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CAMAG TLC-MS Interface – rapid and convenient substance extractions directly into MS

CAMAG TLC-MS Interface is a versatile instrument to extract compounds from a TLC/HPTLC plate and feed them into a mass spectrometer for substance identification or structure elucidation. It can be connected to any brand of LC-coupled mass spectrometer.

Surveys have shown that not all samples may be processed by HPLC-MS or HPLC-DAD systems because of no or low detection of the compounds or impurities in the UV range, a heavy matrix load or a lack of MS compatible solvents, however necessary for the HPLC separation. Alternatively HPTLC is a very fast and convenient method to separate samples. In the past unknown substances were scraped off from TLC/HPTLC plate, eluted into a tube and transferred into the MS. The universal TLC-MS Interface can now semi-automatically extract zones of interest and direct them online into a any brand of HPLC-MS system.

The device is quickly and easily connected (by two fittings) to any LC-coupled mass spectrometer without adjustments or mass spectrometer modifications. Questioned substances are directly extracted from a TLC/HPTLC plate and sensitive mass spectrometric signals are obtained within a minute per substance zone. The interface extracts the complete substance zone with its depth profile and thus allows detections comparable to HPLC down to the pg/zone range.

The interface features plug-and-play installation by two HPLC fittings at a given HPLC-MS system, semi-automatic instrumentation involving automatic piston movement for pressure seal of the TLC/HPTLC zone on both glass plates and aluminium foils, extraction directly from the plate using a suitable solvent delivered by the HPLC pump, and automatic cleaning of the elution head between the extraction and online transfer to the mass spectrometer.

The instrument extracts circular zones of 4 mm diameter or oval zones 2 mm x 4 mm from a TLC/HPTLC plate; for example with methanol or any other appropriate solvent, using the standard flow speed of the HPLC-MS system (e.g. 0.1 mL/min). Additional extraction head geometries will be available. Materials include plates or aluminium foils up to 20 x 20 cm can be positioned accurately and analysed zone by zone. The semi-automatic instrument involves automatic head movement, automatic cleaning of the piston, manual positioning and switching.

Further information available at www.camag.com/tlc-ms.

Contact for the press:

CAMAG, Mr. Marcel Hug, CH-4132 Muttenz/Switzerland
Tel. +41 61-467 34 34, Fax +41 61-461 07 02, info@camag.com

attached images:

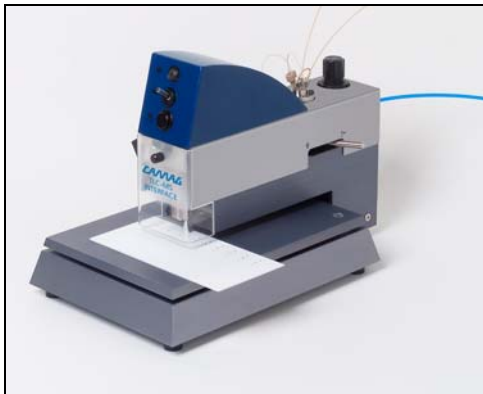
CAMAG TLC-MS_Interface detail_laser.jpg



The CAMAG TLC-MS Interface (detail)

attached image:

CAMAG TLC-MS_Interface.jpg



The CAMAG TLC-MS Interface