

Supplementary Material: Short-Term Exposure to PM₁₀ and Black Carbon in Residential Microenvironments in Bragança, Portugal: A Case Study in Bedrooms, Living Rooms, and Kitchens

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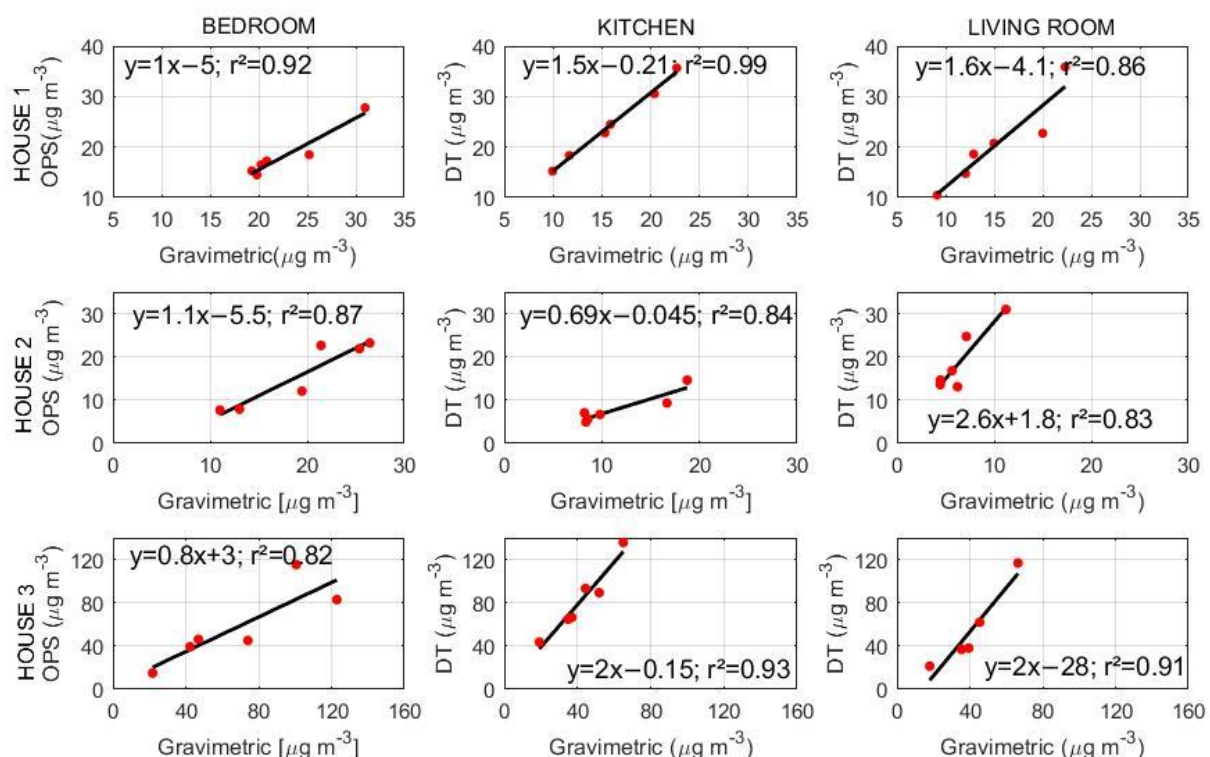


Figure S1. Linear correlations between PM₁₀ concentrations obtained from photometric and gravimetric devices for each microenvironment during the sampling campaign.

Table S1. Absorption coefficients (ϵ) for each wavelength by microenvironment using $\lambda=639$ nm as reference.

Monitoring site		Wavelength						
		405nm	465nm	525nm	639nm	870nm	940nm	1050nm
House 1 House 2 House 3	Bedroom	7.51	6.91	6.53	6.04	5.21	4.98	4.87
	Living room	8.46	7.33	6.71	6.04	5.06	4.80	4.69
	Kitchen	8.16	7.22	6.65	6.04	5.08	4.90	4.73
	Bedroom	7.57	6.95	6.59	6.04	5.09	4.84	4.70
	Living room	7.83	7.07	6.67	6.04	4.96	4.67	4.56
	Kitchen	7.65	6.96	6.60	6.04	5.08	4.83	4.73
	Bedroom	8.82	7.49	6.81	6.04	4.94	4.69	4.55
	Living room	8.34	7.29	6.71	6.04	5.03	4.78	4.64
	Kitchen	8.41	7.36	6.76	6.04	4.94	4.67	4.52

Table S2. Description of main indoor activities by time interval for the 3 microenvironments.

Bedroom	Living room	Kitchen
7 a.m. – 10 a.m.	8 a.m. – 10 a.m.	7 a.m. – 9 a.m. / 11 a.m. – 14 p.m. / 5 p.m. – 9 p.m.
Wake up	Workout (light-exercise)	Cook and fry
Make the bed	Have breakfast	Have breakfast, lunch and dinner
Sweep the room (weekend)	Watch TV	Wash the dishes
Modify the ventilation settings	Modify the ventilation settings	Modify the ventilation settings
Get dressed		Take the garbage out
Use of perfumes and aerosol sprays	12 a.m. - 2 p.m.	Using microwave
	Eat the lunch	Light a match
5 p.m. – 7 p.m.	Watch TV	Clean the table (sprays)
Cleaning the cat's litter box	Rest on the sofa	Lay the table
Light incense or candles	Interaction between occupants	Clean the room
Study	Modify the ventilation settings	Play some table games
Rest		Interaction between occupants
Get dressed	5 p.m. – 12 p.m.	Use of exhaust fan
Clean the room	Study	
Modify the ventilation settings	Modify the ventilation settings	
	Have dinner	
9 p.m. – 12 p.m.	Play some table games	
Work on computer	Watch TV	
Rest and or seep	Playing with dog or cat	
Eat and drink	Clean the room	
Modify the ventilation settings	Interaction between occupants	

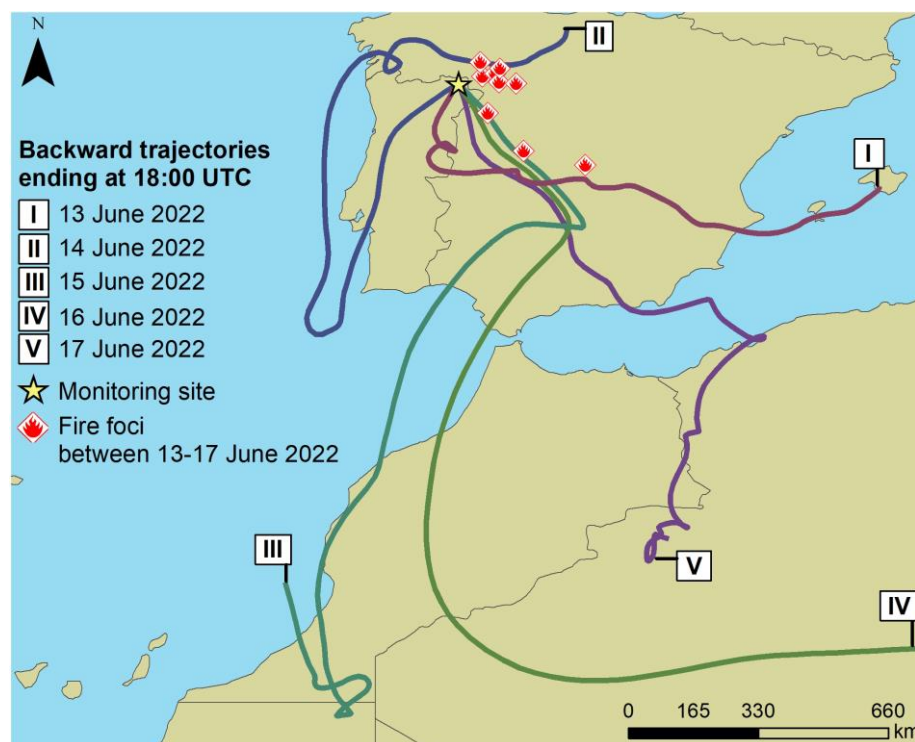


Figure S2. 5-Day backward trajectories arriving at house 3 at 6 p.m on five different days.

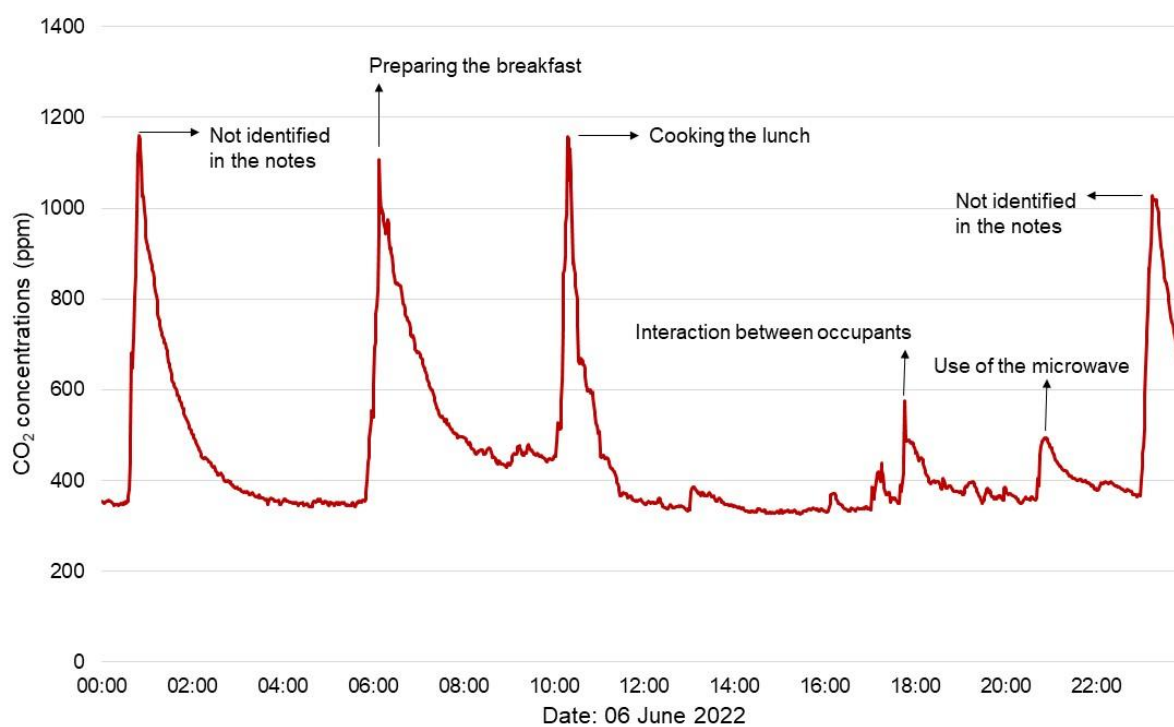


Figure S3. Daily profile of CO₂ concentrations and activities associated with each peak.