



Auto SPE

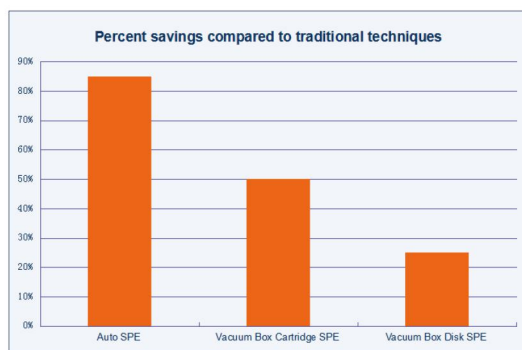
Hanon Auto SPE makes every step of solid phase extraction integrated on one platform, which can realize operation of the whole extraction process (activation, sampling, rinsing, drying, elution), and largely improved the efficiency of the sample pre-treatment, make the analysis workers relieve from the tedious pre-treatment work, and make the sample pre-treatment more quick and efficient.



Applications

SPE as an effective sample pre-treatment technology has been widely applied in various fields. Current analytical methods may require SPE preparation include GC, GC-MS, LC, and LC-MS, and cover the following filed:

- Environmental Sector: Water sample pre-treatment, pesticides and herbicides, oil and grease, PAHs and semi-volatile organic compounds, explosives, PCBs, brominated flame retardants, dioxins and furans organic pollutants, benzene urea herbicides.
- Pharmaceuticals, natural products industry: The active ingredient in liquid analysis, packaging drinking water extractable analysis, drug packaging extractable analysis, vitamins and antibiotics.
- The food and beverage industry: Pesticides and herbicides, pollutants in packaged beverages, pesticides, natural products, dietary supplements.
- Life sciences: Genetic research, pre-treatment of macromolecular protein.
- Identification of the judicial field: Pre-treatment enrichment, toxic substances such as residue screening.
- Other Field: Tobacco analysis, analysis of flavors and fragrances, cosmetics and analysis of organic compounds, such as the vast majority of pre-treatment analysis.



Automation provides lower cost of analysis by reducing the amount of time an analyst has to spend on extraction. More than half of the sample preparation cost for a typical vacuum manifold extraction is from operator labor. The Auto SPE provides unattended operation, thereby significantly reducing the cost of analysis.



Advantages

- Increase in productivity or sample throughput from unattended operation.
- Solid-phase extraction technology to save labor time and solvent.
- Decrease sample analysis costs through savings of labor and solvents.

SPE Cartridges

The most often is Silica-Based SPE Cartridges, also can choose different packing according to extraction condition(pH, polar of compounds).

Bonded silica gel based: ODS, C8 COOH, Silica, PSA, PRS, SCX, SAX Diol

high molecular polymer based: PEP, HXN, PS, PAX, PCX

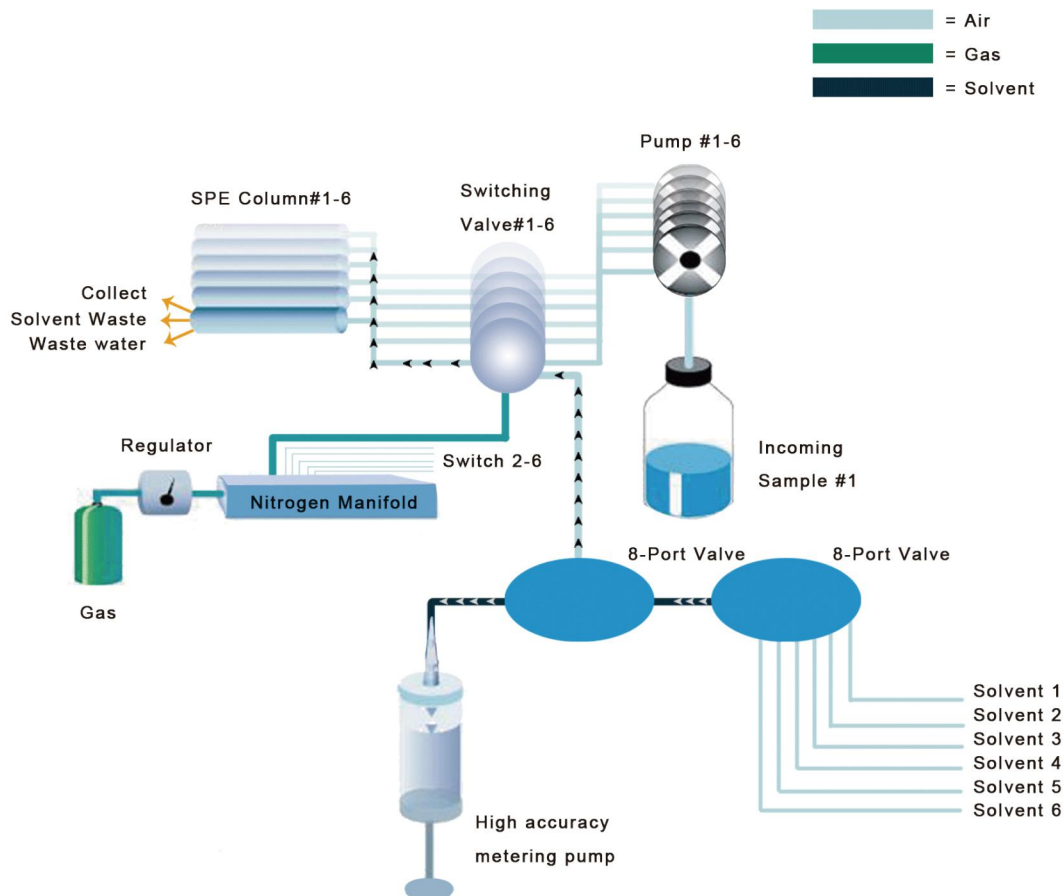
Adsorbability material based: Florisil, PestiCarb, Alumina-N, Alumina-A, Alumina-B

Mixed material based: C8/SCX, PestiCarb/NH2

Special purpose SPE Cartridges: SUL-5, HXN.

Auto SPE instrument automates the SPE process.

- 1.SEP cartridges pre-preparation: the sample cartridges or disks are conditioned with solvent or buffer.
- 2.Sampling: the liquid or water samples are pumped from the sample container through the SPE cartridges or disks. As the sample passes through the SPE material, analytes of interest are absorbed and the liquid goes to aqueous waste.
- 3.SPE cartridges elution: the SPE material is rinsed to remove possible interferences.
- 4.Sample elution: the analytes of interest are eluted from the SPE material with a strong solvent and collected.





Extremely Large Volume Liquid-Liquid Extractions

Hanon Auto SPE is an automated solid-phase extraction (SPE) system designed for use with large samples (0.5 ML - 20L) for the isolation of trace organics in water or aqueous matrices.

Auto SPE Offer Reliability and Precision

- High-precision pressure Sensor, when system pressure > 0.6Mpa, system warning automatically.
- Adopt high-precision syringe pump rinse samples significantly improve the repeatability.
- High-precision ceramic corrosion metering pumps ensure uniform and precision injection volume.

Technical data

Gas Regulator and Gas Gauge Range	
Output	0-30 psi (0-1.4 bar)
Input	max 100 psi (6.9 bar)
Valve	
	two 8-port valve, Teflon
Sample Pumps	
Displacement	Positive
Flow Rate	0.5-20mL/min or 1-50mL/min
Accuracy	±2%
Tube	Polyvinylidene fluoride
Piston and Liner	Ceramic
SPE Configurations	
1 mL Syringe	Compatible cartridges
3 mL Syringe	Compatible cartridges
6 mL Syringe	Compatible cartridges
Electrical	
Voltage	100-220V ±10%
Frequency	50-60Hz
Power	150W
Operation Environment	
Ambient Temperature	0-40°C
Ambient Humidity	20%-80%
Relative Humidity	Non-condensing
Software Requirement	Window XP/7/8
Dimension (h × w × d)	
Sample Rack (h × w × d)	7 X 25 X 5cm
Weight	42Kg