

## CONTRIBUTION TO THE ASSESSMENT OF THE EXPOSURE TO INDOOR PESTICIDES IN FRANCE

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Pesticides are environmental pollutants with potential health effects, but exposure of the population is badly documented. Our purpose is to assess the exposure of adults living in Ile-de-France to indoor air pesticides. Two groups of subjects, one of occupationally exposed workers (5 gardeners, 7 florists, 9 veterinaries) and one of non-occupationally exposed persons (n=20), were recruited. Thirty-three pesticides were measured in indoor air, using a MiniPartisol® air sampler (mean volume sampled: 7.1 m<sup>3</sup>/24h). After extraction, samples were analysed by gas and high-performance liquid chromatographical methods (limits of quantification generally < 5 ng/m<sup>3</sup>). Indoor air concentrations are often near the quantification limits (mean number of different pesticides detected per sample: 3.2±1.7), but maximal values reach 200-300 ng/m<sup>3</sup> (gardeners: malathion and methidathion, population: atrazine). The organophosphates dichlorvos, fenthion, malathion and parathion-methyl are detected in more than 10% of the samples. The organochlorines lindane,  $\alpha$ -HCH (lindane-isomer),  $\alpha$ -endosulfan and dieldrin are detected in 97, 38, 69 and 28% of the samples, whereas the herbicides atrazine, alachlor and trifluraline are found in 24, 21 and 14% of the samples, respectively. A specific profile, consistent with occupational activity, can be observed; on the contrary, more various pesticides are found in the population, without any obvious link with factors such as having pets, a garden or type of household. Our results confirm previously published levels of exposure. However, the most frequently detected pesticides can differ: the chlorpyrifos is undetectable in our study, contrarily to the US ones.