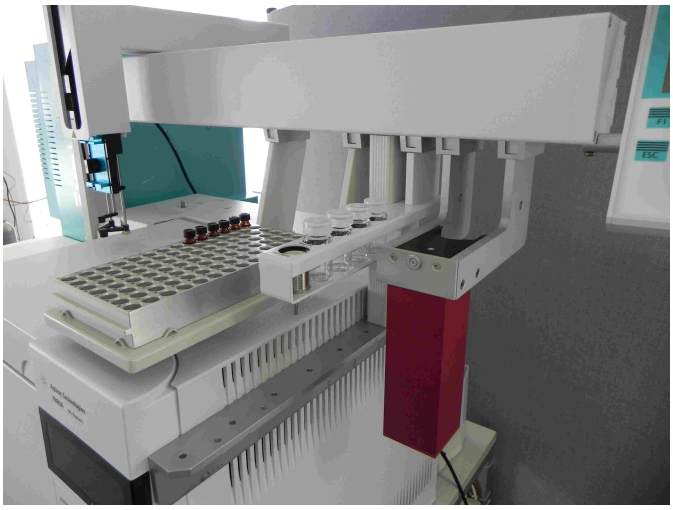
SPDE

Dynamic solid phase extraction

Solvent-free enrichment in an internally coated needle. Sample preparation and thermal desorption automated with PAL RTC or RSI.



SPDE at PAL - Example Configuration

CONCEPT

SPDE stands for Solid Phase Dynamic Extraction. A gas-tight 2.5 ml syringe repeatedly pulls liquid or the gas space over the sample (headspace) through the internally coated steel needle. Target compounds accumulate at the extraction phase.

AUTOMATED WORKFLOW

Extraction: repeated plunger strokes bring the sample into contact with the coating.

Preparation: pick up carrier gas; dry syringe and coating if necessary.

Desorbing: release substances in the hot GC injector and transfer them to the column with carrier gas.

APPLICATIONS AND BENEFITS

For food and aroma research, environmental analysis and forensic applications.

Extraction strokes, sample flow and temperature are set method-specifically. Various coatings allow for adaptation to the target compounds.

EQUIPMENT AND INTEGRATION

Syringe: 2.5 ml, gas-tight needle: internally coated stainless steel capillary automation: PAL RTC / PAL RSI GC: split/splitless or PTV injector

No separate thermodesorption unit is required. Design and coating are selected to suit the method.

Lifespan and sensitivity depend on the matrix, method and care.

Sources: CHROMTECH SPDE product page and product flyer CT-SPDEengl2006. Current RTC/RSI availability according to product page. English short version.

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