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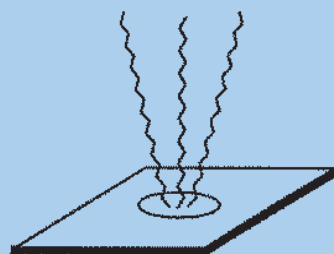
MNF Education:

Surface enhanced laser desorptions ionization-time of flight-mass spectrometry analysis in complex food and biological systems

Harshadrai M. Rawel, Sascha Rohn, Jürgen Kroll and Florian J. Schweigert

The application of mass spectrometry for the characterization of food proteins represents one of the most important tools in food chemistry and nutritional science. This together with the need for methods for biomarker identification as well as the study of protein-protein, and protein-DNA interactions has caused the matrix assisted laser desorptions/ionization – time of flight – mass spectrometry (MALDI-TOF-MS) and the surface enhanced laser desorptions/ionization – time of flight – mass spectrometry (SELDI-TOF-MS) to become two of the most important tools of choice for solving such questions and both these techniques have been described here with corresponding examples of applications. This study critically highlights the merits of SELDI-TOF-MS, like employing preactivated differential binding surfaces to achieve multidimensional chromatography with ProteinChip Arrays or versatility of this methodology, supporting its application to the rapid discovery of potential biomarkers in a variety of cellular systems, but also discusses its limits in resolution power.

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Research Article**Synthesis of stable isotope labeled 3-acetyldeoxynivalenol***Michael Bretz, Marita Beyer, Benedikt Cramer and Hans-Ulrich Humpf.*

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Research Article**Suppression of arachidonic acid metabolism and nitric oxide formation by kudzu isoflavones in murine macrophages***Mira Jun, Jungil Hong, Woo-Sik Jeong and Chi-Tang Ho* 1154**Research Article****Ochratoxin A induces oxidative DNA damage in liver and kidney after oral dosing to rats***Hennicke G. Kamp, Gerhard Eisenbrand, Christine Janzowski, Jetchko Kiossev, John R. Latendresse, Josef Schlatter and Robert J. Turesky* 1160**MNF Report** 1168**MNF Meetings Diary** 1175**Instructions to authors** 1179**Author Index** I–VI