

Quinto Informe de Calidad de Aire - 2024

Distrito de Coronel Gregorio Albarracín Lanchipa

Gobierno Regional de Tacna

2024-10-01

El presente reporte muestra los resultados del monitoreo de la calidad de aire, el cual fue realizado con la estación de monitoreo de calidad de aire del Gobierno Regional de Tacna en un espacio proporcionado por Institución Educativa “Jorge Chávez” en el distrito de Coronel Gregorio Albarracín Lanchipa durante el 12 de septiembre del 2024 al 24 de septiembre del 2024. Los parámetros de calidad de aire evaluados fueron $PM_{2.5}$, PM_{10} , NO_2 , O_3 , CO , SO_2 , H_2S y datos meteorológicos generados por la estación de monitoreo. Las concentraciones de cada uno de estos parámetros no deben superar el Estándar de Calidad Ambiental para Aire (ECA-aire), establecidos mediante el D.S. N° 003-2017-MINAM (MINAM, 2017), a fin de evitar problemas en la salud de las personas y el ambiente. También se ha considerado en el análisis los niveles recomendados por las Directrices de la Organización Mundial de la Salud (OMS, 2021) sobre la calidad del aire. Como principales paquetes computacionales de R para llevar a cabo el procesamiento de la información se tiene a openair (Carslaw & Ropkins, 2012), zoo (Zeileis & Grothendieck, 2005) y tidyverse (Wickham et al., 2019).

Tabla 1: Estándares de Calidad Ambiental para Aire - D.S. N° 003-2017 MINAM

| Parámetros | Período | Valor (ug/m ³) | Criterios de evaluación | Método de análisis ¹ |
|------------|----------|-------------------------------|---------------------------------------|--|
| SO_2 | 24 horas | 250 | NE ² más de 7 veces al año | Fluorescencia ultravioleta (método automático) |
| NO_2 | 1 hora | 200 | NE más de 24 veces al año | Quimioluminiscencia (método automático) |
| $PM_{2.5}$ | 24 horas | 50 | NE más de 7 veces al año | Separación inercial/filtración (gravimetría) |
| PM_{10} | 24 horas | 100 | NE más de 7 veces al año | Separación inercial/filtración (gravimetría) |
| CO | 1 hora | 10000 | NE más de 1 vez al año | Infrarrojo no dispersivo (NDIR) (método automático) |
| | 8 horas | 30000 | Media aritmética móvil | |
| O_3 | 8 horas | 100 | Máxima media diaria | Fotometría de absorción ultravioleta (método automático) |
| | | | NE más de 24 veces al año | |
| H_2S | 24 horas | 150 | Media aritmética | Fluorescencia ultravioleta (método automático) |

Una manera muy útil de medir la calidad de aire de diferentes zonas del país era utilizando el Índice de Calidad de Aire del Perú, sin embargo, este instrumento técnico se encuentra desactualizado respecto a la normativa vigente. Por lo cual en este estudio se utilizó el Índice de Calidad de Aire (AQI por sus siglas en inglés) de la Agencia de Protección Ambiental de los Estados Unidos (US-EPA, 2024), cuya simbología se aprecia en la tabla 2.

Tabla 2: Rangos del AQI y su simbología de colores

| Categoría | Rango AQI | Color |
|------------------------------------|-----------|----------|
| Buena | 0 - 50 | Verde |
| Moderada | 51 - 100 | Amarillo |
| No saludable para grupos sensibles | 101 - 150 | Naranja |
| No saludable | 151 - 200 | Rojo |
| Muy no saludable | 201 - 300 | Púrpura |
| Peligrosa | 301 - 500 | Marrón |

²NE: No exceder más de una cantidad

¹O método equivalente aprobado

1 Estación de monitoreo de calidad de aire EMCA - 05

Durante el 12 de septiembre del 2024 al 24 de septiembre del 2024 se realizó el monitoreo de calidad del aire, en Institución Educativa “Jorge Chávez” en el distrito de Coronel Gregorio Albarracín Lanchipa, utilizando la Estación Móvil de Monitoreo de Calidad de aire del Gobierno Regional de Tacna.

Figura 1: Mapa de Ubicación de la estación EMCA - 05

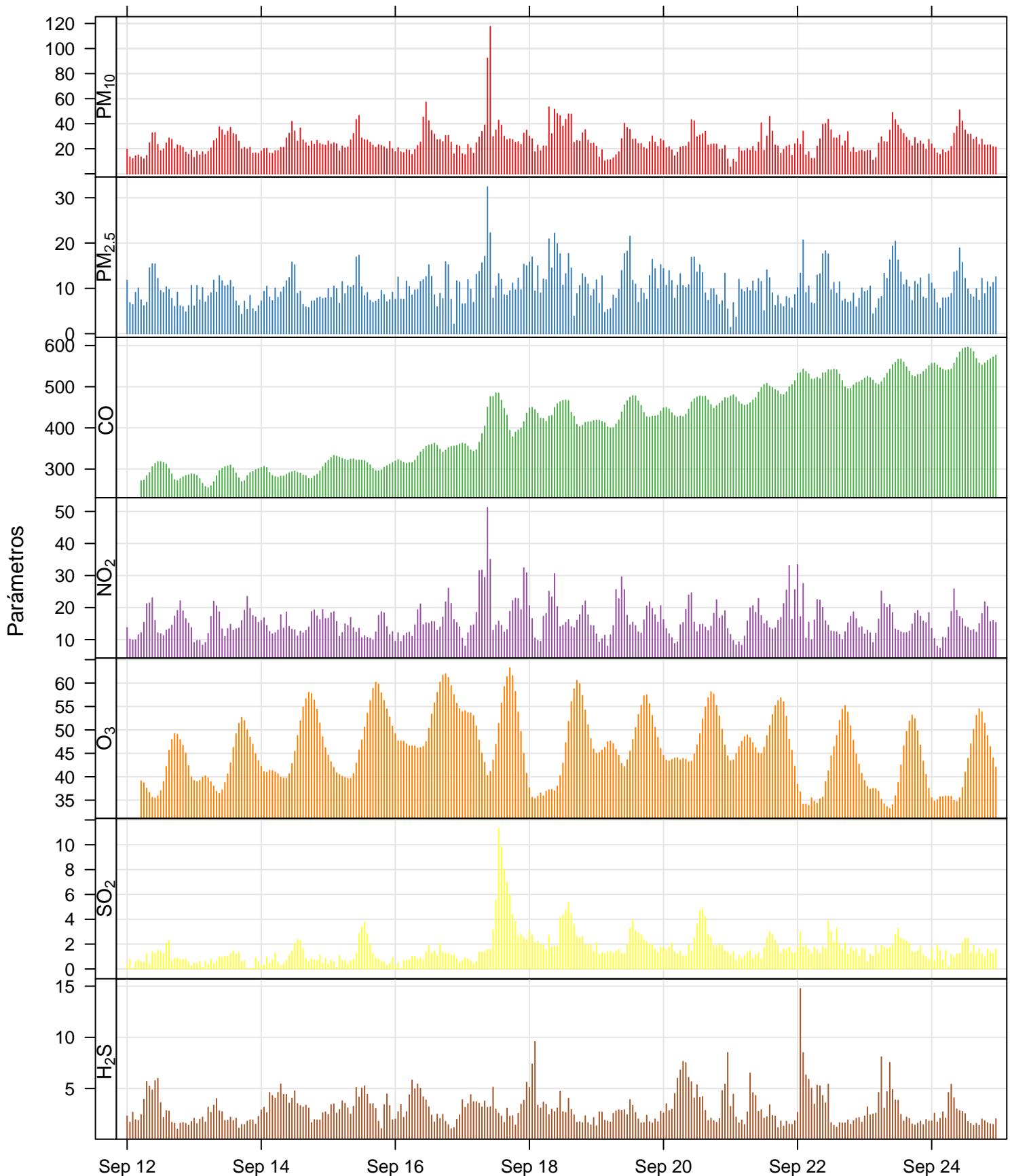


2 Parámetros de calidad de aire

Con los datos obtenidos de la estación de monitoreo de la calidad del aire del Gobierno Regional de Tacna, se realizó un análisis de la variabilidad horaria de las concentraciones de PM_{10} , $PM_{2.5}$, CO , NO_2 , O_3 , SO_2 y H_2S las cuales se presentan en la figura 2 y están expresadas en $\mu g/m^3$.

Figura 2: Datos horarios de calidad de aire ($\mu g/m^3$)

Parámetros de calidad de aire ($\mu g m^{-3}$)



2.1 Comparación con el Estándar de Calidad de aire

2.1.1 Concentraciones diarias de los parámetros monitoreados

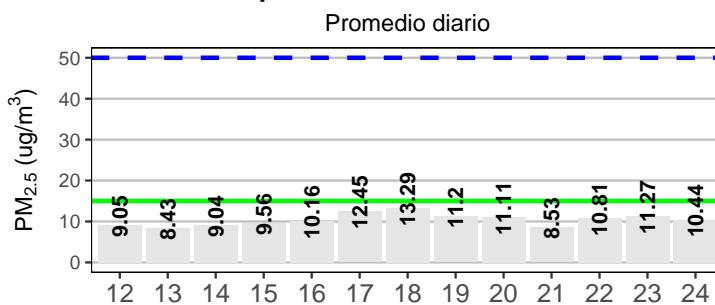
A continuación, se presenta la comparación de las concentraciones diarias obtenidas durante el monitoreo de calidad de aire, con los valores que establece el Estándar de Calidad Ambiental de Aire (D.S. N° 003-2017-MINAM).

Así mismo se compara con los niveles recomendados de las Directrices de la OMS sobre la calidad del aire, la cual ofrece recomendaciones cuantitativas relativas a la salud para la gestión de la calidad del aire.

Figura 3: Comparación de concentraciones diarias con el ECA-aire del 12 de septiembre al 24 de setiembre

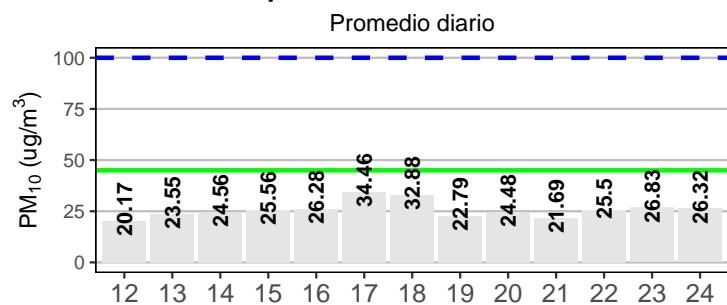
A

Material particulado menor a 2.5 micras



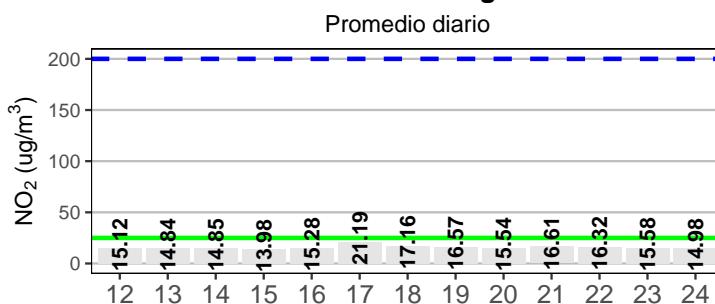
B

Material particulado menor a 10 micras



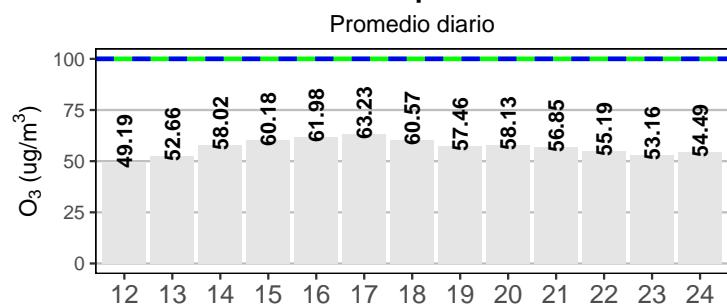
C

Dióxido de nitrógeno



D

Ozono troposférico



Estándar — ECA — OMS

Por otro lado, las concentraciones diarias de los parámetros SO_2 , H_2S y CO se muestran en la siguiente tabla:

Tabla 3: Comparación de concentraciones diarias con el ECA-aire

| Parámetros | 12-09 | 13-09 | 14-09 | 15-09 | 16-09 | 17-09 | 18-09 | 19-09 | 20-09 | 21-09 | 22-09 | 23-09 | 24-09 | ECA | OMS |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SO ₂ | 0.9 | 0.7 | 1.0 | 1.2 | 1.0 | 3.4 | 2.7 | 1.9 | 2.2 | 1.5 | 1.9 | 1.7 | 1.4 | 250 | 40 |
| H ₂ S | 2.8 | 2.2 | 3.4 | 3.4 | 3.0 | 3.3 | 3.3 | 2.3 | 4.4 | 2.6 | 3.8 | 3.1 | 2.4 | 150 | NA |
| CO (8h) | 290.8 | 286.7 | 294.0 | 315.5 | 346.2 | 422.9 | 427.5 | 438.3 | 458.6 | 490.9 | 522.6 | 540.1 | 567.9 | 30000 | 10000 |
| CO (1h) | 292.1 | 284.7 | 290.4 | 316.5 | 340.4 | 407.9 | 433.6 | 434.1 | 454.2 | 483.7 | 523.3 | 534.7 | 565.0 | 10000 | 35000 |

Lo visto en la figura 3 y la tabla 3 muestra que las concentraciones diarias no superan el Estándar de Calidad Ambiental de Aire en ningún día de monitoreo. En el caso del $PM_{2.5}$ la concentración diaria más alta se dio el miércoles 18 de setiembre con 13.29 ug/m³ y en el caso del PM_{10} la concentración diaria más alta se dio el día 17 de setiembre con 34.46 ug/m³.

Sin embargo, al realizar la comparación con las Directrices sobre la calidad de aire de la Organización Mundial de la Salud (OMS), los parámetros $PM_{2.5}$, PM_{10} y NO_2 superan estos valores en varios días de monitoreo.

2.1.2 Concentraciones horarias de los parámetros monitoreados

A continuación, se muestran las concentraciones horarias de los parámetros comparados de forma referencial con los Estándares de Calidad Ambiental (ECA) para aire del Perú y los niveles de la Directriz de la Organización Mundial de la Salud (OMS). El gráfico muestra que los parámetros PM_{10} , $PM_{2.5}$ y NO_2 superan en algunas horas de monitoreo, ambos umbrales de referencia, en el caso de los parámetros O_3 , SO_2 , H_2S y CO no se llega a superar estos umbrales en ningún

momento del periodo de monitoreo. Así también, de forma complementaria en la figura 5 para una mejor comprensión, se muestra el comportamiento semanal de cada uno de los parámetros monitoreados.

Figura 4: Comparación referencial de concentraciones horarias con el Estándar de Calidad Ambiental de Aire del 12 de septiembre al 24 de septiembre

A

Material particulado menor a 2.5 micras

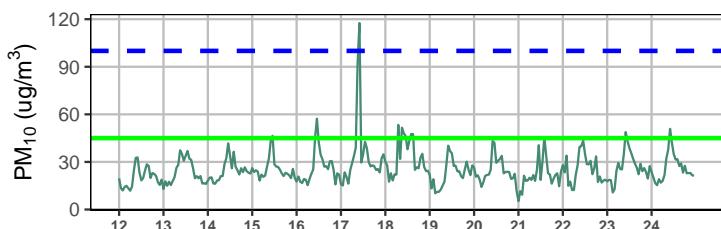
Promedio horario



B

Material particulado menor a 10 micras

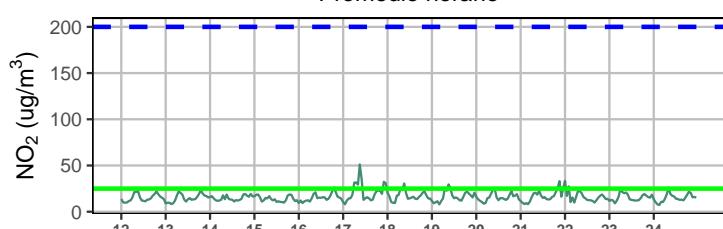
Promedio horario



C

Dióxido de nitrógeno

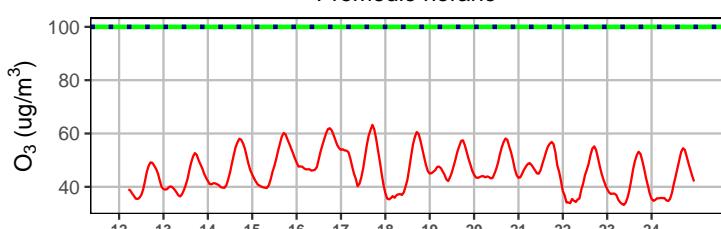
Promedio horario



D

Ozono troposférico

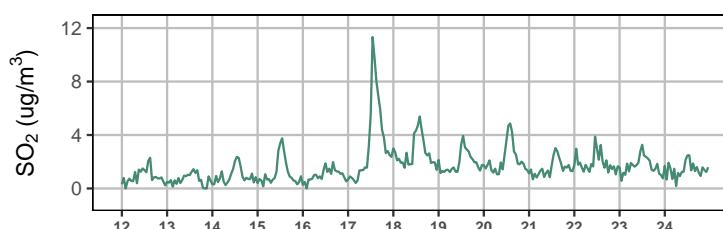
Promedio horario



E

Dióxido de azufre

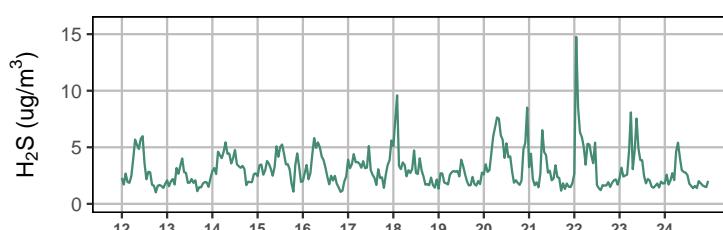
Promedio horario



F

Sulfuro de hidrógeno

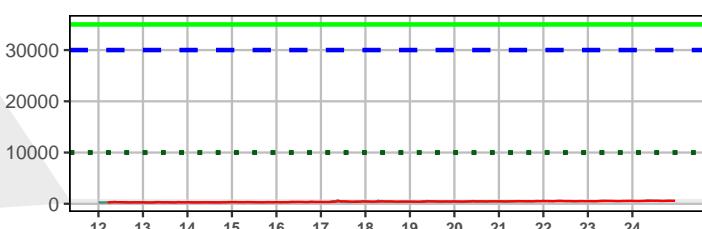
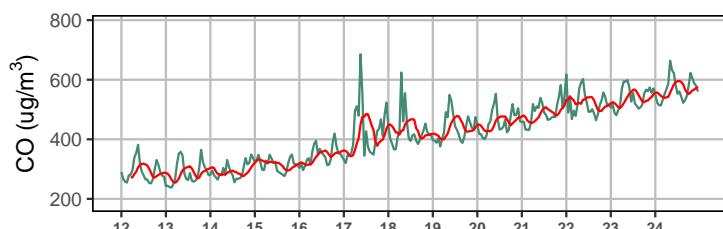
Promedio horario



G

Monóxido de carbono

Promedio horario

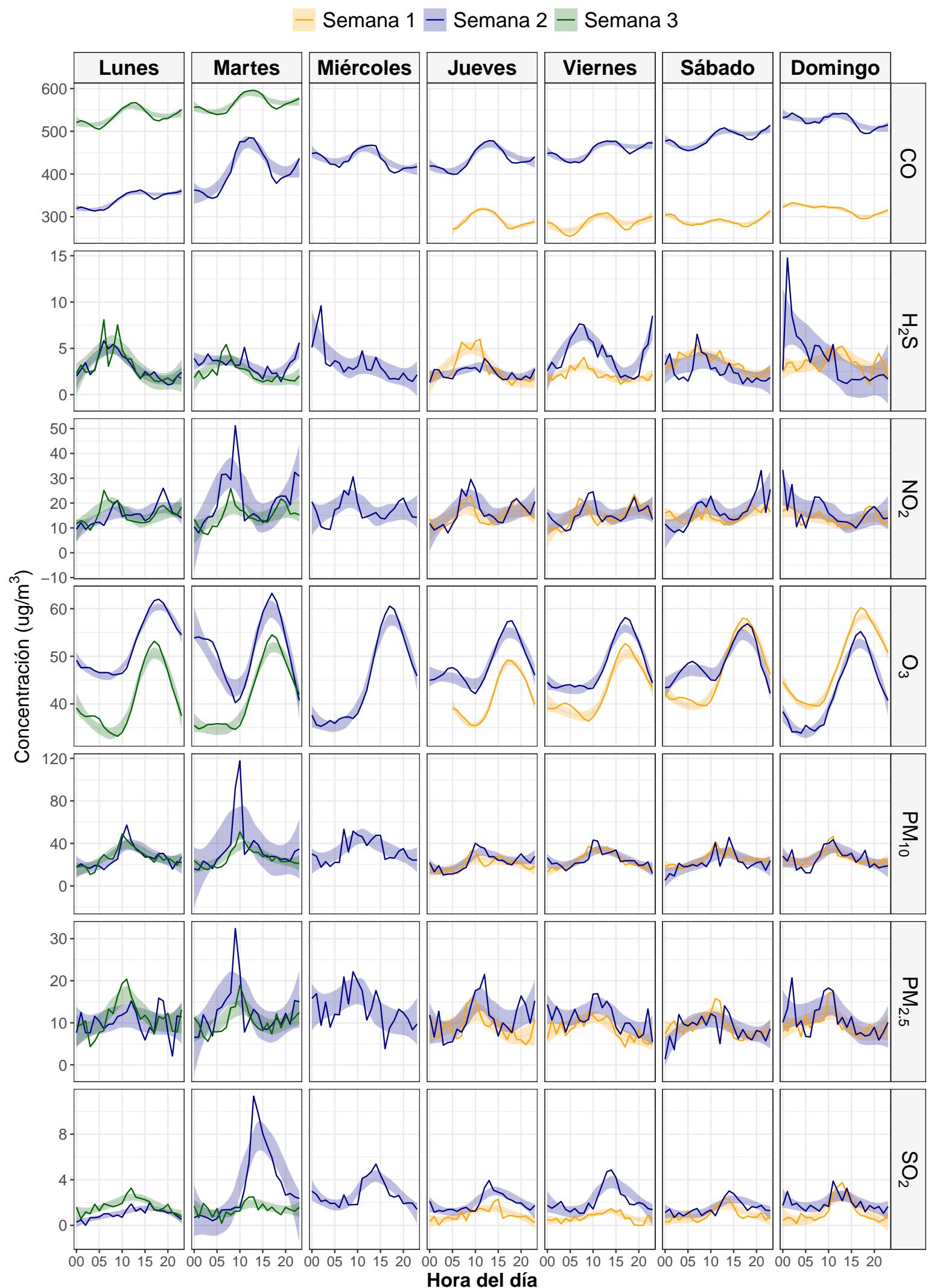


Leyenda

— Media aritmética — ECA — OMS

— Media móvil — ECA(8h) — OMS(8h)

Figura 5: Comportamiento semanal de datos horarios - 12 de septiembre al 24 de septiembre

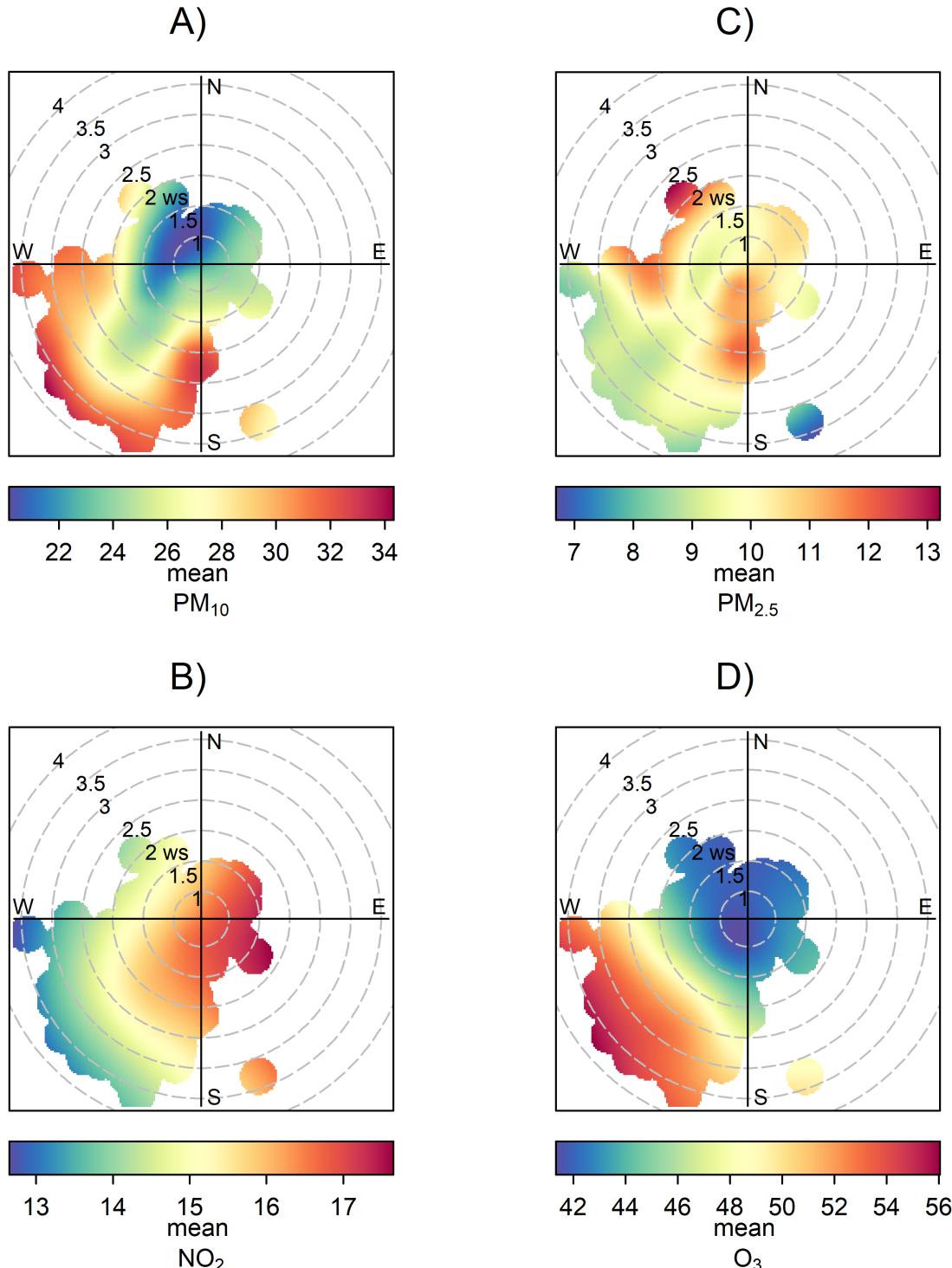


2.1.3 Gráficos polares

Son gráficos que presentan una relación entre las concentraciones horarias de los contaminantes y el comportamiento de los vientos. La dirección del viento se muestra en el plano cartesiano, la velocidad del viento en las circunferencias, la cual aumenta a medida que se aleja del origen, y la concentración en la paleta de colores.

En la figura 6 se aprecia la representación polar de 4 parámetros de calidad de aire de interés PM_{10} , $PM_{2.5}$, NO_2 y O_3 . En el caso del parámetro PM_{10} , esta muestra mayores concentraciones a mayores velocidades del viento, los cuales provienen principalmente de dirección sur, suroeste y oeste; en el caso del $PM_{2.5}$ las mayores concentraciones se dan a bajos niveles de velocidad del viento, y en forma dispersa. Así mismo según el gráfico, las mayores concentraciones de NO_2 se presentan a valores reducidos de velocidad de viento, en todas las direcciones de viento. En el caso del O_3 las mayores concentraciones se presentan a velocidades de viento mayores a 2 m/s y provenientes con mayor predominancia de dirección suroeste.

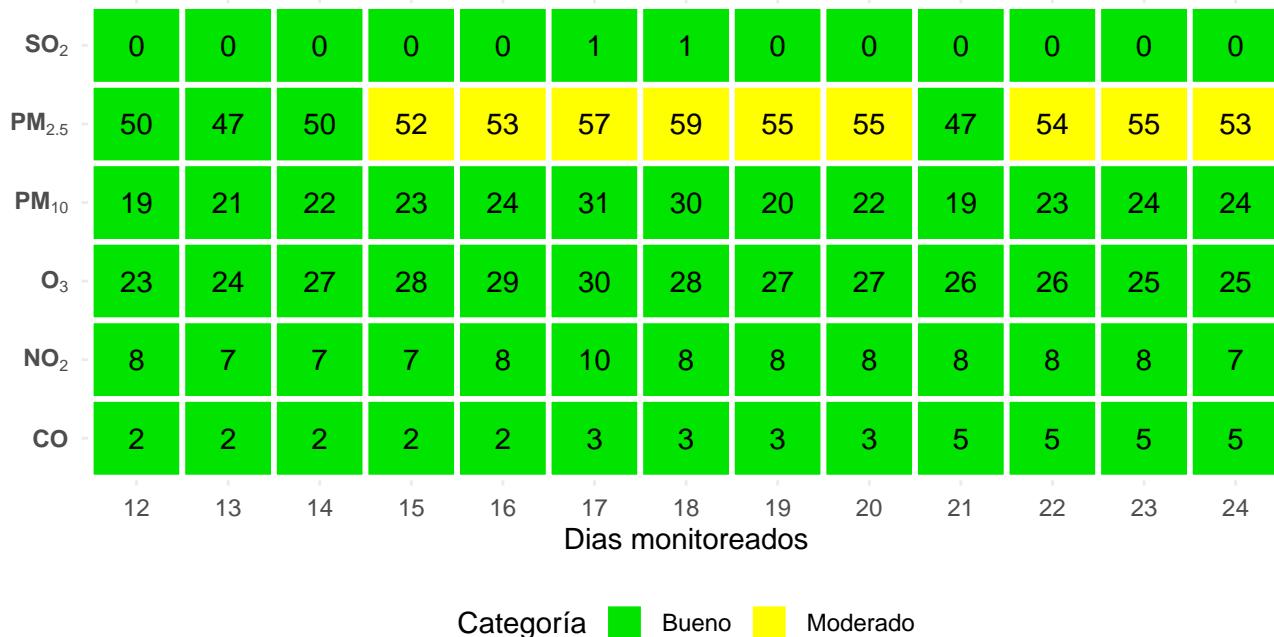
Figura 6: Gráficos polares de los principales parámetros evaluados



2.2 Índice de Calidad de Aire

El índice de Calidad de Aire (AQI por sus siglas en inglés) muestra los estados de la calidad del aire, en general la zona monitoreada durante el 12 de septiembre del 2024 al 24 de septiembre del 2024 presenta estados de calidad de aire “**Bueno**” en los parámetros NO_2 , O_3 , SO_2 , y CO , durante todos los días de medición. En el caso del $PM_{2.5}$ se observa que del 15 al 20 y del 22 al 24 de setiembre presenta estado de calidad del aire “**Moderado**”, que puede no ser favorable para personas sensibles a una exposición prolongada de este parámetro en la zona de evaluación. Finalmente, los valores de PM_{10} presenta estado de calidad del aire “**Bueno**” en casi todos los días monitoreados.

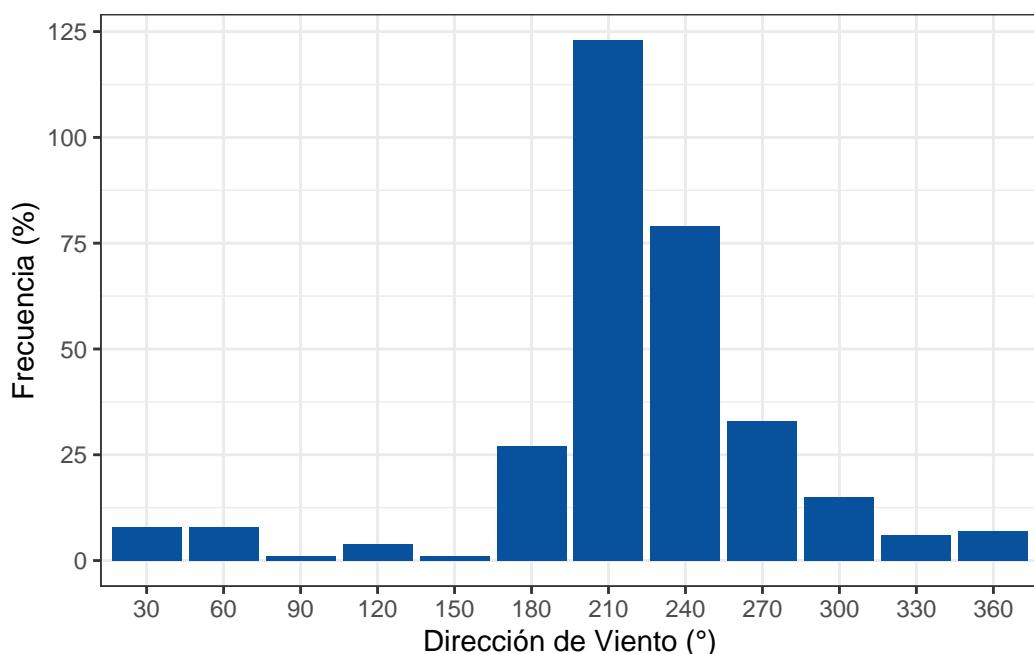
Figura 7: Índice de Calidad de Aire - 12 de septiembre al 24 de septiembre



3 Parámetros meteorológicos

El siguiente gráfico muestra la distibución de los vientos en intervalos de 30 grados sexagesimales, de manera que, la dirección predominante del viento se da a los 210 grados en sentido horario.

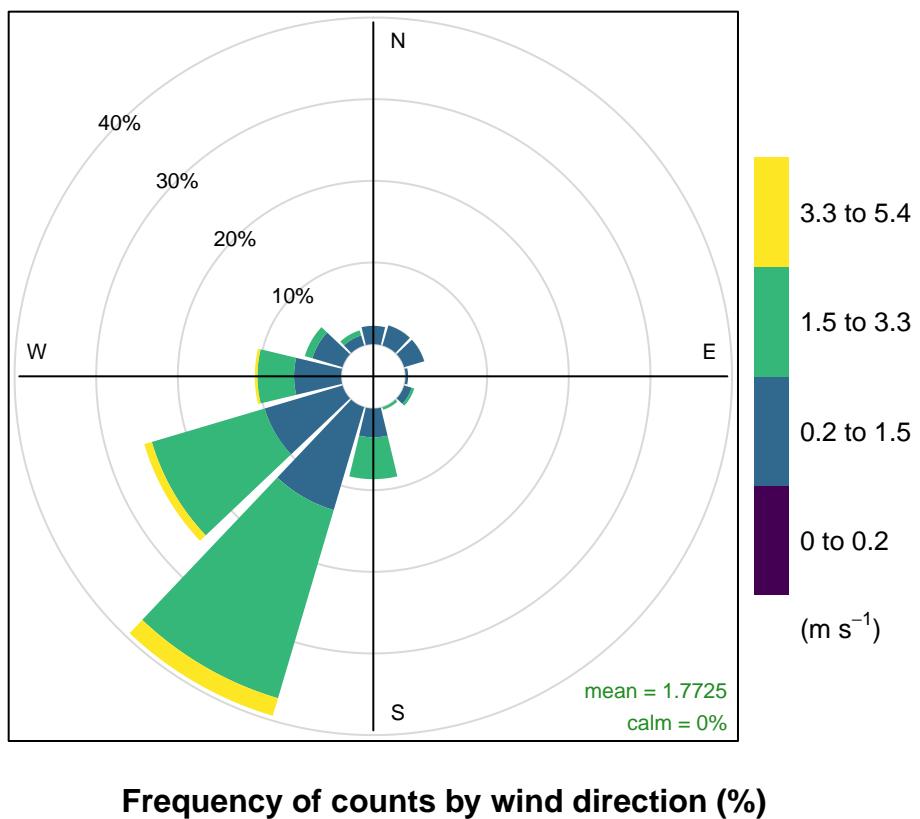
Figura 8: Distibución de la dirección de los vientos



Así también se presenta el gráfico de rosa de viento donde se evidencia que el promedio de velocidades es de 1.77 m/s. De acuerdo con los rangos propuestos por la OMM (2023), los rangos de velocidades de viento en este periodo de monitoreo,

se encuentran en las categorías de “brisa muy débil”, “brisa débil” y “brisa moderada”.

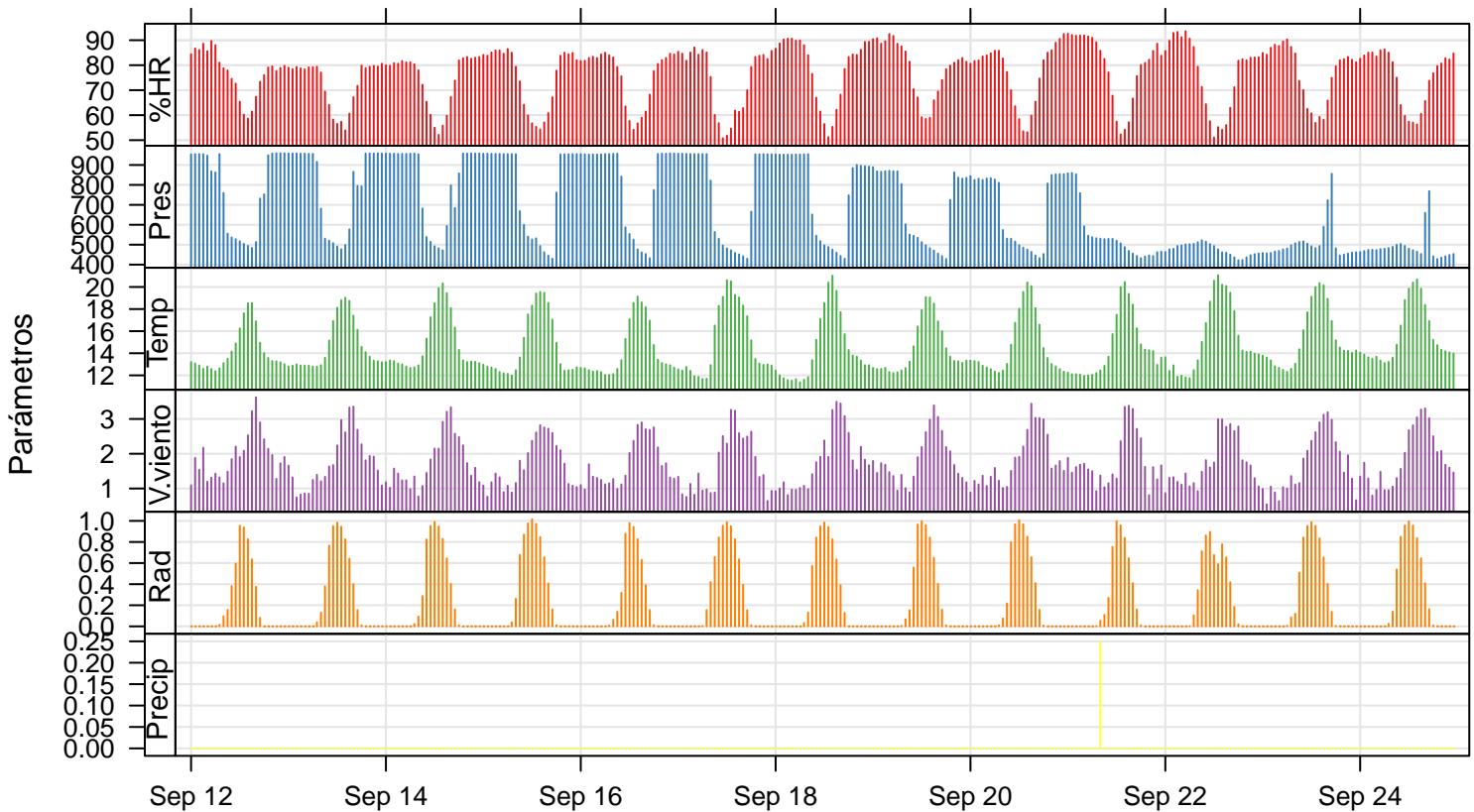
Figura 9: Rosa de vientos



Frequency of counts by wind direction (%)

A continuación, se presenta la información obtenida durante el periodo de monitoreo respecto a los parámetros temperatura, precipitación, humedad relativa, presión, velocidad del viento y radiación solar.

Figura 10: Datos horarios de los parámetros meteorológicos de la estación evaluada



4 Conclusiones

- Las concentraciones diarias de material particulado en la zona evaluada cumple con los Estándar de Calidad Ambiental para aire, establecidos en el D.S. N° 003-2017-MINAM. Asimismo, en el caso del $PM_{2.5}$ la concentración diaria más alta se dio el miércoles 18 de setiembre con 13.29 ug/m³ y en el caso del PM_{10} la concentración diaria más alta se dio el martes 17 de setiembre con 34.46 ug/m³.
- Los contaminantes gaseosos NO_2 , O_3 , SO_2 , H_2S y CO no superaron sus respectivos ECA-aire. Asimismo, la mayor concentración de NO_2 se registró el día martes 17 de setiembre del 2024 con 21.19 ug/m³ y de O_3 el día martes 17 de setiembre con 63.23 ug/m³.
- El Índice de Calidad de Aire utilizado para determinar los estados de la calidad de aire en la zona de estudio muestra que durante los días de monitoreo los parámetros evaluados presentan la categoría de “**Bueno**” en la mayoría de los casos (a excepción del parámetro $PM_{2.5}$). Asimismo, para el parámetro $PM_{2.5}$ del 15 al 20 y del 22 al 24 de setiembre, presenta estado de calidad del aire “**Moderado**”.
- Respecto a la comparación con las Directrices de la Organización Mundial de la Salud (OMS) sobre la calidad del aire, los parámetros $PM_{2.5}$, PM_{10} y NO_2 superan sus valores de referencia en algunos días de monitoreo.
- En cuanto a los parámetros meteorológicos se destaca la predominancia del viento suroeste (210°) y el valor medio de la velocidad del viento en 1.77 m/s.

5 Referencias

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ANEXOS

TABLA : HOJA DE DATOS - TEMPERATURA (°C)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|----------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : Sensor de Temperatura del Aire | Tipo de Data | : Horario |
| Última Calibración del Equipo | : agosto - 2024 | Unidades | : °C |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : ---°C |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. | |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 12/09/2024 | 13.2 | 13.1 | 12.9 | 12.6 | 12.8 | 12.6 | 12.4 | 12.6 | 13.1 | 13.5 | 14.2 | 14.9 | 16.3 | 17.6 | 18.5 | 18.6 | 16.9 | 15.0 | 14.0 | 13.6 | 13.3 | 13.3 | 13.2 | 13.0 | 14.2 | 18.6 | 12.4 | |
| 13/09/2024 | 12.8 | 12.9 | 13.0 | 12.9 | 12.9 | 12.9 | 12.8 | 12.8 | 12.9 | 13.6 | 15.2 | 16.9 | 18.1 | 18.8 | 19.0 | 18.7 | 17.4 | 16.1 | 14.6 | 14.1 | 13.7 | 13.3 | 13.3 | 13.2 | 14.7 | 19.0 | 12.8 | |
| 14/09/2024 | 13.2 | 13.4 | 13.3 | 13.1 | 13.0 | 12.8 | 12.7 | 12.7 | 12.9 | 13.7 | 15.3 | 17.3 | 18.5 | 19.9 | 20.3 | 19.4 | 18.1 | 16.3 | 14.3 | 13.4 | 13.2 | 13.3 | 13.2 | 13.1 | 14.8 | 20.3 | 12.7 | |
| 15/09/2024 | 13.0 | 12.8 | 12.7 | 12.6 | 12.3 | 12.2 | 12.1 | 12.0 | 12.5 | 13.6 | 15.4 | 17.5 | 18.3 | 19.4 | 19.6 | 19.5 | 18.6 | 17.1 | 15.0 | 13.0 | 12.4 | 12.5 | 12.5 | 12.7 | 14.5 | 19.6 | 12.0 | |
| 16/09/2024 | 12.7 | 12.6 | 12.5 | 12.4 | 12.4 | 12.3 | 12.0 | 12.0 | 12.1 | 12.6 | 13.4 | 15.3 | 17.1 | 18.6 | 19.1 | 18.6 | 18.2 | 17.0 | 14.7 | 13.4 | 13.1 | 13.0 | 12.9 | 12.7 | 14.2 | 19.1 | 12.0 | |
| 17/09/2024 | 12.5 | 12.4 | 12.8 | 12.4 | 11.9 | 11.9 | 11.7 | 11.7 | 12.9 | 16.5 | 18.3 | 19.1 | 20.6 | 20.5 | 19.3 | 19.1 | 18.3 | 17.4 | 15.2 | 13.5 | 13.1 | 13.0 | 13.0 | 12.9 | 15.0 | 20.6 | 11.7 | |
| 18/09/2024 | 12.4 | 12.0 | 11.7 | 11.6 | 11.5 | 11.7 | 11.4 | 11.6 | 11.8 | 13.4 | 15.2 | 17.1 | 18.6 | 20.4 | 21.0 | 19.7 | 17.7 | 15.7 | 14.3 | 13.8 | 13.7 | 13.3 | 12.9 | 12.9 | 14.4 | 21.0 | 11.4 | |
| 19/09/2024 | 12.7 | 12.6 | 12.6 | 12.7 | 12.3 | 12.2 | 12.3 | 12.5 | 12.7 | 13.3 | 14.6 | 16.4 | 17.9 | 19.1 | 19.1 | 18.5 | 16.9 | 16.0 | 14.5 | 13.7 | 13.3 | 13.3 | 13.1 | 13.3 | 14.4 | 19.1 | 12.2 | |
| 20/09/2024 | 13.3 | 13.3 | 13.2 | 12.9 | 12.7 | 12.6 | 12.3 | 12.2 | 12.4 | 13.0 | 14.8 | 16.8 | 18.0 | 19.6 | 20.4 | 20.1 | 18.1 | 16.6 | 14.5 | 13.6 | 13.0 | 12.8 | 12.6 | 12.3 | 14.6 | 20.4 | 12.2 | |
| 21/09/2024 | 12.3 | 12.1 | 12.1 | 12.1 | 12.0 | 12.0 | 12.1 | 12.2 | 12.5 | 12.9 | 13.7 | 15.7 | 17.5 | 20.0 | 20.5 | 19.4 | 18.4 | 16.3 | 14.8 | 14.3 | 14.3 | 14.2 | 13.0 | 13.6 | 14.5 | 20.5 | 12.0 | |
| 22/09/2024 | 13.6 | 12.4 | 12.9 | 11.9 | 12.0 | 11.8 | 11.7 | 12.5 | 13.4 | 15.0 | 16.7 | 18.7 | 20.6 | 21.1 | 20.2 | 20.1 | 19.5 | 17.8 | 15.6 | 14.3 | 14.1 | 14.2 | 14.0 | 13.9 | 15.3 | 21.1 | 11.7 | |
| 23/09/2024 | 13.8 | 13.6 | 13.4 | 12.8 | 12.7 | 12.5 | 12.3 | 12.6 | 13.1 | 14.4 | 16.1 | 17.7 | 19.1 | 20.0 | 20.4 | 20.2 | 19.5 | 18.9 | 16.9 | 15.2 | 14.5 | 14.2 | 14.2 | 14.0 | 14.3 | 15.3 | 20.4 | 12.3 |
| 24/09/2024 | 14.1 | 13.9 | 13.6 | 13.5 | 13.7 | 13.3 | 13.1 | 13.2 | 13.6 | 14.8 | 16.5 | 18.8 | 19.9 | 20.4 | 20.7 | 19.9 | 18.4 | 16.9 | 15.2 | 14.7 | 14.3 | 14.2 | 14.1 | 14.0 | 15.6 | 20.7 | 13.1 | |
| Prom. | 13.0 | 12.8 | 12.8 | 12.6 | 12.5 | 12.4 | 12.2 | 12.4 | 12.8 | 13.9 | 15.3 | 17.1 | 18.5 | 19.6 | 19.8 | 19.3 | 18.1 | 16.5 | 14.7 | 13.8 | 13.5 | 13.4 | 13.2 | 13.2 | | | | |
| Max. | 14.1 | 13.9 | 13.6 | 13.5 | 13.7 | 13.3 | 13.1 | 13.2 | 13.6 | 16.5 | 18.3 | 19.1 | 20.6 | 21.1 | 21.0 | 20.2 | 19.5 | 17.8 | 15.6 | 14.7 | 14.3 | 14.2 | 14.1 | 14.3 | | | | |
| Min. | 12.3 | 12.0 | 11.7 | 11.6 | 11.5 | 11.7 | 11.4 | 11.6 | 11.8 | 12.6 | 13.4 | 14.9 | 16.3 | 17.6 | 18.5 | 18.5 | 16.9 | 15.0 | 14.0 | 13.0 | 12.4 | 12.5 | 12.5 | 12.3 | | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - HUMEDAD RELATIVA (%)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : Sensor de Humedad Relativa | Tipo de Data | : Horario |
| Última Calibración del Equipo | : agosto - 2024 | Unidades | : % |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : ---% |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 12/09/2024 | 84.4 | 86.7 | 86.1 | 88.6 | 85.6 | 89.7 | 88.0 | 81.0 | 78.8 | 77.9 | 74.5 | 72.6 | 65.4 | 60.2 | 58.6 | 61.5 | 67.4 | 73.4 | 76.1 | 79.1 | 79.5 | 77.7 | 78.9 | 79.8 | 77.1 | 89.7 | 58.6 |
| 13/09/2024 | 79.0 | 78.4 | 79.3 | 78.7 | 78.3 | 79.1 | 79.2 | 79.4 | 77.1 | 69.5 | 64.1 | 58.3 | 56.5 | 57.4 | 53.9 | 60.6 | 67.2 | 71.7 | 79.9 | 78.8 | 79.4 | 79.7 | 79.5 | 80.6 | 72.7 | 80.6 | 53.9 |
| 14/09/2024 | 80.0 | 79.8 | 80.8 | 80.6 | 81.7 | 81.1 | 81.2 | 80.4 | 78.0 | 72.2 | 65.4 | 60.2 | 55.0 | 52.1 | 55.8 | 59.8 | 67.2 | 73.8 | 81.9 | 82.8 | 83.3 | 82.6 | 83.0 | 83.3 | 74.2 | 83.3 | 52.1 |
| 15/09/2024 | 84.1 | 83.8 | 85.1 | 85.9 | 85.9 | 84.6 | 86.5 | 85.0 | 79.4 | 73.5 | 64.2 | 59.9 | 56.8 | 55.3 | 54.3 | 57.1 | 60.9 | 67.2 | 77.8 | 83.8 | 85.0 | 84.4 | 84.9 | 82.0 | 75.3 | 86.5 | 54.3 |
| 16/09/2024 | 81.7 | 81.8 | 82.9 | 83.4 | 82.9 | 84.3 | 85.0 | 84.0 | 83.1 | 79.3 | 75.6 | 63.5 | 57.7 | 54.2 | 56.7 | 59.0 | 61.5 | 68.2 | 77.6 | 80.5 | 82.0 | 82.9 | 84.6 | 84.3 | 75.7 | 85.0 | 54.2 |
| 17/09/2024 | 85.4 | 84.6 | 81.8 | 85.1 | 87.1 | 84.2 | 86.1 | 85.1 | 75.3 | 60.1 | 56.8 | 50.8 | 51.8 | 54.6 | 61.8 | 61.3 | 62.8 | 70.0 | 79.3 | 83.3 | 83.8 | 84.1 | 82.5 | 85.7 | 74.3 | 87.1 | 50.8 |
| 18/09/2024 | 86.6 | 88.7 | 90.3 | 90.6 | 90.6 | 89.8 | 89.9 | 88.0 | 84.0 | 76.5 | 67.0 | 61.5 | 56.5 | 51.2 | 55.3 | 62.2 | 68.2 | 78.5 | 83.3 | 84.3 | 84.1 | 86.2 | 89.3 | 89.4 | 78.8 | 90.6 | 51.2 |
| 19/09/2024 | 90.4 | 90.8 | 88.6 | 89.6 | 92.5 | 91.7 | 88.6 | 87.5 | 85.5 | 81.4 | 70.4 | 67.1 | 59.2 | 58.5 | 59.0 | 66.0 | 69.5 | 74.1 | 78.4 | 79.9 | 81.0 | 82.0 | 82.9 | 81.4 | 79.0 | 92.5 | 58.5 |
| 20/09/2024 | 80.6 | 81.7 | 81.9 | 83.5 | 83.9 | 84.8 | 85.8 | 85.8 | 82.7 | 77.3 | 70.0 | 63.6 | 58.4 | 53.5 | 53.2 | 59.8 | 65.4 | 74.7 | 82.0 | 85.0 | 86.0 | 89.0 | 90.5 | 92.5 | 77.1 | 92.5 | 53.2 |
| 21/09/2024 | 92.6 | 92.1 | 91.8 | 91.9 | 91.9 | 91.5 | 91.0 | 89.2 | 85.8 | 82.5 | 77.1 | 67.8 | 57.4 | 52.3 | 54.2 | 57.2 | 66.7 | 75.7 | 80.1 | 80.9 | 82.2 | 85.7 | 88.6 | 83.8 | 79.6 | 92.6 | 52.3 |
| 22/09/2024 | 85.7 | 89.8 | 92.9 | 93.3 | 91.2 | 93.6 | 90.6 | 87.3 | 79.4 | 71.3 | 64.4 | 57.6 | 51.0 | 55.2 | 54.1 | 56.0 | 63.0 | 71.2 | 81.8 | 82.4 | 82.0 | 83.0 | 83.1 | 83.2 | 76.8 | 93.6 | 51.0 |
| 23/09/2024 | 84.9 | 84.2 | 87.0 | 88.2 | 87.7 | 89.5 | 90.3 | 87.3 | 84.7 | 73.7 | 70.0 | 62.5 | 60.7 | 56.9 | 59.3 | 58.2 | 65.9 | 75.0 | 79.6 | 82.0 | 82.4 | 83.3 | 82.2 | 81.2 | 77.4 | 90.3 | 56.9 |
| 24/09/2024 | 82.6 | 83.9 | 85.0 | 85.1 | 83.5 | 86.0 | 86.3 | 85.0 | 81.2 | 75.0 | 64.1 | 59.7 | 57.4 | 57.1 | 56.3 | 60.5 | 65.7 | 73.8 | 76.8 | 79.7 | 80.7 | 82.8 | 82.3 | 84.7 | 75.6 | 86.3 | 56.3 |
| Prom. | 84.5 | 85.1 | 85.7 | 86.5 | 86.4 | 86.9 | 86.8 | 85.0 | 81.1 | 74.6 | 68.0 | 61.9 | 57.2 | 55.3 | 56.4 | 59.9 | 65.5 | 72.9 | 79.6 | 81.7 | 82.4 | 83.3 | 84.0 | 84.0 | | | |
| Max. | 92.6 | 92.1 | 92.9 | 93.3 | 92.5 | 93.6 | 91.0 | 89.2 | 85.8 | 82.5 | 77.1 | 72.6 | 65.4 | 60.2 | 61.8 | 66.0 | 69.5 | 78.5 | 83.3 | 85.0 | 86.0 | 89.0 | 90.5 | 92.5 | | | |
| Min. | 79.0 | 78.4 | 79.3 | 78.7 | 78.3 | 79.1 | 79.2 | 79.4 | 75.3 | 60.1 | 56.8 | 50.8 | 51.0 | 51.2 | 53.2 | 56.0 | 60.9 | 67.2 | 76.1 | 78.8 | 79.4 | 77.7 | 78.9 | 79.8 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - VELOCIDAD DEL VIENTO (m/s)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|--|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : Sensor de Velocidad y Dirección del Aire - WINDSONIC I | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : m/s |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : ---m/s |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. | |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-----|
| 12/09/2024 | 1.1 | 1.9 | 1.5 | 2.2 | 1.2 | 1.3 | 1.4 | 1.3 | 1.2 | 1.5 | 1.8 | 2.2 | 1.9 | 2.1 | 2.5 | 3.2 | 3.6 | 2.9 | 2.4 | 2.1 | 2.0 | 1.3 | 1.7 | 1.9 | 1.9 | 3.6 | 1.1 | |
| 13/09/2024 | 1.7 | 1.3 | 0.7 | 0.8 | 0.9 | 0.9 | 1.2 | 1.4 | 1.2 | 1.3 | 1.6 | 1.7 | 2.2 | 3.0 | 2.6 | 3.3 | 3.4 | 2.7 | 2.3 | 1.8 | 1.9 | 1.9 | 1.5 | 1.1 | 1.8 | 3.4 | 0.7 | |
| 14/09/2024 | 1.2 | 1.0 | 1.6 | 1.4 | 1.2 | 1.2 | 1.0 | 1.3 | 0.8 | 1.1 | 1.4 | 1.8 | 2.1 | 2.1 | 2.9 | 3.2 | 3.3 | 2.6 | 2.5 | 2.2 | 1.7 | 1.4 | 1.6 | 1.2 | 1.8 | 3.3 | 0.8 | |
| 15/09/2024 | 1.1 | 0.8 | 1.2 | 1.4 | 1.3 | 0.9 | 1.1 | 0.9 | 1.2 | 1.8 | 1.5 | 2.0 | 2.4 | 2.6 | 2.8 | 2.8 | 2.7 | 2.6 | 2.2 | 2.1 | 1.7 | 1.1 | 1.1 | 1.0 | 1.0 | 1.7 | 2.8 | 0.8 |
| 16/09/2024 | 1.1 | 1.0 | 1.7 | 1.3 | 1.3 | 1.2 | 1.1 | 1.1 | 1.3 | 1.0 | 1.1 | 1.4 | 2.0 | 2.4 | 2.8 | 2.9 | 2.7 | 2.7 | 2.8 | 2.2 | 1.6 | 1.7 | 1.3 | 1.3 | 1.7 | 2.9 | 1.0 | |
| 17/09/2024 | 1.3 | 0.8 | 0.8 | 1.1 | 0.8 | 1.4 | 0.9 | 1.0 | 0.9 | 0.9 | 2.0 | 2.5 | 2.3 | 3.3 | 3.2 | 2.6 | 2.4 | 2.5 | 2.6 | 1.9 | 1.3 | 1.4 | 0.6 | 0.9 | 1.7 | 3.3 | 0.6 | |
| 18/09/2024 | 0.9 | 1.0 | 1.2 | 0.8 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 1.4 | 1.8 | 1.9 | 2.4 | 1.9 | 3.3 | 3.5 | 3.4 | 3.1 | 2.6 | 1.8 | 1.5 | 2.2 | 1.8 | 1.7 | 1.8 | 3.5 | 0.8 | |
| 19/09/2024 | 1.8 | 1.4 | 1.7 | 1.7 | 1.5 | 1.4 | 0.9 | 1.4 | 1.0 | 0.9 | 1.3 | 1.9 | 2.2 | 2.6 | 3.0 | 3.4 | 3.1 | 2.7 | 2.2 | 2.1 | 1.7 | 1.4 | 1.3 | 1.2 | 1.8 | 3.4 | 0.9 | |
| 20/09/2024 | 0.9 | 1.2 | 1.1 | 1.4 | 1.1 | 1.3 | 1.6 | 1.2 | 1.0 | 1.0 | 1.5 | 1.9 | 1.9 | 2.2 | 2.7 | 3.4 | 3.0 | 3.0 | 3.0 | 2.5 | 1.6 | 1.7 | 1.8 | 1.5 | 1.8 | 3.4 | 0.9 | |
| 21/09/2024 | 1.9 | 1.5 | 1.6 | 1.7 | 1.7 | 1.6 | 1.5 | 0.9 | 1.4 | 1.0 | 1.2 | 1.4 | 1.3 | 2.4 | 3.3 | 3.4 | 3.3 | 2.7 | 2.4 | 1.6 | 0.8 | 1.6 | 1.3 | 1.7 | 1.8 | 3.4 | 0.8 | |
| 22/09/2024 | 0.9 | 1.3 | 1.3 | 1.2 | 1.1 | 1.4 | 1.1 | 1.2 | 0.9 | 1.5 | 1.8 | 1.6 | 1.7 | 3.0 | 3.0 | 2.8 | 2.9 | 2.7 | 2.8 | 1.8 | 1.8 | 1.7 | 1.3 | 1.1 | 1.7 | 3.0 | 0.9 | |
| 23/09/2024 | 1.0 | 0.5 | 1.1 | 0.9 | 0.6 | 1.0 | 1.0 | 1.4 | 1.1 | 1.2 | 1.9 | 2.1 | 2.4 | 2.6 | 2.9 | 3.1 | 3.2 | 3.0 | 2.3 | 2.1 | 1.5 | 2.0 | 1.3 | 0.7 | 1.7 | 3.2 | 0.5 | |
| 24/09/2024 | 1.3 | 1.7 | 1.3 | 0.8 | 1.0 | 1.5 | 1.0 | 1.0 | 1.1 | 1.3 | 1.6 | 2.0 | 2.7 | 2.8 | 3.0 | 3.3 | 3.3 | 3.0 | 2.5 | 2.0 | 2.1 | 1.7 | 1.6 | 1.5 | 1.9 | 3.3 | 0.8 | |
| Prom. | 1.2 | 1.2 | 1.3 | 1.3 | 1.1 | 1.2 | 1.1 | 1.2 | 1.1 | 1.2 | 1.6 | 1.9 | 2.1 | 2.5 | 2.9 | 3.1 | 3.1 | 2.8 | 2.5 | 2.0 | 1.6 | 1.6 | 1.4 | 1.3 | | | | |
| Max. | 1.9 | 1.9 | 1.7 | 2.2 | 1.7 | 1.6 | 1.6 | 1.4 | 1.4 | 1.8 | 2.0 | 2.5 | 2.7 | 3.3 | 3.3 | 3.5 | 3.6 | 3.1 | 3.0 | 2.5 | 2.1 | 2.2 | 1.8 | 1.9 | | | | |
| Min. | 0.9 | 0.5 | 0.7 | 0.8 | 0.6 | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | 1.1 | 1.4 | 1.3 | 1.9 | 2.5 | 2.6 | 2.4 | 2.5 | 2.2 | 1.6 | 0.8 | 1.1 | 0.6 | 0.7 | | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - RADIACIÓN SOLAR GLOBAL (kW/m²)

GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|--|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : Equipo Sensor de Radiación Solar Global - CPM3 | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : kW/m ² |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : ---kW/m ² |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. | |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-----|
| 12/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.4 | 0.6 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 1.0 | 0.0 | |
| 13/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.8 | 1.0 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 | |
| 14/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.0 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 | |
| 15/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.7 | 0.9 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 | |
| 16/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 0.9 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 1.0 | 0.0 | |
| 17/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.4 | 0.7 | 0.8 | 1.0 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 |
| 18/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.6 | 0.8 | 0.9 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 | |
| 19/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.6 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 1.0 | 0.0 | |
| 20/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.8 | 1.0 | 1.0 | 1.0 | 0.9 | 0.7 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 | |
| 21/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 0.8 | 1.0 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 1.0 | 0.0 | |
| 22/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.7 | 0.9 | 0.9 | 0.7 | 0.6 | 0.8 | 0.7 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.9 | 0.0 |
| 23/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.5 | 0.8 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 |
| 24/09/2024 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.5 | 0.8 | 1.0 | 1.0 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 | |
| Prom. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.4 | 0.7 | 0.9 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 |
| Max. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.4 | 0.7 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 0.7 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 1.0 | 0.0 |
| Min. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 0.6 | 0.7 | 0.6 | 0.8 | 0.6 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.0 |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - PRESIÓN ATMOSFÉRICA (mbar)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|--------------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : Sensor Presión Atmósferica - CS106 | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : mbar |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : ---mbar |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DÍA | HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 12/09/2024 | 953.0 | 955.0 | 955.0 | 954.0 | 947.0 | 868.0 | 863.0 | 955.0 | 759.6 | 555.4 | 536.3 | 527.6 | 517.3 | 504.1 | 494.3 | 484.1 | 513.2 | 731.8 | 752.8 | 949.0 | 958.0 | 959.0 | 959.0 | 959.0 | 775.4 | 959.0 | 484.1 | |
| 13/09/2024 | 958.0 | 958.0 | 958.0 | 957.0 | 957.0 | 956.0 | 956.0 | 916.0 | 681.0 | 530.3 | 520.5 | 507.7 | 491.0 | 477.1 | 498.3 | 576.6 | 866.0 | 794.9 | 792.6 | 958.0 | 958.0 | 959.0 | 959.0 | 958.0 | 797.6 | 959.0 | 477.1 | |
| 14/09/2024 | 958.0 | 957.0 | 957.0 | 956.0 | 956.0 | 956.0 | 956.0 | 957.0 | 958.0 | 954.0 | 682.0 | 538.3 | 514.3 | 492.2 | 482.0 | 471.7 | 593.7 | 798.1 | 684.4 | 858.0 | 958.0 | 958.0 | 958.0 | 958.0 | 813.1 | 958.0 | 471.7 | |
| 15/09/2024 | 957.0 | 957.0 | 956.0 | 956.0 | 956.0 | 955.0 | 955.0 | 955.0 | 954.0 | 668.4 | 599.5 | 540.9 | 526.4 | 532.0 | 493.3 | 462.3 | 445.4 | 430.1 | 762.1 | 953.0 | 954.0 | 954.0 | 955.0 | 955.0 | 784.7 | 957.0 | 430.1 | |
| 16/09/2024 | 955.0 | 954.0 | 953.0 | 953.0 | 953.0 | 954.0 | 955.0 | 955.0 | 956.0 | 957.0 | 842.0 | 587.4 | 553.8 | 525.4 | 476.7 | 461.1 | 453.5 | 432.3 | 774.2 | 956.0 | 957.0 | 957.0 | 958.0 | 958.0 | 809.9 | 958.0 | 432.3 | |
| 17/09/2024 | 957.0 | 957.0 | 956.0 | 955.0 | 955.0 | 955.0 | 955.0 | 955.0 | 822.0 | 563.8 | 529.5 | 496.1 | 481.9 | 472.2 | 458.4 | 451.5 | 442.0 | 429.7 | 665.9 | 954.0 | 954.0 | 955.0 | 954.0 | 954.0 | 759.5 | 957.0 | 429.7 | |
| 18/09/2024 | 953.0 | 952.0 | 952.0 | 952.0 | 952.0 | 953.0 | 953.0 | 954.0 | 955.0 | 651.5 | 545.0 | 518.0 | 496.8 | 488.2 | 475.5 | 459.9 | 443.7 | 429.7 | 747.5 | 885.0 | 900.0 | 896.0 | 894.0 | 892.0 | 762.5 | 955.0 | 429.7 | |
| 19/09/2024 | 889.0 | 868.0 | 866.0 | 869.0 | 871.0 | 869.0 | 868.0 | 804.0 | 602.4 | 551.3 | 544.3 | 535.0 | 512.8 | 496.8 | 482.4 | 470.6 | 455.5 | 442.8 | 428.3 | 725.1 | 863.0 | 837.0 | 832.0 | 836.0 | 688.3 | 889.0 | 428.3 | |
| 20/09/2024 | 844.0 | 825.0 | 831.0 | 825.0 | 832.0 | 834.0 | 827.0 | 811.0 | 573.6 | 530.6 | 529.6 | 515.8 | 497.5 | 485.4 | 475.6 | 463.9 | 446.1 | 433.0 | 453.1 | 807.0 | 850.0 | 853.0 | 854.0 | 854.0 | 677.1 | 854.0 | 433.0 | |
| 21/09/2024 | 858.0 | 860.0 | 853.0 | 758.7 | 592.6 | 545.2 | 537.7 | 532.6 | 529.8 | 528.1 | 528.8 | 529.4 | 519.9 | 506.9 | 488.1 | 468.9 | 455.5 | 443.3 | 432.6 | 440.8 | 446.3 | 443.2 | 462.2 | 465.1 | 551.1 | 860.0 | 432.6 | |
| 22/09/2024 | 463.4 | 476.9 | 479.5 | 493.9 | 496.5 | 501.1 | 502.5 | 504.0 | 512.5 | 522.2 | 515.3 | 503.0 | 493.2 | 477.1 | 461.8 | 460.0 | 450.4 | 436.8 | 421.8 | 423.5 | 437.0 | 447.0 | 452.6 | 456.0 | 474.5 | 522.2 | 421.8 | |
| 23/09/2024 | 458.5 | 456.3 | 458.5 | 465.6 | 469.0 | 476.4 | 481.1 | 497.3 | 507.3 | 514.2 | 517.2 | 505.3 | 492.6 | 483.2 | 493.4 | 589.9 | 723.1 | 856.0 | 482.1 | 445.8 | 450.2 | 455.4 | 460.6 | 462.0 | 508.4 | 856.0 | 445.8 | |
| 24/09/2024 | 463.2 | 468.4 | 473.7 | 474.8 | 473.1 | 477.8 | 479.7 | 483.0 | 489.1 | 499.6 | 503.8 | 493.8 | 480.0 | 472.3 | 465.1 | 453.6 | 659.7 | 768.6 | 441.5 | 428.1 | 435.0 | 441.7 | 448.7 | 453.5 | 488.7 | 768.6 | 428.1 | |
| Prom. | 820.5 | 818.8 | 819.1 | 813.1 | 800.8 | 792.3 | 791.5 | 790.8 | 715.1 | 596.5 | 557.7 | 521.1 | 504.3 | 492.5 | 479.6 | 492.0 | 550.2 | 562.6 | 616.3 | 760.3 | 778.5 | 778.0 | 780.5 | 781.6 | | | | |
| Max. | 958.0 | 958.0 | 958.0 | 957.0 | 957.0 | 956.0 | 957.0 | 958.0 | 956.0 | 957.0 | 842.0 | 587.4 | 553.8 | 532.0 | 498.3 | 593.7 | 866.0 | 856.0 | 858.0 | 958.0 | 958.0 | 959.0 | 959.0 | 959.0 | | | | |
| Min. | 458.5 | 456.3 | 458.5 | 465.6 | 469.0 | 476.4 | 479.7 | 483.0 | 489.1 | 499.6 | 503.8 | 493.8 | 480.0 | 472.2 | 458.4 | 451.5 | 442.0 | 429.7 | 421.8 | 423.5 | 435.0 | 441.7 | 448.7 | 453.5 | | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - MATERIAL PARTICULADO RESPIRABLE (PM₁₀)

GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|---------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - TEOM 1405 | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 12/09/2024 | 19.6 | 13.5 | 12.0 | 14.2 | 14.9 | 13.3 | 11.8 | 14.6 | 24.7 | 32.6 | 32.9 | 23.4 | 18.4 | 19.8 | 24.6 | 28.5 | 27.4 | 19.9 | 23.0 | 22.4 | 21.1 | 17.2 | 15.5 | 18.9 | 20.2 | 32.9 | 11.8 |
| 13/09/2024 | 13.0 | 17.8 | 15.0 | 17.5 | 15.4 | 17.9 | 20.5 | 26.3 | 28.1 | 37.3 | 35.0 | 30.8 | 33.8 | 36.9 | 32.1 | 31.3 | 25.9 | 19.7 | 21.0 | 19.7 | 21.1 | 16.4 | 16.5 | 16.1 | 23.5 | 37.3 | 13.0 |
| 14/09/2024 | 18.2 | 20.1 | 20.3 | 16.4 | 16.3 | 18.3 | 18.5 | 21.1 | 21.1 | 28.6 | 32.3 | 41.7 | 34.0 | 26.0 | 36.4 | 27.0 | 24.7 | 22.1 | 26.0 | 23.6 | 26.6 | 24.2 | 23.2 | 22.7 | 24.6 | 41.7 | 16.3 |
| 15/09/2024 | 26.1 | 23.6 | 24.8 | 23.9 | 18.2 | 22.0 | 20.6 | 21.4 | 26.9 | 32.1 | 43.3 | 46.5 | 28.6 | 27.1 | 26.8 | 25.1 | 22.7 | 21.1 | 23.2 | 22.6 | 21.5 | 19.8 | 25.6 | 19.9 | 25.6 | 46.5 | 18.2 |
| 16/09/2024 | 17.6 | 20.8 | 17.5 | 16.7 | 19.3 | 18.8 | 15.4 | 19.3 | 22.6 | 25.3 | 45.2 | 57.3 | 42.3 | 34.6 | 31.6 | 27.1 | 27.3 | 25.4 | 30.4 | 30.6 | 25.1 | 15.8 | 22.8 | 21.9 | 26.3 | 57.3 | 15.4 |
| 17/09/2024 | 16.0 | 15.1 | 23.4 | 20.5 | 16.3 | 24.8 | 29.2 | 33.7 | 38.8 | 92.3 | 117.6 | 29.6 | 34.9 | 42.7 | 38.7 | 30.0 | 27.2 | 27.9 | 27.3 | 24.9 | 25.5 | 23.4 | 32.4 | 34.8 | 34.5 | 117.6 | 15.1 |
| 18/09/2024 | 30.0 | 27.9 | 17.5 | 22.9 | 18.3 | 22.2 | 22.1 | 53.3 | 31.9 | 51.6 | 48.0 | 46.3 | 37.9 | 43.3 | 47.6 | 47.5 | 25.0 | 26.6 | 26.0 | 32.6 | 35.1 | 26.9 | 24.3 | 24.4 | 32.9 | 53.3 | 17.5 |
| 19/09/2024 | 21.9 | 13.3 | 19.1 | 10.2 | 11.1 | 11.2 | 12.6 | 15.1 | 17.6 | 28.0 | 40.2 | 36.9 | 35.4 | 27.5 | 27.6 | 24.1 | 24.1 | 21.0 | 19.8 | 25.4 | 30.2 | 25.2 | 21.7 | 27.8 | 22.8 | 40.2 | 10.2 |
| 20/09/2024 | 26.5 | 20.7 | 21.6 | 18.9 | 14.2 | 17.1 | 21.2 | 21.8 | 22.0 | 25.1 | 43.2 | 42.1 | 29.5 | 30.7 | 31.9 | 33.9 | 22.8 | 23.6 | 23.8 | 23.6 | 19.3 | 19.6 | 22.5 | 11.7 | 24.5 | 43.2 | 11.7 |
| 21/09/2024 | 5.3 | 11.6 | 9.3 | 21.3 | 18.0 | 18.4 | 20.0 | 18.7 | 21.7 | 18.0 | 25.1 | 40.6 | 18.7 | 30.1 | 45.7 | 34.0 | 22.9 | 22.0 | 16.3 | 19.4 | 21.8 | 22.8 | 14.7 | 23.8 | 21.7 | 45.7 | 5.3 |
| 22/09/2024 | 28.0 | 23.4 | 34.0 | 14.9 | 17.6 | 12.3 | 12.3 | 22.0 | 27.8 | 39.4 | 40.0 | 43.5 | 35.0 | 28.6 | 28.5 | 30.7 | 22.3 | 26.1 | 33.5 | 17.3 | 20.8 | 17.0 | 18.3 | 18.8 | 25.5 | 43.5 | 12.3 |
| 23/09/2024 | 17.7 | 18.7 | 18.5 | 10.7 | 12.8 | 24.4 | 29.4 | 25.5 | 25.3 | 34.9 | 48.8 | 43.2 | 38.8 | 35.6 | 32.1 | 29.0 | 26.5 | 22.2 | 28.9 | 24.1 | 26.1 | 23.7 | 19.5 | 27.4 | 26.8 | 48.8 | 10.7 |
| 24/09/2024 | 23.7 | 20.2 | 16.6 | 15.3 | 19.1 | 16.9 | 18.1 | 21.7 | 32.3 | 37.7 | 50.9 | 42.0 | 34.9 | 31.6 | 31.7 | 27.4 | 29.1 | 23.2 | 27.6 | 22.9 | 22.9 | 23.1 | 21.6 | 21.3 | 26.3 | 50.9 | 15.3 |
| Prom. | 20.3 | 19.0 | 19.2 | 17.2 | 16.3 | 18.3 | 19.4 | 24.2 | 26.2 | 37.1 | 46.3 | 40.3 | 32.5 | 31.9 | 33.5 | 30.4 | 25.2 | 23.1 | 25.1 | 23.8 | 24.4 | 21.1 | 21.4 | 22.3 | | | |
| Max. | 30.0 | 27.9 | 34.0 | 23.9 | 19.3 | 24.8 | 29.4 | 53.3 | 38.8 | 92.3 | 117.6 | 57.3 | 42.3 | 43.3 | 47.6 | 47.5 | 29.1 | 27.9 | 33.5 | 32.6 | 35.1 | 26.9 | 32.4 | 34.8 | | | |
| Min. | 5.3 | 11.6 | 9.3 | 10.2 | 11.1 | 11.2 | 11.8 | 14.6 | 17.6 | 18.0 | 25.1 | 23.4 | 18.4 | 19.8 | 24.6 | 24.1 | 22.3 | 19.7 | 16.3 | 17.3 | 19.3 | 15.8 | 14.7 | 11.7 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - MATERIAL PARTICULADO RESPIRABLE (PM_{2.5})

GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|---------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Período | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - TEOM 1405 | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DÍA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 12/09/2024 | 11.8 | 6.8 | 6.4 | 9.1 | 10.1 | 7.4 | 6.2 | 6.9 | 14.5 | 15.4 | 15.4 | 12.2 | 9.5 | 9.1 | 10.3 | 9.7 | 7.8 | 6.0 | 9.1 | 6.1 | 5.9 | 4.8 | 6.2 | 10.6 | 9.1 | 15.4 | 4.8 |
| 13/09/2024 | 6.1 | 10.6 | 7.4 | 10.1 | 7.0 | 8.3 | 9.0 | 11.8 | 9.1 | 12.8 | 11.7 | 10.5 | 10.7 | 11.7 | 10.3 | 7.2 | 6.2 | 4.3 | 7.2 | 5.4 | 8.4 | 5.5 | 4.9 | 6.2 | 8.4 | 12.8 | 4.3 |
| 14/09/2024 | 7.2 | 9.3 | 10.5 | 8.1 | 7.3 | 10.1 | 8.0 | 9.2 | 10.2 | 11.6 | 12.4 | 15.8 | 15.2 | 8.9 | 9.3 | 6.4 | 5.9 | 5.8 | 7.2 | 7.2 | 7.8 | 8.1 | 7.7 | 7.9 | 9.0 | 15.8 | 5.8 |
| 15/09/2024 | 10.0 | 8.0 | 10.5 | 10.0 | 6.7 | 11.5 | 8.8 | 10.5 | 10.2 | 10.6 | 16.9 | 17.3 | 10.3 | 8.4 | 9.1 | 7.3 | 6.9 | 7.1 | 7.6 | 9.6 | 8.6 | 7.0 | 7.5 | 9.1 | 9.6 | 17.3 | 6.7 |
| 16/09/2024 | 7.6 | 12.5 | 7.6 | 7.6 | 11.6 | 10.4 | 8.5 | 9.6 | 9.7 | 11.5 | 11.9 | 12.6 | 15.2 | 12.6 | 8.6 | 5.9 | 8.9 | 7.7 | 15.9 | 15.2 | 7.6 | 2.1 | 11.6 | 11.4 | 10.2 | 15.9 | 2.1 |
| 17/09/2024 | 6.5 | 6.6 | 11.9 | 9.8 | 6.9 | 13.1 | 13.7 | 15.6 | 17.1 | 32.4 | 22.2 | 7.8 | 10.5 | 13.2 | 12.0 | 8.6 | 8.5 | 9.5 | 11.1 | 9.6 | 12.2 | 9.7 | 15.3 | 15.0 | 12.5 | 32.4 | 6.5 |
| 18/09/2024 | 15.8 | 16.9 | 9.4 | 15.0 | 9.0 | 12.0 | 11.9 | 20.9 | 14.5 | 22.1 | 19.8 | 17.6 | 10.7 | 13.2 | 17.7 | 14.5 | 3.9 | 8.8 | 10.6 | 13.2 | 12.4 | 10.9 | 8.4 | 9.7 | 13.3 | 22.1 | 3.9 |
| 19/09/2024 | 11.9 | 6.7 | 12.8 | 4.7 | 5.3 | 5.5 | 8.5 | 7.8 | 9.8 | 13.9 | 17.7 | 18.2 | 21.5 | 11.8 | 10.9 | 6.9 | 10.0 | 8.9 | 7.6 | 12.8 | 16.4 | 14.3 | 9.9 | 15.2 | 11.2 | 21.5 | 4.7 |
| 20/09/2024 | 14.3 | 10.7 | 13.9 | 11.7 | 7.8 | 10.6 | 13.2 | 10.6 | 10.2 | 10.8 | 16.8 | 16.9 | 13.6 | 15.1 | 13.5 | 9.0 | 7.3 | 9.9 | 9.9 | 8.5 | 6.4 | 7.3 | 13.3 | 5.4 | 11.1 | 16.9 | 5.4 |
| 21/09/2024 | 1.4 | 6.8 | 3.6 | 12.0 | 9.7 | 9.3 | 10.1 | 9.5 | 11.6 | 9.4 | 12.1 | 11.5 | 5.0 | 14.1 | 12.3 | 9.0 | 6.2 | 8.4 | 6.6 | 5.9 | 8.2 | 7.8 | 5.7 | 8.6 | 8.5 | 14.1 | 1.4 |
| 22/09/2024 | 10.1 | 13.3 | 20.7 | 9.1 | 10.5 | 6.8 | 6.6 | 12.9 | 13.2 | 17.6 | 18.3 | 17.6 | 9.6 | 11.3 | 8.9 | 11.4 | 7.2 | 7.6 | 6.9 | 7.1 | 8.9 | 5.9 | 7.8 | 10.1 | 10.8 | 20.7 | 5.9 |
| 23/09/2024 | 9.3 | 9.5 | 10.5 | 4.4 | 5.6 | 7.7 | 8.2 | 13.3 | 12.2 | 16.3 | 19.3 | 20.4 | 16.2 | 13.6 | 10.8 | 11.8 | 10.3 | 7.3 | 11.5 | 10.9 | 12.3 | 8.1 | 7.7 | 13.1 | 11.3 | 20.4 | 4.4 |
| 24/09/2024 | 11.2 | 9.8 | 6.8 | 5.6 | 7.9 | 7.8 | 8.0 | 8.8 | 13.6 | 13.8 | 18.9 | 15.7 | 12.2 | 9.9 | 8.7 | 8.1 | 9.9 | 7.3 | 12.2 | 8.8 | 11.4 | 10.3 | 11.3 | 12.5 | 10.4 | 18.9 | 5.6 |
| Prom. | 9.5 | 9.8 | 10.1 | 9.0 | 8.1 | 9.3 | 9.3 | 11.3 | 12.0 | 15.3 | 16.4 | 14.9 | 12.3 | 11.8 | 11.0 | 8.9 | 7.6 | 7.6 | 9.5 | 9.3 | 9.7 | 7.8 | 9.0 | 10.4 | | | |
| Max. | 15.8 | 16.9 | 20.7 | 15.0 | 11.6 | 13.1 | 13.7 | 20.9 | 17.1 | 32.4 | 22.2 | 20.4 | 21.5 | 15.1 | 17.7 | 14.5 | 10.3 | 9.9 | 15.9 | 15.2 | 16.4 | 14.3 | 15.3 | 15.2 | | | |
| Min. | 1.4 | 6.6 | 3.6 | 4.4 | 5.3 | 5.5 | 6.2 | 6.9 | 9.1 | 9.4 | 11.7 | 7.8 | 5.0 | 8.4 | 8.6 | 5.9 | 3.9 | 4.3 | 6.6 | 5.4 | 5.9 | 2.1 | 4.9 | 5.4 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - DIÓXIDO DE NITRÓGENO (NO₂)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|--------------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - ANALIZADOR 42i | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DÍA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 12/09/2024 | 13.7 | 10.1 | 9.8 | 9.9 | 11.5 | 12.1 | 15.4 | 21.2 | 21.4 | 23.0 | 16.0 | 12.1 | 11.8 | 11.2 | 12.9 | 13.3 | 14.5 | 17.3 | 19.1 | 22.1 | 18.9 | 16.5 | 15.1 | 13.7 | 15.1 | 23.0 | 9.8 |
| 13/09/2024 | 9.0 | 9.7 | 9.7 | 8.2 | 9.1 | 11.9 | 17.2 | 21.9 | 20.5 | 18.6 | 13.3 | 11.0 | 13.4 | 14.8 | 12.9 | 13.4 | 13.6 | 15.9 | 19.2 | 23.4 | 19.7 | 17.5 | 17.0 | 15.4 | 14.8 | 23.4 | 8.2 |
| 14/09/2024 | 15.9 | 16.8 | 14.4 | 12.5 | 11.8 | 12.1 | 12.9 | 17.7 | 13.5 | 18.6 | 14.1 | 13.2 | 13.0 | 11.1 | 12.6 | 12.1 | 12.8 | 13.9 | 18.7 | 19.2 | 17.4 | 16.2 | 19.4 | 16.5 | 14.9 | 19.4 | 11.1 |
| 15/09/2024 | 16.6 | 18.3 | 18.7 | 15.6 | 10.9 | 12.2 | 14.9 | 14.4 | 16.9 | 13.7 | 12.3 | 13.5 | 10.6 | 11.2 | 10.7 | 10.4 | 9.8 | 12.4 | 17.5 | 18.7 | 18.3 | 14.0 | 11.5 | 12.4 | 14.0 | 18.7 | 9.8 |
| 16/09/2024 | 9.4 | 12.1 | 9.4 | 11.2 | 12.0 | 12.3 | 11.0 | 14.6 | 19.3 | 21.1 | 14.6 | 15.2 | 15.0 | 15.7 | 15.6 | 12.9 | 13.9 | 17.0 | 21.7 | 26.0 | 21.3 | 16.2 | 15.3 | 13.9 | 15.3 | 26.0 | 9.4 |
| 17/09/2024 | 10.4 | 8.0 | 12.1 | 14.3 | 14.6 | 18.5 | 31.5 | 31.7 | 29.4 | 51.2 | 35.0 | 12.9 | 14.5 | 15.7 | 14.4 | 12.3 | 13.1 | 18.8 | 22.1 | 22.9 | 22.8 | 19.3 | 32.4 | 30.8 | 21.2 | 51.2 | 8.0 |
| 18/09/2024 | 20.6 | 16.5 | 10.5 | 9.6 | 9.4 | 17.3 | 18.1 | 25.1 | 23.3 | 30.6 | 20.3 | 14.0 | 14.5 | 15.3 | 16.2 | 14.0 | 13.6 | 16.0 | 17.8 | 20.7 | 22.0 | 17.7 | 14.4 | 14.3 | 17.2 | 30.6 | 9.4 |
| 19/09/2024 | 11.7 | 9.1 | 10.2 | 11.3 | 7.9 | 11.4 | 14.4 | 25.6 | 22.7 | 29.5 | 25.6 | 17.6 | 14.6 | 15.4 | 14.3 | 12.4 | 12.0 | 16.1 | 20.5 | 21.8 | 19.6 | 17.7 | 15.4 | 20.6 | 16.6 | 29.5 | 7.9 |
| 20/09/2024 | 16.2 | 13.4 | 11.8 | 10.6 | 8.8 | 9.3 | 14.6 | 15.3 | 19.4 | 23.9 | 24.6 | 15.4 | 12.4 | 14.7 | 14.8 | 13.9 | 12.7 | 14.2 | 18.2 | 22.4 | 16.7 | 17.4 | 19.0 | 13.4 | 15.5 | 24.6 | 8.8 |
| 21/09/2024 | 11.6 | 9.7 | 8.3 | 9.3 | 8.2 | 11.1 | 15.8 | 19.9 | 20.6 | 18.5 | 22.8 | 17.5 | 14.9 | 15.8 | 13.7 | 13.2 | 13.6 | 16.0 | 16.9 | 21.2 | 25.4 | 33.1 | 16.3 | 25.5 | 16.6 | 33.1 | 8.2 |
| 22/09/2024 | 33.4 | 17.1 | 27.5 | 10.4 | 15.5 | 9.9 | 16.1 | 22.5 | 22.3 | 20.0 | 15.8 | 14.5 | 12.7 | 12.5 | 12.3 | 11.5 | 9.9 | 12.4 | 15.2 | 17.3 | 18.6 | 16.5 | 13.7 | 14.0 | 16.3 | 33.4 | 9.9 |
| 23/09/2024 | 11.7 | 12.9 | 12.1 | 9.1 | 12.0 | 16.4 | 25.1 | 21.2 | 20.0 | 20.9 | 18.4 | 13.3 | 12.9 | 12.4 | 12.1 | 12.1 | 12.6 | 14.8 | 18.1 | 19.1 | 17.3 | 15.8 | 15.3 | 18.4 | 15.6 | 25.1 | 9.1 |
| 24/09/2024 | 13.4 | 10.3 | 7.9 | 7.3 | 10.7 | 10.5 | 13.8 | 18.7 | 25.8 | 19.1 | 17.2 | 16.5 | 14.1 | 13.8 | 12.8 | 13.1 | 12.3 | 15.0 | 18.1 | 21.7 | 20.3 | 15.6 | 16.0 | 15.3 | 15.0 | 25.8 | 7.3 |
| Prom. | 14.9 | 12.6 | 12.5 | 10.7 | 10.9 | 12.7 | 17.0 | 20.8 | 21.2 | 23.8 | 19.2 | 14.4 | 13.4 | 13.8 | 13.5 | 12.7 | 12.7 | 15.4 | 18.7 | 21.3 | 19.9 | 18.0 | 17.0 | 17.3 | | | |
| Max. | 33.4 | 18.3 | 27.5 | 15.6 | 15.5 | 18.5 | 31.5 | 31.7 | 29.4 | 51.2 | 35.0 | 17.6 | 15.0 | 15.8 | 16.2 | 14.0 | 14.5 | 18.8 | 22.1 | 26.0 | 25.4 | 33.1 | 32.4 | 30.8 | | | |
| Min. | 9.0 | 8.0 | 7.9 | 7.3 | 7.9 | 9.3 | 11.0 | 14.4 | 13.5 | 13.7 | 12.3 | 11.0 | 10.6 | 11.1 | 10.7 | 10.4 | 9.8 | 12.4 | 15.2 | 17.3 | 16.7 | 14.0 | 11.5 | 12.4 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - DIOXIDO DE AZUFRE (SO₂)

GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|---------------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Período | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - ANALIZADOR 450i | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DÍA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 12/09/2024 | 0.3 | 0.8 | 0.0 | 0.5 | 0.7 | 0.6 | 0.5 | 1.2 | 0.4 | 1.4 | 1.3 | 1.5 | 1.4 | 1.2 | 2.1 | 2.3 | 0.6 | 0.8 | 0.9 | 0.8 | 0.7 | 0.8 | 0.5 | 0.2 | 0.9 | 2.3 | 0.0 |
| 13/09/2024 | 0.5 | 0.4 | 0.6 | 0.1 | 0.6 | 0.3 | 0.8 | 0.4 | 0.6 | 1.0 | 0.9 | 1.0 | 1.0 | 1.2 | 1.4 | 1.2 | 1.4 | 0.6 | 0.7 | 0.0 | 0.0 | 0.0 | 0.9 | 0.6 | 0.7 | 1.4 | 0.0 |
| 14/09/2024 | 0.3 | 0.3 | 0.9 | 0.5 | 0.8 | 1.3 | 0.5 | 0.3 | 0.4 | 0.7 | 1.1 | 1.4 | 2.1 | 2.4 | 2.3 | 1.6 | 0.9 | 0.6 | 0.8 | 0.7 | 0.7 | 1.1 | 0.4 | 0.8 | 1.0 | 2.4 | 0.3 |
| 15/09/2024 | 0.4 | 0.7 | 0.6 | 0.2 | 1.1 | 0.7 | 0.7 | 0.4 | 0.7 | 0.8 | 1.2 | 2.8 | 3.4 | 3.8 | 2.8 | 2.0 | 1.3 | 0.9 | 0.8 | 0.6 | 0.5 | 0.3 | 0.5 | 0.9 | 1.2 | 3.8 | 0.2 |
| 16/09/2024 | 0.3 | 0.5 | 0.0 | 0.7 | 0.7 | 0.7 | 1.0 | 1.0 | 0.8 | 0.9 | 0.7 | 1.4 | 1.9 | 1.2 | 1.5 | 1.1 | 2.0 | 1.4 | 1.3 | 1.3 | 1.1 | 1.1 | 0.8 | 0.5 | 1.0 | 2.0 | 0.0 |
| 17/09/2024 | 0.7 | 0.9 | 0.8 | 0.6 | 0.4 | 0.6 | 1.3 | 1.4 | 1.4 | 1.6 | 1.6 | 3.2 | 5.5 | 11.3 | 9.8 | 8.0 | 7.0 | 5.9 | 4.4 | 3.8 | 2.6 | 2.8 | 2.5 | 2.4 | 3.4 | 11.3 | 0.4 |
| 18/09/2024 | 3.0 | 2.7 | 2.1 | 2.2 | 1.9 | 1.9 | 1.5 | 2.7 | 1.8 | 1.8 | 1.8 | 4.1 | 4.3 | 4.7 | 5.4 | 4.4 | 3.6 | 2.6 | 2.5 | 2.6 | 1.9 | 2.0 | 1.9 | 1.4 | 2.7 | 5.4 | 1.4 |
| 19/09/2024 | 2.1 | 1.2 | 1.3 | 1.2 | 1.4 | 1.4 | 1.2 | 1.5 | 1.6 | 1.2 | 1.2 | 2.0 | 3.3 | 3.9 | 3.1 | 2.9 | 2.8 | 2.4 | 2.2 | 2.0 | 2.0 | 1.6 | 1.3 | 1.8 | 1.9 | 3.9 | 1.2 |
| 20/09/2024 | 1.7 | 1.5 | 1.8 | 2.1 | 1.4 | 1.2 | 1.5 | 1.1 | 1.1 | 1.9 | 1.4 | 2.5 | 3.6 | 4.7 | 4.9 | 4.2 | 2.8 | 2.5 | 1.9 | 1.8 | 2.0 | 1.9 | 1.5 | 1.4 | 2.2 | 4.9 | 1.1 |
| 21/09/2024 | 1.1 | 1.4 | 0.7 | 1.1 | 0.8 | 1.1 | 1.3 | 1.5 | 0.9 | 1.2 | 1.3 | 0.8 | 1.7 | 2.5 | 3.0 | 2.8 | 2.3 | 1.9 | 1.3 | 1.6 | 1.6 | 1.8 | 1.3 | 1.3 | 1.5 | 3.0 | 0.7 |
| 22/09/2024 | 1.7 | 3.0 | 1.8 | 1.9 | 1.5 | 1.3 | 1.8 | 1.5 | 1.2 | 1.8 | 1.6 | 3.9 | 3.0 | 2.1 | 3.3 | 2.0 | 1.6 | 2.1 | 1.2 | 1.7 | 1.5 | 1.7 | 1.1 | 1.7 | 1.9 | 3.9 | 1.1 |
| 23/09/2024 | 1.6 | 0.6 | 1.2 | 1.0 | 1.9 | 1.3 | 1.9 | 1.8 | 1.6 | 1.8 | 1.9 | 2.8 | 3.3 | 2.5 | 2.4 | 2.2 | 2.1 | 1.4 | 1.3 | 1.5 | 1.8 | 1.1 | 1.0 | 0.8 | 1.7 | 3.3 | 0.6 |
| 24/09/2024 | 1.7 | 0.7 | 1.9 | 1.5 | 0.7 | 1.5 | 0.2 | 1.2 | 0.9 | 1.2 | 1.2 | 2.1 | 2.5 | 2.5 | 1.4 | 1.9 | 1.3 | 1.6 | 1.2 | 0.9 | 1.6 | 1.4 | 1.2 | 1.6 | 1.4 | 2.5 | 0.2 |
| Prom. | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.0 | 1.3 | 1.3 | 2.3 | 2.8 | 3.4 | 3.3 | 2.8 | 2.3 | 1.9 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | | | |
| Max. | 3.0 | 3.0 | 2.1 | 2.2 | 1.9 | 1.9 | 1.9 | 2.7 | 1.8 | 1.9 | 1.9 | 4.1 | 5.5 | 11.3 | 9.8 | 8.0 | 7.0 | 5.9 | 4.4 | 3.8 | 2.6 | 2.8 | 2.5 | 2.4 | | | |
| Min. | 0.3 | 0.3 | 0.0 | 0.1 | 0.4 | 0.3 | 0.2 | 0.3 | 0.4 | 0.7 | 0.7 | 0.8 | 1.0 | 1.2 | 1.4 | 1.1 | 0.6 | 0.6 | 0.7 | 0.0 | 0.0 | 0.0 | 0.4 | 0.2 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - SULFURO DE HIDRÓGENO (H₂S)

GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|---------------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Período | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - ANALIZADOR 450i | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DÍA/HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 12/09/2024 | 2.3 | 1.7 | 2.7 | 1.9 | 1.9 | 2.4 | 3.9 | 5.7 | 5.2 | 4.9 | 5.7 | 6.0 | 3.6 | 2.2 | 2.8 | 2.8 | 1.7 | 1.6 | 1.0 | 1.6 | 1.7 | 1.6 | 1.4 | 1.8 | 2.8 | 6.0 | 1.0 |
| 13/09/2024 | 2.1 | 1.6 | 2.0 | 2.2 | 1.7 | 3.2 | 2.7 | 3.4 | 4.0 | 2.8 | 2.7 | 1.9 | 1.9 | 2.2 | 1.9 | 2.1 | 1.1 | 1.5 | 1.5 | 1.8 | 1.9 | 1.9 | 1.5 | 2.3 | 2.2 | 4.0 | 1.1 |
| 14/09/2024 | 2.9 | 3.2 | 2.6 | 4.6 | 4.3 | 4.0 | 4.6 | 5.4 | 4.4 | 4.4 | 3.6 | 4.0 | 4.8 | 3.5 | 3.3 | 3.2 | 3.4 | 3.1 | 1.7 | 2.0 | 1.9 | 1.9 | 2.6 | 2.7 | 3.4 | 5.4 | 1.7 |
| 15/09/2024 | 2.4 | 3.4 | 3.5 | 2.6 | 2.9 | 3.8 | 3.5 | 3.1 | 2.5 | 3.2 | 5.1 | 4.2 | 5.0 | 5.2 | 4.4 | 3.5 | 3.5 | 3.0 | 1.8 | 1.1 | 3.4 | 4.5 | 3.3 | 1.9 | 3.4 | 5.2 | 1.1 |
| 16/09/2024 | 2.0 | 2.7 | 3.4 | 2.2 | 2.7 | 4.4 | 5.8 | 5.0 | 5.4 | 5.0 | 4.2 | 3.9 | 3.2 | 2.4 | 1.7 | 2.5 | 2.1 | 2.5 | 1.8 | 1.4 | 1.1 | 1.2 | 2.0 | 2.4 | 3.0 | 5.8 | 1.1 |
| 17/09/2024 | 3.9 | 3.1 | 3.5 | 4.4 | 3.7 | 3.7 | 3.6 | 3.2 | 3.8 | 3.2 | 3.2 | 5.1 | 3.0 | 2.6 | 2.3 | 1.7 | 3.1 | 2.3 | 2.3 | 1.4 | 2.6 | 3.5 | 3.9 | 5.6 | 3.3 | 5.6 | 1.4 |
| 18/09/2024 | 5.1 | 7.4 | 9.6 | 3.4 | 3.1 | 3.7 | 3.4 | 2.4 | 3.0 | 2.7 | 3.1 | 4.7 | 2.7 | 2.6 | 4.0 | 3.0 | 2.4 | 1.7 | 1.7 | 1.6 | 2.3 | 1.7 | 1.4 | 2.1 | 3.3 | 9.6 | 1.4 |
| 19/09/2024 | 1.3 | 2.7 | 2.7 | 1.9 | 1.8 | 1.7 | 2.6 | 2.8 | 2.9 | 2.8 | 2.9 | 2.4 | 3.9 | 3.4 | 2.6 | 2.0 | 1.6 | 1.7 | 2.4 | 1.7 | 1.6 | 2.0 | 1.7 | 2.8 | 2.3 | 3.9 | 1.3 |
| 20/09/2024 | 2.6 | 3.5 | 2.8 | 3.0 | 4.5 | 6.0 | 6.8 | 7.6 | 7.5 | 6.1 | 5.7 | 4.1 | 5.4 | 4.1 | 4.2 | 2.9 | 1.9 | 2.1 | 1.8 | 1.7 | 2.1 | 4.8 | 5.4 | 8.5 | 4.4 | 8.5 | 1.7 |
| 21/09/2024 | 3.2 | 4.4 | 2.2 | 1.6 | 1.9 | 1.5 | 2.7 | 6.5 | 4.6 | 4.3 | 2.8 | 2.9 | 2.1 | 2.2 | 3.4 | 2.4 | 2.3 | 1.2 | 1.8 | 1.3 | 1.8 | 1.5 | 1.5 | 1.8 | 2.6 | 6.5 | 1.2 |
| 22/09/2024 | 2.7 | 14.8 | 8.5 | 6.3 | 5.9 | 5.0 | 3.5 | 5.3 | 5.3 | 4.3 | 3.6 | 5.4 | 1.7 | 1.4 | 1.2 | 1.7 | 1.6 | 1.6 | 1.9 | 1.5 | 1.8 | 2.1 | 2.2 | 1.7 | 3.8 | 14.8 | 1.2 |
| 23/09/2024 | 2.3 | 3.2 | 2.4 | 2.5 | 2.6 | 4.6 | 8.1 | 3.1 | 4.7 | 7.5 | 4.9 | 3.9 | 3.9 | 2.5 | 1.8 | 2.2 | 2.1 | 1.5 | 1.4 | 1.6 | 1.8 | 1.4 | 2.0 | 1.8 | 3.1 | 8.1 | 1.4 |
| 24/09/2024 | 1.8 | 2.6 | 1.7 | 2.1 | 2.7 | 2.1 | 4.6 | 5.4 | 4.1 | 3.0 | 2.8 | 2.8 | 2.5 | 1.8 | 1.6 | 1.4 | 1.6 | 1.4 | 2.0 | 1.8 | 1.6 | 1.5 | 1.5 | 2.0 | 2.4 | 5.4 | 1.4 |
| Prom. | 2.7 | 4.2 | 3.7 | 3.0 | 3.1 | 3.5 | 4.3 | 4.5 | 4.4 | 4.2 | 3.9 | 3.9 | 3.4 | 2.8 | 2.7 | 2.4 | 2.2 | 1.9 | 1.8 | 1.6 | 2.0 | 2.3 | 2.3 | 2.9 | | | |
| Max. | 5.1 | 14.8 | 9.6 | 6.3 | 5.9 | 6.0 | 8.1 | 7.6 | 7.5 | 7.5 | 5.7 | 6.0 | 5.4 | 5.2 | 4.4 | 3.5 | 3.5 | 3.1 | 2.4 | 2.0 | 3.4 | 4.8 | 5.4 | 8.5 | | | |
| Min. | 1.3 | 1.6 | 1.7 | 1.6 | 1.7 | 1.5 | 2.6 | 2.4 | 2.5 | 2.7 | 2.7 | 1.9 | 1.7 | 1.4 | 1.2 | 1.4 | 1.1 | 1.2 | 1.0 | 1.1 | 1.1 | 1.2 | 1.4 | 1.7 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - MONOXIDO DE CARBONO (CO PROMEDIO DE UNA HORA)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|--------------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - ANALIZADOR 48i | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA/HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 12/09/2024 | 289.8 | 267.0 | 257.5 | 254.9 | 278.9 | 281.2 | 297.7 | 339.3 | 354.1 | 381.6 | 317.9 | 291.7 | 279.0 | 265.3 | 264.7 | 253.2 | 252.3 | 266.3 | 300.2 | 330.4 | 313.8 | 289.8 | 278.3 | 274.4 | 290.8 | 381.6 | 252.3 |
| 13/09/2024 | 243.4 | 243.8 | 239.6 | 237.7 | 249.1 | 267.6 | 317.8 | 352.3 | 358.0 | 345.9 | 284.5 | 266.7 | 263.2 | 286.9 | 260.9 | 257.5 | 261.4 | 271.4 | 303.3 | 364.7 | 323.9 | 306.4 | 296.0 | 279.7 | 286.7 | 364.7 | 237.7 |
| 14/09/2024 | 280.8 | 295.1 | 279.1 | 271.8 | 264.6 | 283.1 | 282.1 | 303.9 | 279.9 | 330.7 | 309.1 | 290.1 | 280.0 | 255.5 | 267.6 | 267.5 | 269.6 | 276.5 | 307.6 | 337.0 | 316.0 | 320.7 | 348.9 | 338.0 | 294.0 | 348.9 | 255.5 |
| 15/09/2024 | 323.0 | 331.5 | 348.0 | 321.6 | 297.1 | 297.2 | 328.5 | 318.9 | 348.4 | 335.5 | 322.1 | 324.9 | 294.5 | 289.3 | 285.5 | 281.0 | 276.5 | 290.4 | 320.5 | 340.8 | 349.1 | 318.2 | 316.0 | 314.1 | 315.5 | 349.1 | 276.5 |
| 16/09/2024 | 304.0 | 318.2 | 296.4 | 309.8 | 330.4 | 336.7 | 315.2 | 358.9 | 385.7 | 395.0 | 349.9 | 368.1 | 356.2 | 347.6 | 340.1 | 313.3 | 315.0 | 334.0 | 389.9 | 419.3 | 378.5 | 353.1 | 352.4 | 342.3 | 346.2 | 419.3 | 296.4 |
| 17/09/2024 | 331.6 | 320.3 | 346.8 | 343.9 | 354.1 | 382.5 | 496.6 | 510.9 | 479.4 | 685.6 | 552.3 | 345.1 | 427.1 | 374.9 | 358.5 | 353.2 | 348.4 | 390.0 | 427.9 | 436.0 | 467.1 | 411.9 | 483.1 | 523.2 | 422.9 | 685.6 | 320.3 |
| 18/09/2024 | 445.5 | 402.1 | 385.6 | 366.2 | 366.7 | 406.3 | 428.8 | 624.2 | 460.2 | 554.8 | 459.1 | 403.7 | 394.6 | 413.7 | 416.5 | 395.8 | 384.3 | 397.3 | 413.9 | 430.3 | 452.8 | 423.9 | 418.1 | 416.3 | 427.5 | 624.2 | 366.2 |
| 19/09/2024 | 396.8 | 395.9 | 388.5 | 402.6 | 376.2 | 400.8 | 422.3 | 491.4 | 473.9 | 549.2 | 528.4 | 484.0 | 443.2 | 432.1 | 415.8 | 394.1 | 388.0 | 408.5 | 446.5 | 477.3 | 458.9 | 438.9 | 432.1 | 474.6 | 438.3 | 549.2 | 376.2 |
| 20/09/2024 | 449.2 | 417.9 | 416.9 | 403.4 | 401.1 | 413.8 | 450.3 | 460.3 | 498.4 | 520.2 | 552.9 | 467.4 | 432.7 | 435.0 | 441.4 | 466.1 | 423.4 | 432.0 | 478.7 | 518.3 | 480.1 | 481.9 | 504.4 | 460.0 | 458.6 | 552.9 | 401.1 |
| 21/09/2024 | 457.9 | 459.4 | 432.3 | 432.0 | 431.8 | 458.3 | 518.5 | 495.2 | 510.7 | 505.2 | 539.3 | 522.6 | 489.8 | 482.9 | 465.3 | 467.0 | 472.4 | 476.5 | 474.4 | 514.5 | 543.2 | 582.1 | 506.8 | 542.2 | 490.9 | 582.1 | 431.8 |
| 22/09/2024 | 618.0 | 489.6 | 544.9 | 467.7 | 496.1 | 478.7 | 513.3 | 571.3 | 591.1 | 602.5 | 550.4 | 524.3 | 492.4 | 492.6 | 501.3 | 486.7 | 464.1 | 482.7 | 514.0 | 530.2 | 557.2 | 541.7 | 514.2 | 517.4 | 522.6 | 618.0 | 464.1 |
| 23/09/2024 | 506.5 | 516.8 | 488.7 | 481.1 | 497.5 | 514.9 | 570.8 | 594.6 | 593.6 | 599.3 | 574.5 | 526.7 | 555.8 | 520.2 | 511.9 | 502.8 | 507.5 | 516.5 | 553.3 | 566.7 | 561.5 | 574.3 | 556.1 | 570.7 | 540.1 | 599.3 | 481.1 |
| 24/09/2024 | 550.8 | 523.4 | 514.4 | 513.8 | 532.1 | 551.3 | 568.5 | 586.0 | 663.9 | 632.7 | 622.0 | 581.0 | 552.6 | 560.7 | 543.1 | 522.8 | 530.6 | 545.5 | 580.1 | 622.8 | 604.8 | 587.8 | 579.8 | 560.1 | 567.9 | 663.9 | 513.8 |
| Prom. | 399.8 | 383.2 | 379.9 | 369.7 | 375.1 | 390.2 | 423.9 | 462.1 | 461.3 | 495.2 | 458.6 | 415.1 | 404.7 | 396.7 | 390.2 | 381.6 | 376.4 | 391.4 | 423.9 | 452.9 | 446.7 | 433.1 | 429.7 | 431.8 | | | |
| Max. | 618.0 | 523.4 | 544.9 | 513.8 | 532.1 | 551.3 | 570.8 | 624.2 | 663.9 | 685.6 | 622.0 | 581.0 | 555.8 | 560.7 | 543.1 | 522.8 | 530.6 | 545.5 | 580.1 | 622.8 | 604.8 | 587.8 | 579.8 | 570.7 | | | |
| Min. | 243.4 | 243.8 | 239.6 | 237.7 | 249.1 | 267.6 | 282.1 | 303.9 | 279.9 | 330.7 | 284.5 | 266.7 | 263.2 | 255.5 | 260.9 | 253.2 | 252.3 | 266.3 | 300.2 | 330.4 | 313.8 | 289.8 | 278.3 | 274.4 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - MONOXIDO DE CARBONO (CO MEDIA MOVIL DE 8 HORAS)



GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

Ciudad : Tacna
Nombre/Número de la Estación : EMCA-05
Ubicación : I.E. Jorge Chávez
Equipo de Muestreo : THERMO SCIENTIFIC - ANALIZADOR 48i
Última Calibración del Equipo : julio - 2024
Coordenadas UTM (WGS 84)
Este : 367078
Norte : 8004981

Periodo : 12 al 24 de setiembre
Año : 2024
Responsable : GORE - TACNA
Tipo de Data : Horario
Unidades : ug/m³
Límite de Detección : --- ug/m³

| DIA \ HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 12/09/2024 | **** | **** | **** | **** | 271.6 | 272.9 | 283.3 | 291.3 | 305.6 | 313.2 | 317.8 | 317.8 | 315.8 | 311.7 | 300.9 | 288.2 | 273.8 | 271.6 | 276.4 | 280.8 | 283.8 | 285.5 | 288.2 | 292.1 | 317.8 | 271.6 | |
| 13/09/2024 | 287.1 | 284.3 | 276.7 | 265.1 | 257.0 | 254.2 | 259.2 | 268.9 | 283.2 | 296.0 | 301.6 | 305.2 | 307.0 | 309.4 | 302.3 | 290.4 | 278.4 | 269.1 | 271.4 | 283.7 | 291.3 | 293.7 | 298.1 | 300.9 | 284.7 | 309.4 | 254.2 |
| 14/09/2024 | 303.3 | 306.2 | 303.2 | 291.6 | 284.2 | 281.3 | 279.5 | 282.6 | 282.5 | 286.9 | 290.7 | 293.0 | 294.9 | 291.4 | 289.6 | 285.1 | 283.8 | 277.0 | 276.8 | 282.7 | 287.2 | 295.3 | 305.5 | 314.3 | 290.4 | 314.3 | 276.8 |
| 15/09/2024 | 321.0 | 327.8 | 332.9 | 331.0 | 328.6 | 325.7 | 323.1 | 320.7 | 323.9 | 324.4 | 321.2 | 321.6 | 321.3 | 320.3 | 314.9 | 310.1 | 301.2 | 295.5 | 295.3 | 297.3 | 304.2 | 307.8 | 311.6 | 315.7 | 316.5 | 332.9 | 295.3 |
| 16/09/2024 | 319.1 | 322.6 | 319.6 | 315.7 | 313.4 | 315.7 | 315.6 | 321.2 | 331.4 | 341.0 | 347.7 | 355.0 | 358.2 | 359.6 | 362.7 | 357.0 | 348.1 | 340.5 | 345.5 | 351.9 | 354.7 | 355.4 | 356.9 | 360.6 | 340.4 | 362.7 | 313.4 |
| 17/09/2024 | 362.6 | 360.9 | 355.5 | 346.1 | 343.0 | 346.7 | 364.8 | 385.8 | 404.3 | 450.0 | 475.6 | 475.8 | 484.9 | 484.0 | 466.7 | 447.0 | 430.6 | 393.7 | 378.1 | 389.5 | 394.5 | 399.1 | 414.7 | 435.9 | 407.9 | 484.9 | 343.0 |
| 18/09/2024 | 448.1 | 449.6 | 444.3 | 435.6 | 423.0 | 422.3 | 415.5 | 428.2 | 430.0 | 449.1 | 458.3 | 463.0 | 466.5 | 467.4 | 465.9 | 437.3 | 427.8 | 408.1 | 402.5 | 405.8 | 413.1 | 414.4 | 414.6 | 417.1 | 433.6 | 467.4 | 402.5 |
| 19/09/2024 | 418.7 | 418.5 | 415.3 | 411.9 | 402.3 | 399.4 | 399.9 | 409.3 | 419.0 | 438.1 | 455.6 | 465.8 | 474.2 | 478.1 | 477.2 | 465.1 | 454.3 | 436.8 | 426.5 | 425.7 | 427.7 | 428.5 | 430.5 | 440.6 | 434.1 | 478.1 | 399.4 |
| 20/09/2024 | 448.2 | 449.4 | 445.7 | 436.5 | 429.3 | 426.1 | 428.4 | 426.6 | 432.8 | 445.5 | 462.5 | 470.5 | 474.5 | 477.1 | 476.0 | 476.8 | 467.4 | 456.4 | 447.1 | 453.5 | 459.4 | 465.2 | 473.1 | 472.4 | 454.2 | 477.1 | 426.1 |
| 21/09/2024 | 476.7 | 480.1 | 474.3 | 463.5 | 457.5 | 454.5 | 456.3 | 460.7 | 467.3 | 473.0 | 486.4 | 497.7 | 505.0 | 508.0 | 501.4 | 497.8 | 493.1 | 489.5 | 481.4 | 480.3 | 487.0 | 499.4 | 504.6 | 514.0 | 483.7 | 514.0 | 454.5 |
| 22/09/2024 | 532.2 | 533.9 | 542.7 | 536.8 | 530.9 | 518.0 | 518.8 | 522.4 | 519.1 | 533.2 | 533.9 | 541.0 | 540.5 | 542.2 | 540.8 | 530.2 | 514.3 | 499.3 | 494.8 | 495.5 | 503.6 | 509.7 | 511.3 | 515.2 | 523.3 | 542.7 | 494.8 |
| 23/09/2024 | 520.5 | 524.8 | 521.6 | 515.4 | 508.0 | 504.6 | 511.7 | 521.4 | 532.3 | 542.6 | 553.3 | 559.0 | 566.3 | 566.9 | 559.6 | 548.1 | 537.3 | 527.0 | 524.3 | 529.3 | 530.0 | 536.8 | 542.3 | 550.8 | 534.7 | 566.9 | 504.6 |
| 24/09/2024 | 556.2 | 557.1 | 552.2 | 545.6 | 542.0 | 539.1 | 540.6 | 542.6 | 556.7 | 570.4 | 583.8 | 592.2 | 594.8 | 595.9 | 592.7 | 584.8 | 568.2 | 557.3 | 552.0 | 557.3 | 563.8 | 567.2 | 571.8 | 576.4 | 565.0 | 595.9 | 539.1 |
| Prom. | 416.1 | 417.9 | 415.3 | 407.9 | 401.6 | 389.2 | 391.3 | 398.0 | 405.7 | 419.7 | 429.5 | 435.2 | 438.9 | 439.7 | 435.5 | 425.4 | 414.8 | 401.8 | 397.5 | 402.2 | 407.5 | 412.0 | 417.0 | 423.2 | | | |
| Max. | 556.2 | 557.1 | 552.2 | 545.6 | 542.0 | 539.1 | 540.6 | 542.6 | 556.7 | 570.4 | 583.8 | 592.2 | 594.8 | 595.9 | 592.7 | 584.8 | 568.2 | 557.3 | 552.0 | 557.3 | 563.8 | 567.2 | 571.8 | 576.4 | | | |
| Min. | 287.1 | 284.3 | 276.7 | 265.1 | 257.0 | 254.2 | 259.2 | 268.9 | 282.5 | 286.9 | 290.7 | 293.0 | 294.9 | 291.4 | 289.6 | 285.1 | 278.4 | 269.1 | 271.4 | 276.4 | 280.8 | 283.8 | 285.5 | 288.2 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

TABLA : HOJA DE DATOS - OZONO TROPOSFÉRICO (O₃)

GRRNyGA
GERENCIA REGIONAL
DE RECURSOS NATURALES
Y GESTIÓN AMBIENTAL

| | | | |
|--------------------------------------|--------------------------------------|----------------------------|-------------------------|
| Ciudad | : Tacna | Periodo | : 12 al 24 de setiembre |
| Nombre/Número de la Estación | : EMCA-05 | Año | : 2024 |
| Ubicación | : I.E. Jorge Chávez | Responsable | : GORE - TACNA |
| Equipo de Muestreo | : THERMO SCIENTIFIC - ANALIZADOR 48i | Tipo de Data | : Horario |
| Última Calibración del Equipo | : julio - 2024 | Unidades | : ug/m ³ |
| Coordenadas UTM (WGS 84) | | Límite de Detección | : --- ug/m ³ |
| Este | : 367078 | | |
| Norte | : 8004981 | | |

| DIA/HORA | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | Prom. | Max. | Min. |
|------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 12/09/2024 | **** | **** | **** | **** | 39.1 | 38.7 | 37.5 | 36.6 | 35.6 | 35.4 | 35.9 | 37.0 | 39.0 | 42.2 | 45.6 | 47.9 | 49.2 | 49.0 | 47.9 | 46.7 | 45.0 | 42.4 | 40.0 | 41.6 | 49.2 | 35.4 | |
| 13/09/2024 | 39.1 | 39.0 | 39.2 | 39.9 | 40.2 | 39.7 | 38.9 | 38.0 | 36.8 | 36.4 | 37.2 | 38.7 | 40.6 | 42.9 | 46.2 | 49.2 | 51.4 | 52.7 | 52.0 | 50.0 | 48.4 | 46.9 | 44.9 | 43.4 | 43.0 | 52.7 | 36.4 |
| 14/09/2024 | 42.2 | 41.1 | 40.9 | 41.4 | 41.3 | 41.0 | 40.6 | 39.9 | 39.7 | 39.6 | 40.6 | 42.8 | 45.4 | 48.8 | 51.9 | 54.9 | 56.6 | 58.0 | 57.7 | 56.4 | 54.4 | 51.5 | 48.5 | 46.2 | 46.7 | 58.0 | 39.6 |
| 15/09/2024 | 44.6 | 43.2 | 41.9 | 40.8 | 40.5 | 40.0 | 39.8 | 39.6 | 39.6 | 40.7 | 42.9 | 45.7 | 47.8 | 50.6 | 53.5 | 56.2 | 58.9 | 60.2 | 59.7 | 57.9 | 56.3 | 54.5 | 52.7 | 50.8 | 48.3 | 60.2 | 39.6 |
| 16/09/2024 | 49.2 | 47.6 | 47.6 | 47.6 | 47.0 | 46.6 | 46.6 | 46.6 | 46.1 | 46.2 | 46.4 | 47.5 | 50.4 | 53.4 | 55.8 | 58.0 | 60.2 | 61.7 | 62.0 | 61.2 | 59.4 | 57.5 | 55.7 | 54.5 | 52.3 | 62.0 | 46.1 |
| 17/09/2024 | 53.9 | 54.1 | 53.7 | 53.6 | 53.0 | 50.8 | 47.8 | 45.0 | 43.0 | 40.3 | 41.1 | 43.5 | 46.9 | 51.4 | 55.7 | 59.2 | 61.3 | 63.2 | 61.6 | 58.2 | 53.8 | 49.6 | 45.0 | 40.7 | 51.1 | 63.2 | 40.3 |
| 18/09/2024 | 37.6 | 35.6 | 35.3 | 35.8 | 36.5 | 35.9 | 36.8 | 37.2 | 37.3 | 36.9 | 38.0 | 40.2 | 42.9 | 47.3 | 51.8 | 56.0 | 58.7 | 60.6 | 59.9 | 57.3 | 54.2 | 51.1 | 48.1 | 45.9 | 44.9 | 60.6 | 35.3 |
| 19/09/2024 | 45.0 | 45.1 | 45.7 | 46.2 | 47.4 | 47.6 | 47.1 | 45.8 | 44.6 | 42.8 | 42.2 | 43.6 | 45.4 | 47.9 | 50.5 | 53.3 | 55.3 | 57.2 | 57.5 | 55.6 | 53.1 | 50.5 | 48.4 | 46.0 | 48.5 | 57.5 | 42.2 |
| 20/09/2024 | 44.5 | 43.5 | 43.3 | 43.7 | 44.0 | 44.0 | 43.6 | 43.9 | 43.7 | 43.2 | 43.3 | 44.9 | 46.8 | 49.2 | 52.3 | 54.9 | 56.8 | 58.1 | 57.6 | 55.2 | 53.0 | 50.1 | 46.8 | 44.4 | 47.9 | 58.1 | 43.2 |
| 21/09/2024 | 43.4 | 43.6 | 44.9 | 46.4 | 47.6 | 48.5 | 48.9 | 48.3 | 47.2 | 46.2 | 45.0 | 45.0 | 46.3 | 48.7 | 50.9 | 53.3 | 55.2 | 56.2 | 56.8 | 56.0 | 52.9 | 48.0 | 45.7 | 42.2 | 48.6 | 56.8 | 42.2 |
| 22/09/2024 | 38.4 | 36.8 | 34.1 | 34.1 | 33.9 | 35.5 | 34.7 | 34.3 | 35.3 | 35.6 | 39.0 | 41.3 | 44.4 | 46.4 | 48.8 | 52.0 | 54.4 | 55.2 | 53.8 | 50.9 | 47.7 | 44.9 | 42.7 | 40.7 | 42.3 | 55.2 | 33.9 |
| 23/09/2024 | 39.2 | 37.9 | 37.3 | 37.5 | 37.4 | 36.9 | 35.2 | 34.2 | 33.6 | 33.2 | 34.0 | 35.9 | 38.7 | 42.5 | 46.6 | 49.7 | 51.9 | 53.2 | 52.4 | 49.8 | 46.8 | 43.3 | 40.5 | 37.5 | 41.0 | 53.2 | 33.2 |
| 24/09/2024 | 35.5 | 34.7 | 35.1 | 35.7 | 35.7 | 35.8 | 35.8 | 35.8 | 34.9 | 34.7 | 35.5 | 37.7 | 41.0 | 43.9 | 47.0 | 50.1 | 53.1 | 54.5 | 53.8 | 51.4 | 48.8 | 46.4 | 44.0 | 42.0 | 41.8 | 54.5 | 34.7 |
| Prom. | 42.7 | 41.8 | 41.6 | 41.9 | 42.0 | 41.7 | 41.1 | 40.5 | 39.9 | 39.3 | 40.0 | 41.7 | 44.1 | 47.1 | 50.2 | 53.3 | 55.5 | 56.9 | 56.4 | 54.4 | 51.9 | 49.2 | 46.6 | 44.2 | | | |
| Max. | 53.9 | 54.1 | 53.7 | 53.6 | 53.0 | 50.8 | 48.9 | 48.3 | 47.2 | 46.2 | 46.4 | 47.5 | 50.4 | 53.4 | 55.8 | 59.2 | 61.3 | 63.2 | 62.0 | 61.2 | 59.4 | 57.5 | 55.7 | 54.5 | | | |
| Min. | 35.5 | 34.7 | 34.1 | 34.1 | 33.9 | 35.5 | 34.7 | 34.2 | 33.6 | 33.2 | 34.0 | 35.9 | 37.0 | 39.0 | 42.2 | 45.6 | 47.9 | 49.2 | 49.0 | 47.9 | 46.7 | 43.3 | 40.5 | 37.5 | | | |

Observaciones : Corte de Luz (*), Mantenimiento (**), Calibracion (***) y Otros (****)

Reporta: SGGA - GRRNyGA

| Fecha | pm2.5 (ug/m3) | pm10 (ug/m3) | pres (mbar) | pp (mm) | temp (°C) | hr (%) | wd (°) | ws (m/s) | rad (kw/m2) | no (ppb) | no2 (ppb) | so2 (ppb) | h2s (ppb) | co (ppb) | o3 (ppb) |
|---------------------|---------------|--------------|-------------|---------|-----------|--------|--------|----------|-------------|-----------|-----------|-------------|-----------|----------|----------|
| 2024/09/12 00:00:00 | 11.771 | 19.611 | 953 | 0 | 13.2 | 84.4 | 230 | 1.091 | 0 | 1.040441 | 7.297983 | 0.122495 | 1.651055 | 253.0883 | 19.16417 |
| 2024/09/12 01:00:00 | 6.82428 | 13.4599 | 955 | 0 | 13.07 | 86.7 | 188 | 1.88 | 0 | 1.027711 | 5.368367 | 0.2991479 | 1.22556 | 233.1642 | 20.585 |
| 2024/09/12 02:00:00 | 6.37714 | 11.9744 | 955 | 0 | 12.9 | 86.1 | 220 | 1.541 | 0 | 0.8361766 | 5.205741 | -0.03025967 | 1.920352 | 224.8633 | 20.50708 |
| 2024/09/12 03:00:00 | 9.09735 | 14.2496 | 954 | 0 | 12.59 | 88.6 | 193 | 2.173 | 0 | 1.093422 | 5.260408 | 0.2041975 | 1.388357 | 222.5675 | 20.46625 |
| 2024/09/12 04:00:00 | 10.0656 | 14.9433 | 947 | 0 | 12.8 | 85.6 | 193 | 1.197 | 0 | 0.9115016 | 6.115274 | 0.281755 | 1.334437 | 243.5883 | 19.47892 |
| 2024/09/12 05:00:00 | 7.44026 | 13.3436 | 868 | 0 | 12.58 | 89.7 | 244 | 1.312 | 0 | 1.315287 | 6.45815 | 0.2150705 | 1.755932 | 245.5842 | 19.32325 |
| 2024/09/12 06:00:00 | 6.1701 | 11.8395 | 863 | 0 | 12.38 | 88 | 222 | 1.426 | 0 | 0.2068595 | 8.186324 | 0.2085415 | 2.824508 | 259.955 | 17.84683 |
| 2024/09/12 07:00:00 | 6.90879 | 14.5715 | 955 | 0 | 12.64 | 81 | 230 | 1.319 | 0.015 | 3.970845 | 11.26702 | 0.4718149 | 4.076766 | 296.2716 | 15.70283 |
| 2024/09/12 08:00:00 | 14.5198 | 24.6793 | 759.6 | 0 | 13.11 | 78.79 | 214 | 1.151 | 0.095 | 5.836097 | 11.38465 | 0.1492965 | 3.745833 | 309.2392 | 15.45326 |
| 2024/09/12 09:00:00 | 15.4167 | 32.5672 | 555.4 | 0 | 13.5 | 77.89 | 277 | 1.485 | 0.156 | 7.721841 | 12.24852 | 0.5410263 | 3.482116 | 333.2017 | 16.2174 |
| 2024/09/12 10:00:00 | 15.3752 | 32.8528 | 536.3 | 0 | 14.16 | 74.54 | 231 | 1.846 | 0.382 | 4.780016 | 8.482275 | 0.4774078 | 4.126516 | 277.635 | 19.955 |
| 2024/09/12 11:00:00 | 12.172 | 23.4102 | 527.6 | 0 | 14.89 | 72.62 | 223 | 2.206 | 0.595 | 3.77245 | 6.438475 | 0.5723082 | 4.293317 | 254.6925 | 22.35608 |
| 2024/09/12 12:00:00 | 9.49667 | 18.3794 | 517.3 | 0 | 16.25 | 65.41 | 255 | 1.905 | 0.955 | 4.430491 | 6.293508 | 0.522591 | 2.591425 | 243.6325 | 23.85767 |
| 2024/09/12 13:00:00 | 9.05268 | 19.7899 | 504.1 | 0 | 17.62 | 60.19 | 255 | 2.088 | 0.938 | 3.571625 | 5.971778 | 0.4614563 | 1.559047 | 231.72 | 27.51983 |
| 2024/09/12 14:00:00 | 10.321 | 24.5653 | 494.3 | 0 | 18.53 | 58.63 | 220 | 2.529 | 0.826 | 3.673525 | 6.863108 | 0.7897685 | 2.031945 | 231.1458 | 30.87692 |
| 2024/09/12 15:00:00 | 9.74776 | 28.5124 | 484.1 | 0 | 18.55 | 61.47 | 216 | 3.224 | 0.636 | 4.145343 | 7.0716 | 0.8754537 | 2.002044 | 221.1158 | 29.78242 |
| 2024/09/12 16:00:00 | 7.76405 | 27.4104 | 513.2 | 0 | 16.89 | 67.39 | 202 | 3.624 | 0.376 | 4.680625 | 7.715724 | 0.2393392 | 1.209933 | 220.2958 | 24.78958 |
| 2024/09/12 17:00:00 | 6.01035 | 19.8991 | 731.8 | 0 | 14.95 | 73.39 | 226 | 2.901 | 0.081 | 5.00435 | 9.209874 | 0.3168411 | 1.147698 | 232.525 | 21.402 |
| 2024/09/12 18:00:00 | 9.13115 | 22.9889 | 752.8 | 0 | 14.02 | 76.06 | 229 | 2.415 | 0 | 4.959241 | 10.13861 | 0.3291893 | 0.7273766 | 262.1483 | 19.25358 |
| 2024/09/12 19:00:00 | 6.14051 | 22.4483 | 949 | 0 | 13.57 | 79.11 | 220 | 2.141 | 0 | 6.667483 | 11.74227 | 0.2904072 | 1.146812 | 288.4975 | 17.80283 |
| 2024/09/12 20:00:00 | 5.9383 | 21.1089 | 958 | 0 | 13.3 | 79.52 | 220 | 1.963 | 0 | 4.751758 | 10.05668 | 0.2861537 | 1.193475 | 274.0158 | 19.047 |
| 2024/09/12 21:00:00 | 4.78157 | 17.2038 | 959 | 0 | 13.27 | 77.7 | 260 | 1.278 | 0 | 2.894753 | 8.790441 | 0.314579 | 1.13264 | 253.0617 | 20.56975 |
| 2024/09/12 22:00:00 | 6.16419 | 15.4696 | 959 | 0 | 13.19 | 78.93 | 241 | 1.725 | 0 | 9.239586 | 8.023908 | 0.1985974 | 1.00515 | 243.03 | 20.05417 |
| 2024/09/12 23:00:00 | 10.6283 | 18.8558 | 959 | 0 | 13.01 | 79.75 | 212 | 1.906 | 0 | 2.514355 | 7.300875 | 0.08825249 | 1.273566 | 239.6642 | 19.9875 |
| 2024/09/13 00:00:00 | 6.12334 | 12.9574 | 958 | 0 | 12.8 | 79.01 | 216 | 1.659 | 0 | 1.09851 | 4.808841 | 0.1883649 | 1.491826 | 212.5642 | 21.47783 |
| 2024/09/13 01:00:00 | 10.6048 | 17.7851 | 958 | 0 | 12.88 | 78.39 | 285 | 1.318 | 0 | 0.7728358 | 5.1581 | 0.1650881 | 1.116475 | 212.8992 | 20.65425 |
| 2024/09/13 02:00:00 | 7.40234 | 14.9779 | 958 | 0 | 12.99 | 79.28 | 212 | 0.746 | 0 | 0.5614513 | 5.161866 | 0.237408 | 1.429478 | 209.1992 | 20.09858 |
| 2024/09/13 03:00:00 | 10.1387 | 17.5009 | 957 | 0 | 12.89 | 78.73 | 55 | 0.828 | 0 | 0.5180591 | 4.373816 | 0.05174608 | 1.574563 | 207.5533 | 20.7635 |
| 2024/09/13 04:00:00 | 6.95451 | 15.3986 | 957 | 0 | 12.89 | 78.33 | 258 | 0.859 | 0 | 0.6898741 | 4.81335 | 0.2321343 | 1.228521 | 217.5425 | 20.17392 |
| 2024/09/13 05:00:00 | 8.31155 | 17.8924 | 956 | 0 | 12.88 | 79.14 | 131 | 0.851 | 0 | 0.9536101 | 6.319833 | 0.1322713 | 2.273607 | 233.7033 | 18.73217 |
| 2024/09/13 06:00:00 | 9.01491 | 20.5024 | 956 | 0 | 12.8 | 79.21 | 188 | 1.246 | 0 | 2.484647 | 9.152316 | 0.2962702 | 1.90469 | 277.52 | 16.85267 |
| 2024/09/13 07:00:00 | 11.8015 | 26.2613 | 916 | 0 | 12.79 | 79.38 | 205 | 1.394 | 0.038 | 4.859916 | 11.66171 | 0.1538517 | 2.415818 | 307.6658 | 16.05967 |
| 2024/09/13 08:00:00 | 9.12793 | 28.1186 | 681 | 0 | 12.92 | 77.08 | 247 | 1.207 | 0.13 | 6.185381 | 10.8985 | 0.236472 | 2.882185 | 312.63 | 16.8965 |
| 2024/09/13 09:00:00 | 12.7956 | 37.333 | 530.3 | 0 | 13.59 | 69.46 | 248 | 1.335 | 0.38 | 5.899075 | 9.913525 | 0.3659854 | 2.017281 | 302.0358 | 18.8345 |
| 2024/09/13 10:00:00 | 11.6518 | 35.0249 | 520.5 | 0 | 15.15 | 64.14 | 289 | 1.637 | 0.765 | 4.289675 | 7.069191 | 0.351443 | 1.961448 | 248.4058 | 23.29117 |
| 2024/09/13 11:00:00 | 10.4925 | 30.7886 | 507.7 | 0 | 16.91 | 58.29 | 286 | 1.674 | 0.951 | 2.73485 | 5.824366 | 0.3896568 | 1.333524 | 232.8885 | 26.93633 |
| 2024/09/13 12:00:00 | 6.16653 | 33.8483 | 491 | 0 | 18.12 | 56.53 | 187 | 2.24 | 0.985 | 3.737466 | 7.124967 | 0.3807286 | 1.349772 | 229.8108 | 27.82625 |
| 2024/09/13 13:00:00 | 11.7345 | 36.9042 | 477.1 | 0 | 18.81 | 57.37 | 210 | 2.971 | 0.945 | 4.505066 | 7.849458 | 0.4754153 | 1.573163 | 250.5275 | 28.377 |
| 2024/09/13 14:00:00 | 10.325 | 32.0926 | 498.3 | 0 | 19.03 | 53.88 | 235 | 2.615 | 0.825 | 3.576066 | 6.842608 | 0.5524653 | 1.330447 | 227.8542 | 30.27808 |
| 2024/09/13 15:00:00 | 7.20492 | 31.2945 | 576.6 | 0 | 18.74 | 60.59 | 213 | 3.329 | 0.642 | 4.040708 | 7.113942 | 0.4439015 | 1.493762 | 224.8792 | 27.96983 |
| 2024/09/13 16:00:00 | 6.18948 | 25.9332 | 866 | 0 | 17.4 | 67.18 | 263 | 3.355 | 0.401 | 4.152633 | 7.238708 | 0.5204025 | 0.803791 | 228.3075 | 25.98825 |
| 2024/09/13 17:00:00 | 4.25139 | 19.7105 | 794.9 | 0 | 16.12 | 71.74 | 228 | 2.69 | 0.154 | 4.342833 | 8.448625 | 0.2165563 | 1.056399 | 237.0458 | 24.0075 |
| 2024/09/13 18:00:00 | 7.16571 | 21.035 | 792.6 | 0 | 14.57 | 79.85 | 229 | 2.271 | 0.01 | 4.633216 | 10.18324 | 0.2485549 | 1.048087 | 264.8475 | 20.49325 |
| 2024/09/13 19:00:00 | 5.35638 | 19.6528 | 958 | 0 | 14.09 | 78.78 | 247 | 1.81 | 0 | 6.941608 | 12.46793 | 0.01785212 | 1.292751 | 318.4991 | 18.97633 |
| 2024/09/13 20:00:00 | 8.42612 | 21.1149 | 958 | 0 | 13.69 | 79.39 | 206 | 1.935 | 0 | 4.242383 | 10.46753 | -0.04913403 | 1.385493 | 282.8775 | 21.33667 |
| 2024/09/13 21:00:00 | 5.4837 | 16.385 | 958 | 0 | 13.33 | 79.73 | 221 | 1.919 | 0 | 3.223025 | 9.291824 | -0.00652035 | 1.36753 | 267.5625 | 22.21433 |
| 2024/09/13 22:00:00 | 4.8967 | 16.5242 | 959 | 0 | 13.28 | 79.46 | 288 | 1.516 | 0 | 2.771891 | 9.041574 | 0.3453211 | 1.08034 | 258.4575 | 22.07492 |
| 2024/09/13 23:00:00 | 6.15325 | 16.1471 | 958 | 0 | 13.19 | 80.6 | 268 | 1.09 | 0 | 1.308949 | 8.16955 | 0.2271051 | 1.627952 | 244.275 | 21.95992 |
| 2024/09/14 00:00:00 | 7.93936 | 18.4618 | 957 | 0 | 12.67 | 81.2 | 7 | 0.982 | 0 | 1.244646 | 6.875608 | 0.1938728 | 3.306466 | 246.3292 | 20.55066 |
| 2024/09/14 07:00:00 | 9.16981 | 21.1194 | 958 | 0 | 12.73 | 80.4 | 198 | 1.347 | 0.022 | 2.808572 | 9.435616 | 0.09602605 | 3.903966 | 265.4283 | 19.05367 |
| 2024/09/14 08:00:00 | 10.2497 | 21.053 | 954 | 0 | 12.91 | 77.97 | 37 | 0.77 | 0.093 | 1.777251 | 7.198417 | 0.169317 | 3.178308 | 244.4708 | 20.2745 |
| 2024/09/14 09:00:00 | 11.6465 | 28.5978 | 682 | 0 | 13.73 | 72.18 | 215 | 1.073 | 0.287 | 4.312767 | 9.893516 | 0.2581548 | 3.182796 | 288.7958 | 19.07708 |
| 2024/09/14 10:00:00 | 12.3574 | 32.3227 | 538.3 | 0 | 15.32 | 65.36 | 204 | 1.447 | 0.824 | 4.196033 | 7.490417 | 0.4203362 | 2.562663 | 269.9375 | 23.94883 |
| 2024/09/14 11:00:00 | 15.7748 | 41.7446 | 514.3 | 0 | 17.26 | 60.15 | 201 | 1.836 | 0.952 | 3.130483 | 7.015183 | 0.5527966 | 2.905066 | 253.335 | 29.631 |
| 2024/09/14 12:00:00 | 15.1734 | 34.0416 | 492.2 | 0 | 18.53 | 54.97 | 180 | 2.149 | 0.991 | 3.438905 | 6.904858 | 0.7868921 | 3.413683 | 244.5853 | 31.61466 |
| 2024/09/14 13:00:00 | 8.86118 | 25.9619 | 482 | 0 | 19.9 | 52.14 | 258 | 2.148 | 0.947 | 2.174695 | 5.905108 | 0.9307008 | 2.51843 | 223.1358 | 34.74117 |
| 2024/09/14 14:00:00 | 9.34542 | 36.4266 | 471.7 | 0 | 20.33 | 55.83 | 221 | 2.916 | 0.829 | 2.893248 | 6.6919 | 0.8716847 | 2.387178 | 233.7 | 33.30867 |
| 2024/09/1 | | | | | | | | | | | | | | | |

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|---------------------|---------|---------|-------|---|-------|-------|-----|-------|-------|-----------|----------|-------------|-----------|----------|----------|
| 2024/09/15 22:00:00 | 7.4758 | 25.6313 | 955 | 0 | 12.51 | 84.9 | 90 | 1.08 | 0 | 1.113702 | 6.117316 | 0.1828416 | 2.385041 | 275.975 | 25.36908 |
| 2024/09/15 23:00:00 | 9.14767 | 19.8972 | 955 | 0 | 12.73 | 82 | 303 | 1.041 | 0 | 0.9235342 | 6.612 | 0.3484947 | 1.389158 | 274.2933 | 24.09575 |
| 2024/09/16 00:00:00 | 7.60721 | 17.6126 | 955 | 0 | 12.68 | 81.7 | 348 | 1.1 | 0 | 0.835686 | 5.0191 | 0.1064921 | 1.436585 | 265.4383 | 24.802 |
| 2024/09/16 01:00:00 | 12.4659 | 20.8027 | 954 | 0 | 12.64 | 81.8 | 203 | 0.972 | 0 | 0.5695933 | 6.437392 | 0.1867684 | 1.956857 | 277.915 | 22.37808 |
| 2024/09/16 02:00:00 | 7.64202 | 17.5054 | 953 | 0 | 12.48 | 82.9 | 337 | 1.698 | 0 | 0.7884489 | 4.986617 | -0.04103104 | 2.466905 | 258.8167 | 24.98017 |
| 2024/09/16 03:00:00 | 7.60445 | 16.7147 | 953 | 0 | 12.35 | 83.4 | 231 | 1.341 | 0 | 1.1313 | 5.972541 | 0.2565666 | 1.558173 | 270.57 | 23.44791 |
| 2024/09/16 04:00:00 | 11.5642 | 19.2767 | 953 | 0 | 12.39 | 82.9 | 196 | 1.306 | 0 | 0.9136251 | 6.400058 | 0.2576832 | 1.952793 | 288.53 | 21.49125 |
| 2024/09/16 05:00:00 | 10.4057 | 18.7608 | 954 | 0 | 12.29 | 84.3 | 254 | 1.247 | 0 | 1.27976 | 6.542108 | 0.2816115 | 1.339073 | 293.99 | 23.29658 |
| 2024/09/16 06:00:00 | 8.52597 | 15.35 | 955 | 0 | 12.03 | 85 | 75 | 1.116 | 0 | 1.358019 | 5.835649 | 0.3855811 | 4.174683 | 275.2675 | 25.44725 |
| 2024/09/16 07:00:00 | 9.63195 | 19.2975 | 955 | 0 | 12.04 | 84 | 212 | 1.149 | 0.008 | 2.015253 | 7.7525 | 0.390717 | 3.555116 | 313.3858 | 24.00416 |
| 2024/09/16 08:00:00 | 9.73345 | 22.5515 | 956 | 0 | 12.11 | 83.1 | 313 | 1.274 | 0.062 | 4.632808 | 10.24664 | 0.2924535 | 3.8982 | 336.8583 | 22.78517 |
| 2024/09/16 09:00:00 | 11.4795 | 25.2512 | 957 | 0 | 12.58 | 79.25 | 179 | 0.987 | 0.138 | 3.572117 | 11.21063 | 0.345715 | 3.593766 | 344.9725 | 22.91725 |
| 2024/09/16 10:00:00 | 11.9082 | 45.2236 | 842 | 0 | 13.38 | 75.56 | 221 | 1.117 | 0.319 | 2.960633 | 7.776949 | 0.2693223 | 2.999267 | 305.54 | 25.90475 |
| 2024/09/16 11:00:00 | 12.5939 | 57.271 | 587.4 | 0 | 15.3 | 63.5 | 212 | 1.37 | 0.88 | 4.210725 | 8.107633 | 0.5301003 | 2.777393 | 321.4558 | 27.83575 |
| 2024/09/16 12:00:00 | 15.1875 | 42.2603 | 553.8 | 0 | 17.08 | 57.68 | 265 | 2.022 | 0.98 | 3.496841 | 8.000983 | 0.7170835 | 2.299592 | 311.0275 | 33.20142 |
| 2024/09/16 13:00:00 | 12.6262 | 34.568 | 525.4 | 0 | 18.56 | 54.15 | 257 | 2.372 | 0.943 | 4.061083 | 8.326025 | 0.4746357 | 1.714688 | 303.5525 | 35.44908 |
| 2024/09/16 14:00:00 | 8.56967 | 31.6258 | 476.7 | 0 | 19.14 | 56.73 | 249 | 2.829 | 0.826 | 3.813408 | 8.282833 | 0.5654051 | 1.238283 | 296.9767 | 35.226 |
| 2024/09/16 15:00:00 | 5.91965 | 27.0691 | 461.1 | 0 | 18.6 | 59.03 | 262 | 2.901 | 0.631 | 3.227142 | 6.838933 | 0.4148363 | 1.781768 | 273.6066 | 33.09933 |
| 2024/09/16 16:00:00 | 8.88369 | 27.3246 | 453.5 | 0 | 18.16 | 61.47 | 206 | 2.707 | 0.39 | 3.179533 | 7.408341 | 0.7547428 | 1.480337 | 275.0883 | 31.73583 |
| 2024/09/16 17:00:00 | 7.71472 | 25.4481 | 432.3 | 0 | 16.95 | 68.21 | 220 | 2.687 | 0.155 | 3.808117 | 9.034608 | 0.5232515 | 1.772616 | 291.6825 | 29.09942 |
| 2024/09/16 18:00:00 | 15.8692 | 30.4262 | 774.2 | 0 | 14.74 | 77.61 | 209 | 2.758 | 0.011 | 4.314867 | 11.56313 | 0.4867531 | 1.278511 | 340.4508 | 27.12442 |
| 2024/09/16 19:00:00 | 15.1939 | 30.558 | 956 | 0 | 13.42 | 80.5 | 218 | 2.184 | 0 | 5.835525 | 13.81977 | 0.480854 | 1.03917 | 366.1417 | 24.55233 |
| 2024/09/16 20:00:00 | 7.60398 | 25.1298 | 957 | 0 | 13.11 | 82 | 268 | 1.649 | 0 | 3.461324 | 11.30276 | 0.4175568 | 0.7588506 | 330.5492 | 26.07833 |
| 2024/09/16 21:00:00 | 2.10262 | 15.8181 | 957 | 0 | 13.01 | 82.9 | 204 | 1.727 | 0 | 2.582183 | 8.612225 | 0.4319219 | 0.83747 | 308.3583 | 27.63683 |
| 2024/09/16 22:00:00 | 11.6275 | 22.8195 | 958 | 0 | 12.92 | 84.6 | 171 | 1.317 | 0 | 1.839145 | 8.137892 | 0.3142353 | 1.417179 | 307.7041 | 27.6715 |
| 2024/09/16 23:00:00 | 11.3988 | 21.9416 | 958 | 0 | 12.7 | 84.3 | 264 | 1.285 | 0 | 1.644137 | 7.412925 | 0.2035754 | 1.736455 | 298.9283 | 28.41691 |
| 2024/09/17 00:00:00 | 6.53805 | 15.9806 | 957 | 0 | 12.54 | 85.4 | 121 | 1.337 | 0 | 1.066066 | 5.533908 | 0.2513493 | 2.799917 | 289.6166 | 29.11983 |
| 2024/09/17 01:00:00 | 6.59174 | 15.1232 | 957 | 0 | 12.44 | 84.6 | 22 | 0.832 | 0 | 0.5459067 | 4.228325 | 0.3435905 | 2.25758 | 279.6733 | 29.8355 |
| 2024/09/17 02:00:00 | 11.9364 | 23.4278 | 956 | 0 | 12.76 | 81.8 | 225 | 0.756 | 0 | 0.5043083 | 6.427558 | 0.3029344 | 2.513937 | 302.8667 | 25.42508 |
| 2024/09/17 03:00:00 | 9.79206 | 20.5264 | 955 | 0 | 12.41 | 85.1 | 232 | 1.134 | 0 | 0.5807464 | 7.606758 | 0.2458364 | 3.1553 | 300.285 | 24.27583 |
| 2024/09/17 04:00:00 | 6.87783 | 16.2791 | 955 | 0 | 11.91 | 87.1 | 3 | 0.82 | 0 | 0.8738492 | 7.758008 | 0.1563713 | 2.644033 | 309.1975 | 23.80833 |
| 2024/09/17 05:00:00 | 13.081 | 24.7641 | 955 | 0 | 11.85 | 84.2 | 42 | 1.432 | 0 | 1.12335 | 9.817566 | 0.2245156 | 2.652516 | 334.0483 | 18.71792 |
| 2024/09/17 06:00:00 | 13.7193 | 29.2037 | 955 | 0 | 11.68 | 86.1 | 209 | 0.941 | 0.003 | 3.357478 | 16.73786 | 0.5141983 | 2.55438 | 433.6858 | 15.22548 |
| 2024/09/17 07:00:00 | 15.6233 | 33.7191 | 955 | 0 | 11.7 | 85.1 | 225 | 0.976 | 0.155 | 5.504108 | 16.83608 | 0.5215639 | 2.288668 | 446.125 | 17.14727 |
| 2024/09/17 08:00:00 | 17.0802 | 38.8199 | 822 | 0 | 12.93 | 75.31 | 59 | 0.87 | 0.419 | 8.524208 | 15.61489 | 0.524473 | 2.709088 | 418.645 | 21.04617 |
| 2024/09/17 09:00:00 | 32.3964 | 92.292 | 563.8 | 0 | 16.51 | 60.07 | 205 | 0.886 | 0.658 | 18.51975 | 27.22875 | 0.6044798 | 2.261508 | 598.72 | 18.49633 |
| 2024/09/17 10:00:00 | 22.2328 | 117.593 | 529.5 | 0 | 18.29 | 56.8 | 189 | 2.034 | 0.843 | 10.46357 | 18.61946 | 0.5942177 | 2.296912 | 482.3 | 28.98617 |
| 2024/09/17 11:00:00 | 7.80744 | 29.6265 | 496.1 | 0 | 19.11 | 50.76 | 255 | 2.508 | 0.955 | 3.194417 | 6.836958 | 1.21012 | 3.667572 | 301.3983 | 34.01767 |
| 2024/09/17 12:00:00 | 10.4649 | 34.9145 | 481.9 | 0 | 20.62 | 51.8 | 189 | 2.291 | 0.988 | 3.171887 | 7.715975 | 2.112507 | 2.143705 | 372.9683 | 37.4635 |
| 2024/09/17 13:00:00 | 13.2186 | 42.6929 | 472.2 | 0 | 20.51 | 54.61 | 200 | 3.263 | 0.949 | 3.932965 | 8.369516 | 4.324533 | 1.841767 | 327.4333 | 37.03583 |
| 2024/09/17 14:00:00 | 11.9876 | 38.7005 | 458.4 | 0 | 19.28 | 61.81 | 209 | 3.239 | 0.827 | 3.89805 | 7.674508 | 3.644355 | 313.0591 | 32.98883 | |
| 2024/09/17 15:00:00 | 8.57518 | 30.0015 | 451.5 | 0 | 19.06 | 61.34 | 235 | 2.591 | 0.636 | 3.080066 | 6.548758 | 3.070433 | 1.201048 | 308.425 | 31.43242 |
| 2024/09/17 16:00:00 | 8.45188 | 27.1818 | 442 | 0 | 18.32 | 62.83 | 235 | 2.437 | 0.394 | 3.075917 | 6.946308 | 2.65465 | 2.197698 | 304.2392 | 29.61358 |
| 2024/09/17 17:00:00 | 9.47624 | 27.8758 | 429.7 | 0 | 17.35 | 69.97 | 207 | 2.494 | 0.153 | 4.499425 | 9.979724 | 2.271342 | 1.63602 | 340.5608 | 26.26392 |
| 2024/09/17 18:00:00 | 11.1441 | 27.2777 | 665.9 | 0 | 15.17 | 79.3 | 246 | 2.636 | 0.01 | 5.260533 | 11.76332 | 1.672957 | 1.68033 | 373.6425 | 22.12725 |
| 2024/09/17 19:00:00 | 9.63311 | 24.9459 | 954 | 0 | 13.48 | 83.3 | 259 | 1.912 | 0 | 6.060333 | 12.15707 | 1.456918 | 1.013978 | 380.755 | 20.25433 |
| 2024/09/17 20:00:00 | 12.2448 | 25.4957 | 954 | 0 | 13.07 | 83.8 | 209 | 1.33 | 0 | 4.722616 | 12.10576 | 1.010607 | 1.850345 | 407.935 | 19.5925 |
| 2024/09/17 21:00:00 | 9.66488 | 23.366 | 955 | 0 | 12.96 | 84.1 | 275 | 1.389 | 0 | 2.771307 | 10.26918 | 1.068768 | 2.479538 | 359.6866 | 20.06783 |
| 2024/09/17 22:00:00 | 15.3095 | 32.4092 | 954 | 0 | 12.99 | 82.5 | 227 | 0.642 | 0 | 2.052016 | 17.2281 | 0.9522366 | 2.76445 | 421.8892 | 14.0104 |
| 2024/09/17 23:00:00 | 14.9752 | 34.7541 | 954 | 0 | 12.9 | 85.7 | 241 | 0.932 | 0 | 3.092577 | 16.38267 | 0.9029368 | 4.021566 | 456.8608 | 14.10591 |
| 2024/09/18 00:00:00 | 15.7842 | 30.0448 | 953 | 0 | 12.43 | 86.6 | 211 | 0.926 | 0 | 1.190376 | 10.92688 | 1.142547 | 3.653617 | 389.0133 | 16.99642 |
| 2024/09/18 01:00:00 | 16.9253 | 27.8566 | 952 | 0 | 12 | 88.7 | 198 | 1.001 | 0 | 1.00732 | 8.795141 | 1.031357 | 5.297066 | 351.1125 | 17.95133 |
| 2024/09/18 02:00:00 | 9.3955 | 17.5228 | 952 | 0 | 11.74 | 90.3 | 196 | 1.181 | 0 | 0.575694 | 5.580699 | 0.8023331 | 6.883383 | 336.7125 | 20.91 |
| 2024/09/18 03:00:00 | 14.9528 | 22.8701 | 952 | 0 | 11.58 | 90.6 | 225 | 0.812 | 0 | 0.5091909 | 5.127475 | 0.8472177 | 2.415358 | 319.8341 | 22.32692 |
| 2024/09/18 04:00:00 | 8.96966 | 18.3406 | 952 | 0 | 11.53 | 90.6 | 4 | 0.97 | 0 | 0.6054662 | 4.986758 | 0.7342983 | 2.204803 | 320.2216 | 22.517 |
| 2024/09/18 05:00:00 | 12.0339 | 22.1601 | 953 | 0 | 11.66 | 89.8 | 200 | 0.963 | 0 | 0.9541746 | 9.174991 | 0.7386658 | 2.627195 | 354.8075 | 17.55367 |
| 2024/09/18 06:00:00 | 22.0678 | 22.0678 | 953 | 0 | 11.37 | 89.9 | 338 | 1.013 | 0 | 1.836817 | 9.647949 | 0.5907857 | 2.464257 | 374.45 | 17.87183 |
| 2024/09/18 07:00:00 | 20.9 | 53.3413 | 954 | 0 | 11.61 | 88 | 241 | 1.078 | 0.032 | 3.059275 | 13.34557 | 1.020966 | 1.745333 | 545.1433 | 15.518 |
| 2024/09/18 08:00:00 | 14.4773 | 31.8854 | 955 | | | | | | | | | | | | |

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|---------------------|---------|---------|-------|------|-------|-------|-----|-------|-------|-----------|----------|-----------|-----------|----------|----------|
| 2024/09/19 21:00:00 | 14.3333 | 25.1767 | 837 | 0 | 13.27 | 82 | 216 | 1.428 | 0 | 2.633385 | 9.419433 | 0.6064341 | 1.447936 | 383.2741 | 23.17808 |
| 2024/09/19 22:00:00 | 9.91261 | 21.6833 | 832 | 0 | 13.13 | 82.9 | 280 | 1.306 | 0 | 1.909096 | 8.204409 | 0.5091467 | 1.252882 | 377.3108 | 23.78366 |
| 2024/09/19 23:00:00 | 15.2264 | 27.7812 | 836 | 0 | 13.33 | 81.4 | 209 | 1.179 | 0 | 1.833129 | 10.94744 | 0.6703901 | 1.985313 | 414.4333 | 20.53908 |
| 2024/09/20 00:00:00 | 14.343 | 26.4594 | 844 | 0 | 13.33 | 80.6 | 314 | 0.886 | 0 | 0.9749708 | 8.597883 | 0.6660157 | 1.85776 | 392.2983 | 21.36817 |
| 2024/09/20 01:00:00 | 10.6501 | 20.6609 | 825 | 0 | 13.29 | 81.7 | 313 | 1.221 | 0 | 0.8311737 | 7.126166 | 0.5710281 | 2.507573 | 364.9775 | 21.59433 |
| 2024/09/20 02:00:00 | 13.8853 | 21.5894 | 831 | 0 | 13.2 | 81.9 | 278 | 1.118 | 0 | 0.9478377 | 6.273791 | 0.6768064 | 2.026021 | 364.0916 | 21.72225 |
| 2024/09/20 03:00:00 | 11.7199 | 18.9195 | 825 | 0 | 12.87 | 83.5 | 199 | 1.367 | 0 | 0.8693108 | 5.632383 | 0.7999431 | 2.135833 | 352.2808 | 23.17675 |
| 2024/09/20 04:00:00 | 7.76886 | 14.2465 | 832 | 0 | 12.72 | 83.9 | 259 | 1.074 | 0 | 0.7829759 | 4.654692 | 0.5274082 | 3.231908 | 350.315 | 23.84658 |
| 2024/09/20 05:00:00 | 10.6289 | 17.1212 | 834 | 0 | 12.56 | 84.8 | 212 | 1.339 | 0 | 0.9397992 | 4.933733 | 0.4508603 | 4.300866 | 361.3517 | 23.51958 |
| 2024/09/20 06:00:00 | 13.2244 | 21.1921 | 827 | 0 | 12.34 | 85.8 | 220 | 1.591 | 0 | 2.790054 | 7.766258 | 0.5653044 | 4.8793 | 393.32 | 21.86583 |
| 2024/09/20 07:00:00 | 10.6267 | 21.757 | 811 | 0 | 12.22 | 85.8 | 250 | 1.225 | 0.01 | 2.532573 | 8.152083 | 0.4048393 | 5.482666 | 401.9575 | 21.856 |
| 2024/09/20 08:00:00 | 10.1553 | 22.0054 | 573.6 | 0 | 12.44 | 82.7 | 322 | 1.014 | 0.075 | 4.089681 | 10.31246 | 0.4085338 | 5.399483 | 435.225 | 20.5635 |
| 2024/09/20 09:00:00 | 10.7911 | 25.1054 | 530.6 | 0 | 13.04 | 77.28 | 62 | 1.046 | 0.217 | 5.351592 | 12.71169 | 0.7428383 | 4.3588 | 454.2525 | 19.42316 |
| 2024/09/20 10:00:00 | 16.8286 | 43.1568 | 529.6 | 0 | 14.77 | 69.98 | 202 | 1.507 | 0.797 | 8.463625 | 13.06582 | 0.545451 | 4.059183 | 482.8258 | 22.32583 |
| 2024/09/20 11:00:00 | 16.9043 | 42.122 | 515.8 | 0 | 16.76 | 63.58 | 262 | 1.887 | 0.968 | 4.067882 | 8.210475 | 0.9513375 | 2.916397 | 408.1425 | 29.62792 |
| 2024/09/20 12:00:00 | 13.5883 | 29.4973 | 497.5 | 0 | 18.03 | 58.42 | 189 | 1.91 | 1.007 | 2.930325 | 6.618343 | 1.370848 | 3.841683 | 377.91 | 31.44842 |
| 2024/09/20 13:00:00 | 15.1436 | 30.7475 | 485.4 | 0 | 19.55 | 53.54 | 216 | 2.209 | 0.967 | 3.904938 | 7.804667 | 1.792515 | 2.953205 | 379.8492 | 33.284 |
| 2024/09/20 14:00:00 | 13.4571 | 31.9444 | 475.6 | 0 | 20.41 | 53.19 | 272 | 2.688 | 0.85 | 3.765692 | 7.859125 | 1.856062 | 3.016201 | 385.4775 | 34.81275 |
| 2024/09/20 15:00:00 | 8.96296 | 33.853 | 463.9 | 0 | 20.08 | 59.84 | 220 | 3.439 | 0.655 | 3.827991 | 7.3766 | 1.602759 | 2.04645 | 407.0275 | 32.22975 |
| 2024/09/20 16:00:00 | 7.32977 | 22.8286 | 446.1 | 0 | 18.09 | 65.41 | 229 | 3.032 | 0.41 | 3.535427 | 6.776675 | 1.053196 | 1.339426 | 369.7216 | 28.55575 |
| 2024/09/20 17:00:00 | 9.90886 | 23.6348 | 433 | 0 | 16.58 | 74.65 | 221 | 3.027 | 0.157 | 3.896975 | 7.529342 | 0.973019 | 1.500135 | 377.2567 | 24.69408 |
| 2024/09/20 18:00:00 | 9.92205 | 23.7684 | 453.1 | 0 | 14.47 | 82 | 215 | 2.991 | 0.008 | 5.147241 | 9.662391 | 0.7072462 | 1.324116 | 418.075 | 20.23492 |
| 2024/09/20 19:00:00 | 8.5036 | 23.6472 | 807 | 0 | 13.57 | 85 | 220 | 2.548 | 0 | 6.287616 | 11.90764 | 0.6906941 | 1.205965 | 452.6633 | 19.78008 |
| 2024/09/20 20:00:00 | 6.39535 | 19.3148 | 850 | 0 | 13.03 | 86 | 241 | 1.576 | 0 | 3.385917 | 8.867858 | 0.7658072 | 1.476708 | 419.2425 | 22.29408 |
| 2024/09/20 21:00:00 | 7.25388 | 19.6462 | 853 | 0 | 12.81 | 89 | 192 | 1.662 | 0 | 3.486927 | 9.26715 | 0.7146902 | 3.440516 | 420.8683 | 21.66217 |
| 2024/09/20 22:00:00 | 13.3136 | 22.5381 | 854 | 0 | 12.56 | 90.5 | 198 | 1.788 | 0 | 3.764098 | 10.09266 | 0.5633984 | 3.884495 | 440.4608 | 21.17642 |
| 2024/09/20 23:00:00 | 5.41234 | 11.7359 | 854 | 0 | 12.34 | 92.5 | 247 | 1.509 | 0 | 2.14553 | 7.149841 | 0.5256661 | 6.108617 | 401.705 | 22.79625 |
| 2024/09/21 00:00:00 | 1.35947 | 5.30063 | 858 | 0 | 12.25 | 92.6 | 220 | 1.881 | 0 | 1.618806 | 6.150949 | 0.4311564 | 3.243428 | 399.9033 | 24.25083 |
| 2024/09/21 01:00:00 | 6.83932 | 11.5821 | 860 | 0 | 12.1 | 92.1 | 253 | 1.454 | 0 | 1.390372 | 5.132433 | 0.5416858 | 3.182251 | 401.1416 | 25.42042 |
| 2024/09/21 02:00:00 | 3.61094 | 9.30618 | 853 | 0 | 12.1 | 91.8 | 244 | 1.617 | 0 | 1.076355 | 4.393392 | 0.2600228 | 1.575718 | 377.53 | 25.85733 |
| 2024/09/21 03:00:00 | 11.988 | 21.3255 | 758.7 | 0 | 12.06 | 91.9 | 209 | 1.689 | 0 | 1.033618 | 4.932549 | 0.420418 | 1.174932 | 377.2816 | 25.77033 |
| 2024/09/21 04:00:00 | 9.72889 | 18.0462 | 592.6 | 0 | 11.95 | 91.9 | 196 | 1.711 | 0 | 0.8144805 | 4.3569 | 0.3143446 | 3.136043 | 377.125 | 26.9775 |
| 2024/09/21 05:00:00 | 9.62329 | 18.3516 | 545.2 | 0 | 11.99 | 91.5 | 220 | 1.551 | 0 | 1.277453 | 5.88015 | 0.4067954 | 1.047499 | 400.2342 | 25.58108 |
| 2024/09/21 06:00:00 | 10.1209 | 20.0396 | 537.7 | 0 | 12.05 | 91 | 310 | 1.499 | 0 | 2.209371 | 8.391816 | 0.5066165 | 1.940727 | 452.8233 | 22.823 |
| 2024/09/21 07:00:00 | 9.48435 | 18.6613 | 532.6 | 0 | 12.21 | 89.2 | 214 | 0.926 | 0.003 | 2.995271 | 10.5812 | 0.5631087 | 4.674745 | 432.4108 | 20.16916 |
| 2024/09/21 08:00:00 | 11.5921 | 21.7099 | 529.8 | 0.25 | 12.46 | 85.8 | 246 | 1.373 | 0.053 | 4.6101 | 10.94257 | 0.3266521 | 3.28922 | 445.9608 | 19.98417 |
| 2024/09/21 09:00:00 | 9.39393 | 18.0485 | 528.1 | 0 | 12.86 | 82.5 | 286 | 1.036 | 0.109 | 4.064617 | 9.827291 | 0.4412108 | 3.089655 | 441.2017 | 21.082 |
| 2024/09/21 10:00:00 | 12.1467 | 25.1414 | 528.8 | 0 | 13.69 | 77.13 | 21 | 1.153 | 0.271 | 6.674225 | 12.13702 | 0.5120891 | 1.980585 | 470.9316 | 21.21708 |
| 2024/09/21 11:00:00 | 11.4913 | 40.5642 | 529.4 | 0 | 15.73 | 67.8 | 55 | 1.407 | 0.753 | 4.986425 | 9.290741 | 0.3199645 | 2.100605 | 456.385 | 25.43208 |
| 2024/09/21 12:00:00 | 5.02029 | 18.6943 | 519.9 | 0 | 17.49 | 57.41 | 208 | 1.286 | 0.996 | 3.250575 | 7.942058 | 0.6584517 | 4.193621 | 427.7675 | 32.37716 |
| 2024/09/21 13:00:00 | 14.052 | 30.1336 | 506.9 | 0 | 19.99 | 52.32 | 211 | 2.36 | 0.958 | 3.2654533 | 8.400575 | 0.961605 | 1.603262 | 421.6675 | 35.63441 |
| 2024/09/21 14:00:00 | 12.3236 | 45.7365 | 488.1 | 0 | 20.45 | 54.2 | 205 | 3.348 | 0.839 | 4.027908 | 7.273375 | 1.151044 | 2.446137 | 406.3658 | 31.608 |
| 2024/09/21 15:00:00 | 8.99507 | 33.9909 | 468.9 | 0 | 19.37 | 57.2 | 226 | 3.379 | 0.646 | 3.887745 | 7.020075 | 1.06018 | 1.69818 | 407.7941 | 29.79033 |
| 2024/09/21 16:00:00 | 6.20753 | 22.9073 | 455.5 | 0 | 18.41 | 66.69 | 158 | 3.286 | 0.409 | 4.173816 | 7.239392 | 0.8738919 | 1.640365 | 412.5225 | 27.81725 |
| 2024/09/21 17:00:00 | 8.41605 | 22.0457 | 443.3 | 0 | 16.26 | 75.67 | 204 | 2.715 | 0.161 | 4.564624 | 8.504133 | 0.7067281 | 0.8349161 | 416.1258 | 25.32558 |
| 2024/09/21 18:00:00 | 6.5728 | 16.3101 | 432.6 | 0 | 14.8 | 80.1 | 209 | 2.445 | 0.009 | 4.593283 | 8.974216 | 0.4998051 | 1.303858 | 414.3183 | 23.77658 |
| 2024/09/21 19:00:00 | 5.94991 | 19.3808 | 440.8 | 0 | 14.33 | 80.9 | 191 | 1.624 | 0 | 4.236504 | 11.28601 | 0.625899 | 0.9424341 | 449.2725 | 21.91125 |
| 2024/09/21 20:00:00 | 8.17361 | 21.844 | 446.3 | 0 | 14.27 | 82.2 | 357 | 0.809 | 0 | 2.884035 | 13.513 | 0.5960949 | 1.2895 | 474.3783 | 19.681 |
| 2024/09/21 21:00:00 | 7.81084 | 22.8282 | 443.2 | 0 | 14.2 | 85.7 | 213 | 1.613 | 0 | 4.011585 | 17.60828 | 0.6706365 | 1.085114 | 508.3366 | 15.79595 |
| 2024/09/21 22:00:00 | 5.68607 | 14.6624 | 462.2 | 0 | 12.95 | 88.6 | 1 | 1.263 | 0 | 2.335686 | 8.645808 | 0.5054789 | 1.062034 | 442.6158 | 22.03758 |
| 2024/09/21 23:00:00 | 8.60179 | 23.8407 | 465.1 | 0 | 13.61 | 83.8 | 123 | 1.665 | 0 | 1.484874 | 13.57157 | 0.4930908 | 1.323382 | 473.5216 | 15.82683 |
| 2024/09/22 00:00:00 | 10.1216 | 27.9668 | 463.4 | 0 | 13.64 | 85.7 | 248 | 0.868 | 0 | 2.579512 | 17.74443 | 0.6636177 | 1.912571 | 539.6691 | 12.11961 |
| 2024/09/22 01:00:00 | 13.3173 | 23.3533 | 476.9 | 0 | 12.4 | 89.8 | 18 | 1.31 | 0 | 1.428409 | 9.104249 | 1.135107 | 10.59255 | 427.5267 | 18.68483 |
| 2024/09/22 02:00:00 | 20.6564 | 33.971 | 479.5 | 0 | 12.91 | 92.9 | 217 | 1.326 | 0.105 | 4.157142 | 14.60733 | 0.6785414 | 6.099883 | 475.8333 | 13.07263 |
| 2024/09/22 03:00:00 | 9.0626 | 14.9413 | 493.9 | 0 | 11.87 | 93.3 | 169 | 1.193 | 0 | 1.133812 | 5.549875 | 0.7382991 | 4.53625 | 408.4217 | 22.00117 |
| 2024/09/22 04:00:00 | 10.514 | 17.5736 | 496.5 | 0 | 11.97 | 91.2 | 216 | 1.109 | 0 | 1.091607 | 8.2149 | 0.5916903 | 4.230533 | 433.2358 | 18.48533 |
| 2024/09/22 05:00:00 | 6.77787 | 12.2813 | 501.1 | 0 | 11.81 | 93.6 | 51 | 1.432 | 0 | 1.097695 | 5.275475 | 0.4792908 | 3.613255 | 418.0375 | 22.44217 |
| 2024/09/22 06:00:00 | 6.62138 | 12.2785 | 502.5 | 0 | 11.74 | 90.6 | 1 | 1.064 | 0.002 | 1.69653 | 8.554083 | 0.6720646 | 2.483113 | 448.2283 | 19 |

| | | | | | | | | | | | | | | | |
|---------------------|---------|---------|-------|---|-------|-------|-----|-------|-------|-----------|----------|------------|-----------|----------|----------|
| 2024/09/23 20:00:00 | 12.2979 | 26.1152 | 450.2 | 0 | 14.24 | 82.4 | 197 | 1.457 | 0 | 3.599126 | 9.193758 | 0.7035055 | 1.291874 | 490.3066 | 17.54317 |
| 2024/09/23 21:00:00 | 8.07161 | 23.6681 | 455.4 | 0 | 14.21 | 83.3 | 223 | 1.955 | 0 | 3.452175 | 8.3908 | 0.4208023 | 1.036702 | 501.4991 | 17.90058 |
| 2024/09/23 22:00:00 | 7.74787 | 19.5104 | 460.6 | 0 | 14.03 | 82.2 | 184 | 1.284 | 0 | 2.494531 | 8.116342 | 0.3852852 | 1.414286 | 485.5883 | 17.76933 |
| 2024/09/23 23:00:00 | 13.13 | 27.3986 | 462 | 0 | 14.25 | 81.2 | 174 | 0.663 | 0 | 1.182186 | 9.788749 | 0.2884145 | 1.289839 | 498.3775 | 15.87367 |
| 2024/09/24 00:00:00 | 11.1573 | 23.6969 | 463.2 | 0 | 14.07 | 82.6 | 233 | 1.344 | 0 | 1.29152 | 7.148108 | 0.647184 | 1.302415 | 481.0417 | 17.67475 |
| 2024/09/24 01:00:00 | 9.82605 | 20.1725 | 468.4 | 0 | 13.88 | 83.9 | 246 | 1.741 | 0 | 1.096015 | 5.484458 | 0.2564883 | 1.850835 | 457.1183 | 18.87725 |
| 2024/09/24 02:00:00 | 6.79925 | 16.5948 | 473.7 | 0 | 13.64 | 85 | 209 | 1.291 | 0 | 0.9069099 | 4.2171 | 0.734998 | 1.22282 | 449.2142 | 19.95158 |
| 2024/09/24 03:00:00 | 5.60212 | 15.3282 | 474.8 | 0 | 13.51 | 85.1 | 278 | 0.797 | 0 | 0.5270698 | 3.883217 | 0.5738758 | 1.483102 | 448.7042 | 19.97208 |
| 2024/09/24 04:00:00 | 7.8768 | 19.1493 | 473.1 | 0 | 13.68 | 83.5 | 248 | 0.962 | 0 | 0.9200774 | 5.69185 | 0.269823 | 1.944381 | 464.7017 | 17.49108 |
| 2024/09/24 05:00:00 | 7.84893 | 16.9306 | 477.8 | 0 | 13.34 | 86 | 306 | 1.481 | 0 | 1.289568 | 5.602616 | 0.5622171 | 1.506859 | 481.4725 | 18.54608 |
| 2024/09/24 06:00:00 | 8.01224 | 18.0929 | 479.7 | 0 | 13.11 | 86.3 | 209 | 0.953 | 0 | 1.987336 | 7.344933 | 0.06852791 | 3.304297 | 496.4816 | 17.46692 |
| 2024/09/24 07:00:00 | 8.84606 | 21.7183 | 483 | 0 | 13.22 | 85 | 181 | 0.953 | 0.024 | 3.645075 | 9.966933 | 0.4443851 | 3.88157 | 511.77 | 15.91483 |
| 2024/09/24 08:00:00 | 13.5773 | 32.2881 | 489.1 | 0 | 13.6 | 81.2 | 191 | 1.054 | 0.139 | 8.70665 | 13.72796 | 0.3526005 | 2.92483 | 579.7533 | 14.19408 |
| 2024/09/24 09:00:00 | 13.8343 | 37.6728 | 499.6 | 0 | 14.77 | 75.01 | 198 | 1.301 | 0.54 | 6.940908 | 10.15784 | 0.4707972 | 2.141991 | 552.5516 | 17.75992 |
| 2024/09/24 10:00:00 | 18.8931 | 50.8563 | 503.8 | 0 | 16.51 | 64.06 | 197 | 1.564 | 0.849 | 5.874425 | 9.160558 | 0.4772213 | 2.023117 | 543.1392 | 23.34641 |
| 2024/09/24 11:00:00 | 15.6899 | 42.0282 | 493.8 | 0 | 18.82 | 59.71 | 189 | 2.029 | 0.957 | 4.318733 | 8.797641 | 0.8166623 | 1.98261 | 507.3408 | 28.84542 |
| 2024/09/24 12:00:00 | 12.1839 | 34.8824 | 480 | 0 | 19.85 | 57.41 | 192 | 2.678 | 0.995 | 3.643025 | 7.484741 | 0.9447542 | 1.822807 | 482.59 | 31.01075 |
| 2024/09/24 13:00:00 | 9.87002 | 31.5505 | 472.3 | 0 | 20.4 | 57.05 | 229 | 2.819 | 0.956 | 4.420774 | 7.3232 | 0.9479101 | 1.277782 | 489.6075 | 30.3955 |
| 2024/09/24 14:00:00 | 8.67426 | 31.709 | 465.1 | 0 | 20.69 | 56.3 | 233 | 3.046 | 0.837 | 3.755575 | 6.820967 | 0.5177337 | 1.13265 | 474.2858 | 30.14575 |
| 2024/09/24 15:00:00 | 8.09486 | 27.3703 | 453.6 | 0 | 19.85 | 60.52 | 207 | 3.271 | 0.645 | 3.828091 | 6.965533 | 0.7156156 | 0.9943673 | 456.5717 | 28.39967 |
| 2024/09/24 16:00:00 | 9.92685 | 29.0664 | 659.7 | 0 | 18.37 | 65.68 | 217 | 3.304 | 0.409 | 3.550842 | 6.51885 | 0.4965592 | 1.134587 | 463.3408 | 26.5045 |
| 2024/09/24 17:00:00 | 7.33174 | 23.2459 | 768.6 | 0 | 16.92 | 73.77 | 234 | 3.022 | 0.163 | 4.433816 | 7.959142 | 0.6110259 | 1.002564 | 476.3916 | 23.49958 |
| 2024/09/24 18:00:00 | 12.1923 | 27.5571 | 441.5 | 0 | 15.21 | 76.78 | 266 | 2.502 | 0.009 | 4.805741 | 9.626124 | 0.4541848 | 1.443504 | 506.6191 | 20.65208 |
| 2024/09/24 19:00:00 | 8.7995 | 22.8924 | 428.1 | 0 | 14.73 | 79.65 | 208 | 2.049 | 0 | 6.142093 | 11.5633 | 0.3565938 | 1.314721 | 543.8508 | 18.95792 |
| 2024/09/24 20:00:00 | 11.4364 | 22.9232 | 435 | 0 | 14.32 | 80.7 | 216 | 2.083 | 0 | 4.842341 | 10.80992 | 0.6030396 | 1.175473 | 528.1458 | 20.28592 |
| 2024/09/24 21:00:00 | 10.278 | 23.0782 | 441.7 | 0 | 14.18 | 82.8 | 228 | 1.683 | 0 | 3.128319 | 8.282842 | 0.5258676 | 1.101903 | 513.3292 | 20.79391 |
| 2024/09/24 22:00:00 | 11.2763 | 21.5627 | 448.7 | 0 | 14.08 | 82.3 | 230 | 1.599 | 0 | 2.491602 | 8.487267 | 0.4730739 | 1.061523 | 506.29 | 20.3745 |
| 2024/09/24 23:00:00 | 12.5108 | 21.3312 | 453.5 | 0 | 13.99 | 84.7 | 294 | 1.46 | 0 | 1.999176 | 8.131575 | 0.6058272 | 1.457798 | 489.1333 | 20.26367 |