

**Hyphenation of capillary LC with ICP-MS and on-line micro fraction collection for MALDI-TOF analysis as complementary tools for protein analysis**

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Capillary and nano HPLC are the methods of choice for many separation problems due to their good compatibility with the ESI process. Recently different interface systems have been described in the literature allowing the complementary application of ICP-MS and ESI-MS under exactly the same chromatographic conditions, which is a pre-requisite for a proper matching and pre-selection of peaks due to their elemental tag.

Capillary-LC-ESI-MS is often limited especially due to matrix effects and signal suppression as a result of the composition of the used LC eluent. Furthermore MS-MS experiments have to be planned very carefully since data acquisition is often restricted to short time events, defined by the small elution windows of the separated peaks.

The combination of capillary LC with micro fraction collection on a MALDI target plate allows the "quasi" on-line coupling of LC and MALDI-TOF, which helps to overcome some of the limitations of capillary-LC with on-line ESI-MS detection.

This contribution will describe the combination of capillary LC with online ICP-MS detection for element and off line MALDI-TOF analysis for a molecule specific detection of the separated compounds. The setup developed based on a nano flow splitting device and a micro fraction collector system, which allows the direct spotting of the HPLC eluent and matrix addition on either re-usable and disposable MALDI targets. First results will be presented.