TLC-MS Interface 2 – a simple and flexible solution for UPLC-MS and TLC-MS hyphenation

In 2009 CAMAG introduced the TLC-MS Interface, which enables users to directly analyze zones from TLC and HPTLC plates by mass spectrometry. The hyphenation to the ACQUITIY QDa detector speeds this coupling up, so that a confirmation by a mass spectrum can be obtained in less than a minute. Whereas liquid chromatography is characterized by a higher resolution and a high level of automation, HPTLC combines the benefits of analytical robustness and high sample throughput, especially for samples with high matrix load like phytopharmaceutical products, food and cosmetics. Furthermore, derivatizations with universal or group specific reagents can be done as well as effect-directed tests (bioautography) on the HPTLC layer. This allows to get more information out of one separation. Both analytical methods combined increase the performance capacity for a fast and efficient screening.

The workshop will demonstrate the HPTLC-MS coupling with a standard UPLC system (ACQUITY H-Class, Waters). UPLC- and HPTLC-MS can be performed either separate or at the same time (2D) enabling to exploit the full potential of both chromatographic techniques together with mass spectrometry.

You will learn:

- More about the benefits of High-Performance Thin-Layer Chromatography
- How to use UPLC-MS and HPTLC-MS within the same UPLC system
- How to connect the TLC-MS interface 2 into an existing Waters' UPLC-MS system
- How to create an Empower® sample set in order to use the system either as HPTLC-MS or UPLC-MS instrument (using a column switch)