

New Sample Loading for the Automated Sample Preparation: Bidirectional SPE

The robotic system FREESTYLE of LCTech GmbH automatically processes the most difficult matrices in the field of forensic and toxicology: reliably and without cross-contamination.

The specialist for automated sample preparation LCTech GmbH has developed a new procedure of sample loading, the bidirectional SPE (solid phase extraction). Thus, even very difficult matrices with smallest sample volumes, like brain, can be processed automatically without supervision over 24 hours and 7 days per week.

Using the bidirectional SPE the sample is aspirated through the LUER tip into the column. It passes the sorbent from bottom to top and is released directly afterwards into a vial from top to bottom whereas the sample passes the sorbent for the second time. With this kind of sample loading and releasing the sample never enters the robotic system and a contamination of one sample to the next one can be excluded. Unwanted matrix effects are minimised. The elution of the analytes is possible with only a minimal amount of solvents. The original applied sample is collected in a vial next to the sample vial and is available for further processing if needed.

A cooperation with Dr. T. Stimpfl of the Medical University of Vienna has shown that the procedure of bidirectional SPE is especially suitable for acidic, neutral or basic analytes in brain tissue or similar matrices. Lipids and proteins make the automated handling of these matrices particularly difficult, as the samples can contaminate the system due to their characteristics. The risk of cross-contamination is very high, if the samples are loaded with a standard procedure and can only be prevented with intensive rinsing. However with the procedure of bidirectional SPE the user can have the samples processed around the clock, safe and reliable.

You can see the FREESTYLE robotic system with the new bidirectional SPE procedure for yourself at **analytica 2016 in Munich, Germany, in hall A2 booth 400.**



Automated Sample Preparation System with SPE and EValaporation Module

About LCTech GmbH

LCTech GmbH is based in Dorfen, Germany. Since 1998, it has been developing and supplying products and methods for the preparation and analysis of food, animal feed, forensic and environmental samples. The product range includes both semi and fully automated sample preparation systems as well as consumables utilised in the analysis of contaminants and residues.

LCTech is represented worldwide through a well-developed distributor network and also acts as the exclusive distributor for PICKERING Laboratories in Europe, Africa and the Arab countries.

Worldwide, many customers – including governmental and contract laboratories focusing on food and feed analysis, and also those based in the pharmaceutical industry or research – equally appreciate both, the modern and efficient products of LCTech as well as its responsive and competent customer support. More information is available online via www.LCTech.de.

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Pages: 2

Press Information:
Words: 323
Characters: 1,718 (without spaces)
Lines: 32