

**ANEXO XI: RESULTADOS DE LABORATORIO
DE LAS CARACTERÍSTICAS DE LOS LODOS
RESIDUALES**

ENTRADA DE LAGUNA ANAERÓBICA 1



Calle Junin s/n Zona Sapenco CIQ-POE-T08-F02
Tel.(fax): 4391763 (4260814)
Quillacollo - Bolivia

INFORME DE ANÁLISIS

| | | | |
|---|---|-------|-----------------------|
| CODIGO MUESTRA: | CIQ-D-04-104-I | | |
| Datos del solicitante | | | |
| Nombre del Solicitante: | Ing. Alvaro Antezana | | |
| Departamento: | Tarija | | |
| Provincia: | Cercado | | |
| Datos de la Muestra | | | |
| Procedencia de la muestra | Salida Laguna Anaerobia 1 PTAR San Luis - Lodos | | |
| Lugar de muestreo | Fondo Laguna 1 - Lodo Sedimentado | | |
| Descripción del punto de muestreo | Punto 2 de salida de la laguna 1, aprox. 10 m del borde | | |
| Tipo de fuente | Lodos | | |
| Responsable de area | - | | |
| Condiciones del Muestreo y Ensayos | | | |
| Fecha y Hora Muestreo: | 21-04-2019 | 10:15 | Recepción: 22-04-2019 |
| Fecha de Analisis | Inicio: 22-04-2019 | | Final: 14-05-2019 |
| Fecha de elaboración del informe | 14-05-2019 | | |
| Tipo de Envase | Plástico y vidrio Preesterilizado | | |
| Aspecto | Semi sólido negro | | |
| Medidas de conservación | - | | |
| Condiciones Climaticas | Templado | | |
| Responsable del muestreo | Cliente | | |
| Observaciones | - | | |

| Item | Parámetros | Unidad | Método de Ensayos | Límite de Detección | Resultado |
|--------------------------------|----------------------------|----------------------|-------------------------|---------------------|-------------------------|
| Ensayos Fisicos | | | | | |
| 1 | Sólidos | | | | |
| | Totales | % | Gravimétrico | 0.03 | 19.5 |
| | Volátiles | % | Gravimétrico | 0.03 | 87.0 |
| Ensayos Químicos | | | | | |
| 2 | pH | Adimensional | Potenciométrico | 0.01 | 7.42 |
| 3 | Conductividad | uS/cm | Electroquímico | 1 | 2673 |
| 4 | Densidad Aparente | g/cm ³ | Gravimétrico | 0.03 | 1.12 |
| 5 | DBO5 | mgO ₂ /Kg | Reducción de presión | 2 | 11380 |
| 6 | DQO | mgO ₂ /Kg | Fotométrico | 0.1 | 40948 |
| 7 | Nitrogeno total | % | Micro-Kjeldhal | 0.1 | 0.2 |
| 8 | Fósforo total | % | Fotométrico | 0.01 | <LD |
| 9 | Crómico total | mg/Kg | Absorción Atómica | 0.06 | |
| 10 | Zinc | mg/Kg | Absorción Atómica | 0.004 | |
| 11 | Plomo | mg/Kg | Absorción Atómica | 0.012 | |
| 12 | Cadmio | mg/Kg | Absorción Atómica | 0.003 | |
| Ensayos Bacteriológicos | | | | | |
| Parámetros | | | Método de ensayo | Unidades | Valor encontrado |
| 13 | Coliformes termotolerantes | | Filtración por Membrana | UFC/100 ml | 4.0*10 ⁶ |

Laboratorios: Calle Junin s/n Zona Sapenco Telf: (591)-4-4391763 fax:(591)-4-4260814 Quillacollo Bolivia email: marbascope@hotmail.com

Vigencia: 01-01-2017

Versión 02

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Calle Junin s/n Zona Sapenco CIQ-POE-T08-F02
Tel.(fax): 4391763 (4260814)
Quillacollo - Bolivia

| | | | | |
|----|---------------|--------------------------|-------------------|----------|
| 14 | Parasitos (*) | Técnica de Sedimentación | Nº de Parasitos/L | Ausencia |
|----|---------------|--------------------------|-------------------|----------|

Los resultados corresponden a las muestras recibidas y ensayadas en el Laboratorio de Análisis Químicos.
LD: Límite de detección

[Firma]
Jefe / Responsable Laboratorio
Jose Marcelo Bascope Orozco Ph.D.
 Centro de Investigaciones Químicas S.R.L.

SALIDA DE LA LAGUNA ANAERÓBICA 1



Calle Junin s/n Zona Sapenco, CIQ-POE-T08-F02
Tel.(fax): 4391763 (4260814)
Quillacollo - Bolivia

INFORME DE ANÁLISIS

| | | | |
|---|---|-------------------|-----------------------|
| CODIGO MUESTRA: | CIQ-D-04-103-I | | |
| Datos del solicitante | | | |
| Nombre del solicitante: | Ing. Alvaro Artezana | | |
| Departamento: | Tarija | | |
| Provincia: | Cercado | | |
| Datos de la Muestra | | | |
| Procedencia de la muestra: | Salida Laguna 1 (Anaerobia) - PTAR San Luis - Lodos | | |
| Lugar de muestreo: | Fondo Laguna 1 - Lodo Sedimentado | | |
| Descripción del punto de muestreo: | Punto de salida de la laguna 1, aprox. 10 m del borde | | |
| Tipo de fuente: | Lodos | | |
| Responsable de área: | - | | |
| Condiciones del Muestreo y Ensayos | | | |
| Fecha y Hora Muestreo: | 21-04-2019 | 10:00 | Recepción: 22-04-2019 |
| Fecha de Análisis: | Inicio: 22-04-2019 | Final: 14-05-2019 | |
| Fecha de elaboración del informe: | 14-05-2019 | | |
| Tipo de Envase: | Plástico y vidrio Preesterilizado | | |
| Aspecto: | Sólido negro | | |
| Medidas de conservación: | - | | |
| Condiciones Climáticas: | Templado | | |
| Responsable del muestreo: | Cliente | | |
| Observaciones: | - | | |

| Item | Parámetros | Unidad | Método de Ensayos | Límite de Detección | Resultado |
|--------------------------------|----------------------------|----------------------|-------------------------|---------------------|-------------------------|
| Ensayos Físicos | | | | | |
| 1 | Sólidos | | | | |
| | Totales | % | Gravimétrico | 0.03 | 17.3 |
| | Volátiles | % | Gravimétrico | 0.03 | 86.0 |
| Ensayos Químicos | | | | | |
| 2 | pH | Adimensional | Potenciométrico | 0.01 | 7.02 |
| 3 | Conductividad | µS/cm | Electroquímica | 1 | 2629 |
| 4 | Densidad Aparente | g/cm ³ | Gravimétrico | 0.03 | 1.11 |
| 5 | DBO5 | mgO ₂ /Kg | Reducción de presión | 2 | 12214 |
| 6 | DQO | mgO ₂ /Kg | Fotométrico | 0.1 | 44415 |
| 7 | Nitrogeno total | % | Micro-Kjedhal | 0.1 | 0.2 |
| 8 | Fósforo total | % | Fotométrico | 0.01 | <LD |
| 9 | Cromo total | mg/Kg | Absorción Atómica | 0.06 | |
| 10 | Zinc | mg/Kg | Absorción Atómica | 0.004 | |
| 11 | Plomo | mg/Kg | Absorción Atómica | 0.012 | |
| 12 | Cadmio | mg/Kg | Absorción Atómica | 0.003 | |
| Ensayos Bacteriológicos | | | | | |
| Parámetros | | | Método de ensayo | Unidades | Valor encontrado |
| 13 | Coliformes termotolerantes | | Filtración por Membrana | UFC/100 ml | 2.1*10 ⁶ |

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Vigencia: 01-01-2017

Versión 02

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Calle Junin s/n Zona Sapenco, CIQ-POE-T08-F02
Tel.(fax): 4391763 (4260814)
Quillacollo - Bolivia

| | | | | |
|----|---------------|--------------------------|-------------------|----------|
| 14 | Parásitos (*) | Técnica de Sedimentación | Nº de Parasitos/L | Absencia |
|----|---------------|--------------------------|-------------------|----------|

Los resultados corresponden a las muestras recibidas y ensayadas en el Laboratorio de Análisis Químico.
L.D. Límite de detección

Jefe Responsable Laboratorio
Jose Marcelo Bascope Orozco

Centro de Investigaciones Químicas S.R.L.

PARTE MEDIA DE LA LAGUNA ANAERÓBICA 2



Calle Junin s/n Zona Sapenco CIQ-POE-T08-F02
Tel.(fax): 4391763 (4260814)
Quillacollo - Bolivia

INFORME DE ANÁLISIS

| | | | |
|---|--|-------|-----------------------|
| CODIGO MUESTRA: | CIQ-D-04-105-I | | |
| Datos del solicitante | | | |
| Nombre del Solicitante: | Ing. Alvaro Antezana | | |
| Departamento: | Tarja | | |
| Provincia: | Cercado | | |
| Datos de la Muestra | | | |
| Procedencia de la muestra | Mitad laguna anaerobia 2 -PTAR San Luis (Lodos) | | |
| Lugar de muestreo | Fondo Laguna 2 - Lodo Sedimentado | | |
| Descripción del punto de muestreo | Punto medio de laguna 2. aprox. 5 m del borde/orilla | | |
| Tipo de fuente | Lodos | | |
| Responsable de area | - | | |
| Condiciones del Muestreo y Ensayos | | | |
| Fecha y Hora Muestreo: | 21-04-2019 | 10:30 | Recepción: 22-04-2019 |
| Fecha de Analisis | Incio: 22-04-2019 | | Final: 14-05-2019 |
| Fecha de elaboración del informe | 14-05-2019 | | |
| Tipo de Envase | Plástico y vidrio Preesterilizado | | |
| Aspecto | sólido negro | | |
| Medidas de conservación | - | | |
| Condiciones Climáticas | Templado | | |
| Responsable del muestreo | Cliente | | |
| Observaciones | - | | |

| Item | Parámetros | Unidad | Método de Ensayos | Limite de Detección | Resultado |
|--------------------------------|----------------------------|----------------------|-------------------------|---------------------|-------------------------|
| Ensayos Físicos | | | | | |
| 1 | Sólidos | | | | |
| | Totales | % | Gravimétrico | 0.03 | 11.8 |
| | Volátiles | % | Gravimétrico | 0.03 | 83.8 |
| Ensayos Químicos | | | | | |
| 2 | pH | Adimensional | Fotocrométrico | 0.01 | 7.01 |
| 3 | Conductividad | uS/cm | Electroquímico | 1 | 2156 |
| 4 | Densidad Aparente | g/cm3 | Gravimétrico | 0.03 | 1.17 |
| 5 | DBO5 | mgO ₂ /Kg | Reducción de presión | 2 | 8829 |
| 6 | DQO | mgO ₂ /Kg | Fotométrico | 0.1 | 35741 |
| 7 | Nitrogeno total | % | Micro-Kjedhal | 0.1 | <LD |
| 8 | Fosforo total | % | Fotométrico | 0.01 | <LD |
| 9 | Cromo total | mg/Kg | Absorción Atómica | 0.06 | |
| 10 | Zinc | mg/Kg | Absorción Atómica | 0.004 | |
| 11 | Plomo | mg/Kg | Absorción Atómica | 0.012 | |
| 12 | Cadmio | mg/Kg | Absorción Atómica | 0.003 | |
| Ensayos Bacteriológicos | | | | | |
| Parámetros | | | Método de ensayo | Unidades | Valor encontrado |
| 13 | Coliformes termotolerantes | | Filtración por Membrana | UFC/100 ml | 2.8*10 ⁶ |

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Vigencia: 01-01-2017

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| | | | | |
|----|---------------|--------------------------|-------------------|----------|
| 14 | Parasitos (*) | Técnica de Sedimentación | Nº de Parasitos/L | Ausencia |
|----|---------------|--------------------------|-------------------|----------|

Los resultados corresponden a las muestras recibidas y ensayadas en el Laboratorio de Análisis Químicos
LD: Limite de detección.


 Jefe Responsable Laboratorio
 Jose Marcelo Bascope Orozco PhD

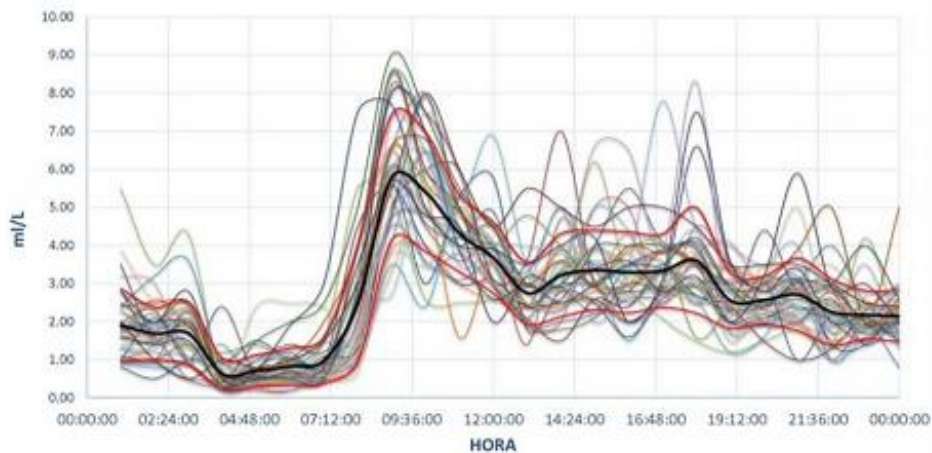


Fuente: Empresa SYL INGENIEROS LTDA

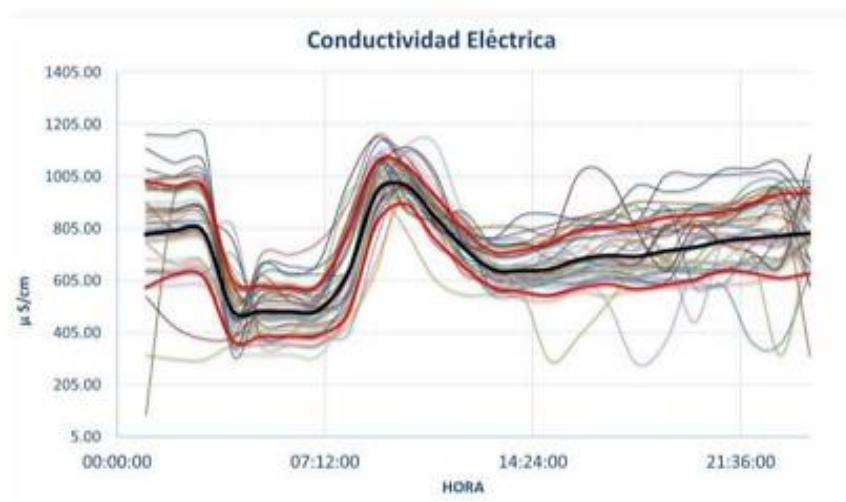
**ANEXO XII: AJUSTE DE COMPORTAMIENTO
DIARIO**

| Sólidos Sedimentables (ml/l) | | | | |
|-------------------------------------|-------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 1,90 | 0,96 | 2,87 | 0,94 |
| 02:00:00 | 1,69 | 0,69 | 2,38 | 1,00 |
| 03:00:00 | 1,69 | 0,83 | 2,52 | 0,86 |
| 04:00:00 | 0,63 | 0,42 | 1,04 | 0,21 |
| 05:00:00 | 0,71 | 0,42 | 1,13 | 0,29 |
| 06:00:00 | 0,83 | 0,49 | 1,31 | 0,34 |
| 07:00:00 | 0,99 | 0,62 | 1,61 | 0,37 |
| 08:00:00 | 2,50 | 1,52 | 4,01 | 0,98 |
| 09:00:00 | 5,80 | 1,64 | 7,44 | 4,16 |
| 10:00:00 | 5,41 | 1,56 | 6,97 | 3,84 |
| 11:00:00 | 4,32 | 1,01 | 5,33 | 3,31 |
| 12:00:00 | 3,68 | 0,93 | 4,61 | 2,75 |
| 13:00:00 | 2,76 | 0,81 | 3,56 | 1,95 |
| 14:00:00 | 3,22 | 1,09 | 4,31 | 2,13 |
| 15:00:00 | 3,35 | 1,04 | 4,40 | 2,31 |
| 16:00:00 | 3,30 | 1,06 | 4,36 | 2,23 |
| 17:00:00 | 3,34 | 0,96 | 4,30 | 2,37 |
| 18:00:00 | 3,61 | 1,39 | 4,99 | 2,22 |
| 19:00:00 | 2,56 | 0,74 | 3,29 | 1,82 |
| 20:00:00 | 2,57 | 0,63 | 3,20 | 1,95 |
| 21:00:00 | 2,71 | 0,96 | 3,67 | 1,76 |
| 22:00:00 | 2,25 | 0,87 | 3,12 | 1,39 |
| 23:00:00 | 2,18 | 0,64 | 2,82 | 1,54 |
| 00:00:00 | 2,15 | 0,68 | 2,83 | 1,47 |

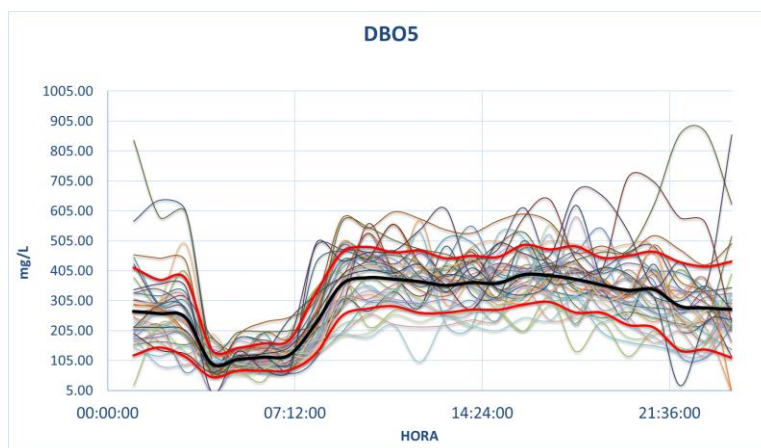
Sólidos Sedimentables



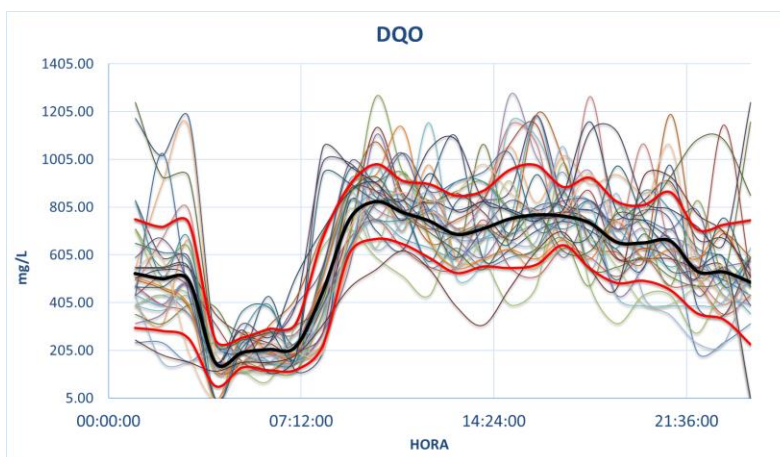
| Conductividad Eléctrica ($\mu\text{S}/\text{cm}$) | | | | |
|---|--------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 782,76 | 203,74 | 986,49 | 579,02 |
| 02:00:00 | 796,89 | 170,59 | 967,49 | 626,30 |
| 03:00:00 | 792,06 | 172,54 | 964,60 | 619,51 |
| 04:00:00 | 491,65 | 116,90 | 608,56 | 374,75 |
| 05:00:00 | 488,22 | 97,41 | 585,63 | 390,81 |
| 06:00:00 | 485,52 | 92,75 | 578,27 | 392,77 |
| 07:00:00 | 493,47 | 96,30 | 589,76 | 397,17 |
| 08:00:00 | 631,06 | 153,17 | 784,23 | 477,90 |
| 09:00:00 | 943,63 | 118,11 | 1061,75 | 825,52 |
| 10:00:00 | 970,98 | 71,43 | 1042,41 | 899,56 |
| 11:00:00 | 850,12 | 83,97 | 934,09 | 766,15 |
| 12:00:00 | 732,53 | 72,43 | 804,96 | 660,09 |
| 13:00:00 | 648,18 | 68,64 | 716,82 | 579,53 |
| 14:00:00 | 642,56 | 79,74 | 722,30 | 562,82 |
| 15:00:00 | 649,34 | 101,51 | 750,85 | 547,84 |
| 16:00:00 | 686,32 | 110,26 | 796,58 | 576,05 |
| 17:00:00 | 701,34 | 110,65 | 811,99 | 590,70 |
| 18:00:00 | 697,61 | 125,26 | 822,87 | 572,36 |
| 19:00:00 | 718,40 | 129,69 | 848,09 | 588,71 |
| 20:00:00 | 733,29 | 124,81 | 858,10 | 608,48 |
| 21:00:00 | 755,92 | 112,19 | 868,10 | 643,73 |
| 22:00:00 | 768,21 | 134,86 | 903,08 | 633,35 |
| 23:00:00 | 776,57 | 161,83 | 938,39 | 614,74 |
| 00:00:00 | 787,14 | 153,64 | 940,77 | 633,50 |



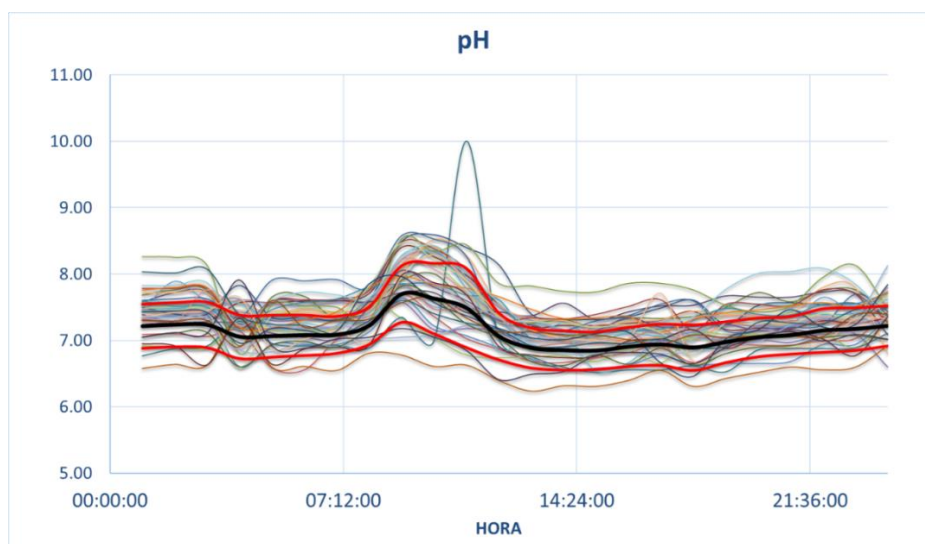
| DBO ₅ (mg/l) | | | | |
|-------------------------|--------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 269,07 | 146,31 | 415,38 | 122,76 |
| 02:00:00 | 261,68 | 112,60 | 374,28 | 149,07 |
| 03:00:00 | 248,19 | 130,79 | 378,98 | 117,39 |
| 04:00:00 | 95,77 | 44,78 | 140,55 | 50,99 |
| 05:00:00 | 109,10 | 37,40 | 146,50 | 71,70 |
| 06:00:00 | 116,77 | 45,29 | 162,05 | 71,48 |
| 07:00:00 | 124,63 | 50,18 | 174,81 | 74,45 |
| 08:00:00 | 228,61 | 100,48 | 329,09 | 128,13 |
| 09:00:00 | 359,04 | 105,82 | 464,85 | 253,22 |
| 10:00:00 | 381,29 | 103,28 | 484,58 | 278,01 |
| 11:00:00 | 376,26 | 90,26 | 466,53 | 286,00 |
| 12:00:00 | 368,02 | 103,93 | 471,95 | 264,09 |
| 13:00:00 | 355,42 | 91,16 | 446,58 | 264,26 |
| 14:00:00 | 365,08 | 90,12 | 455,19 | 274,96 |
| 15:00:00 | 362,68 | 88,43 | 451,10 | 274,25 |
| 16:00:00 | 391,53 | 100,09 | 491,62 | 291,43 |
| 17:00:00 | 388,06 | 88,30 | 476,35 | 299,76 |
| 18:00:00 | 375,82 | 110,99 | 486,80 | 264,83 |
| 19:00:00 | 356,66 | 92,11 | 448,77 | 264,55 |
| 20:00:00 | 339,40 | 115,53 | 454,94 | 223,87 |
| 21:00:00 | 341,91 | 126,80 | 468,71 | 215,11 |
| 22:00:00 | 286,44 | 147,54 | 433,98 | 138,90 |
| 23:00:00 | 280,50 | 138,71 | 419,21 | 141,80 |
| 00:00:00 | 275,34 | 161,06 | 436,40 | 114,29 |



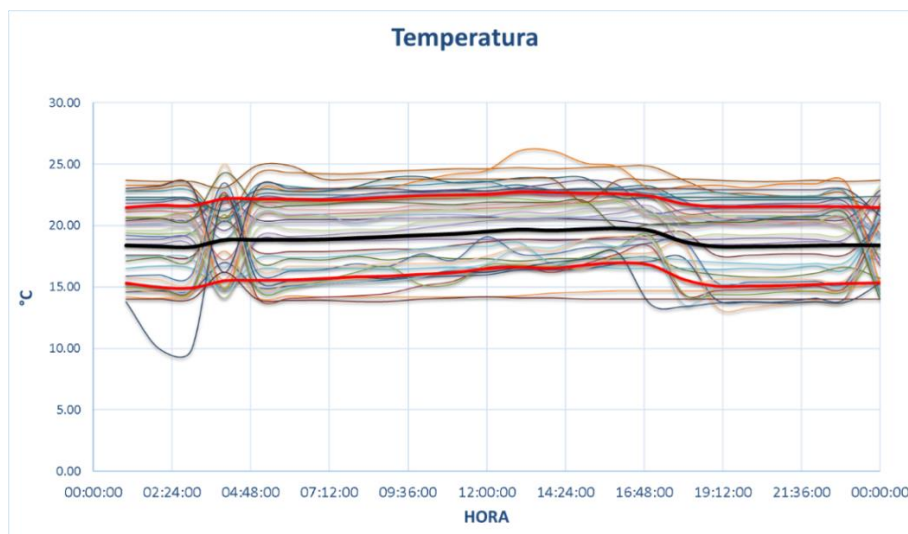
| DQO (mg/l) | | | | |
|------------|--------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 526,61 | 227,62 | 754,23 | 298,99 |
| 02:00:00 | 504,46 | 217,63 | 722,09 | 286,83 |
| 03:00:00 | 497,88 | 243,09 | 740,97 | 254,80 |
| 04:00:00 | 151,89 | 95,85 | 247,74 | 56,04 |
| 05:00:00 | 195,37 | 61,65 | 257,02 | 133,72 |
| 06:00:00 | 208,16 | 85,98 | 294,14 | 122,18 |
| 07:00:00 | 220,11 | 96,08 | 316,19 | 124,02 |
| 08:00:00 | 448,12 | 225,10 | 673,22 | 223,01 |
| 09:00:00 | 752,82 | 142,90 | 895,72 | 609,92 |
| 10:00:00 | 828,19 | 157,33 | 985,53 | 670,86 |
| 11:00:00 | 782,56 | 133,29 | 915,85 | 649,27 |
| 12:00:00 | 746,53 | 155,10 | 901,63 | 591,44 |
| 13:00:00 | 691,09 | 162,40 | 853,49 | 528,69 |
| 14:00:00 | 714,77 | 159,01 | 873,78 | 555,76 |
| 15:00:00 | 755,82 | 206,44 | 962,26 | 549,38 |
| 16:00:00 | 772,32 | 208,37 | 980,69 | 563,95 |
| 17:00:00 | 767,34 | 122,57 | 889,91 | 644,76 |
| 18:00:00 | 737,45 | 190,81 | 928,25 | 546,64 |
| 19:00:00 | 657,58 | 170,78 | 828,37 | 486,80 |
| 20:00:00 | 655,22 | 159,07 | 814,29 | 496,15 |
| 21:00:00 | 662,42 | 205,43 | 867,85 | 456,99 |
| 22:00:00 | 535,93 | 175,92 | 711,85 | 360,01 |
| 23:00:00 | 532,92 | 199,27 | 732,19 | 333,65 |
| 00:00:00 | 489,70 | 260,62 | 750,32 | 229,08 |



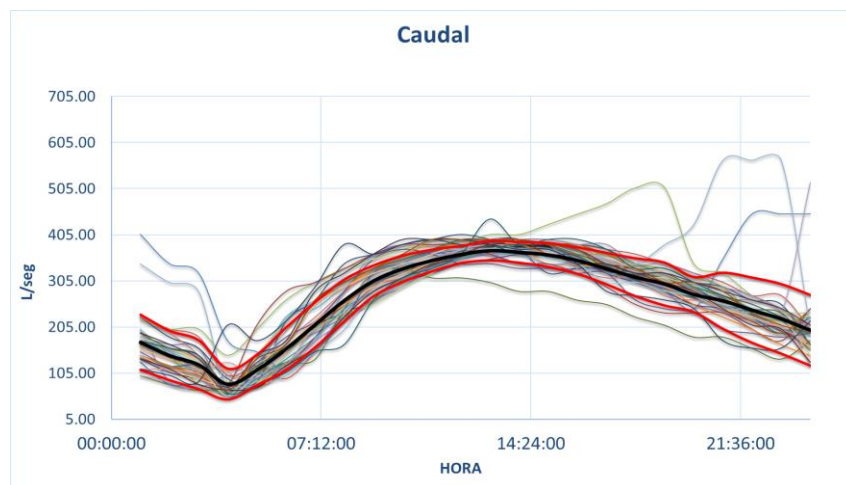
| pH | | | | |
|----------|-------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 7,22 | 0,33 | 7,55 | 6,88 |
| 02:00:00 | 7,24 | 0,34 | 7,57 | 6,90 |
| 03:00:00 | 7,23 | 0,34 | 7,58 | 6,89 |
| 04:00:00 | 7,05 | 0,33 | 7,38 | 6,72 |
| 05:00:00 | 7,06 | 0,32 | 7,38 | 6,75 |
| 06:00:00 | 7,08 | 0,31 | 7,38 | 6,77 |
| 07:00:00 | 7,09 | 0,28 | 7,37 | 6,81 |
| 08:00:00 | 7,23 | 0,29 | 7,51 | 6,94 |
| 09:00:00 | 7,70 | 0,43 | 8,13 | 7,28 |
| 10:00:00 | 7,63 | 0,53 | 8,16 | 7,10 |
| 11:00:00 | 7,49 | 0,60 | 8,08 | 6,89 |
| 12:00:00 | 7,06 | 0,35 | 7,41 | 6,70 |
| 13:00:00 | 6,88 | 0,30 | 7,19 | 6,58 |
| 14:00:00 | 6,85 | 0,30 | 7,15 | 6,55 |
| 15:00:00 | 6,84 | 0,29 | 7,13 | 6,56 |
| 16:00:00 | 6,90 | 0,30 | 7,20 | 6,61 |
| 17:00:00 | 6,93 | 0,31 | 7,25 | 6,62 |
| 18:00:00 | 6,89 | 0,35 | 7,24 | 6,54 |
| 19:00:00 | 6,97 | 0,31 | 7,28 | 6,66 |
| 20:00:00 | 7,05 | 0,29 | 7,34 | 6,75 |
| 21:00:00 | 7,08 | 0,29 | 7,36 | 6,79 |
| 22:00:00 | 7,15 | 0,33 | 7,48 | 6,82 |
| 23:00:00 | 7,17 | 0,32 | 7,49 | 6,85 |
| 00:00:00 | 7,22 | 0,30 | 7,52 | 6,92 |



| Temperatura (°C) | | | | |
|------------------|-------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 18,38 | 3,07 | 21,45 | 15,32 |
| 02:00:00 | 18,30 | 3,34 | 21,64 | 14,96 |
| 03:00:00 | 18,26 | 3,36 | 21,61 | 14,90 |
| 04:00:00 | 18,83 | 3,33 | 22,17 | 15,50 |
| 05:00:00 | 18,84 | 3,31 | 22,15 | 15,53 |
| 06:00:00 | 18,86 | 3,29 | 22,14 | 15,57 |
| 07:00:00 | 18,88 | 3,19 | 22,06 | 15,69 |
| 08:00:00 | 18,98 | 3,16 | 22,14 | 15,83 |
| 09:00:00 | 19,09 | 3,20 | 22,30 | 15,89 |
| 10:00:00 | 19,23 | 3,19 | 22,42 | 16,04 |
| 11:00:00 | 19,33 | 3,15 | 22,47 | 16,18 |
| 12:00:00 | 19,52 | 3,02 | 22,54 | 16,50 |
| 13:00:00 | 19,68 | 3,05 | 22,73 | 16,63 |
| 14:00:00 | 19,61 | 3,07 | 22,68 | 16,54 |
| 15:00:00 | 19,71 | 2,91 | 22,62 | 16,81 |
| 16:00:00 | 19,78 | 2,79 | 22,57 | 16,99 |
| 17:00:00 | 19,58 | 2,79 | 22,37 | 16,79 |
| 18:00:00 | 18,69 | 3,07 | 21,76 | 15,62 |
| 19:00:00 | 18,30 | 3,24 | 21,54 | 15,06 |
| 20:00:00 | 18,29 | 3,22 | 21,52 | 15,07 |
| 21:00:00 | 18,32 | 3,22 | 21,54 | 15,10 |
| 22:00:00 | 18,37 | 3,17 | 21,54 | 15,20 |
| 23:00:00 | 18,40 | 3,12 | 21,53 | 15,28 |
| 00:00:00 | 18,39 | 3,06 | 21,45 | 15,32 |



| Caudal (L/s) | | | | |
|---------------------|--------|---------------------|------------|------------|
| Hora | Media | Desviación Estándar | X med + Sx | X med - Sx |
| 01:00:00 | 171,62 | 59,87 | 231,49 | 111,75 |
| 02:00:00 | 142,96 | 53,55 | 196,52 | 89,41 |
| 03:00:00 | 122,88 | 52,89 | 175,76 | 69,99 |
| 04:00:00 | 80,98 | 33,18 | 114,16 | 47,81 |
| 05:00:00 | 111,93 | 33,06 | 144,99 | 78,88 |
| 06:00:00 | 158,04 | 46,22 | 204,25 | 111,82 |
| 07:00:00 | 210,40 | 49,08 | 259,48 | 161,32 |
| 08:00:00 | 262,68 | 45,44 | 308,12 | 217,24 |
| 09:00:00 | 305,14 | 33,82 | 338,96 | 271,32 |
| 10:00:00 | 331,16 | 28,71 | 359,88 | 302,45 |
| 11:00:00 | 349,19 | 23,82 | 373,02 | 325,37 |
| 12:00:00 | 362,15 | 18,94 | 381,09 | 343,21 |
| 13:00:00 | 370,50 | 21,48 | 391,97 | 349,02 |
| 14:00:00 | 366,80 | 22,74 | 389,55 | 344,06 |
| 15:00:00 | 361,16 | 26,30 | 387,46 | 334,86 |
| 16:00:00 | 349,05 | 29,16 | 378,21 | 319,89 |
| 17:00:00 | 331,32 | 34,35 | 365,67 | 296,97 |
| 18:00:00 | 312,65 | 41,39 | 354,04 | 271,26 |
| 19:00:00 | 297,82 | 46,72 | 344,54 | 251,10 |
| 20:00:00 | 275,18 | 38,20 | 313,38 | 236,97 |
| 21:00:00 | 261,74 | 61,23 | 322,97 | 200,52 |
| 22:00:00 | 241,25 | 70,86 | 312,11 | 170,39 |
| 23:00:00 | 222,39 | 75,59 | 297,98 | 146,80 |
| 00:00:00 | 197,53 | 76,71 | 274,25 | 120,82 |



**ANEXO XIII: MANEJO DE ECUACIONES
PARA EL PROGRAMA DEL MODELO EN EL
MATLAB**

El manejo de ecuaciones para emplear en la elaboración del modelo inicio con aplicar factores e introducir variables a las ecuaciones.

El primer paso fue aplicar un factor a las diferentes ecuaciones primarias para lograr que las variables dependientes den como resultado un valor unitario cuando la variable independiente (hora) tome el valor de 10 (10am) y de esa manera introducir como variable el valor del parámetro medido a las 10am, de modo que las ecuaciones modificadas serian la función del comportamiento del parámetro más representativo en 24 horas.

$$SSed = (4.251 * SIN(3.278 * h - 0.1582) + 0.9528 * SIN(19.67 * h + 0.1109) + 1.017 * SIN(13.11 * h + 1.933) + 0.6864 * SIN(6.556 * h + 1.816) + 0.2936 * SIN(52.45 * h + 0.5928) + 0.2697 * SIN(39.34 * h - 1.355) + 0.3438 * SIN(26.23 * h - 2.607) + 0.2705 * SIN(32.78 * h + 1.022)) * \left(\frac{SSed_{10}}{5.642}\right)$$

Ecuación 9a

$$C = (1364 * SIN(3,836 * h - 0,2222) + 1290 * SIN(7,497 * h + 1,264) + 762,6 * SIN(9,868 * h + 3,32) + 124,2 * SIN(19,95 * h - 0,08303) + 36,31 * SIN(30,6 * h + 1,585) + 472,4 * SIN(46,06 * h + 3,918) + 9,475 * SIN(54,48 * h + 1,435) + 468,8 * SIN(45,74 * h + 0,9973)) * \left(\frac{C_{10}}{967.46}\right)$$

Ecuación 10a

$$DBO5 = (306,2 - 18,62 * COS(7,037 * h) - 119,9 * SIN(7,037 * h) + 59,7 * COS(2 * 7,037 * h) - 5,631 * SIN(2 * 7,037 * h) - 19,17 * COS(3 * 7,037 * h) + 34,12 * SIN(3 * 7,037 * h) - 3,128 * COS(4 * 7,037 * h) - 8,076 * SIN(4 * 7,037 * h) - 1,732 * COS(5 * 7,037 * h) - 1,987 * SIN(5 * 7,037 * h) - 8,801 * COS(6 * 7,037 * h) - 14,5 * SIN(6 * 7,037 * h) + 11,11 * COS(7 * 7,037 * h) - 11,29 * SIN(7 * 7,037 * h) + 9,374 * COS(8 * 7,037 * h) + 3,957 * SIN(8 * 7,037 * h)) * \left(\frac{DBO_{5,10}}{405.089}\right)$$

Ecuación 11a

$$DQO = (598,7 - 128,5 * \text{COS}(h * 6,31) - 195,5 * \text{SIN}(h * 6,31) + 103,6 * \text{COS}(2 * h * 6,31) - 35,51 * \text{SIN}(2 * h * 6,31) + 15,76 * \text{COS}(3 * h * 6,31) + 109,1 * \text{SIN}(3 * h * 6,31) - 48,37 * \text{COS}(4 * h * 6,31) - 15,47 * \text{SIN}(4 * h * 6,31) + 2,598 * \text{COS}(5 * h * 6,31) + 12,27 * \text{SIN}(5 * h * 6,31) - 17,56 * \text{COS}(6 * h * 6,31) + 12,55 * \text{SIN}(6 * h * 6,31) + 2,742 * \text{COS}(7 * h * 6,31) - 21,31 * \text{SIN}(7 * h * 6,31) + 34,5 * \text{COS}(8 * h * 6,31) - 10,65 * \text{SIN}(8 * h * 6,31)) * \left(\frac{DQO_{10}}{852,18}\right)$$

Ecuación 12a

$$SS = (0,6795 - 0,1309 * \text{COS}((h - 0,04167) * 7,049) - 0,1724 * \text{SIN}((h - 0,04167) * 7,049) + 0,112 * \text{COS}(2 * (h - 0,04167) * 7,049) - 0,1081 * \text{SIN}(2 * (h - 0,04167) * 7,049) + 0,03812 * \text{COS}(3 * (h - 0,04167) * 7,049) + 0,1095 * \text{SIN}(3 * (h - 0,04167) * 7,049) - 0,03027 * \text{COS}(4 * (h - 0,04167) * 7,049) - 0,01835 * \text{SIN}(4 * (h - 0,04167) * 7,049) + 0,01925 * \text{COS}(5 * (h - 0,04167) * 7,049) + 0,005268 * \text{SIN}(5 * (h - 0,04167) * 7,049) - 0,0301 * \text{COS}(6 * (h - 0,04167) * 7,049) + 0,02311 * \text{SIN}(6 * (h - 0,04167) * 7,049) - 0,03894 * \text{COS}(7 * (h - 0,04167) * 7,049) - 0,01884 * \text{SIN}(7 * (h - 0,04167) * 7,049)) * \left(\frac{SS_{10}}{1,014}\right)$$

Ecuación 13a

$$pH = (7,306 - 0,03454 * \text{COS}(h * 6,48) + 0,1865 * \text{SIN}(h * 6,48) + 0,1319 * \text{COS}(2 * h * 6,48) - 0,138 * \text{SIN}(2 * h * 6,48) - 0,004051 * \text{COS}(3 * h * 6,48) + 0,1522 * \text{SIN}(3 * h * 6,48) - 0,0376 * \text{COS}(4 * h * 6,48) - 0,07548 * \text{SIN}(4 * h * 6,48) + 0,01677 * \text{COS}(5 * h * 6,48) + 0,03906 * \text{SIN}(5 * h * 6,48) - 0,03338 * \text{COS}(6 * h * 6,48) - 0,0004343 * \text{SIN}(6 * h * 6,48) + 0,01191 * \text{COS}(7 * h * 6,48) - 0,02291 * \text{SIN}(7 * h * 6,48)) * \left(\frac{pH_{10}}{7,92}\right)$$

Ecuación 14a

$$T = (19,33 - 0,6963 * \text{COS}(h * 5,649) + 0,1415 * \text{SIN}(h * 5,649) + 0,1954 * \text{COS}(2 * h * 5,649) + 0,07632 * \text{SIN}(2 * h * 5,649) - 0,06247 * \text{COS}(3 * h * 5,649) - 0,1878 * \text{SIN}(3 * h * 5,649) - 0,07 * \text{COS}(4 * h * 5,649) + 0,04704 * \text{SIN}(4 * h * 5,649) + 0,09964 * \text{COS}(5 * h * 5,649) + 0,06382 * \text{SIN}(5 * h * 5,649) + 0,006395 * \text{COS}(6 * h * 5,649) - 0,02052 * \text{SIN}(6 * h * 5,649) - 0,04601 * \text{COS}(7 * h * 5,649) + 0,08448 * \text{SIN}(7 * h * 5,649)) * \left(\frac{T_{10}}{19,72}\right)$$

Ecuación 15a

$$Q \text{ diario} = (264,2 - 92,68 * \text{COS}(h * 6,459) - 86,4 * \text{SIN}(h * 6,459) + 25,01 * \text{COS}(2 * h * 6,459) - 24,36 * \text{SIN}(2 * h * 6,459) + 12,93 * \text{COS}(3 * h * 6,459) + 1,629 * \text{SIN}(3 * h * 6,459)) * \left(\frac{Q_{10}}{376,99}\right)$$

Ecuación 16a

En la realidad no siempre se toma la medición de parámetros a las 10am de manera que se trabajan las ecuaciones anteriores logrando que la variable dependiente este en función de un parámetro medido a una hora cualquiera y esa hora:

$$S \text{ Sed} = SSed_x * \left[(4.251 * \text{SIN}(3.278 * h - 0.1582) + 0.9528 * \text{SIN}(19.67 * h + 0.1109) + 1.017 * \text{SIN}(13.11 * h + 1.933) + 0.6864 * \text{SIN}(6.556 * h + 1.816) + 0.2936 * \text{SIN}(52.45 * h + 0.5928) + 0.2697 * \text{SIN}(39.34 * h - 1.355) + 0.3438 * \text{SIN}(26.23 * h - 2.607) + 0.2705 * \text{SIN}(32.78 * h + 1.022)) * \left(\frac{1}{5.642}\right) \right]^{-1}$$

Ecuación 9b

$$C = C_x * \left[(1364 * \text{SIN}(3.836 * h - 0.2222) + 1290 * \text{SIN}(7.497 * h + 1.264) + 762.6 * \text{SIN}(9.868 * h + 3.32) + 124.2 * \text{SIN}(19.95 * h - 0.08303) + 36.31 * \text{SIN}(30.6 * h + 1.585) + 472.4 * \text{SIN}(46.06 * h + 3.918) + 9.475 * \text{SIN}(54.48 * h + 1.435) + 468.8 * \text{SIN}(45.74 * h + 0.9973)) * \left(\frac{1}{967.46}\right) \right]^{-1}$$

Ecuación 10b

$$\begin{aligned}
DBO_5 = & 0.96 * DBO_{5X} * \left[(306.2 - 18.62 * \cos(7.037 * h) - 119.9 * \sin(7.037 * h) + \right. \\
& 59.7 * \cos(2 * 7.037 * h) - 5.631 * \sin(2 * 7.037 * h) - 19.17 * \cos(3 * 7.037 * h) + \\
& 34.12 * \sin(3 * 7.037 * h) - 3.128 * \cos(4 * 7.037 * h) - 8.076 * \sin(4 * 7.037 * h) - \\
& 1.732 * \cos(5 * 7.037 * h) - 1.987 * \sin(5 * 7.037 * h) - 8.801 * \cos(6 * 7.037 * h) - \\
& 14.5 * \sin(6 * 7.037 * h) + 11.11 * \cos(7 * 7.037 * h) - 11.29 * \sin(7 * 7.037 * h) + \\
& \left. 9.374 * \cos(8 * 7.037 * h) + 3.957 * \sin(8 * 7.037 * h) \right] * \left(\frac{1}{405.089} \right)^{-1}
\end{aligned}$$

Ecuación 11b

$$\begin{aligned}
DQO = & DQO * \left[(598.7 - 128.5 * \cos(h * 6.31) - 195.5 * \sin(h * 6.31) + 103.6 * \right. \\
& \cos(2 * h * 6.31) - 35.51 * \sin(2 * h * 6.31) + 15.76 * \cos(3 * h * 6.31) + 109.1 * \\
& \sin(3 * h * 6.31) - 48.37 * \cos(4 * h * 6.31) - 15.47 * \sin(4 * h * 6.31) + 2.598 * \\
& \cos(5 * h * 6.31) + 12.27 * \sin(5 * h * 6.31) - 17.56 * \cos(6 * h * 6.31) + 12.55 * \\
& \sin(6 * h * 6.31) + 2.742 * \cos(7 * h * 6.31) - 21.31 * \sin(7 * h * 6.31) + 34.5 * \\
& \left. \cos(8 * h * 6.31) - 10.65 * \sin(8 * h * 6.31) \right] * \left(\frac{1}{852.18} \right)^{-1}
\end{aligned}$$

Ecuación 12b

$$\begin{aligned}
SS = & SS_X * \left[(0.6795 - 0.1309 * \cos((h - 0.04167) * 7.049) - 0.1724 * \sin((h - \right. \\
& 0.04167) * 7.049) + 0.112 * \cos(2 * (h - 0.04167) * 7.049) - 0.1081 * \sin(2 * \\
& (h - 0.04167) * 7.049) + 0.03812 * \cos(3 * (h - 0.04167) * 7.049) + 0.1095 * \\
& \sin(3 * (h - 0.04167) * 7.049) - 0.03027 * \cos(4 * (h - 0.04167) * 7.049) - \\
& 0.01835 * \sin(4 * (h - 0.04167) * 7.049) + 0.01925 * \cos(5 * (h - 0.04167) * \\
& 7.049) + 0.005268 * \sin(5 * (h - 0.04167) * 7.049) - 0.0301 * \cos(6 * (h - \\
& 0.04167) * 7.049) + 0.02311 * \sin(6 * (h - 0.04167) * 7.049) - 0.03894 * \\
& \left. \cos(7 * (h - 0.04167) * 7.049) - 0.01884 * \sin(7 * (h - 0.04167) * 7.049) \right] * \\
& \left(\frac{1}{1.014} \right)^{-1}
\end{aligned}$$

Ecuación 13b

$$PH = PH_X * \left[(7.306 - 0.03454 * \cos(h * 6.48) + 0.1865 * \sin(h * 6.48) + 0.1319 * \cos(2 * h * 6.48) - 0.138 * \sin(2 * h * 6.48) - 0.004051 * \cos(3 * h * 6.48) + 0.1522 * \sin(3 * h * 6.48) - 0.0376 * \cos(4 * h * 6.48) - 0.07548 * \sin(4 * h * 6.48) + 0.01677 * \cos(5 * h * 6.48) + 0.03906 * \sin(5 * h * 6.48) - 0.03338 * \cos(6 * h * 6.48) - 0.0004343 * \sin(6 * h * 6.48) + 0.01191 * \cos(7 * h * 6.48) - 0.02291 * \sin(7 * h * 6.48)) * \left(\frac{1}{7.92} \right) \right]^{-1}$$

Ecuación 14b

$$T = T_X * \left[(19.33 - 0.6963 * \cos(h * 5.649) + 0.1415 * \sin(h * 5.649) + 0.1954 * \cos(2 * h * 5.649) + 0.07632 * \sin(2 * h * 5.649) - 0.06247 * \cos(3 * h * 5.649) - 0.1878 * \sin(3 * h * 5.649) - 0.07 * \cos(4 * h * 5.649) + 0.04704 * \sin(4 * h * 5.649) + 0.09964 * \cos(5 * h * 5.649) + 0.06382 * \sin(5 * h * 5.649) + 0.006395 * \cos(6 * h * 5.649) - 0.02052 * \sin(6 * h * 5.649) - 0.04601 * \cos(7 * h * 5.649) + 0.08448 * \sin(7 * h * 5.649)) * \left(\frac{1}{19.72} \right) \right]^{-1}$$

Ecuación 15b

$$Q = 0.858 * Q_X * \left[(264.2 - 92.68 * \cos(h * 6.459) - 86.4 * \sin(h * 6.459) + 25.01 * \cos(2 * h * 6.459) - 24.36 * \sin(2 * h * 6.459) + 12.93 * \cos(3 * h * 6.459) + 1.629 * \sin(3 * h * 6.459)) * \left(\frac{1}{376.99} \right) \right]^{-1}$$

Ecuación 16b

Una vez trabajadas las ecuaciones para los parámetros diarios se trabajaron las ecuaciones del comportamiento en la remoción de parámetros en las lagunas, una vez extraídas las ecuaciones primarias del MATLAB se trabajaron las ecuaciones de remociones acumuladas y se generaron funciones en las que la variable dependiente representa el valor del parámetro estudiado en los diferentes puntos estudiados:

1p salida de las lagunas anaeróbicas

2p salida de la laguna facultativa

3p salida de la planta de tratamiento.

Sólidos Suspendidos

$$SS1p = SSo - (-0.00000171 * (SSo)^3 + 0.001976 * (SSo)^2 + 0.2861 * (SSo) + 0.002085)$$

$$SS2p = SSo - (0.0000005723 * (SSo)^3 - 0.0001005 * (SSo)^2 + 0.8816 * (SSo) - 44.74)$$

$$SS3p = SSo - (0.9771 * (SSo) - 51.71)$$

Conductividad Eléctrica

$$C1p = Co - (-0.0003053 * (CEo)^2 + 1.475 * (CEo) - 1027)$$

$$C2p = Co - (0.9183 * (CEo) - 769.9)$$

$$C3p = Co - (0.7946 * (CEo) - 684.9)$$

DQO

$$DQO1p = DQOo - (0.9806 * (DQOo) - 249.2)$$

$$DQO2p = DQOo - (1.008 * (DQOo) - 219.7)$$

$$DQO3p = DQOo - (0.9857 * (DQOo) - 183.8)$$

DBO₅

$$DBO_5 1p = DBO_{5o} - (-0.0004407 * (DBO_{5o})^2 + 1.238 * (DBO_{5o}) + -155.3)$$

$$DBO_5\ 2p = DBO_5o - (0.9824 * (DBO_5o) - 87.34)$$

$$DBO_5\ 3p = DBO_5o - (0.9883 * (DBO_5o) - 68.7)$$

PH

$$PH1p = PHo - (0.9314 * (PHo) - 6.7419)$$

$$PH2p = PHo - (0.9982 * (PHo) - 7.3989)$$

$$PH3p = PHo - (1.0396 * (PHo) - 7.7897)$$

Finalmente se puede calcular la cantidad de remoción que existe en las lagunas de la planta de tratamiento San Luis:

R1y2: Remoción en las lagunas anaeróbicas

R3: Remoción en la laguna facultativa

R4: Remoción en la laguna de maduración

Sólidos Suspendidos

$$R1y2_SS = SS1$$

$$R3_SS = SS2 - SS1$$

$$R4_SS = SS3 - SS2$$

Conductividad Eléctrica

$$R1y2_C = C1$$

$$R3_C = C2 - C1$$

$$R4_C = C3 - C2$$

DQO

$$R1y2_DQO = DQO1$$

$$R3_DQO = DQO2 - DQO1$$

$$R4_DQO = DQO3 - DQO2$$

DBO₅

$$R1y2_DBO_5 = DBO_51$$

$$R3_DBO_5 = DBO_52 - DBO_51$$

$$R4_DBO_5 = DBO_53 - DBO_52$$

PH

$$R1y2_PH = PH1$$

$$R3_PH = PH2 - PH1$$

$$R4_PH = PH3 - PH2$$

Para el porcentaje las expresiones quedarían:

%R1y2: Porcentaje de remoción en las lagunas anaeróbicas

%R3: Porcentaje de remoción en la laguna facultativa

%R4: Porcentaje de remoción en la laguna de maduración

Sólidos Suspendidos

$$\%R1y2_SS = \frac{SS1}{SSo}$$

$$\%R3_SS = \frac{SS2 - SS1}{SSo}$$

$$\%R4_{SS} = \frac{SS3 - SS2}{SSo}$$

Conductividad Electrica

$$\%R1y2_C = \frac{C1}{Co}$$

$$\%R3_C = \frac{C2 - C1}{Co}$$

$$\%R4_C = \frac{C3 - C2}{Co}$$

DQO5

$$\%R1y2_{DQO} = \frac{DQO1}{DQOo}$$

$$\%R3_{DQO} = \frac{(DQO2 - DQO1)}{DQOo}$$

$$\%R4_{DQO} = \frac{(DQO3 - DQO2)}{DQOo}$$

DBO₅

$$\%R1y2_{DBO_5} = \frac{DBO_{5o1}}{DBO_{5o}}$$

$$\%R3_{DBO_5} = \frac{DBO_{5o2} - DBO_{5o1}}{DBO_{5o}}$$

$$\%R4_{DBO_5} = \frac{DBO_{5o3} - DBO_{5o2}}{DBO_{5o}}$$

PH

$$\%R1y2_PH = \frac{PH1}{PHo}$$

$$\%R3_PH = \frac{PH2 - PH1}{PHo}$$

$$\%R4_PH = \frac{(PH3 - PH2)}{PHo}$$

**ANEXO XIV: DATOS DIARIOS DE
PARÁMETROS EN EL PARSHAL**

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 31/1/2012 | 04:00:00 | 22,30 | 6,96 | 0,30 | 466,00 | 87,60 | 158,40 | 209,09 |
| 31/1/2012 | 05:00:00 | 22,20 | 6,94 | 0,80 | 468,00 | 89,40 | 118,80 | 151,17 |
| 31/1/2012 | 06:00:00 | 22,20 | 6,94 | 0,50 | 469,00 | 91,20 | 158,40 | 113,81 |
| 31/1/2012 | 07:00:00 | 22,20 | 6,94 | 0,50 | 468,00 | 91,80 | 158,40 | 159,06 |
| 31/1/2012 | 08:00:00 | 22,30 | 7,13 | 1,60 | 574,00 | 181,00 | 277,20 | 235,76 |
| 31/1/2012 | 09:00:00 | 22,40 | 7,64 | 4,50 | 1000,00 | 369,00 | 633,70 | 292,21 |
| 31/1/2012 | 10:00:00 | 22,40 | 7,22 | 3,60 | 1055,00 | 425,00 | 831,70 | 342,24 |
| 31/1/2012 | 11:00:00 | 22,50 | 7,07 | 3,10 | 859,00 | 398,00 | 792,10 | 362,98 |
| 31/1/2012 | 12:00:00 | 22,50 | 6,89 | 3,60 | 753,00 | 285,00 | 554,50 | 362,98 |
| 31/1/2012 | 13:00:00 | 22,60 | 6,72 | 3,00 | 650,00 | 431,00 | 633,70 | 362,98 |
| 31/1/2012 | 14:00:00 | 22,50 | 6,56 | 2,90 | 623,00 | 554,50 | 554,40 | 342,24 |
| 31/1/2012 | 15:00:00 | 22,60 | 6,58 | 2,30 | 628,00 | 390,00 | 594,10 | 332,02 |
| 31/1/2012 | 16:00:00 | 22,50 | 6,62 | 3,50 | 632,00 | 402,00 | 633,70 | 332,02 |
| 31/1/2012 | 17:00:00 | 22,60 | 6,77 | 3,60 | 740,00 | 414,00 | 792,10 | 332,02 |
| 31/1/2012 | 18:00:00 | 22,00 | 6,63 | 2,50 | 725,00 | 466,00 | 792,10 | 302,00 |
| 31/1/2012 | 19:00:00 | 20,70 | 6,65 | 3,50 | 891,00 | 547,00 | 831,70 | 282,52 |
| 31/1/2012 | 20:00:00 | 20,60 | 6,65 | 2,50 | 581,00 | 375,00 | 633,70 | 244,89 |
| 31/1/2012 | 21:00:00 | 20,60 | 6,68 | 3,10 | 587,00 | 372,00 | 673,30 | 352,56 |
| 31/1/2012 | 22:00:00 | 20,80 | 6,94 | 1,50 | 367,00 | 121,80 | 198,00 | 449,89 |
| 31/1/2012 | 23:00:00 | 20,60 | 6,94 | 2,00 | 367,00 | 114,60 | 237,60 | 449,89 |
| 1/2/2012 | 01:00:00 | 19,20 | 7,34 | 0,90 | 636,00 | 185,00 | 237,60 | 405,66 |
| 1/2/2012 | 02:00:00 | 19,10 | 7,37 | 0,90 | 635,00 | 223,20 | 237,60 | 342,24 |
| 1/2/2012 | 03:00:00 | 19,40 | 7,39 | 0,50 | 635,00 | 64,20 | 158,40 | 321,91 |
| 1/2/2012 | 00:00:00 | 19,20 | 7,34 | 0,80 | 635,00 | 216,00 | 316,80 | 449,89 |
| 14/2/2012 | 04:00:00 | 22,00 | 6,60 | 0,50 | 707,00 | 140,40 | 237,60 | 175,23 |
| 14/2/2012 | 05:00:00 | 21,90 | 6,59 | 0,20 | 706,00 | 146,40 | 198,00 | 121,00 |
| 14/2/2012 | 06:00:00 | 21,90 | 6,56 | 0,20 | 706,00 | 139,80 | 277,20 | 93,15 |
| 14/2/2012 | 07:00:00 | 21,90 | 7,01 | 0,80 | 756,00 | 157,00 | 277,20 | 151,17 |
| 14/2/2012 | 08:00:00 | 22,00 | 7,25 | 2,00 | 903,00 | 260,00 | 475,20 | 226,75 |
| 14/2/2012 | 09:00:00 | 22,10 | 7,69 | 6,00 | 1167,00 | 472,00 | 673,30 | 292,21 |
| 14/2/2012 | 10:00:00 | 22,20 | 7,36 | 4,50 | 1042,00 | 458,00 | 752,50 | 311,90 |
| 14/2/2012 | 11:00:00 | 22,20 | 7,03 | 3,60 | 839,00 | 414,00 | 633,70 | 342,24 |
| 14/2/2012 | 12:00:00 | 22,40 | 6,87 | 4,00 | 738,00 | 366,00 | 554,50 | 362,98 |
| 14/2/2012 | 13:00:00 | 22,60 | 6,69 | 1,40 | 652,00 | 358,00 | 554,50 | 373,50 |
| 14/2/2012 | 14:00:00 | 22,40 | 6,67 | 4,70 | 650,00 | 442,00 | 752,50 | 384,12 |
| 14/2/2012 | 15:00:00 | 22,50 | 6,74 | 3,10 | 652,00 | 345,00 | 554,50 | 384,12 |
| 14/2/2012 | 16:00:00 | 22,50 | 6,82 | 2,00 | 686,00 | 365,00 | 514,90 | 384,12 |
| 14/2/2012 | 17:00:00 | 22,60 | 6,92 | 2,50 | 700,00 | 409,00 | 633,70 | 373,50 |
| 14/2/2012 | 18:00:00 | 21,00 | 6,67 | 3,00 | 659,00 | 433,00 | 594,10 | 362,98 |
| 14/2/2012 | 19:00:00 | 21,10 | 6,93 | 3,10 | 815,00 | 349,00 | 514,90 | 342,24 |
| 14/2/2012 | 20:00:00 | 21,10 | 6,93 | 3,00 | 825,00 | 382,00 | 594,10 | 321,91 |
| 14/2/2012 | 21:00:00 | 21,10 | 6,93 | 3,20 | 762,00 | 344,00 | 475,30 | 302,00 |
| 14/2/2012 | 22:00:00 | 21,10 | 7,00 | 1,70 | 758,00 | 337,00 | 475,30 | 272,95 |
| 14/2/2012 | 23:00:00 | 21,20 | 7,03 | 2,50 | 767,00 | 297,00 | 356,40 | 272,95 |
| 15/2/2012 | 01:00:00 | 21,10 | 7,09 | 1,60 | 793,00 | 265,80 | 475,30 | 226,75 |
| 15/2/2012 | 02:00:00 | 21,20 | 7,10 | 1,60 | 792,00 | 273,60 | 396,00 | 200,44 |
| 15/2/2012 | 03:00:00 | 21,10 | 7,06 | 0,50 | 788,00 | 229,20 | 356,40 | 183,50 |
| 15/2/2012 | 00:00:00 | 21,20 | 7,11 | 1,70 | 773,00 | 213,00 | 435,60 | 226,75 |
| 6/3/2012 | 04:00:00 | 21,80 | 7,14 | 0,30 | 400,00 | 96,00 | 158,42 | 99,89 |
| 6/3/2012 | 05:00:00 | 21,80 | 7,15 | 0,40 | 401,00 | 77,40 | 118,81 | 200,44 |
| 6/3/2012 | 06:00:00 | 21,90 | 7,14 | 0,60 | 402,00 | 37,80 | 79,21 | 263,48 |
| 6/3/2012 | 07:00:00 | 21,90 | 7,19 | 1,50 | 576,00 | 201,00 | 316,83 | 302,00 |
| 6/3/2012 | 08:00:00 | 22,10 | 7,61 | 5,50 | 942,00 | 347,00 | 633,66 | 332,02 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 6/3/2012 | 09:00:00 | 22,20 | 7,33 | 5,30 | 950,00 | 399,00 | 712,87 | 352,56 |
| 6/3/2012 | 10:00:00 | 22,30 | 7,04 | 2,60 | 799,00 | 219,00 | 594,03 | 373,50 |
| 6/3/2012 | 11:00:00 | 22,30 | 6,78 | 2,50 | 612,00 | 272,00 | 514,85 | 384,12 |
| 6/3/2012 | 12:00:00 | 22,30 | 6,74 | 2,60 | 552,00 | 293,00 | 435,64 | 384,12 |
| 6/3/2012 | 13:00:00 | 22,20 | 6,75 | 3,00 | 554,00 | 427,00 | 712,87 | 405,66 |
| 6/3/2012 | 14:00:00 | 22,00 | 6,77 | 3,00 | 560,00 | 349,00 | 594,06 | 405,66 |
| 6/3/2012 | 15:00:00 | 21,80 | 6,68 | 6,20 | 298,00 | 273,00 | 396,04 | 427,58 |
| 6/3/2012 | 16:00:00 | 22,00 | 6,87 | 3,00 | 395,00 | 204,00 | 475,25 | 449,89 |
| 6/3/2012 | 17:00:00 | 20,80 | 6,66 | 2,10 | 520,00 | 319,00 | 990,10 | 472,57 |
| 6/3/2012 | 18:00:00 | 20,80 | 7,10 | 1,50 | 659,00 | 136,00 | 475,25 | 507,28 |
| 6/3/2012 | 19:00:00 | 20,80 | 7,09 | 1,20 | 658,00 | 232,00 | 316,83 | 507,28 |
| 6/3/2012 | 20:00:00 | 20,80 | 7,09 | 1,50 | 658,00 | 119,00 | 435,64 | 342,24 |
| 6/3/2012 | 21:00:00 | 20,80 | 7,12 | 1,80 | 752,00 | 205,20 | 435,64 | 321,91 |
| 6/3/2012 | 22:00:00 | 20,50 | 7,12 | 1,40 | 697,00 | 148,80 | 277,23 | 272,95 |
| 6/3/2012 | 23:00:00 | 19,60 | 6,89 | 4,20 | 320,00 | 160,20 | 475,25 | 244,89 |
| 7/3/2012 | 00:00:00 | 19,30 | 6,92 | 5,00 | 315,00 | 203,40 | 594,06 | 244,89 |
| 7/3/2012 | 01:00:00 | 19,40 | 6,92 | 5,50 | 320,00 | 22,00 | 712,87 | 217,86 |
| 7/3/2012 | 02:00:00 | 19,30 | 6,90 | 3,50 | 305,00 | 228,60 | 475,25 | 200,44 |
| 7/3/2012 | 03:00:00 | 19,40 | 6,89 | 4,30 | 302,00 | 185,40 | 435,64 | 200,44 |
| 24/4/2012 | 04:00:00 | 18,80 | 7,26 | 0,40 | 363,00 | 94,20 | 158,50 | 143,42 |
| 24/4/2012 | 05:00:00 | 18,80 | 7,30 | 0,45 | 360,00 | 80,40 | 198,10 | 106,77 |
| 24/4/2012 | 06:00:00 | 18,70 | 7,31 | 0,40 | 362,00 | 105,00 | 198,10 | 159,06 |
| 24/4/2012 | 07:00:00 | 18,80 | 7,32 | 0,60 | 360,00 | 97,80 | 158,50 | 191,91 |
| 24/4/2012 | 08:00:00 | 18,80 | 7,29 | 1,10 | 484,00 | 163,00 | 277,30 | 226,75 |
| 24/4/2012 | 09:00:00 | 18,80 | 7,57 | 4,70 | 886,00 | 333,00 | 554,70 | 263,48 |
| 24/4/2012 | 10:00:00 | 18,90 | 7,16 | 4,80 | 920,00 | 529,00 | 1109,04 | 292,21 |
| 24/4/2012 | 11:00:00 | 18,90 | 7,18 | 4,00 | 746,00 | 381,00 | 792,40 | 332,02 |
| 24/4/2012 | 12:00:00 | 18,90 | 7,13 | 4,50 | 684,00 | 463,00 | 792,40 | 352,56 |
| 24/4/2012 | 13:00:00 | 18,90 | 6,88 | 2,00 | 551,00 | 379,00 | 673,50 | 362,98 |
| 24/4/2012 | 14:00:00 | 18,90 | 6,88 | 2,00 | 550,00 | 361,00 | 594,30 | 373,50 |
| 24/4/2012 | 15:00:00 | 18,90 | 6,85 | 2,20 | 554,00 | 405,00 | 752,80 | 373,50 |
| 24/4/2012 | 16:00:00 | 18,90 | 6,91 | 2,60 | 587,00 | 401,00 | 792,40 | 373,50 |
| 24/4/2012 | 17:00:00 | 18,90 | 6,99 | 2,70 | 607,00 | 394,00 | 594,30 | 342,24 |
| 24/4/2012 | 18:00:00 | 18,90 | 6,92 | 3,50 | 606,00 | 433,00 | 752,80 | 321,91 |
| 24/4/2012 | 19:00:00 | 18,90 | 6,96 | 2,80 | 594,00 | 325,00 | 435,80 | 282,52 |
| 24/4/2012 | 20:00:00 | 19,00 | 7,01 | 2,30 | 600,00 | 331,00 | 554,70 | 254,13 |
| 24/4/2012 | 21:00:00 | 19,00 | 6,97 | 2,10 | 592,00 | 408,00 | 713,20 | 235,76 |
| 24/4/2012 | 22:00:00 | 18,90 | 7,10 | 1,00 | 743,00 | 276,00 | 515,10 | 217,86 |
| 24/4/2012 | 23:00:00 | 19,00 | 7,10 | 2,00 | 742,00 | 317,00 | 554,70 | 200,44 |
| 25/4/2012 | 00:00:00 | 18,90 | 7,21 | 2,10 | 646,00 | 210,00 | 396,20 | 200,44 |
| 25/4/2012 | 01:00:00 | 18,90 | 7,23 | 1,10 | 644,00 | 178,20 | 317,00 | 183,50 |
| 25/4/2012 | 02:00:00 | 18,90 | 7,30 | 1,00 | 638,00 | 184,20 | 356,60 | 167,08 |
| 25/4/2012 | 03:00:00 | 18,90 | 7,34 | 2,30 | 640,00 | 199,80 | 475,40 | 159,06 |
| 29/5/2012 | 04:00:00 | 16,20 | 7,33 | 1,00 | 387,00 | 65,00 | 118,00 | 67,85 |
| 29/5/2012 | 05:00:00 | 16,40 | 7,34 | 0,40 | 388,00 | 108,00 | 237,70 | 121,00 |
| 29/5/2012 | 06:00:00 | 16,40 | 7,34 | 0,80 | 388,00 | 61,80 | 158,50 | 226,75 |
| 29/5/2012 | 07:00:00 | 16,50 | 7,33 | 1,50 | 403,00 | 68,40 | 158,50 | 244,89 |
| 29/5/2012 | 08:00:00 | 16,50 | 7,33 | 0,90 | 402,00 | 122,00 | 237,70 | 292,21 |
| 29/5/2012 | 09:00:00 | 16,40 | 7,90 | 3,50 | 767,00 | 199,00 | 633,90 | 321,91 |
| 29/5/2012 | 10:00:00 | 16,50 | 8,36 | 2,40 | 1023,00 | 297,00 | 752,80 | 342,24 |
| 29/5/2012 | 11:00:00 | 16,60 | 7,79 | 5,00 | 854,00 | 300,00 | 673,50 | 342,24 |
| 29/5/2012 | 12:00:00 | 16,50 | 7,34 | 3,50 | 691,00 | 265,00 | 633,90 | 362,98 |
| 29/5/2012 | 13:00:00 | 16,60 | 7,01 | 2,10 | 566,00 | 272,00 | 594,30 | 373,50 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 29/5/2012 | 14:00:00 | 16,70 | 7,26 | 3,60 | 607,00 | 306,00 | 673,50 | 373,50 |
| 29/5/2012 | 15:00:00 | 16,70 | 7,02 | 3,10 | 580,00 | 241,00 | 752,80 | 373,50 |
| 29/5/2012 | 16:00:00 | 16,50 | 7,10 | 1,50 | 598,00 | 481,00 | 1188,60 | 352,56 |
| 29/5/2012 | 17:00:00 | 16,50 | 7,06 | 2,90 | 627,00 | 333,00 | 752,80 | 332,02 |
| 29/5/2012 | 18:00:00 | 16,50 | 7,12 | 2,60 | 596,00 | 318,00 | 832,00 | 311,90 |
| 29/5/2012 | 19:00:00 | 16,40 | 7,04 | 1,20 | 610,00 | 351,00 | 673,50 | 292,21 |
| 29/5/2012 | 20:00:00 | 16,50 | 7,20 | 1,60 | 612,00 | 329,00 | 633,90 | 292,21 |
| 29/5/2012 | 21:00:00 | 16,40 | 7,43 | 2,90 | 677,00 | 264,00 | 554,70 | 272,95 |
| 29/5/2012 | 22:00:00 | 16,70 | 7,39 | 1,00 | 673,00 | 257,00 | 594,30 | 244,89 |
| 29/5/2012 | 23:00:00 | 16,50 | 7,41 | 1,60 | 688,00 | 195,00 | 475,40 | 226,75 |
| 30/5/2012 | 01:00:00 | 16,50 | 7,47 | 0,90 | 806,00 | 210,00 | 435,80 | 175,23 |
| 30/5/2012 | 02:00:00 | 16,70 | 7,48 | 0,80 | 811,00 | 225,00 | 396,20 | 151,17 |
| 30/5/2012 | 03:00:00 | 16,50 | 7,49 | 0,90 | 800,00 | 190,20 | 477,60 | 121,00 |
| 30/5/2012 | 00:00:00 | 16,70 | 7,43 | 2,00 | 687,00 | 245,00 | 435,80 | 200,44 |
| 12/6/2012 | 04:00:00 | 14,70 | 7,43 | 0,40 | 381,00 | 87,00 | 117,65 | 61,95 |
| 12/6/2012 | 05:00:00 | 14,20 | 7,38 | 0,50 | 380,00 | 76,80 | 117,65 | 73,92 |
| 12/6/2012 | 06:00:00 | 14,30 | 7,46 | 0,60 | 382,00 | 107,40 | 156,86 | 121,00 |
| 12/6/2012 | 07:00:00 | 14,20 | 7,42 | 0,50 | 382,00 | 92,40 | 156,86 | 209,09 |
| 12/6/2012 | 08:00:00 | 14,20 | 7,54 | 0,90 | 434,00 | 122,00 | 235,30 | 282,52 |
| 12/6/2012 | 09:00:00 | 14,20 | 8,14 | 3,90 | 688,00 | 287,00 | 588,24 | 332,02 |
| 12/6/2012 | 10:00:00 | 14,20 | 8,42 | 4,00 | 956,00 | 325,00 | 901,97 | 362,98 |
| 12/6/2012 | 11:00:00 | 14,20 | 7,90 | 3,00 | 867,00 | 325,00 | 705,89 | 384,12 |
| 12/6/2012 | 12:00:00 | 14,20 | 7,38 | 2,60 | 655,00 | 573,00 | 980,40 | 384,12 |
| 12/6/2012 | 13:00:00 | 14,30 | 7,18 | 2,40 | 590,00 | 294,00 | 588,24 | 384,12 |
| 12/6/2012 | 14:00:00 | 14,50 | 7,00 | 2,80 | 536,00 | 369,00 | 588,24 | 373,50 |
| 12/6/2012 | 15:00:00 | 14,60 | 7,03 | 2,50 | 527,00 | 292,00 | 627,46 | 342,24 |
| 12/6/2012 | 16:00:00 | 14,70 | 7,00 | 2,70 | 563,00 | 332,00 | 549,02 | 342,24 |
| 12/6/2012 | 17:00:00 | 14,70 | 7,05 | 2,90 | 547,00 | 369,00 | 784,32 | 332,02 |
| 12/6/2012 | 18:00:00 | 14,70 | 7,00 | 3,70 | 576,00 | 404,00 | 745,10 | 311,90 |
| 12/6/2012 | 19:00:00 | 14,70 | 7,24 | 2,30 | 580,00 | 376,00 | 666,67 | 292,21 |
| 12/6/2012 | 20:00:00 | 14,80 | 7,22 | 2,40 | 580,00 | 297,00 | 627,46 | 272,95 |
| 12/6/2012 | 21:00:00 | 14,90 | 7,25 | 1,90 | 592,00 | 234,00 | 666,67 | 272,95 |
| 12/6/2012 | 22:00:00 | 14,60 | 7,26 | 1,40 | 598,00 | 290,00 | 509,81 | 244,89 |
| 12/6/2012 | 23:00:00 | 14,80 | 7,35 | 1,60 | 652,00 | 215,00 | 352,94 | 226,75 |
| 13/6/2012 | 01:00:00 | 14,20 | 7,56 | 1,30 | 652,00 | 248,40 | 392,16 | 175,23 |
| 13/6/2012 | 02:00:00 | 14,10 | 7,58 | 1,00 | 650,00 | 224,40 | 313,73 | 159,06 |
| 13/6/2012 | 03:00:00 | 14,50 | 7,58 | 0,90 | 659,00 | 236,40 | 666,67 | 135,81 |
| 13/6/2012 | 00:00:00 | 14,80 | 7,37 | 1,70 | 657,00 | 306,80 | 509,81 | 200,44 |
| 10/7/2012 | 04:00:00 | 14,90 | 7,30 | 1,40 | 387,00 | 77,00 | 137,00 | 73,92 |
| 10/7/2012 | 05:00:00 | 15,00 | 7,35 | 1,50 | 389,00 | 75,00 | 196,00 | 86,58 |
| 10/7/2012 | 06:00:00 | 15,10 | 7,36 | 1,00 | 395,00 | 119,00 | 431,00 | 217,86 |
| 10/7/2012 | 07:00:00 | 15,30 | 7,31 | 1,00 | 394,00 | 62,00 | 118,00 | 263,48 |
| 10/7/2012 | 08:00:00 | 15,40 | 7,60 | 2,50 | 549,00 | 114,00 | 196,00 | 342,24 |
| 10/7/2012 | 09:00:00 | 15,60 | 8,49 | 5,60 | 845,00 | 308,00 | 824,00 | 362,98 |
| 10/7/2012 | 10:00:00 | 15,80 | 8,59 | 3,00 | 978,00 | 270,00 | 706,00 | 384,12 |
| 10/7/2012 | 11:00:00 | 15,90 | 8,40 | 5,30 | 893,00 | 335,00 | 627,00 | 394,84 |
| 10/7/2012 | 12:00:00 | 16,00 | 8,14 | 5,80 | 778,00 | 282,00 | 902,00 | 405,66 |
| 10/7/2012 | 13:00:00 | 16,40 | 7,40 | 1,80 | 575,00 | 487,00 | 1098,00 | 394,84 |
| 10/7/2012 | 14:00:00 | 16,40 | 7,32 | 2,80 | 575,00 | 326,00 | 588,00 | 373,50 |
| 10/7/2012 | 15:00:00 | 16,50 | 7,32 | 2,50 | 596,00 | 312,00 | 627,00 | 321,91 |
| 10/7/2012 | 16:00:00 | 16,90 | 7,36 | 1,60 | 594,00 | 355,00 | 706,00 | 332,02 |
| 10/7/2012 | 17:00:00 | 17,10 | 7,49 | 2,60 | 616,00 | 338,00 | 745,00 | 332,02 |
| 10/7/2012 | 18:00:00 | 17,40 | 7,61 | 3,00 | 610,00 | 322,00 | 706,00 | 321,91 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 10/7/2012 | 19:00:00 | 14,00 | 7,25 | 2,00 | 597,00 | 338,00 | 627,00 | 311,90 |
| 10/7/2012 | 20:00:00 | 13,80 | 7,53 | 1,90 | 760,00 | 244,00 | 549,00 | 302,00 |
| 10/7/2012 | 21:00:00 | 13,80 | 7,57 | 2,00 | 757,00 | 427,00 | 980,00 | 292,21 |
| 10/7/2012 | 22:00:00 | 14,10 | 7,54 | 2,60 | 794,00 | 210,00 | 392,00 | 263,48 |
| 10/7/2012 | 23:00:00 | 14,30 | 7,56 | 1,40 | 798,00 | 232,00 | 353,00 | 254,13 |
| 11/7/2012 | 01:00:00 | 14,60 | 7,50 | 0,80 | 822,00 | 570,00 | 1176,00 | 226,75 |
| 11/7/2012 | 02:00:00 | 14,70 | 7,40 | 0,50 | 832,00 | 640,00 | 1020,00 | 183,50 |
| 11/7/2012 | 03:00:00 | 14,70 | 7,40 | 1,00 | 829,00 | 603,00 | 1176,00 | 159,06 |
| 11/7/2012 | 00:00:00 | 14,40 | 7,55 | 1,40 | 798,00 | 224,00 | 431,00 | 235,76 |
| 14/8/2012 | 04:00:00 | 17,90 | 7,58 | 0,21 | 483,00 | 87,00 | 156,90 | 106,77 |
| 14/8/2012 | 05:00:00 | 17,90 | 7,57 | 0,80 | 484,00 | 123,60 | 274,50 | 73,92 |
| 14/8/2012 | 06:00:00 | 17,90 | 7,60 | 0,50 | 484,00 | 99,00 | 235,30 | 121,00 |
| 14/8/2012 | 07:00:00 | 17,90 | 7,60 | 1,10 | 484,00 | 104,40 | 196,10 | 183,00 |
| 14/8/2012 | 08:00:00 | 18,00 | 7,71 | 1,30 | 560,00 | 207,00 | 392,20 | 263,48 |
| 14/8/2012 | 09:00:00 | 18,10 | 8,40 | 5,00 | 887,00 | 283,00 | 705,90 | 302,00 |
| 14/8/2012 | 10:00:00 | 18,10 | 8,26 | 6,00 | 956,00 | 562,00 | 1137,30 | 321,91 |
| 14/8/2012 | 11:00:00 | 18,40 | 7,98 | 6,00 | 858,00 | 397,00 | 862,80 | 352,56 |
| 14/8/2012 | 12:00:00 | 18,70 | 7,55 | 3,00 | 765,00 | 320,00 | 823,50 | 373,50 |
| 14/8/2012 | 13:00:00 | 18,90 | 7,22 | 2,10 | 620,00 | 394,00 | 862,80 | 394,84 |
| 14/8/2012 | 14:00:00 | 18,80 | 7,23 | 1,50 | 596,00 | 468,00 | 784,30 | 394,84 |
| 14/8/2012 | 15:00:00 | 18,90 | 7,23 | 2,60 | 615,00 | 344,00 | 666,70 | 362,98 |
| 14/8/2012 | 16:00:00 | 19,10 | 7,26 | 2,40 | 635,00 | 389,00 | 745,10 | 362,98 |
| 14/8/2012 | 17:00:00 | 19,20 | 7,31 | 3,40 | 644,00 | 420,00 | 784,30 | 342,24 |
| 14/8/2012 | 18:00:00 | 19,50 | 7,44 | 2,70 | 626,00 | 411,00 | 745,10 | 332,02 |
| 14/8/2012 | 19:00:00 | 17,60 | 7,17 | 2,40 | 640,00 | 369,00 | 588,20 | 311,90 |
| 14/8/2012 | 20:00:00 | 17,60 | 7,19 | 1,50 | 635,00 | 324,00 | 588,20 | 282,52 |
| 14/8/2012 | 21:00:00 | 17,70 | 7,18 | 1,00 | 640,00 | 350,00 | 588,20 | 254,13 |
| 14/8/2012 | 22:00:00 | 17,70 | 7,30 | 1,30 | 695,00 | 289,00 | 549,00 | 235,76 |
| 14/8/2012 | 23:00:00 | 17,70 | 7,26 | 2,30 | 692,00 | 274,00 | 549,00 | 200,40 |
| 15/8/2012 | 01:00:00 | 17,60 | 7,31 | 1,60 | 782,00 | 307,00 | 549,00 | 167,08 |
| 15/8/2012 | 02:00:00 | 17,60 | 7,29 | 1,50 | 781,00 | 297,00 | 549,00 | 143,42 |
| 15/8/2012 | 03:00:00 | 17,50 | 7,29 | 2,10 | 777,00 | 317,00 | 549,00 | 113,81 |
| 15/8/2012 | 00:00:00 | 17,60 | 7,31 | 1,60 | 784,00 | 396,00 | 509,80 | 191,91 |
| 25/9/2012 | 04:00:00 | 17,00 | 7,83 | 0,90 | 761,00 | 109,10 | 237,60 | 93,14 |
| 25/9/2012 | 05:00:00 | 17,10 | 7,65 | 0,50 | 542,00 | 89,30 | 198,00 | 106,77 |
| 25/9/2012 | 06:00:00 | 17,30 | 7,66 | 0,60 | 548,00 | 79,40 | 158,40 | 128,33 |
| 25/9/2012 | 07:00:00 | 17,20 | 7,32 | 1,00 | 508,00 | 74,40 | 158,40 | 135,81 |
| 25/9/2012 | 08:00:00 | 17,50 | 7,50 | 3,20 | 649,00 | 208,30 | 554,50 | 244,89 |
| 25/9/2012 | 09:00:00 | 17,20 | 7,90 | 8,60 | 985,00 | 426,50 | 871,30 | 321,91 |
| 25/9/2012 | 10:00:00 | 17,50 | 8,00 | 5,70 | 1005,00 | 446,40 | 910,90 | 332,02 |
| 25/9/2012 | 11:00:00 | 17,30 | 7,56 | 4,90 | 844,00 | 456,30 | 950,50 | 311,90 |
| 25/9/2012 | 12:00:00 | 17,30 | 7,30 | 3,60 | 686,00 | 426,50 | 792,10 | 311,90 |
| 25/9/2012 | 13:00:00 | 17,10 | 7,26 | 1,90 | 613,00 | 347,20 | 594,00 | 302,00 |
| 25/9/2012 | 14:00:00 | 17,30 | 7,31 | 1,80 | 618,00 | 476,10 | 1069,30 | 282,52 |
| 25/9/2012 | 15:00:00 | 17,30 | 7,20 | 2,10 | 618,00 | 337,20 | 633,70 | 282,52 |
| 25/9/2012 | 16:00:00 | 17,30 | 7,33 | 3,00 | 673,00 | 317,40 | 633,70 | 263,48 |
| 25/9/2012 | 17:00:00 | 17,40 | 7,33 | 2,80 | 696,00 | 396,80 | 871,30 | 254,13 |
| 25/9/2012 | 18:00:00 | 16,40 | 7,36 | 2,90 | 755,00 | 287,60 | 554,50 | 226,75 |
| 25/9/2012 | 19:00:00 | 16,00 | 7,50 | 2,00 | 694,00 | 248,00 | 554,50 | 209,09 |
| 25/9/2012 | 20:00:00 | 15,80 | 7,72 | 2,20 | 854,00 | 267,80 | 594,10 | 183,50 |
| 25/9/2012 | 21:00:00 | 15,80 | 7,58 | 2,00 | 851,00 | 248,00 | 514,90 | 183,50 |
| 25/9/2012 | 22:00:00 | 16,10 | 7,75 | 2,80 | 925,00 | 228,10 | 475,30 | 159,06 |
| 25/9/2012 | 23:00:00 | 16,60 | 7,76 | 1,90 | 964,00 | 238,10 | 514,90 | 135,81 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|------------|----------|-------|-------|------------|---------|-----------------------|----------|--------------|
| 26/9/2012 | 01:00:00 | 17,10 | 7,68 | 1,10 | 92,00 | 158,70 | 356,40 | 99,89 |
| 26/9/2012 | 02:00:00 | 17,40 | 7,76 | 1,00 | 938,00 | 168,60 | 316,80 | 80,17 |
| 26/9/2012 | 03:00:00 | 17,20 | 7,75 | 1,40 | 934,00 | 158,70 | 396,00 | 67,85 |
| 26/9/2012 | 00:00:00 | 17,00 | 7,80 | 1,80 | 942,00 | 218,20 | 475,30 | 121,00 |
| 23/10/2012 | 04:00:00 | 20,40 | 7,57 | 0,50 | 582,00 | 184,00 | 356,00 | 80,17 |
| 23/10/2012 | 05:00:00 | 20,50 | 7,60 | 0,50 | 581,00 | 179,00 | 317,00 | 121,00 |
| 23/10/2012 | 06:00:00 | 20,50 | 7,58 | 1,10 | 585,00 | 173,00 | 259,00 | 151,17 |
| 23/10/2012 | 07:00:00 | 20,50 | 7,60 | 0,90 | 552,00 | 179,00 | 396,00 | 209,09 |
| 23/10/2012 | 08:00:00 | 20,50 | 7,58 | 4,50 | 743,00 | 486,00 | 990,00 | 235,76 |
| 23/10/2012 | 09:00:00 | 20,60 | 7,72 | 5,60 | 1056,00 | 476,00 | 990,00 | 263,48 |
| 23/10/2012 | 10:00:00 | 20,60 | 7,72 | 4,00 | 1011,00 | 466,00 | 871,00 | 302,00 |
| 23/10/2012 | 11:00:00 | 20,70 | 7,42 | 3,00 | 813,00 | 427,00 | 792,00 | 321,91 |
| 23/10/2012 | 12:00:00 | 20,70 | 7,43 | 3,10 | 784,00 | 476,00 | 832,00 | 342,24 |
| 23/10/2012 | 13:00:00 | 20,60 | 7,37 | 2,40 | 768,00 | 387,00 | 792,00 | 352,56 |
| 23/10/2012 | 14:00:00 | 20,60 | 7,56 | 2,50 | 792,00 | 436,00 | 832,00 | 362,98 |
| 23/10/2012 | 15:00:00 | 20,50 | 7,31 | 2,60 | 819,00 | 476,00 | 871,00 | 362,98 |
| 23/10/2012 | 16:00:00 | 20,40 | 7,43 | 2,00 | 848,00 | 615,00 | 1188,00 | 352,56 |
| 23/10/2012 | 17:00:00 | 20,10 | 7,52 | 2,90 | 836,00 | 417,00 | 832,00 | 321,91 |
| 23/10/2012 | 18:00:00 | 20,10 | 7,53 | 6,60 | 833,00 | 397,00 | 792,00 | 302,00 |
| 23/10/2012 | 19:00:00 | 20,40 | 7,67 | 3,50 | 1009,00 | 412,00 | 752,00 | 282,52 |
| 23/10/2012 | 20:00:00 | 20,50 | 7,65 | 2,80 | 1011,00 | 466,00 | 832,00 | 254,13 |
| 23/10/2012 | 21:00:00 | 20,50 | 7,65 | 3,10 | 1012,00 | 486,00 | 911,00 | 244,89 |
| 23/10/2012 | 22:00:00 | 20,50 | 7,73 | 1,40 | 1018,00 | 347,00 | 673,00 | 217,86 |
| 23/10/2012 | 23:00:00 | 20,60 | 7,70 | 1,40 | 1016,00 | 337,00 | 673,00 | 191,91 |
| 24/10/2012 | 01:00:00 | 20,40 | 7,58 | 3,50 | 1034,00 | 427,00 | 832,00 | 135,81 |
| 24/10/2012 | 02:00:00 | 20,60 | 7,72 | 1,60 | 1004,00 | 288,00 | 594,00 | 106,77 |
| 24/10/2012 | 03:00:00 | 20,50 | 7,73 | 1,90 | 1001,00 | 278,00 | 594,00 | 93,15 |
| 24/10/2012 | 00:00:00 | 20,40 | 7,62 | 1,60 | 1017,00 | 327,00 | 634,00 | 159,06 |
| 27/11/2012 | 04:00:00 | 22,50 | 6,92 | 0,50 | 634,00 | 180,00 | 385,00 | 73,92 |
| 27/11/2012 | 05:00:00 | 22,50 | 6,96 | 0,60 | 633,00 | 180,00 | 369,00 | 128,33 |
| 27/11/2012 | 06:00:00 | 22,50 | 6,92 | 0,60 | 635,00 | 165,00 | 385,00 | 159,06 |
| 27/11/2012 | 07:00:00 | 22,50 | 6,93 | 0,70 | 631,00 | 140,00 | 231,00 | 200,44 |
| 27/11/2012 | 08:00:00 | 22,50 | 6,89 | 2,70 | 651,00 | 271,00 | 539,00 | 254,13 |
| 27/11/2012 | 09:00:00 | 22,70 | 7,35 | 6,10 | 1055,00 | 441,00 | 962,00 | 302,00 |
| 27/11/2012 | 10:00:00 | 22,80 | 7,00 | 4,60 | 927,00 | 411,00 | 847,00 | 321,91 |
| 27/11/2012 | 11:00:00 | 22,90 | 10,00 | 4,20 | 825,00 | 401,00 | 808,00 | 342,24 |
| 27/11/2012 | 12:00:00 | 23,10 | 7,03 | 4,90 | 698,00 | 366,00 | 577,00 | 362,98 |
| 27/11/2012 | 13:00:00 | 23,30 | 6,76 | 2,40 | 657,00 | 421,00 | 827,00 | 373,50 |
| 27/11/2012 | 14:00:00 | 22,90 | 6,60 | 3,30 | 608,00 | 381,00 | 847,00 | 384,12 |
| 27/11/2012 | 15:00:00 | 22,90 | 6,52 | 3,00 | 607,00 | 371,00 | 693,00 | 384,12 |
| 27/11/2012 | 16:00:00 | 23,10 | 6,56 | 2,80 | 648,00 | 391,00 | 808,00 | 384,12 |
| 27/11/2012 | 17:00:00 | 23,20 | 6,56 | 2,90 | 675,00 | 431,00 | 808,00 | 373,50 |
| 27/11/2012 | 18:00:00 | 22,10 | 6,62 | 2,70 | 672,00 | 341,00 | 693,00 | 342,24 |
| 27/11/2012 | 19:00:00 | 22,10 | 6,53 | 2,30 | 821,00 | 321,00 | 500,00 | 321,91 |
| 27/11/2012 | 20:00:00 | 22,10 | 6,86 | 2,40 | 822,00 | 291,00 | 693,00 | 292,21 |
| 27/11/2012 | 21:00:00 | 22,10 | 6,88 | 2,60 | 820,00 | 281,00 | 539,00 | 254,13 |
| 27/11/2012 | 22:00:00 | 22,10 | 6,88 | 2,40 | 819,00 | 276,00 | 539,00 | 226,75 |
| 27/11/2012 | 23:00:00 | 22,20 | 6,89 | 1,90 | 917,00 | 281,00 | 500,00 | 191,91 |
| 28/11/2012 | 01:00:00 | 22,10 | 6,77 | 2,30 | 995,00 | 331,00 | 654,00 | 135,81 |
| 28/11/2012 | 02:00:00 | 22,10 | 6,88 | 1,80 | 1003,00 | 321,00 | 616,00 | 121,00 |
| 28/11/2012 | 03:00:00 | 22,20 | 6,92 | 2,00 | 977,00 | 331,00 | 577,00 | 99,89 |
| 28/11/2012 | 00:00:00 | 22,20 | 6,80 | 2,30 | 917,00 | 271,00 | 423,00 | 159,06 |
| 11/12/2012 | 04:00:00 | 24,30 | 6,60 | 0,60 | 545,00 | 144,28 | 230,88 | 80,17 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|------------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 11/12/2012 | 05:00:00 | 24,20 | 6,60 | 0,60 | 544,00 | 96,19 | 153,92 | 113,81 |
| 11/12/2012 | 06:00:00 | 24,30 | 6,61 | 1,00 | 555,00 | 197,79 | 307,84 | 159,06 |
| 11/12/2012 | 07:00:00 | 24,20 | 6,55 | 2,00 | 588,00 | 180,35 | 423,28 | 200,44 |
| 11/12/2012 | 08:00:00 | 24,20 | 6,81 | 4,00 | 840,00 | 340,67 | 692,64 | 254,14 |
| 11/12/2012 | 09:00:00 | 24,40 | 6,78 | 8,50 | 1014,00 | 384,80 | 885,04 | 302,00 |
| 11/12/2012 | 10:00:00 | 24,50 | 6,61 | 6,00 | 875,00 | 531,04 | 1077,44 | 332,02 |
| 11/12/2012 | 11:00:00 | 24,60 | 6,63 | 4,90 | 837,00 | 410,80 | 846,56 | 352,56 |
| 11/12/2012 | 12:00:00 | 24,60 | 6,40 | 3,00 | 775,00 | 340,67 | 654,16 | 373,50 |
| 11/12/2012 | 13:00:00 | 24,70 | 6,24 | 2,40 | 655,00 | 320,63 | 692,64 | 384,12 |
| 11/12/2012 | 14:00:00 | 24,60 | 6,32 | 3,90 | 650,00 | 370,73 | 731,12 | 384,12 |
| 11/12/2012 | 15:00:00 | 24,70 | 6,31 | 2,90 | 690,00 | 390,77 | 692,64 | 384,12 |
| 11/12/2012 | 16:00:00 | 24,80 | 6,40 | 3,00 | 687,00 | 480,94 | 1192,88 | 384,12 |
| 11/12/2012 | 17:00:00 | 24,80 | 6,55 | 3,30 | 756,00 | 440,86 | 1000,48 | 362,98 |
| 11/12/2012 | 18:00:00 | 23,70 | 6,31 | 3,50 | 761,00 | 350,69 | 654,16 | 332,02 |
| 11/12/2012 | 19:00:00 | 22,70 | 6,43 | 2,40 | 789,00 | 340,67 | 615,68 | 302,00 |
| 11/12/2012 | 20:00:00 | 22,60 | 6,52 | 2,50 | 819,00 | 320,63 | 577,20 | 272,95 |
| 11/12/2012 | 21:00:00 | 22,40 | 6,60 | 2,90 | 852,00 | 490,96 | 1192,88 | 244,89 |
| 11/12/2012 | 22:00:00 | 22,40 | 6,56 | 2,80 | 887,00 | 370,73 | 615,68 | 217,86 |
| 11/12/2012 | 23:00:00 | 22,50 | 6,60 | 1,80 | 902,00 | 330,65 | 692,64 | 191,91 |
| 12/12/2012 | 01:00:00 | 22,80 | 6,58 | 1,00 | 904,00 | 290,57 | 500,24 | 143,42 |
| 12/12/2012 | 02:00:00 | 23,00 | 6,64 | 1,00 | 802,00 | 280,55 | 461,70 | 121,00 |
| 12/12/2012 | 03:00:00 | 23,10 | 6,63 | 0,90 | 799,00 | 199,79 | 384,80 | 106,77 |
| 12/12/2012 | 00:00:00 | 22,50 | 6,60 | 1,80 | 898,00 | 330,65 | 577,20 | 159,06 |
| 29/1/2013 | 04:00:00 | 22,30 | 7,22 | 0,30 | 590,00 | 82,40 | 158,40 | 73,92 |
| 29/1/2013 | 05:00:00 | 22,20 | 7,20 | 0,40 | 586,00 | 87,60 | 158,40 | 93,15 |
| 29/1/2013 | 06:00:00 | 22,10 | 7,19 | 0,40 | 587,00 | 103,00 | 198,00 | 128,33 |
| 29/1/2013 | 07:00:00 | 22,20 | 7,23 | 0,70 | 546,00 | 72,10 | 118,80 | 175,23 |
| 29/1/2013 | 08:00:00 | 22,30 | 7,62 | 2,40 | 779,00 | 267,80 | 435,60 | 282,52 |
| 29/1/2013 | 09:00:00 | 22,40 | 7,83 | 6,50 | 1029,00 | 412,10 | 752,50 | 362,98 |
| 29/1/2013 | 10:00:00 | 22,60 | 7,51 | 3,50 | 957,00 | 453,30 | 871,30 | 384,12 |
| 29/1/2013 | 11:00:00 | 22,80 | 7,53 | 3,80 | 852,00 | 443,00 | 851,50 | 384,12 |
| 29/1/2013 | 12:00:00 | 22,80 | 7,31 | 3,00 | 767,00 | 381,20 | 792,10 | 384,12 |
| 29/1/2013 | 13:00:00 | 23,00 | 6,88 | 2,10 | 609,00 | 370,90 | 673,30 | 362,98 |
| 29/1/2013 | 14:00:00 | 22,90 | 6,91 | 3,40 | 608,00 | 350,30 | 673,30 | 362,98 |
| 29/1/2013 | 15:00:00 | 23,00 | 7,08 | 3,50 | 631,00 | 309,10 | 693,10 | 342,24 |
| 29/1/2013 | 16:00:00 | 22,90 | 7,19 | 3,00 | 656,00 | 391,50 | 752,50 | 342,24 |
| 29/1/2013 | 17:00:00 | 23,00 | 7,27 | 3,40 | 664,00 | 473,90 | 950,50 | 321,91 |
| 29/1/2013 | 18:00:00 | 21,70 | 7,07 | 2,50 | 655,00 | 360,60 | 653,50 | 321,91 |
| 29/1/2013 | 19:00:00 | 21,70 | 7,02 | 2,80 | 642,00 | 381,20 | 712,90 | 292,21 |
| 29/1/2013 | 20:00:00 | 21,70 | 7,23 | 2,00 | 769,00 | 298,80 | 594,10 | 272,95 |
| 29/1/2013 | 21:00:00 | 21,70 | 7,24 | 2,30 | 769,00 | 350,30 | 673,30 | 272,95 |
| 29/1/2013 | 22:00:00 | 21,60 | 7,65 | 2,10 | 802,00 | 340,00 | 613,90 | 244,89 |
| 29/1/2013 | 23:00:00 | 21,60 | 7,38 | 1,80 | 776,00 | 236,90 | 435,60 | 226,75 |
| 30/1/2013 | 01:00:00 | 21,50 | 7,45 | 2,00 | 786,00 | 195,70 | 396,00 | 175,23 |
| 30/1/2013 | 02:00:00 | 21,60 | 7,89 | 1,90 | 826,00 | 267,80 | 435,60 | 151,17 |
| 30/1/2013 | 03:00:00 | 21,40 | 7,60 | 1,80 | 777,00 | 247,20 | 356,40 | 99,89 |
| 30/1/2013 | 00:00:00 | 21,50 | 7,44 | 2,00 | 786,00 | 319,40 | 594,10 | 200,44 |
| 27/2/2013 | 04:00:00 | 20,60 | 7,29 | 0,50 | 455,00 | 77,50 | 158,40 | 73,92 |
| 27/2/2013 | 05:00:00 | 20,70 | 7,38 | 0,80 | 456,00 | 91,60 | 198,00 | 121,00 |
| 27/2/2013 | 06:00:00 | 20,80 | 7,36 | 0,70 | 458,00 | 133,60 | 277,20 | 175,23 |
| 27/2/2013 | 07:00:00 | 20,90 | 7,38 | 0,50 | 459,00 | 119,80 | 237,60 | 226,75 |
| 27/2/2013 | 08:00:00 | 21,00 | 7,37 | 2,10 | 620,00 | 218,40 | 514,90 | 282,52 |
| 27/2/2013 | 09:00:00 | 21,10 | 7,85 | 6,50 | 1043,00 | 317,00 | 831,70 | 321,91 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 27/2/2013 | 10:00:00 | 21,30 | 7,48 | 8,00 | 983,00 | 310,00 | 752,50 | 352,56 |
| 27/2/2013 | 11:00:00 | 21,30 | 7,47 | 5,00 | 842,00 | 359,30 | 910,90 | 373,50 |
| 27/2/2013 | 12:00:00 | 21,40 | 7,04 | 4,10 | 748,00 | 387,50 | 871,30 | 394,84 |
| 27/2/2013 | 13:00:00 | 21,50 | 6,92 | 2,00 | 629,00 | 359,30 | 712,90 | 394,84 |
| 27/2/2013 | 14:00:00 | 21,70 | 6,96 | 2,00 | 630,00 | 394,50 | 831,70 | 384,12 |
| 27/2/2013 | 15:00:00 | 21,90 | 6,95 | 5,00 | 639,00 | 415,60 | 1148,50 | 384,12 |
| 27/2/2013 | 16:00:00 | 22,10 | 7,02 | 5,00 | 686,00 | 415,60 | 1069,30 | 332,02 |
| 27/2/2013 | 17:00:00 | 22,40 | 7,18 | 2,50 | 688,00 | 338,20 | 673,30 | 311,90 |
| 27/2/2013 | 18:00:00 | 20,40 | 6,91 | 4,50 | 680,00 | 415,60 | 1267,30 | 311,90 |
| 27/2/2013 | 19:00:00 | 20,20 | 7,06 | 3,50 | 686,00 | 317,00 | 712,90 | 272,95 |
| 27/2/2013 | 20:00:00 | 20,00 | 7,22 | 2,00 | 777,00 | 408,60 | 1069,30 | 263,48 |
| 27/2/2013 | 21:00:00 | 20,10 | 7,30 | 2,00 | 782,00 | 317,20 | 633,70 | 263,48 |
| 27/2/2013 | 22:00:00 | 20,30 | 7,28 | 2,50 | 750,00 | 246,50 | 514,90 | 263,48 |
| 27/2/2013 | 23:00:00 | 20,30 | 7,26 | 2,00 | 749,00 | 169,10 | 396,00 | 244,89 |
| 28/2/2013 | 01:00:00 | 20,70 | 7,37 | 1,70 | 755,00 | 204,30 | 475,30 | 226,75 |
| 28/2/2013 | 02:00:00 | 20,70 | 7,42 | 1,80 | 771,00 | 302,90 | 673,30 | 191,91 |
| 28/2/2013 | 03:00:00 | 20,70 | 7,43 | 2,30 | 770,00 | 317,00 | 792,10 | 143,42 |
| 28/2/2013 | 00:00:00 | 20,50 | 7,27 | 2,50 | 750,00 | 211,30 | 514,90 | 244,89 |
| 5/3/2013 | 04:00:00 | 20,60 | 7,38 | 0,30 | 464,00 | 70,44 | 119,40 | 67,85 |
| 5/3/2013 | 05:00:00 | 20,70 | 7,39 | 0,40 | 463,00 | 56,36 | 119,40 | 86,58 |
| 5/3/2013 | 06:00:00 | 20,70 | 7,49 | 0,40 | 466,00 | 73,97 | 119,40 | 143,42 |
| 5/3/2013 | 07:00:00 | 20,70 | 7,43 | 0,50 | 462,00 | 133,85 | 238,80 | 200,44 |
| 5/3/2013 | 08:00:00 | 20,80 | 7,45 | 1,70 | 577,00 | 137,37 | 398,00 | 235,76 |
| 5/3/2013 | 09:00:00 | 20,90 | 8,10 | 6,00 | 1012,00 | 225,43 | 796,00 | 254,13 |
| 5/3/2013 | 10:00:00 | 21,20 | 8,15 | 5,50 | 1010,00 | 253,61 | 636,80 | 292,21 |
| 5/3/2013 | 11:00:00 | 21,30 | 7,73 | 5,00 | 891,00 | 338,15 | 955,20 | 321,91 |
| 5/3/2013 | 12:00:00 | 21,20 | 7,29 | 4,00 | 754,00 | 309,97 | 676,60 | 352,56 |
| 5/3/2013 | 13:00:00 | 21,40 | 7,25 | 2,50 | 676,00 | 260,66 | 557,20 | 373,50 |
| 5/3/2013 | 14:00:00 | 21,50 | 7,08 | 3,40 | 603,00 | 267,70 | 676,60 | 394,84 |
| 5/3/2013 | 15:00:00 | 21,70 | 7,09 | 3,90 | 615,00 | 274,75 | 915,40 | 394,84 |
| 5/3/2013 | 16:00:00 | 22,10 | 7,22 | 3,40 | 657,00 | 204,30 | 597,00 | 384,12 |
| 5/3/2013 | 17:00:00 | 22,40 | 7,14 | 3,00 | 655,00 | 288,83 | 636,80 | 352,56 |
| 5/3/2013 | 18:00:00 | 20,30 | 7,04 | 3,80 | 648,00 | 246,57 | 676,60 | 332,02 |
| 5/3/2013 | 19:00:00 | 20,30 | 7,40 | 1,50 | 676,00 | 267,70 | 557,20 | 311,90 |
| 5/3/2013 | 20:00:00 | 20,30 | 7,35 | 2,50 | 679,00 | 183,17 | 398,00 | 272,95 |
| 5/3/2013 | 21:00:00 | 20,30 | 7,41 | 2,50 | 672,00 | 190,21 | 398,00 | 244,89 |
| 5/3/2013 | 22:00:00 | 20,30 | 7,35 | 3,00 | 682,00 | 246,56 | 477,60 | 235,76 |
| 5/3/2013 | 23:00:00 | 20,50 | 7,35 | 2,40 | 684,00 | 169,08 | 557,20 | 235,76 |
| 6/3/2013 | 01:00:00 | 20,70 | 7,48 | 1,40 | 764,00 | 155,00 | 398,00 | 159,06 |
| 6/3/2013 | 02:00:00 | 20,70 | 7,51 | 1,50 | 765,00 | 204,30 | 437,80 | 135,81 |
| 6/3/2013 | 03:00:00 | 20,60 | 7,50 | 1,40 | 765,00 | 133,85 | 398,00 | 113,81 |
| 6/3/2013 | 00:00:00 | 20,70 | 7,53 | 2,00 | 760,00 | 140,90 | 358,20 | 183,50 |
| 16/4/2013 | 04:00:00 | 18,90 | 7,62 | 0,20 | 468,00 | 80,50 | 159,20 | 61,95 |
| 16/4/2013 | 05:00:00 | 19,00 | 7,55 | 0,30 | 470,00 | 93,90 | 159,20 | 93,15 |
| 16/4/2013 | 06:00:00 | 19,10 | 7,52 | 0,20 | 469,00 | 100,70 | 179,10 | 121,00 |
| 16/4/2013 | 07:00:00 | 19,20 | 7,57 | 0,50 | 508,00 | 97,30 | 199,00 | 175,23 |
| 16/4/2013 | 08:00:00 | 19,40 | 7,61 | 0,90 | 515,00 | 154,30 | 358,20 | 217,86 |
| 16/4/2013 | 09:00:00 | 19,50 | 8,22 | 4,10 | 881,00 | 355,60 | 915,40 | 263,48 |
| 16/4/2013 | 10:00:00 | 19,80 | 8,34 | 6,50 | 1045,00 | 302,00 | 796,00 | 302,00 |
| 16/4/2013 | 11:00:00 | 20,10 | 7,94 | 4,40 | 893,00 | 302,00 | 756,20 | 342,24 |
| 16/4/2013 | 12:00:00 | 20,40 | 7,50 | 4,50 | 775,00 | 295,20 | 796,00 | 362,98 |
| 16/4/2013 | 13:00:00 | 20,50 | 7,30 | 2,80 | 645,00 | 308,70 | 716,40 | 394,84 |
| 16/4/2013 | 14:00:00 | 20,60 | 7,16 | 2,30 | 616,00 | 288,50 | 676,60 | 394,84 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 16/4/2013 | 15:00:00 | 20,70 | 7,13 | 3,90 | 614,00 | 422,70 | 1273,60 | 394,84 |
| 16/4/2013 | 16:00:00 | 21,00 | 7,20 | 3,50 | 641,00 | 402,60 | 1014,90 | 384,12 |
| 16/4/2013 | 17:00:00 | 21,20 | 7,10 | 3,90 | 638,00 | 375,80 | 875,60 | 384,12 |
| 16/4/2013 | 18:00:00 | 18,50 | 7,13 | 4,00 | 621,00 | 395,90 | 955,20 | 342,24 |
| 16/4/2013 | 19:00:00 | 18,50 | 7,23 | 2,30 | 613,00 | 275,10 | 676,60 | 342,24 |
| 16/4/2013 | 20:00:00 | 18,50 | 7,21 | 2,00 | 612,00 | 302,00 | 716,40 | 321,91 |
| 16/4/2013 | 21:00:00 | 18,60 | 7,21 | 2,90 | 650,00 | 268,40 | 636,80 | 292,21 |
| 16/4/2013 | 22:00:00 | 18,70 | 7,32 | 2,00 | 672,00 | 221,40 | 557,20 | 272,95 |
| 16/4/2013 | 23:00:00 | 18,50 | 7,34 | 2,40 | 670,00 | 234,90 | 517,40 | 235,76 |
| 17/4/2013 | 01:00:00 | 18,50 | 7,47 | 1,00 | 750,00 | 167,80 | 477,60 | 200,44 |
| 17/4/2013 | 02:00:00 | 18,50 | 7,42 | 1,40 | 669,00 | 194,60 | 398,00 | 86,58 |
| 17/4/2013 | 03:00:00 | 18,40 | 7,42 | 2,30 | 675,00 | 187,90 | 477,60 | 73,92 |
| 17/4/2013 | 00:00:00 | 18,50 | 7,48 | 2,30 | 750,00 | 214,70 | 597,00 | 226,75 |
| 21/5/2013 | 04:00:00 | 17,20 | 7,22 | 0,40 | 410,00 | 65,40 | 117,70 | 61,95 |
| 21/5/2013 | 05:00:00 | 17,30 | 7,25 | 0,60 | 416,00 | 95,60 | 196,10 | 121,00 |
| 21/5/2013 | 06:00:00 | 17,40 | 7,26 | 0,70 | 416,00 | 65,40 | 156,90 | 226,75 |
| 21/5/2013 | 07:00:00 | 17,40 | 7,21 | 0,80 | 413,00 | 80,50 | 156,90 | 263,48 |
| 21/5/2013 | 08:00:00 | 17,60 | 7,44 | 1,80 | 549,00 | 181,20 | 352,90 | 302,00 |
| 21/5/2013 | 09:00:00 | 17,80 | 8,28 | 4,80 | 904,00 | 302,00 | 627,50 | 332,02 |
| 21/5/2013 | 10:00:00 | 18,10 | 8,31 | 6,50 | 1003,00 | 355,60 | 980,40 | 352,56 |
| 21/5/2013 | 11:00:00 | 18,30 | 7,94 | 5,20 | 892,00 | 322,10 | 705,90 | 373,50 |
| 21/5/2013 | 12:00:00 | 18,30 | 6,84 | 6,90 | 841,00 | 533,40 | 1156,80 | 394,84 |
| 21/5/2013 | 13:00:00 | 18,60 | 7,23 | 3,50 | 617,00 | 228,10 | 509,80 | 394,84 |
| 21/5/2013 | 14:00:00 | 16,90 | 7,13 | 3,00 | 580,00 | 221,40 | 588,20 | 394,84 |
| 21/5/2013 | 15:00:00 | 17,40 | 6,55 | 5,00 | 741,00 | 523,40 | 1156,90 | 384,12 |
| 21/5/2013 | 16:00:00 | 17,40 | 6,67 | 4,40 | 688,00 | 513,30 | 1098,10 | 362,98 |
| 21/5/2013 | 17:00:00 | 17,40 | 7,04 | 2,80 | 620,00 | 315,40 | 862,80 | 332,02 |
| 21/5/2013 | 18:00:00 | 17,20 | 7,01 | 3,50 | 616,00 | 315,40 | 823,50 | 321,91 |
| 21/5/2013 | 19:00:00 | 17,00 | 7,52 | 1,70 | 650,00 | 201,30 | 431,40 | 321,91 |
| 21/5/2013 | 20:00:00 | 16,90 | 7,55 | 2,00 | 650,00 | 167,80 | 392,20 | 292,21 |
| 21/5/2013 | 21:00:00 | 16,80 | 7,53 | 2,20 | 649,00 | 154,30 | 392,20 | 272,95 |
| 21/5/2013 | 22:00:00 | 16,90 | 7,56 | 1,90 | 649,00 | 140,90 | 392,20 | 226,75 |
| 21/5/2013 | 23:00:00 | 17,10 | 7,53 | 2,00 | 674,00 | 174,50 | 411,80 | 209,09 |
| 22/5/2013 | 01:00:00 | 17,50 | 7,59 | 1,30 | 794,00 | 147,60 | 392,20 | 167,08 |
| 22/5/2013 | 02:00:00 | 17,50 | 7,58 | 1,20 | 793,00 | 120,80 | 372,60 | 143,42 |
| 22/5/2013 | 03:00:00 | 17,30 | 7,56 | 1,10 | 787,00 | 154,30 | 431,40 | 121,00 |
| 22/5/2013 | 00:00:00 | 17,20 | 7,50 | 2,80 | 674,00 | 167,80 | 392,20 | 191,91 |
| 25/6/2013 | 04:00:00 | 15,00 | 7,46 | 0,40 | 401,00 | 72,50 | 117,65 | 86,58 |
| 25/6/2013 | 05:00:00 | 15,10 | 7,43 | 0,40 | 402,00 | 78,55 | 156,86 | 106,77 |
| 25/6/2013 | 06:00:00 | 15,30 | 7,42 | 0,50 | 401,00 | 96,67 | 196,08 | 159,06 |
| 25/6/2013 | 07:00:00 | 15,40 | 7,39 | 0,50 | 418,00 | 96,67 | 196,08 | 217,86 |
| 25/6/2013 | 08:00:00 | 15,70 | 7,45 | 1,20 | 467,00 | 140,98 | 235,30 | 254,13 |
| 25/6/2013 | 09:00:00 | 15,70 | 8,03 | 3,30 | 650,00 | 362,52 | 588,24 | 292,21 |
| 25/6/2013 | 10:00:00 | 16,00 | 8,52 | 5,50 | 1045,00 | 422,94 | 823,54 | 321,91 |
| 25/6/2013 | 11:00:00 | 16,30 | 8,28 | 4,80 | 904,00 | 392,73 | 745,10 | 342,24 |
| 25/6/2013 | 12:00:00 | 16,40 | 7,55 | 4,60 | 791,00 | 402,80 | 784,32 | 362,98 |
| 25/6/2013 | 13:00:00 | 16,90 | 7,33 | 3,00 | 621,00 | 392,73 | 745,10 | 384,12 |
| 25/6/2013 | 14:00:00 | 16,70 | 7,30 | 4,00 | 624,00 | 483,36 | 862,75 | 384,12 |
| 25/6/2013 | 15:00:00 | 16,50 | 7,20 | 3,60 | 620,00 | 503,50 | 1058,83 | 384,12 |
| 25/6/2013 | 16:00:00 | 17,60 | 7,28 | 3,80 | 631,00 | 453,15 | 823,54 | 362,98 |
| 25/6/2013 | 17:00:00 | 17,80 | 7,31 | 3,00 | 643,00 | 503,50 | 1019,62 | 342,24 |
| 25/6/2013 | 18:00:00 | 18,40 | 7,44 | 2,50 | 655,00 | 493,43 | 901,97 | 342,24 |
| 25/6/2013 | 19:00:00 | 13,40 | 7,39 | 2,70 | 681,00 | 473,29 | 941,18 | 321,91 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 25/6/2013 | 20:00:00 | 13,30 | 7,38 | 2,60 | 684,00 | 493,43 | 862,75 | 292,21 |
| 25/6/2013 | 21:00:00 | 13,60 | 7,40 | 2,00 | 683,00 | 483,36 | 901,97 | 272,95 |
| 25/6/2013 | 22:00:00 | 13,90 | 7,80 | 1,50 | 799,00 | 251,75 | 588,24 | 235,76 |
| 25/6/2013 | 23:00:00 | 14,20 | 7,79 | 2,00 | 804,00 | 241,68 | 431,38 | 209,90 |
| 26/6/2013 | 01:00:00 | 14,80 | 7,71 | 2,00 | 833,00 | 211,47 | 549,02 | 159,06 |
| 26/6/2013 | 02:00:00 | 14,60 | 7,72 | 1,50 | 837,00 | 302,10 | 901,97 | 135,81 |
| 26/6/2013 | 03:00:00 | 14,60 | 7,72 | 1,30 | 889,00 | 493,43 | 1137,26 | 113,81 |
| 26/6/2013 | 00:00:00 | 14,40 | 7,71 | 2,00 | 833,00 | 221,54 | 470,59 | 191,91 |
| 30/7/2013 | 04:00:00 | 16,20 | 7,91 | 0,50 | 491,00 | | 158,00 | 73,92 |
| 30/7/2013 | 05:00:00 | 16,20 | 7,91 | 0,80 | 494,00 | | 198,00 | 99,89 |
| 30/7/2013 | 06:00:00 | 16,30 | 7,90 | 1,20 | 494,00 | | 198,00 | 128,33 |
| 30/7/2013 | 07:00:00 | 16,40 | 7,92 | 0,70 | 500,00 | | 238,00 | 159,06 |
| 30/7/2013 | 08:00:00 | 16,90 | 7,80 | 2,50 | 541,00 | | 396,00 | 217,86 |
| 30/7/2013 | 09:00:00 | 16,70 | 8,58 | 4,80 | 880,00 | | 634,00 | 321,91 |
| 30/7/2013 | 10:00:00 | 17,70 | 8,53 | 7,90 | 1101,00 | | 832,00 | 342,24 |
| 30/7/2013 | 11:00:00 | 17,20 | 8,27 | 5,00 | 1001,00 | | 1030,00 | 362,98 |
| 30/7/2013 | 12:00:00 | 19,10 | 7,16 | 4,00 | 689,00 | | 871,00 | 373,50 |
| 30/7/2013 | 13:00:00 | 17,70 | 7,14 | 2,50 | 667,00 | | 911,00 | 394,84 |
| 30/7/2013 | 14:00:00 | 17,70 | 7,15 | 3,00 | 664,00 | | 951,00 | 394,84 |
| 30/7/2013 | 15:00:00 | 18,20 | 7,30 | 3,00 | 671,00 | | 1030,00 | 384,12 |
| 30/7/2013 | 16:00:00 | 18,30 | 7,38 | 3,50 | 683,00 | | 713,00 | 352,56 |
| 30/7/2013 | 17:00:00 | 18,60 | 7,55 | 3,90 | 661,00 | | 752,00 | 352,56 |
| 30/7/2013 | 18:00:00 | 18,80 | 7,60 | 3,90 | 664,00 | | 832,00 | 321,91 |
| 30/7/2013 | 19:00:00 | 15,40 | 7,15 | 2,30 | 655,00 | | 713,00 | 302,00 |
| 30/7/2013 | 20:00:00 | 15,40 | 7,17 | 3,10 | 653,00 | | 752,00 | 282,52 |
| 30/7/2013 | 21:00:00 | 15,40 | 7,20 | 1,00 | 646,00 | | 713,00 | 263,48 |
| 30/7/2013 | 22:00:00 | 15,50 | 7,24 | 2,20 | 649,00 | | 792,00 | 235,76 |
| 30/7/2013 | 23:00:00 | 15,50 | 7,70 | 1,70 | 781,00 | | 475,00 | 200,44 |
| 31/7/2013 | 01:00:00 | 15,90 | 7,61 | 1,00 | 846,00 | | 436,00 | 128,33 |
| 31/7/2013 | 02:00:00 | 16,00 | 7,63 | 2,10 | 865,00 | | 1030,00 | 80,17 |
| 31/7/2013 | 03:00:00 | 16,00 | 7,63 | 1,00 | 851,00 | | 436,00 | 80,17 |
| 31/7/2013 | 00:00:00 | 15,60 | 7,71 | 2,30 | 784,00 | | 594,00 | 159,06 |
| 29/8/2013 | 04:00:00 | 14,10 | 7,61 | 1,00 | 439,00 | | 158,40 | 99,89 |
| 29/8/2013 | 05:00:00 | 14,20 | 7,60 | 1,00 | 438,00 | | 158,40 | 209,09 |
| 29/8/2013 | 06:00:00 | 14,10 | 7,61 | 1,40 | 440,00 | | 118,80 | 282,52 |
| 29/8/2013 | 07:00:00 | 14,20 | 7,62 | 1,20 | 440,00 | | 198,00 | 302,00 |
| 29/8/2013 | 08:00:00 | 14,30 | 7,75 | 2,50 | 510,00 | | 277,20 | 332,02 |
| 29/8/2013 | 09:00:00 | 14,50 | 8,48 | 8,20 | 893,00 | | 871,30 | 362,98 |
| 29/8/2013 | 10:00:00 | 15,10 | 8,38 | 6,00 | 962,00 | | 871,30 | 384,12 |
| 29/8/2013 | 11:00:00 | 15,50 | 8,06 | 5,00 | 823,00 | | 792,10 | 384,12 |
| 29/8/2013 | 12:00:00 | 16,60 | 7,34 | 3,00 | 630,00 | | 712,90 | 384,12 |
| 29/8/2013 | 13:00:00 | 16,70 | 7,34 | 3,60 | 631,00 | | 752,50 | 362,98 |
| 29/8/2013 | 14:00:00 | 16,20 | 7,32 | 7,00 | 630,00 | | 831,70 | 342,24 |
| 29/8/2013 | 15:00:00 | 16,90 | 7,39 | 3,00 | 636,00 | | 1069,30 | 342,24 |
| 29/8/2013 | 16:00:00 | 17,70 | 7,51 | 2,80 | 683,00 | | 1148,50 | 321,91 |
| 29/8/2013 | 17:00:00 | 18,30 | 7,61 | 3,90 | 693,00 | | 792,10 | 292,21 |
| 29/8/2013 | 18:00:00 | 14,40 | 7,15 | 3,50 | 674,00 | | 871,30 | 254,13 |
| 29/8/2013 | 19:00:00 | 14,70 | 7,54 | 2,00 | 809,00 | | 594,10 | 235,76 |
| 29/8/2013 | 20:00:00 | 14,80 | 7,54 | 2,10 | 814,00 | | 633,70 | 235,76 |
| 29/8/2013 | 21:00:00 | 14,90 | 7,52 | 2,40 | 825,00 | | 594,10 | 235,76 |
| 29/8/2013 | 22:00:00 | 15,10 | 7,76 | 2,00 | 849,00 | | 514,90 | 200,44 |
| 29/8/2013 | 23:00:00 | 15,10 | 7,71 | 1,50 | 852,00 | | 1148,50 | 175,23 |
| 30/8/2013 | 01:00:00 | 15,20 | 7,78 | 2,80 | 879,00 | | 435,60 | 143,42 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|------------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 30/8/2013 | 02:00:00 | 15,10 | 7,78 | 1,50 | 879,00 | | 514,90 | 121,00 |
| 30/8/2013 | 03:00:00 | 14,80 | 7,78 | 2,00 | 873,00 | | 475,30 | 99,89 |
| 30/8/2013 | 00:00:00 | 15,20 | 7,74 | 2,10 | 855,00 | | 475,30 | 143,42 |
| 23/9/2013 | 04:00:00 | 22,40 | 7,18 | 0,50 | 552,00 | 100,00 | 198,00 | 56,24 |
| 23/9/2013 | 05:00:00 | 22,20 | 7,11 | 0,60 | 546,00 | 148,00 | 238,00 | 128,33 |
| 23/9/2013 | 06:00:00 | 22,20 | 7,05 | 0,70 | 546,00 | 146,00 | 238,00 | 183,50 |
| 23/9/2013 | 07:00:00 | 22,20 | 7,03 | 0,60 | 549,00 | 163,00 | 396,00 | 217,86 |
| 23/9/2013 | 08:00:00 | 22,50 | 7,50 | 4,00 | 835,00 | 292,00 | 554,00 | 282,52 |
| 23/9/2013 | 09:00:00 | 22,70 | 8,05 | 8,00 | 1132,00 | 488,00 | 990,00 | 352,56 |
| 23/9/2013 | 10:00:00 | 22,70 | 7,80 | 7,50 | 1084,00 | 432,00 | 911,00 | 373,50 |
| 23/9/2013 | 11:00:00 | 22,80 | 7,60 | 6,00 | 924,00 | 472,00 | 1030,00 | 362,98 |
| 23/9/2013 | 12:00:00 | 22,80 | 7,30 | 3,10 | 842,00 | 385,00 | 752,00 | 342,24 |
| 23/9/2013 | 13:00:00 | 23,10 | 7,24 | 2,50 | 745,00 | 332,00 | 594,00 | 342,24 |
| 23/9/2013 | 14:00:00 | 23,40 | 7,09 | 2,60 | 749,00 | 378,00 | 713,00 | 332,02 |
| 23/9/2013 | 15:00:00 | 23,70 | 7,15 | 4,00 | 797,00 | 429,00 | 832,00 | 332,02 |
| 23/9/2013 | 16:00:00 | 23,30 | 7,34 | 5,50 | 822,00 | 412,00 | 792,00 | 321,91 |
| 23/9/2013 | 17:00:00 | 21,10 | 7,20 | 4,10 | 802,00 | 427,00 | 832,00 | 321,91 |
| 23/9/2013 | 18:00:00 | 21,30 | 7,21 | 4,00 | 793,00 | 465,00 | 832,00 | 263,48 |
| 23/9/2013 | 19:00:00 | 21,40 | 7,24 | 2,50 | 803,00 | 397,00 | 713,00 | 244,89 |
| 23/9/2013 | 20:00:00 | 21,70 | 7,15 | 4,40 | 786,00 | 430,00 | 792,00 | 235,76 |
| 23/9/2013 | 21:00:00 | 21,80 | 7,16 | 2,80 | 859,00 | 395,00 | 752,00 | 200,44 |
| 23/9/2013 | 22:00:00 | 21,80 | 7,14 | 2,90 | 899,00 | 263,00 | 436,00 | 191,91 |
| 23/9/2013 | 23:00:00 | 21,80 | 7,36 | 2,10 | 952,00 | 331,00 | 554,00 | 183,50 |
| 24/9/2013 | 01:00:00 | 21,80 | 7,39 | 2,00 | 979,00 | 331,00 | 594,00 | 151,17 |
| 24/9/2013 | 02:00:00 | 21,90 | 7,27 | 2,30 | 1007,00 | 342,00 | 673,00 | 121,00 |
| 24/9/2013 | 03:00:00 | 22,00 | 7,28 | 1,00 | 1023,00 | 270,00 | 475,00 | 121,00 |
| 24/9/2013 | 00:00:00 | 21,80 | 7,37 | 2,10 | 978,00 | 308,00 | 594,00 | 167,08 |
| 25/9/2013 | 04:00:00 | 14,70 | 7,56 | 0,60 | 432,00 | 106,00 | 237,60 | 67,85 |
| 25/9/2013 | 05:00:00 | 14,80 | 7,53 | 1,40 | 435,00 | 98,00 | 158,40 | 80,17 |
| 25/9/2013 | 06:00:00 | 14,90 | 7,52 | 1,00 | 433,00 | 78,00 | 118,80 | 128,33 |
| 25/9/2013 | 07:00:00 | 15,50 | 7,50 | 0,80 | 431,00 | 77,00 | 118,80 | 159,06 |
| 25/9/2013 | 08:00:00 | 16,20 | 7,29 | 1,40 | 494,00 | 198,00 | 356,40 | 226,75 |
| 25/9/2013 | 09:00:00 | 16,70 | 8,53 | 6,60 | 952,00 | 287,00 | 673,30 | 263,48 |
| 25/9/2013 | 10:00:00 | 15,20 | 8,34 | 4,90 | 940,00 | 381,00 | 1267,30 | 311,90 |
| 25/9/2013 | 11:00:00 | 15,30 | 8,44 | 4,40 | 884,00 | 343,50 | 950,50 | 342,24 |
| 25/9/2013 | 12:00:00 | 16,80 | 7,86 | 4,00 | 660,00 | 405,00 | 831,70 | 362,98 |
| 25/9/2013 | 13:00:00 | 16,80 | 7,82 | 4,80 | 656,00 | 406,00 | 871,30 | 384,12 |
| 25/9/2013 | 14:00:00 | 16,70 | 7,74 | 4,00 | 655,00 | 427,00 | 910,90 | 384,12 |
| 25/9/2013 | 15:00:00 | 17,50 | 7,73 | 3,00 | 684,00 | 315,00 | 792,10 | 384,12 |
| 25/9/2013 | 16:00:00 | 18,30 | 7,86 | 3,90 | 783,00 | 423,00 | 633,70 | 362,98 |
| 25/9/2013 | 17:00:00 | 19,20 | 7,86 | 4,00 | 821,00 | 379,00 | 673,30 | 362,98 |
| 25/9/2013 | 18:00:00 | 14,50 | 7,76 | 1,60 | 892,00 | 229,00 | 475,30 | 342,24 |
| 25/9/2013 | 19:00:00 | 14,40 | 7,53 | 2,40 | 682,00 | 399,00 | 792,10 | 332,02 |
| 25/9/2013 | 20:00:00 | 14,40 | 7,43 | 3,00 | 684,00 | 389,00 | 712,90 | 311,90 |
| 25/9/2013 | 21:00:00 | 14,60 | 7,52 | 2,40 | 835,00 | 279,00 | 475,30 | 292,21 |
| 25/9/2013 | 22:00:00 | 14,70 | 7,95 | 2,20 | 837,00 | 409,00 | 831,70 | 235,76 |
| 25/9/2013 | 23:00:00 | 14,80 | 8,13 | 1,90 | 874,00 | 299,00 | 514,90 | 217,86 |
| 26/9/2013 | 01:00:00 | 15,00 | 8,26 | 1,80 | 887,00 | 382,00 | 712,90 | 200,44 |
| 26/9/2013 | 02:00:00 | 14,90 | 8,25 | 2,20 | 884,00 | 289,00 | 554,50 | 143,42 |
| 26/9/2013 | 03:00:00 | 14,70 | 8,13 | 1,40 | 876,00 | 399,00 | 633,70 | 80,17 |
| 26/9/2013 | 00:00:00 | 14,90 | 8,13 | 2,00 | 875,00 | 311,00 | 554,50 | 200,44 |
| 28/10/2013 | 04:00:00 | 23,50 | 7,35 | 0,30 | 477,00 | 76,00 | 158,00 | 61,95 |
| 28/10/2013 | 05:00:00 | 23,30 | 7,46 | 0,50 | 474,00 | 112,00 | 277,00 | 93,15 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|------------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 28/10/2013 | 06:00:00 | 23,20 | 7,57 | 0,80 | 474,00 | 196,00 | 396,00 | 135,81 |
| 28/10/2013 | 07:00:00 | 23,00 | 7,62 | 1,50 | 472,00 | 89,00 | 158,00 | 183,50 |
| 28/10/2013 | 08:00:00 | 23,10 | 7,80 | 4,00 | 847,00 | 305,00 | 515,00 | 244,89 |
| 28/10/2013 | 09:00:00 | 23,30 | 7,85 | 8,50 | 1090,00 | 494,00 | 832,00 | 282,52 |
| 28/10/2013 | 10:00:00 | 23,30 | 7,85 | 7,00 | 1018,00 | 453,00 | 752,00 | 311,90 |
| 28/10/2013 | 11:00:00 | 23,50 | 7,68 | 4,50 | 898,00 | 386,00 | 752,00 | 332,02 |
| 28/10/2013 | 12:00:00 | 23,60 | 7,61 | 4,00 | 795,00 | 398,00 | 792,00 | 352,56 |
| 28/10/2013 | 13:00:00 | 22,90 | 7,02 | 3,30 | 762,00 | 514,00 | 911,00 | 373,50 |
| 28/10/2013 | 14:00:00 | 22,90 | 7,04 | 5,00 | 765,00 | 500,00 | 911,00 | 384,12 |
| 28/10/2013 | 15:00:00 | 22,90 | 7,14 | 3,40 | 694,00 | 399,00 | 792,00 | 384,12 |
| 28/10/2013 | 16:00:00 | 23,00 | 7,14 | 2,50 | 786,00 | 387,00 | 752,00 | 362,98 |
| 28/10/2013 | 17:00:00 | 22,60 | 7,17 | 3,30 | 828,00 | 377,00 | 713,00 | 342,24 |
| 28/10/2013 | 18:00:00 | 22,60 | 7,30 | 3,10 | 879,00 | 407,00 | 752,00 | 311,90 |
| 28/10/2013 | 19:00:00 | 22,70 | 7,48 | 3,00 | 872,00 | 369,00 | 634,00 | 292,21 |
| 28/10/2013 | 20:00:00 | 22,40 | 7,39 | 3,20 | 889,00 | 461,00 | 871,00 | 272,95 |
| 28/10/2013 | 21:00:00 | 22,40 | 7,38 | 3,10 | 890,00 | 408,00 | 792,00 | 254,13 |
| 28/10/2013 | 22:00:00 | 22,40 | 7,54 | 4,00 | 983,00 | 398,00 | 634,00 | 235,76 |
| 28/10/2013 | 23:00:00 | 22,50 | 7,55 | 2,50 | 985,00 | 342,00 | 594,00 | 200,44 |
| 29/10/2013 | 01:00:00 | 22,80 | 7,59 | 2,40 | 972,00 | 450,00 | 832,00 | 143,42 |
| 29/10/2013 | 02:00:00 | 22,80 | 7,51 | 3,20 | 946,00 | 293,00 | 515,00 | 121,00 |
| 29/10/2013 | 03:00:00 | 22,80 | 7,50 | 3,60 | 944,00 | 302,00 | 673,00 | 121,00 |
| 29/10/2013 | 00:00:00 | 22,60 | 7,57 | 2,60 | 969,00 | 300,00 | 594,00 | 175,23 |
| 4/12/2013 | 04:00:00 | 22,70 | 7,18 | 0,50 | 595,00 | 152,00 | 313,73 | 80,17 |
| 4/12/2013 | 05:00:00 | 22,70 | 7,19 | 0,40 | 597,00 | 133,00 | 274,51 | 143,42 |
| 4/12/2013 | 06:00:00 | 22,80 | 7,31 | 0,50 | 594,00 | 150,00 | 196,08 | 200,44 |
| 4/12/2013 | 07:00:00 | 23,00 | 7,43 | 0,50 | 599,00 | 137,00 | 196,08 | 263,48 |
| 4/12/2013 | 08:00:00 | 23,10 | 7,80 | 4,00 | 835,00 | 269,00 | 509,81 | 292,21 |
| 4/12/2013 | 09:00:00 | 23,10 | 7,97 | 6,60 | 1069,00 | 500,00 | 901,97 | 332,02 |
| 4/12/2013 | 10:00:00 | 23,70 | 7,84 | 5,50 | 1026,00 | 447,00 | 941,18 | 352,56 |
| 4/12/2013 | 11:00:00 | 24,20 | 7,79 | 1,60 | 940,00 | 561,00 | 1137,26 | 373,50 |
| 4/12/2013 | 12:00:00 | 24,50 | 7,66 | 3,60 | 830,00 | 417,00 | 666,67 | 384,12 |
| 4/12/2013 | 13:00:00 | 26,10 | 7,47 | 2,50 | 746,00 | 380,00 | 549,02 | 384,12 |
| 4/12/2013 | 14:00:00 | 26,10 | 7,33 | 2,40 | 751,00 | 363,00 | 588,24 | 384,12 |
| 4/12/2013 | 15:00:00 | 25,10 | 7,34 | 2,80 | 764,00 | 314,00 | 627,46 | 362,98 |
| 4/12/2013 | 16:00:00 | 24,80 | 7,36 | 3,00 | 803,00 | 297,00 | 588,24 | 342,24 |
| 4/12/2013 | 17:00:00 | 23,00 | 7,13 | 3,90 | 820,00 | 379,00 | 666,67 | 332,02 |
| 4/12/2013 | 18:00:00 | 23,20 | 7,32 | 3,60 | 799,00 | 334,00 | 588,24 | 311,90 |
| 4/12/2013 | 19:00:00 | 23,30 | 7,42 | 3,40 | 825,00 | 376,00 | 745,10 | 292,21 |
| 4/12/2013 | 20:00:00 | 23,10 | 7,46 | 3,10 | 855,00 | 320,00 | 588,24 | 254,13 |
| 4/12/2013 | 21:00:00 | 23,40 | 7,52 | 2,80 | 894,00 | 393,00 | 627,46 | 226,75 |
| 4/12/2013 | 22:00:00 | 23,40 | 7,57 | 2,50 | 928,00 | 313,00 | 588,24 | 200,44 |
| 4/12/2013 | 23:00:00 | 23,40 | 7,51 | 2,00 | 925,00 | 374,00 | 705,89 | 167,08 |
| 5/12/2013 | 01:00:00 | 23,30 | 7,76 | 1,70 | 978,00 | 294,00 | 509,81 | 143,42 |
| 5/12/2013 | 02:00:00 | 23,30 | 7,80 | 2,60 | 1006,00 | 274,00 | 470,59 | 121,00 |
| 5/12/2013 | 03:00:00 | 23,20 | 7,80 | 1,90 | 981,00 | 196,00 | 392,16 | 99,89 |
| 5/12/2013 | 00:00:00 | 23,30 | 7,66 | 2,80 | 983,00 | 304,00 | 549,02 | 143,42 |
| 29/1/2014 | 04:00:00 | 20,90 | 6,80 | 1,20 | 579,00 | 76,00 | 156,90 | 61,95 |
| 29/1/2014 | 05:00:00 | 20,90 | 6,83 | 1,00 | 580,00 | 97,00 | 196,10 | 80,17 |
| 29/1/2014 | 06:00:00 | 20,90 | 6,96 | 1,10 | 573,00 | 84,00 | 156,90 | 99,89 |
| 29/1/2014 | 07:00:00 | 20,90 | 6,91 | 0,80 | 577,00 | 144,00 | 274,50 | 151,17 |
| 29/1/2014 | 08:00:00 | 20,20 | 7,01 | 1,00 | 653,00 | 175,00 | 313,70 | 200,44 |
| 29/1/2014 | 09:00:00 | 20,80 | 7,05 | 6,00 | 967,00 | 435,00 | 862,80 | 282,52 |
| 29/1/2014 | 10:00:00 | 20,90 | 7,08 | 6,50 | 990,00 | 351,00 | 627,50 | 311,90 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 29/1/2014 | 11:00:00 | 20,90 | 7,22 | 3,50 | 819,00 | 339,00 | 745,10 | 342,24 |
| 29/1/2014 | 12:00:00 | 20,80 | 7,16 | 4,00 | 781,00 | 435,00 | 862,80 | 373,50 |
| 29/1/2014 | 13:00:00 | 20,60 | 6,95 | 3,00 | 622,00 | 268,00 | 549,00 | 394,84 |
| 29/1/2014 | 14:00:00 | 20,70 | 6,81 | 5,00 | 633,00 | 456,00 | 823,50 | 394,84 |
| 29/1/2014 | 15:00:00 | 20,70 | 6,80 | 2,00 | 613,00 | 363,00 | 666,70 | 384,12 |
| 29/1/2014 | 16:00:00 | 20,60 | 6,82 | 3,50 | 632,00 | 320,00 | 666,70 | 362,98 |
| 29/1/2014 | 17:00:00 | 20,90 | 6,80 | 7,80 | 518,00 | 526,00 | 1058,80 | 352,56 |
| 29/1/2014 | 18:00:00 | 20,70 | 6,83 | 4,50 | 287,00 | 223,00 | 549,00 | 342,24 |
| 29/1/2014 | 19:00:00 | 20,40 | 6,92 | 4,00 | 373,00 | 453,00 | 862,80 | 384,12 |
| 29/1/2014 | 20:00:00 | 20,80 | 6,98 | 3,50 | 662,00 | 235,00 | 431,40 | 427,58 |
| 29/1/2014 | 21:00:00 | 20,70 | 7,23 | 4,00 | 662,00 | 186,00 | 352,90 | 566,92 |
| 29/1/2014 | 22:00:00 | 20,90 | 7,35 | 1,00 | 664,00 | 125,00 | 235,30 | 566,92 |
| 29/1/2014 | 23:00:00 | 20,90 | 7,35 | 2,00 | 666,00 | 133,00 | 235,30 | 566,92 |
| 30/1/2014 | 01:00:00 | 20,10 | 7,36 | 2,30 | 585,00 | 185,00 | 431,40 | 342,24 |
| 30/1/2014 | 02:00:00 | 20,20 | 7,34 | 1,80 | 588,00 | 88,00 | 156,90 | 302,00 |
| 30/1/2014 | 03:00:00 | 20,20 | 7,34 | 1,50 | 589,00 | 92,00 | 156,90 | 282,52 |
| 30/1/2014 | 00:00:00 | 20,30 | 7,35 | 1,30 | 596,00 | 168,00 | 313,70 | 519,03 |
| 26/2/2014 | 04:00:00 | 21,20 | 7,38 | 0,60 | 356,00 | 67,50 | | 61,95 |
| 26/2/2014 | 05:00:00 | 21,30 | 7,37 | 0,60 | 356,00 | 68,30 | | 99,89 |
| 26/2/2014 | 06:00:00 | 21,30 | 7,37 | 0,60 | 361,00 | 90,80 | | 151,17 |
| 26/2/2014 | 07:00:00 | 21,30 | 7,34 | 0,70 | 364,00 | 99,00 | | 217,86 |
| 26/2/2014 | 08:00:00 | 21,30 | 7,51 | 1,40 | 472,00 | 171,00 | | 263,48 |
| 26/2/2014 | 09:00:00 | 21,40 | 8,21 | 5,60 | 919,00 | 195,00 | | 302,00 |
| 26/2/2014 | 10:00:00 | 21,70 | 8,07 | 5,00 | 987,00 | 260,00 | | 332,02 |
| 26/2/2014 | 11:00:00 | 21,70 | 7,72 | 3,90 | 844,00 | 227,00 | | 342,24 |
| 26/2/2014 | 12:00:00 | 21,70 | 7,34 | 3,00 | 674,00 | 218,00 | | 373,50 |
| 26/2/2014 | 13:00:00 | 21,90 | 7,01 | 2,50 | 590,00 | 223,00 | | 384,12 |
| 26/2/2014 | 14:00:00 | 21,80 | 7,02 | 2,60 | 591,00 | 241,00 | | 384,12 |
| 26/2/2014 | 15:00:00 | 22,20 | 7,23 | 3,00 | 658,00 | 238,00 | | 384,12 |
| 26/2/2014 | 16:00:00 | 22,50 | 7,18 | 4,30 | 743,00 | 349,00 | | 373,50 |
| 26/2/2014 | 17:00:00 | 20,60 | 6,85 | 2,50 | 693,00 | 241,00 | | 352,56 |
| 26/2/2014 | 18:00:00 | 20,70 | 7,33 | 3,80 | 799,00 | 263,00 | | 321,91 |
| 26/2/2014 | 19:00:00 | 20,60 | 7,36 | 4,10 | 887,00 | 346,00 | | 302,00 |
| 26/2/2014 | 20:00:00 | 20,50 | 7,38 | 2,80 | 786,00 | 256,00 | | 282,52 |
| 26/2/2014 | 21:00:00 | 20,30 | 7,28 | 2,90 | 791,00 | 165,00 | | 254,13 |
| 26/2/2014 | 22:00:00 | 20,30 | 7,36 | 2,80 | 767,00 | 203,00 | | 226,75 |
| 26/2/2014 | 23:00:00 | 20,30 | 7,30 | 2,40 | 766,00 | 120,00 | | 200,44 |
| 27/2/2014 | 01:00:00 | 20,30 | 7,29 | 3,20 | 801,00 | 254,00 | | 113,81 |
| 27/2/2014 | 02:00:00 | 20,40 | 7,27 | 3,00 | 783,00 | 168,00 | | 113,81 |
| 27/2/2014 | 03:00:00 | 20,30 | 7,76 | 1,00 | 778,00 | 126,00 | | 106,77 |
| 27/2/2014 | 00:00:00 | 20,30 | 7,34 | 3,00 | 765,00 | 117,00 | | 159,06 |
| 26/3/2014 | 04:00:00 | 19,60 | 7,25 | 2,40 | 323,00 | 69,00 | | 80,17 |
| 26/3/2014 | 05:00:00 | 19,70 | 7,38 | 2,40 | 323,00 | 76,20 | | 143,42 |
| 26/3/2014 | 06:00:00 | 19,70 | 7,38 | 2,50 | 323,00 | 78,75 | | 217,86 |
| 26/3/2014 | 07:00:00 | 19,60 | 7,36 | 2,40 | 321,00 | 129,00 | | 282,52 |
| 26/3/2014 | 08:00:00 | 19,70 | 7,82 | 1,40 | 510,00 | 130,00 | | 321,91 |
| 26/3/2014 | 09:00:00 | 19,70 | 8,47 | 3,80 | 864,00 | 186,00 | | 352,56 |
| 26/3/2014 | 10:00:00 | 20,30 | 8,23 | 3,50 | 925,00 | 197,00 | | 362,98 |
| 26/3/2014 | 11:00:00 | 20,40 | 7,90 | 4,30 | 795,00 | 258,00 | | 394,84 |
| 26/3/2014 | 12:00:00 | 20,50 | 7,36 | 3,00 | 665,00 | 235,00 | | 394,84 |
| 26/3/2014 | 13:00:00 | 20,80 | 7,29 | 2,50 | 685,00 | 262,00 | | 394,84 |
| 26/3/2014 | 14:00:00 | 20,80 | 7,26 | 2,40 | 591,00 | 219,00 | | 384,12 |
| 26/3/2014 | 15:00:00 | 21,20 | 7,20 | 4,00 | 604,00 | 291,00 | | 384,12 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 26/3/2014 | 16:00:00 | 21,50 | 7,24 | 3,20 | 610,00 | 324,00 | | 362,98 |
| 26/3/2014 | 17:00:00 | 21,20 | 7,12 | 3,00 | 633,00 | 559,00 | | 332,02 |
| 26/3/2014 | 18:00:00 | 19,20 | 6,79 | 3,00 | 625,00 | 351,00 | | 311,90 |
| 26/3/2014 | 19:00:00 | 19,30 | 7,27 | 2,90 | 668,00 | 301,00 | | 311,90 |
| 26/3/2014 | 20:00:00 | 19,20 | 7,28 | 3,10 | 663,00 | 266,00 | | 292,21 |
| 26/3/2014 | 21:00:00 | 19,30 | 7,26 | 5,00 | 749,00 | 416,00 | | 263,48 |
| 26/3/2014 | 22:00:00 | 19,30 | 7,41 | 1,80 | 671,00 | 226,00 | | 244,89 |
| 26/3/2014 | 23:00:00 | 19,40 | 7,34 | 2,70 | 698,00 | 274,00 | | 226,75 |
| 27/3/2014 | 01:00:00 | 19,60 | 7,44 | 1,40 | 689,00 | 214,00 | | 183,50 |
| 27/3/2014 | 02:00:00 | 19,60 | 7,45 | 1,30 | 685,00 | 209,00 | | 159,06 |
| 27/3/2014 | 03:00:00 | 19,50 | 7,43 | 2,30 | 675,00 | 197,00 | | 128,33 |
| 27/3/2014 | 00:00:00 | 19,40 | 7,33 | 3,00 | 691,00 | 329,00 | | 200,44 |
| 29/4/2014 | 04:00:00 | 20,30 | 7,15 | 0,70 | 518,00 | 128,00 | | 61,95 |
| 29/4/2014 | 05:00:00 | 20,30 | 7,20 | 0,70 | 519,00 | 172,00 | | 80,17 |
| 29/4/2014 | 06:00:00 | 20,30 | 7,20 | 0,90 | 519,00 | 156,00 | | 121,00 |
| 29/4/2014 | 07:00:00 | 20,30 | 7,21 | 0,60 | 519,00 | 188,00 | | 209,09 |
| 29/4/2014 | 08:00:00 | 20,40 | 7,28 | 1,50 | 572,00 | 180,00 | | 263,48 |
| 29/4/2014 | 09:00:00 | 20,60 | 7,82 | 7,30 | 1089,00 | 283,00 | | 311,90 |
| 29/4/2014 | 10:00:00 | 20,60 | 7,86 | 6,50 | 1084,00 | 339,00 | | 332,02 |
| 29/4/2014 | 11:00:00 | 20,70 | 7,55 | 4,00 | 943,00 | 311,00 | | 352,56 |
| 29/4/2014 | 12:00:00 | 20,80 | 7,34 | 3,80 | 819,00 | 297,00 | | 373,50 |
| 29/4/2014 | 13:00:00 | 21,10 | 7,09 | 3,00 | 676,00 | 258,00 | | 384,12 |
| 29/4/2014 | 14:00:00 | 21,00 | 7,02 | 3,30 | 674,00 | 269,00 | | 384,12 |
| 29/4/2014 | 15:00:00 | 21,40 | 6,99 | 6,60 | 716,00 | 460,00 | | 384,12 |
| 29/4/2014 | 16:00:00 | 21,40 | 6,96 | 6,50 | 716,00 | 462,00 | | 373,50 |
| 29/4/2014 | 17:00:00 | 21,60 | 7,03 | 3,90 | 825,00 | 321,00 | | 342,24 |
| 29/4/2014 | 18:00:00 | 19,90 | 7,07 | 8,30 | 732,00 | 586,00 | | 311,90 |
| 29/4/2014 | 19:00:00 | 20,00 | 7,06 | 1,80 | 720,00 | 356,00 | | 292,21 |
| 29/4/2014 | 20:00:00 | 20,00 | 7,17 | 2,90 | 447,00 | 380,00 | | 272,95 |
| 29/4/2014 | 21:00:00 | 20,10 | 7,10 | 2,00 | 764,00 | 293,00 | - | 244,89 |
| 29/4/2014 | 22:00:00 | 20,00 | 7,13 | 1,90 | 765,00 | 331,00 | | 244,89 |
| 29/4/2014 | 23:00:00 | 20,00 | 7,14 | 3,50 | 780,00 | 380,00 | | 235,76 |
| 30/4/2014 | 01:00:00 | 20,10 | 7,34 | 1,90 | 801,00 | 312,00 | | 99,89 |
| 30/4/2014 | 02:00:00 | 20,10 | 7,29 | 2,00 | 802,00 | 287,00 | | 86,58 |
| 30/4/2014 | 03:00:00 | 20,00 | 7,20 | 2,30 | 795,00 | 231,00 | | 73,92 |
| 30/4/2014 | 00:00:00 | 20,10 | 7,33 | 2,40 | 802,00 | 292,00 | | 135,81 |
| 28/5/2014 | 04:00:00 | 14,80 | 7,20 | 1,00 | 592,00 | 123,00 | | 67,85 |
| 28/5/2014 | 05:00:00 | 15,00 | 7,60 | 1,00 | 590,00 | 125,00 | | 106,77 |
| 28/5/2014 | 06:00:00 | 15,00 | 7,73 | 1,10 | 589,00 | 131,00 | | 200,44 |
| 28/5/2014 | 07:00:00 | 15,30 | 7,69 | 1,00 | 587,00 | 142,00 | | 263,48 |
| 28/5/2014 | 08:00:00 | 15,40 | 7,65 | 2,90 | 653,00 | 173,00 | | 311,90 |
| 28/5/2014 | 09:00:00 | 15,50 | 8,27 | 2,70 | 953,00 | 196,00 | | 332,02 |
| 28/5/2014 | 10:00:00 | 15,80 | 8,43 | 6,00 | 1123,00 | 182,00 | | 352,56 |
| 28/5/2014 | 11:00:00 | 16,50 | 8,04 | 4,50 | 1137,00 | 223,90 | | 373,50 |
| 28/5/2014 | 12:00:00 | 16,90 | 7,57 | 4,10 | 864,00 | 100,00 | | 373,50 |
| 28/5/2014 | 13:00:00 | 18,20 | 7,20 | 4,00 | 748,00 | 244,00 | | 373,50 |
| 28/5/2014 | 14:00:00 | 18,20 | 7,11 | 3,80 | 746,00 | 222,00 | | 373,50 |
| 28/5/2014 | 15:00:00 | 18,80 | 7,09 | 3,60 | 743,00 | 205,00 | | 352,56 |
| 28/5/2014 | 16:00:00 | 18,30 | 7,14 | 3,40 | 773,00 | 248,00 | | 342,24 |
| 28/5/2014 | 17:00:00 | 19,00 | 7,27 | 3,50 | 773,00 | 239,00 | | 302,00 |
| 28/5/2014 | 18:00:00 | 13,60 | 7,36 | 4,40 | 803,00 | 322,00 | | 302,00 |
| 28/5/2014 | 19:00:00 | 15,10 | 7,77 | 2,10 | 865,00 | 235,00 | | 282,52 |
| 28/5/2014 | 20:00:00 | 15,20 | 8,01 | 2,60 | 866,00 | 285,00 | | 272,95 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|-----------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 28/5/2014 | 21:00:00 | 15,00 | 8,04 | 2,40 | 866,00 | 250,00 | | 254,13 |
| 28/5/2014 | 22:00:00 | 15,20 | 8,09 | 2,40 | 868,00 | 269,00 | | 244,89 |
| 28/5/2014 | 23:00:00 | 15,30 | 7,85 | 2,00 | 905,00 | 280,00 | | 226,75 |
| 29/5/2014 | 01:00:00 | 15,30 | 7,83 | 1,90 | 907,00 | 233,00 | | 200,44 |
| 29/5/2014 | 02:00:00 | 15,10 | 7,83 | 1,50 | 906,00 | 216,00 | | 143,42 |
| 29/5/2014 | 03:00:00 | 14,90 | 7,87 | 2,10 | 894,00 | 259,00 | | 121,00 |
| 29/5/2014 | 00:00:00 | 15,30 | 7,84 | 1,50 | 901,00 | 243,00 | | 217,86 |
| 26/6/2014 | 04:00:00 | 16,60 | 6,86 | 0,60 | 511,00 | 103,00 | 197,04 | 67,85 |
| 26/6/2014 | 05:00:00 | 16,60 | 6,87 | 0,60 | 511,00 | 93,00 | 157,63 | 121,00 |
| 26/6/2014 | 06:00:00 | 16,70 | 7,02 | 0,70 | 514,00 | 143,00 | 236,45 | 175,23 |
| 26/6/2014 | 07:00:00 | 16,70 | 7,15 | 0,60 | 514,00 | 123,00 | 197,04 | 254,13 |
| 26/6/2014 | 08:00:00 | 16,70 | 6,99 | 0,70 | 617,00 | 133,00 | 197,04 | 292,21 |
| 26/6/2014 | 09:00:00 | 16,90 | 7,96 | 5,10 | 960,00 | 323,00 | 709,34 | 321,91 |
| 26/6/2014 | 10:00:00 | 16,90 | 8,29 | 7,50 | 1092,00 | 413,00 | 827,57 | 342,24 |
| 26/6/2014 | 11:00:00 | 17,00 | 7,91 | 6,00 | 971,00 | 423,00 | 866,98 | 362,98 |
| 26/6/2014 | 12:00:00 | 17,50 | 7,41 | 3,60 | 851,00 | 421,00 | 827,57 | 384,12 |
| 26/6/2014 | 13:00:00 | 18,20 | 7,16 | 3,20 | 733,00 | 417,00 | 866,98 | 384,12 |
| 26/6/2014 | 14:00:00 | 17,90 | 7,04 | 3,60 | 732,00 | 443,00 | 985,20 | 384,12 |
| 26/6/2014 | 15:00:00 | 18,90 | 7,00 | 3,00 | 758,00 | 413,00 | 866,98 | 384,12 |
| 26/6/2014 | 16:00:00 | 19,10 | 7,03 | 3,90 | 781,00 | 365,00 | 788,16 | 362,98 |
| 26/6/2014 | 17:00:00 | 18,80 | 7,71 | 3,60 | 822,00 | 333,00 | 788,16 | 342,24 |
| 26/6/2014 | 18:00:00 | 15,50 | 6,69 | 3,00 | 791,00 | 433,00 | 945,79 | 321,91 |
| 26/6/2014 | 19:00:00 | 15,60 | 6,89 | 2,20 | 824,00 | 313,00 | 748,75 | 302,00 |
| 26/6/2014 | 20:00:00 | 15,70 | 6,90 | 3,50 | 823,00 | 340,00 | 788,16 | 282,52 |
| 26/6/2014 | 21:00:00 | 15,70 | 6,90 | 3,40 | 823,00 | 470,00 | 1064,02 | 244,89 |
| 26/6/2014 | 22:00:00 | 15,60 | 6,96 | 3,50 | 823,00 | 210,00 | 512,30 | 226,75 |
| 26/6/2014 | 23:00:00 | 15,70 | 7,32 | 2,60 | 854,00 | 270,00 | 551,71 | 200,44 |
| 27/6/2014 | 01:00:00 | 15,80 | 7,36 | 3,90 | 869,00 | 220,00 | 551,71 | 143,42 |
| 27/6/2014 | 02:00:00 | 15,60 | 7,42 | 2,50 | 850,00 | 210,00 | 591,12 | 113,81 |
| 27/6/2014 | 03:00:00 | 15,60 | 7,45 | 1,80 | 842,00 | 90,00 | 197,04 | 93,15 |
| 27/6/2014 | 00:00:00 | 15,70 | 7,38 | 2,10 | 852,00 | 520,00 | 1162,54 | 175,23 |
| 23/7/2014 | 04:00:00 | 15,60 | 7,43 | 0,60 | 819,00 | 172,00 | 315,00 | 128,33 |
| 23/7/2014 | 05:00:00 | 15,60 | 7,18 | 0,70 | 670,00 | 122,00 | 197,00 | 175,23 |
| 23/7/2014 | 06:00:00 | 15,50 | 7,15 | 1,90 | 626,00 | 132,00 | 236,00 | 217,86 |
| 23/7/2014 | 07:00:00 | 15,60 | 7,14 | 3,00 | 678,00 | 245,00 | 512,00 | 292,21 |
| 23/7/2014 | 08:00:00 | 15,80 | 7,85 | 7,50 | 983,00 | 324,00 | 709,00 | 384,12 |
| 23/7/2014 | 09:00:00 | 15,70 | 7,96 | 7,70 | 1156,00 | 382,00 | 867,00 | 362,98 |
| 23/7/2014 | 10:00:00 | 16,00 | 7,57 | 5,00 | 1036,00 | 406,00 | 906,00 | 384,12 |
| 23/7/2014 | 11:00:00 | 16,30 | 7,37 | 4,00 | 879,00 | 397,00 | 749,00 | 394,84 |
| 23/7/2014 | 12:00:00 | 16,20 | 7,18 | 3,90 | 804,00 | 425,00 | 946,00 | 384,12 |
| 23/7/2014 | 13:00:00 | 16,60 | 7,04 | 3,50 | 767,00 | 335,00 | 788,00 | 384,12 |
| 23/7/2014 | 14:00:00 | 17,00 | 7,01 | 4,00 | 855,00 | 414,00 | 828,00 | 373,50 |
| 23/7/2014 | 15:00:00 | 17,30 | 7,10 | 4,20 | 860,00 | 344,00 | 788,00 | 373,50 |
| 23/7/2014 | 16:00:00 | 17,80 | 7,12 | 2,00 | 837,00 | 324,00 | 749,00 | 342,24 |
| 23/7/2014 | 17:00:00 | 13,60 | 6,66 | 3,10 | 852,00 | 368,00 | 867,00 | 282,52 |
| 23/7/2014 | 18:00:00 | 13,40 | 6,46 | 7,50 | 970,00 | 623,00 | 1163,00 | 272,95 |
| 23/7/2014 | 19:00:00 | 13,70 | 7,02 | 3,60 | 947,00 | 378,00 | 788,00 | 263,48 |
| 23/7/2014 | 20:00:00 | 13,80 | 7,16 | 2,80 | 961,00 | 332,00 | 749,00 | 244,89 |
| 23/7/2014 | 21:00:00 | 13,70 | 7,46 | 3,40 | 1031,00 | 318,00 | 670,00 | 175,23 |
| 23/7/2014 | 22:00:00 | 13,80 | 7,20 | 2,00 | 1035,00 | 22,00 | 552,00 | 159,06 |
| 24/7/2014 | 01:00:00 | 13,80 | 7,43 | 1,60 | 1111,00 | 216,00 | 552,00 | 113,81 |
| 24/7/2014 | 02:00:00 | 10,00 | 7,44 | 1,40 | 1057,00 | 215,00 | 552,00 | 99,89 |
| 24/7/2014 | 03:00:00 | 9,90 | 7,42 | 1,50 | 1060,00 | 205,00 | 552,00 | 86,58 |

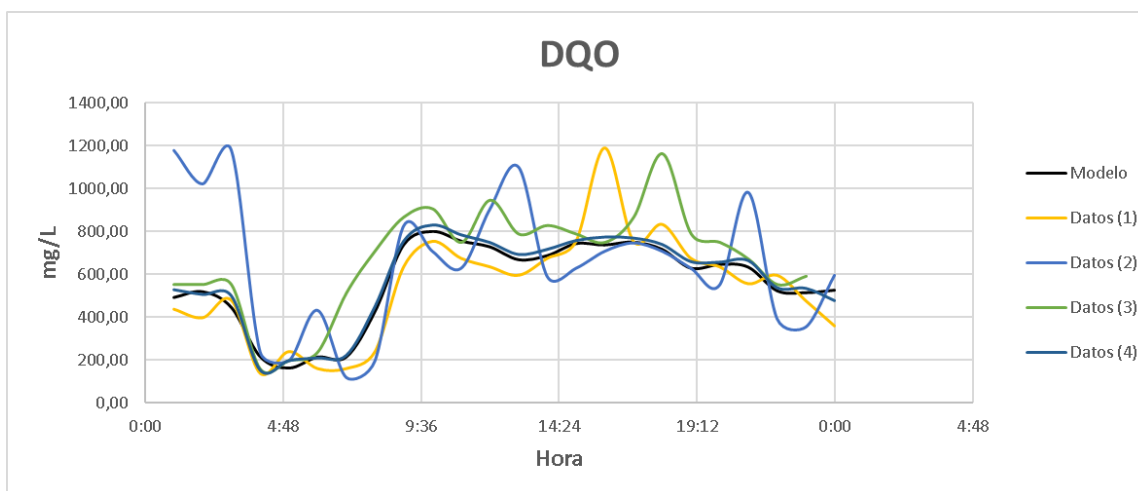
| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|------------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 24/7/2014 | 23:00:00 | 13,80 | 7,24 | 2,10 | 1060,00 | 233,00 | 591,00 | 159,06 |
| 24/7/2014 | 00:00:00 | 14,00 | 7,36 | 2,40 | 1089,00 | 231,00 | 512,00 | 128,33 |
| 26/8/2014 | 04:00:00 | 14,10 | 6,59 | 0,30 | 354,00 | 95,00 | 124,30 | 56,24 |
| 26/8/2014 | 05:00:00 | 14,00 | 6,64 | 0,80 | 483,00 | 117,00 | 155,30 | 73,92 |
| 26/8/2014 | 06:00:00 | 13,90 | 6,87 | 1,00 | 488,00 | 128,00 | 155,30 | 121,00 |
| 26/8/2014 | 07:00:00 | 13,90 | 6,90 | 1,50 | 495,00 | 151,00 | 186,40 | 159,06 |
| 26/8/2014 | 08:00:00 | 13,80 | 6,93 | 3,00 | 626,00 | 257,00 | 310,70 | 226,75 |
| 26/8/2014 | 09:00:00 | 13,80 | 7,98 | 5,50 | 1026,00 | 390,00 | 466,00 | 282,52 |
| 26/8/2014 | 10:00:00 | 14,00 | 7,87 | 8,00 | 1117,00 | 443,00 | 543,70 | 311,90 |
| 26/8/2014 | 11:00:00 | 14,10 | 7,69 | 6,00 | 1023,00 | 560,00 | 621,40 | 342,24 |
| 26/8/2014 | 12:00:00 | 14,20 | 6,91 | 4,50 | 748,00 | 430,00 | 543,70 | 362,98 |
| 26/8/2014 | 13:00:00 | 14,10 | 6,78 | 5,50 | 744,00 | 357,00 | 388,30 | 384,12 |
| 26/8/2014 | 14:00:00 | 14,10 | 6,74 | 5,00 | 747,00 | 277,00 | 310,70 | 384,12 |
| 26/8/2014 | 15:00:00 | 14,00 | 6,76 | 4,50 | 754,00 | 417,00 | 466,00 | 384,12 |
| 26/8/2014 | 16:00:00 | 14,00 | 6,99 | 5,00 | 1017,00 | 583,00 | 621,40 | 373,50 |
| 26/8/2014 | 17:00:00 | 14,00 | 7,02 | 5,00 | 1005,00 | 643,00 | 699,10 | 342,24 |
| 26/8/2014 | 18:00:00 | 14,00 | 7,16 | 4,50 | 797,00 | 443,00 | 543,70 | 321,91 |
| 26/8/2014 | 19:00:00 | 14,00 | 6,88 | 3,50 | 643,00 | 410,00 | 466,00 | 302,00 |
| 26/8/2014 | 20:00:00 | 14,00 | 7,06 | 3,50 | 812,00 | 717,00 | 932,10 | 282,52 |
| 26/8/2014 | 21:00:00 | 14,00 | 7,13 | 3,50 | 746,00 | 703,00 | 932,10 | 244,89 |
| 26/8/2014 | 22:00:00 | 14,00 | 7,02 | 3,00 | 713,00 | 583,00 | 776,70 | 209,09 |
| 26/8/2014 | 23:00:00 | 14,00 | 6,77 | 2,50 | 665,00 | 563,00 | 699,00 | 200,44 |
| 27/8/2014 | 01:00:00 | 14,00 | 6,95 | 2,00 | 543,00 | 195,00 | 248,60 | 135,81 |
| 27/8/2014 | 02:00:00 | 14,00 | 6,92 | 1,00 | 428,00 | 140,00 | 186,40 | 113,81 |
| 27/8/2014 | 03:00:00 | 14,00 | 6,63 | 0,50 | 382,00 | 127,00 | 155,30 | 80,17 |
| 27/8/2014 | 00:00:00 | 14,00 | 7,01 | 2,00 | 580,00 | 627,00 | 854,40 | 167,08 |
| 24/9/2014 | 04:00:00 | 21,40 | 6,86 | 1,00 | 564,00 | 153,00 | 217,00 | 73,92 |
| 24/9/2014 | 05:00:00 | 21,70 | 6,93 | 1,50 | 566,00 | 199,00 | 249,00 | 121,00 |
| 24/9/2014 | 06:00:00 | 21,60 | 6,98 | 2,00 | 569,00 | 201,00 | 280,00 | 167,08 |
| 24/9/2014 | 07:00:00 | 21,70 | 6,90 | 2,50 | 584,00 | 205,00 | 310,00 | 263,48 |
| 24/9/2014 | 08:00:00 | 21,90 | 7,21 | 5,00 | 720,00 | 240,00 | 414,00 | 302,00 |
| 24/9/2014 | 09:00:00 | 21,90 | 7,82 | 9,00 | 1059,00 | 567,00 | 854,00 | 332,02 |
| 24/9/2014 | 10:00:00 | 21,80 | 7,63 | 7,50 | 1050,00 | 550,00 | 932,00 | 352,56 |
| 24/9/2014 | 11:00:00 | 21,70 | 7,25 | 5,50 | 903,00 | 507,00 | 777,00 | 373,50 |
| 24/9/2014 | 12:00:00 | 21,90 | 7,03 | 4,50 | 782,00 | 477,00 | 699,00 | 394,84 |
| 24/9/2014 | 13:00:00 | 21,90 | 6,68 | 3,00 | 700,00 | 460,00 | 621,00 | 394,84 |
| 24/9/2014 | 14:00:00 | 21,90 | 6,62 | 3,00 | 706,00 | 433,00 | 544,00 | 394,84 |
| 24/9/2014 | 15:00:00 | 22,00 | 6,78 | 4,00 | 767,00 | 493,00 | 699,00 | 384,12 |
| 24/9/2014 | 16:00:00 | 19,80 | 6,64 | 4,00 | 792,00 | 533,00 | 777,00 | 362,98 |
| 24/9/2014 | 17:00:00 | 20,10 | 6,88 | 4,00 | 863,00 | 420,00 | 621,00 | 342,24 |
| 24/9/2014 | 18:00:00 | 20,20 | 6,62 | 3,50 | 835,00 | 440,00 | 621,00 | 321,91 |
| 24/9/2014 | 19:00:00 | 20,30 | 6,80 | 3,00 | 874,00 | 467,00 | 777,00 | 321,91 |
| 24/9/2014 | 20:00:00 | 20,30 | 6,90 | 2,50 | 875,00 | 473,00 | 777,00 | 292,21 |
| 24/9/2014 | 21:00:00 | 20,70 | 6,92 | 3,00 | 876,00 | 623,00 | 932,00 | 272,95 |
| 24/9/2014 | 22:00:00 | 20,70 | 7,04 | 3,00 | 946,00 | 860,00 | 1087,00 | 244,89 |
| 24/9/2014 | 23:00:00 | 20,80 | 7,07 | 2,00 | 944,00 | 867,00 | 1087,00 | 235,76 |
| 25/9/2014 | 01:00:00 | 20,60 | 7,05 | 2,50 | 963,00 | 840,00 | 1243,00 | 191,91 |
| 25/9/2014 | 02:00:00 | 20,60 | 7,11 | 2,00 | 952,00 | 583,00 | 932,00 | 159,06 |
| 25/9/2014 | 03:00:00 | 20,50 | 7,12 | 2,50 | 953,00 | 600,00 | 932,00 | 143,42 |
| 25/9/2014 | 00:00:00 | 20,80 | 7,02 | 2,00 | 966,00 | 860,00 | 1243,00 | 209,09 |
| 28/10/2014 | 04:00:00 | 23,10 | 6,90 | 0,50 | 523,00 | 58,00 | 145,00 | 67,85 |
| 28/10/2014 | 05:00:00 | 23,10 | 6,92 | 0,50 | 525,00 | 136,00 | 290,00 | 143,42 |
| 28/10/2014 | 06:00:00 | 23,00 | 6,88 | 0,70 | 526,00 | 74,00 | 109,00 | 175,23 |

| Fecha | Hora | T °C | pH | S Sed ml/L | C µS/cm | DBO ₅ mg/L | DQO mg/L | Q diario L/s |
|------------|----------|-------|------|------------|---------|-----------------------|----------|--------------|
| 28/10/2014 | 07:00:00 | 23,00 | 7,02 | 0,80 | 527,00 | 75,00 | 181,00 | 282,52 |
| 28/10/2014 | 08:00:00 | 23,00 | 7,05 | 3,50 | 810,00 | 495,00 | 1050,00 | 321,91 |
| 28/10/2014 | 09:00:00 | 23,00 | 7,18 | 5,70 | 1063,00 | 438,00 | 977,00 | 362,98 |
| 28/10/2014 | 10:00:00 | 22,80 | 7,05 | 4,80 | 961,00 | 467,00 | 905,00 | 394,84 |
| 28/10/2014 | 11:00:00 | 22,90 | 6,85 | 4,50 | 819,00 | 471,00 | 833,00 | 394,84 |
| 28/10/2014 | 12:00:00 | 22,80 | 6,41 | 2,00 | 752,00 | 542,00 | 1050,00 | 394,84 |
| 28/10/2014 | 13:00:00 | 23,00 | 6,49 | 3,20 | 703,00 | 612,00 | 1086,00 | 384,12 |
| 28/10/2014 | 14:00:00 | 22,90 | 6,53 | 2,90 | 702,00 | 387,00 | 833,00 | 362,98 |
| 28/10/2014 | 15:00:00 | 23,00 | 6,78 | 3,40 | 743,00 | 496,00 | 796,00 | 362,98 |
| 28/10/2014 | 16:00:00 | 22,90 | 6,82 | 3,60 | 768,00 | 463,00 | 760,00 | 342,24 |
| 28/10/2014 | 17:00:00 | 23,00 | 6,79 | 2,80 | 780,00 | 456,00 | 796,00 | 342,24 |
| 28/10/2014 | 18:00:00 | 23,00 | 6,65 | 3,20 | 796,00 | 670,00 | 1122,00 | 321,91 |
| 28/10/2014 | 19:00:00 | 22,90 | 6,89 | 2,00 | 776,00 | 657,00 | 1122,00 | 321,90 |
| 28/10/2014 | 20:00:00 | 22,90 | 7,04 | 3,20 | 833,00 | 538,00 | 833,00 | 302,00 |
| 28/10/2014 | 21:00:00 | 22,90 | 7,14 | 5,90 | 825,00 | 353,00 | 796,00 | 282,52 |
| 28/10/2014 | 22:00:00 | 22,90 | 6,99 | 2,90 | 901,00 | 435,00 | 724,00 | 263,48 |
| 28/10/2014 | 23:00:00 | 22,90 | 7,09 | 3,00 | 900,00 | 356,00 | 652,00 | 244,89 |
| 29/10/2014 | 01:00:00 | 23,00 | 7,05 | 2,80 | 868,00 | 342,00 | 507,00 | 191,91 |
| 29/10/2014 | 02:00:00 | 23,20 | 7,12 | 2,00 | 873,00 | 361,00 | 543,00 | 167,08 |
| 29/10/2014 | 03:00:00 | 23,20 | 7,11 | 2,80 | 877,00 | 350,00 | 507,00 | 135,81 |
| 29/10/2014 | 00:00:00 | 22,90 | 7,08 | 2,40 | 871,00 | 348,00 | 543,00 | 226,75 |
| 19/11/2014 | 04:00:00 | 23,00 | 7,23 | 0,80 | 659,00 | 106,00 | 290,00 | 56,24 |
| 19/11/2014 | 05:00:00 | 22,90 | 7,24 | 0,60 | 662,00 | 107,00 | 217,00 | 80,17 |
| 19/11/2014 | 06:00:00 | 22,80 | 7,22 | 0,50 | 661,00 | 116,00 | 290,00 | 106,77 |
| 19/11/2014 | 07:00:00 | 22,80 | 7,09 | 0,50 | 661,00 | 96,00 | 181,00 | 151,17 |
| 19/11/2014 | 08:00:00 | 23,20 | 7,29 | 2,90 | 788,00 | 429,00 | 941,00 | 167,08 |
| 19/11/2014 | 09:00:00 | 23,90 | 7,60 | 8,00 | 1061,00 | 471,00 | 905,00 | 263,48 |
| 19/11/2014 | 10:00:00 | 24,00 | 7,40 | 7,00 | 880,00 | 441,00 | 833,00 | 311,90 |
| 19/11/2014 | 11:00:00 | 23,50 | 7,26 | 3,90 | 838,00 | 414,00 | 833,00 | 332,02 |
| 19/11/2014 | 12:00:00 | 23,60 | 7,16 | 2,60 | 870,00 | 351,00 | 724,00 | 362,98 |
| 19/11/2014 | 13:00:00 | 23,90 | 6,92 | 3,00 | 745,00 | 392,00 | 688,00 | 438,69 |
| 19/11/2014 | 14:00:00 | 23,90 | 6,90 | 2,50 | 745,00 | 373,00 | 724,00 | 384,12 |
| 19/11/2014 | 15:00:00 | 23,90 | 6,96 | 3,00 | 741,00 | 319,00 | 652,00 | 394,84 |
| 19/11/2014 | 16:00:00 | 22,30 | 6,95 | 3,50 | 814,00 | 505,00 | 941,00 | 394,84 |
| 19/11/2014 | 17:00:00 | 22,30 | 7,02 | 3,50 | 814,00 | 369,00 | 688,00 | 373,50 |
| 19/11/2014 | 18:00:00 | 22,30 | 6,90 | 4,20 | 814,00 | 371,00 | 688,00 | 332,02 |
| 19/11/2014 | 19:00:00 | 22,30 | 6,91 | 2,90 | 806,00 | 414,00 | 977,00 | 332,02 |
| 19/11/2014 | 20:00:00 | 22,30 | 7,27 | 2,40 | 892,00 | 394,00 | 760,00 | 302,00 |
| 19/11/2014 | 21:00:00 | 22,30 | 7,26 | 3,10 | 885,00 | 318,00 | 615,00 | 272,95 |
| 19/11/2014 | 22:00:00 | 22,30 | 7,25 | 3,00 | 889,00 | 304,00 | 507,00 | 254,13 |
| 19/11/2014 | 23:00:00 | 22,30 | 7,46 | 4,00 | 986,00 | 353,00 | 760,00 | 226,75 |
| 20/11/2014 | 01:00:00 | 22,30 | 8,03 | 1,80 | 1168,00 | 216,00 | 471,00 | 175,23 |
| 20/11/2014 | 02:00:00 | 22,30 | 8,01 | 2,00 | 1162,00 | 291,00 | 471,00 | 159,06 |
| 20/11/2014 | 03:00:00 | 22,20 | 8,07 | 1,90 | 1158,00 | 280,00 | 507,00 | 143,42 |
| 20/11/2014 | 00:00:00 | 22,40 | 7,52 | 2,60 | 986,00 | 277,00 | 471,00 | 200,44 |
| 16/12/2014 | 04:00:00 | 25,00 | 7,65 | 0,80 | 523,00 | 195,00 | | 80,17 |
| 16/12/2014 | 05:00:00 | 24,90 | 7,60 | 0,80 | 626,00 | 189,75 | | 135,81 |
| 16/12/2014 | 06:00:00 | 24,90 | 7,20 | 0,90 | 526,00 | 232,50 | | 167,08 |
| 16/12/2014 | 07:00:00 | 23,80 | 7,30 | 1,00 | 532,00 | 250,00 | | 263,48 |
| 16/12/2014 | 08:00:00 | 23,80 | 7,32 | 2,60 | 645,00 | 308,00 | | 302,00 |
| 16/12/2014 | 09:00:00 | 23,80 | 7,57 | 6,60 | 962,00 | 578,00 | | 332,02 |
| 16/12/2014 | 10:00:00 | 23,80 | 7,65 | 6,80 | 960,00 | 546,00 | | 362,98 |
| 16/12/2014 | 11:00:00 | 23,80 | 7,34 | 5,00 | 892,00 | 601,00 | | 394,84 |

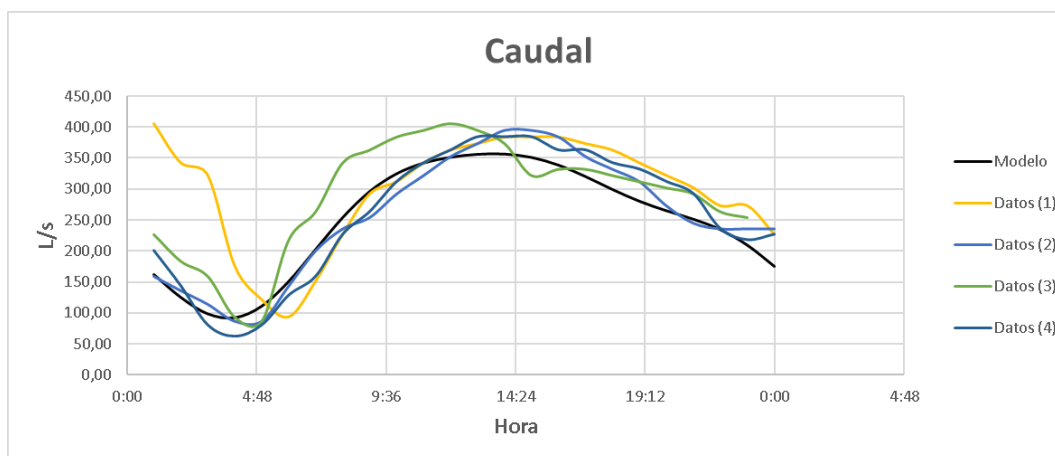
| Fecha | Hora | T °C | pH | S Sed ml/L | C μS/cm | DBO₅ mg/L | DQO mg/L | Q diario L/s |
|--------------|-------------|-----------------|-----------|-----------------------|--------------------|---------------------------------|---------------------|-----------------------------|
| 16/12/2014 | 12:00:00 | 23,80 | 7,13 | 3,70 | 812,00 | 578,00 | | 394,84 |
| 16/12/2014 | 13:00:00 | 23,80 | 7,13 | 3,00 | 814,00 | 541,00 | | 394,84 |
| 16/12/2014 | 14:00:00 | 23,80 | 7,08 | 3,60 | 812,00 | 530,00 | | 394,84 |
| 16/12/2014 | 15:00:00 | 21,90 | 7,08 | 3,00 | 778,00 | 571,00 | | 384,12 |
| 16/12/2014 | 16:00:00 | 23,70 | 7,01 | 4,00 | 845,00 | 594,00 | | 373,50 |
| 16/12/2014 | 17:00:00 | 23,70 | 6,94 | 3,80 | 874,00 | 567,00 | | 332,02 |
| 16/12/2014 | 18:00:00 | 23,80 | 7,08 | 4,10 | 908,00 | 466,00 | | 332,02 |
| 16/12/2014 | 19:00:00 | 23,70 | 7,04 | 2,90 | 905,00 | 487,00 | | 302,00 |
| 16/12/2014 | 20:00:00 | 23,60 | 7,07 | 3,00 | 902,00 | 462,00 | | 302,00 |
| 16/12/2014 | 21:00:00 | 23,60 | 7,07 | 3,90 | 902,00 | 522,00 | | 282,52 |
| 16/12/2014 | 22:00:00 | 23,70 | 7,06 | 5,00 | 908,00 | 475,00 | | 235,76 |
| 16/12/2014 | 23:00:00 | 23,60 | 7,39 | 2,00 | 957,00 | 424,00 | | 209,09 |
| 17/12/2014 | 01:00:00 | 23,70 | 7,30 | 2,40 | 954,00 | 458,00 | | 167,08 |
| 17/12/2014 | 02:00:00 | 23,60 | 7,29 | 2,50 | 960,00 | 446,00 | | 143,42 |
| 17/12/2014 | 03:00:00 | 23,60 | 7,30 | 2,40 | 951,00 | 436,00 | | 121,00 |
| 17/12/2014 | 00:00:00 | 23,70 | 7,40 | 2,60 | 958,00 | 495,00 | | 191,91 |

ANEXO XV: VALIDACIÓN DE MODELO DIARIOS

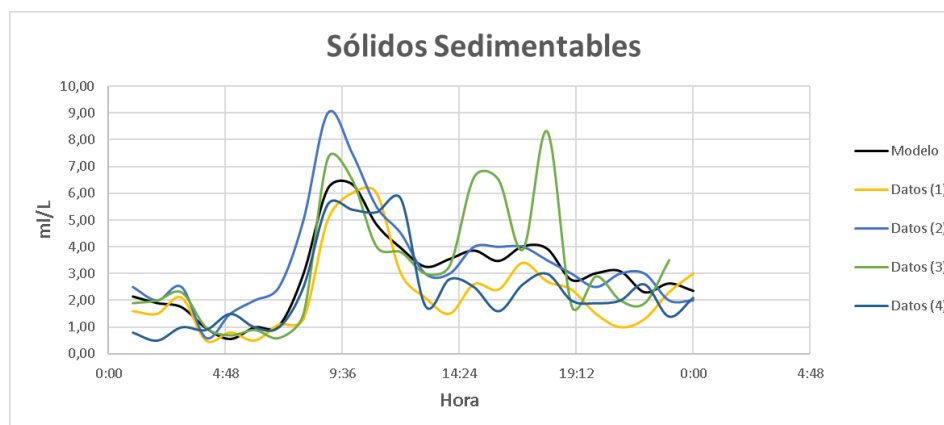
| Hora | Dato de 10:00:00 | DQO | Datos medidos | | | |
|-----------------------|---------------------|----------------|----------------|----------------|----------------|----------------|
| | | mg/L | 1 | 2 | 3 | 4 |
| 1:00 | 798,25 | 492,00 | 435,80 | 1176,00 | 552,00 | 526,61 |
| 2:00 | 798,25 | 518,92 | 396,20 | 1020,00 | 552,00 | 504,46 |
| 3:00 | 798,25 | 445,41 | 477,60 | 1176,00 | 552,00 | 497,88 |
| 4:00 | 798,25 | 216,55 | 137,00 | 237,60 | 158,40 | 151,89 |
| 5:00 | 798,25 | 162,78 | 237,70 | 196,00 | 197,00 | 195,37 |
| 6:00 | 798,25 | 214,06 | 158,50 | 431,00 | 236,00 | 208,16 |
| 7:00 | 798,25 | 214,35 | 158,50 | 118,00 | 512,00 | 220,11 |
| 8:00 | 798,25 | 426,28 | 237,70 | 196,00 | 709,00 | 448,12 |
| 9:00 | 798,25 | 737,69 | 633,90 | 824,00 | 867,00 | 752,82 |
| 10:00 | 798,25 | 800,30 | 752,80 | 706,00 | 906,00 | 828,19 |
| 11:00 | 798,25 | 755,39 | 673,50 | 627,00 | 749,00 | 782,56 |
| 12:00 | 798,25 | 728,45 | 633,90 | 902,00 | 946,00 | 746,53 |
| 13:00 | 798,25 | 668,49 | 594,30 | 1098,00 | 788,00 | 691,09 |
| 14:00 | 798,25 | 687,48 | 673,50 | 588,00 | 828,00 | 714,77 |
| 15:00 | 798,25 | 743,44 | 752,80 | 627,00 | 788,00 | 755,82 |
| 16:00 | 798,25 | 737,06 | 1188,60 | 706,00 | 749,00 | 772,32 |
| 17:00 | 798,25 | 750,49 | 752,80 | 745,00 | 867,00 | 767,34 |
| 18:00 | 798,25 | 716,38 | 832,00 | 706,00 | 1163,00 | 737,45 |
| 19:00 | 798,25 | 628,80 | 673,50 | 627,00 | 788,00 | 657,58 |
| 20:00 | 798,25 | 646,29 | 633,90 | 549,00 | 749,00 | 655,22 |
| 21:00 | 798,25 | 633,47 | 554,70 | 980,00 | 670,00 | 662,42 |
| 22:00 | 798,25 | 523,29 | 594,30 | 392,00 | 552,00 | 535,93 |
| 23:00 | 798,25 | 514,61 | 475,40 | 353,00 | 591,00 | 532,92 |
| 0:00 | 798,25 | 526,22 | 358,20 | 594,00 | 0,00 | 475,75 |
| Promedio total | | 562,008 | 542,379 | 648,942 | 644,558 | 575,888 |



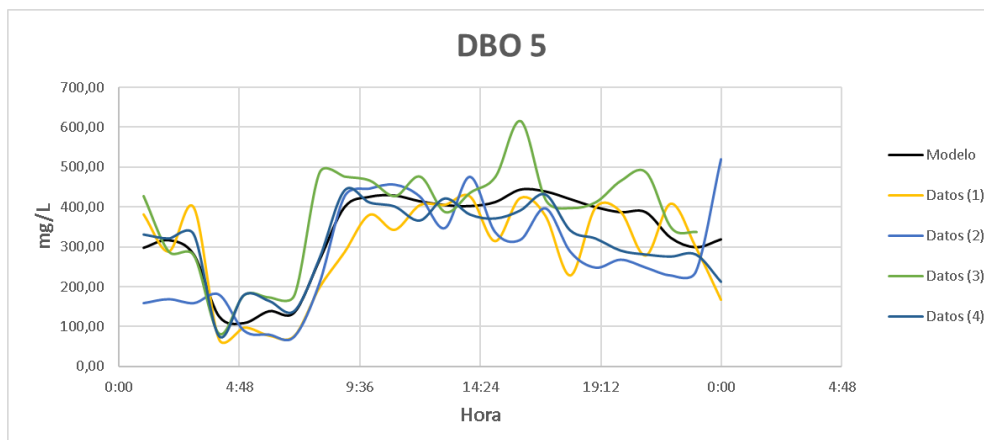
| Hora | Dato de 10:00:00 | Caudal | Datos medidos | | | |
|-----------------------|---------------------|----------------|----------------|----------------|----------------|----------------|
| | | L/s | 1 | 2 | 3 | 4 |
| 1:00 | 325,23 | 161,89 | 405,66 | 159,06 | 226,75 | 200,44 |
| 2:00 | 325,23 | 124,80 | 342,24 | 135,81 | 183,50 | 143,42 |
| 3:00 | 325,23 | 98,10 | 321,91 | 113,81 | 159,06 | 80,17 |
| 4:00 | 325,23 | 91,89 | 175,23 | 86,58 | 93,14 | 61,95 |
| 5:00 | 325,23 | 110,60 | 121,00 | 86,58 | 86,58 | 80,17 |
| 6:00 | 325,23 | 150,79 | 93,15 | 143,42 | 217,86 | 128,33 |
| 7:00 | 325,23 | 202,64 | 151,17 | 200,44 | 263,48 | 159,06 |
| 8:00 | 325,23 | 254,21 | 226,75 | 235,76 | 342,24 | 226,75 |
| 9:00 | 325,23 | 296,28 | 292,21 | 254,13 | 362,98 | 263,48 |
| 10:00 | 325,23 | 325,15 | 311,90 | 292,21 | 384,12 | 311,90 |
| 11:00 | 325,23 | 342,35 | 342,24 | 321,91 | 394,84 | 342,24 |
| 12:00 | 325,23 | 351,79 | 362,98 | 352,56 | 405,66 | 362,98 |
| 13:00 | 325,23 | 356,51 | 373,50 | 373,50 | 394,84 | 384,12 |
| 14:00 | 325,23 | 356,93 | 384,12 | 394,84 | 373,50 | 384,12 |
| 15:00 | 325,23 | 351,49 | 384,12 | 394,84 | 321,91 | 384,12 |
| 16:00 | 325,23 | 338,96 | 384,12 | 384,12 | 332,02 | 362,98 |
| 17:00 | 325,23 | 320,45 | 373,50 | 352,56 | 332,02 | 362,98 |
| 18:00 | 325,23 | 299,55 | 362,98 | 332,02 | 321,91 | 342,24 |
| 19:00 | 325,23 | 280,45 | 342,24 | 311,90 | 311,90 | 332,02 |
| 20:00 | 325,23 | 265,06 | 321,91 | 272,95 | 302,00 | 311,90 |
| 21:00 | 325,23 | 251,41 | 302,00 | 244,89 | 292,21 | 292,21 |
| 22:00 | 325,23 | 234,44 | 272,95 | 235,76 | 263,48 | 235,76 |
| 23:00 | 325,23 | 209,28 | 272,95 | 235,76 | 254,13 | 217,86 |
| 0:00 | 325,23 | 175,08 | 226,75 | 235,76 | 167,08 | 226,75 |
| Promedio total | | 247,920 | 297,816 | 256,299 | 282,800 | 258,248 |



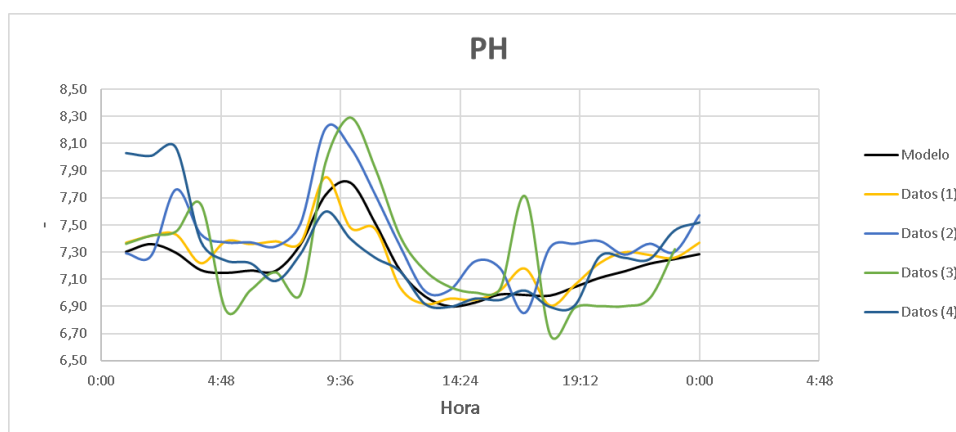
| Hora | Dato de 10:00:00 | Sólidos Sedimentables | Datos medidos | | | |
|-----------------------|------------------|-----------------------|---------------|--------------|--------------|--------------|
| | | ml/L | 1 | 2 | 3 | 4 |
| 1:00 | 325,23 | 2,16 | 1,60 | 2,50 | 1,90 | 0,80 |
| 2:00 | 325,23 | 1,91 | 1,50 | 2,00 | 2,00 | 0,50 |
| 3:00 | 325,23 | 1,76 | 2,10 | 2,50 | 2,30 | 1,00 |
| 4:00 | 325,23 | 0,98 | 0,50 | 0,60 | 1,00 | 0,90 |
| 5:00 | 325,23 | 0,57 | 0,80 | 1,50 | 0,70 | 1,50 |
| 6:00 | 325,23 | 1,00 | 0,50 | 2,00 | 0,90 | 1,00 |
| 7:00 | 325,23 | 1,07 | 1,10 | 2,50 | 0,60 | 1,00 |
| 8:00 | 325,23 | 3,00 | 1,30 | 5,00 | 1,50 | 2,50 |
| 9:00 | 325,23 | 6,19 | 5,00 | 9,00 | 7,30 | 5,60 |
| 10:00 | 325,23 | 6,35 | 6,00 | 7,50 | 6,50 | 5,40 |
| 11:00 | 325,23 | 4,84 | 6,00 | 5,50 | 4,00 | 5,30 |
| 12:00 | 325,23 | 3,97 | 3,00 | 4,50 | 3,80 | 5,80 |
| 13:00 | 325,23 | 3,27 | 2,10 | 3,00 | 3,00 | 1,80 |
| 14:00 | 325,23 | 3,56 | 1,50 | 3,00 | 3,30 | 2,80 |
| 15:00 | 325,23 | 3,87 | 2,60 | 4,00 | 6,60 | 2,50 |
| 16:00 | 325,23 | 3,48 | 2,40 | 4,00 | 6,50 | 1,60 |
| 17:00 | 325,23 | 4,03 | 3,40 | 4,00 | 3,90 | 2,60 |
| 18:00 | 325,23 | 3,94 | 2,70 | 3,50 | 8,30 | 3,00 |
| 19:00 | 325,23 | 2,78 | 2,40 | 3,00 | 1,80 | 2,00 |
| 20:00 | 325,23 | 3,03 | 1,50 | 2,50 | 2,90 | 1,90 |
| 21:00 | 325,23 | 3,10 | 1,00 | 3,00 | 2,00 | 2,00 |
| 22:00 | 325,23 | 2,32 | 1,30 | 3,00 | 1,90 | 2,60 |
| 23:00 | 325,23 | 2,64 | 2,30 | 2,00 | 3,50 | 1,40 |
| 0:00 | 325,23 | 2,37 | 3,00 | 2,00 | 1,30 | 2,10 |
| Promedio total | | 3,008 | 2,317 | 3,421 | 3,229 | 2,400 |



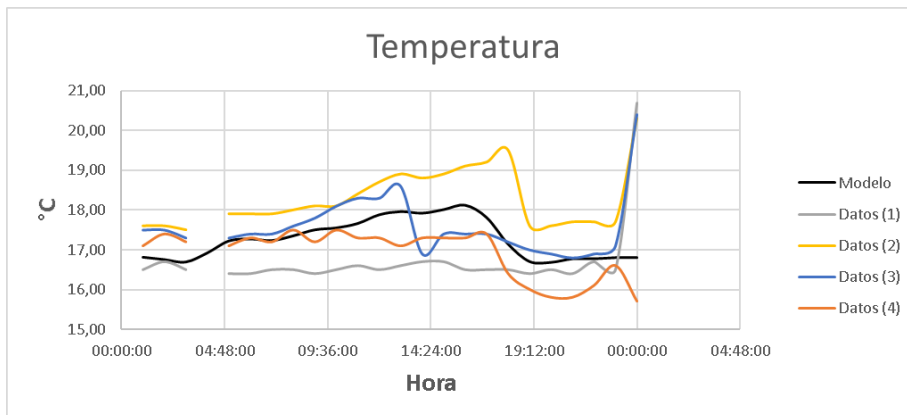
| Hora | Dato de 10:00:00 | DBO ₅ | Datos medidos | | | |
|-----------------------|------------------|------------------|----------------|----------------|----------------|----------------|
| | | mg/L | 1 | 2 | 3 | 4 |
| 1:00 | 426,00 | 298,22 | 382,00 | 158,70 | 427,00 | 331,00 |
| 2:00 | 426,00 | 317,16 | 289,00 | 168,60 | 288,00 | 321,00 |
| 3:00 | 426,00 | 280,88 | 399,00 | 158,70 | 278,00 | 331,00 |
| 4:00 | 426,00 | 126,37 | 69,00 | 180,00 | 82,40 | 77,50 |
| 5:00 | 426,00 | 109,20 | 98,00 | 89,30 | 179,00 | 180,00 |
| 6:00 | 426,00 | 138,97 | 78,00 | 79,40 | 173,00 | 165,00 |
| 7:00 | 426,00 | 135,73 | 77,00 | 74,40 | 179,00 | 140,00 |
| 8:00 | 426,00 | 266,71 | 198,00 | 208,30 | 486,00 | 271,00 |
| 9:00 | 426,00 | 399,94 | 287,00 | 426,50 | 476,00 | 441,00 |
| 10:00 | 426,00 | 426,00 | 381,00 | 446,40 | 466,00 | 411,00 |
| 11:00 | 426,00 | 429,27 | 343,50 | 456,30 | 427,00 | 401,00 |
| 12:00 | 426,00 | 414,84 | 405,00 | 426,50 | 476,00 | 366,00 |
| 13:00 | 426,00 | 405,21 | 406,00 | 347,20 | 387,00 | 421,00 |
| 14:00 | 426,00 | 402,90 | 427,00 | 476,10 | 436,00 | 381,00 |
| 15:00 | 426,00 | 412,71 | 315,00 | 337,20 | 476,00 | 371,00 |
| 16:00 | 426,00 | 443,97 | 423,00 | 317,40 | 615,00 | 391,00 |
| 17:00 | 426,00 | 439,51 | 379,00 | 396,80 | 417,00 | 431,00 |
| 18:00 | 426,00 | 420,07 | 229,00 | 287,60 | 397,00 | 341,00 |
| 19:00 | 426,00 | 400,09 | 399,00 | 248,00 | 412,00 | 321,00 |
| 20:00 | 426,00 | 387,36 | 389,00 | 267,80 | 466,00 | 291,00 |
| 21:00 | 426,00 | 387,42 | 279,00 | 248,00 | 486,00 | 281,00 |
| 22:00 | 426,00 | 323,18 | 409,00 | 228,10 | 347,00 | 276,00 |
| 23:00 | 426,00 | 299,33 | 299,00 | 238,10 | 337,00 | 281,00 |
| 0:00 | 426,00 | 319,31 | 167,80 | 520,00 | 348,00 | 213,00 |
| Promedio total | | 332,681 | 297,013 | 282,725 | 377,558 | 309,771 |



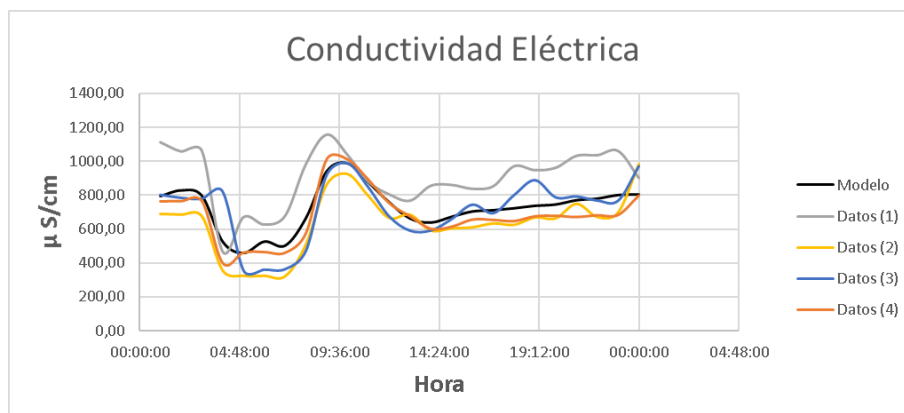
| Hora | Dato de 10:00:00 | pH | Datos medidos | | | |
|-----------------------|------------------|--------------|---------------|--------------|--------------|--------------|
| | | - | 1 | 2 | 3 | 4 |
| 1:00 | 7,81 | 7,30 | 7,37 | 7,29 | 7,36 | 8,03 |
| 2:00 | 7,81 | 7,36 | 7,42 | 7,27 | 7,42 | 8,01 |
| 3:00 | 7,81 | 7,29 | 7,43 | 7,76 | 7,45 | 8,07 |
| 4:00 | 7,81 | 7,17 | 7,22 | 7,43 | 7,65 | 7,38 |
| 5:00 | 7,81 | 7,15 | 7,38 | 7,37 | 6,87 | 7,24 |
| 6:00 | 7,81 | 7,16 | 7,36 | 7,37 | 7,02 | 7,22 |
| 7:00 | 7,81 | 7,16 | 7,38 | 7,34 | 7,15 | 7,09 |
| 8:00 | 7,81 | 7,36 | 7,37 | 7,51 | 6,99 | 7,29 |
| 9:00 | 7,81 | 7,72 | 7,85 | 8,21 | 7,96 | 7,60 |
| 10:00 | 7,81 | 7,81 | 7,48 | 8,07 | 8,29 | 7,40 |
| 11:00 | 7,81 | 7,51 | 7,47 | 7,72 | 7,91 | 7,26 |
| 12:00 | 7,81 | 7,16 | 7,04 | 7,34 | 7,41 | 7,16 |
| 13:00 | 7,81 | 6,97 | 6,92 | 7,01 | 7,16 | 6,92 |
| 14:00 | 7,81 | 6,90 | 6,96 | 7,02 | 7,04 | 6,90 |
| 15:00 | 7,81 | 6,93 | 6,95 | 7,23 | 7,00 | 6,96 |
| 16:00 | 7,81 | 6,99 | 7,02 | 7,18 | 7,03 | 6,95 |
| 17:00 | 7,81 | 6,99 | 7,18 | 6,85 | 7,71 | 7,02 |
| 18:00 | 7,81 | 6,98 | 6,91 | 7,33 | 6,69 | 6,90 |
| 19:00 | 7,81 | 7,04 | 7,06 | 7,36 | 6,89 | 6,91 |
| 20:00 | 7,81 | 7,11 | 7,22 | 7,38 | 6,90 | 7,27 |
| 21:00 | 7,81 | 7,16 | 7,30 | 7,28 | 6,90 | 7,26 |
| 22:00 | 7,81 | 7,21 | 7,28 | 7,36 | 6,96 | 7,25 |
| 23:00 | 7,81 | 7,25 | 7,26 | 7,30 | 7,32 | 7,46 |
| 0:00 | 7,81 | 7,28 | 7,37 | 7,57 | 7,33 | 7,52 |
| Promedio total | | 7,207 | 7,258 | 7,398 | 7,267 | 7,295 |



| Hora | Dato de 10:00:00 | Temperatura | Datos medidos | | | |
|-----------------------|---------------------|---------------|---------------|---------------|---------------|---------------|
| | | °C | 1 | 2 | 3 | 4 |
| 1:00 | 17,55 | 16,81 | 16,50 | 17,60 | 17,50 | 17,10 |
| 2:00 | 17,55 | 16,75 | 16,70 | 17,60 | 17,50 | 17,40 |
| 3:00 | 17,55 | 16,69 | 16,50 | 17,50 | 17,30 | 17,20 |
| 4:00 | 17,55 | 16,92 | | | | |
| 5:00 | 17,55 | 17,22 | 16,40 | 17,90 | 17,30 | 17,10 |
| 6:00 | 17,55 | 17,27 | 16,40 | 17,90 | 17,40 | 17,30 |
| 7:00 | 17,55 | 17,23 | 16,50 | 17,90 | 17,40 | 17,20 |
| 8:00 | 17,55 | 17,35 | 16,50 | 18,00 | 17,60 | 17,50 |
| 9:00 | 17,55 | 17,50 | 16,40 | 18,10 | 17,80 | 17,20 |
| 10:00 | 17,55 | 17,55 | 16,50 | 18,10 | 18,10 | 17,50 |
| 11:00 | 17,55 | 17,66 | 16,60 | 18,40 | 18,30 | 17,30 |
| 12:00 | 17,55 | 17,88 | 16,50 | 18,70 | 18,30 | 17,30 |
| 13:00 | 17,55 | 17,96 | 16,60 | 18,90 | 18,60 | 17,10 |
| 14:00 | 17,55 | 17,92 | 16,70 | 18,80 | 16,90 | 17,30 |
| 15:00 | 17,55 | 18,01 | 16,70 | 18,90 | 17,40 | 17,30 |
| 16:00 | 17,55 | 18,12 | 16,50 | 19,10 | 17,40 | 17,30 |
| 17:00 | 17,55 | 17,81 | 16,50 | 19,20 | 17,40 | 17,40 |
| 18:00 | 17,55 | 17,14 | 16,50 | 19,50 | 17,20 | 16,40 |
| 19:00 | 17,55 | 16,70 | 16,40 | 17,60 | 17,00 | 16,00 |
| 20:00 | 17,55 | 16,68 | 16,50 | 17,60 | 16,90 | 15,80 |
| 21:00 | 17,55 | 16,77 | 16,40 | 17,70 | 16,80 | 15,80 |
| 22:00 | 17,55 | 16,77 | 16,70 | 17,70 | 16,90 | 16,10 |
| 23:00 | 17,55 | 16,80 | 16,50 | 17,70 | 17,10 | 16,60 |
| 0:00 | 17,55 | 16,80 | 20,70 | 20,30 | 20,40 | 15,70 |
| Promedio total | | 17,263 | 16,704 | 18,291 | 17,587 | 16,909 |



| Hora | 10:00 | Conductividad Eléctrica | Datos medidos | | | |
|-----------------------|-------|-------------------------|----------------|----------------|----------------|----------------|
| | | μ S/cm | 1 | 2 | 3 | 4 |
| 01:00:00 | 989,5 | 795,14 | 1111 | 689 | 801 | 764 |
| 02:00:00 | 989,5 | 828,95 | 1057 | 685 | 783 | 765 |
| 03:00:00 | 989,5 | 796,70 | 1060 | 675 | 778 | 765 |
| 04:00:00 | 989,5 | 524,71 | 466 | 354 | 819 | 401 |
| 05:00:00 | 989,5 | 457,82 | 670 | 323 | 356 | 463 |
| 06:00:00 | 989,5 | 525,75 | 626 | 323 | 361 | 466 |
| 07:00:00 | 989,5 | 501,68 | 678 | 321 | 364 | 462 |
| 08:00:00 | 989,5 | 665,27 | 983 | 510 | 472 | 577 |
| 09:00:00 | 989,5 | 942,97 | 1156 | 864 | 919 | 1012 |
| 10:00:00 | 989,5 | 989,50 | 1036 | 925 | 987 | 1010 |
| 11:00:00 | 989,5 | 877,10 | 879 | 795 | 844 | 891 |
| 12:00:00 | 989,5 | 758,37 | 804 | 665 | 674 | 754 |
| 13:00:00 | 989,5 | 662,60 | 767 | 685 | 590 | 676 |
| 14:00:00 | 989,5 | 638,18 | 855 | 591 | 591 | 603 |
| 15:00:00 | 989,5 | 672,84 | 860 | 604 | 658 | 615 |
| 16:00:00 | 989,5 | 704,20 | 837 | 610 | 743 | 657 |
| 17:00:00 | 989,5 | 711,51 | 852 | 633 | 693 | 655 |
| 18:00:00 | 989,5 | 723,01 | 970 | 625 | 799 | 648 |
| 19:00:00 | 989,5 | 737,84 | 947 | 668 | 887 | 676 |
| 20:00:00 | 989,5 | 745,54 | 961 | 663 | 786 | 679 |
| 21:00:00 | 989,5 | 771,00 | 1031 | 749 | 791 | 672 |
| 22:00:00 | 989,5 | 780,57 | 1035 | 671 | 767 | 682 |
| 23:00:00 | 989,5 | 801,57 | 1060 | 698 | 766 | 684 |
| 00:00:00 | 989,5 | 804,48 | 901 | 983 | 969 | 798 |
| Promedio total | | 725,721 | 900,083 | 637,875 | 716,583 | 682,292 |



ANEXO XVI: DATOS REMOCIÓN

| SÓLIDOS EN SUSPENSIÓN | | | | | | | |
|-----------------------|--|--|---|---|--|---|---|
| Fecha | Datos | | | | Modelo | | |
| | Sólidos Suspensión Ingreso de la Planta mg/L | Remoción en las Lagunas Anaeróbicas 1 y 2 mg/L | Remoción hasta la Laguna Facultativa mg/L | Remoción hasta la Laguna de Maduración mg/L | Remoción en las Lagunas Anaeróbicas 1 y 2 mg/L | Remoción hasta la Laguna Facultativa mg/L | Remoción hasta la Laguna de Maduración mg/L |
| 25-3-15 | 160.00 | 107.50 | 118.00 | 116.00 | 89.36 | 96.09 | 104.63 |
| 31-3-15 | 140.00 | 90.00 | 97.50 | 85.00 | 74.09 | 78.28 | 85.08 |
| 8-4-15 | 245.00 | 202.50 | 207.00 | 211.00 | 163.56 | 173.64 | 187.68 |
| 23-4-15 | 85.00 | 40.00 | 45.00 | 47.00 | 37.55 | 29.82 | 31.34 |
| 6-5-15 | 170.00 | 116.87 | 120.00 | 124.00 | 97.34 | 105.04 | 114.40 |
| 10-6-15 | 190.00 | 134.00 | 140.00 | 150.00 | 113.97 | 123.06 | 133.94 |
| 29-7-15 | 290.91 | 238.41 | 242.91 | 252.91 | 208.36 | 217.31 | 232.54 |
| 11-8-15 | 120.00 | | | | 59.83 | 60.59 | 65.54 |
| 13-8-15 | 130.00 | 78.00 | 88.00 | 94.00 | 66.83 | 69.43 | 75.31 |
| 8-9-15 | 80.00 | 16.00 | 28.00 | 38.00 | 34.66 | 25.44 | 26.46 |
| 21-10-15 | 75.00 | 32.50 | 25.00 | 11.00 | 31.85 | 21.06 | 21.57 |
| 27-11-15 | 125.00 | 79.00 | 65.00 | 59.00 | 63.30 | 65.01 | 70.43 |
| 9-12-15 | 105.00 | 60.00 | | | 49.85 | 47.38 | 50.89 |
| 16-12-15 | 200.00 | 150.00 | | | 122.58 | 132.14 | 143.71 |
| 24-2-16 | 85.00 | 21.67 | 5.00 | 27.50 | 37.55 | 29.82 | 31.34 |
| 16-3-16 | 80.00 | 30.00 | 20.00 | 17.00 | 34.66 | 25.44 | 26.46 |
| 23-3-16 | 110.00 | 50.00 | 40.00 | 51.50 | 53.11 | 51.78 | 55.77 |
| 20-4-16 | 63.33 | 16.66 | 10.00 | 5.83 | 25.61 | 10.83 | 10.17 |
| 27-4-16 | 70.00 | 13.33 | 16.67 | 16.67 | 29.12 | 16.68 | 16.69 |
| 11-5-16 | 100.00 | 55.00 | 35.00 | 46.00 | 46.66 | 42.99 | 46.00 |
| 18-5-16 | 103.33 | 63.33 | 48.33 | 47.33 | 48.78 | 45.91 | 49.25 |
| 11-5-16 | 100.00 | 55.00 | 35.00 | 46.00 | 46.66 | 42.99 | 46.00 |
| 8-6-16 | 106.66 | 64.16 | 59.16 | 59.04 | 50.92 | 48.84 | 52.51 |
| 29-6-16 | 100.00 | 46.67 | 55.00 | 48.00 | 46.66 | 42.99 | 46.00 |
| 29-7-16 | 60.00 | 10.00 | 6.00 | 8.00 | 23.91 | 7.92 | 6.92 |
| 10-8-16 | 60.00 | 17.50 | 10.00 | 20.00 | 23.91 | 7.92 | 6.92 |
| 7-9-16 | 123.33 | 76.33 | 67.33 | 73.33 | 62.13 | 63.53 | 68.80 |
| 28-9-16 | 130.00 | 62.00 | 70.00 | 78.00 | 66.83 | 69.43 | 75.31 |
| 28-10-16 | 6.00 | 6.00 | | | 1.79 | -39.45 | -45.85 |
| 23-11-16 | 100.00 | 52.50 | 40.00 | 50.00 | 46.66 | 42.99 | 46.00 |
| 30-11-16 | 166.67 | 94.67 | 106.67 | 110.67 | 94.66 | 102.05 | 111.14 |
| 14-12-16 | 190.00 | 110.00 | 115.00 | 130.00 | 113.97 | 123.06 | 133.94 |
| 25-1-17 | 120.00 | 43.34 | 57.50 | 62.50 | 59.83 | 60.59 | 65.54 |
| 31-1-17 | 525.00 | 447.50 | 473.20 | 479.00 | 447.40 | 473.21 | 461.27 |
| 8-2-17 | 160.00 | 97.50 | 105.00 | 110.00 | 89.36 | 96.09 | 104.63 |
| 23-2-17 | 125.00 | 52.00 | 60.00 | 65.00 | 63.30 | 65.01 | 70.43 |
| 21-3-17 | 133.33 | 75.83 | 76.19 | 78.33 | 69.22 | 72.37 | 78.57 |
| 11-4-17 | 370.00 | 287.50 | 296.67 | 303.33 | 289.76 | 296.68 | 309.82 |
| 26-4-17 | 295.00 | 227.17 | 232.00 | 237.20 | 212.46 | 221.28 | 236.53 |
| 5-5-17 | 275.00 | 202.00 | 207.00 | 217.00 | 192.55 | 202.00 | 216.99 |
| 31-5-17 | 110.00 | 41.00 | 58.00 | 58.00 | 53.11 | 51.78 | 55.77 |
| 8-6-17 | 375.00 | 305.00 | 290.00 | 319.00 | 294.99 | 301.91 | 314.70 |
| 27-6-17 | 282.50 | 200.00 | 217.50 | 222.50 | 199.97 | 209.19 | 224.32 |
| 19-7-17 | 115.00 | 55.00 | 57.50 | 67.00 | 56.44 | 56.19 | 60.66 |
| 27-7-17 | 355.00 | 261.67 | 280.00 | 295.00 | 274.09 | 281.17 | 295.16 |
| 9-8-17 | 282.00 | 177.00 | 200.00 | 217.00 | 199.47 | 208.71 | 223.83 |
| 23-8-17 | 153.33 | 55.33 | 75.83 | 93.33 | 84.16 | 90.14 | 98.11 |
| 13-9-17 | 195.00 | 103.00 | 116.00 | 136.00 | 118.25 | 127.59 | 138.82 |

| | | | | | | | |
|----------|--------|--------|--------|--------|--------|--------|--------|
| 4-10-17 | 280.00 | 160.00 | 185.00 | 211.00 | 197.49 | 206.79 | 221.88 |
| 25-10-17 | 185.00 | 89.00 | 100.00 | 123.00 | 109.73 | 118.54 | 129.05 |
| 15-11-17 | 390.00 | 313.33 | 324.00 | 324.00 | 310.70 | 317.75 | 329.36 |
| 29-11-17 | 210.00 | 115.00 | 138.00 | 150.00 | 131.39 | 141.26 | 153.48 |
| 20-12-17 | 190.00 | 99.00 | 122.00 | 131.00 | 113.97 | 123.06 | 133.94 |
| 29-12-17 | 220.00 | 110.00 | 136.00 | 168.00 | 140.37 | 150.44 | 163.25 |
| 10-1-18 | 250.00 | 160.00 | 166.00 | 195.00 | 168.31 | 178.32 | 192.57 |
| 30-1-18 | 140.00 | 42.00 | 62.00 | 88.00 | 74.09 | 78.28 | 85.08 |
| 7-2-18 | 244.00 | 155.00 | 166.00 | 185.00 | 162.61 | 172.70 | 186.70 |
| 22-2-18 | 120.00 | 60.00 | 60.00 | 62.00 | 59.83 | 60.59 | 65.54 |
| 27-3-18 | 160.00 | 72.00 | 75.00 | 100.00 | 89.36 | 96.09 | 104.63 |
| 23-4-18 | 380.00 | 290.00 | 292.50 | 325.00 | 300.22 | 307.16 | 319.59 |
| 17-5-18 | 195.00 | 87.50 | 112.50 | 132.50 | 118.25 | 127.59 | 138.82 |
| 27-6-18 | 215.00 | 175.00 | 155.00 | 173.00 | 135.86 | 145.85 | 158.37 |
| 31-7-18 | 260.00 | 200.00 | 200.00 | 202.00 | 177.91 | 187.74 | 202.34 |
| 9-8-18 | 350.00 | 276.67 | 283.33 | 290.00 | 268.88 | 276.05 | 290.28 |
| 12-10-18 | 290.00 | 209.00 | 229.00 | 232.00 | 207.45 | 216.43 | 231.65 |
| 16-11-18 | 220.00 | 135.00 | 160.00 | 163.50 | 140.37 | 150.44 | 163.25 |
| 28-11-18 | 185.00 | 110.00 | 117.00 | 125.00 | 109.73 | 118.54 | 129.05 |
| 20-12-18 | 325.00 | 241.67 | 248.33 | 285.00 | 243.00 | 250.81 | 265.85 |

| CONDUCTIVIDAD | | | | | | | |
|---------------|--|---|--|--|---|--|--|
| | Datos | | | | Modelo | | |
| Fecha | Conductividad Ingreso de la Planta $\mu\text{S}/\text{cm}$ | Remoción en las Lagunas Anaeróbicas 1 y 2 $\mu\text{S}/\text{cm}$ | Remoción hasta la Laguna Facultativa $\mu\text{S}/\text{cm}$ | Remoción hasta la Laguna de Maduración $\mu\text{S}/\text{cm}$ | Remoción en las Lagunas Anaeróbicas 1 y 2 $\mu\text{S}/\text{cm}$ | Remoción hasta la Laguna Facultativa $\mu\text{S}/\text{cm}$ | Remoción hasta la Laguna de Maduración $\mu\text{S}/\text{cm}$ |
| 25-3-15 | 691.00 | -78.00 | -81.00 | -71.00 | -153.55 | -135.35 | -135.83 |
| 31-3-15 | 674.00 | -132.00 | -131.00 | -117.00 | -171.54 | -150.97 | -149.34 |
| 8-4-15 | 763.00 | -51.00 | -47.00 | -37.00 | -79.31 | -69.24 | -78.62 |
| 23-4-15 | 837.00 | 28.00 | 32.00 | 40.00 | -6.31 | -1.28 | -19.82 |
| 6-5-15 | 1043.00 | 184.00 | 172.00 | 176.00 | 179.30 | 187.89 | 143.87 |
| 10-6-15 | 772.00 | -102.00 | -104.00 | -97.00 | -70.25 | -60.97 | -71.47 |
| 29-7-15 | 816.00 | -125.00 | -128.00 | -125.00 | -26.69 | -20.57 | -36.51 |
| 11-8-15 | 922.00 | 922.00 | 922.00 | -28.00 | 73.42 | 76.77 | 47.72 |
| 13-8-15 | 711.00 | -181.00 | -202.00 | -214.00 | -132.61 | -116.99 | -119.94 |
| 8-9-15 | 751.00 | -201.00 | -203.00 | -200.00 | -91.46 | -80.26 | -88.16 |
| 21-10-15 | 799.00 | -152.00 | -123.00 | -118.00 | -43.38 | -36.18 | -50.01 |
| 27-11-15 | 1009.00 | 142.00 | 142.00 | 150.00 | 150.45 | 156.66 | 116.85 |
| 9-12-15 | 945.00 | 103.00 | 945.00 | | 94.23 | 97.89 | 66.00 |
| 16-12-15 | 804.00 | -108.00 | 804.00 | | -38.45 | -31.59 | -46.04 |
| 24-2-16 | 814.00 | 84.00 | 92.00 | 109.00 | -28.64 | -22.40 | -38.10 |
| 16-3-16 | 730.00 | -63.00 | -41.00 | -28.00 | -112.94 | -99.54 | -104.84 |
| 23-3-16 | 660.00 | -146.00 | -135.00 | -119.00 | -186.49 | -163.82 | -160.46 |
| 20-4-16 | 626.00 | -155.00 | -141.00 | -110.00 | -223.29 | -195.04 | -187.48 |
| 27-4-16 | 728.00 | -69.00 | -53.00 | -42.00 | -115.00 | -101.38 | -106.43 |
| 11-5-16 | 777.00 | -54.00 | -29.00 | -2.00 | -65.24 | -56.38 | -67.50 |
| 18-5-16 | 534.00 | -339.00 | -318.00 | -297.00 | -326.41 | -279.53 | -260.58 |
| 11-5-16 | 777.00 | -54.00 | -29.00 | -2.00 | -65.24 | -56.38 | -67.50 |
| 8-6-16 | 755.00 | -167.00 | -165.00 | -148.00 | -87.40 | -76.58 | -84.98 |
| 29-6-16 | 878.00 | -92.50 | -41.00 | -44.00 | 32.70 | 36.37 | 12.76 |
| 29-7-16 | 852.00 | -176.00 | -172.00 | -216.00 | 8.08 | 12.49 | -7.90 |
| 10-8-16 | 810.00 | -158.00 | -186.00 | -231.00 | -32.56 | -26.08 | -41.27 |
| 7-9-16 | 902.00 | -200.00 | -177.00 | -163.00 | 55.06 | 58.41 | 31.83 |
| 28-9-16 | 816.00 | -229.00 | -221.00 | -223.00 | -26.69 | -20.57 | -36.51 |
| 28-10-16 | 1273.00 | 197.00 | 197.00 | 219.00 | 355.93 | 399.10 | 326.63 |
| 23-11-16 | 847.00 | -174.00 | -144.00 | -142.00 | 3.30 | 7.90 | -11.87 |
| 30-11-16 | 786.00 | -175.50 | -203.00 | -198.00 | -56.26 | -48.12 | -60.34 |
| 14-12-16 | 800.00 | -135.00 | -119.00 | -120.00 | -42.39 | -35.26 | -49.22 |
| 25-1-17 | 748.00 | -175.50 | -168.00 | -126.00 | -94.52 | -83.01 | -90.54 |
| 31-1-17 | 1247.00 | 282.00 | 809.00 | 368.00 | 337.58 | 375.22 | 305.97 |
| 8-2-17 | 760.00 | -131.50 | -76.00 | -56.00 | -82.34 | -71.99 | -81.00 |
| 23-2-17 | 1031.00 | 159.00 | 207.00 | 213.00 | 169.20 | 176.87 | 134.33 |
| 21-3-17 | 733.00 | -135.00 | -82.00 | -87.00 | -109.86 | -96.79 | -102.46 |
| 11-4-17 | 749.00 | -163.00 | -105.00 | -83.00 | -93.50 | -82.09 | -89.74 |
| 26-4-17 | 991.00 | 62.50 | 82.00 | 104.00 | 134.90 | 140.14 | 102.55 |
| 5-5-17 | 1027.00 | 82.00 | 119.00 | 110.00 | 165.82 | 173.19 | 131.15 |
| 31-5-17 | 764.00 | -108.50 | -93.00 | -78.00 | -78.30 | -68.32 | -77.83 |
| 8-6-17 | 1029.00 | 156.00 | 174.00 | 177.00 | 167.51 | 175.03 | 132.74 |
| 27-6-17 | 993.00 | 902.70 | 102.00 | 103.00 | 136.63 | 141.97 | 104.14 |
| 19-7-17 | 697.00 | -159.00 | -181.00 | -179.00 | -147.24 | -129.84 | -131.06 |
| 27-7-17 | 1033.00 | 146.00 | 157.00 | 176.00 | 170.89 | 178.70 | 135.92 |
| 9-8-17 | 960.00 | 58.00 | 60.00 | 78.00 | 107.64 | 111.67 | 77.92 |
| 23-8-17 | 727.00 | -173.00 | -178.00 | -163.00 | -116.03 | -102.30 | -107.23 |
| 13-9-17 | 690.00 | -205.00 | -203.00 | -189.00 | -154.60 | -136.27 | -136.63 |

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|----------|---------|---------|---------|---------|---------|---------|---------|
| 4-10-17 | 775.00 | -141.00 | -130.00 | -114.00 | -67.25 | -58.22 | -69.09 |
| 25-10-17 | 728.00 | -174.00 | -173.00 | -157.00 | -115.00 | -101.38 | -106.43 |
| 15-11-17 | 1074.00 | 177.00 | 198.00 | 201.00 | 204.99 | 216.35 | 168.50 |
| 29-11-17 | 1121.00 | 237.00 | 251.00 | 251.00 | 242.82 | 259.51 | 205.85 |
| 20-12-17 | 899.00 | 73.00 | 58.00 | 71.00 | 52.28 | 55.65 | 29.45 |
| 29-12-17 | 878.00 | 110.00 | 148.00 | 134.00 | 32.70 | 36.37 | 12.76 |
| 10-1-18 | 669.00 | -151.00 | -119.00 | -103.00 | -176.87 | -155.56 | -153.31 |
| 30-1-18 | 653.00 | 12.00 | 15.00 | 12.00 | -194.01 | -170.25 | -166.03 |
| 7-2-18 | 660.00 | -72.00 | -51.00 | -17.00 | -186.49 | -163.82 | -160.46 |
| 22-2-18 | 661.00 | -85.00 | -66.00 | -42.00 | -185.42 | -162.90 | -159.67 |
| 27-3-18 | 665.00 | -68.00 | -72.00 | -71.00 | -181.14 | -159.23 | -156.49 |
| 23-4-18 | 656.00 | -138.00 | -134.00 | -101.00 | -190.78 | -167.50 | -163.64 |
| 17-5-18 | 852.00 | 102.00 | 98.00 | 112.00 | 8.08 | 12.49 | -7.90 |
| 27-6-18 | 1150.00 | 247.00 | 248.00 | 254.00 | 265.49 | 286.15 | 228.89 |
| 31-7-18 | 754.00 | -145.00 | -149.00 | -133.00 | -88.42 | -77.50 | -85.77 |
| 9-8-18 | 793.00 | -108.00 | -111.00 | -109.00 | -49.31 | -41.69 | -54.78 |
| 12-10-18 | 793.00 | -108.00 | -111.00 | -109.00 | -49.31 | -41.69 | -54.78 |
| 16-11-18 | 954.00 | 119.00 | 104.00 | 94.00 | 102.29 | 106.16 | 73.15 |
| 28-11-18 | 910.00 | 70.00 | 75.00 | 45.00 | 62.43 | 65.75 | 38.19 |
| 20-12-18 | 1164.00 | 359.00 | 340.00 | 280.00 | 276.25 | 299.00 | 240.01 |

| DQO | | | | | | | |
|----------|-------------------------------|--|---|---|--|---|---|
| Fecha | Datos | | | | Modelo | | |
| | DQO Ingreso de la Planta mg/L | Remoción en las Lagunas Anaeróbicas 1 y 2 mg/L | Remoción hasta la Laguna Facultativa mg/L | Remoción hasta la Laguna de Maduración mg/L | Remoción en las Lagunas Anaeróbicas 1 y 2 mg/L | Remoción hasta la Laguna Facultativa mg/L | Remoción hasta la Laguna de Maduración mg/L |
| 25-3-15 | 666.67 | 431.37 | 480.39 | 525.49 | 404.54 | 452.30 | 473.34 |
| 31-3-15 | 588.24 | 379.09 | 392.16 | 416.16 | 327.63 | 373.25 | 396.03 |
| 8-4-15 | 1960.80 | 1751.65 | 1823.54 | 1784.33 | 1673.56 | 1756.79 | 1748.96 |
| 23-4-15 | 705.89 | 392.17 | 470.59 | 533.34 | 443.00 | 491.84 | 512.00 |
| 6-5-15 | 901.97 | 640.53 | 686.28 | 729.42 | 635.27 | 689.49 | 705.27 |
| 10-6-15 | 784.32 | 444.45 | 509.81 | 596.08 | 519.90 | 570.89 | 589.30 |
| 29-7-15 | 1142.83 | 853.84 | 886.68 | 922.15 | 871.46 | 932.27 | 942.69 |
| 11-8-15 | 591.12 | 591.12 | 591.12 | 386.20 | 330.45 | 376.15 | 398.87 |
| 13-8-15 | 709.34 | 472.89 | 532.00 | 551.71 | 446.38 | 495.31 | 515.40 |
| 8-9-15 | 630.53 | 394.08 | 354.67 | 409.85 | 369.10 | 415.87 | 437.71 |
| 21-10-15 | 551.71 | 262.72 | 354.67 | 378.31 | 291.81 | 336.42 | 360.02 |
| 27-11-15 | 866.98 | 656.80 | 669.94 | 677.82 | 600.96 | 654.22 | 670.78 |
| 9-12-15 | 788.16 | 577.98 | 788.16 | | 523.67 | 574.77 | 593.09 |
| 16-12-15 | 709.34 | 446.62 | 709.34 | | 446.38 | 495.31 | 515.40 |
| 24-2-16 | 705.89 | 418.31 | 490.70 | 517.65 | 443.00 | 491.84 | 512.00 |
| 16-3-16 | 980.40 | 745.10 | 784.32 | 792.16 | 712.18 | 768.54 | 782.58 |
| 23-3-16 | 627.46 | 418.31 | 411.77 | 454.91 | 366.09 | 412.78 | 434.69 |
| 20-4-16 | 313.73 | 52.29 | 117.65 | 172.55 | 58.44 | 96.54 | 125.44 |
| 27-4-16 | 666.67 | 457.52 | 490.20 | 509.81 | 404.54 | 452.30 | 473.34 |
| 11-5-16 | 823.54 | 509.81 | 588.24 | 603.93 | 558.36 | 610.43 | 627.96 |
| 18-5-16 | 274.51 | -13.07 | -19.61 | 54.90 | 19.98 | 57.01 | 86.78 |
| 11-5-16 | 823.54 | 509.81 | 588.24 | 603.93 | 558.36 | 610.43 | 627.96 |
| 8-6-16 | 660.21 | 388.36 | 427.19 | 446.61 | 398.20 | 445.79 | 466.97 |
| 29-6-16 | 660.21 | 388.36 | 466.03 | 458.26 | 398.20 | 445.79 | 466.97 |
| 29-7-16 | 776.72 | 466.03 | 563.12 | 543.70 | 512.45 | 563.23 | 581.81 |
| 10-8-16 | 737.88 | 491.92 | 524.28 | 582.54 | 474.37 | 524.08 | 543.53 |
| 7-9-16 | 941.18 | 718.96 | 725.49 | 752.94 | 673.72 | 729.01 | 743.92 |
| 28-9-16 | 941.18 | 640.53 | 725.49 | 721.57 | 673.72 | 729.01 | 743.92 |
| 28-10-16 | 745.10 | 522.88 | 529.41 | 541.18 | 481.45 | 531.36 | 550.65 |
| 23-11-16 | 784.32 | 562.10 | 588.24 | 611.77 | 519.90 | 570.89 | 589.30 |
| 30-11-16 | 392.16 | 104.58 | 156.86 | 188.24 | 135.35 | 175.60 | 202.75 |
| 14-12-16 | 431.00 | 143.42 | 215.31 | 242.76 | 173.44 | 214.75 | 241.04 |
| 25-1-17 | 588.24 | 339.88 | 392.16 | 415.69 | 327.63 | 373.25 | 396.03 |
| 31-1-17 | 980.40 | 705.91 | 764.71 | 807.85 | 712.18 | 768.54 | 782.58 |
| 8-2-17 | 776.72 | 556.65 | 601.96 | 621.38 | 512.45 | 563.23 | 581.81 |
| 23-2-17 | 470.92 | 261.77 | 274.84 | 314.06 | 212.58 | 254.99 | 280.39 |
| 21-3-17 | 543.70 | 284.79 | 368.94 | 388.36 | 283.95 | 328.35 | 352.13 |
| 11-4-17 | 621.38 | 362.47 | 446.62 | 458.27 | 360.13 | 406.65 | 428.69 |
| 26-4-17 | 582.00 | 336.39 | 358.20 | 364.52 | 321.51 | 366.96 | 389.88 |
| 5-5-17 | 543.71 | 288.71 | 318.71 | 372.83 | 283.96 | 328.36 | 352.13 |
| 31-5-17 | 776.72 | 546.20 | 582.54 | 605.84 | 512.45 | 563.23 | 581.81 |
| 8-6-17 | 776.72 | 543.70 | 563.12 | 590.31 | 512.45 | 563.23 | 581.81 |
| 27-6-17 | 699.05 | 414.25 | 466.03 | 481.57 | 436.29 | 484.94 | 505.25 |
| 19-7-17 | 712.87 | 396.04 | 455.44 | 491.09 | 449.84 | 498.87 | 518.88 |
| 27-7-17 | 831.68 | 594.06 | 574.16 | 609.90 | 566.35 | 618.63 | 635.99 |
| 9-8-17 | 950.50 | 607.27 | 712.88 | 744.56 | 682.86 | 738.40 | 753.11 |
| 23-8-17 | 792.08 | 501.65 | 574.26 | 586.14 | 527.51 | 578.72 | 596.95 |
| 13-9-17 | 356.44 | 145.22 | 58.42 | 138.62 | 100.33 | 139.59 | 167.54 |

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|----------|---------|--------|--------|--------|--------|--------|--------|
| 4-10-17 | 623.83 | 386.21 | 445.83 | 386.21 | 362.53 | 409.12 | 431.11 |
| 25-10-17 | 831.68 | 567.65 | 613.86 | 594.06 | 566.35 | 618.63 | 635.99 |
| 15-11-17 | 1108.91 | 871.29 | 891.09 | 902.97 | 838.20 | 898.08 | 909.25 |
| 29-11-17 | 792.08 | 506.93 | 514.85 | 586.14 | 527.51 | 578.72 | 596.95 |
| 20-12-17 | 910.00 | 645.98 | 692.18 | 719.90 | 643.15 | 697.58 | 713.19 |
| 29-12-17 | 712.00 | 421.57 | 474.38 | 521.90 | 448.99 | 498.00 | 518.02 |
| 10-1-18 | 910.89 | 673.07 | 693.07 | 720.79 | 644.02 | 698.48 | 714.06 |
| 30-1-18 | 950.50 | 580.86 | 712.88 | 744.56 | 682.86 | 738.40 | 753.11 |
| 7-2-18 | 673.27 | 382.84 | 455.45 | 483.17 | 411.01 | 458.96 | 479.84 |
| 22-2-18 | 712.87 | 369.64 | 455.44 | 506.93 | 449.84 | 498.87 | 518.88 |
| 27-3-18 | 636.66 | 319.83 | 418.84 | 430.72 | 375.11 | 422.05 | 443.76 |
| 23-4-18 | 554.46 | 290.43 | 336.64 | 348.52 | 294.50 | 339.20 | 362.73 |
| 17-5-18 | 792.08 | 528.05 | 554.46 | 586.14 | 527.51 | 578.72 | 596.95 |
| 27-6-18 | 792.08 | 554.46 | 554.46 | 586.14 | 527.51 | 578.72 | 596.95 |
| 31-7-18 | 910.80 | 646.80 | 653.40 | 736.60 | 643.93 | 698.39 | 713.98 |
| 9-8-18 | 854.39 | 569.59 | 582.54 | 652.45 | 588.61 | 641.53 | 658.37 |
| 12-10-18 | 815.56 | 453.09 | 485.46 | 567.01 | 550.54 | 602.38 | 620.10 |
| 16-11-18 | 970.90 | 556.90 | 679.63 | 706.82 | 702.86 | 758.97 | 773.22 |
| 28-11-18 | 543.70 | 284.80 | 368.94 | 372.82 | 283.95 | 328.35 | 352.13 |
| 20-12-18 | 737.88 | 478.97 | 485.45 | 535.94 | 474.37 | 524.08 | 543.53 |

| DBO 5 | | | | | | | |
|----------|---------------------------------|--|---|---|--|---|---|
| Fecha | Datos | | | | Modelo | | |
| | DBO 5 Ingreso de la Planta mg/L | Remoción en las Lagunas Anaeróbicas 1 y 2 mg/L | Remoción hasta la Laguna Facultativa mg/L | Remoción hasta la Laguna de Maduración mg/L | Remoción en las Lagunas Anaeróbicas 1 y 2 mg/L | Remoción hasta la Laguna Facultativa mg/L | Remoción hasta la Laguna de Maduración mg/L |
| 25-3-15 | 373.00 | 207.50 | 276.62 | 294.20 | 245.16 | 279.10 | 299.94 |
| 31-3-15 | 307.00 | 141.50 | 226.75 | 239.00 | 183.23 | 214.26 | 234.71 |
| 8-4-15 | 615.00 | 449.50 | 533.62 | 553.60 | 439.39 | 516.84 | 539.10 |
| 23-4-15 | 200.00 | 34.50 | 105.00 | 137.80 | 74.67 | 109.14 | 128.96 |
| 6-5-15 | 540.00 | 374.50 | 446.40 | 475.40 | 384.71 | 443.16 | 464.98 |
| 10-6-15 | 393.00 | 227.50 | 299.70 | 318.40 | 263.17 | 298.74 | 319.70 |
| 29-7-15 | 484.00 | 318.50 | 385.90 | 412.00 | 340.66 | 388.14 | 409.64 |
| 11-8-15 | 272.00 | 272.00 | 272.00 | 207.60 | 148.83 | 179.87 | 200.12 |
| 13-8-15 | 344.00 | 211.50 | 244.10 | 277.20 | 218.42 | 250.61 | 271.28 |
| 8-9-15 | 379.00 | 254.00 | 251.50 | 300.40 | 250.60 | 284.99 | 305.87 |
| 21-10-15 | 210.00 | 66.43 | 120.00 | 133.80 | 85.25 | 118.96 | 138.84 |
| 27-11-15 | 402.00 | 278.14 | 308.10 | 322.40 | 271.16 | 307.58 | 328.60 |
| 9-12-15 | 334.00 | 226.86 | 334.00 | | 209.03 | 240.78 | 261.39 |
| 16-12-15 | 414.00 | 300.86 | 414.00 | | 281.70 | 319.37 | 340.46 |
| 24-2-16 | 434.00 | 266.86 | 337.70 | 360.60 | 298.98 | 339.02 | 360.22 |
| 16-3-16 | 538.00 | 357.14 | 426.40 | 455.60 | 383.19 | 441.19 | 463.01 |
| 23-3-16 | 419.00 | 301.57 | 329.60 | 342.80 | 286.05 | 324.29 | 345.40 |
| 20-4-16 | 163.00 | 26.29 | 73.60 | 89.40 | 34.79 | 72.79 | 92.39 |
| 27-4-16 | 362.00 | 265.57 | 280.70 | 301.80 | 235.10 | 268.29 | 289.06 |
| 11-5-16 | 326.00 | 224.00 | 231.20 | 258.00 | 201.45 | 232.92 | 253.49 |
| 18-5-16 | 231.00 | 102.86 | 143.40 | 157.80 | 107.16 | 139.59 | 159.60 |
| 11-5-16 | 326.00 | 224.00 | 231.20 | 258.00 | 201.45 | 232.92 | 253.49 |
| 8-6-16 | 324.00 | 231.22 | 262.20 | 264.40 | 199.55 | 230.96 | 251.51 |
| 29-6-16 | 274.00 | 176.71 | 204.10 | 217.60 | 150.83 | 181.84 | 202.09 |
| 29-7-16 | 376.00 | 235.22 | 290.50 | 296.40 | 247.88 | 282.04 | 302.90 |
| 10-8-16 | 392.00 | 280.79 | 320.00 | 323.60 | 262.28 | 297.76 | 318.71 |
| 7-9-16 | 568.00 | 386.23 | 464.80 | 488.20 | 405.70 | 470.66 | 492.65 |
| 28-9-16 | 447.00 | 329.15 | 346.50 | 372.00 | 310.03 | 351.79 | 373.07 |
| 28-10-16 | 386.00 | 263.86 | 292.10 | 307.00 | 256.91 | 291.87 | 312.78 |
| 23-11-16 | 406.00 | 257.93 | 313.30 | 332.60 | 274.68 | 311.51 | 332.55 |
| 30-11-16 | 215.00 | 67.50 | 110.00 | 136.97 | 90.50 | 123.88 | 143.78 |
| 14-12-16 | 234.00 | 129.00 | 144.00 | 169.20 | 110.26 | 142.54 | 162.56 |
| 25-1-17 | 290.80 | 162.45 | 193.60 | 221.60 | 167.44 | 198.34 | 218.70 |
| 31-1-17 | 530.00 | 407.22 | 437.60 | 460.20 | 377.05 | 433.33 | 455.10 |
| 8-2-17 | 390.00 | 242.79 | 281.40 | 316.80 | 260.49 | 295.80 | 316.74 |
| 23-2-17 | 246.00 | 99.00 | 152.40 | 182.40 | 122.58 | 154.33 | 174.42 |
| 21-3-17 | 294.00 | 146.97 | 196.80 | 219.20 | 170.58 | 201.49 | 221.86 |
| 11-4-17 | 349.00 | 205.86 | 250.30 | 277.20 | 223.08 | 255.52 | 276.22 |
| 26-4-17 | 303.00 | 177.86 | 205.20 | 237.80 | 179.35 | 210.33 | 230.75 |
| 5-5-17 | 290.00 | 148.50 | 192.20 | 212.00 | 166.66 | 197.56 | 217.91 |
| 31-5-17 | 344.00 | 194.00 | 245.00 | 266.20 | 218.42 | 250.61 | 271.28 |
| 8-6-17 | 397.00 | 245.72 | 290.50 | 318.60 | 266.73 | 302.67 | 323.66 |
| 27-6-17 | 319.00 | 159.14 | 201.40 | 239.40 | 194.78 | 226.05 | 246.57 |
| 19-7-17 | 268.00 | 166.43 | 184.60 | 206.80 | 144.83 | 175.94 | 196.16 |
| 27-7-17 | 341.00 | 209.86 | 226.40 | 265.00 | 215.61 | 247.66 | 268.31 |
| 9-8-17 | 355.00 | 220.00 | 261.70 | 279.00 | 228.65 | 261.41 | 282.15 |
| 23-8-17 | 340.00 | 200.71 | 254.50 | 269.00 | 214.68 | 246.68 | 267.32 |
| 13-9-17 | 187.00 | 81.14 | 97.90 | 113.60 | 60.80 | 96.37 | 116.11 |

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|----------|--------|--------|--------|--------|--------|--------|--------|
| 4-10-17 | 301.00 | 193.86 | 202.00 | 199.00 | 177.41 | 208.36 | 228.78 |
| 25-10-17 | 470.00 | 367.57 | 353.30 | 382.20 | 329.21 | 374.39 | 395.80 |
| 15-11-17 | 472.00 | 370.86 | 391.60 | 400.40 | 330.86 | 376.35 | 397.78 |
| 29-11-17 | 352.00 | 258.57 | 260.80 | 279.40 | 225.87 | 258.46 | 279.18 |
| 20-12-17 | 440.00 | 295.00 | 350.00 | 366.00 | 304.10 | 344.92 | 366.15 |
| 29-12-17 | 310.00 | 198.57 | 226.00 | 239.60 | 186.13 | 217.20 | 237.67 |
| 10-1-18 | 470.00 | 366.71 | 381.20 | 398.20 | 329.21 | 374.39 | 395.80 |
| 30-1-18 | 410.00 | 264.29 | 317.00 | 336.00 | 278.20 | 315.44 | 336.50 |
| 7-2-18 | 365.00 | 217.14 | 267.50 | 287.80 | 237.86 | 271.24 | 292.03 |
| 22-2-18 | 440.00 | 242.00 | 320.30 | 364.00 | 304.10 | 344.92 | 366.15 |
| 27-3-18 | 387.00 | 221.57 | 258.30 | 294.00 | 257.80 | 292.85 | 313.77 |
| 23-4-18 | 297.00 | 161.14 | 201.90 | 221.60 | 173.51 | 204.43 | 224.83 |
| 17-5-18 | 350.00 | 208.57 | 254.00 | 272.00 | 224.01 | 256.50 | 277.21 |
| 27-6-18 | 328.00 | 228.57 | 252.40 | 265.80 | 203.35 | 234.89 | 255.46 |
| 31-7-18 | 421.00 | 275.00 | 334.30 | 349.00 | 287.79 | 326.25 | 347.37 |
| 9-8-18 | 460.00 | 367.43 | 376.60 | 392.20 | 320.93 | 364.56 | 385.92 |
| 12-10-18 | 450.00 | 317.57 | 360.60 | 377.40 | 312.56 | 354.74 | 376.04 |
| 16-11-18 | 388.00 | 226.00 | 290.50 | 308.40 | 258.70 | 293.83 | 314.76 |
| 28-11-18 | 299.00 | 200.43 | 218.00 | 231.00 | 175.46 | 206.40 | 226.80 |
| 20-12-18 | 358.00 | 270.14 | 277.00 | 284.80 | 231.42 | 264.36 | 285.11 |

| PH | | | | | | | |
|----------|-------------------------|---|--------------------------------------|--|---|--------------------------------------|--|
| Fecha | Datos | | | Modelo | | | |
| | PH Ingreso de la Planta | Remoción en las Lagunas Anaeróbicas 1 y 2 | Remoción hasta la Laguna Facultativa | Remoción hasta la Laguna de Maduración | Remoción en las Lagunas Anaeróbicas 1 y 2 | Remoción hasta la Laguna Facultativa | Remoción hasta la Laguna de Maduración |
| 25-3-15 | 6.88 | -0.34 | -0.71 | -0.89 | -0.33 | -0.53 | -0.64 |
| 31-3-15 | 7.34 | 0.09 | -0.09 | -0.33 | 0.09 | -0.07 | -0.16 |
| 8-4-15 | 7.17 | -0.15 | -0.33 | -0.58 | -0.06 | -0.24 | -0.34 |
| 23-4-15 | 7.30 | 0.10 | -0.10 | -0.24 | 0.06 | -0.11 | -0.20 |
| 6-5-15 | 8.34 | 1.04 | 1.04 | 0.91 | 1.03 | 0.93 | 0.88 |
| 10-6-15 | 7.72 | 0.42 | 0.32 | 0.27 | 0.45 | 0.31 | 0.24 |
| 29-7-15 | 7.17 | -0.02 | -0.19 | -0.31 | -0.06 | -0.24 | -0.34 |
| 11-8-15 | 8.12 | | | 0.70 | 0.82 | 0.71 | 0.65 |
| 13-8-15 | 6.97 | -0.41 | -0.43 | -0.44 | -0.25 | -0.44 | -0.54 |
| 8-9-15 | 7.51 | 0.10 | 0.13 | -0.07 | 0.25 | 0.10 | 0.02 |
| 21-10-15 | 7.19 | 0.08 | -0.31 | -0.24 | -0.05 | -0.22 | -0.31 |
| 27-11-15 | 7.29 | 0.38 | 0.10 | -0.03 | 0.05 | -0.12 | -0.21 |
| 9-12-15 | 7.61 | 0.22 | | | 0.35 | 0.20 | 0.12 |
| 16-12-15 | 7.13 | 0.16 | | | -0.10 | -0.28 | -0.38 |
| 24-2-16 | 7.57 | 0.34 | 0.28 | 0.15 | 0.31 | 0.16 | 0.08 |
| 16-3-16 | 7.15 | -0.15 | -0.36 | -0.48 | -0.08 | -0.26 | -0.36 |
| 23-3-16 | 6.31 | -0.80 | -0.90 | -0.96 | -0.86 | -1.10 | -1.23 |
| 20-4-16 | 7.16 | -0.04 | -0.13 | -0.23 | -0.07 | -0.25 | -0.35 |
| 27-4-16 | 7.32 | 0.09 | -0.01 | -0.15 | 0.08 | -0.09 | -0.18 |
| 11-5-16 | 6.70 | -0.36 | -0.57 | -0.72 | -0.50 | -0.71 | -0.82 |
| 18-5-16 | 7.08 | 0.07 | -0.15 | -0.26 | -0.15 | -0.33 | -0.43 |
| 11-5-16 | 6.70 | -0.36 | -0.57 | -0.72 | -0.50 | -0.71 | -0.82 |
| 8-6-16 | 7.37 | -0.05 | -0.15 | -0.20 | 0.12 | -0.04 | -0.13 |
| 29-6-16 | 8.14 | 0.93 | 0.72 | 0.68 | 0.84 | 0.73 | 0.67 |
| 29-7-16 | 7.15 | -0.08 | -0.28 | -0.50 | -0.08 | -0.26 | -0.36 |
| 10-8-16 | 6.75 | -0.45 | -0.76 | -0.75 | -0.45 | -0.66 | -0.77 |
| 7-9-16 | 7.38 | 0.02 | -0.37 | -0.41 | 0.13 | -0.03 | -0.12 |
| 28-9-16 | 6.83 | -0.49 | -0.73 | -0.60 | -0.38 | -0.58 | -0.69 |
| 28-10-16 | 7.92 | 0.85 | 0.50 | 0.49 | 0.63 | 0.51 | 0.44 |
| 23-11-16 | 6.76 | -0.17 | -0.56 | -0.55 | -0.45 | -0.65 | -0.76 |
| 30-11-16 | 6.79 | -0.24 | -0.37 | -1.00 | -0.42 | -0.62 | -0.73 |
| 14-12-16 | 7.63 | 0.63 | 0.31 | 0.39 | 0.36 | 0.22 | 0.14 |
| 25-1-17 | 6.86 | -0.26 | -0.53 | -0.75 | -0.35 | -0.55 | -0.66 |
| 31-1-17 | 7.66 | 0.51 | 0.18 | 0.17 | 0.39 | 0.25 | 0.17 |
| 8-2-17 | 6.99 | -0.20 | -0.46 | -0.45 | -0.23 | -0.42 | -0.52 |
| 23-2-17 | 7.25 | 0.07 | -0.22 | -0.34 | 0.01 | -0.16 | -0.25 |
| 21-3-17 | 6.77 | -0.40 | -0.82 | -0.73 | -0.44 | -0.64 | -0.75 |
| 11-4-17 | 7.12 | -0.31 | -0.32 | -0.44 | -0.11 | -0.29 | -0.39 |
| 26-4-17 | 7.40 | 0.21 | -0.14 | -0.05 | 0.15 | -0.01 | -0.10 |
| 5-5-17 | 7.80 | 0.43 | 0.35 | 0.60 | 0.52 | 0.39 | 0.32 |
| 31-5-17 | 7.44 | -0.01 | -0.16 | -0.10 | 0.19 | 0.03 | -0.06 |
| 8-6-17 | 8.22 | 0.99 | 0.67 | 0.54 | 0.91 | 0.81 | 0.76 |
| 27-6-17 | 7.43 | 0.15 | 0.10 | 0.01 | 0.18 | 0.02 | -0.07 |
| 19-7-17 | 7.37 | 0.23 | 0.20 | -0.16 | 0.12 | -0.04 | -0.13 |
| 27-7-17 | 7.80 | 0.40 | 0.46 | 0.23 | 0.52 | 0.39 | 0.32 |
| 9-8-17 | 7.23 | 0.04 | 0.03 | -0.20 | -0.01 | -0.18 | -0.27 |
| 23-8-17 | 6.55 | -0.65 | -0.50 | -0.72 | -0.64 | -0.86 | -0.98 |
| 13-9-17 | 7.08 | -0.68 | -0.68 | -0.69 | -0.15 | -0.33 | -0.43 |

| | | | | | | | |
|----------|------|-------|-------|-------|-------|-------|-------|
| 4-10-17 | 7.33 | -0.15 | -0.17 | -0.41 | 0.09 | -0.08 | -0.17 |
| 25-10-17 | 6.69 | -0.55 | -0.63 | -0.76 | -0.51 | -0.72 | -0.83 |
| 15-11-17 | 7.70 | 0.73 | 0.41 | 0.46 | 0.43 | 0.29 | 0.22 |
| 29-11-17 | 6.97 | -0.29 | -0.61 | -0.52 | -0.25 | -0.44 | -0.54 |
| 20-12-17 | 6.97 | -0.41 | -0.44 | -0.58 | -0.25 | -0.44 | -0.54 |
| 29-12-17 | 7.49 | 0.01 | -0.06 | -0.11 | 0.23 | 0.08 | 0.00 |
| 10-1-18 | 6.81 | -0.44 | -0.69 | -0.88 | -0.40 | -0.60 | -0.71 |
| 30-1-18 | 6.45 | -0.87 | -1.18 | -1.28 | -0.73 | -0.96 | -1.08 |
| 7-2-18 | 6.94 | -0.09 | -0.29 | -0.47 | -0.28 | -0.47 | -0.57 |
| 22-2-18 | 6.89 | -0.22 | -0.47 | -0.63 | -0.32 | -0.52 | -0.63 |
| 27-3-18 | 6.76 | -0.51 | -0.59 | -0.66 | -0.45 | -0.65 | -0.76 |
| 23-4-18 | 6.91 | -0.28 | -0.51 | -0.83 | -0.31 | -0.50 | -0.61 |
| 17-5-18 | 7.25 | 0.15 | 0.00 | 0.25 | 0.01 | -0.16 | -0.25 |
| 27-6-18 | 7.67 | 0.52 | 0.43 | 0.36 | 0.40 | 0.26 | 0.18 |
| 31-7-18 | 6.94 | -0.35 | -0.56 | -0.55 | -0.28 | -0.47 | -0.57 |
| 9-8-18 | 6.52 | -0.69 | -1.21 | -1.24 | -0.67 | -0.89 | -1.01 |
| 12-10-18 | 7.45 | 0.10 | 0.00 | -0.07 | 0.20 | 0.04 | -0.04 |
| 16-11-18 | 7.35 | 0.10 | -0.10 | -0.23 | 0.10 | -0.06 | -0.15 |
| 28-11-18 | 7.20 | -0.35 | -0.31 | -0.25 | -0.04 | -0.21 | -0.30 |
| 20-12-18 | 7.60 | -0.02 | 0.18 | -0.12 | 0.34 | 0.19 | 0.11 |

ANEXO XVIII: FOTOGRAFÍAS

Fotografía N° 1: Nivelado de prisma para recepción de disparos de la estación total en un punto del replanteo de la laguna anaeróbica 1



Fuente: Elaboración Propia (18/03/19)

Fotografía N° 2: Disparo de la estación total hacia el prisma en el replanteo de la laguna anaeróbica 1



Fuente: Elaboración Propia (18/03/19)

Fotografía N° 3: Alineamiento de la línea paralela con hilo tanza en función al replanteo



Fuente: Elaboración Propia (19/03/19)

Fotografía N° 4: Indumentaria y materiales para trabajo de campo



Fuente: Elaboración Propia (23/03/19)

Fotografía N° 5: Prueba de deformación de la cuerda perlón al tesarla en las estacas metálicas



Fuente: Elaboración Propia (26/03/19)

Fotografía N° 6: Instrumentos batimétricos en el bote para su navegación en la laguna anaeróbica 2



Fuente: Elaboración Propia (26/03/19)

Fotografía N° 7: Equipamiento de la indumentaria de seguridad para la navegación en las lagunas anaeróbicas



Fuente: Elaboración Propia (4/04/19)

Fotografía N° 8: Redireccionamiento del bote en la sección transversal de la laguna anaeróbica 2



Fuente: Elaboración Propia (6/04/19)

Fotografía N° 9: Desplazamiento del bote en la sección transversal jalando el triple alambre de amarre



Fuente: Elaboración Propia (4/04/19)

Fotografía N° 10: Toma de mediciones batimétricas simultánea en dos puntos de la sección transversal de la laguna anaeróbica 2



Fuente: Elaboración Propia (4/04/19)

Fotografía N° 11: Mediciones batimétricas por trabajadores de la Empresa “SYL INGENIEROS” en puntos aleatorios de la laguna anaeróbica 1 dentro el sector de algas



Fuente: Elaboración Propia (11/04/19)

Fotografía N° 12: Sacamuestras introducido con giros durante el proceso en la laguna anaeróbica 1



Fuente: Elaboración Propia (19/04/19)

Fotografía N° 13: Expulsión de la muestra visual de lodo residual con el sacabocado



Fuente: Elaboración Propia (19/04/19)

Fotografía N° 14: Muestras visuales de lodo residual de ambas lagunas anaeróbicas



Fuente: Elaboración Propia (19/04/19)

Fotografía N° 15: Conservadora con refrigerantes y recipientes para toma de muestras de lodo residual



Fuente: Elaboración Propia (16/04/19)

Fotografía N° 16: Extracción de muestra de lodo residual en la laguna anaeróbica 1



Fuente: Elaboración Propia (19/04/19)

Fotografía N° 17: Extracción de muestra de lodo residual cerca del canal de entrada de la laguna anaeróbica 1



Fuente: Elaboración Propia (20/04/19)

Fotografía N° 18: Muestra de lodo residual homogeneizada de las salidas de agua en la laguna anaeróbica 1



Fuente: Elaboración Propia (19/04/19)