



Cryogenics Introduction

In 1962 the founder of Nunc teleaxed home from a meeting in Geneva. He asked the production manager to make a 2 ml tube for WHO, which could be used in the liquid phase of nitrogen. This was the forerunner of today's CryoTubes™.

We have come a long way since then, most recently meeting the IATA requirements for the transport of biological samples. This means that the tubes can withstand evacuation to 95 kPascal without leaking.

All CryoTubes™ carry the CE marking required for containers of samples of human origin.

The certificate that accompanies each box indicates that the tubes are also thoroughly tested. They are non-toxic as indicated by the USP biological reactivity class VI – 50°C test (7 days implant), which is performed on the raw materials used in the production of all CryoTubes™.

The tubes are certified non-pyrogenic, meeting the international criteria.

All tubes with internal and external threads are packed 50 per reclosable laminated zippered bag. The stronger bags ensure sterility of the contents (As one of only very few cryo vial suppliers, we can certify sterility at the level SAL 10⁻⁶). All bags are marked with catalog and lot numbers.

Nunc CryoTubes™ exhibit low binding characteristics both in terms of cellular adhesion and protein binding when compared with competitive tubes.

L929 Cell Adsorption to CryoTubes™ (3 days incubation)



Nunc™

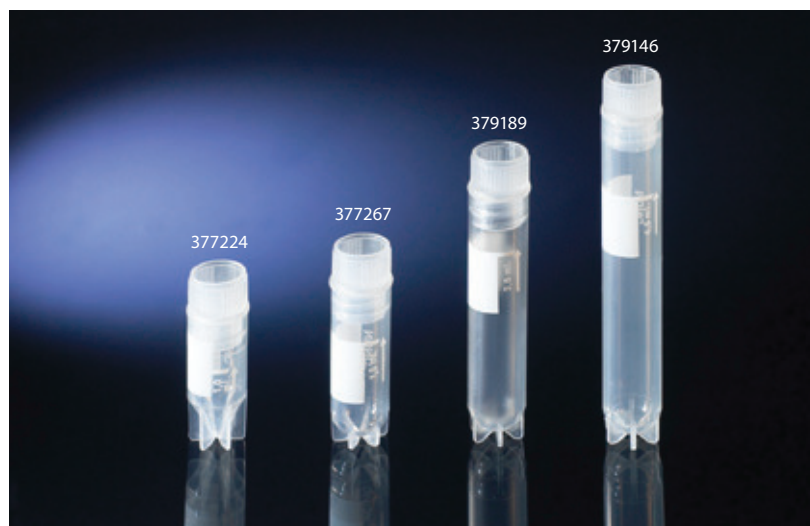
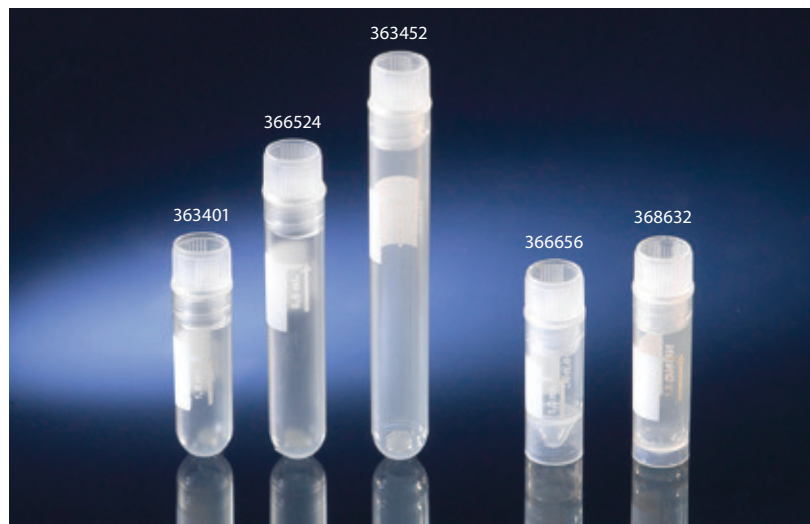
Various competitors

Nunc Brand has comprehensive barcoding capabilities. We can supply coded tubes printed with Interleaved 2 of 5 or labeled with Code 128. Both code types withstand all reagents and conditions normally used in cryo-storage.

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CryoTubes[™] Internal Thread



- Intended for cryogenic transportation and storage of biological material
- CE marked for IVD
- Conform to IATA requirements for the transport of diagnostic specimens
- Perform well in mechanical freezers, and in nitrogen (gas and liquid* phase)
- One hand operation with starfoot tubes in CryoTube[™] Rack (Cat. No. 376589)
- Non-toxic, USP, Class VI
- Non-pyrogenic
- Non-mutagenic
- Sterile (SAL 10⁻⁶) according to ISO 11137
- Re-closable zippered bags
- Internal thread with a silicone gasket provides the best possible seal
- Catalog No. and Lot No. are printed on the bags
- For extreme storage conditions like liquid phase of nitrogen CryoFlex[™] must be used*



Starfoot tube fits into grooves of the CryoTube Rack (Cat. No: 376589) - Page 47 - which allows one-hand operation.

*Warning

Do not use CryoTubes in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex Tubing (Cat. No. 343958). Improper use may cause liquified nitrogen to be trapped inside the vial and lead to pressure build-up, resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the Nunc CryoPreservation Manual when handling and disposing of the CryoTubes.

Literature:

Tech Note No: 14

See Pages 195-196 for full reference list with titles and links

About barcoding:
www.nuncbrand.com/go/barcoding

CryoPreservation Manual:
www.nuncbrand.com/go/cryopresmanual

Instruction guide enclosed in each case

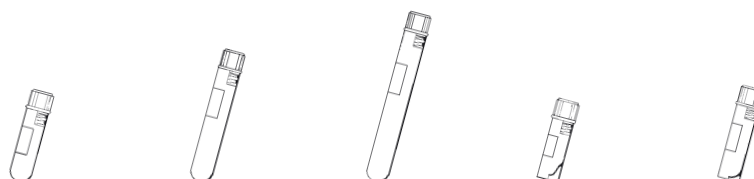
Accessories:

CryoTubes accessories

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Nunc CryoTubes™

Internal thread.
Polypropylene (PP) tubes
and screw cap.
Sterile with writing area.



Cap for
tubes with
internal
thread

Cat. No.	363401	366524	363452	366656	368632
Bottom shape	Round	Round	Round	Conical	Round
Suggested working volume, ml	1.8	3.6	4.5	1.0	1.8
Free standing	-	-	-	+	+
Starfoot	-	-	-	-	-
Total length, mm	48	70	92	42	49
Total diameter, mm	12.5	12.5	12.5	12.5	12.5
Units per pack/carton/case	50/500/2000	50/400/1600	50/300/1200	50/500/2000	50/450/1800

Nunc CryoTubes™

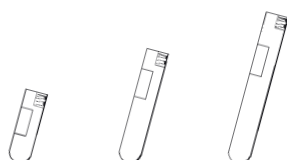
Internal thread.
Polypropylene (PP) tubes
and screw cap.
Sterile with writing area.



Cat. No.	377224	377267	379189	379146
Bottom shape	Conical	Round	Round	Round
Suggested working volume, ml	1.0	1.8	3.6	4.5
Free standing	+	+	+	+
Starfoot	+	+	+	+
Total length, mm	42	49	72	92
Total diameter, mm	12.5	12.5	12.5	12.5
Units per pack/carton/case	50/500/2000	50/450/1800	50/400/1600	50/300/1200

Nunc CryoTubes™ without caps

Non-Sterile



Cat. No.	351934	367997	361247
Bottom shape	Round	Round	Round
Suggested working volume, ml	1.8	3.6	4.5
Free standing	-	-	-
Total length, mm	48	70	92
Total diameter, mm	12.5	12.5	12.5
Writing area	+	+	+
Units per pack/case	500/2500	250/1500	250/1500

Nunc Replacement Screw Caps

Non-Sterile

Cat. No.	363436	336096 ‡	336097 ‡	336095 ‡
Color	Clear	Red	Blue	Yellow
Units per pack/case	500/2500	250/2500	250/2500	250/2500

‡ Not available in Americas

Nunc Replacement Screw Caps

Irradiated

Cat. No.	336078	336081	336088	336092	336094
Color	Clear	Red	Blue	Yellow	Assorted
Units per pack/case	500/2500	250/2500	250/2500	250/2500	250/2500