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NEW GENERATION Tissue homogenizer

SAMPLE PREPARATION & CELL LYSIS



precellys 24
lysis & homogenization

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 cross-contamination. Before the analysis by HPLC-MS/MS, the samples had to be reduced in powder form.

See also the publication

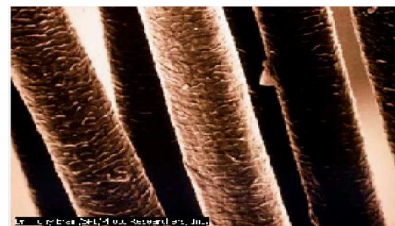
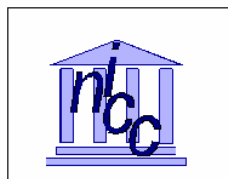
1. *Journal of Analytical Toxicology*, Vol. 29, Oct 2005
2. *Anal Bioanal Chem* DOI 10.1007/s00216-007-1297-9

MATERIAL

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

PROTOCOL

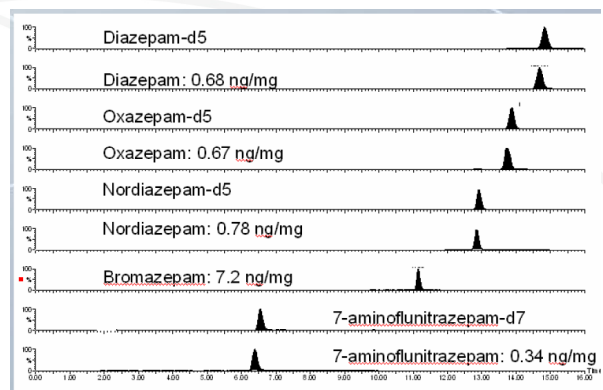
- Precellys®24 parameters:
6500 rpm, 2x50 sec., 15 sec. break



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

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.

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