

effect and activity to inhibit immunotoxicity induced CY.

[PA3-15] [ 04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3] ]

### Head Space-Solid Phase Microextraction analysis for methamphetamine in Urine.

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Head Space Solid-Phase MicroExtraction (SPME) is a relatively new technique that allows the samplings of small amount of substances from an aqueous medium and direct GC and GC/MS analysis.

It's an simple and rapid method for quantifying and qualifying various drugs and chemicals without solvent extraction.

This paper describes the application of head space SPME to methamphetamine(MA) , amphetamine (AM) and major metabolite analysis in urine by GC-TSD.

A vial containing a urine sample, internal standard and potassium carbonate was heated at 80 °C for 2i5 mn.

The extraction fiber in the needle of a SPME was exposed for 4 min in the head space of the vial. The standard curves were a straight line between 6.7 and 8.3 ppm for AM and 0.83-6.7 ppm for MA.

The calibration curves showed correlation coefficients of 0.996 for both drugs.

The proposed method is also suitable for the analysis of amphetamine-like compounds in urine.

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### Measurement and Distribution of Cadmium, Lead, Mercury, Selenium and Zinc in Human Tissues

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In the past, particular interest has been attracted to the distribution and interaction between the toxic and essential elements in animals and human, since such interactions might have adaptive implications to environmental pollution. We previously have reported the distribution of 15 elements in 91 Korean cadavers. The current study was performed for monitoring of toxic elements to the human tissues and to assess the correlation between toxic and essential elements. Toxic elements, such as Cd, Pb, Hg, and essential elements such as Se and Zn, were analyzed on internal organs of 82 Korean cadavers. The tissues were digested with microwave digestion system and elements were determined by ICP-AES. High correlation between age and elemental concentration was observed in the following cases : Cd in kidney cortex and kidney medulla ; Pb in liver and testis ; Hg in cerebrum and heart. A significantly high correlation between Hg and Se was observed in all tissues tested, while a significant correlation between Pb and Se was observed in liver, kidney cortex, kidney medulla, heart, lung, spleen, testis and bone. The correlation between Cd and Zn was significant in liver, kidney cortex, kidney medulla, lung, testis and bone. These results indicate that the distribution of toxic elements is similar to that of essential elements in all tissues.

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### Estrogenic activities of alkylphenols and curcumine derivatives

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