

Ultrasonic Microwave Reaction System XO-SM200



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Item Code:XO-SM200 Features:XO-SM200 Ultrasonic And Microwave Combined Reaction System

- Description

Detailed Product Description:

XO-SM series Ultrasonic And Microwave Combined Reaction System has won national invention patent: 200712134456.2, they work by ultrasonic and microwave synergy. Both of them power adjustable, time preset, temperature controlled. They apply to fast, efficiently, controlled synthesise of medicine, organic compound, inorganic compound and nano materials, possess of high chemoselectivity, products high crystallinity, epecially the the products of mineral, high polymer, metallic nano materials are well-distributed. With such kind apparatus can overcome carbonization phenomenon due to the long time organic chemical reaction. Cooperate with microwave may accelerate the reaction speed that superior to use ultrasonic or mircowave alone, meanwhile improve the reaction yield and selectivity. Therefore, lots of reactions that hard to occur or very low speed and physical processes can easily and quickly come true. This instrument includes ultrasonic apparatus, microwave apparatus, circulation chillers, jacking gear, reflux condenser. And ultrasonic apparatus includes probe, energy converter, power source, temperature control displayer, time control displayer, power control displayer; mircowave apparatus includes magnetron, waveguide, temperature control displayer, time control displayer, power control displayer; circulation chillers includes temperature control displayer, time control displayer, circulating pump; reflux condenser includes condenser, triangular flask, glass catheter, closing plug and circulation heat insulator.

Technical Parameters:

Model No.: XO-SM200;

Ultrasonic Power: 0 ~ 1200W;

Ultrasonic Frequency: 25KHz;

Microwave Power: 0 ~ 1200W;

Microwave Frequency: 2450MHz;

Handling Capacity: 100 ~ 1500ML;

Probe Diameter: $\Phi 20$;

Key Features:

1. XO-SM50 Series Ultrasonic Microwave Combined Reaction System has the feature of flexible combination which the ultrasonic or microwave can be independently controlled and collaborate;
2. Adopting SAMSUNG Microwave Generating System, steady performance, microwave power adjustable, frequency: 2450MHz;
3. Ultrasonic power adjustable, frequency: 25KHz, ultrasonic frequency selective range: 15 ~ 40KHz; the ultrasonic generator is no need to put into samples, but energy is transferred by air, and work directly to samples;
4. Optional matching vacuum pump to remove moisture, suitable for ultra-low temperature microwave vacuum drying experiments, or liquid reaction experiments that require eliminating water vapor or other reactant gas;
5. Optional Teflon Digestion Tank with temperature or pressure control and magnetic agitation;
6. Reaction vessel may optional match the unique designed cold water linking apparatus, temperature control: $-40 \sim 500^{\circ}\text{C}$, it controls the high temperature that caused by microwave emission, microwave utilization ratio can be reached 100%, so reactant will be fully effected, ensuring the homogeneity and high yield of reaction product;
7. Parameters are controlled using high sensitive touch screen, all parameters programmable control, five groups experimental data storage;
8. With 10 inches ultrathin, high definition, multi-function liquid crystal displayer, showing the working condition in real-time;
9. With high precision gold-plating PT100 armored thermocouple sensor, detecting the reaction temperature real time, enable to control the reaction process temperature; control range: $0 \sim 300^{\circ}\text{C}$, precision: $\leq \pm 0.5^{\circ}\text{C}$;
10. With the function of particular Inverter Blast Heat Dissipation, keeping

temperature in chamber uniformity;

11. Work hour: continuous, 0~9999S adjustable;

12. Programmable Microwave, Ultrasonic system, temperature, time, power are adjustable at the same time;

13. Optional glass container, teflon materials reaction system;

14. Various kinds of probe: $\Phi 2$, $\Phi 3$, $\Phi 10$, $\Phi 15$, $\Phi 18$, $\Phi 25$, $\Phi 30$, $\Phi 35$, suitable for different size reactors;

15. Match different speed magnetic agitator and sample lifting gear, so as to couple with microwave;

16. With glass conduit, open reaction system, enable to install dropping funnel and condenser pipe;

17. Provided with over heat and sensor unusual protection, high reliability and safety;

18. Adopt stainless steel inner and outer, antimagnetic, guard against magnetic materials enter into the chamber to destroy the internal construction, durable in use.