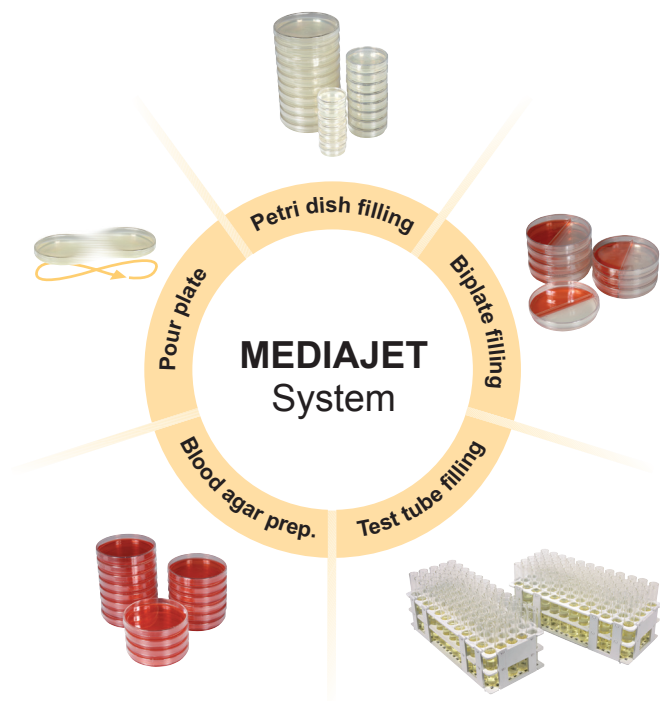


MEDIAJET Versatile and reliable media processing

MEDIAJET – versatile dispensing system



For laboratories involved in culture media preparation, sterile dispensing is essential for successful downstream applications and to meet quality requirements. Furthermore, as a growing need for cost saving and performance improvements exists, a reliable work flow is necessary.

These requirements have created a strong demand for an automated medium dispensing system that allows reliable walk-away operation and at the same time fulfils quality requirements. MEDIAJET has been developed to meet these needs.

The MEDIAJET system offers the unique flexibility to fill Petri dishes of various sizes, Petri dishes with two compartments as well as test tubes of various diameters and length. At the same time, MEDIAJET requires only minimal bench space in the laboratory.

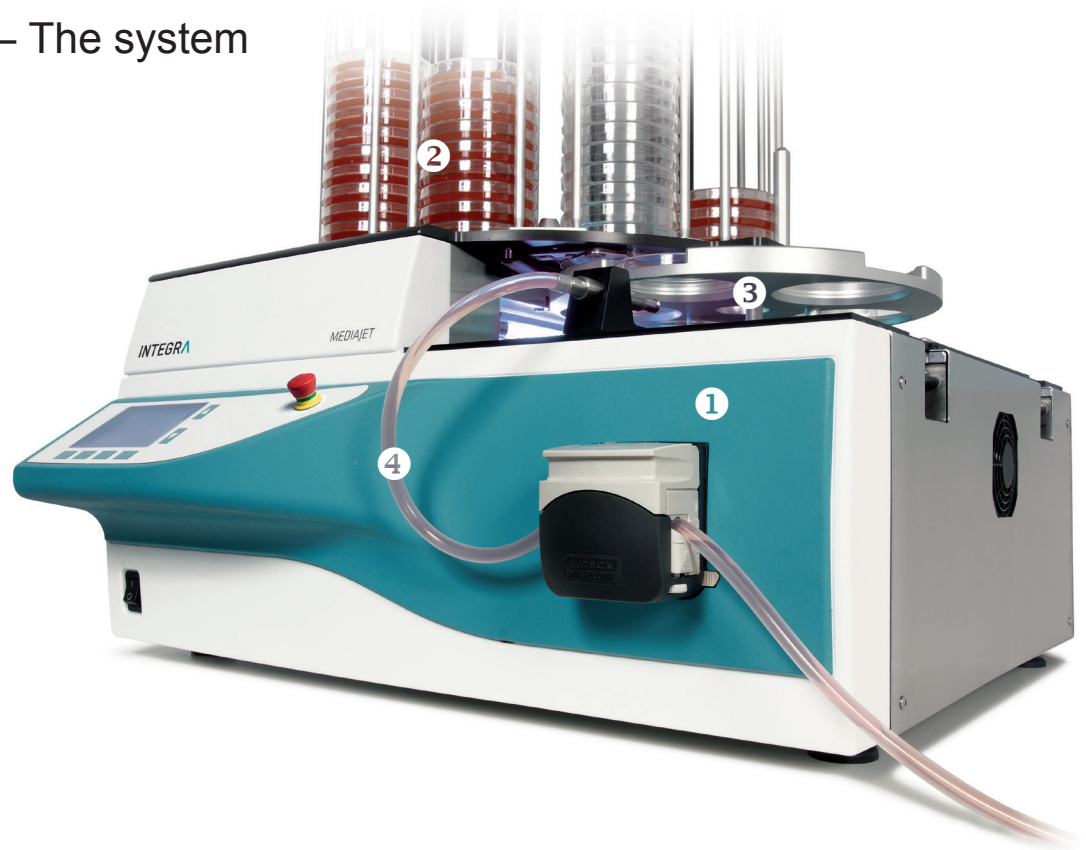
MEDIAJET is the perfect complementation to the INTEGRA MEDIACLAVE media preparator range as it allows the continuous filling of up to thirty litres media into Petri dishes.

Additional options:

- Petri dish cooling
- Petri dish imprinting
- Printing of MEDIAJET process parameters



Petri dish filling – The system



- ❶ Base unit
- ❷ Carousel
- ❸ Rotor
- ❹ Tubing set

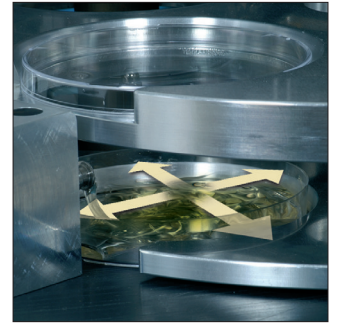
Easy handling

The intuitive, full size graphical user interface makes it very easy to control all functions of MEDIAJET. The operation of the system is entirely self-explanatory, as all functions and prompts are explained in plaintext.



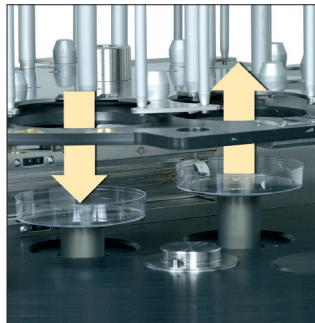
Media cost reduction

MEDIAJET has a built-in “Agar Spread Function” which ensures a homogenous distribution and an even surface of the agar. It helps to optimise the agar level in the Petri dish and thereby allows a significant reduction of media costs.



Reliable walk-away automation

With the Feed-In / Stack-Out technology, MEDIAJET guarantees a reliable and completely user independent operation. Typical production variations in the diameter or shape of the Petri dishes are easily handled by the unit, as they are actively guided throughout the entire filling process. Moreover, the optical dish sensors of MEDIAJET can be easily adjusted to virtually every Petri dish brand at the user interface level.



Eliminating sources of contamination

For consistent agar plate quality, a clean environment during the dispensing process is essential. The surface of the filling chamber is manufactured of a single piece of resistant PE, which allows convenient and efficient cleaning.

In addition, MEDIAJET is equipped with a UV lamp extending over the full length of the rotor where the dishes are opened during the dispensing process. The lamp emits powerful 2.1 W UV-C radiation for optimal bactericidal efficiency in the area most vulnerable to contamination.



Operation

MEDIAJET is easily set up and quickly ready for use. Load the carousel with up to 540 Petri dishes, connect the MEDIAJET to your sterilised culture medium source and start the automated dispensing at the touch of a button.

Up to 19 individual Petri dish filling programs with user-defined parameter settings such as dish height, dispensing volume or number of dishes can be saved and recalled.

Different operation modes for Petri dish filling can be executed and the parameters set to your needs:

1. STANDARD mode:

Is used for the standard filling of Ø 90, 60 or 35 mm Petri dishes.

2. TURBO mode:

Is used to accelerate the filling process. Together with the optional turbo mode kit installed, up to 1'100 Petri dishes can be filled in one hour.

3. POUR PLATE mode:

Total viable count determination is mainly carried out by using the pour plate method. However, pouring the plates by hand is time-consuming and laborious. The POUR PLATE mode facilitates this process by automatically shaking the Petri dishes. Depending on the volume or viscosity of the

medium to be filled into Petri dishes, different shaking levels are selectable according to requirements.

4. BATCH mode:

The Batch mode can be used for applications where it is important to have a highly planar agar surface, as for example automatic colony counting.



Special Applications



Blood agar preparation:

MEDIAJET allows the control of the INTEGRA peristaltic pump DOSE IT. This accessory is especially useful to continuously mix additives in the concentration of 3-10% into the medium. Blood, for instance, can be added into the agar immediately before pouring the plates, which minimises the risk of thermal denaturation of the additive.



Independent pump functions:

The MEDIAJET pump can be independently used for other applications like the manual filling of tubes or bottles. Dispensing can be conveniently triggered by the optionally available foot switch. This feature is especially useful when using Petri dishes or tubes of unusual sizes or shapes that can not be processed by the automated MEDIAJET filling system.

Processing Ø 35, 60 or 90 mm Petri dishes

MEDIAJET vario not only allows the filling of Ø 90 mm dishes, but also Ø 60 or 35 mm dishes by using the corresponding conversion set. In just a few minutes, the MEDIAJET vario base unit can be converted and adjusted to fill the Petri dishes of choice, providing invaluable flexibility to your media preparation lab.



Filling dishes with two compartments

For many applications, the amount of required agar can be reduced by using two-compartment Petri dishes. However, pouring biplates by hand is time-consuming and inefficient. With the MEDIAJET vario biplate option you have an efficient and reliable solution to fill two-compartment Petri dishes automatically.



Test tube filler option for MEDIAJET



For every lab involved in culture media production, the TUBEFILLER option is the perfect extension to the functionality of MEDIAJET. It allows you to convert the automated Petri dish pourer into a test tube filler in just a minute. This unique solution from INTEGRA Biosciences makes MEDIAJET the most versatile system for media dispensing in the market.

Racks for test tubes of various diameters and length can be processed continuously. This makes the TUBEFILLER suitable for a wide range of applications, including the production of agar slants, broth cultures or NaCl dilutions.

Process documentation and validation



MEDIAJET provides all features necessary to support the individual needs in quality control. All process relevant information can be documented using a standard external printer or by directly transferring the information to a personal computer.

In connection with MEDIACLAVE, these data can also be printed on its embedded printer. If connected to MEDIACLAVE 10 or MEDIACLAVE 30, an electronic log file including the MEDIAJET process data is created.

Petri dish imprinting

Different optionally available inkjet printer connection kits allow the connection of three different brands of inkjet printers (MARKEM-IMAJE, LINX, Domino). All inkjet printer systems permit to apply a wide variety of information onto the Petri dishes like alphanumeric text, expiry/production date or barcodes.



All supported inkjet printers allow side wall imprinting. Alternatively, dishes can be imprinted on the bottom using the LINX inkjet printer module.



Instrument selection and available options



	MEDIAJET	MEDIAJET vario	MEDIAJET vario with biplate option
Filling of Ø 90 mm Petri dishes	●	●	●
Filling of Ø 60 mm Petri dishes		●	●
Filling of Ø 35 mm Petri dishes		●	●
Filling of Ø 90 mm biplate Petri dishes			●
Filling of test tubes (with TUBEFILLER option installed)	●	●	●
Shaker function for pour plate applications	●*	●*	●*
Turbo mode (with optional kit)	●	●	●
Imprinting 90, 60 and 35 mm Petri dishes on the side wall (connection kit for MARKEM-IMAGE, LINX and Domino)	●	●	●
Imprinting 90, 60 (and 35 mm) Petri dishes on the bottom (connection kit for LINX inkjet printer), ex factory option	●	●	●
Blood agar preparation with external pump DOSE IT	●	●	●
Cooling option, ex factory	●	●	●*

* Standard feature

Technical Data

MEDIAJET

Dosing range per dish	1 – 99.9 ml
Dosing reproducibility	circa 1% (at 15 ml)
Maximal dosing rate	500 ml/min
Filling delay	0 – 9.9 sec
Capacity / Carousel	540 (90 mm Petri dish) 360 (90, 60, 35 mm Petri dish)

Filling rates

Standard filling rate (up to 15 ml)	circa 900 dishes/hour
Turbo filling rate	circa 1'100 dishes/hour (up to 24 ml)

Petri dish

Dish diameter	90 mm 90, 60, 35 mm (vario)
Dish height	12 – 25 mm

TUBEFILLER

Test tube diameters	13, 16, 18, 20, 25 or 30 mm
Dosing range	0.5 – 999 ml
Flow rate	up to 260 ml/min
Test tube length	up to 25 cm
Dosing reproducibility	< 1 % (at 1 – 99 ml)
Filling rate	1000 tubes/hour (at 10 ml, 4 mm ID tubing)

Power supply

Consumption	200 W
Input voltage	100 – 240 V, 50/60 Hz
Fuses	T 2A (2x)

Dimensions

Basic unit (H x W x D)	330 x 655 x 634 mm
Height with 360 Carousel	1070 mm
Height with 540 Carousel	1405 mm

Net weight

Basic unit	47.0 kg
360 Carousel	6.8 kg
540 Carousel	8.3 kg



UV-Lamp

11 W
(2.1 W UV-C, 253.7 nm)

Interface

2 x RS232, Alarm, Inkjet,
Foot switch

Ordering information

Instrument		Part No.
MEDIAJET base unit	for Ø 90 mm Petri dishes. Requires rotor and carousel. Includes tubing set 103 030	103 005
	with cooling	103 006
MEDIAJET vario base unit	for Ø 35, 60 or 90 mm Petri dishes. Requires rotor, carousel and conversion set	113 000
	with cooling	113 001
MEDIAJET vario base unit with biplate option	for Ø 35, 60 or 90 mm or two-compartment Petri dishes. Requires rotor, carousel and conversion set	with cooling 113 002
Rotor 	for Ø 90 mm Petri dishes	103 271
	for Ø 90 mm biplate Petri dishes (for MEDIAJET vario with biplate option only). Can also be used for standard Ø 90 mm Petri dishes	113 806
	for small Ø 90 mm (Ø 90S) Petri dishes	103 272
	for large Ø 90 mm (Ø 90L) Petri dishes (for MEDIAJET vario only)	113 460
	for Ø 60 mm Petri dishes (for MEDIAJET vario only)	113 271
	for Ø 35 mm Petri dishes (for MEDIAJET vario only)	113 272
Carousel 	for Ø 90 mm Petri dishes, capacity of 360	103 020
	for Ø 90 mm Petri dishes, capacity of 540	103 021
	for large Ø 90 mm (Ø 90L) Petri dishes, capacity of 360 (for MEDIAJET vario only)	113 022
	for large Ø 90 mm (Ø 90L) Petri dishes, capacity of 540 (for MEDIAJET vario only)	113 023
	for Ø 60 mm Petri dishes, capacity of 360 (for MEDIAJET vario only)	113 020
	for Ø 35 mm Petri dishes, capacity of 360 (for MEDIAJET vario only)	113 021
Conversion set (required for MEDIAJET vario only)	for Ø 90 mm Petri dishes, comprises the adaptation insert, head plates for feeder and stacker piston and 1 tubing set	113 051
	for large Ø 90 mm (Ø 90L) Petri dishes, comprises the adaptation insert, head plates for feeder and stacker piston and 1 tubing set	113 055
	for Ø 60 mm Petri dishes, comprising the adaptation insert, head plates for feeder and stacker piston, gripper left, gripper right and 1 tubing set	113 052
	for Ø 35 mm Petri dishes, comprising the adaptation insert, head plates for feeder and stacker piston, gripper left, gripper right and 1 tubing set	113 053
Accessories		Part No.
Filling nozzle	for Ø 90 mm Petri dishes	103 032
	for Ø 60 and 35 mm Petri dishes	113 032
Tubing set	for Ø 90 mm Petri dishes, comprising 1.5 m silicone tubing (6 mm inner diameter) and filling nozzle	103 030
	for Ø 35 and 60 mm Petri dishes, comprising 1.5 m silicone tubing (6 mm inner diameter) and filling nozzle	113 030
Communication interface cable MEDIAJET to MEDIACLAVE	for process documentation on MEDIACLAVE printer	103 046
Turbo mode option		Part No.
Turbo mode kit	for accelerating the filling rate of Ø 90 mm Petri dishes, comprising extension pump head and tubing set for Turbo mode (Part No. 103 035)	103 036
Tubing set for Turbo mode	including filling nozzle for Ø 90 mm Petri dishes and tubing for double pump head configuration (6 mm inner diameter), length 2.0 m, 2 glass Y-pieces	103 035
Petri dish imprinting		Part No.
Printer connection kit	for MARKEM-IMAJE 9018-9030 inkjet printer including the fixing device and the interface cable for Ø 90, Ø 60 and Ø 35 mm PD. Without printer.	103 080
	for MARKEM-IMAJE 9232/9410/9450 inkjet printer including the fixing device and the interface cable for Ø 90 and Ø 60 mm PD. Without printer.	103 091
	for LINX 4900/5900/CJ400/89xx inkjet printer, for imprinting Ø 90 and Ø 60 mm PD on the side wall. Includes interface cable and fixing device. Without printer.	113 845
	for LINX 4900/5900/CJ400/89xx inkjet printer, for imprinting Petri dishes on the bottom. Includes interface cable and fixing device. Ex factory option without printer.	113 840
	Domino A320i/A420i/Ax150i/Ax350i inkjet printer including the fixing device and the interface cable for Ø 90 and Ø 60 mm PD. Without printer.	113 060
Cart	for MEDIAJET, with compartment for LINX inkjet printer and opening for connecting the printer head to MEDIAJET (bottom printing).	113 841

Ordering information

Accessories (continuation of previous page)		Part No.
Independent pump function		
Footswitch	for independently using the MEDIAJET pump	143 200
Aspiration/dispensing tube	for 6 mm inner diameter silicone tubing as suction or end-piece nozzle, 6 mm inner diameter, 10 cm length, stainless steel, one end dented	171 056
Aspiration tube	6 mm inner diameter, 35 cm length, stainless steel, one end dented	171 066
Tube collar as weight for aspiration tubes	for aspiration tubes with 4-6 mm inner diameter	171 074
Blood agar preparation		
Tubing set for blood agar	suitable for adding 3 to 10% blood in connection with the INTEGRA peristaltic pump DOSE IT. Includes filling nozzle for Ø 90 mm Petri dishes, tubing for media (6 mm inner diameter) and additive (2 mm inner diameter), glass T-piece, suction needle stainless steel	103 040
DOSE IT P910	peristaltic pump for preparation of blood agar	171 000
Interface cable	for connection of MEDIAJET to DOSE IT	103 047
Tube-filler option		
TUBEFILLER option for MEDIAJET	including filling arm, support plate and a 2.5 m (3 mm inner diameter) silicone tubing set with 2 aspiration/dispensing tubes and tube collar	103 010
Test tube racks stainless steel, autoclavable	for Ø 13 mm tubes, 6 x 15 capacity, height 60 mm	103 058
	for Ø 13 mm tubes, 6 x 15 capacity, height 90 mm	103 059
	for Ø 16 mm tubes, 5 x 12 capacity, height 60 mm	103 063
	for Ø 16 mm tubes, 5 x 12 capacity, height 90 mm	103 061
	for Ø 16 mm tubes, 5 x 12 capacity, height 120 mm	103 062
	for Ø 18 mm tubes, 4 x 10 capacity, height 90 mm	103 064
	for Ø 18 mm tubes, 4 x 10 capacity, height 120 mm	103 068
	for Ø 20 mm tubes, 4 x 10 capacity, height 90 mm	103 069
	for Ø 20 mm tubes, 4 x 10 capacity, height 120 mm	103 077
	for Ø 25 mm tubes, 3 x 8 capacity, height 90 mm	103 078
	for Ø 25 mm tubes, 3 x 8 capacity, height 120 mm	103 079
	for Ø 30 mm tubes, 3 x 7 capacity, height 90 mm	103 083
	for Ø 30 mm tubes, 3 x 7 capacity, height 120 mm	103 084
	Lid for rack with tubes, max. height above rack 40 mm	103 096
Aspiration/dispensing tube	10 cm length, 2.0 mm inner diameter, stainless steel, one end dented	171 052
	10 cm length, 3.0 mm inner diameter, stainless steel, one end dented	171 053
	10 cm length, 4.0 mm inner diameter, stainless steel, one end dented	171 054
Tube collar as weight	for aspiration tubes with 1-3 mm inner diameter	171 071
	for aspiration tubes with 4-6 mm inner diameter	171 074
Consumables		Part No.
UV lamp TUV11W	to reduce the risk of contamination during the filling process	103 705
Silicone tubing	for Petri dish filling, 25 m bulk roll (6 mm inner diameter, 1.5 mm wall thickness)	171 036
	for TUBEFILLER option, 25 m bulk roll (2 mm inner diameter, 1.5 mm wall thickness)	171 032
	for TUBEFILLER option, 25 m bulk roll (3 mm inner diameter, 1.5 mm wall thickness)	171 033
	for TUBEFILLER option, 25 m bulk roll (4 mm inner diameter, 1.5 mm wall thickness)	171 034



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