

# RAYPA

Leading  
Lab Technologies

 Sterilization

## **MEDIA PREPARATORS** AE-MP SERIES

EFFICIENT SOLUTION  
FOR CULTURE MEDIA  
PREPARATION



# Media Preparators

**AE-MP** streamlines the operative workflow for microbiology and plant tissue culture laboratories. One single device integrates the preparation, sterilization and dispensation of high quality culture media with outstanding batch to batch reproducibility. **AE-MP** autoclaves are designed to reduce total run time while delivering high volumes of sterile culture media thanks to its efficient heating system and fast cooling phase at the end of the sterilization process.



## Cleaning of vessel and dispensing lines

The media vessels can be removed easily thanks to integrated handle grips. Dispensing lines can be cleaned before every dispensing cycle with steam pulses reaching all the length of the dispensing line.

## Accurate dispensation

Once the media is prepared and sterilized it is dispensed with an integrated peristaltic pump while using a foot pedal. It is possible to program a delay between dispensation pulses to facilitate repeated filling operations with one single action.

## Sterilization management by $F_0$ value

The sterilization of the culture media is managed by a P.I.D microprocessor and controlled by a flexible heat probe. Sterilization cycles can either be programmed by  $F_0$  value or temperature and time.



## INTENDED USE

- + MICROBIOLOGY
- + PLANT TISSUE CULTURE LABORATORIES



## F<sub>0</sub> VALUE

The sterilization is managed by a flexible heart probe with precise temperature readings directly taken from the culture media.

The microprocessor uses these readings to calculate progression of F<sub>0</sub> value until complete sterilization is achieved.

The sterile media is then dispensed with a built-in peristaltic pump with programmable settings while using a foot pedal.

## BENEFITS



Increase efficiency of microbiology and plant tissue culture laboratories



Accurate control of sterilization with flexible heart probe



Dispensed with an integrated peristaltic pump



Cleaning throughout the length of the dosing line with steam pulses



Automatic water level control and optional automatic water feed



Precise dosage of media culture with delay time

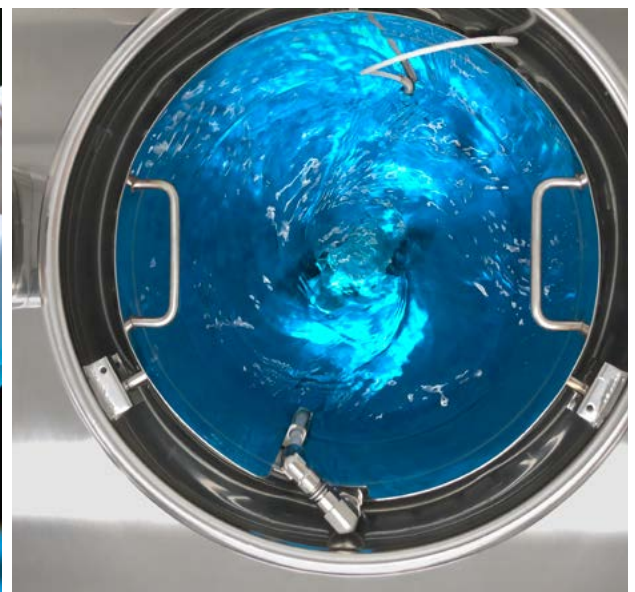


Sterilization management by either F<sub>0</sub> value or temperature and time



Included:

- ✓ Heart probe
- ✓ Peristaltic pump
- ✓ 3 dosing tubes (4,8 - 6,4 - 8 mm)



# Media Preparators

## Accessories



### DW-MP

Dosing station for culture media

#### DISPENSING CAPACITY CHART

		AE-20 MP	AE-40 MP	AE-60 MP	AE-80 MP	AE-100 MP
Dispensing system	Ø Tube (mm)	Dispensing speed				
<b>SINGLE PERISTALTIC PUMP</b> (95% power)	3,2			7 ml/s		
	4			9 ml/s		
	4,8			11 ml/s		
	6,4			15 ml/s		
	8			20 ml/s		
<b>DOUBLE PERISTALTIC PUMP</b> (95% power)	3,2			12 ml/s		
	4			15 ml/s		
	4,8			18 ml/s		
	6,4			25 ml/s		
	8			33 ml/s		
<b>COUNTERPRESSURE</b>	6,4	Optional system			65 ml/s (0,6 bar)	
					76 ml/s (0,7 bar)	
					87 ml/s (0,8 bar)	
					94 ml/s (0,9 bar)	



### CAB-2

Additional peristaltic pump head



### PH-MP

Control and registry of pH, with real-time monitoring on screen



### TUB-DOSIF

Dosing tubes set with nozzle:  
3,2 - 4 - 4,8 - 6,4 - 8 mm



## Accessories



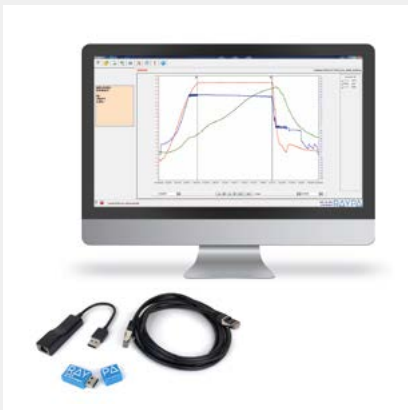
**IT/TS**  
Integrated printer



**KLL-MP**  
Automatic water filling kit



**CP-MP**  
Compressed air system



**SW8000**  
External software for data  
visualization and report with results



**CAP-MP**  
External probe adapter



**PRENSACLAV**  
For calibration



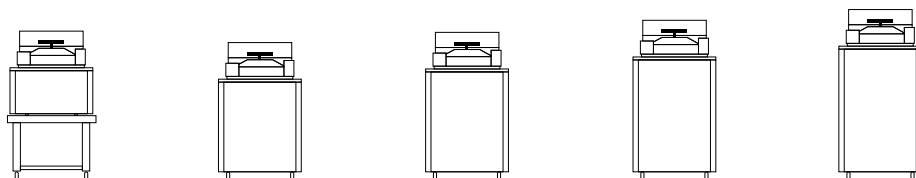
**TABLE-MP**  
Stainless steel table



**TR-TR**  
Transport trolley

# Media Preparators

## Technical Data



### GENERAL DATA

	AE-20 MP <sup>1</sup>	AE-40 MP	AE-60 MP	AE-80 MP	AE-100 MP
<b>Media preparation capacity</b> min - max	2 - 18 L	3 - 37 L	3 - 57 L	5 - 78 L	5 - 97 L
<b>Chamber dimensions</b> Ø x H	320 x 350 mm	320 x 500 mm	320 x 700 mm	420 x 500 mm	420 x 700 mm
<b>Power</b> <sup>2</sup>	3000 W	6000 W	9000 W	12000 W	15000 W
<b>Electrical voltage</b> <sup>3</sup>	230 (1P+N+E) V	400 (3P+N+E) V	400 (3P+N+E) V	400 (3P+N+E) V	400 (3P+N+E) V
<b>Frequency</b>	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
<b>External dimensions</b> L x D x H	615x815x735 mm	615x815x1100 mm	615x815x1320 mm	755x935x1285 mm	755x935x1385 mm
<b>Weight</b>	95 Kg	165 Kg	180 Kg	250 Kg	295 Kg

<sup>1</sup> Included stainless steel table with casters. Ref. TABLE-MP, ext. dimensions L x D x H: 700 x 700 x 600 mm and weight: 19 Kg

<sup>2</sup> Consult overpowered equipments

<sup>3</sup> Ask for other voltages.

### PREPARATION PROCESS DATA

<b>Sterilization temperature</b>	50 - 125 °C
<b>Dispensation temperature</b>	25 - 80 °C
<b>Sterilization Time</b>	1 - 250 min
<b>Maximum pressure</b>	2,2 bar

### MECHANICAL DATA

<b>Cooling system</b>	Cooling coil
<b>Dispensation system</b>	Integrated single peristaltic pump. Integrated double peristaltic pump (optional) <b>Type:</b> Magnetic with double paddle
<b>Stirrer</b>	<b>Control:</b> independent potentiometer on control panel <b>Speed range:</b> 50-200 rpm
<b>Sterilization control system</b>	Fully automatic microprocessor control of PT100 heart probe sensor and chamber temperature sensor. F0 value to control sterilization cycle
<b>Purge system</b>	Gravity displacement
<b>Construction</b>	<b>External case:</b> AISI 304 <b>Sterilization chamber and lid:</b> AISI 316L
<b>Lid gasket</b>	Silicone gasket
<b>Opening lid mode</b>	Horizontal swiveling lid with blocking wheel
<b>Casters</b> <sup>4</sup>	4 casters (with brakes in two of them)

<sup>4</sup> For AE-20-MP, the 4 casters with brakes are installed in the stainless steel table (Ref. TABLE-MP)



## Technical Data

### CONTROL DATA

<b>External data transfer</b>	Ethernet USB
<b>Number of programs</b>	50 programs (2 preset programs)
<b>Programable autostart</b>	Date and time
<b>Screen</b>	5" Color TFT-LCD touchscreen
<b>Monitoring of sterilization parameters</b>	Self control of obtained values (T <sup>9</sup> ) vs programmed values. Cycle is automatically interrupted if obtained values differ from programmed values
<b>Pressure display</b>	Pressure gauge on control panel

### SAFETY FEATURES

- Door blocking systems with positive pressure
- Open door sensor
- Water level detector
- Safety valve
- Safety thermostat

### REGULATIONS

This equipment complies with the following standards and European directives:

**UNE-EN-ISO 9001:2015** Quality management system

**EN-61010-1** Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements

**EN-61010-2-040** Part 2-040: Requirements for laboratory autoclaves

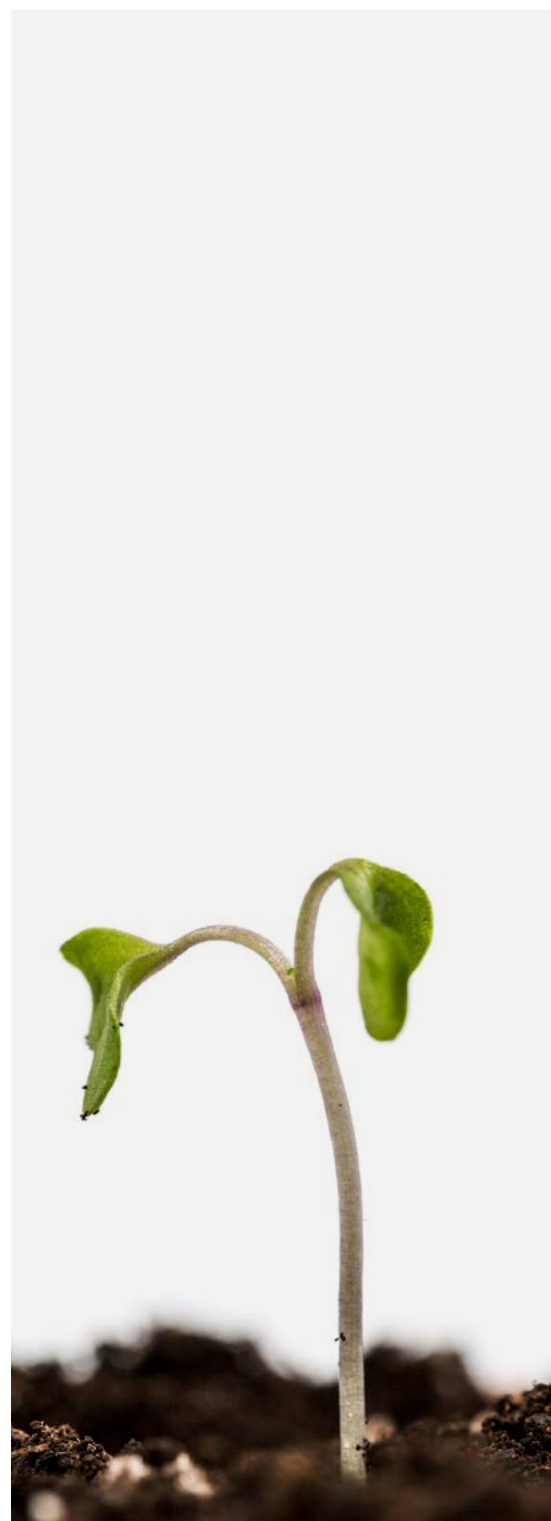
**EN-61326** Electrical equipment for measurement, control and laboratory use. EMC Requirements

**AD 2000 Merkblatt** Pressure vessels

**2014/35/UE** Low Voltage

**2014/30/UE** Electromagnetic Compatibility

**2014/68/UE** Pressure equipment





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REV 10/2020

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