HGE-300

Fast Solvent Extractor

- Method setting: the same method can be set for 24 extraction samples, or different methods can be set for 24 samples.
- Corrosion prevention: the instrument bottom plate and extraction cell need to be coated with dense Teflon, which can resist the corrosion of acid and alkali and various organic reagents.
- Cleaning mode: two cleaning positions, which can realize automatic cleaning between samples, pre cleaning before and after the experiment, and eliminate cross pollution.
- Gas liquid circuit isolation protection device and buffer protection device between gas and liquid circuits can overcome the temporary failure and slight leakage of one-way valve after long-time shutdown, protect the gas pipeline from corrosion by organic solvent, and avoid solvent backflow polluting the sample.

Specification and weight of the host

- HGE-300: 810(L)×700(W)×670mm(H); 68kg

Application

- As a sample pretreatment device of organic detection instruments such as GC, LC and GC/MS, HGE-300 Fast Solvent Extractor is used for rapid extraction of organic components from solid or semi-solid samples.
- It is used for the extraction of toxic and harmful substances and active natural products such as polychlorinated biphenyls, polycyclic aromatic hydrocarbons, organophosphorus pesticides, organochlorine pesticides, pesticides, phenoxy herbicides, triazine herbicides, diesel oil, total petroleum hydrocarbons, dioxins, furans, explosives in soil, sludge, sediment, dust, food, animal and plant tissues and other samples in organic pollutant residue detection.

Working principle

- Use higher extraction temperature and pressure to accelerate the solvent extraction process and improve the extraction efficiency -- saving time and solvent.

Instrument composition

- 7-inch LCD touch control screen;
- High pressure liquid phase pump with large flow (the maximum pump speed is 100mL/min);
- A set of solvent controller allowing automatic switching and mixing of four different solvents;
- Semi enclosed high-power heater;
- 24+2 sample turntable: can be used for all specifications (10mL, 22mL, 34mL, 66mL, 100mL, etc.) of sample cells;
- 26+26 collection turntable: can select 250mL and 60mL collection bottles at the same time to facilitate the formulation and development of analytical methods.

Working conditions and power consumption

- Working environment:
  Temperature: 4℃~40℃; relative humidity:< 95%.
- Power supply: 220±22V, 50±1Hz; Power consumption<600W.
- Gas source: nitrogen or other inert gases, pressure>0.8MPa.
- Continuous working time: >24 hours.
- Communication interface: RS232/485 optional.

Technical requirements

- Extraction mode: Continuous extraction mode and vertical positioning mode are adopted for the extraction cell. The extraction solvent flows from top to bottom of the extraction cell for extraction. It can extract 24 samples automatically and continuously. Automatic cleaning can be completed between samples to avoid cross pollution and realize unattended.
- Extraction cell turntable: 24 sample positions and 2 cleaning positions, which can be compatible with 1mL, 5mL, 10mL, 22mL, 34mL, 66mL and 100mL extraction cells. 24 samples can be placed in all specifications of extraction cells.
- Collection bottle turntable: It is required to have a 26-position collection plate design. One sample plate can be compatible with 26 collection bottles of 250mL and 26 collection bottles of 60mL at the same time. There is no need to replace the collection bottle sample plate during use. The collection bottles of two specifications can be switched freely, and the 60mL collection bottle can be expanded to 50 positions by using the vial insert.
- Type of extraction cell: Stainless steel, easy to disassemble and polish internally. The extraction cell must be resistant to 0.1M acid-base extractant and matched with TFM material gasket. Optional specifications: 1mL, 5mL, 10mL, 22mL, 34mL, 66mL and 100mL.
- High pressure infusion pump: pump speed: 0~100ml/min, 0~25MPa. The pump speed can be automatically adjusted according to different volumes of sample extraction cell. Multi-stage variable speed design and pressure progressive mode.
- Solvent controller: the built-in standard quaternary gradient solvent control system has four special fixed positions for solvent bottles, which can realize the automatic switching of four solvents and the automatic mixing of different solvents in different proportions. There is no need to prepare mixed reagents manually, which will save labor and reduce the infringement of chemical reagents.
- Heating and control mode: electric heating, close fitting heating furnace design, PID control temperature rise and constant temperature program, with overheating protection function. The temperature control accuracy is ±1℃, the temperature range is normal temperature~210℃, and the safety cut-off is provided when the temperature is too high.
- Intelligent instrument control: automatically judge the specification of extraction cell; automatically judge whether there is a collection bottle; automatically reset the collection after power failure; automatically judge the air source pressure; automatically judge the leakage or blockage of pipeline, etc.