



Microbiology Workflow with Eppendorf Products

MRAMA

26/11/2024 | Carmen Molina, Maria Lucas, Adolfo Molejón

Eppendorf at a Glance

Dr. Heinrich Netheler and Dr. Hans Hinz began doing business in 1945

To this day, the Eppendorf Group remains an entirely family-owned company with headquarters in Hamburg, Germany

An expert and preferred partner in the field of sample management – as a supplier of premium-quality products and services

Leading market position in most of the markets served

Subsidiaries in 33 countries worldwide



EPENDORF

eppendorf

Eppendorf Business Areas

Liquid Handling



Consumables



Separation & Instrumentation



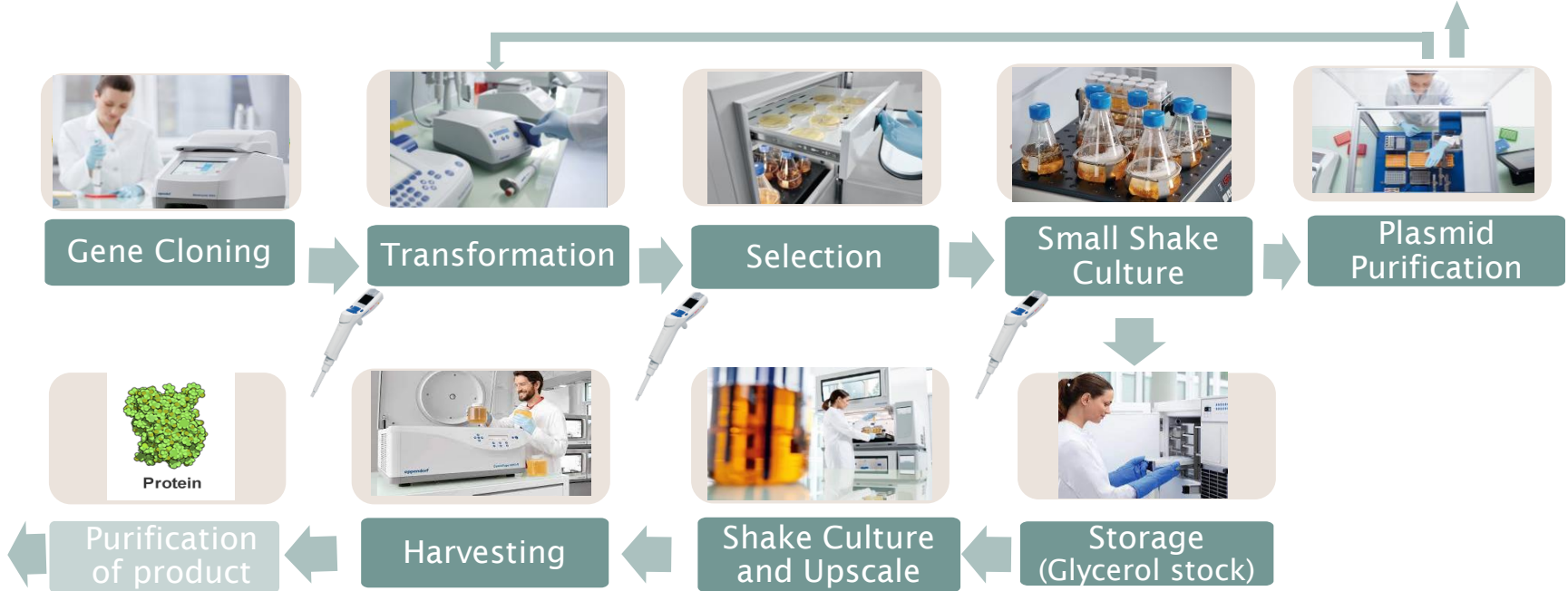
Bioprocess



Microbiology Workflow

Production of
e.g. recombinant
protein

Mammalian,
insect cell etc.



Reliable mLH Systems – needed in every workflow

Research® plus



Reference® 2



Multipette® M4 or E3/E3x



Xplorer®(plus)



Move It®



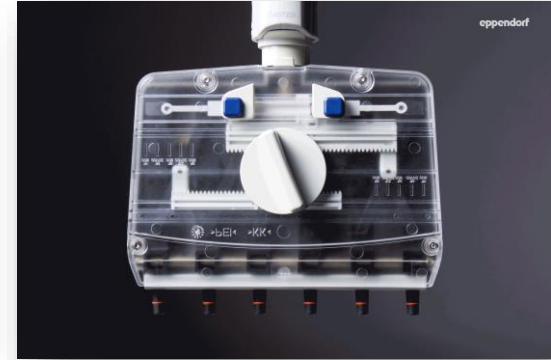
epT.I.P.S.®



Combitips advanced®

MoveIt® - Change between Tubes and Plates

- Fully autoclavable (Research plus, Xplorer: Lower part)
- 20 variants

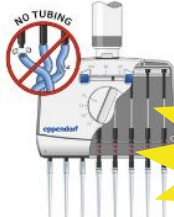


Format limiter

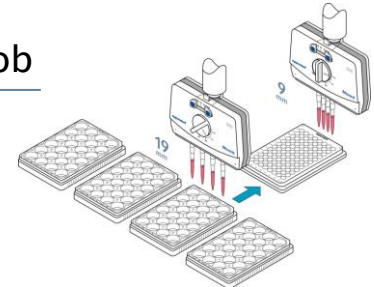
Tubeless adjustable tip spacing system

360° Rotatability

Manual adjustment knob



Exclusive to Eppendorf



epMotion 96 Flex



Exchangeable dispensation heads

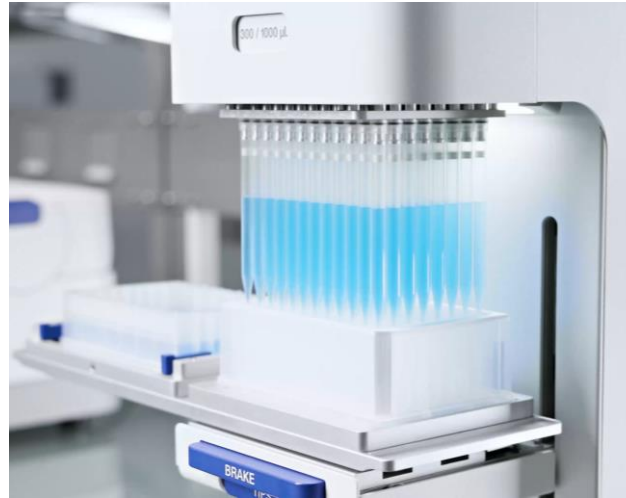
50/300µl head - 0,5-300µl

300/1000µl head - 5-1000µl

epMotion 96 Flex



Seamless multiposition operation



Smooth fully controllable dispensation



User friendly interphase

Book your own demo today!

The 5070 Systems



5070



5073I

5073t

5073t - NGS



5075I

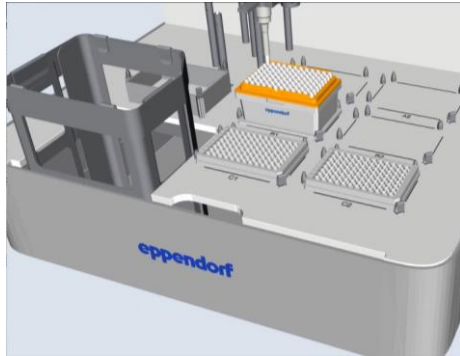
5075t

5075t - NGS

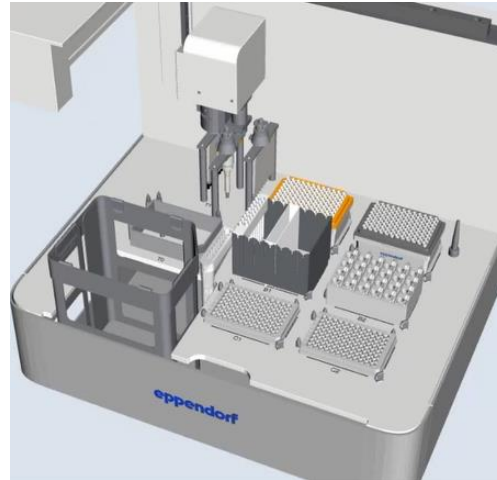
5075v

5075vt

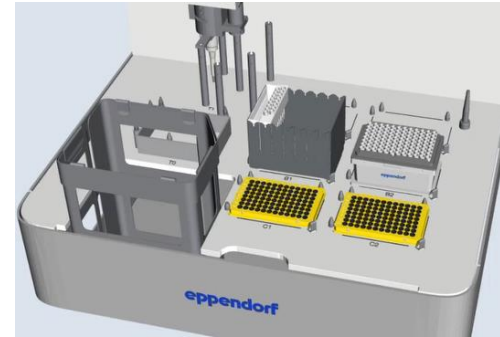
Basic Liquid handling



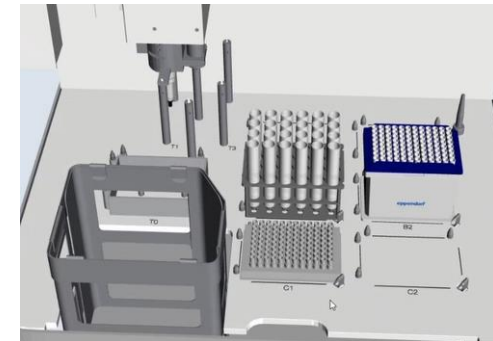
Cherry picking



Serial dilution



Concentration adjustment



Reformatting

Genomics: Nucleic Acid Purification

APPLICATION NOTE No. 419

Purification of High-Quality DNA from FFPE Samples

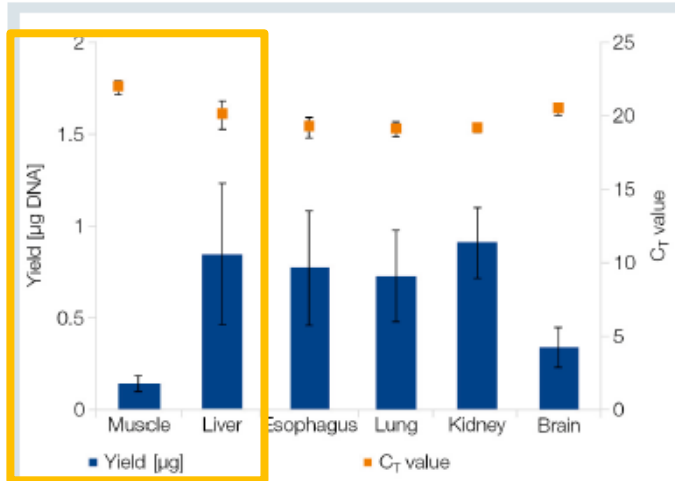


Figure 2: Automated isolation of DNA from various mouse FFPE samples

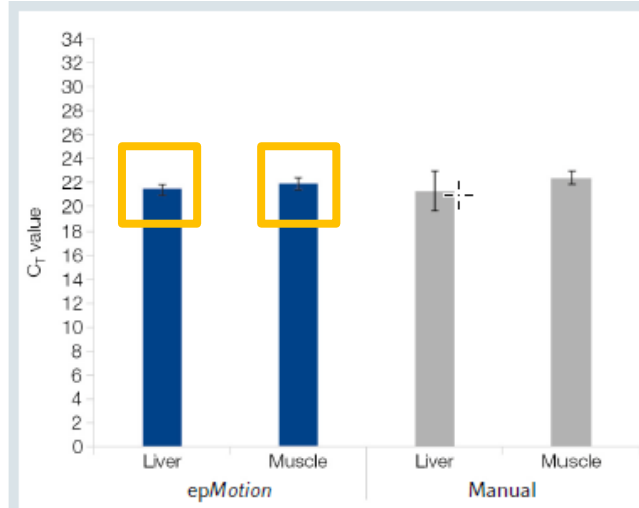


Figure 3: Comparison of automated and manual processing

We do it for you or you can make it yourself!

This simple

- You will be trained to use and program
- System requires no intervention from Eppendorf to modify protocols or optimise
- You are able to contract a base method and develop other similars

3D result

- You can visualise your work on a computer before running an actual protocol
- More sustainable and allows to correct errors quickly
- Very visual for different objectives

Challenge epMotion to automate your liquid handling
Today or tomorrow, in remote/in our showrooms

Mastercycler X50 – Fastest device in industry!



- High reproducibility with centre fixed Peltier's
- Short program runtime
- Most quiet cycler in the market
- 2D Gradient function
- High Throughput

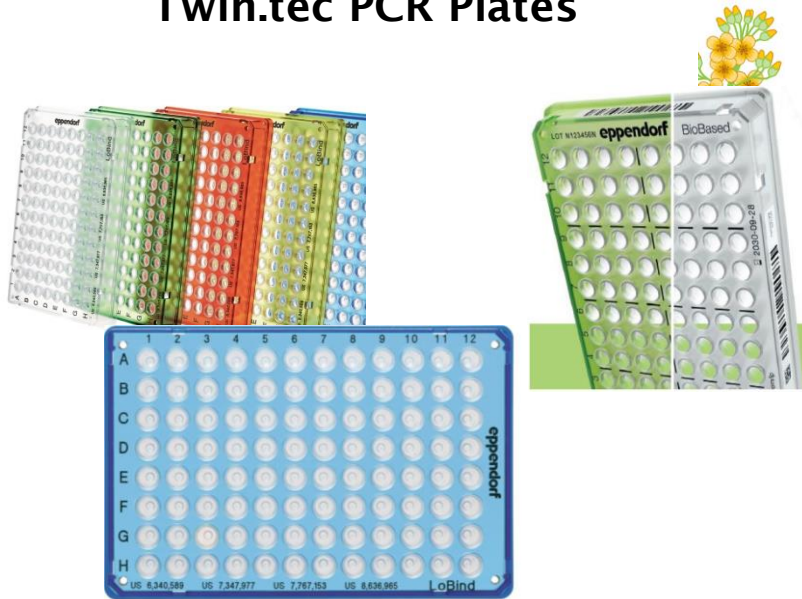


Manufacturer	Thermal cycler	Total run time [hh:mm:ss] (rounded to the nearest 10 seconds)	(Maximum heating) ramp rate according to technical data [°C/s]
Eppendorf	Mastercycler® X50s	00:39:00	10
Eppendorf	Mastercycler® X50a	00:45:10	5
VWR™	PeqSTAR 96X	00:47:20	5
HiMedia®	Prima-96™	00:48:00	5
Bio-Rad®	C1000 Touch™	00:48:20	5
Bio-Rad®	PTC Tempo 96	00:48:20	5
Applied Biosystems	Proflex™ (96-well)*	00:48:40	6.0
Eppendorf	Mastercycler® X40	00:51:20	3.3
Bioneer	AllInOneCycler™#*	00:51:40	9.5
Applied Biosystems	Veriti™ Dx Fast	00:53:40	5.0
Applied Biosystems	SimpliAmp™*	00:54:30	4.0
VWR™	XT ⁹⁶	00:55:30	4
Bio-Rad®	T100*	01:02:50	4

Application Note 274

Contamination free DNA amplification

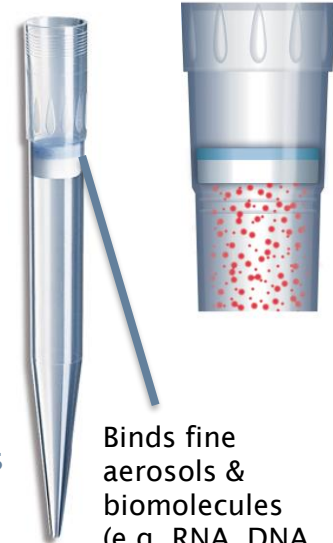
Twin.tec PCR Plates



ep Dualfilter T.I.P.S.

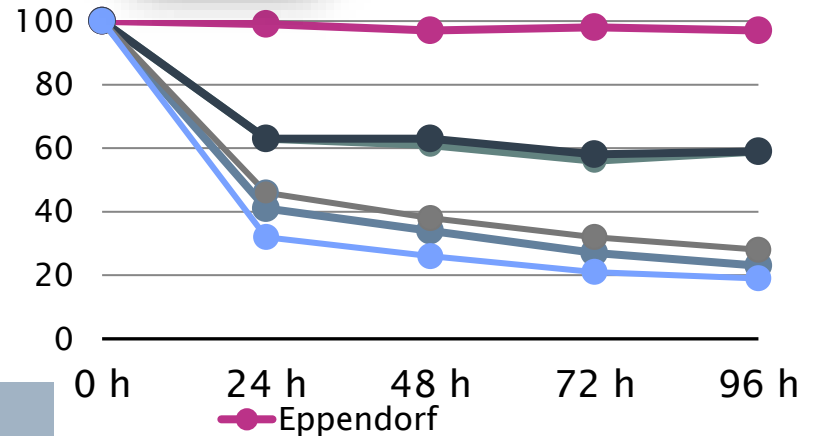
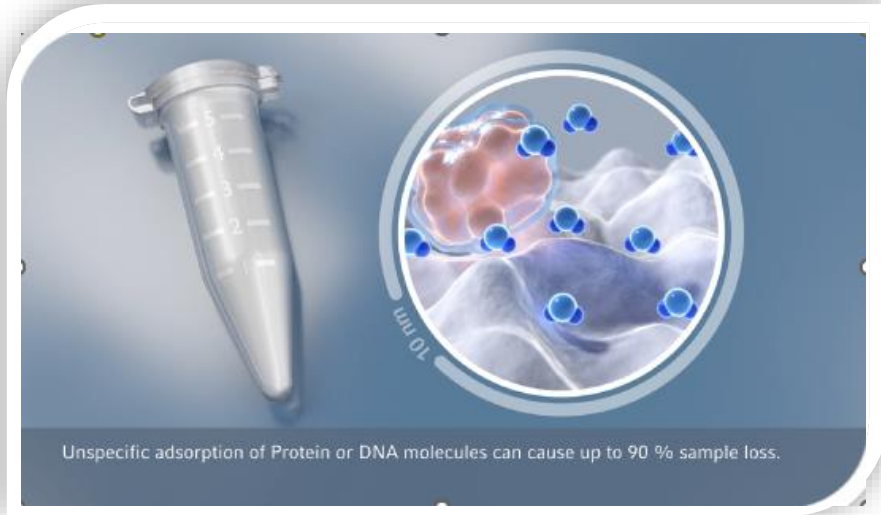


...of
different
pore sizes



Binds fine aerosols & biomolecules (e.g. RNA, DNA, virus)

LoBind Consumables



97 % recovery after 96 h incubation:
 → Eppendorf Protein LoBind tubes reduce sample loss!

ThermoMixer® - Reliable Mixing



Eppendorf 2D Mix-Control

50 μ L sample mixing with 1,800 rpm

Competitor 1 min



Suboptimal
sample mixing

Eppendorf 2D Mix-Control 1 min
(MixMate®)



Reliable
sample mixing

Eppendorf 2D Mix-Control 1 min
(Eppendorf ThermoMixer®)



Reliable
sample mixing



ThermoMixer® – Accessories

13 different SmartBlocks



For many tube formats



→ Many Options



Eppendorf ThermoTop®



Eppendorf
SmartExtender



Temperature control

- Blocks are individually checked and certified
 - Sensor-controlled thermoblocks
Sensor is located near the tubes, not in the tube
- High reproducibility

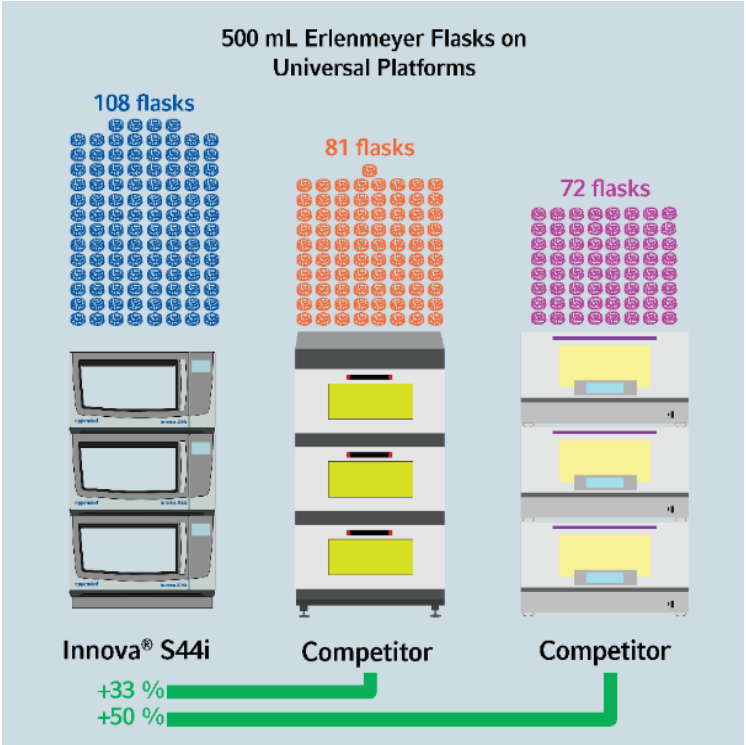
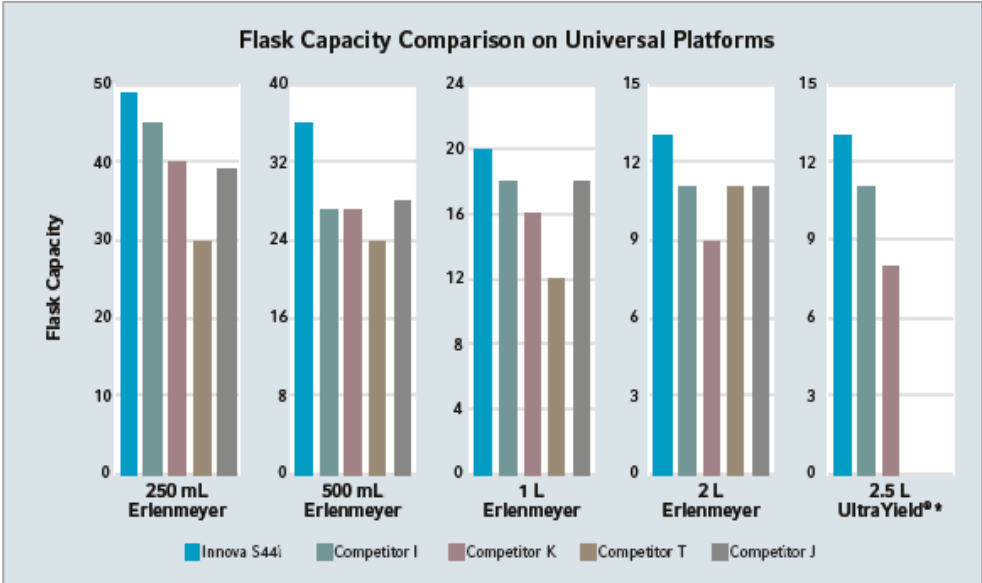
Cultivation in an Innova[®] S44i



- Incubated and refrigerated version
- Wide temperature range and precise control
 - 5°C above/ 20°C below ambient to 80°C
 - Uniformity ± 0.25 °C
- Orbits (2.5 and 5 cm)
- Speed ranges: 25-400 / 25-300
- Flasks up to 5 Liter
- Stackable up to three
- Ergonomic glide-up door



Flask Capacity



Brochure: Increase your protein yield

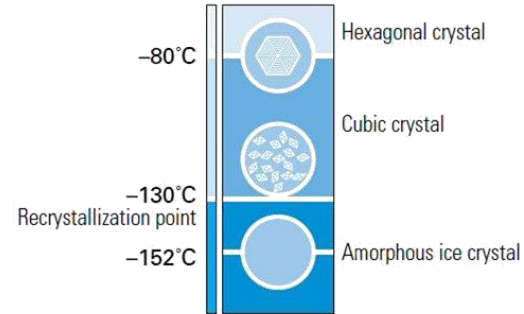
Your Samples must be stored during your Workflow

Speed and crystal formation are decisive

- > stable ice crystal formation at - 80°C (or -70°C?)
- > minimal damage to cells and tissue

Example: liver cell cultures

- > storage over 5 years without losses
- > Life span at 4°C: approx. 3 weeks



Reliable Storage of your Samples



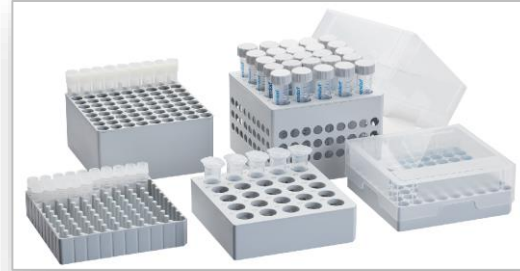
Side access



Tower



Drawer



Storage boxes

- Polypropylen
- 10 variants



Storage boxes

- Cardboard
- 3 hights, 4 dividers

Harvesting with an Eppendorf Centrifuge



Microcentrifuges

- 5418 R
- 5425 R
- 5427 R
- 5430 R
- 5702 R

Small General-Purpose Centrifuges

- 5702 RH
- 5804 R (1 Liter)
- 5810 R (3 Liter)
- 5910 Ri (4 Liter)
- 5920 R (4 Liter)

Multipurpose Benchtop Centrifuges

- 5430
- 5425
- 5420
- 5702
- 5804 (1 Liter)
- 5810 (3 Liter)

Floor Standing Centrifuges

- CR22N (6 Liter)
- CR30NX (6 Liter)

Ultracentrifuges

- CPNX (1,38 Liter)
- CS-150FNX (0,18 Liter)
- CS-150NX (0,18 Liter)

Vacuum Concentrator

- 5702

Minispin

- 5420
- 5425
- 5430



Aerosol Tightness – Important for your MiBi-Workflow



QuickLock® rotor lids for ergonomic locking

Our aerosol-tight QuickLock rotors close with only $\frac{1}{4}$ of a turn. This saves time and takes repetitive stress off your wrist.



New: Eppendorf QuickLock® Pro (for the 5425): just click the rotor into place



QuickLock® caps with one-hand operation

Aerosol-tight caps provide the needed safety when working with potentially hazardous samples.

Video: Aerosols in the Lab: [Stay Informed - Aerosols in the Lab \(youtube.com\)](https://www.youtube.com/watch?v=...)

> Time For Your Questions 😊

Thank You!