



Get a
„CONCEPT“

Dietmar Hein
PAS Technology Deutschland GmbH

Professional Analytical Systems

Availability

- **Liquid-Injection-Mode:** from $< 1 \mu\text{l}$ to $> 1000 \mu\text{l}$
- **Static Headspace-Injection-Mode:** 0.25 ml, 0.5 ml, 1 ml syringe technique (up to $90 \text{ }^\circ\text{C}$)
- **DTD:** automated exchange of desorber tubes
- **DMI:** automated liner exchange for difficult matrix samples
- **SPME:** standard SPME technique
- **NeedleTrap:** automated NeedleTrap injection
- **sample preparation/liquid handling:** automated LL-extraction, sample heating, mixing, derivatization, dilution....

Liquid-Injection- Mode

- 4 standard syringe types (10 µl, 50 µl, 100 µl and 250 µl, others on request)
- any needle tip form available
- variable injection speed
- variable pre- and post-injection times
- variable injection place
- standard trays for 2 ml vials (4 x 8 or 8 x 12 positions), 10 ml/20 ml vials (5 x 7 positions) and 40ml/60 ml VOA vials (5 x 6 positions)
- any type of customized trays available
- Wash/Waste positions
- Internal Standard positions

Headspace- Injection- Mode

- 0,25 ml, 0,5 ml or 1 ml syringe technique (up to 90 °C)
- 2 position heated (up to 90 °C) shaker for 10ml and 20 ml vials
- variable shaking frequenz (0 – 800 Hz)
- variable temperatures
- Variable sample volume
- vial transfer by magnetic vial cap

DTD/DMI- Injection- Mode

- **automated liner exchange for difficult matrix samples**
- **automated liner exchange for thermodesorbtion samples**
- **standard 4 x 8 position tray**
- **any type of customized trays available**
- **liners are sealed by PTFE-disk**
- **liner transfer by magnetic liner-cap**
- **controlled carrier gas flow during desorption**
- **injector closure by pneumatic device**

SPME- Injection- Mode

- use of standard SUPELCO SPME-fibers and SPME-fiber holder
- 2 position heated (up to 90 °C) shaker for 10ml and 20 ml vials
- single position heated (up to 90 °C) magnetic stirrer
- variable shaking/stirring frequenz (0 – 800 Hz, 0 – 2000 Hz)
- variable temperatures
- variable adsorption-/desorption times
- vial transfer by magnetic vial cap

Sample Preparation

- transfer of liquids from any place of working range of sampler (approx. 50 cm x 20 cm x 26 cm) to any other
- transfer of vials from any place of working range of sampler to any other
- shaking/heating/stirring of sample
- mixing of samples
- easy set-up of customized methods
- i. e. „H 53“:
 - Extraction step: 15 ml sample in 20 ml vial on tray → add 1,5 ml of solvent → move sample vial to shaker → LL-Extraction
 - Drying step: take alliquote of extract and inject into 2 ml vial with NaSO₄ → mixing
 - Clean-up step: take alliquote of dried extract and inject into 2 ml vial with Floresil → mixing
 - Injection step: LVI (100 – 150 µl)