

# Providing clear solutions for all types of samples



## Superior global support and service

With over 30 subsidiaries and more than 50 distribution partners we are active in over 110 countries worldwide.

## More than 40 years of experience

Anton Paar has been a major producer of instruments for sample preparation in trace element analysis for more than four decades.

## Thousands of satisfied users

Even when using the best analytical equipment, sample preparation is the key factor to obtain reliable measurement values. Outstanding sample preparation is the only way to obtain precise analysis results.

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 Anton Paar

Sample preparation



Solutions for chemists



# Microwave digestion systems

## Multiwave 7000 – Microwave digestion at its best

### Complete digestion for all kinds of samples in one single run

All samples – in one run – using the same method: the pressurized digestion cavity (PDC) for temperatures up to 300 °C and pressures up to 199 bar revolutionizes your sample preparation workflow.

- Budget-friendly pressure-sealed vials with plug-on caps
- Different volumes and racks with up to 28 positions
- Integrated water cooling minimizes cooling times and maximizes the sample throughput

## Multiwave 5000 – One system, endless possibilities

### The user-friendliest microwave reaction platform

Multiwave 5000 is designed for acid digestion and leaching of samples with varying difficulty or volume, but also applications such as evaporation, microwave-induced oxygen combustion, and extraction.

Adapt the system completely according to your needs thanks to the broad portfolio of rotors and accessories.

- Comprehensive interactive method library with full-text search
- More than 500 pre-installed methods
- Customizable and intuitive user interface
- Unique hands-free door opener
- Easy-to-handle compact rotors and vessels
- For the highest throughput to boost your productivity

## Multiwave GO Plus – Ready, steady, go!

### The world's smallest and most economic microwave for digestion

Multiwave GO Plus combines the best of two technologies: the fast heating of a monomode reactor with capacity to heat up multiple samples like a multimode system due to its patented (EP2854478 B) Directed Multimode Cavity (DMC).

Multiwave GO Plus is the easiest ready-to-use microwave on the market. It provides:

- Automatic adaption of the microwave field to the number of filled or empty positions (including the filling state of the vessel)
- Sample cooling in less than eight minutes for a fully loaded twelve-position rotor, for example for EPA methods.
- Unique pressure-release vessels (SmartVent technology)

## Milling and grinding system

### Ball Mill 500 – the all-rounder for milling and homogenization

Used for the milling and homogenization of a broad range of samples prior to analysis, ball mills are advantageous for preparing samples perfectly for subsequent preparation steps such as extraction, digestion, and filtration, and/or for subsequent analysis.

Ball Mill 500 is used for dry, wet, or cryogenic grinding depending on the source material's state. It covers inorganic as well as organic and biological samples in different feed sizes.

## Conventionally heated sample preparation systems

### HPA-S – the reference in wet digestion

The HPA-S High Pressure Asher is the instrument of choice whenever the ultimate digestion performance is needed.

It is conventionally heated and due to its superior pressure and temperature specifications (130 bar and 320 °C which can be held for an unlimited amount of time) HPA-S is still recognized as a reference instrument for acid digestion of the toughest samples requiring extreme conditions.

### Multicube 48 – trendsetting open-vessel digestion

Multicube 48 is a robust laboratory hot block for acid digestion, evaporation, and concentration of samples. The high temperature homogeneity of ±1 °C over the whole block ensures the same digestion quality for all samples.

High-purity, low-cost disposable vials providing the lowest metal blanks to eliminate the risk of external contamination can be used for weighing, digesting, and storing digested solutions and also as volumetric flasks to fill samples to the appropriate volume for further analysis.



	Multiwave GO Plus	Multiwave 5000	Multiwave 7000
<b>Budget</b>	\$	\$\$	\$\$\$
<b>Technology</b>	Directed Multimode Cavity (DMC)	Multimode Cavity	Pressurized Digestion Cavity (PDC)
<b>Convenience and ease of use</b>	Easy and simple interface Tool-free vessel handling	Intuitive user interface with full-text database search and software guidance Tool-free vessel handling	Software guides you through the whole digestion process Vials with plug-on caps
<b>Throughput</b>	Medium – 12 samples in less than 20 minutes	Highest sample throughput for routine samples (41 positions) and demanding samples (20 positions)	High – up to 28 samples in a single run
<b>Portfolio</b>	12HVT50 Rotor (PTFE-TFM)	Unrivaled portfolio with wide selection of rotors, vessels, and accessories	Different racks, vials, and vessels available (disposable glass, quartz, and PTFE-TFM)
<b>Temperature range</b>	Up to 250 °C	Up to 300 °C	Up to 300 °C
<b>Vessel/vial volume</b>	50 mL	5 mL to 100 mL	7 mL to 80 mL
<b>Applications</b>	Acid digestion Acid leaching	Acid digestion Acid leaching Evaporation Drying Oxygen combustion Solvent extraction Synthesis Stirred reactions	Acid digestion Acid leaching Stirred reactions
<b>Samples</b>	Wide range of routine samples – especially food and environmental material	All kinds of samples (depending on rotor) Organic and inorganic samples, microsamples	All kinds of samples Organic and inorganic samples