BIOBANK SYSTEMS

2024 issue

SMTRA BIO

The Pulse of Lab Innovation

COMPANY PROFILE

About SMTRA BIO

SmtraBio is committed to producing exceptional, premium laboratory plastic consumables that offer substantial cost savings in comparison to other brands.

SmtraBio stands at the forefront of laboratory innovation, providing bespoke consumable solutions with unrivaled precision. Our state-of-the-art facilities, spanning over 26,640 square meters, are a testament to our commitment to excellence and the trust placed in us by renowned brands across Europe and the United States.

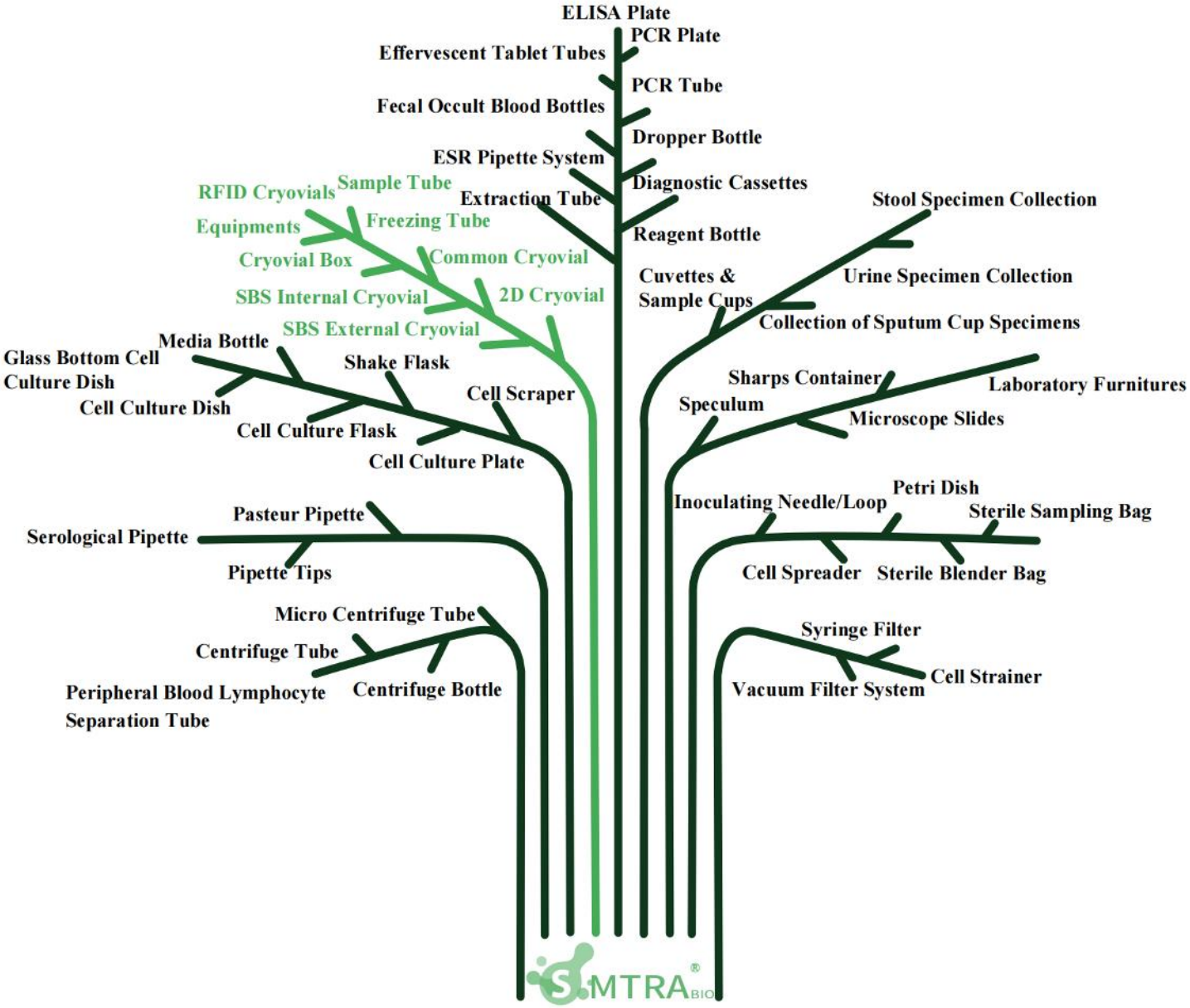
As a seasoned OEM manufacturer, SmtraBio boasts a portfolio rich with over 2,000 products, safeguarded by 107 patents, of which 54 are inventions that redefine industry standards. We have mastered the art of delivering high-end consumables, diagnostic products, and comprehensive solutions for biological laboratories that are second to none.

From biological sample bank series to rapid diagnostic consumables, each product is a masterpiece of innovation, created using advanced injection molding machines, ultrasonic welding, and eco-friendly sterilization processes. Our rigorous quality assurance system guarantees that every item not only meets but exceeds the stringent standards demanded by the scientific community.

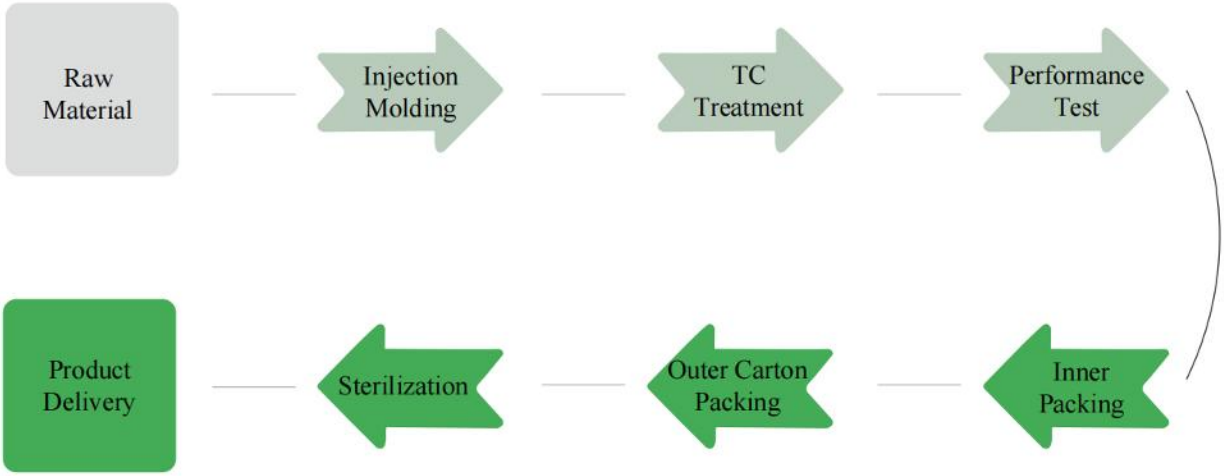
'SmtraBio — The Pulse of Lab Innovation' is not just a slogan; it is our ethos. It is the promise we make to every customer that with our products, their research will not skip a beat. Join us at SmtraBio, and let's set the tempo for scientific discovery together.

Biobank Systems

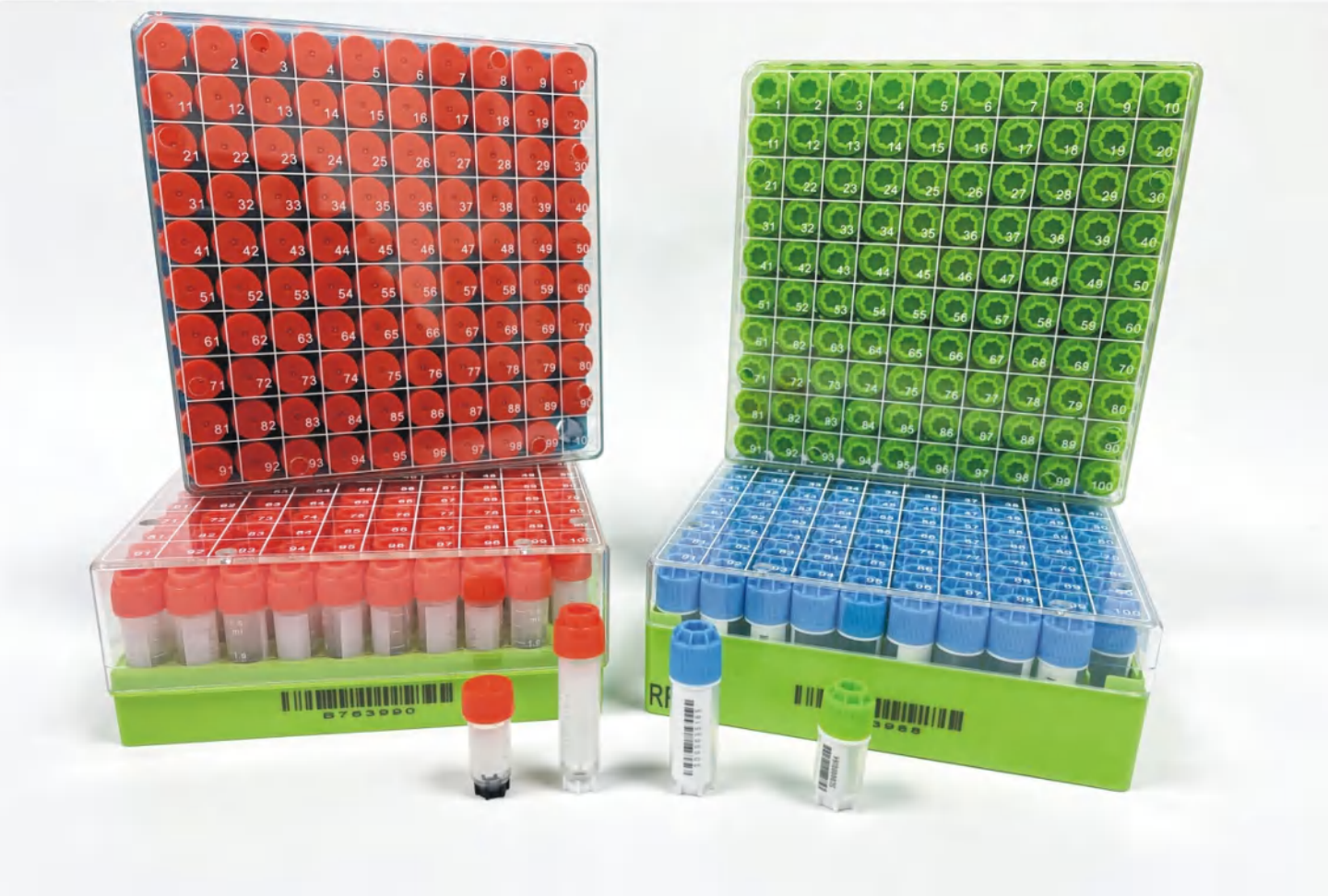
CONTENTS



The Pulse of Lab Innovation



RFID Cryogenic Vial



What is RFID?

RFID (Radio Frequency Identification) is a wireless communication technology that can identify specific targets and read relevant data through radio waves, without the need to establish mechanical or optical contact. Imagine the anti-theft systems in supermarkets or transit cards; these are examples of RFID technology applications.

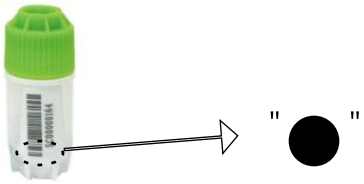
A complete RFID system typically includes two main components: tags and readers.

Types of RFID Tags

- Passive tags: These tags do not have their own power source. They obtain energy from the signals emitted by readers and send back information. These tags are inexpensive but have a shorter reading distance.
- Active tags: These tags have their own power source, allowing them to send signals from greater distances. They are more expensive and suitable for scenarios requiring long-distance reading.

RFID Cryogenic Vial

Integrating RFID tags on cryogenic vials (small sealed containers specially designed for long-term storage of biological samples such as blood, DNA, cells, etc.) allows for wireless tracking and management of biological samples.



"Core Values of RFID Cryovials"

Unique Identification

Each tag has a unique ID, used for accurate identification of samples

Information Storage

Capable of storing detailed information about the sample, such as origin, date, type, etc

Increased Efficiency

Allows for rapid scanning of entire cryogenic boxes or racks in refrigeration

Reduced Errors

Reduces errors associated with manual data entry or mismatches with traditional database information

Large-scale Storage

Manages large volumes of biological samples, ensuring they are easy to retrieve and maintain

Convenience of Use

Breaks away from traditional cryogenic vial image recognition difficulties. No risks of frosting, QR code peeling off, etc

ISO9001 & ISO13485

Challenges with RFID Cryovials

1. Low-temperature resistance: A reader and tags suitable for low-temperature environments, capable of long-term stable operation in such conditions.
2. Compact size: Considering the small size of cryogenic vials, the tags should be small and integrate stably with the vials without affecting the samples.
3. Interference-free: Ultra-small cryogenic vials should not interfere with each other on the reader and should be stored in metal containers without mutual interference.
4. Long-term storage validation: There is currently a lack of long-term storage validation data for RFID cryogenic vials.
5. Regular testing: RFID cryogenic vials need regular testing of the system's accuracy to ensure that the tags and reader are working properly.
6. Cost analysis: Consider the costs of introducing an RFID system (additional costs for tags, tag integration processes, and costs generated by the read-write programs).

RFID Cryogenic Vial

RFID Chip "●"

"Four-in-One Code"

RFID chip, QR code, barcode, and readable numeric code

Suitable for automated/manual sample handling in cryogenic environments.

"Writable Freedom"

With a chip writing device, data can be edited on the chip.

Overcomes traditional low-temperature label issues such as easy detachment and non-writable QR codes.

"Rapid Reading"

With a chip reading device, chip parameters are read.

Radio frequency reading completely resolves the difficulty of reading QR codes through frost, enabling rapid reading and localization of entire pages, racks, or even freezers.

"Extreme Durability"

Temperature tolerance: -196°C to 121°C

Innovative chip encapsulation technology withstands deep cryogenic temperatures (-196°C) without affecting data read/write, ensuring sample data security.

"Life Traceability"

Global unique TID code, unalterable for life.

Trace sample life cycles through the chip without the need for sample management software.

"Injection Molding Integration"

Dual-color chip injection molded at the bottom of the cryogenic vial.

Original dual-color injection molding chip design ensures stable integration at the bottom of the vial, preventing detachment and contact with the sample.

RFID Parameters

Air Protocol	EPC Global Class1 Gen2IS018000-6C
Operating Frequency	UHF902-928MHz(FCC)
Environmental Compatibility	Best on Non-Metal Surfaces
Reading Distance	0.5m(Non-Metal)
Polarization	Linear Polarization
Chip	Impinj R6-P
Storage	EPC 128bit TID 96bitUser 32bit

Mechanical Parameters

Tag Material	Fr4
Surface Material	Industrial-grade resin
Size	4.8 x 2.1 mm
Weight	0.1 g
Installation Method	Medical-grade material encapsulation
Color	Black

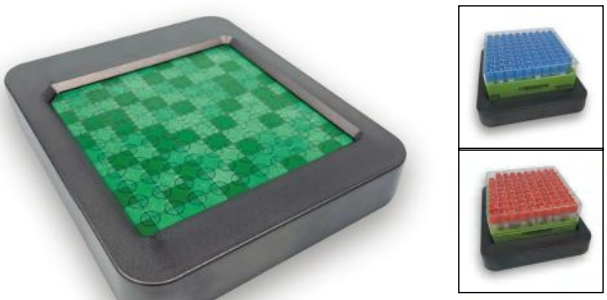
RFID, SBS(6*8)

Cat. No.	Volume (ml)	Description	Package	QTY/ctn (racks)
T6301-RF4	1	RFID, 3 codes, External thread	48 pcs/rack, 12 racks/box, 4 boxes/ctn	48
T6401-RF4	2	RFID, 3 codes, External thread	48 pcs/rack, 9 racks/box, 4 boxes/ctn	36
T6501-RF4	4	RFID, 3 codes, External thread	48 pcs/rack, 6 racks/box, 4 boxes/ctn	24

RFID, 2D(10*10)

Cat. No.	Volume (ml)	Description	Package	QTY/ctn (racks)
T2077-RF3	0.5	RFID, 2 codes, External thread, flat cap, with gasket	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2277-RF4	1.5	RFID, 3 code, External thread, flat cap, with gasket	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
T2501-RF4	1	RFID, 3 codes, External thread	100 pcs/rack, 8 racks/box, 4	32
T2401-RF4	2	RFID, 3 codes, External thread	100 pcs/rack, 6 racks/box, 4	24

RFID Integrated Decoding Device



- **Supports various types of cryogenic boxes, including 10x10, 9x9, etc., with customizable specifications.**
- **Reads within ≤5 seconds, allowing for rapid inventory and precise localization, suitable for high-throughput sample storage scenarios.**
- **Chip radio frequency reading, unaffected by appearance, with no risk of frosting.**
- **Supports disordered reading for rapid organization of entire boxes of samples.**
- **Interfaces such as TXT, CSV, XML, and RESTful are available, enabling integration with sample library systems and automated equipment.**
- **Features an open and friendly design, equipped with an SDK toolkit, which can be integrated into automated systems or laboratory management systems.**

Equipment Parameters

Dimensions	98x98x32 mm
Weight	100 g
Body material	Engineering plastics
Input voltage	DC 5V
Standby current	<100mA
Maximum operating current	1100mA+/-5%@DC 5V Input
Operating temperature	-20°C~+65°C
Storage temperature	-40°C~+85°C
Operating humidity	5%RH-95%RH (No condensation)
Air interface protocol	EPC global UHF Class 1 Gen 2Is18000-6C
Operating frequency range	902-928MHz FCC 865-868MHz ETSI
Output power	0-26dBm

RFID Handheld Decoding Device

Communication Data

Bluetooth	Bluetooth v2.1+EDR,3.0+HSv4.1+HS
WLAN	IEEE802.11 a/b/g/n/ac
WWAN	2G:900/1800 MHz 3G;WCDMA:B1,B8 CDMA2000 EVDO:BCO TD-SCDMA:B34,B39 4G:B1,B3,B5,B8,B34,B38,B39,B40,B41
GNSS	Beidou/GPS/GLONASS, supports A-GPS

Specifications

Cat. No.	Item Name	Description	Package
1510000	RFID integrated decoding device	Batch decoding	1 unit/case
1520000	RFID handheld decoding device	Single decoding	1 unit/case

Output power accuracy	+1dB
Output power flatness	+0.2dR
Receiver sensitivity	<-80dBm
Inventory tag peak speed	-
Antenna	Internal circularly polarized antenna
Tag RSSI	Supported
Antenna connection protection	Supported
Environmental temperature monitoring	-
Communication interface	USB communication simulated keyboard output
GPIO	-
Maximum communication baud rate	115200 bps
LP level	Ip54

Physical Parameters

Touch screen	Corning Gorilla Glass, supports multi-touch, supports glove or wet hand operation
Display screen	5.2-inch, IPS FHD 1920x1080 resolution
Communication interface	USB 2.0 Type-C, OTG, supports Type-C headphones
Battery	Rechargeable lithium polymer battery 8000 mAh standby time >500 hours Working time >12 hours (depending on usage and network environment) Charging time 3-4 hours (using standard power adapter and data cable)
Dimensions	164.2x80.0x24.3 mm
Weight	654 g
Sensors	Gravity sensor, light sensor, proximity sensor

SBS Cryogenic Vial

Features

- USP class VI PP (polypropylene) raw material, produced in a 100,000-level clean room
- Dual-color injection molding process, permanent laser etching of 2D codes / 1D codes / digital clear codes, multiple codes integrated into one
- Full-process quality control to ensure readable and unique codes without duplication risk
- The internal thread is prefabricated with a dual-color injection molded integral seal ring to ensure sealing performance
- The bottom U-shaped transparent window design facilitates full sample utilization and bottom observation
- The rack design complies with the ANSI/SLAS 2004 international standard and can be used with laboratory automation equipment
- The special pattern resistance design of the tube cap inner hole can be matched with a multi-channel screw cap opener for batch opening and closing
- DNase & RNase Free, Endotoxin free,Non-pyrogenic, Non-cytotoxic
- Irradiation sterilization:SAL 10^{-6}(ISO 11137)

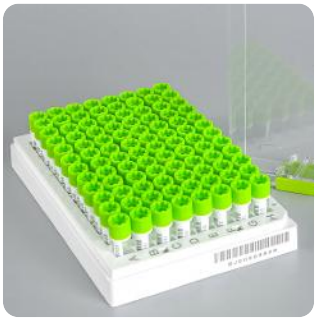
Product Details

Dual injection molding Technology

More stable and suitable for long-term storage

Laser etching coding

High accuracy and excellent firmness , no risk of compound or text ink contamination of biological samples



Cutting-edge coding rules

The code applies the Data Matrix ECC200 coding rules, which has high error correction ability, can be used for a variety of devices for individual/batch decoding

Three codes in one

Equipped with bottom 2D Data Matrix code, side bar code and readable digital code to enhance sample identification and providing various application possibilities.

SBS Internal Thread Cryogenic Vial

SBS Internal Thread Cryogenic Vial (Rack Pack)

Cat. No.	Volume (ml)	Description	Package	QTY/ctn (racks)	Size/ctn(cm)			GW/ctn (kg)
					L	W	H	
★T6101	0.75	Single code, Internal thread【Star Cap】Black bottom	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
★T6102	0.75	Single code【TPE Cap】Black bottom	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
★T6131	0.75	3 codes, Internal thread【Star Cap】White bottom	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
T6131M	0.75	3 codes, Internal thread【Hexagon round cap, Matrix cap】Black bottom	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
T6132	0.75	3 codes【TPE Cap】White bottom	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
★T6201	1.4	Single code, Internal thread【Star Cap】Black bottom	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
★T6202	1.4	Single code【TPE Cap】White bottom	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
★T6231	1.4	3 codes, Internal thread【Star Cap】White bottom	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
T6231M	1.4	3 codes, Internal thread【Hexagon round cap, Matrix cap】White bottom	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
T6232	1.4	3 codes【TPE Cap】White bottom	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
T6902	1.4	3 codes, Internal thread【Micronic cap, short cap】	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
T6912	1.4	3 codes, Internal thread【Micronic cap, high cap】	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35

SBS Internal Thread Cryogenic Vial (Bag Pack)

Cat. No.	Volume(ml)	Description	Package	QTY/ctn(pcs)
T6106	0.75	Single code, Internal thread【Star Cap】Black bottom	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T6108	0.75	Single code【TPE Cap】Black bottom	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T6136	0.75	3 codes, Internal thread【Star Cap】White bottom	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T6136M	0.75	3 codes, Internal thread【Hexagon round cap, Matrix cap】Black bottom	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T6138	0.75	3 codes【TPE Cap】White bottom	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T6206	1.4	Single code, Internal thread【Star Cap】Black bottom	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T6208	1.4	Single code【TPE Cap】White bottom	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T6236	1.4	3 codes, Internal thread【Star Cap】White bottom	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T6236M	1.4	3 codes, Internal thread【Hexagon round cap, Matrix cap】White bottom	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T6238	1.4	3 codes【TPE Cap】White bottom	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T6908	1.4	3 codes, Internal thread【Micronic cap, short cap】	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T6918	1.4	3 codes, Internal thread【Micronic cap, high cap】	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000

"★" indicates commonly used specifications

TPE Cap

- 96 TPE caps are attached together as a single unit. After sealing, tear off the fixed foil, and each cap can be used independently.
- Working temperature: -50°C to 50°C.
- Can be pierced for use under sealed conditions and still maintain sealing performance after piercing. Under special conditions, each cap can be removed independently.
- Suitable for automated products, corrosion-resistant, resistant to conventional chemical reagents, and the natural color TPE cap meets medical material requirements.

SBS Internal Thread Cryogenic Vial (Size Table)

Image					
Cat.No.	T6101	T6102	T6131	T6132	T6131M
Capacity(ml)	0.75	0.75	0.75	0.75	0.75
Working Volume(ml)	0.5	0.55	0.5	0.55	0.5
A(mm)	8.7	9	8.7	9	8.7
B(mm)	13.45	5.15	13.45	5.15	13.45
C(mm)	7.0	7.0	7.0	7.0	7.0
D(mm)	27.35	27.35	27.35	27.35	27.35
Height with Cap(mm)	34.0	28.7	34.0	28.7	34.0
Rack Space(mm)	9.0	9.0	9.0	9.0	9.0
Cap Design					

Dimensions:

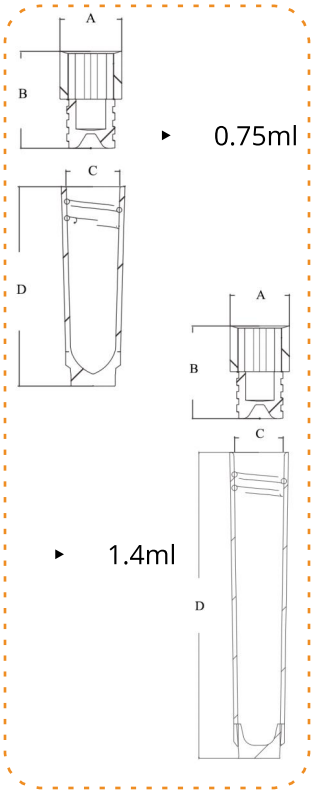


Image							
Cat.No.	T6201	T6202	T6231	T6232	T6231M	T6902	T6912
Capacity(ml)	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Working Volume(ml)	1.10	1.15	1.10	1.15	1.10	1.10	1.10
A(mm)	8.7	9.0	8.7	9.0	8.7	8.6	8.8
B(mm)	13.45	5.15	14.45	5.15	13.45	7.45	14.15
C(mm)	7.0	7.0	7.0	7.0	7.0	6.9	6.9
D(mm)	45.6	45.6	45.6	45.6	45.6	43.9	43.9
Height with Cap(mm)	52.0	42.0	53.0	42.0	52.0	44.9	51.9
Rack Space(mm)	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Cap Design							

SBS External Thread Cryogenic Vial

SBS External Thread Cryogenic Vial (Rack Pack)

Cat. No.	Volume (ml)	Description	Package	QTY/ctn (racks)	Size/ctn(cm)			GW/ctn (kg)
					L	W	H	
★T6151M	0.3	3 codes, External thread, 'M CAP'	96 pcs/rack, 18 racks/box, 4 boxes/ctn	72	30	29	39	/
T6151F	0.3	3 codes, External thread, 'F CAP'	96 pcs/rack, 18 racks/box, 4 boxes/ctn	72	30	29	39	/
★T6801	0.5	3 codes, External thread, 'M CAP'	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
T6802	0.5	3 codes, External thread, 'F CAP'	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
★T6121	0.75	3 codes, External thread, 'M CAP'	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
T6141	0.75	3 codes, External thread, 'F CAP'	96 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
★T6221	1.4	3 codes, External thread, 'M CAP'	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
T6241	1.4	3 codes, External thread, 'F CAP'	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
T6701	1.2	3 codes, External thread, 'HIGH CAP'	96 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
★T6301	1	3 codes, External thread	48 pcs/rack, 12 racks/box, 4 boxes/ctn	48	30	29	39	8.7
★T6401	2	3 codes, External thread	48 pcs/rack, 9 racks/box, 4 boxes/ctn	36	30	29	39	9.35
★T6501	4	3 codes, External thread	48 pcs/rack, 6 racks/box, 4 boxes/ctn	24	30	29	39	/
T6601	5	3 codes, External thread	48 pcs/rack, 6 racks/box, 4 boxes/ctn	24	30	29	39	/

SBS External Thread Cryogenic Vial (Bag Pack)

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(pcs)
T6153M	0.3	3 codes, External thread, 'M CAP'	100 pcs/bag, 20 bags/ctn	2000
T6153F	0.3	3 codes, External thread, 'F CAP'	100 pcs/bag, 20 bags/ctn	2000
T6803	0.5	3 codes, External thread, 'M CAP'	100 pcs/bag, 20 bags/ctn	2000
T6804	0.5	3 codes, External thread, 'F CAP'	100 pcs/bag, 20 bags/ctn	2000
T6123	0.75	3 codes, External thread, 'M CAP'	100 pcs/bag, 20 bags/ctn	2000
T6143	0.75	3 codes, External thread, 'F CAP'	100 pcs/bag, 20 bags/ctn	2000
T6223	1.4	3 codes, External thread, 'M CAP'	50 pcs/bag, 20 bags/ctn	1000
T6243	1.4	3 codes, External thread, 'F CAP'	50 pcs/bag, 20 bags/ctn	1000
T6703	1.2	3 codes, External thread, 'HIGH CAP'	50 pcs/bag, 20 bags/ctn	1000
T6303	1	3 codes, External thread	50 pcs/bag, 20 bags/ctn	1000
T6403	2	3 codes, External thread	50 pcs/bag, 20 bags/ctn	1000
T6503	4	3 codes, External thread	50 pcs/bag, 20 bags/ctn	1000
T6603	5	3 codes, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000

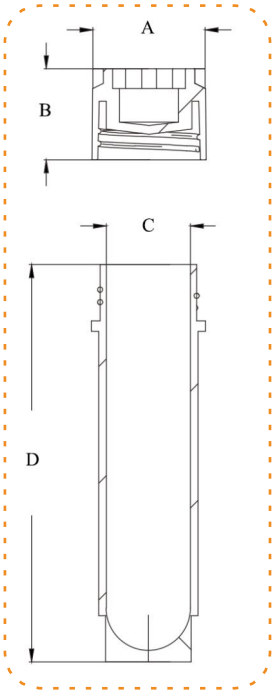
"★" indicates commonly used specifications

SBS External Thread Cryogenic Vial (Size Table)

Image								
Cat.No.	T6151M	T6151F	T6801	T6802	T6121	T6141	T6221	T6241
Capacity(ml)	0.3	0.3	0.5	0.5	0.75	0.75	1.4	1.4
Working Volume(ml)	0.2	0.2	0.4	0.4	0.65	0.65	1.2	1.2
A(mm)	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
B(mm)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
C(mm)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
D(mm)	16.3	16.3	27.7	27.7	30.6	30.6	48.5	48.5
Height with Cap(mm)	19.0	19.0	30.5	30.5	33.2	33.2	51.4	51.4
Rack Space(mm)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Cap Design								

Image					
Cat.No.	T6301	T6401	T6501	T6601	T6701
Capacity(ml)	1.0	2.0	4.0	5.0	1.2
Working Volume(ml)	1.0	2.0	4.0	4.5	1.0
A(mm)	12.8	12.8	12.8	12.9	8.8
B(mm)	11.60	11.60	12.70	8.50	12.00
C(mm)	9.5	9.5	9.5	9.5	6.5
D(mm)	26.3	38.4	75.3	83.6	42.1
Height with Cap(mm)	33.0	43.0	81.0	85.0	44.8
Rack Space(mm)	13.50	13.50	13.50	13.50	9.00
Cap Design					

Dimensions:



SBS Cryovial Rack

Features

- The cover is made of PC material, transparent for easy observation of samples inside the box.
- The base is made of PP material (same as the cryogenic tube), effectively reducing tube compression due to low-temperature deformation.
- The design of the top left corner is angled for easy identification of the top position to avoid operational errors.
- The plate rack design complies with the ANSI/SLAS 2004 international standard and can be used with laboratory automation equipment.
- The base has resistance holes for single-handed screwing and can be adapted for screw capping devices.

Specifications

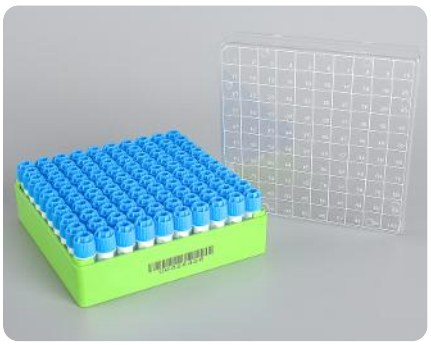
Cat. No.	Volume (ml)	Description	QTY/ctn (pcs)
T3061	96 wells	PC material, 8*12 wells, 127*85*24 mm For 0.3ml SBS cryogenic vial	100
T3053	96 wells	PC material, 8*12 wells, 127*85*37.5 mm For 0.75ml, 0.5ml SBS cryogenic vial (both for internal and external thread)	100
T3054	96 wells	PC material, 8*12 wells, 127*85*55mm For 1.4ml, 1.2ml SBS cryogenic vial (both for internal and external thread)	100
T3055	48 wells	PC material, 6*8 wells, 127*85*39mm For 1ml SBS cryogenic vial	100
T3056	48 wells	PC material, 6*8 wells, 127*85*50mm For 2ml SBS cryogenic vial	100
T3059	48 wells	PC material, 6*8 wells, 127*85*85mm For 4ml SBS cryogenic vial	50

2D Cryogenic Vial (2mL)

Features

- USP class VI PP (polypropylene) raw material, produced in a 100,000-level clean room
- Dual-color injection molding process, permanent laser etching of 2D codes / 1D codes / digital clear codes, multiple codes integrated into one
- Compatible with SBS 48 cryogenic tubes, allowing for easy adaptation to various scenarios by simply replacing the cryogenic box.
- Full-process quality control to ensure readable and unique codes without duplication
- Risk-free design with a bottom U-shaped transparent window for optimal sample utilization
- The cryogenic box is made of high-strength polycarbonate (PC) material, conforming to the standard laboratory 2-inch cryogenic box size (133*133*52mm)
- DNase & RNase Free, Endotoxin free,Non-pyrogenic, Non-cytotoxic
- Irradiation sterilization:SAL 10^{-6}(ISO 11137)

Product Details



Specifications

Cat. No.	Volume(ml)	Description	Package	QTY/ctn(pcs)
T2301-1	2	Three codes, Bottom Black, Internal Thread, Rack Pack, With Graduation	100pcs/rack, 6racks/box, 4boxes/ctn	24racks
T2302-1	2	Three codes, Bottom Black, Internal Thread, Bag Pack, With Graduation	50pcs/bag, 20bags/ctn	1000
T2401-1	2	Three codes, External Thread, Rack Pack, With Graduation, White Bottom	100pcs/rack, 6racks/box, 4boxes/ctn	24racks
T2402-1	2	Three codes, External Thread, Bag Pack, With Graduation, White Bottom	50pcs/bag, 20bags/ctn	1000

2D Cryogenic Vial

Features

- USP class VI PP (polypropylene) raw material, produced in a 100,000-level clean room
- Dual-color injection molding process, permanent laser etching of 2D codes / 1D codes / digital clear codes, multiple codes integrated into one
- External screw cap design reduces the risk of sample contamination. Optional flat/concave caps with/without gaskets, suitable for various experimental scenarios
- Full-process quality control to ensure readable and unique codes without duplication
- Risk-free design with a bottom U-shaped transparent window for optimal sample utilization
- The cryogenic box is made of high-strength polycarbonate (PC) material, conforming to the standard laboratory 2-inch cryogenic box size (133*133*52mm)
- DNase & RNase Free, Endotoxin free,Non-pyrogenic, Non-cytotoxic
- Irradiation sterilization:SAL 10^{-6}(ISO 11137)

Product Details

Laser etching coding

All tube codes are laser etched, which has good stability and no risk of peeling or scratching;

Dual injection molding technology

More stable and suitable for long-term storage

Standard box

*Standard laboratory 2 inch cryogenic storage box(133*133*52),suitable for all kinds of traditional laboratory equipment*

Flat Cap vs Concave Cap

With Gasket vs Without Gasket

Excellent sealing performance

The cap is designed with air pressure seal, which is firm and not easy to leak

With Gasket, Rack Pack

"★" indicates commonly used specifications

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(racks)
FLAT CAP				
T2077	0.5	Single code, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2277	1.5	Single code, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
T2077-1	0.5	2 codes, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2277-1	1.5	3 codes, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
CONCAVE CAP				
T2053	0.5	Single code, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2203	1.5	Single code, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
★T2051-1	0.5	2 codes, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2201-1	1.5	3 codes, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24

With Gasket, Bag Pack

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(pcs)
FLAT CAP				
T2078	0.5	Single code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2278	1.5	Single code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T2078-1	0.5	2 codes, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2278-1	1.5	3 codes, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
CONCAVE CAP				
T2054	0.5	Single code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2204	1.5	Single code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T2052-1	0.5	2 codes, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2202-1	1.5	3 codes, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000

Without Gasket, Rack Pack

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(racks)
FLAT CAP				
★T2057	0.5	Single code, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2207	1.5	Single code, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
T2057-1	0.5	2 codes, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
★T2207-1	1.5	3 codes, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
CONCAVE CAP				
T2033	0.5	Single code, External Thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2233	1.5	Single code, External Thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
T2031-1	0.5	2 codes, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2231-1	1.5	3 codes, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24

Without Gasket, Bag Pack

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(pcs)
FLAT CAP				
T2058	0.5	Single code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2208	1.5	Single code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T2058-1	0.5	2 codes, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2208-1	1.5	3 codes, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
CONCAVE CAP				
T2034	0.5	Single code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2234	1.5	Single code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
T2032-1	0.5	2 codes, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2232-1	1.5	3 codes, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000

2D Cryogenic Vial Storage Rack

Cat. No.	Volume (ml)	Description	QTY/ctn (pcs)
T3051	100 wells	PC material, 10*10 wells, 127*85*36mm. For 0.5ml 2D cryogenic vial (both for flat and concave thread)	50
T3052	100 wells	PC material, 10*10 wells, 127*85*52.5mm. For 1.5ml 2D cryogenic vial (both for flat and concave thread)	50
T3071	100 wells	PC material, Clamshell type, 10*10 wells, 132.5*132.5*53mm. For 2ml 2D cryogenic vial	50
T3072	100 wells	PC material, 10*10 wells, 132.5*132.5*53mm. For 2ml 2D cryogenic vial	50

Common Cryogenic Vial

Features

- USP class VI PP (polypropylene) raw material, produced in a 100,000-level clean room
- External screw cap design reduces the risk of sample contamination. Optional flat/concave caps with/without gaskets, suitable for various experimental scenarios
- Risk-free design with a bottom U-shaped transparent window for optimal sample utilization
- The cryogenic box is made of high-strength polycarbonate (PC) material, conforming to the standard laboratory 2-inch cryogenic box size (133*133*52mm)
- DNase & RNase Free, Endotoxin free,Non-pyrogenic, Non-cytotoxic
- Irradiation sterilization:SAL 10^{-6}(ISO 11137)

Product Details

U-shaped bottom

Standard box

Flat Cap vs Concave Cap

With Gasket vs Without Gasket

Excellent sealing performance

With Gasket, Rack Pack

"★" indicates commonly used specifications

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(racks)
FLAT CAP				
★T2075	0.5	No code, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
★T2275	1.5	No code, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
CONCAVE CAP				
★T2051	0.5	No code, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
★T2201	1.5	No code, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24

With Gasket, Bag Pack

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(pcs)
FLAT CAP				
T2076	0.5	No code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2276	1.5	No code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
CONCAVE CAP				
T2052	0.5	No code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2202	1.5	No code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000

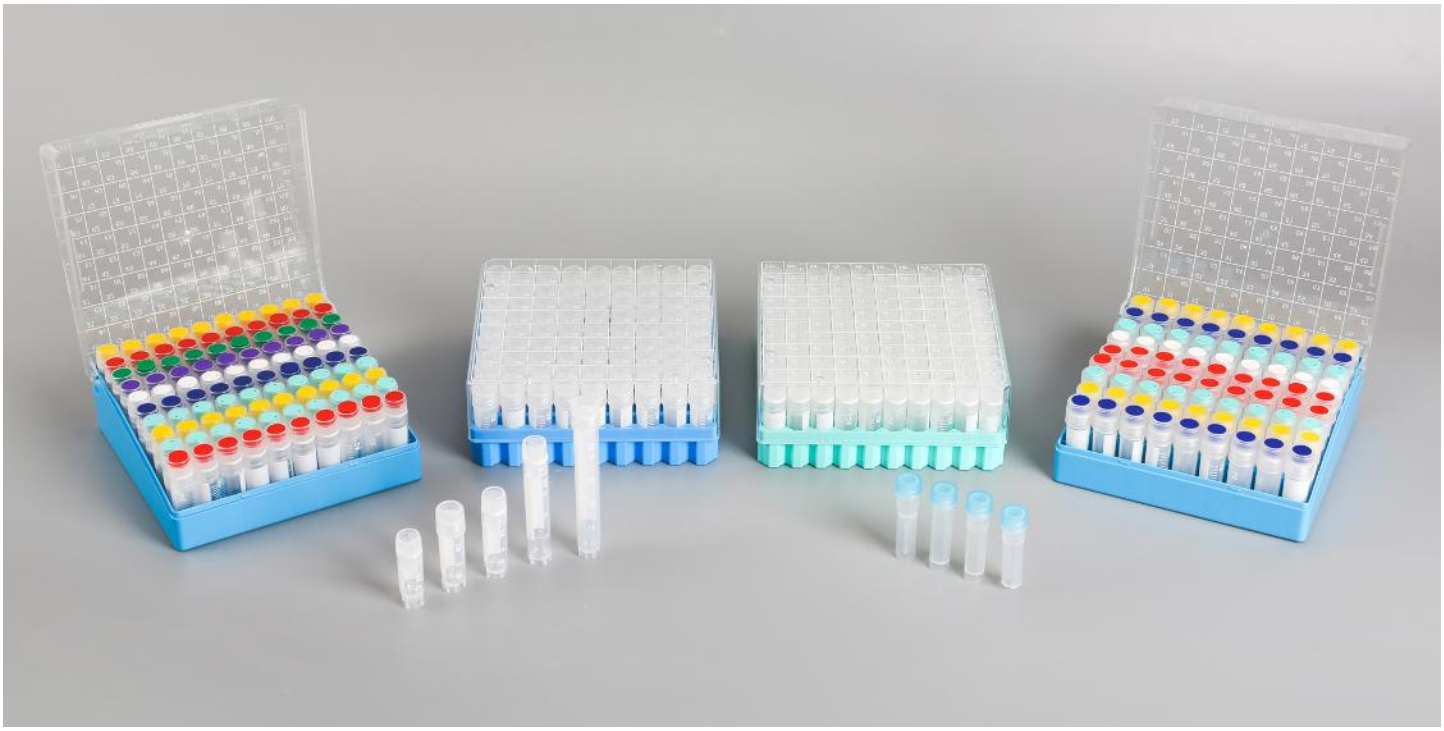
Without Gasket, Rack Pack

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(racks)
FLAT CAP				
T2055	0.5	No code, External thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2205	1.5	No code, External thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24
CONCAVE CAP				
T2031	0.5	No code, External Thread	100 pcs/rack, 8 racks/box, 4 boxes/ctn	32
T2231	1.5	No code, External Thread	100 pcs/rack, 6 racks/box, 4 boxes/ctn	24

Without Gasket, Bag Pack

Cat. No.	Volume (ml)	Description	Package	QTY/ctn(pcs)
FLAT CAP				
★T2056	0.5	No code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
★T2206	1.5	No code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000
CONCAVE CAP				
T2032	0.5	No code, External thread	50 pcs/bag, 10 bags/box, 4 boxes/ctn	2000
T2232	1.5	No code, External thread	50 pcs/bag, 10 bags/box, 2 boxes/ctn	1000

Common Cryogenic Vial



Features

- USP class VI PP (polypropylene) raw material, produced in a 100,000-level clean room
- A variety of capacity specifications to meet the requirements of different laboratory scenarios.
- Circular design at the bottom is conducive to full sample recovery
- RNase-/DNase-free, Endotoxin free, Non-pyrogenic, Non-cytotoxic
- Irradiation sterilization: SAL 10^{-6}(ISO 11137)

Product Details

Varies bottom type

Circular design at the bottom is conducive to full sample recovery

A variety of capacity specifications

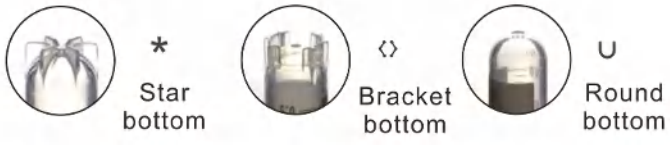
To meet the requirements of different laboratory scenarios

Color marks

Embedded in the cap for easy identification

Clear graduation

Precise sample volume measurements, aiding in sample identification, and supporting efficient sample handling and documentation.



Common Cryogenic Vial

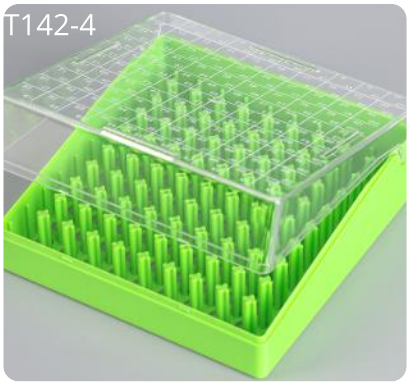
"★" indicates commonly used specifications

Cat. No.	Volume(ml)	Description	Package	QTY/ctn(pcs)	Size/ctn(cm)			GW/ctn(kg)
					L	W	H	
T131	1	Round bottom, Internal Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.3
★T132	1	Bracket bottom, Self-standing, Internal Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.28
T133	1	Star bottom, Self-standing, Internal Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.28
T134	2	Round bottom, Internal Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.51
★T135	2	Bracket bottom, Self-standing, Internal Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.15
T136	2	Star bottom, Self-standing, Internal Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.76
T137	4	Round bottom, Internal Thread	50pcs/bag, 20bags//ctn	1000	39	36.5	21.5	3.37
★T138	4	Bracket bottom, Self-standing, Internal Thread	50pcs/bag, 20bags//ctn	1000	35.5	27.9	25.4	3.37
T139	4	Star bottom, Self-standing, Internal Thread	50pcs/bag, 20bags//ctn	1000	35.5	27.9	25.4	3.37
T101	2	Round bottom, External Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.8
★T102	2	Bracket bottom, Self-standing, External Thread	50pcs/bag, 20bags//ctn	1000	34	21	28.5	2.8
T114	5	Round bottom, External Thread	50pcs/bag, 20bags//ctn	1000	36	28.5	25.5	4.76
★T115	5	Bracket bottom, Self-standing, External Thread	50pcs/bag, 20bags//ctn	1000	47	35	31.5	5.71

Color Marker

Cat. No.	Volume(ml)	Description	Package	QTY/ctn(pcs)	Sterile	Size/ctn(cm)			GW/ctn(kg)
						L	W	H	
T144	Red	 6 Colors in total, embedded in the cap for easy identification	1000pcs/bag, 10bags/ctn	10000	NO	28	22	16.5	1.87
	White			10000					
	Light Green			10000					
	Dark Green			10000					
	Yellow			10000					
	Dark Blue			10000					

Common Cryogenic Vial Storage



Features

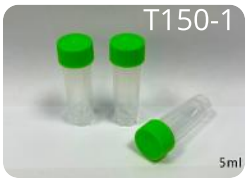
- The cover is made of PC material, transparent for easy observation of samples inside the box.
- The base is made of PP material (same as the cryogenic tube), effectively reducing tube compression due to low-temperature deformation.
- The cover and base are specially designed with gaps and holes to facilitate rapid cooling and quick drainage of liquid without frosting.
- The design of the top left corner is angled for easy identification of the top position to avoid operational errors.
- The plate rack design complies with standard laboratory 2-inch cryogenic box dimensions (133*133*52mm), significantly improving space utilization.

Specifications

"★" indicates commonly used specifications

Cat. No.	Volume(ml)	Description	QTY/ctn (pcs)	Size/ctn(cm)			GW/ctn(kg)
				L	W	H	
★T130-3	81 wells	PP material (base), PC material (cover), 9*9, 127*85*53mm Fit 2ml External Cryo Vial	50	50	41.5	45.8	7.66
★T142-3	100 wells	PP material (base), PC material (cover), 10*10, 127*85*53mm Fit 2ml Internal Cryo Vial	50	/			
★T130-4	81 wells	PC material, Filp Cover, 9*9, 127*85*53mm Fit 2ml External Cryo Vial	50	/			
★T142-4	100 wells	PC material, Flip Cover, 10*10, 127*85*53mm Fit 2ml Internal Cryo Vial	50	/			
T145-1	16 wells	PC material, 4*4, 76*76*52.5mm Fit 2ml External Cryo Vial	100	/			
T145-2	25 wells	PC material, 5*5, 76*76*52.5mm Fit 2ml Internal Cryo Vial	100	52.5	38	38.5	15.5

Freezing Tube



Features

- USP class VI PP (polypropylene) raw material, produced in a 100,000-level clean room
- Cone design at the bottom is more conducive to sample concentration and recovery
- The cap and gasket adopt integrated molding technology to ensure sealing performance
- RNase-/DNase-free
- Irradiation sterilization

Product Application

- Separation and purification of trace samples, can be used directly in the laboratory.
- Used for storage at room temperature or low temperature of tools enzymes, buffers, antibodies, primers, tissue samples, etc.
- Used for transportation of proteases or buffers.

Product Details

Designed with a flat bottom for stable placement on laboratory workbenches

The unique thread design allows it to be locked into a dedicated base with a single

The gasket is made using integral molding technology to ensure sealing performance

Specifications

"★" indicates commonly used specifications

Cat.No.	Volume(ml)	Description	Package	QTY/ctn(pcs)	Sterile
T118	0.5	Conical bottom,External Thread(with O-ring),Tube and cap separately packed	Tube：500/bag, 20bags/ctn. Cap：2500/bag, 4bags/ctn	10000	NO
T119-1	0.5	Self-standing,External Thread (with O-ring),Tube and cap separately packed	Tube：500/bag,20bags/ctn. Cap：2500/bag, 4bags/ctn	10000	NO
★T105-1	1.5	Self-standing,External Thread (with O-ring),Tube and cap separately packed	Tube：500/bag,20bags/ctn. Cap：2500/bag, 4bags/ctn	10000	NO
★T105-3	1.5	Self-standing,External Thread (with O-ring),Tube and cap separately packed,With Graduation	50pcs/bag, 20bags/ctn	1000	YES
★T119-2	0.5	Self-standing,External Thread	50pcs/bag, 20bags/ctn	1000	YES
★T105-2	1.5	Conical bottom,External Thread	50pcs/bag, 20bags/ctn	1000	YES
T150-1	5	Self-standing,External Thread	50pcs/bag, 20bags/ctn	1000	YES

Automatic Capper

Features

- Integrated smart sensors that can automatically identify samples at different heights without additional settings
- Opens/closes cryogenic tubes in SBS48/96 boxes in 20 seconds with precise torque values to optimize sealing performance and reduce wear on cap adapters
- Patented resistance design ensures no risk of tube bursting during rotation sealing
- Rear network interface for remote access, facilitating integration with various systems or automated equipment
- Touchscreen control panel for one-touch operation, providing a more intuitive and convenient user experience.

Specifications

Cat. No.	Item Name	Description	QTY/ctn(racks)
T9101	Single-Channel Electric Capper	Open single cap at a time	1
T9201	8-Channel Electric Capper	Open 8 caps at a time	1
T9501	6-Channel Electric Capper	Open 6 caps at a time	1
T9301	96-Channel Automatic Intelligent Capper	Open 96 caps at a time (one rack)	1
T9401	48-Channel Automatic Intelligent Capper	Open 48 caps at a time (one rack)	1

Intelligent Camera Decoder

Features

- Complete decoding of 48/96/100 plates in 5 seconds
- Utilizes intelligent algorithms to fully recognize blurry bottom 2D codes
- Comprehensive software functions, marking positions with missing, duplicate, or failed decoding
- Open design for easy integration with sample management systems
- Optional side barcode reading for cryogenic boxes
- Replaceable 48/96/100 panels
- High-level photography decoding to prevent frost-induced decoding failure.

Specifications

Cat. No.	Item Name	Description	QTY/ctn(racks)
T8301	Intelligent Camera Decoder	100 channels ; Whole scan	1
T8401	Intelligent Camera Decoder	96 channels ; Whole scan	1
/	Decoder Plate	100 channels/96 channels/48 channels	1

Single-tube Decoder

Features

- The single-tube decoder has a USB interface for plug-and-play functionality
- It comes with a built-in light source and has a high infrared reading rate
- It is easy to operate, allowing for single-handed reading of the bottom QR code on tubes
- The high-precision camera ensures more accurate QR code recognition.

Specifications

Cat. No.	Item Name	Description	QTY/ctn(racks)
T8201	Single-tube Decoder	Wired	1
T8202	Single-tube Decoder	Wireless	1
T8203	Single-tube Decoder	Desktop	1

Freezing Container

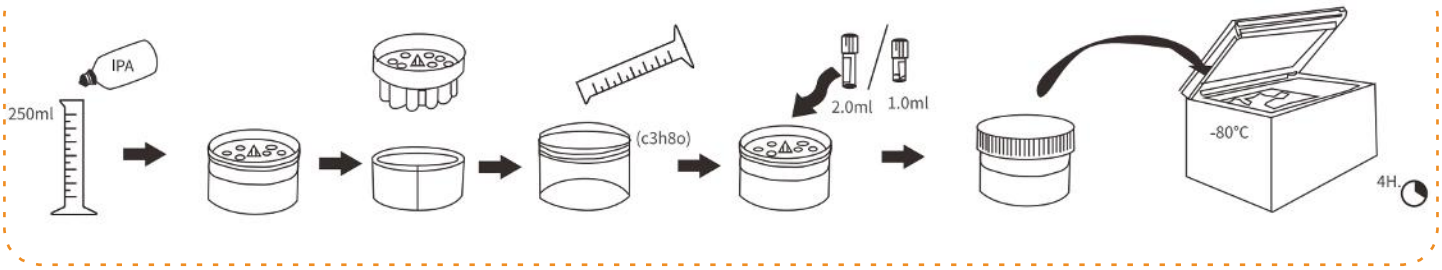
Features

- The main body is made of polycarbonate, and the lid is made of high-density polyethylene
- Achieves stable and repeatable linear cooling effect with only 100% isopropanol and mechanical freezer, -1°C/min
- 18-hole design, can accommodate up to 18 1.0~2.0mL cryogenic tubes simultaneously
- Internally designed with supports to prevent direct contact between cryogenic tubes and isopropanol, preventing possible contamination or label detachment caused by contact
- Can be stored at room temperature when cooling is not required, with good sealing performance and reduced isopropanol evaporation, saving refrigeration space.

Specifications

Cat. No.	Item Name	Description	QTY/ctn(racks)
181100	Freezing Container	18 wells	1

Operating Steps



No. 36, No.10 Street, Qiantang District, Hangzhou, 313000, Zhejiang Province, P.R.China

claireyu@smtrabio.com

Tel +86 18857231197

Official Website: www.smtrabio.com

Store Website: www.smtrabio.shop

Follow us on