SOLID PHASE EXTRACTION SOLUTIONS

SOLID PHASE EXTRACTION

Reproducible Results - Increased Productivity

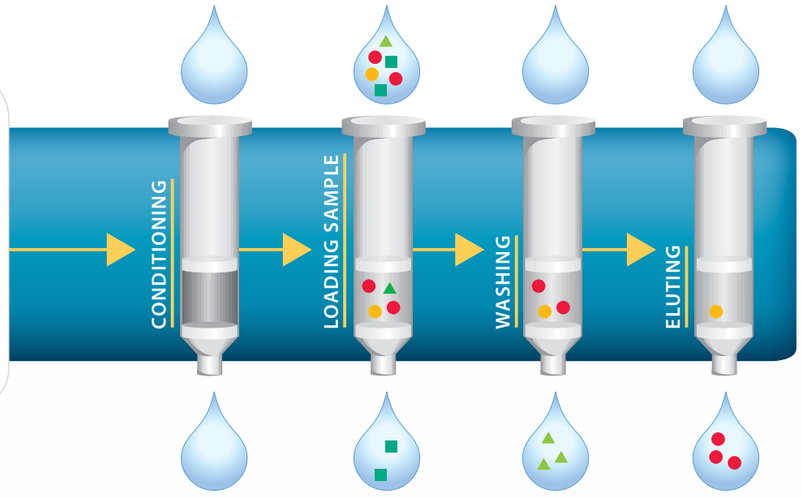
FOOD & BEVERAGE
DRINKING WATER CLINICAL POLYMERIC
ION EXCHANGE CONDITION LOAD
MIX-MODE DRUGS OF ABUSE
WASH ELUTE CARTRIDGES
AGRICULTURAL
FORENSICS INJECT CONCENTRATE
REVERSE PHASE PESTICIDES
NORMAL PHASE SILICA

GILSON®

Is sample processing your major source of error with SPE?

Solid phase extraction consists of multiple steps that require precise volumes, pressure, timing and more. Automation delivers the accuracy, reproducibility, high recoveries and yields required by researchers in environmental, clinical, pharmaceutical, forensic and agricultural labs. Applications versatility without compromising performance are at your fingertips with the trusted ASPEC solutions.

Automated Solid Phase Extraction Cartridges



REPRODUCIBLE RESULTS INCREASED PRODUCTIVITY

Automating SPE improves reproducibility, reduces the costs and delays associated with re-runs and increases overall throughput by running samples 24/7 without overtime or coffee breaks. Imagine starting your day with samples ready for analysis! Equally important, process automation minimizes your personnel's long-term exposure to repetitive, often demoralizing tasks or harmful chemicals and frees up people to focus on mission-critical efforts that actually require the uniquely human touch.

SPE PRE-CAPPED CARTRIDGES - CONSISTENT FLOW RATES AND YIELD

ASPEC, pre-capped solid phase extraction cartridges are available in 1, 3, and 6 mL volumes. These high quality silica and polymer products come in a variety of phases including Silica, C18, SCX, WCX, HLB (Polymeric) and many more. With reproducible separation, high loading capacity and accurate elution properties, each of the phases allows low solvent consumption and reliable analysis.

- More consistent flow rates and analyte recoveries
- Reduced variation
- Minimal carry-over from sample to sample

Application of *positive pressure* to individual cartridges using Gilson's unique Sealing Cap technology ensures more consistent flow rates and analyte recoveries, reduced variation, and minimal carry-over from sample to sample.

ASPEC Complete Solid Phase Solutions

Designed to address the SPE sample processing and applications versatility of today's busy laboratories. Gilson SPE systems feature cutting-edge technology in a space-saving, modular design that can be customized to meet your exact specifications.

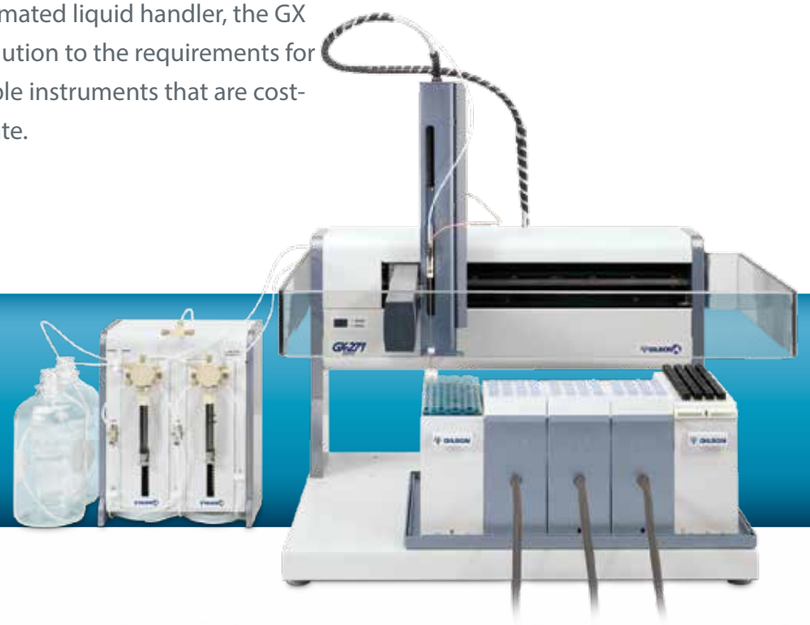
- Automation-ready right out of the box
- Pre-capped cartridges save time
- Lot-to lot-reproducibility
- Wide selection of phases

TRUST GILSON

Decades of experience in engineering, optimizing and supporting automation and custom solutions for countless laboratories around the world have made Gilson the gold standard for reliability, fast installation, straight-forward operation, and high lifetime value. Built to be modular and versatile, Gilson systems will adapt to your changing needs for years to come and help lower operating costs while improving results, morale and productivity.

Seamless SPE with the GX ASPEC Series

Laboratories are under pressure to process more samples than ever in a limited laboratory space. Integrating SPE with all the capabilities of an automated liquid handler, the GX ASPEC platform is Gilson's solution to the requirements for smaller, flexible, highly capable instruments that are cost-effective and simple to operate.



- Single and Dual syringe pumps deliver volumes from 1 µL to 25 mL with high accuracy and precision
- Positive Pressure elution with syringe push or external gas

- Standard racks accommodate 1, 3 and 6 mL SPE pre-capped cartridges

- Racks accommodate a wide variety of test tubes and vials. We can provide customized rack solutions for specialized vessels, allowing the instrument to conform to your application.

QUESTIONS ANSWERED…WITH ASPEC

Post purification processing?

With the Mobile Rack technology from Gilson, you have access to purified samples for any subsequent steps, including pH adjustment, solvent evaporation or automatic injection.

Analyze the sample automatically?

The GX Direct Injection Module supports on-line injections onto HPLC or LC/MS systems. Transfer ports are also available to deliver samples to off-bed detection sources such as spectrophotometers for flow injection analysis.

Prepare more samples faster?

Process up to four samples simultaneously with the GX-274 ASPEC. Four probes run in parallel and deliver higher total throughput and faster turn-around during hectic periods.

Concentrate with Large-Volume Water SPE

Built upon the robustness of the Gilson GX ASPEC™ series of Solid Phase Extraction Systems, the new Large-Volume (LV) Water SPE system configurations from Gilson provide rugged and reliable automation of small to large volume SPE applications for labs conducting research and routine testing on drinking water, rain water, ground water, and surface water. *Concentration* extends the range of analytical equipment and makes the difference between the right result – and no result at all.

VALVEMATE II

Concentration works best with larger volumes, so it is a natural fit for samples that never run out, such as water.

But how do I push a liter of water through standard SPE cartridges?

Large-Volume Water SPE solution from Gilson combines all of the features of the GX 271/4 ASPEC with special hardware that makes large-volume SPE practical and cost-effective.

- VALVEMATE programmable actuators allow for access to 40 large-volume samples and up to 17 solvents (8 standard)
- Dual-drain mobile rack design separates aqueous load stream from organic elution stream to reduce waste volumes and disposal costs
- Multi-fraction collection capability required by many large-volume regulatory methods is made possible by our unique Mobile Rack technology

REMOVE BOTTLENECKS WITH INTEGRATED DRY-DOWN

After SPE, samples often need to be dried down to facilitate the next step of the analysis. Taking up only one rack position, the **GX Solvent Evaporation Station** automates this time-consuming step and removes a common bottleneck in laboratories.

- Dries down 40 samples simultaneously
- Unattended and fully automated
- Moisture and maintenance free, low temperature dry down
- Programmable or keypad controlled

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Limited Lab Space?
GX-241 SPE system

Occupying less than 40 cm of linear bench space, Gilson's smallest automated SPE and liquid handling system is ideally suited for facilities where bench space or budget is limited. The **GX-241 SPE system** offers the most popular features of the larger ASPEC systems in a single-probe, compact configuration designed for lower-throughput applications.

- One rack for samples and one rack for cartridges
- Syringe pump precisely dispenses 0.1 - 10 mL
- Compatible with test tubes, vials and microplates
- On-bed access to eight 100 mL solvent reservoirs
- Accommodates 1, 3, and 6 mL solid phase extraction cartridges

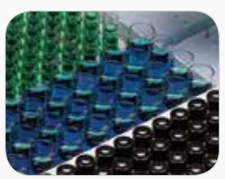
Which Gilson SPE system is right for you?

Whether your priority is flexibility, throughput or footprint, there is a Gilson system that offers the right features for your application. Regardless of which configuration best meets your needs, you can be confident that any Gilson SPE Solution will perform to the highest industry standards.

	GX-241 SPE	GX-271 ASPEC	GX-274 ASPEC
No. of Probes	*	*	****
No. of Racks	**	**	*****
Direct Inject	No	Standard	Special
Large-Volume	No	Yes	Yes
Evaporation	No	Yes	Yes
Post-SPE auto	No	Yes	Yes

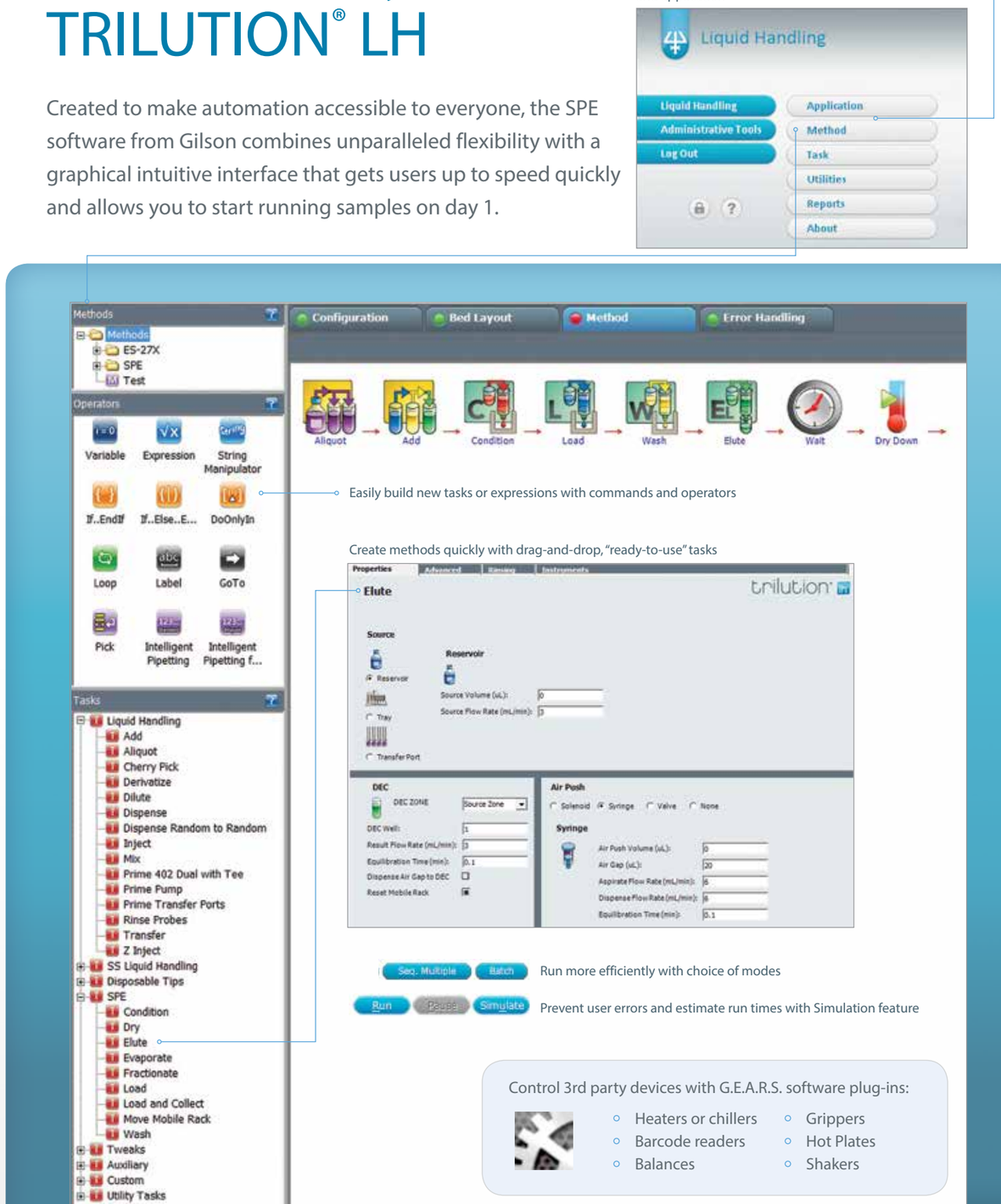
WORK CONFIDENTLY WITH GILSON'S SPE VERIFICATION KIT

Gilson SPE Verification Kit runs through a standard SPE application, analyzes the results and verifies the system is performing to expectations – ensuring your application will do the same.



Control Comfortably with
TRILUTION® LH

Created to make automation accessible to everyone, the SPE software from Gilson combines unparalleled flexibility with a graphical intuitive interface that gets users up to speed quickly and allows you to start running samples on day 1.



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SPE System Specifications

		274/271 ASPEC	241 SPE
Cartridge Sizes		1 mL, 3 mL, 6 mL standard, other sizes as specials	
Cartridge Rack Capacity		36 (1 mL), 20 (3 mL), 15 (6 mL)	
Cartridge Rack Type		Code 20, 33X/34X, 37X, others as specials	
Bed Capacity		5 racks	2 racks
Solvent Reservoirs		4 (500 or 700 mL)	8 (100 mL)
Positive Pressure		Air Push or Gas Cylinder	Syringe Air Push only
Syringe Range		100 µL – 25 mL	100 µL – 10 mL
Auto sampler		X/Y/Z arm with stationary racks	
Probe Positioning	Accuracy Precision	± 0.75 mm in X/Y/Z dimensions ± 0.20 mm in X/Y/Z dimensions	
Dispensing Accuracy		> 98%	
Contact Control		(2) contact closure inputs, (2) 24 VDC outputs, (1) safety input	
Dimensions (w x d x h) [excluding syringe pump(s)]		60 x 54 x 57 cm 24 x 21 x 22 in	39 x 50 x 47 cm 15 x 20 x 18 in
Weight		22 kg (48 lb)	7.7 kg (17 lbs)

Standard Pre-Capped Cartridges

SILICA	SCX	C4
ASPEC SILICA, 50 mg, 1 mL	ASPEC Tosic Acid (SCX), 50 mg, 1 mL	ASPEC C4, 50 mg, 1 mL
ASPEC SILICA, 100 mg, 1 mL	ASPEC Tosic Acid (SCX), 100 mg, 1 mL	ASPEC C4, 100 mg, 1 mL
ASPEC SILICA, 200 mg, 3 mL	ASPEC Tosic Acid (SCX), 200 mg, 3 mL	ASPEC C4, 200 mg, 3 mL
ASPEC SILICA, 500 mg, 3 mL	ASPEC Tosic Acid (SCX), 500 mg, 3 mL	ASPEC C4, 500 mg, 3 mL
ASPEC SILICA, 500 mg, 6 mL	ASPEC Tosic Acid (SCX), 500 mg, 6 mL	ASPEC C4, 500 mg, 6 mL
ASPEC SILICA, 1 g, 6 mL	ASPEC Tosic Acid (SCX), 1g, 6 mL	ASPEC C4, 1 g, 6 mL
SAX	**SCX-2**	**C8**
ASPEC A Chloride nec (SAX), 50 mg, 1 mL	ASPEC Propylsulfonic Acid (SCX-2), 50 mg, 1 mL	ASPEC C8, 50 mg, 1 mL
ASPEC A Chloride nec (SAX), 100 mg, 1 mL	ASPEC Propylsulfonic Acid (SCX-2), 100 mg, 1 mL	ASPEC C8, 100 mg, 1 mL
ASPEC A Chloride nec (SAX), 200 mg, 3 mL	ASPEC Propylsulfonic Acid (SCX-2), 200 mg, 3 mL	ASPEC C8, 200 mg, 3 mL
ASPEC A Chloride nec (SAX), 500 mg, 3 mL	ASPEC Propylsulfonic Acid (SCX-2), 500 mg, 3 mL	ASPEC C8, 500 mg, 3 mL
ASPEC A Chloride nec (SAX), 500 mg, 6 mL	ASPEC Propylsulfonic Acid (SCX-2), 500 mg, 6 mL	ASPEC C8, 500 mg, 6 mL
ASPEC A Chloride nec (SAX), 1 g, 6 mL	ASPEC Propylsulfonic Acid (SCX-2), 1g, 6 mL	ASPEC C8, 1 g, 6 mL
SAX-2	**WXC**	**C18**
ASPEC TMA Acetate nec, 50 mg, 1 mL	ASPEC Carboxylic Acid (WCX), 50 mg, 1 mL	ASPEC C18, 50 mg, 1 mL
ASPEC TMA Acetate nec, 100 mg, 1 mL	ASPEC Carboxylic Acid (WCX), 100 mg, 1 mL	ASPEC C18, 100 mg, 1 mL
ASPEC TMA Acetate nec, 200 mg, 3 mL	ASPEC Carboxylic Acid (WCX), 200 mg, 3 mL	ASPEC C18, 200 mg, 3 mL
ASPEC TMA Acetate nec, 500 mg, 3 mL	ASPEC Carboxylic Acid (WCX), 500 mg, 3 mL	ASPEC C18, 500 mg, 3 mL
ASPEC TMA Acetate nec, 500 mg, 6 mL	ASPEC Carboxylic Acid (WCX), 500 mg, 6 mL	ASPEC C18, 500 mg, 6 mL
ASPEC TMA Acetate nec, 1 g, 6 mL	ASPEC Carboxylic Acid (WCX), 1 g, 6 mL	ASPEC C18, 1g, 6 mL
WAX		**POLYMERIC**
ASPEC Amine (WAX), 50 mg, 1 mL		ASPEC HLB, 30 mg, 1 mL
ASPEC Amine (WAX), 100 mg, 1 mL		ASPEC HLB, 60 mg, 3 mL
ASPEC Amine (WAX), 200 mg, 3 mL		ASPEC HLB, 100 mg, 6 mL
ASPEC Amine (WAX), 500 mg, 3 mL		ASPEC HLB, 200 mg, 6 mL
ASPEC Amine (WAX), 500 mg, 6 mL		ASPEC HLB, 500 mg, 6 mL
ASPEC Amine (WAX), 1 g, 6 mL		

Additional phases are available upon request. Please inquire to **sales@gilson.com** for more information.

ISO 9001 CERTIFIED

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