

A2

Microwave Digestion Instrument

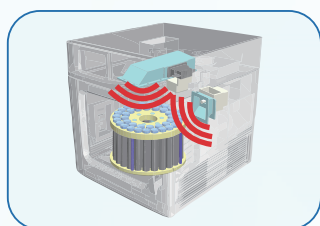


Microwave Digestion Instrument is an excellent assistant for elemental analysis techniques such as AAS, AFS, ICP, ICP-MS, as well as GC, HPLC, GC-MS, and other analytical methods. It offers highly efficient sample processing capabilities, capable of completing the digestion, extraction, protein hydrolysis, concentration, drying, and organic synthesis of the majority of organic/inorganic/liquid/solid samples within 20 minutes.



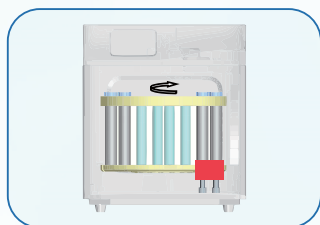
■ Professional all-digital microwave source

With the adoption of professional dual magnetron microwave control technology, it enables non-pulsed continuous microwave output. The microwave power can be adjusted continuously in a true range of 0-100.



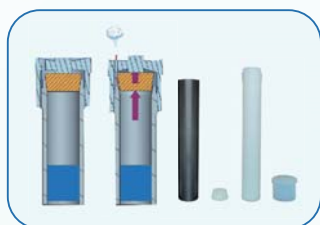
■ Vertical/Horizontal bidirectional waveguide design

Three-dimensional output, effectively enhancing microwave power density and uniformity, increasing energy utilization efficiency, ensuring consistent sample digestion and improving heating efficiency.



■ Non-contact infrared temperature measurement system

Real-time monitoring of the temperature of each digestion vessel, enabling non-contact infrared temperature measurement and intuitive display of the temperature of the sample solution inside each vessel. This allows for more accurate temperature control.



■ Full vessel pressure control technology

Overpressure self-sealing intelligent pressure control technology ensures that the digestion vessel remains completely sealed without any leaks during normal operation. In case of overpressure, it automatically performs a safe pressure relief, releases excess reaction gases (such as CO₂ and nitrogen oxides), and instantly seals again, ensuring smooth progress of subsequent experiments.



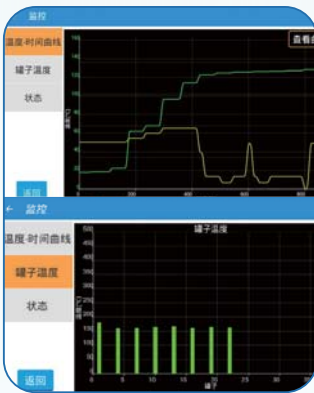
■ High-power turbulent flow exhaust cooling system

Built-in high-power centrifugal fan, automatically cools the digestion vessel in situ after completion, reducing the temperature from 200°C to a safe level in approximately 10 minutes, thereby shortening the cooling and depressurization time.



■ Easy program setup

Built-in comprehensive method library, large storage capacity, one-click selection of preset methods or manual configuration of temperature, ramp-up time, and hold time, making experiments easy.



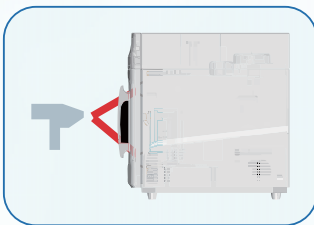
- Real-time updating of temperature operating curve and temperature bar graph

Real-time updating of temperature operating curve and temperature bar graph for all digestion vessels, providing a clear overview of the digestion process.



- Explosion-proof sight window

Directly observe abnormal conditions inside the chamber to ensure safety during use.



- Mechanical safety protection device

Instant physical power cutoff of the microwave when the door is opened for 0.1 seconds to protect human safety.



- SUS316 stainless steel microwave chamber

SUS316 ultra-thick stainless steel chamber, laser seamless welding, with multiple layers of anti-corrosion and high-temperature resistant PTFE coating applied, effectively preventing strong acid corrosion, and a 5-year anti-corrosion warranty for the chamber.



- High-strength structural anti-corrosion casing for the entire machine

The entire machine shell is made of engineering sheet metal material, with an anti-corrosion coating on the shell, providing high-strength structure and laboratory-grade corrosion and rust resistance.



- Built-in LED multi-color light recognition system

By changing the color and intensity of the lights, it distinguishes between the reaction microwave digestion state and abnormal warning state.

Technical Parameter

Model	A2
Batch processing capacity	10
Internal tank capacity	110mL
Microwave source	2450 MHz, variable frequency dual magnetron high-power microwave field emission, non-pulsed continuous microwave output
Temperature monitoring system	Dual high-precision non-contact infrared temperature sensors, direct measurement
Material of the inner tank	TFM
Material of the outer tank	Fiber-reinforced PEEK
Temperature measurement method	Infrared thermometry
Operating system	Open-source operating platform based on Android
Instrument dimensions	W560mm*L630mm*H635mm
Instrument weight	About 65kg
Human-Computer Interface	7-inch color LCD touchscreen
Total installed power	3600W
Power supply	220V±10%, 50Hz, 16A
Operating temperature	0~40℃
Operating relative humidity	15~80%RH


Company Profile

Grand Analytical Instrument Co.,Ltd., located in the millennium commercial city of Guangzhou, is a comprehensive enterprise engaged in research, development, production, and sales. Since its establishment in 2014, the company has assembled a high-end research and application team led by well-known experts and professors in the industry. We provide industry solutions that integrate product research and development, production, sales, after-sales service, and value-added services, specializing in creating personalized and distinctive services for our customers.

Grand's products and services include: fully automatic graphite digestion systems, intelligent graphite digestion systems, microwave digestion instrument, urine iodine digestion systems, laboratory hotplates, nitrogen concentrators, Soxhlet extractors, Kjeldahl nitrogen analyzers, and other sample preparation products. We also offer laboratory information management software and various laboratory solutions for different industries.

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