

MEDIDA DEL NIVEL DE CONTAMINACIÓN DEL AIRE EN EL ENTORNO DEL JARDÍN DE LAS HESPÉRIDES (Ceuta)

INFORME DE RESULTADOS

Anexo 1. Resultados del laboratorio e Informes.

Localización	nº de muestra	Fecha inicio	Fecha fin	tiempo (horas)	NO ₂ (µg/m ³)
COLE 1 (invernadero)	2252750	27/6/2023	17/7/2023	478,58	47,44
COLE 2	2252751	27/6/2023	17/7/2023	478,65	40,21
ESTACION	2252752	27/6/2023	17/7/2023	478,47	45,52
COLE 1 (invernadero)	2252753	17/7/2023	3/8/2023	408,77	40,26
COLE 2	2252754	17/7/2023	3/8/2023	408,75	41,23
ESTACION	2252755	17/7/2023	3/8/2023	408,67	54,74
COLE 1 (invernadero)	2252756	3/8/2023	16/8/2023	318,00	52,79
COLE 2	2252757	3/8/2023	16/8/2023	318,00	47,42
ESTACION	2252758	3/8/2023	16/8/2023	320,00	43,00
COLE 1 (invernadero)	2252759	16/8/2023	31/8/2023	360,25	53,85
COLE 2	2252760	16/8/2023	31/8/2023	360,33	49,87
ESTACION	2252761	16/8/2023	31/8/2023	358,33	57,86
COLE 1 (invernadero)	2296324	31/8/2023	16/9/2023	384,08	47,04
COLE 2	2296325	31/8/2023	16/9/2023	384,13	42,12
ESTACION	2296326	31/8/2023	16/9/2023	384,08	43,92
COLE 1 (invernadero)	2296327	16/9/2023	1/10/2023	358,67	56,28
COLE 2	2296328	16/9/2023	1/10/2023	358,62	51,22
ESTACION	2296329	16/9/2023	1/10/2023	358,83	34,43
COLE 1 (invernadero)	2296330	1/10/2023	16/10/2023	359,17	55,01
COLE 2	2296331	1/10/2023	16/10/2023	359,13	50,69
ESTACION	2296332	1/10/2023	16/10/2023	357,67	25,97
COLE 1 (invernadero)	2296333	16/10/2023	26/10/2023	240,00	16,80
COLE 2	2296334	16/10/2023	26/10/2023	240,08	16,56
ESTACION	2296335	16/10/2023	26/10/2023	240,83	51,02

Tabla de resultados de laboratorio: concentración promedio del periodo de muestreo por punto de muestreo. En cursiva resultados no considerados en el estudio por anomalía detectada en la muestra por el laboratorio.

LABORATORY ANALYSIS REPORT

NITROGEN DIOXIDE IN DIFFUSION TUBES BY U.V.SPECTROPHOTOMETRY

REPORT NUMBER R06619R
BOOKING IN REFERENCE R06619
DESPATCH NOTE 102679
CUSTOMER Veo El Aire, Coop. V Attn: María José Sales
 Avenida Cortes
 Valencianas
 43 A-D1,
 Valencia
 46015
 Spain
DATE SAMPLES RECEIVED 11/09/2023

Location	Sample Number	Exposure Data			$\mu\text{g}/\text{m}^3$ *	ppb *	$\mu\text{g NO}_2$ on tube	
		Date On*	Date Off*	Time* (hr.)				
COLE 1 (invernadero)	2252750	27/06/2023	17/07/2023	478.58	47.44	24.76	1.65	
COLE 2	2252751	27/06/2023	17/07/2023	478.65	40.21	20.99	1.40	
ESTACION	2252752	27/06/2023	17/07/2023	478.47	45.52	23.76	1.58	
COLE 1 (invernadero)	2252753	17/07/2023	03/08/2023	408.77	40.26	21.01	1.20	
COLE 2	2252754	17/07/2023	03/08/2023	408.75	41.23	21.52	1.23	
ESTACION	2252755	17/07/2023	03/08/2023	408.67	54.74	28.57	1.63	
COLE 1 (invernadero)	2252756	03/08/2023	16/08/2023	318.00	52.79	27.55	1.22	
COLE 2	2252757	03/08/2023	16/08/2023	318.00	47.42	24.75	1.10	
ESTACION	2252758	03/08/2023	16/08/2023	320.00	43.00	22.44	1.00	
COLE 1 (invernadero)	2252759	16/08/2023	31/08/2023	360.25	53.85	28.11	1.41	
COLE 2	2252760	16/08/2023	31/08/2023	360.33	49.87	26.03	1.31	
ESTACION	2252761	16/08/2023	31/08/2023	358.33	57.86	30.20	1.51	
Laboratory Blank					478.65	0.11	0.06	0.004

Comment: Results are not blank subtracted

Tube 2252753 contained a web. Result may be compromised.

Results have been corrected to a temperature of 293 K (20°)

Overall M.U. $\pm 9.7\%$

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Tube Preparation: 20% TEA / Water

Analyst Name Jennie Green

Limit of Detection 0.031 μgNO_2

Analysed on UV CARY2

Report Checked By Adam Robinson

Date of Analysis 26/09/2023

Date of Report 26/09/2023

Analysis carried out in accordance with documented In-house Laboratory Method GLM7

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

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Report Number R06619R

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Gradko International Ltd
 This signature confirms the authenticity of these results
 Signed.....
 L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

NITROGEN DIOXIDE IN DIFFUSION TUBES BY U.V.SPECTROPHOTOMETRY

REPORT NUMBER R08286R
BOOKING IN REFERENCE R08286
DESPATCH NOTE 103608
CUSTOMER Veo El Aire, Coop. V Attn: María José Sales
 Avenida Cortes
 Valencianas
 43 A-D1.
 Valencia
 46015
 Spain
DATE SAMPLES RECEIVED 15/11/2023
JOB REFERENCE Jardín de las Hespérides - Fase II

Location	Sample Number	Exposure Data			µg/m ³ *	ppb *	µg NO ₂ on tube
		Date On*	Date Off*	Time* (hr.)			
COLE 1 (invernadero)	2296324	31/08/2023	16/09/2023	384.08	47.04	24.55	1.31
COLE 2	2296325	31/08/2023	16/09/2023	384.13	42.12	21.98	1.18
ESTACION	2296326	31/08/2023	16/09/2023	384.08	43.92	22.92	1.23
COLE 1	2296327	16/09/2023	01/10/2023	358.67	56.28	29.37	1.47
COLE 2	2296328	16/09/2023	01/10/2023	358.62	51.22	26.73	1.34
ESTACION	2296329	16/09/2023	01/10/2023	358.83	34.43	17.97	0.90
COLE 1	2296330	01/10/2023	16/10/2023	359.17	55.01	28.71	1.44
COLE 2	2296331	01/10/2023	16/10/2023	359.13	50.69	26.45	1.32
ESTACION	2296332	01/10/2023	16/10/2023	357.67	25.97	13.55	0.68
COLE 1	2296333	16/10/2023	26/10/2023	240.00	16.80	8.77	0.29
COLE 2	2296334	16/10/2023	26/10/2023	240.08	16.56	8.64	0.29
ESTACION	2296335	16/10/2023	26/10/2023	240.83	51.02	26.63	0.89
Laboratory Blank				384.13	0.11	0.06	0.003

Comment: Results are not blank subtracted

Customer noted spiders in tubes: 2296326, 2296329 & 2296335

Tubes were exposed for shorter than the recommended 2-4 weeks.

Exposure times were calculated from start and finish times given on the exposure sheet.

Tubes 2296326, 2296329 & 2296335 contained webs. Results may be compromised.

Results have been corrected to a temperature of 293 K (20°)

Overall M.U. ±9.7%

Limit of Detection 0.028µgNO₂

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of *k*-2, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Tube Preparation: 20% TEA / Water

Analysed on UV CARY1

Analyst Name Ivelina Paldamova

Report Checked By Adam Robinson

Date of Analysis 30/11/2023

Date of Report 30/11/2023

Analysis carried out in accordance with documented in-house Laboratory Method GLM7

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Gradko International Ltd
 This signature confirms the authenticity of these results
 Signed.....
 L. Gates, Laboratory Manager