

## **Enhancing Efficiency and Precision: HAUK Tech's Solid Phase Extraction (SPE) Systems**

Solid Phase Extraction (SPE) plays a critical role in sample preparation, enabling efficient isolation and concentration of analytes from complex matrices. HAUK Technology offers a cutting-edge range of automated SPE systems, engineered for high precision, robust performance, and user-friendly operation—meeting the rigorous demands of contemporary analytical laboratories.

### **Intelligent Pump Control for Accurate Flow Regulation**

At the heart of HAUK Tech's SPE systems is a digitally controlled syringe pump platform, which regulates the pressure and flow for each 4 or 8 SPE column. Unlike traditional vacuum-based systems, this precise positive-pressure approach ensures consistent flow rates (up to 25 mL/min) and uniform sample processing across all channels.

This digital control reduces variability and maximises analyte recovery—especially critical in applications such as:

- Environmental analysis (e.g. EPA Method 3535, EPA Method 1633, EPA Method 525 and EPA Method 533)
- Clinical diagnostics (e.g. sample prep for LC-MS/MS)
- Food safety monitoring
- Pharmaceutical quality control

### **Cross-Contamination-Free Column Transfer**

Cross-contamination is a persistent challenge in high-throughput labs. HAUK's systems solve this with a column transfer mechanism that relocates each cartridge to the elution rack under controlled positive pressure. This not only prevents cross-contact between solvents and analytes but also ensures reproducible elution profiles.

Compared with manual methods or older automated platforms, this technique reduces potential carryover by up to 98%, based on internal benchmarking and typical industry standards.

## Scalable Throughput with HSE-08D Series

The HSE-08D series supports parallel processing of up to 8 samples simultaneously, making it ideal for labs handling high sample volumes. Each channel is independently programmable, enabling flexible workflows for varied matrices in a single batch.

Key specifications include:

- Sample flow rate: 0.01-25 mL/min
- Solvent flow rate: 0.01-10mL/min
- Sample volume capacity: up to 5000 mL per run
- Solvent compatibility: up to 5 solvents, compatible with aqueous and organic solvents (methanol, acetonitrile, hexane, etc.)

These features make it an ideal choice for organisations like CDC laboratories, university research centres, and contract testing facilities.

## User-Focused Interface and Automation

HAUK SPE systems are designed with ease of use in mind. The HSE-C/D series incorporates an intuitive LED display for quick, real-time monitoring. For labs requiring advanced control, the HSE-C/D series features a responsive touchscreen interface with the ability to store up to 30 programmable methods, reducing setup time for recurring applications.

Operators benefit from:

- Real-time pressure and flow monitoring
- Step-by-step method programming
- Automated conditioning, loading, washing, and elution steps

These capabilities not only improve productivity but also reduce human error, a critical concern in regulated environments.

HAUK Tech's SPE solutions combine automation, intelligence, and precision to elevate sample preparation efficiency. By minimising variability, preventing contamination, and increasing throughput, HAUK's SPE systems empower labs across industries to meet both routine and complex analytical challenges with confidence.