10	34.283	2.74	34.341	2.98	34.263
900m	2.62	34.382	2.62	34.396	2.67	34.386	2.77	34.363	2.74	34.373	2.78	34.350	2.95	34.326	2.94	34.330	2.61	34.377	2.86	34.322
1000m	2.51	34.415	2.49	34.428	2.52	34.423	2.63	34.400	2.61	34.406	2.64	34.384	2.81	34.362	2.78	34.366	2.50	34.415	2.81	34.367

Table 5-19

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199507		199507		199507		199507		199507		199507		199508		199508		199508		199508	
Station No	SM12		SM13		SM14		SM15		SM16		SM17		PK11		P22		P21		PK02	
Latitude:N	43- 0.0		42-30.0		42- 0.0		41-30.0		41- 0.0		40-30.0		42-44.8		42-44.8		42-54.1		42-45.1	
Longitude:E	154-30.0		153-30.0		152-30.0		151-30.0		150-30.0		149-30.0		144-29.8		144-59.3		144-59.9		145-29.7	
Date	1995/07/22		1995/07/22		1995/07/23		1995/07/23		1995/07/24		1995/07/24		1995/08/01		1995/08/01		1995/08/01		1995/08/01	
Time(JST)	10:40		18:08		09:45		18:10		10:35		18:09		10:13		12:22		13:25		15:45	
Weather	BC		C		C		B						F		C		C		C	
Air Temp.	16.7		17.3		16.3		18.7		20.2		17.8		14.1		12.3		13.5		13.6	
Bar	1008.5		1010.4		1011.5		1009.6		1016.6		1017.0		1007.0		1005.5		1006.0		1015.0	
Wind Dir	N		WSW		SSW		SE		E		ESE		NNE		NE		NE		ENE	
Wind Spd/F	F 1				F 4		F 3		F 2		F 2		F 2		F 4		F 4		F 4	
Transparency	12				8				18				11		12		6		12	
Depth															167		63			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.6	32.694	17.3	33.665	15.7	33.253	18.5	33.638	17.2	32.590	15.7	32.405	13.7	33.287	10.1	32.876	11.0	33.101	14.7	32.535
10m	13.86	32.653	16.80	33.674	14.85	33.208	18.37	33.663	15.14	32.664	14.60	32.408	11.50	32.852	10.35	33.078	10.72	33.148	12.15	32.653
20m	8.10	33.054	16.49	33.725	10.56	33.417	13.74	33.682	9.16	33.236	9.08	32.725	8.10	32.802	7.76	33.186	10.46	33.152	8.18	32.817
30m	6.33	33.275	13.79	33.599	9.80	33.590	12.88	34.002	4.79	32.912	5.11	32.835	7.45	32.840	4.84	32.765	10.24	33.139	5.97	32.851
50m	3.97	33.072	10.26	33.849	7.23	33.694	11.32	34.170	2.35	33.036	2.71	32.946	5.67	32.597	4.05	32.863	10.05	33.196	3.96	32.856
75m	3.35	33.216	8.01	33.834	6.61	33.720	9.18	34.009	2.22	33.125	1.69	32.958	4.03	32.453	4.64	33.046			2.37	32.876
100m	1.32	33.134	7.06	33.763	6.37	33.720	7.24	33.733	3.13	33.274	1.62	33.059	2.98	32.400	4.10	33.059			1.80	32.954
125m	2.97	33.418	6.37	33.710	6.06	33.705	6.18	33.663	2.04	33.267	1.68	33.184			3.64	33.022			1.91	33.075
150m	2.49	33.426	6.08	33.696	5.88	33.710	5.88	33.678	3.78	33.540	2.25	33.403			1.84	33.018			2.25	33.273
200m	3.57	33.664	3.72	33.501	4.53	33.641	4.71	33.636	3.04	33.545	2.49	33.582							2.80	33.544
250m	2.95	33.723	4.23	33.692	4.08	33.716	4.51	33.720	3.25	33.701	2.90	33.729							3.02	33.684
300m	3.02	33.817	4.19	33.772	3.84	33.760	4.18	33.767	3.89	33.856	2.95	33.811							3.11	33.783
400m	3.16	33.972	4.16	33.938	3.90	33.937	4.25	33.941	3.00	33.869	3.26	33.999							3.22	33.915
500m	3.40	34.115	3.81	34.037	3.77	34.057	4.12	34.060	3.18	34.029	3.22	34.113							3.21	34.017
600m	3.20	34.204	3.66	34.149	3.68	34.153	3.87	34.160	3.08	34.123	3.10	34.193							3.11	34.106
700m	2.97	34.243	3.55	34.218	3.28	34.198	3.41	34.214	3.24	34.240	3.02	34.277								
800m	2.86	34.294	3.21	34.262	3.15	34.273	3.28	34.285	3.31	34.324	2.85	34.314								
900m	2.74	34.338	3.10	34.323	2.90	34.312	3.07	34.320	3.09	34.357	2.94	34.383								
1000m	2.58	34.374	2.89	34.369	2.68	34.345	2.85	34.360	2.74	34.371	2.76	34.410								

Table 5-20

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	PK01		P11		P12		P13		P14		P15		P16		P17		P18		PK07	
Latitude:N	42-55.0		43- 4.1		42-54.1		42-45.0		42-30.2		42-14.3		41-59.1		41-30.0		40-59.1		41- 0.1	
Longitude:E	145-29.1		145-44.9		145-50.0		145-54.1		145-59.9		145-59.1		145-59.9		146- 0.1		145-59.9		145-30.4	
Date	1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02	
Time(JST)	17:01		18:34		19:49		22:07		00:32		03:32		05:13		08:07		10:59		13:11	
Weather	F		F		F		F		C		C		C		F		C		C	
Air Temp.	12.6		12.0		12.6		14.3		14.8		14.8		15.1		16.0		18.8		18.0	
Bar	1005.0				1005.5		1005.0		1015.0		1004.5		1005.5		1005.5		1005.5		1005.5	
Wind Dir	ENE		NE		NNE		NE		NNE		NNE		NNW		NW		NW		NNW	
Wind Spd/F	F 4		F 3		F 4		F 4		F 3		F 3		F 4		F 3		F 2		F 2	
Transparency	11												14		14		18		15	
Depth			104																	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.7	32.726	11.4	33.083	12.4	32.637	15.6	32.408	15.8	32.511	14.6	32.455	15.4	32.517	15.6	32.370	18.6	32.905	18.5	32.795
10m	8.69	32.921	9.34	33.377	12.34	32.605	15.61	32.433	13.40	32.420	10.63	32.531	15.45	32.530	14.47	32.508	15.94	32.807	17.78	32.903
20m	5.46	33.026	8.13	33.575	7.89	32.743	9.85	32.643	4.78	32.929	5.86	32.831	7.27	32.800	6.84	32.770	5.93	32.707	9.13	33.584
30m	4.73	33.191	7.70	33.571	4.96	32.891	6.24	32.823	3.86	32.985	4.31	32.994	4.51	32.884	5.40	32.852	4.16	33.218	7.84	33.371
50m	2.63	33.111	7.65	33.574	2.57	32.947	2.95	32.884	2.75	33.083	2.67	33.079	2.60	33.011	2.48	32.982	1.22	33.115	3.76	33.269
75m	2.60	33.132	7.62	33.563	1.75	33.019	1.68	32.948	2.77	33.233	1.93	33.182	2.13	33.085	2.02	33.044	1.32	33.190	2.41	33.267
100m	2.33	33.143			1.65	33.120	1.47	33.024	3.71	33.483	1.81	33.274	1.88	33.159	1.79	33.124	1.39	33.256	2.35	33.363
125m	1.87	33.229			1.97	33.270	1.65	33.178	1.73	33.286	1.71	33.328	2.16	33.335	1.94	33.275	1.57	33.312	2.00	33.313
150m					2.45	33.443	2.34	33.422	1.98	33.393	1.70	33.379	2.42	33.487	2.33	33.457	1.65	33.345	1.76	33.364
200m					2.53	33.576	2.52	33.611	2.57	33.599	2.33	33.554	2.82	33.694	2.84	33.679	1.71	33.402	1.70	33.422
250m					3.06	33.743	2.94	33.782	2.46	33.661	3.03	33.749	3.13	33.839	3.08	33.831	1.73	33.470	1.73	33.486
300m					2.97	33.804	3.04	33.879	2.59	33.769	4.05	33.997	3.17	33.927	3.19	33.939	1.79	33.535	1.93	33.574
400m					2.85	33.919	3.15	34.017	3.49	34.053	3.36	34.034	2.99	34.019	3.03	34.017	2.20	33.686	2.30	33.720
500m					2.91	34.038	3.13	34.118	3.66	34.224	3.34	34.150	3.06	34.159	3.04	34.151	2.73	33.863	2.61	33.845
600m					2.87	34.073	3.05	34.207	3.04	34.217	3.34	34.261	3.01	34.259	3.02	34.236	3.13	34.053	2.99	34.000
700m					2.94	34.189	2.92	34.277	2.84	34.277	3.03	34.299	2.89	34.317	2.74	34.274	3.30	34.205		
800m					2.84	34.250	2.73	34.313	2.77	34.333	2.90	34.357	2.77	34.377	2.75	34.352	3.18	34.292		
900m					2.80	34.326	2.70	34.366	2.67	34.384	2.76	34.395	2.56	34.415	2.64	34.396	3.00	34.349		
1000m					2.65	34.364	2.63	34.402	2.55	34.421	2.70	34.450	2.51	34.459	2.51	34.433	2.85	34.393		

Table 5-21

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	P27		PK16		P36		PK24		PK32		PK31		PK23		P35		PK15		P26	
Latitude:N	41- 0.1		41- 0.0		41- 0.1		41- 0.1		41- 0.1		41-29.9		41-30.0		41-30.0		41-30.1		41-30.2	
Longitude:E	145- 0.0		144-30.0		143-59.1		143-29.9		143- 0.3		143- 0.1		143-29.8		143-59.1		144-29.9		144-59.9	
Date	1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/03		1995/08/03		1995/08/03		1995/08/03		1995/08/03		1995/08/03	
Time(JST)	15:43		17:54		20:04		22:12		00:17		03:22		05:39		07:52		09:58		12:03	
Weather	C		F		C		C		C		C		F		F		F		F	
Air Temp.	19.2		16.7		18.1		19.7		18.8		16.5		14.6		14.3		16.2		18.1	
Bar	1005.5		1006.0		1007.0		1007.0		1007.0		1017.0		1007.5		1008.0		1008.0		1008.0	
Wind Dir	NW		CALM		CALM		SE		CALM		E		NE		W		S		W	
Wind Spd/F	F 1		F 0		F 0		F 2		F 0		F 2		F 2		F 2		F 2		F 2	
Transparency	18		8										15		10		10		9	
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.4	32.713	13.5	32.499	16.8	32.659	19.9	32.696	16.5	32.474	17.5	33.786	15.1	32.504	13.2	32.632	12.4	32.720	14.2	32.647
10m	19.28	32.802	10.81	32.789	14.40	32.956	17.41	32.779	14.15	32.548	17.40	33.851	13.47	32.523	11.20	32.715	10.87	32.788	10.86	32.684
20m	11.82	32.818	7.52	32.772	5.92	32.738	12.10	33.611	7.54	32.702	14.74	34.157	6.68	32.904	3.50	33.007	6.61	32.836	6.70	32.847
30m	4.29	32.848	4.52	32.911	2.85	32.986	10.77	33.934	4.36	32.847	13.89	34.225	5.10	33.061	4.01	33.134	4.89	32.888	5.10	32.865
50m	3.09	33.145	2.79	33.040	2.10	33.066	9.71	34.072	2.15	32.992	12.79	34.212	4.76	33.284	3.54	33.191	3.14	33.040	2.88	32.967
75m	4.16	33.450	2.09	33.134	1.39	33.121	7.03	33.720	1.57	33.064	11.46	34.168	5.20	33.581	3.06	33.187	2.19	33.061	2.11	33.028
100m	4.22	33.482	1.93	33.192	1.36	33.174	4.44	33.434	1.38	33.130	10.18	34.078	5.23	33.649	1.63	33.138	2.02	33.121	2.09	33.143
125m	4.05	33.536	1.77	33.254	1.30	33.218	2.97	33.360	1.27	33.183	9.06	33.989	4.10	33.488	1.32	33.188	1.77	33.222	2.24	33.310
150m	3.65	33.553	1.91	33.341	1.27	33.262	2.32	33.336	1.19	33.219	7.49	33.816	4.23	33.579	1.39	33.248	1.97	33.316	2.45	33.477
200m	3.36	33.603	2.05	33.463	1.38	33.347	2.15	33.422	1.65	33.351	4.42	33.495	4.25	33.649	1.64	33.347	2.55	33.535	2.82	33.669
250m	2.67	33.649	2.02	33.539	1.80	33.462	1.80	33.463	2.40	33.557	3.43	33.492	3.83	33.677	1.93	33.475	2.84	33.694	3.07	33.795
300m	2.98	33.761	1.94	33.598	1.64	33.524	2.21	33.582	2.57	33.639	1.64	33.428	3.57	33.708	2.25	33.571	2.05	33.697	3.21	33.907
400m	3.54	33.981	2.16	33.751	2.24	33.702	2.64	33.807	2.19	33.750	2.53	33.731	1.99	33.682	2.11	33.685	2.65	33.908	3.23	34.032
500m	3.87	34.156	2.72	33.918	3.20	33.942	3.38	34.040	3.29	34.002	2.63	33.885	2.71	33.902	2.68	33.909	3.00	34.107	2.83	34.100
600m	3.20	34.177	3.22	34.113	3.02	34.054	3.35	34.143	2.71	34.060	2.99	34.040	2.48	33.946	2.96	34.076	2.93	34.204	3.01	34.209
700m																				
800m																				
900m																				
1000m																				

Table 5-22

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	PK06		PK05		P25		PK14		P34		PK22		PK21		P33		PK13		P24	
Latitude:N	41-30.2		42- 0.1		42- 0.1		42- 0.0		42- 0.1		41-59.1		42-14.8		42-15.0		42-15.0		42-15.0	
Longitude:E	145-29.8		145-29.9		145- 0.1		144-30.0		144- 0.4		143-30.1		143-29.9		143-59.8		144-30.1		145- 0.1	
Date	1995/08/03		1995/08/03		1995/08/03		1995/08/03		1995/08/04		1995/08/04		1995/08/04		1995/08/04		1995/08/04		1995/08/04	
Time(JST)	15:00		17:53		20:07		22:21		00:28		02:47		04:13		06:14		08:25		10:38	
Weather	F		F		F		F		F		C		F		C		C		C	
Air Temp.	18.0		16.7		16.2		14.8		13.0		13.5		14.8		14.1		15.8		17.3	
Bar	1007.5		1008.5		1009.0		1010.0		1010.0		1010.5		1011.0		1012.0		1012.5		1012.5	
Wind Dir	W		NNE		NE		NE		N		ENE		ENE		CALM		NE		SE	
Wind Spd/F	F 1		F 2		F 2		F 2		F 3		F 3		F 3		F 0		F 1		F 2	
Transparency	8		9												10		12		13	
Depth									1114		122		66		932					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	13.9	32.471	16.9	32.377	16.5	32.273	16.1	32.456	11.6	32.999	12.7	32.868	13.3	32.992	12.2	32.919	13.9	32.586	16.4	32.523
10m	10.33	32.719	9.75	32.596	15.28	32.426	15.14	32.483	5.67	32.928	11.34	32.985	12.39	33.022	9.56	32.879	10.74	32.675	13.61	32.617
20m	6.37	32.855	5.22	32.838	6.58	32.770	8.04	32.754	4.50	32.972	7.85	33.210	8.94	32.949	4.60	32.954	5.63	32.851	7.63	32.768
30m	4.86	32.901	4.03	32.929	4.70	32.878	5.38	32.865	3.33	33.030	6.65	33.327	8.94	33.178	3.73	33.112	3.84	32.890	6.04	32.829
50m	2.71	32.978	1.95	32.986	2.08	32.974	3.50	32.901	3.74	33.215	5.49	33.260	7.96	33.234	4.42	33.319	3.94	33.249	2.89	32.984
75m	2.07	33.112	1.81	33.137	1.78	33.035	1.86	32.974	2.86	33.191	4.81	33.235			2.25	33.176	3.24	33.229	2.00	33.027
100m	2.17	33.251	1.92	33.275	1.77	33.159	1.76	33.072	2.28	33.199	4.39	33.211			2.40	33.216	1.90	33.205	2.12	33.145
125m	2.24	33.390	2.11	33.393	2.37	33.434	1.73	33.161	1.91	33.258					2.14	33.243	1.92	33.262	2.20	33.331
150m	2.34	33.497	2.12	33.485	2.63	33.609	2.03	33.322	1.89	33.276					1.92	33.263	2.16	33.399	2.47	33.473
200m	2.82	33.680	2.19	33.620	2.94	33.746	2.64	33.619	1.73	33.315					1.86	33.323	2.30	33.542	2.89	33.699
250m	3.06	33.800	2.43	33.760	3.22	33.892	3.14	33.815	1.90	33.383					1.66	33.389	2.56	33.647	3.11	33.836
300m	3.17	33.893	2.98	33.906	3.26	33.975	3.29	33.929	2.00	33.466					1.82	33.477	2.19	33.675	3.08	33.916
400m	3.24	34.028	3.00	34.039	3.24	34.105	3.30	34.091	1.68	33.563					1.99	33.627	2.76	33.902	3.04	34.043
500m	3.05	34.122	3.07	34.162	2.97	34.175	3.10	34.175	2.54	33.823					2.25	33.744	3.27	34.051	3.10	34.163
600m	3.09	34.216	2.93	34.235	2.94	34.247	2.92	34.254	2.93	34.003					2.70	33.973	2.91	34.113	2.99	34.240
700m			2.89	34.305	2.78	34.307	2.79	34.310	3.12	34.161										
800m			2.77	34.365	2.71	34.357	2.73	34.351	3.01	34.238										
900m			2.68	34.417	2.58	34.396	2.62	34.385	2.90	34.298										
1000m			2.56	34.446	2.47	34.433	2.53	34.420	2.80	34.344										

Table 5-23

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	PK04		PK03		P23		PK12		P32		P31		IK01		IK02		IK03		IK04	
Latitude:N	42-15.2		42-29.9		42-30.1		42-30.1		42-30.0		42-45.0		42-41.0		42-20.0		42- 0.0		41-55.0	
Longitude:E	145-29.9		145-30.0		145- 0.0		144-29.9		144- 0.1		144- 0.1		145-20.0		145- 0.0		145- 0.0		144-30.0	
Date	1995/08/04		1995/08/04		1995/08/04		1995/08/04		1995/08/04		1995/08/04		1995/08/28		1995/08/29		1995/08/29		1995/08/30	
Time(JST)	12:49		14:27		16:31		18:33		20:41		22:14		18:57		08:05		17:58		05:41	
Weather	BC		BC		BC		C		C		C		C		C		BC		C	
Air Temp.	18.3		20.7		18.2		16.6		15.0		14.6		14.4		14.2		17.2		18.2	
Bar	1013.0		1013.0		1013.0		1014.0		1014.5		1014.5		1008.5		1015.5		1013.5		1014.5	
Wind Dir	NE		E		ESE		N		ESE		SSE		NE		SW		SSW		WSW	
Wind Spd/F	F 2		F 3		F 1		F 2		F 1		F 2		F 5		F 2		F 4		F 4	
Transparency	9		10		10		8								8				10	
Depth									496		64									
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.3	32.463	17.8	32.567	17.1	32.440	13.4	32.753	13.2	33.113	13.6	33.123	13.6	32.66*	12.8	32.71*	15.3	32.52*	17.9	32.32*
10m	12.19	32.527	15.94	32.499	12.34	32.486	10.59	32.888	11.44	33.098	10.48	33.318	10.71	33.131	12.39	32.753	13.08	32.619	17.96	32.309
20m	6.55	32.733	6.85	32.820	6.70	32.815	6.86	33.149	9.75	33.030	9.98	33.315	9.01	33.125	3.10	32.957	6.61	32.905	7.64	32.797
30m	4.05	32.921	5.61	32.871	5.57	32.874	5.32	33.212	7.38	33.009	9.90	33.324	7.32	33.009	2.35	33.035	3.81	32.959	5.43	32.827
50m	2.45	33.027	3.39	32.908	2.74	32.949	5.28	33.385	5.34	33.152	9.03	33.469	5.10	33.032	1.83	33.108	4.02	33.250	4.37	33.174
75m	1.93	33.126	1.85	33.041	1.86	32.988	3.35	33.253	5.26	33.304			3.89	33.235	1.93	33.318	1.19	33.197	3.50	33.273
100m	1.89	33.285	1.78	33.149	1.62	33.038	2.56	33.218	4.11	33.236			2.12	33.035	2.54	33.489	1.98	33.307	2.33	33.253
125m	2.14	33.393	1.84	33.299	1.64	33.191	1.87	33.252	2.77	33.189			1.95	33.118	2.13	33.509	2.04	33.375	2.08	33.272
150m	1.81	33.455	2.16	33.452	2.35	33.432	1.81	33.294	1.88	33.229			1.95	33.179	2.11	33.549	2.08	33.426	2.14	33.369
200m	2.10	33.563	2.44	33.600	2.93	33.680	1.76	33.404	1.73	33.310			2.12	33.284	2.21	33.600	2.14	33.495	2.23	33.523
250m	2.92	33.743	2.75	33.744	3.22	33.819	1.81	33.501	1.79	33.451			2.16	33.366	2.41	33.685	2.06	33.556	2.60	33.660
300m	2.90	33.837	2.68	33.828	3.33	33.922	1.82	33.563	2.03	33.566			2.24	33.395	2.62	33.764	2.44	33.665	2.53	33.735
400m	3.45	34.051	3.00	33.993	3.18	34.033	2.25	33.739	2.44	33.764										
500m	3.31	34.147	3.20	34.136	3.15	34.116	2.65	33.881												
600m	2.96	34.200	3.09	34.221	3.11	34.189	2.82	34.003												
700m																				
800m																				
900m																				
1000m																				

Table 5-24

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199509		199509		199509		199509		199509		199509		199509	
Station No	IK05		IK06		IK07		IW01		IW02		IW03		IW04		IW05		IW06		IW07	
Latitude:N	42-15.0		42-15.0		42-40.0		42-40.0		42- 9.3		41-49.8		41-29.0		41-45.0		41-59.2		41-29.9	
Longitude:E	144- 0.0		144- 0.0		144-10.0		144- 9.8		144- 0.0		143-34.8		143- 9.8		142-35.0		141-59.9		142-15.0	
Date	1995/08/31		1995/08/31		1995/08/31		1995/09/05		1995/09/05		1995/09/06		1995/09/06		1995/09/07		1995/09/07		1995/09/08	
Time(JST)	06:55		06:55		18:09		10:40		17:39		07:42		17:35		09:58		17:34		08:21	
Weather	F		F		F		B		BC		C		C		BC		BC		BC	
Air Temp.	18.7		17.4		17.0		18.8		19.2		17.4		19.2		20.7		20.5		19.5	
Bar	1012.3		1011.0		1017.5		996.4		998.7		1005.9		1004.5		998.4		1001.0		1008.5	
Wind Dir	S		ENE		ENE		W		NNE		N		NE		W		NNW		NNW	
Wind Spd/F	F 3		F 2		F 2		F 2				F 1		F 2		F 4		F 3		F 4	
Transparency			8				9				9				27				16	
Depth							392		926		153		1299				984			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.2	32.53*	17.9	32.42*	16.9	32.89*	16.5	33.41*	16.4	32.80*	15.5	33.23*	20.2	33.28*	22.2	33.70*	19.9	33.07*	21.9	33.64*
10m	16.96	32.523	13.32	32.568	15.34	33.010	15.57	33.350	15.95	32.787	15.06	33.225	20.28	33.270	22.19	33.676	19.92	33.102	22.08	33.644
20m	11.48	32.756	6.88	32.835	11.01	33.304	11.11	33.123	7.45	32.771	10.17	33.462	20.36	33.424	22.19	33.678	19.51	33.044	22.08	33.643
30m	5.53	32.908	5.55	32.855	9.42	33.428	7.62	32.894	5.44	32.935	9.31	33.432	19.68	34.012	22.19	33.677	18.30	33.580	21.98	33.671
50m	2.93	33.015	3.15	33.006	7.81	33.397	4.20	32.956	3.37	32.969	8.56	33.414	16.53	34.211	19.88	33.918	13.92	33.987	21.37	33.812
75m	2.80	33.138	2.36	33.095	5.15	33.167	2.18	33.017	2.26	33.043	5.99	33.228	14.50	34.376	18.04	34.055	11.56	34.090	19.76	33.843
100m	2.19	33.214	2.04	33.169	2.27	33.054	1.85	33.099	2.15	33.128	4.15	33.189	11.90	34.062	15.96	34.122	10.43	34.101	17.89	34.055
125m	2.07	33.329	2.77	33.338	1.58	33.160	1.97	33.199	1.94	33.231	2.64	33.179	8.74	33.784	14.86	34.301	8.74	33.930	15.78	34.239
150m	2.11	33.389	2.12	33.322	2.06	32.282	2.00	33.242	2.02	33.315			8.01	33.732	13.07	34.260	4.67	33.459	14.34	34.296
200m	2.17	33.484	2.37	33.485	2.09	33.400	2.01	33.298	2.34	33.481			2.39	33.396	8.63	33.914	3.19	33.443	11.60	34.211
250m	2.40	33.601	2.59	33.609	2.17	33.499	2.09	33.396	2.81	33.666			2.07	33.577	5.84	33.655	2.70	33.488	7.28	33.683
300m	2.77	33.753	2.40	33.676	2.59	33.654			3.01	33.781			2.50	33.728	2.89	33.431	2.34	33.562	3.17	33.349
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-25

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199509	199509	199509	199509	199509	199509	199509	199509	199509	199509										
Station No	IW08	IW09	IW10	IW11	IW12	IW13	IW14	IW15	IW16	IW17										
Latitude:N	40-59.5	40-59.8	40-59.3	41-25.1	41-49.2	41-54.7	41-59.3	42-15.0	42-29.7	42-45.0										
Longitude:E	142-29.5	143- 9.8	143-49.8	144-14.7	144-39.5	145-19.9	146- 0.0	145-30.2	145- 0.0	144-30.0										
Date	1995/09/08	1995/09/09	1995/09/09	1995/09/10	1995/09/10	1995/09/11	1995/09/11	1995/09/12	1995/09/12	1995/09/12										
Time(JST)	17:37	09:31	17:36	08:24	17:37	08:56	17:38	08:32	12:09	15:19										
Weather	BC	C	C	BC	R	R	C	BC	B	BC										
Air Temp.	21.6	22.1	19.4	19.5	16.4	17.0	16.9	17.5	15.9	17.7										
Bar	1008.9	1010.0	1009.6	1012.0	1011.9	1003.6	1005.5	1005.7	1005.0	1006.6										
Wind Dir	WSW	WNW	WSW	SSE	SE	SSE	WSW	SW	SW	SW										
Wind Spd/F	F 4	F 4	F 4	F 4	F 3	F 4	F 5	F 6	F 6	F 3										
Transparency		14		10		14		11		8										
Depth										130										
Equipment	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD										
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	22.1	33.72*	22.1	33.69*	18.5	32.26*	16.7	32.93*	14.9	32.57*	15.8	32.52*	15.4	32.65*	16.0	32.55*	12.8	32.78*	16.0	33.42*
10m	22.13	33.704	22.16	33.647	16.19	32.402	16.62	32.943	14.75	32.564	15.69	32.580	14.70	32.663	15.89	32.551	12.30	32.775	16.08	33.414
20m	21.96	33.694	22.13	33.651	9.16	32.806	12.22	32.634	8.12	32.771	13.23	32.655	7.93	32.840	9.12	32.755	11.78	32.762	15.89	33.489
30m	21.89	33.720	21.33	33.717	6.87	32.878	6.44	32.855	4.51	32.980	8.06	32.780	6.16	32.824	6.27	32.787	7.23	32.823	14.48	33.549
50m	19.92	33.820	18.59	34.056	3.43	32.936	2.83	33.105	2.27	33.104	3.82	32.905	2.89	32.977	2.86	32.961	3.81	32.919	11.02	33.453
75m	18.27	33.936	15.23	34.249	2.01	33.031	2.46	33.234	1.86	33.216	1.97	33.006	2.08	33.051	2.04	33.020	2.21	33.013	7.84	33.240
100m	15.94	34.084	12.54	34.291	1.96	33.153	2.19	33.299	2.01	33.320	1.67	33.077	1.92	33.230	1.67	33.143	1.90	33.066	5.03	33.259
125m	14.07	34.193	4.90	33.076	2.09	33.277	2.02	33.342	2.04	33.383	1.98	33.301	1.96	33.336	2.03	33.355	1.89	33.220		
150m	12.93	34.242	2.86	33.080	2.30	33.457	2.00	33.375	2.17	33.428	2.40	33.483	2.31	33.477	2.48	33.515	2.19	33.383		
200m	11.55	34.244	2.02	33.283	2.67	33.656	2.12	33.475	2.17	33.539	2.94	33.707	2.33	33.619	2.90	33.697	2.71	33.632		
250m	9.79	34.080	2.05	33.418	2.91	33.783	2.15	33.534	2.32	33.606	2.99	33.808	2.63	33.750	3.07	33.827	2.85	33.752		
300m	6.42	33.724	2.13	33.517	3.02	33.880	2.28	33.610	2.47	33.681	3.11	33.900	2.88	33.860	3.07	33.906	3.15	33.882		
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-26

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199509		199509		199509		199509		199509		199509		199509		199509		199510		199510	
Station No	SM11		SM10		SM09		SM08		SM07		SM03		SM02		SM01		P31		PK11	
Latitude:N	41-28.8		40-59.9		40-29.9		40-14.9		39-59.1		41-44.7		42- 4.7		42-30.4		42-45.2		42-45.2	
Longitude:E	143-59.4		144-44.7		145-30.3		146-14.7		146-59.4		145-14.6		144-54.5		144-30.8		143-59.8		144-29.7	
Date	1995/09/20		1995/09/22		1995/09/22		1995/09/23		1995/09/23		1995/09/25		1995/09/26		1995/09/26		1995/10/02		1995/10/02	
Time(JST)	17:37		08:53		17:37		08:09		17:37		17:36		07:41		17:32		10:45		12:44	
Weather	B		B		C		B		BC		BC		C		C		C		C	
Air Temp.	14.3		16.2		17.2		17.7		16.3		15.3		15.6		15.1		16.0		16.2	
Bar	1017.0		1020.5		1021.5		1024.5		1024.0		1013.0		1017.7		1017.0		1014.0		1012.5	
Wind Dir	CALM		W		SW		CALM		S		WNW		SSE		SSE		NNE		S	
Wind Spd/F	F 0		F 3		F 2		F 0		F 3		F 3		F 4		F 5		F 2		F 3	
Transparency			11				8						11				6		13	
Depth																	62		128	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.2	32.69*	14.6	32.65*	16.1	32.65*	17.0	32.91*	15.8	32.61*	14.6	32.48*	13.6	32.46*	14.9	33.45*	14.4	33.019	14.9	33.218
10m	13.89	32.668	13.81	32.647	14.88	32.682	16.69	33.058	15.40	32.608	14.60	32.478	13.21	32.463	14.86	33.453	14.01	33.029	14.84	33.255
20m	13.33	32.679	13.02	32.668	9.23	32.853	13.17	32.858	14.46	32.645	14.00	32.501	12.57	32.451	14.30	33.476	13.73	33.118	14.80	33.296
30m	11.08	32.775	10.43	32.723	4.74	33.035	11.41	32.902	11.51	32.822	11.61	32.490	8.20	32.635	12.99	33.463	12.95	33.441	13.32	33.400
50m	3.46	32.946	5.66	32.853	2.31	33.020	5.86	33.149	3.36	33.202	3.79	32.998	3.52	32.907	11.76	33.423	12.54	33.438	12.58	33.457
75m	2.20	33.029	2.61	32.970	1.98	33.190	2.89	33.083	3.72	33.370	2.45	33.071	2.23	33.009	9.47	33.375			10.32	33.388
100m	2.13	33.152	1.98	33.024	2.06	33.320	3.78	33.444	3.50	33.407	1.95	33.175	1.75	33.128	5.94	33.220			6.20	33.246
125m	2.19	33.286	1.88	33.196	2.07	33.411	2.39	33.417	3.08	33.429	2.00	33.318	1.88	33.281	4.18	33.141				
150m	2.27	33.437	2.22	33.416	2.10	33.480	2.28	33.531	2.85	33.460	2.29	33.453	2.44	33.512	2.33	33.232				
200m	2.64	33.603	2.74	33.644	2.28	33.573	2.41	33.661	2.69	33.560	2.62	33.644	2.79	33.683	1.94	33.345				
250m	2.87	33.709	2.94	33.768	2.48	33.681	2.98	33.826	2.02	33.572	2.88	33.792	2.90	33.811	2.02	33.429				
300m	2.68	33.758	3.11	33.884	2.94	33.828	3.06	33.919	2.57	33.724	2.89	33.886	3.11	33.899	2.13	33.511				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-27

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	P22		P21		PK02		PK01		P11		P12		P13		P14		P15		P16	
Latitude:N	42-44.9		42-54.1		42-45.0		42-54.5		43- 5.1		42-54.7		42-44.1		42-30.1		42-15.1		42- 0.1	
Longitude:E	144-59.8		144-59.9		145-29.1		145-30.0		145-45.0		145-49.4		145-54.1		145-59.8		145-59.1		145-59.8	
Date	1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/03		1995/10/03		1995/10/03	
Time(JST)	14:49		15:49		18:00		19:11		20:55		22:26		23:49		01:42		03:31		05:17	
Weather	R		R		R		R		R		R		R		R		R		C	
Air Temp.	14.1		15.6		14.3		14.6		14.8		13.3		13.3		14.1		14.8		15.1	
Bar	1011.0		1010.5		1008.0		1008.0		1008.0		1007.0		1004.0		1004.2		1005.5		1006.5	
Wind Dir	S		S		E		ENE		ENE		NNE		NNE		N		NNE		N	
Wind Spd/F	F 4		F 4		F 4		F 4		F 4		F 4		F 5		F 5		F 4		F 4	
Transparency	13		7																	
Depth	167		64				196		102											
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.6	33.445	15.6	33.393	12.5	32.996	14.7	33.510	14.9	33.539	12.9	32.428	12.9	32.401	15.8	32.693	15.6	32.852	15.4	32.667
10m	14.62	33.467	15.64	33.406	12.38	33.074	14.80	33.555	15.01	33.557	12.68	32.434	12.73	32.435	16.04	32.708	15.65	32.859	15.43	32.686
20m	13.02	33.384	14.72	33.445	10.83	32.778	13.86	33.402	14.99	33.568	11.15	32.736	11.34	32.549	15.24	32.697	15.66	32.859	15.12	32.863
30m	10.28	33.420	14.10	33.464	9.70	32.701	12.17	33.214	14.68	33.562	8.86	32.516	6.46	32.738	9.34	32.880	15.19	32.881	12.83	32.833
50m	8.13	33.344	13.34	33.473	3.71	32.934	6.51	32.981	12.49	33.537	3.86	32.969	2.80	32.938	2.80	32.991	5.96	33.503	4.39	33.023
75m	4.57	33.213			2.14	33.058	2.38	33.128	10.53	33.474	2.23	33.089	1.78	32.996	2.28	33.099	4.36	33.404	4.23	33.350
100m	4.11	33.269			1.69	33.127	2.49	33.280			1.96	33.169	1.34	33.067	2.43	33.299	4.05	33.462	4.05	33.433
125m	2.93	33.226			1.76	33.221	2.43	33.278			1.95	33.239	1.51	33.191	2.91	33.409	3.68	33.473	4.18	33.540
150m	2.71	33.270			1.87	33.301	2.25	33.308			2.04	33.308	1.86	33.327	2.52	33.416	3.08	33.477	3.60	33.524
200m					2.04	33.436					2.19	33.411	2.71	33.585	2.44	33.546	3.69	33.659	4.95	33.845
250m					2.02	33.496					2.18	33.470	2.65	33.667	3.00	33.733	2.93	33.653	4.42	33.833
300m					2.38	33.623					2.24	33.580	3.31	33.828	2.94	33.801	2.89	33.718	3.49	33.800
400m					2.67	33.688					2.66	33.757	3.10	33.955	3.11	33.969	3.78	34.007	3.38	33.943
500m					3.10	33.991					2.97	33.942	3.10	34.068	3.29	34.106	3.39	34.071	3.55	34.091
600m					3.19	34.126					3.12	34.059	3.10	34.174	3.22	34.194	3.31	34.181	3.45	34.186
700m											3.05	34.170	2.97	34.242	2.96	34.238	2.97	34.230	3.06	34.237
800m											2.90	34.248	2.87	34.299	3.11	34.333	2.95	34.302	2.95	34.305
900m											2.87	34.307	2.72	34.344	2.84	34.358	2.80	34.354	2.92	34.368
1000m											2.69	34.355	2.61	34.382	2.62	34.383	2.60	34.387	2.80	34.406

Table 5-28

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510	199510	199510	199510	199510	199510	199510	199510	199510	199510	199510
Station No	P17	P18	PK07	P27	PK16	P36	PK24	PK32	PK31	PK23	
Latitude:N	41-30.0	40-59.1	41- 0.0	40-59.1	41- 0.0	40-59.9	41- 0.2	41- 0.0	41-30.1	41-29.8	
Longitude:E	146- 0.0	146- 0.0	145-29.1	145- 0.1	144-29.9	144- 0.0	143-30.0	142-59.9	143- 0.1	143-30.2	
Date	1995/10/03	1995/10/03	1995/10/03	1995/10/03	1995/10/03	1995/10/03	1995/10/04	1995/10/04	1995/10/04	1995/10/04	
Time(JST)	08:35	11:48	14:16	16:56	19:41	22:26	00:54	03:10	05:52	08:00	
Weather	C	BC	BC	C	C	C	R	R	C	C	
Air Temp.	15.3	15.8	17.0	16.1	17.5	18.5	17.7	16.6	14.8	15.0	
Bar	1008.5	1008.5	1007.5	1009.7	1011.2	1012.0	1011.5	1010.9	1010.4	1011.5	
Wind Dir	WNW	WNW	WNW	NW	NW	NNW	NNW	E	E	E	
Wind Spd/F	F 4	F 4	F 5	F 5	F 4	F 4	F 1	F 3	F 6	F 5	
Transparency	19	9	9							12	
Depth											
Equipment	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD
STND. Dep	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S
0m	15.6 32.600	15.0 32.598	15.1 32.520	13.9 32.409	17.5 33.777	19.8 33.807	19.5 33.773	19.6 33.723	20.0 33.787	18.0 33.920	
10m	15.68 32.610	14.89 32.607	15.01 32.528	13.80 32.408	17.53 33.777	19.88 33.811	19.66 33.778	19.89 33.752	20.26 33.784	18.04 33.940	
20m	15.53 32.681	14.62 32.605	14.76 32.508	12.97 32.548	16.96 34.009	19.80 33.805	19.44 33.793	19.89 33.753	20.27 33.787	17.19 33.897	
30m	13.11 32.712	12.27 32.676	13.95 32.565	12.59 32.601	15.91 34.120	18.92 33.869	18.87 33.864	19.88 33.752	20.05 33.806	16.63 34.160	
50m	3.26 33.007	3.20 32.954	2.97 32.990	3.55 32.883	14.29 34.210	16.66 34.201	13.61 34.350	16.35 33.761	17.36 34.036	15.44 34.135	
75m	3.63 33.312	2.17 33.058	2.11 33.045	2.22 32.973	12.36 34.188	12.44 34.478	12.50 34.512	11.66 34.086	15.30 34.147	13.91 34.144	
100m	3.30 33.390	1.85 33.147	2.45 33.153	1.93 33.133	11.28 34.202	12.48 34.523	12.46 34.525	11.56 34.351	13.15 34.196	12.59 34.152	
125m	2.83 33.414	1.96 33.324	2.17 33.261	1.90 33.242	10.14 34.079	12.43 34.531	12.44 34.530	10.06 34.184	12.43 34.229	10.86 34.108	
150m	2.59 33.461	2.34 33.461	2.34 33.410	2.07 33.376	7.49 33.756	12.30 34.516	12.33 34.517	8.86 34.062	11.77 34.208	9.25 33.917	
200m	2.64 33.592	2.85 33.682	2.62 33.628	2.53 33.606	5.31 33.616	11.91 34.467	11.88 34.461	7.47 33.972	10.01 34.048	5.77 33.599	
250m	4.25 33.913	2.93 33.795	2.76 33.725	2.97 33.771	3.17 33.499	11.01 34.321	11.39 34.391	5.07 33.670	3.53 33.362	3.33 33.492	
300m	3.95 33.950	2.95 33.873	2.99 33.854	3.14 33.872	3.18 33.627	8.96 34.053	10.17 34.210	3.37 33.604	2.03 33.347	3.09 33.555	
400m	3.34 34.008	3.17 34.038	3.21 34.020	3.16 34.030	2.64 33.716	2.64 33.370	5.78 33.713	2.96 33.698	3.13 33.642	2.91 33.724	
500m	3.36 34.125	3.09 33.996	3.15 34.119	3.13 34.136	3.04 33.920	2.22 33.545	3.18 33.614	3.01 33.838	3.04 33.719	2.92 33.840	
600m	3.14 34.199	3.02 34.221	3.09 34.202	3.01 34.209	3.18 34.062	2.69 33.734	3.26 33.783	3.66 34.036	3.62 33.983	3.05 33.921	
700m	3.01 34.259	2.88 34.291									
800m	2.90 34.327	2.79 34.345									
900m	2.69 34.358	2.62 34.388									
1000m	2.61 34.396	2.50 34.422									

Table 5-29

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510			
Station No	P35		PK15		P26		PK06		PK05		P25		PK14		P34		PK22		PK21			
Latitude:N	41-30.1		41-29.1		41-29.1		41-29.1		42- 0.2		42- 0.1		41-59.1		42- 0.0		42- 0.1		42-14.9			
Longitude:E	143-59.9		144-29.1		145- 0.0		145-30.1		145-29.9		144-59.8		144-29.9		144- 0.1		143-30.1		143-29.1			
Date	1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/05		1995/10/05		1995/10/05		1995/10/05			
Time(JST)	10:08		12:30		14:49		17:09		20:06		22:22		00:39		02:53		06:02		07:35			
Weather	C		C		C		C		C		C		F		C		BC		C			
Air Temp.	13.5		14.1		15.6		15.6		14.6		14.6		13.8		14.6		13.3		13.3			
Bar	1010.5		1009.5		1009.0		1010.0		1010.0		1009.5		1008.9		1007.7		1007.9		1008.0			
Wind Dir	E		ENE		E		WNW		E		ESE		CALM		ESE		N		NNW			
Wind Spd/F	F 5		F 4		F 3		F 1		F 4		F 2		F 0		F 2		F 3		F 3			
Transparency	9		10		10												6		8			
Depth																			122		65	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.3	32.471	14.1	32.403	14.6	32.491	14.8	32.486	14.8	32.522	14.4	32.420	13.2	32.416	14.8	33.401	13.4	32.858	14.1	32.909		
10m	12.25	32.513	14.11	32.411	14.60	32.490	14.93	32.506	14.85	32.528	14.41	32.435	12.72	32.408	14.75	33.419	13.47	32.903	14.13	32.922		
20m	10.84	32.635	13.14	32.451	14.49	32.512	13.72	32.580	14.66	32.565	14.20	32.458	12.22	32.470	13.53	33.485	13.05	33.144	13.24	33.273		
30m	7.78	32.733	7.87	32.580	12.64	32.641	9.34	32.675	9.09	32.824	11.82	32.673	10.48	32.548	12.90	33.470	11.12	33.119	12.80	33.398		
50m	3.36	33.003	2.77	32.953	3.63	32.920	2.96	32.955	4.16	33.378	4.22	32.999	4.52	32.836	11.50	33.452	7.37	33.084	11.87	33.382		
75m	2.06	33.088	2.02	33.034	2.33	33.060	2.35	33.098	3.65	33.304	2.31	33.030	2.69	32.975	8.53	33.236	4.58	33.124				
100m	1.75	33.168	1.98	33.151	2.23	33.171	2.04	33.159	3.89	33.416	2.05	33.120	1.41	33.025	3.85	33.155	3.91	33.130				
125m	1.83	33.231	2.02	33.285	2.23	33.305	2.22	33.337	3.43	33.442	2.05	33.245	1.28	33.127	2.79	33.189						
150m	1.78	33.276	2.40	33.490	2.39	33.503	2.43	33.461	3.16	33.510	2.16	33.387	1.73	33.266	2.09	33.196						
200m	1.95	33.382	2.77	33.663	2.71	33.664	2.59	33.621	3.21	33.633	2.41	33.570	2.54	33.521	1.97	33.332						
250m	2.05	33.463	2.97	33.792	2.86	33.778	2.65	33.724	3.92	33.819	2.94	33.759	2.80	33.695	1.98	33.380						
300m	2.28	33.588	3.08	33.887	3.01	33.881	2.94	33.848	2.91	33.777	2.96	33.832	3.05	33.821	2.01	33.437						
400m	2.64	33.748	3.22	34.047	3.00	34.020	3.06	33.990	3.08	33.964	3.14	33.997	3.23	33.973	2.15	33.522						
500m	3.11	34.038	3.15	34.143	3.10	34.148	3.13	34.107	3.15	34.098	3.13	34.117	3.20	34.100	2.40	33.667						
600m	3.06	34.127	2.96	34.198	3.09	34.244	3.06	34.183	3.14	34.194	3.08	34.211	3.07	34.188	2.88	33.884						
700m									3.06	34.256	2.93	34.278	2.96	34.247	2.99	33.961						
800m									2.87	34.318	2.80	34.329	2.85	34.309	3.20	34.109						
900m									2.74	34.369	2.67	34.381	2.69	34.353	2.92	34.280						
1000m									2.59	34.411	2.52	34.409	2.58	34.398	2.65	34.381						

Table 5-30

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	P33		PK13		P24		PK04		PK03		P23		PK12		P32		IK08		IK18	
Latitude:N	42-15.1		42-15.2		42-15.1		42-15.1		42-29.9		42-30.1		42-30.1		42-29.9		42-47.0		43-56.0	
Longitude:E	143-59.9		144-29.9		144-59.9		145-29.7		145-30.0		144-59.1		144-29.9		143-59.1		145-35.0		145-12.5	
Date	1995/10/05		1995/10/05		1995/10/05		1995/10/05		1995/10/05		1995/10/05		1995/10/05		1995/10/06		1995/10/11		1995/10/12	
Time(JST)	09:36		11:45		14:07		16:16		17:50		19:58		22:05		00:15		18:01		11:20	
Weather	BC		F		C		C		C		C		R		C		BC		BC	
Air Temp.	14.5		14.6		15.5		15.6		15.1		14.3		14.1		14.6		12.8		18.5	
Bar	1008.0		1007.0		1005.9		1005.5		1004.5		1002.5		999.5		999.5		1028.5		1025.0	
Wind Dir	WNW		SW		SW		SW		S		SSW		S		W		SSW		SSE	
Wind Spd/F	F 2		F 2		F 3		F 3		F 2		F 4		F 4		F 6		F 4		F 3	
Transparency	12		10		11		12												14	
Depth	932																		79	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.0	33.106	12.8	32.474	15.4	32.665	15.0	32.542	15.0	32.572	12.7	32.461	13.4	33.226	14.7	33.358	12.1	32.49*	15.4	33.82*
10m	14.28	33.315	12.45	32.830	15.43	32.633	15.00	32.551	15.06	32.579	11.28	32.643	13.60	33.282	14.81	33.358	12.15	32.606	14.97	33.827
20m	14.33	33.338	12.18	32.958	15.04	32.589	14.94	32.562	15.06	32.582	11.25	32.842	13.65	33.440	13.75	33.465	10.57	32.587	14.83	33.837
30m	14.25	33.342	10.33	32.727	10.99	32.680	12.20	32.796	13.68	32.623	9.66	32.864	10.59	33.457	13.34	33.522	7.78	32.783	14.70	33.922
50m	9.18	33.317	6.04	33.032	3.23	32.918	4.36	33.261	4.28	32.953	3.60	32.932	7.35	33.270	12.06	33.432	3.23	33.020	13.22	33.990
75m	4.52	33.116	2.22	33.044	2.16	32.981	4.10	33.346	2.76	33.130	1.78	32.999	5.29	33.239	9.51	33.388	2.37	33.192		
100m	2.45	33.134	1.75	33.123	1.89	33.101	4.07	33.456	2.18	33.152	1.24	33.059	3.07	33.266	6.02	33.234	3.58	33.386		
125m	2.12	33.182	1.74	33.210	1.81	33.228	2.84	33.378	2.23	33.365	1.35	33.153	2.55	33.284	3.09	33.117	3.15	33.425		
150m	1.98	33.241	1.88	33.296	2.22	33.413	2.63	33.428	2.24	33.430	1.80	33.299	2.18	33.313	2.07	33.121	3.48	33.499		
200m	1.98	33.319	2.04	33.409	2.73	33.650	3.68	33.780	2.59	33.567	2.59	33.528	2.05	33.371	2.00	33.312	3.10	33.563		
250m	2.07	33.397	2.21	33.542	2.94	33.766	2.84	33.680	2.76	33.707	2.61	33.642	2.12	33.449	2.02	33.399	2.64	33.567		
300m	2.07	33.471	2.75	33.686	3.12	33.888	2.65	33.731	2.98	33.795	2.75	33.753	2.22	33.543	2.11	33.475	2.74	33.724		
400m	2.40	33.637	2.87	33.863	3.16	34.023	3.09	33.953	3.19	33.977	2.87	33.901	2.60	33.744	2.42	33.646				
500m	2.78	33.818	3.23	34.058	3.10	34.120	3.11	34.068	3.19	34.102	3.21	34.064	2.88	33.880						
600m	3.07	34.029	3.11	34.142	3.00	34.208	3.06	34.166	3.08	34.176	3.10	34.144	2.94	33.950						
700m																				
800m																				
900m																				
1000m																				

Table 5-31

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	IK17		IK16		IK15		IK12		IK11		IK10		IK09		IK13		IK14		IK07	
Latitude:N	43-59.0		44- 2.0		44- 5.0		44- 8.0		44-11.0		44-20.0		44-10.0		44- 0.0		43-55.0		42-29.0	
Longitude:E	145-15.0		145-17.5		145-20.0		145-22.5		145-25.0		144-20.0		144-50.0		145-14.0		145-14.0		145- 0.0	
Date	1995/10/12		1995/10/12		1995/10/12		1995/10/12		1995/10/12		1995/10/13		1995/10/13		1995/10/15		1995/10/16		1995/10/17	
Time(JST)	11:45		12:18		12:49		13:19		13:49		17:38		23:27		16:58		23:49		17:53	
Weather	BC		BC		BC		BC		BC		BC		BC		C		R		BC	
Air Temp.	16.2		17.4		17.2		16.1		15.7		13.0		12.8		11.9		15.1		14.4	
Bar	1025.0		1024.3		1024.0		1023.5		1023.5		1015.0		1015.0		1022.5		1015.5		1007.5	
Wind Dir	SSE		SSE		S		S		S		ESE		SW		NE		E		W	
Wind Spd/F	F 4		F 4		F 4		F 4		F 4		F 2		F 5		F 3		F 1		F 4	
Transparency	15		15		13		12		15											
Depth			794				510		510		210				160		81			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	15.5	33.78*	15.6	33.82*	15.4	33.80*	15.4	33.81*	15.5	33.81*	13.0	31.86*	12.8	31.81*	14.9	33.78*	14.9	33.71*	13.2	32.21*
10m	15.33	33.788	15.37	33.828	15.20	33.797	15.30	33.809	15.45	33.805	11.09	31.884	12.11	31.854	14.93	33.779	14.96	33.776	13.17	32.527
20m	15.25	33.794	15.20	33.804	15.04	33.787	15.22	33.805	15.40	33.804	10.33	31.987	11.80	31.875	14.93	33.781	14.89	33.778	12.20	32.560
30m	15.04	33.812	15.15	33.795	15.00	33.796	14.91	33.776	15.36	33.836	9.03	32.113	10.78	32.009	14.91	33.778	14.86	33.779	11.99	32.657
50m	13.65	33.810	14.22	33.850	13.86	33.690	13.87	33.726	14.23	33.859	1.71	32.953	6.92	32.692	14.49	33.840	13.67	33.858	5.91	32.777
75m	12.37	34.058	12.71	34.005	12.78	34.031	13.39	33.983	13.20	33.997	0.06	33.223	2.06	33.039	13.47	33.936			2.11	32.985
100m	11.24	34.037	11.14	34.046	11.81	34.037	11.95	34.028	11.43	34.005	0.22	33.266	1.52	33.284	12.67	33.996			2.05	33.066
125m	8.72	33.948	9.59	33.972	9.24	33.966	9.03	33.950	9.96	34.006	0.16	33.290	0.96	33.288	11.36	34.018			2.02	33.159
150m	6.53	33.776	6.61	33.770	7.60	33.827	8.56	33.964	8.71	33.967	0.03	33.289	0.50	33.279	9.43	33.985			2.11	33.320
200m	4.04	33.577	4.14	33.581	4.67	33.639	4.97	33.634	5.36	33.692	0.01	33.305	0.77	33.340					2.57	33.541
250m	2.59	33.476	2.91	33.495	3.49	33.556	2.66	33.475	2.47	33.459			1.01	33.392					2.89	33.711
300m	2.10	33.456	2.09	33.439	2.56	33.479	1.66	33.419	1.73	33.428			2.24	33.547					3.02	33.802
400m	1.46	33.520	1.40	33.477	1.38	33.464	1.39	33.490	1.36	33.475										
500m			1.54	33.630	1.53	33.596	1.58	33.626	1.60	33.645										
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-32

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510		
Station No	IK06		IK05		IK04		IK03		IK02		IK01		SM01		SM02		SM03		SM04		
Latitude:N	42-15.0		42- 0.0		42- 0.0		42- 0.0		42-15.0		42-30.0		42-30.0		42-19.6		42- 7.3		41-45.0		
Longitude:E	145- 0.0		145- 0.0		144-30.0		144- 0.0		144-10.0		144-20.0		145- 0.0		144-29.6		144- 0.7		144- 0.0		
Date	1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/26		1995/10/27		1995/10/27		1995/10/28		
Time(JST)	04:21		05:54		08:06		10:16		12:03		17:45		18:07		08:56		18:03		07:59		
Weather	C		BC		BC		BC		BC		BC				B				B		
Air Temp.	14.5		14.5		15.4		16.3		18.9		13.3		14.0		11.3		11.7		9.5		
Bar	1011.5		1013.0		1015.0		1016.0		1016.0		1017.0		1007.6		1012.1		1016.5		1026.8		
Wind Dir	NNW		NW		NNW		N		ESE		SE		SW		WNW		NNE		NNW		
Wind Spd/F	F 4		F 4		F 3		F 2		F 3		F 4		F 4		F 4		F 3		F 3		
Transparency					17		13		11						15				13		
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	14.2	32.67*	14.5	28.26*	13.2	32.62*	12.9	32.84*	14.5	33.48*	13.3	33.51*	13.7	32.89*	10.2	32.96*	11.6	33.18*	10.2	32.93*	
10m	14.24	32.661	14.55	32.811	13.07	32.625	12.60	32.967	14.06	33.474	13.46	33.514	13.74	32.853	10.18	33.040	11.74	33.170	10.36	32.930	
20m	12.79	32.576	14.55	32.811	10.89	32.779	11.42	33.178	12.56	33.486	12.93	33.516	13.75	32.851	10.70	33.270	11.73	33.170	10.22	32.760	
30m	10.35	32.949	14.16	32.839	9.59	32.967	9.24	33.058	11.23	33.361	12.68	33.489	13.74	32.851	10.88	33.330	11.75	33.200	5.92	33.020	
50m	5.24	33.158	3.67	33.178	3.44	33.010	6.20	33.017	10.16	33.408	11.37	33.509	4.71	33.081	5.48	33.030	5.56	33.050	3.80	33.280	
75m	4.28	33.329	3.59	33.308	2.64	33.091	2.91	32.938	8.49	33.362	9.89	33.333	3.06	33.112	2.74	33.110	3.09	33.320	3.93	33.440	
100m	4.42	33.501	3.73	33.455	2.06	33.173	1.93	33.076	6.06	33.281	6.33	33.268	3.53	33.307	2.17	33.250	2.21	33.350	2.72	33.440	
125m	4.47	33.564	3.34	33.446	2.09	33.278	1.69	33.148	2.95	33.208	3.57	33.209	3.29	33.345	2.31	33.340	2.23	33.400	3.01	33.520	
150m	4.05	33.590	2.76	33.455	2.33	33.431	1.82	33.228	2.29	33.236	2.89	33.248	3.23	33.417	3.36	33.640	2.11	33.420	2.77	33.560	
200m	3.22	33.647	2.86	33.566	3.07	33.657	2.95	33.453	2.05	33.333	2.27	33.284	3.21	33.523	3.26	33.730	2.05	33.510	3.15	33.780	
250m	3.26	33.735	3.05	33.707	3.02	33.762	3.45	33.606	2.08	33.426	2.07	33.326	3.29	33.620	2.83	33.810	2.14	33.600	2.99	33.870	
300m	3.35	33.819			2.95	33.820	3.03	33.627	2.13	33.493	2.06	33.409	3.56	33.739	3.01	33.920	2.18	33.660	3.25	33.980	
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 5-33

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199510		199510		199511		199511		199511		199511		199511		199511		199511		199511	
Station No	SM05		SM08		SU02		SU03		SU06		SU07		SU10		SU11		SU14		SU15	
Latitude:N	41-21.2		40-47.4		42-48.5		42-51.8		42-41.9		42-45.4		42-34.8		42-36.0		42-23.7		42-24.3	
Longitude:E	144- 1.9		142-28.0		144-17.3		144- 0.6		144-10.1		143-55.3		143-58.0		143-44.4		143-49.4		143-32.2	
Date	1995/10/28		1995/10/30		1995/11/13		1995/11/13		1995/11/13		1995/11/14		1995/11/14		1995/11/14		1995/11/14		1995/11/14	
Time(JST)	18:10		18:04		12:54		14:16		15:51		04:59		06:47		08:28		10:32		12:37	
Weather					B		BC		C		C		C		B		BC		BC	
Air Temp.	9.5		16.3		9.1		8.5		10.5		9.8		11.2		10.1		11.3		10.5	
Bar	1027.5		1006.0		1021.0		1020.5		1020.0		1016.0		1015.0		1013.5		1011.5		1003.0	
Wind Dir	ESE		WNW		SSE		SSW		SSW		S		SSW		S		S		S	
Wind Spd/F	F 1		F 2		S 1		S 2		S 8		S 6		S 10		S 7		S 8		S 8	
Transparency					13		5		11				10		5		9		11	
Depth					284		47		314		39		291		42		286		41	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.4	32.95*	16.6	34.04*	9.5	33.36*	6.6	33.17*	9.3	33.36*	6.5	33.06*	8.4	33.25*	6.3	32.32*	9.5	33.36*	7.3	33.27*
10m	10.92	32.970	16.17	34.010	9.01	33.320	6.24	33.183	9.11	33.420	6.00	33.173	8.39	33.273	6.71	32.790	9.58	33.359	7.23	33.295
20m	10.90	33.020	14.90	33.840	8.75	33.332	6.11	33.216	8.93	33.452	5.44	33.245	8.37	33.276	5.22	33.227	9.58	33.358	7.13	33.294
30m	10.60	33.160	14.86	34.010	8.58	33.311	5.85	33.256	8.91	33.450	5.33	33.244	8.40	33.288	4.96	33.249	9.51	33.357	6.81	33.283
50m	4.02	33.060	14.92	34.010	8.63	33.360			8.91	33.453			8.46	33.305			8.96	33.368		
75m	2.96	33.180	12.47	34.250	7.79	33.307			8.01	33.391			4.64	33.212			5.21	33.257		
100m	2.99	33.340	11.02	34.260	5.28	33.250			2.99	33.170			3.15	33.294			3.82	33.222		
125m	2.61	33.410	8.82	34.010	3.89	33.254			2.35	33.253			2.93	33.339			2.33	33.192		
150m	2.58	33.500	7.64	33.970	3.54	33.254			2.19	33.273			2.64	33.328			2.23	33.261		
200m	2.74	33.720	3.97	33.590	2.90	33.254			2.22	33.314			2.16	33.331			2.50	33.366		
250m	3.10	33.900	3.07	33.610	2.68	33.284			2.27	33.343			2.26	33.366			2.37	33.402		
300m	3.10	33.950	3.52	33.770					2.33	33.379										
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 5-34

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199511		199511		199511		199511		199511		199512		199512		199512		199512		199512	
Station No	SU18		SU19		SU20		SU21		SU22		PK11		P22		P21		PK02		PK01	
Latitude:N	42-13.4		42-26.4		42-31.1		42-49.6		42-49.5		42-44.1		42-45.2		42-55.0		42-45.2		42-55.2	
Longitude:E	143-41.4		143-45.0		143-52.8		144-16.6		144-22.8		144-29.9		144-59.9		144-59.9		145-29.8		145-29.1	
Date	1995/11/14		1995/11/15		1995/11/15		1995/11/16		1995/11/16		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05	
Time(JST)	14:29		06:56		11:08		11:14		13:02		10:24		12:33		13:30		15:44		17:01	
Weather	BC		C		C		B		B		C		BC		BC		C		C	
Air Temp.	10.7		8.2		8.0		7.0		0.6		6.9		7.9		6.6		6.0		6.0	
Bar	1006.0		998.0		997.5		14.5		14.0		1006.0		1004.5		1004.0		1004.0		1004.0	
Wind Dir	S		SW		WSW		SW		SW		NW		NNW		N		NW		NNW	
Wind Spd/F	S 5		S 6		S 12		S 6		S 6		F 3		F 3		F 2		F 3		F 3	
Transparency	14		5		11		13		11		16		14							
Depth	317		119		128		219		127		130		164		65				150	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.3	33.31*	6.9	33.14*	8.8	33.43*	8.6	33.46*	7.5	33.05*	8.1	33.017	7.6	32.842	7.1	32.789	6.8	32.967	7.2	32.643
10m	8.20	33.310	6.97	33.176	9.01	33.429	8.71	33.460	7.46	33.352	8.16	33.010	7.42	32.794	7.08	32.775	6.86	32.967	7.32	32.637
20m	7.97	33.303	6.39	33.170	9.02	33.430	8.70	33.460	7.39	33.344	8.15	33.013	7.08	32.802	7.08	32.780	6.76	33.014	7.43	32.730
30m	7.22	33.275	5.42	33.235	9.02	33.431	8.69	33.459	7.38	33.344	8.15	33.012	7.07	32.849	7.20	32.821	6.62	33.073	7.38	32.741
50m	5.28	33.223	4.39	33.262	8.75	33.426	8.67	33.454	7.35	33.343	8.05	33.011	6.86	32.872	7.70	32.957	5.98	33.168	7.35	32.779
75m	3.28	33.290	3.87	33.280	4.04	33.251	8.62	33.448	5.40	33.251	7.59	32.964	6.84	32.892			5.60	33.198	7.18	32.823
100m	3.09	33.305	3.76	33.289	3.73	33.253	6.70	33.329	5.14	33.301	7.62	32.987	6.72	32.946			5.13	33.206	7.78	33.005
125m	2.96	33.313					5.11	33.291					6.92	33.071			4.93	33.238	7.79	33.004
150m	2.85	33.327					4.36	33.274					6.85	33.163			4.48	33.245		
200m	2.64	33.338					3.71	33.266									3.80	33.287		
250m	2.59	33.354															3.00	33.311		
300m	2.41	33.375															2.47	33.338		
400m																	1.94	33.446		
500m																	2.16	33.620		
600m																	3.07	34.029		
700m																				
800m																				
900m																				
1000m																				

Table 5-35

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	P11		P12		P13		P14		P15		P16		P17		P18		PK07		P27	
Latitude:N	43- 5.0		42-54.9		42-45.2		42-30.2		42-15.1		41-59.1		41-30.1		41- 0.1		40-59.1		41- 0.1	
Longitude:E	145-45.2		145-50.1		145-54.1		145-59.1		145-59.9		145-59.1		145-59.8		146- 0.1		145-30.0		144-59.8	
Date	1995/12/05		1995/12/05		1995/12/05		1995/12/06		1995/12/06		1995/12/06		1995/12/06		1995/12/06		1995/12/06		1995/12/06	
Time(JST)	18:35		19:49		22:02		00:28		03:00		05:42		08:40		11:31		14:04		16:40	
Weather	C		R		C		C		C		C		C		C		C		C	
Air Temp.	5.4		5.6		5.3		5.5		5.5		5.6		6.3		4.9		6.5		7.1	
Bar	1004.5		1005.0		1004.0		1003.2		1003.0		1002.5		1002.5		1001.0		1001.0		1001.0	
Wind Dir	NE		NNE		NNW		W		WNW		NNW		WNW		WSW		NNE		NE	
Wind Spd/F	F 2		F 2		F 2		F 4		F 3		F 3		F 3		F 4		F 3		F 5	
Transparency													19		16		14			
Depth	104																			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	7.3	32.795	6.3	33.099	5.5	32.741	6.6	32.852	6.3	32.799	7.8	33.099	6.5	33.162	6.4	32.989	7.0	33.088	12.5	33.903
10m	7.44	32.797	6.33	33.089	5.46	32.786	6.66	32.857	6.32	32.796	7.92	33.104	6.56	33.159	6.52	32.953	7.44	33.153	12.81	33.894
20m	7.45	32.792	6.32	33.093	5.44	32.811	6.53	32.845	6.32	32.795	7.92	33.103	6.45	33.147	6.19	32.970	6.54	33.029	12.82	33.892
30m	7.58	32.823	6.21	33.103	5.55	33.065	6.53	32.849	6.32	32.796	7.92	33.102	6.17	33.114	6.16	32.966	6.42	33.027	12.82	33.892
50m	7.61	32.889	5.96	33.122	5.26	33.187	5.68	32.772	4.09	32.929	7.74	33.082	5.94	33.089	5.95	32.955	7.32	33.238	12.83	33.892
75m	6.98	32.966	4.26	33.209	3.63	33.241	2.32	32.983	2.25	33.040	3.46	33.093	4.61	33.041	5.41	33.071	6.69	33.217	12.15	33.814
100m			3.94	33.275	2.52	33.296	2.22	33.112	1.91	33.141	2.27	33.194	3.04	33.097	3.36	33.268	3.63	33.186	11.98	34.120
125m			3.25	33.274	2.12	33.326	4.40	33.526	2.22	33.339	2.37	33.312	1.99	33.227	2.46	33.284	3.18	33.247	12.06	34.355
150m			3.13	33.298	1.79	33.347	3.65	33.545	3.49	33.598	3.59	33.602	2.26	33.372	2.19	33.345	2.68	33.264	12.07	34.446
200m			2.74	33.329	1.33	33.382	2.76	33.654	5.08	34.036	2.57	33.589	2.71	33.600	2.02	33.511	2.13	33.322	10.80	34.258
250m			2.32	33.388	2.90	33.673	2.86	33.772	3.87	33.942	3.37	33.789	2.61	33.694	2.30	33.658	2.08	33.440	8.45	33.976
300m			2.05	33.447	3.22	33.821	3.05	33.875	4.44	34.109	3.30	33.827	3.01	33.826	2.67	33.800	2.01	33.519	4.22	33.446
400m			2.09	33.551	3.32	33.997	3.17	34.041	3.26	34.078	3.48	34.022	3.09	33.967	3.03	33.952	3.49	33.943	2.57	33.496
500m			2.29	33.695	3.19	34.064	3.15	34.134	3.38	34.200	3.17	34.099	3.12	34.127	3.25	34.092	3.38	34.019	3.22	33.693
600m			3.16	33.984	3.23	34.155	3.07	34.221	2.92	34.234	3.09	34.205	3.07	34.219	3.24	34.198	3.44	34.143	2.94	33.828
700m			3.20	34.147	3.12	34.200	2.92	34.287	2.88	34.302	3.03	34.291	3.06	34.294	3.01	34.252				
800m			2.94	34.220	2.95	34.283	2.81	34.331	2.74	34.356	2.92	34.356	2.88	34.354	2.88	34.311				
900m			2.81	34.303	2.84	34.348	2.66	34.381	2.59	34.380	2.73	34.386	2.78	34.403	2.77	34.364				
1000m			2.70	34.341	2.76	34.389	2.56	34.418	2.52	34.421	2.62	34.423	2.59	34.435	2.68	34.410				

Table 5-36

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	PK16		P36		PK24		PK23		P35		PK15		P26		PK06		PK05		P25	
Latitude:N	41- 0.1		40-59.1		41- 0.1		41-30.1		41-30.0		41-29.1		41-30.1		41-30.1		42- 0.0		42- 0.1	
Longitude:E	144-29.8		144- 0.1		143-30.1		143-30.2		144- 0.1		144-29.9		144-59.9		145-29.8		145-29.9		144-59.9	
Date	1995/12/06		1995/12/06		1995/12/07		1995/12/07		1995/12/07		1995/12/07		1995/12/07		1995/12/07		1995/12/07		1995/12/07	
Time(JST)	19:11		21:40		00:09		03:02		05:08		07:07		09:13		11:23		14:28		16:47	
Weather	C		C		R		C		C		C		C		C		BC		BC	
Air Temp.	7.1		6.1		7.1		5.9		5.6		4.8		5.0		6.3		3.5		3.5	
Bar	1002.0		1004.0		1004.5		1005.5		1005.5		1007.0		1007.0		1006.0		1006.0		1008.0	
Wind Dir	NE		NE		N		NNE		NNE		NNW		NW		NW		NNE		N	
Wind Spd/F	F 5		F 5		F 4		F 4		F 3		F 3		F 4		F 4		F 5		F 5	
Transparency											15		17		18		15			
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.3	34.129	12.4	34.044	12.5	34.012	11.4	33.682	12.7	34.05*	7.4	33.021	5.9	32.941	7.3	33.049	7.0	32.929	5.7	32.819
10m	12.63	34.122	12.67	34.030	13.04	34.005	11.77	33.670	13.06	33.952	7.55	33.011	5.98	32.933	7.29	33.029	7.20	32.927	5.88	32.822
20m	12.63	34.127	12.67	34.034	13.05	34.006	11.77	33.669	13.05	33.952	7.56	33.016	5.98	32.934	7.29	33.026	7.21	32.926	5.79	32.844
30m	12.67	34.188	12.68	34.043	13.05	34.007	11.77	33.670	13.07	33.953	7.55	33.035	5.98	32.932	7.29	33.024	7.21	32.927	5.75	33.082
50m	12.37	34.270	12.64	34.214	13.05	34.006	11.40	33.691	13.07	33.952	7.69	33.196	5.94	32.934	6.34	33.054	6.16	32.913	4.53	33.197
75m	12.47	34.382	12.49	34.258	13.06	34.006	10.79	33.692	13.07	33.953	7.71	33.311	3.58	33.087	3.97	33.068	3.40	33.047	3.72	33.243
100m	12.49	34.524	12.48	34.536	13.03	33.997	8.82	33.540	12.52	33.846	6.58	33.215	2.88	33.250	2.13	33.155	1.69	33.119	3.03	33.251
125m	12.45	34.532	12.43	34.536	12.58	33.988	8.76	33.858	9.46	33.582	5.19	33.238	2.32	33.282	2.12	33.285	1.76	33.229	1.99	33.268
150m	12.38	34.527	12.36	34.529	8.81	33.433	8.61	33.973	8.57	33.730	3.96	33.231	2.27	33.375	2.31	33.405	2.36	33.424	1.90	33.303
200m	12.08	34.485	12.09	34.496	11.07	34.204	5.07	33.607	4.82	33.480	2.19	33.246	2.95	33.612	2.98	33.686	3.06	33.679	2.09	33.440
250m	11.50	34.399	11.71	34.453	9.21	34.028	4.77	33.743	2.86	33.390	2.24	33.395	2.99	33.734	3.08	33.781	2.81	33.747	2.07	33.510
300m	11.05	34.339	11.53	34.427	7.60	33.865	3.72	33.673	3.38	33.584	2.73	33.556	3.02	33.821	3.33	33.928	3.10	33.854	2.11	33.589
400m	8.27	33.989	9.83	34.171	4.15	33.624	4.01	33.872	3.91	33.850	2.61	33.734	3.05	33.951	3.19	34.016	3.38	34.033	2.75	33.808
500m	4.12	33.601	5.25	33.681	3.09	33.631	3.48	33.923	3.41	33.891	2.98	33.908	3.16	34.059	3.14	34.107	3.78	34.211	3.08	33.990
600m	2.96	33.641	3.65	33.680	3.06	33.781	3.62	34.074	3.41	34.051	3.16	34.041	3.11	34.161	2.91	34.198	3.01	34.183	3.17	34.104
700m																	3.09	34.285	3.19	34.198
800m																	2.88	34.318	2.90	34.249
900m																	2.84	34.371	2.79	34.303
1000m																	2.61	34.398	2.69	34.369

Table 5-37

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	PK14		P34		PK22		PK21		P33		PK13		P24		PK04		PK03		P23	
Latitude:N	42- 0.3		41-59.9		41-59.1		42-14.9		42-14.1		42-14.1		42-15.1		42-15.1		42-29.9		42-30.1	
Longitude:E	144-29.8		144- 0.1		143-30.1		143-29.8		143-59.7		144-30.1		145- 0.0		145-30.0		145-30.1		145- 0.2	
Date	1995/12/07		1995/12/07		1995/12/07		1995/12/08		1995/12/08		1995/12/08		1995/12/08		1995/12/08		1995/12/08		1995/12/08	
Time(JST)	19:01		21:14		23:32		00:58		02:59		05:16		07:31		09:48		11:33		13:53	
Weather	S		B		C		BC		BC		BC		B		C		BC		BC	
Air Temp.	3.0		2.7		3.0		1.2		2.0		1.6		2.0		3.0		3.5		4.9	
Bar	1009.5		1010.0		1009.5		1009.0		1009.0		1008.5		1009.0		1009.0		1007.5		1008.0	
Wind Dir	N		NNE		NNE		NNE		N		NNW		NW		WNW		NNW		NNE	
Wind Spd/F	F 5		F 3		F 3		F 2		F 3		F 4		F 4		F 4		F 3		F 2	
Transparency													18		15		22		18	
Depth			1122		120		65													
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.9	32.859	5.2	32.974	7.5	33.127	7.3	33.063	7.0	33.165	5.2	32.895	5.8	32.793	6.1	32.805	5.5	32.815	6.6	33.065
10m	6.01	32.859	5.28	32.968	8.11	33.109	7.88	33.080	7.34	33.125	5.43	32.887	6.02	32.779	6.06	32.785	5.55	32.801	6.74	33.019
20m	6.00	32.860	5.29	33.007	8.11	33.109	7.89	33.083	7.34	33.128	5.61	32.975	6.02	32.776	6.06	32.782	5.43	32.832	6.58	33.058
30m	6.00	32.864	5.58	33.083	8.12	33.103	7.91	33.083	7.35	33.124	5.94	33.092	5.88	32.757	6.06	32.781	5.39	32.861	6.55	33.056
50m	5.37	32.930	5.99	33.158	8.12	33.109	8.10	33.134	7.34	33.124	6.00	33.113	4.21	33.031	6.06	32.781	5.24	32.962	6.43	33.089
75m	3.21	33.048	5.83	33.145	8.15	33.121			7.34	33.123	3.77	33.192	4.16	33.150	4.87	33.286	5.32	33.122	6.20	33.155
100m	2.09	33.152	4.49	33.259	7.92	33.122			5.23	33.087	3.30	33.241	3.47	33.258	2.43	33.171	4.62	33.196	5.72	33.203
125m	1.75	33.182	2.86	33.230					4.23	33.221	2.73	33.319	2.89	33.312	2.30	33.283	3.01	33.230	5.53	33.220
150m	2.19	33.359	2.70	33.300					3.35	33.243	2.56	33.336	2.54	33.344	2.37	33.424	2.20	33.268	4.91	33.245
200m	1.92	33.441	2.37	33.345					2.49	33.324	2.36	33.357	2.20	33.367	2.74	33.644	2.46	33.407	3.56	33.286
250m	2.92	33.631	2.30	33.440					2.16	33.378	1.99	33.366	1.92	33.408	2.93	33.784	2.14	33.521	2.17	33.246
300m	3.20	33.762	2.02	33.499					2.02	33.427	2.03	33.446	2.09	33.474	3.11	33.897	1.93	33.600	2.15	33.380
400m	3.18	33.902	2.67	33.718					2.21	33.618	2.16	33.609	3.14	33.764	3.21	34.036	2.83	33.853	1.96	33.516
500m	3.19	34.019	2.86	33.891					2.40	33.728	2.34	33.697	3.05	33.912	3.39	34.168	3.05	34.010	2.78	33.759
600m	3.24	34.130	2.89	33.968					2.60	33.838	2.28	33.792	3.03	34.054	3.10	34.233	3.13	34.123	3.05	33.926
700m	2.98	34.181	3.14	34.084																
800m	2.91	34.252	3.11	34.185																
900m	2.79	34.293	3.04	34.257																
1000m	2.69	34.344	2.85	34.308																

Table 5-38

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199602		199602		199602		199602		199602		199602		199602	
Station No	PK12		P32		P31		PK11		P22		P21		PK02		PK01		P11		P12	
Latitude:N	42-30.0		42-30.0		42-45.0		42-44.1		42-45.1		42-55.1		42-44.1		42-54.9		43- 5.1		42-54.9	
Longitude:E	144-29.1		143-59.8		144- 0.1		144-29.9		144-59.8		144-59.9		145-29.9		145-30.0		145-44.9		145-50.1	
Date	1995/12/08		1995/12/08		1995/12/08		1996/02/19		1996/02/19		1996/02/19		1996/02/19		1996/02/19		1996/02/19		1996/02/19	
Time(JST)	17:03		19:14		20:45		10:35		12:38		13:39		15:55		17:11		18:55		20:10	
Weather	C		C		C		B		B		B		C		C		B		B	
Air Temp.	3.2		2.7		1.5		-4.9		-0.8		-3.5		-3.2		-4.4		-5.0		-5.1	
Bar	1009.0		1010.0		1011.5		1026.0		1025.0		1024.0		1024.5		1024.4		1026.0		1025.5	
Wind Dir	NNE		NNE		N		WSW		W		WSW		NW		NW		NW		W	
Wind Spd/F	F 5		F 6		F 4		F 2		F 3		F 3		F 3		F 3		F 2		F 2	
Transparency							16		20		21		24							
Depth			478		65		133		167		66				162		104			
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	6.8	33.098	7.0	33.070	7.2	33.033	-0.7	32.390	0.5	32.683	-0.4	32.364	1.0	33.037	-0.8	32.730	-1.2	32.546	0.1	32.885
10m	7.01	33.083	7.26	33.062	7.86	33.019	-0.66	32.408	0.01	32.695	-0.50	32.366	1.20	33.040	0.13	32.759	-0.70	32.528	0.44	32.884
20m	6.56	33.065	7.26	33.061	7.93	33.033	-0.64	32.425	0.14	32.755	-0.48	32.489	1.11	33.041	0.20	32.759	-0.59	32.543	0.49	32.896
30m	6.46	33.092	7.26	33.061	7.96	33.043	-0.62	32.444	0.16	32.767	-0.32	32.490	1.14	33.047	0.23	32.765	-0.56	32.544	0.49	32.897
50m	6.54	33.131	7.29	33.091	8.08	33.118	-0.30	32.626	0.57	32.894	-0.28	32.495	1.16	33.054	0.28	32.770	-0.54	32.543	0.59	32.920
75m	6.42	33.196	7.30	33.113			0.36	32.803	0.79	32.945			1.19	33.063	0.32	32.779	-0.52	32.542	0.92	33.007
100m	5.32	33.225	6.44	33.085			0.46	32.844	0.86	32.970			1.49	33.171	0.68	32.889			1.38	33.119
125m	4.31	33.188	5.74	33.147			0.50	32.855	0.94	33.010			1.70	33.209	0.99	32.995			1.86	33.255
150m	3.71	33.244	5.33	33.210					1.66	33.255			1.89	33.270	1.48	33.143			2.03	33.334
200m	2.68	33.295	3.28	33.211									2.26	33.398					2.39	33.470
250m	2.07	33.339	2.28	33.285									2.27	33.492					2.37	33.509
300m	2.13	33.428	2.13	33.359									2.62	33.607					2.32	33.524
400m	2.42	33.625	2.14	33.518									2.87	33.770					2.31	33.644
500m	2.72	33.771											3.33	33.960					3.14	33.838
600m	2.88	33.896											3.08	34.026					3.12	33.899
700m																			3.17	33.958
800m																			3.19	34.143
900m																			3.03	34.253
1000m																			2.88	34.316

Table 5-39

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199602	199602	199602	199602	199602	199602	199602	199602	199602	199602										
Station No	P13	P14	P15	P16	P17	P18	PK07	P27	PK16	P36										
Latitude:N	42-44.1	42-30.0	42-14.8	42- 0.1	41-29.1	41- 0.2	40-59.9	41- 0.1	40-59.9	41- 0.2										
Longitude:E	145-54.1	146- 0.0	145-58.8	145-59.9	145-59.9	145-59.9	145-30.1	145- 0.0	144-29.9	143-59.8										
Date	1996/02/19	1996/02/19	1996/02/20	1996/02/20	1996/02/20	1996/02/20	1996/02/20	1996/02/20	1996/02/20	1996/02/20										
Time(JST)	21:41	23:39	03:03	04:58	08:12	11:26	14:14	16:33	18:47	21:01										
Weather	B	B	C	S	B	C	BC	BC	BC	C										
Air Temp.	-4.8	-4.0	-3.5	-3.2	-2.5	-1.6	-1.7	-2.4	-2.5	-2.0										
Bar	1025.5	1020.5	1024.6	1024.5	1025.0	1024.5	1023.5	1023.0	1023.0	1023.0										
Wind Dir	WSW	WSW	CALM	NNW	SW	WNW	NW	W	W	W										
Wind Spd/F	F 1	F 3	F 0	F 3	F 2	F 4	F 3	F 3	F 3	F 3										
Transparency					25	24	23	16												
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD									
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S								
0m	0.9	33.045	0.9	33.002	0.2	33.155	1.3	33.075	2.2	33.114	2.1	33.106	1.9	33.200	2.1	33.169	2.1	33.186	1.3	33.075
10m	1.12	33.050	1.16	33.005	2.22	33.172	1.52	33.070	2.26	33.157	2.12	33.100	2.40	33.133	2.39	33.157	2.49	33.189	1.42	33.079
20m	1.12	33.049	1.16	33.007	2.21	33.172	1.52	33.072	2.27	33.157	2.12	33.101	2.40	33.135	2.37	33.155	2.48	33.187	1.40	33.085
30m	1.12	33.051	1.16	33.006	2.21	33.171	1.52	33.072	2.31	33.167	2.10	33.098	2.42	33.139	2.37	33.156	2.47	33.181	1.39	33.084
50m	1.28	33.097	1.19	33.012	2.29	33.182	1.53	33.070	2.34	33.172	2.10	33.098	2.51	33.157	2.53	33.176	2.45	33.193	1.39	33.084
75m	1.60	33.171	1.50	33.106	2.52	33.212	1.55	33.076	2.41	33.185	2.10	33.099	2.57	33.166	2.54	33.179	2.52	33.207	1.38	33.087
100m	1.70	33.196	2.02	33.261	3.29	33.342	2.24	33.292	2.68	33.308	2.10	33.100	2.63	33.177	2.81	33.250	2.52	33.212	2.12	33.285
125m	2.04	33.277	2.54	33.422	2.93	33.478	2.45	33.473	2.72	33.477	2.44	33.381	2.66	33.186	2.78	33.296	2.70	33.277	2.67	33.464
150m	2.38	33.373	2.49	33.505	2.89	33.565	2.83	33.607	2.91	33.571	2.74	33.567	2.25	33.196	2.79	33.426	2.75	33.456	2.98	33.567
200m	2.19	33.523	3.03	33.677	3.06	33.726	3.00	33.743	2.76	33.663	2.94	33.748	2.82	33.553	2.88	33.644	2.86	33.632	3.53	33.776
250m	2.19	33.572	2.95	33.778	3.29	33.836	3.18	33.869	3.17	33.798	3.15	33.855	3.02	33.725	3.04	33.736	3.01	33.735	3.05	33.774
300m	2.66	33.695	3.53	33.905	3.23	33.960	3.26	33.964	3.36	33.906	3.21	33.957	3.20	33.851	3.17	33.843	3.16	33.848	3.13	33.865
400m	2.96	33.850	3.48	34.037	3.30	34.076	3.34	34.086	3.41	34.042	3.27	34.079	3.38	34.009	3.39	34.035	3.36	34.020	3.31	34.027
500m	3.18	34.022	3.28	34.125	3.23	34.152	3.23	34.181	3.19	34.137	3.18	34.172	3.32	34.120	3.34	34.138	3.36	34.141	3.34	34.143
600m	3.02	34.096	3.33	34.230	3.11	34.227	3.12	34.252	3.18	34.236	3.17	34.276	3.19	34.224	3.20	34.216	3.26	34.225	3.20	34.219
700m	3.08	34.230	3.04	34.270	2.98	34.291	2.94	34.307	3.00	34.301	2.91	34.318								
800m	3.02	34.266	2.92	34.324	2.80	34.344	2.79	34.356	2.93	34.364	2.76	34.368								
900m	2.93	34.306	2.74	34.364	2.68	34.387	2.67	34.401	2.66	34.387	2.66	34.406								
1000m	2.82	34.330	2.63	34.394	2.59	34.416	2.56	34.436	2.53	34.430	2.48	34.436								

Table 5-40

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199602	199602	199602	199602	199602	199602	199602	199602	199602	199602	199602
Station No	PK24	PK23	P35	PK15	P26	PK06	PK05	P25	PK14	P34	
Latitude:N	41- 0.2	41-29.1	41-29.1	41-30.1	41-30.1	41-30.1	42- 0.0	41-59.1	42- 0.1	42- 0.1	
Longitude:E	143-29.6	143-30.1	143-59.7	144-29.9	145- 0.2	145-29.8	145-29.1	144-59.1	144-29.9	143-59.7	
Date	1996/02/20	1996/02/21	1996/02/21	1996/02/21	1996/02/21	1996/02/21	1996/02/21	1996/02/21	1996/02/21	1996/02/21	
Time(JST)	23:13	02:13	04:22	06:41	08:54	11:03	13:51	17:39	20:14	22:45	
Weather	BC	C	C	C	BC	S	C	S	S	B	
Air Temp.	-2.4	-2.7	-2.7	-2.5	-0.6	-0.8	-1.6	-2.7	-3.7	-3.5	
Bar	1021.5	1019.7	1019.0	1018.5	1018.0	1012.5	1015.2	1015.5	1017.0	1019.0	
Wind Dir	W	WNW	W	SWS	WSW	SSW	N	W	WNW	N	
Wind Spd/F	F 4	F 4	F 4	F 4	F 4	F 5	F 2	F 3	F 4	F 4	
Transparency				19	23	20	25				
Depth											1120
Equipment	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD	CTD
STND. Dep	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S	T S
0m	-0.5 32.651	-0.5 32.625	0.1 32.636	2.0 33.192	2.5 33.188	2.4 33.204	1.2 33.052	1.2 33.070	1.1 32.983	-0.1 32.561	
10m	0.17 32.658	-0.29 32.631	0.26 32.651	2.27 33.201	2.42 33.194	2.40 33.206	1.36 33.049	1.43 33.046	1.18 32.996	0.07 32.585	
20m	0.12 32.669	-0.28 32.630	0.26 32.651	2.25 33.186	2.44 33.196	2.39 33.207	1.35 33.051	1.43 33.044	1.18 32.996	0.23 32.654	
30m	0.07 32.675	-0.23 32.638	0.27 32.653	2.18 33.192	2.45 33.197	2.40 33.211	1.35 33.049	1.40 33.043	1.18 32.996	0.17 32.679	
50m	0.17 32.702	0.02 32.684	0.41 32.752	2.37 33.209	2.47 33.198	2.55 33.240	1.34 33.048	1.39 33.043	1.18 32.995	0.34 32.708	
75m	0.16 32.704	0.33 32.769	0.48 32.899	2.40 33.213	2.47 33.200	2.58 33.245	1.38 33.058	1.40 33.046	1.69 33.116	0.27 32.742	
100m	0.43 32.790	0.86 32.913	1.01 32.983	2.41 33.215	2.51 33.215	2.60 33.247	1.89 33.277	1.40 33.070	1.93 33.227	0.84 32.881	
125m	0.75 32.879	1.30 33.023	1.10 32.999	2.82 33.388	2.90 33.349	2.70 33.329	2.52 33.463	2.51 33.460	2.32 33.336	1.31 33.031	
150m	1.06 32.972	1.48 33.083	1.13 33.017	2.80 33.532	2.54 33.403	2.98 33.531	2.93 33.620	2.84 33.604	2.47 33.414	1.57 33.177	
200m	1.45 33.128	1.77 33.187	1.90 33.315	3.63 33.769	2.70 33.600	3.07 33.675	3.28 33.803	3.17 33.788	2.35 33.542	1.95 33.345	
250m	1.77 33.248	1.79 33.252	1.96 33.401	4.60 33.986	2.88 33.700	3.09 33.784	3.22 33.901	3.25 33.872	2.47 33.673	2.25 33.457	
300m	2.09 33.387	2.31 33.404	1.89 33.490	3.37 33.902	3.19 33.839	3.32 33.886	3.30 33.974	3.35 33.959	2.70 33.783	2.56 33.547	
400m	2.15 33.582	2.20 33.594	2.24 33.681	3.36 34.047	3.32 34.022	3.41 34.023	3.33 34.091	3.31 34.080	3.12 33.971	2.33 33.634	
500m	3.23 33.896	2.61 33.783	3.09 34.009	3.40 34.171	3.31 34.146	3.39 34.123	3.12 34.190	3.17 34.174	3.15 34.078	2.72 33.774	
600m	3.14 34.023	2.83 33.875	3.19 34.127	3.21 34.246	3.19 34.229	3.26 34.216	3.02 34.263	3.08 34.248	3.15 34.161	3.07 33.928	
700m							2.91 34.318	2.93 34.307	3.07 34.217	3.16 34.075	
800m							2.76 34.354	2.82 34.351	3.01 34.270	3.09 34.180	
900m							2.66 34.397	2.69 34.386	2.90 34.312	2.98 34.268	
1000m							2.51 34.429	2.56 34.414	2.78 34.348	2.85 34.319	

Table 5-41

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199602		199602		199602		199602		199602		199602		199602		199602		199602		199602	
Station No	PK22		PK21		P33		PK13		P24		PK04		PK03		P23		PK12		P32	
Latitude:N	41-59.1		42-12.1		42-14.9		42-14.1		42-15.2		42-15.1		42-30.0		42-29.1		42-29.1		42-29.1	
Longitude:E	143-29.1		143-30.1		143-59.9		144-29.8		144-59.1		145-30.1		145-29.8		144-59.1		144-30.0		144- 0.0	
Date	1996/02/22		1996/02/22		1996/02/22		1996/02/22		1996/02/22		1996/02/22		1996/02/22		1996/02/22		1996/02/22		1996/02/22	
Time(JST)	01:05		02:24		04:22		06:32		08:48		11:05		12:34		14:35		16:37		18:45	
Weather	C		C		C		B		B		B		BC		BC		B		B	
Air Temp.	-4.9		-6.3		-5.5		-4.9		-2.7		-0.4		-1.7		-2.0		-2.7		-1.6	
Bar	1020.0		1020.0		1019.5		1020.0		1021.0		1021.0		1020.2		1020.5		1020.0		1020.5	
Wind Dir	N		NW		SW		SW		SW		WSW		SW		W		S		SSW	
Wind Spd/F	F 3		F 1		F 1		F 2		F 2		F 2		F 2		F 1		F 2		F 1	
Transparency							20		24		25		28		29		17			
Depth	121		79		937														491	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	-0.7	32.455	-0.3	32.431	-0.6	32.682	-0.2	32.960	1.2	33.001	1.6	33.068	1.0	33.010	1.2	33.018	0.6	32.932	-0.2	32.756
10m	0.08	32.475	-0.15	32.446	0.00	32.709	0.56	32.961	1.16	33.019	1.56	33.098	1.11	33.012	1.20	33.001	1.02	33.007	-0.05	32.745
20m	0.13	32.481	-0.05	32.470	0.00	32.709	0.84	33.016	1.18	33.029	1.61	33.103	1.21	33.119	1.16	33.005	0.93	33.031	-0.04	32.752
30m	0.27	32.565	0.13	32.536	0.00	32.707	0.96	33.040	1.12	33.037	1.89	33.142	1.27	33.148	1.13	33.002	0.96	33.045	-0.01	32.763
50m	0.32	32.613	0.27	32.565	0.00	32.709	1.20	33.085	1.10	33.042	2.07	33.161	1.35	33.171	1.18	33.020	1.04	33.069	0.10	32.799
75m	0.34	32.667			0.00	32.719	1.48	33.146	1.31	33.090	2.20	33.180	1.85	33.269	1.29	33.048	1.33	33.125	0.19	32.818
100m	0.56	32.725			0.28	32.778	1.83	33.216	1.62	33.189	2.60	33.244	1.61	33.324	1.58	33.134	1.53	33.179	0.30	32.842
125m					0.82	32.918	2.08	33.301	2.02	33.268	2.71	33.415	1.54	33.318	2.55	33.414	1.69	33.223	0.52	32.880
150m					0.98	32.987	2.08	33.343	2.32	33.354	2.69	33.490	1.63	33.338	2.81	33.544	1.85	33.256	0.99	32.985
200m					1.43	33.088	2.27	33.514	3.02	33.639	2.89	33.628	2.08	33.440	3.30	33.756	2.47	33.466	1.44	33.129
250m					1.47	33.169	2.09	33.558	2.96	33.752	3.12	33.787	2.41	33.575	3.09	33.794	2.72	33.538	1.90	33.313
300m					1.90	33.312	2.42	33.670	2.80	33.799	3.23	33.878	2.10	33.605	3.12	33.855	2.83	33.601	2.27	33.456
400m					1.99	33.520	2.93	33.889	3.44	34.017	3.35	34.036	2.72	33.759	3.18	33.962	2.85	33.731	2.35	33.652
500m					2.56	33.748	3.22	34.026	3.26	34.109	3.21	34.142	3.17	33.979	3.10	34.045	3.05	33.860		
600m					3.05	33.965	3.19	34.135	3.21	34.226	3.09	34.225	3.22	34.085	3.09	34.143	3.06	33.973		
700m																				
800m																				
900m																				
1000m																				

Table 5-42

Table 5 Results of serial oceanographic observations. Hokkaido Kushiro Fisheries Experimental Station

Stn-prefix	199602																		
Station No	P31																		
Latitude:N	42-45.1																		
Longitude:E	143-59.9																		
Date	1996/02/22																		
Time(JST)	20:24																		
Weather	B																		
Air Temp.	-2.0																		
Bar	1021.0																		
Wind Dir	ESE																		
Wind Spd/F	F 1																		
Transparency																			
Depth	65																		
Equipment	CTD																		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	-0.7	32.424																	
10m	-0.48	32.459																	
20m	-0.46	32.459																	
30m	-0.40	32.467																	
50m	-0.52	32.494																	
75m																			
100m																			
125m																			
150m																			
200m																			
250m																			
300m																			
400m																			
500m																			
600m																			
700m																			
800m																			
900m																			
1000m																			

Table 5-43

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	S4		S3		S2		S1		O15		OA10		O14		O13		O12		O11	
Latitude:N	45-39.9		45-37.1		45-34.2		45-31.1		45-29.9		45-29.9		45-29.9		45-19.9		45-12.3		45- 8.0	
Longitude:E	142- 0.0		142- 0.0		141-59.9		141-59.9		142-10.0		142-30.1		142-50.0		142-39.9		142-32.2		142-27.7	
Date	1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12		1995/04/12	
Time(JST)	10:46		11:10		11:36		12:02		12:52		14:14		15:50		17:13		18:22		19:05	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	4.3		3.7		5.0		5.3		3.3		3.5		1.8		0.3		0.0		1.1	
Bar	1010.0		1009.5		1010.0		1008.5		1008.0		1008.0		1007.5		1007.0		1006.0		1005.5	
Wind Dir	ESE		ESE		ESE		E		E		E		E		ENE		NE		ENE	
Wind Spd/F	F 2		F 3		F 3		F 4		S 7		S 5		F 6		F 3		F 4		F 4	
Transparency																				
Depth	52		41		39				33		80		116		96		57		33	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	4.0	34.050	4.8	33.980	5.5	33.23*	5.5	33.38*	4.8	33.830	0.5	31.88*	0.3	31.92*	-0.5	31.94*	0.9	32.480	5.1	32.460
10m	3.73	34.072	4.21	34.089	5.21	33.891	5.36	33.506	4.37	34.087	0.05	31.883	0.05	31.957	-0.14	31.938	2.42	33.476	5.14	33.642
20m	3.71	34.079	4.01	34.081	4.97	34.021			4.06	34.081	0.14	32.253	-0.75	32.096	0.17	32.472	3.39	33.938	5.04	33.822
30m	3.71	34.083	4.01	34.081	4.91	34.033					1.64	33.399	-0.40	32.570	-1.34	32.853	3.71	34.023		
50m											2.87	33.869	-1.51	32.792	-1.50	33.074	3.74	34.028		
75m											3.02	33.923	0.17	33.172	2.86	33.897				
100m													1.99	33.711						
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-1

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	OA02		OA03		OA04		OA05		O26		O25		O24		O23		O22		O21	
Latitude:N	44-52.5		44-59.9		45- 9.8		45-20.0		45- 9.8		45- 0.0		44-49.8		44-39.9		44-35.0		44-32.1	
Longitude:E	142-52.4		143- 0.0		143-10.0		143-20.1		143-49.7		143-39.9		143-29.9		143-20.0		143-15.1		143-12.8	
Date	1995/04/12		1995/04/12		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13	
Time(JST)	21:28		22:43		00:13		01:50		04:23		06:06		07:23		08:45		09:44		10:22	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	0.0		0.0		-0.7		-1.4		-1.6		-1.2		-0.7				1.9		0.6	
Bar	1005.0		1005.0		1005.0		1005.0		1006.0		1007.5		1009.5		1010.4		1011.2		1011.8	
Wind Dir	NE		ENE		NNE		NE		N		N		N		NNW		NNW		NW	
Wind Spd/F	F 3		F 2		F 4		F 4		F 5		F 5		F 6		F 5		F 3		F 3	
Transparency																				
Depth	82		127		130		142		310		171		147		110		72		57	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	0.6	32.18*	-0.2	<i>N.D.</i>	-0.1	31.69*	-0.5	31.95*	-0.3	31.79*	-0.6	31.82*	-0.3	31.89*	0.0	32.50*	2.1	33.08*	4.6	33.55*
10m	1.15	32.701	-0.41	31.874	-0.08	31.688	-0.32	31.948	-0.29	31.849	-0.38	31.822	-0.37	31.907	0.01	32.569	2.67	33.182	4.81	33.564
20m	3.76	34.032	-0.60	32.044	-0.51	31.749	-0.32	31.949	-0.31	32.135	-0.37	31.823	-1.50	32.385	2.56	33.788	4.84	33.735	4.84	33.581
30m	3.76	34.039	-1.45	32.781	-1.24	32.237	-0.32	31.952	-1.48	32.623	-1.23	32.221	-1.41	32.686	3.59	34.026	4.56	33.756	4.72	33.591
50m	3.76	34.041	-1.19	32.942	-1.62	32.804	-1.18	32.617	-1.60	32.907	-1.41	32.767	-1.31	32.863	3.62	34.036	4.09	33.949		
75m	3.76	34.041	1.75	33.601	-1.77	33.054	-1.71	32.995	-1.74	33.014	-1.49	32.870	-1.76	33.041	3.61	34.034				
100m			3.18	34.054	-1.76	33.080	-1.73	33.076	-1.76	33.058	-1.58	32.942	-1.74	33.081	3.59	34.033				
125m							-1.65	33.108	-1.70	33.086	-1.35	33.061	3.01	33.965						
150m									-1.65	33.096	-0.76	33.201								
200m									-1.55	33.116										
250m									-1.46	33.135										
300m									-1.22	33.170										
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-2

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	OA11		OA12		OA13		OA14		O34		O33		O32		OA20		O31		J11	
Latitude:N	44-17.7		44-22.7		44-30.1		44-39.9		44-30.0		44-19.8		44-10.0		44- 5.0		44- 2.1		45-30.1	
Longitude:E	143-37.7		143-42.7		143-50.2		144- 0.2		144-19.9		144-19.9		144-20.0		144-20.2		144-20.0		141-40.1	
Date	1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/13		1995/04/17	
Time(JST)	12:44		13:31		14:32		16:03		17:42		19:42		20:49		21:29		21:54		10:45	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	0.5		0.2		-0.3		-0.1		-0.2		-0.2		0.0		0.6		0.3		1.8	
Bar	1011.5		1012.0		1012.0		1012.0		1013.5		1015.5		1016.0		1016.6		1017.0		1015.0	
Wind Dir	NW		NNW		NW		NW		NW		W		NW		NW		NW		ENE	
Wind Spd/F	F 2		F 3		F 3		F 2		F 2		F 2		F 3		F 3		F 3		F 4	
Transparency																			6	
Depth	46		92		162		188		860		260		111		35		32		50	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	2.8	32.97*	1.2	32.92*	-0.1	32.03*	0.1	N.D.	-0.2	32.01*	0.3	N.D.	0.0	32.13*	1.1	32.69*	1.2	32.44*	5.8	33.652
10m	2.44	N.D.	1.88	33.376	-0.40	32.037	-0.07	N.D.	-0.72	32.007			-0.35	32.127	3.21	33.056	1.66	32.724	5.62	28.205
20m	2.99	N.D.	3.37	33.881	-0.94	32.609	-0.08	32.099	-0.72	32.007			-0.12	32.229	3.76	33.268	2.14	32.874	5.63	33.021
30m	3.73	N.D.	3.73	33.964	-0.71	32.802	-1.60	32.587	-0.61	32.228			1.43	32.793	3.82	33.328			5.65	33.086
50m			3.69	33.981	-1.24	32.995	-1.48	32.782	-1.35	32.851			3.24	33.494						
75m			3.66	33.981	-1.17	33.080	-1.68	32.878	-1.23	33.037			4.39	33.733						
100m					2.38	33.738	-1.51	32.951	-1.53	33.062			4.46	33.759						
125m					3.70	34.078	-0.23	33.106	-1.48	33.099										
150m					3.70	34.079	-0.10	33.316	-1.17	33.132										
200m									-1.14	33.159										
250m									-1.01	33.204										
300m									0.54	33.359										
400m									1.33	33.522										
500m									0.96	33.553										
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-3

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	J12		WLC1		WLC4		JW13		JW12		JW11		WLE2		WLE4		J23		J22	
Latitude:N	45-29.9		45-15.0		45-14.9		44-59.9		45- 0.0		45- 0.0		44-45.0		44-44.9		44-30.0		44-29.8	
Longitude:E	141-25.1		141-30.2		141- 0.1		141- 0.0		141-15.0		141-29.9		141-30.0		141- 0.0		140-59.9		141-15.1	
Date	1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/17		1995/04/18		1995/04/18	
Time(JST)	12:05		13:55		15:59		17:28		18:43		20:03		21:42		23:56		01:48		03:17	
Weather	C				C		C		C		C		C		C		C		C	
Air Temp.	2.2				2.5		3.7		2.9		2.3		8.3		4.2		4.5		7.9	
Bar	1015.5				1017.0		1018.0		1019.0		1020.0		1020.0		1020.0		1019.0		1017.5	
Wind Dir	NE				NE		N		NE		ENE		NNW		ESE		SSE		SSW	
Wind Spd/F	F 5				F 3		F 3		F 3		F 2		F 1		F 2		F 1		F 2	
Transparency	10		7		7		8													
Depth	110		31		84		96		83		63		82		132		202		114	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.1	34.089	5.6	33.065	6.0	34.109	5.0	34.149	5.6	34.135	5.8	30.834	5.6	33.900	6.0	34.157	7.0	33.787	6.8*	34.037
10m	4.87	33.374	5.07	33.570	5.44	33.423	5.23	34.136	5.74	34.111	5.71	33.821	5.86	33.904	6.27	34.142	6.35	34.002	6.78	34.016
20m	4.88	33.387	5.21	33.575	5.55	33.388	5.14	34.138	5.49	34.119	5.44	34.005	5.73	34.028	6.27	34.144	6.01	34.086	6.80	34.027
30m	4.88	33.389			5.66	33.367	5.10	34.139	5.27	34.124	5.28	34.090	5.36	34.071	6.23	34.148	5.67	34.115	6.75	34.082
50m	4.79	33.440			5.75	33.393	5.02	34.140	5.10	34.128	5.04	34.121	5.31	34.102	6.03	34.150	5.55	34.116	6.50	34.129
75m	4.68	33.468			5.49	33.570	4.71	34.143	4.94	34.127			5.25	34.112	5.30	34.128	5.45	34.145	6.28	34.145
100m	4.61	33.521												4.88	34.147	5.08	34.161			
125m																	4.81	34.153		
150m																	4.12	34.141		
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-4

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199504		199504		199504		199504		199504		199504		199504		199504		199504		199504	
Station No	J21		WLG2		WLG3		WLG4		WLG5		J24		J25		J26		J27		WLE6	
Latitude:N	44-30.0		44-14.9		44-15.1		44-15.1		44-15.1		44-30.1		44-30.1		44-30.0		44-30.2		44-45.0	
Longitude:E	141-29.9		141-29.6		141-15.0		141- 0.1		140-40.1		140-40.1		140-19.9		140- 0.1		139-30.0		140-19.7	
Date	1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18		1995/04/18	
Time(JST)	04:36		06:20		07:31		08:52		10:53		12:31		14:28		16:32		19:16		23:11	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	5.0		4.9		6.1		5.8		6.6		7.1		6.9		7.1		5.4		5.5	
Bar	1019.0		1018.5		1018.0		1016.3		1015.8		1014.0		1012.5		1012.0		1010.0		1008.3	
Wind Dir	S		SE		SE		S		S		S		S		S		S		SSW	
Wind Spd/F	F 3		F 3		F 3		F 5		F 4		F 4		F 3		F 2		F 2		F 3	
Transparency			9		10		7		6		8		8		8					
Depth	78		56		116		325		154		141		245		538		510		41	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.9	33.567	6.4	34.010	7.0	33.880	6.5	34.124	6.2	34.122	6.3	34.12*	5.9	34.16*	5.7	34.142	4.4	34.130	4.9	34.153
10m	6.14	34.020	6.56	34.008	7.03	33.911	6.43	34.107	6.02	34.093	5.93	34.124	5.67	34.156	5.37	34.143	4.22	34.125	4.37	34.150
20m	5.97	34.091	6.52	34.060	7.14	33.967	6.38	34.120	6.01	34.093	5.88	34.125	5.41	34.154	5.35	34.144	4.01	34.114	4.36	34.150
30m	5.94	34.091	6.40	34.096	6.94	34.073	6.15	34.143	6.00	34.093	5.72	34.127	5.03	34.154	5.31	34.144	3.30	34.073	4.36	34.150
50m	5.70	34.099	6.28	34.109	5.84	34.148	5.74	34.139	5.57	34.127	4.92	34.148	4.69	34.156	4.72	34.148	2.70	34.079		
75m					5.32	34.147	5.26	34.152			4.54	34.145	4.53	34.152	3.76	34.115	2.61	34.084		
100m					4.82	34.154			4.79	34.157	3.87	34.121	4.13	34.142	3.30	34.104	1.97	34.092		
125m							4.70	34.149	4.08	34.134	3.00	34.091	3.16	34.097	2.81	34.082	1.54	34.074		
150m							4.39	34.140					2.60	34.082	2.50	34.082	1.43	34.071		
200m							2.34	34.076					1.65	34.068	1.79	34.073	1.27	34.072		
250m							1.34	34.065							1.30	34.066	1.13	34.071		
300m							0.69	34.063							0.98	34.064	0.91	34.067		
400m															0.60	34.062	0.62	34.065		
500m															0.48	34.061				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-5

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199504		199504		199505		199505		199505		199506		199506		199506		199506		199506	
Station No	JW15		JW14		WHK01		WHK02		WHK03		S104		S103		S102		S101		O15	
Latitude:N	45- 0.3		45- 0.0		45- 0.9		45- 0.9		45- 0.0		45-39.7		45-37.0		45-33.9		45-31.1		45-30.0	
Longitude:E	140-19.9		140-40.2		140-52.9		140-52.9		141- 3.6		142- 0.4		142- 0.3		142- 0.5		142- 0.3		142-10.0	
Date	1995/04/19		1995/04/19		1995/05/15		1995/05/17		1995/05/18		1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/12	
Time(JST)	01:04		02:54		18:00		09:00		07:00		10:48		11:16		11:46		12:10		12:47	
Weather	C		C		C						BC		B		BC		BC		BC	
Air Temp.	5.4		5.6								13.8		13.9		15.3		16.5		16.1	
Bar	1007.0		1006.0								1016.0		1016.0		1016.0		1015.5		1015.0	
Wind Dir	SSE		ENE								SW		SW		SW		SW		SW	
Wind Spd/F	F 2		F 2								F 5		F 5		F 5		F 6		F 6	
Transparency											15		14		13		14		9	
Depth	151		367																	
Equipment	CTD		CTD		STD		STD		STD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.1	34.170	6.0	34.135	10.5	34.13*	9.6	34.13*	9.7	34.12*	11.8	34.084	10.8	34.082	11.9	33.959	12.9	33.870	11.6	34.007
10m	4.89	34.150	5.63	34.117	9.03	34.15	9.60	34.12	9.72	34.10	9.78	34.106	9.84	34.079	11.23	33.959	12.42	33.861	11.25	33.997
20m	4.88	34.150	5.37	34.126	8.44	34.14	9.53	34.12	9.40	34.10	8.99	34.090	9.57	34.083	11.22	33.960			11.24	33.997
30m	4.54	34.147	4.99	34.142	8.18	34.17	8.33	34.08	9.32	34.11	8.49	34.098	9.60	34.082	11.02	33.976				
50m	3.83	34.130	4.77	34.147			7.66	34.13	9.27	34.12										
75m	3.30	34.124	4.46	34.145					7.77	34.14										
100m	2.65	34.106	4.06	34.140																
125m	2.41	34.100	3.61	34.121																
150m			2.71	34.109																
200m			1.84	34.090																
250m			1.14	34.069																
300m			0.75	34.064																
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-6

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	OA10		O14		O13		O12		O11		OA02		OA03		OA04		OA05		O26	
Latitude:N	45-30.1		45-30.1		45-20.0		45-12.5		45- 8.2		44-52.6		45- 0.0		45-10.0		45-20.1		45- 9.9	
Longitude:E	142-30.2		142-49.9		142-40.1		142-32.7		142-28.6		142-52.3		143- 0.0		143- 9.9		143-20.0		143-49.9	
Date	1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/12		1995/06/13		1995/06/13	
Time(JST)	14:04		15:29		16:57		18:03		18:48		20:47		21:56		23:23		00:51		03:21	
Weather	BC		B		BC		BC		BC		BC		BC		C		C		BC	
Air Temp.	12.7		17.2		12.3		14.6		15.3		13.8		12.6		10.4		10.3		9.4	
Bar	1014.0		1014.0		1014.0		1013.2		1013.0		1015.0		1015.0		1015.0		1017.5		1018.0	
Wind Dir	WSW		W		W		W		WSW		W		WNW		NNW		NNW		N	
Wind Spd/F	F 5		F 4		F 5		F 6		F 7		F 3		F 3		F 3		F 2		F 2	
Transparency	5		14		4		9													
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	5.5	32.835	9.3	32.020	4.5	32.869	10.3	<i>N.D.</i>	12.2	33.960	9.8	33.941	8.5	32.379	9.0	32.308	9.2	32.020	8.8	32.046
10m	2.92	32.990	8.95	32.013	3.15	33.074	10.47	34.027	11.92	33.949	9.22	34.009	5.54	32.377	8.31	32.285	8.97	32.014	8.52	32.052
20m	5.61	33.959	5.40	32.210	2.61	33.388	10.10	34.037	11.82	33.949	8.81	34.026	0.65	32.673	1.22	32.552	6.88	32.156	3.43	32.323
30m	5.48	34.026	-0.59	32.594	2.89	33.715	9.74	34.044			7.95	34.048	-1.13	32.810	-0.89	32.836	0.03	32.600	-0.55	32.705
50m	5.44	34.059	-0.85	32.911	3.14	33.815	9.26	34.050			7.60	34.082	2.09	33.246	-1.17	32.980	-1.30	32.876	-1.58	33.011
75m	5.45	34.061	-1.35	33.047	3.51	33.872					4.41	33.770	-1.61	33.064	-1.57	33.027	-1.52	33.045		
100m			3.79	33.778							3.89	34.016	-1.36	33.120	-1.58	33.102	-1.55	33.097		
125m											3.76	34.012			-0.92	33.182	-1.42	33.132		
150m																			-1.32	33.161
200m																			-1.26	33.182
250m																			-1.15	33.213
300m																			-0.58	33.290
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-7

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	O25		O201		O24		O202		O203		O204		O23		O205		O22		O206	
Latitude:N	45- 0.1		44-55.1		44-50.1		44-47.5		44-45.0		44-42.4		44-39.8		44-37.5		44-34.8		44-33.5	
Longitude:E	143-39.9		143-35.0		143-30.0		143-27.5		143-24.8		143-22.4		143-19.9		143-17.5		143-15.0		143-13.6	
Date	1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13	
Time(JST)	04:48		05:42		06:35		07:26		08:05		08:39		09:14		09:56		10:35		11:02	
Weather	BC		BC		BC		BC		B		B		B		B		BC		BC	
Air Temp.	11.5		14.1		16.3		15.0		15.0		16.0		15.0		17.0		18.0		20.0	
Bar	1018.8		1018.8		1019.2		1020.6		1020.0		1020.0		1020.0		1020.0		1020.0		1020.0	
Wind Dir	NE		NE		SSW		WNW		SW		CALM		ESE		ENE		NE		NE	
Wind Spd/F	F 2		F 2		F 1		F 1		F 1		F 0		F 1		F 1		F 1		F 2	
Transparency	17		10		9		8		9		8		7		7		8		11	
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	9.3	32.138	8.9	32.175	9.3	32.358	9.2	32.548	8.9	32.490	8.8	32.883	8.1	32.851	8.6	32.617	9.9	33.063	12.5	33.818
10m	8.55	32.263	8.24	32.207	7.84	32.446	5.62	32.610	4.76	32.815	3.39	33.120	3.92	33.113	7.80	33.416	9.66	33.970	11.10	33.962
20m	3.29	32.446	-0.06	32.585	0.39	32.713	1.66	32.833	-1.20	32.945	0.08	33.164	3.29	33.430	8.71	33.966	9.45	34.045	9.61	33.989
30m	-0.04	32.669	-0.83	32.758	-0.53	32.813	-1.00	32.878	-1.41	33.073	2.91	33.491	3.89	33.547	8.80	34.015	9.36	34.041	9.60	34.046
50m	-1.27	32.900	-1.20	32.984	-1.14	32.991	-1.15	33.040	2.31	33.470	5.33	33.948	6.00	33.977	8.17	34.000	9.09	34.018		
75m	-1.40	33.022	-1.45	33.080	1.32	33.330	2.07	33.448	5.16	33.977	4.68	34.006	4.66	33.961	7.39	34.018				
100m	-1.42	33.107	-1.45	33.123	2.15	33.548	1.99	33.612	4.92	34.053	4.36	34.041	4.59	34.015						
125m	3.47	33.702	4.08	33.762	3.48	33.931	3.47	33.929	4.25	34.045										
150m	4.36	33.921	4.56	33.972																
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-8

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	OA11		OA12		OA13		OA14		O35		O36		O46		O45		O44		O43	
Latitude:N	44-17.6		44-22.1		44-29.8		44-40.0		44-50.0		45- 7.9		45-10.0		45- 0.1		44-50.1		44-40.1	
Longitude:E	143-37.4		143-42.5		143-49.9		143-59.9		144-19.9		144-20.1		145-19.9		145-19.9		145-20.0		145-20.1	
Date	1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/13		1995/06/14		1995/06/14		1995/06/14		1995/06/14	
Time(JST)	13:12		13:59		15:09		16:33		18:28		20:24		01:00		02:41		04:42		06:53	
Weather	BC		BC		BC		BC		BC		BC		BC		BC		BC		B	
Air Temp.	15.3		15.9		15.7		11.9		10.5		8.7		6.9		6.5		6.3		7.2	
Bar	1019.5		1019.0		1019.0		1018.8		1019.5		1020.5		1021.0		1021.5		1021.6		1022.2	
Wind Dir	ENE		ESE		E		E		ESE		E		SSE		SSE		SSE		SSE	
Wind Spd/F	F 2		F 3		F 3		F 3		F 3		F 3		F 6		F 5		F 6		F 5	
Transparency	9		15		8		11										11		12	
Depth																	1000		1000	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	11.8	34.007	11.8	34.007	9.3	32.552	10.3	32.467	9.0	32.265	9.2	31.962	7.7	32.295	7.0	32.301	7.0	32.347	6.9	32.357
10m	9.70	33.980	9.70	33.980	3.37	32.845	5.83	32.525	8.15	32.244	9.02	31.944	7.35	32.280	6.83	32.284	6.94	32.318	6.37	32.306
20m	9.15	34.047	9.15	34.047	-0.41	32.797	2.29	32.885	2.52	32.488	3.48	32.352	7.04	32.282	6.55	32.304	1.83	32.451	0.26	32.575
30m	8.99	34.044	8.99	34.044	0.05	32.945	0.94	33.049	-0.51	32.731	-0.55	32.601	1.95	32.436	0.83	32.609			-0.01	32.771
50m	8.13	34.057	8.13	34.057	-0.17	33.163	-0.51	33.094	-1.38	32.944	-0.56	32.935	1.28	32.746	-0.52	32.906			-0.56	32.984
75m	5.99	33.965	5.99	33.965	3.41	33.741	-1.02	33.143	-1.27	33.093	-1.14	33.027	-1.38	32.891	-1.02	33.029	-1.29	33.022	-1.01	33.061
100m					3.90	33.930	-1.04	33.156	-1.08	33.160	-0.80	33.104	-1.45	32.992	-0.70	33.104	-0.78	33.102	-0.53	33.146
125m					3.75	33.969	-0.09	33.188	-0.90	33.198	-0.51	33.166	0.01	33.132	-0.11	33.205			-0.06	33.223
150m					3.66	33.974	-0.38	33.253			-0.40	33.209	-0.59	33.158	0.17	33.268	-0.51	33.215	0.45	33.302
200m											0.33	33.333	0.00	33.268	-0.08	33.318	0.39	33.343	2.04	33.490
250m											0.35	33.373	0.52	33.360	-0.21	33.355	0.69	33.413	2.20	33.528
300m											0.32	33.404	0.79	33.435	0.32	33.416	0.80	33.466	1.14	33.482
400m											1.40	33.580	1.14	33.561	1.06	33.563	1.17	33.591	1.13	33.578
500m											1.47	33.695	1.45	33.709	1.46	33.704	1.57	33.759	1.48	33.722
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-9

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	O42		O41		OA24		OA23		OA22		OA21		O34		O33		O32		OA20	
Latitude:N	44-29.8		44-21.9		44-29.8		44-20.0		44- 9.8		44- 2.2		44-30.0		44-20.0		44- 9.8		44- 5.0	
Longitude:E	145-20.1		145-20.0		144-50.2		144-50.2		144-50.0		144-50.0		144-19.9		144-20.0		144-20.1		144-20.0	
Date	1995/06/14		1995/06/14		1995/06/14		1995/06/14		1995/06/14		1995/06/14		1995/06/14		1995/06/14		1995/06/14		1995/06/14	
Time(JST)	08:41		10:05		12:18		14:10		15:28		16:38		19:49		21:17		22:42		23:28	
Weather	B		B		B		BC		BC		BC		BC		BC		BC		BC	
Air Temp.	7.9		11.4				13.7		14.1		16.6		11.0		10.2		11.5		11.2	
Bar	1021.5		1022.0		1020.5		1020.0		1019.0		1019.8		1019.0		1019.0		1019.0		1019.5	
Wind Dir	SE		SE		SE		ESE		S		ESE		SSE		SSE		SSE		S	
Wind Spd/F	F 6		F 3		F 1		F 3		F 2		F 3		F 4		F 4		F 4		F 3	
Transparency	9		9		17		11		12		8									
Depth	1700		135		1500		1073		576		77		855		265		107		33	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	8.3	33.083	11.5	33.780	9.6	32.412	10.2	32.868	8.1	33.442	12.7	33.738	9.1	32.379	8.0	32.542	12.0	33.880	11.5	33.896
10m	4.94	33.220	9.01	33.560	8.63	32.239	8.74	33.171	7.70	33.396	11.07	33.753	8.58	32.291	6.34	32.536	10.49	33.983	10.95	33.912
20m	2.75	33.402	9.43	33.763	6.61	32.281	0.46	32.730	8.09	33.816	11.02	33.762	4.45	32.362	2.26	32.502	9.78	34.005	10.33	33.970
30m	3.65	33.500	7.91	33.726	1.55	32.501	-0.16	32.718	7.61	33.823	9.78	33.802	0.61	32.528			9.43	34.001		
50m	3.13	33.486	7.21	33.858	0.62	32.954	-1.18	32.987	3.18	33.375	7.97	33.888	-0.37	32.807	-1.12	32.928	8.78	34.031		
75m	1.30	33.349	7.33	33.924	0.58	33.087	-1.01	33.085	0.78	33.242			-0.40	33.010	-1.17	33.045	8.10	34.040		
100m	0.30	33.298	5.58	33.791	-1.28	33.072	-0.78	33.121	1.08	33.311			-0.49	33.094	-0.67	33.152	7.64	34.030		
125m	-0.17	33.268			-1.26	33.118	0.08	33.214	0.12	33.273			-0.79	33.126	-0.22	33.220				
150m	-0.03	33.298			-0.90	33.173	0.12	33.263	2.30	33.478			-0.65	33.169	-0.26	33.236				
200m	0.45	33.359			0.35	33.329	0.63	33.365	2.87	33.583			0.08	33.273	0.38	33.341				
250m	1.24	33.461			0.38	33.374	0.80	33.424	3.12	33.649			-0.70	33.270	2.74	33.767				
300m	1.96	33.556			0.24	33.404	1.01	33.485	2.78	33.643			0.63	33.398						
400m	1.84	33.615			1.36	33.581	1.13	33.570	2.49	33.655			0.96	33.493						
500m	1.49	33.679			1.47	33.693	1.37	33.666	2.75	33.738			1.38	33.595						
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-10

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	O31		WKG107		WKG106		WKG105		WKG104		WKG103		WKG102		WKG101		WKG201		WKG202		
Latitude:N	44- 2.1		45-30.0		45-26.4		45-23.3		45-20.1		45-16.4		45-13.2		45-10.0		45- 6.7		45-10.0		
Longitude:E	144-19.9		142-50.2		142-46.4		142-43.2		142-39.9		142-36.5		142-33.3		142-30.1		142-32.9		142-36.6		
Date	1995/06/15		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		1995/06/19		
Time(JST)	00:00		14:42		15:53		16:56		17:58		18:56		19:48		20:44		21:28		22:26		
Weather	BC																				
Air Temp.	11.2																				
Bar	1019.5																				
Wind Dir	S																				
Wind Spd/F	F 4																				
Transparency																					
Depth	32																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	11.2	33.719	11.7	31.94*	11.1	31.93*	10.4	32.02*	8.3	32.83*	6.0	33.70*	11.8	34.03*	12.0	34.03*	11.9	34.03*	11.8	34.03*	
10m	10.89	33.902	9.31	31.984	9.64	31.895	10.29	32.012	0.07	32.774	5.81	33.683	11.78	34.034	11.95	34.033	11.87	34.029	11.73	34.035	
20m	9.94	33.962	2.25	32.286	4.12	32.189	3.95	32.410	3.51	33.285	4.52	33.730	8.89	34.002	11.57	34.052	11.32	34.064	9.85	34.064	
30m			-0.26	32.621	0.13	32.525	1.90	32.873	4.61	33.494	4.53	33.797	7.56	34.007	10.99	34.066	11.06	34.060	7.14	33.979	
50m			-1.42	32.837	0.07	33.077	1.23	33.231	4.54	33.942	5.37	34.005	7.56	34.026					7.21	34.025	
75m			-1.26	33.039	0.52	33.294	3.16	33.631	4.35	33.922											
100m			2.44	33.530	2.91	33.781															
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-11

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG203		WKG204		WKG205		WKG206		WKG207		WKG307		WKG306		WKG305		WKG304		WKG303		
Latitude:N	45-13.1		45-16.2		45-20.0		45-23.1		45-26.7		45-23.3		45-20.1		45-16.4		45-13.4		45-10.0		
Longitude:E	142-40.1		142-43.0		142-46.6		142-50.0		142-53.5		142-56.2		142-53.2		142-50.0		142-46.2		142-43.3		
Date	1995/06/19		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		
Time(JST)	23:19		00:20		01:19		02:24		03:30		04:31		05:34		06:34		07:26		08:15		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	5.4	33.53*	7.1	32.86*	10.9	32.05*	10.8	31.95*	11.4	31.97*	10.9	32.12*	10.9	32.15*	9.8	32.34*	6.5	32.81*	6.3	33.58*	
10m	4.73	33.689	0.39	32.818	10.23	32.030	9.96	31.949	9.03	32.097	10.86	32.116	9.86	32.042	9.71	32.341	4.46	32.780	4.65	33.812	
20m	4.85	33.921	2.11	33.141	2.52	32.335	3.08	32.291	1.56	32.429	1.29	32.344	2.05	32.367	1.26	32.401	1.47	32.993	4.97	33.975	
30m	5.13	33.975	4.84	33.569	0.50	32.470	-0.14	32.682	-0.56	32.605	-0.47	32.518	0.19	32.646	-0.33	32.514	2.32	33.233	5.05	33.993	
50m	5.19	33.987	4.48	33.933	1.16	33.211	-1.18	32.910	-1.40	32.879	-1.25	32.903	-1.09	32.900	2.83	33.410	4.62	33.865	5.04	33.991	
75m	5.27	34.001	4.32	33.927	4.25	33.812	3.02	33.515	-1.32	33.056	-1.21	33.084	-1.03	33.129	4.35	33.731	4.61	33.953	5.04	33.993	
100m					4.45	33.951	3.02	33.635	0.01	33.291	0.14	33.330	0.37	33.336	4.30	33.774					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-12

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG302		WKG301		WKG401		WKG402		WKG403		WKG404		WKG405		WKG406		WKG407		WKG507		
Latitude:N	45- 6.3		45- 3.0		44-59.6		45- 3.0		45- 6.4		45-10.0		45-13.2		45-16.3		45-19.9		45-16.3		
Longitude:E	142-40.0		142-36.2		142-40.3		142-43.4		142-46.6		142-50.0		142-53.3		142-56.4		142-59.9		143- 3.2		
Date	1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		1995/06/20		
Time(JST)	09:06		09:54		10:38		12:04		14:09		15:54		17:30		19:26		21:45		23:28		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	10.4	34.03*	12.1	34.02*	11.9	34.03*	11.5	34.05*	6.1	33.64*	N.D.	N.D.	10.4	32.23*	10.8	32.20*	10.7	32.20*	10.2	32.06*	
10m	7.73	33.922	12.09	34.017	11.90	34.034	8.07	34.001	4.60	33.829			9.83	32.271	9.91	32.227	10.64	32.204	10.19	32.072	
20m	7.70	33.963	11.57	34.054	11.38	34.040	7.90	33.979	5.01	33.980			1.63	32.338	3.23	32.380	3.13	32.383	4.64	32.394	
30m	7.40	33.959	11.57	34.050	11.14	34.046	7.88	33.972	5.07	33.991	0.50	33.029	-0.83	32.610	-0.09	32.639	-0.70	32.616	-0.30	32.665	
50m	7.16	33.955					7.06	33.955	5.07	33.990	2.70	33.406	1.98	33.217	-1.24	32.894	-1.27	32.876	-1.51	32.927	
75m									5.05	33.989	5.12	33.970	4.58	33.726	-0.93	33.067	-1.40	33.051	-1.58	33.076	
100m											4.66	33.957	4.36	33.786	0.82	33.432	-0.56	33.211	-1.37	33.130	
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-13

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506	
Station No	WKG506		WKG505		WKG504		WKG503		WKG502		WKG501		WKG601		WKG602		WKG603		WKG604	
Latitude:N	45-13.2		45- 9.9		45- 6.3		45- 3.1		44-59.7		44-56.3		44-53.0		44-56.2		44-59.9		45- 3.3	
Longitude:E	143- 0.1		142-56.3		142-53.2		142-50.0		142-46.3		142-43.2		142-46.6		142-49.9		142-53.3		142-56.4	
Date	1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21	
Time(JST)	00:20		01:19		02:12		03:08		04:00		04:50		05:34		06:26		07:21		08:15	
Weather																				
Air Temp.																				
Bar																				
Wind Dir																				
Wind Spd/F																				
Transparency																				
Depth																				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	N.D.	N.D.	10.0	32.16*	9.6	32.34*	5.9	33.31*	5.4	32.94*	12.0	34.02*	12.1	34.02*	5.0	32.93*	6.4	33.53*	9.5	32.32*
10m			9.68	32.187	6.66	32.357	5.62	33.284	0.95	32.808	11.26	34.067	12.06	34.018	3.69	32.953	5.15	33.501	1.83	32.501
20m	1.06	32.507	0.29	32.524	-0.67	32.583	2.47	33.112	2.43	33.134	10.64	34.069	10.35	34.064	2.80	33.247	4.92	33.710	-1.03	32.627
30m	-0.84	32.722	-0.95	32.742	0.96	32.930	2.47	33.260	3.79	33.356	10.60	34.068	10.06	34.052	4.24	33.464	4.35	33.911	-0.99	32.822
50m	-1.35	32.960	0.01	33.043	4.13	33.490	4.82	33.852	5.49	33.775					5.32	33.791	4.36	33.915	3.29	33.409
75m	-1.58	33.077	0.32	33.237	5.06	33.941	4.56	33.930	5.58	33.795					5.34	33.885	4.36	33.916	4.94	33.922
100m	-1.07	33.161	2.07	33.551	4.65	33.954	4.60	33.942									4.35	33.919	4.78	33.967
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-14

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG605		WKG606		WKG607		WKG707		WKG706		WKG705		WKG704		WKG703		WKG702		WKG701		
Latitude:N	45- 6.5		45-10.0		45-13.2		45- 9.8		45- 6.3		45- 3.1		44-59.9		44-56.2		44-53.1		44-50.1		
Longitude:E	143- 0.1		143- 3.4		143- 6.5		143-10.0		143- 6.3		143- 2.9		143- 0.0		142-56.5		142-53.4		142-50.4		
Date	1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		
Time(JST)	09:07		10:00		10:53		11:47		12:37		13:38		14:21		15:17		16:06		16:51		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	10.4	32.18*	10.4	32.23*	10.3	32.35*	10.5	32.28*	10.6	32.25*	11.1	32.24*	10.9	32.32*	7.0	33.44*	6.2	32.85*	11.2	34.07*	
10m	7.80	32.230	8.85	32.157	7.32	32.217	10.30	32.285	6.61	32.154	8.40	32.239	7.40	32.238	3.47	33.374	-0.32	32.742	10.92	34.073	
20m	0.95	32.514	1.56	32.486	0.46	32.548	2.16	32.535	1.06	32.576	0.04	32.589	-0.02	32.670	4.14	33.584	3.84	33.352	10.81	34.070	
30m	-0.79	32.684	-0.62	32.686	-0.70	32.661	-0.42	32.731	-0.56	32.708	-0.70	32.725	-1.22	32.769	4.69	33.869	4.36	33.449	10.73	34.069	
50m	-1.27	32.916	-1.07	32.896	-1.20	32.851	-1.14	33.005	-1.31	32.948	-1.36	32.957	3.29	33.402	4.79	33.966	5.24	33.704	10.71	34.067	
75m	-1.47	33.087	-1.51	33.060	-1.39	33.031	-1.12	33.102	-1.49	33.061	-1.44	33.084	5.16	33.865	4.80	33.967	5.47	33.756			
100m	0.86	33.437	2.11	33.454	-1.41	33.115	-0.73	33.177	-1.44	33.116	0.67	33.404	4.75	33.956	4.82	33.969					
125m																					
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-15

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG801		WKG802		WKG803		WKG804		WKG805		WKG806		WKG807		WKG907		WKG906		WKG905		
Latitude:N	44-46.4		44-49.8		44-53.1		44-56.3		45- 0.0		45- 3.2		45- 6.3		45- 3.1		44-59.9		44-56.4		
Longitude:E	142-53.2		142-56.3		143- 0.1		143- 3.2		143- 6.5		143-10.1		143-13.3		143-16.4		143-13.1		143-10.0		
Date	1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/21		1995/06/22		1995/06/22		
Time(JST)	17:37		18:24		19:14		20:05		20:59		21:50		22:40		23:29		00:18		01:11		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	12.3	34.02*	11.2	33.99*	6.3	33.45*	10.7	32.31*	11.2	32.24*	11.1	32.23*	11.1	32.25*	10.9	32.17*	10.8	32.20*	10.6	32.28*	
10m	12.02	34.025	5.88	33.351	4.18	33.503	4.11	32.490	6.52	32.231	8.22	32.302	10.47	32.292	9.36	32.245	10.10	32.194	6.22	32.337	
20m	11.64	34.036	2.08	33.125	4.83	33.764	-0.75	32.779	1.02	32.535	0.28	32.621	3.90	32.557	2.66	32.549	0.86	32.646	-0.48	32.689	
30m	10.40	34.065	4.61	33.492	4.66	33.893	-1.30	32.920	-0.57	32.710	-0.79	32.777	0.03	32.722	-0.86	32.695	-0.76	32.780	-0.77	32.892	
50m			5.02	33.614	4.89	33.975	4.07	33.628	-1.26	32.923	-1.29	33.008	-0.99	33.054	-1.20	32.937	-1.22	33.004	-1.34	33.033	
75m			5.27	33.745	4.88	33.975	4.90	33.901	-0.79	33.088	-1.52	33.087	-0.96	33.142	-0.35	33.163	-1.40	33.109	-1.22	33.115	
100m					4.85	33.971	4.67	33.941	1.11	33.437	-1.30	33.145	1.62	33.521	0.93	33.432	-0.48	33.220	1.22	33.428	
125m									3.21	33.846	2.52	33.651	3.34	33.864	3.34	33.860	1.25	33.441			
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-16

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG904		WKG903		WKG902		WKG901		WKG111		WKG112		WKG113		WKG114		WKG115		WKG116		
Latitude:N	44-53.1		44-49.9		44-46.2		44-43.2		44-40.1		44-43.2		44-46.5		44-50.1		44-53.2		44-56.3		
Longitude:E	143- 6.5		143- 3.2		143- 0.2		142-56.4		142-59.9		143- 3.3		143- 6.6		143-10.1		143-13.3		143-16.5		
Date	1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		
Time(JST)	02:10		03:01		03:51		04:41		05:22		07:02		08:31		10:00		11:24		13:19		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	8.3	32.42*	6.9	33.10*	11.9	34.04*	12.0	34.02*	12.6	34.00*	11.7	34.03*	7.1	32.79*	9.3	32.61*	10.5	32.51*	10.5	32.42*	
10m	0.56	32.665	1.40	33.132	11.01	33.975	12.02	34.025	12.09	34.038	11.10	34.016	1.76	32.927	5.25	32.830	9.45	32.284	10.27	32.521	
20m	-1.11	32.885	2.14	33.219	8.24	33.993	11.72	34.057	11.75	34.032	10.18	34.050	-1.13	32.959	-1.13	32.853	0.32	32.528	2.10	32.591	
30m	-1.22	32.977	4.60	33.652	8.19	34.034	10.93	34.068	11.72	34.034	9.09	33.983	-1.27	33.045	3.27	33.334	-0.90	32.784	-0.19	32.704	
50m	6.13	33.977	4.96	33.971	5.43	33.645			6.34	33.706	4.02	33.609	5.11	33.901	-1.36	33.071	4.87	33.555			
75m	4.87	33.913	4.86	33.965	5.90	33.737					4.33	33.778	5.04	33.944	-1.20	33.169	2.64	33.488			
100m	4.76	33.936	4.90	33.972							4.92	33.936	5.02	33.963	2.26	33.577	3.42	33.713			
125m															3.37	33.802	3.37	33.903			
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-17

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG117		WKG127		WKG126		WKG125		WKG124		WKG123		WKG122		WKG121		WKG131		WKG132		
Latitude:N	44-59.9		44-56.5		44-53.2		44-50.1		44-46.4		44-43.1		44-39.9		44-36.3		44-33.1		44-36.4		
Longitude:E	143-20.1		143-23.1		143-20.0		143-16.4		143-13.2		143- 9.9		143- 6.3		143- 3.2		143- 6.2		143-10.1		
Date	1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		1995/06/22		
Time(JST)	14:56		16:26		17:18		18:11		19:16		20:02		20:51		21:37		22:19		23:01		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	11.2	32.41*	10.4	32.36*	10.4	32.65*	10.9	32.37*	8.6	33.24*	9.7	33.68*	12.5	34.03*	13.4	33.93*	13.4	33.92*	12.7	34.01*	
10m	8.38	32.265	8.74	32.408	5.08	32.830	5.28	32.459	6.30	33.308	5.93	33.646	12.11	34.026	12.11	34.035	12.08	34.037	12.31	34.038	
20m	0.76	32.604	0.75	32.703	1.37	32.804	-0.71	32.649	2.39	33.245	6.22	33.757	10.69	34.070	11.87	34.035	11.81	34.042	10.49	34.062	
30m	-0.79	32.750	-0.94	32.797	-0.15	32.886	-1.24	32.853	4.74	33.672	6.09	33.852	9.10	34.038	11.82	34.035	11.73	34.042	10.35	34.055	
50m	-1.22	32.952	-1.16	33.024	6.00	33.842	-1.23	33.099	5.35	33.922	5.50	33.853	7.69	33.891					9.42	33.995	
75m	2.17	33.373	0.73	33.221	5.98	33.941	-0.70	33.219	5.36	33.955	5.27	33.862									
100m	5.07	33.828	2.53	33.473	4.26	33.826	4.22	33.866	5.13	33.961											
125m	2.05	33.617	3.65	33.833	3.50	33.838	4.71	33.944													
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-18

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199506		199506		199506		199506		199506		199506		199506		199506		199506		
Station No	WKG133		WKG134		WKG135		WKG136		WKG137		WKG147		WKG146		WKG145		WKG144		WKG143		
Latitude:N	44-40.0		44-42.9		44-46.3		44-49.9		44-53.1		44-50.1		44-46.3		44-43.2		44-39.8		44-36.3		
Longitude:E	143-13.5		143-16.3		143-20.0		143-23.1		143-26.4		143-29.8		143-26.2		143-23.1		143-20.0		143-16.3		
Date	1995/06/22		1995/06/23		1995/06/23		1995/06/23		1995/06/23		1995/06/23		1995/06/23		1995/06/23		1995/06/23		1995/06/23		
Time(JST)	23:49		00:37		01:24		02:15		03:03		03:54		04:47		05:37		06:31		07:24		
Weather																					
Air Temp.																					
Bar																					
Wind Dir																					
Wind Spd/F																					
Transparency																					
Depth																					
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	12.1	33.88*	11.1	33.90*	9.8	32.38*	10.2	32.28*	8.7	32.28*	10.3	32.38*	10.0	32.35*	9.3	32.45*	9.8	33.56*	12.2	34.03*	
10m	8.71	34.033	2.86	33.062	4.39	32.537	8.52	32.291	2.13	32.450	8.31	32.360	2.64	32.530	7.21	32.508	9.92	33.802	11.72	34.067	
20m	8.57	34.013	0.66	33.059	5.37	33.299	0.50	32.660	0.21	32.631	3.06	32.600	-0.91	32.849	1.17	32.774	8.11	33.891	9.30	34.045	
30m	7.91	33.960	3.29	33.381	-1.21	32.978	-1.01	32.864	-0.61	32.811	-0.62	32.805	-1.16	33.003	-0.81	32.980	6.96	33.857	8.81	34.037	
50m	6.73	33.813	2.31	33.446	-1.32	33.101	-1.23	33.050	-1.23	33.016	1.43	33.295	-1.34	33.095	5.79	33.844	1.18	33.283	8.05	34.006	
75m	5.48	33.674	5.30	33.941	0.14	33.277	-0.95	33.162	-1.20	33.109	4.74	33.809	-1.35	33.139	2.24	33.527	5.03	33.814			
100m			5.05	33.929	4.61	33.904	4.68	33.802	-0.81	33.173	4.56	33.854	2.67	33.563	4.65	33.921					
125m							3.41	33.832	3.29	33.694	3.41	33.824	3.73	33.916							
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-19

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199506		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	WKG142		S4		S3		S2		S1		O15		OA10		O13		O12		O11	
Latitude:N	44-33.2		45-40.1		45-36.8		45-33.9		45-30.7		45-30.0		45-29.9		45-20.1		45-12.2		45- 8.0	
Longitude:E	143-13.7		142- 0.3		142- 0.0		142- 0.1		142- 0.0		142-10.0		142-29.9		142-40.0		142-32.0		142-28.1	
Date	1995/06/23		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/07/31	
Time(JST)	08:10		11:09		11:34		11:55		12:17		13:00		14:11		15:15		16:14		16:48	
Weather			C		C		C		C		C		C		C		C		C	
Air Temp.			16.3		16.1		16.6		16.4		16.7		13.1		14.7		15.7		15.9	
Bar			1009.5		1009.0		1008.5		1008.8		1009.7		1009.0		1009.0		1009.0		1009.0	
Wind Dir			ESE		E		E		E		ESE		E		ESE		ESE		ESE	
Wind Spd/F			F 5		F 5		F 5		F 5		F 5		F 3		F 3		F 4		F 4	
Transparency			18		13		13		13		11		9		8		8		9	
Depth			50		39		35		14		32		79		93		55		30	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	12.8	33.95*	18.0	33.910	18.5	33.740	19.1	33.630	18.8	33.740	18.9	33.630	10.2	33.420	11.6	33.200	17.5	33.760	17.8	33.670
10m	12.72	33.993	17.78	33.901	18.91	33.727	19.01	33.630	16.16	33.856	18.83	33.637	8.26	33.481	10.29	33.319	17.54	33.773	17.66	33.685
20m	11.50	34.055	14.77	33.979	18.30	33.860	17.30	33.886			12.98	34.040	7.23	33.623	7.03	33.668	17.02	33.863	17.53	33.756
30m	10.78	34.061	9.46	34.187	11.34	34.126	13.83	34.000					6.83	33.823	7.15	33.807	13.88	34.011		
50m													6.63	33.990	7.25	34.077	12.22	34.030		
75m															7.19	34.104				
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-20

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	OA02		OA03		OA04		O25		O24		O23		O22		OA11		OA12		OA13	
Latitude:N	44-52.3		45- 0.0		45-10.0		44-59.9		44-50.1		44-39.9		44-35.0		44-17.5		44-22.6		44-30.0	
Longitude:E	142-52.7		142-59.9		143-10.1		143-40.0		143-29.9		143-20.2		143-15.2		143-37.4		143-42.5		143-50.0	
Date	1995/07/31		1995/07/31		1995/07/31		1995/07/31		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01	
Time(JST)	18:46		19:48		21:07		23:22		00:36		02:01		02:51		04:58		05:39		06:33	
Weather	C		F		C		R		R		R		C		R		R		C	
Air Temp.	15.8		14.1		15.3		15.2		16.0		16.2		16.3		16.8		16.5		15.5	
Bar	1009.5		1010.0		1010.0		1009.0		1008.2		1007.5		1007.2		1007.0		1007.5		1007.5	
Wind Dir	ESE		E		E		E		ENE		ENE		ENE		ESE		ESE		ESE	
Wind Spd/F	F 3		F 3		F 3		F 3		F 4		F 3		F 3		F 2		S 3		F 3	
Transparency															14		15		10	
Depth	80		127		130		168		147		108		70		41		87		160	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.5	33.820	13.7	31.990	17.9	31.450	17.4	31.370	17.1	31.490	16.9	33.780	18.5	33.610	18.4	33.300	17.7	33.600	15.4	33.470
10m	17.24	33.840	4.99	33.244	17.79	31.462	16.91	31.473	14.80	31.888	16.34	33.813	15.88	33.849	17.25	33.739	17.18	33.686	8.20	33.133
20m	16.63	33.878	3.09	33.278	6.60	32.214	3.87	32.459	1.88	32.447	13.87	33.817	15.79	33.860	17.07	33.753	13.66	33.981	3.01	32.990
30m	14.11	33.980	2.46	33.441	1.17	32.494	0.39	32.800	-0.64	32.637	8.94	34.091	15.71	33.861	17.04	33.747	13.32	33.986	3.98	33.333
50m	12.97	34.012	2.72	33.514	-1.30	32.952	-1.15	32.983	-1.19	32.945	7.67	33.995	15.31	33.889			12.64	34.009	7.67	33.992
75m	11.92	34.035	3.54	33.623	-1.46	33.080	-1.48	33.090	-1.46	33.084	7.56	33.991					11.52	34.032	5.63	33.733
100m			4.42	33.746	-0.94	33.168	-1.38	33.137	-1.30	33.148	7.28	33.995							5.06	33.729
125m					0.50	33.363	-1.22	33.165	1.23	33.429									4.11	33.632
150m							-0.27	33.288											3.77	33.601
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-21

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	OA14		O35		O34		O33		O32		OA20		O31		OA21		OA22		OA23	
Latitude:N	44-40.0		44-49.8		44-29.6		44-20.1		44-10.1		44- 5.0		44- 2.1		44- 1.9		44-10.1		44-19.6	
Longitude:E	144- 0.0		144-19.8		144-19.8		144-19.9		144-20.1		144-19.9		144-20.0		144-49.9		144-50.0		144-49.9	
Date	1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01		1995/08/01	
Time(JST)	07:48		09:33		11:25		12:24		13:32		14:11		14:33		16:26		17:14		19:49	
Weather	C		C		C		C		C		C		C		C		C		C	
Air Temp.	16.1		16.5		16.7		16.8		23.4		18.5		18.8		18.0		17.1		16.0	
Bar	1008.0		1008.5		1008.0		1007.2		1007.0		1006.8		1006.6		1006.5		1007.0		1007.5	
Wind Dir	SE		SE		SE		E		SE		SE		SE		ESE		NW		ESE	
Wind Spd/F	F 3		F 1		F 3		F 2		F 3		F 2		F 2		F 4		F 1		F 2	
Transparency	12		11		12		10		13		9		8		12		9			
Depth	184		151		120		264		113		32		30		74		590		1090	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.3	31.680	16.8	31.810	17.8	31.920	16.0	32.190	18.4	33.480	18.5	33.280	18.6	33.500	17.3	33.650	15.3	32.560	16.2	32.160
10m	12.42	32.173	4.78	32.531	11.45	32.299	14.99	32.251	15.76	33.882	17.39	33.665	16.52	33.773	16.45	33.777	16.00	33.395		
20m	1.13	32.712	-0.09	32.834	2.51	32.591	3.14	32.704	15.74	33.878	16.19	33.802	15.27	33.813	15.87	33.826	9.98	33.670		
30m	-0.36	32.885	-0.94	32.934	0.22	32.800	-0.52	32.885	14.61	33.935					15.00	33.888	10.45	33.980	-0.32	32.903
50m	-1.30	33.022	-1.33	33.024	-0.73	32.981	-0.96	33.031	11.07	34.047					14.52	33.921	9.44	33.921	-1.06	33.052
75m	-1.27	33.106	-1.05	33.185	-1.11	33.069	-1.04	33.114	9.36	34.013							6.28	33.615	-0.92	33.140
100m	-0.85	33.170	-0.83	33.235	-1.00	33.151	-0.66	33.210	9.32	34.021							3.41	33.444	-0.98	33.206
125m	-0.58	33.226	-0.82	33.237			-0.71	33.228									1.81	33.349	0.44	33.312
150m	-0.38	33.273					-0.58	33.262									0.19	33.236	-0.13	33.296
200m							-0.50	33.290									-0.17	33.277	0.50	33.365
250m							1.67	33.602									2.34	33.599	0.07	33.363
300m																	3.43	33.755	0.48	33.419
400m																	1.98	33.603	0.84	33.511
500m																	2.52	33.707	1.43	33.649
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-22

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	OA24		O41		O42		O43		O44		O45		O46		O36		O26		OA05	
Latitude:N	44-30.0		44-22.4		44-30.1		44-39.9		44-50.0		45- 0.0		45-10.1		45- 7.9		45-10.0		45-20.0	
Longitude:E	144-50.0		145-19.9		145-20.0		145-19.8		145-20.1		145-20.0		145-20.0		144-20.1		143-50.0		143-20.0	
Date	1995/08/01		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02		1995/08/02	
Time(JST)	22:13		01:15		02:10		03:32		04:49		06:01		07:12		10:59		13:05		15:24	
Weather	C		C		C		C		C		C		C		R		C		R	
Air Temp.	16.7		14.1		14.6		14.4		14.7		14.6		14.5		16.5		17.4		17.3	
Bar	1007.5		1007.0		1006.8		1007.0		1007.0		1007.5		1007.5		1006.0		1004.5		1004.6	
Wind Dir	SE		SE		SE		SE		ESE		ESE		SE		SE		SE		ESE	
Wind Spd/F	F 2		F 6		F 6		F 4		F 2		F 3		F 4		F 3		F 3		F 2	
Transparency									11		13		13		13		11		12	
Depth	1500		276				2000		2000				2000		800		340		139	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.8	31.96*	14.6	33.480	16.8	33.640	14.8	32.390	15.7	32.130	15.0	32.160	14.3	32.180	15.8	31.860	17.5	31.490	17.7	31.310
10m	11.12	32.401	14.46	33.495	17.00	33.661	14.00	32.535	15.02	32.350	4.17	32.665	13.97	32.196	8.81	32.615	4.15	32.480	17.27	31.582
20m	1.96	32.734	14.47	33.503	16.72	33.681	9.54	33.057	8.45	33.438	1.03	32.815	6.87	33.081	2.21	32.866	0.58	32.766	3.17	32.485
30m	0.76	32.901	14.55	33.588	12.23	33.372	1.69	33.118	5.85	33.514	3.63	33.200	4.74	33.179	0.62	32.936	-0.81	32.890	-0.17	32.686
50m	-0.67	33.069	14.27	33.616	6.65	33.606	-0.43	33.064	2.72	33.391	2.71	33.204	3.60	33.312	0.12	33.040	-1.29	33.004	-1.39	32.961
75m	0.58	33.225	9.46	33.967	4.02	33.393	-0.22	33.155	3.25	33.570	1.54	33.230	-1.08	33.060	-0.18	33.092	-1.32	33.120	-1.48	33.112
100m	0.34	33.248	8.11	33.800	1.77	33.281	0.08	33.244	2.35	33.520	0.81	33.242	-0.60	33.128	-0.37	33.153	-0.86	33.180	-1.48	33.141
125m	0.55	33.313	6.94	33.749	-0.25	33.236	0.62	33.320	2.38	33.548	0.49	33.270	-0.47	33.199	-0.01	33.227	-0.92	33.203	-1.45	33.169
150m	0.25	33.316	4.66	33.568	0.53	33.313	0.68	33.342	2.12	33.543	-0.09	33.278	-0.25	33.250	-0.01	33.270	-1.22	33.211		
200m	0.15	33.332	3.79	33.551	1.49	33.455	0.46	33.363	1.73	33.546	0.67	33.382	-0.26	33.305	0.23	33.335	-0.76	33.266		
250m	0.46	33.394	2.83	33.564	2.69	33.629	0.92	33.438	2.23	33.622	0.66	33.421	0.30	33.374	-0.06	33.348	-0.69	33.273		
300m	1.46	33.512			2.76	33.649	0.56	33.438	2.71	33.706	0.67	33.458	0.49	33.418	0.34	33.412	-0.17	33.347		
400m	1.07	33.547			2.57	33.693	1.11	33.570	1.97	33.697	1.16	33.596	1.07	33.536	0.89	33.520				
500m	1.52	33.687					1.47	33.695	1.60	33.785	1.57	33.761	1.41	33.648	1.52	33.666				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-23

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508	
Station No	O14		S103		S102		S101		S300		S301		S399		S302		S303		S304	
Latitude:N	45-30.2		45-40.0		45-35.0		45-31.1		45-27.0		45-30.0		45-34.9		45-40.1		45-45.0		45-50.0	
Longitude:E	142-49.0		142- 0.2		142- 0.2		142- 0.0		142- 7.7		142-10.1		142-15.0		142-19.9		142-25.0		142-30.1	
Date	1995/08/02		1995/08/07		1995/08/07		1995/08/07		1995/08/07		1995/08/07		1995/08/07		1995/08/07		1995/08/07		1995/08/07	
Time(JST)	18:11		13:27		14:28		15:08		15:47		16:16		17:14		18:38		19:43		20:36	
Weather	C		BC		C		C		C		C		C		F		C		C	
Air Temp.	17.7		21.4		20.3		20.8		19.8		20.0		19.9		15.4		15.7		18.6	
Bar	1005.0		1010.5		1009.8		1009.7		1009.7		1010.0		1010.0		1010.0		1010.0		1010.0	
Wind Dir	ESE		ESE		E		E		E		ESE		ESE		ESE		ESE		E	
Wind Spd/F	F 3		S 3		S 3		S 2		S 2		S 3		S 4		S 2		S 2		S 2	
Transparency	11																			
Depth	115		52		42		22		21		33		45		62		70		70	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.6	31.140	20.5	33.622	20.4	33.843	21.0	33.622	19.9	33.813	19.7	33.807	19.8	33.777	8.3	34.103	9.4	33.200	18.4	31.445
10m	16.15	31.671	11.43	34.149	16.29	33.962	20.75	33.570	19.02	33.810	17.28	33.912	12.99	34.063	7.35	34.096	7.84	33.489	14.45	32.194
20m	8.34	32.117	10.50	34.123	13.90	34.031					17.03	33.918	11.52	34.326	7.35	34.096	7.04	33.820	8.62	33.113
30m	4.79	32.352	10.22	34.119	13.67	34.032							11.28	34.108	7.35	34.095	6.95	33.843	5.47	33.383
50m	-0.28	32.881													7.37	34.096	6.94	33.870	4.33	33.541
75m	-1.42	33.062																		
100m	1.72	33.391																		
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-24

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199508		199508		
Station No	S206		S205		S204		S404		S403		S402		S401		T103		T104		T105		
Latitude:N	46- 0.2		46- 0.0		45-59.9		45-30.1		45-20.0		45-12.5		45- 8.6		45-59.9		46- 0.1		46- 0.0		
Longitude:E	142-25.0		142-40.0		142-49.9		142-50.0		142-40.1		142-32.4		142-29.0		141-40.2		141-30.0		141-20.1		
Date	1995/08/07		1995/08/07		1995/08/08		1995/08/08		1995/08/08		1995/08/08		1995/08/08		1995/08/09		1995/08/09		1995/08/09		
Time(JST)	21:54		23:27		00:32		03:17		10:55		12:04		12:34		21:12		23:04		23:48		
Weather	C		C		C		C		C		R		C		C		C		C		
Air Temp.	18.5		18.5		18.4		18.9		18.1		17.5		17.5		17.2		17.2		17.4		
Bar	1010.0		1009.5		1009.0		1007.7		1007.5		1006.6		1006.3		1009.5		1009.5		1009.0		
Wind Dir	ESE		E		E		ENE		E		ESE		E		E		E		ENE		
Wind Spd/F	S 1		S 2		S 2		S 2		S 1		S 4		S 5		S 4		S 4		S 4		
Transparency																					
Depth	74		85		97		115		92		56		36		79		112		154		
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	18.1	31.856	18.9	31.499	18.7	31.471	19.2	31.344	14.3	32.823	17.9	33.837	19.2	33.693	20.1	33.888	19.9	33.865	19.7	33.823	
10m	9.32	32.864	17.29	31.507	17.29	31.537	17.85	31.543	8.82	33.775	16.90	33.904	18.72	33.835	16.78	33.963	19.89	33.860	19.63	33.822	
20m	2.98	32.967	12.11	31.939	11.82	31.917	8.87	32.081	8.74	34.093	15.78	33.944	17.61	33.864	14.06	34.046	16.10	33.965	17.49	33.939	
30m	0.25	32.971	10.79	32.007	6.66	32.240	2.49	32.516	8.82	34.126	14.29	33.991			10.44	34.160	11.23	34.106	13.03	34.052	
50m	-1.10	33.083	1.12	32.647	-0.31	32.814	0.61	33.084	8.79	34.141					9.76	34.158	9.97	34.161	10.49	34.116	
75m			-1.20	33.081	-0.97	33.025	-0.94	33.142	8.47	34.120							9.22	34.162	9.15	34.151	
100m							1.15	33.430									7.74	34.166	8.05	34.166	
125m																				7.82	34.164
150m																					
200m																					
250m																					
300m																					
400m																					
500m																					
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-25

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199508		199508		199508		199508		199508		199508		199508		199508		199510		199510	
Station No	T106		T107		T108		T109		T110		T208		T209		T210		S4		S3	
Latitude:N	46- 0.0		46- 0.0		46- 0.0		46- 0.0		45-59.9		46-19.9		46-20.0		46-20.0		45-39.6		45-37.0	
Longitude:E	141-10.0		141- 0.1		140-40.1		140-19.8		140- 0.0		140-39.9		140-20.0		139-59.9		142- 0.0		141-59.9	
Date	1995/08/10		1995/08/10		1995/08/10		1995/08/10		1995/08/10		1995/08/10		1995/08/10		1995/08/10		1995/10/02		1995/10/02	
Time(JST)	01:07		01:55		04:28		06:04		08:47		12:28		14:54		16:29		12:17		12:39	
Weather	C		C		C		C		C		BC		BC		BC		BC		BC	
Air Temp.	17.7		18.0		18.0		17.9		19.7		19.7		20.8		20.1		20.0		19.8	
Bar	1008.2		1008.5		1008.5		1009.0		1010.0		1010.0		1010.0		1010.0		1013.0		1013.0	
Wind Dir	ENE		ENE		ENE		ENE		E		ENE		ENE		ENE		SSW		SW	
Wind Spd/F	S 5		S 5		S 4		S 4		S 4		S 3		S 3		S 3		F 3		F 3	
Transparency																	13		13	
Depth	141		735		802		1082		1330		702		1494		1535		51		49	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	20.3	34.080	20.3	34.068	19.9	33.701	19.5	33.692	19.7	33.672	20.0	33.727	22.3	33.747	21.0	33.708	15.5	34.070	17.8	34.050
10m	20.40	34.079	20.50	34.053	20.09	33.692	19.56	33.671	19.61	33.665	19.78	33.743	20.05	33.714	19.69	33.662	16.66	34.080	16.77	34.072
20m	20.39	34.079	20.50	34.053	12.91	33.917	10.20	34.046	11.16	34.076	13.92	34.070	14.33	34.040	11.68	33.916	16.29	34.096	15.40	34.165
30m	16.24	34.201	15.19	34.192	8.08	34.053	7.10	34.133	5.72	34.173	9.82	34.170	9.38	34.097	6.80	34.136	12.42	34.320	15.14	34.173
50m	10.59	34.105	9.82	34.204	4.57	34.143	3.77	34.130	4.17	34.141	5.91	34.138	5.08	34.140	3.42	34.024				
75m	9.01	34.154	7.91	34.173	3.72	34.123	2.90	34.107	3.48	34.120	4.74	34.137	3.89	34.121	2.91	34.051				
100m	8.57	34.159	6.89	34.169	3.06	34.104	2.37	34.095	2.60	34.096	3.71	34.122	3.16	34.105	1.87	34.004				
125m	7.93	34.164	5.81	34.149	2.52	34.097	1.97	34.090	2.14	34.081	2.99	34.107	2.69	34.101	2.09	34.050				
150m			5.41	34.142	2.03	34.090	1.69	34.084	1.76	34.067	2.38	34.094	2.29	34.097	2.00	34.067				
200m			4.27	34.131	1.53	34.079	1.31	34.076	1.47	34.071	1.77	34.086	1.66	34.082	1.40	34.053				
250m			2.70	34.098	1.30	34.077	0.93	34.069	1.15	34.070	1.27	34.076	1.25	34.076	1.11	34.064				
300m			1.83	34.084	1.07	34.073	0.75	34.069	0.90	34.069	0.94	34.073	0.90	34.071	0.89	34.069				
400m			1.08	34.074	0.68	34.070	0.51	34.069	0.58	34.069	0.63	34.070	0.57	34.070	0.58	34.069				
500m			0.69	34.071	0.53	34.066	0.40	34.069	0.42	34.069	0.41	34.069	0.43	34.070	0.43	34.069				
600m			0.44	34.070			0.32	34.068			0.31	34.069			0.35	34.069				
700m																				
800m																				
900m																				
1000m																				

Table 6-26

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	S2		S1		O15		OA10		O13		O12		O11		OA02		OA03		OA04	
Latitude:N	45-34.0		45-30.9		45-30.3		45-30.0		45-19.9		45-12.5		45- 8.9		44-52.3		45- 0.0		45-10.0	
Longitude:E	141-59.9		142- 0.2		142-10.2		142-30.2		142-40.0		142-32.2		142-28.8		142-52.7		142-59.8		143- 9.7	
Date	1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02		1995/10/02	
Time(JST)	13:01		13:23		14:03		15:15		16:19		17:13		17:40		20:03		21:08		22:21	
Weather	BC		BC		BC		BC		BC		BC		BC		BC		BC		BC	
Air Temp.	19.6		20.1		19.0		18.0		13.2		13.9		15.6		13.7		13.9		14.0	
Bar	1013.0		1013.0		1012.0		1012.0		1011.5		1011.0		1011.0		1010.6		1010.6		1010.0	
Wind Dir	SW		W		W		SE		SE		SE		SSE		SSE		SSW		SSW	
Wind Spd/F	F 2		F 2		F 1		F 1		F 1		F 2		F 2		F 2		F 2		F 2	
Transparency	15		8		10		12		9											
Depth	40		22		38		82		97		60		40		78		131		133	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		STD		STD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	17.0	34.120	17.8	33.950	16.6	34.100	11.5	33.810	11.9	32.260	15.6	34.140	16.2	34.130	13.5	33.440	14.1	31.860	14.1	31.770
10m	16.37	34.108	17.34	33.954	16.21	34.097	10.65	34.031	8.55	33.253	15.45	34.147	16.07	34.11	13.46	34.14	13.92	31.847	14.07	31.754
20m	16.37	34.108			16.20	34.097	10.29	34.056	7.47	33.589	15.29	34.151	16.07	34.12	13.43	34.14	4.27	32.493	9.65	32.101
30m	16.36	34.108			16.22	34.097	10.08	34.088	6.43	33.746	14.99	34.153	16.07	34.12	13.42	34.15	1.39	32.745	1.93	32.784
50m							9.98	34.111	6.37	33.865	14.77	34.147			13.29	34.15	-0.13	32.888	-1.02	33.016
75m							9.97	34.128	5.90	33.939					13.03	34.15	5.15	33.905	-1.43	33.097
100m																	5.26	33.968	-0.80	33.175
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-27

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510		
Station No	O25		O24		O23		O22		OA11		OA12		OA13		OA14		O35		O46		
Latitude:N	44-59.9		44-50.0		44-40.0		44-35.1		44-17.6		44-22.6		44-30.1		44-40.3		44-50.1		45- 9.6		
Longitude:E	143-40.1		143-29.8		143-20.1		143-15.0		143-37.3		143-42.3		143-49.8		144- 0.0		144-19.7		145-19.5		
Date	1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		
Time(JST)	00:29		01:43		03:01		03:54		05:53		06:31		07:27		08:41		10:24		14:42		
Weather	BC		BC		BC		BC		BC		C		C		C		C		C		
Air Temp.	13.9		13.6		14.4		15.2		13.4		14.0		15.3		13.1		12.4		11.3		
Bar	1009.5		1009.0		1008.5		1008.0		1008.5		1008.5		1008.0		1008.5		1009.0		1009.5		
Wind Dir	WSW		W		W		SSW		S		SW		SSW		WNW		WNW		NW		
Wind Spd/F	F 1		F 2		F 2		F 2		F 2		F 3		F 3		F 6		F 5		F 5		
Transparency									13		9		12		12		11		14		
Depth	173		150		113		73		44		88		162		187		151				
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	
0m	14.1	31.960	14.1	31.960	14.2	<i>N.D.</i>	15.2	34.130	16.3	33.980	14.4	33.720	13.7	32.150	13.3	32.460	13.1	32.780	14.1	32.980	
10m	13.88	31.970	13.93	31.982	12.81	33.894	15.09	34.117	16.86	34.004	12.52	33.621	13.04	32.198	12.76	32.434	12.88	32.873	14.09	32.967	
20m	12.22	32.086	13.49	32.106	12.67	34.110	14.99	34.115	16.77	34.054	11.52	33.991	10.04	33.263	11.17	32.575	9.00	33.218	13.63	33.064	
30m	1.49	32.905	0.71	32.896	11.22	34.136	14.80	34.118	16.66	34.059	11.31	34.073	8.18	34.092	1.93	32.958	6.66	33.368	9.94	33.665	
50m	-1.05	33.057	-1.27	33.070	9.77	34.107	14.57	34.117			11.24	34.080	7.85	34.111	0.64	33.238	3.33	33.386	4.45	33.375	
75m	-1.30	33.123	1.00	33.307	9.59	34.105					10.87	34.067	6.48	33.950	0.19	33.255	1.02	33.323	-0.02	33.091	
100m	-1.14	33.166	1.40	33.354	9.00	34.097							2.36	33.469	0.50	33.297	0.34	33.303	-0.51	33.122	
125m	-1.09	33.197	1.73	33.412									1.73	33.393	0.91	33.363	0.41	33.309	0.15	33.200	
150m	0.47	33.330											1.47	33.372	1.67	33.461			0.67	33.275	
200m																				-0.21	33.287
250m																				-0.19	33.312
300m																				0.40	33.384
400m																				0.79	33.485
500m																				1.25	33.612
600m																					
700m																					
800m																					
900m																					
1000m																					

Table 6-28

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	O45		O44		O43		O42		O41		OA24		OA23		OA22		OA21		O31	
Latitude:N	45- 0.0		44-50.1		44-39.9		44-30.1		44-22.2		44-29.9		44-20.0		44-10.1		44- 2.1		44- 2.1	
Longitude:E	145-20.1		145-19.8		145-20.0		145-20.1		145-19.9		144-49.9		144-50.0		144-50.1		144-50.0		144-20.0	
Date	1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/03		1995/10/04		1995/10/04		1995/10/04		1995/10/04	
Time(JST)	15:52		17:02		18:13		19:23		20:31		23:08		00:33		02:03		03:10		05:21	
Weather	C		C		C		C		C		BC		BC		BC		BC		C	
Air Temp.	11.5		10.9		11.5		11.3		11.7		11.9		12.0		12.1		12.5		12.0	
Bar	1010.5		1011.5		1012.5		1013.5		1013.5		1014.6		1014.5		1014.5				1015.5	
Wind Dir	NW		NW		NNW		NNW		NNW		W		NW		N		W		W	
Wind Spd/F	F 5		F 5		F 5		F 4		F 4		F 3		F 2		F 1		F 1		F 2	
Transparency	9																			
Depth							1700		230		1550		1078		587		78		33	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	14.3	32.940	13.2	32.240	13.3	32.570	13.6	32.940	15.5	33.950	13.8	32.980	13.2	32.960	15.2	34.070	16.0	33.940	16.5	33.780
10m	14.32	32.901	13.08	32.239	13.27	32.574	13.48	32.935	15.98	33.893	13.10	33.012	13.11	32.922	15.20	34.077	16.07	34.000	16.55	33.767
20m	13.85	32.846	7.23	32.896	9.77	33.379	12.24	33.213	15.99	33.895	9.32	33.363	11.00	33.608	15.16	34.082	15.96	34.027	16.10	33.946
30m	3.86	32.951	2.91	32.920	2.82	33.076	8.24	33.752	15.07	34.050	6.39	33.700	7.42	33.787	14.80	34.088	15.26	34.012		
50m	1.44	33.083	1.65	33.136	0.82	33.115	6.82	33.856	13.73	34.139	3.42	33.478	6.17	33.828	14.59	34.085	14.14	34.059		
75m	1.47	33.178	0.54	33.139	0.30	33.146	3.54	33.510	11.22	34.158	1.96	33.375	4.16	33.591	13.22	34.094				
100m	1.01	33.209	0.37	33.172	0.24	33.201	2.38	33.409	9.85	34.145	1.43	33.364	0.49	33.274	10.63	34.167				
125m	0.28	33.194	0.30	33.224	1.00	33.301	1.40	33.346	9.04	34.089	1.27	33.380	0.57	33.290	10.43	34.144				
150m	0.22	33.227	0.00	33.252	0.71	33.311	0.99	33.339	8.40	34.041	1.26	33.397	0.52	33.306	8.96	34.016				
200m	-0.25	33.273	0.09	33.312	0.01	33.313	0.88	33.367	4.48	33.633	1.33	33.437	0.95	33.374	3.13	33.514				
250m	-0.78	33.277	0.41	33.383	0.90	33.416	0.73	33.385			0.80	33.420	1.07	33.401	2.13	33.431				
300m	-0.52	33.328	-0.15	33.373	1.03	33.461	0.68	33.432			1.04	33.476	1.11	33.435	0.90	33.367				
400m	0.60	33.469	0.75	33.496	1.35	33.570	1.23	33.553			1.50	33.582	1.69	33.599	1.64	33.580				
500m	1.39	33.643	1.41	33.653	1.48	33.669	1.49	33.674			1.49	33.659	1.57	33.685	1.77	33.826				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-29

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	OA20		O32		O33		O34		O36		O26		OA05		O14		J11		J12	
Latitude:N	44- 5.0		44-10.0		44-20.0		44-30.0		45- 7.9		45-10.0		45-20.0		45-30.0		45-29.9		45-29.9	
Longitude:E	144-19.9		144-20.2		144-19.8		144-20.0		144-19.9		143-50.8		143-19.9		142-50.0		141-40.1		141-25.1	
Date	1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/04		1995/10/17		1995/10/17	
Time(JST)	05:42		06:15		07:19		08:28		12:24		14:28		16:46		18:53		09:48		10:53	
Weather	C		C		BC		BC		BC		C		C		C		C		R	
Air Temp.	12.0		12.0		12.5		13.3		17.6		14.3		14.0		12.8		14.1		14.0	
Bar	1015.5		1015.5		1015.5		1015.6		1015.0		1012.5		1012.0		1011.5		1008.6		1008.7	
Wind Dir	W		W		SW		NNW		ESE		ESE		ESE		ESE		NNE		N	
Wind Spd/F	F 2		F 1		F 2		F 1		F 2		F 2		F 3		F 3		F 3		F 3	
Transparency			12		11		10		12		6		7		8		8		14	
Depth	37		113		264				787		375		142		118		54		112	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.6	33.950	16.9	33.960	13.1	32.300	13.0	32.960	13.5	32.470	13.5	32.270	12.9	31.850	13.3	31.680	16.3	33.799	15.9	34.098
10m	16.53	33.940	16.86	33.973	11.84	32.526	12.56	32.967	13.02	32.512	13.31	32.526	12.70	31.841	12.93	31.683	16.39	33.938	15.91	34.130
20m	15.40	34.060	16.61	34.031	9.76	33.108	9.17	33.214	9.56	32.631	2.93	32.843	12.44	31.856	10.31	32.010	16.35	34.110	15.90	34.133
30m	15.37	34.058	16.41	34.055	7.31	33.567	6.62	33.390	2.17	32.869	0.56	32.954	8.13	32.213	3.50	32.595	16.20	34.159	15.50	34.181
50m			12.19	33.805	3.65	33.340	2.01	33.303	0.25	33.069	-0.85	33.091	-0.60	32.996	-0.20	32.890			15.18	34.210
75m			11.54	34.088	2.07	33.357	1.58	33.305	-0.77	33.117	-1.22	33.132	-1.44	33.120	-1.07	33.027			9.76	34.307
100m			11.08	34.070	1.84	33.381	2.08	33.410	0.90	33.273	-1.41	33.159	-1.25	33.174	-1.38	33.110			5.76	34.160
125m					1.27	33.349	1.52	33.395	1.45	33.357	-1.30	33.180	-1.23	33.179						
150m					1.24	33.366	1.02	33.375	1.19	33.367	-1.07	33.204								
200m					0.80	33.375	0.57	33.378	0.63	33.353	-0.45	33.266								
250m					1.05	33.460	0.96	33.445	0.34	33.366	-0.16	33.310								
300m							1.32	33.510	0.74	33.420	0.06	33.340								
400m							1.50	33.600	1.27	33.543										
500m							1.52	33.690	1.61	33.694										
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-30

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	J13		JW11		JW12		JW13		JW14		J21		J22		J23		J24		J25	
Latitude:N	45-30.0		45- 0.1		45- 0.0		45- 0.1		45- 0.0		44-29.9		44-30.0		44-30.0		44-30.0		44-29.9	
Longitude:E	141-10.0		141-30.0		141-15.3		141- 0.4		140-40.6		141-29.8		141-15.0		141- 0.0		140-40.0		140-20.0	
Date	1995/10/17		1995/10/17		1995/10/17		1995/10/17		1995/10/17		1995/10/17		1995/10/18		1995/10/18		1995/10/18		1995/10/18	
Time(JST)	11:59		15:04		16:08		17:12		18:38		23:04		00:25		01:43		03:23		04:59	
Weather	R		R		C		C		C		C		R		R		R		R	
Air Temp.	13.6		14.7		14.5		14.0		12.9		14.6		14.3		13.4		13.4		13.0	
Bar	1008.7		1009.5		1010.0		1011.0		1014.0		1014.5		1016.0		1017.0		1017.5		1018.5	
Wind Dir	N		NNW		NW		NNW		NNW		WNW		NW		NW		NNW		NNW	
Wind Spd/F	F 4		F 3		F 5		F 5		F 6		F 5		F 5		F 5		F 4		F 3	
Transparency	16		15		14															
Depth	128		65		84		96		367		79		118		200		143		250	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	15.9	34.070	17.0	33.972	16.0	34.095	16.0	34.171	16.2	34.137	16.8	34.113	17.1	33.977	17.0	33.900	16.8	34.077	16.4	34.131
10m	15.87	34.087	17.02	34.014	15.90	34.133	15.89	34.184	16.22	34.124	17.06	34.074	17.19	33.986	16.92	33.918	16.79	34.078	16.41	34.130
20m	15.60	34.153	16.98	34.100	15.91	34.164	15.89	34.192	16.22	34.127	16.89	34.084	17.21	34.060	16.10	34.214	16.45	34.101	16.41	34.129
30m	13.79	34.351	16.15	34.182	15.80	34.180	15.85	34.206	15.80	34.154	16.78	34.116	17.02	34.092	15.14	34.116	14.41	34.071	16.40	34.131
50m	10.89	34.346	13.78	34.450	11.93	34.449	14.96	34.183	13.30	34.166	11.78	34.404	12.69	34.473	12.48	34.468	11.75	34.423	12.14	34.464
75m	8.80	34.257			9.16	34.296	11.36	34.374	9.71	34.314			10.47	34.367	9.84	34.329	9.47	34.308	9.55	34.317
100m	6.69	34.188							8.08	34.222			9.08	34.283	6.62	34.183	6.35	34.176	6.70	34.172
125m									5.50	34.154					4.88	34.124	4.17	34.122	5.17	34.138
150m									3.84	34.118					3.54	34.103			4.65	34.120
200m									1.80	34.083									2.26	34.091
250m									1.13	34.072										
300m									0.77	34.070										
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-31

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199510		199510		199510		199510		199510		199510		199510		199510	
Station No	J26		J27		JW16		JW15		J18		J17		J16		J15		J14		JW03	
Latitude:N	44-29.8		44-30.0		45- 0.0		45- 0.0		45-30.0		45-30.0		45-30.0		45-30.0		45-29.9		45-45.1	
Longitude:E	140- 0.1		139-30.2		140- 0.2		140-20.2		139-40.1		139-59.8		140-19.8		140-39.9		140-52.9		141- 0.1	
Date	1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/18		1995/10/19	
Time(JST)	06:33		08:48		12:16		13:38		17:22		19:09		20:49		22:19		23:27		01:53	
Weather	C		C		C		C		C		C		D		C		C		R	
Air Temp.	12.5		14.0		12.9		13.1		12.6		12.6		12.9		12.6		12.8		16.9	
Bar	1020.0		1020.2		1019.5		1019.0		1018.5		1019.0		1019.0		1018.4		1018.2		1018.0	
Wind Dir	NW		NNW		WNW		WNW		NNE		N		NNW		N		W		NNW	
Wind Spd/F	F 3		F 2		F 3		F 3		F 2		F 1		F 2		F 1		F 1		F 1	
Transparency			17		14		17													
Depth	576		487		225		158		835		590		397		546		427		496	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	16.7	34.120	16.3	34.098	13.7	33.956	15.7	34.094	12.5	33.799	13.0	33.877	14.9	34.174	14.7	34.082	14.7	34.093	14.9	34.118
10m	16.74	34.116	16.37	34.053	13.33	33.934	14.59	34.097	12.37	33.808	12.85	33.873	14.70	34.155	14.71	34.051	14.73	34.076	15.15	34.133
20m	16.73	34.118	16.37	34.053	12.79	33.869	13.60	34.057	12.36	33.808	12.85	33.873	14.22	34.218	14.44	34.040	14.62	34.062	14.90	34.154
30m	16.72	34.119	16.37	34.053	11.40	33.939	11.32	34.296	12.13	33.835	9.69	34.083	11.43	34.369	12.91	33.998	13.02	33.913	14.76	34.162
50m	13.38	34.487	11.40	34.387	5.37	34.153	8.73	34.274	4.05	34.132	4.90	34.144	9.20	34.287	7.63	34.204	9.23	34.219	12.21	34.401
75m	11.15	34.405	8.66	34.269	4.15	34.130	5.35	34.152	2.90	34.105	3.57	34.115	5.69	34.146	6.05	34.154	7.23	34.193	9.87	34.312
100m	9.82	34.326	6.20	34.159	3.05	34.111	4.07	34.124	2.16	34.090	3.11	34.109	4.72	34.129	5.01	34.140	5.61	34.138	7.51	34.213
125m	8.41	34.255	4.23	34.126	2.37	34.090	3.35	34.109	1.78	34.082	2.60	34.095	3.87	34.106	4.04	34.113	4.76	34.119	5.76	34.154
150m	6.22	34.170	3.13	34.112	2.16	34.085	3.27	34.102	1.57	34.075	2.11	34.086	3.56	34.102	3.56	34.101	4.15	34.105	4.86	34.125
200m	4.61	34.138	2.11	34.086	1.73	34.077			1.26	34.071	1.55	34.077	2.68	34.097	2.69	34.097	2.86	34.102	3.28	34.109
250m	2.70	34.096	1.59	34.077					0.97	34.069	1.24	34.074	1.85	34.082	1.81	34.082	1.77	34.082	1.74	34.083
300m	1.89	34.082	1.23	34.073					0.76	34.069	0.97	34.072	1.31	34.076	1.28	34.074	1.20	34.073	1.12	34.073
400m	1.15	34.072	0.77	34.069					0.53	34.069	0.65	34.069			0.58	34.068	0.55	34.068	0.62	34.068
500m	0.54	34.067							0.43	34.068	0.47	34.069			0.36	34.067				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-32

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199510		199510		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	JW02		JW01		O35		O36		O26		O25		OA04		OA05		J11		J12	
Latitude:N	45-45.1		45-45.0		44-49.9		45- 8.1		45- 9.9		45- 0.1		45- 9.9		45-19.9		45-30.0		45-30.1	
Longitude:E	141-10.2		141-20.1		144-20.0		144-20.1		143-50.1		143-39.8		143-10.1		143-20.0		141-39.7		141-25.0	
Date	1995/10/19		1995/10/19		1995/11/30		1995/11/30		1995/11/30		1995/12/01		1995/12/01		1995/12/01		1995/12/05		1995/12/05	
Time(JST)	02:55		03:40		19:31		21:34		23:51		01:20		03:42		05:06		10:02		11:08	
Weather	R		R		R		R		C		C		C		BC		R		C	
Air Temp.	13.0		13.3		3.3		4.1		3.9		3.9		3.5		4.1		4.3		3.7	
Bar	1018.0		1018.0		1002.5		1002.0		1002.5		1002.0		1003.0		1003.0		1011.0		1011.0	
Wind Dir	NNW		NNW		NE		NNW		NNW		NNW		NNE		NNE		NE		NE	
Wind Spd/F	F 1		F 1		F 2		F 2		F 2		F 2		F 3		F 4		F 6		F 5	
Transparency																	13		11	
Depth	121		124		153		808		350		171		130		141		55		113	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	13.0	33.922	14.8	34.145	3.4	32.412	4.0	32.404	3.0	32.034	3.9	31.379	4.0	31.503	3.6	31.528	9.0	33.156	6.2	32.304
10m	12.75	33.974	14.75	34.164	3.99	32.452	4.10	32.407	3.59	32.091	3.52	31.387	3.41	31.544	3.48	31.536	8.35	33.159	6.72	32.329
20m	12.53	33.932	14.07	34.251	4.03	32.465	4.10	32.406	3.60	32.189	3.53	31.437	3.42	31.560	3.37	31.572	8.53	33.249	9.88	33.963
30m	12.68	34.174	12.28	34.201	3.17	32.567	4.10	32.406	3.92	32.300	3.54	31.529	3.44	31.586	3.02	32.022	9.56	33.798	10.61	34.190
50m	11.16	34.361	10.66	34.188	-0.56	33.072	2.52	33.234	0.25	32.830	2.71	32.212	3.03	32.019	2.44	32.238	10.31	34.200	10.43	34.195
75m	8.73	34.264	6.61	34.191	-0.74	33.108	1.32	33.217	-0.42	33.070	0.98	32.789	2.50	32.227	2.10	32.355			10.35	34.218
100m	7.99	34.227	5.14	34.141	-0.54	33.159	1.15	33.246	-0.51	33.146	-0.19	32.929	1.88	32.419	1.37	32.559			8.85	34.215
125m					-0.39	33.228	0.92	33.262	-0.53	33.191	-0.78	33.033	1.17	32.588	0.00	32.891				
150m							0.30	33.259	-0.51	33.203	-0.79	33.036								
200m							0.14	33.301	-0.49	33.233										
250m							0.39	33.365	-0.25	33.278										
300m							0.55	33.408	-0.08	33.304										
400m							0.90	33.500												
500m							1.38	33.621												
600m							1.52	33.715												
700m																				
800m																				
900m																				
1000m																				

Table 6-33

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	J13		JW13		JW12		JW11		J21		J22		J23		J14		J15		J16	
Latitude:N	45-29.9		45- 0.2		44-59.9		44-59.9		44-30.2		44-30.1		44-29.9		45-30.1		45-30.1		45-30.1	
Longitude:E	141-10.1		140-59.9		141-15.0		141-29.9		141-28.9		141-15.0		140-59.7		140-53.4		140-40.2		140-20.1	
Date	1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/05		1995/12/10		1995/12/10		1995/12/10	
Time(JST)	12:09		15:09		16:23		17:38		20:17		21:20		22:34		13:07		14:22		16:16	
Weather	R		R		R		R		C		C		C		BC		BC		C	
Air Temp.	3.8		4.2		3.5		3.3		4.2		4.1		4.5		3.6		2.6		1.5	
Bar	1010.0		1009.0		1008.6		1008.9		1008.0		1007.0		1007.5		1016.5		1017.5		1018.7	
Wind Dir	NE		NE		NE		NE		NE		NE		NE		WNW		WNW		WNW	
Wind Spd/F	F 6		F 6		F 6		F 6		F 6		F 7		F 7		F 6		F 6		F 5	
Transparency	12		15												18		16			
Depth	130		103		87		66		82		118		207		350		560		397	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	10.0	34.187	10.0	34.148	10.2	34.064	9.8	34.157	10.2	33.897	10.4	34.023	10.9	34.105	9.0	34.122	9.5	34.155	7.6	34.162
10m	10.21	34.195	10.54	34.140	10.59	34.066	10.02	34.154	10.40	33.927	10.70	34.075	11.18	34.110	9.72	34.126	9.68	34.157	7.48	34.158
20m	10.21	34.195	10.54	34.140	10.58	34.065	10.03	34.154	10.43	33.944	10.70	34.075	11.18	34.110	9.71	34.122	9.68	34.157	7.50	34.158
30m	10.20	34.197	10.55	34.141	10.59	34.066	10.03	34.154	10.59	34.027	10.73	34.081	11.17	34.110	9.70	34.121	9.54	34.161	7.49	34.157
50m	10.07	34.220	10.55	34.140	10.59	34.073	10.00	34.165	11.03	34.183	10.79	34.098	10.98	34.152	9.41	34.111	7.62	34.153	7.47	34.157
75m	9.91	34.232	10.18	34.243	9.58	34.256			10.83	34.216	10.89	34.133	9.41	34.242	8.62	34.191	6.53	34.148	4.27	34.107
100m	8.98	34.215									8.28	34.241	7.95	34.226	7.13	34.193	4.37	34.127	2.44	34.092
125m													5.79	34.151	5.59	34.149	3.53	34.109	2.21	34.084
150m													4.01	34.096	4.37	34.134	2.60	34.097	1.94	34.080
200m													2.57	34.087	3.03	34.103	1.59	34.078	1.64	34.075
250m															2.25	34.086	1.26	34.073	1.30	34.072
300m															1.23	34.075	0.89	34.069	0.93	34.071
400m																	0.56	34.067		
500m																	0.37	34.065		
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-34

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	J17		J18		J27		J26		J25		J24		S4		S3		S2		S1	
Latitude:N	45-30.0		45-30.2		44-30.3		44-30.1		44-30.0		44-30.0		45-39.9		45-37.1		45-34.1		45-31.5	
Longitude:E	140- 0.2		139-40.2		139-29.7		140- 0.0		140-19.9		140-39.9		142- 0.0		141-59.9		142- 0.0		142- 0.1	
Date	1995/12/10		1995/12/10		1995/12/11		1995/12/11		1995/12/11		1995/12/11		1995/12/11		1995/12/11		1995/12/11		1995/12/11	
Time(JST)	18:26		20:32		02:12		04:24		06:00		07:29		17:16		17:40		18:05		18:30	
Weather	C		C		BC		C		C		C		S		S		C		C	
Air Temp.	1.2		0.8		2.5		3.2		3.2		3.4		-1.7		-1.8		-1.6		-1.8	
Bar	1019.5		1020.0		1018.5		1017.6		1017.0		1016.3		1014.7		1014.5		1014.5		1014.5	
Wind Dir	WNW		NW		W		W		WNW		WNW		NW		NNW		NW		NW	
Wind Spd/F	F 5		F 5		F 2		F 3		F 2		F 3		F 4		F 3		F 3		F 3	
Transparency											13									
Depth	591		821		540		588		253		142		56		44		43		26	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	7.5	34.168	6.4	34.154	7.8	34.196	8.0	34.222	8.6	34.174	8.2	33.508	4.9	31.322	4.2	31.397	4.6	31.356	4.8	31.547
10m	7.93	34.169	6.43	34.161	7.76	34.195	8.30	34.224	8.71	34.179	8.40	34.170	4.99	31.732	4.54	31.423	4.90	31.386	5.04	31.555
20m	7.91	34.168	6.42	34.161	7.71	34.195	8.29	34.224	8.71	34.180	8.39	34.170	6.70	33.020	6.32	32.482	5.87	32.087		
30m	6.88	34.161	6.43	34.162	7.62	34.190	8.30	34.224	8.63	34.180	8.38	34.170	7.72	33.711	8.41	33.585	7.32	32.874		
50m	4.84	34.103	6.36	34.158	7.59	34.187	8.21	34.216	8.44	34.189	8.30	34.168								
75m	3.20	34.106	2.55	34.097	5.42	34.141	8.07	34.201	7.72	34.174	8.13	34.171								
100m	2.43	34.090	1.96	34.082	4.26	34.120	7.85	34.195	6.99	34.141	6.96	34.163								
125m	1.95	34.080	1.73	34.078	3.26	34.105	5.04	34.125	5.79	34.132	5.64	34.125								
150m	1.68	34.076	1.43	34.074	2.66	34.095	3.38	34.097	4.11	34.117										
200m	1.27	34.073	1.16	34.072	1.87	34.082	2.23	34.086	2.42	34.091										
250m	1.03	34.071	0.91	34.070	1.50	34.075	1.59	34.076												
300m	0.84	34.069	0.74	34.068	1.21	34.072	1.38	34.072												
400m	0.56	34.067	0.56	34.068	0.73	34.068	0.79	34.067												
500m	0.35	34.065	0.38	34.066	0.48	34.066	0.39	34.065												
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-35

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	O15		OA10		O14		O13		O12		O11		OA03		O24		O23		O22	
Latitude:N	45-30.0		45-30.0		45-30.0		45-20.2		45-12.6		45- 9.0		44-59.9		44-50.0		44-40.0		44-35.1	
Longitude:E	142- 9.8		142-30.2		142-50.2		142-40.0		142-32.5		142-28.8		143- 0.0		143-30.1		143-20.2		143-14.9	
Date	1995/12/11		1995/12/11		1995/12/11		1995/12/11		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12	
Time(JST)	19:17		20:43		22:04		23:19		00:16		00:48		03:46		05:45		07:10		07:59	
Weather	S		C		C		C		S		S		S		S		C		C	
Air Temp.	-1.1		-2.9		-2.4		-2.5		-1.4		-1.9		-2.0		-2.3		-1.8		-2.2	
Bar	1014.2		1014.0		1013.0		1013.0		1013.5		1013.0		1012.5		1012.0		1012.0		1012.5	
Wind Dir	N		NNW		NW		NW		NW		NW		WNW		W		WNW		W	
Wind Spd/F	F 2		F 3		F 3		F 3		F 3		F 3		F 3		F 4		F 5		F 4	
Transparency																			7	
Depth	37		83		120		97		63		43		131		151		116		73	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	4.4	31.365	3.6	31.275	2.8	31.014	3.3	31.023	3.8	31.379	3.8	31.214	3.4	31.041	2.5	31.333	2.9	31.178	3.5	31.082
10m	4.86	31.467	3.80	31.255	3.36	31.000	3.38	31.021	4.33	31.612	3.69	31.220	3.38	31.045	2.84	31.331	3.08	31.166	3.55	31.081
20m	6.62	32.430	3.83	31.254	3.37	30.999	3.45	31.128	5.54	32.134	4.37	31.458	3.39	31.046	3.28	31.637	3.11	31.175	3.57	31.084
30m			4.14	31.293	3.38	31.003	3.53	31.190	5.85	32.281	5.89	32.389	3.39	31.047	3.17	31.832	3.07	31.448	3.66	31.103
50m			6.78	32.940	3.66	31.183	3.49	31.559	5.98	32.430			3.38	31.066	3.19	32.104	3.07	31.674	4.15	31.313
75m			6.75	33.027	2.81	31.511	6.71	32.954					3.11	31.284	2.53	32.361	3.56	31.798		
100m					2.50	31.953							3.20	31.670	1.20	32.697	3.18	32.116		
125m															-0.41	33.013				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-36

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199512		199512		199512		199512		199512	
Station No	OA11		OA12		OA13		OA14		O34		O33		O32		OA20		OA21		OA22	
Latitude:N	44-17.6		44-22.6		44-30.0		44-40.1		44-29.8		44-20.1		44-10.0		44- 5.0		44- 2.0		44-10.1	
Longitude:E	143-37.7		143-42.7		143-50.2		143-59.9		144-20.1		144-20.5		144-20.1		144-20.1		144-49.9		144-50.1	
Date	1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12		1995/12/12	
Time(JST)	10:04		10:48		11:51		13:08		14:37		15:41		17:04		17:44		19:35		20:34	
Weather	C		BC		C		C		S		S		C		C		BC		C	
Air Temp.	-1.4		-1.0		-0.6		-0.7		-0.4		-0.3		-0.5		-0.6		-1.0		-0.4	
Bar	1012.0		1011.5		1010.5		1009.5		1009.5		1010.0		1010.0		1009.5		1008.8		1008.5	
Wind Dir	W		WNW		WNW		WNW		WNW		WNW		WNW		WNW		WNW		WNW	
Wind Spd/F	F 4		F 4		F 4		F 4		F 4		F 4		F 4		F 3		F 3		F 3	
Transparency	10		10		10		9		11											
Depth	48		94		165		188		800		270		117		39		82		603	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	3.6	31.205	3.8	31.219	3.3	31.278	3.1	31.410	3.0	32.453	3.0	31.903	3.3	31.157	3.4	31.120	3.5	31.211	3.0	31.474
10m	3.82	31.203	3.79	31.226	3.29	31.280	3.12	31.410	2.83	32.445	2.97	31.905	3.46	31.138	3.51	31.107	3.61	31.210	3.14	31.460
20m	3.83	31.204	3.80	31.228	3.29	31.309	3.13	31.411	2.84	32.451	2.97	31.905	3.47	31.139	3.46	31.142	3.61	31.209	3.20	31.537
30m	3.83	31.204	3.94	31.277	3.26	31.480	3.17	31.439	3.01	32.513	3.08	31.943	3.48	31.141			3.61	31.209	3.17	31.627
50m			3.97	31.319	3.17	31.660	3.55	31.810	4.05	32.789	3.22	31.988	3.50	31.166					3.06	31.728
75m			4.18	31.702	3.13	31.733	3.34	31.955	3.64	32.882	5.11	32.496	3.46	31.211					3.14	31.806
100m					3.07	32.021	2.81	32.133	0.74	33.003	2.83	32.543	3.53	31.498					3.27	31.932
125m					2.97	32.315	1.11	32.659	-0.71	33.076	1.48	32.747							3.43	32.091
150m					0.04	32.912	0.16	32.873	-0.57	33.122	0.77	32.869							3.58	32.322
200m									-0.31	33.206	-0.01	32.982							5.83	33.276
250m									-0.26	33.245	-0.25	33.172							0.50	33.096
300m									0.05	33.291									-0.70	33.129
400m									0.67	33.433									0.29	33.320
500m									1.26	33.591										
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-37

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199512		199512		199512		199512		199512		199602		199602		199602		199602		199602	
Station No	OA23		OA24		O41		O42		O43		J11		J12		J13		J14		J15	
Latitude:N	44-20.1		44-30.1		44-22.1		44-30.0		44-40.1		45-30.0		45-30.0		45-30.0		45-30.0		45-29.9	
Longitude:E	144-50.1		144-50.2		145-20.1		145-20.1		145-19.5		141-40.0		141-25.0		141-10.0		140-53.0		140-39.8	
Date	1995/12/12		1995/12/12		1995/12/13		1995/12/13		1995/12/13		1996/02/13		1996/02/13		1996/02/13		1996/02/13		1996/02/13	
Time(JST)	22:10		23:47		01:57		02:53		04:21		11:19		12:31		13:38		15:07		16:19	
Weather	BC		C		R		S		S		C		C		BC		C		C	
Air Temp.	-0.3		-0.5		0.3		-0.9		-1.6		-1.2		1.7		-1.4		-1.1		-0.8	
Bar	1007.5		1006.0		1005.0		1004.0		1003.6		1006.5		1006.0		1006.0		1006.8		1006.0	
Wind Dir	W		W		W		WNW		WNW		NNE		NNE		NE		E		E	
Wind Spd/F	F 4		F 5		F 5		F 6		F 6		F 3		F 3		F 3		F 3		F 2	
Transparency											8		12		16		15		15	
Depth	1073		1582		145		1500		2160		53		114		130		429		546	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	3.0	32.419	2.9	32.304	3.5	31.160	3.5	31.502	2.7	32.238	2.0	33.869	3.4	33.98*	2.8	30.694	4.7	34.012	4.1	34.004
10m	3.19	32.413	3.25	32.307	3.42	31.163	3.27	31.518	3.27	32.257	2.06	33.877	3.92	33.979	2.93	33.834	5.01	34.072	4.37	34.143
20m	3.31	32.453	3.25	32.315	3.43	31.174	3.27	31.687	3.28	32.267	2.07	33.877	3.93	33.981	2.93	33.834	4.99	34.076	4.36	34.143
30m	3.43	32.501	3.29	32.491	3.43	31.182	3.06	32.060	3.58	32.552	2.08	33.879	3.96	33.984	2.92	33.834	4.94	34.072	4.35	34.143
50m	3.49	32.536	3.27	32.639	3.56	31.326	3.32	32.258	1.76	33.109	2.30	33.900	3.99	33.987	2.94	33.835	4.82	34.073	4.35	34.143
75m	1.55	32.690	-0.22	33.018	3.55	31.741	3.34	32.337	-0.24	33.186			4.03	33.996	3.00	33.843	4.79	34.087	4.34	34.142
100m	7.06	33.565	0.42	33.146	3.84	32.431	3.30	32.390	-0.70	33.163			4.07	34.005	3.43	33.905	4.61	34.076	4.35	34.143
125m	5.91	33.460	0.77	33.228	3.29	32.460	1.89	33.117	-0.67	33.177							4.45	34.063	4.35	34.142
150m	2.35	33.175	-0.21	33.206			0.92	33.230	-0.42	33.214							4.26	34.056	4.34	34.142
200m	-0.72	33.119	-0.03	33.276			0.52	33.278	-0.10	33.266							4.28	34.095	3.56	34.130
250m	-0.67	33.165	0.09	33.319			0.09	33.281	0.19	33.309							4.18	34.142	2.40	34.093
300m	-0.59	33.202	0.17	33.335			0.12	33.322	0.29	33.338							3.41	34.130	1.61	34.076
400m	0.13	33.322	0.55	33.415					0.65	33.427							1.44	34.079	0.89	34.069
500m	0.64	33.429	0.98	33.517					1.32	33.594									0.48	34.064
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-38

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199602		199602		199602		199602		199602		199602		199603		199603		199603		199603	
Station No	J21		J22		J23		J24		J25		J26		J101		J102		J103		JW01	
Latitude:N	44-30.0		44-30.1		44-30.1		44-30.0		44-30.1		44-30.1		45-29.9		45-29.9		45-29.9		45-44.9	
Longitude:E	141-30.0		141-14.9		140-59.8		140-40.0		140-20.1		140- 0.2		141-40.0		141-24.8		141-10.0		141-20.0	
Date	1996/02/14		1996/02/14		1996/02/14		1996/02/14		1996/02/14		1996/02/14		1996/03/11		1996/03/11		1996/03/11		1996/03/11	
Time(JST)	03:26		04:31		05:34		06:57		08:21		09:51		09:48		11:12		12:41		14:58	
Weather	C		C		C		C		C		C		C		S		C		S	
Air Temp.	1.5		3.1		3.9		5.0		5.5		4.4		-4.3		-3.5		-2.4		-3.2	
Bar	1001.5		1000.5		999.0		997.5		996.5		994.5		1009.0		1007.5		1006.0		1006.0	
Wind Dir	SE		SE		SE		SSE		S		SW		E		E		E		E	
Wind Spd/F	F 2		F 3		F 3		F 4		F 5		F 6		S 8		S 7		S 10		S 12	
Transparency							17		20		20									
Depth	80		120		207		147		230		560		56		115		130		128	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	4.7	33.999	5.7	34.026	6.1	33.924	5.3	34.065	5.4	34.061	4.5	34.051	2.3	33.890	3.4	34.053	2.9	33.995	3.2	34.043
10m	4.91	34.013	5.97	34.040	6.08	34.031	5.35	34.080	5.46	34.075	5.71	34.067	2.23	33.880	3.55	34.051	2.96	33.993	3.32	34.048
20m	4.91	34.013	5.98	34.041	6.08	34.031	5.35	34.080	5.46	34.075	5.69	34.065	2.21	33.881	3.55	34.051	2.96	33.993	3.33	34.049
30m	4.91	34.013	5.98	34.041	6.08	34.031	5.35	34.080	5.45	34.076	5.69	34.065	2.23	33.881	3.56	34.052	2.96	33.993	3.33	34.049
50m	4.86	34.020	5.92	34.037	5.88	34.022	5.35	34.080	5.43	34.077	5.63	34.066	1.99	33.886	3.56	34.052	2.95	33.992	3.34	34.051
75m			5.82	34.031	5.72	34.065	5.35	34.079	5.43	34.077	5.63	34.065			3.56	34.053	2.95	33.992	3.34	34.051
100m			5.72	34.022	5.56	34.070	5.34	34.092	5.42	34.078	5.63	34.066			3.58	34.056	2.94	33.991	3.32	34.050
125m					5.52	34.071	4.80	34.122	5.32	34.086	5.63	34.065								
150m					5.42	34.074			5.01	34.112	5.40	34.094								
200m									3.79	34.091	3.51	34.093								
250m											2.02	34.075								
300m											1.51	34.071								
400m											0.84	34.067								
500m											0.63	34.065								
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-39

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199603		199603		199603		199603		199603		199603		199603		199603		199603		199603	
Station No	JW02		JW03		J104		J105		J106		J107		J108		S103		S102		S101	
Latitude:N	45-45.0		45-44.9		45-30.0		45-30.0		45-30.0		45-30.0		45-30.0		45-40.0		45-35.1		45-31.0	
Longitude:E	141-10.0		141- 0.0		140-52.9		140-40.0		140-20.0		140- 0.0		139-40.0		142- 0.0		142- 1.0		142- 0.0	
Date	1996/03/11		1996/03/11		1996/03/11		1996/03/11		1996/03/11		1996/03/12		1996/03/12		1996/03/12		1996/03/12		1996/03/13	
Time(JST)	16:05		16:51		19:33		21:31		23:11		01:25		03:07		13:17		14:00		07:22	
Weather	S		S		S		S		S		S		C		BC		BC		BC	
Air Temp.	-3.4		-3.1		-2.4		-2.4		-2.3		-1.7		-2.2		-0.7		-2.0		0.7	
Bar	1006.0		1006.3		1007.0		1008.5		1009.0		1009.5		1010.0		1010.0				1017.0	
Wind Dir	E		ENE		NE		NE		NNE		NNW		NNW		SSW		WSW		SW	
Wind Spd/F	S 10		S 11		S 11		S 8		S 6		S 11		S 12		S 3		S 2		S 8	
Transparency																				
Depth	124		489		445		557		395		589		840		54		48		26	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	3.8	34.116	3.4	34.124	4.1	34.117	3.9	34.151	4.0	34.128	4.4	34.129	2.9	34.139	2.9	33.912	2.9	33.989	2.0	33.854
10m	4.02	34.117	3.62	34.128	4.16	34.114	4.23	34.108	4.06	34.124	4.28	34.117	2.84	34.125	2.62	33.947	2.65	33.988	2.13	33.867
20m	4.02	34.116	3.62	34.128	4.16	34.115	4.24	34.107	3.97	34.128	4.29	34.117	2.84	34.125	2.81	34.000	2.64	33.994	2.28	33.885
30m	4.02	34.116	3.62	34.128	4.16	34.115	4.24	34.108	3.36	34.141	4.29	34.117	2.14	34.099	2.88	34.018	2.64	34.003		
50m	4.01	34.116	3.62	34.128	3.82	34.091	4.24	34.107	3.32	34.137	4.29	34.117	2.12	34.091	2.89	34.019				
75m	3.95	34.112	3.62	34.127	3.76	34.087	4.24	34.107	3.10	34.131	4.24	34.120	1.84	34.077						
100m	3.60	34.091	3.58	34.127	3.73	34.086	4.24	34.107	2.43	34.113	3.92	34.127	1.71	34.079						
125m			3.37	34.125	3.72	34.087	4.28	34.120	2.09	34.101	3.35	34.123	1.55	34.069						
150m			3.22	34.126	3.35	34.131	3.94	34.128	1.92	34.097	2.76	34.119	1.58	34.083						
200m			2.74	34.117	2.20	34.097	3.05	34.129	1.34	34.081	2.31	34.117	1.27	34.078						
250m			1.44	34.083	1.65	34.086	2.24	34.102	1.10	34.077	2.06	34.105	0.97	34.077						
300m			0.99	34.077	1.11	34.078	1.69	34.087	0.80	34.075	1.66	34.086	0.79	34.075						
400m			0.63	34.073	0.62	34.073	0.93	34.075			0.98	34.076	0.53	34.072						
500m							0.50	34.072			0.49	34.072	0.38	34.071						
600m												0.30	34.070							
700m																				
800m																				
900m																				
1000m																				

Table 6-40

Table 6 Results of serial oceanographic observations. Hokkaido Wakkanai Fisheries Experimental Station

Stn-prefix	199603		199603		199603		199603		199603		199603		199603		199603		199603		199603	
Station No	S300		S301		S301-1		S399		S302		S401		S402		S403		S103N		S103H	
Latitude:N	45-27.1		45-30.0		45-31.0		45-32.4		45-35.0		45- 8.1		45-12.4		45-15.5		45-41.4		45-40.1	
Longitude:E	142- 7.9		142- 9.9		142-10.7		142-12.2		142-15.0		142-28.1		142-32.4		142-34.9		142- 0.4		141-59.9	
Date	1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/13		1996/03/14		1996/03/14	
Time(JST)	09:00		09:27		09:38		09:54		10:32		13:41		14:27		14:52		16:04		16:28	
Weather	BC		BC		BC		BC		BC		C		BC		BC		C		C	
Air Temp.	1.5		2.4		2.3		2.2				2.7		3.7		3.1		1.4		1.3	
Bar	1017.5		1018.0		1017.5		1017.5		1018.0		1017.6		1017.8		1017.8		1013.0		1013.0	
Wind Dir	SW		WSW				WSW		WSW		WSW		WSW		WSW		SE		SE	
Wind Spd/F	S 7		S 8				S 8		S 7		S 9		S 8		S 8		S 8		S 8	
Transparency																				
Depth	26		37		40		43		49		33		61		72		58		54	
Equipment	CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD		CTD	
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	2.7	33.998	2.6*	33.98*	-0.5	32.833	-1.0	32.606	-1.1	32.494	1.0	33.317	-0.5	32.727	-1.4	32.368	1.5	33.520	1.8	33.692
10m	2.65	33.991	2.62	33.985	1.79	33.647	-0.08	32.962	-0.84	32.683	1.24	33.425	-0.65	32.727	-1.52	32.360	2.15	33.761	2.13	33.747
20m	2.65	33.990	2.62	33.987	2.70	33.998	2.60	33.914	2.13	33.743	1.72	33.596	0.23	33.153	-1.51	32.400	2.57	33.910	2.52	33.897
30m			2.63	33.989	2.72	34.011	2.75	33.968	2.42	33.869			2.24	33.785	0.36	33.061	2.61	33.930	2.59	33.915
50m													2.29	33.838	2.33	33.873	2.64	33.938	2.68	33.941
75m																				
100m																				
125m																				
150m																				
200m																				
250m																				
300m																				
400m																				
500m																				
600m																				
700m																				
800m																				
900m																				
1000m																				

Table 6-41

Stn-prefix	199603		199603															
Station No	S102N		S101N															
Latitude:N	45-34.9		45-31.0															
Longitude:E	142- 0.1		142- 0.0															
Date	1996/03/14		1996/03/14															
Time(JST)	18:34		19:51															
Weather	C		C															
Air Temp.	1.5		1.4															
Bar	1013.0		1012.5															
Wind Dir	SE		NE															
Wind Spd/F	S 8		S 7															
Transparency																		
Depth	45		26															
Equipment	CTD		CTD															
STND. Dep	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S
0m	2.2	33.927	2.4	33.938														
10m	2.39	33.920	2.55	33.933														
20m	2.38	33.919	2.55	33.933														
30m	2.38	33.919																
50m																		
75m																		
100m																		
125m																		
150m																		
200m																		
250m																		
300m																		
400m																		
500m																		
600m																		
700m																		
800m																		
900m																		
1000m																		

Table 6-42

Part II. Results of Chemical Analyses

Water samples were taken with Nansen bottle cast on R/V Oyashio Maru cruises in South of Hokkaido, Japan Sea, from April 1990 to February 1991. Sea temperature was determined with Nansen bottles equipped with reversing thermometers. Salinity was measured with an Auto-Lab salinometer (PSS-78). Dissolved oxygen was analyzed in the land laboratory by the Winkler method within 24 hours after sampling at sea. Sea water samples of 200 to 500 ml from selected depth were filtered through Whatman GF/C glass fiber filter covered with a thin layer of MgCO_3 on board immediately after sampling, stored at -20°C in a deep freezer, and brought back to the land laboratory. The GF/C filter was changed to GF/F glass fiber filter since 1995. These samples were analyzed with a Turner Designs Fluorometer Model 10 to determine concentration of chlorophyll *a*. Nutrients ($\text{NO}_2\text{-N}$, $\text{NO}_3\text{-N}$ and $\text{PO}_4\text{-P}$) were analyzed with Technicon Auto-Analyzer II. $\text{SiO}_3\text{-Si}$ was analyzed with molybdenum blue method.

Table 7. Results of chemical analysis. Hokkaido Central Fisheries Experimental Station. N.D.; not detected

Station No	Position		Japanese Standard		Depth m	Temperature	Salinity	Dissolved P.S.U. oxygen ml	Nutrients, $\mu\text{g-atoms/l}$				Chlorophyll-a	
	Latitude N	Longitude E	Date	Time					NO ₃ -N	NO ₂ -N	PO ₄ -P	NH ₄ -N	Si	$\mu\text{g/l}$
199504J35	43-30.1	140-00.0	1995/4/11	17:00	0	7.7	34.156							
					10	7.73	34.152							
					20	7.72	34.148							
					30	7.72	34.145							
					49	7.64	34.143							
					74	7.35	34.148							
					99	5.81	34.157							
					123	4.68	34.136							
					199	2.01	34.082							
					241	1.40	34.073							
					323	0.97	34.074							
					402	0.69	34.074							
					485	0.52	34.072							
					573	0.40	34.074							
					199504J38	43-30.1	139-00.0	1995/4/11	22:05	0	5.5	34.176		
133	5.32	34.164												
229	3.39	34.122												
327	1.44	34.080												
422	0.90	34.078												
520	0.61	34.075												
199504J41	42-30.0	139-40.0	1995/4/12	9:01	0	8.8	34.162	4.4	N.D.	0.14		0.9	2.08	
					19	8.83	34.154	1.2	N.D.	0.10		0.7	1.95	
					28	8.79	34.159	1.6	N.D.	0.20		1.4	1.92	
					38	8.53	34.176	2.0	N.D.	0.23		1.4	1.30	
					56	8.13	34.189	2.0	N.D.	0.16		1.1	0.87	
					80	7.53	34.174	5.3	N.D.	0.25		4.2	1.36	
					103	6.22	34.163	9.4	N.D.	0.49		6.8	0.39	
					127	5.19	34.128	12.0	N.D.	0.66		10.6	0.52	
					208	2.74	34.113	16.1	N.D.	0.80		11.1	0.32	
					254	1.82	34.086	15.7	N.D.	0.95		18.6	0.22	
					347	1.05	34.079	16.4	N.D.	1.18		27.1		
					436	0.74	34.076	18.7	N.D.	1.28		32.3		
					527	0.53	34.077	18.8	N.D.	1.45		38.2		
					624	0.43	34.073	20.1	N.D.	1.07		28.6		
199504J46	42-30.1	138-00.1	1995/4/12	17:56	0	5.1	34.169	5.3	N.D.	0.23		2.3	4.31	
					10	5.04	34.167	2.6	N.D.	0.22		3.6	5.10	
					20	5.03	34.165	2.5	N.D.	0.30		3.8	4.80	
					30	5.01	34.163	2.4	N.D.	0.27		3.6	5.30	
					50	4.54	34.157	5.2	N.D.	0.31		3.7	2.54	
					75	3.15	34.129	14.6	N.D.	0.93		16.3	0.11	
					100	2.37	34.103	13.9	N.D.	1.03		19.1	0.02	
					125	1.85	34.083	16.8	N.D.	1.07		22.9	0.02	
					156	1.39	34.076	18.0	N.D.	1.26		25.4	0.00	

Table 7. Results of chemical analysis. Hokkaido Central Fisheries Experimental Station.											N.D.; not detected			
Station No	Position		Japanese Standard		Depth m	Temperature	Salinity	Dissolved P.S.U. oxygen ml	Nutrients, $\mu\text{g-atoms/l}$				Chlorophyll-a	
	Latitude N	Longitude E	Date	Time					$\text{NO}_3\text{-N}$	$\text{NO}_2\text{-N}$	$\text{PO}_4\text{-P}$	$\text{NH}_4\text{-N}$	Si	$\mu\text{g/l}$
199506J35	43-29.9	140-00.4	1995/5/29	3:56	207	1.11	34.078		18.4	N.D.	1.31		25.8	0.00
					308	0.81	34.080		21.5	N.D.	1.47		32.9	
					407	0.56	34.078		25.3	N.D.	1.87		35.9	
					503	0.49	34.077		25.0	N.D.	1.82		36.7	
					604	0.39	34.077		25.2	N.D.	1.53			
					0	11.9	34.062							
					300	1.00	34.076							
199506J38	43-30.0	139-00.2	1995/5/29	20:54	400	0.71	34.071							
					500	0.51	34.071							
					600	0.40	34.068							
					0	11.2	34.111							
					292	1.00	34.072							
199506J41	42-30.1	139-40.0	1995/5/30	14:37	390	0.71	34.073							
					487	0.53	34.073							
					585	0.43	34.072							
					0	12.9	33.973	5.4	N.D.	0.23		0.9	0.22	
					10	13.11	34.004	6.0	0.12	0.36		2.5	0.22	
					20	13.11	34.014	5.9	0.12	0.35		2.2	0.23	
					30	10.86	34.244	6.0	0.14	0.38		2.6	0.59	
					50	9.21	34.277	5.0	0.12	0.36		0.7	0.15	
					75	7.46	34.177	3.9	0.12	0.36			0.25	
					100	6.47	34.152	3.8	0.09	0.40		1.8	0.14	
					125	6.08	34.143	9.2	N.D.	0.67		2.0	0.09	
					139	5.09	34.123	12.5	N.D.	0.86		2.0	0.03	
					184	4.06	34.100	10.9	N.D.	0.87		8.8	0.01	
					271	2.37	34.083	18.7	N.D.	1.51		14.8		
					351	1.38	34.072	23.0	N.D.	1.80		13.3		
434	0.88	34.071	19.3	N.D.	1.60		20.7							
525	0.61	34.071	16.3	N.D.	1.40		15.2							
199506J46	42-30.0	138-00.2	1995/5/31	0:19	0	12.5	34.000	N.D.	N.D.	0.19		1.1	0.19	
					10	12.25	33.998	N.D.	N.D.	0.25		1.7	0.19	
					20	11.69	34.014	N.D.	N.D.	0.33		2.7	0.22	
					30	7.68	34.095	1.7	N.D.	0.45		1.7	0.59	
					50	5.31	34.130	5.1	0.14	0.62		2.2	0.47	
					74	3.87	34.094	5.3	0.19	0.63			0.03	
					99	3.19	34.127	6.7	0.21	0.65		3.8	0.03	
					124	2.25	34.096	8.2	0.14	0.71		3.7	0.01	
199506J27	44-30.0	139-30.1	1995/6/2	18:29	0	10.7	33.942							
					300	0.81	34.091							
					400	0.57	34.088							
199508J18	45-29.6	139-41.5	1995/7/28	18:35	0	18.8	33.598							
					10	18.39	33.588							
					20	15.07	33.893							
					30	9.35	33.975							

Table7-2

Table 7. Results of chemical analysis. Hokkaido Central Fisheries Experimental Station. N.D.; not detected

Station No	Position		Japanese Standard		Depth m	Temperature	Salinity	Dissolved P.S.U. oxygen ml	Nutrients, $\mu\text{g-atoms/l}$				Chlorophyll-a	
	Latitude N	Longitude E	Date	Time					NO ₃ -N	NO ₂ -N	PO ₄ -P	NH ₄ -N	Si	$\mu\text{g/l}$
					50	4.06	34.089							
					75	2.95	34.108							
					100	2.21	34.093							
					125	2.16	34.093							
					150	1.62	34.083							
					196	1.24	34.081							
					296	0.84	34.077							
					395	0.58	34.074							
					499	0.40	34.080							
					600	0.32	34.069							
199508J38	43-29.8	139-00.6	1995/7/30	18:11	0	20.1	34.029							
					140	3.36	34.086							
					188	2.20	34.085							
					282	1.27	34.085							
					380	0.81	34.083							
					478	0.59	34.079							
					574	0.46	34.076							
199508J41	42-29.7	139-40.4	1995/7/31	4:17	0	20.4	34.017	2.2	N.D.	0.05		1.7	0.21	
					14	18.95	34.137	N.D.	N.D.	N.D.		1.3	0.22	
					24	16.18	34.346	N.D.	N.D.	0.08		1.4	0.25	
					34	14.56	34.430	N.D.	N.D.	N.D.		1.5	0.43	
					53	12.37	34.433	N.D.	N.D.	0.11		1.4	0.66	
					77	11.10	34.405	3.8	N.D.	0.29		3.6	0.46	
					101	10.03	34.340	7.8	N.D.	0.45		4.6	0.10	
					125	8.85	34.278	9.0	N.D.	0.47		6.6	0.08	
					138	8.62	34.268	9.7	N.D.	0.51		6.6	0.05	
					176	6.89	34.191	12.8	N.D.	0.62		10.1	0.04	
					257	3.72	34.095	17.3	N.D.	0.93		17.6		
					327	1.92	34.081	18.2	N.D.	1.30		23.2		
					406	1.15	34.075	22.1	N.D.	1.57		34.7		
					494	0.72	34.074	25.9	N.D.	1.58		39.2		
199508J46	42-29.7	138-00.7	1995/7/31	13:20	0	20.8	33.912	2.9	N.D.	0.11		3.9	0.28	
					15	19.58	33.937	0.8	N.D.	0.06		4.6	0.32	
					25	10.58	34.087	0.5	N.D.	0.10		6.0	0.38	
					34	6.03	34.088	0.5	N.D.	0.20		8.1	0.31	
					54	4.19	34.105	12.2	0.22	0.69		11.9	0.68	
					77	3.06	34.094	18.5	N.D.	0.91		17.9	0.17	
					101	2.43	34.115	14.6	N.D.	0.99			0.02	
					125	1.84	34.087	15.8	N.D.	1.19			0.00	
					138	1.52	34.078	18.4	N.D.	1.26		21.9	0.00	
					178	1.26	34.079	18.9	N.D.	1.12		22.4	0.00	
					262	0.96	34.081	22.5	N.D.	1.35		29.3		
					343	0.70	34.076	24.3	N.D.	1.39		30.3		
					426	0.55	34.078	25.4	N.D.	1.56		37.9		

Table 7. Results of chemical analysis. Hokkaido Central Fisheries Experimental Station. N.D.;not detected

Station No	Position		Japanese Standard		Depth m	Temperature	Salinity P.S.U.	Dissolved oxygen ml	Nutrients, $\mu\text{g-atoms/l}$				Chlorophyll-a $\mu\text{g/l}$	
	Latitude N	Longitude E	Date	Time					$\text{NO}_3\text{-N}$	$\text{NO}_2\text{-N}$	$\text{PO}_4\text{-P}$	$\text{NH}_4\text{-N}$	Si	
199510J35	43-30.0	140-00.1	1995/10/2	16:08	517	0.45	34.073		26.4	N.D.	1.44			
					0	19.2	33.976							
					11	19.11	33.975							
					21	19.05	33.975							
					31	16.27	34.507							
					50	14.23	34.530							
					75	12.11	34.461							
					100	10.07	34.339							
					124	7.68	34.214							
					182	3.14	34.081							
					226	2.01	34.079							
					316	1.16	34.075							
					404	0.77	34.069							
					498	0.56	34.068							
592	0.41													
199510J38	43-30.0	139-00.0	1995/10/2	21:59	0	18.8	33.982							
					11	18.81	33.974							
					21	18.81	33.978							
					31	18.78	34.009							
					51	11.84	34.334							
					75	7.30	34.189							
					100	3.86	34.070							
					125	2.56	34.074							
					163	1.71	34.070							
					213	1.19	34.072							
					315	0.81	34.074							
					410	0.57	34.070							
					508	0.45	34.071							
					608	0.35	34.069							
199510J41	42-30.0	139-40.0	1995/10/3	8:39	0	18.9	34.084		1.6	N.D.	0.10	3.2	0.33	
					11	18.90	34.078		N.D.	N.D.	0.06	3.3	0.32	
					21	18.87	34.080		N.D.	N.D.	0.06	3.2	0.38	
					31	18.66	34.097		N.D.	N.D.	0.15	3.9	0.56	
					50	13.33	34.064		9.3	0.16	0.77	9.3	0.36	
					75	9.98	34.330		15.2	N.D.	0.94	17.8	0.06	
					100	6.86	34.195		16.5	N.D.	1.31	12.4	0.04	
					124	4.86	34.120		19.1	N.D.	1.35	18.4	0.01	
					180	2.29	34.077		18.5	N.D.	1.35	22.5	0.01	
					224	1.59	34.070		17.3	N.D.	1.16	24.5	0.00	
					316	1.11	34.082		23.0	N.D.	1.60	28.6		
					404	0.68	34.073		24.1	N.D.	1.66	34.1		
					497	0.48	34.071		26.9	N.D.	1.92	36.8		
					593	0.40	34.071		28.7	N.D.	1.99	39.2		
199510J46	42-30.1	138-00.1	1995/10/3	18:06	0	17.6	33.875		2.6	N.D.	0.10	1.2	0.15	

Table 7. Results of chemical analysis. Hokkaido Central Fisheries Experimental Station. N.D.;not detected

Station No	Position		Japanese Standard		Depth m	Temperature	Salinity	Dissolved P.S.U. oxygen ml	Nutrients, $\mu\text{g-atoms/l}$				Chlorophyll-a	
	Latitude N	Longitude E	Date	Time					$\text{NO}_3\text{-N}$	$\text{NO}_2\text{-N}$	$\text{PO}_4\text{-P}$	$\text{NH}_4\text{-N}$	Si	$\mu\text{g/l}$
199512J35	43-30	140-00	1995/12/4	16:33	10	17.84	33.876		N.D.	N.D.	0.06		1.0	0.15
					20	17.82	33.886		N.D.	N.D.	0.06		0.7	0.15
					30	9.36	34.143		N.D.	N.D.	0.08		0.9	0.43
					50	6.10	34.141		2.4	0.06	0.21		3.8	0.44
					75	3.88	34.085		6.6	N.D.	0.43		6.1	0.09
					100	2.86	34.082		13.3	N.D.	0.76		10.2	0.00
					125	2.16	34.074		15.6	N.D.	0.87		8.3	0.00
					179	1.60	34.073		17.8	N.D.	1.32		18.1	0.00
					227	1.27	34.075		17.4	N.D.	1.23		22.6	0.00
					333	0.92	34.078		18.8	N.D.	1.38		25.2	
					428	0.65	34.073		24.7	N.D.	1.74		37.6	
					531	0.48	34.073		30.1	N.D.	2.14		46.4	
					634	0.39	34.071		29.5	N.D.	2.01		48.5	
					0	10.1	34.155							
					11	10.23	34.152							
21	10.17	34.154												
31	9.36	34.182												
51	8.87	34.230												
75	8.88	34.223												
100	8.47	34.221												
125	7.20	34.196												
150	4.44	34.105												
194	2.77	34.082												
258	1.63	34.075												
199603J35	43-30	140-00	1996/3/13	11:52	0	6.2	34.101							
					14	6.23	34.100							
					24	6.21	34.102							
					34	6.20	34.097							
					53	6.15	34.098							
					77	6.06	34.100							
					101	5.99	34.101							
					125	5.47	34.117							
					176	4.54	34.109							
					225	2.52	34.066							
					295	1.40	34.070							
					383	1.04	34.069							
					471	0.70	34.071							
					530	0.57	34.070							
					199603J46	42-30	138-00	1996/3/14	8:00	0	4.9	34.125		
11	4.88	34.135												
21	4.88	34.125												
31	4.89	34.132												
50	4.73	34.124												
75	3.16	34.154												

Table 7. Results of chemical analysis. Hokkaido Central Fisheries Experimental Station.											N.D.;not detected		
Station No	Position		Japanese Standard		Depth m	Temperature	Salinity P.S.U.	Dissolved oxygen ml	Nutrients, $\mu\text{g-atoms/l}$				Chlorophyll-a $\mu\text{g/l}$
	Latitude N	Longitude E	Date	Time					$\text{NO}_3\text{-N}$	$\text{NO}_2\text{-N}$	$\text{PO}_4\text{-P}$	$\text{NH}_4\text{-N}$	
					100	2.49	34.088						
					124	1.90	34.136						
					163	1.50	34.087						
					213	1.13	34.073						
					306	0.84	34.082						
					410	0.68	34.073						
					512	0.51	34.072						
					610	0.42	34.072						
199603J41	42-30	139-40	1996/3/14	16:53	0	6.5	34.116						
					12	6.46	34.118						
					21	6.44	34.120						
					31	6.45	34.113						
					51	6.41	34.105						
					75	6.40	34.107						
					99	5.75	34.122						
					124	5.13	34.120						
					159	3.43	34.087						
					206	2.54	34.079						
					280	1.45	34.070						
					362	1.04	34.069						
					445	0.69	34.071						
					518	0.61	34.077						

Part III. Plankton Collection Records

Vertical hauls with a paired NORPAC net (45 cm × 180 cm, conical, NGG 54 and NXX 13, 0.33 and 0.10 mm mesh openings, respectively) or a standard NORPAC net (NGG 54) were carried out from the near sea bottom to the surface but sometimes from a depth of 150 m to the surface when the bottom was deeper than 150m. A flowmeter (RGS, Rigosha) was mounted at the center of the mouth ring of each net to register the volume of water filtered by the net. Calibrations of the flowmeter on board were means of repeated vertical tows without nets on each observation. Wet weight measurements of the preserved samples with 10% formalin seawater solution were all together carried out at the land laboratory of Central Fisheries Experimental Station, Yoichi.

Table 8-1. Calibration data of flow-meters used for NORPAC net samplings, Oyashio Maru, April 1995- March 1996 .

Date	1995/4/12	1995/4/12	1995/6/2	1995/6/2	1995/7/7	1995/7/7	1995/10/3	1995/10/3	1995/12/4	1995/12/4
Wire length(m)	100	100	100	100	100	100	100	100	100	100
Wire angle(°)	-	-	0-9	0-9	-	-	-	-	-	-
RGS No.	1782	1787	1782	1787	1782	1787	1782	1787	1782	1787
Revolution	1070*	1080*	1044*	1083*	1129*	1138	1030*	1078*	1513*	1460*
	1093	1090	988*	1003*	1109	1144	1071	1072	1289	1130*
	1112*	1105	1006	1022	1089*	1129	1067	1075	1217*	1389
	1095	1100	997	1026	1124	1119*	1062	1070*	1281	1365
	1105	1130*	1027	1035	1109	1170*	1080*	1074	1252	1169
Mean revolution per 100m	1098	1098	1010	1028	1114	1137	1067	1074	1274	1308

Table 8-2. Calibration data of flow-meters used for NORPAC net samplings, Hokushin Maru, April 1995- March 1996 .

Date	1995/4/15	1995/4/16	1995/4/16	1995/8/2	1995/10/5	1995/12/4	1995/12/4	1996/2/21
Wire length(m)	100	100	100	100	100	100	100	100
Wire angle(°)	-	-	-	-	-	-	-	-
RGS No.	2195	1590	2204	2195	1590	D1782	D1787	1590
Revolution	1041	1194*	1000	1162	1358*	1513*	1460*	1864*
	1037	964*	1085*	1175*	1050	1289	1130*	1075
	1044	1054	874*	1045	1030	1217*	1389	1076
	1032*	1090	1019	1025*	1052	1281	1365	1059*
	1126*	1061	974	1030	1022*	1252	1169	1074
Mean revolution per 100m	1041	1068	998	1079	1044	1274	1308	1075

Table 8-3. Calibration data of flow-meters used for NORPAC net samplings, Hokuyo Maru, April 1995- March 1996 .

Date	1995/2					
Wire length(m)	100					
Wire angle(°)		No Data	No Data	No Data	No Data	No Data
RGS No.						
Revolution	974					
	1082*					
	1010					
	990	No Data	No Data	No Data	No Data	No Data
	938*					
Mean revolution per 100m	991					

Calibration data obtained in February 1995 were used to calculate the zooplankton biomass from April 1995 to March 1996, because no data on flow-meter calibration were available during the Hokuyo Maru cruises in these months.

Table 8-4. Calibration data of flow-meters used for NORPAC net samplings, Kinsei Maru, April 1995- March 1996 .

Date	1995/4/18	1995/5/24	1995/7/27	1995/10/2	1995/12/2	1996/2/21
Wire length(m)	100	100	100	100	100	100
Wire angle(°)	5-5	15-21	15-19	13-17	2-8	10-11
RGS No.	1620	1620	1620	1620	2427	2427
Revolution	1080	855*	908	802	761	806
	1090*	943*	799	853*	727	770*
	1090	914	864	852	1005*	820
	1082	916	804	814	705*	822*
		924		790*	716	820
Mean revolution per 100m	1084	918	844	823	735	815

Table 9. Data on plankton samples collected by vertical hauls with a paired NORPAC net or a standard NORPAC net, from April 1995 to February 1996.

Station No.	Position		Japan Standard Time		Length of wire (m)	Angle of wire (degree)	Estimated depth of haul (m)	Net	Flow meter (RGS)		Estimated volume of water filtered (m ³)	Wet weight of sample (g)		Permanent Sample No.	Vessel	Remarks
	Lat N	Long E	Date	Hour					No.	Rev.		per haul	per 1000m ³			
J31	43-20	141-10	1995/4/11	10:09	40	37	32	NGG54	1787	765	11.1	1.68	151	C95017	Oyashio-Maru	
J31	43-20	141-10	1995/4/11	10:09	40	37	32	NXX13	1782	630	9.2			C95018	Oyashio-Maru	*1
J32	43-30	141-00	1995/4/11	11:38	95	34	79	NGG54	1787	1832	26.6	5.88	221	C95019	Oyashio-Maru	*2
J32	43-30	141-00	1995/4/11	11:38	95	34	79	NXX13	1782	1646	23.9	6.04	252	C95020	Oyashio-Maru	
J33	43-30	140-40	1995/4/11	13:20	170	38	134	NGG54	1787	2175	31.6	4.30	136	C95021	Oyashio-Maru	*3
J33	43-30	140-40	1995/4/11	13:20	170	38	134	NXX13	1782	1555	22.6	10.24	453	C95022	Oyashio-Maru	*4
J34	43-30	140-20	1995/4/11	15:10	170	35	139	NGG54	1787	2170	31.6	4.44	141	C95023	Oyashio-Maru	
J34	43-30	140-20	1995/4/11	15:10	170	35	139	NXX13	1782	1885	27.4	5.84	213	C95024	Oyashio-Maru	
J41	42-30	139-40	1995/4/12	9:01	150	48	100	NGG54	1787	160	2.3	0.10	43	C95025	Oyashio-Maru	*5
J41	42-30	139-40	1995/4/12	9:01	150	48	100	NXX13	1782	1925	28.0	0.42	15	C95026	Oyashio-Maru	
J43	42-30	139-00	1995/4/12	13:01	164	25	149	NGG54	1787	1978	28.8	0.84	29	C95027	Oyashio-Maru	*2
J43	42-30	139-00	1995/4/12	13:01	164	25	149	NXX13	1782	1932	28.1	2.92	104	C95028	Oyashio-Maru	*2
J45	42-30	138-20	1995/4/12	16:00	170	29	149	NGG54	1787	2100	30.5	11.48	376	C95029	Oyashio-Maru	
J45	42-30	138-20	1995/4/12	16:00	170	29	149	NXX13	1782	1538	22.4	18.24	815	C95030	Oyashio-Maru	
J32	43-30	141-00	1995/5/29	11:15	85	8	84	NXX13	1782	811	12.8	9.64	750	C95036	Oyashio-Maru	
J33	43-30	140-40	1995/5/29	12:45	150	4	150	NGG54	1787	2430	37.7	5.42	144	C95037	Oyashio-Maru	
J33	43-30	140-40	1995/5/29	12:45	150	4	150	NXX13	1782	2410	38.2	6.72	176	C95038	Oyashio-Maru	
J34	43-30	140-20	1995/5/29	14:19	150	7	149	NGG54	1787	1538	23.9	7.72	323	C95039	Oyashio-Maru	
J34	43-30	140-20	1995/5/29	14:19	150	7	149	NXX13	1782	1460	23.1	9.74	421	C95040	Oyashio-Maru	
J41	42-30	139-40	1995/5/30	14:40	150	45	106	NGG54	1787	2908	45.2	3.22	71	C95041	Oyashio-Maru	
J41	42-30	139-40	1995/5/30	14:40	150	45	106	NXX13	1782	2918	46.2	5.72	124	C95042	Oyashio-Maru	
J43	42-30	139-00	1995/5/30	19:15	161	21	150	NGG54	1787	2108	32.7	3.32	101	C95043	Oyashio-Maru	*7
J43	42-30	139-00	1995/5/30	19:15	161	21	150	NXX13	1782	2112	33.5	5.38	161	C95044	Oyashio-Maru	
J45	42-30	138-20	1995/5/30	22:48	154	13	150	NGG54	1787	2280	35.4	4.32	122	C95045	Oyashio-Maru	*7
J45	42-30	138-20	1995/5/30	22:48	154	13	150	NXX13	1782	2052	32.5	6.08	187	C95046	Oyashio-Maru	*7
J47	42-30	137-30	1995/5/31	4:37	155	15	150	NGG54	1787	1840	28.6	0.98	34	C95047	Oyashio-Maru	
J47	42-30	137-30	1995/5/31	4:37	155	15	150	NXX13	1782	1732	27.4	2.52	92	C95048	Oyashio-Maru	*8
J31	43-20	141-10	1995/7/29	17:20	30	4	30	NGG54	1787	335	4.7	0.14	30	C95049	Oyashio-Maru	
J31	43-20	141-10	1995/7/29	17:20	30	4	30	NXX13	1782	297	4.3	0.54	126	C95050	Oyashio-Maru	
J32	43-30	141-00	1995/7/29	16:06	87	23	80	NGG54	1787	1055	14.8	1.20	81	C95051	Oyashio-Maru	
J32	43-30	141-00	1995/7/29	16:06	87	23	80	NXX13	1782	905	13.0	4.00	307	C95052	Oyashio-Maru	
J33	43-30	140-40	1995/7/30	9:30	200	53	120	NGG54	1787	3097	43.5	3.20	74	C95053	Oyashio-Maru	
J33	43-30	140-40	1995/7/30	9:30	200	53	120	NXX13	1782	2383	34.3	3.40	99	C95054	Oyashio-Maru	
J34	43-30	140-20	1995/7/30	11:17	200	52	123	NGG54	1787	3285	46.1	1.98	43	C95055	Oyashio-Maru	
J34	43-30	140-20	1995/7/30	11:17	200	52	123	NXX13	1782	2828	40.8	3.16	78	C95056	Oyashio-Maru	
J41	42-30	139-40	1995/7/31	4:17	195	40	149	NGG54	1787	2530	35.5	2.14	60	C95057	Oyashio-Maru	
J41	42-30	139-40	1995/7/31	4:17	195	40	149	NXX13	1782	2018	29.1	11.52	396	C95058	Oyashio-Maru	*9
J43	42-30	139-00	1995/7/31	8:30	150	5	149	NGG54	1787	1445	20.3	2.26	111	C95059	Oyashio-Maru	
J43	42-30	139-00	1995/7/31	8:30	150	5	149	NXX13	1782	1415	20.4	4.48	220	C95060	Oyashio-Maru	
J45	42-30	138-20	1995/7/31	11:51	166	25	150	NGG54	1787	2085	29.3	2.34	80	C95061	Oyashio-Maru	

Table 9. Data on plankton samples collected by vertical hauls with a paired NORPAC net or a standard NORPAC net, from April 1995 to February 1996.

Station No.	Position		Japan Standard Time		Length of wire (m)	Angle of wire (degree)	Estimated depth of haul (m)	Net	Flow meter (RGS)		Estimated volume of water filtered (m ³)	Wet weight of sample (g)		Permanent Sample No.	Vessel	Remarks
	Lat N	Long E	Date	Hour					No.	Rev.		per haul	per 1000m ³			
J45	42-30	138-20	1995/7/31	11:51	166	25	150	NXX13	1782	2023	29.2	5.56	191	C95062	Oyashio-Maru	
J47	42-30	137-30	1995/7/31	16:25	187	37	149	NGG54	1787	2318	32.5	2.16	66	C95063	Oyashio-Maru	*10
J47	42-30	137-30	1995/7/31	16:25	187	37	149	NXX13	1782	2180	31.4	2.84	90	C95064	Oyashio-Maru	*11
J31	43-20	141-10	1995/10/2	10:13	30	0	30	NGG54	1787	348	5.2	0.52	100	C95065	Oyashio-Maru	
J31	43-20	141-10	1995/10/2	10:13	30	0	30	NXX13	1782	314	4.7	2.20	469	C95066	Oyashio-Maru	
J32	43-30	141-00	1995/10/6	11:27	85	4	85	NGG54	1787	905	13.5	1.40	103	C95067	Oyashio-Maru	
J32	43-30	141-00	1995/10/6	11:27	85	4	85	NXX13	1782	815	12.2	4.20	345	C95068	Oyashio-Maru	
J33	43-30	140-40	1995/10/6	12:52	164	24	150	NGG54	1787	1777	26.6	1.92	72	C95069	Oyashio-Maru	
J33	43-30	140-40	1995/10/6	12:52	164	24	150	NXX13	1782	1486	22.2	2.48	112	C95070	Oyashio-Maru	
J34	43-30	140-20	1995/10/6	14:31	158	18	150	NGG54	1787	1822	27.2	0.84	31	C95071	Oyashio-Maru	
J34	43-30	140-20	1995/10/6	14:31	158	18	150	NXX13	1782	1558	23.3	3.42	147	C95072	Oyashio-Maru	
J41	42-30	139-40	1995/10/3	9:30	185	36	150	NGG54	1787	2349	35.1	1.54	44	C95073	Oyashio-Maru	
J41	42-30	139-40	1995/10/3	9:30	185	36	150	NXX13	1782	2109	31.5	3.76	119	C95074	Oyashio-Maru	
J43	42-30	139-00	1995/10/3	13:01	150	5	149	NGG54	1787	1965	29.4	0.82	28	C95075	Oyashio-Maru	
J43	42-30	139-00	1995/10/3	13:01	150	5	149	NXX13	1782	1900	28.4	1.98	70	C95076	Oyashio-Maru	
J45	42-30	138-20	1995/10/3	16:30	152	10	150	NGG54	1787	1785	26.7	0.92	34	C95077	Oyashio-Maru	
J45	42-30	138-20	1995/10/3	16:30	152	10	150	NXX13	1782	1705	25.5	2.12	83	C95078	Oyashio-Maru	
J47	42-30	137-30	1995/10/3	21:01	152	11	149	NGG54	1787	2008	30.0	4.56	152	C95079	Oyashio-Maru	*12
J47	42-30	137-30	1995/10/3	21:01	152	11	149	NXX13	1782	1851	27.7	4.28	155	C95080	Oyashio-Maru	*13
J31	43-20	141-10	1995/12/4	10:14	30	0	30	NGG54	1787	782	9.6	0.18	19	C95081	Oyashio-Maru	
J31	43-20	141-10	1995/12/4	10:14	30	0	30	NXX13	1782	773	9.7	0.94	97	C95082	Oyashio-Maru	*14
J32	43-30	141-00	1995/12/4	11:38	85	30	74	NGG54	1787	1209	14.8	0.52	35	C95083	Oyashio-Maru	
J32	43-30	141-00	1995/12/4	11:38	85	30	74	NXX13	1782	1200	15.1	1.24	82	C95084	Oyashio-Maru	
J33	43-30	140-40	1995/12/4	13:10	162	22	150	NGG54	1787	2352	28.7	0.44	15	C95085	Oyashio-Maru	
J33	43-30	140-40	1995/12/4	13:10	162	22	150	NXX13	1782	2315	29.2	1.90	65	C95086	Oyashio-Maru	
J34	43-30	140-20	1995/12/4	14:52	173	31	148	NGG54	1787	2513	30.7	0.20	7	C95087	Oyashio-Maru	
J34	43-30	140-20	1995/12/4	14:52	173	31	148	NXX13	1782	2479	31.2	1.98	63	C95088	Oyashio-Maru	*15
P11	43-05	145-45	1995/4/11	17:01	90	7	89	NGG54	1590	1267	18.9	1.02	54	K9506	Hokushin-Maru	*16
P13	42-45	145-55	1995/4/11	22:56	-	12	150	NGG54	1590	1662	24.9	6.40	258	K9507	Hokushin-Maru	*17
P15	42-15	146-00	1995/4/12	4:59	157	17	150	NGG54	1590	2283	34.1	8.06	236	K9508	Hokushin-Maru	
P16	42-00	146-00	1995/6/1	10:13	-	24	150	NGG54	1590	1914	28.6	11.10	388	K9509	Hokushin-Maru	
P11	43-05	145-45	1995/5/31	20:14	98	21	91	NGG54	1590	1510	24.2	3.34	138	K9510	Hokushin-Maru	
P13	42-45	145-55	1995/5/31	23:21	-	20	150	NGG54	1590	2194	35.1	9.16	261	K9511	Hokushin-Maru	*18
P15	42-15	146-00	1995/6/1	22:05	150	2	150	NGG54	1590	1430	22.9	7.86	344	K9512	Hokushin-Maru	*13
P16	42-00	146-00	1995/6/1	20:17	158	17	151	NGG54	1590	1812	29.0	15.36	530	K9513	Hokushin-Maru	*13
P17	41-30	146-00	1995/6/1	17:24	150	3	150	NGG54	1590	1521	24.3	5.16	212	K9514	Hokushin-Maru	*13
P11	43-05	145-45	1995/8/1	18:31	90	13	88	NGG54	1590	1010	14.2	1.54	109	K9515	Hokushin-Maru	
P13	42-45	145-55	1995/8/1	22:05	-	38	150	NGG54	1590	3833	53.8	0.20	4	K9516	Hokushin-Maru	
P15	42-15	146-00	1995/8/2	3:36	-	8	150	NGG54	1590	1953	27.4	-	-	-	Hokushin-Maru	*19
P16	42-00	146-00	1995/8/2	5:14	-	7	150	NGG54	1590	1650	23.2	7.24	313	K9517	Hokushin-Maru	*13

Table 9. Data on plankton samples collected by vertical hauls with a paired NORPAC net or a standard NORPAC net, from April 1995 to February 1996.

Station No.	Position		Japan Standard Time		Length of wire (m)	Angle of wire (degree)	Estimated depth of haul (m)	Net	Flow meter (RGS)		Estimated volume of water filtered (m ³)	Wet weight of sample (g)		Permanent Sample No.	Vessel	Remarks
	Lat N	Long E	Date	Hour					No.	Rev.		per haul	per 1000m ³			
P17	41-30	146-00	1995/8/2	8:05	150	1	150	NGG54	1590	2775	38.9	-	-	-	Hokushin-Mar	*19
P11	43-05	145-45	1995/10/2	20:53	94	17	90	NGG54	1590	1183	18.2	2.58	142	K9518	Hokushin-Mar	
P13	42-45	145-55	1995/10/2	23:47	-	47	150	NGG54	1590	3270	50.3	6.44	128	K9519	Hokushin-Mar	*20
P15	42-15	146-00	1995/10/3	3:30	-	9	150	NGG54	1590	1630	25.1	88.48	3528	K9520	Hokushin-Mar	*21
P16	42-00	146-00	1995/10/3	5:18	164	23	151	NGG54	1590	1030	15.8	56.80	3584	K9521	Hokushin-Mar	*22
P17	41-30	146-00	1995/10/3	8:35	154	14	149	NGG54	1590	1925	29.6	13.48	455	K9522	Hokushin-Mar	*22
P11	43-05	145-45	1995/12/5	18:33	-	7	90	NGG54	1590	983	14.4	1.16	80	K9523	Hokushin-Mar	*22
P13	42-45	145-55	1995/12/5	22:00	-	8	150	NGG54	1590	1610	23.6	0.40	17	K9524	Hokushin-Mar	
P15	42-15	146-00	1995/12/6	3:01	-	12	150	NGG54	1590	1668	24.5	2.88	118	K9525	Hokushin-Mar	*23
P16	42-00	146-00	1995/12/6	5:43	-	9	150	NGG54	1590	1600	23.5	3.88	165	K9526	Hokushin-Mar	
P17	41-30	146-00	1995/12/6	8:38	-	6	150	NGG54	1590	1750	25.7	5.06	197	K9527	Hokushin-Mar	
P11	43-05	145-45	1996/2/19	18:54	91	10	90	NGG54	1500	930	13.8	0.38	28	K9601	Hokushin-Mar	*20
P13	42-45	145-55	1996/2/19	21:41	153	12	150	NGG54	1500	2055	30.4	1.52	50	K9602	Hokushin-Mar	*24
P15	42-15	146-00	1996/2/20	3:04	160	20	150	NGG54	1500	1920	28.4	1.40	49	K9603	Hokushin-Mar	
P16	42-00	146-00	1996/2/20	4:58	154	13	150	NGG54	1500	1745	25.9	2.94	114	K9604	Hokushin-Mar	*20
P17	41-30	146-00	1996/2/20	8:12	152	9	150	NGG54	1500	1738	25.7	3.42	133	K9605	Hokushin-Mar	
P52	42-00	142-20	1995/4/18	4:15	150	6	149	NGG54	1620	2030	30.1	12.08	402	H9501	Kinsei-Mar	*25
P54	41-40	142-00	1995/4/18	8:38	154	14	149	NGG54	1620	1990	29.5	5.90	200	H9502	Kinsei-Mar	
P56	41-20	141-40	1995/4/18	12:58	160	20	150	NGG54	1620	3284	48.7	4.66	96	H9503	Kinsei-Mar	
P52	42-00	142-20	1995/5/24	6:48	190	38	150	NGG54	1620	2132	37.1	14.78	399	H9504	Kinsei-Mar	*26
P54	41-40	142-00	1995/5/24	11:17	150	0	150	NGG54	1620	918	16.0	3.88	243	H9505	Kinsei-Mar	
P56	41-20	141-40	1995/5/24	15:36	160	12	157	NGG54	1620	1096	19.1	3.30	173	H9506	Kinsei-Mar	
P52	42-00	142-20	1995/7/27	0:54	153	12	150	NGG54	1620	839	16.0	1.90	119	H9507	Kinsei-Mar	
P54	41-40	142-00	1995/7/27	5:23	150	0	150	NGG54	1620	481	9.2	5.44	594	H9508	Kinsei-Mar	*27
P56	41-20	141-40	1995/7/27	9:55	154	13	150	NGG54	1620	907	17.3	2.78	161	H9509	Kinsei-Mar	
P52	42-00	142-20	1995/10/3	5:05	150	5	149	NGG54	1620	1088	21.2	1.10	52	H9510	Kinsei-Mar	
P54	41-40	142-00	1995/10/2	23:45	157	17	150	NGG54	1620	1426	27.8	6.36	229	H9511	Kinsei-Mar	*27
P56	41-20	141-40	1995/10/2	19:08	152	9	150	NGG54	1620	1354	26.4	3.38	128	H9512	Kinsei-Mar	
P52	42-00	142-20	1995/12/2	4:39	153	11	150	NGG54	1620	1004	21.7	0.68	31	H9513	Kinsei-Mar	
P54	41-40	142-00	1995/12/2	9:50	181	34	150	NGG54	1620	2083	45.0	0.54	12	H9514	Kinsei-Mar	
P52	42-00	142-20	1996/2/21	6:28	120	11	118	N52GG	2427	1039	20.3	0.44	22	H9601	Kinsei-Mar	
P54	41-40	142-00	1996/2/21	9:50	100	22	93	N52GG	2427	756	14.8	0.16	11	H9602	Kinsei-Mar	
O21	44-30	143-10	1995/4/13	10:20	40	-	-	NGG54		570	9.2	2.26	245	W9505	Hokuyo-Mar	
O23	44-40	143-20	1995/4/13	8:41	100	-	-	NGG54		-	-	2.06	-	W9506	Hokuyo-Mar	*28
O24	44-50	143-30	1995/4/13	7:22	100	53	60	NGG54		1270	20.5	2.10	102	W9507	Hokuyo-Mar	
O26	45-10	143-50	1995/4/13	4:20	150	60	75	NGG54		-	-	13.74	-	W9508	Hokuyo-Mar	*29
O23	44-40	143-20	1995/6/13	9:13	100	2	100	NGG54		1015	16.4	2.58	157	W9509	Hokuyo-Mar	
O24	44-50	143-30	1995/6/13	6:33	145	0	145	NGG54		1860	30.1	4.08	136	W9510	Hokuyo-Mar	
O23	44-40	143-20	1995/8/1	2:00	118	15	114	NGG54		1120	18.1	1.44	80	W9511	Hokuyo-Mar	
O24	44-50	143-30	1995/8/1	0:32	170	30	147	NGG54		1237	20.0	5.40	270	W9512	Hokuyo-Mar	*30

Table 9-3

Table 9. Data on plankton samples collected by vertical hauls with a paired NORPAC net or a standard NORPAC net, from April 1995 to February 1996.

Station No.	Position		Japan Standard Time		Length of wire (m)	Angle of wire (degree)	Estimated depth of haul (m)	Net	Flow meter (RGS)		Estimated volume of water filtered (m ³)	Wet weight of sample (g)		Permanent Sample No.	Vessel	Remarks
	Lat N	Long E	Date	Hour					No.	Rev.		per haul	per 1000m ³			
O26	45-10	143-50	1995/8/2	13:05	158	18	150	NGG54	624	10.1	1.56	155	W9513	Hokuyo-Maru		
J11	45-30	141-40	1995/10/17	9:47	50	5	50	NGG54	369	6.0	0.58	97	W9514	Hokuyo-Maru		
J13	45-30	141-10	1995/10/17	11:56	130	25	118	NGG54	1101	17.8	11.84	665	W9515	Hokuyo-Maru	*31	
J15	45-30	140-40	1995/10/18	19:05	150	4	150	NGG54	1091	17.6	1.06	60	W9516	Hokuyo-Maru		
J17	45-30	140-00	1995/10/18	22:17	150	0	150	NGG54	982	15.9	4.76	300	W9517	Hokuyo-Maru	*32	
O23	44-40	143-20	1995/10/3	2:59	138	35	113	NGG54	1137	18.4	1.44	78	W9518	Hokuyo-Maru		
O24	44-50	143-30	1995/10/3	1:40	148	0	148	NGG54	1791	28.9	3.84	133	W9519	Hokuyo-Maru	*33	
O26	45-10	143-50	1995/10/4	14:26	177	33	148	NGG54	1713	27.7	0.48	17	W9520	Hokuyo-Maru		
J11	45-30	141-40	1995/12/5	9:55	70	38	55	NGG54	1029	16.6	0.42	25	W9521	Hokuyo-Maru		
J13	45-30	141-10	1995/12/5	12:08	120	60	60	NGG54	2224	35.9	0.26	7	W9522	Hokuyo-Maru		
J15	45-30	140-40	1995/12/10	14:20	150	45	106	NGG54	1640	26.5	0.26	10	W9523	Hokuyo-Maru		
J17	45-30	140-00	1995/12/10	18:23	150	-	-	NGG54	2645	42.7	2.68	63	W9524	Hokuyo-Maru	*34	
O23	44-40	143-20	1995/12/12	7:08	115	-	-	NGG54	1778	28.7	1.36	47	W9525	Hokuyo-Maru		
O24	44-50	143-30	1995/12/12	5:42	150	75	39	NGG54	2418	39.1	0.84	21	W9526	Hokuyo-Maru		
J11	45-30	141-40	1996/2/13	11:12	56	28	49	N52GG	743	14.9	0.46	31	W9601	Hokuyo-Maru		
J13	45-30	141-10	1996/2/13	13:35	130	24	119	N52GG	1425	28.5	0.92	32	W9602	Hokuyo-Maru		
J15	45-30	140-40	1996/2/13	16:15	156	15	151	N52GG	2019	40.4	0.14	3	W9603	Hokuyo-Maru		

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|-----|--|-----|--|
| *1 | Gelatinous, wet wt not measured. | *21 | Gelatinous. Small salps abundant. |
| *2 | <i>Parasagitta elegans</i> appear. | *22 | Small salps abundant, but rather well drained. |
| *3 | <i>Parasagitta elegans</i> abundant. | *23 | Euphausiids and <i>Parasagitta elegans</i> appear. |
| *4 | <i>Parasagitta elegans</i> and euphausiids appear. | *24 | Euphausiids appear. |
| *5 | Maybe insufficient collection. | *25 | Phytoplankton abundant. <i>Parasagitta elegans</i> appear. |
| *7 | <i>Parasagitta elegans</i> abundant. | *26 | Large plankters abundant. |
| *8 | Euphausiids appear. | *27 | Somewhat gelatinous. |
| *9 | Phytoplankton abundant. | *28 | <i>Parasagitta elegans</i> appear. |
| *10 | Excluding 11 salps. | *29 | Euphausiids and <i>Parasagitta elegans</i> abundant. |
| *11 | Excluding 14 salps. | *30 | Euphausiids abundant. |
| *12 | Excluding 2 salps (ca. 5cm long). | *31 | Gelatinous |
| *13 | <i>Parasagitta elegans</i> appear. | *32 | Somewhat gelatinous. <i>P. elegans</i> and euphausiids appear. |
| *14 | Sample colored greenish. | *33 | <i>Parasagitta elegans</i> and euphausiids appear. |
| *15 | Sample, green-brownish. | *34 | Euphausiids appear. |
| *16 | <i>Parasagitta elegans</i> appear. Phytoplankton included. | | |
| *17 | Euphausiids appear. | | |
| *18 | Excluding one fish (BL, ca 4cm). Euphausiids appear. | | |
| *19 | Sample damaged. No sample. | | |
| *20 | <i>Parasagitta elegans</i> appear. Euphausiids abundant. | | |

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北海道立水産試験場

北海道立中央水産試験場	〒046-8555 北海道余市町浜中町 238	TEL:0135-23-7451	FAX:0135-23-3141
北海道立函館水産試験場	〒042-0932 函館市湯川町 1-2-66	TEL:0138-57-5998	FAX:0138-57-5991
北海道立函館水試室蘭支場	〒051-0013 室蘭市舟見町 1-133-31	TEL:0143-22-2327	FAX:0143-22-7605
北海道立釧路水産試験場	〒085-0024 釧路市浜町 2-6	TEL:0154-23-6221	FAX:0154-23-6225
北海道立網走水産試験場	〒099-3119 網走市鱒浦 1-1-1	TEL:0152-43-4591	FAX: 0152-43-4593
北海道立稚内水産試験場	〒097-0001 稚内市末広 4-5-15	TEL:0162-32-7177	FAX:0162-32-7171

Hokkaido Central Fisheries Experimental Station

238 Hamanaka-cho Yoichi-cho Hokkaido Japan, 046-8555

<http://www.fishexp.pref.hokkaido.jp/exp/central/index.htm>

E-mail: ckaiyou@fishexp.pref.hokkaido.jp

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発行者 北海道立中央水産試験場 北海道余市町浜中町 238

編集者 北海道立中央水産試験場 海洋環境部 北海道余市町浜中町 238 TEL:0135-23-4020 FAX:0135-23-8721

印刷所 株式会社 XXXXX