



QWAVE 4000

EPA-Compliant Microwave-Assisted Sample Digestion



Features and Benefits

User-defined digestion procedures

Easy! You can store up to 10 procedures relevant to your samples and call up any one of them to perform your digestion. If you need to make a new procedure, just formulate the time-to-temperature curve and enter it into the system using the system keyboard and you are set to go.

Preloaded EPA protocols

No guess work and no calibrations required. Just select the particular protocol from memory and go.

Controlled temperature vessels

Whether using UHP or VHP vessels, you can count on a second-by-second temperature control of your digestions according to the loaded procedure. Safe, reliable and done right, every time.

Automated power control

The loaded procedure drives the power required to keep the vessel temperature as needed. One vessel or ten, the power adjusts automatically.

Q-Sens™ sensor control

Our unique Q-Sens™ optical temperature sensor and control module senses the actual vessel temperature every 20 msecond to keep the digestion in line with the loaded procedure.

Uncompromising safety features

Our Q-Sens™ and OPGuard™ modules provide subtle, transparent, and no-nonsense layered safety features with uncompromising regard for the well-being of the operator. Our Q-Sens™ technology provides the first line of defense against over-temperature and over-pressure conditions by keeping the power supplied to the samples to exactly what is needed in maintaining the procedure temperature profile and by observing its temperature limits. OPGuard™ module provides the second line of defense against unforeseen pressure buildup by automatically venting at pre-set pressure limits – safely and reliably. A rugged and powerful exhaust system works extra fast to remove any acid fumes from the cavity. Finally, our third line of defense is our mechanically strong and conservatively specified oven body. Its rugged frame and intelligent design provides uncompromising protection under the worst imaginable scenarios.

New rugged design with enhanced safety features

- Spring-loaded door latch provides a simple and effective safety shield
- Door safety interlocks
- PTFE-coated reinforced cavity
- Newly designed vessels with OPGuard™ Vessel Protection System
- User-friendly control panel with tactile membrane switches
- Better and brighter LED display
- Easily accessible electronics and serviceable modules

Introducing LVHP

With the launch of our QWAVE 4000 microwave digestion system, Questron Technologies is proud to announce the introduction of our new vessels module called LVHP (Low Volume High Pressure) Vessels Module.

LVHP will be launched in the coming months as an answer to the need in modern labs for higher throughput and greater efficiency for digesting samples using the microwave digestion technique. If the samples to be processed require smaller sample size heating to less than 200°C with pressures below 400 psi, than our LVHP vessels will enable the simultaneous processing of up to 30 samples at a time.

LVHP > Safe, high throughput sample processing with temperature regulated microwave power.

Specifications

Oven

Microwave power output	Up to 1200 Watts
Magnetron frequency	2450 MHz
Utilities	208 VAC, 60 Hz, 20 Amps 220 VAC, 50 Hz, 20 Amps
Exhaust	150 CFM
Display	High brightness LED
Dimensions (width x depth x height)	
<i>External</i>	58 x 61 x 64 cm (23 x 24 x 25.5 in.)
<i>Cavity</i>	39 x 34 x 30.5 cm (15 x 13.5 x 12 in.)
Weight	75 kg. (165 lbs.)

Vessels Module

Supported vessels	UHP, VHP and LVHP
Maximum samples	10 (UHP & VHP) and 30 (LVHP)

Temperature Limits

Absolute maximum temperature	300°C (UHP & VHP)
Maximum control temperature	230°C (UHP & VHP)

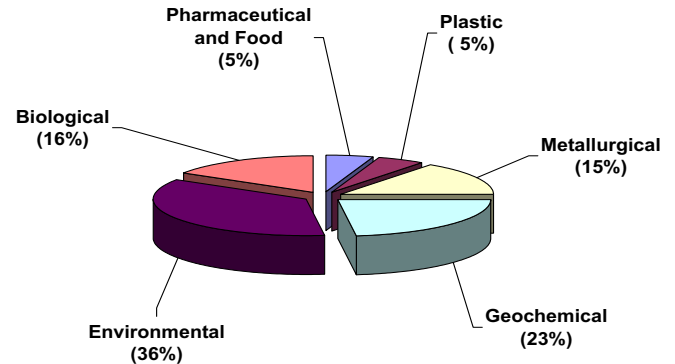
Computing processor

Built-in with capability to store up to 10 digestion procedures

Designed to meet USEPA protocols

- Preloaded with EPA methods 3015, 3051 and 3052
- Direct sensing and control of sample temperature to ensure reproducible digestions every time
- Ten time-to-temperature methods can be stored for easy, one-step operation of the system
- Program your own methods for your specific samples
- Prepare up to 10 samples at a time in standard VHP or UHP vessels carousel and up to 30 samples in LVHP sample tray

Usage by industry



Some common applications

Sample type	Size (grams)	Digestion time (hr:min)
Alpha Alumina	1.00	0:30
Blood	1.50	0:15
Cellulose filter	1.10	0:23
Cement (Portland)	0.15	0:10
Fish tissue	1.20	0:25
Paint chips	0.60	0:27
Paper pulp	1.50	0:23
Polyethylene	0.40	0:15
Sediments	0.40	0:17
Soil	0.80	0:24
Steel	0.50	0:28
Vegetation (dried)	0.75	0:22
Waste water	25.0	0:20

Your local distributor:

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