

## **methylenedioxyamphetamine (MDA) and methylenedioxymethamphetamine (MDMA) by GC/MS in Hair**

Lee JS, Park MJ, Kim EM, Chung HS and Yoo YC

Narcotics Analysis Div., Forensic Science Dep., National Institute of Scientific Investigation

The abuse of amphetamine's methylenedioxy-derivatives such as 3,4-methylenedioxyamphetamine (MDA) and 3,4-dimethylenedioxymethamphetamine (MDMA) has increased recently in Korea. In this study, a method is investigated for the simultaneous determination of amphetamine (AM), methamphetamine (MA), MDA and MDMA in hair. To extraction of drugs, fine cutted hair sample was incubated with MeOH (1% HCl) overnight (18 hrs) while stirring. For GC/MS analysis, the extract was evaporated and derivatized with trifluoroacetic anhydride / EtOAc and applied to Hewlette Packard 5973 MSD with selective ion monitoring (SIM) mode.

Quantification of AM, MA, MDA and MDMA in hair sample were based on peak area ratio to their internal standards, like as AM-d<sub>5</sub>, MA-d<sub>5</sub>, MDA-d<sub>5</sub> and MDMA-d<sub>5</sub>, respectively. Selected ions at m/z 140 for AM, m/z 144 for AM-d<sub>5</sub>, m/z 154 for MA and MDMA, m/z 158 for MA-d<sub>5</sub> and MDMA-d<sub>5</sub>, m/z 162 for MDA and m/z 167 for MDA-d<sub>5</sub> were used in this analysis.

[PD4-11] [ 04/19/2001 (Thr) 13:30 - 14:40 / Hall 4 ]

## **Studies on the Quality Evaluation of Pharmaceuticals (III) – Comparative Analysis of Pyrogen and Endotoxin Test in Amino acid injections**

Kim HS<sup>o</sup>, Lee SD, Ze KR, Kim HS<sup>o</sup>, Kim MJ, Jang SH, Jung KS, Lee YH, Jung HY and Jang SJ

Division of Drug Chemistry, Department of Drug Evaluation, KFDA

Limulus Amebocyte Lysate(LAL) test (endotoxin test) is supposed to be a alternative to the rabbit pyrogen test in that the former is more convenient, specific and inexpensive. To compare the LAL test with the rabbit pyrogen test, we prepared spiked samples of 5 pharmaceutical amino acid injections with concentration of 0.25, 0.5, 1.0 EU/mL and tested those by pyrogen and endotoxin test simultaneously.

The LAL test was accomplished by using 2 different methods, gel-clot method and kinetic turbidimetric method and the pyrogen test was accomplished by using KP official pyrogen test method. In our results, the LAL test was about 15.8 times more sensitive than the rabbit pyrogen test in the case of gel-clot method and about 97.3 times more sensitive than the rabbit pyrogen test in the case of kinetic turbidimetric method. The amounts of endotoxin in 5 amino acid injections estimated by the LAL test was well recovered and correlated with the rise of body temperature in rabbit pyrogen test. These results suggest that the LAL test could be used as an alternative method for the rabbit pyrogen test to examined 5 amino acid injections.

[PD4-12] [ 04/19/2001 (Thr) 13:30 - 14:40 / Hall 4 ]

## **Mass Spectrometric Study of cyclofenil and its metabolites in human urine**

Myung S-W<sup>1</sup>, Min H-K<sup>1</sup>, Chang Y-J<sup>1</sup>, Kim H-Y<sup>1</sup>, Yoon SH<sup>1</sup>, Kim MS<sup>1</sup>, Cha SJ<sup>o 2</sup>, Yoo EA<sup>2</sup>

<sup>1</sup>Doping Control Center/Korea Institute of Science and Technology, <sup>2</sup>Department of Chemistry/Sungshin Women's University