



## Evaporation Rotor 8EVAP MW PRO



**Rotor 8EVAP MW PRO is a valuable accessory for microwave-assisted evaporation of acids and pre-concentration of sample solutions. It enhances the field of application for the Multiwave PRO sample preparation system.**

Rotor 8EVAP MW PRO is an innovative accessory for the modular Multiwave PRO microwave sample preparation system. It is designed for the fast, easy and comfortable evaporation of aqueous solutions in up to 8 vessels simultaneously.

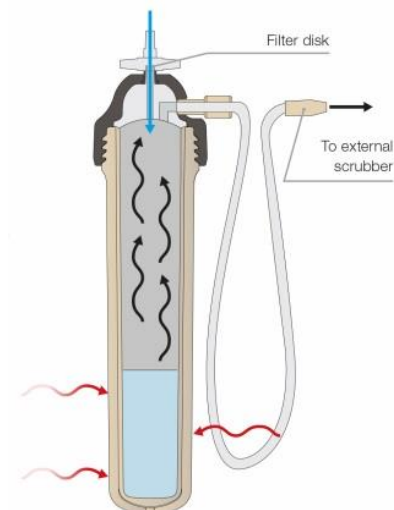
Prior to digestion aqueous samples can be reduced in volume in order to **increase analyte concentrations**.

After a digestion process it may be necessary to fume off unwanted reagents or to **reduce the acidic strength** of a solution.

- ▶ The PTFE-TFM liners of MF100, HF100 or NXF100 reaction vessels are inserted into the PEEK vessel jackets of Rotor 8EVAP MW PRO and closed with the integrated screw caps, which contain a syringe filter for clean air inlet and a connection hose for gas outlet.
- ▶ The 8 vessels are connected via individual flexible PTFE hoses to an 8-port lead through in the cavity wall. Outside the cavity the outlet line is connected to an acid scrubber with a vacuum pump, which removes the reagent vapors from the reaction vessels and collects them in condensation bottles.
- ▶ The evaporation process can be controlled by the infrared temperature sensor of Multiwave PRO, allowing for documentation of each single sample.

### 1 Features and Benefits

- ▶ No sample transfer – evaporation directly from the digestion vessel
- ▶ All parts are made of highly resistant materials
- ▶ Reduced evaporation time by fast microwave heating
- ▶ Fast cooling provided by built in air cooling guides
- ▶ No risk of contamination due to clean room conditions
- ▶ No cross-contamination due to individual gas outlet connections
- ▶ Process control by IR-sensor
- ▶ Safe and easy handling and cleaning





## 2 Notes

- ▶ Do not use Rotor 8EVAP MW PRO for evaporation of high boiling acids or reagents, like sulphuric acid or phosphoric acid!  
The boiling point of these reagents is too high concerning the thermal stability of the used materials.
- ▶ Due to safety reasons do not use perchloric acid for evaporation.
- ▶ Rotor 8EVAP MW PRO is not compatible with NXQ80 quartz vessels. An additional set of liners has to be purchased for evaporation of sample solutions from quartz vessels. A dedicated adapter for NXQ80 quartz vessels is available on request (for more information have a detailed look to the instruction sheet “Rotor 8EVAP with Q80 Quartz Vessels” D19IB011EN-A.)

## 3 External Means and Installation

Rotor 8EVAP MW PRO has to be connected to an 8-port lead through, which has to be installed in the Multiwave PRO cavity. This can be done easily by a field service engineer.

Additionally, the use of an external scrubber and a chemically resistant vacuum pump with sufficient suction capacity is required.

## 4 Ordering Information

### ▶ 104290 Rotor 8EVAP MW PRO

Rotor for simultaneous evaporation of up to 8 solutions. Rotor 8EVAP MW PRO comes with 8 Vessel Jackets M100 PEEK. The vessels are closed by a screw cap fitted with a seal made of PTFE-TFM, a syringe filter for air inlet under clean room conditions and a connection for gas outlet. Connection Hoses made of PTFE connect the vessels to the 8-port Lead Through EVAP in the cavity wall.

The hoses are connected at the outlet to an external acid scrubber and a vacuum pump. The rotor contains built-in air cooling guides made of reinforced high-performance plastic for fast cooling after evaporation. All parts are made of highly resistant materials and can be cleaned easily.

#### **Not included:**

PTFE-TFM liners (may be taken from the reaction vessels), Lead Through EVAP (Mat.No. 11091), Scrubber- Set of Washing Bottles (without pump) (Mat.No. 4756), Vacuum Pump 230V/50Hz (Mat.No. 4768) or Vacuum Pump 115V/ 60Hz (Mat.No. 4769).

### ▶ 11091 Lead Through EVAP

Required for operation with Rotor 8EVAP MW PRO. Has to be mounted onto the left cavity wall of Multiwave PRO. It is used for the connection of the 8 hoses of Rotor 8EVAP MW PRO for gas outlet to the vacuum pump and acid scrubber. The included Hose Connector 8/1 leads the 8 hoses together at the outside of the oven to one single hose, which is connected to the vacuum pump. When ordered with a new Multiwave PRO system, the Lead Through EVAP comes already installed. Later upgrades can be done in the field by authorized service technicians.



▶ **4756 Scrubber – Set of Washing Bottles (without pump)**

Set of four bottles, containing all flanges, gas diffusers, connectors and hoses in a corrosion resistant casing. Flexible PFA hose for connection to Multiwave PRO or other 12 mm hose connector included.

▶ **4768 Vacuum Pump (230 V / 50 Hz)**

Chemically resistant, high throughput pump for use with Scrubber- Set of Washing Bottles (without pump).

▶ **4769 Vacuum Pump (115 V / 60 Hz)**

Same as 4768, but for 115 V / 60 Hz.