

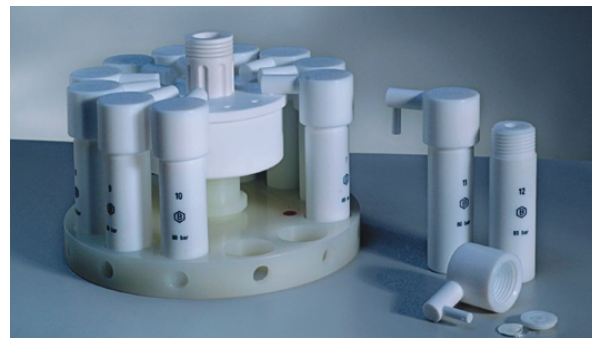
Digestion vessels for the **speedwave** MWS-3

Vessel type	Volume	T-max. (continuous)	Working pressure	Multiple arrangement
DAP-30S	30 ml	230°C	80 bar / 1160 psi	12 vessels
DAP-60S	60 ml	230°C	40 bar / 580 psi	12 vessels
DAQ-20H	20 ml	250°C	100 bar / 1450 psi	12 vessels
DAP-80S	80 ml	230°C	35 bar / 508 psi	12 vessels
DAC-100	100 ml	230°C	100 bar / 1450 psi	8 vessels

Special sizes can also be produced to suit customer applications.

■ DAP-30S

Standard vessel manufactured entirely of TFM for numerous routine applications. Sample quantities up to 200 mg. Used principally in applications involving foodstuffs and environmental analysis. High resistance to pressure enables good digestion quality to be achieved.



■ DAP-60S

Vessel manufactured entirely of TFM for larger sample quantities up to 500 mg. Uses include quality control applications (e.g. plastic granules).

■ DAC-100

Special TFM vessel with aluminium cap. Used for the largest sample quantities, up to 1000 mg at high temperatures. For digestion applications involving difficult to digest samples (e.g. ceramics, oxides, PET).



The short-term working temperature is for all vessels 260°C.



PRODUCTS + INSTRUMENTS

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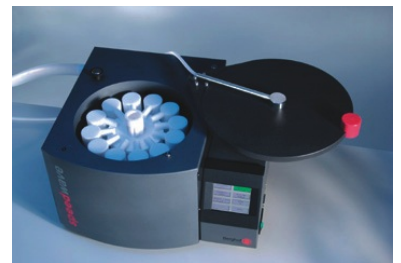


- Rapid

- Safe

- Accurate

- Economical



speedwave MWS-3



Quicker sample digestion

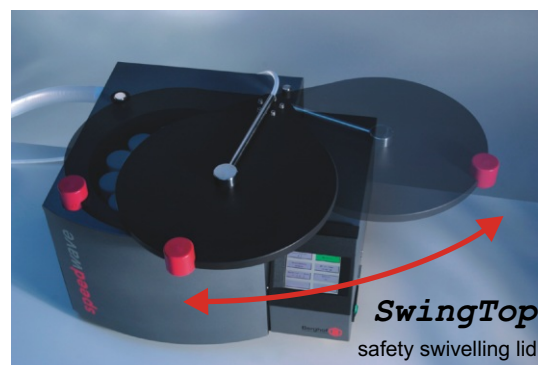
Continually increasing requirements in laboratories for speedy digestion of small to medium-size sample quantities necessitate the application of effective technology. Conventional "overnight" digestion is no longer adequate in this case. The Berghof **speedwave MWS-3** microwave pressure digestion system enables considerably shorter sample preparation times to be achieved (with digestion duration of 15-20 minutes on average) for sophisticated analysis and routine laboratory application.

- Compact, robust PTFE-coated stainless steel housing for lasting value
- Contact-free temperature control and recording of all samples
- Very simple, tool-less handling of vessels
- Closed rotors guarantee high safety and long service life
- Integrated suction system
- Magnetron with 1450 Watt, unpulsed between 0 and 1450 Watt
- Integrated industrial PC with 6-inch colour touch screen

Innovative technology and the highest operating comfort

speedwave MWS-3, the world's first microwave pressure digestion system in a compact toploader design, offers decisive advantages in digestion applications:

- The sample chamber can be easily accessed from above, thanks to the **SwingTop** safety swivelling lid, a space-saving feature located on top of the unit. The **SwingTop** also offers excellent viewing conditions and optimum user-safety in the event of a spontaneous reaction occurring.
- The electronically-controlled lid locking system makes the unit easy to handle and increases operational safety.
- The circular, pressure-resistant sample chamber, a further innovation, ensures that microwave excitement is uniform and, as a consequence, the temperature also remains the same in all the digestion vessels. A non-impulse commutated output regulator from 0 to 1450 Watt and only one strong magnetron are the providers of the power required.
- The **speedwave MWS-3** provides the kind of lasting value one expects from an investment of this kind, thanks to its stainless steel housing and corrosion-resistant PTFE coating.
- Further features, such as for fuming of samples, can be easily retrofitted at any time, thanks to the modular construction of the system.



Contamination-free temperature control and recording optimises digestion quality

The interior temperature of the sample vessels (i.e. the temperature of the samples themselves) is determined with the aid of a patented infrared thermometer. For this purpose, the **speedwave MWS-3** is equipped for contact-free, and thus contamination-free, temperature determination of all samples, being fitted with sensors located outside the digestion vessels.

Solve routine tasks in a routine manner

The **speedwave MWS-3** is ready for operation as soon as the digestion vessels have been inserted in the sample rotor. Time-consuming, troublesome connecting of hoses or temperature and pressure sensors is dispensed with.

The vessels are manufactured entirely of isostatically-pressed TFM and consist of a minimum of individual parts, so that handling is both simple and quick. This greatly reduces preparation time.

Shielded rupture discs limit the interior pressure in the event of the permitted values being exceeded. This represents a solution with an optimum cost-effectiveness ratio.

Touch-Screen for operating comfort

The **speedwave MWS-3** is operated via an industrial PC using a 6" (15 cm) colour touch-screen.

Each sample temperature is displayed in real-time, thanks to the graphic VGA display (in conjunction with intelligent temperature determination) and automatic identification of sample vessels in the system. Designed for unattended operation after loading samples. The **MicroWaveAutoControl** software package installed in the system can save up to 2,500 digestion procedures without difficulty, allowing them to be called up at any time for reconstruction purposes.

The system is ready for use, offering as it does saved application examples (e.g. USEPA methods).

Keyboard, PC and external drive (100 Mbytes) can be connected via interfaces.

