

Figure S1. Map of the Mediterranean basin of Spain showing the different locations of sampling. Created with OpenStreetMaps.

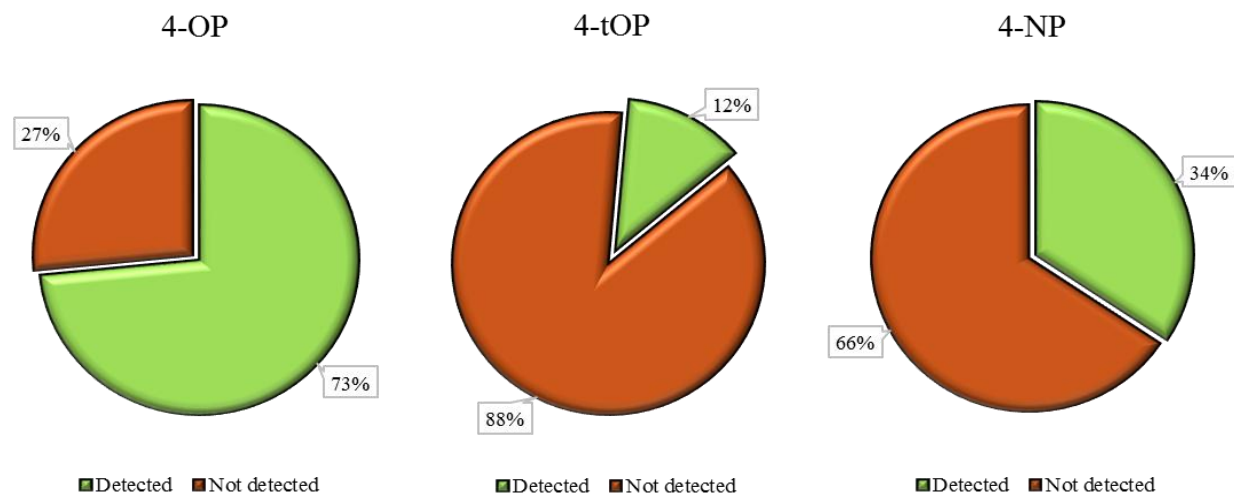


Figure S2. Occurrence of 4-OP, 4-tOP, and 4-NP in the analyzed water samples ($n = 64$).

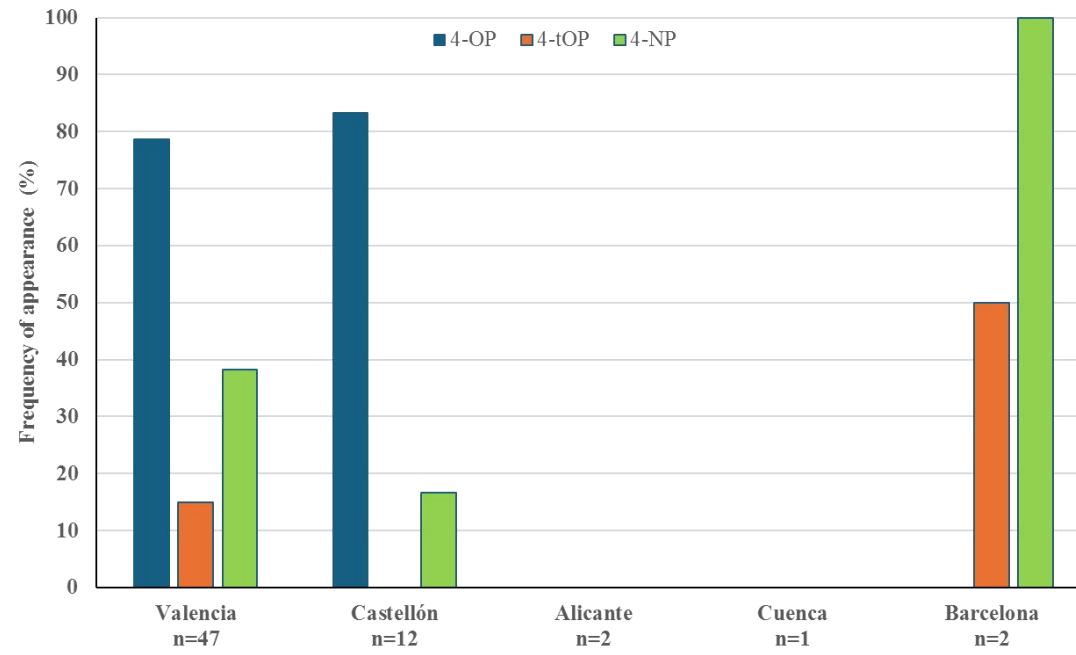
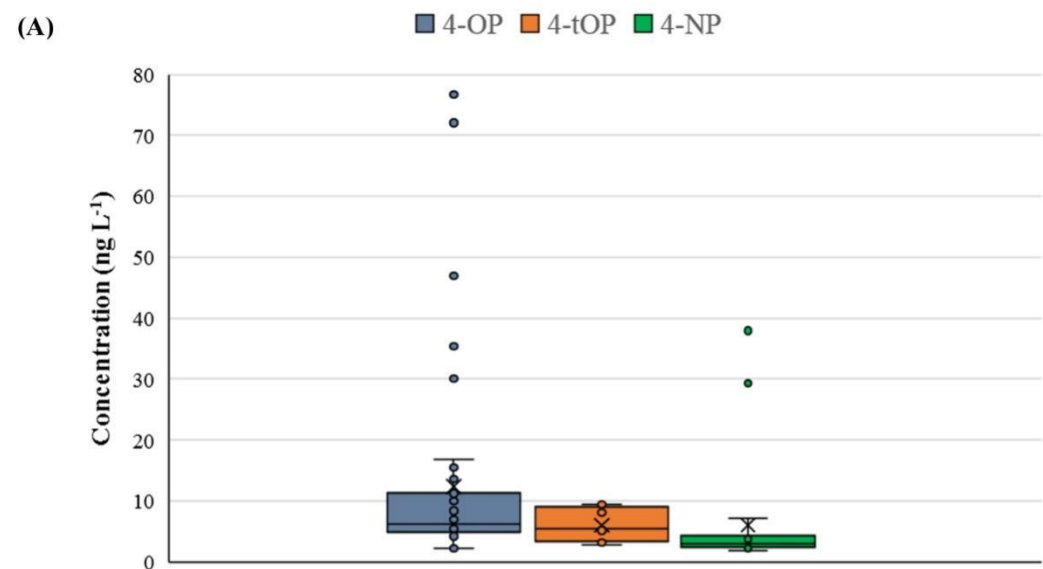


Figure S3. Occurrence of 4-OP, 4-NP, and 4-tOP in analyzed water samples by location.

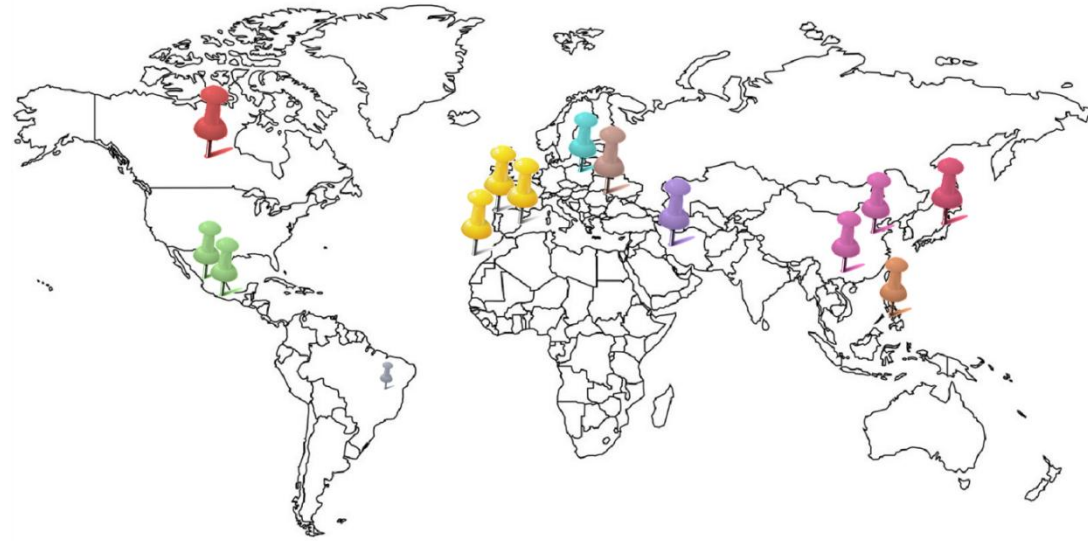


(B)

Compound	Concentration (ng L ⁻¹)		
	Average	Range	EU reference value
4-OP	5.9	2.1-76.7	- ^a
4-tOP	5.5	2.8-9.4	- ^a
4-NP	3.0	2.2-38.0	300
APs	8.0	2.1-88.6	- ^a

^a: EU does not provide reference values

Figure S4. Boxplot showing the concentrations of 4-OP, 4-tOP, and 4-NP in the analyzed water samples (A) and summary of average, interquartile range (IQR), and EU reference values for the analyzed APs (B). Note: The boxes in the boxplot represent the interquartile range (IQR), the horizontal lines indicate the median, and the whiskers show the minimum and maximum values within $1.5 \times \text{IQR}$ ($n = 64$).



**Figure S5. Sampling sites around the world are compared with those found in this study.
Created with OpenStreetMaps.**

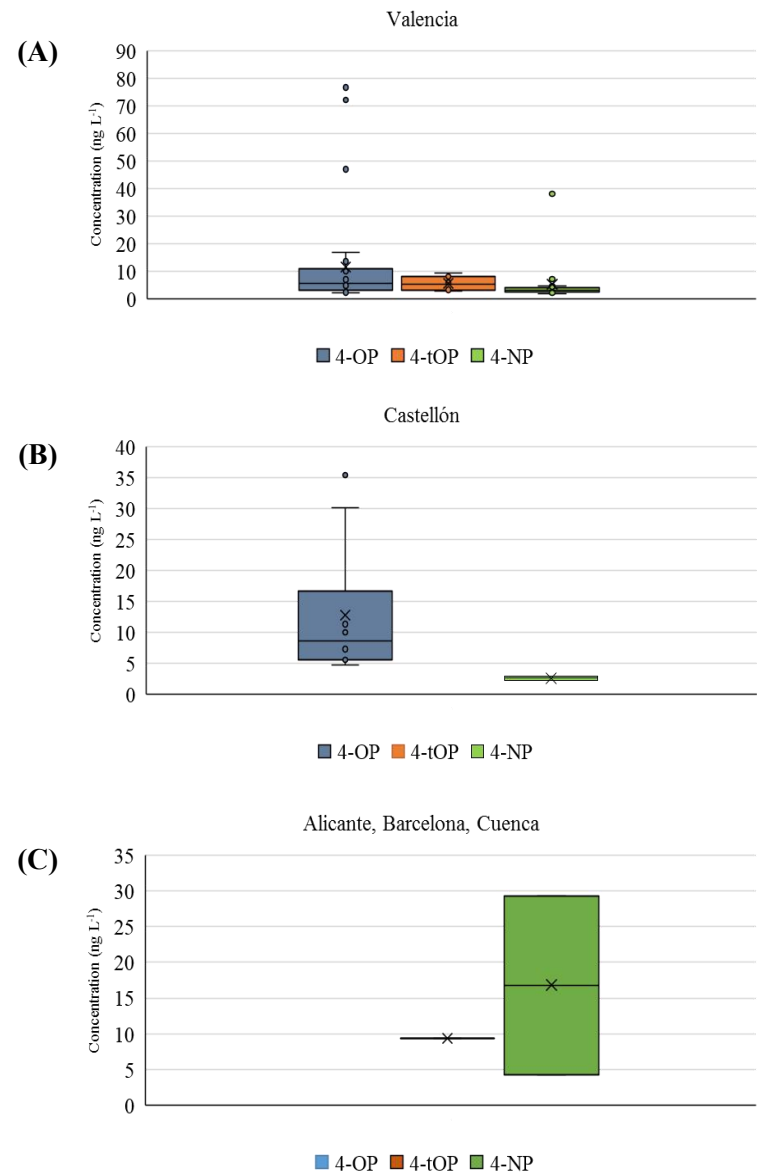


Figure S6. Boxplot showing the concentrations of 4-OP, 4-tOP, and 4-NP in the analyzed water samples in Valencia (A), Castellon (B), and in Alicante, Barcelona, and Cuenca (C). Note: The boxes represent the interquartile range (IQR), the horizontal lines indicate the median, and the whiskers show the minimum and maximum values within $1.5 \times \text{IQR}$, where n values are 47, 12, and 5 for (A), (B), and (C), respectively.