

# “FAST AND UNCOMPLICATED MASS DETERMINATIONS OF SEPARATED COMPOUNDS.”

## Dr. Gertrud Morlock

Professor, Food Science  
Interdisciplinary Research Center,  
Justus Liebig University of Gießen, Germany

# Advion

### Q: WHAT IS THE FOCUS OF YOUR LAB'S RESEARCH?

**A:** Further improvement of high-performance thin-layer chromatography (HPTLC) as the most efficient and powerful planar chromatographic technique standing for optimized coating material (lower particle size and narrower particle size distribution) in combination with the employment of advanced instrumentation for most steps of the chromatographic process.

Direct analysis in real time (DART) was first coupled to planar chromatography by our group as well as atmospheric pressure glow discharge (APGD), HPTLC-MALDI-TOFMS achieved reproducibility of about 10% directly from the plate via Imaging MS. We successfully modified an interface, originally invented by Dr. Luftmann from University of Münster and together with a company turned this into a product, the TLC-MS Interface from CAMAG.

### Q: WHAT PREVIOUS WORKFLOW CHALLENGES DID YOU EXPERIENCE?

**A:** In regard to our HPTLC-MS-coupling project, we aimed for an uncomplicated solution to connect a compact mass spectrometer directly to the TLC-MS Interface without the need of any additional peripherals.

### Q: WHY DID YOU INCORPORATE THE EXPRESSION CMS INTO YOUR LABORATORY?

**A:** Based on the good performance data, the **expression** compact MS from Advion enabled mass-over-charge ( $m/z$ ) signal intensities of HPTLC zones in a concentration-dependent (quantitative) and reliable manner. As a very compact MS, it will help to establish MS in the workflow of TLC/HPTLC laboratories.



#### RESEARCH FOCUS:

High-performance thin-layer chromatography (HPTLC) and its hyphenation with other modern analytical tools.

#### CUSTOMER SINCE:

2012