

Table S1. Ion m/z ratios used for the identification and quantification in selective ion monitoring GC-MS of polychlorobiphenyls, polycyclic aromatic hydrocarbons, other organohalogen compounds, and their recovery standards.

Compound	Abbreviation	m/z (CE 70 eV)
2,4,4'-Trichlorobiphenyl	PCB28	256
2,2',5,5'-Tetrachlorobiphenyl	PCB52	292
2,2',4,5,5'-Pentachlorobiphenyl	PCB101	326
2,3',4,4',5-Pentachlorobiphenyl	PCB118	326
2,2',3,4,4',5'-Hexachlorobiphenyl	PCB138	360
2,2',4,4',5,5'-Hexachlorobiphenyl	PCB153	360
2,2',3,4,4',5,5'-Heptachlorobiphenyl	PCB180	394
Decachlorobiphenyl	PCB209	498
Tetrabromobenzene	TBB	394
Hexachlorobenzene	HCB	284
Pentachlorobenzene	PeCB	250
α -Hexachlorocyclohexane	α -HCH	181
γ -Hexachlorocyclohexane	γ -HCH	181
Fluorene	Fle	166
Phenanthrene	Phe	178
Fluoranthene	Fluo	202
Pyrene	Pyr	202
Benz[a]anthracene	B[a]ant	228
Chrysene + Triphenylene	Chr + TriPh	228
Fluorene-d ₁₀	Fle-d ₁₀	176
Phenanthrene-d ₁₀	Phe-d ₁₀	188
Fluoranthene-d ₁₀	Flu-d ₁₀	212
Pyrene-d ₁₀	Pyr-d ₁₀	212
Benz[a]anthracene-d ₁₂	B[a]ant-d ₁₂	240
Chrysene-d ₁₂	Chrys-d ₁₂	240

Table S2. Ion m/z transitions and collision energies (CE) used for the identification and quantification in GC-MS/MS MRM of organophosphate flame retardants (OPFRs) and their respective recovery standards.

Compound	Abbreviation	Quantifier		Qualifier	
		Transition (m/z)	CE (eV)	Transition (m/z)	CE (eV)
Tributyl phosphate	TBP	99→81	20	99→63	38
Tris(2-chloroethyl) phosphate	TCEP	249→125	10	249→99	32
Tris(1-chloro-2-propyl) phosphate	TCPP	125→81	29	125→99	12
Tris(1,3-dichloro-2-propyl) phosphate	TDCP	191→155	5	191→75	11
Triphenyl phosphate	TPhP	326→215	25	326→169	32
Tributyl phosphate-d ₁₀	TBP-d ₁₀	103→83	20	103→63	43
Tris(2-chloroethyl) phosphate-d ₁₂	TCEP-d ₁₂	261→131	9	261→131	30
Tris(1-chloro-2-propyl) phosphate-d ₁₈	TCPP-d ₁₈	131→83	30	131→103	11
Tris(1,3-dichloro-2-propyl) phosphate-d ₁₅	TDCP-d ₁₅	197→160	4	197→79	12
Triphenyl phosphate-d ₁₅	TPhP-d ₁₅	341→223	26	341→243	11

Table S3. Average relative standard deviations (RSD%) of passive air sampling (PAS) replicates for each target compound. These values were calculated from the concentrations analyzed in samplers deployed in duplicate at six different sites over four consecutive sampling periods between 2017 and 2019 in Aigüestortes, a high-mountain continental background location.

Compound	Abbreviation	RSD %
2,4,4'-Trichlorobiphenyl	PCB28	18.1
2,2',5,5'-Tetrachlorobiphenyl	PCB52	14.6
2,2',4,5,5'-Pentachlorobiphenyl	PCB101	11.5
2,3',4,4',5-Pentachlorobiphenyl	PCB118	23.3
2,2',3,4,4',5'-Hexachlorobiphenyl	PCB138	16.2
2,2',4,4',5,5'-Hexachlorobiphenyl	PCB153	15.7
2,2',3,4,4',5,5'-Heptachlorobiphenyl	PCB180	34.2
Hexachlorobenzene	HCB	12.8
Pentachlorobenzene	PeCB	9.4
Fluorene	Fle	13.5
Phenanthrene	Phe	11.2
Fluoranthene	Fluo	16.5
Pyrene	Pyr	18.7
Benz[a]anthracene	B[a]ant	17.8
Chrysene + Triphenylene	Chr + TriPh	20.4
Tributyl phosphate	TBP	22.6
Tris(2-chloroethyl) phosphate	TCEP	36.3
Tris(1-chloro-2-propyl) phosphate	TCPP	30.8
Tris(1,3-dichloro-2-propyl) phosphate	TDCP	60.1
Triphenyl phosphate	TPhP	22.3

Figure S1. Distribution of the concentrations of gas pollutants measured in the city of Barcelona during the following periods: B1: 10/15/2019–1/9/2020; B2: 1/9/2020–7/15/2020; pre-lockdown: 1/1/2020–3/14/2020; lockdown: 3/15/2020–6/22/2020. The median value is represented by the horizontal line inside the box and the mean value by an x. They are compared to the concentrations in the same periods of the previous two years (2018 and 2019, averaged).

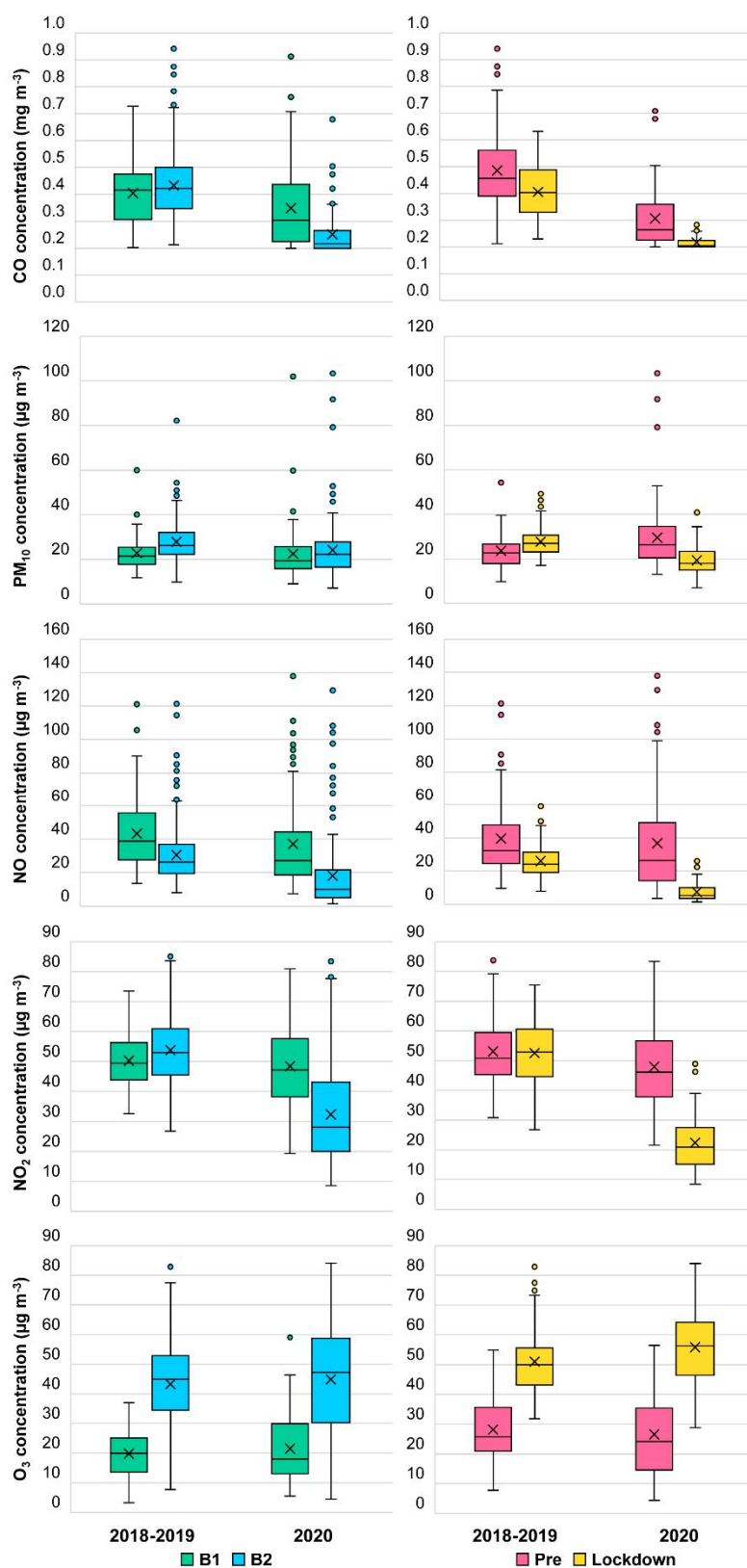


Figure S2. Causal impact analysis representations of concentrations of air quality indicators measured in Barcelona during lockdown of 2020. The passive air sampled (PAS) B1/B2 periods are delimited by vertical, green, dashed lines. For each compound, the top charts show daily average concentrations recorded in 2020 (black continuous line) against a counterfactual prediction based on 2018–2019 average values (blue dashed line, based on B1/B2 sampling dates). The bottom charts show the difference between the observed data and the counterfactual predictions.

