

Environnement Humain/EHU-4

Occupational and non-occupational exposure of non-smokers to Environmental Tobacco Smoke in Switzerland : Preliminary Results of an Original Campaign

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A passive sampling device called Monitor of NiCotine or “MoNIC”, was constructed and evaluated by IST laboratory for determining nicotine in Environmental Tobacco Smoke (ETS). Vapour nicotine was passively collected on a potassium bisulfate treated glass fibre filter as collection medium. Analysis of amount of nicotine on the treated filter by gas chromatography equipped with Thermoionic-Specific Detector (GC-TSD) after liquid-liquid extraction of 1mL of 5N NaOH : 1 mL of n-heptane saturated with NH₃ using quinoline as internal standard. Based on nicotine amount of 0.2 mg/cigarette as reference, the inhaled Cigarette Equivalents (CE) by non-smokers can be calculated. Using the detected CE on the badge for non-smokers, and comparing with amount of nicotine and cotinine level in saliva of both smokers and exposed non-smokers (N=49), we can confirm the use of the CE concept for estimating exposure to ETS.

The Valais CIPRET (Center of information and prevention of the addiction to smoking), is going to organize a big campaign on the subject of the passive addiction to smoking entitled “Smoked passive, we suffer from it, we die from it”. This campaign will take place in 2007 and has for objective to inform clearly the population of Valais of the dangerousness of the passive smoke. More than 1’500 MoNIC badges were gracefully distributed to Swiss population to perform a self-monitoring of population exposure level to ETS, expressed in term of CE. Non-stimulated saliva were also collected to determine ETS biomarkers nicotine/cotinine levels of participating volunteers.

Preliminary results of different levels of CE in occupational and non-occupational situations in relation with ETS were presented in this study.



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