

AUTOMATED SOLID PHASE EXTRACTION SYSTEMS



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The Automated Solid Phase Extraction system is a device that automates loading, rinsing, and elution of the sample to reduce the usage of solvent and to enhance reproducibility. It is a fully automated system that acts to produce the contamination-free sample pre-processing and trace analyte enrichment before performing sample analysis by chromatography.

Used in Research, Analytical laboratories, HPLC, GCMS, HPLC-MS.

Also known as Liquid-solid extraction.

LTSPE9 AUTOMATED SOLID PHASE EXTRACTION SYSTEM

The injection needle and the extraction column are sealed by a universal plug sealing structure and equipped with H-axis pressing block to ensure good sealing.

The suspension structure is adopted in the test tube bracket, which ensures the positioning accuracy of the manipulator to the greatest extent.

The instrument standard router can be connected by WiFi or network line, which fully realizes the whole process of automation and unattended.

Using modular design, only one communication line and pipeline can work between modules, and it is convenient to replace and maintain.

Add emergency stop button, when the instrument is abnormal, manual operation can be emergency stop, to maximize user safety.

Handwheel adjusting origin greatly saves the time of adjusting origin.

Number of channels and control mode: The instrument host adopts modular design, supports the number of channels upgraded in the field, and supports 1/2/4/6/8 multiple channel combinations;

Continuous processing capacity: Maximum continuous processing capacity of 52-bit samples;

Robot arm: X/Y/Z three-dimensional manipulator design, X/Y axis linkage, improve operational

efficiency; H axis is added to move the slider, giving consideration to flexible movement and accurate positioning;

Sample pump: Sampling accuracy, solvent corrosion resistance, high pressure resistance (maximum withstand voltage 1Mpa), and compatible with size and volume sampling;

Sample needle: 316L stainless steel, solvent resistant; unique side-bottom opening to ensure full sample loading; highly integrated function for liquid channels, gas channels, and for extraction column seals;

Remote connection and control: The instrument is equipped with a router that can be connected via Wi-Fi or network cable, which fully realizes the whole process of automation and unattended operation;

Puncture sampling: Sample needle can be selected to realize puncture sampling and avoid sample volatilization loss;

Sample volume and receiving volume: The whole series supports 10 - 20mL sample tube, and can support 50mL and larger specifications within two channels; the receiving volume is standard 10mL/15mL, and the two channels can be expanded by 50mL;

Pressure sensing: Each channel is equipped with a standard pressure sensor, push column pressure to achieve closed-loop fuzzy control, and has the functions of overpressure alarm and termination of the experiment;

Velocity control: The top of each extraction column is equipped with an independent sealing cap. The high pressure sealing is realized by docking with the sample needle and moving Z-axis pressure block. The solution passes through the extraction column according to the set flow rate to ensure good reproducibility and parallelism;

Solvent management system: Supporting 8 reagents; Supporting the hint function of insufficient residual capacity; Supporting liquid level following function;

Infiltration and incubation: When the active solvent or eluting solvent is loaded into the extraction column, the liquid level can be kept above the packing for a certain time to ensure full activation or elution and to ensure the ideal experimental results;

Cleaning mode: Supporting various cleaning modes to ensure that the inner and outer walls of sample needles are clean without cross-contamination;

Waste discharge passage: Support environmental protection to recover waste liquor and separate treatment of waste liquor with different

Properties;

Specification of extraction column: Compatible with conventional 1/3/6mL extraction column, other specifications of extraction column can be

customized according to requirements;

Multi-scheme extraction: Supporting the simultaneous operation of different specifications of extraction columns and different treatment

projects without waiting, improving the efficiency of continuous treatment;

A/B column extraction: Support multi-mode tandem column extraction, automatic identification of A/B column extraction scheme;

Online drying/dewatering: Supporting on-line nitrogen purge mode;

Online Concentration: Supporting in-situ nitrogen purge and concentration, the concentration time can be edited;

Large volume injection: Supports the continuous and smooth loading of more than 500 mL samples without interruption, particle wear

resistance, corrosion resistance, no need for any consumables and regular maintenance; supports the continuous switching of samples, the number of samples larger than 48 bits;

Cloud services: Supporting upload and download programs and parameters; Supporting online technical support and exchange; Supporting remote monitoring;

Booking starts: After editing the experimental scheme, the start-up time can be self-booked according to the time of the analyzer;

Count down: After the beginning of the experiment, the countdown time is used to facilitate the control of the end time of the experiment and to match the time of the analyzer in advance;

Intelligent self-check and alarm: After the parameter setting is completed, the software self-checks whether there are logic errors, promptly

reminds the modification; Intelligent fault alarm system, according to the fault level, chooses to continue or stop

Number of channels and control mode: The instrument host adopts modular design,



SPECIFICATIONS

Model	LTSPE9-1	LTSPE9-2	LTSPE9-3
Channels	1	2	4
Channel Independent Control	Support		
Sample pump	Precision Continuous Sample Pump		
Pump flow rate	0.1-120 mL/min		
Types of solvents	8 Seed, 500 mL Solvent Bottle		
Sample volume	0.1 mL-20L		
Sample tube volume	10 - 20 mL,customization		
Receiving volume	10mL/15 mL, other specifications customized		
Puncture sampling	Supporting		
Loading mode	X/Y/Z Three-Dimensional Manipulator		
Accuracy of manipulator	0.01 mm		
Sealing technology	Docking Technology of Independent Seal Cover and Pan-plug Seal		
Extraction mode	Positive pressure extraction		
column pressure	≤80 psi		
Pressure sensing	Support, Over voltage Alarm, Threshold Editable (5-145psi)		
Column drying method	Nitrogen purge		
Waste collection	Branch collection, 3 channels		
A/B in series	Support, A/B Pillar		
Cleaning mode	Nitrogen purge, solvent cleaning, blowing stirring cleaning and other modes are used to clean the inner and outer walls of sample needles.		
Liquid level following	Support		
Solvent Residual Capacity	Solvent deficiency hints		
Host Size (HxWxD)	680 mmx580 mmx670 mm		
Voltage	220/110 V, 50/60 Hz		
working temperature	5-40Temperature		
Working humidity	0-90% without condensation		
power	60 W	80 W	120 W



LTSPE9-1



LTSPE9-2



LTSPE9-3

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