



DRUG ANALYSIS IN HAIR

by The National Institute of Criminalistics and Criminology

/ CONTEXT

Within the context of drug analysis in hair new protocols have been developed to establish the toxicological profile of a patient. Those techniques involve constraints as low volumes and concentrations and absence of crosscontamination. Before the analysis by HPLCMS/MS, the samples had to be reduced in powder form. See also the publication 1. Journal of Analytical Toxicology, Vol. 29, Oct 2005 2. Anal Bioanal Chem DOI 10.1007/s00216-007- 1297-9

/ MATERIALS

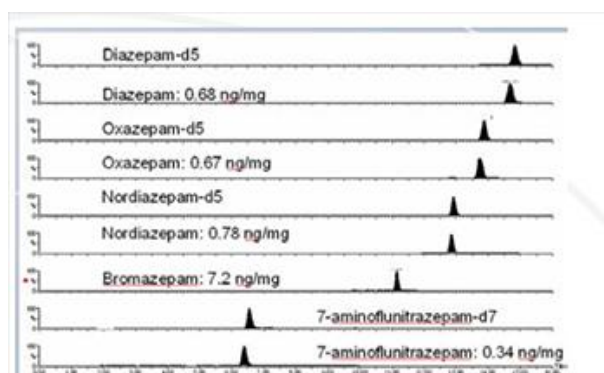
- Precellys®24 equipment.
- Precellys® kit MK28 (metal beads).
- Sample : 1cm hair segments.
- Buffer : empty.

/ PROTOCOL

Precellys®24 parameters: 6500 rpm, 2x50 sec., 15 sec. Break.

/ RESULTS

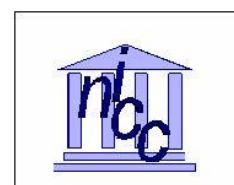
Analysis of an authentic hair sample by HPLC-MS/MS with the following steps : 1. Decontamination (Dichloromethane) 2. Grinding (Precellys®24) 3. Incubation (Methanol) 4. Centrifugation 5. Evaporation 6. Filtration 7. Analysis by HPLC-MS/MS



NICC, Belgium January 2005



/ CUSTOMER



/ CONCLUSION

Precellys®24 is successfully evaluated on hair grinding, which is considered a difficult and challenging sample. Results of toxicology tests in crime labs are now faster.