AquaTrace ASPE900

Automated solid-phase extraction for water samples

AquaTrace ASPE900 from GL Sciences automates solid-phase extraction of water samples on up to six parallel lines. Conditioning, loading, rinsing, drying, elution and evaporation are combined in one system.



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CONCEPT

This stand-alone system prepares tap water, drinking water and groundwater for subsequent chromatographic analysis. Automated processing reduces repetitive manual extraction work. A valveless piston pump delivers samples and solvents while flow paths are switched under method control.

KEY FEATURES

- Process up to six samples in parallel
- Automate the extraction workflow including evaporation
- Set up methods and monitor progress on the colour touchscreen
- Store up to 120 methods on the instrument and 120 on USB memory
- Use up to seven solvent positions for flexible workflows
- Use Luer-connected cartridges; 6 mL syringe-barrel format as standard

CHROMTECH GmbH
Carl-Zeiss-Strasse 20 · 65520 Bad Camberg
+49 6434 20768-0 · info@chromtech.de · www.chromtech.de

Workflow and operation

Conditioning	Prepare the selected cartridge with the solvents specified by the method.
Sample loading	Pass water through the sorbent at a controlled flow to retain target compounds.
Rinsing	Remove interfering matrix components with a suitable rinse step.
Drying	Remove residual water by suction, nitrogen purging or a combination of both.
Elution	Transfer retained compounds into collection tubes using the selected solvent.
Evaporation	Concentrate the eluate inside the instrument with nitrogen and optional heating in an aluminium block at 30 to 60 °C.

OPERATION

After loading samples, cartridges and solvents, select a stored method. Individual lines can be selected and a timer defines the start and end of operation. The screen shows process progress and remaining time. Edited parameters can be saved and the calculated total duration is updated.

ASSISTANT - PC SOFTWARE

The ASSISTANT PC application supports method editing, transfer and documentation. Reports combine an automatically generated flow diagram with settings and user notes such as cartridge type, batch or sampling location. Logs record operation and maintenance; reports can be printed or saved as PDF. The email function requires a PC with an internet connection.

CONCENTRATION AND OPTIONS

Graduated GL-SPE tubes allow concentration directly in the system. Nitrogen is directed at an angle onto the tube wall. An optional liquid-level sensor stops nitrogen delivery at a selected final volume between 0.1 and 5 mL. The usable range depends on the equipment and method.

Sample lines can be rinsed with organic solvents, including toluene. Suitable rinsing steps help reduce carryover between samples. Cartridge, solvent, sample matrix and target compounds must be selected together for the method.

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Specifications and applications

Sample lines	Up to 6 in parallel
Delivery principle	Valveless piston pump
Operation	Colour LCD touchscreen
Solvent positions	Up to 7
Method storage	120 on instrument / 120 on USB
Cartridge connection	Luer; 6 mL syringe-barrel format as standard
Sample volume setting	10 to 99,990 mL
Sample flow rate	0.5 to 80 mL/min
Elution and soak flow	1.0 to 80.0 mL/min
Dehydration	Suction, nitrogen or combined
Concentration	Nitrogen; with or without heating block
Heating block	30 to 60 °C
Concentration tubes	GL-SPE 6 / 7 mL; 10 mL optional
Other collection tubes	Up to 16 mL, without concentration
Liquid-level sensor	Optional; final volume 0.1 to 5 mL
External signals	Ready input; stop, end and error outputs
Dimensions (W × D × H)	480 × 560 × 615 mm
Weight, standard	Approx. 50 kg
Power requirements	220 V AC ±10 %, 50/60 Hz, 240 VA

Dimensions exclude protrusions and include rubber feet. The volume range is a setting range, not a cartridge capacity claim. The manufacturer specifies volume accuracy of less than ±2% under test conditions: ultrapure water, 20 mL/min aspiration/delivery rate, no load. Flow, recovery and final volume depend on the method.

APPLICATIONS AND CONFIGURATION

Typical applications include PFAS, pesticides, phenols, 1,4-dioxane and the odour compounds geosmin and 2-methylisoborneol in water. The manufacturer describes preparation workflows associated with EPA methods 533 and 537.1, among others. This does not establish universal method compliance for every sample and configuration.

ASPE900 is a stand-alone sample preparation system, not a PAL option. Subsequent analysis uses a suitable liquid or gas chromatography method, with mass spectrometry where appropriate. Nitrogen supply, cartridges, collection tubes, sensor and PC equipment must be clarified for the configuration. CHROMTECH helps match the workflow to your samples and target compounds.

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