MICRONIC
INNOVATION IN SAMPLE STORAGE

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

TUBES WITH INTERNAL THREAD

2D Data-Matrix Coded

2D DATA-MATRIX CODED TUBES

Micronic's 2D Data-Matrix coded tubes are used by many research laboratories worldwide in order to fully track and trace their valuable samples during the entire sample storage process. The unique 2D code identifies the sample, its coordinates within a storage rack, the particular rack and the location of the rack in the freezer. Next to ensuring reliable long-term sample identification, the high quality labware of Micronic also ensures that the integrity of samples is preserved at ultra-low temperatures over extended periods of time.

Micronic offers a comprehensive range of 2D Data-Matrix coded tubes. Precision manufactured from ultra-pure grade Polypropylene in a certified Class 7 clean room production environment, the tubes resist many organic solvents (DMSO, methanol, dichloromethane), may be autoclaved clean and can be gamma irradiated without loss of product performance. Manufactured to the industry leading strict tolerances, the tube-to-tube consistency of Micronic labware maximizes operational uptime when used in combination with automated cherry picking and handling systems.

Want to get started using 2D coded tubes? Check out our Starter Packs that offer a substantial saving over buying the products individually!
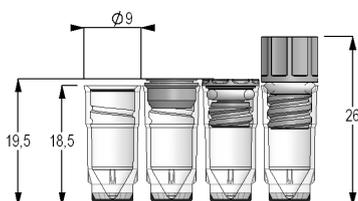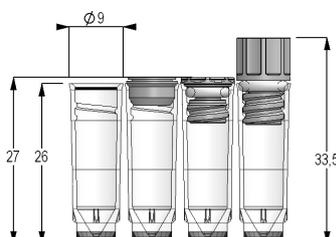
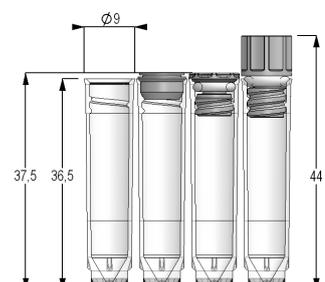| 0.50ml	0.75ml	1.10ml
2D Data-Matrix Coded 96-well configuration	2D Data-Matrix Coded 96-well configuration	2D Data-Matrix Coded 96-well configuration

TUBES WITH INTERNAL THREAD

2D DATA-MATRIX CODED

RACK, CAP AND EQUIPMENT COMPATIBILITY

The 2D Data-Matrix coded tube size range includes 0.50ml, 0.75ml, 1.10ml, 1.40ml, 2.00ml, 4.00ml and 6.00ml. Micronic Amber tubes (0.75ml and 1.40ml) for light sensitive samples are also available 2D Data-Matrix coded. The tubes are available with an inner V- or U-bottom and in bulk, refill or rack. The storage rack range consists of the Loborack-96, Roborack-96 and ULT Rack Range in 96-, 48- and 24-well format. The racks are based on the ANSI/SLAS standards for storage racks.

Micronic offers Screw Caps and Push Caps for secure tube sealing. For effective cryogenic storage a Screw Cap with Silicon O-ring is recommended since it allows for the tightest seal possible. For storage from -80ºC and above, either a Push Cap or Screw Cap can be used. The caps are available in a rainbow range of 12 different colors to aid easy visual differentiation of samples. To enable fast, accurate and efficient sample identification, Micronic offers a line of Tracxer Code Readers including single tube and rack scanners. The Univo capping and decapping equipment enable significant productivity gains to be made in opening and closing multiple sample storage tubes.
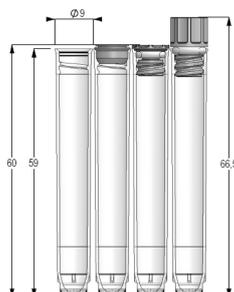
1.40ml

2D Data-Matrix Coded
96-well configuration
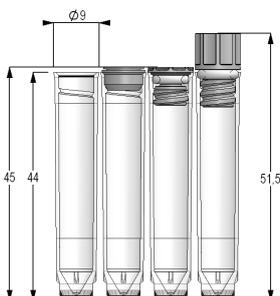
2.00ml

2D Data-Matrix Coded
96-well configuration

4.00ml

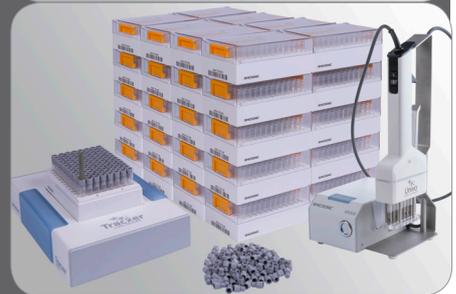2D Data-Matrix Coded
48-well configuration

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 a 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+.

The Starter Packs contain everything needed to start using 2D coded sample storage tubes, enabling laboratory workers to maintain a secure sample logistics system and eliminate the costly possibility of false sample identities. Available with a choice of either TPE cap or Screw cap tube closure – the Micronic range of Sample Storage Starter Packs enables labs to start securely sealing and storing up to 4,000 samples.

6.00ml

2D Data-Matrix Coded
24-well configuration

Ø 16,3

43,35   51,4
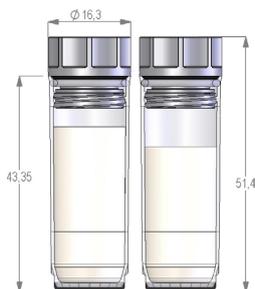
Amber Tubes
for light sensitive samples

2D Data-Matrix Coded
(0.75ml and 1.40ml)

Please check dimensions for
0.75ml and 1.40ml tubes in
96-well configuration

DID YOU KNOW...

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.

SUPERIOR FEATURES OF MICRONIC SAMPLE STORAGE TUBES

Medical approved virgin Polypropylene according to the highest standards

Low protein binding and extractables-free surface (Test Report 022601 & 022901)

Mechanical strength

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

Inner U-bottom for maximizing the working volume of tubes

High fill rate

The Screw Cap tube features a single turn thread for easy opening and closing of the tube

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

RNase / DNase and Endotoxin (pyrogen) free

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

Permanent laser-etched code on the tube bottom which is chemically, scratch and mechanically resistant

OPTIONAL SERVICES / FEATURES

STERILE

Sterilization by Gamma Irradiation

Most of the Micronic products are sterilized by gamma irradiation (15.0 kGy). Sterilization by gamma irradiation can ensure a SAL of 10-6: a one millionth probability of microbial survival. Irradiation itself cannot guarantee that the product is free from any detectable RNases, DNases or pyrogens. Class 7 clean room production is therefore an essential requirement.

Sterilization by EtO Treatment

Using a novel Ethylene Oxide Treatment process - Micronic's consumable products are independently certified to be absolutely DNA-free and therefore provide the perfect medium for long-term, high integrity storage of forensic samples. Micronic is offering the DNA-free products in a special Tyvek packaging.

Snap Tubes

The tubes are locked into the rack wells to prevent sample loss from overturned racks. There is no extra charge for this feature and it is available with 0.50ml, 0.75ml, 1.10ml and 1.40ml.

Pre-Capped

All Micronic tubes are available pre-capped with screw caps or TPE Push Caps upon request. There are 12 different colors for your choice: Grey, White, Yellow, Orange, Red, Pink, Purple, Blue, Light Blue, Light Green, Green and Black.

Pre-Racked

All Micronic tubes are available pre-racked upon request. The racks are based on the global recognized ANSI / SLAS standards for storage and features a laser etched 1D rack barcode.

TUBE WORKING VOLUMES

Working volume (+21ºC)	With Push Cap V-Bottom	With Push Cap U-Bottom	With Screw Cap V-Bottom	With Screw Cap U-Bottom	With Screw Cap Flat Bottom
0.50ml Screw Cap tube	0.30ml	n/a	0.21ml	n/a	n/a
0.75ml Screw Cap tube	0.58ml	n/a	0.48ml	n/a	n/a
0.75ml Push Cap tube	0.56ml	0.59ml	n/a	n/a	n/a
1.10ml Screw Cap tube	0.90ml	n/a	0.80ml	n/a	n/a
1.40ml Screw Cap tube	1.15ml	1.20ml	1.04ml	1.10ml	n/a
1.40ml Push Cap tube	1.13ml	1.19ml	n/a	n/a	n/a
2.00ml Screw Cap tube	n/a	1.58ml	n/a	1.49ml	n/a
4.00ml Screw Cap tube	n/a	n/a	n/a	n/a	2.70ml
6.00ml Screw Cap tube	n/a	n/a	n/a	n/a	4.80ml

CODE RESISTANCE PERFORMANCE OF LASER-ETCHED VS. INK CODES

The Tech Note about "Code Resistance Performance" demonstrates that Micronic laser-etched 2D Data-Matrix codes can be read after extreme abrasion and submerging into several chemical solvents.

One of the biggest concerns regarding sample traceability is the loss of a tube code or its invalidation throughout the storage process. A well-placed and high-quality 2D Data-Matrix code is essential for reliable sample identification and is critical to the success of an automation system.

Next to the proven mechanical and chemical resistance of the 2D codes, Micronic also ensures that its 2D Data-Matrix codes are permanently applied on the tubes. First, the tubes are manufactured using a unique 2K injection molding technique so that the highly transparent tube and the black codeable surface cannot be separated. Second, the 2D Data-Matrix code is laser-etched on the tube bottom.

MICRONIC INNOVATION IN SAMPLE STORAGE — TECHNOTE

"Micronic laser-etched 2D Data-Matrix codes can be read after extreme abrasion and submerging into several chemicals. The excellent results of the Micronic 2D Data-Matrix codes confirm the capability of mechanical and chemical resistance guaranteeing reliable sample identification after short or long-term storage."

CODE RESISTANCE PERFORMANCE
Of laser-etched versus ink 2D based codes

Micronic Europe
(Asia, Africa, Europe, Oceania)
Tel: +31 (0)320 277070

Micronic America
(North, Central and South America)
Tel: +1 484 480 3372

E-mail: sales@micronic.com
www.micronic.com

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