



**AD41 SPE** High/Low Volume Pipettor

**AD21 SPE** High Volume Pipettor

**AD 41 SPE and AD21 SPE** provide combined variable pressure for SPE sample processing and liquid-controlled dispensing in one process controllable unit.

Positive Pressure Processors for SPE sample processing significantly improve the flow of viscous samples through SPE-packed beds by providing highly uniform well-to-well flow.

## SOLID PHASE EXTRACTION (SPE)

SPE has emerged as the preferred method for sample clean-up and trace enrichment for clinical analysis, food and beverage screening, environmental testing, and pharmaceutical analysis.

### SPE in FOUR STEPS:

**Conditioning:** This step primes the cartridge for accepting the target analyte.

**Loading:** The sample is loaded onto the cartridge at an appropriate flow rate, allowing the target analytes to be adsorbed or collected by the adsorbent.

**Washing:** The cartridge is rinsed with a solvent or pure water to remove interferents that were not retained by the adsorbent. Additional rinses can be performed using solvents of increasing polarity (e.g., 5%, 10%, 20%, 100%) to remove compounds based on decreasing polarity.

**Elution:** This step releases the analytes from the adsorbent, using an elution solvent or a combination of solvents.

### AD41

SPE and  
High/Low Volume Pipettor

### AD21

SPE and  
High Volume Pipettor

### AD21-HL

High/Low Volume Pipettor

- 96 Channels with High/Low volume Core
- Low Volume: 0.5 to 30 $\mu$ L
- High Volume: 10 to 1250 $\mu$ L
- Air Processing Speed:  $\leq$  2.5 seconds for max. volume, or  $<5.0$  seconds/cycle
- Fully programmable GUI
- Manual indexing nest for 96 to 384 applications
- 3-position manual plate shuttle
- 2-position manual tool shuttle: SPE process tool and pipetting head
- Maximum pressure: 25 PSI+
- Tips: Your choice

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- 3-position manual plate shuttle
- 2-position tool shuttle: pipetting heads for High or Low volume tips
- Tips: your choice

#### OPERATIONAL FOOTPRINT

13.7" wide x 27.7" tall x 17.6" deep  
348 mm wide x 705 mm tall x 448 mm deep