

Patterns of Personal Exposure to Urban Pollutants Using Personal Passive Samplers and GC × GC/ToF-MS

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© 2018 American Chemical Society. The performance of silicon wristband passive samplers (WB), combined with comprehensive two-dimensional gas-chromatography/time-of-flight mass-spectrometry (GC × GC/ToF-MS), for the analysis of urban derived pollutants in the personal environment was evaluated. Cumulative 5-day exposure samples from 27 individuals in areas with different geographical/socioeconomic characteristics within the Santiago Metropolitan Region (Chile) were collected during winter and summer (2016-2017). Samples were extracted without cleanup/fractionation and analyzed using targeted and nontargeted methods. The quantified semivolatile organic compounds (SVOCs, n = 33) (targeted analysis), and tentatively identified features (n = 595-1011) (nontargeted analysis) were classified according to their use/source. Seasonal differences were observed in the targeted analysis, while seasonal and spatial differences were observed in the nontargeted analysis. Higher concentrations of combu