

SPEVA

Automated Sample Purification and Concentration System



SPEVA is designed to integrate solid phase extraction and nitrogen evaporation processes. It automatically completes the steps of conditioning, sample loading, rinsing, drying and elution, while continuously evaporating and solvent replacement of the eluent and then passing through the cartridge again. No human intervention is required during operation, freeing laboratory personnel and safeguarding their health. SPEVA offers multiple sample processing modes, making it suitable for various fields of sample pre-treatment such as pesticide residues detection in food, organic pollutant enrichment in large volume water samples from the environment, and toxic substance detection in viscous samples like blood and urine. With innovative and compact structure design of pump and valve, SPEVA exhibits the features of high throughput and efficiency with accurate results, significantly improving the detection capabilities of laboratories.



Integrated design of enrichment, purification and concentration

- Solid phase extraction steps such as conditioning, sample loading, rinsing, drying, and elution, as well as eluent concentration, are all automatically performed without the need for manual intervention.

High throughput and batch processing

- It can process simultaneously with up to 8 channels, allowing for continuous processing of 80 samples without the need for manual monitoring.

Excellent chemical performance

- All sample contacted tubes do not introduce impurities or adsorption, ensuring theoretical recovery rates can be achieved.

Multiple sampling modes to meet different needs

- Different sampling modes can be selected to easily address samples from various fields such as large volume environmental water samples, fruits and vegetables, fish, shrimp and poultry, blood and urine, herbal medicine and pharmaceuticals.

Accurate flow control and precise experimental results

- Using a high-precision syringe pump with plunger flow path system, the column plunger directly fits the packing material, eliminating solvent retention space. The set rate of the high-precision syringe pump is the flow rate through the column, unaffected by the sample's own characteristics, ensuring the accuracy of experimental results.

Stable pump valves and multi-axis structure without unnecessary movements

- The use of syringe pumps and multi-way valves, with extremely high pressure resistance, greatly improving the sample loading efficiency of large volume samples
- Independent multi-axis structure allows each module to operate independently, without unnecessary mechanical waiting time.

Variable diameter nitrogen blowing needle

- The high-strength inner and outer needle design ensures that the nitrogen blowing needle is always in the center position of the sample tube.
- The nitrogen blowing needle has good consistency in inner diameter, ensuring the same airflow for each nitrogen blowing needle.

Safe and reliable

- Enclosed design with independent exhaust system to prevent solvent volatilization from contaminating the laboratory.
- Transparent outer cover for real-time observation of the sampling process and adjustment of operating methods as needed.
- Floor standing design, compact structure, does not occupy the fume hood.

Smart software interaction and real-time monitoring of the operating process

- Graphical software interface with large screen display and intuitive method interface.
- Flexible and adjustable program settings, allowing real-time changes to methods and sequences, and simultaneous operation of multiple methods.
- Real-time display of instrument operating status, automatic production of monitoring logs for easy recording and querying.
- Equipped with solvent warning and automatic identification of sample racks, collection racks and column racks.



Range of Application

➤ Food field

Determination of pesticide and veterinary residues in food samples



➤ Environmental field

Determination of organic pollutants in environmental samples



➤ Other fields

Pharmaceutical industry, biological samples, cosmetics, etc



Application Examples

- Health Standard for Drinking Water
- Environmental Quality Standard for Surface Water
- Environmental Quality Standard for Groundwater
- National Standard for Food Safety - Maximum Residue Limit of Veterinary Drugs in Foods
- National Standard for Food Safety Maximum Residue Limit of Pesticides in Foods

Dedicated to be a leading supplier in smart laboratory



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