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SURVEY OF HUMAN'S EXPOSURE TO ORGANIC POLLUTANTS COMING FROM HOME PRODUCED VEGETABLES AND ANIMALS

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Abstract

Extended use of organic compounds chemicals from our history and present is felt by our environment, and therefore by our health. Evaluation of inhabitant exposure to organic pollutants coming from home produced food stuffs was conducted during 2008-2010 in Cluj, Salaj and Bistrita Nasaud district, from North part of Transylvania. Main founded pollutants in vegetables and home grown animals were chlorinated solvents ($0.3\text{--}59\ \mu\text{g}\cdot\text{kg}^{-1}$ dry weights), insecticides ($0.5\text{--}26.9\ \mu\text{g}\cdot\text{kg}^{-1}$ dry weight), fungicides ($0.2\text{--}31.25\ \mu\text{g}\cdot\text{kg}^{-1}$ dry weight) and mono- and polycyclic aromatic hydrocarbons ($0.5\text{--}30\ \mu\text{g}\cdot\text{kg}^{-1}$ dry weights). Their detection was done with gas chromatograph apparatus equipped with electron capture detector and flame ionization detector. In case of animal origin food stuffs a non-invasive sampling method was used. These pollutants levels in home grown animals were detected at nanoscale levels. As regards inhabitants exposure to their home produced foods it was established that potato and carrot has the greatest intake fraction values, 0.0046 and 0.0032, respectively.

Key words: animal origin food, intake fraction, pollutants, vegetables

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