



ORGANISMO NACIONAL DE SANIDAD PESQUERA

SUB DIRECCIÓN DE SUPERVISIÓN ACUÍCOLA

Concesiones de Cultivo de *Argopecten purpuratus* "concha de abanico"

Monitoreo de Fitoplancton Potencialmente Tóxico

Departamentos de Piura, La Libertad y Ancash / Zonas: 002 Guaynuma, 004 Isla Tortugas, 009 Salinas, 010 Nonura, 017 Culebras, 011 Bahía Samanco, 012 Bahía Sechura

Análisis Cuantitativo de Fitoplancton (Nº cel/L)

1ra Semana



Semana: 05 al 11 de abril de 2015

Fechas: 07, 10 y 11 de abril de 2015

ZONAS	002 GUAYNUNA															004 I. TORTUGAS			009 SALINAS			010 NONURA								
ESTACION	01-A-GUA**			01-B-GUA**			01-C-GUA**			02-D-GUA**			02-E-GUA**			01-A-TOR			01-A-SAL**			01-A-NON*			01-B-NON*			01-C-NON*		
PROFUNDIDAD (m)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
TEMPERATURA (°C)	18,1	16,6	16,4	18,0	16,5	16,4	17,7	16,6	16,3	18,2	17,2	16,4	17,9	17,3	16,3	....	....	....	18,0	17,0	16,5	19,8	19,4	19,4	20,1	19,1	19,1	19,8	19,3	19,1
DIATOMEAS																														
Grupo <i>Pseudo-nitzschia delicatissima</i>	640	240	80	440	0	0	960	160	120	480	120	0	840	0	0	S/M	S/M	S/M	0	0	0	20640	16440	9960	9680	7360	6560	11960	6840	7720
Grupo <i>Pseudo-nitzschia seriata</i>	28720	7920	3440	29200	5720	2280	30400	9280	3840	75520	39840	3600	64160	11040	2320	S/M	S/M	S/M	20480	2920	2840	0	240	0	0	0	0	0	0	0
DINOFLAGELADOS																														
<i>Alexandrium minutum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium monilatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium ostenfeldii</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium peruvianum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium sp.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Azadinium spinosum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cochlodinium polykrikoides</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis acuminata</i>	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis caudata</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis rotundata</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis tripos</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Gonyaulax spinifera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Karenia sp.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Karlodinium cf. veneficum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum lima</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum minimum</i>	48480	880	80	16320	280	120	24960	1120	40	48000	4560	1520	54560	720	720	S/M	S/M	S/M	17280	1120	560	0	0	0	0	0	0	0	0	0
<i>Protoceratium reticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protoperidinium crassipes</i>	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
FITOFLAGELADOS																														
<i>Heterosigma akashiwo</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Apoyo ACUILAB S.A.



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Concesiones de Cultivo de *Argopecten purpuratus* "concha de abanico"

Monitoreo de Fitoplancton Potencialmente Tóxico

Departamentos de Piura, La Libertad y Ancash / Zonas: 002 Guaynuma, 004 Isla Tortugas, 009 Salinas, 010 Nonura, 017 Culebras, 011 Bahía Samanco, 012 Bahía Sechura

Análisis Cuantitativo de Fitoplancton (N° cel/L)

1ra Semana



Semana: 05 al 11 de abril de 2015

Fechas: 10 y 11 de abril de 2015

ZONAS	017 CULEBRAS			011 BAHIA SAMANCO												012 BAHIA DE SECHURA			
ESTACION	01-A-CUL			01-B-SAM*			01-C-SAM*			02-A-SAM**			02-B-SAM**			12-B-SECH**			13-A-SECH
PROFUNDIDAD (m)	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....
TEMPERATURA (°C)	....	....	....	21.7	19.5	17.2	21.2	19.4	17.3	21.3	19.7	17.3	21.1	19.1	17.4	20.43	19.43	19.03	....
DIATOMEAS																			
Grupo <i>Pseudo-nitzschia delicatissima</i>	S/M	S/M	S/M	160	0	0	1240	240	160	160	160	0	160	200	160	19680	23040	19040	S/M
Grupo <i>Pseudo-nitzschia seriata</i>	S/M	S/M	S/M	1400	3520	280	1240	0	3200	1280	280	800	1680	6040	2120	0	0	0	S/M
DINOFAGELADOS																			
<i>Alexandrium minutum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium monilatum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium ostenfeldii</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium peruvianum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Azadinium spinosum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Cochlodinium polykrikoides</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis acuminata</i>	S/M	S/M	S/M	0	80	0	40	160	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis caudata</i>	S/M	S/M	S/M	40	0	0	40	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis rotundata</i>	S/M	S/M	S/M	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis tripos</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Gonyaulax spinifera</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Karenia</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Karlodinium</i> cf. <i>veneficum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Lingulodinium polyedrum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Prorocentrum lima</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Prorocentrum minimum</i>	S/M	S/M	S/M	12480	1200	240	11840	4640	800	8800	400	1040	6720	2760	560	0	0	0	S/M
<i>Protoceratium reticulatum</i>	S/M	S/M	S/M	1440	1840	480	5040	2800	520	320	640	240	360	720	0	0	0	0	S/M
<i>Protoperdinium crassipes</i>	S/M	S/M	S/M	320	120	40	440	160	0	80	160	0	40	80	0	0	0	0	S/M
FITOFAGELADOS																			
<i>Heterosigma akashiwo</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Anovo ACUILAB S.A.



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Análisis Cuantitativo de Fitoplancton (Nº cel/L)

2da Semana



Semana: 12 al 18 de abril de 2015

Fechas: 14, 16, 17 y 18 de abril de 2015

ZONAS	002 GUAYNUNA															004 ISLA TORTUGAS			009 SALINAS			010 NONURA								
	01-A-GUA**			01-B-GUA**			01-C-GUA**			02-D-GUA**			02-E-GUA**			01-A-TOR			01-A-SAL**			01-A-NON*			01-B-NON*			01-C-NON*		
ESTACION	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
TEMPERATURA (°C)	19,4	17,7	16,8	18,8	17,2	16,7	18,2	17,7	16,4	19,6	19,3	19,2	19,2	18,7	17,6	....	....	....	19,0	18,2	16,7	21,7	21,4	21,1	21,6	21,1	20,8	21,5	21,2	20,7
DIATOMEAS																														
Grupo <i>Pseudo-nitzschia delicatissima</i>	320	0	0	0	0	0	0	480	0	0	240	160	640	640	520	S/M	S/M	S/M	160	280	0	180480	215840	152240	239280	165440	167120	175920	121760	61760
Grupo <i>Pseudo-nitzschia seriata</i>	97760	62160	14320	109453	46559	19440	106186	63760	13600	269549	171531	161730	184480	123680	80480	S/M	S/M	S/M	160880	97440	81680	15480	10280	11960	10200	20800	10040	13000	7720	2720
DINOFLAGELADOS																														
<i>Alexandrium minutum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium monilatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium ostenfeldii</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium peruvianum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium</i> sp.	0	0	0	80	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Azadinium spinosum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cochlodinium polykrikoides</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis acuminata</i>	40	40	0	0	0	0	0	80	0	200	40	0	200	40	0	S/M	S/M	S/M	160	40	0	40	0	0	0	0	0	0	0	0
<i>Dinophysis caudata</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	40	0	0	0	0	0	0	0
<i>Dinophysis rotundata</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis tripos</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Gonyaulax spinifera</i>	40	0	0	0	0	0	0	0	0	40	80	0	0	0	0	S/M	S/M	S/M	0	40	0	0	0	0	0	0	0	0	0	0
<i>Karenia</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Karlodinium</i> cf. <i>veneficum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum lima</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum minimum</i>	40800	3920	240	67796	15120	1520	15280	8720	360	107820	6400	1680	21680	2280	360	S/M	S/M	S/M	388804	10320	2000	200	120	40	600	160	680	400	760	80
<i>Protoceratium reticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protoperidinium crassipes</i>	0	0	0	0	40	0	0	0	0	200	120	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
FITOFLAGELADOS																														
<i>Heterosigma akashiwo</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

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Análisis Cuantitativo de Fitoplancton (Nº cel/L)

2da Semana



Semana: 12 al 18 de abril de 2015

Fechas: 17 y 18 de abril de 2015

ZONAS	017 CULEBRAS			011 BAHIA SAMANCO												012 BAHIA DE SECHURA			
ESTACION	01-A-CUL			01-B-SAM**			01-C-SAM*			02-A-SAM**			02-B-SAM**			12-B-SECH**			13-A-SECH
PROFUNDIDAD (m)	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....
TEMPERATURA (°C)	....	....	....	21.7	19.8	18.6	21.9	20.7	18.4	20.7	18.3	17.3	20.4	18.2	16.9	22.4	22.1	21.2	....
DIATOMEAS																			
Grupo <i>Pseudo-nitzschia delicatissima</i>	S/M	S/M	S/M	320	160	0	160	80	80	0	0	0	0	0	0	102919	101285	93117	S/M
Grupo <i>Pseudo-nitzschia seriata</i>	S/M	S/M	S/M	43291	31120	30320	30880	59360	48000	7520	7280	4880	5600	4960	4560	177600	106400	64560	S/M
DINOFLAGELADOS																			
<i>Alexandrium minutum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium monilatum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium ostenfeldii</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium peruvianum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium</i> sp.	S/M	S/M	S/M	0	40	0	0	0	0	0	40	0	0	0	0	0	0	40	S/M
<i>Azadinium spinosum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Cochlodinium polykrikoides</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis acuminata</i>	S/M	S/M	S/M	120	440	0	360	240	0	0	320	0	160	0	0	0	0	0	S/M
<i>Dinophysis caudata</i>	S/M	S/M	S/M	0	80	0	80	80	0	0	160	0	0	0	0	0	0	0	S/M
<i>Dinophysis rotundata</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	S/M
<i>Dinophysis tripos</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Gonyaulax spinifera</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	S/M
<i>Karenia</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Karlodinium</i> cf. <i>veneficum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Lingulodinium polyedrum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Prorocentrum lima</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Prorocentrum minimum</i>	S/M	S/M	S/M	42474	2360	320	13520	11360	480	280	13120	40	24160	400	80	1680	1120	960	S/M
<i>Protoceratium reticulatum</i>	S/M	S/M	S/M	1240	2160	2360	2240	2640	1120	160	520	40	320	80	0	0	0	0	S/M
<i>Protoperdinium crassipes</i>	S/M	S/M	S/M	480	680	440	240	320	120	40	440	40	160	80	0	0	0	0	S/M
FITOFLAGELADOS																			
<i>Heterosigma akashiwo</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Apoyo ACUILAB S.A.



ORGANISMO NACIONAL DE SANIDAD PESQUERA

SUB DIRECCIÓN DE SUPERVISIÓN ACUÍCOLA

Concesiones de Cultivo de *Argopecten purpuratus* "concha de abanico"

Monitoreo de Fitoplancton Potencialmente Tóxico

Departamentos de Piura, La Libertad y Ancash / Zonas: 002 Guaynuma, 004 Isla Tortugas, 009 Salinas, 010 Nonura, 017 Culebras, 011 Bahía Samanco, 012 Bahía Sechura

Análisis Cuantitativo de Fitoplancton (N° cel/L)

3ra Semana



Semana: 19 al 25 de abril de 2015

Fechas: 21 y 24 de abril de 2015

ZONAS	002 GUAYNUNA															004 I. TORTUGAS			009 SALINAS			010 NONURA								
ESTACION	01-A-GUA**			01-B-GUA**			01-C-GUA**			02-D-GUA**			02-E-GUA**			01-A-TOR			01-A-SAL**			01-A-NON*			01-B-NON*			01-C-NON*		
PROFUNDIDAD (m)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
TEMPERATURA (°C)	18,9	17,7	17,5	18,0	17,5	17,5	17,8	17,6	17,5	18,6	17,4	18,4	18,6	17,4	18,4	....	....	....	18,2	18,0	16,8	20,0	19,2	19,0	21,0	19,3	19,1	20,4	19,1	18,9
DIATOMEAS																														
Grupo <i>Pseudo-nitzschia delicatissima</i>	480	80	200	160	0	160	0	0	160	0	0	0	0	0	0	S/M	S/M	S/M	120	120	0	22320	6000	2160	10240	960	1640	2440	360	320
Grupo <i>Pseudo-nitzschia seriata</i>	217273	25760	12960	12000	13440	8720	15280	7920	16160	189501	99652	17280	161730	88216	14720	S/M	S/M	S/M	26240	42080	8960	1200	320	0	1400	0	0	120	0	0
DINOFLAGELADOS																														
<i>Alexandrium minutum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium monilatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium ostenfeldii</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium peruvianum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium sp.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Azadinium spinosum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cochlodinium polykrikoides</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis acuminata</i>	0	0	0	0	0	0	40	0	0	0	40	0	0	0	0	S/M	S/M	S/M	0	80	0	0	0	0	40	0	0	0	0	0
<i>Dinophysis caudata</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis rotundata</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis tripos</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Gonyaulax spinifera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	40	0	0	0	0	0	0	0	0	0	0	0
<i>Karenia sp.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Karlodinium cf. veneficum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum lima</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum minimum</i>	181333	6160	4960	38400	16000	7280	30000	15280	10560	155195	124156	6640	135591	101285	5680	S/M	S/M	S/M	29760	12480	240	0	0	0	0	0	0	0	40	0
<i>Protoceratium reticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protoperdinium crassipes</i>	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	0	0	40	0	0	0	0	0	40	0	0	0
FITOFLAGELADOS																														
<i>Heterosigma akashiwo</i>	294054	27840	9840	27200	19200	8960	5120	9840	5680	8720	6880	5200	7840	4960	3920	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Apoyo ACUILAB S.A.



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Departamentos de Piura, La Libertad y Ancash / Zonas: 002 Guaynuma, 004 Isla Tortugas, 009 Salinas, 010 Nonura, 017 Culebras, 011 Bahía Samanco, 012 Bahía Sechura

Análisis Cuantitativo de Fitoplancton (Nº cel/L)

3ra Semana



Semana: 19 al 25 de abril de 2015

Fechas: 23 y 25 de abril de 2015

ZONAS	017 CULEBRAS			011 BAHIA SAMANCO												012 BAHIA DE SECHURA			
ESTACION	01-A-CUL			01-B-SAM**			01-C-SAM*			02-A-SAM**			02-B-SAM**			12-B-SECH**		13-A-SECH	
PROFUNDIDAD (m)	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....
TEMPERATURA (°C)	....	....	....	21.7	20.1	18.3	21.5	19.5	17.6	20.9	19.5	18.8	20.9	19.5	18.7	21.1	20.8	20.1	....
DIATOMEAS																			
Grupo <i>Pseudo-nitzschia delicatissima</i>	S/M	S/M	S/M	0	0	0	560	320	400	80	80	0	0	80	0	130691	26240	11680	S/M
Grupo <i>Pseudo-nitzschia seriata</i>	S/M	S/M	S/M	320	880	320	2120	1120	960	240	400	480	560	360	240	2360	7920	560	S/M
DINOFLAGELADOS																			
<i>Alexandrium minutum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium monilatum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium ostenfeldii</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium peruvianum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Alexandrium</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Azadinium spinosum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Cochlodinium polykrikoides</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis acuminata</i>	S/M	S/M	S/M	80	80	0	240	400	80	0	0	40	0	40	40	40	0	0	S/M
<i>Dinophysis caudata</i>	S/M	S/M	S/M	0	0	0	40	160	40	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis rotundata</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Dinophysis tripos</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Gonyaulax spinifera</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Karenia</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Karlodinium</i> cf. <i>veneficum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Lingulodinium polyedrum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Prorocentrum lima</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S/M
<i>Prorocentrum minimum</i>	S/M	S/M	S/M	8080	1120	160	9520	2440	520	7040	1600	80	2040	840	80	0	80	0	S/M
<i>Protoceratium reticulatum</i>	S/M	S/M	S/M	840	600	40	1400	1120	360	160	320	40	80	80	0	0	0	0	S/M
<i>Protoperdinium crassipes</i>	S/M	S/M	S/M	720	560	0	280	80	120	40	40	40	80	40	80	0	0	0	S/M
FITOFLAGELADOS																			
<i>Heterosigma akashiwo</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	80	0	160	1920	1080	0	0	0	S/M

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Apoyo ACUILAB S.A.



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Monitoreo de Fitoplancton Potencialmente Tóxico

Departamentos de Piura, La Libertad y Ancash / Zonas: 002 Guaynuma, 004 Isla Tortugas, 009 Salinas, 010 Nonura, 017 Culebras, 011 Bahía Samanco, 012 Bahía Sechura

Análisis Cuantitativo de Fitoplancton (Nº cel/L)

4ta Semana



Semana: 26 de abril al 02 de mayo de 2015

Fechas: 28 y 30 de abril y 01 de mayo de 2015

ZONAS	002 GUAYNUNA															004 ISLA TORTUGAS			009 SALINAS			010 NONURA								
ESTACION	01-A-GUA**			01-B-GUA**			01-C-GUA**			02-D-GUA			02-E-GUA			01-A-TOR			01-A-SAL**			01-A-NON*			01-B-NON*			01-C-NON*		
PROFUNDIDAD (m)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....	....	....	....	....	....	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
TEMPERATURA (°C)	19,4	18,3	17,4	19,0	18,3	17,6	18,9	18,6	17,7	....	....	....	....	....	....	....	....	....	18,8	18,0	17,6	21,3	21,3	21,1	21,8	21,2	21,2	21,5	21,3	21,3
DIATOMEAS																														
Grupo <i>Pseudo-nitzschia delicatissima</i>	160	0	0	320	0	0	800	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	560	320	360	6920	8320	9760	3880	3720	2640	4480	3360	2680
Grupo <i>Pseudo-nitzschia seriata</i>	24240	7600	1120	10880	2640	1080	20480	5760	520	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	26960	7680	1920	4680	1520	1920	320	280	320	680	960	680
DINOFLAGELADOS																														
<i>Alexandrium minutum</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium monilatum</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium ostenfeldii</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium peruvianum</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alexandrium sp.</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Azadinium spinosum</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cochlodinium polykrikoides</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis acuminata</i>	240	40	0	200	40	0	0	40	40	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	40	0	0	0	0	0	0	0	80	0	0	0
<i>Dinophysis caudata</i>	0	0	0	40	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	80	0	0	0	0	0	0	40	0	0	0	0
<i>Dinophysis rotundata</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dinophysis tripos</i>	0	0	0	0	0	0	0	0	40	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Gonyaulax spinifera</i>	40	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Karenia sp.</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Karlodinium cf. veneficum</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum lima</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Prorocentrum minimum</i>	75147	1840	40	46559	1320	80	20640	9120	880	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	14240	1040	240	0	80	160	160	560	840	400	800	640
<i>Protoceratium reticulatum</i>	40	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protoperidinium crassipes</i>	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0
FITOFLAGELADOS																														
<i>Heterosigma akashiwo</i>	130691	32000	480	123339	30640	200	10320	22160	8640	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	S/M	11680	3840	400	0	0	0	0	0	0	0	0	0

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Apoyo ACUILAB S.A.



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Análisis Cuantitativo de Fitoplancton (Nº cel/L)

4ta Semana



Semana: 26 de abril al 02 de mayo de 2015

Fechas: 29 y 30 de abril de 2015

ZONAS	017 CULEBRAS			011 BAHIA SAMANCO												012 BAHIA DE SECHURA			
ESTACION	01-A-CUL			01-B-SAM*			01-C-SAM*			02-A-SAM**			02-B-SAM**			12-B-SECH		13-A-SECH	
PROFUNDIDAD (m)	....	....	....	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	....	....	....	....
TEMPERATURA (°C)	....	....	....	22.4	21.0	21.3	21.7	20.3	19.1	21.8	20.4	20.1	21.5	20.0	19.8	....	....	....	....
DIATOMEAS																			
Grupo <i>Pseudo-nitzschia delicatissima</i>	S/M	S/M	S/M	0	0	0	160	240	160	0	0	0	0	0	80	S/M	S/M	S/M	S/M
Grupo <i>Pseudo-nitzschia seriata</i>	S/M	S/M	S/M	360	3600	1400	640	320	2160	0	800	880	1280	1360	1960	S/M	S/M	S/M	S/M
DINOFLAGELADOS																			
<i>Alexandrium minutum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Alexandrium monilatum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Alexandrium ostenfeldii</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Alexandrium peruvianum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Alexandrium</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Azadinium spinosum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Cochlodinium polykrikoides</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Dinophysis acuminata</i>	S/M	S/M	S/M	80	0	0	160	80	40	40	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Dinophysis caudata</i>	S/M	S/M	S/M	0	0	0	40	40	0	0	0	0	0	80	0	S/M	S/M	S/M	S/M
<i>Dinophysis rotundata</i>	S/M	S/M	S/M	0	0	0	0	40	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Dinophysis tripos</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Gonyaulax spinifera</i>	S/M	S/M	S/M	0	0	0	0	0	40	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Karenia</i> sp.	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Karlodinium</i> cf. <i>veneficum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Lingulodinium polyedrum</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Prorocentrum lima</i>	S/M	S/M	S/M	0	0	0	0	0	0	0	0	0	0	0	0	S/M	S/M	S/M	S/M
<i>Prorocentrum minimum</i>	S/M	S/M	S/M	2600	80	40	7040	4080	2400	2680	640	120	6720	1200	800	S/M	S/M	S/M	S/M
<i>Protoceratium reticulatum</i>	S/M	S/M	S/M	640	0	0	640	480	240	280	160	0	320	0	0	S/M	S/M	S/M	S/M
<i>Protoperdinium crassipes</i>	S/M	S/M	S/M	240	40	0	200	320	240	0	0	40	0	0	0	S/M	S/M	S/M	S/M
FITOFLAGELADOS																			
<i>Heterosigma akashiwo</i>	S/M	S/M	S/M	80	1400	120	0	0	0	80	40	400	1920	1440	1360	S/M	S/M	S/M	S/M

S/M: Sin Monitoreo

Fuente: * Entidad de Apoyo CERPER S.A.

** Entidad de Apoyo ACUILAB S.A.