

## Anexo1. Tablas de Resumen de estadísticos a lo largo del año 2019

En este documento se presentan los resúmenes estadísticos mensuales de los datos de material particulado y gases monitoreados por la Red de Monitoreo de Calidad del Aire del Valle de Aburrá. Los resultados para todas las variables son reportados en  $\mu g/m^3$ , en condiciones de referencia; a excepción del  $NO_x$  se reporta en ppm.

Para el cálculo de excedencias, se consideran los niveles máximos permisibles establecidos en la Resolución 2254 de 2017 publicada por el Ministerio de Ambiente y Desarrollo Sostenible.

En las tablas presentadas se utilizan las siguientes convenciones:

- N.A: No Aplica. Corresponde a estaciones en las que no se obtuvo el 75 % de datos válidos para calcular los valores promedios correspondientes, o estaciones que no estaban operando durante el mes en consideración.
- CMD: Cantidad de muestras diarias.
- NEND: Número de excedencias a la norma diaria (PM10, PM2.5 y  $SO_2$ ).
- NEN1H: Número de excedencias a la norma horaria ( $SO_2$ ,  $NO_2$  y CO).
- NEN8H: Número de excedencias a la norma octohoraria ( $O_3$ ).
- MAX, MEAN, MIN seguidos por -1H, -8H, -D: Valores máximos, medios y mínimos calculados para cada variable con diferente periodicidad(horaria, octohoraria y diaria); de acuerdo a lo establecido en el Protocolo para el Monitoreo y Seguimiento de la Calidad del Aire del Ministerio de Ambiente, Vivienda y Desarrollo Territorial.

Considerando los procedimientos propios del proceso de validación de datos establecidos dentro del sistema de gestión de calidad de la red de monitoreo, es posible que los resultados presentados en este informe varíen respecto a los reportados en meses anteriores.

# 1. Resumen Estadísticos 2019 para PM25

## 1.1. Resumen Estadísticos para estaciones en el municipio de Medellín

	CEN-TRAF	MED-UNNV	MED-LAYE	MED-ALTA	MED-VILL	MED-BEME	MED-TESO	MED-SCRI	MED-ARAN	MED-SELE
<b>Enero 2019</b>										
CMD	26	31	31	31	31	30	30	31	31	N.A
MAX-D	35.8	30.8	27.7	26.8	29.3	28.3	23.6	25.2	39.5	N.A
MEAN-D	25.9	19.1	20.3	22.2	18.4	19.8	17	15.6	22.6	N.A
MIN-D	18	12.8	8.8	15.9	9.2	10.9	8.8	9.6	14.2	N.A
NEND	0	0	0	0	0	0	0	0	1	N.A
<b>Febrero 2019</b>										
CMD	28	28	28	28	26	28	28	26	28	12
MAX-D	58	46	51.7	48.5	40.3	47.7	45.9	38.2	49.4	34.2
MEAN-D	39.9	30.6	32.3	31.4	29.6	29.8	28.2	25.2	34.4	20.2
MIN-D	27.1	18.6	17.7	19.9	18	21.2	16.1	14.9	23.6	10.3
NEND	18	4	7	6	3	4	3	1	12	0
<b>Marzo 2019</b>										
CMD	31	31	31	30	31	31	31	31	31	31
MAX-D	68.8	58.1	57.7	54.8	55.9	52.6	49.4	49.8	63.8	35.3
MEAN-D	44.1	32.2	33.6	34.6	33.2	33.4	30	28.3	37.4	19.4
MIN-D	27.9	19.6	17.1	24.6	19.3	20	17.8	16.4	22.4	7.7
NEND	19	9	12	10	11	10	9	5	13	0
<b>Abril 2019</b>										
CMD	26	30	30	30	30	30	29	30	30	27
MAX-D	50.9	35.9	37.6	40.2	36.4	40.9	32.1	29.4	44.5	23.3
MEAN-D	32.1	19.3	18.5	24.3	20.5	21.6	18.1	16.4	23.5	9.7
MIN-D	16.9	9	7.4	12.4	9.8	10.1	8.4	8.2	12	3.4

	CEN- TRAF	MED- UNNV	MED- LAYE	MED- ALTA	MED- VILL	MED- BEME	MED- TESO	MED- SCRI	MED- ARAN	MED- SELE
NEND	7	0	1	4	0	1	0	0	3	0
<b>Mayo 2019</b>										
CMD	31	31	27	31	31	31	29	30	30	24
MAX-D	38.7	25.8	26.6	31.6	28.4	31	24.4	22.1	29.8	15.4
MEAN-D	25.6	17.4	16.4	22.5	18.2	21	15.4	14.4	20.7	8.3
MIN-D	16	8.5	6	13.4	11.1	10.4	7.4	7.7	14.1	3.2
NEND	2	0	0	0	0	0	0	0	0	0
<b>Junio 2019</b>										
CMD	30	30	30	30	30	30	30	30	30	24
MAX-D	29.3	21.3	22.2	27.6	20.6	31.5	16.4	17.3	23.8	14.3
MEAN-D	22.1	14.6	14	18.6	12.6	18.1	11.8	11.2	16.3	5.8
MIN-D	12.6	9.6	8.3	11.1	5.9	11.5	8	7.2	10.8	3.4
NEND	0	0	0	0	0	0	0	0	0	0
<b>Julio 2019</b>										
CMD	31	30	31	30	30	31	31	31	31	28
MAX-D	25.8	16.9	24.8	22.8	16.6	22.9	15	15.8	19	8.8
MEAN-D	20.4	13.8	16.6	17.5	11.5	16.6	11.5	10.8	14.7	5.9
MIN-D	12.8	9.5	10.3	12.5	6.8	11.2	7.3	7.6	11.4	4.3
NEND	0	0	0	0	0	0	0	0	0	0
<b>Agosto 2019</b>										
CMD	31	31	31	31	31	30	31	31	29	31
MAX-D	57.3	37.5	61.1	44.6	41.4	43.2	42.2	38.1	42.8	33.3
MEAN-D	29.7	18.8	23.5	23.8	18.4	23.2	17.5	17.5	22.7	13.2
MIN-D	17.4	9.8	13.8	15.5	10.8	13	11.1	10.6	14.3	6.2
NEND	4	1	2	1	1	2	1	1	1	0
<b>Septiembre 2019</b>										
CMD	30	29	28	30	30	30	29	29	30	30

	CEN-TRAF	MED-UNNV	MED-LAYE	MED-ALTA	MED-VILL	MED-BEME	MED-TESO	MED-SCRI	MED-ARAN	MED-SELE
MAX-D	36.3	22.1	23	26.3	24.5	30.3	20.4	18.1	26.7	11.6
MEAN-D	25.9	14.9	16.2	19	14.6	18.1	14	13.4	19	7.6
MIN-D	18.3	9.4	9	15	9	10.5	10.6	9.4	13.9	4.2
NEND	0	0	0	0	0	0	0	0	0	0

**Octubre 2019**

CMD	29	31	31	31	31	31	31	31	31	30
MAX-D	38	22.6	26.9	30.1	27.9	30.6	24.4	25.4	28.5	12.4
MEAN-D	26	14.5	14.9	20.2	16.4	18.3	14.6	12.8	18.4	6.7
MIN-D	14.8	8.1	8.4	10.6	10.4	8.4	7.5	8.5	10.7	3.8
NEND	1	0	0	0	0	0	0	0	0	0

## 1.2. Resumen Estadísticos para estaciones en los municipios del Valle, diferentes a Medellín

	GIR-SOSN	ITA-CJUS	CAL-LASA	ITA-CONC	SUR-TRAF	CAL-JOAR	EST-HOSP	BAR-TORR	COP-CVID	BEL-FEVE	ENV-HOSP	SAB-RAME
<b>Enero 2019</b>												
CMD	28	27	27	31	31	31	31	31	29	27	31	31
MAX-D	22	54.2	39.2	30.9	38.4	30.4	27.6	19.7	23	34.4	24.6	27.5
MEAN-D	14.1	23.5	24.4	20.3	29.3	21.9	21.2	15	18	17.9	18.1	19
MIN-D	7.4	16.8	11.1	11.1	20.5	10.6	13.6	8.3	9.6	11.2	10.7	10.6
NEND	0	1	1	0	2	0	0	0	0	0	0	0

**Febrero 2019**

CMD	27	28	28	28	28	28	28	27	26	27	28	28
MAX-D	48.5	52.1	45.6	44.5	62.5	46.2	50.5	39.3	41.9	42.5	45	48.5
MEAN-D	32.4	33.4	35	28.7	41.6	33.8	32.7	26.4	28.3	27.3	29.1	30.5
MIN-D	20.9	19.6	21	17.1	28.4	21.3	22.3	14.4	16.9	16.9	17.5	17.5

	GIR-SOSN	ITA-CJUS	CAL-LASA	ITA-CONC	SUR-TRAF	CAL-JOAR	EST-HOSP	BAR-TORR	COP-CVID	BEL-FEVE	ENV-HOSP	SAB-RAME
NEND	7	8	12	4	22	9	5	2	1	2	3	3
<b>Marzo 2019</b>												
CMD	31	31	31	31	31	31	31	31	31	31	31	31
MAX-D	64.1	55.3	60.1	50.9	66.3	58.9	53.6	59.4	58	55.7	52.6	53.4
MEAN-D	33.7	35.1	35.9	29.5	43.3	34.4	32.8	28.9	30.1	29.1	30.3	31.9
MIN-D	16	23.5	15.3	14.1	27.6	15.6	15	12	14.8	14.9	15.4	18.4
NEND	10	13	13	7	21	12	10	5	8	6	9	10
<b>Abril 2019</b>												
CMD	28	30	30	30	30	30	30	30	30	30	29	29
MAX-D	31.6	45.3	38.2	31.3	51.2	38.2	35.5	27.5	30.2	32.3	33	33.5
MEAN-D	18	25	19.9	16.3	31.1	20.8	19.8	14.2	17.3	16.5	18.9	18.4
MIN-D	9.4	12.7	6.6	5.7	10.4	7.8	8.8	5.6	9.2	7.2	7.8	7
NEND	0	3	1	0	8	1	0	0	0	0	0	0
<b>Mayo 2019</b>												
CMD	30	30	31	31	27	31	30	30	31	31	31	31
MAX-D	25.5	34.1	33.5	20.5	41.8	32	27	21	23.4	22.2	23.7	28
MEAN-D	12.4	23.1	17.7	14.3	30.9	18.4	18.2	9.8	12.8	12.9	15.9	16
MIN-D	5.4	12.6	7	4.9	15.9	7.3	10	4.8	7.2	5.3	6.9	5.6
NEND	0	0	0	0	5	0	0	0	0	0	0	0
<b>Junio 2019</b>												
CMD	30	30	30	22	25	28	30	29	30	30	30	30
MAX-D	23.9	25.4	24.1	14.1	35.5	25.1	20	16.1	16.3	16.3	19	18.3
MEAN-D	13.2	18.2	16.1	9.5	26.2	16.2	14.3	8.6	10.5	10.5	12.4	13.5
MIN-D	5.2	10.3	9.5	6.7	16.3	10	10.2	5.3	6.3	6.1	7.7	10.4
NEND	0	0	0	0	0	0	0	0	0	0	0	0
<b>Julio 2019</b>												
CMD	31	31	28	31	31	30	31	31	31	31	31	30

	GIR-SOSN	ITA-CJUS	CAL-LASA	ITA-CONC	SUR-TRAF	CAL-JOAR	EST-HOSP	BAR-TORR	COP-CVID	BEL-FEVE	ENV-HOSP	SAB-RAME
MAX-D	25.2	23.8	25.4	17.8	34.5	24	19.4	12.3	13.1	13.4	18.3	20.3
MEAN-D	16.8	17.1	17	13.4	25.3	16.8	14.6	8.9	10.3	9.8	12	13.7
MIN-D	12	11.7	10.8	8.7	16	11.1	9.8	5.8	6.6	7	6.9	8.7
NEND	0	0	0	0	0	0	0	0	0	0	0	0
<b>Agosto 2019</b>												
CMD	31	31	31	31	30	29	31	31	30	30	30	29
MAX-D	37.6	49.8	49.6	47.8	70.1	58.3	48.5	29.3	34.4	32.6	43.1	49.8
MEAN-D	27.4	25.9	24.1	20.2	33.6	25.2	21.1	17	18.1	16.7	17.9	20.1
MIN-D	15.6	15.8	16.7	13.1	17.8	16.4	13.6	9.1	11.4	9.7	10.6	11.3
NEND	3	2	1	1	7	1	1	0	0	0	1	1
<b>Septiembre 2019</b>												
CMD	29	30	30	30	30	26	26	24	30	30	25	29
MAX-D	23.1	34.2	24.2	23.7	41.7	26.9	19.1	12.4	17.9	18.5	19.1	22.3
MEAN-D	17	21.1	17	16.2	29.1	19.1	16	9.1	12.9	13	13.9	14.9
MIN-D	12.3	12.5	5.4	10.8	20.5	8.4	12.5	5.1	8.6	7.5	7.9	7.1
NEND	0	0	0	0	2	0	0	0	0	0	0	0
<b>Octubre 2019</b>												
CMD	30	31	30	31	31	31	31	31	30	31	30	31
MAX-D	26.3	38.3	24	32	47.9	23.5	24	15	20.8	21.2	21.5	23.4
MEAN-D	16.8	20.6	15.8	19.1	30.6	16.8	13.4	8.8	11.3	11.8	14.1	15.1
MIN-D	9.5	12.8	8.6	9.9	20	9.9	7	5.1	6.5	7.9	8.6	7.9
NEND	0	1	0	0	4	0	0	0	0	0	0	0

### 1.3. Resumen Estadísticos para estaciones manuales

	BEL- SESB	MED- PJIC
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**Enero 2019**

CMD	10	9
MAX-D	26.1	23
MEAN-D	20.4	19.1
MIN-D	14.7	15.9
NEND	0	0

**Febrero 2019**

CMD	9	9
MAX-D	45.2	48.7
MEAN-D	32.8	32.4
MIN-D	20.5	18.1
NEND	2	2

**Marzo 2019**

CMD	11	11
MAX-D	57.7	52.1
MEAN-D	34.4	36.3
MIN-D	23.9	22.4
NEND	4	5

**Abril 2019**

CMD	9	10
MAX-D	40.2	38.5
MEAN-D	22.1	22.9
MIN-D	2.6	11.2
NEND	1	1

**Mayo 2019**

CMD	10	10
MAX-D	29.6	29.1

	BEL- SESB	MED- PJIC
MEAN-D	18	20.2
MIN-D	10.3	11.4
NEND	0	0

**Junio 2019**

CMD	9	6
MAX-D	23.8	22.1
MEAN-D	15.4	14.3
MIN-D	10.9	7.3
NEND	0	0

**Julio 2019**

CMD	11	5
MAX-D	20.4	16.6
MEAN-D	15.5	13.6
MIN-D	11.5	10
NEND	0	0

**Agosto 2019**

CMD	10	9
MAX-D	28.5	29
MEAN-D	21.9	20.1
MIN-D	13.7	14.2
NEND	0	0

**Septiembre 2019**

CMD	10	10
MAX-D	25.8	24.5
MEAN-D	19.9	17.5
MIN-D	14.2	12.2
NEND	0	0

	BEL- SESB	MED- PJIC
<b>Octubre 2019</b>		
CMD	2	9
MAX-D	25.4	30.1
MEAN-D	23.8	21
MIN-D	22.2	15.1
NEND	0	0

## 2. Resumen Estadísticos 2019 para PM10

	MED- PJIC	GIR- IECO	CEN- TRAF	BEL- USBV	ITA- CONC	MED- EXSA	SUR- TRAF	MED- ITMR	ITA- POGO
<b>Enero 2019</b>									
CMD	31	30	30	25	31	31	25	31	31
MAX-D	48.7	58.3	63.6	61.5	56	64.2	56.2	48.4	59.3
MEAN-D	36.5	40.2	50.1	46.7	40.4	52	48.6	36.4	44.6
MIN-D	24.8	29.5	32.4	30.1	23.9	32.1	37.3	26.8	29.4
NEND	0	0	0	0	0	0	0	0	0
<b>Febrero 2019</b>									
CMD	26	28	26	28	28	28	18	28	28
MAX-D	64.8	70.4	81.5	79.9	75.1	80.6	79.2	67.6	93.5
MEAN-D	50.7	54.2	66.3	63.1	59.6	67.4	60.7	52.9	62.7
MIN-D	31.3	37.1	45	47.9	38.6	43.3	44.6	36.4	39.9
NEND	0	0	4	1	1	7	2	0	4
<b>Marzo 2019</b>									
CMD	31	31	30	31	31	29	22	30	31
MAX-D	69.2	83.2	92.9	82.5	82.1	100.1	76.6	78.6	94.8

	MED- PJIC	GIR- IECO	CEN- TRAF	BEL- USBV	ITA- CONC	MED- EXSA	SUR- TRAF	MED- ITMR	ITA- POGO
MEAN-D	50.6	55.1	67	59.5	59.4	69.8	60.6	54.4	63.5
MIN-D	34.1	34.4	43.9	41.2	40.7	45.9	42.2	33.7	44.8
NEND	0	6	10	6	5	11	1	2	4

**Abril 2019**

CMD	30	28	25	18	30	27	22	30	30
MAX-D	53.5	64.6	68.1	57.4	66.4	73	67.4	64.6	91.2
MEAN-D	35.1	38.5	47.2	43	39.2	52	49.1	36.4	51.9
MIN-D	16.1	19	23.9	32	16	29.2	23.8	22.9	27.6
NEND	0	0	0	0	0	0	0	0	2

**Mayo 2019**

CMD	31	24	31	26	30	31	30	29	31
MAX-D	52.2	65.2	66.8	52.7	52.1	69	64.4	51.3	91.8
MEAN-D	33.6	38.2	46	41	39.5	52.1	47.1	37.6	52.6
MIN-D	13.5	22.9	26.6	30.9	23.2	29.7	24.9	22	31.4
NEND	0	0	0	0	0	0	0	0	2

**Junio 2019**

CMD	20	28	30	30	28	30	21	30	30
MAX-D	42	79.9	60.2	43.8	40.4	59.8	59.4	49	83.6
MEAN-D	30	39.1	44.3	34.9	31.9	44.7	48.5	31.3	47.9
MIN-D	17.3	21.1	25.4	23.6	21.9	28.5	26.7	23	31.1
NEND	0	1	0	0	0	0	0	0	1

**Julio 2019**

CMD	29	27	31	30	31	29	31	30	30
MAX-D	44.2	60.9	56.1	37	38.7	51.7	60.8	38.3	69.9
MEAN-D	34	37.9	44	28.6	32.1	41.1	45.5	28.5	44.7
MIN-D	20.4	21	26	18	20.4	24.7	30.9	21.5	30.2
NEND	0	0	0	0	0	0	0	0	0

	MED- PJIC	GIR- IECO	CEN- TRAF	BEL- USBV	ITA- CONC	MED- EXSA	SUR- TRAF	MED- ITMR	ITA- POGO
<b>Agosto 2019</b>									
CMD	30	28	31	31	31	31	28	31	31
MAX-D	73.7	92.5	83.9	61.3	74.8	80.1	92.9	60	87.5
MEAN-D	44.2	57.9	57.8	40.6	40.6	49.1	56.8	39.4	54.6
MIN-D	26	27.7	36.8	26.3	25.1	30.8	38	25.6	36.8
NEND	0	3	3	0	0	1	1	0	3
<b>Septiembre 2019</b>									
CMD	28	27	30	30	30	26	21	30	28
MAX-D	64.3	57.2	79	46.6	40.5	77	77.5	55.1	77.5
MEAN-D	37.9	39.4	55.1	34.2	31	49.7	51.7	33	46.9
MIN-D	26	28.9	34.6	23.8	21	29.7	38.2	22.8	30.9
NEND	0	0	2	0	0	1	1	0	1
<b>Octubre 2019</b>									
CMD	31	31	28	31	30	19	31	28	31
MAX-D	64.8	86.8	73	49	55	79.7	76	54.2	76.8
MEAN-D	39.2	39.7	56.8	37.6	32.8	52.4	52.2	36.8	47
MIN-D	18.8	17.1	34.3	28.1	22.1	26.6	36.6	20	22.2
NEND	0	2	0	0	0	1	1	0	1

## 2.1. Resumen Estadísticos para estaciones manuales

	BAR- HSVP	CAL- JOAR	COP- HSMA	EST- MAGO	ITA- POGO	ITA- PTAR	MED- CORA	MED- MIRA	MED- PJIC	SUR- TRAF
<b>Enero 2019</b>										
CMD	10	10	10	3	10	9	10	10	10	10
MAX-D	34.7	49.2	49.7	54.3	51	42.5	41.4	58.9	44	51.3
MEAN-D	28	36.7	36	47.7	39.1	34.2	32.7	28.6	36.6	40

	BAR- HSVP	CAL- JOAR	COP- HSMA	EST- MAGO	ITA- POGO	ITA- PTAR	MED- CORA	MED- MIRA	MED- PJC	SUR- TRAF
MIN-D	16.3	20	25.6	39.7	19.1	26.8	20.2	16.6	28.4	16.4
NEND	0	0	0	0	0	0	0	0	0	0

**Febrero 2019**

CMD	9	8	9	7	7	9	9	8	8	9
MAX-D	51.3	76.1	58.1	96.6	68.1	60.2	54.6	57.6	65.3	80.6
MEAN-D	40	53	46.2	61.8	47.1	46.9	44.1	38	46.5	61.5
MIN-D	22.2	30.6	29	39.5	32.5	34.6	34.2	23.3	33	43.7
NEND	0	1	0	1	0	0	0	0	0	1

**Marzo 2019**

CMD	11	10	10	11	11	11	11	9	11	11
MAX-D	70.5	82.8	74.8	74.4	66.6	74.5	69	63.2	70.6	85.8
MEAN-D	40	42.7	43	52.6	49.2	44.5	41.4	41.3	46.3	57.8
MIN-D	25.6	18.5	19.9	29.1	32.8	24.7	20.8	28.3	31.2	31.2
NEND	0	1	0	0	0	0	0	0	0	3

**Abril 2019**

CMD	10	10	10	10	9	10	10	10	9	10
MAX-D	39.5	46	52.1	64	83	55.3	59.7	46.4	67.4	78.4
MEAN-D	27.3	32.1	31.4	45.3	47.4	36.9	34.4	30.1	40.8	54
MIN-D	17.1	14.2	7	18.4	35.4	20.9	12.9	8.3	13.4	25.3
NEND	0	0	0	0	1	0	0	0	0	1

**Mayo 2019**

CMD	10	10	8	10	10	9	10	9	10	10
MAX-D	35	53.6	50.9	59	77.5	53	40.8	68.1	49.9	69.9
MEAN-D	20.8	29.4	28.4	39.7	45.3	33.1	30.4	29.3	34.8	47.5
MIN-D	8.9	17.7	16.1	21.7	28.2	19.3	18.5	18.4	21.9	25.4
NEND	0	0	0	0	1	0	0	0	0	0

**Junio 2019**

	BAR- HSVP	CAL- JOAR	COP- HSMA	EST- MAGO	ITA- POGO	ITA- PTAR	MED- CORA	MED- MIRA	MED- PJC	SUR- TRAF
CMD	10	10	10	10	10	10	10	10	6	10
MAX-D	34.5	39.4	43.1	48.9	44.6	42.8	32.6	33.6	67.4	65.5
MEAN-D	19.3	28.2	27.9	38.8	33.9	26.9	25.5	23.8	33.3	49.9
MIN-D	10.7	16.1	12.8	23.4	23.6	12.3	12.5	13	16.6	26.3
NEND	0	0	0	0	0	0	0	0	0	0

**Julio 2019**

CMD	11	11	11	11	11	11	11	11	11	11
MAX-D	22.4	39.6	31.6	59.4	56.9	40.1	36.9	27.2	44.4	59.3
MEAN-D	16.7	25.6	23.6	34.7	33.2	25.6	22.3	17.1	28.4	42.3
MIN-D	8.6	9.6	10.6	17.1	24.2	11.7	12.8	10.9	14.8	20.1
NEND	0	0	0	0	0	0	0	0	0	0

**Agosto 2019**

CMD	9	9	9	9	10	9	10	9	10	9
MAX-D	46.3	46.9	49.4	73.8	63.8	46.8	40.1	41.2	47.5	66.3
MEAN-D	34	39.5	42.5	53.6	43.8	37.8	32.5	26.9	38.4	56.4
MIN-D	24.8	26.2	25.3	37.6	29.4	23	21.8	17.9	22.6	33.9
NEND	0	0	0	0	0	0	0	0	0	0

**Septiembre 2019**

CMD	9	10	10	10	9	6	10	8	9	10
MAX-D	30.2	43.1	40.4	56.8	51.2	43.7	43.4	29.8	44.6	63.8
MEAN-D	21.3	31.9	28.6	38.6	38.4	28.8	29.1	20.6	32.9	48
MIN-D	14.4	20.1	17.4	22.8	18.9	10.9	12.9	8.4	18.1	26.6
NEND	0	0	0	0	0	0	0	0	0	0

**Octubre 2019**

CMD	11	11	11	11	11	9	10	11	11	11
MAX-D	32.3	47	35.5	49.6	59	41	37.4	40.7	52.3	80
MEAN-D	19.5	28.2	26.3	36.2	41.8	30.4	30.1	22.5	38.8	53.1

	BAR- HSVP	CAL- JOAR	COP- HSMA	EST- MAGO	ITA- POGO	ITA- PTAR	MED- CORA	MED- MIRA	MED- PJIC	SUR- TRAF
MIN-D	9.5	9.4	16.4	25.4	24	22.5	20.3	12.3	31.1	35.9
NEND	0	0	0	0	0	0	0	0	0	1

### 3. Resumen Estadísticos 2019 para CO

	GIR- SOSN	MED- PJIC
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#### Enero 2019

CMD	N.A	31
MAX-1H	N.A	3316.9
MEAN-1H	N.A	1360.4
MIN-1H	N.A	380.3
NEN1H	N.A	0
MAX-8H	N.A	2543.5
MEAN-8H	N.A	1359.8
MIN-8H	N.A	508.8
NEN8H	N.A	0

**Febrero 2019**

CMD	9	24
MAX-1H	1259.4	3794.3
MEAN-1H	643.4	1513.9
MIN-1H	343.5	537.8
NEN1H	0	0
MAX-8H	914.7	2664
MEAN-8H	645.9	1508.9
MIN-8H	459.3	641
NEN8H	0	0

**Marzo 2019**

CMD	15	31
MAX-1H	1303.7	4948.2
MEAN-1H	573.8	1955.3

	GIR- SOSN	MED- PJIC
MIN-1H	239.2	764.6
NEN1H	0	0
MAX-8H	856.5	4026.6
MEAN-8H	574	1953.9
MIN-8H	378.9	952.8
NEN8H	0	0

**Abril 2019**

CMD	12	28
MAX-1H	871.7	5465.6
MEAN-1H	360	2011.1
MIN-1H	39	305.4
NEN1H	0	0
MAX-8H	612.4	4268.4
MEAN-8H	356.5	2012

	GIR- SOSN	MED- PJIC
MIN-8H	91	965.1
NEN8H	0	0

**Mayo 2019**

CMD	19	31
MAX-1H	1915.4	4972.2
MEAN-1H	509.9	2007.2
MIN-1H	2.4	625.7
NEN1H	0	0
MAX-8H	979.6	3841.3
MEAN-8H	512.6	2008.5
MIN-8H	48.4	960.6
NEN8H	0	0

**Junio 2019**

CMD	20	14
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	GIR- SOSN	MED- PJIC
MAX-1H	1408.2	4149.1
MEAN-1H	584.8	1591.9
MIN-1H	303.5	294.2
NEN1H	0	0
MAX-8H	1095	2775.2
MEAN-8H	586	1589.5
MIN-8H	379.8	549.2
NEN8H	0	0

**Julio 2019**

CMD	5	N.A
MAX-1H	827.2	N.A
MEAN-1H	391.7	N.A
MIN-1H	57.1	N.A
NEN1H	0	N.A

	GIR- SOSN	MED- PJIC
MAX-8H	610.2	N.A
MEAN-8H	393.4	N.A
MIN-8H	182.5	N.A
NEN8H	0	N.A

**Agosto 2019**

CMD	N.A	24
MAX-1H	N.A	6164
MEAN-1H	N.A	1569.1
MIN-1H	N.A	368.6
NEN1H	N.A	0
MAX-8H	N.A	3780.1
MEAN-8H	N.A	1569.9
MIN-8H	N.A	597.9
NEN8H	N.A	0

**Septiembre 2019**

CMD	N.A	29
MAX-1H	N.A	8126.3
MEAN-1H	N.A	1900.7
MIN-1H	N.A	27.5
NEN1H	N.A	0
MAX-8H	N.A	5716.9
MEAN-8H	N.A	1897.1
MIN-8H	N.A	379.7
NEN8H	N.A	4

**Octubre 2019**

CMD	N.A	31
MAX-1H	N.A	5919
MEAN-1H	N.A	1880.9

	GIR- SOSN	MED- PJIC
MIN-1H	N.A	392.7
NEN1H	N.A	0
MAX-8H	N.A	4245
MEAN-8H	N.A	1878.7
MIN-8H	N.A	643.7
NEN8H	N.A	0

#### 4. Resumen Estadísticos 2019 para Ozono

	GIR- SOSN	MED- UNNV	CAL- LASA	BEL- USBV	ITA- CONC	BAR- PDLA	MED- UDEM	MED- MIRA	MED- LAYE
<b>Enero 2019</b>									
CMD	31	30	31	21	27	31	30	31	31
MAX-8H	64.8	70.4	120.7	65	129.7	68.4	86.8	37.8	105.9
MEAN-8H	28	22.9	34.2	26.7	35.6	25.5	23.6	10.5	23.9
MIN-8H	5.1	3.8	0.9	0.4	3	0	3	0	0
NEN8H	0	0	9	0	8	0	0	0	4
<b>Febrero 2019</b>									
CMD	28	28	28	28	26	28	13	20	28
MAX-8H	72.7	88.4	130.4	71.1	111.6	84.4	65.9	100.8	96.8
MEAN-8H	36	29.3	41.4	29.5	44.8	32.4	28.6	28	29.4

	GIR-SOSN	MED-UNNV	CAL-LASA	BEL-USBV	ITA-CONC	BAR-PDLA	MED-UDEM	MED-MIRA	MED-LAYE
MIN-8H	7.4	5	1.3	0.6	4.3	2.7	4.8	0.4	2
NEN8H	0	0	41	0	19	0	0	2	0
<b>Marzo 2019</b>									
CMD	31	24	31	31	25	31	N.A	31	31
MAX-8H	87.3	86.1	124	77.9	125.4	90.8	N.A	97	90.5
MEAN-8H	40	29.3	40.6	31.7	44.7	35.5	N.A	29.9	27.7
MIN-8H	8.2	4.3	0.8	0	4.3	0.1	N.A	0.4	4.2
NEN8H	0	0	37	0	16	0	N.A	0	0
<b>Abril 2019</b>									
CMD	28	25	26	30	30	29	N.A	24	29
MAX-8H	82.2	74.9	99.8	93.9	116.4	82.9	N.A	94	80.6
MEAN-8H	36.3	27.9	34.6	32	37.4	29.2	N.A	31.6	26.9
MIN-8H	7.8	3.6	3.1	0.1	0	0	N.A	0	3.6
NEN8H	0	0	0	0	16	0	N.A	0	0
<b>Mayo 2019</b>									
CMD	31	31	31	31	31	31	30	27	31
MAX-8H	68.1	97	111	69.7	98.3	66.9	85.9	116.7	91.9
MEAN-8H	21	23.3	27.1	22.6	28	21.8	22	26.8	24.3
MIN-8H	0.1	0.4	3.3	0.7	0.1	0	0	0	3.3
NEN8H	0	0	3	0	0	0	0	4	0
<b>Junio 2019</b>									
CMD	30	30	30	28	28	24	30	28	28
MAX-8H	52.4	65.8	80.4	64.6	104.1	59.6	61.3	76.8	73.6
MEAN-8H	18.9	17.7	26.6	21	26.6	23.7	18.9	24.7	24.8
MIN-8H	0.1	0.3	3.1	0.7	0.1	1	0.7	0	4.1
NEN8H	0	0	0	0	2	0	0	0	0
<b>Julio 2019</b>									

	GIR-SOSN	MED-UNNV	CAL-LASA	BEL-USBV	ITA-CONC	BAR-PDLA	MED-UDEM	MED-MIRA	MED-LAYE
CMD	8	29	31	26	27	29	29	30	31
MAX-8H	47.3	72.3	90.1	57.6	90	61.9	72.2	86.8	78.3
MEAN-8H	19.3	22.1	31.5	24	33.7	25.4	23.7	30.1	28.5
MIN-8H	1.4	1.1	2.6	0.3	1.9	1	1.6	1.2	5
NEN8H	0	0	0	0	0	0	0	0	0
<b>Agosto 2019</b>									
CMD	N.A	28	31	31	26	27	25	31	31
MAX-8H	N.A	102.4	102.1	91.5	109.5	92.1	76.8	109.1	94
MEAN-8H	N.A	32.1	41.3	35.1	46.9	34.2	33.5	43.8	41.1
MIN-8H	N.A	2.2	1.6	0.7	3.9	0.8	1.1	1.2	2.7
NEN8H	N.A	2	1	0	4	0	0	4	0
<b>Septiembre 2019</b>									
CMD	N.A	23	30	30	30	30	30	29	18
MAX-8H	N.A	90.8	100.8	95.3	114.2	92.9	77.7	106.7	87.3
MEAN-8H	N.A	36.2	34.8	30.8	39.7	32.2	27.4	35.6	40.6
MIN-8H	N.A	6.1	0.3	0	1.4	0.6	0	0	4.9
NEN8H	N.A	0	1	0	5	0	0	3	0
<b>Octubre 2019</b>									
CMD	27	31	31	31	31	29	30	31	24
MAX-8H	64.4	75.8	96.4	75.5	94.2	76.1	83.1	91.2	96.8
MEAN-8H	21.7	21.8	26	21.5	30.3	25.2	21.2	27	28.8
MIN-8H	0.5	0	0.4	0	0.5	2.2	0	1	1.8
NEN8H	0	0	0	0	0	0	0	0	0

## 5. Resumen Estadísticos 2019 para SO2

**Enero 2019**

CMD	31
MAX-1H	314
MEAN-1H	28.6
MIN-1H	4.2
NEN1H	19
MAX-D	60.6
MEAN-D	28.6
MIN-D	9.1
NEND	1

**Febrero 2019**

CMD	24
MAX-1H	223.9
MEAN-1H	25.6
MIN-1H	3.7
NEN1H	10
MAX-D	41.2
MEAN-D	25.8
MIN-D	12.6
NEND	0

**Marzo 2019**

CMD	31
MAX-1H	201.4
MEAN-1H	27.4
MIN-1H	4.2
NEN1H	16
MAX-D	43.7

	GIR- SOSN
MEAN-D	27.4
MIN-D	16.1
NEND	0

**Abril 2019**

CMD	4
MAX-1H	148.7
MEAN-1H	28.3
MIN-1H	0
NEN1H	4
MAX-D	42.3
MEAN-D	34.8
MIN-D	28.5
NEND	0

**Mayo 2019**

CMD	16
MAX-1H	219.2
MEAN-1H	23.5
MIN-1H	1.6
NEN1H	11
MAX-D	60.8
MEAN-D	23.4
MIN-D	10
NEND	1

**Junio 2019**

CMD	23
MAX-1H	387.3
MEAN-1H	22.6

GIR-SOSN	
MIN-1H	0
NEN1H	18
MAX-D	55.3
MEAN-D	23
MIN-D	5.6
NEND	2

**Julio 2019**

CMD	22
MAX-1H	280.2
MEAN-1H	33.5
MIN-1H	5
NEN1H	29
MAX-D	62.9
MEAN-D	33.3
MIN-D	8.7
NEND	4

**Agosto 2019**

CMD	31
MAX-1H	442.8
MEAN-1H	47.7
MIN-1H	4.5
NEN1H	79
MAX-D	85.1
MEAN-D	47.7
MIN-D	16.9
NEND	13

**Septiembre 2019**

	GIR-SOSN
CMD	30
MAX-1H	283.3
MEAN-1H	28.4
MIN-1H	2.6
NEN1H	19
MAX-D	60.9
MEAN-D	28.4
MIN-D	8.9
NEND	1

**Octubre 2019**

CMD	31
MAX-1H	179.6
MEAN-1H	23.7
MIN-1H	1.8
NEN1H	9
MAX-D	34.2
MEAN-D	23.7
MIN-D	12
NEND	0

## 6. Resumen Estadísticos 2019 para NO2

	GIR-SOSN	MED-PJIC	CEN-TRAF	MED-UNNV	ITA-CJUS	BEL-USBV	SUR-TRAF	MED-ITMR
<b>Enero 2019</b>								
CMD	23	31	N.A	29	30	14	27	31

	GIR-SOSN	MED-PJIC	CEN-TRAF	MED-UNNV	ITA-CJUS	BEL-USBV	SUR-TRAF	MED-ITMR
MAX-1H	50.1	74.5	N.A	87.5	91	64	82.1	46
MEAN-1H	16.7	27.3	N.A	30.1	33.7	18.6	29.5	16.4
MIN-1H	0.2	7.2	N.A	1.5	7.2	2.9	0.3	3.2
NEN1H	0	0	N.A	0	0	0	0	0

**Febrero 2019**

CMD	10	27	N.A	27	28	21	28	11
MAX-1H	52.7	102	N.A	93.4	114.2	85.5	74.9	44.4
MEAN-1H	16.9	32.4	N.A	34	36.8	18.9	31.6	18.2
MIN-1H	0.1	8.3	N.A	7.1	10.4	0.8	1.5	7.3
NEN1H	0	0	N.A	0	0	0	0	0

**Marzo 2019**

CMD	20	29	N.A	23	27	29	31	16
MAX-1H	72.6	97.3	N.A	116.1	129.3	107.8	83.5	104.2
MEAN-1H	24.2	35.6	N.A	41.1	45.8	20.9	32.7	39.4
MIN-1H	3.1	10.6	N.A	0.3	5.5	0.1	0.9	5.8
NEN1H	0	0	N.A	0	0	0	0	0

**Abril 2019**

CMD	26	28	N.A	24	30	27	30	11
MAX-1H	98.3	127.1	N.A	122.4	128.9	112.4	121.8	124.1
MEAN-1H	28	37.1	N.A	26.9	52.8	25.2	43.6	44.9
MIN-1H	2.9	8.1	N.A	0	8.8	0.4	6.8	10.7
NEN1H	0	0	N.A	0	0	0	0	0

**Mayo 2019**

CMD	28	31	N.A	28	31	31	31	29
MAX-1H	97	103	N.A	87.4	130.8	108.8	128.1	100.3
MEAN-1H	26.3	36.1	N.A	27	48.6	25.3	42	38.1
MIN-1H	5.6	8.3	N.A	2.7	11.3	3	8	3.5

	GIR- SOSN	MED- PJC	CEN- TRAF	MED- UNNV	ITA- CJUS	BEL- USBV	SUR- TRAF	MED- ITMR
NEN1H	0	0	N.A	0	0	0	0	0
<b>Junio 2019</b>								
CMD	30	19	8	28	30	5	11	29
MAX-1H	90.1	154.5	97.8	132.6	152.9	67.5	77.5	122.6
MEAN-1H	22.8	38.1	40.9	20.1	40.8	22.1	31.3	27.9
MIN-1H	5.1	1.4	0	0	7	6.4	7.4	2.7
NEN1H	0	0	0	0	0	0	0	0
<b>Julio 2019</b>								
CMD	30	31	28	30	31	N.A	31	28
MAX-1H	64.5	116.7	128.5	109.2	123.2	N.A	115.3	118.1
MEAN-1H	21.7	38.5	37.4	21.8	41.3	N.A	21.7	23.4
MIN-1H	4.5	1.2	18.5	0.1	5.2	N.A	0	0
NEN1H	0	0	0	0	0	N.A	0	0
<b>Agosto 2019</b>								
CMD	29	29	31	17	30	N.A	23	27
MAX-1H	82.3	126.5	151	103.3	126.9	N.A	85.4	100
MEAN-1H	28.9	49.3	56.1	36.9	45.2	N.A	25	31
MIN-1H	5.3	5.6	0	0.8	9.4	N.A	0.5	0
NEN1H	0	0	0	0	0	N.A	0	0
<b>Septiembre 2019</b>								
CMD	30	28	30	15	6	N.A	10	28
MAX-1H	74.2	185.1	168.1	92	95.3	N.A	104.6	100.6
MEAN-1H	24.3	54.4	53.4	32.1	45.4	N.A	31.4	32.7
MIN-1H	2.6	8	11.3	3.8	16.9	N.A	2.9	3.5
NEN1H	0	0	0	0	0	N.A	0	0
<b>Octubre 2019</b>								
CMD	31	31	29	22	31	N.A	31	30

	GIR- SOSN	MED- PJIC	CEN- TRAF	MED- UNNV	ITA- CJUS	BEL- USBV	SUR- TRAF	MED- ITMR
MAX-1H	105.6	117.2	118.2	89.2	106.9	N.A	107.6	80.8
MEAN-1H	25.9	50.5	51	36.8	40.4	N.A	33	29.9
MIN-1H	3.1	13.4	16.1	0	11.6	N.A	1.6	7.7
NEN1H	0	0	0	0	0	N.A	0	0