

**RAYLEIGH**

Beijing Rayleigh Analytical Instrument Co.,Ltd

# MSP

## Microwave Digestion System



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## MSP Microwave Digestion System

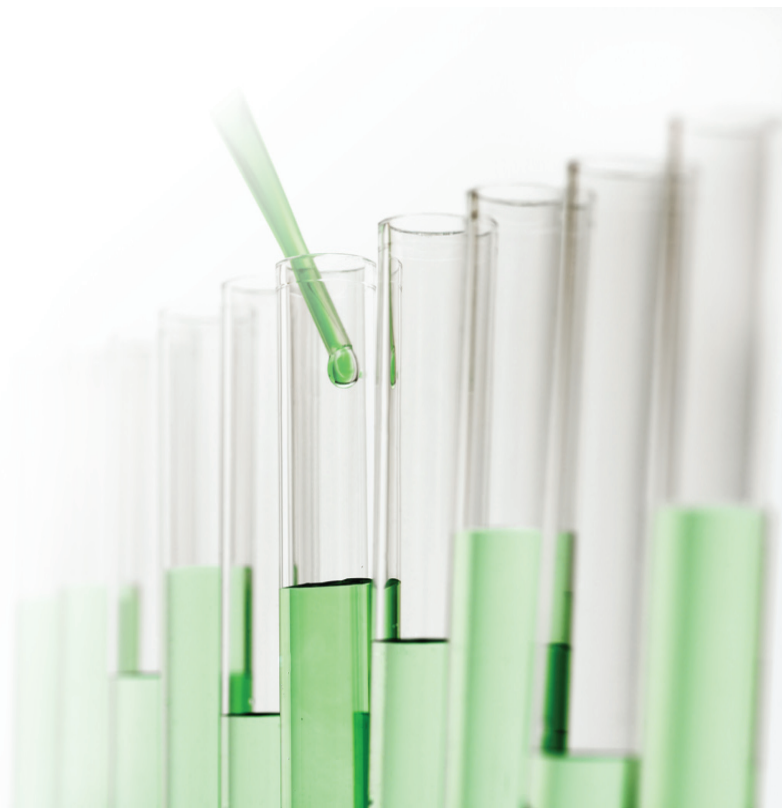


### APPLICATIONS

- ◆ 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.

### SPECIFICATIONS

- ◆ Maximum pressure display: 5MPa
- ◆ Controllable pressure: 5.0MPa
- ◆ Pressure setting: 0.01MPa increment
- ◆ Pressure control accuracy:  $\pm 0.05$ MPa
- ◆ Maximum temperature display: 300°C
- ◆ Controllable temperature: 230°C
- ◆ Temperature setting accuracy: 1°C
- ◆ Temperature display accuracy: 0.1°C
- ◆ Microwave power setting: 1% increment in the range of 1 – 100%
- ◆ Vessel volume: 80ml; Maximum operating temperature: 300°C; Maximum operating pressure: 5.0MPa.
- ◆ 4 sets of double-cup vessels are supplied as standard; Maximum of 10 vessels can be placed in the sample bracket.
- ◆ Microwave leakage is less than 5mw/cm<sup>2</sup>.
- ◆ Interlock switch stops microwave radiation when the door opens.
- ◆ Microwave frequency: 2450MHz; Microwave power: 1000W
- ◆ Power: AC220V, 15A, 50/60Hz, 1250W
- ◆ Net weight: 35.5kg; Cavity volume: 30L
- ◆ Dimensions: 63 x 44 x 50cm

## MSP-6600 Microwave Digestion System

### INSTRUMENT FEATURES

- ◆ Large screen LCD displays pressure curve and parameters in real time, enabling clear understanding of the reaction status. Reaction results stored with chemical reaction characters, which 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, pressure value and 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.
- ◆ The pressure control vessel and other sample vessels are under the same conditions, realizing true real time monitoring and over-pressure protection. Setting target pressure of each step at an increment of 0.1 for more accurate control. 10 double-cup vessels can be used at the same time for high efficiency of sample preparation.
- ◆ One second time-base 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.

### SPECIFICATIONS

- ◆ Maximum pressure display: 5MPa
- ◆ Controllable pressure: 4.0MPa
- ◆ Pressure setting: 0.01MPa increment
- ◆ Pressure control accuracy:  $\pm 0.05$ MPa
- ◆ Microwave power setting: 1% increment in the range of 1 – 100%
- ◆ Vessel volume: 80ml; Maximum operating temperature: 300°C; Maximum operating pressure: 4.0MPa.
- ◆ 4 sets of double-cup vessels are supplied as standard; Maximum of 10 vessels can be placed in the sample bracket.
- ◆ Microwave leakage is less than 5mw/cm<sup>2</sup>.
- ◆ Interlock switch stops microwave radiation when the door opens.
- ◆ Microwave frequency: 2450MHz; Microwave power: 800W
- ◆ Power: AC220V, 15A, 50/60Hz, 1400W
- ◆ Net weight: 35.5kg; Cavity volume: 30L
- ◆ Dimensions: 63 x 44 x 50cm