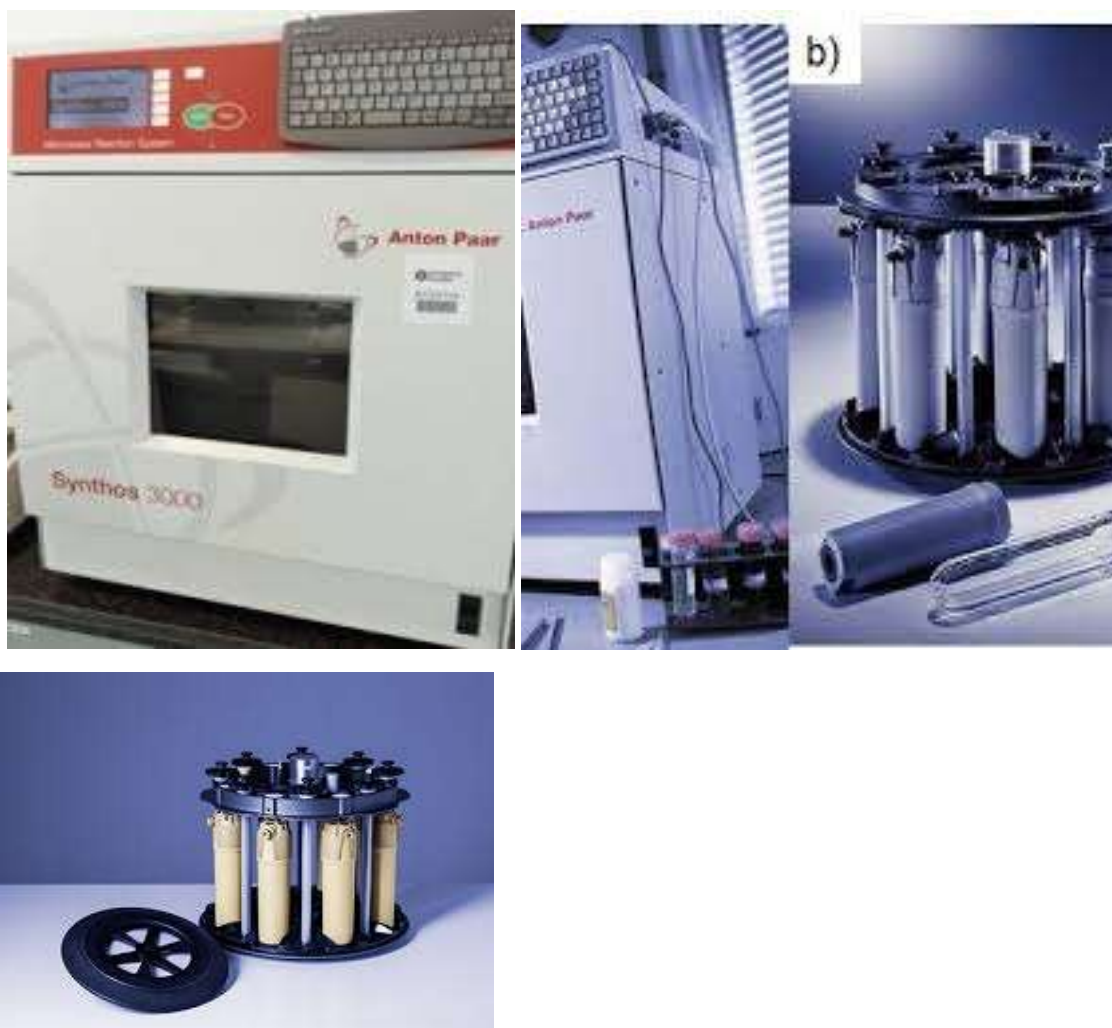


## Reactor microunde multimodal Synthos 3000 Anton Paar



### **Large sample volume for direct scale-up**

Synthos 3000 is a high-performance microwave reactor for chemical synthesis. It enables direct scale-up of reactions from small batch sizes (in  $\mu\text{L}$  to mL range) up to liter volumes. Therefore optimized protocols can be directly scaled up using the same reactor without changing the reaction parameters.

### **Modularity and Flexibility**

Vessels and rotors can be easily exchanged, which allows you to set up the best possible configuration for any chemical application. Either up to 1 L reaction volume or up to 192 different reactions on the smallest scale can be processed in one single run. This proves particularly useful for work in R&D laboratories in the pharmaceutical industry and for suppliers of chemical building blocks.

### New possibilities at the cutting edge

Featuring the highest simultaneously accessible temperature/pressure conditions on the market, Synthos 3000 allows reactions under extreme conditions. Furthermore, an individual inert or reactant gas atmosphere of up to 20 bar can be created in every single vessel prior to reaction.

### Microwave technology

Synthos 3000 delivers 1400 W of continuous, unpulsed microwave power via two magnetrons, therefore ensuring effective heating rates as well as smooth reaction control. Furthermore, the system provides optimum reproducibility for any synthesis.

### High-performance rotors

Synthos 3000 provides rotors that are especially designed for high-pressure applications. Sophisticated safety features allow safe operation at up to 80 bar and 300 °C, which opens up completely new dimensions in microwave-assisted chemical processing.

### Specifications

Synthos 3000 microwave synthesis platform

Topic	Well plates	MF50	MF100	HF100	XF100	XQ80
Material	Sintered silicon carbide	PFA	PTFE-TFM	PTFE-TFM	PTFE-TFM	Quartz glass
Pressure jacket	n/a	PEEK	PEEK	Ceramics	Ceramics	n/a
Filling volume	0.02 mL to 3.0 mL	6 mL to 25 mL	6 mL to 60 mL	6 mL to 60 mL	6 mL to 60 mL	6 mL to 60 mL
Operating pressure	20 bar (290 psi)	20 bar (290 psi)	20 bar (290 psi)	40 bar (580 psi)	60 bar (870 psi)	80 bar (1160 psi)
Max. pressure	55 bar (800 psi)	60 bar (870 psi)	115 bar (1670 psi)	115 bar (1670 psi)	140 bar (2000 psi)	140 bar (2000 psi)
Max. temperature	200 °C	200 °C	200 °C	240 °C	260 °C	300 °C
Typical applications	Reaction screening, parallel optimizations, high throughput synthesis	Method development, multigram library generation, solid phase synthesis, polymer synthesis, nanomaterials		Pre-pressurized reactions, polymer synthesis	Near-critical water chemistry, nano-materials	