

MSP Microwave Digestion System



APPLICATIONS

- ◆ Sample preparation for AAS, ECD, ICP-AES and MIP-AES according to EPA3015, EPA3050, EPA3052, EPA3015A standards;
- ◆ Sample preparation for GC/LC/ICP-MS, GC/LC, UV-VIS and other chemical analysis. It's the best equipment for sample extraction according to EPA3546, ASTM D5258, D5765 and D6010.
- ◆ Chemical synthesis of molecular sieve catalyst, etc.
- ◆ Widely used in the field of Food, biology/botany, environmental protection, metallurgy, agriculture, geology, technical supervision, archaeology, aerospace materials, cosmetics, clinical examination, disease control, commodity inspection, research and teaching in universities and institutes.

ADVANTAGES OF MICROWAVE SAMPLE PREPARATION

- ◆ The activation characteristic of microwave enables easier sample dissolution and chemical reaction. Combined with sealed container to increase pressure and temperature, it greatly increases the speed of chemical reaction and shortens the sample preparation time to 1/10 of traditional method.
- ◆ Volatile elements or components will not be lost in the process of sample preparation.
- ◆ Low reagent consumption, reducing blank value and waste liquid pollution to the environment.
- ◆ Lessening harm of acid mist to human bodies.
- ◆ Eliminating contamination of environment to the sample.
- ◆ Less interference factors, easier sample control and automation.



MSP-8600

Microwave Digestion System

INSTRUMENT FEATURES

- ◆ The first microwave instrument with monitoring and alarm system for organic volatile reagent. When the concentration of organic gas reaches the alarm line, the alarm sounds and the system stops running.
- ◆ Large screen LCD displays temperature and pressure curve and parameters in real time, enabling clear understanding of the reaction status. Reaction results can be recalled at any time.
- ◆ 10 sets of pre-stored digestion method satisfy routine sample digestion needs. Each set of method includes 5-step program (microwave power, total time, temperature or pressure value and temperature or pressure keeping time) to control the reaction, keeping uniform conditions for different batches of sample.
- ◆ Adopting the newest technology of ideal gas pressure control system, real time pressure monitoring device and over-pressure protection, realizes easy and safe operation.
- ◆ Adopting advanced optic fiber temperature measurement technique for more safety.
- ◆ Constant power microwave radiation design realizes fast and smooth microwave sample preparation.
- ◆ The cavity wall is coated with corrosion-resistant material, preventing acid and alkali corrosion. The system is designed with microwave leakage prevention.
- ◆ New-type rotating microwave provides even heating and easy control.
- ◆ Specially designed exhaust fan can get rid of acid mist easily.



MSP-8600

Microwave Digestion System



Specifications

Model No.	MSP-8600
Microwave Frequency	2450MHz
Installed Power	1800W
Maximum Output Power	1000w, Non-pulse Continuous Automatic Variable Frequency Control
Turntable Design	Load 8 MP-100 Closed Digestion Vessels at same time
Pressure Measurement and Control System	Piezoelectric Crystal Pressure Sensor, Pressure Control Range : 0-10MPa (1500 psi), Accuracy ± 0.01 MPa
Temperature Measurement and Control System	High-Precision Platinum Resistor Temperature Sensor, Temperature Range : 0-300°C, Accuracy ± 1 °C
Outer Vessel Material	Explosion-proof outer vessel made of aerospace composite fiber
Inner Vessel Material	TFM material
Chamber Exhaust System	High-power anticorrosion axial fan, exhaust speed: 3.1 m3/min
Operating Ambient Temperature	0-40 °C
Working Environment Humidity	15-80%RH
Power Supply	220-240 VAC 50/60Hz 8A
Whole Physical Size	450 x 515 x 510 mm (W x D x H)
Net Weight	40 KG

Standard 6-station or optional 8-station ultrastrength frame closed reaction vessel 8-station rotor MP-100 closed high-pressure reaction vessel:

Maximum Pressure	15MPa(2250psi)
Maximum sustained temperature	300°C
Maximum working temperature	250 °C
Inner vessel volume	100ml
Outer vessel material	Ultrastrength aerospace composite fiber
Inner vessel material	TFM (Modified PTFE)
Maximum batch capacity	8 vessels

Application area

Food and drug (milk and dairy products, health food), cosmetics, agricultural and sideline products, aquatic products, biological tissues, various types of feed, energy and petrochemical, geology and mineral resources, environmental resources (air, water, soil), metals, alloys, ceramics, RoHS, medicine, domestic wastes.