

- Rotor paralelo com 16 recipientes de média pressão com tubos internos de PTFE-TFM e invólucros de pressão de PEEK. Volume de recipientes: 100 ml; Parâmetros de Operação: 200°C at 20 bar (290 psi) Pressão Máxima: 115 bar (1670 psi); Pressão de Teste: 140 bar (2000 psi) **Temperatura Máxima: 310 °C.**

You can use the best analytical equipment in the world, but without flawless sample preparation, your measurement values won't be reliable. That's where Anton Paar's Multiwave 5000 comes in. We've incorporated over 40 years of sample preparation expertise into the most ambitious, the most user-friendly microwave system ever built.

- It's fast – saving time, boosting throughput, and reducing costs, with up to 64 samples in a single run.
- It's flexible – easy configuration, straightforward operation.
- It's resilient – challenging samples, no problem; temperatures up to 300 °C for extended periods; operation limits up to 100 bar.

**HIGH-END ROTOR 8N**  
 For samples that are either very reactive or require extreme temperatures and pressures for complete digestion, Anton Paar offers a unique, proven solution: Rotor 8N with PTFE-TFM or quartz vessels. Made for simultaneous and wireless pressure and pressure increase rate measurement as well as temperature control of every vessel, it withstands temperatures up to 300 °C for extended periods of time at operation limits up to 80 bar. If spontaneous reactions occur, the microwave power is reduced immediately and, if required, the cooling airflow is intensified.

### One instrument, every application

Premium digestion parameters – up to 300°C and 100 bar

Up to 64 samples in 1 run

500+ pre-installed programs

Instrument	Multiwave GO Plus	Multiwave 5000								
		64MG5	41HVT56	24HVT50	20SVT50	16MF100	8NHF100	8NHF100	8NHF100	
Rotor	12HVT50	64MG5	41HVT56	24HVT50	20SVT50	16MF100	8NHF100	8NHF100	8NHF100	
SmartVent technology	Yes	No	Yes			No				
Vessel / vial	HV-T50	MG5	HVT56	HVT50	HVT50	SVT50	MF100	HF100	XF100	XD90
No. of vessels	12	64	41	24	20	16		8		
Vessel / vial / liner material	PTFE-TFM	Glass	PTFE-TFM			PTFE-TFM			Quartz	
Pressure jacket	n.a.	n.a.	n.a.			PEEK-GF	Ceramic		n.a.	
Volume	50 mL	5 mL	56 mL	50 mL	50 mL	100 mL		80 mL		
SmartVent parameters	20 bar (290 psi) @ 250 °C	20 bar (290 psi) @ 250 °C		40 bar (580 psi) @ 250 °C		20 bar (290 psi) / 40 bar (580 psi)		60 bar (870 psi) / 80 bar (1160 psi)		
Working pressure	45 bar (653 psi)	20 bar (290 psi)	45 bar (653 psi)	80 bar (1160 psi)	80 bar (1160 psi)	20 bar (290 psi)	40 bar (580 psi)	60 bar (870 psi)	80 bar (1160 psi)	
Design pressure	80 bar (1160 psi)	33 bar (479 psi)	80 bar (1160 psi)	110 bar (1595 psi)	110 bar (1595 psi)	115 bar (1668 psi)	140 bar (2030 psi)			
Maximum temperature	310 °C	310 °C		310 °C		310 °C				
HF resistant	Yes	No	Yes			No				
Reaction control	Temperature in all positions	Temperature in 16 positions	Temperature in all positions			IR in all positions		Temperature and pressure in all positions		
Reaction control in a reference vessel	n.a.	n.a.	n.a.			Temperature and/or pressure		Temperature		

	ROTOR 24HVT50/80	ROTOR 41HVT56	ROTOR 20SVT50	ROTOR 8 NMF/NXF	ROTOR 64MG5
Number of vessels	24	41	20	8	64
Volume	50 mL / 80 mL	56 mL	50 mL	100 mL / 80 mL	5 mL
Material	PTFE-TFM	PTFE-TFM	PTFE-TFM	PTFE-TFM / Quartz	Glass
HF resistance	Yes	Yes	Yes	Yes (PTFE-TFM) / No (Quartz)	No
Temperature control	Internal T in all positions / SmartTemp		SmartTemp	IR in all positions	IR in 16 positions
Pressure control	SmartVent technology / SmartVent detection			p in all vessels	PTFE seal
Applications	Routine samples: biological and environmental samples, EPA procedures, food, cosmetic, and pharmaceutical samples		Harder to digest samples: including polymers, ceramics, petroleum products, and alloys	Most difficult samples	Microsamples up to 20 mg

Multiwave 5000 is backwards compatible, it can accommodate Rotors 16MF and 19HF and accessories of older Multiwave models.

Instrument	Multwave GO Plus		Multwave 5000							
	12H/T50	64K/35	41H/T50	24H/T50	24H/T30	20V/T50	10AF/100	10HF/100	10XF/100	10XG/100
Rotor	Yes	No	Yes			No				
SmartVent technology	Yes	No	Yes			No				
Vessel / vial	H/T50	MDS	H/T50	H/T50	H/T30	SVT50	MF/100	HF/100	XF/100	XG/100
No. of vessels	12	64	41	24	20	20	10	10	10	10
Vessel / vial / liner material	PTFE, TFM	Glass	PTFE, TFM			PTFE, TFM				Quartz
Pressure jacket	n.a.	n.a.	n.a.			PEEK-GF	Ceramic		n.a.	
Volume	50 mL	5 mL	50 mL	50 mL	80 mL	50 mL	100 mL		80 mL	
SmartVent parameters	20 bar (290 psi) @ 250 °C	20 bar (290 psi) @ 250 °C			40 bar (580 psi) @ 250 °C					
Working pressure	45 bar (653 psi)	20 bar (290 psi)	45 bar (653 psi)	60 bar (870 psi)		20 bar (290 psi)	40 bar (580 psi)	60 bar (870 psi)	80 bar (1160 psi)	
Design pressure	80 bar (1160 psi)	33 bar (479 psi)	80 bar (1160 psi)	110 bar (1595 psi)		110 bar (1595 psi)	110 bar (1595 psi)		180 bar (2610 psi)	
Maximum temperature	310 °C	310 °C				310 °C				
HF resistant	Yes	No				Yes	No			
Reaction control	Temperature in all positions	Temperature in 16 positions	Temperature in all positions				Temperature and pressure in all positions		Temperature	
Reaction control in a reference vessel	n.a.	n.a.	n.a.			Temperature and/or pressure	Temperature			



Figure 4. iCAP PRO Series ICP-OES duo torch box with inner torch box mounted

