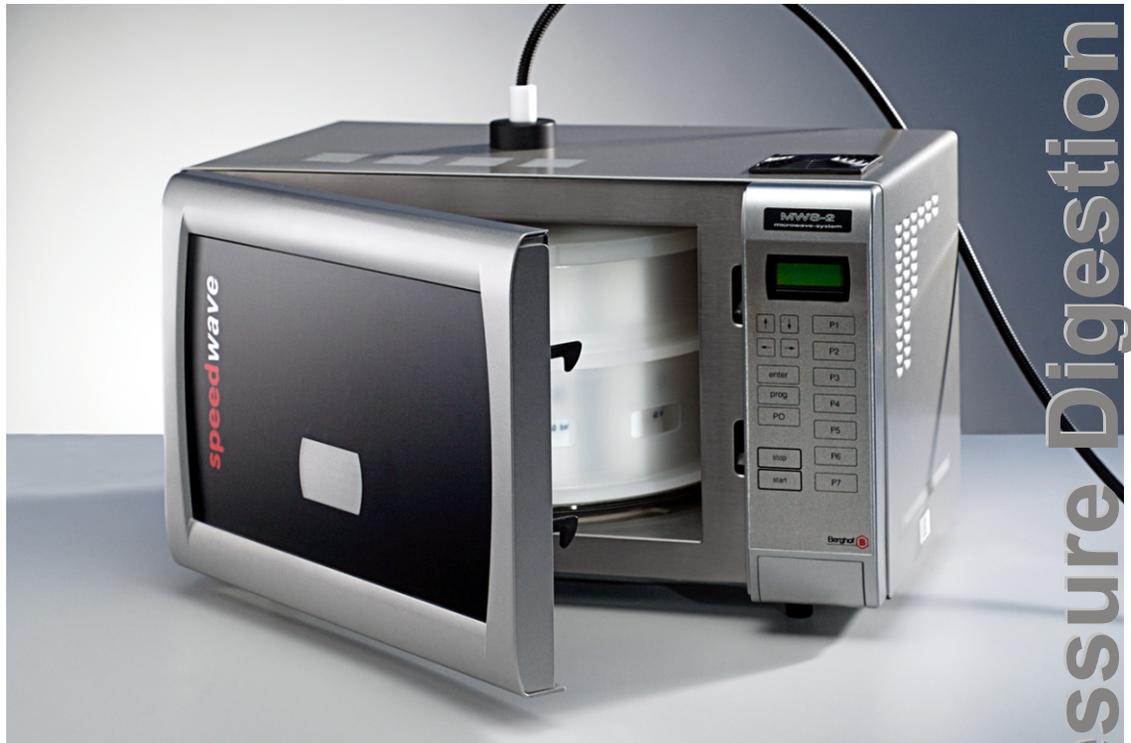


Light and compact
microwave pressure digestion system

AIS-1



Analytical
www.ais-india.com



- **Rapid**
- **Safe**
- **Accurate**
- **Compact**

Microwave Pressure Digestion

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 AIS -1 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 AIS-1 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**
- **Closeable PP rotor, ensuring a high degree of safety and long service life**
- **Integrated suction feature**
- **Latest Inverter microwave technology**
- **Contact-free IR temperature measurement in all pressure vessels**
- **Integrated control system**

Extremely easy operation due to innovative technology.

- Thanks to its limited dimensions and a weight of only 14 kg, the AIS-1 pressure digestion system does not occupy much space in the laboratory and can be easily moved about.
- A closeable polypropylene rotor 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 infrared thermometer. The Analytical AIS-1 is equipped with an IR sensor 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.

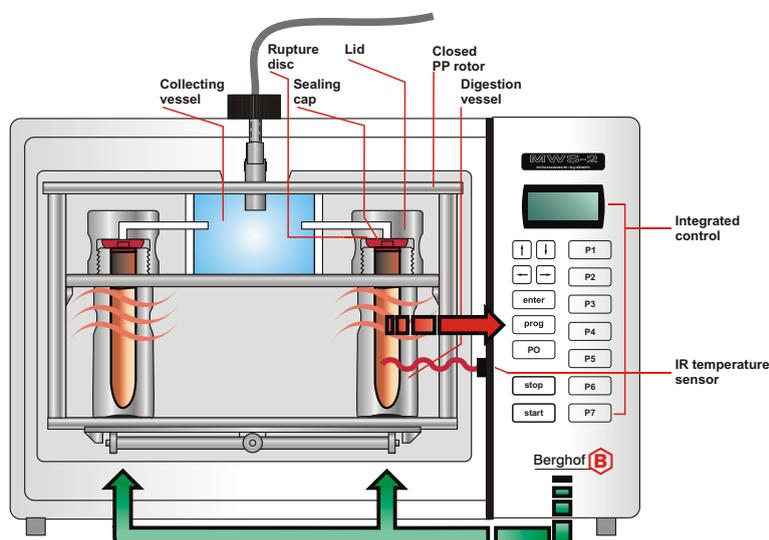
The pressure digestion vessels are manufactured completely of isostatically-pressed Teflon® PTFE/TFM, have very few individual components and can thus easily and quickly be handled without the need for tools.

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 AIS-1

| Vessel type | Volume | Operating pressure | Multiple arrangement |
|-------------|--------|--------------------|----------------------|
| DAP-60K | 60 ml | 40 bar / 580 psi | 10 vessels |
| DAK-70 | 70 ml | 100 bar / 1450 psi | 5 vessels |
| DAQ-10 | 10 ml | 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. Continuous operating temperature is 230°C, with up to 260°C being possible for short periods.



■ DAK-70

Special TFM outer vessel with ceramic pressure jacket and replaceable TFM liners. The volume of the liner is 100ml and max pressure of the vessel is 100bar.

Continuous operating temperature is 260°C (with up to 300°C being possible for short periods) at a pressure of 100 bar.

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.).

