MICRONIC
INNOVATION IN SAMPLE STORAGE

CATALOG

30 YEARS OF EXPERIENCE IN TRACEABLE SAMPLE STORAGE

CERTIFIED CLASS 7 CLEAN ROOM INJECTION MOLDING AND ASSEMBLY

PRODUCTION IN THE NETHERLANDS AND THE UNITED STATES

SAMPLE PRESERVATION & STORAGE SOLUTIONS

Advancing research by serving scientists with sample preservation and storage

ABOUT MICRONIC

Our goal is to advance research by serving scientists in finding solutions that contribute to a higher quality of life. We develop and manufacture a range of Dutch-designed products to enhance the process of sample preservation and storage.

Micronic is an independent organization with its headquarters located in Lelystad, the Netherlands. Micronic produces and assembles its labware in certified Class 7 clean rooms which are located in the Netherlands and the United States. Its labware equipment is also assembled inhouse.

Micronic is an ISO 9001 and 14001 certified company. The Micronic sales, marketing and product support is organized at two sales offices: Micronic America LLC and Micronic Europe BV. The products are applied worldwide in the (research) laboratories of university hospitals, forensics, agricultural, veterinary and governmental institutes, as well as companies in biotech, food, chemical and pharmaceutical industries.

PRODUCTION AND QUALITY CHARACTERISTICS

- *Class 7 clean room:* Micronic's labware is manufactured and assembled in a certified clean room environment (US Federal Standard 209E Class 7).

- *FDA approved and virgin material:* Materials and auxiliary agents used to manufacture Micronic's labware are FDA compliant and are selected on quality and the highest purity levels. Micronic uses solely virgin material.

- *Extractables:* The materials used for Micronic tubes are the result of extensive research. One selection criteria is that no noticeable amount of extractables should leach into samples.

- *RNase and DNase:* Micronic manufactured labware complies with the highest injection molding standards and is free of any detectable RNase or DNase contamination.

- *Endotoxin (pyrogen):* By maintaining the highest possible hygiene level during its production processes, Micronic is able to limit the endotoxin level of produced and packaged labware to an acceptable minimum (< 0.01 EU/ml).

- *CE label:* Micronic products comply with the Class 1 CE label. Material Safety Data Sheets are available for all products (the EU directive 98/79/EC is the leading standard).

- *Sterile products:* Upon request, products manufactured at Micronic can be supplied sterilized. Sterilization is carried out using gamma radiation or ethylene oxide treatment.

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MICRONIC OFFERS A COMPLETE LINE OF SAMPLE STORAGE TUBES THAT FIT IN THE 96-WELL, 48-WELL OR 24-WELL ANSI / SLAS STANDARD (FORMERLY RECOGNIZED AS THE ANSI / SBS STANDARD) RACK FORMAT. THE COMPREHENSIVE RANGE INCLUDES TUBES WITH VOLUMES RANGING FROM 0.50ML TO 7.50ML WHICH ARE SUITABLE FOR THE MOST COMMON LABORATORY STORAGE APPLICATIONS. THE TUBES ARE AVAILABLE NON-CODED, ALPHANUMERIC CODED OR WITH A UNIQUE 2D TRAXIS / DATA-MATRIX CODE (ADHERE TO THE ECC200 STANDARD) ON THE TUBE BOTTOM. IN ADDITION, MICRONIC OFFERS A VARIETY OF SPECIAL TUBES INCLUDING TUBESTRIP-8 AND AMBER TUBES FOR LIGHT SENSITIVE SAMPLES. THROUGH OUR LINE OF COMPATIBLE STORAGE RACKS, SEALING PRODUCTS AND EQUIPMENT MICRONIC IS ABLE TO OFFER YOU A COMPLETE SOLUTION.

SUPERIOR FEATURES OF MICRONIC SAMPLE STORAGE TUBES

High fill rate

Medical approved virgin Polypropylene according to the highest standards

The Screw Cap tube features a single turn thread for easy open-ing and closing of the tube

Low protein binding surface (reference: Test Report TR022601), non hydroscopic material

The Push Cap tube has a special design that eliminates caps to pop off during thawing (-80ºC) or pushed in during piercing

Mechanical strength (reference: Test Report TR021801)

Inner V-bottom for maxi-mum sample recovery and the lowest dead volume

RNase / DNase and Endotoxin (pyrogen) free

Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique

Inner U-bottom for maximizing the working volume of tubes

Permanent laser-etched code on the tube bottom which is chemically, scratch and mechanically resistant (reference: Test Report TR022501)

UNIQUE MANUFACTURING PROCESS

All Micronic sample storage tubes are manufactured to industry leading strict tolerances. Due to the unique 2K injection molding tech-nique, the highly transparent tube and the black code surface are molded to one component leading to the following advantages:

- Black code surface cannot be separated from the transparent tube enabling absolute traceability
- Solid and uniform walls allow maximum working volume
- No contamination during the production process

MICRONIC'S HIGH QUALITY AND STRONG SAMPLE STORAGE TUBES ARE ABLE TO WITHSTAND:

- *Multiple freeze-thaw cycles.*

  Extensive freeze-thaw tests are conducted with Micronic sample storage tubes and results show no leakages for both Micronic Push Cap tubes and Micronic Screw Cap tubes closed with TPE caps. Additionally, research also shows that no Micronic TPE caps pop off during the freeze-thaw process (reference: Test Report TR021901 - available upon request).

- *Grinding of samples by high speed bead beating for DNA/RNA extraction.*

  When homogenizing samples, beads are often used to break open cell walls and membranes to release the desired DNA and RNA. The solid walls of Micronic tubes have been tested and are able to withstand the process of bead beating easily (reference: Test Report TR021801/TR022701 - available upon request).

SAMPLE STORAGE TUBES

TUBE OVERVIEW AND SPECIFICATIONS

	0.50 ML	0.50 ML	0.75 ML	0.75 ML	1.10 ML	1.40 ML
	Page 8	Page 8	Page 10	Page 10	Page 12	Page 14
Storage Rack	Loborack-96	96-L-rack	Loborack-96	Loborack-96	Roborack-96	Roborack-96 Comorack-96
Push Cap and / or Screw Cap	P+S	S	P+S	P	P+S	P
Inner tube shape	V	Flat	V	V or U	V	U
Working volume with Push Cap (+21ºC)*	0.30ml	n/a	0.58ml	0.56 or 0.59ml	0.90ml	1.14ml
Working volume with Push Cap (-20ºC)*	0.30ml	n/a	0.53ml	0.53 or 0.53ml	0.79ml	1.01ml
Working volume with Push Cap (-80ºC)*	0.30ml	n/a	0.55ml	0.51 or 0.55ml	0.80ml	1.01ml
Working volume with Screw Cap (+21ºC)*	0.21ml	0.50ml	0.48ml	n/a	0.80ml	n/a
Working volume with Screw Cap (-20ºC)*	0.21ml	0.50ml	0.48ml	n/a	0.78ml	n/a
Working volume with Screw Cap (-80ºC)*	0.21ml	0.50ml	0.48ml	n/a	0.73ml	n/a
2D Data-Matrix coded	Yes	Yes	Yes	Yes	Yes	No
TraXis coded	Yes	No	Yes	Yes	No	No
Alphanumeric coded	Yes	No	Yes	Yes	No	Yes
Non-coded	Yes	No	Yes	Yes	Yes	Yes
Human readable coded	Yes	No	Yes	Yes	Yes	No
Capping options (SC = Screw Cap)	Low Profile SC Screw Cap Push Cap	Screw Cap	Low Profile SC Screw Cap Push Cap	Push Cap	Low Profile SC Screw Cap Push Cap	Push Cap
Outer diameter	9.0mm	7.3mm	9.0mm	9.0mm	9.0mm	9.0mm
Tube height	18.5mm	20.9mm	26.0mm	26.0mm	36.5mm	44.0mm
Tube height with Push Cap / Low Profile Screw Cap	19.5mm	n/a	27.0mm	27.0mm	37.5mm	45.0mm
Tube height with Screw Cap	26.0mm	25.9mm	33.5mm	n/a	44.0mm	n/a
Available precapped	Yes	Yes	Yes	Yes	Yes	Yes
Thread type	Internal	External	Internal	n/a	Internal	n/a
Twist-lock	Yes	Yes	Yes	No	Yes	No
Snap tube option	Yes	No	Yes	Yes	Yes	No
Available sterile	Yes	No	Yes	Yes	Yes	Yes
Available DNase / RNase free	Yes	No	Yes	Yes	Yes	Yes
Class 7 clean room production	Yes	No	Yes	Yes	Yes	Yes
Minimum storage temperature**	Vapor phase LN2	Vapor phase LN2	Vapor phase LN2	-80ºC	Vapor phase LN2	-80ºC
Availability	Bulk, Rack	Rack	Bulk, Refill, Rack	Bulk, Refill, Rack	Bulk, Rack	Bulk, Refill, Rack

* If more sample volume is used in a tube than the specified working volume, it could be possible that deformation of the tube occurs.

** Temperature range of the material of the tubes, caps and racks is approved from -80ºC to +100ºC. In practice tubes are used in lower temperatures until *vapor phase* LN2 (-150ºC to -196ºC). Micronic does not recommend to store tubes in liquid phase nitrogen (LN2). In practice tubes are only snap frozen in LN2 (without submerging the cap).

1.40 ML	1.40 ML	2.00 ML	2.50 ML	3.00 ML	4.00 ML	6.00 ML	7.50 ML
Page 14	Page 14	Page 16	Page 17	Page 22	Page 18	Page 20	Page 21
Roborack-96 Comorack-96	Roborack-96 Comorack-96	Roborack-96	Roborack-96	Micronic 24-2 Rack	Micronic 48-4 Rack	Arctic Rack-24	Comorack-24
P	P+S	P+S	P	S	S	S	Hinged Cap
V or U	V or U	U	U	Flat	Flat	Flat	Flat
1.13 or 1.19ml	1.15 or 1.20ml	1.58ml	2.50ml	n/a	n/a	n/a	6.30ml
1.04 or 1.05ml	1.01 or 1.07ml	1.39ml	1.80ml	n/a	n/a	n/a	5.10ml
1.01 or 0.99ml	0.95 or 1.06ml	n/a	n/a	n/a	n/a	n/a	n/a
n/a	1.04 or 1.10ml	1.49ml	n/a	2.50ml	2.70ml	4.80ml	n/a
n/a	1.00 or 1.06ml	1.38ml	n/a	2.40ml	2.65ml	4.10ml	n/a
n/a	1.01 or 0.98ml	1.25ml***	n/a	2.40ml	2.45ml	3.85ml	n/a
Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Yes	Yes	No	No	No	No	No	No
Yes	Yes	Yes	No	No	No	No	No
Yes	Yes	No	Yes	No	No	No	Yes
Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Push Cap	Low Profile SC Screw Cap Push Cap	Low Profile SC Screw Cap Push Cap	Push Cap	Screw Cap	Screw Cap	Screw Cap	Hinged Cap
9.0mm	9.0mm	9.0mm	9.0mm	15.4mm	13.0mm	16.3mm	16.8mm
44.0mm	44.0mm	59.0mm	82.5mm	26.0mm	44.0mm	42.9mm	44.0mm
45.0mm	45.0mm	60.0mm	83.5mm	n/a	n/a	n/a	44.5mm
n/a	51.5mm	66.5mm	n/a	33.7mm	51.0mm	50.7mm	n/a
Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
n/a	Internal	Internal	n/a	External	Internal	Internal	n/a
No	Yes	Yes	No	Yes	Yes	Yes	Yes
Yes (V-bottom)	Yes	Yes	No	No	No	No	No
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
-80ºC	Vapor phase LN2	-80ºC	-20ºC	Vapor phase LN2	Vapor phase LN2	Vapor phase LN2	-80ºC
Bulk, Refill, Rack	Bulk, Refill, Rack	Bulk, Rack	Bulk, Rack	Bulk, Rack	Bulk, Rack	Bulk, Rack	Bulk, Rack

*** For -80ºC storage of the 2.00ml tube a special freeze protocol should be used.

0.50ML STORAGE TUBES
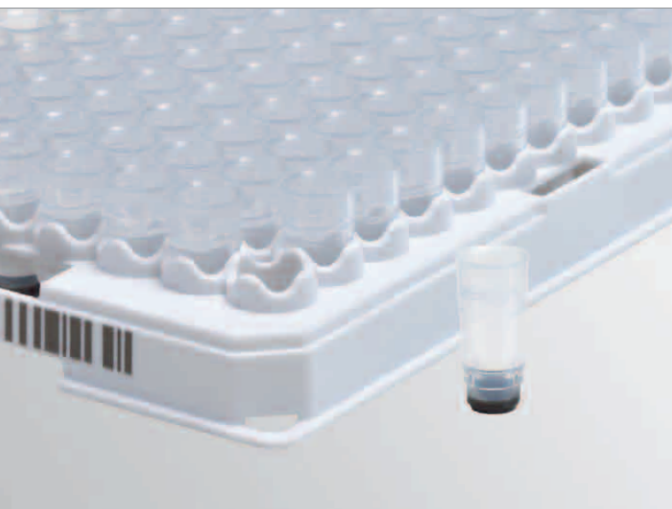
Standard available in the Loborack-96, 96-1 Rack and 96-Q1 Rack: The racks feature a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 0.50ml tubes are available Non-coded, Alphanumeric coded or with a unique 2D TraXis / Data-Matrix code. The Alphanumeric and 2D codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 0.50ml Screw Cap tubes work equally well with either Screw Caps or Push Caps. The working volume of the 0.50ml tube ranges from 0.21ml to 0.30ml (depending on the capping style / storage temperature).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at ultra-low temperatures
- Available Non-coded, Alphanumeric coded or with a unique 2D TraXis / Data-Matrix code (adhere to the ECC200 standard)
- Alphanumeric codes, 2D codes and 1D rack barcodes are permanently laser etched
- 2D codes also have a human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk, Loborack-96, 96-1 and 96-Q1 Rack (based on the ANSI / SLAS standards for storage racks)
- 100% quality control on all 2D codes
- Highly compact solution to save freezer space
- Class 7 clean room production
- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Snap tubes; tubes are locked into the rack wells to prevent sample loss from overturned racks
- Precapped with (Low Profile) Screw Cap or Push Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C		Working volume at -80°C	
0.30ml	0.21ml	0.30ml	0.21ml

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	V-bottom
Working volume (+21ºC):	0.21ml (Screw Cap) / 0.30ml (Push Cap)
Tube height:	18.5mm
Tube height in rack:	21.0mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 (with Screw Cap) / -80°C (with Push Cap) to +100°C

ORDERING INFORMATION
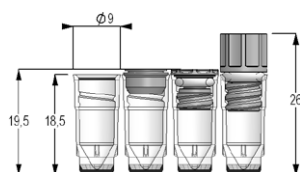
Catalog number	Description	Unit
0.50ml Non-coded Screw Cap tubes V-bottom without caps		
MP32040	0.50ml Non-Coded Screw Cap tubes in Bulk	960 tubes
MPW32041BC3	0.50ml Non-Coded Screw Cap tubes in Loborack-96 (standard cover)	10 racks
MPW32068BC3	0.50ml Non-Coded Screw Cap tubes in Loborack-96 (low cover)	10 racks
MP32100	0.50ml Non-Coded Screw Cap tubes in Micronic 96-1 Rack with low cover	10 racks
MP32101	0.50ml Non-Coded Screw Cap tubes in Micronic 96-Q1 Rack with high cover	10 racks
0.50ml Alphanumeric coded Screw Cap tubes V-bottom without caps		
MPW42049BC3	0.50ml Alphanumeric coded Screw Cap tubes in Loborack-96 (standard cover)	10 racks
MPW42072BC3	0.50ml Alphanumeric coded Screw Cap tubes in Loborack-96 (low cover)	10 racks
MP42100	0.50ml Alphanumeric coded Screw Cap tubes in Micronic 96-1 Rack with low cover	10 racks
MP42101	0.50ml Alphanumeric coded Screw Cap tubes in Micronic 96-Q1 Rack with high cover	10 racks
0.50ml 2D Data-Matrix coded Screw Cap tubes V-bottom without caps		
MP52326	0.50ml 2D Data-Matrix coded Screw Cap tubes in Bulk	960 tubes
MPW52325BC3	0.50ml 2D Data-Matrix coded Screw Cap tubes in Loborack-96 (standard cover)	10 racks
MPW52337BC3	0.50ml 2D Data-Matrix coded Screw Cap tubes in Loborack-96 (low cover)	10 racks
MP52500	0.50ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-1 Rack with low cover	10 racks
MP52501	0.50ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-Q1 Rack with high cover	10 racks

Also available precapped with (Low Profile) Screw Cap or Push Cap.

DID YOU KNOW...

Micronic also offers the 0.50ml externally threaded Octygen tubes, which save up to 40% freezer space compared to other 0.50ml screw cap tubes in 96-well format. The special tube and cap design minimize diffusion of vapor during storage. Contact us for more information!

SAMPLE STORAGE TUBES
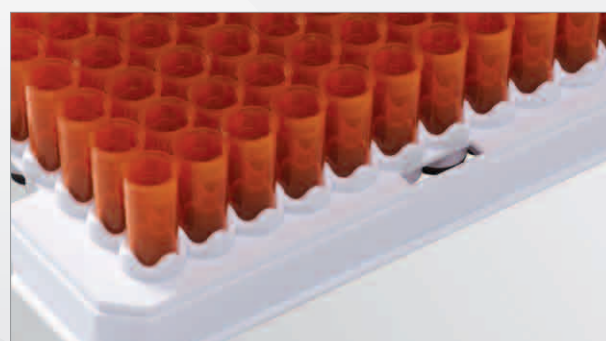
0.75ML STORAGE TUBES

Standard available in Loborack-96 and Micronic 96-2 Rack: The racks feature a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 0.75ml tubes are available Non-coded, Alphanumeric coded or with a unique 2D TraXis / Data-Matrix code. The Alphanumeric and 2D codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 0.75ml tube is available in a Push Cap and Screw Cap variant. The working volume of the 0.75ml tube ranges from 0.48ml to 0.59ml (depending on the capping style / storage temperature / inner tube shape).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at ultra-low temperatures
- Available Non-coded, Alphanumeric coded or with a unique 2D TraXis / Data-Matrix code (adhere to the ECC200 standard)
- Alphanumeric codes, 2D codes and 1D rack barcodes are permanently laser etched
- 2D codes also have a human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk, refill, Loborack-96 and Micronic 96-2 Rack (based on the ANSI / SLAS standards for storage racks)
- 100% quality control on all 2D codes
- Class 7 clean room production
- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Amber tubes for light sensitive samples
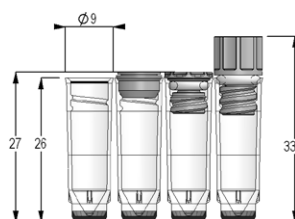- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Snap tubes; tubes are locked into the rack wells to prevent sample loss from overturned racks
- Precapped with (Low Profile) Screw Cap or Push Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C		Working volume at -80°C	
0.58ml	0.48ml	0.55ml	0.48ml

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	V-bottom (Screw Cap tube) / V- or U-bottom (Push Cap tube)
Working volume (+21ºC):	Please see 'Tube Overview and Specs' on page 6-7
Tube height:	26.0mm
Tube height in rack:	28.5mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 (with Screw Cap) / -80°C (with Push Cap) to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
0.75ml Non-coded Screw Cap tubes V-bottom without caps		
MP32069	0.75ml Non-Coded Screw Cap tubes in Bulk	960 tubes
MP32070	0.75ml Non-Coded Screw Cap tubes in refill carrier-96	10 racks
MPW32071BC3	0.75ml Non-Coded Screw Cap tubes in Loborack-96	10 racks
MP32110	0.75ml Non-Coded Screw Cap tubes V-bottom in Micronic 96-2 Rack with low cover	10 racks
MP32111	0.75ml Non-Coded Screw Cap tubes V-bottom in Micronic 96-2 Rack with high cover	10 racks
0.75ml Alphanumeric coded Screw Cap tubes V-bottom without caps		
MP42067	0.75ml Alphanumeric coded Screw Cap tubes in refill carrier-96	10 racks
MPW42068BC3	0.75ml Alphanumeric coded Screw Cap tubes in Loborack-96	10 racks
MP42110	0.75ml Alphanumeric coded Screw Cap tubes in Micronic 96-2 Rack with low cover	10 racks
MP42111	0.75ml Alphanumeric coded Screw Cap tubes in Micronic 96-2 Rack with high cover	10 racks
0.75ml 2D Data-Matrix coded Screw Cap tubes V-bottom without caps		
MP52349	0.75ml 2D Data-Matrix coded Screw Cap tubes in Bulk	960 tubes
MP52350	0.75ml 2D Data-Matrix coded Screw Cap tubes in refill carrier-96	10 racks
MPW52351BC3	0.75ml 2D Data-Matrix coded Screw Cap tubes in Loborack-96	10 racks
MP52519	0.75ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-2 Rack with low cover	10 racks
MP52520	0.75ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-2 Rack with high cover	10 racks

Other item numbers are available for 0.75ml Push Cap tubes V- or U-bottom. Also available precapped with (Low Profile) Screw Cap or Push Cap.

DID YOU KNOW...

Buying Micronic Starter Packs you can save up to 20% compared to buying the products individually! Micronic offers the Sample Storage Starter Packs in a range of formats: BASIC, STANDARD, ADVANCED, PREMIUM and PREMIUM+. For more information go to page 78.

SAMPLE STORAGE TUBES

1.10ML STORAGE TUBES
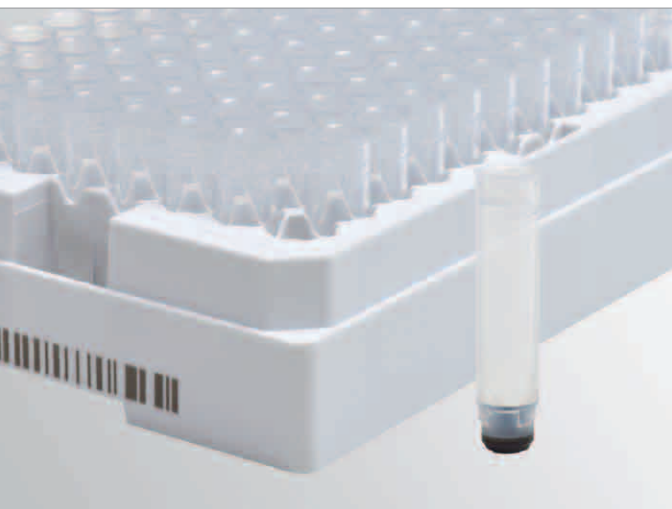
Standard available in the Roborack-96 and Micronic 96-3 Rack: The racks feature a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 1.10ml sample storage tubes are available Non-coded or with a unique 2D Data-Matrix code on the tube bottom. The 2D Data-Matrix codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 1.10ml Screw Cap tubes work equally well with either Screw Caps or Push Caps. The working volume of the 1.10ml tube ranges from 0.73ml to 0.90ml (depending on the capping style / storage temperature).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at ultra-low temperatures
- Available Non-coded or with a unique 2D Data-Matrix code (adhere to the ECC200 standard) on the tube bottom
- 2D codes and 1D rack barcodes are permanently laser etched
- 2D codes also have a human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk, Roborack-96 and Micronic 96-3 Rack (based on the ANSI / SLAS standards for storage racks)
- 100% quality control on all 2D codes
- Class 7 clean room production
- RNase/DNase and Pyrogen free

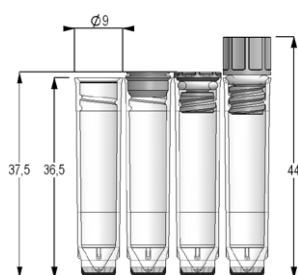## ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Snap tubes; tubes are locked into the rack wells to prevent sample loss from overturned racks
- Precapped with (Low Profile) Screw Cap or Push Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C		Working volume at -80°C	
0.90ml	0.80ml	0.80ml	0.73ml

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	V-bottom
Working volume (+21ºC):	0.80ml (Screw Cap) / 0.90ml (Push Cap)
Tube height:	36.5mm
Tube height in rack:	39.0mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 (with Screw Cap) / -80°C (with Push Cap) to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
1.10ml Non-Coded Screw Cap tubes V-bottom without caps		
MP32033	1.10ml Non-Coded Screw Cap tubes in Bulk	960 tubes
MP32033L	1.10ml Non-Coded Screw Cap tubes Snap in Bulk	960 tubes
MPW32034BC3	1.10ml Non-Coded Screw Cap tubes in Roborack-96	10 racks
MPW32034LBC3	1.10ml Non-Coded Screw Cap tubes Snap in Roborack-96	10 racks
MP32120	1.10ml Non-Coded Screw Cap tubes in Micronic 96-3 Rack with low cover	10 racks
MP32121	1.10ml Non-Coded Screw Cap tubes in Micronic 96-3 Rack with high cover	10 racks
1.10ml 2D Data-Matrix coded Screw Cap tubes V-bottom without caps		
MP52318	1.10ml 2D Data-Matrix coded Screw Cap tubes in Bulk	960 tubes
MP52318L	1.10ml 2D Data-Matrix coded Screw Cap tubes Snap in Bulk	960 tubes
MPW52319BC3	1.10ml 2D Data-Matrix coded Screw Cap tubes in Roborack-96	10 racks
MPW52319LBC3	1.10ml 2D Data-Matrix coded Screw Cap tubes Snap in Roborack-96	10 racks
MP52540	1.10ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-3 Rack with low cover	10 racks
MP52541	1.10ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-3 Rack with high cover	10 racks

DID YOU KNOW...

The Micronic capping range, consisting of Screw Caps and Push Caps, has been tested extensively in different low storage temperatures. The results of these tests show that the Micronic Screw Caps can be best used in cryogenic temperatures (-80°C and colder) due to the flexibility of the high quality silicon O-ring around the base of the cap. Up to -80°C the Micronic Push Caps are the best and most economical solution. *Test results also show that the Micronic Push Caps can be used in temperatures up to -80°C without popping off!* (Reference: Test Report TR021901)

SAMPLE STORAGE TUBES
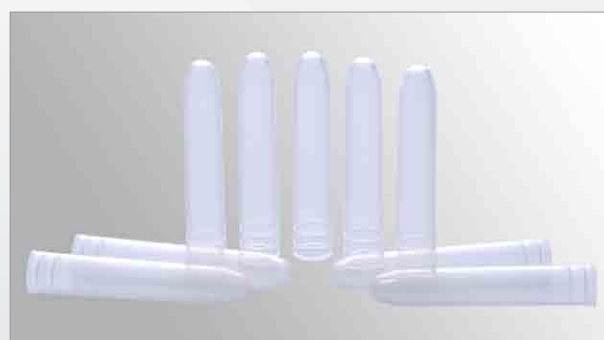
1.40ML STORAGE TUBES

Standard available in the Roborack-96, Comorack-96 and 96-4 Rack: The racks feature a laser etched 1D rack barcode on one side of the rack and 'Twist-Lock' to prevent tubes from turning during screw (de)capping.

Codings: The 1.40ml tubes are available Non-coded, Alphanumeric coded or with a unique 2D TraXis / Data-Matrix code. The Alphanumeric and 2D codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 1.40ml Screw Cap tube is available in a Push Cap and Screw Cap variant. The working volume ranges from 0.95ml to 1.20ml (depending on the capping style / storage temperature / inner tube shape).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at ultra-low temperatures
- Available Non-coded, Alphanumeric coded or with a unique 2D TraXis / Data-Matrix code (adhere to the ECC200 standard)
- Alphanumeric codes, 2D codes and 1D rack barcodes are permanently laser etched
- 2D codes also have a human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk, refill, Roborack-96 and Micronic 96-4 Rack (based on the ANSI / SLAS standards for storage racks)
- 100% quality control on all 2D codes
- Class 7 clean room production
- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Amber tubes for light sensitive samples
- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Snap tubes; tubes are locked into the rack wells to prevent sample loss from overturned racks
- Precapped with (Low Profile) Screw Cap or Push Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C		Working volume at -80°C	
1.15ml	1.04ml	0.95ml	1.01ml

INNOVATION IN SAMPLE STORAGE | **MICRONIC**

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	V- or U-bottom (Screw Cap tube) / V- or U-bottom (Push Cap tube)
Working volume (+21ºC):	Please see 'Tube Overview and Specs' on page 6-7
Tube height:	44.0mm
Tube height in rack:	46.5mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 (with Screw Cap) / -80°C (with Push Cap) to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
1.40ml Standard Push Cap tubes U-bottom without caps (round bottom)		
MP32022	1.40ml Non-Coded Push Cap tubes in Bulk	960 tubes
MPW42002BC3	1.40ml Non-Coded Push Cap tubes in Roborack-96	10 racks
MP22502	1.40ml Non-Coded Push Cap tubes in Comorack-96 (polycarbonate)	10 racks
1.40ml Screw Cap tubes V-bottom without caps		
MP32074	1.40ml Non-Coded Screw Cap tubes in Bulk	960 tubes
MPW32076BC3	1.40ml Non-Coded Screw Cap tubes in Roborack-96	10 racks
MP32130	1.40ml Non-Coded Screw Cap tubes in Micronic 96-4 Rack with low cover	10 racks
MP32131	1.40ml Non-Coded Screw Cap tubes in Micronic 96-4 Rack with high cover	10 racks
MP42070	1.40ml Alphanumeric coded Screw Cap tubes in refill carrier-96	10 racks
MPW42071BC3	1.40ml Alphanumeric coded Screw Cap tubes in Roborack-96	10 racks
MP42130	1.40ml Alphanumeric coded Screw Cap tubes in Micronic 96-4 Rack with low cover	10 racks
MP42131	1.40ml Alphanumeric coded Screw Cap tubes in Micronic 96-4 Rack with high cover	10 racks
MP52353	1.40ml 2D Data-Matrix coded Screw Cap tubes in Bulk	960 tubes
MPW52355BC3	1.40ml 2D Data-Matrix coded Screw Cap tubes in Roborack-96	10 racks
MP52550	1.40ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-4 Rack with low cover	10 racks
MP52551	1.40ml 2D Data-Matrix coded Screw Cap tubes in Micronic 96-4 Rack with high cover	10 racks
1.40ml Screw Cap tubes U-bottom without caps		
MP32062	1.40ml Non-Coded Screw Cap tubes in Bulk	960 tubes
MPW32042BC3	1.40ml Non-Coded Screw Cap tubes in Roborack-96	10 racks
MPW42063BC3	1.40ml Alphanumeric coded Screw Cap tubes in Roborack-96	10 racks
MP52345	1.40ml 2D Data-Matrix coded Screw Cap tubes in Bulk	960 tubes
MPW52330BC3	1.40ml 2D Data-Matrix coded Screw Cap tubes in Roborack-96	10 racks

Other item numbers are available for 1.40ml Push Cap tubes V- or U-bottom. Also available precapped with (Low Profile) Screw Cap or Push Cap.

SAMPLE STORAGE TUBES

MICRONIC
INNOVATION IN SAMPLE STORAGE

2.00ML STORAGE TUBES
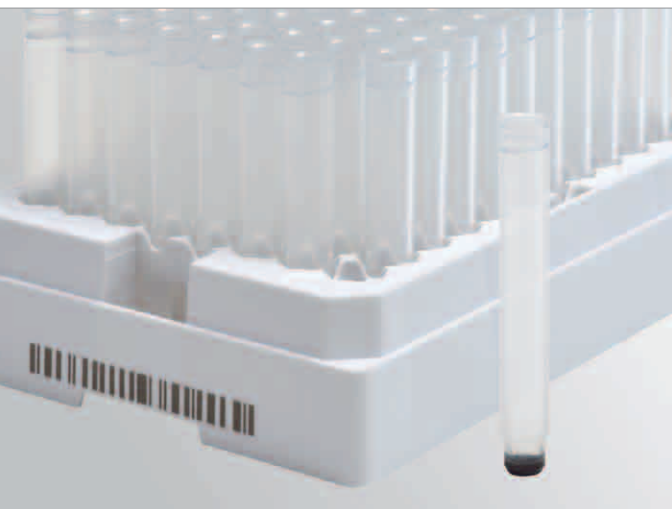
Standard available in the Roborack-96: The Roborack-96 features a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 2.00ml tubes are available Alphanumeric coded or with a unique 2D Data-Matrix code. The Alphanumeric and 2D Data-Matrix codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 2.00ml Screw Cap tubes work equally well with either Screw Caps or Push Caps. The working volume of the 2.00ml tube ranges from 1.25ml to 1.58ml (depending on the capping style / storage temperature).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at low temperatures
- Available Alphanumeric coded or with a unique 2D Data-Matrix code (adhere to the ECC200 standard) on the tube bottom
- Alphanumeric codes, 2D codes and 1D rack barcodes are permanently laser etched
- 2D codes also have a human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk and Roborack-96 (based on the ANSI / SLAS standards for storage racks)
- 100% quality control on all 2D codes
- Class 7 clean room production
- RNase/DNase and Pyrogen free

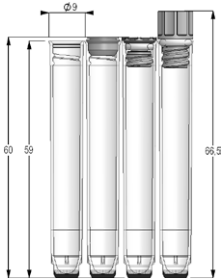## ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Snap tubes; tubes are locked into the rack wells to prevent sample loss from overturned racks
- Precapped with (Low Profile) Screw Cap or Push Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C		Working volume at -20°C	
1.58ml	1.49ml	1.39ml	1.38ml

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	U-bottom
Working volume (+21ºC):	1.49ml (Screw Cap) / 1.58ml (Push Cap)
Tube height:	59.0mm
Tube height in rack:	61.5mm (without cover)
Resistance:	Chemical solvents
Temperature range:	-80°C(*) to +100°C

* For -80°C storage of the 2.00ml tube a special freeze protocol should be used.

ORDERING INFORMATION

Catalog number	Description	Unit
2.00ml Screw Cap tubes U-bottom without caps		
MPW42073BC3	2.00ml Alphanumeric coded Screw Cap tubes in Roborack-96	6 racks
MPW42073LBC3	2.00ml Alphanumeric coded Screw Cap tubes Snap in Roborack-96	6 racks
MP52359	2.00ml 2D Data-Matrix coded Screw Cap tubes in Bulk	480 tubes
MP52359L	2.00ml 2D Data-Matrix coded Screw Cap tubes Snap in Bulk	480 tubes
MPW52360BC3	2.00ml 2D Data-Matrix coded Screw Cap tubes in Roborack-96	6 racks
MPW52360LBC3	2.00ml 2D Data-Matrix coded Screw Cap tubes Snap in Roborack-96	6 racks
2.00ml Screw Cap tubes U-bottom standard precapped with Grey (Low Profile) Screw Caps		
MPW42073BC3-Z20	2.00ml Alphanumeric coded Screw Cap tubes with Screw Caps in Roborack-96	6 racks
MP52359-Z20	2.00ml 2D Data-Matrix coded Screw Cap tubes with Screw Caps in Bulk	480 tubes
MP52359L-Z20	2.00ml 2D Data-Matrix coded Screw Cap tubes Snap with Screw Caps in Bulk	480 tubes
MPW52360BC3-Z20	2.00ml 2D Data-Matrix coded Screw Cap tubes with Screw Caps in Roborack-96	6 racks
MPW52360BC3-V20	2.00ml 2D Data-Matrix coded tubes with Low Profile Screw Caps in Roborack-96	6 racks
2.00ml Screw Cap tubes U-bottom standard precapped with TPE Caps Natural		
MPW52360BC3-X01	2.00ml 2D Data-Matrix coded Screw Cap tubes with TPE Caps in Roborack-96	6 racks
MPW52360LBC3-X01	2.00ml 2D Data-Matrix coded Screw Cap tubes Snap with TPE Caps in Roborack-96	6 racks

DID YOU KNOW...

Micronic also offers the 2.50ml Push Cap tube, which has the highest net working volume on 96-format: 2.50ml. The tubes have a round outer bottom, are Non-coded and are standard available in the Roborack-96. The Univo Electric Capper CP860 has been specifically designed to automatically close 2.00ml and 2.50ml sample storage tubes with Push Caps.

SAMPLE STORAGE TUBES

4.00ML STORAGE TUBES

Standard available in the Micronic 48-4 Rack: The 48-well format rack features a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 4.00ml tubes are available Non-coded, Alphanumeric coded or with a unique 2D Data-Matrix code. The Alphanumeric and 2D codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 4.00ml Screw Cap tubes can be sealed with Micronic Screw Caps in 48-format. The working volume of the 4.00ml tube ranges from 2.45ml to 2.70ml (depending on the storage temperature).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at ultra-low temperatures
- Available Non-coded, Alphanumeric coded or with a unique 2D Data-Matrix code (adhere to the ECC200 standard)
- Alphanumeric codes, 2D codes and 1D rack barcodes are permanently laser etched
- A large human-readable code next to the 2D code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk and Micronic 48-4 Rack (based on the ANSI / SLAS standards for storage racks)
- 48-format Screw Caps are available in 12 colors
- 100% quality control on all 2D codes
- Class 7 clean room production
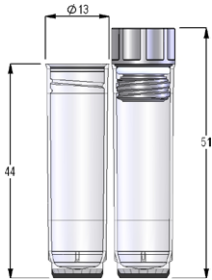- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Precapped with Screw Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C	Working volume at -80°C
2.70ml	2.45ml

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	Flat bottom
Working volume (+21ºC):	2.70ml (Screw Cap)
Tube height:	44.0mm
Tube height in rack:	45.0mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
4.00ml Screw Cap tubes without caps		
MP32200	4.00ml Non-Coded Screw Cap tubes Bulk	480 tubes
MP32201	4.00ml Non-Coded Screw Cap tubes in Micronic 48-4 Rack with high cover	10 racks
MP42200	4.00ml Alphanumeric coded Screw Cap tubes in Micronic 48-4 Rack with high cover	10 racks
MP52440	4.00ml 2D Data-Matrix coded Screw Cap tubes in Bulk	480 tubes
MP52441	4.00ml 2D Data-Matrix coded Screw Cap tubes in Micronic 48-4 Rack with high cover	10 racks
4.00ml Screw Cap tubes standard precapped with Grey Screw Caps		
MP52440-Z20	4.00ml 2D Data-Matrix coded Screw Cap tubes with Screw Caps in Bulk	480 tubes
MP52441-Z20	4.00ml 2D Data-Matrix coded Screw Cap tubes with Screw Caps in Micronic 48-4 Rack	10 racks

DID YOU KNOW...

Micronic has the largest cap color range in the market for both Screw Caps and Push Caps (TPE), ideal for your cap color coding practices. While most laboratories use 1D and 2D barcodes on sample tubes to ensure traceability of samples, cap color inspection will further promote the tube identification process. Cap color coding in laboratories is particularly useful when used to distinguish between different types of research purposes. Micronic developed a standard cap color coding guide for 96-, 48- and 24-well format sample storage tubes. Please see Tech Note 'Cap Color Coding' on our website www. micronic.com, and find out more!

MICRONIC TECHNOTE

CAP COLOR CODING
For biological samples

SAMPLE STORAGE TUBES

6.00ML STORAGE TUBES

Standard available in the Arctic Rack-24 and Micronic 24-4 Rack: The racks feature a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 6.00ml tubes are standard available with a unique 2D Data-Matrix code on the tube bottom. The 2D Data-Matrix codes are laser etched in the Polypropylene code area, in turn guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 6.00ml Screw Cap tubes can be sealed with Micronic Screw Caps in 24-format. The working volume of the 6.00ml tube ranges from 3.85ml to 4.80ml (depending on the storage temperature).

SUPERIOR FEATURES

- Internal thread provides the most optimal sealing for storage at ultra-low temperatures
- Standard available with a unique 2D Data-Matrix code (adhere to the ECC200 standard) on the tube bottom
- 2D codes and 1D rack barcodes are permanently laser etched
- A large human-readable code next to the 2D code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk, Arctic Rack-24 and Micronic 24-4 Rack (based on the ANSI / SLAS standards for storage racks)
- 24-format Screw Caps are available in 12 colors
- 100% quality control on all 2D codes
- Class 7 clean room production
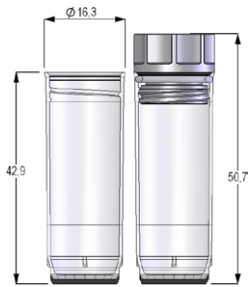- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Precapped with Screw Cap
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C	Working volume at -80°C
4.80ml	3.85ml

SPECIFICATIONS

Material:	Highest purity Polypropylene
Inner tube shape:	Flat bottom
Working volume (+21ºC):	4.80ml (Screw Cap)
Tube height:	42.9mm
Tube height in rack:	45.4mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
6.00ml Screw Cap tubes without caps		
MP52400	6.00ml 2D Data-Matrix coded Screw Cap tubes in Bulk	240 tubes
MPW52401BC5	6.00ml 2D Data-Matrix coded Screw Cap tubes in Arctic Rack-24	10 racks
MP52410	6.00ml 2D Data-Matrix coded Screw Cap tubes in Micronic 24-4 Rack with high cover	10 racks
6.00ml Screw Cap tubes standard precapped with Grey Screw Caps		
MP52400-Z20	6.00ml 2D Data-Matrix coded Screw Cap tubes with Screw Caps in Bulk	240 tubes
MPW52401BC5-Z20	6.00ml 2D Data-Matrix coded Screw Cap tubes with Screw Caps in Arctic Rack-24	10 racks
MP52410-Z20	6.00ml 2D Data-Matrix Screw Cap tubes with Screw Caps in Micronic 24-2 Rack	10 racks
7.50ml Non-Coded tubes		
MP32026	7.50ml Non-Coded tubes Flat bottom in Bulk	100 tubes
MP32029	7.50ml Non-Coded tubes Flat bottom in Comorack-24 (polycarbonate)	10 racks
7.50ml tubes 2D Data-Matrix coded tubes		
MP52314	7.50ml 2D Data-Matrix coded tubes Flat bottom in Bulk	100 tubes
MP52315	7.50ml 2D Data-Matrix coded tubes Flat bottom in Comorack-24 (polycarbonate)	10 racks

DID YOU KNOW...

Next to the 6.00ml tube, Micronic also offers the 7.50ml sample storage tube in 24-well format. The 7.50ml tubes is an economical solution to store larger quantities of liquid or solid biological samples. The tubes have a working volume of 6.50ml, are sealed with the attached hinged cap, and are standard available in the Comorack-24. The 7.50ml tube from Micronic is most often used to store insects, plants or larger quantities of seeds.

SAMPLE STORAGE TUBES

3.00ML TISSUE STORAGE TUBES

Available in the Micronic 24-2 Rack: The 24-well format rack features a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. Optionally available in bulk.

Codings: The 3.00ml Tissue tubes are available with a unique 2D Data-Matrix code. The 2D Data-Matrix code and human-readable codes are laser etched in the Polypropylene on the tube bottom / side, guaranteeing the highest resistance to solvent attack and ensuring a reliable code reading.

Working volume: The 3.00ml Tissue storage tubes are available with grey Screw Caps. The Tissue tube is ideal for the storage of tissue samples with a size of $0.5cm^2$ to $1.0cm^2$.

SUPERIOR FEATURES

- External thread for minimum cross contamination and maximum working volume
- Wide shallow opening enabling easy loading / removal of tissue samples using tweezers
- Unique 'single turn' TPE / Polypropylene Screw Cap is available in 6 different colors
- Available with a unique 2D Data-Matrix code on the tube bottom and large human readable on the tube sidewall
- 2D codes are permanently laser etched
- 2D codes also have a large human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in bulk and Micronic 24-2 Rack (based on the ANSI / SLAS standards for storage racks)
- 100% quality control on all 2D codes
- Class 7 clean room production
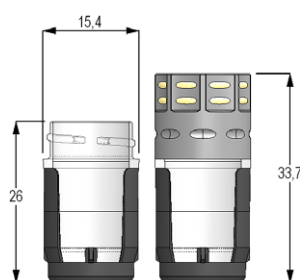- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Precapped with Screw Caps
- Customized 2D Data-Matrix tube code and 1D rack barcode

Working volume at +21°C	Working volume at -80°C
2.50ml	2.40ml

SPECIFICATIONS

|	
Material:	Highest purity Polypropylene
Inner tube shape:	Flat bottom
Working volume (+21ºC):	2.50ml (Screw Cap)
Tube height:	26.0mm
Tube height in rack:	27.0mm (without cover)
Resistance:	Chemical solvents
Temperature range:	Vapor phase LN2 to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
3.00ml Screw Caps tubes without caps		
MP52480	3.00ml 2D Data-Matrix coded externally threaded Screw Cap tubes in Bulk	240 tubes
MP52482	3.00ml 2D Data-Matrix coded externally threaded Screw Cap tubes in Micronic 24-2 Rack	10 racks
3.00ml Screw Cap tubes precapped with Grey/Natural Screw Cap		
MP52480-Z01	3.00ml 2D Data-Matrix coded externally threaded Screw Cap tubes precapped with Grey / Natural Screw Caps in Bulk	240 tubes
MP52482-Z01	3.00ml 2D Data-Matrix coded externally threaded Screw Cap tubes precapped with Grey / Natural Screw Caps in Micronic 24-2 Rack	10 racks

DID YOU KNOW...

Micronic conducted extensive research in the tissue storage market regarding the ideal tissue storage product. Several biobanks and other laboratory facilities indicated which features a storage tube for tissue samples should have. Based on the results, Micronic developed the 3.00ml Tissue Storage Tube. The tube has the perfect shape for storing tissue pieces from ± 0.5cm^2 to 1.0cm^2. The tube is shallow, has a wide opening and a flat inner bottom, enabling easy loading / removal of tissue samples using tweezers. The tube is also fully traceable because of the permanently laser-etched 2D Data-Matrix code on the tube bottom and the large human-readable code on the tube sidewall.

SAMPLE STORAGE TUBES

SPECIAL TUBES
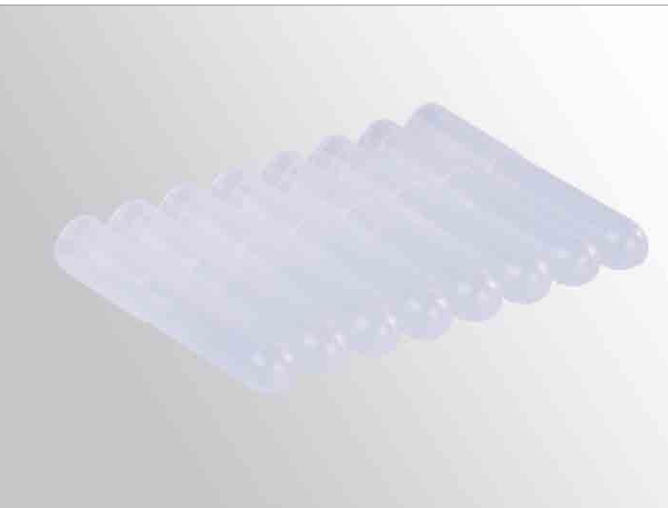
Tubestrip-8: An economical Non-coded solution for storing up to 8 samples in a linked row with the same features and benefits as other Micronic tubes. The Micronic TPE Capband-8 or EVA Capband-8 are available for closure. The gross volume of the Tubestrip-8 is 1.40ml, net working volume is 1.00ml when used with Push Caps (TPE or EVA). The Tubestrip-8 has a inner U-bottom.

Amber tubes: The Amber storage tube uniquely safeguards light sensitive samples while still usefully allowing visual checking of enclosed sample volume. The tubes (including code area) are manufactured of the highest-purity Amber Polypropylene. Available in 0.75ml and 1.40ml, Non-coded or with unique 2D Data-Matrix code on the tube bottom. The internal thread provides the most optimal sealing for storage at ultra-low temperatures.

SUPERIOR FEATURES

Tubestrip-8

- Standard available Non-coded
- Class 7 clean room production
- RNase/DNase and Pyrogen free
- Additional options: sterile, snap tubestrips
- Low cost solution for storing up to 8 samples in a linked row

Amber tubes

- For light sensitive samples
- Available Non-coded or with unique laser etched 2D Data-Matrix code (adhere to the ECC200 standard) on the tube bottom
- 2D codes also have a human-readable code
- Black code surface cannot be separated from the transparent tube due to the unique 2K injection molding technique
- Available in Loborack-96 or Roborack-96 (depends on volume)
- Class 7 clean room production
- RNase/DNase and Pyrogen free
- Additional options: sterile, snap tubes, precapped, customized 2D Data-Matrix code and 1D rack barcode
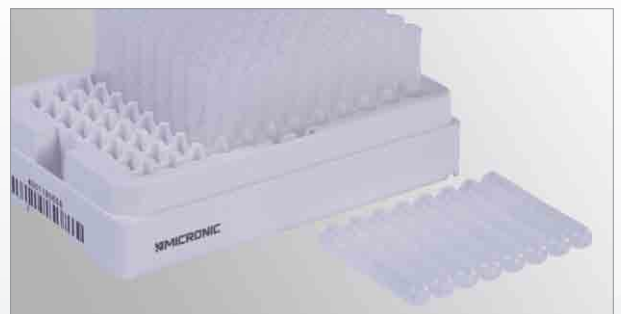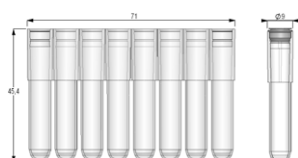
SPECIFICATIONS

|	
Material tubestrip-8:	Highest purity Polypropylene
Inner tube shape:	U-bottom
Working volume (+21ºC):	1.10ml
Tube height without cap:	45.4mm / 46.4mm with Push Cap (EVA)
Temperature range:	-80°C to +100°C

For specifications of the Amber tubes see page 10 (0.75ml) or page 14 (1.40ml)

ORDERING INFORMATION

Catalog number	Description	Unit
1.40ml Non-coded Push Cap Tubestrip U-bottom		
MP32067	1.40ml Non-coded Push Cap tubes in strip of 8-tubes	120 strips
MP32067L	1.40ml Non-coded Push Cap tubes in strip of 8-tubes Snap	120 strips
Products for Light Sensitive Samples - 0.75ml / V-bottom		
MPW32078BC3	0.75ml Non-coded Push Cap tubes Amber in Loborack-96	10 racks
MPW32078LBC3	0.75ml Non-coded Push Cap tubes Amber Snap in Loborack-96	10 racks
MPW52647BC3	0.75ml 2D Data-Matrix coded Push Cap tubes Amber in Loborack-96	10 racks
MPW52647LBC3	0.75ml 2D Data-Matrix coded Push Cap tubes Amber Snap in Loborack-96	10 racks
Products for Light Sensitive Samples - 1.40ml / U- or V-bottom		
MPW32080BC3	1.40ml Non-coded Push Cap tubes Amber U-bottom in Roborack-96	10 racks
MPW52651BC3	1.40ml 2D Data-Matrix coded Push Cap tubes Amber U-bottom in Roborack-96	10 racks
MPW52649BC3	1.40ml 2D Data-Matrix coded Screw Cap tubes Amber V-bottom in Roborack-96	10 racks
MPW52649LBC3	1.40ml 2D Data-Matrix coded Screw Cap tubes Amber V-bottom Snap in Roborack-96	10 racks

DID YOU KNOW...

Amber tubes are designed from special amber colored material (sample remains visible) to eliminate sample degradation by exposure to light. Examples of analytes that are light sensitive and can therefore be perfectly stored in the Amber tubes: Bilirubin, Erythrocyte Protoporphyrin or Carotene.

SAMPLE STORAGE TUBES
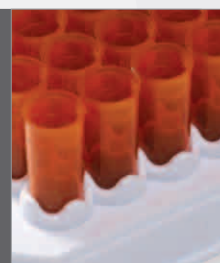
BLUECHIIP® TRACKING SYSTEM
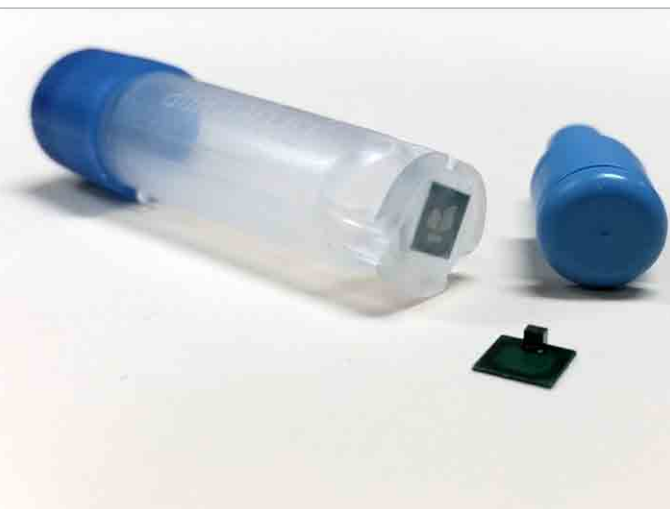
Tracking technology: Bluechiip®'s unique technology is a MEMS-based (micro-electronic mechanical system) smart chip providing a secure wireless tracking technology. The smart chip enables sample identification and temperature sensing in extreme cryogenic environments where other identification methods struggle. *Please contact us for availability.*

Equipment: The Matchbox Reader® and Stream software deliver sample integrity and complete temperature chain-of-custody for biobanking.

Stream software: The Stream software is user-friendly and tracks ID, location and temperature. Can be used as stand-alone or easily integrated with existing database solutions. It meets all ISBER and CAP guidelines for sample storage.

SUPERIOR FEATURES

The Chiip that makes sense

- Operates in Cryogenic temperatures (-196ºC to + 60ºC)
- Survives autoclave and gamma sterilization
- Reading unaffected by frost or humidity

The Matchbox Reader®

- Reads Cryovial and Cryotags in under 1 second
- Wand attachment to read samples directly in temperature control environments
- Logs sample ID and sample temperature with time stamps and user traceability
- Integrated barcode scanner for additional sample traceability
- Customizable to warn about samples approaching to a critical temperature
- Wi-Fi connection and 32GB of internal memory for holding scan data
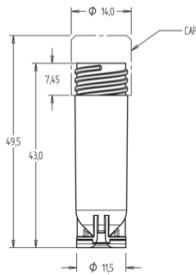
Handheld Reader

- Scan and track samples anywhere in your lab or logistical process
- WIFI enabled to send data to Stream database

Multi-vial Reader

- Read a box of cryovials in seconds
- No need to remove frost or warm up damaging samples
- Interfaces directly with existing Matchbox reader
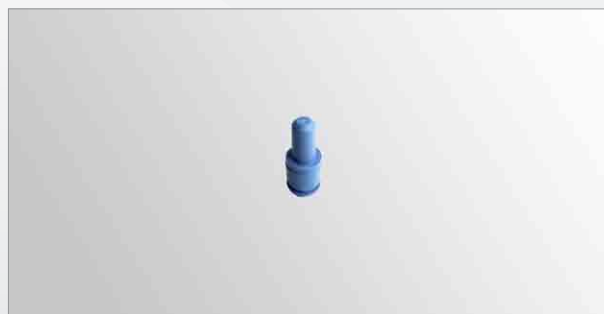
SPECIFICATIONS

Material:	Polypropylene (PP)
Inner tube shape:	V-bottom
Working volume:	1.20ml
Tube height:	43.0mm
Tube height with cap:	49.5mm
Resistance:	Chemical solvents
Temperature range:	-196°C to +60°C

ORDERING INFORMATION

Catalog number	Description	Unit
Bluechiip® Tagged products		
RH83012	Cryovial	1 piece
RH83013	Cryovial	50 pieces
RH83014	Cryotag	1 piece
RH83015	Cryotag	10 pieces
Bluechiip® Cryo Equipment		
RH83004	6-bay Frame	1 unit
RH83007	8-bay Frame	1 unit
RH83010	12-bay Tower Rack	1 unit
Bluechiip® Reader		
RH83002	Matchbox Reader 3.5	1 unit
RH83003	Stream Software (includes 4 users and 1 administrator ID)	1 unit
Bluechiip® Starter Pack		
RH83001	Biobank Starter Pack (includes Matchbox Reader, Stream Software, 50 cryovials, 10 6 Cryotags and 2 ID fobs)	1 unit

DID YOU KNOW...

Bluechiip® also offers patented cassettes for blood bags which incorporate the cryotag technology as well, enabling the identity and temperature history of the cassette to be known throughout its operational use. The Bluechiip® cassettes are up to 76% cooler compared to aluminum cassettes in the first 10 seconds following removal from a liquid nitrogen environment. It also takes 73% longer for the internal air temperature to increase by 50°C preventing unwanted thermal excursions compared to aluminum cassettes. The cassettes are available in a variety of colors.
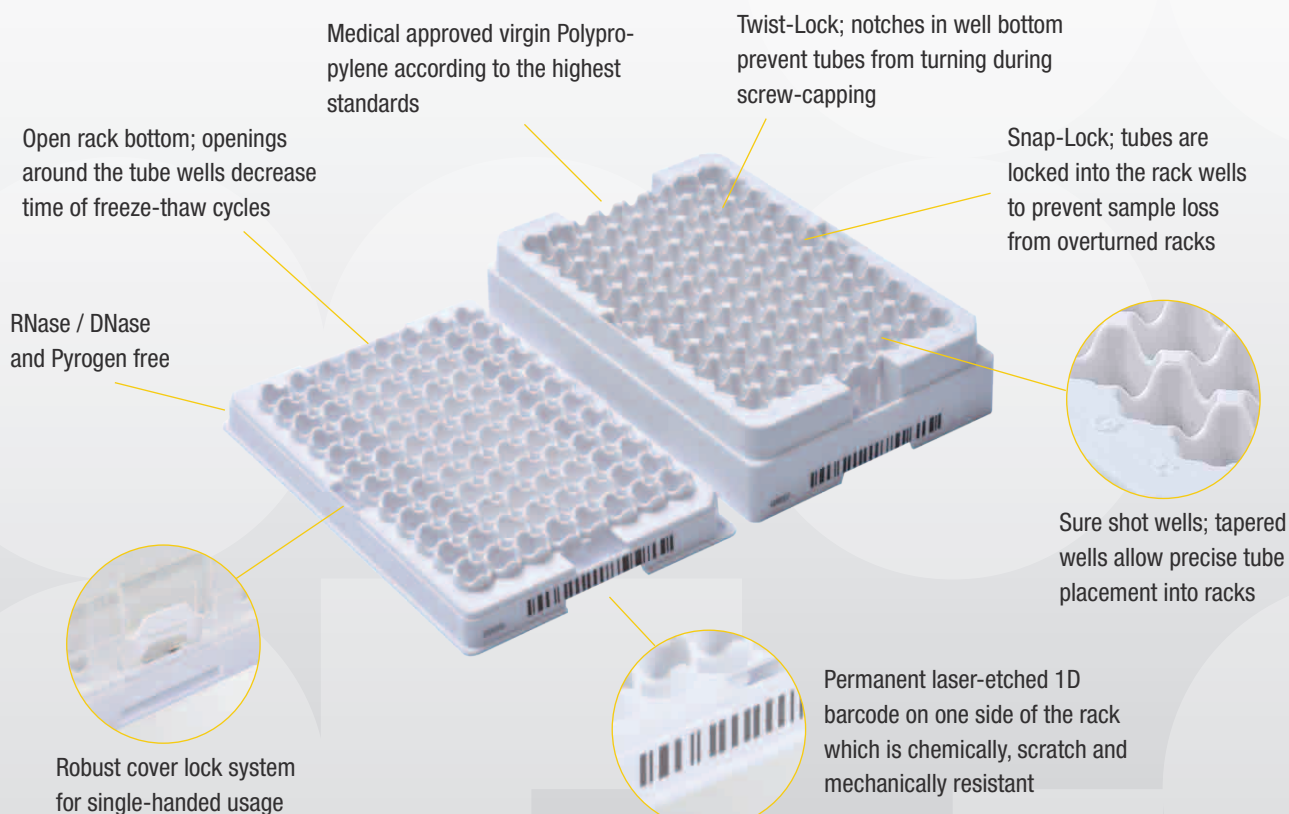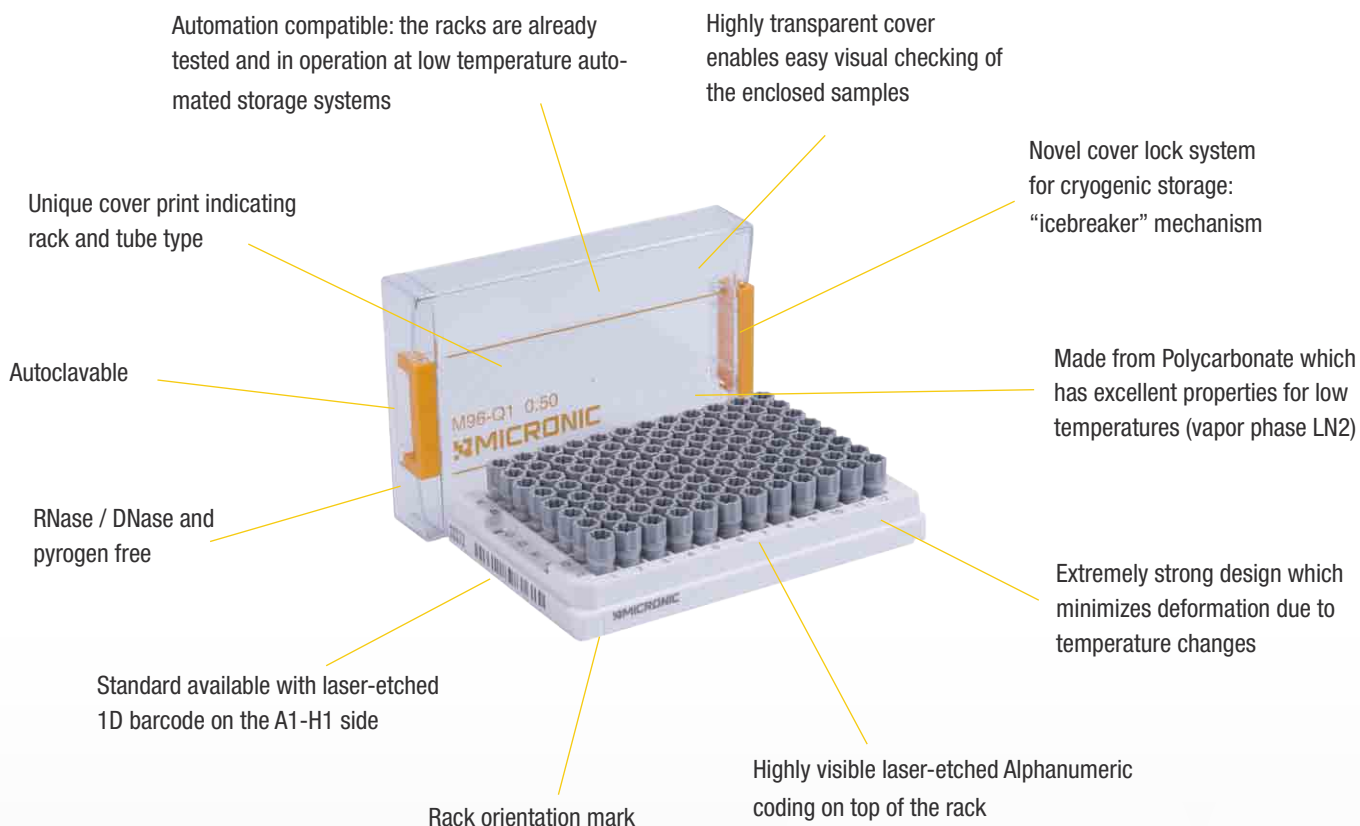
SAMPLE STORAGE TUBES

MICRONIC
INNOVATION IN SAMPLE STORAGE

PRODUCTION IN
THE NETHERLANDS AND
THE UNITED STATES

CERTIFIED CLASS 7 CLEAN ROOM
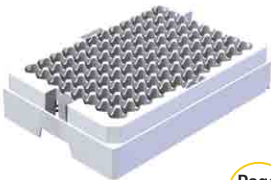INJECTION MOLDING
AND ASSEMBLY

SAMPLE STORAGE RACKS

ALL MICRONIC STORAGE RACKS ARE BASED ON THE GLOBAL RECOGNIZED ANSI / SLAS 1-2004 THROUGH ANSI / SLAS 4-2004 STANDARDS (FORMERLY RECOGNIZED AS THE ANSI / SBS STANDARDS) AND PROVIDE AN EASY AND AUTOMATION FRIENDLY METHOD TO STORE YOUR SAMPLE STORAGE TUBES. FOR EACH SAMPLE STORAGE TUBE FORMAT MICRONIC OFFERS A ROBUST AND USER FRIENDLY STORAGE RACK. THE RACKS FEATURE A LASER ETCHED 1D RACK BARCODE ON ONE SIDE OF THE RACK AND 'TWIST-LOCK' TO PREVENT TUBES FROM TURNING DURING SCREW (DE)CAPPING. BESIDES THE STANDARD BARCODED RACKS, MICRONIC ALSO OFFERS THE SERVICE TO SUPPLY LASER-ETCHED 1D BARCODES IN CUSTOMIZED FORMATS.

SUPERIOR FEATURES OF MICRONIC SAMPLE STORAGE RACKS

Automation compatible: the racks are already tested and in operation at low temperature automated storage systems

Highly transparent cover enables easy visual checking of the enclosed samples

Novel cover lock system for cryogenic storage: "icebreaker" mechanism

Unique cover print indicating rack and tube type

Autoclavable

Made from Polycarbonate which has excellent properties for low temperatures (vapor phase LN2)

RNase / DNase and pyrogen free

Extremely strong design which minimizes deformation due to temperature changes

Standard available with laser-etched 1D barcode on the A1-H1 side

Highly visible laser-etched Alphanumeric coding on top of the rack

Rack orientation mark

Medical approved virgin Polypropylene according to the highest standards

Twist-Lock; notches in well bottom prevent tubes from turning during screw-capping

Snap-Lock; tubes are locked into the rack wells to prevent sample loss from overturned racks

Open rack bottom; openings around the tube wells decrease time of freeze-thaw cycles

RNase / DNase and Pyrogen free

Sure shot wells; tapered wells allow precise tube placement into racks

Robust cover lock system for single-handed usage

Permanent laser-etched 1D barcode on one side of the rack which is chemically, scratch and mechanically resistant

RACK OVERVIEW AND SPECIFICATIONS (96-WELL FORMAT)

	LOBORACK-96	ROBORACK-96	COMORACK-96
	Page 36	Page 36	Page 36
Rack material	PP	PP	PC
Quantity of tubes in rack	96	96	96
Available for tube volumes (nominal)	0.50ml and 0.75ml	1.10ml, 1.40ml, 2.00ml and 2.50ml	1.40ml (standard tube)
Rack height without cover	15.0mm	28.4mm	31.1mm
Tube height in rack without cover	21.0mm (0.50ml tube without cap)	39.0mm (1.10ml tube without cap)	46.5mm (1.40ml tube without cap)
(*Tubes with Push Caps and tubes with	22.0mm (0.50ml tube with Push Cap*)	40.0mm (1.10ml tube with Push Cap*)	47.5mm (1.40ml tube with Push Cap)
Low Profile Screw Caps are identical in	28.5mm (0.50ml tube with Screw Cap)	46.4mm (1.10ml tube with Screw Cap)	
height)	28.5mm (0.75ml tube without cap)	46.5mm (1.40ml tube without cap)	
	29.5mm (0.75ml with Push Cap*)	47.5mm (1.40ml with Push Cap*)	
	36.0mm (0.75ml with Screw Cap)	54.5mm (1.40ml with Screw Cap)	
		61.5mm (2.00ml tube without cap)	
		62.5mm (2.00ml with Push Cap*)	
		69.0mm (2.0ml with Screw Cap)	
		85.0mm (2.50ml tube without cap)	
		86.0mm (2.50ml with Push Cap)	
Rack height with low cover	23.8mm	41.2mm	n/a
Rack height with standard cover	31.7mm	49.1mm	52.0mm
Rack height with high cover	38.7mm	56.1mm	n/a
Rack height with extra high cover	n/a	88.0mm	n/a
Available barcoded	Yes	Yes	Yes
Available laser etched barcoded	Yes	Yes	No
Twist-Lock	Yes	Yes	No
Available sterile	Yes	Yes	Yes
Available DNase / RNase free	Yes	Yes	Yes
Sure shot design	Yes	Yes	No
Rack locking system (cover)	Yes	Yes	Yes
Autoclavable**	Yes	Yes	Yes
Class 7 clean room production	Yes	Yes	Yes
Temperature range***	Vapor phase LN2 to +100ºC	Vapor phase LN2 to +100ºC	-80ºC to +140ºC
Chemical resistance	+++	+++	+

** The racks can be autoclaved in +121ºC. Please request more information about the amount of cycles per rack type.

*** Temperature range of the material of the tubes, caps and racks is approved from -80ºC to +100ºC. In practice racks are used in lower temperatures until vapor phase LN2 (-150ºC to -196ºC). Micronic does not recommend to store racks in liquid phase nitrogen (LN2).

MICRONIC 96-1	MICRONIC 96-Q1	MICRONIC 96-2	MICRONIC 96-3	MICRONIC 96-4
Page 34	Page 34	Page 34	Page 34	Page 34
PC	PC	PC	PC	PC
96	96	96	96	96
0.50ml	0.50ml	0.75ml	1.10ml	1.40ml
12.0mm	16.0mm	19.0mm	22.7mm	30.0mm
19.5mm (without cap)	19.5mm (without cap)	27.0mm (without cap)	37.5mm (without cap)	45.0mm (without cap)
20.5mm (with Push Cap*)	27.2mm (with Screw Cap)	28.0mm (with Push Cap*)	38.5mm (with Push Cap*)	46.0mm (with Push Cap*)
		34.7mm (with Screw Cap)	45.2mm (with Screw Cap)	52.7mm (with Screw Cap)
23.8mm	30.8mm	30.8mm	41.5mm	48.8mm
n/a	n/a	n/a	n/a	n/a
n/a	n/a	37.8mm	48.5mm	55.8mm
n/a	n/a	n/a	n/a	n/a
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
No	No	No	No	No
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Vapor phase LN2 to +140ºC	Vapor phase LN2 to +140ºC	Vapor phase LN2 to +140ºC	Vapor phase LN2 to +140ºC	Vapor phase LN2 to +140ºC
++/+	++/+	++/+	++/+	++/+

RACK OVERVIEW AND SPECIFICATIONS (48- & 24-WELL FORMAT)

	MICRONIC 48-4 RACK	MICRONIC 24-2 RACK	MICRONIC 24-4 RACK
	Page 38	Page 40	Page 40
Rack material	PC	PC	PC
Quantity of tubes in rack	48	24	24
Available for tube volumes (nominal)	4.00ml	3.00ml	6.00ml
Rack height without cover	30.0mm	19.0mm	30.0mm
Tube height in rack without cover	45.0mm (without cap)	27.0mm (without cap)	45.0mm (without cap)
	52.3mm (with Screw Cap)	35.3mm (with Screw Cap)	52.8mm (with Screw Cap)
Rack height with low cover	n/a	n/a	n/a
Rack height with standard cover	55.8mm	37.8mm	55.8mm
Rack height with high cover	n/a	n/a	n/a
Rack height with extra high cover	n/a	n/a	n/a
Available barcoded	Yes	Yes	Yes
Available laser etched barcoded	Yes	Yes	Yes
Twist-Lock	Yes	Yes	Yes
Available sterile	Yes	Yes	Yes
Available DNase / RNase free	Yes	Yes	Yes
Sure shot design	No	No	No
Rack locking system (cover)	Yes	Yes	Yes
Autoclavable**	Yes	Yes	Yes
Class 7 clean room production	Yes	Yes	Yes
Temperature range***	Vapor phase LN2 to +140ºC	Vapor phase LN2 to +140ºC	Vapor phase LN2 to +140ºC
Chemical resistance	++/+	++/+	++/+

** The racks can be autoclaved in +121ºC. Please request more information about the amount of cycles per rack type.

*** Temperature range of the material of the tubes, caps and racks is approved from -80ºC to +100ºC. In practice racks are used in lower temperatures until *vapor phase* LN2

(-150ºC to -196ºC). Micronic does not recommend to store racks in liquid phase nitrogen (LN2).

ARCTIC RACK-24	COMORACK-24
Page 40	Page 40
PC	PC
24	24
6.00ml	7.50ml
36.8mm	36.8mm
45.4mm (without cap)	52.9mm (without cap)
53.2mm (with Screw Cap)	53.4mm (with Hinged Cap)
n/a	n/a
58.0mm	58.0mm
n/a	n/a
n/a	n/a
Yes	Yes
No	No
Yes	Yes
Yes	Yes
Yes	Yes
No	No
Yes	Yes
Yes	Yes
Yes	Yes
Vapor phase LN2 to +140ºC	-80ºC to +140ºC
++/+	+

SAMPLE STORAGE RACKS

96-WELL FORMAT RACKS

The Ultra-Low Temperature (ULT) Racks from Micronic are based on the global recognized ANSI / SLAS standards for storage racks, feature a laser etched 1D rack barcode on one side of the rack and 'Twist-Lock' to prevent tubes from turning during screw (de)capping. The racks are compatible with the leading sample storage automation systems (-20^{0}C, -80^{0}C and lower temperatures).

Tube compatibility: The Micronic ULT Racks in 96-well format can hold 96 individual sample storage tubes: 0.50ml, 0.75ml, 1.10ml and 1.40ml.

Rack dimensions: For the rack dimensions and tube in rack dimensions of the 96-well, see the drawings on the right page.

SUPERIOR FEATURES

- Based on the Society for Laboratory Automation and Screening (ANSI / SLAS) standards for storage racks
- Extremely strong design which minimizes deformation due to temperature changes
- Made from Polycarbonate which has excellent properties for low temperatures (vapor phase LN2)
- Highly transparent cover
- Standard available with laser etched 1D rack barcode
- Unique laser etched Alphanumeric coding on top
- Rack orientation marks on bottom and side
- Secure and safe locking system
- Twist-Lock
- Compatible with the Micronic Tracxer Code Readers
- Class 7 clean room production
- RNase/DNase and Pyrogen free
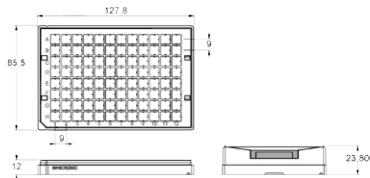

ADDITIONAL OPTIONS

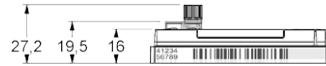- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
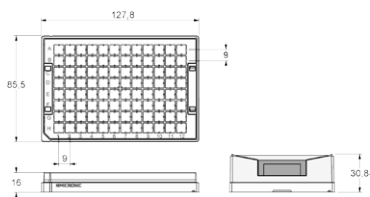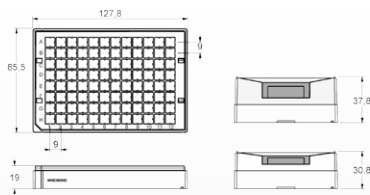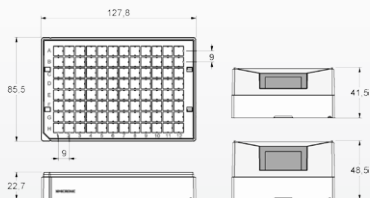- Customized 1D rack barcode

SPECIFICATIONS

Micronic 96-1: rack dimensions and tube in rack dimensions (0.50ml tubes with TPE Push Caps/Low Profile Screw Caps)
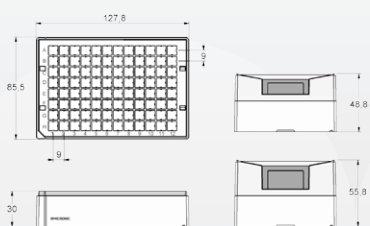
Micronic 96-Q1: rack dimensions and tube in rack dimensions (0.50ml tubes with Screw Caps)

Micronic 96-2: rack dimensions and tube in rack dimensions (0.75ml tubes with TPE Push Caps/Low Profile Screw Caps or Screw Caps)

Micronic 96-3: rack dimensions and tube in rack dimensions (1.10ml tubes with TPE Push Caps/ Low Profile Screw Caps or Screw Caps)

Micronic 96-4: rack dimensions and tube in rack dimensions (1.40ml tubes with TPE Push Caps/ Low Profile Screw Caps or Screw Caps)

ORDERING INFORMATION

Catalog number	Description	Unit
Tube storage racks in 96-well ANSI/SLAS standard format (empty)		
MP51201	Micronic 96-1 Rack with low cover for tubes capped with Push Caps or Low Profile Screw Caps	10 racks
MP51213	Micronic 96-Q1 Rack with high cover for tubes capped with Screw Caps	10 racks
MP51204	Micronic 96-2 Rack with low cover for tubes capped with Push Caps or Low Profile Screw Caps	10 racks
MP51205	Micronic 96-2 Rack with high cover for tubes capped with Screw Caps	10 racks
MP51207	Micronic 96-3 Rack with low cover for tubes capped with Push Caps or Low Profile Screw Caps	10 racks
MP51208	Micronic 96-3 Rack with high cover for tubes capped with Screw Caps	10 racks
MP51210	Micronic 96-4 Rack with low cover for tubes capped with Push Caps or Low Profile Screw Caps	10 racks
MP51211	Micronic 96-4 Rack with high cover for tubes capped with Screw Caps	10 racks

SAMPLE STORAGE RACKS

96-WELL FORMAT RACKS

The Loborack-96 and Roborack-96 are based on the global recognized ANSI / SLAS standards for storage racks, feature a laser etched 1D rack barcode on one side of the rack and 'Twist-Lock' to prevent tubes from turning during screw (de)capping.

The Comorack-96, based on the global recognized ANSI / SLAS standards for storage racks, is manufactured to the industry leading strict tolerances and available with a pre-labelled barcode on the side of the rack.

Rack dimensions: For the rack dimensions and tube in rack dimensions of the Loborack-96, Roborack-96 and Comorack-96, see the drawings on the right page.

SUPERIOR FEATURES

- Based on the Society for Laboratory Automation and Screening (ANSI / SLAS) standards for storage racks
- Standard available with laser etched 1D rack barcode (Loborack-96 and Roborack-96)
- Secure and safe locking system
- Twist-Lock (Loborack-96 and Roborack-96)
- Sure shot design: tapered wells allow precise tube placement into racks (Loborack-96 and Roborack-96)
- Manufactured from Polypropylene (Loborack-96 and Roborack-96) or Polycarbonate (Comorack-96)
- Open rack bottom
- Compatible with the Micronic Tracxer Code Readers
- Class 7 clean room production
- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
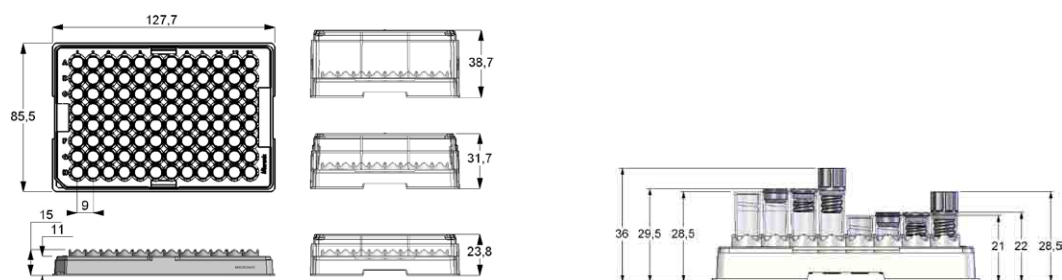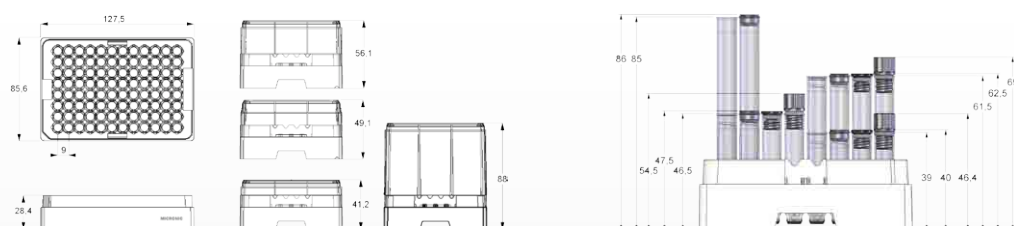- Customized 1D rack barcode
- Pre-labelled rack barcode (Comorack-96)

SPECIFICATIONS

Loborack-96: rack dimensions and tube in rack dimensions (0.50ml and 0.75ml tubes)

Roborack-96: rack dimensions and tube in rack dimensions (1.10ml, 1.40ml, 2.00ml and 2.50ml tubes)

Comorack-96: rack dimensions and tube in rack dimensions (standard 1.40ml tubes)

ORDERING INFORMATION

Catalog number	Description	Unit
Tube storage racks in 96-well ANSI/SLAS standard format (empty)		
MPW51013BC3	Loborack-96 White, Laser etched (including low cover) (barcoded A1-H1 side)	10 racks
MPW51004BC3	Loborack-96 White, Laser etched (including standard cover) (barcoded A1-H1 side)	10 racks
MPW51015BC3	Loborack-96 White, Laser etched (including high cover) (barcoded A1-H1 side)	10 racks
MPW51001BC3	Roborack-96 White, Laser etched (including standard cover) (barcoded A1-H1 side)	10 racks
MPW51012BC3	Roborack-96 White, Laser etched (including high cover) for 1.20ml tubes or tubes precapped with Screw Caps (barcoded A1-H12 side)	10 racks
MPW51016BC3	Roborack-96 White, Laser etched (including extra high cover) for 2.50ml tubes (barcoded A1-H1 side)	10 racks
MPW51017BC3	Roborack-96 White, Laser etched (including low cover) (barcoded A1-H1 side)	10 racks
MP22504	Comorack-96 (including cover) (polycarbonate)	10 racks

SAMPLE STORAGE RACKS

48-WELL FORMAT RACKS

The Micronic 48-4 Rack, based on the global recognized ANSI / SLAS standards for storage racks, features a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping.

Tube compatibility: The Micronic 48-4 Rack can hold 48 individual sample storage tubes (4.00ml), also known as a 48-well configuration.

Rack dimensions: The height of the Micronic 48-4 Rack without cover is 30.0mm. The height with standard cover is 55.8mm. For the dimensions (in mm) of the 4.00ml tubes in the Micronic 48-4 Rack without cover, please see the drawing below.
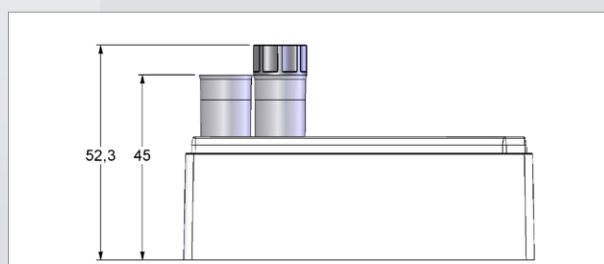
SUPERIOR FEATURES

- Based on the Society for Laboratory Automation and Screening (ANSI / SLAS) standards for storage racks
- Extremely strong design which minimizes deformation due to temperature changes
- Made from Polycarbonate which has excellent properties for low temperatures (vapor phase LN2)
- Highly transparent cover
- Standard available with laser etched 1D rack barcode
- Unique laser etched Alphanumeric coding on top
- Rack orientation marks on bottom and side
- Secure and safe locking system
- Twist-Lock
- Compatible with the Micronic Tracxer Code Readers
- Class 7 clean room production
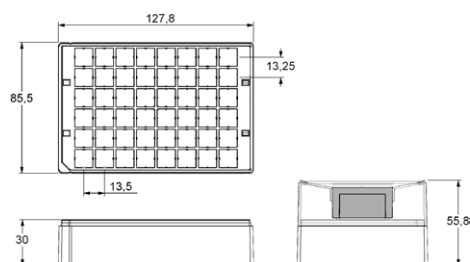- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Customized 1D rack barcode

SPECIFICATIONS

Material: Polycarbonate
Rack height: 30.0mm
Rack height with standard cover: 55.8mm
Chemical resistance: ++/+
Temperature range: Vapor phase LN2 to +140ºC

ORDERING INFORMATION

Catalog number	Description	Unit
Tube storage racks in 48-well ANSI/SLAS standard format (empty)		
MP51301	Micronic 48-4 Rack with cover for tubes capped with Screw Caps	10 racks
Freezer racks		
MP340000	Modular Vertical Freezer Rack	10 racks

DID YOU KNOW...

The Modular Vertical Freezer Rack provides a flexible, lightweight and economic storage solution for samples into a chest freezer. Simply 'click' individual storage holders together to construct a tower of up to 15 holders. Each storage holder has the capacity to house a single Micronic sample storage rack (Micronic ULT racks, Roborack-96, Comorack-96, Comorack-24 or Arctic Rack-24). When using the Micronic Loborack-96 with a low profile cover, one storage holder accommodates two Loboracks, providing a space saving storage solution. The Modular Vertical Freezer Rack can be used in temperatures up to vapor phase LN2 (-196ºC). Compared to an upright freezer, the main advantage of a chest freezer is that it is more energy efficient. When opening a chest freezer, it allows cold air to stay inside instead of coming out. Also, the built-in side wall insulation enables chest freezers to hold their cold temperatures very well and therefore use the least energy to run. In addition to offering lower ongoing energy consumption, chest freezers are typically less expensive to purchase and tend to have longer life cycles than the upright models.

SAMPLE STORAGE RACKS

24-WELL FORMAT RACKS

The Micronic 24-2 Rack, 24-4 Rack and the Arctic Rack-24 are based on the global recognized ANSI / SLAS standards for storage racks, and feature a laser etched 1D rack barcode on one side and 'Twist-Lock' to prevent tubes from turning during screw (de)capping.

The Comorack-24, based on the global recognized ANSI / SLAS standards for storage racks, is manufactured to the industry leading strict tolerances and available with a pre-labelled barcode on the side of the rack.

Rack dimensions: For the rack dimensions and tube in rack dimensions of the Micronic 24-2 Rack, 24-4 Rack, Arctic Rack-25 and Comorack-24, see the drawings on the right page.

SUPERIOR FEATURES

- Based on the Society for Laboratory Automation and Screening (ANSI / SLAS) standards for storage racks
- Extremely strong design which minimizes deformation due to temperature changes (Micronic 24-2 and 24-4 Racks)
- Ideal for storage at ultra-low temperatures (Micronic 24-2, 24-4 Racks and Arctic Rack-24)
- Standard available with laser etched 1D rack barcode (Micronic 24-2, 24-4 Racks and Arctic Rack-24)
- Unique laser etched Alphanumeric coding on top of the rack (Micronic 24-2 and 24-4 Racks)
- Secure and safe locking system
- Twist-Lock
- Autoclavable up to 100 times
- Manufactured from Polycarbonate
- Compatible with the Micronic Tracxer Code Readers
- Class 7 clean room production
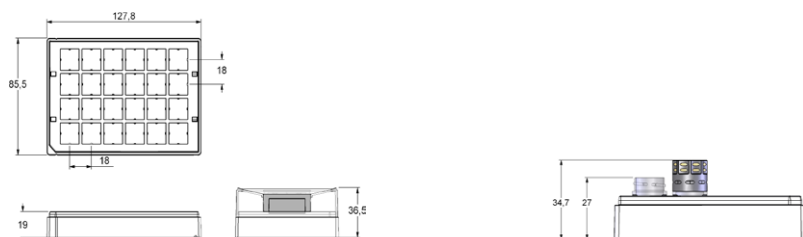- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
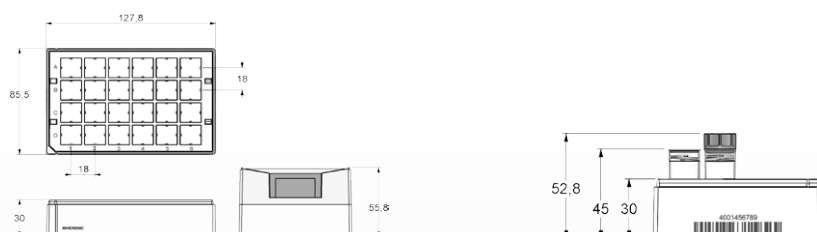- Customized 1D rack barcode
- Pre-labelled rack barcode (Comorack-24)
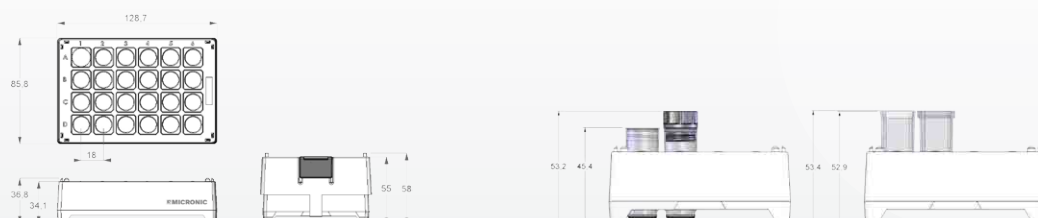
SPECIFICATIONS

Micronic 24-2 Rack: rack dimensions and tube in rack dimensions (3.00ml tissue tubes)

Micronic 24-4: rack dimensions and tube in rack dimensions (6.00ml tubes)

Arctic Rack-24 and Comorack-24: rack dimensions and tube in rack dimensions (6.00ml and 7.50ml tubes)

ORDERING INFORMATION

Catalog number	Description	Unit
Tube storage racks in 24-well ANSI/SLAS standard format (empty)		
MP51401	Micronic 24-2 Rack with cover for tubes capped with Screw Caps	10 racks
MP51403	Micronic 24-4 Rack with high cover for tubes capped with Screw Caps	10 racks
MPW51100BC5	Arctic Rack-24, Laser etched (including cover) (barcoded A1-D1 side and D1-D6 side)	10 racks
MP23100	Comorack-24 (including cover) (polycarbonate)	10 racks

DID YOU KNOW...

Micronic regularly conducts research on the protein binding properties of the materials used for its tubes. The most recent tests show that the Micronic standard Polypropylene (PP) material is, compared to Polystyrene, a very low protein binder. The Micronic standard PP material sterile (gamma radiated) is the lowest protein binder. (Reference: Test Report TR022601)

SAMPLE STORAGE RACKS

MICRONIC
INNOVATION IN SAMPLE STORAGE

PRODUCTION IN THE NETHERLANDS AND THE UNITED STATES

CERTIFIED CLASS 7 CLEAN ROOM INJECTION MOLDING AND ASSEMBLY

SAMPLE STORAGE CAPS

MICRONIC OFFERS AN EXTENSIVE RANGE OF TUBE CAPPING PRODUCTS INCLUDING SCREW CAPS AND PUSH CAPS. FOR EFFECTIVE CRYOGENIC STORAGE A SCREW CAP WITH SILICON O-RING IS RECOMMENDED SINCE IT ALLOWS FOR THE TIGHTEST SEAL POSSIBLE. FOR STORAGE FROM -80°C AND ABOVE, EITHER A PUSH CAP (TPE CAPCLUSTER) OR A SCREW CAP CAN BE USED. ALL TUBES HAVE AN UPPER SCREW THREAD OR DOUBLE O-RING DESIGN PROVIDING A PERFECT SEAL AND CLOSURE ENSURING MAXIMUM SAMPLE INTEGRITY. THE MICRONIC PUSH CAPS ARE AVAILABLE IN 96-FORMAT AND THE SCREW CAPS IN 96-, 48- AND 24-FORMAT. ALL SEALING PRODUCTS ARE AVAILABLE IN 12 DIFFERENT COLORS!

SUPERIOR FEATURES OF MICRONIC SAMPLE STORAGE CAPS

TPE Push Caps are multi-pierceable without losing sealing integrity

Working range: -80ºC to +80ºC

Available with split septum to pierce with a pipette tip

Manufactured from medical approved material (Natural)

Available in Natural + 12 colors

RNase / DNase and Pyrogen free

Available in 12 colors

High quality Silicon O-ring allows for the tightest seal possible

Working range: Vapor phase LN2 to +100ºC

Manufactured from the highest purity Polypropylene or PBTP

Automation friendly

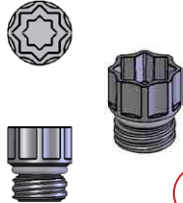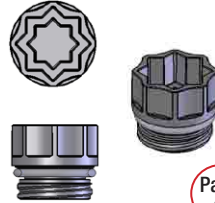## STANDARD MICRONIC CAP COLOR CODING GUIDE FOR SAMPLE STORAGE TUBES

During the collection, processing and storage of samples, sample traceability is crucial. While most laboratories use 1D and 2D barcodes on sample tubes to ensure traceability of samples, cap color inspection will further promote the tube identification process. Cap color coding in laboratories is particularly useful when used to distinguish between different types of research purposes. Color provides a visual clue that works faster than text alone. By adding cap color coding next to 1D and 2D barcodes, users can speed up sample storage and retrieval time, eliminate human errors, and reduce the risk of lost samples.

To ensure that aliquots, which are transferred from sample collection tubes (vacuum tubes) into smaller sample storage tubes can still be identified by cap color inspection, Micronic offers a standard cap color coding solution for 96-, 48- and 24-format sample storage tubes. This solution is related to the cap colors of vacuum tubes. To each type of blood sample (i.e. additive which is present to pre-treat or preserve the blood), a cap color is assigned. Next to blood samples, the cap color solution can also be used for other biological samples (e.g. DNA, tissue, urine, feces, plants, or seeds).

For more information about the standard cap color coding guide, please see Micronic's Tech Note 'Cap Color Coding' on our website www.micronic.com!

CAP OVERVIEW AND SPECIFICATIONS

	SCREW CAP-96	SCREW CAP-48	SCREW CAP-24	LOW PROFILE SC
	Page 46	Page 48	Page 48	Page 46
Cap material	PP + Silicon O-ring	PBTP + Silicon O-ring	PBTP + Silicon O-ring	PBTP + Silicon O-ring
Capping for # tubes	1	1	1	1
Format	Single cap for 96-format tubes	Single cap for 48-format tubes	Single cap for 24-format tubes	Single cap for 96-format tubes
Compatible tubes	0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml	4.00ml	6.00ml	0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml
Colors*	12 different colors	12 different colors	12 different colors	12 different colors
Pierceable	No	No	No	No
Available as pre-split	No	No	No	No
Re-usable	Yes	Yes	Yes	Yes
Available sterile	Yes	Yes	Yes	Yes
Available DNase / RNase free	Yes	Yes	Yes	Yes
Class 7 clean room production	Yes	Yes	Yes	Yes
Minimum storage temperature**	Vapor phase LN2	Vapor phase LN2	Vapor phase LN2	Vapor phase LN2
Chemical resistance	++	++	++	++

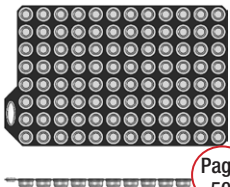* Please be aware that great care was taken to test the stability of the colored caps.
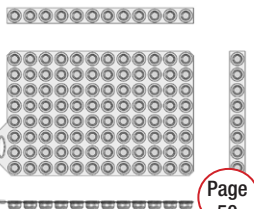   However, as it is not possible to cover all applications, we recommend users to test the colored caps within their own applications.
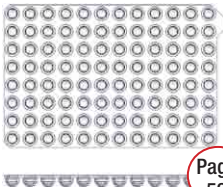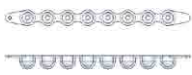
** Temperature range of the material of the tubes, caps and racks is approved from -80ºC to +100ºC. In practice Screw Caps are used in lower temperatures until *vapor phase* LN2 (-150ºC to -196ºC). Micronic does not recommend to store tubes in liquid phase nitrogen. In practice tubes are only snap freezed in LN2 (without submerging the cap).

DID YOU KNOW...

Micronic strives to be as 'Green' as possible. One example of being 'Green' is limiting the amount of waste when using Micronic TPE Capclusters. The TPE Capclusters from Micronic are developed in such a way that there is minimal waste during usage: only the black retaining foil needs to be removed to leave each tube individually capped. This way the very thin black foil needs to be discarded instead of an entire holding plate.

TPE CAPCLUSTER	TPE CAPMAT	EVA CAPMAT	EVA CAPBAND	EVA BREAK-OFF
Page 50	Page 50	Page 52	Page 52	Page 52
TPE	TPE	EVA	EVA	EVA
96 or 1	96, 12 or 8	96	8	8 or 1
Mat of 96 individual caps	Mat of 96 caps	Mat of 96 caps	Strip of 8 caps	Strip of 8 caps
0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml, 2.50ml	0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml, 2.50ml	1.40ml (standard tubes)	1.40ml (standard tubes)	1.40ml (standard tubes)
Natural + 12 different colors	Natural + 7 different colors	Transparent	Transparent	Transparent
Yes	Yes	No	No	No
Yes	Yes	No	No	No
No	No	No	No	No
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
-80ºC	-80ºC	-40ºC	-40ºC	-40ºC
+++	+++	++	++	++

SAMPLE STORAGE CAPS

SCREW CAPS-96

The Micronic Screw Caps-96 provide a secure closure for long-term sample storage at ultra-low temperatures or a safe sealing during the transportation of your samples. The caps feature a high quality Silicon O-ring around the base to allow for the tightest seal possible.

Range of 96-format Screw Caps: Next to the standard Screw Cap for capping an individual 96-well format tube, there is also a Low Profile Screw Cap available. This cap is 6.0mm lower than the standard Screw Cap.

Tube compatibility: The Screw Caps for tubes in 96-well format are available with a standard or a low profile, and compatible with Micronic sample storage tubes in the volumes 0.50ml, 0.75ml, 1.10ml, 1.40ml and 2.00ml.

SUPERIOR FEATURES

- Screw Caps feature a high quality Silicon O-ring
- Available in 12 different colors: Grey, White, Yellow, Orange, Red, Pink, Purple, Blue, Light Blue, Light Green, Green and Black
- Automation friendly
- Ideal for sample storage at ultra-low temperatures or for sample transportation
- Compatible with Micronic Screw Cap tubes in 96-format
- Small packaging of 960 caps
- Resists chemical solvents
- Class 7 clean room production
- RNase/DNase and Pyrogen free
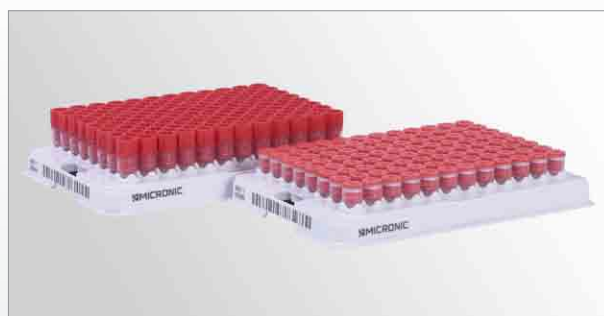
ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Pre-capped on Micronic Screw Cap tubes

SPECIFICATIONS
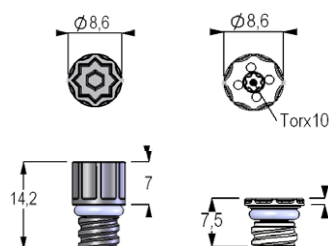
Material:	PP (standard) / PBTP (low profile) with Silicon O-ring
Cap height:	14.2mm (high profile), 7.5mm (low profile)
Chemical resistance:	++
Temperature range:	Vapor phase LN2 to +100°C

ORDERING INFORMATION

Catalog number	Description	Unit
Screw Caps for tubes in 96-well format		
MP53120	Screw Caps for tubes in 96-well format - Grey	960 caps
MP53101	Screw Caps for tubes in 96-well format - White	960 caps
MP53104	Screw Caps for tubes in 96-well format - Yellow	960 caps
MP53130	Screw Caps for tubes in 96-well format - Orange	960 caps
MP53102	Screw Caps for tubes in 96-well format - Red	960 caps
MP53121	Screw Caps for tubes in 96-well format - Pink	960 caps
MP53109	Screw Caps for tubes in 96-well format - Purple	960 caps
MP53103	Screw Caps for tubes in 96-well format - Blue	960 caps
MP53124	Screw Caps for tubes in 96-well format - Light Blue	960 caps
MP53123	Screw Caps for tubes in 96-well format - Light Green	960 caps
MP53105	Screw Caps for tubes in 96-well format - Green	960 caps
MP53122	Screw Caps for tubes in 96-well format - Black	960 caps
Screw Caps Low Profile for tubes in 96-well format		
MP53320	Screw Caps Low Profile for tubes in 96-well format - Grey	960 caps
MP53301	Screw Caps Low Profile for tubes in 96-well format - White	960 caps
MP53304	Screw Caps Low Profile for tubes in 96-well format - Yellow	960 caps
MP53300	Screw Caps Low Profile for tubes in 96-well format - Orange	960 caps
MP53302	Screw Caps Low Profile for tubes in 96-well format - Red	960 caps
MP53321	Screw Caps Low Profile for tubes in 96-well format - Pink	960 caps
MP53309	Screw Caps Low Profile for tubes in 96-well format - Purple	960 caps
MP53303	Screw Caps Low Profile for tubes in 96-well format - Blue	960 caps
MP53306	Screw Caps Low Profile for tubes in 96-well format - Light Blue	960 caps
MP53323	Screw Caps Low Profile for tubes in 96-well format - Light Green	960 caps
MP53305	Screw Caps Low Profile for tubes in 96-well format - Green	960 caps
MP53322	Screw Caps Low Profile for tubes in 96-well format - Black	960 caps

SAMPLE STORAGE CAPS

MICRONIC
INNOVATION IN SAMPLE STORAGE

SCREW CAPS-48 & -24

The Micronic Screw Caps-48 and -24 provide a secure closure for long-term sample storage at ultra-low temperatures or a safe sealing during the transportation of your samples. The caps feature a high quality Silicon O-ring around the base to allow for the tightest seal possible.

Range of 48- & 24-format Screw Caps: For individual 48-well format tubes there is one type of 48-format Screw Cap available. For individual 24-well format tubes there is also one type of 24-format Screw Cap available.

Tube compatibility: The Screw Caps for tubes in 48-well format are compatible with the 4.00ml tubes from Micronic and the Screw Caps for tubes in 24-well format are compatible with the 6.00ml tubes from Micronic.

SUPERIOR FEATURES

- Screw Caps feature a high quality Silicon O-ring
- Available in 12 different colors: Grey, White, Yellow, Orange, Red, Pink, Purple, Blue, Light Blue, Light Green, Green and Black
- Automation friendly
- Ideal for sample storage at ultra-low temperatures or for sample transportation
- Compatible with Micronic Screw Cap tubes in 48- or 24-format
- Small packaging of 480 or 240 caps
- Resists chemical solvents
- Class 7 clean room production
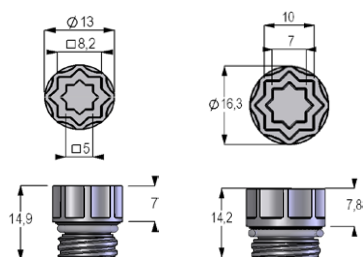- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Pre-capped on Micronic Screw Cap tubes

SPECIFICATIONS

Material: PBTP with Silicon O-ring
Cap height: 14.9mm (48-format), 14.2mm (24-format)
Chemical resistance: ++
Temperature range: Vapor phase LN2 to +100°C

ORDERING INFORMATION

| Catalog number	Description	Unit
Screw Caps for tubes in 48-well format		
MP53620	Screw Caps for tubes in 48-well format - Grey	480 caps
MP53601	Screw Caps for tubes in 48-well format - White	480 caps
MP53604	Screw Caps for tubes in 48-well format - Yellow	480 caps
MP53600	Screw Caps for tubes in 48-well format - Orange	480 caps
MP53602	Screw Caps for tubes in 48-well format - Red	480 caps
MP53621	Screw Caps for tubes in 48-well format - Pink	480 caps
MP53609	Screw Caps for tubes in 48-well format - Purple	480 caps
MP53603	Screw Caps for tubes in 48-well format - Blue	480 caps
MP53606	Screw Caps for tubes in 48-well format - Light Blue	480 caps
MP53623	Screw Caps for tubes in 48-well format - Light Green	480 caps
MP53605	Screw Caps for tubes in 48-well format - Green	480 caps
MP53622	Screw Caps for tubes in 48-well format - Black	480 caps
Screw Caps for tubes in 24-well format		
MP53220	Screw Caps for tubes in 24-well format - Grey	240 caps
MP53201	Screw Caps for tubes in 24-well format - White	240 caps
MP53204	Screw Caps for tubes in 24-well format - Yellow	240 caps
MP53200	Screw Caps for tubes in 24-well format - Orange	240 caps
MP53202	Screw Caps for tubes in 24-well format - Red	240 caps
MP53221	Screw Caps for tubes in 24-well format - Pink	240 caps
MP53209	Screw Caps for tubes in 24-well format - Purple	240 caps
MP53203	Screw Caps for tubes in 24-well format - Blue	240 caps
MP53206	Screw Caps for tubes in 24-well format - Light Blue	240 caps
MP53223	Screw Caps for tubes in 24-well format - Light Green	240 caps
MP53205	Screw Caps for tubes in 24-well format - Green	240 caps
MP53222	Screw Caps for tubes in 24-well format - Black	240 caps

SAMPLE STORAGE CAPS

TPE PUSH CAPS-96
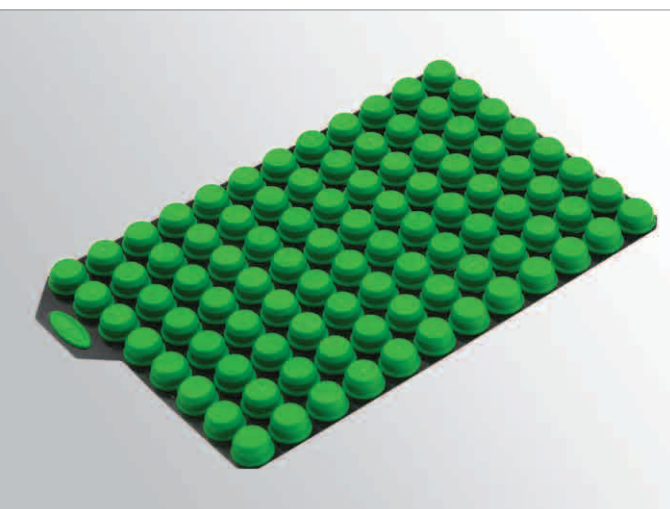
The Micronic TPE Push Caps-96 are used for sealing storage tubes in a 96-well format. Manufactured from chemically resistant and hydrophobic polymer, each TPE cap is multi-pierceable, ensuring long-term sample integrity.

Range of TPE Push Caps-96: Several TPE cap formats are available. The Capcluster-96 which leaves each tube individually capped, the Capmat-96 holds 96 caps in a fixed foil in which the tubes are sealed together, and the Capband-8 or -12 comes in a mat format with tear off lines to obtain cap strips.

Tube compatibility: The TPE Push Caps for tubes in 96-well format are compatible with the 0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml, and 2.50ml tubes from Micronic.

SUPERIOR FEATURES

- Caps can be pierced repeatedly without losing seal integrity
- Available in Natural and 12 different colors: Grey, White, Yellow, Orange, Red, Pink, Purple, Blue, Light Blue, Light Green, Green and Black (Capcluster-96)
- TPE caps in Natural are made out of Medical approved material (USP Class VI certificate)
- Economical solution storage at temperatures down to -80°C
- Compatible with Micronic tubes in 96-format
- Small and large packaging of clusters or mats
- Resists chemical solvents
- Class 7 clean room production
- RNase/DNase and Pyrogen free
- Special TPE Push Cap: Lyo Caps-96, which are specially developed for the lyophilisation process as the vents in the caps allow water vapor to escape from the tubes
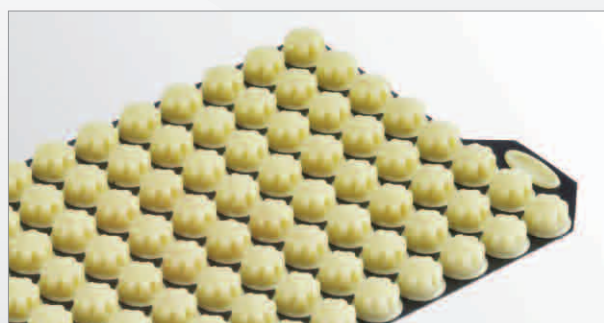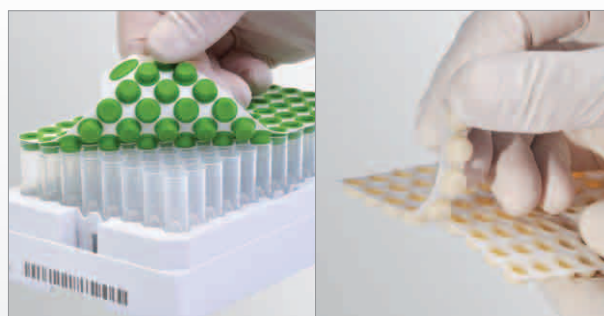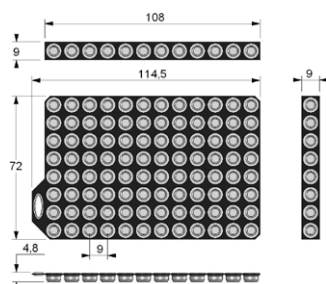

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated
- Pre-capped on Micronic tubes
- Split septum to pierce with a pipette tip

INNOVATION IN SAMPLE STORAGE | **MICRONIC**

SPECIFICATIONS

Material:	Thermo Plastic Elastomer
Cap height:	4.8mm (5.5mm Lyo Caps)
Chemical resistance:	+++
Temperature range:	-80°C to +100°C (without retaining foil)

ORDERING INFORMATION

Catalog number	Description	Unit
Pierceable TPE Capclusters		
MP53065	Pierceable TPE Capcluster Natural for capping 96 individual tubes (virgin TPE material)	40 clusters
MP53068	Pierceable TPE Capcluster Grey for capping 96 individual tubes	40 clusters
MP53073	Pierceable TPE Capcluster White for capping 96 individual tubes	40 clusters
MP53072	Pierceable TPE Capcluster Yellow for capping 96 individual tubes	40 clusters
MP53043	Pierceable TPE Capcluster Orange for capping 96 individual tubes	40 clusters
MP53044	Pierceable TPE Capcluster Red for capping 96 individual tubes	40 clusters
MP53069	Pierceable TPE Capcluster Pink for capping 96 individual tubes	40 clusters
MP53077	Pierceable TPE Capcluster Purple for capping 96 individual tubes	40 clusters
MP53066	Pierceable TPE Capcluster Blue for capping 96 individual tubes	40 clusters
MP53045	Pierceable TPE Capcluster Light Blue for capping 96 individual tubes	40 clusters
MP53067	Pierceable TPE Capcluster Light Green for capping 96 individual tubes	40 clusters
MP53046	Pierceable TPE Capcluster Green for capping 96 individual tubes	40 clusters
MP53071	Pierceable TPE Capcluster Black for capping 96 individual tubes	40 clusters
Pierceable TPE Capmats		
MP53081	Pierceable TPE Capmat Natural for capping 96 tubes (virgin TPE material)	40 mats
MP53084	Pierceable TPE Capmat Grey for capping 96 tubes	40 mats
Pierceable TPE Capbands		
MP53089	Pierceable TPE Capband-8 Natural in Capmat format (virgin TPE material)	40 bands
MP53092	Pierceable TPE Capband-8 Grey in Capmat format	40 bands
MP53098	Pierceable TPE Capband-12 Natural in Capmat format (virgin TPE material)	40 bands
TPE Split Capclusters / Capmats or Capbands		
MP53026	Split TPE Capcluster Natural for capping 96 individual tubes (virgin TPE material)	10 clusters
MP53028	Split TPE Capcluster Blue for capping 96 individual tubes	10 clusters
MP53052	Split TPE Capmat Natural for capping 96 tubes (Virgin TPE material)	10 mats
MP53027	Split TPE Capband for capping 8 tubes	10 bands
MP53050	Split TPE Capband Green for capping 8 tubes	10 bands
Lyo Capclusters for capping 96 individual tubes (large pack)		
MP53042	Lyo Capclusters for capping 96 individual tubes	10 clusters

SAMPLE STORAGE CAPS
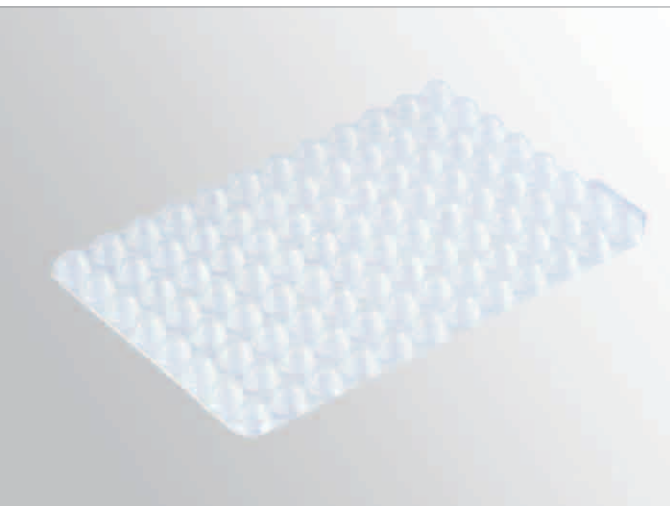
EVA PUSH CAPS-96

The EVA Push Caps-96 from Micronic are a cost effective way to securely close sample storage tubes in a 96-well format. The caps are manufactured from Ethyl Vinyl Acetate, ensuring long-term sample integrity.

Range of EVA Push Caps-96: Several EVA cap formats are available. The EVA Capmat-96 holds 96 caps in a fixed format, the EVA Capband-8 comes in a strip of 8 caps and the EVA break-off Capband-8 allows individual caps to be removed from the strip.

Tube compatibility: The EVA Push Caps for tubes in 96-well format are compatible with the 0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml, and 2.50ml tubes from Micronic.

SUPERIOR FEATURES

- Economical solution
- Available in Transparent
- Compliant with the US and European Food contact regulations
- Compatible with Micronic tubes in 96-well format
- Resists chemical solvents
- Clean room Class 7 production
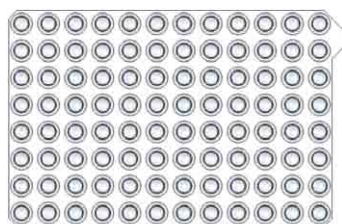- RNase/DNase and Pyrogen free

ADDITIONAL OPTIONS

- Sterile, gamma radiated (15 kGy Avg.) or EtO treated

SPECIFICATIONS

Material:	Ethyl Vinyl Acetate
Cap height:	5.88mm
Chemical resistance:	++
Temperature range:	-40°C to +80°C

ORDERING INFORMATION

Catalog number	Description	Unit
EVA Capping Range		
MP82605	EVA Capband break-off for capping 1 tube	1000 bands
MP2271B1	EVA Capband for capping 8 tubes	120 bands
MP227C2	EVA Capband for capping 8 tubes	1000 bands
MP33000	EVA Capmat for capping 96 tubes	10 mats
MP33001	EVA Capmat for capping 96 tubes for Comorack-96 only (polycarbonate)	10 mats
Manual Decapping Products		
MP54000	Manual Decapper-1	10 pieces
MP54001	Manual Decapper-8	10 pieces
MP65010	Manual Decapper-8 (Aluminum)	1 piece
MP54004	Screw Cap Remover	10 pieces

DID YOU KNOW...

In conjunction with its customers Micronic has developed a variety of decappers for manual removal of individual Push Caps and Screw Caps. All Manual Decappers secure a quick and easy removal of the caps. The Manual Decapper-1 is designed to remove a single Push Cap and the Manual Decapper-8 removes individual Push Caps in a row of eight. The Manual Decapper-8 Aluminum removes individual Push Caps from frozen tubes in a row of eight. The Screw Cap Remover is a tool for easy capping and decapping of a single Screw Cap tube. The Manual Decappers are compatible with the 0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml, and 2.50ml tubes from Micronic.

SAMPLE STORAGE CAPS

ASSEMBLED IN THE NETHERLANDS

3-5 YEAR WARRANTY ON EQUIPMENT

SAMPLE HANDLING EQUIPMENT & SOFTWARE

TO ENABLE FAST, ACCURATE AND EFFICIENT SAMPLE IDENTIFICATION, MICRONIC OFFERS THE EXTENSIVE TRACXER CODE READER RANGE WHICH CONSISTS OF SINGLE TUBE SCANNERS AND WHOLE RACK SCANNERS. THE SCANNERS CAN READ CODED 24-, 48-, 96- AND 384- WELL FORMAT TUBES. MICRONIC OFFERS ALSO A WIDE RANGE OF MANUAL AND AUTO-MATED CAPPING AND DECAPPING EQUIPMENT (THE UNIVO LINE). THESE DEVICES ENABLE SIGNIFICANT PRODUCTIVITY GAINS TO BE MADE IN THE OPENING EN CLOSING OF MULTIPLE SAMPLE STORAGE TUBES. IN ADDITION, SEVERAL SAMPLE MANAGEMENT SOLUTIONS ARE AVAILABLE THAT SUIT ALL THROUGHPUT AND BUDGET NEEDS.

EQUIPMENT SERVICE & WARRANTY

MICRONIC EQUIPMENT ASSEMBLY CENTER

All equipment from the Micronic 'blue-white' equipment line is assembled in-house at the Micronic Equipment Assembly Center. Next to assembling equipment, Micronic's well-trained personnel at this center also provide service on equipment. These services range from taking care of annual maintenance of equipment to repairs when a device turns out to be defective.

At Micronic, high quality and high level service are of paramount importance. By assembling equipment in-house, Micronic's equipment assembly personnel is able to fully understand the equipment, which enables them to perform the service on equipment fast and smoothly.
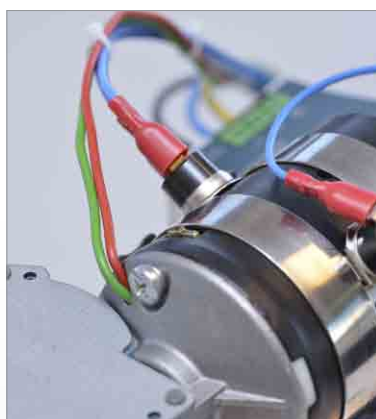
MICRONIC WARRANTY ON EQUIPMENT

The Micronic products are designed and manufactured to the highest quality standards to deliver outstanding performance, ease of use and ease of installation. In case a user encounters any difficulties while installing or using the product, we recommend to first consult the operating instructions in the supplied User Manual or Getting Started Manual.

Micronic warrants that its products are of satisfactory quality and conform to applicable EU legislation. If the product turns out to be defective, Micronic will arrange to repair or replace the product during the warranty period. The warranty period begins on the day the product was purchased from an authorized dealer and ends after **5 years** for Tracxer Code Readers and after **3 years** for other Micronic equipment. In case of product replacement, the warranty start date remains the date of purchase of the original product.

The Micronic Warranty does not affect consumer statutory rights under applicable local laws, nor consumer rights against the seller arising from the purchase transaction. For more information about Micronic Warranty on equipment or about its applicability, please request the 'Micronic Warranty Statement'.

Service needed?
To obtain service please contact Micronic America / Micronic Europe or a local Micronic supplier.

SAMPLE HANDLING EQUIPMENT & SOFTWARE

1D / 2D CODE READER OVERVIEW AND SPECIFICATIONS

	TRACXER CODE READER TS201 MINI	HANDHELD WIRELESS SCANNER MINI	TRACXER CODE READER RS297
	Page 58	Page 58	Page 60
Basic Features			
Imaging technology	CIS	CIS	CIS
Decode time	< 1 second	< 1 second	1 second
Scan time	< 1 second	< 1 second	15 seconds
Dimensions (mm)	70 x 72 x 120	150 x 40 x 40	430 x 280 x 49
Decoding software	n/a	n/a	Latest version Tracxer Software
Software compatibility			
Windows 10, 8, 7*	Yes	Yes	Yes
Connection	USB x1	USB x1	USB x2
Output options			
Output text file	n/a	Yes	Yes
Configure output file	n/a	Yes	Yes
Export to Excel	n/a	Yes	Yes
ODBC Database push	n/a	n/a	Yes
User account independent	n/a	Yes	Yes
Network ready	n/a	n/a	Yes
TCP/IP Remote control	n/a	n/a	Yes
Tube / rack compatibility			
24-well format tube / rack	Yes	Yes	Yes
48-well format tube / rack	Yes	Yes	Yes
96-well format tube / rack	Yes	Yes	Yes
384-well format tube / rack	Yes	Yes	Yes
Read all 2D Data-Matrix codes	Yes	Yes	Yes
Read all TraXis codes	No	No	Yes
Other features			
No tube, no code feature	n/a	n/a	Yes
Single tube reading	Yes	Yes	Yes
Rack templates	n/a	n/a	Yes
Anti-frost system	No	n/a	No
Robot gripper friendly	No	n/a	No
Linear barcode reading	Yes, 1D tube and rack barcodes	Yes, 1D tube and rack barcodes	No
ActiveX Toolkit	No	No	Yes

*Please contact us for compatibility with older Windows versions.

TRACXER CODE READER RS210	TRACXER CODE READER RS210 CRYO	TRACXER CODE READER RD235 CRYO
Page 62	Page 62	Page 64
CIS	CIS	CCD
1 second	1 second	1 second
5 seconds	5 seconds	7 seconds
254 x 157 x 47	254 x 157 x 47	298 x 180 x 66
Latest version Tracxer Software	Latest version Tracxer Software	Latest version Tracxer Software
Yes	Yes	Yes
USB x2	USB x2	USB x2
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
No	Yes	Yes
Yes	Yes	Yes
Optional, 1D rack barcodes	Optioinal, 1D rack barcodes	Optional, 1D rack barcodes
Yes	Yes	Yes

SAMPLE HANDLING EQUIPMENT & SOFTWARE

TRACXER CODE READER **TS201 MINI**

The Tracxer Code Reader TS201 MINI is high-speed code reading at its best. The TS201 MINI is the most versatile single tube reader in the market - it reads 1D rack barcodes and 1D barcoded and 2D Data-Matrix coded tubes in less than a second. No software installation is required.

The Tracxer Code Reader TS201 MINI is an easy-to-use scanner. Simply hold a 1D rack barcode or a 1D/2D tube code above the transparent plate and the barcode is decoded instantly.

Tube compatibility: The Tracxer Code Reader reads single 96-, 48- and 24-well format Micronic tubes. The TS201 MINI is also compatible with other brands of 1D barcoded and 2D Data-Matrix coded storage tubes/racks.

SUPERIOR FEATURES

**Tracxer Code Reader TS201 MINI**

- Extremely compact
- High-end sophisticated decoding engine
- Fully automated scan and decode feature
- No software installation required
- Scans and decodes 1D rack barcodes and 1D barcoded and 2D Data-Matrix coded tubes in less than one second
- Compatible with tubes in 96-, 48- and 24-well format
- Condensation free scanner plate
- Keyboard wedge functionality
- Correct code reads are indicated with a bleep
- USB connection (no power supply needed)
- Compatible with other suppliers of 1D and 2D barcoded tubes

Handheld Wireless Scanner MINI

- Instantly reads 2D and 1D codes
- Compatible with iOS, Android and Windows and Bluetooth dongles attached to any laptop
- Incredible internal storage of approximately 15.000 2D scans and 17.000 1D scans
- Personalized configuration with time, date, user, project name, and other useful data
- Reads directly into a LMS system, Excel spreadsheet or notepad
- Long-lasting battery through 10-12 hours of continuous usage

SPECIFICATIONS

120

70

72
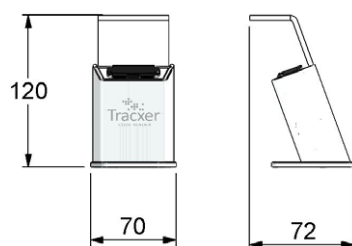
System requirements:	1x USB port (at least 2.0)
Scan time:	< 1 second
Dimensions:	70 x 72 x 120 mm / 2.7 x 2.8 x 4.7 inch
Weight:	315 grams / 0.7 lbs
Tube code reading:	1D rack barcodes, 1D barcoded tubes and 2D Data-Matrix (ECC200, 12x12, 14x14) coded tubes

ORDERING INFORMATION

Catalog number	Description	Unit
Single Tube Readers		
MP55126	Tracxer Code Reader TS201 MINI for single 1D and 2D Data-Matrix coded tubes	1 unit
MP55127	Handheld Wireless Scanner MINI	1 unit
RH82025	Handheld Wireless 1D barcode and 2D Data-Matrix code reader	1 unit
RH82030	Handheld 1D barcode and 2D Data-Matrix code reader with USB-connection	1 unit

DID YOU KNOW...

Barcode quality is integral to the success of an automated system. The laser etched 1D rack barcode which is standard available on Micronic racks, falls within the highest quality classifications. The classification is determined by the least high result for each parameter (e.g. decodability, defects, minimum edge contrast, minimum reflection and modulation) which means that the barcode is always as good as its lowest scoring parameter. When a barcode falls within the highest classifications, it has a consistent level of quality for readability in an automated process.

The 2D Data-Matrix codes on Micronic sample storage tubes are permanently laser etched on the tube bottom so that they can never wear or fall off. Due to the optimal symbol contrast, modulation and print growth, and Micronic's 100% quality control on all 2D codes, the 2D codes can be easily read by scanners and readers. The 2D Data-Matrix codes are guaranteed unique and also have a human-readable code. The special custom 2D code service from Micronic enables customers to choose their own prefix of three digits which are followed by ten predefined digits which are also guaranteed unique.

SAMPLE HANDLING EQUIPMENT & SOFTWARE

TRACXER CODE READER **RS297**

The Micronic Tracxer Code Reader RS297 reads whole racks filled with 2D Data-Matrix or TraXis coded tubes. The scanner is an economical solution which is built for operational precision, high throughput and reliability to improve sample logistics.

Software: The Tracxer Code Reader Software is easy to install, gives reliable code readings and a smooth integration into any laboratory sample database. The software includes a 'no tube, no code' feature which can be crucial for determining whether any samples are missing.

Rack compatibility: The RS297 reads 384-, 96-, 48-, and 24-, 12-well format racks (standard ANSI / SLAS footprint) filled with 2D coded tubes.

SUPERIOR FEATURES

- Cost-effective solution
- Scans and decodes racked 2D Data-Matrix and TraXis coded tubes in 15 seconds
- Easy-to-use Tracxer Code Reader Software (latest version)
- Compatible with 384-, 96-, 48-, 24- and 12-well format racks (standard ANSI / SLAS footprint)
- Outputs CSV-files (text)
- Microsoft Access / Excel compatible
- ActiveX toolkit included
- Single tube reading option for 96-format tubes
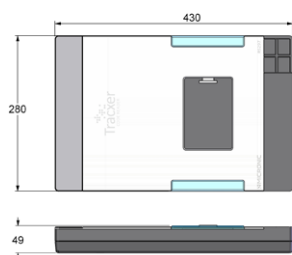
ADDITIONAL OPTIONS

- 1D Handheld Barcode Reader

SPECIFICATIONS

System requirements:	2x USB port
Scan time:	15 seconds (whole rack) / 2 seconds (single tube)
Dimensions:	430 x 280 x 49 mm / 16.9 x 11.0 x 1.9 inch
Weight:	2.6 kg / 5.7 lbs
Voltage:	115 - 230 V
Tube code reading:	2D Data-Matrix and TraXis codes

ORDERING INFORMATION

Catalog number	Description	Unit
Single Rack Readers		
MP55114	Tracxer Code Reader RS297 for whole rack 2D codes tubes	1 unit

DID YOU KNOW...

Micronic regularly participates in exhibitions, like the SLAS Conference & Exhibition or the European Lab Automation show. During these exhibitions leading researchers, technologists, engineers and laboratory professionals come together. These shows are therefore excellent opportunities to talk to us about our extensive range of sample storage products and sample handling equipment. Additionally, we will also update you on the latest innovations in sample storage. Visit our website for more information about the upcoming exhibitions that Micronic will attend. See you there!

SAMPLE HANDLING EQUIPMENT & SOFTWARE

TRACXER CODE READER **RS210**

The Micronic Tracxer Code Reader RS210 reads whole racks filled with 2D Data-Matrix or TraXis coded tubes quickly, cost effective and with limited lab-space. The compact reader is built for high throughput and automated systems. It enables a reliable interface with your sample organization.

Software: The Tracxer Code Reader Software is easy to install, gives reliable code readings and a smooth integration into any laboratory sample database. The software includes a 'no tube, no code' feature which can be crucial for determining whether any samples are missing.

Rack compatibility: The RS210 reads 384-, 96-, 48-, 24- and 12-well format racks (standard ANSI / SLAS footprint) filled with 2D coded tubes.

SUPERIOR FEATURES

- Reads a whole rack (in 384-, 96-, 48-, 24- or 12-well format in less than 5 seconds and a single 96-well format tube in less than 2 seconds
- Anti-frost system which minimizes condensation of frozen samples on the scanner plate (CRYO version)
- Scans and decodes 2D Data-Matrix and TraXis coded tubes
- Small bench top solution
- Easy-to-use Tracxer Code Reader Software (latest version)
- Software Developer's ActiveX Toolkit included for easy LIMS integration
- Outputs CSV-files (text)
- Microsoft Access / Excel compatible
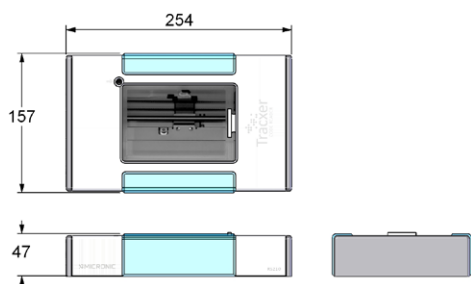- Compatible with most brands of 2D Data-Matrix coded tubes

ADDITIONAL OPTIONS

- Integrated 1D Rack Barcode Reader BC210

SPECIFICATIONS

254

157

47

System requirements:	2x USB port
Scan time:	5 seconds (whole rack) / 2 seconds (single tube)
Dimensions:	254 x 157 x 47 mm / 10.0 x 6.2 x 1.9 inch
Weight:	1.3 kg / 2.9 lbs
Voltage:	115 - 230 V
Tube code reading:	2D Data-Matrix and TraXis codes

ORDERING INFORMATION

Catalog number	Description	Unit
Single Rack Readers		
MP55120	Tracxer Code Reader RS210 for whole rack 2D coded tubes	1 unit
MP55121	Tracxer Code Reader RS210 CRYO for whole rack 2D coded tubes	1 unit
MP55637	Tracxer 1D Rack Barcode Reader BC210	1 unit

DID YOU KNOW...

The Tracxer Code Reader RS210 from Micronic is also available in a CRYO version. This version has an anti-frost system, which enables users to read racks filled with 2D codes tubes straight from the freezer. The anti-frost system minimizes condensation of frozen samples on the scanner plate of the Tracxer Code Reader. This way, tube codes from even frozen samples can be read, thereby improving productivity and preserving the integrity of your samples. The Tracxer Code Reader RS210 CRYO is a simple and high-performance scanning unit. With a couple of mouse clicks in the Tracxer Code Reader Software you will be able to scan a full rack of 2D Data-Matrix or TraXis coded tubes in less than 5 seconds or a single tube in less than 2 seconds. Due to the small size of the Tracxer Code Reader RS210 CRYO the scanner can be easily integrated into robotic liquid handling or storage systems.

SAMPLE HANDLING EQUIPMENT & SOFTWARE

MICRONIC
INNOVATION IN SAMPLE STORAGE
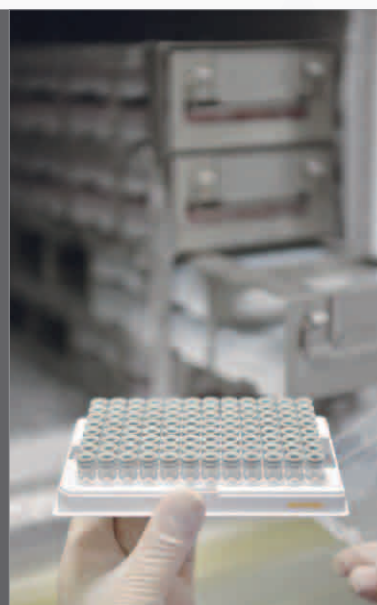
# TRACXER CODE READER **RD235 CRYO**

The high-end Micronic Tracxer Code Reader RD235 CRYO reads whole racks filled with 2D Data-Matrix or TraXis coded tubes. The reader features a CCD image sensor ensuring the highest accuracy 2D code reading, and an anti-frost system so that tube codes from even frozen samples can be read.

Software: The Tracxer Code Reader Software is easy to install, gives reliable code readings and a smooth integration into any laboratory sample database. The software includes a 'no tube, no code' feature which can be crucial for determining whether any samples are missing.

Rack compatibility: The RD235 reads 384-, 96-, 48-, 24- and 12-well format racks (standard ANSI / SLAS footprint) filled with 2D coded tubes.

SUPERIOR FEATURES

- CCD image sensor for high resolution image quality
- Anti-frost system which minimizes condensation of frozen samples on the scanner plate
- Reads racks filled with tubes (in 384-, 96-, 48-, 24- or 12-well format) in 7 seconds
- Reads a single tube (in 96-, 48- or 24-well format) in less than 2 seconds
- Scans and decodes 2D Data-Matrix and TraXis codes
- Small bench top solution
- Easy-to-use Tracxer Code Reader Software (latest version)
- Software Developer's ActiveX Toolkit included for easy LIMS integration
- Outputs CSV-files (text)
- Microsoft Access / Excel compatible
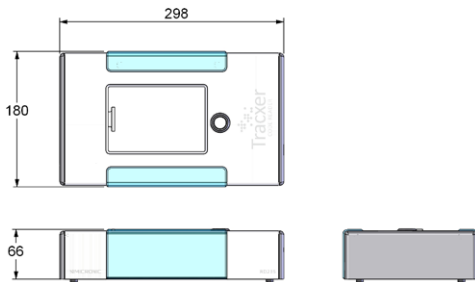- Compatible with most brands of 2D Data-Matrix coded tubes
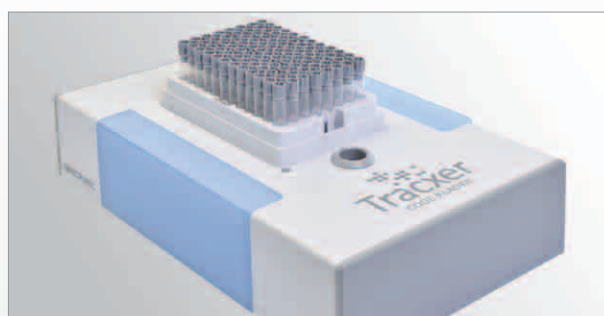
ADDITIONAL OPTIONS

- Integrated 1D Rack Barcode Reader BC235

SPECIFICATIONS

System requirements:	2x USB port
Scan time:	7 seconds (whole rack) / 2 seconds (single tube)
Dimensions:	298 x 180 x 66 mm / 11.7 x 7.1 x 2.6 inch
Weight:	1.8 kg / 4.0 lbs
Voltage:	115 - 230 V
Tube code reading:	2D Data-Matrix and TraXis codes

ORDERING INFORMATION

Catalog number	Description	Unit
Single Rack Readers		
MP55122	Tracxer Code Reader RS235 CRYO for whole rack 2D coded tubes	1 unit
MP55638	Tracxer 1D Rack Barcode Reader BC235	1 unit

DID YOU KNOW...

The Micronic equipment is packed in solid cardboard boxes and thick foam to keep the devices protected during transportation. Larger equipment, such as cappers or decappers, are packed in strong wooden boxes due to their weight. Next to the protection feature of the packaging it also has a design feature. The name Micronic is visualized in the inner protection foam so that it is easily recognizable as a Micronic device. Next to the equipment packaging, Micronic also uses unique packaging for their sample storage consumables. Sample storage tubes, caps and racks are all packed in air-tight bags in Micronic's certified Class 7 clean rooms. This prevents the entrance or escape of any air, in turn no contamination of the products can take place. For customers in need of DNase, RNase or Pyrogen free products this is of utmost importance. The air-tight bags are provided with clear labels and are double packed (inner and outer cardboard boxes). The outer cardboard boxes consist of double cardboard waves so that the products are firmly packed for transportation.

SAMPLE HANDLING EQUIPMENT & SOFTWARE

UNIVO ELECTRIC CAPPER **CP480 / 860**

Built to meet the special individual requirements of our customers, the Univo Electric Cappers can cap the following Micronic Push Caps on 96-format tubes in rack: TPE Capmats, Capbands, Capclusters, and EVA Capmats.

For your convenience the capper operates without any buttons. Simply pull the drawer out of the capper, place a rack filled with tubes on the drawer, and then place the capmat, capband or capcluster on the tubes. Push the drawer inside the capper and the capping will start automatically.

Tube compatibility: The Univo Electric Capper CP480 has the flexibility to cap any tube height up to 48mm and the Univo Electric Capper CP860 can cap any tube height up to 86mm (no adapters required).

SUPERIOR FEATURES

- No adapters required
- Caps an entire rack of 96 tubes in an average of 7 seconds (depends on the tube height)
- Operates without any buttons
- Compact and robust design
- Controlled pressure system for an evenly capping result
- Works on full and partially full racks (minimum amount of 10 tubes)
- Compatible with the complete Micronic range of 96-format tubes and racks
- Works with tube sizes up to 1.40ml (CP480) or with tube sizes up to 2.50ml (CP860)
- Also compatible with other brands of tubes and caps (ask us for a compatibility list)

SPECIFICATIONS
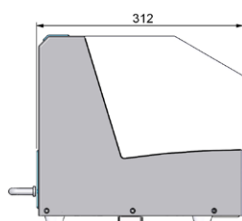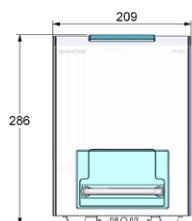
Compatibility:	All ANSI / SLAS standard 96-format racks
Cycle time:	On average 7 seconds (CP480 + CP860)
Dimensions:	312 x 209 x 286 mm / 12.3 x 8.2 x 11.3 inch (CP480)
Weight:	14 kg / 31 lbs (CP480)
Voltage:	115 - 230 V

ORDERING INFORMATION

Catalog number	Description	Unit
Push Cap Cappers		
MP35020	Univo Electric Capper CP480 for all tube sizes up to 1.40ml	1 unit
MP35021	Univo Electric Capper CP860 for all tube sizes	1 unit
MP35050	Univo Manual Capper CM480 (including 1 adapter of your choice)	1 unit
MP35054	Adapter Univo Manual Capper CM480 0.50ml tubes	1 unit
MP35053	Adapter Univo Manual Capper CM480 0.75ml tubes	1 unit
MP35052	Adapter Univo Manual Capper CM480 1.10ml tubes	1 unit
MP35051	Adapter Univo Manual Capper CM480 1.40ml tubes	1 unit

Compatible with other brands of racks, tubes and caps. Contact us for the compatibility list.

DID YOU KNOW...

Next to the Univo Electric Cappers, Micronic offers also an economical manual capping solution for Push Caps. The Univo Manual Capper CM480 offers a cost effective way of applying uniform pressure to push caps in an entire 96 tubes rack in only a single action. Built to meet the varying needs of different users, the Univo Manual Capper CM480 can seal full or partially full racks with the complete range of Micronic TPE or EVA style capmats, capbands and capclusters. The manual capper is able to repeatably and reliably securely cap tubes (up to 1.40 ml) in all ANSI /SLAS format racks up to a maximum height of 48mm. Contact us for other brands compatibility.

SAMPLE HANDLING EQUIPMENT & SOFTWARE

MICRONIC
INNOVATION IN SAMPLE STORAGE

UNIVO ELECTRIC DECAPPER **DC480**

With the ever-growing requirement for higher sample throughput in many laboratories the Univo Electric Decapper DC480 enables significant productivity gains to be made in the opening of multiple sample storage tubes.

The internal cap grippers are developed in such a way that cross-contamination is minimized. The gripper moves down slightly into the cap while the rack in the sleigh is moving backwards, ensuring a smooth and safe removal of the caps. Through a friendly user interface the user chooses the correct rack to decap, without using different adapters.

Tube compatibility: The decapper is compatible with Micronic tube sizes up to 1.40ml, racks and caps.

SUPERIOR FEATURES

- No adapters required
- Decaps 96 caps in 8 seconds
- Simple and safe operation
- Friendly user interface for an easy selection of tube size
- CE-approved and conform UL
- Operates stand-alone or in a fully automated environment
- Minimum cross-contamination
- Remote control via RS232
- Compatible with the complete Micronic range of 96-format tubes (up to 1.40ml)
- Also compatible with other brands of tubes and caps (ask us for a compatibility list)

SPECIFICATIONS
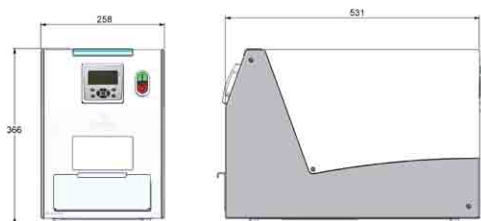
Compatibility:	All ANSI / SLAS standard 96-format racks
Cycle time:	10-15 seconds
Dimensions:	531 x 258 x 366 mm / 20.9 x 10.2 x 14.4 inch
Weight:	25 kg / 55 lbs
Voltage:	115 - 230 V
Temperature Range:	Room temperature conditions

ORDERING INFORMATION

Catalog number	Description	Unit
Push Cap Decappers		
MP35000	Univo Electric Capper DC480 for decapping TPE Caps	1 unit

DID YOU KNOW...

If you require technical assistance during installation of Micronic equipment, you can contact the Micronic technical support team. E-mail to helpdesk@micronic.com or call +1 484 480 3372 (Micronic America) / +31 (0)320 277 099 (Micronic Europe). Micronic strives to respond to your technical support enquiries within 24 hours. To help us answering your technical questions quickly we kindly ask you to write down the following information (if available): product number, serial number of the device, version of the software you are running and the version of Windows.

SAMPLE HANDLING EQUIPMENT & SOFTWARE

UNIVO SCREW CAP RECAPPER **SR008**

The Univo Screw Cap Recapper SR008 is developed in conjunction with several leading laboratories. The handheld device offers users the ability to cap, decap or recap a row of 8 tubes in less than 5 seconds, improving productivity!

The Screw Cap Recapper SR008 requires no battery charging and is always available for use. Whether you are looking to recap tubes with the same or new caps it is easy to position the screw caps above tubes using the SR008. When removing screw caps, the large ejection handle makes discarding the old caps a simple single action task.

Tube compatibility: The recapper is compatible with Micronic tube sizes up to 2.00ml with Standard or Low Profile Screw Caps.

SUPERIOR FEATURES

- Cost-effective solution to cap, decap or recap a row of 8 tubes at once
- Each screw cap is reproducibly tightened securely and uniformly
- Caps a row of 8 tubes in 5 seconds and a whole rack of 96 tubes in only 1 minute - 10 times faster than by hand!
- Compatible with Micronic Screw Caps and tubes
- Compatible with other brands (contact us for a compatibility list)
- Minimizes contamination
- Easy positioning of screw caps above the tubes
- Ergonomic lightweight solution for left and right handed use
- Caps can be easily discarded using the large ejection handle
- Very small footprint for bench top use
- No need for battery recharging
- 3 year warranty
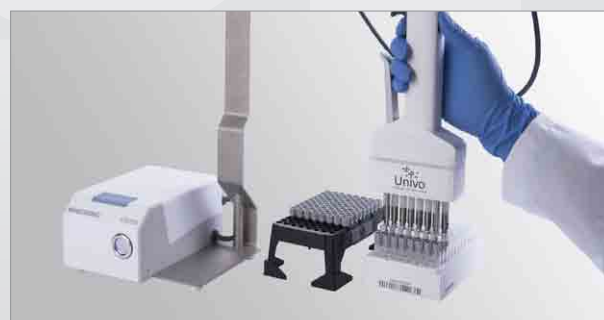
SPECIFICATIONS
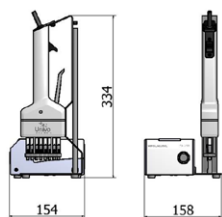
Compatibility:	All ANSI / SLAS standard 96-format racks
Cycle time:	Less than 5 seconds per row
Dimensions:	5.8 x 15.4 x 33.4 cm / 6.22 x 6.06 x 13.14 inches
Weight:	2 kg / 4.4 lbs
Voltage:	115 - 230 V

ORDERING INFORMATION

Catalog number	Description	Unit
Screw Cap Recapper		
MP35025	Univo Screw Cap Recapper SR008 for standard Micronic Screw Caps	1 unit
MP35030	Univo Screw Cap Recapper SR096 for standard Micronic Screw Caps	1 unit

DID YOU KNOW...

The Univo Screw Cap Recapper SR096 will be soon available! The device offers users the ability to cap, decap or recap 96 screw cap tubes at once! The Screw Cap Recapper ensures each screw cap is reproducibly tightened securely and uniformly. Contact us for updates and do not forget to check our website for the latest news around sample preservation and storage (www.micronic.com).

SAMPLE HANDLING EQUIPMENT & SOFTWARE

SCREW CAP DECAPPER

The Screw Cap DeCapper decaps or caps rows of 8 or 12 tubes at one time. No cap moves over open tubes which eliminates the risk of contamination.

The torque monitoring ensures optimal sealing quality of your valuable samples. The laser sensor detects the tube height so that no adapters are needed for different tube sizes. The graphical touch screen interface simplifies programming and it clearly displays tubes to be capped or recapped which makes the DeCapper easy to operate.

Tube compatibility: The Screw Cap DeCapper can screw and unscrew Micronic Screw Caps (including the Low Profile Screw Cap) on Micronic tubes. The DeCapper is also compatible with other brands of tubes and caps.

SUPERIOR FEATURES

- Compatible with the Micronic Screw Caps in 96-format including the Low Profile Screw Caps
- Compatible with the Micronic range of Screw Cap tubes in 96-well format (0.50ml, 0.75ml, 1.10ml and 1.40ml)
- No adapters required
- Caps or decaps 96 Screw Cap tubes within 60 seconds
- Torque monitoring for optimal sealing quality
- Easy-to-use graphical touch screen interface
- Process a full rack of tubes or row of tubes in portrait or landscape format
- Permanent sensor control enhances process safety
- Eliminates risk of cross contamination by not moving over opened tubes
- Secure processing mode provides sample security by minimizing the time a tube is opened - only one row is processed at a time by holding caps after decapping and then immediately recapping
- Also compatible with other brands of tubes and caps
- Connection interface: Ethernet for integration
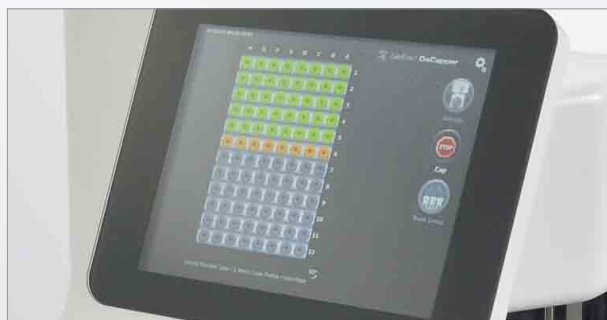
SPECIFICATIONS
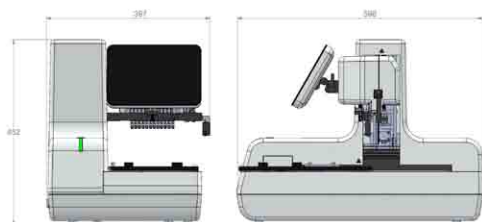
Compatibility:	All ANSI / SLAS standard 96-format racks
Cycle time:	60 seconds per rack of 96 tubes
Dimensions:	600 x 380 x 440 mm / 23.6 x 15.0 x 17.3 inch
Weight:	20 kg / 44.1 lbs
Voltage:	100 - 240 V

ORDERING INFORMATION

Catalog number	Description	Unit
Screw Cap DeCappers		
RH71010	Automatic Screw Cap DeCapper - Decaps and Caps rows of 8 or 12 Screw Cap Tubes	1 unit

DID YOU KNOW...

With just a few clicks of the mouse, all product, service and company information can be found on the corporate Micronic website: www.micronic.com. On the home page you can immediately choose a product category and a specific product. The website will give you all information you need on the chosen product: superior features, specifications, pictures, movies, leaflets and ordering information. Examples of other interesting sections on our website are the services section and the support section. Visit our website today and find out why!

SAMPLE HANDLING EQUIPMENT & SOFTWARE

TUBESORTER & VOLUMECHECK

Tubesorters: For cherry picking or re-arraying your sample storage library, the Tubesorter can quickly transfer tubes between multiple 96 tube racks while maintaining sample identity. The advanced tube management system supports sorting of a nearly unlimited number of tubes. The robotics allows for the unattended processing of 9 or 20 tube racks at a time. For projects over 1,920 tubes, the tube racks can be exchanged dynamically.

Volume Check: The Volume Check determines the exact sample volume in your storage tube by using non-contact acoustic signal. The Volume Check is fully compatible with the range of Micronic 96-well format sample storage tubes: 0.50ml, 0.75ml, 1.10ml and 1.40ml, in any sample storage rack.

## SUPERIOR FEATURES

TubeSorter

- Work list based processing for fast and reliable operations
- Capacity of 9 or 20 tube racks - sorts 300 to 900 tube per hour
- Intuitive software
- Sample tracking, work list based software, and integrated 2D tube scanner (2D Data-Matrix or TraXis)
- Individual tube identification
- Barcoded rack set-up
- Detailed LOG files
- Additional options: ActiveX toolkit, integrated 2D code reader, analytical balance for weighing tubes, tube level check

VolumeCheck

- Accuracy +/- 10µl to +/- 15µl
- Non-contact acoustic volume measurement within one minute
- Compatible with the Micronic 96-well format tubes: 0.50ml, 0.75ml, 1.10ml and 1.40ml (standard)
- Works on full and partially-full racks
- Additional option: ActiveX toolkit
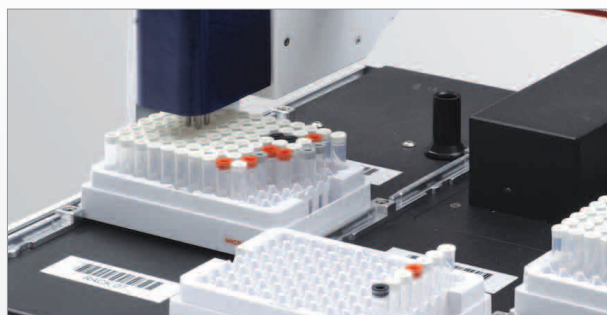
SPECIFICATIONS

XL9

VC
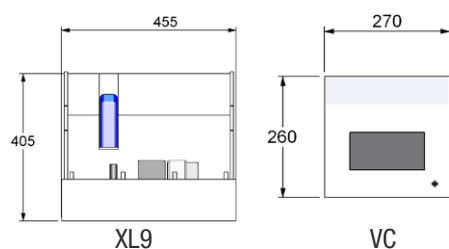
System requirements:	Windows 7 / Vista / XP
Dimensions:	430 x 455 x 405 mm / 16.9 x 17.9 x 15.9 inch (XL9)
	430 x 270 x 260 mm / 16.9 x 10.6 x 10.2 inch (VC)
Weight:	24 kg / 52.9 lbs (XL9)
	12 kg / 26.5 lbs (VC)
Voltage:	110-220 VAC 60Hz

ORDERING INFORMATION

Catalog number	Description	Unit
XL9 TubeSorter (9 rack capacity)*		
LXL9	XL9 TubeSorter System Base model - sort only	1 unit
LXL9C	XL9 TubeSorter System with 2D Code Reader	1 unit
LXL9S	XL9 TubeSorter System with Analytical Balance	1 unit
LXL9CS	XL9 TubeSorter System with 2D Code Reader and Analytical Balance	1 unit
LCRXL9	XL9 TubeSorter System Base model COLD ROOM - sort only	1 unit
XL20 TubeSorter (20 rack capacity)*		
LXL20	XL20 TubeSorter System Base model - sort only	1 unit
LXL20C	XL20 TubeSorter System with 2D Code Reader	1 unit
LXL20S	XL20 TubeSorter System with Analytical Balance	1 unit
LXL20CS	XL20 TubeSorter System with 2D Code Reader and Analytical Balance	1 unit
LCRXL20	XL20 TubeSorter System Base model COLD ROOM - sort only	1 unit
VolumeCheck (VC)		
LVC50	VolumeCheck with low speed sensor, 3 minutes per 96 plate or tube rack	1 unit
LVC100	VolumeCheck with high speed sensor, 45 seconds per 96 plate or tube rack	1 unit
LVC100LV	VolumeCheck for large vials (up to 70mm), high speed, 45 seconds per rack	1 unit

Level Check add-ons and other accessories are available

DID YOU KNOW...

Next to the automated systems, Micronic also offers a manual tube picking tool: the Tube Selector. The tool is very user friendly since it offers the convenience of single-handed operation. A single thumb button enables the rapid and secure picking of a sample storage tube. Pressing the thumb button again releases the tube from the Tube Selector.

SAMPLE HANDLING EQUIPMENT & SOFTWARE
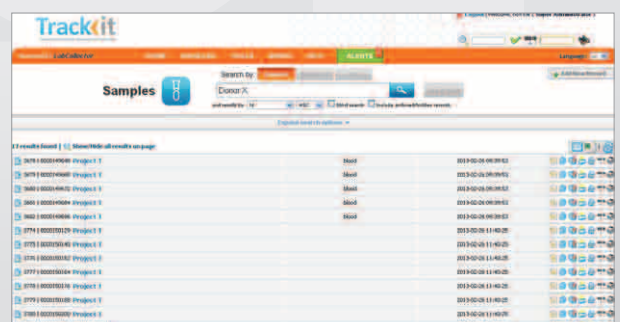
TRACK-IT DATABASE SOFTWARE

Track-IT is a unique out-of-the-box LSMS (Laboratory Sample Management System) made for scientists enabling them to reorganize and track tubes and samples in just minutes.

Track-IT is compatible with 1D rack barcode and 2D tube code scanning, in turn allowing you to catalogue samples that have been scanned by lab equipment such as readers and scanners.

The main concept behind Track-IT is that each scientist in the lab can manage data and information quickly and make it available to the rest of the lab community. Via intranet support, data can be accessed from any connected computer in the lab, which accelerates information retrieval.

SUPERIOR FEATURES

- Modular based system
- Manage samples, equipment, reagents and more
- Web based access
- 1D and 2D Data-Matrix code compatible
- Central information database
- Quick information retrieval
- Customizable to match the workflow of your laboratory
- Alerts system
- Cross-database searches
- Uniform data presentation
- Data reports export (screen and MS-Excel)
- Upgradable
- 1 licence per database covers all the lab users
- Micronic Tracxer Code Reader Software fully integrated

SPECIFICATIONS

Track‹‹it
Laboratory Sample Management System

Server system requirements: Windows 2000 / XP / Vista, 2x USB ports

Client system requirements: Windows / Mac OS / Linux

Internet requirements: Internet Explorer 6+, Firefox 2+,

Safari 2+, Opera 8+

ORDERING INFORMATION

Catalog number	Description	Unit
Sample Management Software		
RH81001	Track-IT Sample Management Software full version (Academic usage)	1 unit
RH81007	Track-IT Sample Management Software full version (Private usage)	1 unit

DID YOU KNOW...

The Micronic Tracxer Code Reader Software is fully integrated with Track-IT so that users can directly trigger tube or rack barcode scanning from the Track-IT program. The database software enables users to scan barcodes in only 5 seconds and transfer the codes directly into Track-IT. This way laboratories can markedly speed up their sample storage process compared to database programs in which users need to upload spread sheets with scanned codes. Additionally, Track-IT is available in a version for Academic usage and a version for Private usage. The Academic version is an economical solution for research laboratories of university hospitals. The Private version is intended for forensics, agricultural, veterinary and governmental institutes, as well as companies in the biotech, food, chemical and pharmaceutical areas.


SAMPLE HANDLING EQUIPMENT & SOFTWARE

SAMPLE STORAGE STARTER PACKS

DO YOU WANT TO GET STARTED WITH USING 2D CODED TUBES TO TRACK AND STORE YOUR VALUABLE SAMPLES? IF SO, MICRONIC OFFERS THE POSSIBILITY TO START USING A FULLY TRACEABLE STORAGE SOLUTION AT A LOW INVESTMENT. BUYING THE STARTER PACK CAN SAVE YOU UP TO 20% COMPARED TO BUYING THE PRODUCTS INDIVIDUALLY. SINCE THE AMOUNT OF STORED SAMPLES DIFFERS LABORATORY BY LABORATORY, MICRONIC OFFERS STARTER PACKS IN A RANGE OF SIZES: BASIC, STANDARD, ADVANCED, PREMIUM AND PREMIUM+.

SAMPLE STORAGE WITH MICRONIC
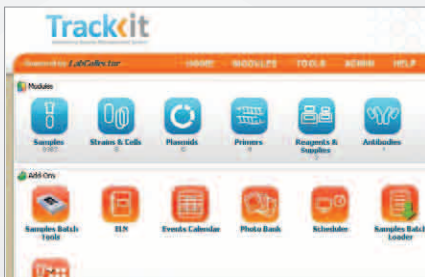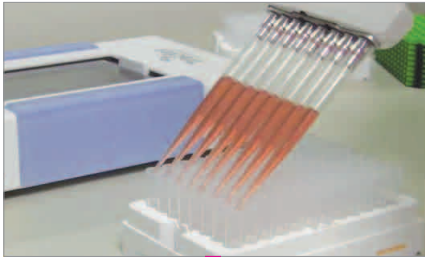
COLLECT SAMPLES

Micronic products are essential during your sample storage process. When a liquid sample is obtained, it is often temporary stored in a large tube, like vacuum containers. For long-term storage, the sample is transferred from the larger tube into several Micronic sample storage tubes.

CLOSE SAMPLE STORAGE TUBES

To securely close your sample storage tubes for long-term storage in -80°C, the TPE Capclusters from Micronic are an ideal and economical solution. Place a TPE Capcluster on the tubes in a 96-well format rack and the Micronic Univo Electric Capper CP480 closes all 96 tubes in only 7 seconds! Remove the black foil to leave the tubes individually capped.

SCAN TUBE CODES

The Micronic Tracxer Code Readers reads the 2D (Data-Matrix or TraXis) codes of sample storage tubes and the 1D barcodes of sample storage racks in just 5 seconds. The intuitive user interface of the Tracxer Software is designed for maximum functionality and enables full sample traceability.

ADD SAMPLES TO YOUR DATABASE

The full integration of the Tracxer Code Reader Software with the Track-IT Sample Management Software enables users to directly trigger tube or rack barcode scanning from the Track-IT program. The sample data and the location / position of the rack in the freezer can be easily organized and tracked. The sample database in Track-IT is customizable to match the workflow of your laboratory.

PLACE SAMPLES IN ALLOCATED FREEZER

After the sample data has been saved, the rack cover can be placed on the rack. The samples are now ready to be stored at the allocated freezer position.

SAMPLE STORAGE STARTER PACKS

SAMPLE STORAGE STARTER PACK OVERVIEW

	SAMPLE STORAGE STARTER PACK **BASIC**	SAMPLE STORAGE STARTER PACK **STANDARD**
Starter packs with Screw Caps		
10 racks filled with 2D Data-Matrix coded tubes	Yes (0.75ml / 1.40ml)	Yes (0.75ml / 1.40ml)
40 racks filled with 2D Data-Matrix coded tubes	No	No
Screw Caps in Grey to cap 10 racks with tubes	Yes (0.75ml / 1.40ml)	Yes (0.75ml / 1.40ml)
Screw Caps in Grey to cap 40 racks with tubes	No	No
Tracxer Code Reader TS201 MINI	Yes	No
Tracxer Code Reader RS210	No	Yes
Tracxer Code Reader RS210 CRYO	No	No
Tracxer 1D Rack Barcode Reader BC210	No	No
Handheld Wireless Scannew MINI	Yes	No
Univo Screw Cap Recapper SR008	No	No
Manual decapping tools	Yes	Yes
Starter packs with Push Caps		
10 racks filled with 2D Data-Matrix coded tubes	Yes (0.75ml / 1.40ml)	Yes (0.75ml / 1.40ml)
40 racks filled with 2D Data-Matrix coded tubes	No	No
TPE Caps in Grey to cap 10 racks with tubes	Yes (0.75ml / 1.40ml)	Yes (0.75ml / 1.40ml)
TPE Caps in Grey to cap 40 racks with tubes	No	No
Tracxer Code Reader TS201 MINI	Yes	No
Tracxer Code Reader RD235 CRYO	No	No
Tracxer Code Reader RS210	No	Yes
Tracxer Code Reader RS210 CRYO	No	No
Tracxer 1D Rack Barcode Reader BC235	No	No
Handheld Wireless Scannew MINI	Yes	No
Univo Manual Capper CM480	No	No
Univo Electric Capper CP480	No	No
Manual decapper-1	Yes	Yes
Manual decapper-8	Yes	Yes

| SAMPLE STORAGE STARTER PACK **ADVANCED**	SAMPLE STORAGE STARTER PACK **PREMIUM**	SAMPLE STORAGE STARTER PACK **PREMIUM+**
		Not Available
No	No	n/a
Yes (3.00ml/ 4.00ml)	Yes (0.75ml / 1.40ml)	n/a
No	No	n/a
Yes (3.00ml/ 4.00ml)	Yes (0.75ml / 1.40ml)	n/a
No	No	n/a
No	No	n/a
Yes	Yes	n/a
Yes	No	n/a
No	No	n/a
No	Yes	n/a
No	Yes	n/a
Not Available		
n/a	No	No
n/a	Yes (0.75ml / 1.40ml)	Yes (0.75ml / 1.40ml)
n/a	No	No
n/a	Yes (0.75ml / 1.40ml)	Yes (0.75ml / 1.40ml)
n/a	No	No
n/a	No	Yes
n/a	No	No
n/a	Yes	No
n/a	No	Yes
n/a	No	No
n/a	Yes	No
n/a	No	Yes
n/a	Yes	Yes
n/a	Yes	Yes

**PRODUCTION IN
THE NETHERLANDS AND
THE UNITED STATES**

**CERTIFIED CLASS 7 CLEAN ROOM
INJECTION MOLDING
AND ASSEMBLY**

POST-ANALYTICAL CAPPING SOLUTION FOR SAMPLE COLLECTION TUBES

AFTER ANALYTICAL TESTS, SAMPLE COLLECTION TUBES CONTAINING BLOOD OR URINE SAMPLES REQUIRE SECURE STORAGE FOR SEVERAL DAYS IN CASE ADDITIONAL TESTING NEEDS TO BE DONE. MICRONIC OFFERS A UNIQUE POST-ANALYTICAL CAPPING SOLUTION (THE NOVITAIN CAPCLUSTER-50 AND NOVITAIN MANUAL CAPPER CV750) FOR THE SHORT-TERM STORAGE OF SAMPLE COLLECTION TUBES.

SHORT-TERM STORAGE OF BLOOD SAMPLES
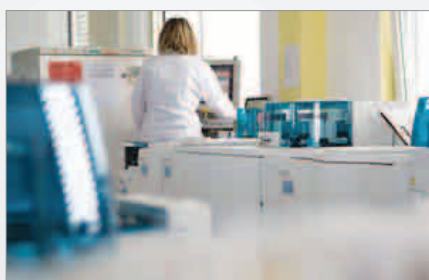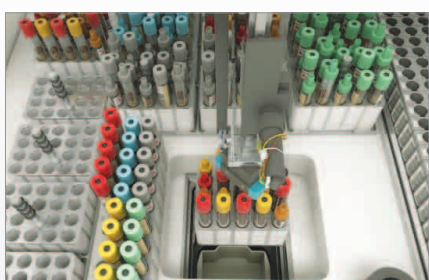
BLOOD SAMPLES ARE OBTAINED IN SAMPLE COLLECTION TUBES

Blood analysis is one of the most important diagnostic tools available to clinicians within health care. The process of obtaining blood samples from patients for diagnostic purposes is performed by medical laboratory scientists, medical practitioners, paramedics or other nursing staff. Typically blood is collected in vacuum sample collection tubes.

TUBES WITH SAMPLES ARE BEING SENT TO A HOSPITAL LABORATORY

After the collection of blood in the vacuum sample collection tubes, the blood samples are being sent to a (hospital) laboratory for testing. Under controlled conditions clinicians test for evidence of infection, disease or abnormalities.

SORT AND DECAP SAMPLE COLLECTION TUBES FOR ANALYTICAL TESTS

Before analytical tests can be performed with the blood samples, the sample collection tubes are typically centrifuged first. Afterwards they are sorted by color (which indicates a specific analytical test) and decapped by pre-analytical sorting / decapping systems.

ANALYTICAL TESTS ARE CONDUCTED WITH THE BLOOD SAMPLES

The prepared tubes containing the blood samples are transported to the specific analytical testing equipment. Blood is tested for cholesterol, diabetes, various infections, kidney function, calcium levels, liver function, blood disease or abnormalities in the body.

TEMPORARY STORAGE OF SAMPLE COLLECTION TUBES WITH NOVITAIN™

After these analytical tests, the sample collection tubes need to be stored for several days in case additional tests need to be performed. The Novitain Push Caps provide a fast and easy closure of the tubes for short-term storage. The Novitain Manual Capper CV750 is designed to close 50 racked tubes in one time. When the sample collection tubes are securely sealed, the samples can be registered and stored in a -20°C freezer.

NOVITAIN CAPPING SOLUTION

Designed in conjunction with healthcare professionals, the unique **Novitain TPE Push Caps** are ideal for the short-term sealing of sample collection tubes in a 50-well format. The Push Caps are manufactured from chemically resistant and hydrophobic polymer, in turn ensuring sample integrity.

The **Novitain Manual Capper CV750** can seal 50 sample collection tubes in one time using the Novitain Capcluster-50. The capper operates as a stand-alone device, is very easy-to-use and requires minimum force.

Compatibility: The Novitain Manual Capper can cap plastic sample collection tubes with a height of 75.0mm (+2.5mm / -2.5mm) and a diameter of 13.0mm in a PVT plastic rack with 50 positions (13.0mm).

SUPERIOR FEATURES

Novitain Capcluster-50

- Economical solution for the temporary storage of sample collection tubes in a 50-well format
- The caps are provided with a small tab for easy removal
- Caps can be pierced repeatedly without losing seal integrity
- Available in Natural
- Natural TPE caps are made out of Medical approved material (USP Class VI certificate)
- Compatible with sample tubes with a diameter of 13.0mm
- Resists chemical solvents
- Class 7 clean room production
- RNase/DNase and Pyrogen free

Novitain Manual Capper CV750

- Ideal solution for the fast and simple sealing of 50 sample collection tubes at one time
- No adapters required, adjustable in height
- Minimum force required
- Safe operations due to the white handgrip
- Stand-alone operation
- Minimizes cross-contamination
- Compatible with the Novitain Capcluster-50
- Compatible with sample collection tubes (75.0 x 13.0mm) in a PVT plastic rack with 50 positions (13.0mm)
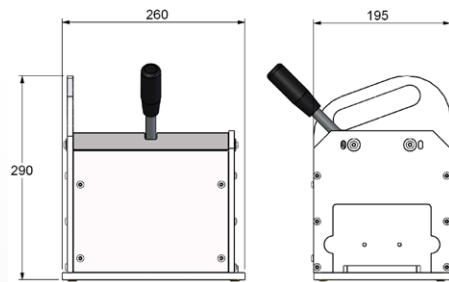
SPECIFICATIONS
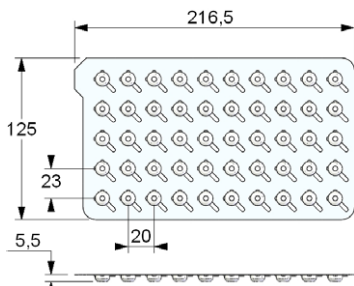
Material:	Thermo Plastic Elastomer
Cap height:	5.5mm
Chemical resistance:	++
Temperature range:	-20°C to +100°C

Rack compatibility:	PVT plastic rack with 50 positions (13.0mm)
Cycle time:	2 seconds
Dimensions:	195 x 260 x 290 mm / 7.7 x 10.2 x 11.4 inch
Weight:	12 kg / 26.5 lbs

ORDERING INFORMATION

Catalog number	Description	Unit
Novitain Capping Solution for Sample Collection Tubes		
MP35100	Novitain Manual Capper CV750	1 unit
MP35110	Novitain TPE Capcluster Natural for capping 50 individual tubes	10 clusters
MP35120	Novitain 50-well format rack for sample collection tubes	10 racks

DID YOU KNOW...

Are you unsure which tube or cap you need or would you just like to receive samples of our product range? Please let us know and we send you a complete bag with samples of our entire sample storage tube and cap range for free! Still not sure what type of tube or cap you need after you have received the samples? Micronic is very happy to help. We can provide you with advice on the most optimal storage solution for your application.

POST-ANALYTICAL CAPPING SOLUTION FOR SAMPLE COLLECTION TUBES

![MICRONIC - INNOVATION IN SAMPLE STORAGE]

TECHNOLOGY CENTER

At Micronic, innovation in sample storage is of paramount importance, it even is our "raison d'être". We are engaging ourselves in various innovative activities, ranging from manufacturing processes, product development / improvement, brand building initiatives to customer satisfaction, so that we are able to offer our customers (e.g. research laboratories of university hospitals, forensics, agricultural, veterinary and governmental institutes, as well as companies in the biotech, food, chemical and pharmaceutical industries) the expert advice with regard to traceable sample storage solutions. As the business environment has become more dynamic, we aim to create new and improved products, solutions and services that provide radically better customer experiences. Micronic has organized these innovative activities in its Technology Center - the center of expertise - which is located in Lelystad, The Netherlands.


ACTIVITIES

RESEARCH & DEVELOPMENT (R&D)

The primary goal of the Micronic Technology Center is to develop new and to improve existing products. Next to this primary goal, another fundamental task of the Technology Center is to discover and create new knowledge about scientific and technological topics for the purpose of uncovering and enabling development of valuable new products, processes, and services. Micronic mainly has a technology driven system in which R&D is directed towards developing those products that will meet, indicated by means of market research, an unmet need. Since Micronic is a medium-sized company and has all high-tech manufacturing and R&D knowledge in-house, it has the flexibility to quickly capitalize on developments in the market.

The process of product development at Micronic includes the following phases. Based on market research into customer (unmet) needs or new technologies, product concepts are drawn and feasibility studies are conducted. If it turns out that the development is feasible, prototypes of the new or improved product are created. Often different types of prototypes are created to test a variety of functionalities. The prototypes need to be tested by the end-customers as well. Their findings are also used to fine-tune the development / improvement of the product.

Additionally, Micronic is often approached by companies and end-customers that would like us to develop specific products for their applications. Please be informed that we are open to OEM developments and customer specific requests, so contact Micronic at sales@micronic.com or Micronic America + 1 484 480 3372 / Micronic Europe +31 (0)320 277 070, if you have suggestions about new or improved sample storage products. Micronic can offer you highly / academically trained personnel, knowledge in materials and injection mold development, technical and electrical knowledge, and a large network of suppliers. The Technology Center has also access to the following facilities: 3D CAD engineering, printing / plotting machines, a test facility with injection molding machines, a technical department for prototyping and modifications, and a laboratory testing facility.
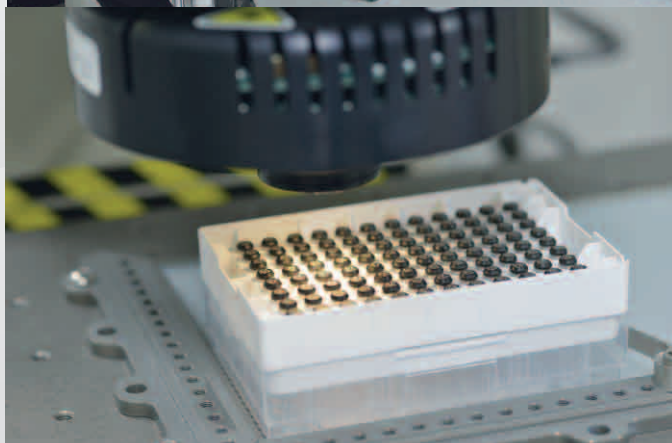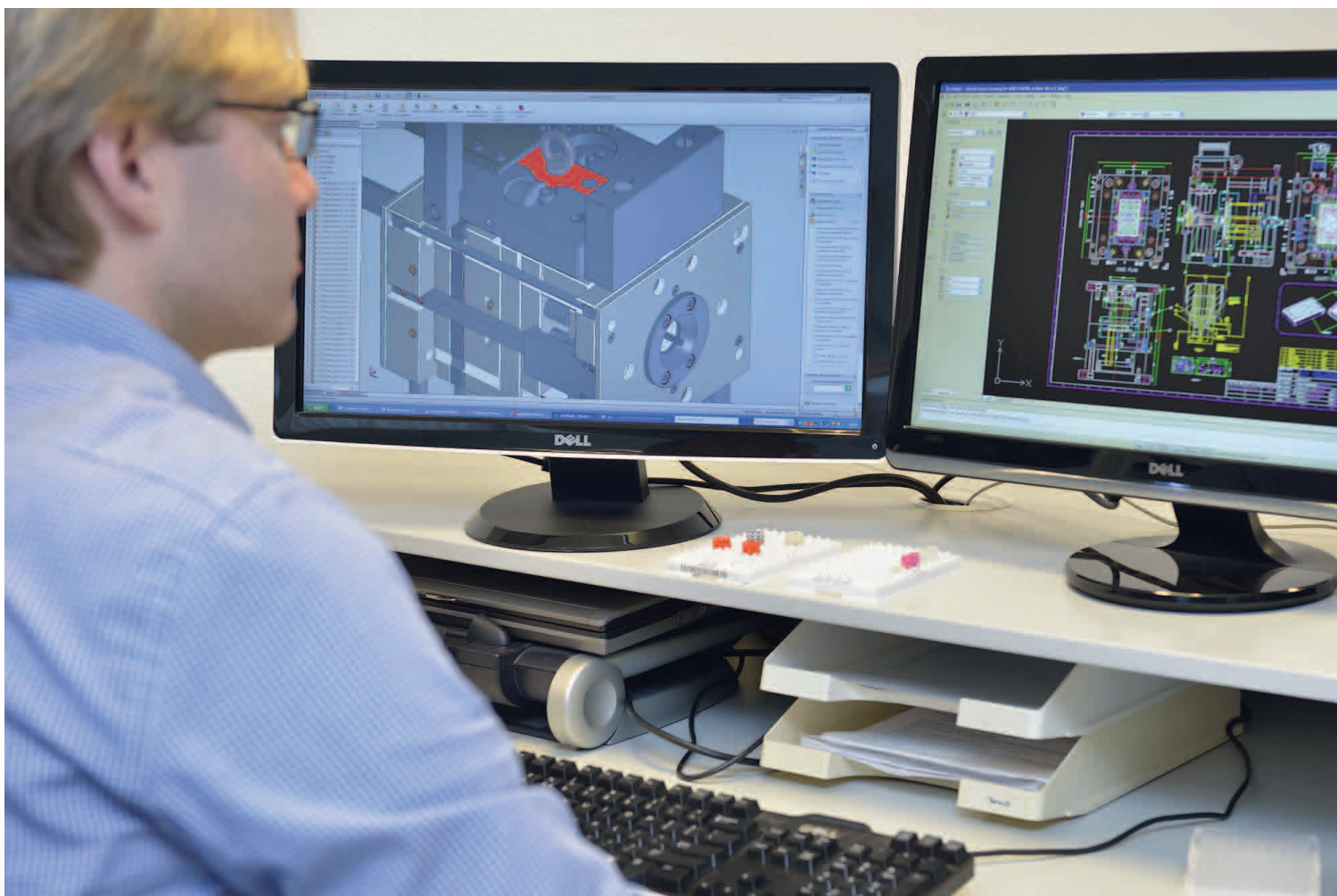
TESTING

Another important activity which is supported by Micronic's Technology Center is product testing. When new or improved products are developed, they first need to be tested before they are introduced in the market. This testing is done to fine-tune the product and to create the most optimal solution for specific customer applications. A wide range of tests are conducted at the laboratory testing facility of the Technology Center. Examples of tests that are conducted with Micronic sample storage products (tubes, caps and racks) are: freeze-thaw cycles, protein binding tests, evaporation / closure tests, determinations of tube working volumes, low temperature resistance tests, code readability tests and code scratch tests.
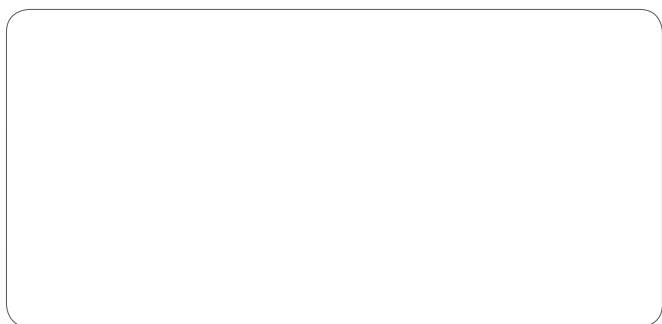
To imitate storage applications, a variety of testing equipment is present in the laboratory testing facility of Micronic's Technology Center, such as a controlled measuring room, a -4°C refrigerator, a -20°C chest and upright freezer, an ultra-low mechanical freezer (-80°C), a LN2 vessel (-196°C), an incubator (+70°C), and a Smartscope (visual measurement).

Please be aware that Micronic takes great care to test its products in several usage conditions. However, as it is not possible to cover all applications, we recommend customers to test the products also within their own application before usage. If you need any assistance in performing these application tests, Micronic's technical support team is very happy to help: contact Micronic at sales@micronic.com or Micronic America + 1 484 480 3372 / Micronic Europe +31 (0)320 277 099.

To the best of our knowledge, the information contained herein is accurate and reliable. However, Micronic does not make any express or implied representation or warranty as to the accuracy or completeness of the information. It is the user's responsibility to inspect and test the Micronic products in order to satisfy itself as to the suitability of the products for its particular purpose. The user is responsible for the appropriate, safe and legal use, processing and handling of the Micronic products.

WHERE TO BUY

PD802305

MICRONIC
INNOVATION IN SAMPLE STORAGE