Multifunctional Microwave Chemistry Reaction Workstation

Introduction:

BMS-M2000 integrates the atmospheric pressure and pressurized reactions, microwave heating, ultrasonic and ultraviolet irradiation, and other functions, and provides the workstation with flexibility and reliability for the microwave chemical research. BMS-M2000 has an intelligent operating system, and 7-inch touch screen control is simple and friendly; It realizes the multi-energy and multifunctional free combination and collocation with the modular design, giving inspiration to your experiment; It can conduct the 2000ml open vessel reaction and 500ml pressurized reaction maximally, thus can help researchers conduct the mass production experiment. Regardless of organic extraction, pharmaceutical research, protein chemistry, novel material science, research of the graphene, polymer synthesis and many other fields, BMS-M2000 will provides various imaginations and feasibility of the microwave chemical research.

Features:

Good Innovation:

Integrate the atmospheric pressure and pressurized reaction, microwave, ultra-sonic wave and ultraviolet irradiation and other functions, giving full flexibility.

High reproducibility:

Microwave automatic frequency conversion control, dual temperature control technology, and piezoelectric crystal pressure can ensure the accurate record and representation of each reaction.

Severe safety:

Pressurized mode, intelligent safety pressure control system, real-time overpressure alarm and active pressure relief, outer vessel with composite fiber and other safety protection measures at the highest level.

Friendly operation:

7-inch color LCD touch screen, intelligent software, safe and remote control, and reaction process videography facility.

Reliable durability:

Multilayer Teflon coating 316L stainless steel chamber and durable reaction container material ensure that all kinds of chemical reactions proceed smoothly.

Technical Parameters:

Model	BMS-M2000
Microwave Source	2450MHz, 0~1000W, continuous, non-pulse and automatically adjustable along with the temperature program, PID technology
Microwave Oven Chamber	Large volume, 316L stainless steel chamber, applied with multi-layer anticorrosive PFA Teflon spray inside and outside
Temperature Measuring and Control System	Dual channel temperature detection DTD technology, switchable control. Infrared temperature sensor range 0~900℃, precision ±1℃, PT-100 resistor temperature sensor range 0~250℃, precision±1℃
Pressure Measuring and Control System	Piezoelectric crystal pressure sensor, pressure control range: 0~5MPa (750psl), precision of ±0.01 MPa
Working Temperature	Standard configuration instrument's maximum operating temperature is 300℃ and the maximum theoretical operating temperature is 900℃(peculiar configuration). The standard maximum working temperature of high-pressure reaction is 230℃.
Working Pressure	The standard maximum working pressure of high-pressure reaction is 2 MPa, with constant pressure control valve, and constant pressure value of 2 MPa.
UV Light Source System	It can be equipped with two sets of ultraviolet light, with UV power of 300W and the dominant wavelength of 365nm (standard); UV power of 100W and the dominant wavelength of 254nm (optional)
Ultrasonic System	Immersion ultrasonic launcher, with adjustable scope of ultrasound power: 0~ 800W, frequency of 28KHZ, and automatic frequency sweeping and frequency locking
Stirring System	Digital constant speed mechanical stirring, with rotation speed of 30~1600r/min. It can realize real-time speed regulation and displays ±10r/grade, with torque of 300 N.m. It can stir clockwise or anticlockwise; Built-in magnetic stirring rotation speed of 0~800r/min, speed program is adjustable and of real-time display.
Software System	With Windows software and 7-inch color LCD touch screen, it can make accurate setting and real-time display of various parameters and curves, and can transmit the reaction parameters and curves by connecting with the computer, and record and realize the control or change of each reaction process unlimitedly;
Video System	Color image recording system is equipped, which can realize real-time display of reaction process through 7-inch color LCD screen. And it can realize the transmission and recording by connecting the computer.
Interface	USB2.0 Serial port
Exhaust System	Oven chamber is equipped with high-speed hot blast fan, with blast capacity of $3m^3$/min. 3-gear speed change will be made automatically according to the reaction situation
Atmospheric Pressure Reaction Vessel	Standard 50~1000ml high borosilicate glass reaction vessel and condensation, reflux, charging accessories, optional 2000ml high borosilicate glass vessel, optional 50~1000ml quartz reaction vessel
High Pressure Reaction Vessel	100ml, 200ml and 500ml TFM high pressure digestion inner vessel, aerospace composite fiber explosion-proof outer vessel, high-strength alloy frame
Ambient Temperature/ Humidity	0~40℃/15~80% RH
Power Supply	220~240VAC 50/60Hz 9A
External Size(W*D*H)	500*625*580mm
Package Size(W*D*H)	Main Unit: 740*630*730mm; Accessories: 590*500*410mm; 570*540*210mm
Gross Weight	Main Unit: 73kg; Accessories: 14kg; 6kg