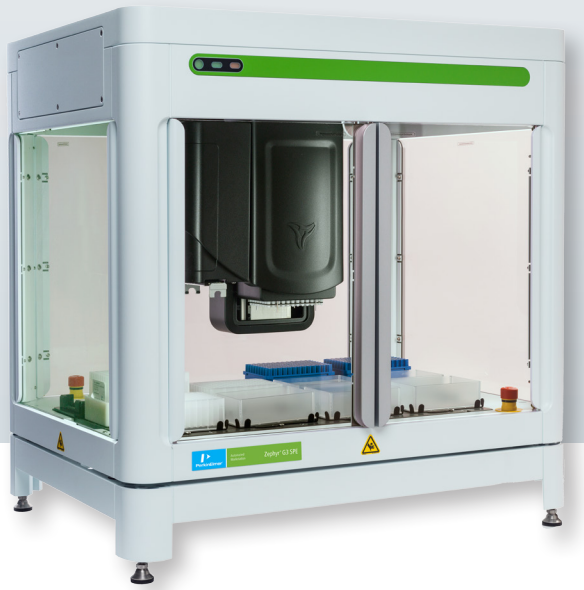
PRODUCT NOTE

Zephyr G3 SPE Workstation



Key Features

- Faster, cleaner and more reproducible sample prep
- High capacity within a small footprint
- Safe, unattended operation with ultrasonic clog detection
- Comprehensive error recovery ensures sample preservation

The ideal solution for 96-well Solid Phase Extraction

Advanced analytical devices such as mass spectrometry are keeping pace with the increased throughout, sensitivity, and specificity in toxicological screening. However, conventional sample preparation methods have not, in particular, SPE (Solid Phase Extraction). It is an essential step in the analysis of biomolecules, and yet, has become the throughput bottleneck for many laboratories.

The Zephyr® G3 SPE Workstation is a compact, robust and flexible liquid handler to automate the critical steps required for plate-based SPE purification. An intuitive graphical interface and straightforward protocols allow even occasional users to achieve highly accurate, reproducible results.

PerkinElmer®
For the Better

Zephyr G3 SPE Workstation (Figure 1) is a powerful platform designed to accommodate high throughput SPE purification. It eliminates sample throughput bottlenecks by simultaneously processing 96 samples. With its 96 channel high volume head, it can process one 96-well plate in approximately 20 minutes (Figures 2 and 3).

PING Non Contact Clog Detection

The Zephyr G3 SPE Workstation Advantage

The Zephyr G3 SPE Workstation is equipped with a truly unique feature called PING Non Contact Clog Detection (Figure 4). By using a state of the art ultrasonic sensor, the Zephyr G3 SPE Workstation can quickly examine all wells on an SPE plate to determine if the wells have emptied before moving on to the next step of the method. If a clogged well is detected the workstation can apply vacuum for additional time or notify the operator by e-mail.

This feature ensures that each sample is processed during the run resulting in increased efficiency and true walk-away time.

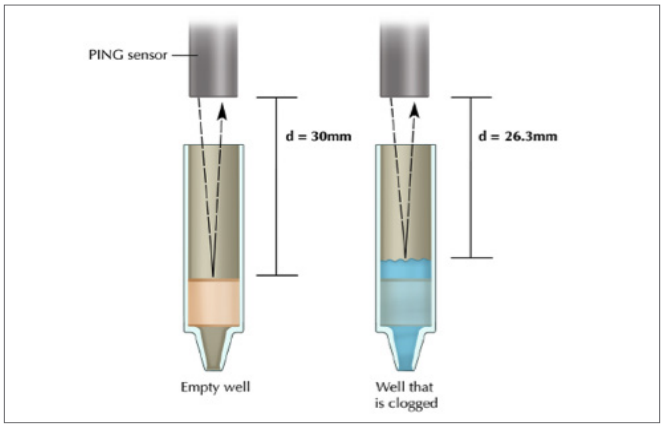


Figure 4. PING non-contact clog detection uses ultrasonic waves to interrogate consumables (plates, reservoirs, tubes) to determine liquid levels without ever physically contacting the sample.

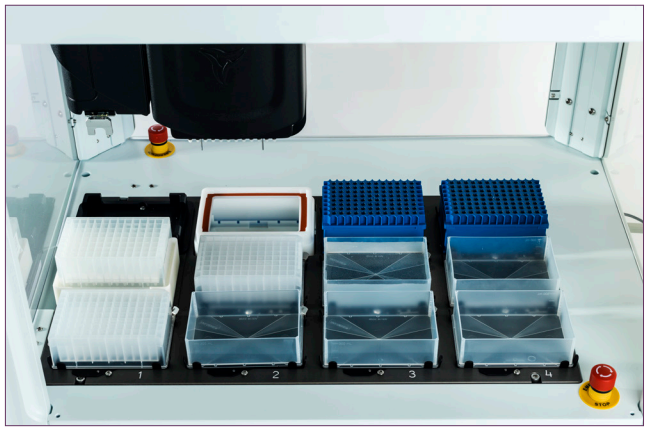


Figure 1. Zephyr G3 SPE Workstation deck setup.

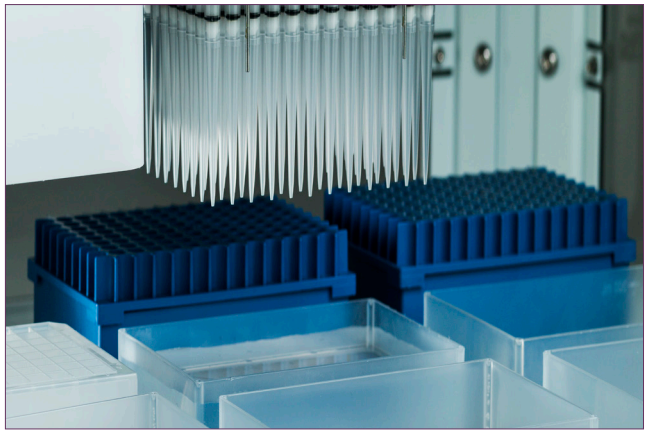


Figure 2. High throughput liquid handling using 96-channel head.

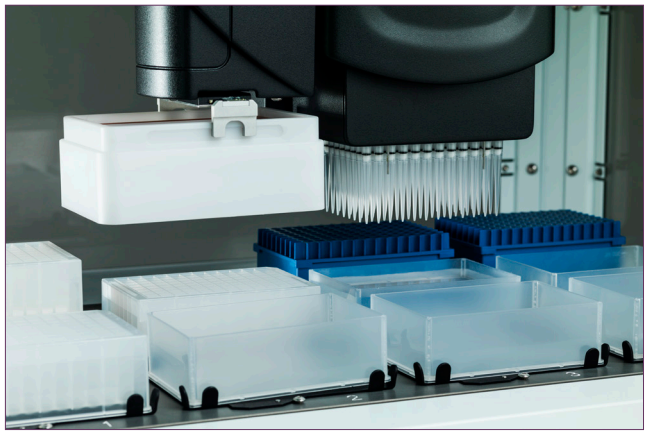


Figure 3. Up to five reagents available for the conditioning, washing and elution steps.

Powered by Maestro

A SPE specific graphical user interface (Figure 5) is included with the workstation to enable operators to move from setup to run in only three screens (i.e. method setup, reagent and deck setup, run).

Multiple reservoirs for the different reagents provide flexibility with the conditioning, washing and elution steps. The flexibility allows for buffer or an internal standard to be added to the sample plate.

After the sample is loaded onto the SPE plate and washed, the system will automatically insert a collection plate into the vacuum station prior to sample elution

Our pre-programmed SPE method provides a true-walkway solution, and can even be set up to notify the operator via email when the method is complete. In the event of an error, Maestro software provides comprehensive error recovery features to ensure sample preservation and data integrity.

The Zephyr G3 SPE Workstation offers:

- Automated sample prep for 96-well SPE biological samples
- Intuitive graphical user interface
- Vacuum filtration
- Automated conditioning, loading, washing and elution
- Multiple reagent reservoirs for conditioning, washing and elution
- Ability to specify all parameters associated with liquid handling for conditioning, load, rinse and elute steps
- Add buffer and internal standard to sample
- Reconstitute and mix samples post evaporation prior to analysis
- Uses standard formats of 96-well SPE plates

What's Included with your Zephyr G3 SPE Workstation

- PC controller and monitor
- Vacuum filtration station
- Waste bottle
- Plate/lid gripper
- PING non-contact Clog Detector
- Graphical User Interface Maestro software
- Startup Kit

Figure 5. Zephyr G3 SPE Workstation application specific graphical user interface.

Supra-Clean® and Supra-Poly® Solid Phase Extraction Solutions for Automated Liquid Handling Systems

PerkinElmer SPE columns and plates enable high selectivity and cleaner extracts with reliable, reproducible results (Figure 6).

- Consistent plate packing and spherical particle control enables better flow rates and reduced clogging
- Wide range of extraction media available
- Documented methods and application support

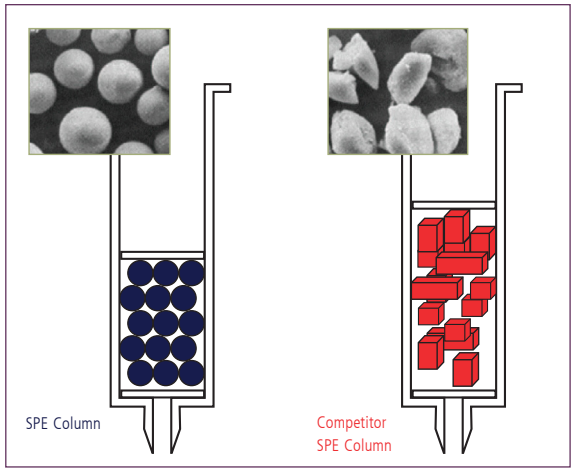
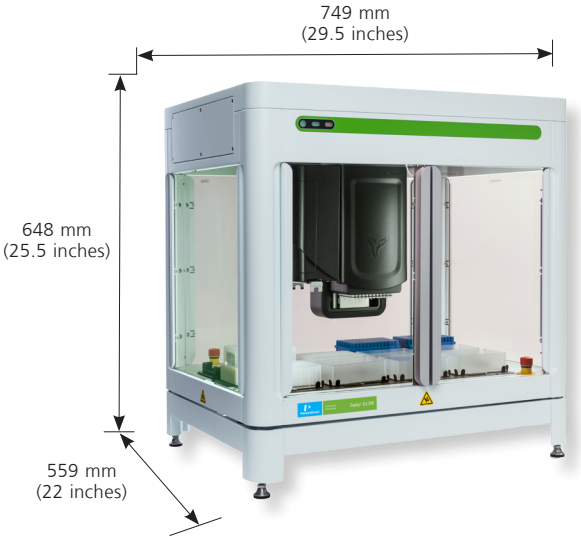


Figure 6. Spherical media and consistent particle distribution enable smaller elution volumes and more reproducible extraction purification, concentration and recovery.



Performance

Volume Range

High Volume Head (HVH) 1 - 200 µL

Precision

High Volume Head (HVH) 1 - 5 µL: CV <5%
5 - 200 µL: CV <2%
2 - 25 µL or 50 µL: CV 5%

Dimensions

Height: 648 mm (25.5 inches)
Width: 749 mm (29.5 inches)
Depth: 559 mm (22 inches)

Weight 75 kg (185 lbs) Base Unit

Operating Temperature 15 - 35 °C (59 - 95 °F)

Operating Humidity 0 - 85% RH, non condensing

Air Supply Regulated 35 - 65 psi

Power Input 115 VAC, 50/60 Hz, 1000 VA max. or
230 VAC, 50/60 Hz, 1000 VA max.

PART NO.	DESCRIPTION
126600	Workstation-SPE ZEPHYR, GEN 3, 120V
126601	Workstation-SPE ZEPHYR, GEN 3, 230V
124543	Optional Environmental Enclosure, ZEPHYR
126269	Optional Assay-Evacuation, VAPOR, ZEPHYR

For research use only. Not intended for diagnostic procedures.

For more information, please visit our website at www.perkinelmer.com/zephyrSPE

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