



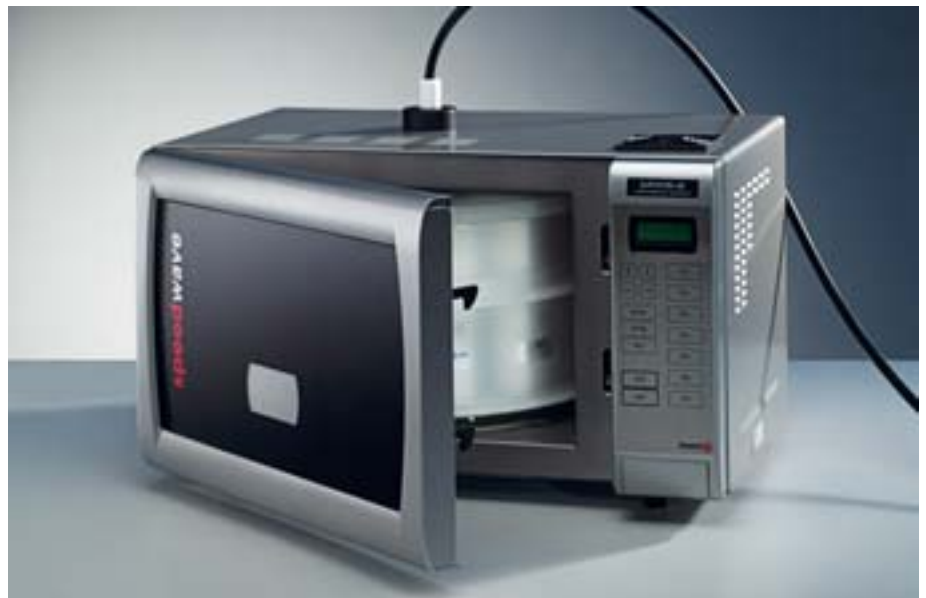
Light and compact
MICROWAVE
PRESSURE DIGESTION
SYSTEM



- Rapid
- Safe
- Accurate
- Compact



speedwave MWS-2



Rapid preparation of samples for AA/ICP/ICP-MS.

The application of effective technology is necessary to meet growing laboratory demands for the digestion of small to medium sample volumes. Conventional "overnight" digestion is often no longer adequate to meet these requirements. With an average digestion duration of 15 - 20 minutes, the Berghof **speed**wave MWS-2 microwave pressure digestion system considerably reduces sample preparation periods for sophisticated analysis and routine laboratory use. Even complex organic and anorganic matrixes can be easily and safely digested with this system. The **speed**wave MWS-2 is therefore perfect for samples derived from areas such as the environment, agriculture, nutrition, animal feed, geochemistry, petrochemistry, metallurgy, human biology and pharmacy.

- Light, compact stainless-steel oven with a capacity of 27 liters
- Contact-free IR temperature measurement in all pressure vessels
- Very simple, tool-less handling of vessels
- Closeable rotors, ensuring a high degree of safety and long service life
- Integrated suction feature
- Latest Inverter microwave technology
- Integrated control system

Extremely easy operation due to innovative technology.

- Thanks to its limited dimensions and a weight of only 14 kg, the **speed**wave MWS-2 pressure digestion system does not occupy much space in the laboratory and can be easily moved about.
- Closeable rotors with collecting vessel ensures top level safety and long service life.
- Simple retrofitting of an evaporation/concentration unit because of suction feature already integrated in system.
- The latest mass-production inverter microwave technology for a continuous performance of 40 - 100 % at 1,000 Watt and long magnetron service life.
- The integrated control enables the system to be operated after charging with samples without the need for monitoring personnel. An external PC is also not required, but can be connected to the system.



Temperature recording free of contamination optimizes digestion quality.

The interior temperature of the sample vessel (i.e. the temperature of the sample itself) is determined with an patented infrared thermometer. The **speedwave MWS-2** is equipped with an IR sensor (patented by BERGHOF) fitted to its inside, thus enabling remote, contact-free and thus absolutely contamination-free temperature determination of all samples. One is in complete control, even in cases involving exothermal reactions, as the temperature of the sample itself is measured. This design reduces preparation time for digestions considerably. There is no necessity for time-consuming and troublesome connecting of hoses or temperature and pressure sensors.

Routine solution for routine tasks.

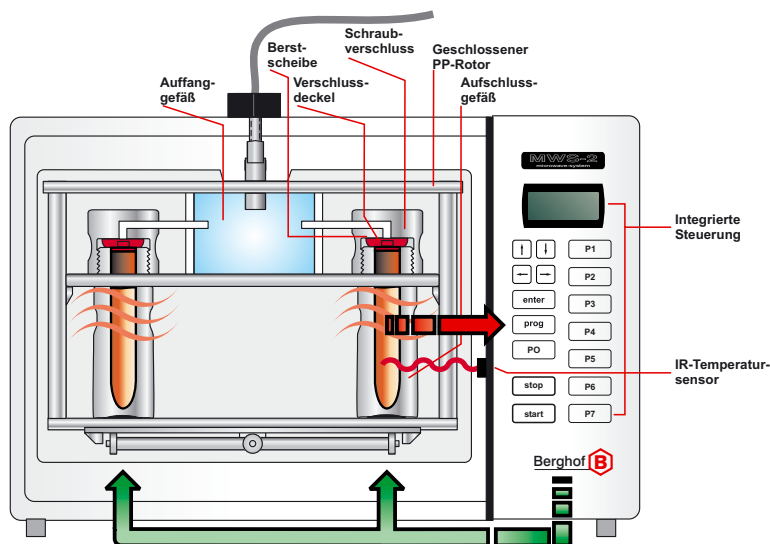
The pressure digestion vessels are manufactured completely of isostatically-pressed PTFE/TFM, have very few individual components and can thus easily and quickly be handled without the need for tools.

Shielded metal rupture discs with large diameters safely limit the interior pressure if the maximum permissible value is exceeded (a solution with an optimum cost-benefit ratio). The pressure vessels have an incomparably long service life, thanks to the rupture discs. The rotor is constantly rotating, enabling uniform connection with up to 24 vessels and ensuring optimum digestion results.

Extremely simple 2-step control.

Pre-programmed applications enable the desired digestions to be started easily and effortlessly by pressing 2 keys. Digestion programs for specific applications can be easily installed via a PC.

The installation software also enables complete documentation of digestions for QS, ISO and GLP.



Digestion vessels for the **speedwave** MWS-2

Vessel type	Volume	T-max. (continuous)	Working pressure	Multiple arrangement
DAP-60K	60 ml	220°C	40 bar / 580 psi	10 vessels
DAC-70	70 ml	220°C	100 bar / 1450 psi	5 vessels
DAQ-10	10 ml	220°C	75 bar / 1090 psi	24 vessels

Special sizes can also be produced to suit customer applications.

■ DAP-60K

Standard, 100% pure Teflon® PTFE/TFM vessel which, thanks to its simple design and resulting user-friendliness, is adequate for most samples and routine applications (e.g. in quality assurance and environmental analysis).

The volume can accommodate samples up to approx. 400 mg.



■ DAC-70

Special TFM vessel with aluminium cap for large samples up to 800 mg which require high digestion pressure.

Typical applications involve samples which are difficult to digest (e.g. ceramics, oxides, PET, etc.).



■ DAQ-10

Special quartz glass vessel for the smallest samples with a high sample throughput (e.g. blood, hair, etc.).



Continuous operating temperature for all vessels is 220°C, with up to 260°C being possible for short periods.



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