

SCP SCIENCE

PROVIDING INNOVATIVE SOLUTIONS TO ANALYTICAL CHEMISTS

MiniWAVE

Microwave Digestion Made Easy

Composed of one controller and up to four digestion modules

Powered by a 1000 watt magnetron

Integrated compressed air module

Pre-calibrated vent and seal safety caps on digestion vessels

Offers modular flexibility in relation to the number of samples

Fast digestion time

Ultra quick cooling times

Reduce the risk of runaway samples



CONCEPT

Microwave Digestion System and controller is a top-loading, compact, microwave digestion system consisting of a touch screen controller and up to 4 digestion inter-connecting modules. Each module is able to digest up to 6 samples simultaneously. Six IR sensors, located on the side walls, monitor each sample temperature. A single magnetron is located below the floor. With its unique design, microwave energy is evenly distributed throughout the digestion chamber to provide reproducible results sample to sample. Ideal for environmental, agricultural, petroleum, geological, food and biological samples.

The touch screen controller can handle up to 4 **MiniWAVE** digestion modules simultaneously. The system is fully functional with only one module and controller. Additional modules can be added as workload increases. Using two or more modules, run completely different sample types on each module using sample specific operating conditions.



EASY TO LOAD

Top loading cavity



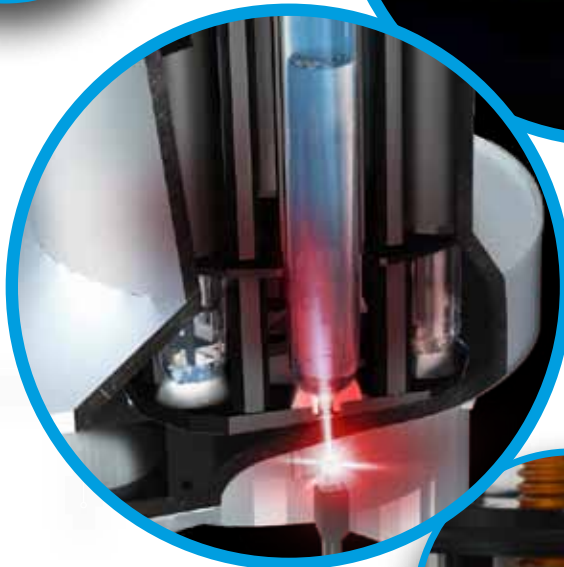
SPEED

Meets specifications for US EPA methods 3015, 3051, 3052.



FAST COOLING

Cool samples to 70°C from 180°C in little as 3 minutes (10ml sample) using standard compressed air, cooling is 5 minutes using built-in blower.



INNOVATIVE

Six IR sensors measure each sample temperature independently in real time. This provides immediate feedback for software control of microwave energy delivered to the stationary samples in the cavity. No moving parts. All Teflon® coated stainless steel construction axisymmetric cavity.



INCREASE THROUGHPUT

Connect up-to 4 *MiniWAVE* Modules to one controller for maximum sample throughput

SAFETY

Vessel rated at 90 bar. Vent and Seal Safety Pressure Caps at 30 bar.

ADVANTAGES

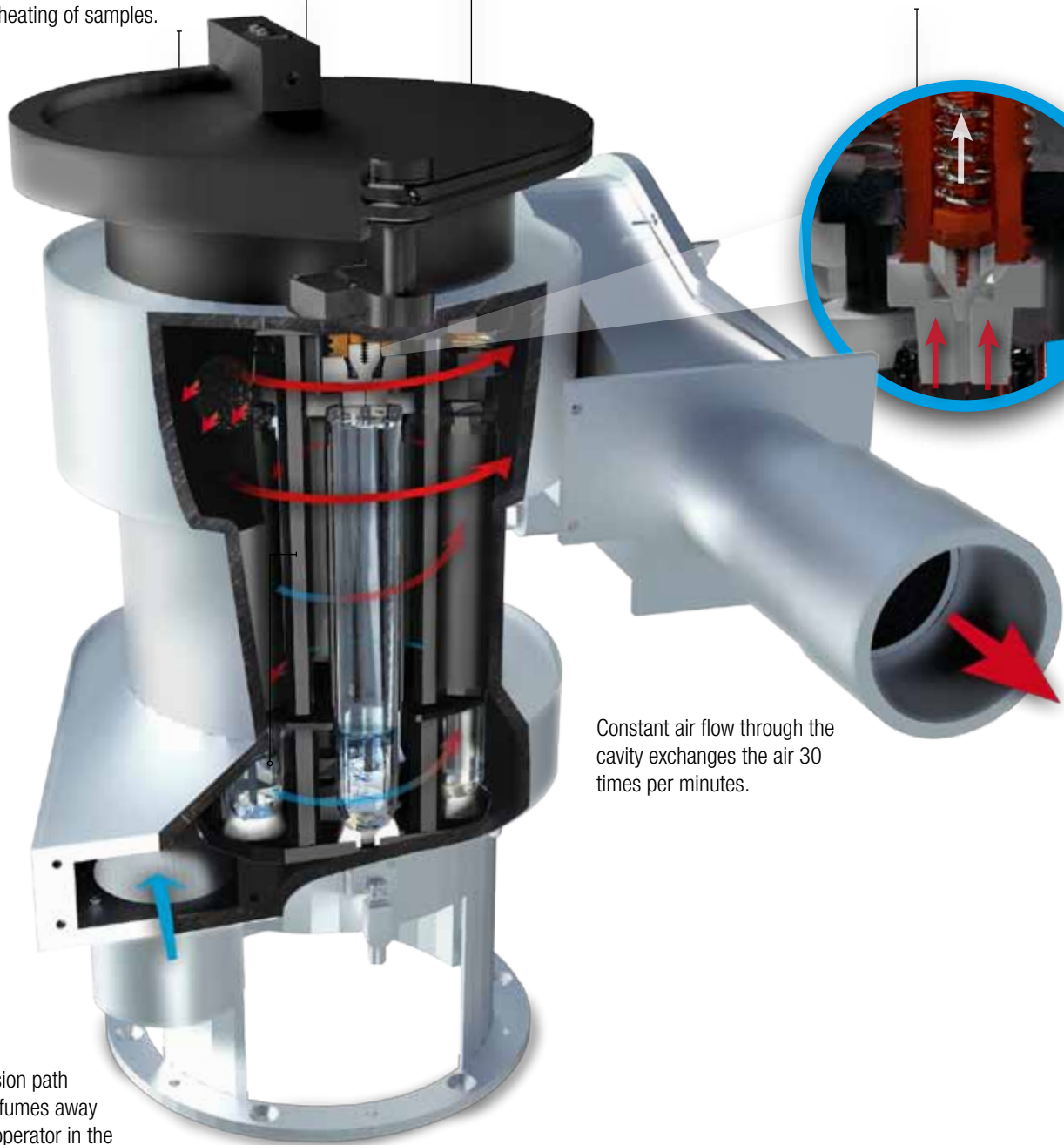
SAFETY

Teflon® coated stainless steel, microwave axisymmetric cavity tuned for optional heating of samples.

One piece interlocking cover plate with dual safety interlocks.

Triple coated PFA cavity, cover plate and racks for protection against corrosion.

Safety Pressure Caps are serialized and calibrated to release at 30 bar (435psi). Caps utilize a patent pending, vent and seal technology.



Constant air flow through the cavity exchanges the air 30 times per minutes.

Explosion path vents fumes away from operator in the event of a failing vessel unlikely.



Simple to install



Easy to cap vessel

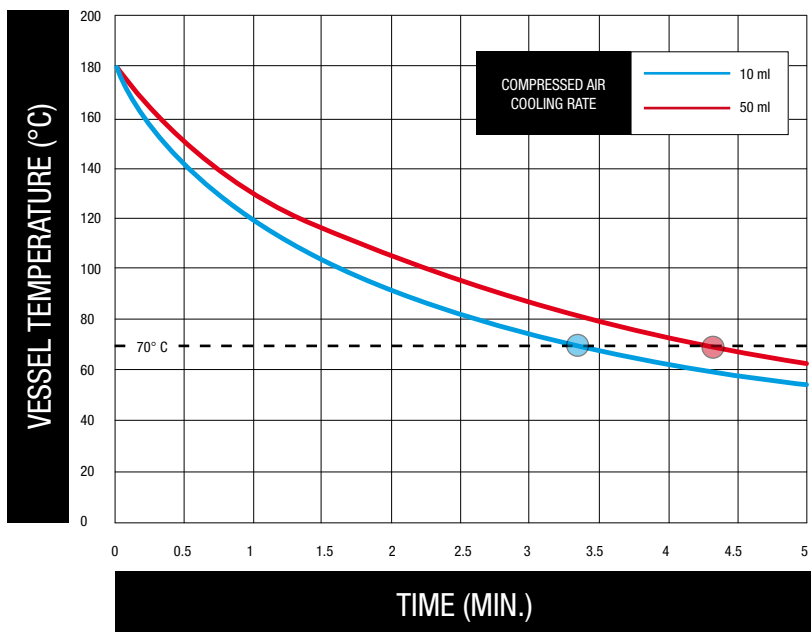


Fast cooling & safe venting

MiniWAVE offers the fastest sample cooling time in the market. With its integrated compressed air module, a 10 ml sample may cool from 180°C to 70°C in just 3.4 minutes.

COOLING FROM 180°C TO 70°C

| | 10 ml Volume | 50 ml Volume |
|----------------|--------------|--------------|
| Exhaust Blower | 5 minutes | 7 minutes |
| Compressed Air | 3.4 minutes | 4.3 minutes |



RACKS

METHODS

Pre-installed US EPA (3015, 3051, 3052) and DIN methods

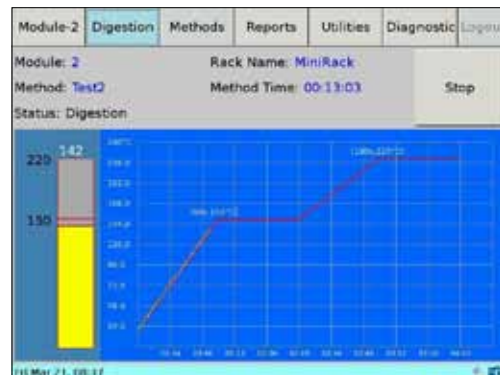
Initiate these methods at the touch of a button. USP 232 / 233 compliant.

Add 2nd and 3rd temperature profiles of "time to temperature" and "time at temperature"

Offers single or multi-steps digestion methods.

Save methods to an installed USB stick on the back of the controller

Store and access a library of methods at your fingertips.



REPORTS

Select between "Operator" or "Administrator" user

Setup what priority level your employee has access to the **MinIWAVE** system.

Simple single key touch and drop down windows on-screen

Create new methods and edit/copy factory programmed methods. Prepare custom methods for your lab easily. Input the reagent(s) used in the method being programmed (for information use only).

View and generate detailed reports

Provide a history of the run using the actual temperature profile of each digestion rack. Includes graphical representation of run with a time stamp.

SPECIFICATIONS

Ports/Printer: USB/ Ethernet.

Weight

**Electrical Requirements
110V and 220V systems**

Microwave Energy

**Overall Instrument
Dimensions**

(Width x Depth x Height)

MinIWAVE module:

43 cm × 33 cm × 47 cm
(16.8 in. × 13.0 in. × 18.5 in.)

Controller module:

30 cm x 26 cm x 23 cm
(12.0 in. x 10.3 in. x 9.1 in.)

MinIWAVE module:
30 kg (65 lbs)

Controller module:
4 kg (9 lbs)

MinIWAVE rack:
3 kg (6 lbs)

The number of modules that can be connected depends on the current available.

1) 100-125VAC, 50/60Hz, 10A.

Connect a maximum of 2 modules. Detachable power cord.

2) 200-240VAC, 50/60Hz, 5A.

Connect a maximum of 4 modules to the Controller. Detachable power cord.

Contact **SCP SCIENCE** for further information.

2.45 GHz, 1000 Watts,

Continuous, linear power levels deliver up to 6 samples per digestion module. Under software control using IR temperature sensor feedback.

Maximum controllable temperature to 250°C.

SPECIFICATIONS



EU Users:
Contact your local
distributor for disposal
instructions.



APPLICATION NOTES LIBRARY

Are you digesting environmental, metallurgical, food, plant or oil samples in your laboratory and not obtaining desired results? Contact our Applications' Specialist to answer your questions and provide insight to increase sample throughput, optimize recovery levels or improve methodologies. We are dedicated to finding a solution to your sample digestion needs.

A growing library of **MiniWAVE** Application Notes is available. Each of the Notes demonstrate the ease of use and effectiveness of **MiniWAVE**. Recent Application Notes include:

- The Digestion of Agricultural Leaves
- The Digestion of Polypropylene Plastic
- The Digestion of Used Oil
- The Digestion of Basalt Rock
- The Digestion of Waste Water

Contact your local sales representative
or distributor for more information.

ORDERING INFORMATION

To place an order, choose the correct **MinWAVE*** system (item 1 or 2) and rack (item 4 to 7) for your needs. One controller (# 010-600-008) may run up-to four **MinWAVE** microwave digestion modules.

| | | | | |
|-----------------------------------|------------------|---|--------|-------------|
| SYSTEM COMPONENTS | MinWAVE | Microwave Digestion Module, 6 Position, 110v | Each | 010-600-006 |
| | MinWAVE | Microwave Digestion Module, 6 Position, 220v | Each | 010-600-008 |
| | Controller | MinWAVE Controller | Each | 010-600-007 |
| | Rack | MinWAVE Rack 6 Place, with 75 ml Quartz Vessels | Each | 010-600-009 |
| | Rack | MinWAVE Rack, 6 Place, with 75 ml Teflon® Vessels | Each | 010-600-010 |
| | Rack | MinWAVE Rack, 6 Place, with 50 ml Teflon® Vessels | Each | 010-600-011 |
| | Rack | MinWAVE Rack, 6 Place, with 50 ml Quartz Vessels | Each | 010-600-012 |
| ACCESSORIES AND REPLACEMENT PARTS | Vessels | Quartz Vessel, 50 ml, Calibrated | (Pk/6) | 010-600-051 |
| | Vessels | Quartz Vessel, 75 ml, Calibrated | (Pk/6) | 010-600-071 |
| | Vessels | Teflon® Vessel, 50 ml | (Pk/6) | 010-600-053 |
| | Vessels | Teflon® Vessel, 75 ml | (Pk/6) | 010-600-073 |
| | Support Sleeves | Support Sleeves for 50 ml Teflon® Vessels | (Pk/6) | 010-600-054 |
| | Support Sleeves | Support Sleeves for 75 ml Teflon® Vessels | (Pk/6) | 010-600-074 |
| | Caps | PFA caps for Quartz Vessels | (Pk/6) | 010-600-060 |
| | Caps | PFA caps for Fluoropolymer Vessels | (Pk/6) | 010-600-061 |
| | Venting Tool | To manually release the safety cap pressure after digesting samples | Each | 010-600-080 |
| | Weighing Support | Weighing Support for Microwave Vessel | Each | 010-600-110 |
| | Mixing Cap | Mixing Cap for Microwave Vessel | Each | 010-600-100 |
| | Cart | Cart for up to 2 Modules and 1 Controller | Each | 010-600-014 |

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

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