nucleosides and liver disease. For the urinary nucleoside profiles, free nucleosides were extracted by SPE in affinity mode with the subsequent analysis by MEKC. A total of 15 nucleosides were positively identified in urine samples from patients with liver diseases and normal subjects studied. Multivariate statistical analyses appropriate for the correlation between urinary nucleosides profiles and liver diseases was investigated. Canonical discrimination analysis applied to the 15 nucleosides correctly classified each urine specimen into each separate cluster according to the disease type. Star patterns were very informative in comparing the abnormal group with normal control group. The present nucleoside profiling and simple pattern recognition methods appear to be useful for the comparative analysis of urinary nucleosides among groups of normal subjects and patients with liver disease.

GC-SIM-MS and GC-Dual ECD Profiling and Screening Analysis of Trace Acidic and Neutral Pollutants from Water Samples

Park JeongEun[O], Paik ManJeong, Koo WonHoe, Kim KyoungRae, Kim JungHan

Department of Biotechnology, College of Engineering and Bioproducts Research Center, Yonsei University.College of Pharmacy, Sungkyunkwan University

34 trace pollutants including phenols, organic acids, polyaromatic hydrocarbons, alcohol and esters in water samples were recovered by solid-phase extraction in static adsorption mode using XAD-4 resin as the adsorbent with subsequent modified Soxhlet extraction using dichloromethane containing acetonitrile as the solvent. The extracts were evaporated with subsequent tert.-butyldimethylsilylation for the direct analysis by gas chromatography-mass spectrometry (GC-MS) in selected ion monitoring (SIM) mode and GC-dual electron capture detector (ECD) system on dual-columns of different polarity. Validation of the GC-SIM-MS and GC-ECD methods for the simultaneous profiling analysis of pollutants will be compared.

Residue and risk assessment of polychlorinated dibenzo-p-dioxins and dibenzofurans in the Korean population.

Kang YounSeok[O] , Choi Shinai, Na TaeHwa , Oh ChangHwan , Park JongSei

Lab Frontier Co. Ltd.

Polychlorinated dibenzo-p-dioxins and dibenzofurans(PCDDs/DFs) are ubiquitous contaminants in the global environment. These compounds are detected in high concentrations in human tissues from developed and industrialized countries. However, the status of PCDDs/DFs contamination is not so clear in the general Korean population. In this study, we examined the contamination levels and characterization of these toxic compounds in human adipose tissue and human milk collected from Korea.

The human adipose and milk samples analysed in this study were collected at hospitals in Seoul, Masan and Jinju. The mean values of International Dioxin Toxic Equivalents (I-TEQ) of PCDDs and PCDFs in human adipose samples from the three regions were calculated as 9 pg TEQ/g(0.2 ~ 30 pg TEQ/g, lipid weight basis) and 8 pg TEQ/g (0.8 ~ 25 pg TEQ/g), respectively. The residue levels of PCDDs-TEQ and PCDFs-TEQ in human milk collected from Masan were 13 pg TEQ/g (lipid wt.) and 4.8 pg TEQ/g, respectively. On the whole, the contamination levels of these compounds in the Korean population were lower than those in the other countries.
Based on the analytical data and assuming a daily intake consumption of 800mL milk with 3% fat, the