

CryoPure Storage System

Energizing your Cryopreservation



Come Grow With Us

*Efficient and reliable
cryopreservation*



CryoPure Storage System

CryoPure – Certified Quality

CryoPure tubes are subjected to extensive testing to ensure that potential contaminants which could harm cell materials and cellular components during 'vital preservation' are not present.

Upon successfully meeting stringent testing criteria, CryoPure tubes are certified as follows:



- ✓ Non-pyrogenic
- ✓ Sterile
- ✓ Non-mutagenic
- ✓ CE/IVD-compliant
- ✓ Non-cytotoxic

Designed for Versatility and Convenience

The CryoPure storage system is available in a range of sizes from 1.2 ml to 5.0 ml to accommodate all major volume requirements.

Free-standing CryoPure tubes fit standard cryo boxes and aluminium holders.

The automated tracking of biological samples is increasingly important. Sarstedt therefore offers CryoPure tubes with various barcode types as well as data matrix (2D barcode) upon request. Custom labels designed for use with liquid nitrogen are pre-printed with the desired barcode and automatically affixed to the tube. The labels are resistant to smearing and most solvents (e.g. ethanol max. 70%).

The two-dimensional data matrix code has many advantages over a conventional barcode, for example:



- ✓ Very high reading accuracy due to Error Correction Codes (ECC200) in the data matrix format
- ✓ Readability of the matrix is still possible even if partially damaged
- ✓ Large amounts of data can be coded in a small surface
- ✓ No code alignment is required for scanning (360° readable)



Cryo boxes for low temperature range storage

- High-quality durable polycarbonate storage boxes for a deep-freeze temperature range to -196°C
- Numerical coding for each tube enables quick sample identification
- Optically clear lid and coloured base with large apertures for swift ventilation
- Full range of box options tailored to accommodate standard 1.2/2.0/3.5 and 5.0 ml cryo tubes
- Compartmentalized boxes in multiple formats (5 x 5, 9 x 9, 10 x 10) offer flexible storage options
- Autoclavable, 121°C , 20 min.



Numerical coding

CryoRack 40/Work Rack

- Accommodates 40 tubes (4 rows of 10 grooves)
- Interlocking connection with tube bases provides easy single-handed operation
- Alphanumeric colour-coding for easy sample identification
- Anti-slip rubber pads
- Autoclavable, 121°C , 20 min.



Ordering Information CryoRack 40

Order No.	Packaging
93.856.040	1/bag · 10/case

Exceptional Versatility

- Available in a volume range of 1.2 to 5.0 ml, highly transparent CryoPure tubes are engineered with a safe, externally threaded screw cap to minimize contamination
- For more compact storage in our 10 x 10 formatted cryo storage boxes, a 2.0 ml CryoPure tube with an internally threaded cap and silicone O-ring is available
- The optimized contour of the interior tube base enables easy removal of the complete sample



Ergonomic Design

- QuickSeal screw caps ensure safe, ergonomic opening and closing with a single turn
- Skirted design allows for user-friendly single-handed operation of the tubes in the CryoRack 40 and most other racks



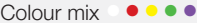
Colour-Coding Options

- 5 Cap colours and 5 cap insert colours provide up to 25 different colour-coding options
- **NEW** Blue screw caps for 2 ml CryoPure tubes and coding inserts




Ordering Information • The complete range

CryoPure 1.2 ml tubes with external thread

Order No.	Screw cap	Nominal volume	Packaging
72.377	white	1.0 ml	50/bag · 500/inner box · 2.000/case
72.377.002	red	1.0 ml	
72.377.004	yellow	1.0 ml	
72.377.005	green	1.0 ml	
72.377.007	violet	1.0 ml	
72.377.992	Colour mix 	1.0 ml	




CryoPure 2.0 ml tubes with external thread

Order No.	Screw cap	Nominal volume	Packaging
72.379	white	1.8 ml	50/bag · 500/inner box · 2.000/case
72.379.002	red	1.8 ml	
72.379.004	yellow	1.8 ml	
72.379.005	green	1.8 ml	
NEW 72.379.006	blue	1.8 ml	
72.379.007	violet	1.8 ml	
72.379.992	Colour mix 	1.8 ml	

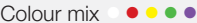


CryoPure 5.0 ml tubes with external thread

Order No.	Screw cap	Nominal volume	Packaging
72.383	white	4.5 ml	25/bag · 250/inner box · 1.000/case
72.383.002	red	4.5 ml	
72.383.004	yellow	4.5 ml	
72.383.005	green	4.5 ml	
72.383.007	violet	4.5 ml	
72.383.992	Colour mix 	4.5 ml	




CryoPure 2.0 ml tubes with internal thread and silicone O-ring

Order No.	Screw cap	Nominal volume	Packaging
72.380	white	1.6 ml	50/bag · 500/inner box · 2.000/case
72.380.002	red	1.6 ml	
72.380.004	yellow	1.6 ml	
72.380.005	green	1.6 ml	
NEW 72.380.006	blue	1.6 ml	
72.380.007	violet	1.6 ml	
72.380.992	Colour mix 	1.6 ml	








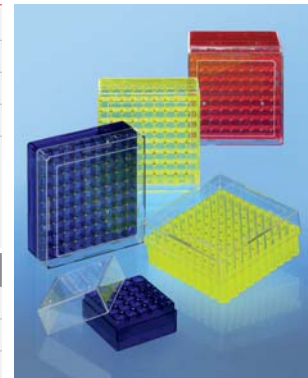
Colour-coded inserts for CryoPure tubes

Order No.	Colour	Packaging
65.386	white	100/bag · 3.000/case
65.386.002	red	
65.386.004	yellow	
65.386.005	green	
NEW 65.386.006	blue	
65.386.007	violet	
65.386.992	Colour mix 	100/bag · 5 colours · 2.500/case



Cryo boxes for low temperature range storage

Compatible tube designs	1.2 - 2.0 ml			3.5 - 5.0 ml	
Format	5 x 5	9 x 9	10 x 10	9 x 9	
Storage capacity	25	81	100	81	
Box size (W x D x H) in mm	75 x 75 x 52	132 x 132 x 53	132 x 132 x 53	132 x 132 x 95	
Ideal for tubes with	Internal and external thread		Internal thread	Internal and external thread	
				 	
Packaging	Colour	Order No.			
5/bag 20/case	red	93.872.225	93.873.281	93.874.210	93.875.281
	yellow	93.872.425	93.873.481	93.874.410	93.875.481
	blue	93.872.625	93.873.681	93.874.610	93.875.681



Caution

During the freezing process, a vacuum is created inside the tubes. The size of the vacuum is dependent upon the filling volume (freezing volume). When CryoPure tubes are stored in liquid nitrogen, liquid nitrogen may enter the tubes in proportion to the vacuum inside. During removal and/or thawing of the tubes the liquid nitrogen changes into the gas phase and causes an internal pressure to build. As a result, infectious material may be released or the tubes may explode. The use of CryoPure tubes with internal thread and silicone O-ring reduces the risk of explosion. Contaminated nitrogen entering the tubes may also harm the cellular components of the sample. For safety reasons, CryoPure tubes must always be stored in the gas phase of liquid nitrogen.

Always observe appropriate safety precautions when working with CryoPure tubes:

- Store tubes in the gas phase only.
- Fill the tubes to the fill mark.
- Apply screw cap handtight. Do not over-tighten or use any tool.
- Wear protective clothing, face protection, glasses and gloves.
- Place tubes into a container (e.g. water bath) with cover during the thawing process.

Please also observe your institutional safety guidelines!

Standard Protocol for Freezing Mammalian Cells

- Rinse cells with PBS.
- Remove cells with suitable method depending on the cell type (e.g. treatment of cell layer with EDTA-, Trypsin- or EDTA-Trypsin solution).
- Stop reaction with cell culture medium containing serum.
- Count cells by means of Neubauer cell chamber.
- Centrifuge cells (5 min, 350 x g, room temperature), discard supernatant.
- Re-suspend the cell pellet in a culture medium containing serum in order to render a final cell concentration of approx. 10^7 cells/ml.
- Add 1 volume of double-concentrated freezing medium (e.g. 50% medium, 30% FCS, 20% DMSO). The number of cells should be at least about 5×10^6 cells/ml.
- Fill CryoPure tubes to fill mark.
- Freeze samples in an insulating container at -80°C that ensures a cooling rate of $1^{\circ}\text{C}/\text{min}$. Cells should be stored at -80°C for at least 6 hours. Depending on the cell type, cells may also be viable for several days at -80°C .
- Transfer the tubes to a liquid nitrogen tank.

Standard Thawing Protocol

- Quickly remove the CryoPure tubes from the liquid nitrogen freezer and place into a 37°C water bath with cover.
- After thawing, briefly disinfect the tubes with 70% alcohol. Dry and transfer the cell suspension into a 15 ml centrifuge tube (e.g. Order No. 62.554.002).
- Add culture medium and centrifuge cells (5 min, 350 x g, room temperature).
- Discard the supernatant and re-suspend cells in a suitable fresh culture medium.
- Transfer to a cell culture flask and incubate.

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