Customer:	[redacted]	Testing Facility:	SOCOTEC Unit 12 Moorbrook Southmead Industrial Park Didcot Oxfordshire OX11 7HP
Quotation Number:	DIF-ANU-10952 (Period 4)	Samples Received:	05 May 2023
Customer Order Number:		Analysis Completed:	18 May 2023
Customer Reference:		Report Date:	19 May 2023

Nitrogen Dioxide Diffusion Tube Analysis Report

The samples have been analysed in accordance with SOCOTEC's standard operating procedure ANU/SOP/1015. This method meets the guidelines set out in DEFRA's 'Diffusion Tubes for Ambient NO2 Monitoring: Practical Guidance.'

The tubes were prepared by spiking acetone:triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow auto analyser with ultraviolet detection. All samples were received in good condition, unless otherwise stated in the comments field of results table. Please note:

(i) As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11°C, the reported values **have** been adjusted to 20°C to allow for direct comparison with EU limits.

(ii) The reported results have not been bias adjusted.

This analysis of diffusion tube samples to determine the amount of nitrogen dioxide present on the tube is within the scope of our UKAS schedule. Any further calculations and assessments requiring exposure details and conditions fall outside the scope of our accreditation. In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a **Satisfactory** laboratory.

Approved By

[redacted]

1252

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S1	1	05/04/2023 08:55	03/05/2023 09:54	672.98	0.91	19.5	10.1	
OCC/23A/NA4S2	2	05/04/2023 08:57	03/05/2023 09:56	672.98	0.89	18.9	9.8	
OCC/23A/NA4S3	3	05/04/2023 09:00	03/05/2023 09:58	672.97	1.15	24.4	12.7	
OCC/23A/NA4S4	4	05/04/2023 09:04	03/05/2023 10:00	672.93	1.16	24.8	12.9	
OCC/23A/NA4S5	5	05/04/2023 09:08	03/05/2023 10:03	672.92	0.98	20.8	10.8	
OCC/23A/NA4S6	6	05/04/2023 09:10	03/05/2023 10:08	672.97	1.14	24.4	12.7	
OCC/23A/NA4S7	7	05/04/2023 09:12	03/05/2023 10:10	672.97	0.8	17.1	8.9	
OCC/23A/NA4S8	8	05/04/2023 09:15	03/05/2023 10:13	672.97	1.77	37.8	19.6	
OCC/23A/NA4S9	9	05/04/2023 09:17	03/05/2023 10:16	672.98	1.52	32.4	16.8	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S10	10	05/04/2023 09:20	03/05/2023 10:19	672.98	1.57	33.4	17.4	
OCC/23A/NA4S11	11	05/04/2023 09:23	03/05/2023 10:20	672.95	1.42	30.2	15.7	
OCC/23A/NA4S12	12	05/04/2023 09:25	03/05/2023 10:22	672.95	1.53	32.5	16.9	
OCC/23A/NA4S13	13	05/04/2023 09:28	03/05/2023 10:26	672.97	0.43	9.2	4.8	
OCC/23A/NA4S14	14	05/04/2023 09:28	03/05/2023 10:26	672.97	0.48	10.1	5.3	
OCC/23A/NA4S15	15	05/04/2023 09:28	03/05/2023 10:26	672.97	0.49	10.4	5.4	
OCC/23A/NA4S16	16	05/04/2023 09:33	03/05/2023 10:32	672.98	1.09	23.1	12	
OCC/23A/NA4S17	17	05/04/2023 09:37	03/05/2023 10:36	672.98	1.53	32.6	17	
OCC/23A/NA4S18	18	05/04/2023 09:40	03/05/2023 10:38	672.97	1.19	25.2	13.1	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S19	19	05/04/2023 09:46	03/05/2023 10:40	672.90	1.45	30.9	16.1	
OCC/23A/NA4S20	20	05/04/2023 09:49	03/05/2023 10:45	672.93	0.44	9.3	4.8	Spider in tube
OCC/23A/NA4S21	21	05/04/2023 09:58	03/05/2023 10:50	672.87	0.93	19.8	10.3	
OCC/23A/NA4S22	22	05/04/2023 10:02	03/05/2023 10:52	672.83	1.71	36.5	19	
OCC/23A/NA4S23	23	05/04/2023 10:05	03/05/2023 10:55	672.83	0.86	18.3	9.5	
OCC/23A/NA4S24	24	05/04/2023 10:10	03/05/2023 11:00	672.83	0.9	19.3	10	
OCC/23A/NA4S25	25	05/04/2023 10:17	03/05/2023 11:03	672.77	1.58	33.7	17.5	
OCC/23A/NA4S26	26	05/04/2023 10:19	03/05/2023 11:06	672.78	1.75	37.2	19.4	
OCC/23A/NA4S27	27	05/04/2023 10:23	03/05/2023 11:10	672.78	1.72	36.7	19.1	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S28	28	05/04/2023 10:25	03/05/2023 11:13	672.80	1.71	36.4	18.9	
OCC/23A/NA4S29	29	05/04/2023 10:30	03/05/2023 11:17	672.78	1.01	21.4	11.1	
OCC/23A/NA4S30	30	05/04/2023 10:35	03/05/2023 11:20	672.75	1.65	35.2	18.3	
OCC/23A/NA4S31	31	05/04/2023 10:40	03/05/2023 11:23	672.72	1.17	25	13	
OCC/23A/NA4S32	32	05/04/2023 10:41	03/05/2023 11:25	672.73	1.63	34.8	18.1	
OCC/23A/NA4S33	33	05/04/2023 10:42	03/05/2023 11:27	672.75	1.84	39.2	20.4	
OCC/23A/NA4S34	34	05/04/2023 10:43	03/05/2023 11:30	672.78	1.71	36.5	19	
OCC/23A/NA4S35	35	05/04/2023 13:20	03/05/2023 12:12	670.87	2.59	55.2	28.7	
OCC/23A/NA4S36	36	05/04/2023 13:23	03/05/2023 12:15	670.87	2.16	46.1	24	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S37	37							Missing
OCC/23A/NA4S38	38	05/04/2023 13:29	03/05/2023 12:25	670.93	1.31	28	14.5	
OCC/23A/NA4S39	39	05/04/2023 13:33	03/05/2023 12:30	670.95	1.48	31.7	16.5	
OCC/23A/NA4S40	40	05/04/2023 13:38	03/05/2023 12:32	670.90	1.48	31.5	16.4	
OCC/23A/NA4S41	41	05/04/2023 13:40	03/05/2023 12:36	670.93	1.17	24.9	13	
OCC/23A/NA4S42	42	05/04/2023 13:42	03/05/2023 12:40	670.97	1.22	26.1	13.6	
OCC/23A/NA4S43	43	05/04/2023 13:44	03/05/2023 12:42	670.97	1.39	29.7	15.4	
OCC/23A/NA4S44	44	05/04/2023 13:50	03/05/2023 12:57	671.12	2.19	46.8	24.3	
OCC/23A/NA4S45	45	05/04/2023 14:00	03/05/2023 13:00	671.00	1.56	33.4	17.4	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S46	46	05/04/2023 14:03	03/05/2023 13:06	671.05	1.33	28.4	14.8	
OCC/23A/NA4S47	47	05/04/2023 14:06	03/05/2023 13:10	671.07	1.14	24.3	12.7	
OCC/23A/NA4S48	48	05/04/2023 14:08	03/05/2023 13:12	671.07	1.49	31.7	16.5	
OCC/23A/NA4S49	49	05/04/2023 14:10	03/05/2023 13:14	671.07	1.52	32.5	16.9	
OCC/23A/NA4S50	50	05/04/2023 14:15	03/05/2023 13:18	671.05	0.97	20.6	10.7	
OCC/23A/NA4S51	51	05/04/2023 14:25	03/05/2023 13:25	671.00	0.78	16.8	8.7	
OCC/23A/NA4S52	52	05/04/2023 14:30	03/05/2023 13:30	671.00	0.6	12.8	6.6	
OCC/23A/NA4S53	53	05/04/2023 14:35	03/05/2023 13:40	671.08	0.99	21.2	11	
OCC/23A/NA4S54	54	05/04/2023 14:38	03/05/2023 13:44	671.10	1.11	23.6	12.3	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S55	55	05/04/2023 14:44	03/05/2023 13:46	671.03	1.16	24.8	12.9	
OCC/23A/NA4S56	56	05/04/2023 14:48	03/05/2023 13:48	671.00	1.75	37.3	19.4	
OCC/23A/NA4S57	57	05/04/2023 14:50	03/05/2023 13:50	671.00	0.67	14.4	7.5	
OCC/23A/NA4S58	58	05/04/2023 14:55	03/05/2023 13:52	670.95	1.03	22	11.4	
OCC/23A/NA4S59	59	05/04/2023 15:05	03/05/2023 14:00	670.92	1.49	31.9	16.6	
OCC/23A/NA4S60	60	05/04/2023 15:07	03/05/2023 14:05	670.97	0.85	18.2	9.5	
OCC/23A/NA4S61	61	05/04/2023 15:00	03/05/2023 13:55	670.92	2.27	48.5	25.2	
OCC/23A/NA4S62	62	05/04/2023 15:00	03/05/2023 13:55	670.92	2.26	48.2	25.1	
OCC/23A/NA4S63	63	05/04/2023 15:00	03/05/2023 13:55	670.92	2.46	52.5	27.3	

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S64	64	05/04/2023 15:15	03/05/2023 14:12	670.95	1.61	34.3	17.9	
OCC/23A/NA4S65	65	05/04/2023 15:16	03/05/2023 14:13	670.95	1.38	29.4	15.3	
OCC/23A/NA4S66	66	05/04/2023 15:17	03/05/2023 14:16	670.98	0.76	16.2	8.4	
OCC/23A/NA4S67	67	05/04/2023 15:19	03/05/2023 14:18	670.98	1.72	36.7	19.1	
OCC/23A/NA4S68	68	05/04/2023 15:22	03/05/2023 14:19	670.95	1.38	29.5	15.3	
OCC/23A/NA4S69	69	05/04/2023 15:25	03/05/2023 14:20	670.92	1.52	32.5	16.9	
OCC/23A/NA4S70	70	05/04/2023 15:30	03/05/2023 14:22	670.87	1.01	21.6	11.2	
OCC/23A/NA4S71	71	05/04/2023 15:32	03/05/2023 14:25	670.88	1.57	33.6	17.5	
OCC/23A/NA4S72	72	05/04/2023 15:34	03/05/2023 14:28	670.90	1.34	28.6	14.9	

1252

Sample Number	Site	Date and Time ON	Date and Time OFF	Exposure Time (Hours)	Total µg	µg m^{-3}	ppb	Comments
OCC/23A/NA4S73	73	05/04/2023 15:36	03/05/2023 14:30	670.90	1.7	36.3	18.9	
OCC/23A/NA4S74	74	05/04/2023 15:38	03/05/2023 14:32	670.90	1.18	25.2	13.1	
OCC/23A/NA4S75	75	05/04/2023 15:40	03/05/2023 14:35	670.92	1.42	30.4	15.8	
OCC/23A/NA4S76	76	05/04/2023 15:10	03/05/2023 14:10	671.00	0.47	10.1	5.3	
OCC/23A/NA4S77	77	05/04/2023 15:12	03/05/2023 14:08	670.93	1.04	22.2	11.5	