

Zephyr | SPE Workstation

**Key Features**

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

The ideal solution for 96 well Solid Phase Extraction

The Zephyr® SPE Workstation is a simple and efficient, yet powerful tool for automating the critical steps required in SPE and is designed to specifically meet the needs of clinical, forensic, and pharmaceutical/biotech laboratories.

Advanced analytical tools such as mass spectrometry are meeting the increasing demand for greater speed, sensitivity and specificity in toxicological screening. However, conventional sample preparation methods have not kept pace, in particular, solid phase extraction (SPE). SPE is an essential step in the analysis of many biomolecules and has become a throughput limiting bottleneck in many laboratories.

Zephyr SPE Workstation is a powerful workstation dedicated specifically for high throughput SPE. Designed to simultaneously process 96 samples with its 96 channel high volume head, the Zephyr SPE workstation can process one plate in approximately 30 minutes.

The Zephyr SPE Workstation eliminates bottlenecks, so that your lab can realize the full benefits of today's powerful and costly-analytical instruments.

The Zephyr SPE workstation automatically checks for clogs at each process step. Zephyr SPE methods offer total portability and can be easily transferred from one workstation to another, or from one site to another. Critical steps needed to perform SPE include:

- Conditioning the plate
- Addition of buffer and/or instrument standards
- Loading the sample
- Plate rinsing
- Elution (s)

The Zephyr SPE Workstation is a simple and efficient, yet powerful tool for automating the critical steps required in SPE and is designed to specifically meet the needs of clinical, forensic, and pharmaceutical/biotech laboratories.

Clog Detection Sensor

The Zephyr SPE Workstation Advantage

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

This feature ensures that each sample is processed during every run. In doing so, it therefore provides the operator true walk away time, and creates efficiency in the sample preparation process.

The Clog Detection feature makes the Zephyr SPE workstation a powerful and critical sample preparation tool.

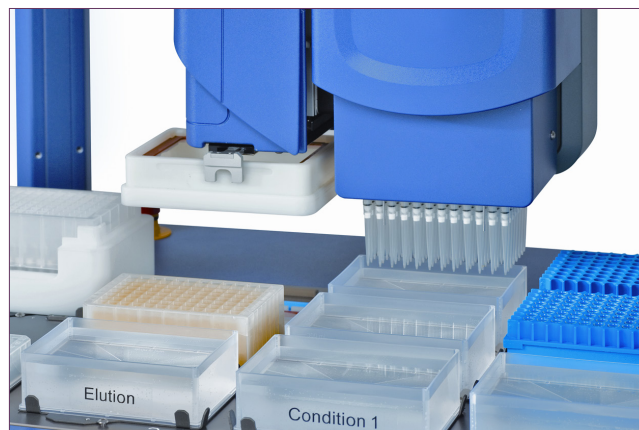


Figure 1. Automatically detect clogged wells and minimize re-runs

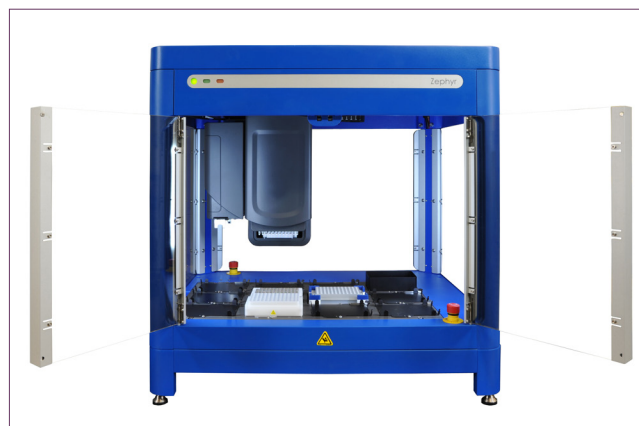


Figure 2. Zephyr SPE Workstation - shown with optional environmental doors

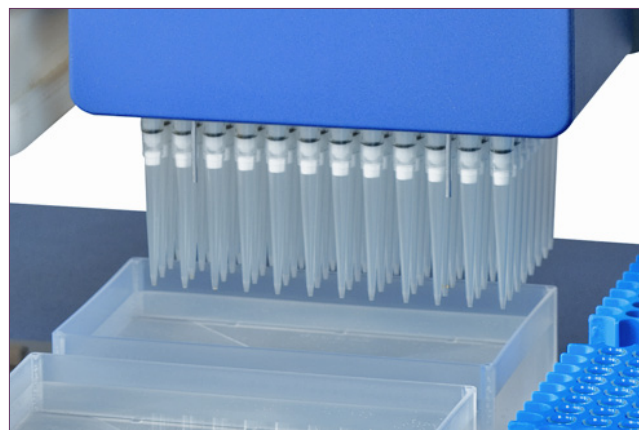


Figure 3. High throughput liquid handling with patented PING clog detection

Powered by Maestro

A simple graphical user interface is included with Zephyr SPE and is modeled after PerkinElmer's industry leading RapidTrace software.

This powerful approach enables operators to set up and run the entire methods using only three screens - simply set-up the method, put reagents and samples on the deck and run!

Multiple reservoirs for different reagents give you flexibility in conditioning, washing and elution. Start your method by conditioning the plate then add buffer or internal standard to the sample plate as required.

After the sample is loaded onto the SPE plate and washed, the Zephyr automatically inserts a collection plate into the vacuum station prior to sample elution.

Once an SPE method is started the system runs unattended, and can even notify the operator that the method is completed by paging or e-mail. After, elution plates can be manually transferred to a TurboVap 96 for evaporation and then returned to the Zephyr for reconstitution prior to analysis if needed.

Zephyr's small footprint fits on to a standard lab bench, requiring no special table, while offering flexibility for SPE applications:

- Automates 96 Well SPE of Biological Samples
- Intuitive graphical user interface
- Vacuum filtration based
- Automated conditioning, loading, washing and elution
- Multiple reagents 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
- Add an LS TurboVap 96 for evaporation post SPE
- Reconstitute and mix samples post evaporation prior to analysis
- Uses standard formats of 96 well SPE plates

What's Included with your Zephyr SPE Workstation

- PC controller and monitor
- Vacuum filtration station & vacuum venturi
- Waste bottle
- Plate/lid gripper
- Clog Detector
- Maestro software and SPE GUI
- Startup Kit



Figure 4. SPE Workstation powered by Maestro 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.

- 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

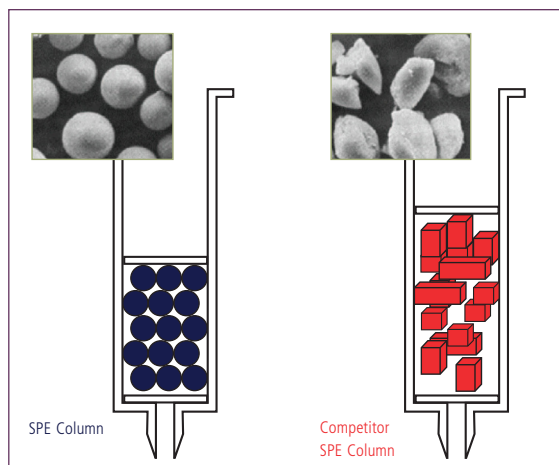
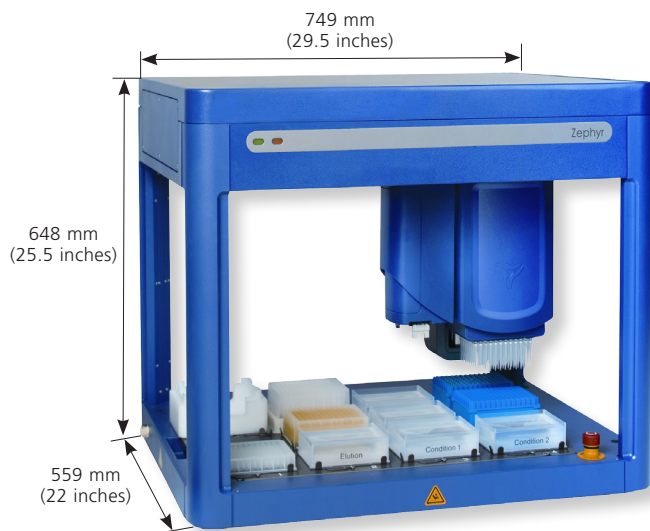


Figure 5. Spherical media and consistent particle distribution enable smaller elution volumes and better, more reproducible extraction purification, concentration and recovery.



Performance

Volume Range

High Volume Head (HVV) 1 - 200 μ L

Precision

High Volume Head (HVV) 1 - 5 μ L: CV <5%
 5 - 200 μ L: CV <2%
 2 - 25 μ L or 50 μ L: 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 $^{\circ}$ C (59 - 95 $^{\circ}$ 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 more information, please visit our website at www.perkinelmer.com/zephyrSPE

PerkinElmer, Inc.
 940 Winter Street
 Waltham, MA 02451 USA
 P: (800) 762-4000 or
 (+1) 203-925-4602
www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

Copyright ©2013, PerkinElmer, Inc. All rights reserved. PerkinElmer® is a registered trademark of PerkinElmer, Inc. All other trademarks are the property of their respective owners.

011112_01