Microwave Assisted Sample Digestion With Safety, Economy, High Throughput

Rugged Design with Enhanced Safety Features

- Ideal for digestion, extraction, evaporation, and synthesis
- Built-in temperature and pressure monitoring of each digestion vessel
- User-independent safety features ensuring safe digestions
- Controlled release of over pressure to avoid cross-contamination
- Rotating antenna and 360° carousel rotation ensuring uniform microwave distribution
- Corrosion-proof PTFE-coated reinforced cavity for corrosion resistance
- Two-900 Watt magnetrons provide continuously variable, non-pulsed, evenly distributed power in small increments for precise temperature control of every vessel.
- 2-speed, 150 CFM exhaust for fume removal and vessel cooling
- Spring-loaded door latches for enhanced safety

Configurations

- Closed Vessel Time-To-Temperature
- Open Vessel Time-To-Temperature
- Closed Vessel Time-To-Power
- Open Vessel Time-To-Power

External exhaust blower in case of Open vessel configuration takes care of excessive acid fumes generated during operation

Vessel Sets

eVHP Vessel Set (18 Vessels)

eVHP Vessel Station

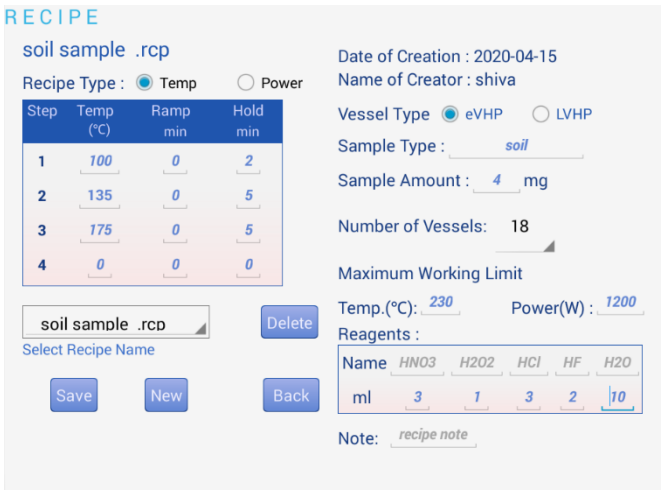
- Accurate temperature sensing (±0.1°C sensitivity)
- Ease of loading carousel vessel by vessel inside the system's cavity. 3, 6-vessel sectors make for convenient loading.
- Convenient manual release of residual pressure after digestion
- Compact Vessel Handling Station prepares vessel correctly every time
- Option of sensor vessels for in-situ temperature and pressure measurements
- Automatic protection against unusual heating of vessels
- Optimally designed carousel ensures uniform heating of all samples

LVHT Vessel Set (40 Vessels)

- Vessel for high throughput and moderate temperature requirements
- Possibility to a batch of 40 samples in a single run
- Temperature monitoring of each vessel
- Vessels are individually pressure controlled and equipped with our unique resealing over-pressure guard (OPGuard™) vessel protection system
- Temperature control for as low as 8 ml possible
- Ideal solution for labs running large number of samples in every batch

Touchscreen Interface

- User-friendly control panel, operated through touchscreen
- Easy navigation for method creation and storage
- Audible alarm and visual alerts during digestion runs
- Preloaded with Methods library of EPA and other standard methods
- Capable of identifying a vessel in case of over pressure release
- Data export and printing capability for tracking, tracing, and documentation



User may create and store 1000+ multi-step digestion recipes or select from Questron's existing methods library

OPGuard™

All vessels are individually pressure controlled using our unique resealing over-pressure guard (OPGuard™) vessel protection system. This system releases pressure vertically in a controlled manner to achieve safe pressure conditions. Released fumes are removed quickly to avoid condensation on cavity and vessels. If release is minor and drop in temperature is minimal, the digestion method can be continued. In an instance where pressure release is major, complete safety is achieved by automatically cutting off magnetron power, activating audible alarm, and displaying visual warnings.

System Specifications

Oven

Microwave power output	Two magnetrons supply 1800 watts total power in 1-watt increments
Magnetron frequency	2450 MHz
Temperature sensing	Non-contact IR based
Utilities	200- 240 VAC, 50/60 Hz, 15 Amps
Oven Door Viewing Window	Built-in camera video displayed on dedicated LCD screen on oven door
Exhaust	2-speed, 50 cfm or 150 cfm nominal
Weight	69 kg. (150 lbs.)
Dimensions (width x depth x height)	
External	63 x 63 x 65 cm (24.8 x 24.8 x 25.5 in.)
Cavity	40 x 40 x 32 cm (15.6 x 15.6x 12.5 in.)

System Controller

Display	
Type	Glass Touchscreen
Size	18.8 x 11.2 cm (7.5 X 4.5 in.)
Processor speed	1.2 GHz
Resolution	1024 x 600 pixels
Data input method	Direct via touchscreen
On-board method storage	1000 +
On-board data storage	10 GB
Computer connectivity	Bluetooth or Ethernet with Oven, USB-B Port
Noise Level	< 56 dB

Vessels

Parameters	eVHP	LVHT
Liner		
Type	TFM	TFM
Volume	110 ml	50 ml
Temperature		
Absolute max. temperature	300°C	300°C
Max. control temperature	230°C	200°C
Pressure		
Absolute max. pressure(bar/psi)	151 / 2200	43 / 625
Max. control pressure(bar/psi)	69 / 1000	20.7 / 300
Sample processing capacity	18	40

In-situ Temperature Sensor Vessel

Pressure Sensor Vessel

Pre & Post digestion Treatment

- Option of QBlock digestion system for pre- and post-digestion treatment of samples in digestion vessel liners
- Prevent contamination from use of multiple vials
- Partly digest organic-rich samples in QBlock at low temperatures to increase sample handling capacity of microwave digestion vessels
- Concentrate samples before microwave digestion treatment
- Give boric acid treatment for excess HF acid
- Evaporate excess or unwanted acids at the end of digestion

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