PAL Purge and Trap with CDS 7000C

Transforming Purge and Trap from tradition to present-day analytics

Purge and Trap (P&T) is well-established since 1974 for analysis of volatile compounds with trace level sensitivity. Research and contract labs rely on P&T for environmental assessment, waste water, drinking water or beverage analysis applications, and worldwide applied protocols (DIN-EN ISO 15009; US-EPA 500-, 8000-series...). However, the P&T setups have evolved so far with several downsides of inflexible setups, laborious daily routines, and high running costs on one dedicated instrumentation (e.g. P&T-GC/MS).

The PAL Purge and Trap was built to overcome these limitations, and to meet today’s working comforts:

- P&T Methods and Data processing integrates to GC/MS with only one sample list
- Full control via TCP/IP makes remote I/O Cables obsolete: Manual plugging and signal setting is history.
- Flexible with other analytics by robotic tool change: e.g. Headspace, SPME, Liquid, Sample Prep, etc.
- PAL Dilutor automates P&T calibrations, e.g. with EPA MegaMix® Standards

Highlights of the PAL P&T

- Highest degree of P&T automation
- Multi-point calibrations
- Method flexibility to SPME, Headspace, Liquid
- Ease of use for routine and expert users
- Standalone or GC mounted for small footprint
- PAL workflows and reliability

Figure 1: Chromatogram of volatiles at 20 ppb.
Closing the Gaps in P&T Automation, Method Design and Analysis

**Technical principle:** Simple, robust and complied with established method protocols

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**CDS 7000C Specifications**
- Pressure transducer for leak check
- Programmable times: 0–999.9 minutes
- Trap: 0.3 cm OD x 28.5 cm Length
- Transfer Line: 1.5 m stainless steel clad fused silica
- Desorb pre-heat option
- Maximum Operating Temperatures
  - Vocarb or Tenax Adsorbent Trap
  - Valve oven 350°C
  - Transfer Line 450°C
  - Wet Trap 425°C
  - Adsorbent Trap 425°C
- Weight: 9.5 kg / 21 lbs
- 18 cm W x 50 cm H x 33 cm D (7” X 19.5” X 13”)

**CDS 7000C Options**
- Hot water rinse module
- Heated sparge vessel module
- Electronic mass flow controller
- ISTD addition module

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**PAL P&T Plugin Software:** Seamless integrates to your familiar instruments

**PAL Purge&Trap Tool:**
- Precision Dosage
- Double Needle
- Inert Gas Backpressure
- Vial Types (VOA, 20mL,...)

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**PAL Sample Control:** Acquisition software with boosted productivity

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**Figure 2:** Routine P&T controls (left) and method design on expert level (right).

**Figure 3:** Easy user interface (left) and time optimized processing (right).