

Supplement of Atmos. Chem. Phys., 19, 2233–2246, 2019
<https://doi.org/10.5194/acp-19-2233-2019-supplement>
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Supplement of

Aliphatic carbonyl compounds (C₈–C₂₆) in wintertime atmospheric aerosol in London, UK

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1 **Table S1:** Detection limit of gaseous (G) and particle (P) carbonyl compounds.

Carbon number	n-Alkanals	DL, ng m ⁻³		n-Alkan-2-ones	DL, ng m ⁻³		n-Alkan-3-ones	DL, ng m ⁻³	
		G	P		G	P		G	P
C ₈	<i>n</i> -Octanal	0.013	0.008	<i>n</i> -Octan-2-one	0.015	0.011	<i>n</i> -Octan-3-one	0.010	0.008
C ₉	<i>n</i> -Nonanal	0.011	0.015	<i>n</i> -Nonan-2-one	0.010	0.008	<i>n</i> -Nonan-3-one	0.007	0.002
C ₁₀	<i>n</i> -Decanal	0.016	0.002	<i>n</i> -Decan-2-one	0.007	0.005	<i>n</i> -Decan-3-one	0.005	0.003
C ₁₁	<i>n</i> -Undecanal	0.015	0.010	<i>n</i> -Undecan-2-one	0.002	0.009	<i>n</i> -Undecan-3-one	0.005	0.003
C ₁₂	<i>n</i> -Dodecanal	0.010	0.006	<i>n</i> -Dodecan-2-one	0.005	0.001	<i>n</i> -Dodecan-3-one	0.009	0.001
C ₁₃	<i>n</i> -Tridecanal	0.010	0.009	<i>n</i> -Tridecan-2-one	0.008	0.004	<i>n</i> -Tridecan-3-one	0.008	0.002
C ₁₄	<i>n</i> -Tetradecanal	0.008	0.013	<i>n</i> -Tetradecan-2-one	0.015	0.006	<i>n</i> -Tetradecan-3-one	0.010	0.005
C ₁₅	<i>n</i> -Pentadecanal	0.015	0.005	<i>n</i> -Pentadecan-2-one	0.013	0.002	<i>n</i> -Pentadecan-3-one	0.009	0.003
C ₁₆	<i>n</i> -Hexadecanal	0.020	0.015	<i>n</i> -Hexadecan-2-one	0.006	0.001	<i>n</i> -Hexadecan-3-one	0.015	0.007
C ₁₇	<i>n</i> -Heptadecanal	0.021	0.012	<i>n</i> -Heptadecan-2-one	0.008	0.004	<i>n</i> -Heptadecan-3-one	0.009	0.004
C ₁₈	<i>n</i> -Octadecanal	0.014	0.007	<i>n</i> -Octadecan-2-one	0.011	0.012	<i>n</i> -Octadecan-3-one	0.008	0.003
C ₁₉	<i>n</i> -Nonadecanal	0.010	0.016	<i>n</i> -Nonadecan-2-one	0.020	0.006	<i>n</i> -Nonadecan-3-one	0.012	0.005
C ₂₀	<i>n</i> -Eicosanal	0.019	0.015	<i>n</i> -Eicosan-2-one	0.018	0.009			
C ₂₁				<i>n</i> -Heneicosan-2-one	0.022	0.006			
C ₂₂				<i>n</i> -Docosan-2-one	0.014	0.010			
C ₂₃				<i>n</i> -Tricosan-2-one	0.017	0.011			
C ₂₄				<i>n</i> -Tetracosan-2-one	0.010	0.015			
C ₂₅				<i>n</i> -Pentacosan-2-one	0.016	0.020			
C ₂₆				<i>n</i> -Hexacosan-2-one	0.021	0.015			

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3 Table S2. Concentrations (ng m⁻³) in particulate (P) and gaseous (G) forms

RU (Regent University, 15 m above ground, 23 Jan - 19 Feb 2017)												
	n-alkanals		n-alkanals		n-alkan-2-ones		n-alkan-2-ones		n-alkan-3-ones		n-alkan-3-ones	
	P	SD	G	SD	P	SD	G	SD	P	SD	G	SD
C ₈	28.6	10.9			0.97	0.64			0.62	0.58		
C ₉	11.6	6.07			0.72	0.58			0.27	0.14		
C ₁₀	9.11	5.06	2.99	2.47	0.69	0.57	4.37	2.46	0.13	0.09	1.62	1.08
C ₁₁	1.32	0.81	1.58	1.05	0.84	0.61	3.09	1.80	0.12	0.13	0.82	0.66
C ₁₂	2.73	1.50	0.92	0.59	0.67	0.54	2.01	1.47	0.26	0.39	0.57	0.45
C ₁₃	1.45	0.98	0.39	0.35	1.41	1.01	0.90	0.79	0.23	0.21	0.42	0.33
C ₁₄	1.73	1.08	0.50	0.40	1.07	0.74	1.09	0.92	0.22	0.23	0.40	0.28
C ₁₅	2.10	1.41	0.11	0.13	2.33	1.31	0.44	0.35	0.48	0.49	0.47	0.38
C ₁₆	1.98	1.21			2.23	1.35	0.21	0.18	0.85	0.60	0.36	0.20
C ₁₇	1.20	0.86			6.63	3.13	0.62	0.51	1.72	0.97		
C ₁₈	16.1	9.19			7.17	3.41	0.45	0.33	0.83	0.48		
C ₁₉	4.48	3.92			9.03	3.86						
C ₂₀	1.48	1.19			6.21	3.12						
C ₂₁					5.88	3.35						
C ₂₂					4.21	3.05						
C ₂₃					3.13	2.35						
C ₂₄					2.51	1.98						
C ₂₅					1.80	1.59						
C ₂₆					1.02	1.06						

WM (Westminster University, 20 m above ground, 24 Jan - 20 Feb 2017)												
	n-alkanals		n-alkanals		n-alkan-2-ones		n-alkan-2-ones		n-alkan-3-ones		n-alkan-3-ones	
	P	SD	G	SD	P	SD	G	SD	P	SD	G	SD
C ₈	50.3	18.7			0.94	0.66			1.47	1.05		
C ₉	12.6	6.64			0.85	0.80			0.81	0.71		
C ₁₀	12.7	6.97	2.76	1.82	0.74	0.60	4.41	2.32	0.62	0.45	2.04	1.15
C ₁₁	1.74	1.53	1.05	0.89	0.81	0.69	3.22	2.31	0.62	0.61	1.09	0.76
C ₁₂	3.87	2.92	1.38	0.81	0.57	0.54	1.41	0.87	0.20	0.19	0.68	0.56
C ₁₃	2.26	1.53	0.49	0.45	1.29	1.04	1.35	1.02	0.50	0.43	0.30	0.25
C ₁₄	2.73	1.78	0.87	0.71	0.75	0.81	1.61	0.97	0.20	0.16	0.58	0.36
C ₁₅	3.51	2.92			2.89	2.06	0.51	0.33	0.89	0.52	0.41	0.23
C ₁₆	2.62	2.02			2.84	2.15	0.33	0.29	1.21	0.64	0.11	0.17
C ₁₇	1.42	1.03			5.16	4.40	0.85	0.68	2.05	1.15	0.19	0.30
C ₁₈	17.8	11.0			5.37	4.32	0.96	0.73	1.79	1.51	0.01	0.08
C ₁₉	2.65	2.02			5.98	4.98						
C ₂₀	3.34	2.66			8.26	6.93						
C ₂₁					6.02	5.46						
C ₂₂					5.61	5.53						
C ₂₃					2.76	3.11						
C ₂₄					2.14	2.19						
C ₂₅					1.17	1.18						

C₂₆

1.01

1.13

EL (Eltham, 23 Feb - 21 Mar 2017)

	n-alkanals		n-alkanals		n-alkan-2-ones		n-alkan-2-ones		n-alkan-3-ones		n-alkan-3-ones	
	P	SD	G	SD	P	SD	G	SD	P	SD	G	SD
C ₈	53.0	22.5			1.66	0.94			1.10	0.91		
C ₉	27.6	21.5			1.81	1.93			0.92	0.99		
C ₁₀	19.3	11.6	2.02	0.96	2.56	3.28	2.82	1.66	1.01	0.79	1.14	0.66
C ₁₁	4.56	4.72	0.68	0.51	3.81	4.51	1.46	0.95	1.31	1.15	0.80	0.29
C ₁₂	6.75	7.02	0.52	0.49	4.76	6.24	0.95	0.73	0.73	0.95	0.37	0.27
C ₁₃	4.75	3.43	0.22	0.16	5.44	6.32	0.88	0.65	0.90	0.92	0.47	0.32
C ₁₄	3.94	2.43	0.37	0.36	4.07	3.30	0.68	0.53	0.52	0.54	0.36	0.30
C ₁₅	6.22	4.05	0.21	0.19	6.30	4.27	0.37	0.30	1.84	1.19	0.34	0.27
C ₁₆	3.29	2.92			6.41	3.28	0.40	0.28	2.66	1.69	0.33	0.24
C ₁₇	5.03	4.91			10.9	5.82	0.45	0.42	1.98	1.32	0.45	0.19
C ₁₈	22.6	18.3			1.56	6.16	0.45	0.31	2.26	1.48	0.40	0.57
C ₁₉	7.46	4.58			11.9	11.2						
C ₂₀	5.05	4.10			8.96	7.75						
C ₂₁					15.2	7.22						
C ₂₂					11.1	7.34						
C ₂₃					13.0	9.38						
C ₂₄					6.84	6.17						

MR (Marylebone road, 22 Mar - 18 Apr 2017)

	n-alkanals		n-alkanals		n-alkan-2-ones		n-alkan-2-ones		n-alkan-3-ones		n-alkan-3-ones	
	P	SD	G	SD	P	SD	G	SD	P	SD	G	SD
C ₈	141	68.8			4.22	3.44			2.89	1.54		
C ₉	126	74.7			3.35	2.88			1.76	1.69		
C ₁₀	99.9	46.6	8.99	4.16	12.1	5.21	7.72	3.67	0.80	0.74	3.13	1.76
C ₁₁	26.0	13.5	3.76	2.93	4.69	3.96	4.66	2.42	0.88	0.64	1.78	0.56
C ₁₂	38.6	22.3	2.92	2.52	22.3	8.02	2.90	1.71	0.63	0.50	1.61	0.39
C ₁₃	36.0	20.1	1.46	1.08	11.7	4.06	1.64	0.92	1.38	1.09	1.61	0.38
C ₁₄	35.6	17.0	1.78	1.61	41.6	12.7	1.78	0.91	3.29	2.38	1.28	0.49
C ₁₅	76.1	30.0			23.6	10.3	0.75	0.40	6.31	2.84	1.22	0.29
C ₁₆	41.0	22.5			14.4	7.90	0.54	0.25	7.53	3.70	1.03	0.24
C ₁₇	21.9	11.7			14.0	7.12	0.59	0.46	5.64	3.52	0.77	0.18
C ₁₈	10.7	8.76			9.68	6.61	0.78	0.62	4.64	2.82	0.63	0.23
C ₁₉	17.5	10.7			3.56	2.93			4.35	1.91		
C ₂₀	5.47	4.28			7.78	6.17						
C ₂₁					4.01	4.41						
C ₂₂					5.12	4.40						
C ₂₃					2.65	2.73						
C ₂₄					5.89	4.71						

5 Table S3. The ratios of n-alkan-2-ones/n-alkanes, and n-alkan-3-ones/n-alkanes with same carbon
 6 numbers (particles plus vapour).
 7

n-alkan-2-ones/n-alkanes, %					
Carbon numbers	RU	WM	EL	MR	
				Northerly winds	Southerly winds
C13	2.31	1.86	2.14	6.02	6.34
C14	2.03	1.58	2.38	20.8	15.9
C15	4.17	4.77	5.95	11.3	13.6
C16	7.35	5.98	8.58	11.8	7.27
C17	48.9	29.8	31.7	27.0	24.6
C18	32.5	18.2	31.3	23.4	18.1
C19	77.8	33.9	43.2	19.6	14.7
C20	379	168	33.3	32.8	10.1
C21	267	59.3	33.1	10.4	3.18
C22	144	36.1	18.6	4.76	5.29
C23	17.1	6.61	10.5	1.75	3.41
C24	17.1	7.16	11.3	3.31	5.62
C25	26.5	4.24			
C26	18.3	3.36			
averages	74.7	27.2	19.3	14.4	10.1
min	2.03	1.58	2.14	1.75	3.18
max	379	168	43.2	32.8	24.6

8

n-alkan-3-ones/n-alkanes, %					
Carbon numbers	RU	WM	EL	MR	
				Northerly winds	Southerly winds
C13	0.70	0.50	0.49	1.30	1.39
C14	0.58	0.50	0.47	2.10	1.73
C15	1.31	1.51	2.15	5.22	3.58
C16	3.80	1.73	3.87	14.9	4.44
C17	12.4	7.17	8.39	15.7	8.58
C18	3.78	3.87	7.61	11.1	3.59
C19				7.65	8.27
averages	3.76	2.55	3.83	8.28	4.51
min	0.58	0.50	0.47	1.30	1.39
max	12.4	7.17	8.39	15.7	8.58

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12

13 Table S4. The regression equations between black carbon (BC) and n-alkanals, NO_x and n-alkanals
 14 (particles + vapour).

15
 16 $C_{n\text{-alkanals}} = m C_{BC} + b$

Carbon atoms	RU			WM			MR					
	m	b	r ²	m	b	r ²	Northerly Winds			Southerly winds		
							m	b	r ²	m	b	r ²
C10	-2.00	14.5	0.02	-1.55	18.3	0.02	4.39	95.7	0.05	36.2	-48.8	0.53
C11	0.11	2.28	0.00	-0.18	3.25	0.01	-0.33	27.4	0.02	12.6	-25.2	0.57
C12	-1.25	5.23	0.11	-0.17	5.84	0.00	2.17	30.1	0.02	20.7	-47.3	0.56
C13	-0.10	1.87	0.00	0.01	2.84	0.00	-4.36	46.7	0.09	12.6	-12.7	0.58
C14	-0.23	2.48	0.02	0.11	3.60	0.00	6.37	19.5	0.18	9.57	-0.65	0.49
C15	-0.33	2.57	0.01	-0.69	5.25	0.02	6.59	57.0	0.12	18.3	5.08	0.43
C16	0.85	0.81	0.09	-0.01	2.75	0.00	5.57	29.6	0.08	8.18	9.85	0.28
C17	-0.35	1.66	0.04	0.05	1.33	0.00	4.73	4.67	0.31	5.79	0.94	0.35
C18	-6.42	25.2	0.10	-1.90	21.7	0.01	0.81	6.19	0.03	8.61	-26.2	0.44
C19	-2.80	7.88	0.15	-0.35	3.38	0.01	3.74	4.81	0.50	7.08	-9.39	0.38
C20	0.11	1.33	0.00	-1.04	5.44	0.07	0.79	2.18	0.14	2.38	-3.11	0.34
Average			0.05			0.01			0.15			0.47
Min	-6.42	0.81	0.00	-5.30	1.33	0.00	-4.36	2.18	0.02	2.38	-108	0.28
Max	0.85	34.3	0.15	0.11	73.5	0.07	40.5	95.7	0.50	57.02	17.5	0.61

17

18 $C_{n\text{-alkanals}} = m C_{NO_x} + b$

Carbon atoms	EL			MR					
	m	b	r ²	Northerly Winds			Southerly winds		
				m	b	r ²	m	b	r ²
C10	0.44	10.4	0.16	0.11	83.2	0.01	0.36	13.0	0.42
C11	0.16	1.48	0.13	0.01	25.6	0.01	0.11	1.73	0.49
C12	0.06	5.51	0.01	0.14	13.1	0.19	0.18	-2.49	0.45
C13	0.08	2.92	0.07	-0.02	35.3	0.01	0.14	1.35	0.38
C14	0.03	3.59	0.02	0.15	12.1	0.23	0.13	4.64	0.35
C15	0.00	6.14	0.00	0.20	39.9	0.15	0.14	47.4	0.15
C16	0.07	1.72	0.07	0.18	17.0	0.20	0.11	11.0	0.12
C17	-0.09	7.04	0.05	0.08	4.19	0.28	0.05	11.4	0.11
C18	-0.49	34.1	0.09	0.02	5.64	0.03	0.07	-8.65	0.30
C19	0.05	6.24	0.02	3.74	4.81	0.50	0.07	1.14	0.23
C20	-0.06	6.33	0.03	0.00	3.28	0.01	0.03	-2.08	0.24
Average			0.08			0.15			0.32
Min	-0.75	1.48	0.00	-0.02	3.28	0.01	0.03	-8.65	0.11
Max	1.05	72.9	0.31	3.74	83.2	0.50	0.56	47.4	0.50

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21 Table S5. Concentrations of PM₁₀ at the sampling sites.

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Sites	PM ₁₀ Range, µg/m ³	PM ₁₀ Mean µg/m ³	Note
RU and WM	10.8-72.4	34.1	The sampling period was dominated by southerly winds and the data from London, North Kensington were used as this is an upwind urban background site.
EL	4.37-27.1	19.3	The PM ₁₀ data was obtained from the London North Kensington site (Defra), because the EL only have PM _{2.5} data, and the PM _{2.5} data of two site (EL and London North Kensington) were close to each other.
MR	12.6-78.7	30.7	MR site

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24

25 Table S6. Analysis of n-alkanals, alkan-2-ones and alkan-3-ones partitioning, all compounds, daily
 26 data at RU, WM, El and MR sites.

RU													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
26/01/2017	0.41	-0.22	-1.73	0.09	-0.55	-4.67	0.50	-0.12	-2.27	0.15	-0.25	-2.80	0.11
27/01/2017	7.17	-0.24	-1.71	0.18	-0.40	-3.33	0.83	-0.24	-3.19	0.26	-0.26	-2.58	0.19
28/01/2017	5.44	-0.29	-1.76	0.15	-0.47	-3.48	0.88	-0.28	-2.82	0.53	-0.31	-2.54	0.34
29/01/2017	8.28	-0.30	-1.49	0.18	-0.43	-2.86	0.81	-0.24	-2.16	0.42	-0.33	-2.20	0.41
03/02/2017	5.58	-0.18	-1.68	0.02	-0.41	-3.42	0.87	-0.43	-3.80	0.90	-0.36	-3.08	0.45
04/02/2017	5.15	-0.34	-2.44	0.64	-0.40	-3.37	0.95	-0.29	-3.18	0.59	-0.33	-2.93	0.55
05/02/2017	3.70	-0.27	-2.25	0.37	-0.35	-3.30	0.84	-0.34	-3.54	0.62	-0.29	-2.90	0.50
06/02/2017	6.30	-0.08	-1.88	0.05	-0.41	-4.21	0.92	-0.44	-4.48	0.47	-0.34	-3.67	0.53
07/02/2017	5.60	-0.03	-1.90	0.02	-0.48	-4.96	0.83	-0.58	-5.54	0.58	-0.41	-4.38	0.57
08/02/2017	2.84	-0.10	-0.74	0.17	-0.54	-5.51	0.90	-0.34	-3.83	0.61	-0.34	-3.77	0.48
09/02/2017	1.65	-0.16	-2.30	0.15	-0.49	-5.27	0.95	-0.24	-3.67	0.39	-0.31	-3.86	0.47
10/02/2017	1.38	-0.14	-1.71	0.07	-0.46	-4.48	0.93	-0.42	-4.47	0.47	-0.35	-3.61	0.44
11/02/2017	2.30	-0.14	-1.86	0.21	-0.49	-5.02	0.87	-0.37	-4.34	0.84	-0.33	-3.74	0.45
12/02/2017	5.67	-0.08	-1.38	0.04	-0.54	-5.55	0.89	-0.35	-4.59	0.67	-0.38	-4.41	0.55
13/02/2017	5.60	-0.10	-1.11	0.13	-0.48	-5.07	0.92	-0.48	-5.18	0.85	-0.36	-4.25	0.53
14/02/2017	9.51	-0.48	-3.83	0.62	-0.42	-4.43	0.94	-0.37	-4.51	0.89	-0.34	-3.87	0.51
15/02/2017	7.96	-0.10	-1.43	0.33	-0.51	-4.53	0.89	-0.50	-4.65	0.62	-0.40	-3.69	0.54
17/02/2017	7.83	-0.20	-2.42	0.40	-0.46	-4.80	0.94	-0.23	-3.69	0.48	-0.30	-3.63	0.43
18/02/2017	7.72	-0.14	-2.20	0.12	-0.56	-5.47	0.91	-0.48	-5.17	0.77	-0.42	-4.42	0.57
19/02/2017	11.38	-0.31	-2.35	0.63	-0.37	-3.72	0.92	-0.42	-4.40	0.78	-0.30	-5.20	0.42
Average	5.57	-0.20	-1.91	0.23	-0.46	-4.37	0.87	-0.36	-3.97	0.59	-0.34	-3.58	0.45
MIN		-0.48	-3.83	0.02	-0.56	-5.55	0.50	-0.58	-5.54	0.15	-0.42	-5.20	0.11
MAX		-0.03	-0.74	0.64	-0.35	-2.86	0.95	-0.12	-2.16	0.90	-0.25	-2.20	0.57

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WM													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
26/01/2017	0.41	-0.34	0.46	0.97	-0.41	-4.36	0.73	-0.39	-4.60	0.55	-0.24	-3.29	0.21
27/01/2017	7.17	-0.17	-1.95	0.20	-0.59	-5.44	0.93	-0.54	-4.96	0.63	-0.43	-4.08	0.49
28/01/2017	5.44	-0.15	-1.32	0.31	-0.35	-2.90	0.88	-0.44	-3.42	0.84	-0.32	-2.55	0.66
29/01/2017	8.28	-0.15	-1.35	0.35	-0.30	-2.63	0.58	-0.42	-3.45	0.40	-0.22	-1.99	0.22
03/02/2017	5.58	-0.14	-1.11	0.31	-0.46	-3.05	0.90	-0.19	-2.26	0.22	-0.34	-2.29	0.33
04/02/2017	5.15	-0.06	-1.12	0.11	-0.44	-3.87	0.87	-0.03	-1.07	0.43	-0.24	-2.35	0.25
05/02/2017	3.70	-0.06	-1.24	0.14	-0.36	-2.77	0.87	-0.09	-1.72	0.17	-0.24	-2.03	0.31
06/02/2017	6.30	-0.04	-1.02	0.11	-0.33	-3.02	0.51	-0.14	-0.51	0.21	-0.14	-1.70	0.19

WM													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
07/02/2017	5.60	-0.08	-1.85	0.09	-0.43	-4.68	0.86	-0.21	-3.15	0.32	-0.27	-3.37	0.43
08/02/2017	2.84	-0.27	-2.47	0.29	-0.44	-4.17	0.91	-0.56	-5.16	0.92	-0.39	-3.79	0.64
09/02/2017	1.65	-0.12	-1.30	0.16	-0.39	-3.48	0.92	-0.29	-3.09	0.24	-0.31	-2.85	0.47
10/02/2017	1.38	-0.20	-2.03	0.53	-0.42	-4.23	0.95	-0.28	-3.34	0.46	-0.30	-3.21	0.54
11/02/2017	2.30	-0.01	-1.33	0.28	-0.44	-4.55	0.89	-0.16	-2.37	0.35	-0.27	-3.10	0.49
12/02/2017	5.67	-0.24	-2.61	0.17	-0.44	-4.65	0.88	-0.42	-4.77	0.55	-0.34	-3.89	0.43
13/02/2017	5.60	-0.05	-1.12	0.11	-0.43	-4.44	0.88	-0.33	-3.99	0.52	-0.31	-3.58	0.48
14/02/2017	9.51	-0.03	-1.66	0.09	-0.38	-4.61	0.88	-0.11	-2.61	0.23	-0.21	-3.23	0.35
15/02/2017	7.96	-0.07	-1.17	0.12	-0.36	-3.24	0.93	-0.53	-4.47	0.77	-0.33	-3.00	0.54
16/02/2017	9.27	-0.35	-2.66	0.40	-0.35	-3.40	0.85	-0.39	-3.81	0.78	-0.30	-2.96	0.51
17/02/2017	7.83	-0.25	-2.43	0.23	-0.35	-3.99	0.86	-0.40	-4.51	0.51	-0.28	-3.34	0.33
18/02/2017	7.72	-0.30	-2.96	0.26	-0.37	-4.30	0.85	-0.35	-4.01	0.61	-0.28	-3.44	0.43
19/02/2017	11.38	-0.22	-1.24	0.21	-0.51	-4.11	0.88	-0.48	-3.82	0.81	-0.40	-3.24	0.61
Average	6.02	-0.16	-1.59	0.26	-0.41	-3.90	0.85	-0.32	-3.39	0.50	-0.29	-3.01	0.42
MIN		-0.35	-2.96	0.09	-0.59	-5.44	0.51	-0.56	-5.16	0.17	-0.43	-4.08	0.19
MAX		-0.01	0.46	0.97	-0.30	-2.63	0.95	-0.03	-0.51	0.92	-0.14	-1.70	0.66

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EL													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
23/02/2017	5.20	-0.13	-0.59	0.16	-0.34	-2.45	0.72	-0.32	-2.62	0.53	-0.26	-1.89	0.39
24/02/2017	5.58	-0.05	-0.78	0.11	-0.39	-3.03	0.77	-0.39	-3.07	0.76	-0.28	-2.14	0.43
25/02/2017	9.36	-0.01	-0.82	0.09	-0.29	-1.40	0.60	-0.22	-1.2	0.10	-0.19	-0.66	0.16
26/02/2017	9.82	-0.07	-0.26	0.05	-0.37	-2.48	0.85	-0.26	-1.69	0.24	-0.27	-1.66	0.44
27/02/2017	4.16	-0.07	-0.16	0.08	-0.54	-3.71	0.90	-0.22	-1.48	0.01	-0.30	-2.04	0.35
28/02/2017	5.55	-0.32	-2.40	0.42	-0.53	-4.6	0.94	-0.11	-1.82	0.14	-0.32	-2.99	0.49
01/03/2017	6.57	-0.26	-1.50	0.69	-0.48	-3.68	0.87	-0.37	-5.07	0.71	-0.36	-2.71	0.57
02/03/2017	5.77	-0.21	-1.61	0.56	-0.48	-3.47	0.91	-0.34	-2.81	0.46	-0.40	-2.90	0.69
03/03/2017	8.09	-0.16	0.55	0.64	-0.17	-2.13	0.46	-0.13	-2.61	0.08	-0.10	-1.81	0.06
04/03/2017	6.98	-0.09	-0.32	0.16	-0.32	-2.65	0.77	-0.15	-1.24	0.12	-0.11	-1.17	0.10
05/03/2017	6.19	-0.24	-1.27	0.35	-0.45	-3.25	0.9	-0.05	-0.90	0.04	-0.27	-1.96	0.42
06/03/2017	5.13	-0.13	-1.18	0.19	-0.37	-3.28	0.71	-0.17	-1.86	0.20	-0.24	-2.18	0.37
07/03/2017	8.12	-0.16	-0.33	0.21	-0.28	-1.97	0.71	-0.22	-1.7	0.21	-0.17	-1.07	0.17
08/03/2017	9.89	-0.05	-0.74	0.03	-0.41	-3.40	0.84	-0.28	-2.58	0.31	-0.29	-2.45	0.44
09/03/2017	6.83	-0.09	-0.39	0.70	-0.21	-1.73	0.53	-0.18	-1.98	0.19	-0.14	-1.28	0.14
10/03/2017	7.69	-0.01	-0.79	0.33	-0.12	-1.32	0.37	-0.19	-2.05	0.61	-0.09	-1.11	0.10
11/03/2017	7.12	-0.32	-1.74	0.35	-0.12	-1.16	0.33	-0.21	-2.17	0.18	-0.14	-1.27	0.13

EL													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
12/03/2017	7.50	-0.23	-1.19	0.79	-0.10	-0.63	0.16	-0.30	-2.49	0.22	-0.09	-0.93	0.03
13/03/2017	8.21	-0.06	0.20	0.01	-0.30	-1.94	0.84	-0.19	-1.79	0.23	-0.22	-1.37	0.23
14/03/2017	7.88	-0.11	1.25	0.10	-0.08	-0.81	0.12	-0.25	-2.20	0.28	-0.07	-0.74	0.04
15/03/2017	8.04	-0.14	-1.07	0.21	-0.18	-1.43	0.54	-0.34	-2.84	0.45	-0.21	-1.72	0.35
16/03/2017	7.37	-0.16	-1.04	0.07	-0.38	-3.56	0.54	-0.13	-1.88	0.12	-0.19	-2.01	0.14
17/03/2017	10.23	-0.50	-1.96	0.77	-0.21	-1.93	0.37	-0.11	-1.39	0.07	-0.12	-1.05	0.05
18/03/2017	11.11	-0.35	-1.97	0.24	-0.30	-2.79	0.49	-0.74	-5.47	0.83	-0.27	-2.40	0.25
19/03/2017	11.14	-0.28	-1.08	0.38	-0.19	-1.76	0.60	-0.11	-1.49	0.04	-0.08	-0.87	0.03
21/03/2017	6.53	-0.19	-0.64	0.89	-0.17	-1.12	0.55	-0.06	-0.91	0.01	-0.09	-0.59	0.05
Average	7.82	-0.17	-0.84	0.33	-0.30	-2.37	0.63	-0.23	-2.20	0.27	-0.20	-1.65	0.25
MIN		-0.50	-2.40	0.01	-0.54	-4.60	0.12	-0.74	-5.47	0.01	-0.40	-2.99	0.03
MAX		-0.01	1.25	0.89	-0.08	-0.63	0.94	-0.05	-0.90	0.83	-0.07	-0.59	0.69

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MR													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
22/03/2017	8.01	-0.32	-1.47	0.88	-0.16	-1.24	0.18	-0.66	-5.40	0.76	-0.25	-2.03	0.14
23/03/2017	8.64	-0.38	-1.76	0.57	-0.29	-2.48	0.45	-0.40	-3.94	0.87	-0.23	-2.07	0.13
24/03/2017	9.01	-0.25	-1.86	0.81	-0.29	-2.71	0.45	-0.37	-3.69	0.80	-0.26	-2.56	0.34
25/03/2017	10.08	-0.47	-2.77	0.57	-0.31	-2.48	0.56	-0.45	-4.26	0.88	-0.32	-2.73	0.33
26/03/2017	9.95	-0.15	-1.31	0.33	-0.30	-2.36	0.61	-0.62	-5.11	0.78	-0.31	-2.51	0.28
27/03/2017	10.47	-0.17	-1.89	0.21	-0.41	-3.56	0.77	-0.39	-3.98	0.60	-0.38	-3.45	0.58
28/03/2017	13.05	-0.18	-0.84	0.58	-0.34	-2.20	0.68	-0.42	-3.66	0.80	-0.34	-2.35	0.36
29/03/2017	13.74	-0.45	-2.07	0.65	-0.23	-1.73	0.40	-0.28	-2.77	0.72	-0.23	-1.78	0.20
30/03/2017	15.45	-0.28	-1.76	0.69	-0.29	-2.29	0.65	-0.65	-4.92	0.85	-0.34	-2.65	0.44
31/03/2017	11.94	-0.59	-3.05	0.81	-0.28	-2.15	0.83	-0.30	-3.0	0.79	-0.27	-2.15	0.33
01/04/2017	10.82	-0.23	-1.50	0.45	-0.17	-1.86	0.26	-0.61	-5.32	0.84	-0.23	-2.35	0.17
02/04/2017	11.08	-0.35	-2.55	0.77	-0.29	-2.59	0.6	-0.35	-3.85	0.47	-0.29	-2.82	0.34
03/04/2017	12.29	-0.23	-1.71	0.39	-0.14	-1.45	0.20	-0.33	-3.43	0.79	-0.19	-2.01	0.2
04/04/2017	10.76	-0.17	-0.77	0.15	-0.26	-1.79	0.49	-0.30	-2.83	0.84	-0.23	-1.72	0.23
05/04/2017	10.83	-0.43	-2.20	0.91	-0.16	-1.20	0.22	-0.36	-3.61	0.78	-0.21	-1.85	0.15
06/04/2017	12.00	-0.14	-0.90	0.40	-0.36	-2.64	0.63	-0.32	-3.19	0.61	-0.22	-2.08	0.24
07/04/2017	12.38	-0.32	-3.09	0.90	-0.25	-2.81	0.59	-0.43	-5.03	0.29	-0.31	-3.54	0.27
08/04/2017	15.34	-0.17	-1.58	0.07	-0.29	-2.91	0.47	-0.33	-3.68	0.59	-0.23	-2.65	0.23
09/04/2017	15.11	-0.18	-1.58	0.19	-0.19	-1.84	0.37	-0.65	-5.45	0.91	-0.30	-2.73	0.31
10/04/2017	10.42	-0.16	-1.02	0.23	-0.26	-1.67	0.65	-0.52	-4.56	0.94	-0.33	-2.51	0.33
11/04/2017	11.30	-0.15	-1.31	0.51	-0.27	-2.32	0.57	-0.58	-4.99	0.87	-0.32	-2.77	0.38

MR													
Date	Temp	alkanals (C ₁₀ -C ₁₄)			alkan-2-ones(C ₁₀ -C ₁₈)			alkan-3-ones(C ₁₀ -C ₁₆)			All Carbonyl compounds		
	°C	m	b	r ²	m	b	r ²	m	b	r ²	m	b	r ²
12/04/2017	11.75	-0.11	-0.69	0.28	-0.35	-2.37	0.58	-0.34	-3.19	0.84	-0.27	-2.05	0.25
13/04/2017	11.20	-0.02	-0.29	0.03	-0.24	-2.04	0.56	-0.50	-4.52	0.78	-0.24	-2.23	0.22
14/04/2017	11.96	-0.11	-0.57	0.2	-0.31	-2.63	0.68	-0.28	-3.07	0.66	-0.23	-2.17	0.27
15/04/2017	10.68	-0.14	-0.72	0.15	-0.24	-1.83	0.22	-0.43	-4.08	0.44	-0.25	-2.11	0.14
16/04/2017	10.96	-0.02	0.44	0.02	-0.17	-0.90	0.23	-0.36	-3.42	0.68	-0.20	-1.44	0.12
18/04/2017	9.01	-0.13	-0.58	0.04	-0.30	-2.03	0.67	-0.37	-3.34	0.92	-0.27	-2.03	0.29
Average	11.95	-0.23	-1.46	0.44	-0.26	-2.15	0.50	-0.43	-4.01	0.74	-0.27	-2.35	0.27
MIN		-0.59	-3.09	0.02	-0.41	-3.56	0.18	-0.66	-5.45	0.29	-0.38	-3.54	0.12
MAX		-0.02	0.44	0.91	-0.14	-0.90	0.83	-0.28	-2.77	0.94	-0.19	-1.44	0.58

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