Filetype 029

ACCESSION NUMBER 76-1624

MR506

DATA DOCUMENTATION FORM

BIO 289 Sept 3, 1976

NOAA FORM 24-13 (4-76)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED
O.M.B. No. 41-R2651

DDF-A:1:09

TR0506

F029

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION.

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

Dr. Vera Alexander
Institute of Marine Science
University of Alaska
Fairbanks, Alaska 99701

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

OCS NOAA/BLM
Phytoplankton / Primary Produc.
R.U. # 159/164

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

Discoverer # 808
File ID D15808

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Discoverer	Ship	USA	USA	5/18/75	6/20/75

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR ___ MONTH ___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

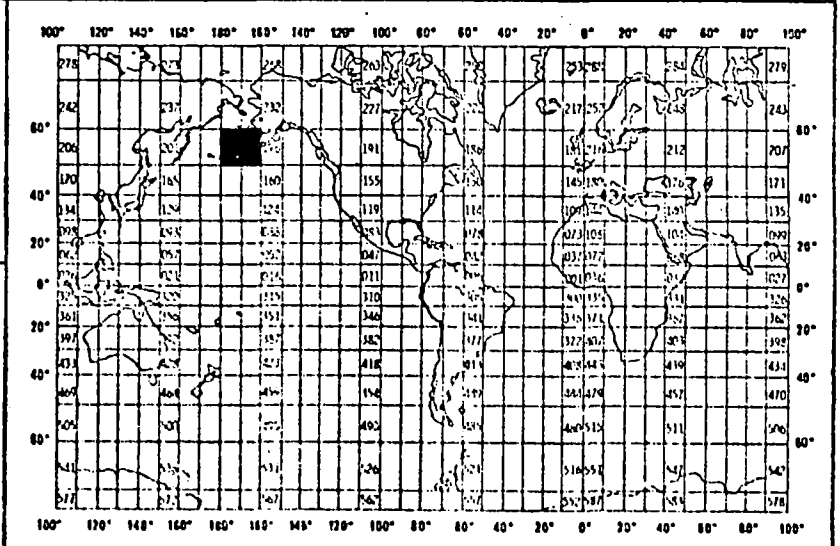
[X] NO [ ] YES [ ] PART (SPECIFY BELOW)

10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1)

V. Alexander
R. S. Hadley

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA



B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Chlorophyll a	mg m^{-3}	See, "Procedures and Quality Control" enclosed.		
O_2	ml/l			
PO_4-P	ugat/l			
Nitrate-Nitrite	ugat/l			
SiO_3-Si	ugat/l			
pH				
alkalinity	meq/l			
Carbon uptake	mg C m^{-3} hr^{-1}			

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALIBRATED
		YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW (√)	(√)
See	Procedures and Quality				Control		enclosed		

NOAA FORM 24-19

USCOMM-DC 44289-P72

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Record Type I

Record Type II (III see format next page for comment)

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

All Record Type I

All Record Type II (III see format Next Page)

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Cydney Hansen, (907) 479-7836

ADDRESS Institute of Marine Science, University of Alaska, Fairbanks, AK 99701

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE
☐ BCD ☐ BINARY
☐ ASCII ☒ EBCDIC
☐ _____

6. NUMBER OF TRACKS (CHANNELS)
☐ SEVEN
☒ NINE
☐ _____

7. PARITY
☒ ODD
☐ EVEN

8. DENSITY
☐ 200 BPI ☐ 1600 BPI
☐ 556 BPI
☒ 800 BPI
☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN)
☐ 3/4 INCH
☒ .5 INCH

10. END OF FILE MARK
☐ OCTAL 17
☒ OCTAL 23

11. ~~DE~~ ONS

159/164 029 DIS808
Discoverer 808
5/18-6/20/75 V. Alexander
9Trk,800BPI,EBCDIC, Odd Parity
No Label

12. PHYSICAL BLOCK LENGTH IN BYTES
80 BYTES/BLOCK

13. LENGTH OF BYTES IN BITS
8 BITS/BYTE

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
Used file type "029" originally dated 2/20/76 used ammended Record type II which should be labled Record type III, ammended 7/22/76. Meaning. the format for data corresponds to the 7/22/76 format for record type III, however the record type identified on the tape is Record type II					

NOAA FORM 24-13

USCOMM-DC 44289-P72

EBCDIC DIS808

WR414 03 08/26/76 UTILITY REPORT 750804 PAGE 1

Octal Dump 1 - 10 Records

```
$      FFI    IN,PHYREC
$      FUTIL  IN,,REW/IN/,DUMP/10P/
```

BLK#	MODE	CC	WRD#	PHYREC DUMP FILE# 1 FILECODE IN					DENS 800
1	BINARY	5	1	741713716114	474276170370	743703607417	036175374362	751703606537	%\#Z/@PK"\3Y%\3+%\3/=\LS=\3+V\
			6	076675770764	741703467577	276075370770	743743627604	736174040100	7W=\7U%\3O=\G+=\7Y%\LS"4,/%410
			11	200401002004	010020040100	200401002004	010020040100	200401007437	410 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
2		5	1	741713716114	474276170370	743703607417	036275374361	745707706537	%\#Z/@PK"\3Y%\3+%\3S=\L/%'7YV\
			6	076675770761	747703467577	276075370771	741717627544	736174170360	7W=\7/%\3O=\G+=\7Z%\\S=M,/%\3+
			11	741733662004	010020040100	200401002004	010020040100	200401007437	%\.W 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
3		5	1	741713716114	474276170370	743703607417	036375374360	753703606537	%\#Z/@PK"\3Y%\3+%\3T=\L+=\3+V\
			6	076675572767	741703467577	276075370771	741747627424	736174170360	7W='GX%\3O=\G+=\7Z%\PS%D,/%\3+
			11	741733642004	010020040100	200401002004	010020040100	200401007437	%\.U 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
4		5	1	741713716114	474276170370	743703607417	036475373765	745717606537	%\#Z/@PK"\3Y%\3+%\3U=\\V%'\+V\
			6	076675571770	747703467577	276075370771	743717627624	736174170360	7W='\Y%\3O=\G+=\7Z%\\S"D,/%\3+
			11	741733672004	010020040100	200401002004	010020040100	200401007437	%\.X 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
5		5	1	741713716114	474276170370	743703607417	036575373764	741703606537	%\#Z/@PK"\3Y%\3+%\3V=\\U%\3+V\
			6	076675571762	741703467577	276075370771	743737657444	736174170360	7W='\S%\3O=\G+=\7Z%\\V%M,/%\3+
			11	741733672004	010020040100	200401002004	010020040100	200401007437	%\.X 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
6		5	1	741713716114	474276170370	743703607417	036675373764	757703606537	%\#Z/@PK"\3Y%\3+%\3W=\\U=\3+V\
			6	076675572367	741703467577	276075370771	745713627444	736174170360	7W='CX%\3O=\G+=\7Z%'#S%M,/%\3+
			11	753737672004	010020040100	200401002004	010020040100	200401007437	=\\X 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
7		5	1	741713716114	474276170370	743703607417	037175373764	761703606537	%\#Z/@PK"\3Y%\3+%\3Z=\\U"\3+V\
			6	076675770370	741703467577	276075371360	743743617464	736174170360	7W=\3Y%\3O=\G+=\#+%\L/%U,/%\3+
			11	755737672004	010020040100	200401002004	010020040100	200401007437	='\X 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
8		5	1	741713716114	474276170370	743703607417	076075373764	761717606537	%\#Z/@PK"\3Y%\3+%\7+=\\U"\\+V\
			6	076675770760	741703467577	276075371360	745703657524	736174170360	7W=\7+%\3O=\G+=\#+%'3V=D,/%\3+
			11	755747652004	010020040100	200401002004	010020040100	200401007437	='PV 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
9		5	1	741713716114	474276170370	743703607417	076175373763	753703606537	%\#Z/@PK"\3Y%\3+%\7/=\\T=\3+V\
			6	076675770371	741703467577	276075371360	745717657424	736174170360	7W=\3Z%\3O=\G+=\#+%'\V%D,/%\3+
			11	757707632004	010020040100	200401002004	010020040100	200401007437	=\7T 410 410 410 410 410 410%\
			16	110020040100	200401002004	010020040000			90 410 410 410 400
10		5	1	741713716114	474276170370	743703607417	076275373763	743703606537	%\#Z/@PK"\3Y%\3+%\7S=\\T%\3+V\

```
  6 076675770371 741703467577 276075371[illegible] 741707647424 736174170360
 11 757713652004 010020040100 200401002004 010020040100 200401007437
 16 110020040100 200401002004 010020040000
```

```
7W=\3Z%\30=\G+=\#/%\7U[illegible]/%\3+
=\#V 410 410 410 410 410 410%\
90 410 410 410 400
```

The ORIGINATOR tape was sorted by record type only. Corrected version was sorted first by station and second by record type.

ORIGINATOR tape (see SORTED VERSION OF ORIGINATOR tape) contained zeroes in bytes 33 (CARBON 14), 42 (phosphate) and 58-59 (silicate) that indicated no value for that parameter. These were replaced with blanks. Record type 3's contained zeroes in bytes 75-80, these were replaced with blanks

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Record types 1 AND 3
Total Records = 734

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

DSN= ALEXAND, VOL=SER=011249, FB, SL, LRECL=80,
BLKsize=1600, 9 TRK

TAPE 000135 COPY OF ORIGINATOR
DSN= ALEXAND, 80x20, 9 TRK, SL, FB

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☐ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER _____
ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE
☐ BCD ☐ BINARY
☐ ASCII ☒ EBCDIC
☐ _____

6. NUMBER OF TRACKS (CHANNELS)
☐ SEVEN
☒ NINE
☐ _____

7. PARITY
☐ ODD
☐ EVEN

8. DENSITY
☐ 200 BPI ☒ 1600 BPI
☐ 556 BPI
☐ 800 BPI
☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN)
☒ 3/4 INCH
☐ _____

10. END OF FILE MARK
☐ OCTAL 17
☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION (*INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER*)
DSN= ALEXAND
VOL= SER= 011249
NAPIS ACC # 16-1624

12. PHYSICAL BLOCK LENGTH IN BYTES
1600

13. LENGTH OF BYTES IN BITS
8 bits/byte

Primary Productivity

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Four record types: File Header (Type 0); Master Record (Type 1); Detail Record (Type 3); and Text Record (Type 4) differentiated by byte 10.

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☐ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER _____
ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE ☐ BCD ☐ BINARY ☐ ASCII ☐ EBCDIC ☐ _____

6. NUMBER OF TRACKS (CHANNELS) ☐ SEVEN ☐ NINE ☐ _____

7. PARITY ☐ ODD ☐ EVEN

8. DENSITY ☐ 200 BPI ☐ 1600 BPI ☐ 556 BPI ☐ 800 BPI ☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☐ _____

10. END OF FILE MARK ☐ OCTAL 17 ☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

12. PHYSICAL BLOCK LENGTH IN BYTES

13. LENGTH OF BYTES IN BITS

RECORD NAME FILE HEADER RECORD - PRIMARY PRODUCTIVITY

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '029'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '0'
Vessel	11	11	Bytes	A11	
Cruise	22	6	Bytes	A6	
Cruise Dates in GMT	28	17	Bytes	I2,5(A1,I2)	XX/XX/XX-XX/XX/XX Beginning year, month, day; Ending year, month, day;
Senior Scientist	45	19	Bytes	19A1	Left justified
Investigator/ Institution	64	17	Bytes	17A1	Left justified

RECORD FORMAT DESCRIPTION

RECORD NAME MASTER RECORD - PRIMARY PRODUCTIVITY

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '029'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '1'
Station Number	11	5	Bytes	A5	
Latitude,					
Degrees	16	2	Bytes	I2	
Minutes	18	2	Bytes	I2	
Seconds	20	2	Bytes	I2	
Hemisphere	22	1	Bytes	A1	
Longitude					
Degrees	23	3	Bytes	I3	
Minutes	26	2	Bytes	I2	
Seconds	28	2	Bytes	I2	
Hemisphere	30	1	Bytes	A1	
Year	31	2	Bytes	I2	Last two digits of year (GMT)
Month	33	2	Bytes	I2	1-12 (GMT)
Day	35	2	Bytes	I2	1-31 (GMT)
Hour	37	2	Bytes	I2	0-23 (GMT)
Minutes	39	2	Bytes	I2	0-59 (GMT)
Time Zone	41	1	Bytes	A1	Always '+' or '-'
Time Zone	42	2	Bytes	A2	01-12
Depth to Bottom	44	5	Bytes	I5	To Whole Meters
Chlorophyll a (Integrated)	49	4	Bytes	I4	To Tenths (mg m^{-2})

RECORD FORMAT DESCRIPTION

RECORD NAME MASTER RECORD (CONTINUED) Primary Productivity

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
Phaeopigments (Integrated)	53	4	Bytes	I4	To Tenths (mg m^{-2})
Carbon Assimilation (Integrated)	57	5	Bytes	I5	To Tenths (mg C m^{-2} Day^{-1})
One Percent Light Depth	62	3	Bytes	I3	To Whole Meters
Phosphate PO_4-P Reactive time	65	2	Bytes	I2	To Whole Minutes
pH Scale	67	1	Bytes	I1	1 = NBS pH scale 2 = Sorensen pH scale 3 = Hansson pH scale
In Situ Correc - tions for pH measurements	68	1	Bytes	I1	1 - Temperature and pressure correction have been made. 2 - No corrections made.
SECCHI Depth	69	2	Bytes	I2	To Whole Meters
~~M~~ Mixed Layer Depth	71	3	Bytes	I3	To Whole Meters.
Light Level (Aboard Platform)	74	3	Bytes	I3	Langleys/Day
Blank	77	4	Bytes	4X	

RECORD NAME DETAIL RECORD - PRIMARY PRODUCTIVITY 7-22-76

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '029'
File Identifier	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '3'
Station Number	11	5	Bytes	A5	
Depth of Sample	16	5	Bytes	I5	To Tenths of Meters
Chlorophyll a Concentration	21	4	Bytes	I4	To Hundredths (mg m^{-3})
Phaeopigment Concentration	25	4	Bytes	I4	To Hundredths (mg m^{-3})
Carbon Assimilation	29	5	Bytes	I5	To Hundredths (mg C m^{-3} hr^{-1})
Elapsed Time of Incubation	34	4	Bytes	I4	2 bytes hours, 2 bytes minutes
Oxygen	38	4	Bytes	I4	To Hundredths (ml/l)
~~Phosphate~~ Phosphate, PO_4-P (inorganic)	42	4	Bytes	I4	To Hundredths (µg-at/l)
Ammonia NH_3-N	46	3	Bytes	I3	To Tenths (µg-at/l)
Nitrate NO_3-N	49	3	Bytes	I3	To Tenths (µg-at/l)
Nitrite NO_2-N	52	3	Bytes	I3	To Hundredths (µg-at/l)
Silicate SiO_3-Si	55	5	Bytes	I5	To Hundredths (µg-at/l)
pH	60	3	Bytes	I3	To Hundredths
Alkalinity, total	63	4	Bytes	I4	To Thousandths (meq/l)
Temperature	67	4	Bytes	I4	To Hundredths (°C)
Salinity	71	4	Bytes	I4	To Hundredths (°/oo)
Blank	75	3	Bytes	3X	
Sequence Number	78	3	Bytes	I3	

PRODUCTIVITY

PRIMARY ~~PRODUCTIVITY~~

7-[illegible]-76

FILE HEADER

FILE TYPE	FILE IDENTIFIER	RECORD TYPE	VESSEL	CRUISE	START DATE (G.M.T.)	END DATE (G.M.T.)	SENIOR SCIENTIST	INVESTIGATOR/INSTITUTION
(029)					YR / MO / DY	- YR / MO / DY		

MASTER

FILE TYPE	FILE IDENTIFIER	RECORD TYPE	STATION NUMBER	LATITUDE				LONGITUDE				DATE (G.M.T.)			TIME (G.M.T.)				BOTTOM DEPTH	CHLOROPHYLL a	PHAEOPIGMENT	CARBON ASSIMILATION	1% LIGHT DEPTH	PO_4 REACTIVE TIME	SECCHI DEPTH SCALE	SECCHI DEPTH CORRECT	SECCHI DEPTH	MIXED LAYER DEPTH	FLAT-FORM LIGHT LEVEL	BLANK
				DEG.	MIN.	SEC.	N OR S	DEG.	MIN.	SEC.	E OR W	YR.	MON.	DAY	HR.	MIN	+ OR -	TIME ZONE	(METERS)	(INTEGRAT.) (mg m^{-3}) (To 1/10)	(INTEGRAT.) (mg m^{-3}) (To 1/10)	(INTEGRATED) (mgC m^{-2} Day^{-1}) (To 1/10)	(M.)	(MIN)	IN SITU SCALE	IN SITU CORRECT	(M)	(M)	(L. ELV.)	
(029)																														

DETAIL

FILE TYPE	FILE IDENTIFIER	RECORD TYPE	STATION NUMBER	SAMPLE DEPTH	CHLOROPHYLL	PHAEOPIGMENT	CARBON ASSIMILATION	ELAPSED TIME OF INCUBATION		OXYGEN CONC.	PO_4 CONC.	NH_3 CONC.	NO_3 CONC.	NO_2 CONC.	SiO_3 CONC.	pH	ALKALINITY CONC.	TEMP.	SAL-INITY	BLANK	SEQUENCE NUMBER
								HR.	MIN.												
(029)				(M TO 1/10)	(mg/m^3 TO 1/100)	(mg/m^3 TO 1/100)	(mg C H^{-3} HR TO 1/100)			(ML/L TO 1/100)	(µg AT/L TO 1/100)	(µg AT/L TO 1/10)	(µg AT/L TO 1/10)	(µg AT/L TO 1/10)	(µg AT/L TO 1/100)	(TO 1/100)	(M_3 EQ/L TO 1/1000)	(°C TO 1/100)	(‰ TO 1/100)		

PUNCH CARD TRANSCRIPT

AF [illegible] 1553 [illegible] OBSOLETE ON HAND MAY BE USED.

PROCEDURES AND QUALITY CONTROL

FOR

PHYTOPLANKTON STUDIES

as used by

Vera Alexander, Principal Investigator
Contract Number 03-5-022-56
Task Order 1, R. U. 159/164

Date: May 12, 1976

Pages: 5

Field Methods for Collection of Phytoplankton for Identification and Counting

At selected stations and depths and at all stations and depths where primary productivity measurements were made water samples were collected from the Niskin bottles to be analyzed for phytoplankton composition. Approximately 250 mls of water was dispensed directly from the Niskin bottle to wide mouth sample jars. One-half cc of Lugol's solution was added to each to preserve the phytoplankton for later identification in the laboratory. The Lugol's solution consists of 10 g of KI, 5 g of iodine and 100 ml. of glacial acetic acid diluted to 1 liter.

PHYTOPLANKTON

Detailed procedure used for counting phytoplankton standing stock samples.

1. Set up 5 ml. subsample from each sample

   a. Be sure the counting chamber is extremely clean and the plastic ring is tight in the metal holder.

   b. Sample

      1. Shake the sample about 25 times to make sure the cells are throughly mixed in the water.

      2. Pour the sample into the chamber.

      3. Slide the round cover onto the chamber starting at one edge and sliding the cover across the top of the chamber.

      4. Carefully wipe any excess sample off of the chamber.

      5. Put the chamber in a protected place and allow it to settle at least overnight and preferably for 24 hours. Air bubbles will form in the chamber.

2. Preparation of the settled subsamples for the inverted microscope

   a. 5 ml. sample

      1. Carefully remove the cover by sliding it off the top of the chamber.

      2. Remove any air bubbles that may have formed on or near the bottom of the chamber with a piece of fine wire (touch the wire to the bubble, the bubble will cling to the wire and can be lifted to the top of the chamber).

      3. Put the cover back on the chamber by sliding it across the top until a large air space forms. Using a plastic water bottle carefully add a small amount of distilled water to the chamber and finish sliding the cover over the top of the chamber. The cells are caught in the interface between the chamber bottom and the water on the bottom and won't be disturbed. This can be checked by immediately looking at the sample under the microscope. Moving cells and particles can sometimes be seen floating in the water. If this occurs allow the sample to settle on the microscope stage for about an hour before starting to count.

3. Counting

   a. 5 ml. chamber

      1. Using 12.5 oculars and 40x objective count a portion of the chamber. At least 100 cells should be counted. Transects counted may be from left to right as from front to back, whichever is easier for the counter. To change rows, find something on or near the edge of the chamber that you can use as a marker and move the stage to the marker; or determine the

2. Count every cell seen in the transects. If you cannot identify the cell, measure it and sketch it on the counting sheet. You may be able to identify it later.

3. If you want to be able to go back to a cell after the count is completed write down the coordinates from the stage calibration.

4. Keep unidentified flagellates and unidentified diatoms separate on the counting sheet because flagellates are usually colorless and the diatoms pigmented.

b. Counting Sheet

1. Set up the counting sheet to include

   a. Date sample was collected
   b. Depth
   c. Ship and cruise number
   d. Volume of the counting chamber
   e. Amount of subsample counted
   f. date (s) when subsample was counted
   g. Initials of name of person doing the counting

2. To determine the number of cells per liter present in the sample;

   a. 5 ml subsample; ½ chamber counted; multiply number of cells counted by 400. ¼ chamber counted multiply number of cells by 800.

c. Summary Sheet

Make up summary sheets for each sample to include;

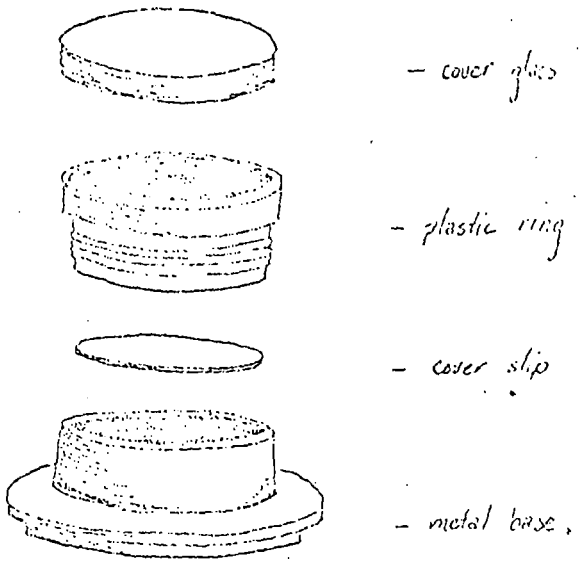
1. Collection data from counting sheet

2. Species names and number of cells per liter for each species.

3. Unidentified cells including sketches and measurements and number of cells per liter for each species and for total sample.

Horner, R.A., L.S. Dick and W. Shiels (Revised by L. Schandelmeier)
Counting procedure for phytoplankton standing stock measurements Section 7-1
p 473-476

From Data Volume I Environmental Studies of Port Valdez (Hood, D.W., Shiels, W. and Kelley, E. ed) Institute of Marine Science Occasional Publication No.3A July 1973



5 ml counting chamber

DATE SAMPLES	SAMPLE
YEAR / MONTH / DAY	NUMBER

SORTER : _____ TOTAL CELLS

TAXON	SPECIES NUMBER	COUNT	CELLS PER	SIZE	COMMENTS

Use for
70-1622
-1623
-1624

PROCEDURES AND QUALITY CONTROL

FOR

PHYTOPLANKTON STUDIES

as used by

Vera Alexander, Principal Investigator
Contract Number 03-5-022-56
Task Order 1, R. U. 159/164

Date: May 12, 1976

Pages: 5

Field Methods for Collection of Phytoplankton for Identification and Counting

At selected stations and depths and at all stations and depths where primary productivity measurements were made water samples were collected from the Niskin bottles to be analyzed for phytoplankton composition. Approximately 250 mls of water was dispensed directly from the Niskin bottle to wide mouth sample jars. One-half cc of Lugol's solution was added to each to preserve the phytoplankton for later identification in the laboratory. The Lugol's solution consists of 10 g of KI, 5 g of iodine and 100 ml of glacial acetic acid diluted to 1 liter.

PHYTOPLANKTON

Detailed procedure used for counting phytoplankton standing stock samples.

1. Set up 5 ml. subsample from each sample

   a. Be sure the counting chamber is extremely clean and the plastic ring is tight in the metal holder.

   b. Sample

      1. Shake the sample about 25 times to make sure the cells are throughly mixed in the water.

      2. Pour the sample into the chamber.

      3. Slide the round cover onto the chamber starting at one edge and sliding the cover across the top of the chamber.

      4. Carefully wipe any excess sample off of the chamber.

      5. Put the chamber in a protected place and allow it to settle at least overnight and preferably for 24 hours. Air bubbles will form in the chamber.

2. Preparation of the settled subsamples for the inverted microscope

   a. 5 ml. sample

      1. Carefully remove the cover by sliding it off the top of the chamber.

      2. Remove any air bubbles that may have formed on or near the bottom of the chamber with a piece of fine wire (touch the wire to the bubble, the bubble will cling to the wire and can be lifted to the top of the chamber).

      3. Put the cover back on the chamber by sliding it across the top until a large air space forms. Using a plastic water bottle carefully add a small amount of distilled water to the chamber and finish sliding the cover over the top of the chamber. The cells are caught in the interface between the chamber bottom and the water on the bottom and won't be disturbed. This can be checked by immediately looking at the sample under the microscope. Moving cells and particles can sometimes be seen floating in the water. If this occurs allow the sample to settle on the microscope stage for about an hour before starting to count.

3. Counting

   a. 5 ml. chamber

      1. Using 12.5 oculars and 40x objective count a portion of the chamber. At least 100 cells should be counted. Transects counted may be from left to right as from front to back, whichever is easier for the counter. To change rows, find something on or near the edge of the chamber that you can use as a marker and move the stage to the marker; or determine the

2. Count every cell seen in the transects. If you cannot identify the cell, measure it and sketch it on the counting sheet. You may be able to identify it later.

3. If you want to be able to go back to a cell after the count is completed write down the coordinates from the stage calibration.

4. Keep unidentified flagellates and unidentified diatoms separate on the counting sheet because flagellates are usually colorless and the diatoms pigmented.

b. Counting Sheet

1. Set up the counting sheet to include

   a. Date sample was collected
   b. Depth
   c. Ship and cruise number
   d. Volume of the counting chamber
   e. Amount of subsample counted
   f. date (s) when subsample was counted
   g. Initials of name of person doing the counting

2. To determine the number of cells per liter present in the sample;

   a. 5 ml subsample; ½ chamber counted; multiply number of cells counted by 400. ¼ chamber counted multiply number of cells by 800.

c. Summary Sheet

Make up summary sheets for each sample to include;

1. Collection data from counting sheet

2. Species names and number of cells per liter for each species.

3. Unidentified cells including sketches and measurements and number of cells per liter for each species and for total sample.

Horner, R.A., L.S. Dick and W. Shiels (Revised by L. Schandelmeier)
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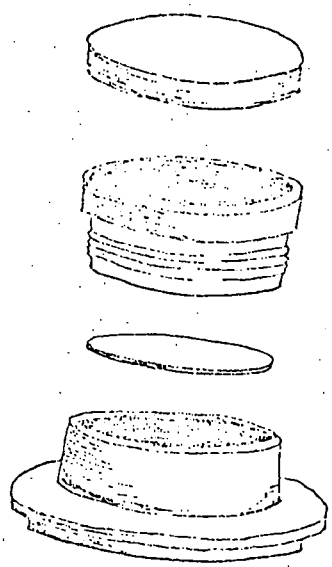

5 ml counting chamber

LOCATION NUMBER	DATE SAMPLED YEAR	MONTH	DAY	SAMPLE NUMBER		

SORTER : _____ TOTAL CELLS _____

TAXON	SPECIES NUMBER	COUNT	CELLS PER	SIZE	COMMENTS

Filetype 029

SDF1 002158

SDF2 020081

ANSI 020075

TR 154-183, 270, 448, 506-510, 514, 579, 878-880, 947, 948, 950-1049, 1054, 1055, 1310, 1325-1330, 1549, 1683-1688, 1750, 1751, 2039, 2040, 2665, 3097-3099, 3646-3650, 3839, 3889, 6454, 6455

192, 261

Accessions Nos.:

OCSeap TR506 76-1624

Primary Productivity TR507-508 76-1634

Ocseap PRIM. PROD. TR509 76-1622

Ocseap PRIMARY PROD TR510 76-1623

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