MEDIA PREPARATORS

Leading
Lab Technologies

RAYPA

Sterilization

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INTRODUCTION

MANUAL PRODUCTION OF CULTURE MEDIA WITH AUTOCLAVE

Problems

- Several manual and time-consuming steps

- Compound human error due to several manual steps

- Lack of temperature accuracy during sterilization

- Potentially dangerous: burns

- Lack of homogeneity on final product

- Slow dispensing and not easily scalable

- Lack of process traceability

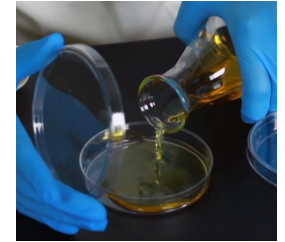Manual weighing and dosing

Manual water filling

Mixing

Autoclave sterilization

Natural cooling

Manual dispensing

AUTOMATIC PREPARATION OF CULTURE MEDIA WITH MEDIA PREPARATORS

4 in 1

4 processes

1 equipment

PREPARATION
- Only 1 weighing
- Adjustable stirring
- Fast heating
- Homogenous

STERILIZATION
- Accurate
- Heart probe regulation
- Fo sterilization
- Traceable

COOLING
- Active refrigeration
- Temperature holding
- Safe manipulation

DISPENSING
- Very fast
- Scalable
- Adjustable dispensing temperature
- Automatic cleaning of dispensing lines

FEATURES

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Main features

- Integration in a single equipment of the preparation, sterilization, cooling and dispensing of culture media.

- Dispensing lines can be cleaned each time with steam pulses.

- Media output per cycle from 18 up to 90L.

- Fast cooling at the end of the cycle.

- Precise dispensing with pedal, delay or optic sensor.

- Faster dispensing with pressure support.

Applications

Plant Tissue Culture Laboratories

Microbiology

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Features

- All the process is controlled by a built-in heart probe to ensure that the media is properly sterilized.

- Adjustable stirring speed with an external independent potentiometer through visual inspection of the vortex.

- Multiple dispensing options via optical sensor, pedal or peristaltic pumps: different tube sizes, single or double peristaltic pumps or pressure support.
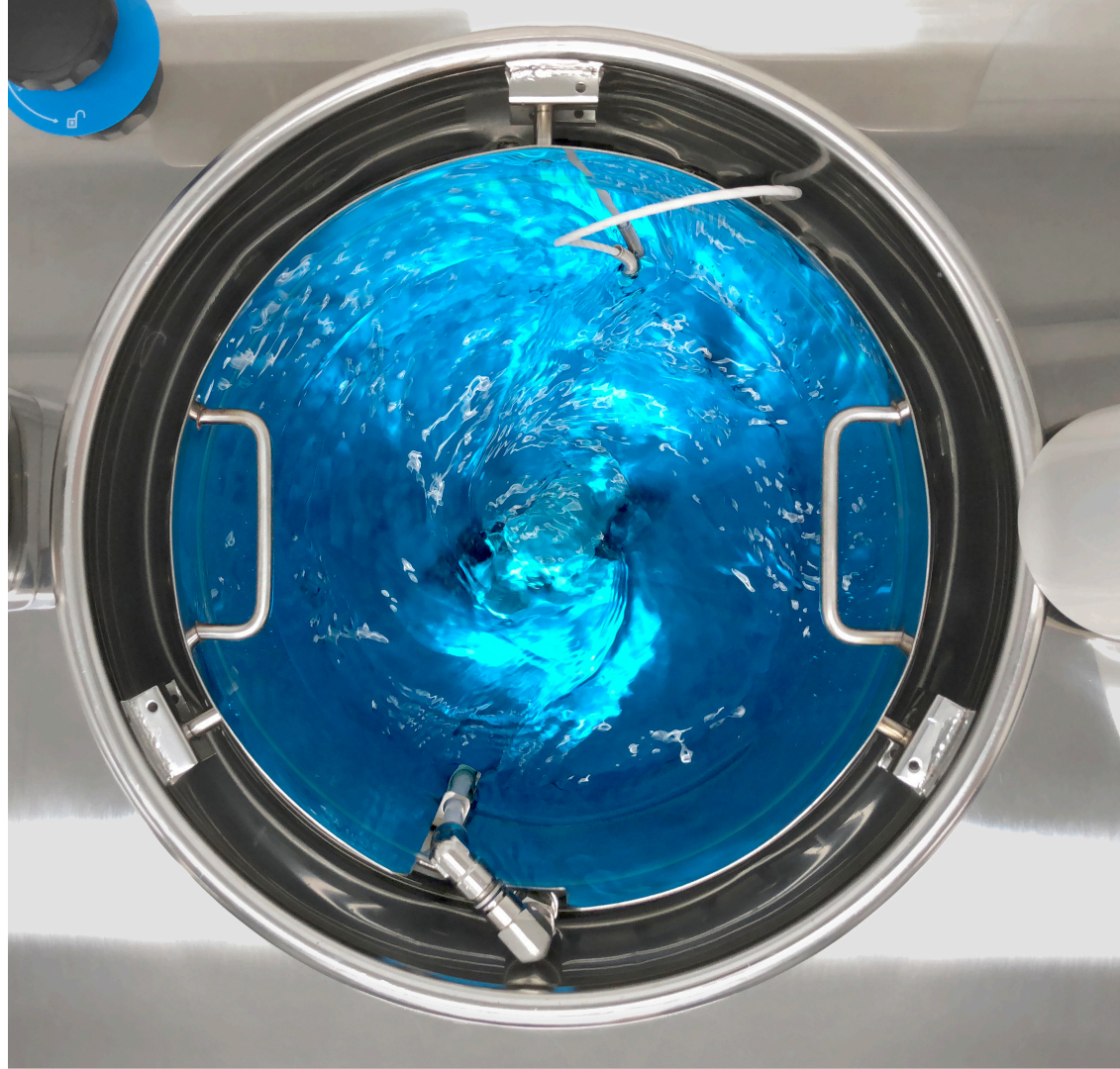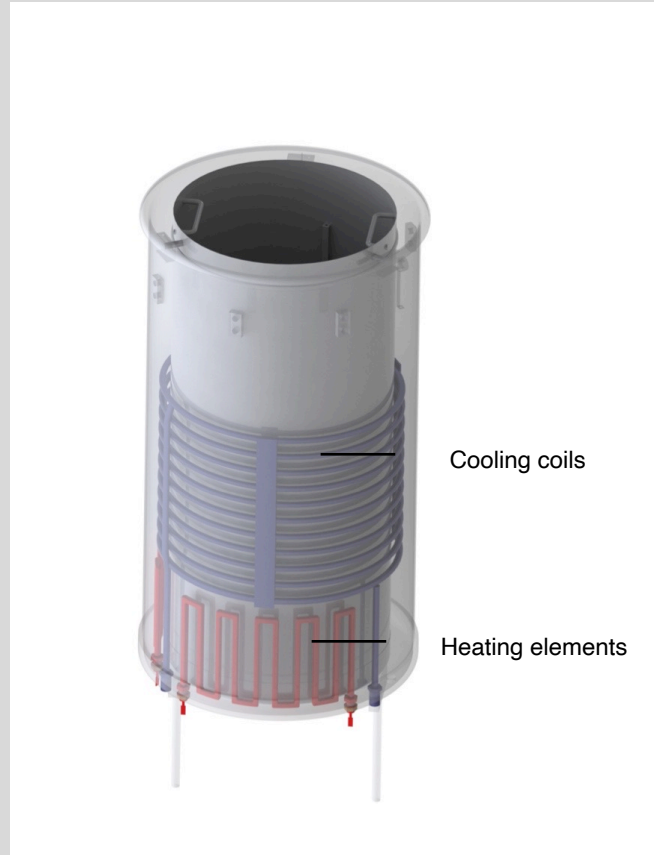
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Features

- Integrated preparation, sterilization, cooling and dispensing of culture media.

- Integrated cleaning and disinfection of dosing lines with steam: before, during and after dispensation.

- Control of sterilization with F0 and P0 values, flexible heart probe included.

- Selectable sterilization and dispensing temperatures.

- Several heating capacities upgrades up to 30kW to achieve faster cycles.

Cooling coils

Heating elements

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More advantages

- Removable magnetic stirrer and vessel for easier cleaning.

- 50 user programs in a 5" touchscreen.

- Traceability: PC and USB connection, built-in printer, admin hierarchy and software.

- Integrated nozzle to dose sensible liquids

- Water feed directly from pressurized purified water network.
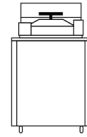
- Automatic water level control.

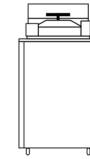# MEDIA PREPARATORS

Media preparation performance

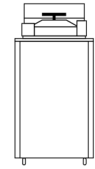|	AE-10-MP	AE-20-MP	AE-40-MP	AE-60-MP	AE-80-MP	AE-100-MP
Media preparation capacity* Min-Max L	2 - 8	6 - 18	12 - 36	15 - 54	30 - 72	35 - 90
Heating time from 25 to 121℃ min	60 - 65	70 - 75	40 - 80	55 - 80	30 - 60	35 - 80
Cooling down time from 121 to 60℃ min	10 - 15	15 - 20	15 - 20	15 - 20	20 - 25	20 - 25
Total cycle time min	85 - 100	100 - 115	70 - 120	85 - 120	65 - 105	70 - 125

*The minimum volume capacity can actually be lower, much lower on larger unit, if we sterilize by F_0

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Dispensing performance

|	Ø Tube (mm)	Dispensing speed
Dispensing via single peristaltic pump	3,2	7 ml/s
	4	9 ml/s
	4,8	11 ml/s
	6,4	15 ml/s
	8	20 ml/s
Dispensing via double peristaltic pump	3,2	12 ml/s
	4	15 ml/s
	4,8	18 ml/s
	6,4	25 ml/s
	8	33 ml/s
Dispensing via external dispensing station and counterpressure	6,4	65 ml/s (0,6 Bar)
		76 ml/s (0,7 Bar)
		87 ml/s (0,8 Bar)
		94 ml/s (0,9 Bar)

- Dispensing via peristaltic pump can be either manual through pedal or semi-automatic via delay

- The second peristaltic pump is an accessory that can be added later on

- Dispensing via counterpressure and the external dispensing station (DW-MP) can be either manual through pedal or semi-automatic via optic sensor.

- The air compressor is included in AE-60-MP, AE-80-MP and AE-100-MP, on other models it is an accessory.

- The external work station (DW-MP) is an accessory

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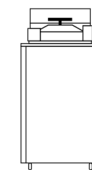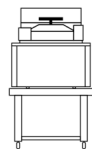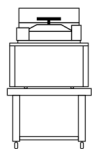
Models	AE-10-MP*	AE-20-MP	AE-40-MP	AE-60-MP	AE-80-MP	AE-100-MP
Exterior dimensions L x D x H mm	615 x 815 x 735	615 x 815 x 735	615 x 815 x 1100	615 x 815 x 1320	755 x 935 x 1285	755 x 935 x 1385
Internal cuvette dimensions Ø x H mm	210 x 236	330 x 236	330 x 461	330 x 696	420 x 594	420 x 734
Power Kw**	3	3	6 or 12	9 or 15	15, 20 or 30	15, 20 or 30
Voltage V***	230 (1P+N+E)	230 (1P+N+E)	400 (3P+N+E)	400 (3P+N+E)	400 (3P+N+E)	400 (3P+N+E)
Current A**	16	16	16	16	32	32
Frequency Hz	50/60	50/60	50/60	50/60	50/60	50/60
Weight Kg	125	128	136	155	245	265

*Included stainless steel table with casters for AE-10-MP & AE-20MP (LxDxH: 700 x 700 x 600 mm).
**Consult for equipments with enhanced heating capacity.
***Consult for other voltages.

CERTIFICATIONS

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Safety features

- Warning and alert messages.
- Door blocking system with positive pressure.
- Open door sensor.
- Water level detector.
- Safety valve.
- Safety thermostat.

Regulations

- **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.

Certifications

ACCESSORIES

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Accessories (1/3)

DW-MP
Dosing station for culture media.

CAB-2
Additional peristaltic pump head.

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

IT/TS
Integrated printer.

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Accessories (2/3)

KLL-MP
Automatic water filling kit.

CP-MP
Compressed air system. Already
included in models of 60, 80 and
100L.

SW8000
External software for data visualization
and report with results.

ECOPUR-500
Eco-efficient water purifier.

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Accessories (3/3)

CAP-MP
External probe adapter.

TR-TR
Transport trolley.

TABLE-MP
Stainless steel table.

MORE INFORMATION

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Videos

Brochures & Installation guides

Thank you!

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