

New CAMAG TLC-MS Interface



Rolf Rolli,
CEO CAMAG

Dear reader

For a long time TLC-MS hyphenation has been proposed to complement the widely used LC-MS techniques, because not all samples can be analyzed satisfactorily by LC-MS. Several years ago Dr. Luftmann of the University of Munster/Germany developed an automated TLC/ESI-MS interface. At its heart is an extractor which can extract spots or zones from a TLC plate into a mass spectrometer for MS analysis.

Prof. G. Morlock, University of Hohenheim, published several studies with this TLC extractor and popularized the concept. Many customers requested from CAMAG that a similar TLC extractor should be developed. Customer surveys conducted in 2007 also indicated a great interest in a standardized commercial solution. In the past CAMAG had manufactured a similar device, the Eluchrom, and therefore decided in 2008, to start the development of a new instrument in collaboration with Dr. Luftmann.

Prof. HR Schmutz, University for Life Sciences, Basel helped with testing the new device. We are proud that this TLC-MS Interface is now available to our customers.

News & Events

- Pittcon 2009, Chicago 8–13 March 2009
CAMAG Scientific Inc., Booth 1927
- TLC-MS Interface in Germany:
Analytischer Fortbildungstag
“**Neuer Weg zur TLC/HPTLC-MS
Kopplung**”
26.03.09, Langenau
30.04.09, Offenburg
26.06.09, Münster
01.10.09, Berlin
Details: www.camag.com/ger/kurse.html
- TLC-MS special workshop
at Sanofi Aventis, 02. April 2009,
Neuville s/Saône, France
- Triangle Chromatography Symposium,
21 May 2009 in Raleigh NC, USA

CAMAG

CAMAG

Flash

March 2009

Direct extraction of compounds from TLC/HPTLC layers into MS: Introducing the CAMAG TLC-MS Interface

When doing TLC or HPTLC analyses we often want to know more about a certain substance. We then usually would scrape off the silica, extract the unknown substance zones with an appropriate solvent, filter the solutions and finally inject them into a mass spectrometer. A tedious procedure, isn't it?

Now the new CAMAG TLC-MS Interface is available for the rapid and convenient extraction of compounds into APCI-MS, APPI-MS or ESI-MS. The instrument semi-automatically extracts zones of interest and directs them online into a HPLC-MS system for substance identification or structure elucidation.

Easily linked, simple handling

The universal CAMAG TLC-MS Interface is conveniently connected (by two fittings) to any brand of LC-coupled mass spectrometer without adjustments or MS modifications:

- Connect solvent capillary to the HPLC pump
- Connect the outlet capillary to the MS
- Place the zone of interest under the piston
- Start the extraction with TLC-MS Interface and the MS registration.

How it works

TLC-MS Interface extracts circular zones of 4 mm diameter from the TLC/HPTLC layer, e.g. with methanol or another appropriate solvent by using the standard flow speed of the HPLC-MS system. The semi-automatic instrument features automatic piston movement for pressure seal of the TLC/HPTLC zone on glass plates and aluminium foils, automatic cleaning of the piston, but manual positioning and switching for flexibility.

Conclusion

The methodology of coupling HPTLC and MS can be very helpful because the identification of unknown compounds can be performed in very short time. Within a minute the mass spectrum of the substance of interest is obtained by direct extraction into HPLC-MS.

Further details, application example

More information about CAMAG TLC-MS Interface is available at www.camag.com/tlc-ms
TLC-MS Interface is shown at Pittcon 2009, booth #1927



WORLD LEADER IN PLANAR CHROMATOGRAPHY

CAMAG · Sonnenmattstr.11 · CH-4132 Muttenz (Switzerland) · www.camag.com