Bisphenol A concentrations in indoor and outdoor PM2.5 samples

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Keywords: indoor/outdoor particles, health aspects of aerosols, BPA, indoor sources

Indoor air pollution levels are influenced by indoor pollution source and by infiltration of outdoor air. In an indoor environment there are many potential sources of BPA from epoxide resins and polycarbonate plastics, but the major source could be the polycarbonate elements of the lamps that, when switch on, warm up by joule effect.

Daily indoor BPA concentration was correlated to daily outdoor BPA (R²= 0.88) (Fig.1), thus indicating as indoor is strictly influenced by infiltration of outdoor air. The slope of the linear correlation between indoor and outdoor BPA is less than 1 (0.82), suggesting that about 80% of outdoor BPA is transported in the indoor environment.

Nevertheless, the y-intercept of the linear relationship between indoor and outdoor daily concentrations indicate that another source of indoor BPA, not related to the exchange with outdoor, occurred. The level of indoor BPA attributed to indoor pollution source was estimated equal to 0.15 ng m⁻³, and it contributed to 19% up to 94% of the indoor BPA level we measured.

![Figure 1. Daily BPA concentration (ng m⁻³) in PM2.5 samples indoor (offices) versus outdoor.](image-url)

Figure 1. Daily BPA concentration (ng m⁻³) in PM2.5 samples indoor (offices) versus outdoor.