Constant Temperature Ultrasonic Homogenizer



Description

The Constant Temperature Ultrasonic Extractor is a new type of ultrasonic extraction and extraction device that uses modern ultrasonic technology and combines an intelligent low-temperature constant temperature system. The ultrasonic secondary effect of the instrument is more conducive to the full mixing and smooth reaction of the reactants than general phase transfer catalysis and mechanical stirring, and can also meet the reaction temperature requirements of different customers. Ultrasonic technology is gradually entering chemical laboratories as a physical catalytic means, and is currently widely used in the pharmaceutical industry, chemical industry, colleges and universities, and scientific research laboratories.

Principle

The cavitation effect of ultrasound is used to increase the movement frequency and speed of the molecules of the substance, thereby increasing the penetration of the solvent and improving the dissolution rate of the extracted components. In addition, the secondary effects of ultrasound,such as thermal effects and mechanical effects, can also accelerate the diffusion of the extracted components and fully mix them with the solvent,which is also beneficial to the extraction.

Features

- Intelligent : According to the reaction environment, the best ultrasonic effect can be achieved automatically through automatic frequency tracking.
- High Efficiency : Ultrasonic technology combined with constant temperature control system makes the reaction more complete.
- Flexible Parameters : Ultrasonic power, time and reaction temperature are adjustable.
- Optional Mode : High-power ultrasonic and constant temperature system can be used in combination or separately.
- Simple Operation : Special multi-mouth reaction bottle can meet the requirements of filling various gases to participate in the reaction, and can also be continuously added.
- Intelligent Storage : Data can be set, stored and working status can be controlled.
- High Safety : It has fault self-diagnosis and alarm prompt functions.

Applications

- Diffuse various salt solutions in the soil to promote plant absorption;
- Allow titanium oxide to fully diffuse and blend in water or solution;
- Ultrasonic technology to extract organic halides from textiles;
- Research on auxiliary extraction of effective ingredients of traditional Chinese medicine;
- Fully diffuse and extract various granular agents;
- Preparation of nanomaterials;
- Research on the properties of grain storage fumigants;

Technical Parameters

Model	FSF-1000UC	FSF-500UC	FSF-250UC
Ultrasonic Power MAX	1800W	900W	650W
Reaction Bottle Volume	1000ml	500ml	250ml
Probe Diameter	Φ20mm	Φ10mm	Φ6mm
Adjustable Power Range	30%-100%	15%-100%	5%-100%
Ultrasonic Frequency	20±1KHz	22±1KHz	22±1KHz
Ultrasonic Total Time	1-999min		
Ultrasonic Time	1-99S		
Interval Time	1-99S		
Compressor Power	500W		
Heating Power	1000W		
Temperature Control Method	PID automatic temperature control		
Temperature Measurement Method	Dual-channel temperature measurement, monitoring the real-time temperature of the reaction system and the constant temperature working tank.		
Temperature Control Range	0-99℃		
Temperature Control Fluctuation	≦±1℃		
Constant Temperature Volume	6L		
Abnormal Alarm Function	Yes, the device has fault self-diagnosis and alarm prompt functions		
Operation Record Method	The device has a working curve screen, which records the temperature and other parameter changes during operation		
Equipment Control Method	7-inch TFT touch screen and single-chip integrated control.		
Equipment Operation Method	Direct operation on the touch screen to set parameters such as temperature, power, time, etc.		
USB Communication Port	The device has a USB communication port, plug in a USB flash drive, and save the curve and other information in the form of pictures to the USB flash drive		
Remote Communication Serial Port	This function is optional, and users who need it can purchase it (including the host computer software) and connect it to the computer.		
Reaction Bottle	The conventional bottle is a four-mouth bottle, and users who need it can purchase a five-mouth bottle.		