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Journal of Chromatography A

journal homepage: www.elsevier.com/locate/chroma

Editorial

Editorial on “Liquid phase chromatography on microchips” by J.P. Kutter

Miniaturization of analytical techniques and instruments is an important and well-recognized field of research today, and numerous milestones have been achieved in recent decades. The miniaturization of devices and instruments appears to have acted as a driving force in modern analytical chemistry technology. Miniaturization continues to be a central consideration in the design and development of already mature, conventional chromatographic techniques, reflecting the chemist's need to work with smaller amounts and volumes wherever possible. Miniaturizing also serves the growing need for portable instruments.

Professor Jörg P. Kutter, who since 2006 has been responsible for experimental lab-on-a-chip systems at the Department of Micro and Nanotechnology of the Technical University of Denmark in Lyngby, is one of the most highly respected scientists in the field of microfluidics. Among other things he and his group have made outstanding contributions to the development of microfluidic devices for applications in the life sciences.

In his authoritative and comprehensive review featured in this issue of *Journal of Chromatography A*, Professor Kutter offers a

realistic view of the state of chromatography on microfluidic devices. He touches on all the crucial factors relevant to the suitability of miniaturized devices for liquid chromatographic separations. Not only does he take a close and critical look at how liquid phase chromatography has been implemented in miniaturized formats over the past several years, but he also lists those things we need to remember when developing or undertaking separations in miniaturized devices. And he notes those technical barriers, pitfalls and challenges that remain to be overcome.

The development of chromatographic separation systems on microchips has slowed somewhat in recent years. Liquid phase chromatography in microchip format nevertheless continues to offer ample opportunities for creative research. Professor Kutter's review will surely stimulate the design of new and better miniaturized separation devices.

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Available online 16 November 2011