

Introducing a routine LC-IRMS interface Finnigan LC IsoLink: a completely new concept

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With the introduction of compound specific isotope analysis by irm-GC/MS the immediate for similar applications using HPLC was created. In irm-GC/MS the carrier is helium, which does not interfere with the essential combustion step prior to isotope ratio mass spectrometry (IRMS). In opposite the LC mobile phase has inhibited a similar direct conversion up to now. All earlier irm-LC/MS approaches were based on the removal of the liquid phase prior to combustion risking fractionation of the isotope ratios of the eluted compounds. To avoid such restrictions we have developed a new continuous flow concept for the coupling of an HPLC system to the isotope ratio MS.

The differentiation idea of the new concept is to leave the compounds in the effluent and to combust them in the liquid phase. Then separate the resulting CO₂ compound peaks from the effluent and analyze then with the isotope ratio MS.

First results on sensitivity, linearity and precision will be shown. First applications will give an idea on the broad range of possibilities.

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