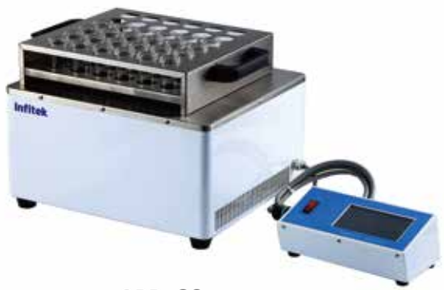
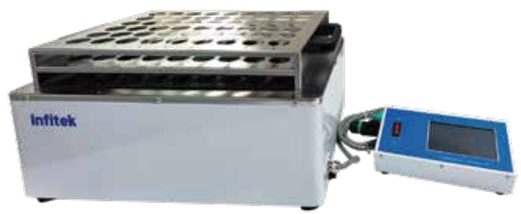
Graphite Digester

GRD-36 GRD-54



GRD-36



GRD-54

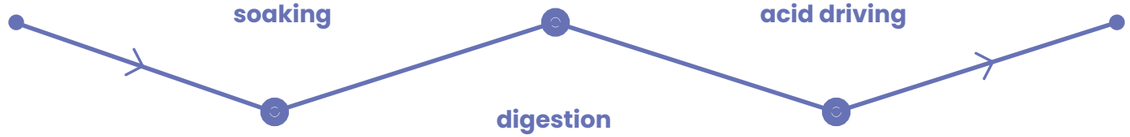
Description

The heater is designed separately from the control system to prevent corrosion of electrical components.

The intelligent temperature control system adopts 5-inch color touch screen, and the information display is detailed, easy to understand and operate

Specifications

Model	GRD-36	GRD-54
Number of sample holes	36 holes	54 holes
Aperture	Φ32*50mm	
Heating module material	high density graphite	
Digestion tube	high borosilicate glass	
Designed temperature	350℃	
Temperature control accuracy	±1℃	
Heating rate	≈8--15℃/min	
Operating system	5.5-inch color touch screen	
Control mode	1-40 stage temperature program/single point heating dual mode	
Recipe management	9	
Timing shutdown	1 - 999	
Working voltage	AC220V/50Hz	
Heating power	3Kw	4Kw
Package Dimension (W*D*H)(mm)	/	850*550*490mm
G.W.(kg)	/	46kg



Sample soaking → digestion → acid driving is completed with one button, which is convenient, fast and has large sample processing capacity

Features

Graphite heating module is made of high-density graphite, which has the features of uniform temperature distribution, high temperature resistance and low temperature buffer.

The input method of recipe program is tabular fast input method with clear logic, fast speed and not easy to go wrong.

0-40 sections of program can be arbitrarily selected and set.

316

With excellent corrosion resistance, the shell is made of 316 stainless steel with teflon coating.

PID

Intelligent P, I, D self-adjustment with high precision, reliability and stability.

With widely range of applications, the temperature and heating rate of furnace hole can be adjusted continuously.

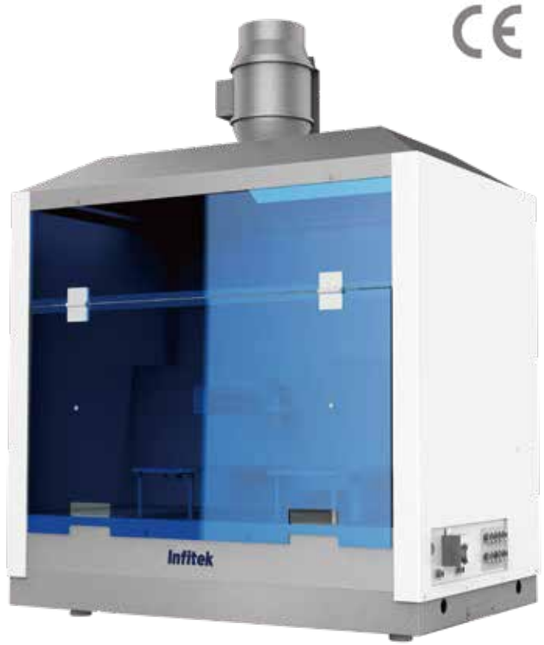
Dual-mode of single point heating and curve heating that can be arbitrarily selected.

The electrical control system uses solid state relay (regulating module) for mute and strong anti-interference capability.

Segmented power supply and restart function to avoid power failure preventing potential risks

Graphite Digester

GRD-60A



Description

"Fully automatic graphite digestion platform" is a pre-treatment equipment designed and produced according to the principle of wet digestion, and it is an ideal matching product for AES, AAS, AFS, ICP-MS and other analytical instruments.It is an " automatic sample processing platform".

With the following process:

Sample soaking process → Reagent automatic addition → Curve heating digestion → Automatic mixing. → Automat- ic constant volume → Automatic acid driving

And Its advantage is the large sample processing capacity (60 samples/batch) with one-click completion, and there is no personnel needed to guard the process, therefore saying goodbye to monotonous, repetitive, cumbersome, dangerous sample processing work.

Features

1
Rotary oscillating and mixing technology - rotary oscillating and mixing has large amplitude and good mixing effect, and the swing amplitude is 5-10 times that of reciprocating technology.

2
Sample non-contact mixing - avoid cross contamination and loss of samples. The instrument can be used for oscillation, mixing, and setting of speed and time during process of adding liquid, cooling, constant volume, etc.

3
Positive pressure with intelligent ventilation, anti-corrosion and anti-condensation water design: adopt the integral anti-corrosion material design, to ensure the long-term operation of equipment reliable.

4
Digestion equipment is completely enclosed: the powerful fan inhales fresh air and injects it into the control and implementation system of digestion equipment, where a positive pressure state is formed to prevent acidic gas from entering the fume hood. Acid mist of samples is wrapped by the positive pressure before going to the ventilation system.

5
Solve the problem of water vapor formation in the inside wall of fume hood： the reason for the formation of water vapor is the condensation phenomenon formed by the high temperature environment encountering low temperature conditions, and the key to solve this problem is to eliminate the internal and external temperature difference and remove the gas with a large water content, so that it cannot form condensation.

6
Intelligent internal and external environmental temperature determination, independent power supply system: solve the problem of time limit for stopping positive pressure and negative pressure ventilation.

7
The digestion equipment has a set of independent environmental temperature determination system and ventilation control system.
Even if the operator turns off its power switch, the system will maintain the ventilation state if there is large temperature difference between the inside and outside.

9

Digestion and heating system adopts partition design:

The two digestion units can be controlled and operated independently or simultaneously, and the digestion module adopts graphite heater with good temperature uniformity and high

Two independent temperature zones can be controlled and operated independently or simultaneously

Liquid supply system

Sample head-space system: the instrument is equipped with one air channel, which can be used for all the head-space

of the pre-reagent or the head-space at any position to prevent the reaction of different reagents.

The instrument is equipped with 8 reagent channels, with multiple reagent automatic switching functions, and each reagent channel is independently controlled so that they will not affect each other.

The distilled water is supplied by independent pipeline (single module and double channel liquid adding pipe-line) to prevent reagent adding error caused by the same reagent pipeline.

Adding reagent adopts peristaltic pump with high precision and corrosion resistant, which can be calibrated at any time with high accuracy.

Instrument constant volume system

Use "high-precision ultrasonic liquid level sensor" to implement constant volume for any size digestion tube. The finishing digestion tube cooperates with the above sensor to make the volumetric accuracy of 10ml-50ml ≤ ±1%.

Instrument temperature control system

Temperature control range：RT～300℃
Temperature control accuracy：≤1℃
Adopt PID intelligent control

Specifications

Model	GRD-60A
Temperature control range /temperature control accuracy	RT+5℃-300℃ / ±1℃
Temperature control zone/digestion unit	2 zones / 2 units
Sample handling quantity/heating material temperature control system	60 holes / graphite PID intelligent control, 60 sections of program heating and single point heating mode.
Constant volume mode/	Ultrasonic wave sensor
Constant volume range/ constant volume accuracy	1-50ml / ≤ 1%/5-50ml hour/ per time
Reagent adding accuracy Mixing mode/amplitude	≤0.5% Rotation/vibration amplitude 20mm
Mixing time	About 0-99min
Reagent channel	8 channels
Anti-corrosion and anti-condensation design	Positive pressure ventilation, with anti - corrosion, anti - condensation water system, and independent power supply
Internal and external environment temperature determination system	Equipped
Working voltage	AC220V/50Hz ±10%
Heating power	4KW
Fume hoods	Equipped
Net size (L * W * H)	650*1020*1400mm