

Your Best Choice for Laboratory and Medical Consumables.

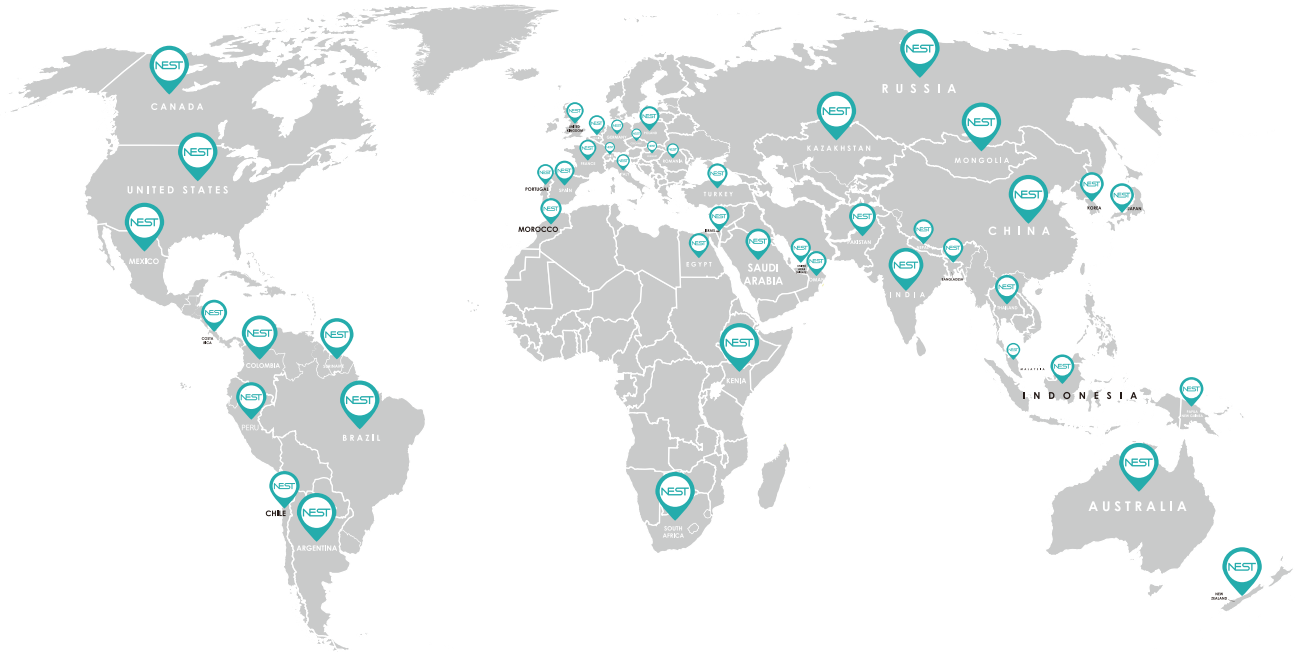
# NEST USA

## PRODUCT CATALOGUE



# NEST International

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COA/COC  
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Documents  
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Cross-Reference  
Tool



PCR Product  
Compatibility  
Reference Tool



Closed System  
Customization

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# COMPANY PROFILE

## A leading life science plastic consumables manufacturer.

Wuxi NEST Biotechnology Co., Ltd. is a leading life science plastic consumables manufacturer located in Wuxi, Jiangsu, China, integrated with R&D production and sales, which was established in 2009. Our products have been exported to North America, Europe, Japan, Korea, India, and other countries, with an excellent reputation nationwide and abroad. Customers are located almost all over the world.

2011, NEST passed the standard of the quality management system of ISO 9001.

2014, NEST passed the standard of the quality management system of ISO 11137.

2016, NEST passed the standard of the quality management system of ISO 13485.

2020, NEST obtained the medical device production license.

In addition to these certifications, we also gained CE and FDA standards.

## NEST Scientific Inc. (USA)

With the development of the business, we have established deep cooperation and built strong relationships with overseas customers in order to send the products to customers in North America more quickly. Nest Scientific Inc., a branch of Wuxi NEST Biotechnology Co., Ltd., was established in New Jersey, the USA in 2013. Composed by a professional team with rich experience in training and sales skills, NEST Scientific USA can provide professional training as well as great communication with customers in-depth in order to understand customers' demands better and quicker. In 2022, NEST is opening a new 48,000ft<sup>2</sup> warehouse located in Phoenix, AZ. This new warehouse allows for more space to receive in and stock items as well as lower shipping costs for distributors on the west coast.

To further expand our footprints globally, and to respond the request for more timely service from NEST's accumulating industrial customers including CDMOs, vaccine plants and third-party testing companies, etc., we are setting up subsidiaries in Netherland, UAE and Japan to duplicate our US successful experience.



## Overseas Branches

NEST brand is continuously expanding its overseas market. With a steady increase in overseas business volume, NEST's presence has extended to the Americas, Europe, the Middle East, and East Asia. In 2013, the US branch was officially established, and a new warehouse was completed in the US in 2022. Additionally, NEST has subsidiaries in Rotterdam, the Netherlands; Sharjah, the United Arab Emirates; and Tokyo, Japan. These subsidiaries have successfully provided integrated storage, transportation, and sales services, ensuring NEST brand's supply in overseas markets. Currently, NEST products are sold in many countries worldwide, including North America, Europe, Japan, South Korea, and India.

## Customized Consumables

NEST offers a wide range of consumables, including plates, bottles, dishes, tubes, and other cell culture consumables. You can freely choose our standardized products in specific packaging or request customized solutions such as closed systems. Should you have any requirements, please feel free to contact us.



# Wuxi NEST Biotechnology Co., Ltd.



## Your best choice for medical laboratory consumables.

NEST is dedicated to researching and developing innovative plastic consumables suitable for life sciences research and medical establishments. There are more than 600 plastic consumables that can be widely used for cell culture, molecular biology, immunoassays, liquid handling, and storage such as cell culture plates, Erlenmeyer flasks, BioFactory, pipette tips, etc. More than 100 medical plastic consumables and reagents can be used in molecular diagnosis and vaccination, such as disposable samplers, transport media, swabs, nucleic acid extraction kits, and disposable intranasal atomization devices. In order to provide a more comprehensive and convenient service, we work closely with our affiliated company Wuxi Tech-star Technology Co., Ltd. We also provide lab instruments such as centrifuges, metal baths, BioBank, etc.



## Quality Guaranteed Experienced team & a complete plastic consumables production line.

A complete plastic consumables production line is in NEST's possession, where all the procedures from mold-making, injection molding to sterilization, are done efficiently in our own factory. Precision molds, high-quality raw material, and advanced equipment are in position to manufacture products and perform quality testing under strict and comprehensive rules, ensuring our products meet the highest quality and performance standards expected by hospitals, research institutions, and industrial, clinical laboratories, to which we supply products.

### • Excellent mold-making ability.

With over 30 years' experience, our senior R&D team utilize high-quality mold-making equipment imported from Germany in combination of professional mold analysis software to accomplish precision molds development tasks.

### • Injection molding in Class 10,000 and Class 100,000 cleanroom in strict quality control.

Owing to the 2700 m<sup>2</sup> Class 10,000 cleanroom and 6800 m<sup>2</sup> Class 100,000 cleanroom, all-electric high-speed injection molding machines imported from Japan and the raw material which is in line with USP Class VI requirements, production and quality control are performed strictly in accordance with the corresponding SOP.

### • Sterilization by electronic beam irradiation.

The Rhodotron TT200 electron accelerator, whose sterilization process has been certified by the ISO 11137 quality system, was imported from the IBA company, a world leader in the E-Beam sterilization industry in Belgium. Compared with sterilization by cobalt 60 or ethylene oxide sterilization, sterilization by electronic beam irradiation is more efficient and safer which requires less time and will not produce any chemical residue.





ISO 9001



ISO 13485



ISO 11137



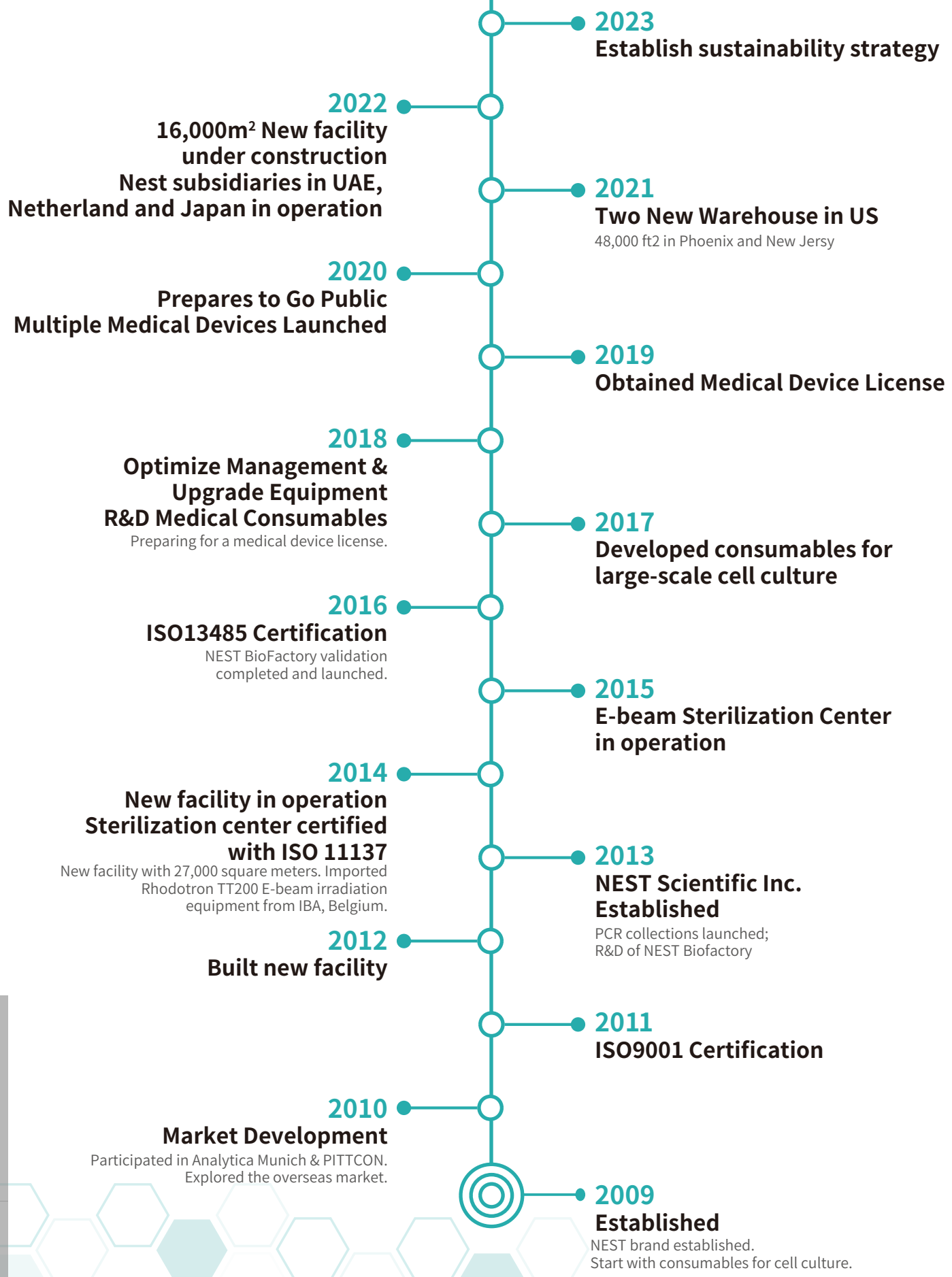
JSDA



CE



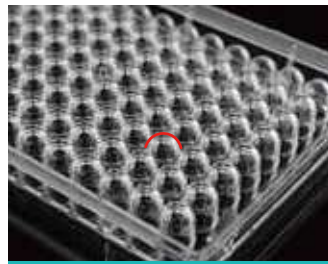
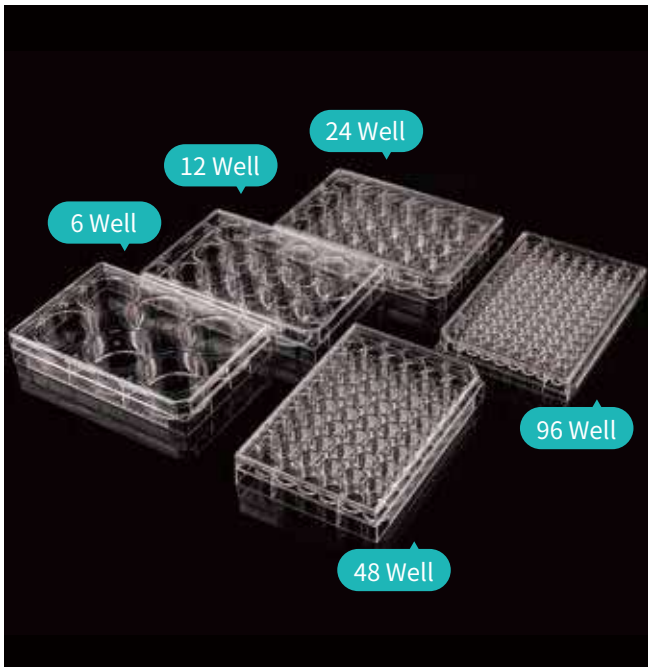
CE  
(Medical Consumables)



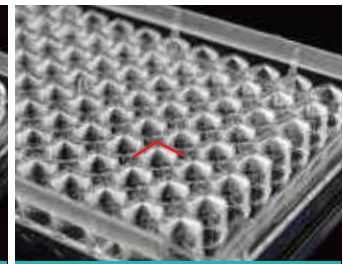


# Cytology

# Cell Culture Plate



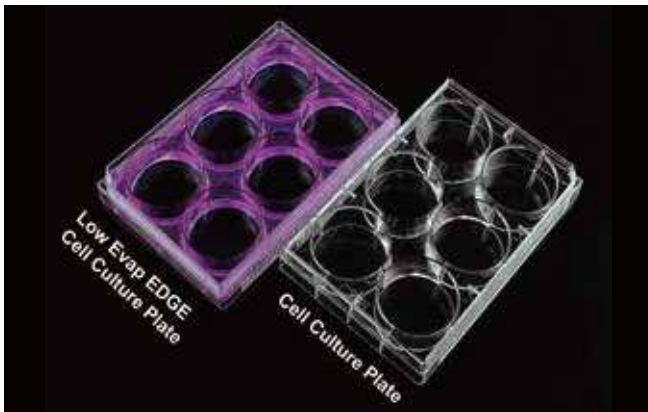
U-bottom plates are suitable for 3D culture.



V-bottom plates are suitable for agglutination experiments.

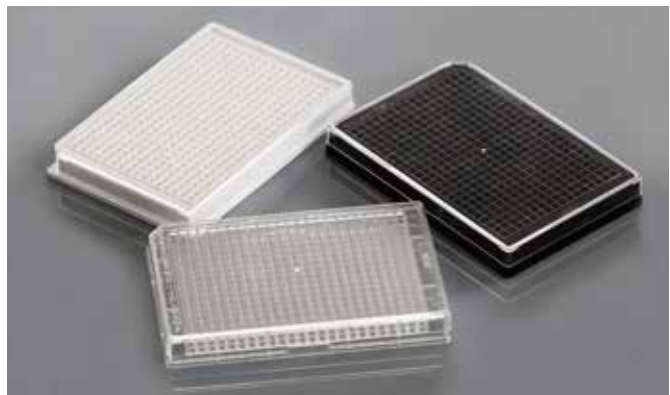
- Sterilized by E-beam, SAL=10<sup>6</sup>.
- High clarity, 100% virgin polystyrene.
- "TC" refers to vacuum plasma tissue culture treatment.
- Clear lot number for batch traceability.
- Markings of well coordinates available for 6, 12, 24, 48 and 384 well plates.
- Non-Pyrogenic, DNase/Rnase free.

\*The TC-treated ones are intended for adherent cell culture, while the non-treated ones are suitable for suspension cell culture.



## ● Low Evap EDGE Cell Culture Plate

- Grooves are designed at the edge of the culture plate to avoid the edge effect to the greatest extent and to ensure that the cells maintain their optimal state during cell culture.



## ● 384 Well Cell Culture Plate

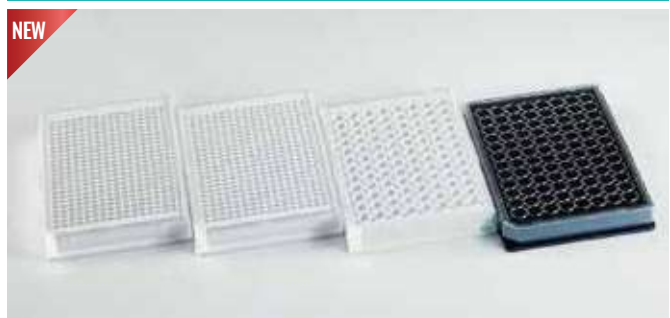
- NEST microplate have been designed for high content screening (HCS) assays in drug development and related areas. It is also suitable for homogeneous assays employing fluorescence intensity, FRET and TR-FRET where measurements are bottom-read.
- Black microplates, which can reduce mutual influence, are suitable for fluorescent assays involving either top or bottom detection microplate readers.
- White microplates suit luminescent assays involving either top or bottom detection microplate readers.



Individually Packaged



Plastic Bag Package

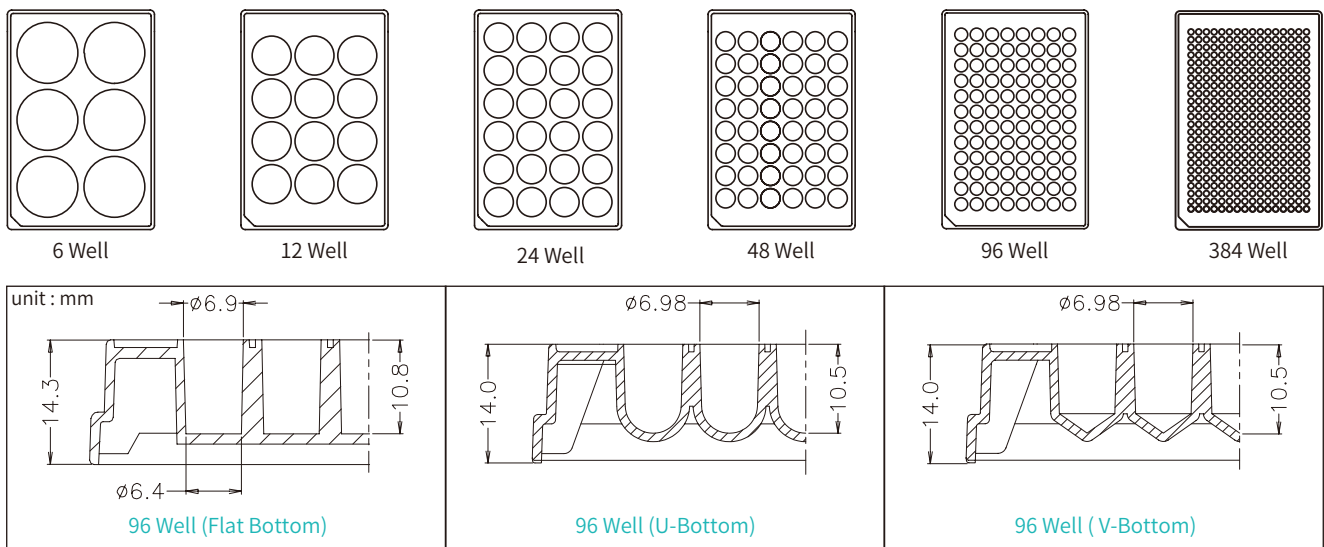


Cell Culture Plate with Clear Polystyrene Bottom

## Cell Culture Plate

Well Number	Cell Growth Area (cm <sup>2</sup> )	Recommended Medium Volume (mL)	Bottom Type	Colour	Packing			Cat. No.				
					Packaging	/Pack	/Case	TC Treated	Non-Treated			
6 Well	9.5	1.9-2.9	□	Clear	Individually Packaged	1	50	703001	703011			
					Plastic Bag Package	10	50	703002	703012			
6 Well Low Evap EDGE Plate	Individually Packaged	1			50	714011	714001					
12 Well	3.6	0.76-1.14			Individually Packaged	1	50	712001	712011			
					Plastic Bag Package	10	50	712002	712012			
24 Well	1.9	0.38-0.57			Individually Packaged	1	50	702001	702011			
					Plastic Bag Package	10	50	702002	702012			
48 Well	0.88	0.19-0.285			Individually Packaged	1	50	748001	748011			
					Plastic Bag Package	10	50	748002	748012			
96 Well	0.32	0.1-0.2			□	Clear	Individually Packaged	1	100	701001	701011	
			Plastic Bag Package	10			100	701002	701012			
	0.66		□	Individually Packaged	1		100	701101	701111			
			Individually Packaged	1	100		701201	701211				
	0.41		□	White	Individually Packaged		1	100	701301	701311		
				Black	Individually Packaged		/	/	/	/		
	0.32		□	White, transparent bottom	Individually Packaged		/	/	/	/		
				Black, transparent bottom	Individually Packaged		/	/	/	/		
	96 Well Low Evap EDGE Plate		0.32	0.1-0.2	□		Clear	Individually Packaged	1	100	713011	713001
	384 Well		0.11	0.025-0.05	□		Clear	Individually Packaged	1	100	761001	761011
Plastic Bag Package		10				100		761002	761012			
Black		Individually Packaged				1		100	761301	761311		
White		Individually Packaged				1		100	761601	761611		
White, transparent bottom		Individually Packaged				/		/	/	/		
Black, transparent bottom		Individually Packaged				/		/	/	/		

### Technical Drawing of Cell Culture Plates

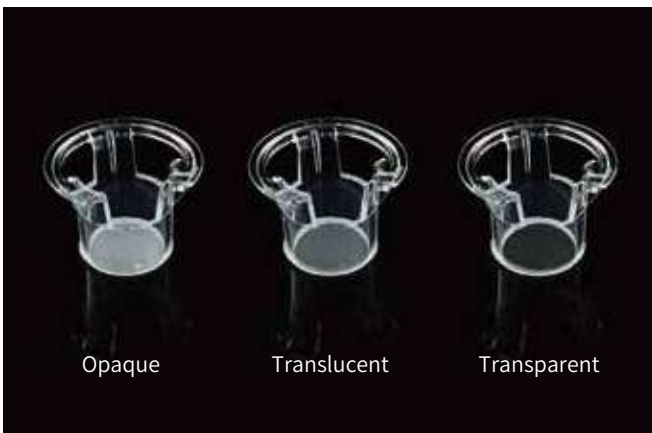
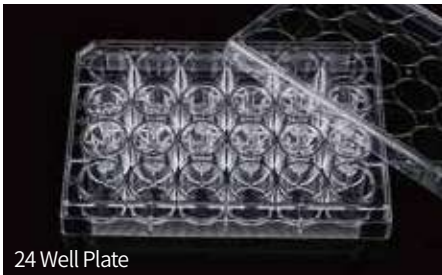
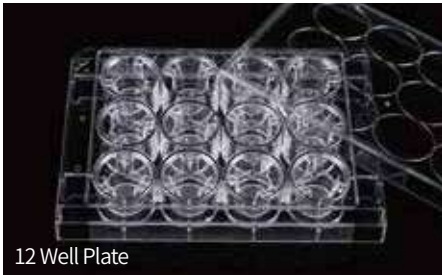


# Cell Culture Insert

Cell and tissue culture technologies have an increasing importance in the fields of basic and applied life science. New culture vessels and new surfaces for cell adsorption are continuously emerging, in order to simulate the internal environment as much as possible for culture of some special cell lines. Logically, using permeable supports with a microporous membrane becomes the basic method for culturing these cells. Permeable supports may effectively improve the culture of polar cells, because these supports allow cells to secrete on and absorb molecules from their basal and apical surfaces to metabolize in a more natural way, as well as to stimulate the in vivo environment to the maximum extent for culturing of some special cell lines.

## Features

- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Vacuum Plasma tissue culture treatment.
- Non-Pyrogenic, DNase/Rnase free.
- A rich selection of matching plates: 6-well, 12-well, 24-well.
- Passed the USP VI toxicity test.
- Cell culture plates are made of high clarity, 100% virgin polystyrene.
- Clear lot number for batch traceability.
- Innovative edge design for convenient sample loading.
- Low protein binding to ensure accurate results.
- Compatible with most solvents used for fixing and staining.



## Application Directions and Types

Applications	Cells	Pore size of Membrane
ADME (transport and permeation of compounds through the enterocyte barrier)	Caco-2, MDCK	0.4 $\mu\text{m}$
Co-culture and cell differentiation, cell imaging	Primary cells, tumor, stem cells	0.4 $\mu\text{m}$ , 1.0 $\mu\text{m}$
Cell migration and invasion (angiogenesis)	Endothelial cells	3.0 $\mu\text{m}$
Cyto-chemotaxis (migration) or endothelial migration	Leukocytes	
Axonal hyperplasia	Neurons	
Tumor cell migration and invasion	Tumor-derived cells	
Hematostaxis or migration through endothelial cells	Leukocytes	8.0 $\mu\text{m}$
Co-culture	Tumor stem cells	
Transport and secretion of macromolecules or viruses		1.0 $\mu\text{m}$ , 3.0 $\mu\text{m}$

## Product Specification

Specifications	Insert (Pcs/Plate)	Insert Diameter (mm)	Volume of Each Well (mL)	Inner Volume of Insert (mL)	Membrane Growth Area of Insert (cm <sup>2</sup> )
6 Well Plate	6	24	2.6	1.5	4.67
12 Well Plate	12	12	1.5	0.5	1.12
24 Well Plate	12	6.5	0.6	0.1	0.33
100mm Dish	1	75	13	9	44

Pore Size of Membrane ( $\mu\text{m}$ )	0.4	1.0	3.0	5.0	8.0
Membrane Density (Well/cm <sup>2</sup> )	1x10 <sup>8</sup>	2x10 <sup>7</sup>	2x10 <sup>6</sup>	4x10 <sup>5</sup>	1x10 <sup>5</sup>
PC Membrane Transparency	Opaque	/	Transparent	Transparent	Transparent
PET Membrane Transparency	Opaque	Transparent	Transparent	/	Transparent

## Cell Culture Insert

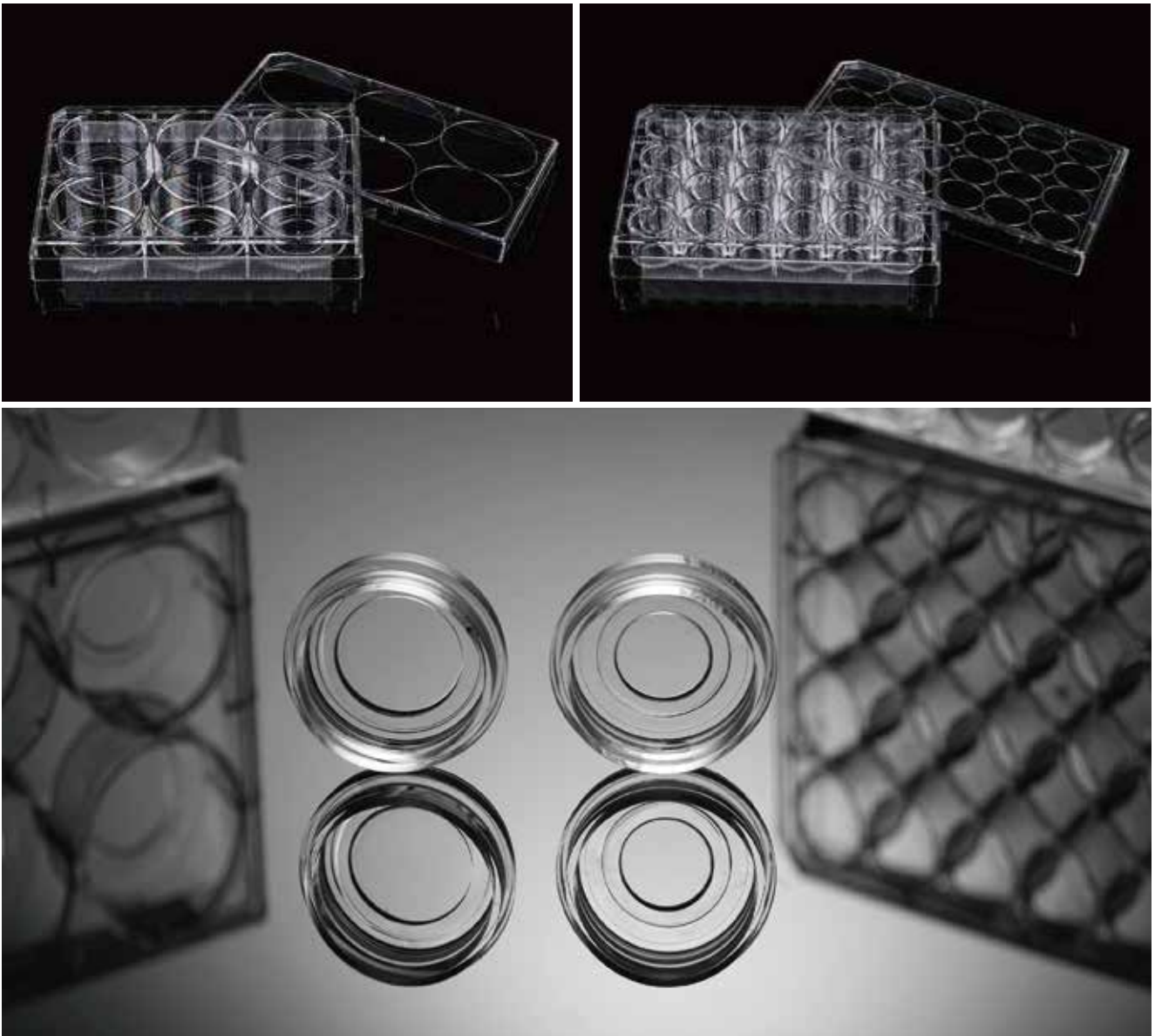
Pore Size ( $\mu\text{m}$ )	Description	Packing		PC Membrane		PET Membrane	
		/Pack	/Case	TC Treated	Non-Treated	TC Treated	Non-Treated
0.4	6 Cell Culture Inserts + 6 Well Plate	6	60	723101	723111	723121	723131
	12 Cell Culture Inserts + 12 Well Plate	12	120	724101	724111	724121	724131
	12 Cell Culture Inserts + 24 Well Plate	12	120	725101	725111	725121	725131
1	6 Cell Culture Inserts + 6 Well Plate	6	60	/	/	723421	723431
	12 Cell Culture Inserts + 12 Well Plate	12	120	/	/	724421	724431
	12 Cell Culture Inserts + 24 Well Plate	12	120	/	/	725421	725431
3	6 Cell Culture Inserts + 6 Well Plate	6	60	723001	723011	723021	723031
	12 Cell Culture Inserts + 12 Well Plate	12	120	724001	724011	724021	724031
	12 Cell Culture Inserts + 24 Well Plate	12	120	725001	725011	725021	725031
	100 mm Cell Culture Insert-Dish	1	10	726001	/	/	/
5	12 Cell Culture Inserts + 12 Well Plate	12	120	724201	724211	/	/
	12 Cell Culture Inserts + 24 Well Plate	12	120	725201	725211	/	/
8	6 Cell Culture Inserts + 6 Well Plate	6	60	723301	723311	723321	723331
	12 Cell Culture Inserts + 12 Well Plate	12	120	724301	724311	724321	724331
	12 Cell Culture Inserts + 24 Well Plate	12	120	725301	725311	725321	725331

# Glass Bottom Cell Culture Dish & Plate

NEST glass bottom series are applied in confocal microscope, high resolution microscope, differential interference contrast microscope, polarized light microscope and phase contrast microscope for cell observation.

## Features

- Can be used for live cell observation.
- Special bottom design for easy grip.
- Round cover glass inserts for good appearance.
- Medical adhesive glue to guarantee non-cytotoxicity.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Made of high clarity, 100% virgin polystyrene and high clarity glass as bottoms.
- High quality cover glass of standard thickness.





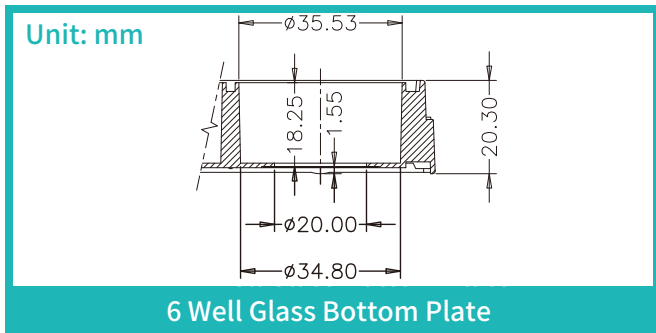
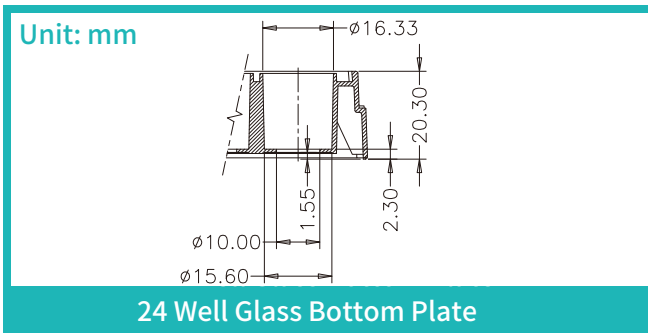
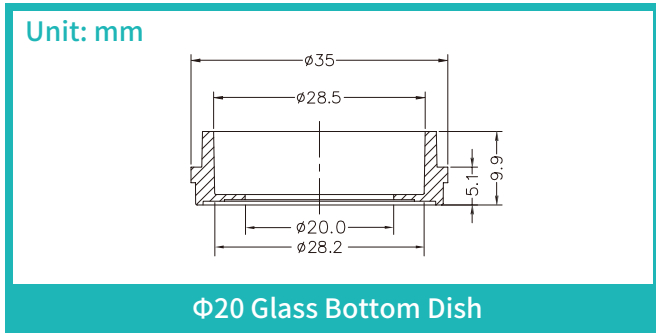
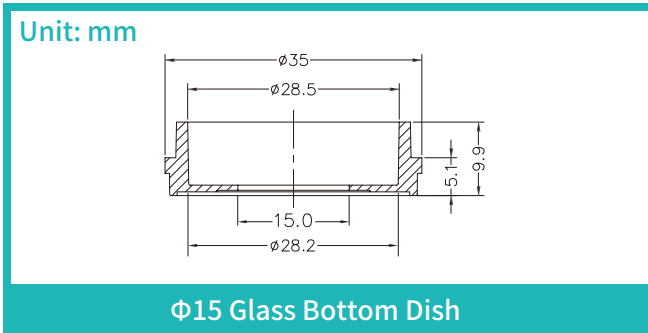
## Glass Bottom Culture Dish

Cat.No.	Type (mm)	Glass Diameter (mm)	Cultivation Area (cm <sup>2</sup> )	TC	/Pack	/Case
801002	28.2	15	6.2	Yes	10	200
801001	28.2	20	6.2	Yes	10	200



## Glass Bottom Culture Plate

Cat.No.	Spec (Well)	Glass Diameter (mm)	Cultivation Area (cm <sup>2</sup> )	TC	/Pack	/Case
801004	6	34.8	9.5	Yes	1	10
801006	24	15.6	1.9	Yes	1	10



# Cover Glass

## Features

- High quality glass, non-cytotoxic.
- Sterile, non-treated.
- Manufactured in class 100,000 clean room.
- Resistant to organic solvent.
- Autoclavable.
- Suitable for used in confocal experiment.



Cat.No.	Glass Diameter (mm)	Thickness (mm)	/Pack	Application
801010	14	0.17	100	24 Well Cell Culture Plate
801007	15	0.17	100	24 Well Cell Culture Plate
801011	18	0.17	100	12 Well Cell Culture Plate
801008	20	0.17	100	12 Well Cell Culture Plate
801009	25	0.17	100	6 Well Cell Culture Plate

### Tips:

**Terilization:** If the glass needs to be sterilized after a long period of non-use, it is recommended to wrap it in tin foil and sterilize it at 180°C in a metal container for two hours.

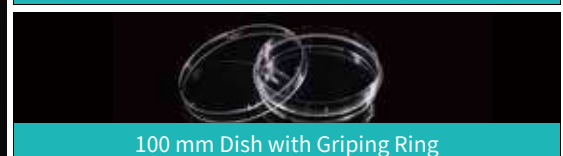
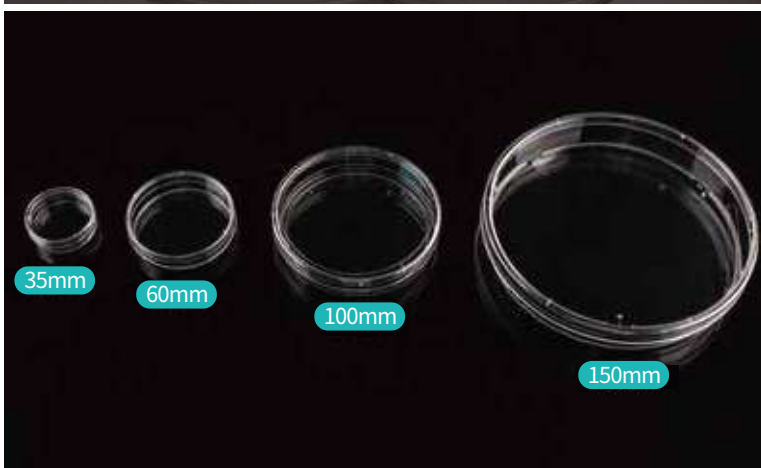
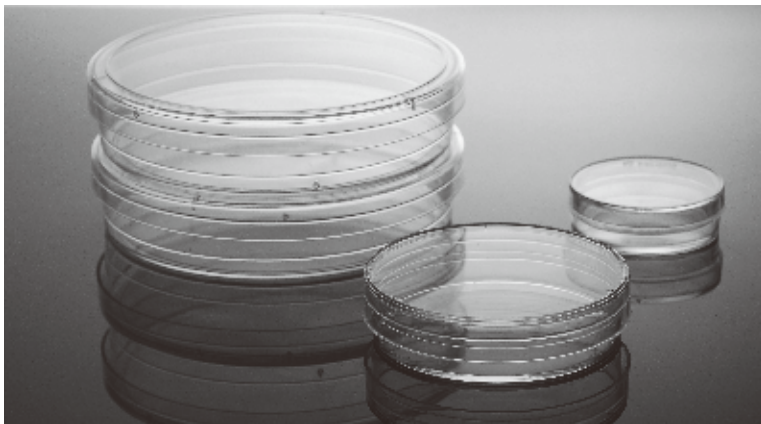
**Coating:** Coating can be done with polylysine, collagen, extracellular matrix, and some commercially available reagents containing layer adhesive protein, fibronectin, and proteoglycan, which can improve cell adhesion.

# Cell Culture Dish

NEST cell culture dishes are ideal for all types of culturing where microscopic examination is required. Numeric indicators on the bottom of each plate allow users to identify the location of cells.

## Features

- High clarity, 100% virgin polystyrene.
- Flat transparent surface for distortion-free observation.
- Vacuum plasma TC treatment, excellent cell adherence.
- Stackable for easy storage and handling.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.



## Cell Culture Dish

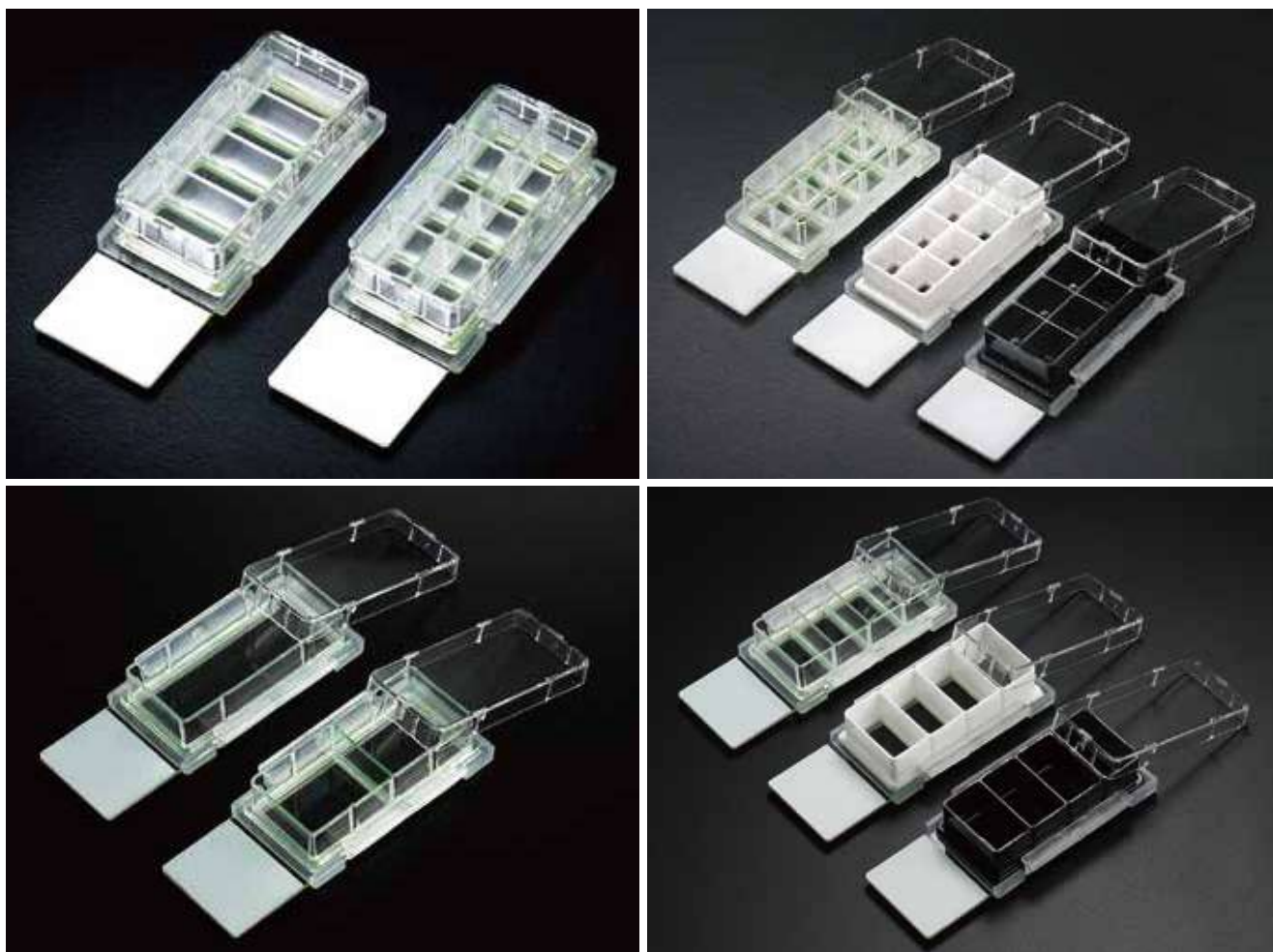
Spec (mm)	Height (mm)	Cell Growth Area (cm <sup>2</sup> )	Recommended Medium Volume (mL)	Types	Packing		Cat.No.
					/Pack	/Case	
35	12	8.5	1.8-2.7	Regular	20	25	706001
				Easy Grip	20	25	706201
60	15	22.9	4.2-6.3	Regular	20	25	705001
				Easy Grip	20	25	705201
100	20	57.6	11-16.5	Regular	5	60	704004
					10	30	704002
		Easy Grip		20	15	704001	
				10	30	704202	
20	15	704201					
150	25	150.1	30.4-45.6	Regular	5	20	715001



Actual diameter is smaller than the indicated  
 35 mm dish bottom inner diameter: 35.0 mm  
 60 mm dish bottom inner diameter: 54.0 mm

100 mm dish bottom inner diameter: 85.6 mm  
 150 mm dish bottom inner diameter: 138.2 mm  
 100 mm easy grip dish bottom inner diameter: 86.9 mm

# Cell Culture Chamber Slides



NEST Cell Culture Chamber Slides are designed for various cell-based experiments and are also useful for virus, toxicity tests and immunocytological experiments. Cell Culture Chamber Slides provide removable chambers that enable cell growth directly on the microscopic slide, convenient for staining and microscopic examination without cell transfer. Chambers with various well numbers and colors are available for different applications.

## Features

- Convenient for microscopic observation.
- Bottom materials: Borosilicate Glass, thickness 1.0 +0.1mm. No surface treatment for glass bottom.
- Chamber color: Clear/White/Black
- Easy open flip for chamber & slide disassembly.
- No chemical adhesives used.
- Designed to prevent cross contamination.
- Alphanumeric labeling.
- Packing trays can be used as incubation racks in CO<sub>2</sub> incubators.
- Sterile

Clear Cat.No.	White Cat.No.	Black Cat.No.	Descriptions	Growth Area / Well (cm <sup>2</sup> )	Working Volume (mL)	Well Dimension (mm)	/Pack	/Case
230101	230121	230111	1 well w/glass slide	9.4	2.50 - 5.50	23.00 x 49.60	6	12
230102	230122	230112	2 well w/glass slide	4.55	1.20 - 2.50	23.00 x 22.20	6	12
230104	230124	230114	4 well w/glass slide	2.13	0.50 - 1.30	23.00 x 11.40	6	12
230108	230128	230118	8 well w/glass slide	0.98	0.20 - 0.60	11.50 x 11.40	6	12

# Cell Culture Flask

NEST's Cell Culture Flasks whose cell growth areas ranging from 25cm<sup>2</sup> to 225cm<sup>2</sup> are available. These flasks are available as issue culture treated or non-treated as well as with a vent cap or plug seal cap to meet your requirements.

## • Features

- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- Frosted writing and clear graduations.
- Notched bottom for slip free slip stacking.
- Clear lot number for batch traceability.
- Packaged in sterile, zip-sealable bags.

## • 3 / 5 - Layer Cell Culture Flask

- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- 3-Layer Cell Culture Flask Growth area: 520 cm<sup>2</sup>.
- 5-Layer Cell Culture Flask Growth area: 870 cm<sup>2</sup>.
- Individually packaged in sterile bag.



Yellow caps for non-treated flask

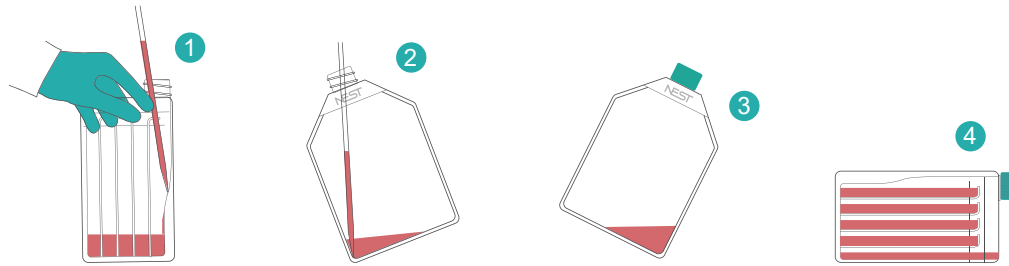


Vent caps and plug seal caps

Vent caps with 0.22 μm hydrophobic filters to ensure gas exchange without contamination

# Feature

## User guide for seeding cells into a 5-layer Cell Culture Flask



1. Prepare cell suspension of the required concentration, then mix it with medium evenly in a container. A volume of 30-50 mL per layer is recommended.
2. Slowly add the mixed solution into the 5-layer Cell Culture Flask with a serological pipette. To avoid foam or bubbles, it is recommended to set the pipette firmly against the wall, enable the stream to flow along the slope, and save a little liquid in the pipette each time.  
**Notes:** While a 10 ml pipette can disperse the medium at the bottom, a 25 ml pipette will only reach up to the NEST mark to disperse the medium.
3. Position the Multi-layer Flask upright with the NEST mark facing you, tilt it 45° clockwise and let stand in this position for a while to level the liquid in each layer.
4. Gently lay it flat onto the workbench with NEST mark facing upwards.
5. Gently shake it from side to side to distribute cells evenly onto culture surfaces.  
**Notes:** be careful to shake gently to avoid foam or bubbles and spilling liquid from each layer.
6. Transfer the flask to the incubator for incubation

### Culture medium removal

#### 1. Aspiration

Tilt the flask 45° clockwise with the NEST mark facing you. counter-clock wise to a 45° angle while inverting the Multi-Flask toward you. Then reach the serological pipette into the bottom for fully aspiration.

#### 2. Pouring

Tilt the flask 45° counterclockwise with the NEST mark facing you, pour the spent media from the flask.

**Tips:** A NEST 10mL serological pipette is suggested for fully aspiration.

### Cell harvesting

1. Rinse off the residual serum with buffer, add digestion solution ( $\geq 5$  mL per layer) and mix evenly. Then, follow Steps 3-4 to distribute to dissociating reagent to each layer.
2. Let stand for 2 min, then neutralize and mix with inactivating solution following steps 3-4. Gently swirl to dislodge cells completely.  
Transfer the solution in a centrifuge tube or other containers by aspiration or pouring.
4. Rinse the flask with buffer for three times, then transfer the buffer into the centrifuge tube for passage and counting.

**Tips:** Search "NEST Multi-layer Flask" video on YouTube(@nest-wuxi4075).

### Cell Culture Flask

Cell Growth Area (cm <sup>2</sup> )	Maximum Graduated Volume (mL)	Recommended Medium Volume (mL)	Size(mm)			Packing		TC Treated		Non-Treated	
			Base Height	Width	Length	/Pack	/Case	Plug seal caps	Vent caps	Plug seal caps	Vent caps
25	30	5-7.5	25.9	53.8	97.13	10	20	707001	707003	707011	707013
75	225	15-22.5	35.7	89.56	160.01	5	20	708001	708003	708011	708013
150	375	30-45	40.3	110.75	203	5	8	720001	720003	720011	720013
175	400	35-52.5	39.1	120.51	217.9	5	8	709001	709003	709011	709013
225	700	45-67.5	46.05	137	238.5	5	5	721001	721003	721011	721013
520	50	60-100	60.1	120.5	203	1	12	731301	731302	/	/
870 (5-Layer)	50	100-150	84.3	120.5	203.6	1	8	731001	731002	/	/



#### Precautions:

It is important to handle multi-layer Cell Culture Flasks with caution to avoid the formation of bubbles. The presence of bubbles can lead to the creation of siphon bridge at the baffle, resulting in the upper layer of culture medium flowing down to the bottom.

# Cell Culture Flask Closed System Solution



## 1 Filter

The Pre-installed filter on the cap facilitates gas exchange during liquid transfer, and allows for subsequent cell culture.



## 2 Clamp

Clamp should keep open for gas exchange during liquid transfer. After the transfer is complete, it can be closed for the growth of anaerobic cells and viruses.



## 3 Thermoplastic Elastomer Tube (TPE Tube)

TPE tube can be connected to the tubing system via a tube sealing machine under non-sterile conditions.



## 4 PTFE Tube

PTFE tubing is placed inside the bottle below the filter to facilitate gas exchange during liquid transfer.



The range of T-flask Closed System allow for aseptic transfer of liquids, during which culture media or cells can be transferred into or out of bioreactors or BioFactorie without the need to open the cap. After the transfer, the culture media and cells can be directly cultured inside the flask, eliminating the exogenous contamination risk for drug development and other production processes. In addition, it also reduces the unnecessary time wasted for tubing designing, assembly, and sterilization, thereby improving production efficiency.

## ● Removal of culture media

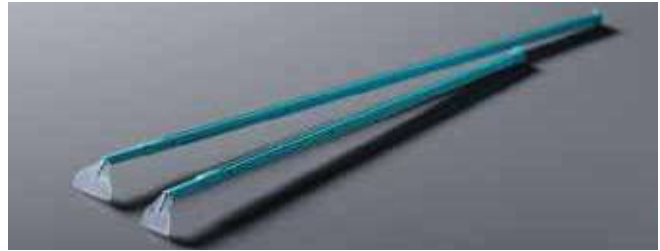
- Allows for cell culture and liquid transfer without the need to open the cap and hence minimizes the risk of contamination during liquid transfer.
- Intended for both aerobic cells (by opening the clamp) and anaerobic cells (by closing the clamp).
- Liquid transfer can be achieved by gravity without the need for peristaltic pumps.
- The one-piece injection moulding for bottle and cap reduces the risk of leakage and media residue.
- The TPE tube can be sealed in non-sterile environments.
- The high-quality materials makes smooth inner wall of the tube and ensures excellent transfer performance.
- Sterility assurance level (SAL)= 10<sup>-6</sup>.
- Free from endotoxins and animal-derived components.

Growth Area (cm <sup>2</sup> )	Tubing Measurements			Membrane Area of 0.2µm Filter	/Case	Cat.NO.
	Diameter	Length	Joint Connection			
25	1/4" ID, 3/8" OD φ9.53mm φ6.4mm	40cm	aseptic welding /heat sealing	4.5cm <sup>2</sup>	4	C92032-BZB040A
75						C92131-BZB040A
225						C92231-BZB040A

# Cell Scraper

## Features

- Free rotating blade, makes the blade twist to the right direction.
- Two sizes are available.
- Easy-tear sterile packing.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- Individually packaged.



Spec(mm)		Colour	Sterile	/Case	Cat.No.
Total Length	Blade Width				
220	13	Blue handle + transparent blade	Yes	100	710001
280	20	Blue handle + transparent blade	Yes	100	710011

# Cell Strainer

## Features

- Ideal for stem cell and tissue-derived primary cell preparation.
- Fits nearly all 50ml conical tubes.
- Tab molded within upper ring enables easy sterile handling.
- Sterilized by Gamma ray.
- Non-Pyrogenic, DNase/Rnase free.
- Individually packaged.



Spec (µm)	目数	Color	/Pack	/Case	Cat.No.
40	360	Blue	1	50	258366
70	220	White	1	50	258365
100	150	Yellow	1	50	258364

# 50mL Min Bioreactor

## Features

- USP VI Polypropylene.
- High transparency, easy to observe.
- Vent caps with 0.22 µm hydrophobic filters for gas exchange without contamination.
- Packaged in sterile, zip-sealable bags.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- Suitable for used for centrifugation.

Volume (mL)	/Pack	/Case	Cat.No.
50 mL Vent caps Sterile	10	10	788211





**TriSteri™**



## TriSteri™ Ultra-low Particulate Collection

### ● Product overview

Regular packaging may unintentionally introduce pollutants into the cleanroom area if pollutants adhere to the outside of the packaging bag. However, triple packaging of TriSteri™ Ultra-low Particulate Collection are designed to meet the higher demands of cleanrooms. The outer packaging acts as a barrier, preventing pollutants from entering sensitive production areas and greatly enhancing the safety of samples in a sterile environment.

#### Quality Inspection

- Each batch of products undergoes insoluble particle testing according to the Chinese Pharmacopoeia.
- All products undergo two visual inspections to ensure that every product leaving the facility is free from visible foreign substances.
- Each minimum packaging is labeled with a batch number for easy quality inquiries.

#### Validation

- Compliant with ISO 13485 (Medical Device Quality Management System) and ISO 9001.
- Sterility Assurance Level (SAL) reaches  $10^{-6}$ , free from DNase/RNase, endotoxins, and cytotoxicity.

#### Production Environment

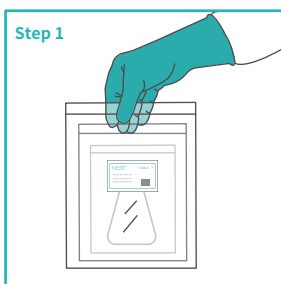
- Products are produced and packaged in Class 100,000 cleanroom and partial Class 1000,000 cleanroom.
- Packaging materials are produced in Class 10,000 cleanroom.

#### Raw Material Validation

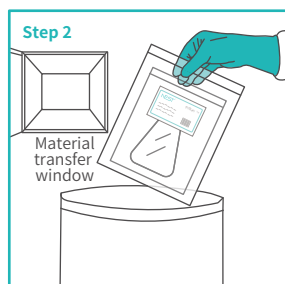
- All injection molded components are made from medical-grade materials.



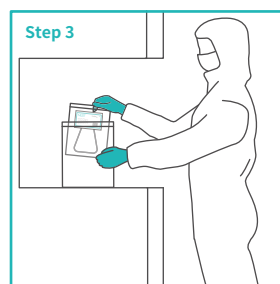
### ● Instructions for Use



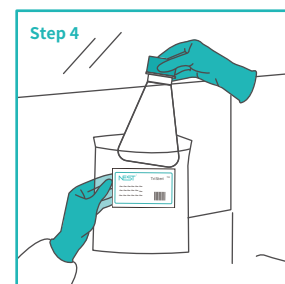
**Step 1**  
Inspect the product's appearance and packaging integrity. Check the information on the label, such as expiration date and batch number.



**Step 2**  
or unsterile environment In a non-clean environment, open the outermost packaging and transfer the two inner bags to the Material Delivery Window for sterilization.



**Step 3**  
For sterile environment Open the second inner bag carefully in the cleanroom. Remove the innermost packaging from the second inner bag, transferring it to the sterile operation table.



**Step 4**  
For sterile operation station Open the final layer of packaging in the sterile operation table and remove the required consumables.

#### Triple Packed Products for clean room applications

Triple packed products are used where sterile transfer of products is essential. Contamination adhering to the outside of the bag can be carried into clean room areas with single packaging. Therefore, all single packed materials must be wiped clean with 70 % alcohol or other disinfectant. Triple packed products eliminate the need for such cleaning procedures. It prevents contamination from reaching highly sensitive production areas, simplify handling and reduce processing time.

## ● Order Information

Product	Description (sterile, TriSteri™)			Triple Packaging			Cat.NO.	
	Specification	Cap	Other	pcs/pk	pk/cs	Pcs/cs		
Cell Culture Plates	6 Well	/	Clear, Flat Bottom, TC	1	50	50	703009	
	24 Well	/	Clear, Flat Bottom, TC	1	50	50	702009	
	48 Well	/	Clear, Flat Bottom, TC	1	50	50	748009	
	96 Well	/	Clear, Flat Bottom, TC	1	100	100	701009	
Cell Culture Dish	100*20 mm	/	TC	1	50	50	704009	
	150*25 mm	/	TC	1	50	50	715009	
Cell Culture Flask	25 cm <sup>2</sup>	Vent Cap	TC	1	200	200	707009	
	75 cm <sup>2</sup>	Vent Cap	TC	1	100	100	708009	
	150 cm <sup>2</sup>	Vent Cap	TC	1	40	40	720009	
	175 cm <sup>2</sup>	Vent Cap	TC	1	40	40	709009	
	225 cm <sup>2</sup>	Vent Cap	TC	1	25	25	721009	
Multi-layer Cell Culture Flask	5-layer(100-150)	Vent Cap	TC	1	8	8	731009	
Erlenmeyer Flask	125 mL	Seal Cap	PC, Flat Bottom	1	24	24	781109	
	250 mL	Seal Cap	PC, Flat Bottom	1	12	12	782109	
	500 mL	Seal Cap	PC, Flat Bottom	1	12	12	783109	
	1000 mL	Seal Cap	PC, Flat Bottom	1	6	6	784109	
	125 mL	Vent Cap	PC, Flat Bottom	1	24	24	781119	
	250 mL	Vent Cap	PC, Flat Bottom	1	12	12	782119	
	500 mL	Vent Cap	PC, Flat Bottom	1	12	12	783119	
	1000 mL	Vent Cap	PC, Flat Bottom	1	6	6	784119	
	125 mL	Seal Cap	PC, Baffled	1	24	24	781209	
	250 mL	Seal Cap	PC, Baffled	1	12	12	782209	
	500 mL	Seal Cap	PC, Baffled	1	12	12	783209	
	1000 mL	Seal Cap	PC, Baffled	1	6	6	784209	
	125 mL	Vent Cap	PC, Baffled	1	24	24	781219	
	250 mL	Vent Cap	PC, Baffled	1	12	12	782219	
	500 mL	Vent Cap	PC, Baffled	1	12	12	783219	
	1000 mL	Vent Cap	PC, Baffled	1	6	6	784219	
	High Efficiency Erlenmeyer Flask	2000 mL	Seal Cap	PC, Flat Bottom	1	4	4	785109
		3000 mL	Seal Cap	PC, Flat Bottom	1	4	4	786109
		3000 mL	Seal Cap	PC, Flat Bottom	1	4	4	786509
		5000 mL	Seal Cap	PC, Flat Bottom	1	4	4	787009
2000 mL		Vent Cap	PC, Flat Bottom	1	4	4	785119	
3000 mL		Vent Cap	PC, Flat Bottom	1	4	4	786119	
3000 mL(Wide Mouth)		Vent Cap	PC, Flat Bottom	1	4	4	786519	
5000 mL		Vent Cap	PC, Flat Bottom	1	4	4	787019	
2000 mL		Seal Cap	PC, Baffled	1	4	4	785129	
3000 mL		Seal Cap	PC, Baffled	1	4	4	786129	
3000 mL(Wide Mouth)		Seal Cap	PC, Baffled	1	4	4	786529	
5000 mL		Seal Cap	PC, Baffled	1	4	4	787029	
2000 mL		Vent Cap	PC, Baffled	1	4	4	785139	
3000 mL		Vent Cap	PC, Baffled	1	4	4	786139	
3000 mL(Wide Mouth)		Vent Cap	PC, Baffled	1	4	4	786539	
5000 mL		Vent Cap	PC, Baffled	1	4	4	787039	

## ● Order Information

Product	Description (sterile, TriSteri™)			Triple Packaging			Cat.NO.
	Specification	Cap	Other	pcs/pk	pk/cs	Pcs/cs	
BioFactory	2 Layer	Two wide mouths	TC	1	8	8	771109
	5 Layer	Two wide mouths	TC	1	4	4	771209
	10 Layer	Two wide mouths	TC	1	6	6	771309
Cryogenic Tubes	1.0	External Thread	/	5	20	100	618909
	1.5	External Thread	/	5	20	100	606909
	2.0	External Thread	/	5	20	100	607409
	4.0	External Thread	/	5	20	100	608409
	5.0	External Thread	/	5	20	100	609409
Centrifuge Tube	15	/	/	5	100	500	601009
	50	/	/	5	50	250	602009
250/500mL Centrifuge Tube	250	Internal Thread	/	6	17	102	622009
	500	Internal Thread	/	6	6	36	623009



# Bioprocessing Solutions

# OptiFlask® Erlenmeyer Flask

NEST Erlenmeyer Flask collection is designed for suspension cell culture, and is ideal for small-scale research and industrial production of vaccines, proteins, monoclonal antibodies and biopharmaceuticals.

NEST provides Erlenmeyer Flasks in sizes ranging from 125 to 3000mL, as well as High Efficiency Erlenmeyer Flasks in sizes of 2-5L. Each size option comes with a choice of a seal or vent cap, as well as the option of a flat bottom or a bottom with baffles. The Erlenmeyer Flasks are available in both PC and PETG.

Accordingly, NEST offers customized transfer caps that are compatible with our Erlenmeyer Flask collection. These caps come in various sizes and can also be tailored to accommodate diverse requirements, allowing for liquid transfer and cultivation in a closed environment.

## Strict product quality supervision

### Production environment--Class 10,000 clean production workshop

NEST Factory™ is produced in a dedicated 10,000-class clean room, and other products are produced in a 100,000-class clean room.

### Production material--Strictly selected polystyrene conforming to USP Class VI standard

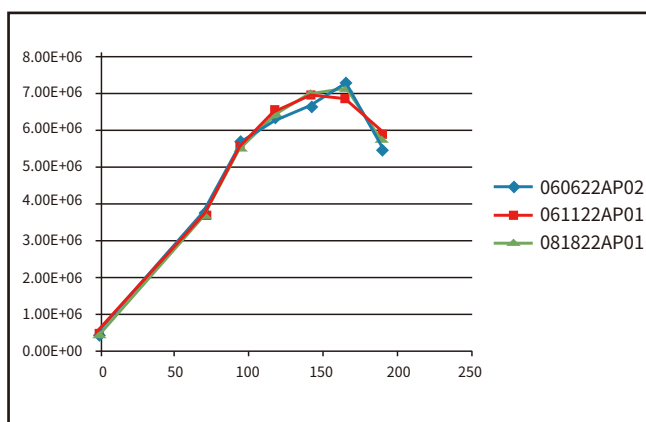
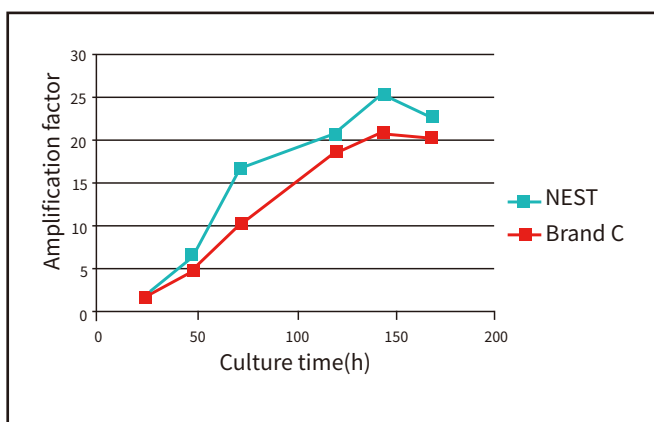
### Quality Assurance from Professional Testing Agencies

NEST ensures top product quality, stability, safety, applicability, and effectiveness through the implementation of state-of-the-art production technology and a strict quality control system. All our product ranges have undergone rigorous validation by professional testing institutions possessing national testing qualifications (CMA, CNAS). The internationally recognized testing results provide further assurance.

### Performance Testing

Relevant performance testings include sealing test, pressure resistance test, inter-batch stability, endotoxin, nucleic acid enzyme, and cell culture comparative experiments.

Sample batch	Culture time(h)	72	76	120	144	168	192
060622AP02	Cell count	$3.82 \times 10^6$	$5.78 \times 10^6$	$6.46 \times 10^6$	$6.79 \times 10^6$	$7.48 \times 10^6$	$5.59 \times 10^6$
	Amplification factor	12.72	19.25	21.53	22.63	24.94	18.62
061122AP01	Cell count	$3.69 \times 10^6$	$5.67 \times 10^6$	$6.66 \times 10^6$	$7.09 \times 10^6$	$7.05 \times 10^6$	$5.95 \times 10^6$
	Amplification factor	12.30	18.91	22.19	23.62	23.51	19.83
0818224P01	Cell count	$3.72 \times 10^6$	$5.60 \times 10^6$	$6.58 \times 10^6$	$7.13 \times 10^6$	$7.32 \times 10^6$	$5.88 \times 10^6$
	Amplification factor	12.40	18.66	21.93	23.78	24.40	19.59



## Biosafety testing

Refer to <<State Food and Drug Administration National Standards for Packaging Materials and Containers in Direct Contact with Drugs (Series 6)>>, The product is tested for cytotoxicity, sensitization, intradermal irritation, acute systemic toxicity and hemolysis.

## Physical and chemical safety testing

Refer to <<State Food and Drug Administration National Standards for Packaging Materials and Containers in Direct Contact with Drugs (Series 6)>>, The products are tested for insoluble particles, ignition residues, metal elements, and dissolved substances (clarity, color, pH, UV absorbance, non-volatile matter, easy oxides, heavy metals).

Testing item	Detection limit (mg/L)	Test result (mg/L)
Lead	0.05	N.D.
Tin	0.04	N.D.
Cadmium	0.02	N.D.
Chromium	0.03	N.D.

Testing item	Requirement or detection limit	Testing result
Reducing substances (consumption of $c(1/5KMnO_4)=0.01mol/L$ )	$\leq 0.5$ mL	0.12
Acid-base pH (compared with blank solution)	$< 1$	0.22
Evaporated residue, mg/50mL	$< 2.5$ mg	0.9
UV absorbance 230nm~360nm	$< 0.05$	0.0070
Appearance	Colorless and transparent	Colorless and transparent
Lead content, $\mu g/mL$	$< 0.05$	Below the detection limit
Tin content, $\mu g/mL$	$< 0.04$	Below the detection limit
Cadmium content, $\mu g/mL$	$< 0.02$	Below the detection limit
Chromium content, $\mu g/mL$	$< 0.03$	Below the detection limit

## Sterility and particle guarantee

NEST ensures thorough testing of its products through examinations of the irradiation process, packaging, and insoluble particles. The verification of the irradiation dose distribution is conducted in accordance with ISO 11137-1:2015, meeting the necessary requirements for sterilization irradiation dose ( $SAL=10^{-6}$ ).

# OptiFlask® Erlenmeyer Flask

Erlenmeyer Flask, Flat-bottom



Erlenmeyer Flask, Baffled



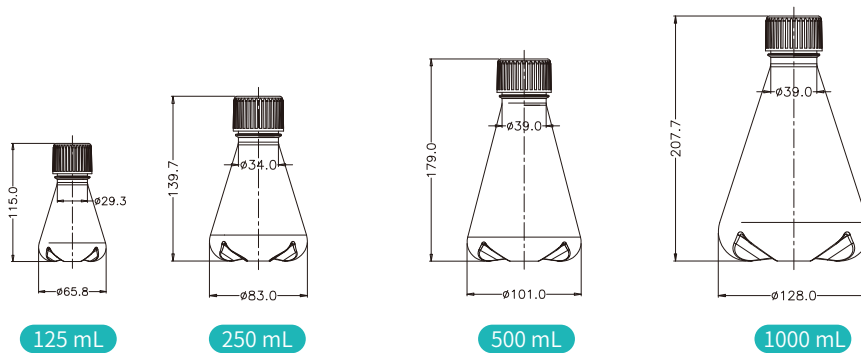
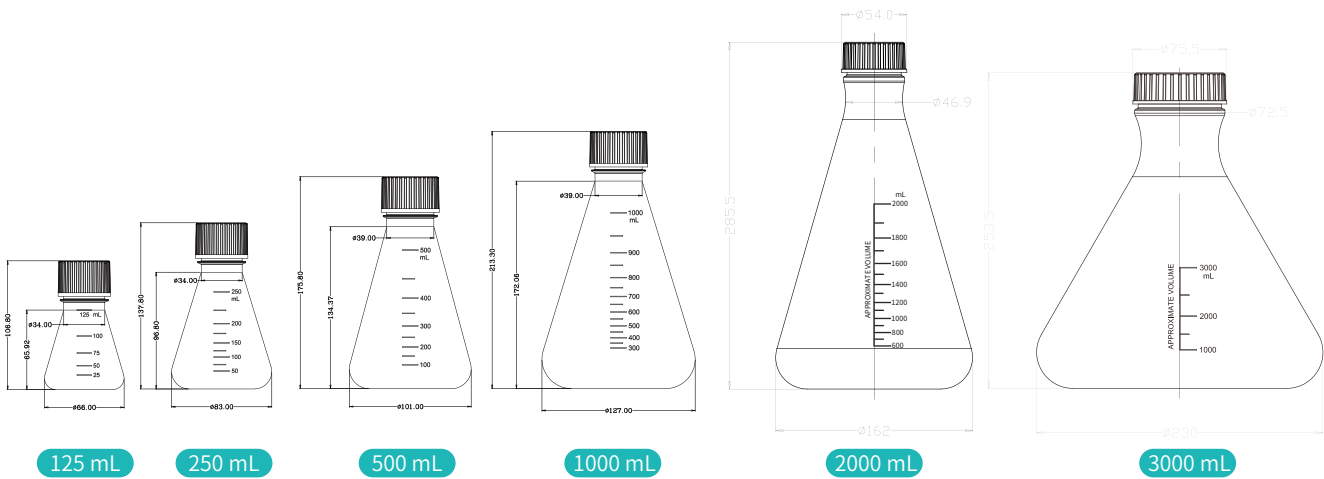
- Erlenmeyer Flask collection is suitable for suspension cell culture or bacterial culture, and can also be used for medium preparation, mixing, and storage.
- The body is made of PETG/PC, and the cap is made of PP. Both materials comply with USP Class VI.
- Qualified by the USP Class 6 Standard, PC bottle with high transparency, is resistant to strong impact, oxidation and high temperature up to 121°C.
- Vent caps with 0.22  $\mu\text{m}$  hydrophobic filters for gas exchange without contamination.
- The baffled bottom can improve gas exchange efficiency and ensure better oxygen dissolution in the culture medium, but it also increases cell shear force.

# Feature

- Individually packaged in sterile bags
- There's a scale made by injection molding on the flask body to facilitate observing the filled liquid volume.
- Non-Pyrogenic, DNase/Rnase free.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.

## • Erlenmeyer Flask

Volume (mL)	Size(mm)			Cap Style	Packing		PETG Erlenmeyer Flask		PC Erlenmeyer Flask	
	Height	Bottleneck Diameter	Bottom Diameter		/Pack	/Case	Flat-bottom	Baffled	Flat-bottom	Baffled
125	106.8	34	66	Seal Cap	1	24	781001	781301	781101	781201
				Vent Filter Cap	1	24	781011	781311	781111	781211
250	137.8	34	83	Seal Cap	1	12	782001	782301	782101	782201
				Vent Filter Cap	1	12	782011	782311	782111	782211
500	175.8	39	101	Seal Cap	1	12	783001	783301	783101	783201
				Vent Filter Cap	1	12	783011	783311	783111	783211
1000	213.3	39	127	Seal Cap	1	6	784001	784301	784101	784201
				Vent Filter Cap	1	6	784011	784311	784111	784211
2000	285	47	162	Seal Cap	1	6	/	/	785001	/
				Vent Filter Cap	1	6	/	/	785011	/
3000	253	62	230	Seal Cap	1	4	/	/	786001	/
				Vent Filter Cap	1	4	/	/	786011	/





# OptiFlask® Erlenmeyer Flask, High Efficiency



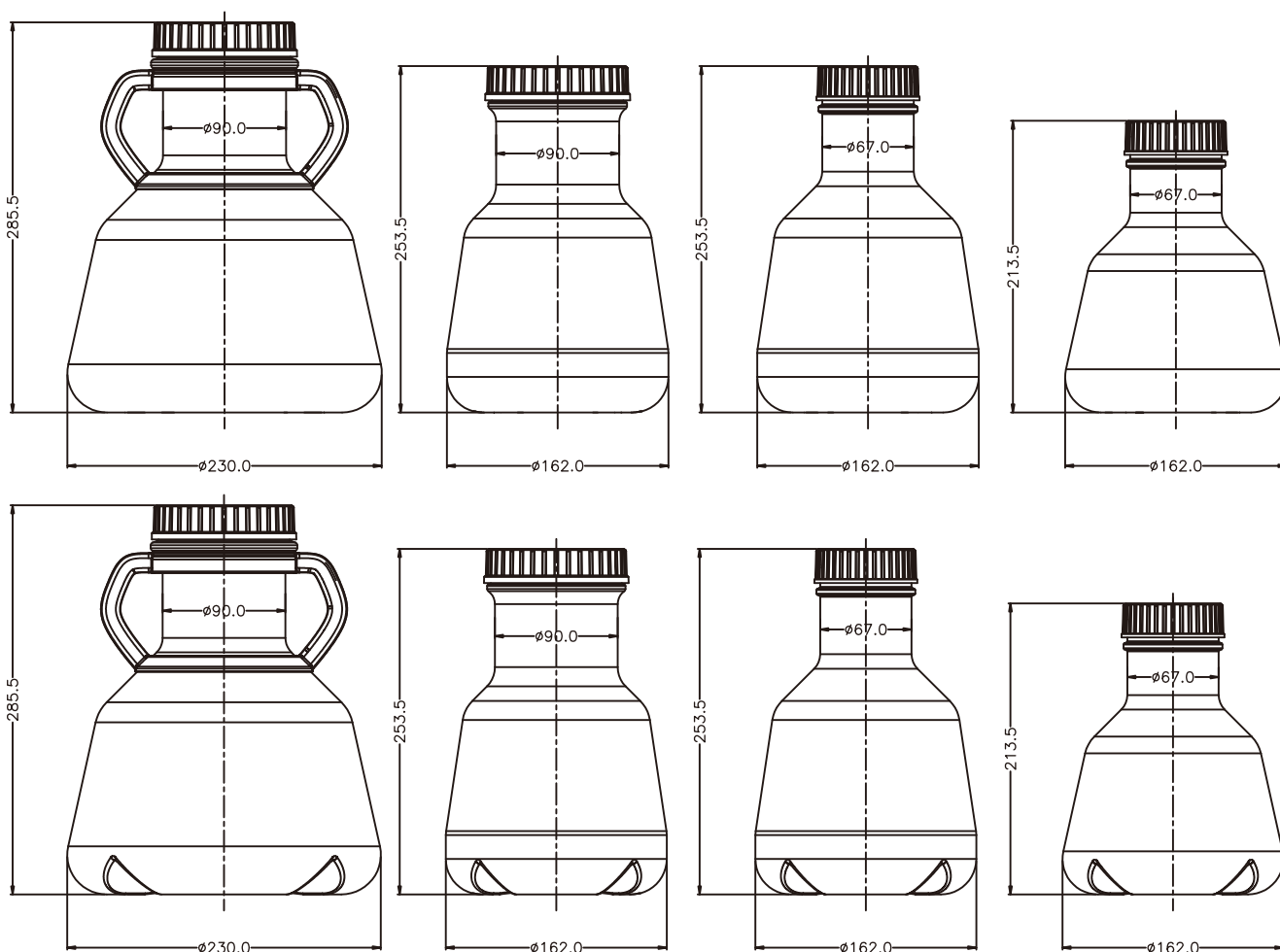
High-efficiency, large-volume culture flasks allow cells to show strong viability with large expression amount of proteins in the culture of mammalian cells and insect cells. During the culturing process, the use rate of the shaker is significantly increased, and the survival rate and viability of cells are both dramatically elevated. NEST culture flasks also provide high repeatability, which allows highly inter-batch consistency of cell growth and yield.

# Feature

- Qualified by the USP Class 6 Standard, PC bottle with high transparency, is resistant to strong impact, oxidation and high temperature up to 121°C.
- Obvious and accurate scale.
- The vent cap is covered with a 0.2 µm vent membrane, watertight but not airtight.
- Equipped with transfer Cap, more safe and convenient operation.
- Individually packaged in sterile bag.
- Non-Pyrogenic, DNase/Rnase free.
- Suitable for suspension cell culture or bacterial culture, as well as for medium preparation, mixing, and storage
- Sterilized by E-beam, SAL=10<sup>-6</sup>.

## • Erlenmeyer Flask, High Efficiency

Volume (L)	Dimension (mm)			Cap Style	/Case	Cat.No.	
	Height	Bottleneck Dia	Bottom Dia			Flat-bottom	With Baffles
2.0	213.5	67	162	Seal Cap	4	785101	785105
	213.5	67	162	Vent Filter Cap	4	785111	785115
3.0	253.5	67	162	Seal Cap	4	786101	786105
	253.5	67	162	Vent Filter Cap	4	786111	786115
3.0 (Wide-mouth)	253.5	90	162	Seal Cap	4	786501	786505
	253.5	90	162	Vent Filter Cap	4	786511	786515
5.0	253.5	90	230	Seal Cap	4	787001	787005
	253.5	90	230	Vent Filter Cap	4	787011	787015



# Accessories

- Closed system reduces the risks of contamination during liquid transfer.
- One-piece construction of caps and connectors reduces the risk of leakage and media residue.
- Caps of various diameters are available and aseptic welding of liquid inlet tubing under normal conditions is supported.
- High-quality materials and smooth inner wall of the tubing provide an excellent transfer performance.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Endotoxin-free, and no ingredients of animal origin.
- Individually packaged in sterile bag.



## ● Bi-directional Liquid Transfer Cap System

- For aseptic transfer of culture medium and cell culture solution.
- One end of the pipeline is connected to the MPC series connector, which increases the convenience and safety in use. The male connector and the sealing cap are tightly connected to prevent accidental disconnection, and the connector can be rotated to reduce pipeline distortion.



## ● Multifunction Liquid Transfer Cap

Compatible with 2/3/5L high efficient Erlenmeyer flasks. Different from bi-directional liquid transfer cap, the multifunctional transfer cap can be directly placed in an incubator for culture after the liquid transfer is completed. It can reach a large air flux. The quick sampling connector is composed of a sampling nozzle and a one-way valve, which can prevent the liquid from flowing backwards during the sampling process and ensure the aseptic sampling. The liquid inlet tubing is provided with a PTFE needle filter, which solves the issue of liquid remaining in the tubing during the feeding process.



## ● Inverted Liquid Transfer Caps

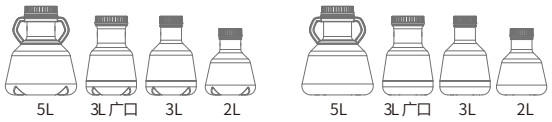
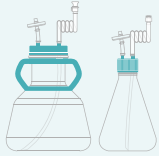
- No need for other equipment, and no damage to cells.
- Invert the bottle to transfer the liquid by gravity.
- Available with regular tubing or wide-mouth tubing.

# Accessories

To customize a NEST Erlenmeyer Flask Closed System Solution that meets your needs, follow these steps:

## Step 1

- Choose the bottle capacity
- Choose the bottle material



Bottle Material (PETG PET PC)

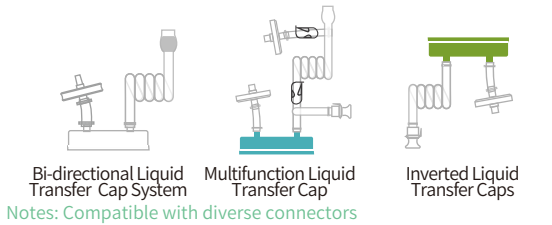
Notes: you may order the transfer cap only

Generate custom graphics by submitting your request on [www.cell-nest.com](http://www.cell-nest.com)



## Step 2

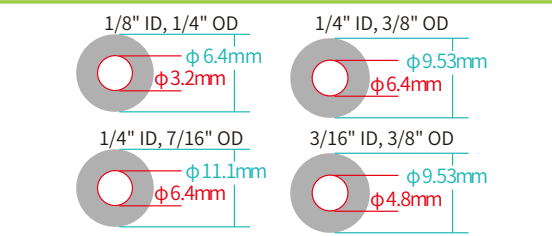
- Choose the cap type



Notes: Compatible with diverse connectors

## Step 3

- Choose the tube size/length
- Choose the tube material

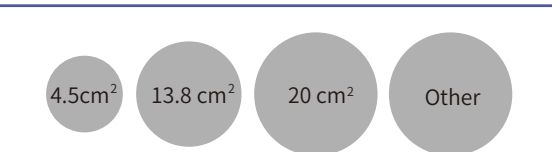


Inlet and outlet liquid tubing

( vulcanized silicone tube  P welded tube)

## Step 4

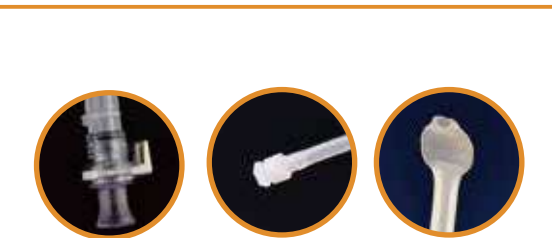
- Choose the membrane area  
Air filter (PVDF membrane)



Membrane (4.5cm² 13.8cm² 20cm² Other)

## Step 5

- Choose the connector type
- ① Luer connector (male and female)
  - ② MPC connector (male and female)
  - ③ Heat sealing (no connector)



MPC Connector (male/female)

Luer Connector (male/female)

Heat Seal (no connector)

= Results



Inform our sales or product engineer of your choice if you have completed your selection.

## ● High Efficient Erlenmeyer Flask Closed System

Volume (mL)	Transfer Caps for High Efficient Erlenmeyer Flasks							Closed System	
	Cap Style	Tube Material					Cat.No.	Cat.No.	
		External Liquid Transfer Tube			Connector	0.2µm Filter Membrane area		Flat-bottom	With Baffles
		材质	Length (cm)	Dia.					
125 mL	Bi-directional Liquid Transfer	Silicon Tube	50	1/8" ID, 1/4" OD	MPC Male Connector	Φ42mm	C30821-EAC050B		
250 mL					Male Luer Connector		C30821-EFC050B		
					MPC Male Connector		C30921-EAC050B		
500 mL					Male Luer Connector		C30921-EFC050B		
					MPC Male Connector		C31021-EAC050B		
1000 mL					Male Luer Connector		C31021-EFC050B		
					MPC Male Connector		C31121-EAC050B		
									Male Luer Connector
2L High Efficiency	Multifunction Liquid Transfer	TPE Tube	52	1/8" ID, 1/4" OD	Heat Seal(Supports sampling)	Φ50mm	C10111-AJE052B		
		TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Φ24mm	C10111-DZB050B		
		Silicon Tube	100	3/16" ID, 3/8" OD	MPC Male Connector	Φ24mm	C10111-GBB100B		
	Bi-directional Liquid Transfer	TPE Tube	50	1/8" ID, 1/4"OD	Heat Seal	Φ24mm	C10122-AZB050B	C10122-AZB050A	C20122-AZB050A
		TPE Tube	50	1/4" ID, 3/8" OD	Heat Seal	Φ42mm	C10123-BZC050B	C10123-BZC050A	
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Male Connector	Φ42mm	C10123-FBC050B		
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Female Connector	Φ42mm	C10123-FDC050B		
	Inverted Liquid Transfer	TPE Tube	50	1/8" ID, 1/4" OD	Heat Seal	Φ42mm	C10131-AZC050B		
		TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Φ42mm	C10133-DZC050B		
	3L High Efficiency	Multifunction Liquid Transfer	TPE Tube	52	1/8" ID, 1/4" OD	Heat Seal(Supports sampling)	Φ50mm	C10211-AJE052B	
TPE Tube			50	1/4" ID, 7/16" OD	Heat Seal	Φ24mm	C10211-DZB050B		
Silicon Tube			100	3/16" ID, 3/8" OD	MPC Male Connector	Φ24mm	C10211-GBB100B		
Bi-directional Liquid Transfer		TPE Tube	50	1/8" ID, 1/4"OD	Heat Seal	Φ24mm	C10222-AZB050B	C10222-AZB050A	C20222-AZB050A
		TPE Tube	50	1/4" ID, 3/8" OD	Heat Seal	Φ42mm	C10223-BZC050B	C10223-BZC050A	
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Male Connector	Φ42mm	C10223-FBC050B		
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Female Connector	Φ42mm	C10223-FDC050B		
Inverted Liquid Transfer		TPE Tube	50	1/8" ID, 1/4" OD	Heat Seal	Φ42mm	C10231-AZC050B		
		TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Φ42mm	C10233-DZC050B		
3L Wide-mouth High Efficiency		Multifunction Liquid Transfer	TPE Tube	52	1/8" ID, 1/4" OD	Heat Seal(Supports sampling)	Φ50mm	C10311-AJE052B	
	TPE Tube		50	1/4" ID, 7/16" OD	Heat Seal	Φ24mm	C10311-DZB050B		
	Silicon Tube		100	3/16" ID, 3/8" OD	MPC Male Connector	Φ24mm	C10311-GBB100B		
	Bi-directional Liquid Transfer	TPE Tube	50	1/8" ID, 1/4"OD	Heat Seal	Φ24mm	C10322-AZB050B	C10322-AZB050A	C20322-AZB050A
		TPE Tube	50	1/4" ID, 3/8" OD	Heat Seal	Φ42mm	C10323-BZC050B	C10323-BZC050A	
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Male Connector	Φ42mm	C10323-FBC050B		
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Female Connector	Φ42mm	C10323-FDC050B		
	Inverted Liquid Transfer	TPE Tube	50	1/8" ID, 1/4" OD	Heat Seal	Φ42mm	C10331-AZC050B		
		TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Φ42mm	C10333-DZC050B		
	5L High Efficient	Multifunction Liquid Transfer	TPE Tube	30	1/8" ID, 1/4" OD	Heat Seal	No Filter	/	C10442-AKA060A
TPE Tube			92	1/8" ID, 1/4" OD	Heat Seal(Supports sampling)	Φ50mm	C10411-AJE092B		
TPE Tube			90	1/4" ID, 7/16" OD	Heat Seal	Φ24mm	C10411-DZB090B		
Silicon Tube			100	3/16" ID, 3/8" OD	MPC Male Connector	Φ24mm	C10411-GBB100B		
Bi-directional Liquid Transfer		TPE Tube	90	1/8" ID, 1/4"OD	Heat Seal	Φ24mm	C10422-AZB090B	C10422-AZB090A	
		TPE Tube	90	1/4" ID, 3/8" OD	Heat Seal	Φ42mm	C10423-BZC090B	C10423-BZC090A	
		Silicon Tube	90	1/4" ID, 3/8" OD	MPC Male Connector	Φ42mm	C10423-FBC090B		
		Silicon Tube	90	1/4" ID, 3/8" OD	MPC Female Connector	Φ42mm	C10423-FDC090B		
Inverted Liquid Transfer		TPE Tube	90	1/8" ID, 1/4" OD	Heat Seal	Φ42mm	C10431-AZC090B		
		TPE Tube	90	1/4" ID, 7/16" OD	Heat Seal	Φ42mm	C10433-DZC090B		

# Accessories

## ● Erlenmeyer Flasks Accessories

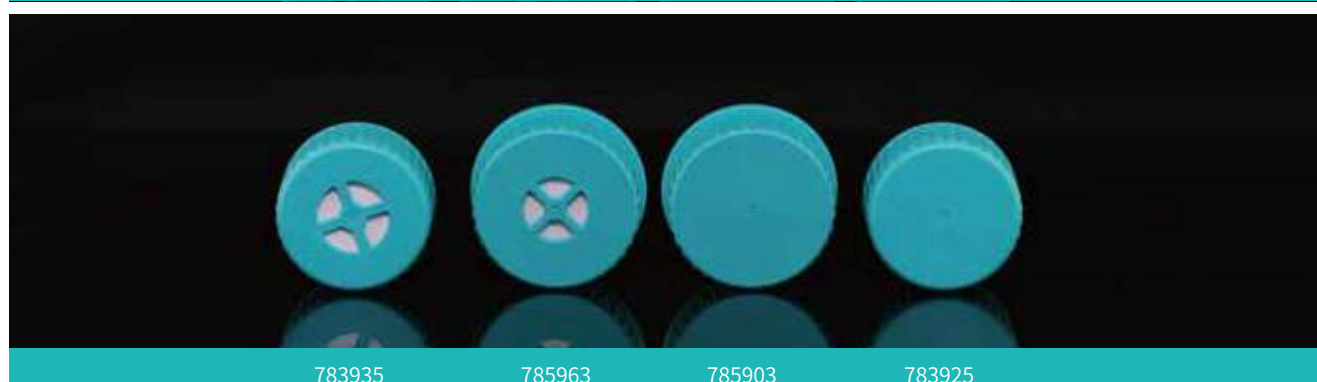


781935

782935

782925

781925

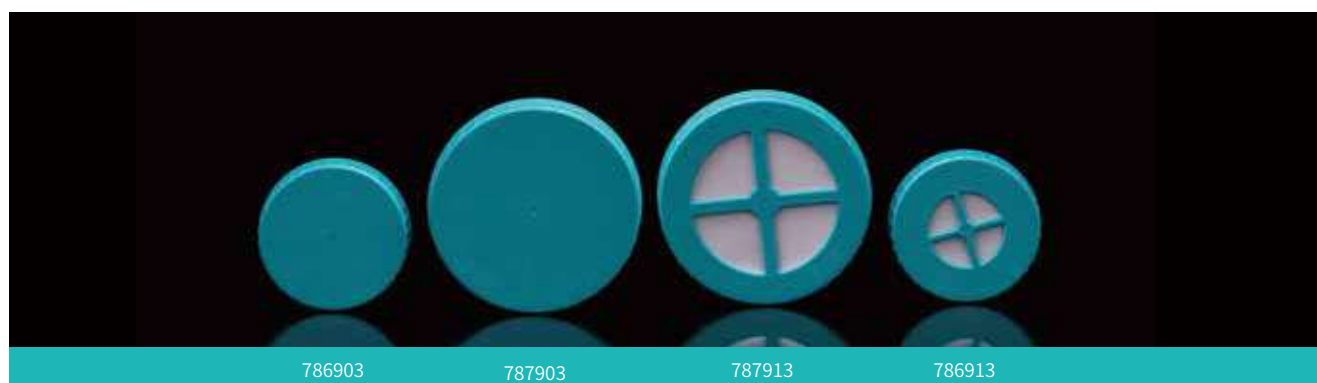


783935

785963

785903

783925



786903

787903

787913

786913

Compatibility	/Pack	/Case	Cat.No.
Seal Cap for 125 mL PC Erlenmeyer Flasks	1	25	781905
Vent Cap for 125 mL PC Erlenmeyer Flasks	1	25	781915
Seal Cap for 250 mL PC Erlenmeyer Flasks	1	25	781925
Vent Cap for 250 mL PC Erlenmeyer Flasks	1	25	781935
Seal Cap for 500&1000 mL PC Erlenmeyer Flasks	1	25	782925
Vent Cap for 500&1000 mL PC Erlenmeyer Flasks	1	25	782935
Seal Cap for 2L Erlenmeyer Flasks	1	25	783905
Vent Cap for 2L Erlenmeyer Flasks	1	25	783915
Seal Cap for 3L Conical Erlenmeyer Flasks/2&3L High Efficient Erlenmeyer Flasks	1	25	783925
Vent Cap for 3L Conical Erlenmeyer Flasks/2&3L High Efficient Erlenmeyer Flasks	1	25	783935
Seal Cap for 3L Wide-mouth/5L Erlenmeyer Flasks	1	20	785903
Vent Cap for 3L Wide-mouth/5L Erlenmeyer Flasks	1	20	785913

# BioFactory

## Strict product quality supervision

### Production environment—Class 10,000 clean production workshop

NEST Factory is produced in a dedicated 10,000-class clean room, and other products are produced in a 100,000-class clean room.

### Production material—Strictly selected polystyrene conforming to USP Class VI standard

### Production Process—Strictly follow SOP for production and quality control

Exquisite product design, high precision forming, ultrasonic welding, no chemical addition.

### Surface treatment—Tissue culture treated

The surface of the cell culture container is treated with hydrophilic treatment to ensure that the cells adhere to the surface more evenly and stable with better adsorption capacity.

### Product expiration date verification

The cell growth surface can still meet the cell growth requirements after three years of aging, and there is no positive result of the sterility test.

### Biosafety testing

Refer to <<State Food and Drug Administration National Standards for Packaging Materials and Containers in Direct Contact with Drugs (Series 6)>>, The product is tested for cytotoxicity, sensitization, intradermal irritation, acute systemic toxicity and hemolysis.

### Physical and chemical safety testing

Refer to <<State Food and Drug Administration National Standards for Packaging Materials and Containers in Direct Contact with Drugs (Series 6)>>, The products are tested for insoluble particles, ignition residues, metal elements, and dissolved substances (clarity, color, pH, UV absorbance, non-volatile matter, easy oxides, heavy metals).

### Process testing

In order to ensure the structure and strength of the product, it is necessary to verify the performance of relevant equipment, such as injection molding machines, molds, plasma equipment, welding machines, leakage meter and so on before production. After production, the product should be verified for sealing, strength, dropping and transportation.

### Cell growth test

Cell growth homogeneity experiment.

### Cell factory validation test--Sterility and particle guarantee

Product initial bioburden test, irradiation dose setting, dose review, aseptic packaging verification, irradiation process verification, product sterility and particle testing.

### Applicable cells

VERO、MRC-5、2BS、293T、L-929 .....

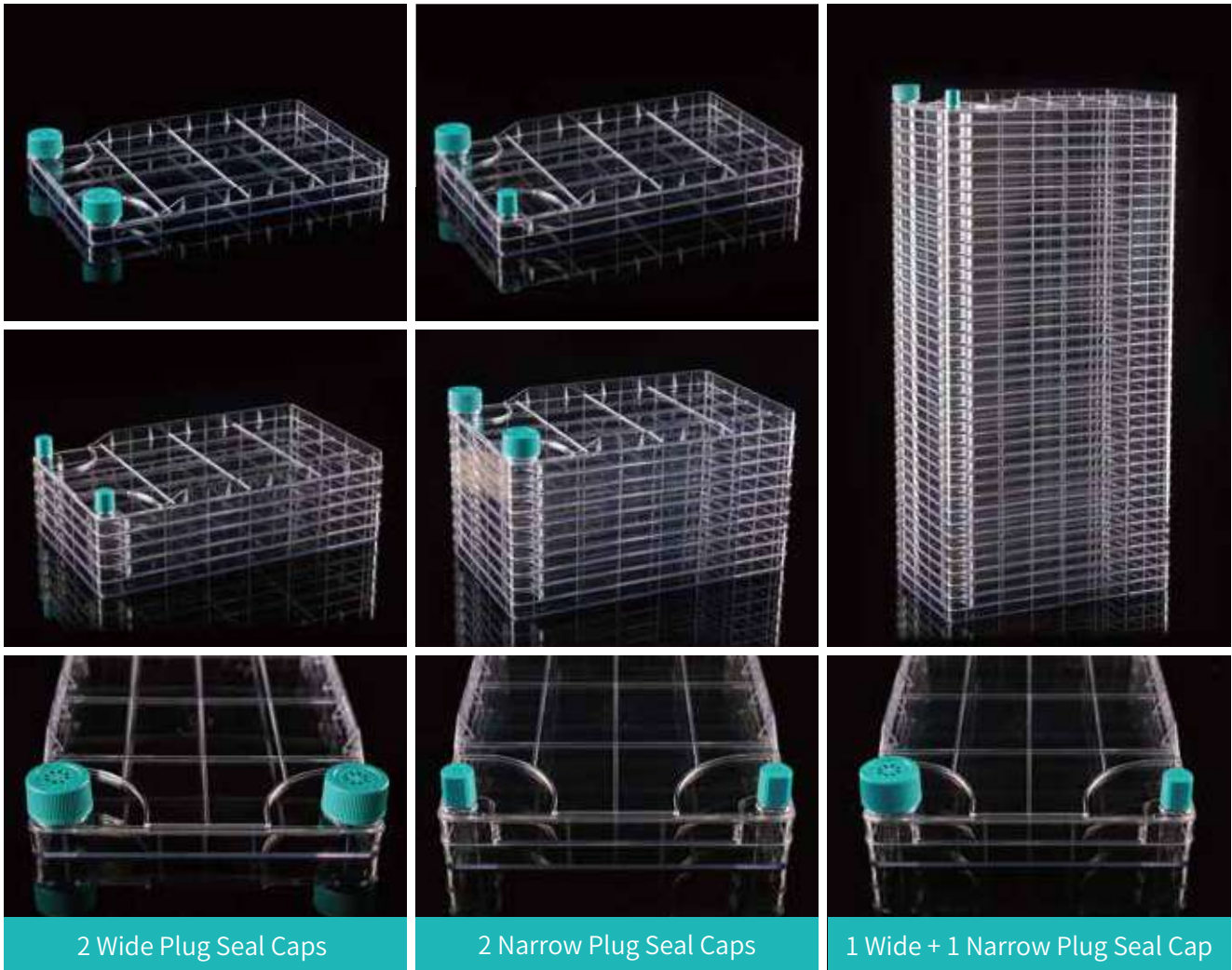
### Packaging strength verification

The breakage rate is less than 3% after repeated long distance delivery challenges.

### Sterility Guarantee--Imported Rhodotron® TT200 electron accelerator from Belgian IBA company, Self-built irradiation center.

The irradiation sterilization process has passed ISO 13485 and ISO 11137 quality system certification.

- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- Excellent welding line design can avoid producing particles during welding and make the biofactory stronger (Under Features 7th line).
- Vent caps with 0.22 μm hydrophobic filters for gas exchange without contamination.
- Wide mouth is applicable to pour culture medium directly. Narrow mouth is applicable to operate with the aseptic pipeline.
- Standardize operations to reduce batch differences.
- Individually packaged in double-layer sterile bags.
- TC treated, good for cell attachment and growth.
- Clear lot number for batch traceability.
- Ultrasonic welding without extrinsic ingredients.
- Standardize operations to reduce batch differences.
- Growth kinetics are the same as cells grow in the cell culture flasks.
- Applicable to large-scale culture adherent cells.
- Large growing area. Just a single operate, you can cultivate a large number of cells and reduce contamination risk.
- Applicable to automatic machine.



2 Wide Plug Seal Caps

2 Narrow Plug Seal Caps

1 Wide + 1 Narrow Plug Seal Cap

## ● BioFactory

Layer	Cultivation Area(cm <sup>2</sup> )	Dimension (mm)			/Case	Seal Caps	Vent Filter Caps	Cat.No.		
		Length	Width	Height				2 Wide Plug	2 Narrow Plug	1 Wide + 1 Narrow Plug
1	632	335	205	44	8	16	16	771001	772001	773001
2	1264	335	205	61	8	16	16	771101	772101	773101
5	3160	335	205	112	4	8	8	771204	772204	773204
10	6320	335	205	197	6	12	12	771302	772302	773302
40	25280	335	205	712	2	4	4	771403	772403	773403

Large mouth design for easy pouring of the medium directly;

Small mouth design for easy connection with the feeding systems;

Vent Cap : 0.22 μm hydrophobic gas permeable membrane, hindering bacteria and water, can also avoid liquid swelling.



# Guidelines for use

## Cell culture



Pour the prepared suspension into the BioFactory (recommended volume of 150-200 mL per layer).



Turn the BioFactory Chamber 90° make sure the liquid at the same horizontal.



Turn the BioFactory Chamber 90° so that the filling and venting ports are up (as shown). It is normal for the medium level in the bottom chamber section to be slightly higher.



Gently lower the BioFactory Chamber to its normal horizontal incubation position and gently tilt the chamber back and forth until the surface of each chamber is completely covered with medium.



Put the BioFactory into the incubator.



Watch operation video

## Precautions

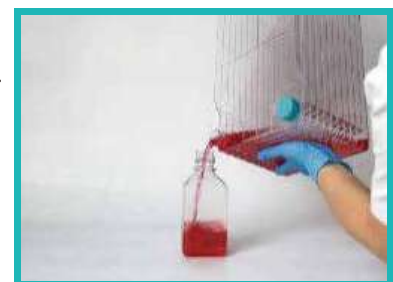
1. Please pre-heat the cell factory and culture medium to the culture temperature: since it takes a long time for a large incubator to reach the set culture temperature, pre-heating the cell factory and culture medium to the culture temperature before starting the experiment may speed up cell attachment and significantly increase cell recovery.
2. Slow operating is required to avoid occurrence of air bubbles caused by sharp shaking: air bubbles may lead to flowing the medium from an upper layer to a lower layer.
3. Avoid spraying alcohol onto the breathable cover, since alcohol may wet the hydrophobic membrane filter and make it impermeable and consequently affect the gas exchange or cause pressure imbalance during operations.

## Cell Harvest

1. After the culture is completed, pour the culture medium out.
2. Wash the factory with the calcium-free and magnesium-free phosphate buffer solution (CMF-PBS) (40-50 mL / layer) and if necessary, repeat the washing process.
3. Digestion: pre-heat the digestion solution (10-40 mL / layer) in advance.
4. Collection: centrifuge for 5 mins at 1000 rpm, remove the digestion solution and collect cells.
5. Washing: wash the incubator with CMF-PBS or culture medium after digestion.

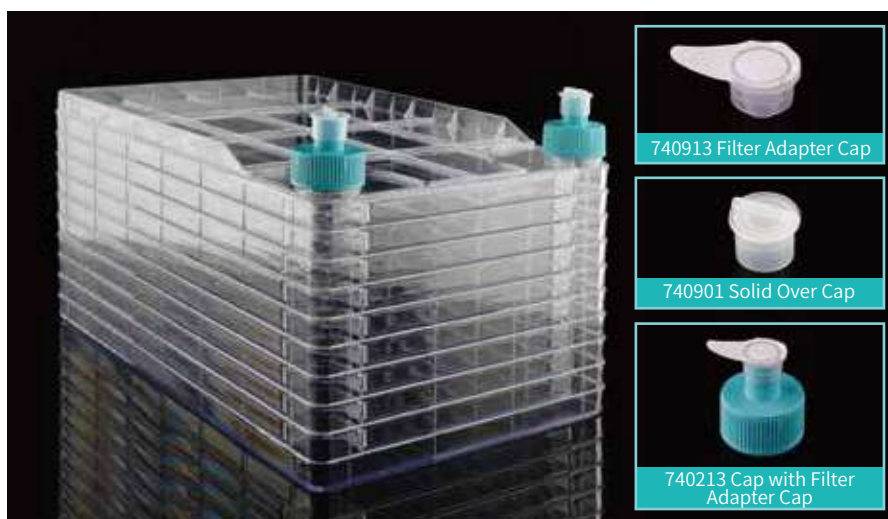
## Precautions

1. Ensure that the culture surface of each layer is completely immersed in the CMF-PBS, and gently shake the cell factory forward and backward to wash off the residual culture medium.
2. Distribute the digestion solution evenly to each layer; gently tilt the incubator forward and backward, left and right to ensure that the digestion solution has completely covered the culture surface; gently tap the incubator to help the cells detach from the surface.
3. Since it is unable to clearly observe the digestion status of the cells in the middle layers of a cell factory, it is recommended to refer to the digestion status of a culture flask or a single-layer cell factory under exactly the same culture conditions. Or, use a dedicated observation platform for multiple-layer cell incubators to observe the growth status of cells in each layer.
4. If there are numerous cells present in the washing solution or the culture layers of the cell factory, it is necessary to wash multiple times or adjust the procedure of cell digestion.
5. Even a slight deviation of the culture temperature may affect the cell harvest rate, so it is required to pay close attention as to whether or not the culture temperature is exactly the set temperature.



# Biofactory Closed System Solution

## • BioFactory (Cap with Over cap)



Vented Overcap and Solid Overact can be used directly on the adaptor caps to block dust and bacteria. Vented Overcap is equipped with a 0.22 μm hydrophobic breathable membrane to achieve aseptic ventilation during liquid transfer.

 Accessory information can be found on page 40

Layer	Description	Comes with Vented Overcap	/Case	Cat.No.
10	2 Sterile Vented over caps	12	6	771322
40	2 Sterile Vented over caps	4	6	771422

## • BioFactory (-20°C Frost Resistance)



The NEST freeze-resistant BioFactory adopts a dispensing technique to glue different layers, thus its freeze resistance is upgraded. It can withstand freezing at -18 ~ -20 °C, and can be repeatedly frozen and thawed three times, with better firmness.

Reminder: Due to the principle of thermal expansion and cold contraction, after the BioFactory uses a sealed cap to fill the culture media and freezes, the bottom or top layer may be slightly deformed. This is an inevitable and normal phenomenon, and there will be no leakage and will not affect normal use.

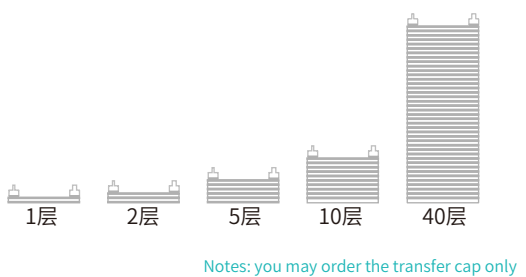
Layer	Cultivation Area (cm <sup>2</sup> )	Dimension (mm)			Description	Package	Cat.No.
		Length	Width	Height			
10	6320	335	205	201	Double Large mouth, TC , sterile	Double bag package, 1 pc / bag, 6 pcs / case	771392

# Biofactory Closed System Solution

To customize a NESTBiofactory™ Closed System Solution that meets your needs, follow these steps:

## Step 1

- Choose the Layer

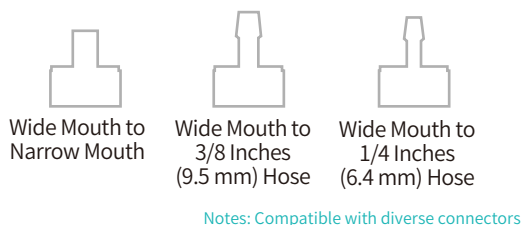


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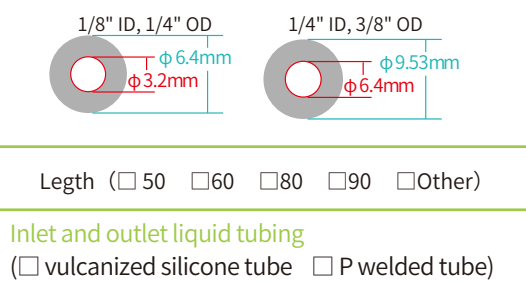
## Step 2

- Choose the cap type



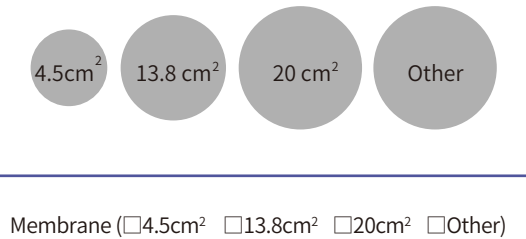
## Step 3

- Choose the tube size/length
- Choose the tube material



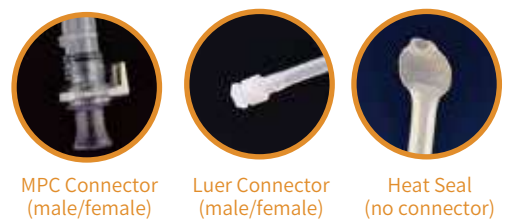
## Step 4

- Choose the membrane area Air filter (PVDF membrane)



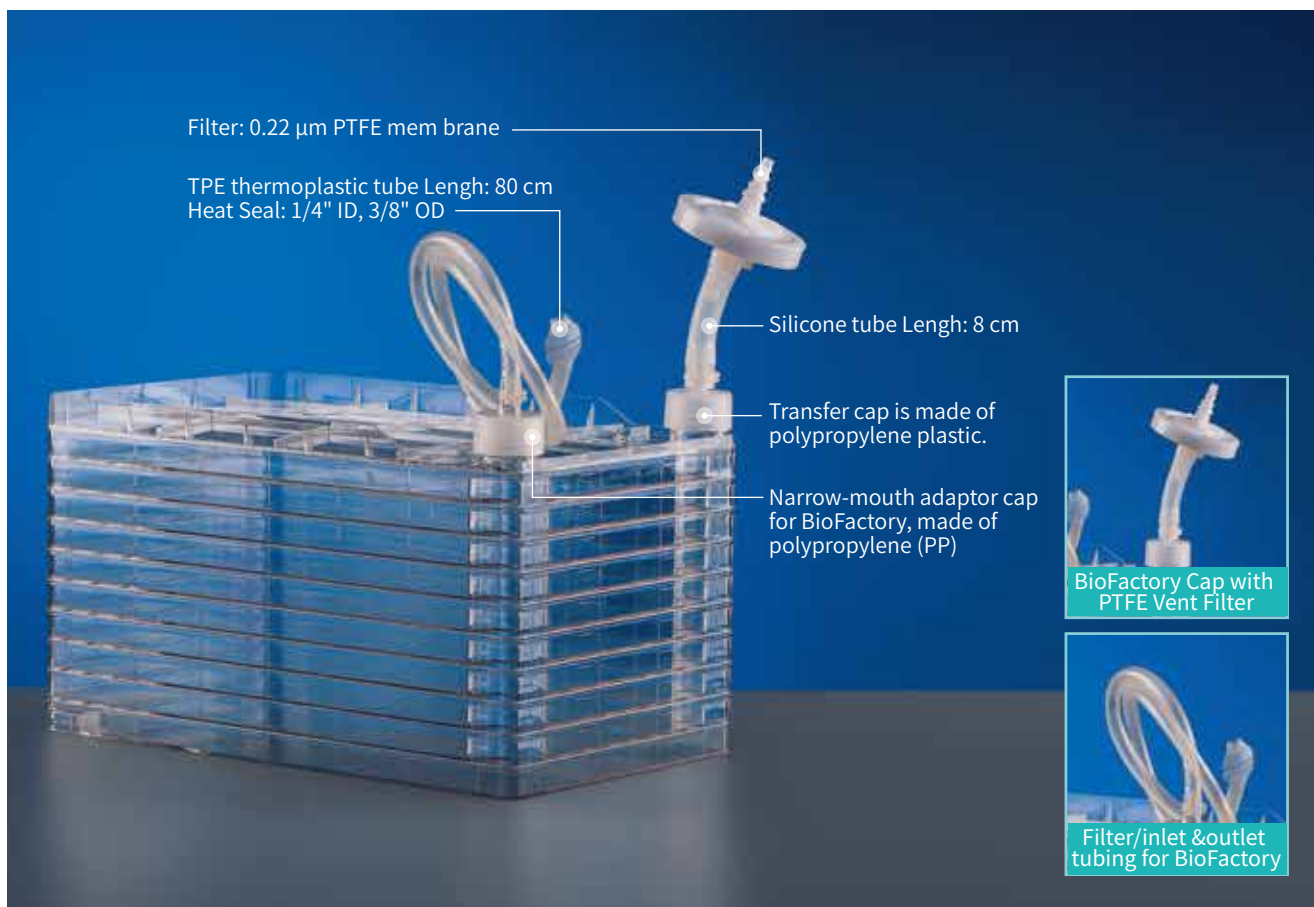
## Step 5

- Choose the connector type
- Luer connector (male and female)
  - MPC connector (male and female)
  - Heat sealing (no connector)



Inform our sales or product engineer of your choice if you have completed your selection.

# Biofactory Closed System Solution



- Closed liquid transfer, avoiding open operation and reducing the risk of pollution in the process of liquid transfer.
- The liquid inlet tube can be aseptically welded under a normal environment.
- High-quality materials and smooth inner wall of the tube, ensuring an excellent transmission performance.
- Electron beam sterilization, SAL = 10<sup>-6</sup>.
- No endotoxin and no components of animal origin.



Accessory information can be found on page 40.

Layer	Cultivation Area (cm <sup>2</sup> )	External Liquid Transfer Tube			0.2µm Filter Membrane area	/Case	Cat.No.
		Dia.	Length	Connector			
5	3160	<p>TPE Tube: 1/4" ID, 3/8" OD</p> <p>φ 9.53mm</p> <p>φ 6.4mm</p>	80 cm	Heat Seal	20 cm <sup>2</sup>	2	C71754-BZD080A
10	6320						C71554-BZD080A

# Accessories

## BioFactory™ Accessories



Description	/Pack	/Case	Cat.No.
Wide Mouth Seal cap for BioFactory	1	10	740001
Wide Mouth Vent cap for BioFactory	1	10	740011
Narrow Mouth Seal cap for BioFactory	1	10	740101
Narrow Mouth Vent cap for BioFactory	1	10	740111



Description	Size(mm)		/Pack	/Case	Application	Cat.No.
	ID	OD				
Adaptor Cap	11.8	14.3	1	10	Wide Mouth to Narrow Mouth	740201
Adaptor Cap	7.3	14.3	1	10	Wide Mouth to 3/8 Inches(9.5 mm) Hose	740302
Adaptor Cap	5.9	8.8	1	10	Wide Mouth to 1/4 Inches(6.4 mm) Hose	740402



Description	/Pack	/Case	Cat.No.
Filter Adapter Cap	1	20	740913
Solid Over Cap	1	20	740901
Cap with Filter Adapter Cap	1	10	740213



### C71254-ZMC000B

#### Filter/inlet & outlet tubing for BioFactory

BioFactory Cap with PTFE Vent Filter (0.22 µm Φ42mm), without BioFactory, Sterile  
1 /Pack, 4 /Case



### C71255-ZMD000B

#### Filter/inlet & outlet tubing for BioFactory

BioFactory Cap with PTFE Vent Filter (0.22 µm Φ50mm), without BioFactory  
1 /Pack, 4 /Case

### C71254-FBA080B

#### Filter/inlet & outlet tubing for BioFactory

BioFactory Cap with Silicon Tube (80cm 1/4" ID3/8" OD), Male CPC Connector with Female Sealing Cap, without BioFactory, Sterile  
1 /Pack, 4 /Case

### C71255-HCA080B

#### Filter/inlet & outlet tubing for BioFactory

BioFactory Cap with Silicon Tube (80cm 3/8" ID5/8" OD), Male CPC Connector with Female Sealing Cap, without BioFactory, Sterile  
1 /Pack, 4 /Case



#### 741001 Adaptor Connector

Adaptor Connector to 3/8 Inches (9.5 mm)Hose  
 1 pcs / pack  
 Compatible with transfer cap and narrow mouth  
 One end is designed to fit the narrow mouth of BioFactory and the other end connects to a hose with a 3/8" ID



#### C71200-ZME000B

Hose Clamp\*1 (743001) Intended for hoses with an OD ranging from 12mm to 18mm.  
 Vent Filter \*1 (742001) Hydrophobic membrane: PTFE, Pore size: 0.2 μm  
 Membrane area: 20 cm<sup>2</sup>.  
 Silicone Ring\*2  
 SPT-50 Hose\*1 (15cm) (744001) ID: 3/8" (9.5mm) , OD: 5/8" (15.9mm)



#### C71275-ZME000B

Hose Clamp\*1 (743001) Intended for hoses with an OD ranging from 12mm to 18mm.  
 Vent Filter \*1 (742001) Hydrophobic membrane: PTFE, Pore size: 0.2 μm  
 Membrane area: 20 cm<sup>2</sup>.  
 2 different Adaptor Caps\*1 (741001) PTFE Material , ID:7.3mm  
 Serrated OD: 10 mm  
 Silicone Ring\*2  
 SPT-50 Hose\*1 (15cm) (744001) ID: 3/8" (9.5mm) , OD: 5/8" (15.9mm)



#### 745001 BioFactory AccessoryLite Package

Adaptor Cap\*1 (740201) Wide mouth to narrow mouth  
 Adaptor Cap\*1 (740302) ID 3/8"  
 2 different Adaptor Caps\*1 (741001)  
 Vent Filter \*1 (742001) Hydrophobic membrane: PTFE, Pore size: 0.2 μm  
 Membrane area: 20 cm<sup>2</sup>.  
 Hose Clamp\*1 (743001) Intended for hoses with an OD ranging from 12mm to 18mm.  
 SPT-50 Hose\*1 (15cm) (744001) ID: 3/8" (9.5mm) , OD: 5/8" (15.9mm)  
 1 pcs / pack



#### 751101 BioFactory Holder, Individually Wrapped

Material: aluminum alloy and silicone  
 1 pcs / pack, 5 pcs / case  
 Function: to tilt for easy transfer  
 Features:  
 The double "N" latch makes the width adjustable; the anti-slip silicone mat attached avoids abrasion and secures the stability.  
 Multiple adjustable positions for desired height

#### Notes:

- ① Position 2 or 3 is recommended(Recommended working volume for each layer of BioFactory:150ml to 200ml)
- ② It is necessary to tilt the BioFactory forward manually to ensure all the liquid flows out when there is a small amount of liquid.

# Square Bottle & Closed System Solution



Square Storage Bottle is a reagent storage container commonly utilized in laboratories. NEST offers Square Storage Bottles in PET, PETG, and PC materials. Additionally, a fresh range of PET bottles featuring a classic square shoulder design is recently launched, offering a wider variety of specifications and liquid storage solutions.

The bottle body has high transparency, high mechanical strength, and strong impact resistance, making it convenient for observation and transportation.

- PET material specifications: 60 mL /125mL/250mL/500mL/1L
- PETG material specifications: 30mL/60mL/125mL/250mL/500mL/1L/2L
- PC material specifications: 30mL / 60mL/125mL/250mL/500mL/1L/2 L/5L
- PET material specification with square shoulder: 500 mL

[Square Bottle & Closed System Solution: Customizable. More information can be found on page 44.](#)

# Square Bottle



## ● Structural Features

- Cap: the mold for cap is specifically designed. The cap is formed through one-shot moulding without inner gasket, enabling it closer attached to the body for better sealing performance.
- Bottleneck: smooth buckle design reduces residue inside.
- Body: it has high transparency, high mechanical strength, strong impact resistance, and is convenient for observation and transportation. The smooth inner surface minimizes the residue on the inner wall. And the thickness of the bottle wall is uniform for better anti-crack and anti-puncture capacity.
- Bottom: the bottom has curved inner corners that are easy to clean, and the bottom is injection molded with raw material information



## Double-layer Packaging

- Enhanced protection: double-layer packaging offers additional protection for safety in case the bottles were damaged by external forces such as extrusion, vibration, and collision during transportation
- Improved durability: double-layer packaging ensures durability and a longer service life.
- Compliance: in line with material entry requirements of the GMP purification workshop of the biological laboratory.

## Double-layer Large Packaging

- Economical and cost-effective: reducing costs of packaging and labor
- Improve efficiency: reducing the redundant loading and unloading operations for industrial customers when filling liquid, spurring the efficiency and reducing the labor intensity.

## Tray-packed

- The tray-packed bottles features an one-piece plastic sealing coating by packaging equipment, which ensures better protection and less collision between and prevents contamination and loss
- High space utilization by stacking

## ● Product information

Volume (mL)	Double-layer Packaging			Double-layer Large Packaging		Tray-packed			
	Pack	PET	PETG	PC	Pack	PET	Pack	PETG	PC
30	5pcs/bag, 40pks/cs	/	354111	354314	/	/	40 pcs/tray 280 pcs/cs	354113	354313
60	6pcs/bag, 48pks/cs	354611	354511	354714	40pcs/bag, 200pks/cs	354614	40 pcs/tray 200 pcs/cs	354513	354713
125	6pcs/bag, 48pks/cs	353611	353511	353314	24pcs/bag, 192pks/cs	353614	24 pcs/tray 96 pcs/cs	353513	353313
250	6pcs/bag, 48pks/cs	352611	352511	352314	30pcs/bag, 120pks/cs	352614	30 pcs/tray 60 pcs/cs	352513	352313
500	8pcs/bag, 24pks/cs	333001	333511	333314	20pcs/bag, 80pks/cs	333004	20 pcs/tray 40 pcs/cs	333513	333313
500 (Square shoulder design)	8pcs/bag, 24pks/cs	333621	/	/	20pcs/bag, 80pks/cs	333624	/	/	/
1000	4pcs/bag, 12pks/cs	334001	334511	334314	12pcs/bag, 48pks/cs	334004	12 pcs/tray 24 pcs/cs	334513	334313
2000	6pcs/bag, 12pks/cs	/	355114	355314	/	/	/	/	/
5000	1pcs/bag, 6pks/cs	/	/	355714	/	/	/	/	/




# Square Storage Bottle Closed System Solution

NEST has introduced a new liquid transfer system that provides a sterile transfer solution for pharmaceutical, biotechnology, and laboratory applications. The interface uses a standard Luer head for easy operation, and the TPE material meets the requirements of industrial pharmaceutical companies and has been tested for extractables according to the full set of BPOG guidelines by a certified third-party.

To customize a NEST Square Storage Bottle Closed System Solution that meets your needs, follow these steps:

### Step1

- Choose the bottle capacity
- Choose the bottle material




250mL      500mL      1000mL

Bottle Material (PETG PET PC)

Notes: you may order the transfer cap only

### Step2

- Choose the cap type




Two-port cap      Three-port cap

Notes: Compatible with diverse connectors

### Step3


- Choose the tube size/length
- Choose the tube material

TPE 1/4" ID, 3/8" OD



$\phi 9.53\text{mm}$   
 $\phi 6.4\text{mm}$

TPE 1/8" ID, 1/4" OD

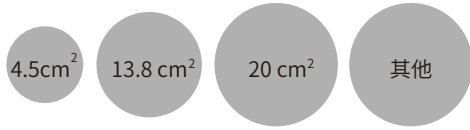


$\phi 6.4\text{mm}$   
 $\phi 3.2\text{mm}$

**Inlet and outlet liquid tubing**  
( vulcanized silicone tube  P welded tube)

### Step4

- Choose the bottle capacity
- Choose the bottle material



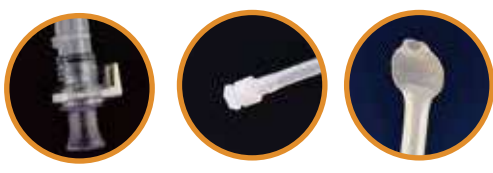
4.5cm<sup>2</sup>    13.8cm<sup>2</sup>    20cm<sup>2</sup>    其他

Membrane (4.5cm<sup>2</sup> 13.8cm<sup>2</sup> 20cm<sup>2</sup> Other)

### Step5

- Choose the connector type

- ① Luer connector (male and female)
- ② MPC connector (male and female)
- ③ Heat sealing (no connector)



MPC Connector (male/female)    Luer Connector (male/female)    Heat Seal (no connector)

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# Square Storage Bottle Closed System Solution



Closed System Solution (Bi-Directional Transfer Cap)



Bi-Directional Transfer Cap



Closed System Solution (3-Port Transfer Cap)



3-Port Transfer Cap

## Product Description

The newly launched NEST Closed System collection provides an aseptic liquid infusion solution for pharmaceuticals, biotechnology industry and laboratories. A standard Luer head is used in the joint of the system, enabling the operation more convenient. Also, the TPE material of tubes is in line with the requirements for industrial pharmaceutical enterprises, and is validated by a certified third party in accordance with BPOG Guide for Evaluating Extractables and Leachables.

## Application

- Various tubing specifications
- The injection-molded transfer cap is highly compatible with other major brands.
- The bottle body is made of PETG, which has high transparency, mechanical strength, low-temperature resistance, and UV resistance, making it suitable for observation and transportation.
- The unique external thick collar design of the bottle neck secures a sealed environment for experiments.
- Non-cytotoxic, non-pyrogenic, no animal-derived components.

## Square Storage Bottle Closed System Solution

Compatibility	Transfer Cap type	Tubing			Connector	0.2µm Filter Membrane area	/Case	Cat. NO.	
		Material	Length	Dia.				Closed System	Transfer Cap
250 mL	Bi-Directional Transfer Cap	TPE hose	60cm	TPE 1/4"ID, 3/8"OD	Female Luer	4.5 cm <sup>2</sup>	10	C50921-BHB060A	C50921-BHB060B
				TPE 1/4"ID, 3/8"OD	MPC Male	4.5 cm <sup>2</sup>	10	C50921-BBB060A	C50921-BBB060B
				TPE 1/8" ID, 1/4" OD	Female Luer	4.5 cm <sup>2</sup>	10	C50922-AGB060A	C50922-AGB060B
				TPE 1/8" ID, 1/4" OD	MPC Male	4.5 cm <sup>2</sup>	10	C50922-AAB060A	C50922-AAB060B
500 mL	Bi-Directional Transfer Cap			TPE 1/4"ID, 3/8"OD	Female Luer	4.5 cm <sup>2</sup>	10	C51021-BHB060A	C51021-BHB060B
				TPE 1/4"ID, 3/8"OD	MPC Male	4.5 cm <sup>2</sup>	10	C51021-BBB060A	C51021-BBB060B
				TPE 1/8" ID, 1/4" OD	Female Luer	4.5 cm <sup>2</sup>	10	C51022-AGB060A	C51022-AGB060B
				TPE 1/8" ID, 1/4" OD	MPC Male	4.5 cm <sup>2</sup>	10	C51022-AAB060A	C51022-AAB060B
1000 mL	Bi-Directional Transfer Cap	TPE 1/4"ID, 3/8"OD	Female Luer	4.5 cm <sup>2</sup>	10	C51121-BHB060A	C51121-BHB060B		
		TPE 1/4"ID, 3/8"OD	MPC Male	4.5 cm <sup>2</sup>	10	C51121-BBB060A	C51121-BBB060B		
	3-Port Transfer Cap	TPE 1/8" ID, 1/4" OD	Female Luer	4.5 cm <sup>2</sup>	10	C51122-AGB060A	C51122-AGB060B		
		TPE 1/8" ID, 1/4" OD	MPC Male	4.5 cm <sup>2</sup>	10	C51122-AAB060A	C51122-AAB060B		
2000 mL	Bi-Directional Transfer Cap	TPE 1/8" ID, 1/4" OD	Female Luer lock connector with Luer plug	4.5 cm <sup>2</sup>	10	C511AB-AGB060A	C511AB-AGB060B		
		TPE 1/4"ID, 3/8"OD	Female Luer	13.8 cm <sup>2</sup>	4	C50123-BHC060A	C50123-BHC060B		
	3-Port Transfer Cap	TPE 1/4"ID, 3/8"OD	MPC Male	13.8 cm <sup>2</sup>	4	C50123-BBC060A	C50123-BBC060B		
		TPE 1/4"ID, 3/8"OD	Female Luer	13.8 cm <sup>2</sup>	4 Double-layer	C501AA-BHC060A	C501AA-BHC060B		
5000 mL	Bi-Directional Transfer Cap	Welding hose	TPE 1/4"ID, 3/8"OD	Heat-seal	13.8 cm <sup>2</sup>	2	C50423-BZC060A	C50423-BZC060B	
			TPE 1/4"ID, 3/8"OD	Heat-seal	13.8 cm <sup>2</sup>	2 Double-layer	C504AA-BZC060A	C504AA-BZC060B	

# Accessories



## 744001 SPT-50 Hose

Inner Dia # 3/8 Inches (9.5 mm)  
Outer Dia # 5/8 Inches (15.9 mm)  
50 Inches/ 15 meters  
1 pcs / pack  
Application: serves as the connection point between the tubings for infusion and drainage



## 746001 C-Flex Welding Hose

Inner Dia# 3/8 Inches (9.5 mm)  
Outer Dia# 5/8 Inches (15.9 mm)  
50 Inches/ 15 meters  
1 pcs / pack  
Application: serves as the connection point between the tubings for infusion and drainage; heat weldable



747011 747001

## 747001 CPC Connector

Material: CPC & PC  
Packaging: individual sterile packaging, 5prs/cs  
(Inner Dia #3/8) for Hose to Hose Connecting  
1 pcs / pack, 5 pcs / case  
**747011 CPC Sealing Plug**  
10 pcs / case



## 743001 Hose Clamp

Hose clamp for 12-18 mm diameter hose  
10 pcs / pack



## 751001 Y Shape Connector

Material: PP  
Y Shape CPC Connector for Inner Dia #3/8 Hose  
1 pcs / pack, 5 pcs / case



## 749001 T Shape Connector

Material: PP  
T Shape CPC Connector for Inner Dia #3/8 Hose  
1 pcs / pack, 5 pcs / case



## 742011 0.22µm Vent Filter

Membrane aperture: 0.22µm Membrane area: 13.8cm<sup>2</sup>  
1 pcs / pack, 5 pcs / case

## 742001 0.22µm Vent Filter

Hydrophobic membrane: PTFE Filter membrane aperture: 0.2µm Membrane area: 20 cm<sup>2</sup>  
Packaging: individual sterile packaging, 1 pcs / pack, 5 pcs / case  
Application: Hose fitting

# Carboy



## • Product Description

The barrel, the tap and the screw cap of the carboy are made from polypropylene (PP) and the gasket is made from thermoplastic elastomer (TPE), all of which are autoclavable for sterilization before use to prevent the growth of bacteria and other microorganisms. It is mainly used for storing and dispensing solutions, culture medium, also ideal for sterile water. The barrel is moulded with a 1-gallon or 5 liter scale markings for easy identification of liquid levels during operation. The sealing performance is secured by the TPE gasket and the thread on the finish, which is well matched to the cap.

## • Application

- Storage container for raw pharmaceutical materials or culture media that require autoclaving sterilization.
- Storage container for bulk raw pharmaceutical materials or other substances.
- Storage container for sterile water.

Volume (mL)	With Handle	Sterilization	/Case	With Tap	Without Tap
10	YES	NO	4	789001	789011
20	YES	NO	3	789101	789111



# Biobank System

# Cryogenic Tubes

Cryogenic tubes, also known as freezing tubes, are commonly used for low-temperature preservation. They are a crucial laboratory consumable in the biological, pharmaceutical, food, and other industries. Made of medical-grade polypropylene (PP), cryogenic tubes can withstand low temperatures down to minus 196°C in a liquid nitrogen gas phase environment. They are available in three types: cryogenic tubes (without 2D barcode), 2D barcode cryogenic tubes and 3-code cryogenic tubes.



## ✓ High Quality Raw Materials:

The products are made of the highest quality resin that complies with pharmaceutical, laboratory, and food-grade standards and USP Class 6 standards. The concentration of extractable trace elements in the raw materials is much lower than that of glass.



## ✓ High-Precision Technology:

Equipped with high-precision injection-stretch-blow molding equipment and automated equipment for manufacturing.

## ✓ Multiple Specifications:

Multiple materials and specifications are available, including PET, PETG, HDPE that are resistant to chemical corrosion, as well as PP and PC products that are autoclavable. The packaging mode of square reagent bottles can be customized to meet any needs.



## ✓ High Quality Standards:

Certified by ISO13485 and ISO 9001, with batch stability.

## ✓ Economical and Environmentally Friendly:

Some products are reusable and extremely durable, reducing the waste of disposable containers and preventing the leakage of harmful substances, making them environmentally friendly.

## Complete stability and safety verification reports are available

Manufacturing certification		Production process, quality standards, storage, transportation, and usage verification		Inspection and testing from professional third-party authoritative agencies		
Quality Certification	ISO 9001, ISO 13485	Process testing	Injection molding machine and mold performance verification	Biological testing: GB/T 16886.5-2017 GB/T 16886.4-2003 GB/T 16886.10-2017 GB/T 16886.11-2021	In vitro cytotoxicity test	
	FDA, CE		Drop and transportation verification		Skin sensitization test	
	Radiation: ISO 13485, ISO 11137	Performance testing	Sealing test		Skin irritation test	
Environmental testing for Sterility testing laboratory	ISO 7 requirements		Pressure resistance test		Acute systemic toxicity test	
	GB 50591-2010		Freezing detection test		Hemolysis test	
	GB/T 16294-2010		Endotoxin detection test		Material heavy metal content Dissolution testing	Lead, tin, cadmium, chromium, iron, zinc
Environmental testing for Class 100,000 clean room	ISO 8 requirements		Nucleic acid enzymetest	Physical and chemical testing: GB/T 14233.1-2008		
	GB 50073-2013	Sterility and particle assurance	Radiation process verification		Reducing substances	
YY0033-2000	Sterile packaging verification		Acidity and alkalinity			
Purified water system verification	GMP regulations		Product sterility testing		Evaporative residue	
Raw material verification	Physical and chemical testing	Insoluble particle testing	Ultraviolet absorbance		Appearance determination test	
	Dissolution testing		Ignition residue determination test			



# Cryogenic Tubes



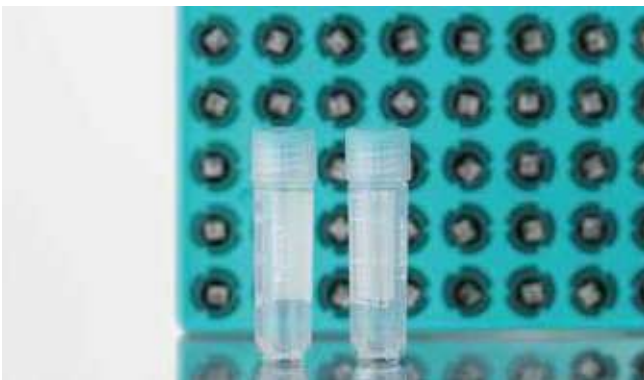
## • Volume optimization

Volume selection based on quantity and type of sample.



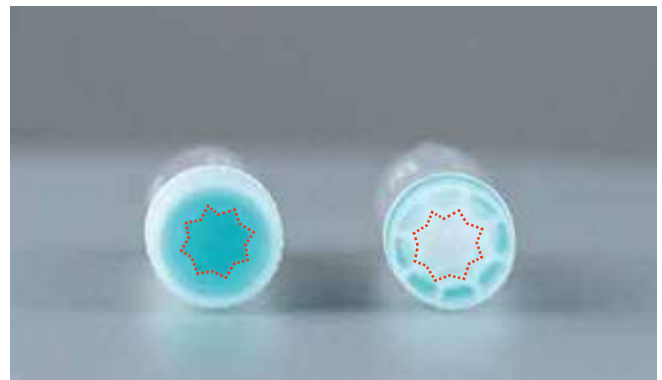
## • Improved sealing effect

Soft rubber sealing surface design, passing vacuum test, ensuring sample safety.



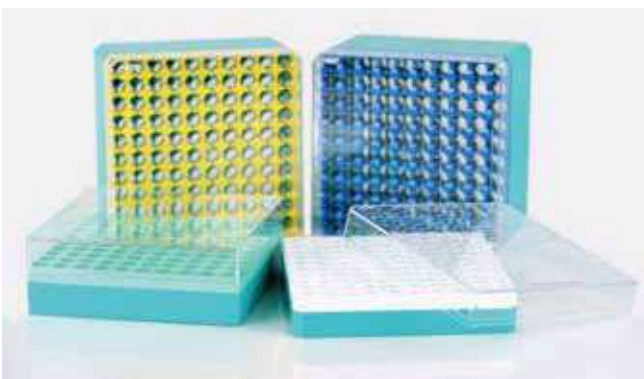
## • Material upgrade

New polymer material, improved cryogenic and anti-aging performance, high-temperature and high-pressure sterilization



## • Suitable for automation

"Eight-petal plum" design, reduces manual process, contamination risk, and labor cost



## • More specifications

Filling gap for 4 mL, 5 mL, and 10x10 box series, meeting various research needs.



## • Multi-color inserts

Color-coded cap inserts for easy sample identification.

# Cryogenic Tubes



Cap Type	External thread cap				Internal thread cap			
Capacity (mL)	1.5	2.0	4.0	5.0	1.5	1.8	4.0	5.0
Overall height(mm)	40.7	45.5	76.3	93.3	40.7	45.5	76.3	93.3
Size parameters (mm)	10				8.3			
Outer diameter $\Phi$ (mm)	12.85				12.10			
Temperature Range	-196 to 121°C				-196 to 121°C			

**Note:**

1. The thread of the external thread cap is not directly exposed to the outside, which minimizes the possibility of cross-contamination;
2. The internal thread cap has the same diameter as the cryogenic tube, which has an advantage in intensive storage applications;
3. The maximum volume of the external thread cap is closer to the nominal volume than the internal thread cap. Since the content volume usually increases during liquid freezing, the recommended usage volume of both external and internal thread cap cryogenic tubes is 80% of the maximum volume;
4. Both storage methods are aimed at ensuring the safety of cryogenic storage and can be freely selected according to the actual user needs.





# Cryogenic Tubes

## ● Cryogenic Tubes (without 2D barcode) – Bag Package

Cat. No.	Capacity (mL)	Cap Type	Quantity /Bag	Bags /Box	Box /Case
618901	1.0	External thread	96	/	10
606901	1.5	External thread	50	10	4
607401	2.0	External thread	50	10	4
608401	4.0	External thread	50	5	4
609401	5.0	External thread	50	5	4
606801	1.5	Internal thread	50	10	4
607301	1.8	Internal thread	50	10	4
608301	4.0	Internal thread	50	5	4
609301	5.0	Internal thread	50	5	4



\*The dimensions of the cryogenic box are detailed on page 09

## ● Cryogenic Tubes (without 2D barcode) - Rack Package

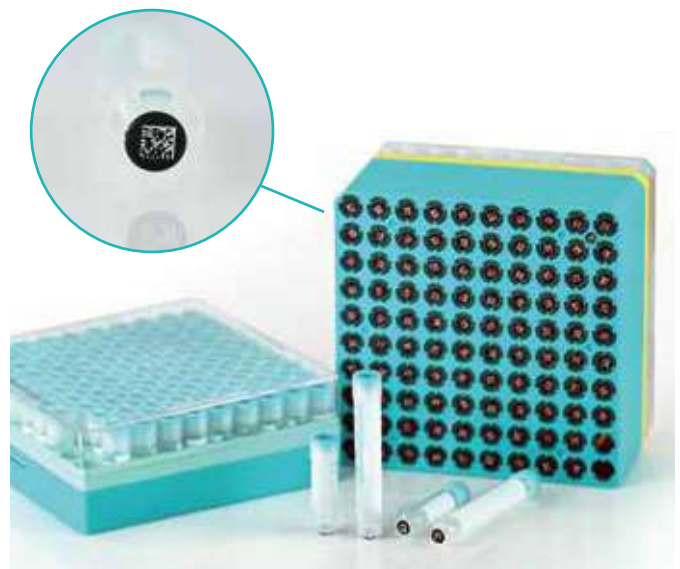
Cat. No.	Capacity (mL)	Cap Type	Pack-aging	Quantity /Rack	Racks /Case
618906	1.0	External thread	8*12	96	10
606902	1.5	External thread	10*10	100	14
607402	2.0	External thread	10*10	100	12
608402	4.0	External thread	10*10	100	8
609402	5.0	External thread	10*10	100	6
606802	1.5	Internal thread	10*10	100	14
607302	1.8	Internal thread	10*10	100	12
608302	4.0	Internal thread	10*10	100	8
609302	5.0	Internal thread	10*10	100	6



\*The dimensions of the cryogenic box are detailed on page 09

## ● 2D Barcode Cryogenic Tubes - Rack Package

Cat.NO.	Capacity (mL)	Cap Type	Pack-aging	Quantity /Rack	Racks /Case
606952	1.5	External thread	10*10	100	14
607452	2.0	External thread	10*10	100	12
608452	4.0	External thread	10*10	100	8
609452	5.0	External thread	10*10	100	6
606852	1.5	Internal thread	10*10	100	14
607352	1.8	Internal thread	10*10	100	12
608352	4.0	Internal thread	10*10	100	8
609352	5.0	Internal thread	10*10	100	6
612891	2.0	External thread	6*8	48	10
614591	4.0	External thread	6*8	48	10



\*The dimensions of the cryogenic box are detailed on page 09

# SBS Format Cryogenic Tubes

## Sealing design

- New sealing structure design, optimized sealing performance, better liquid nitrogen sealing, smoother feel.

## High-quality raw materials

- Made of medical-grade high-purity polypropylene, ultra-high rigidity toughening material, excellent weather resistance, compliant with ISO10993 standards.
- No DNase, no RNase, no endotoxin.

## Encoding rules

- Three-code-in-1 composed of DATAMATRIX code, barcode and readable code, laser-etched on the bottom and side of the tube.
- Codes are high contrast for easy reading, ratch-resistant, not easy to fall off, resistant to DMSO and other organic solvents.
- High uniqueness of laser-etched international standard DATAMATRIX codes.

At the same time, NEST can customize exclusive encodings for you. If you have any requirements, please contact us. For more information, please visit our official website at [www.cell-nest.com](http://www.cell-nest.com).

## Quality assurance

- Produced in GMP 100,000-level clean room certified according to ISO 9001, ISO 13485 quality system certification.
- Strict production process, well-developed management system to ensure batch quality stability.

## Sterility assurance

- E-beam sterilization, SAL=10<sup>-6</sup>.

## Box features

- Cryogenic box identifier code: We have a unique QR code at the bottom of the rack and a one-dimensional barcode laser engraved on the side of the rack. When reading the cryogenic tube information, the box information is also read to automatically locate the rack and achieve a safer sample traceability.
- Box lid buckle: The cryogenic box is designed with a buckle that can tightly fit with the box to prevent scattering when dropped. The buckle switch is also convenient and does not fail even after being frozen in liquid nitrogen, ensuring sample safety.



External thread cap

Internal thread cap



# SBS Format Cryogenic Tubes



Cap Type	External thread cap							Internal thread cap		External thread cap		
Capacity (mL)	0.5	0.75	1.0	2.0	4.0	6.0	8.0	0.5	1.0	4.0	1.9	
Overall height (mm)	27.6	37.3	45.6	45.5	76.3	57.5	71.7	33.5	51.4	76.76	42.96	
Size parameters (mm)	5.3			10			10.3		6.55			
Outer diameter $\Phi$ (mm)	8.85			12.85			17.8		8.7		12.8	
Temperature Range	-196 to 121°C							-196 to 121°C				

- Note:
1. The thread of the external thread cap is not directly exposed to the outside, which minimizes the possibility of cross-contamination;
  2. The internal thread cap has the same diameter as the cryogenic tube, which has an advantage in intensive storage applications;
  3. The maximum volume of the external thread cap is closer to the nominal volume than the internal thread cap. Since the content volume usually increases during liquid freezing, the recommended usage volume of both external and internal thread cap cryogenic tubes is 80% of the maximum volume;
  4. Both storage methods are aimed at ensuring the safety of cryogenic storage and can be freely selected according to the actual user needs.



Bag Package



Rack Package



Yellow Cap

## ● SBS 3-Code Cryogenic Tubes - Bag Package

Product Number	Capacity (mL)	Cap Type	Quantity /Bag	Bags /Case
612541	0.5	External thread	96	10
612641	0.75	External thread	96	10
612741	1	External thread	96	10
612841	2	External thread	48	10
614541	4	External thread	48	10
614641	6	External thread	24	10
614741	8	External thread	24	10
612521	0.5	Internal thread	96	10
612721	1	Internal thread	96	10
<b>Yellow Cap</b> 612041	1.9	External thread	48	10
<b>Yellow Cap</b> 614041	4.0	External thread	48	10

## ● SBS 3-Code Cryogenic Tube - Rack Package

Product Number	Capacity (mL)	Cap Type	Quantity /Rack	Racks /Case
612551	0.5	External thread	96	10
612651	0.75	External thread	96	10
612751	1	External thread	96	10
612851	2	External thread	48	10
614551	4	External thread	48	10
614651	6	External thread	24	10
614751	8	External thread	24	10
612531	0.5	Internal thread	96	10
612731	1	Internal thread	96	10
<b>Yellow Cap</b> 612051	1.9	External thread	48	10
<b>Yellow Cap</b> 614051	4.0	External thread	48	10

# Cap Inserts, Cryogenic Box

## ● Cap Inserts



Product Number (NEW)	Color	Sterilization	Packaging	
			Quantity/Bag	Bags/Case
611201	White	No	100	10
611202	Red	No	100	10
611203	Yellow	No	100	10
611204	Blue	No	100	10
611205	Green	No	100	10
611206	Purple	No	100	10

\*The new Cryogenic Vial Labels are exclusively designed to work with NEST's latest collection of Cryogenic Vials.

## ● Cryogenic Box



3-Code-in-1 Cryogenic Vial

- PC transparent cover, PC-ABS high-strength composite material base.
- Temperature range from -196°C to 70°C.
- Alphanumeric grid for easy sample labeling and identification.
- Each box contains drainage holes and vents, which accelerate the discharge of cold air and reduce condensation.
- Packaging with independent product and batch identification for quality traceability.

## ● Cryogenic Box

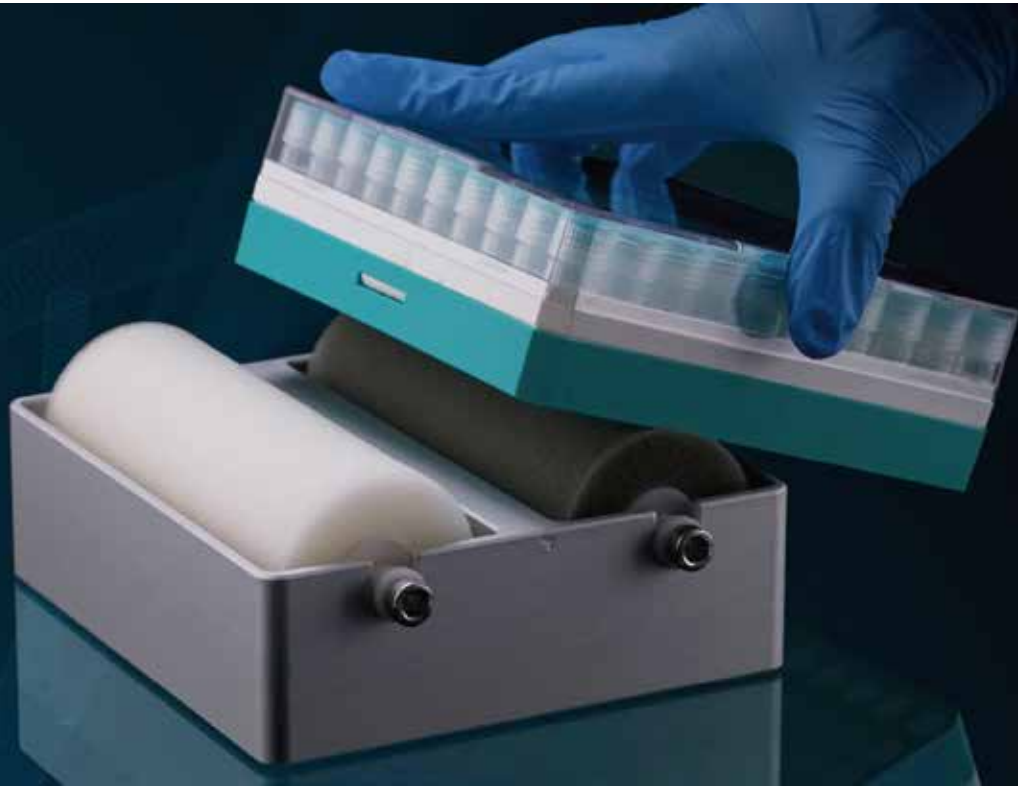
Product Number	Compatible Cryogenic Tube Capacity (mL)	Format (Holes)	Size (L x W x H)	Color	Sterilization	Quantity/Box
616651	1.5	10*10	133.6×133.6×44	White	No	14
616051	2.0 external thread/1.8 internal thread	10*10	133.6×133.6×48.8	Green	No	12
616151	4.0	10*10	133.6×133.6×79.5	Yellow	No	8
616551	5.0	10*10	133.6×133.6×96.5	Blue	No	6

## ● 3-Code-in-1 Cryogenic Vial

Product Number	Compatible Cryogenic Tube Capacity (mL)	Format (Holes)	Size (L x W x H)	Sterilization	Quantity/Box
616041	2.0	8*6	127×85.3×48.3	No	10
616841	6.0	4*6	127×85.3×60.4	No	10

\*The new Cryogenic Box are exclusively designed to work with NEST's latest collection of Cryogenic Vials.

# Defrosting Device



## ● Product introduction

The NEST defrosting device is a tool used to quickly remove frost from the bottom of boxed cryogenic vials. When cryogenic vials are stored in liquid nitrogen vapor phase or  $-80^{\circ}\text{C}$  freezer, ice can form at the bottom of the vials. However, to ensure the rapid reading of cryogenic vial decoding systems, it is necessary to clearly identify the 2D code at the bottom of the vial. Therefore, rapid defrosting has become a necessary step.

## ● Features

- Wide compatibility: can be used for 24, 48, 96, and 384 formats of different brands of cryogenic boxes.
- Sample integrity: achieves bottom defrosting without heating, and the sample can still maintain a frozen state.
- Practicality: sponge roller is easy to assemble. The first roll requires the addition of a special reagent, and the second roll dries it, making it easy to use.

## ● Workflow



Add ethanol or isopropanol to infiltrate the white sponge.

Repeat the process multiple times until the frost is completely removed.

Product name	Defrosting device	Consumables for the defrosting device	Sponge
Product number	106001	Product number	106003/106004
Base material	Aluminum alloy	Material	High-quality sponge
Defrosting part	High-quality sponge	Color	White/Brown
Supporting reagent	Ethanol	Packaging method	1 piece/pack

# Vertical Freezer Racks



Product number	Size (mm)	Maximum number of boxes	Size of boxes (mm)	Pcs/Case
200301	454H x 143D x 140W	8	133x133x51	6
200302	677H x 143D x 140W	12	133x133x51	6
200303	724H x 143D x 140W	13	133x133x51	6
200304	789H x 143D x 140W	14	133x133x51	6
200305	845H x 143D x 140W	15	133x133x51	6



Product number	Size (mm)	Maximum number of boxes	Size of boxes (mm)	Pcs/Case
200321	492H x 143D x 140W	6	133x133x75	6
200322	653H x 143D x 140W	8	133x133x75	6
200323	724H x 143D x 140W	9	133x133x75	6
200324	814H x 143D x 140W	10	133x133x75	6



Product number	Size (mm)	Maximum number of boxes	Size of boxes (mm)	Pcs/Case
200341	413H x 143D x 140W	4	133x133x98	6
200342	616H x 143D x 140W	6	133x133x98	6
200343	717H x 143D x 140W	7	133x133x98	6



# Sample Freezing Recommendations

## ! Safety Risks and Recommendations:

NEST cryogenic vials are made of polypropylene (PP), which has good chemical resistance and low-temperature performance. The temperature range for using cryogenic vials is -196° C to 121° C. They can be sterilized at high temperature and high pressure or placed in liquid nitrogen vapor.

However, it is not recommended to store them in liquid nitrogen due to the risk of cross-contamination. Liquid nitrogen has very low surface tension, which can cause it to flow into tightly capped cryogenic vials. After removing a cryogenic vial, residual liquid nitrogen may vaporize, creating explosion and injury risks.

**If the sample has already been stored in the liquid phase of liquid nitrogen, the following measures are recommended to reduce the risks:**

- Place the cryogenic box and cryogenic vial in liquid nitrogen vapor phase for 24 hours before removing from the liquid nitrogen tank to allow the liquid nitrogen to evaporate.
- When handling, be sure to wear protective goggles and gloves to prevent cryogenic vial rupture.
- Add a cryogenic vial sleeve before freezing the sample.

**Please note that correct use and storage of cryogenic vials are critical steps to ensure the quality and safety of biological samples. Therefore, please follow the correct operating procedures and safety measures when using and storing cryogenic vials to ensure the reliability of biological sample quality and research results.**

## ● Preserving Sample Activity



- When handling low-temperature samples, it plays the role of a portable refrigerator, quickly cooling and temporarily stabilizing the temperature, maximizing the preservation of cell, nucleic acid, protein, and other sample activities.
- Suitable for tissue culture incubators, biosafety cabinets, and other limited space situations.



- Used for freezing various cell types, including stem cells, primary cells, cell lines, and yeast, etc. "Slow freezing" to protect cell activity; just place in a -80°C freezer to make the sample cool down 1°C per minute.
- Zero addition and zero emissions, permanent use, and responds to the call of environmental protection.

## Ice Free Cool Box

Product number	Size (mm)	Weight (g)	Application
200103	152x170x123	1300	Includes 200902 ice core and 2mL module 200904
200901	152x170x123	140	Without ice core and module, multiple cooling sources and modules can be selected.

## Ice Core

Product number	Product name	Temperature range	Freezer temperature	Freezing time	Size (mm)
200902	Cold core	0.5°C~4°C	-20°C	4h+	105 x 100 x 26
		0.5°C~4°C	-80°C	2h+	105 x 100 x 26
200903	Freezing core	-18°C~-4°C	-20°C	6h+	105 x 100 x 26
		-18°C~-4°C	-80°C	3h+	105 x 100 x 26

## Module

Product number	Product name	Size (mm)	Application
200904	2 mL module	119*101*38	30 holes for 2 mL cryogenic vials
200905	1.5 mL module	119*101*38	48 holes for 1.5 mL cryogenic vials
200906	5 mL module	119*101*38	30 holes for 5 mL cryogenic vials
200907	PCR module	119*101*38	96 PCR holes

## Cell Freezing Box

Product number	Shap	Sepecifications (mm)	Application
200101	Hexagonal	S108X100 (S: Side Length)	Holds 1 mL/2 mL cryogenic tubes or microcentrifuge tubes(12-φ13)
200102	Square	117X117X100	



# Liquid Transfer

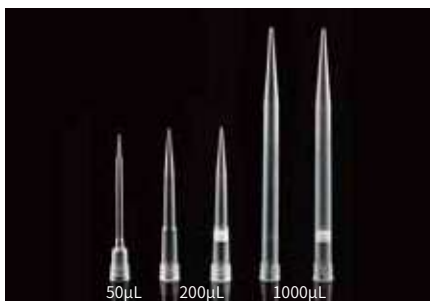


# Automation Tips

## ● Brand T Automation Tips



Automation Conductive Tips for Brand T



Compatible with Brand T Systems

### Brand T Automation Tips:

50 / 200 / 1000 µL

(Available in various packagings with or without filters)

### Brand H Automation Tips:

50 / 300 / 1000 µL

(Available in various packagings with or without filters)

### Compatible with Brand B Systems:

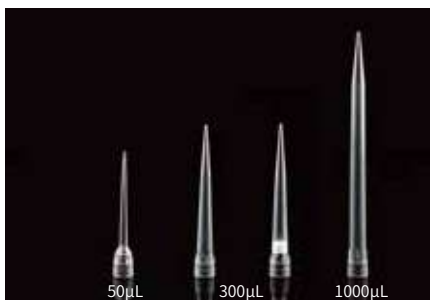
190 / 250 µL

(Available in various packagings with or without filters)

## ● Brand H Automation Tips



Automation Conductive Tips for Brand H



Compatible with Brand H Systems

## ● Compatible with Brand B Systems



Compatible with Brand B Systems

## ● Advantages

- Medical-grade black conductive polypropylene (PP) materials.
- Electron beam sterilization: Safe and fast, without chemical residue.
- Uniform conductivity: Tips of the same box sharing the same cavity number ensures the product traceability and the conductivity uniformity and improves the accuracy of experimental results, greatly reducing the difference among each tip.
- The smooth inner surfaces of tips supported by the unique processing technology greatly reduces the amount of residual liquid.
- The porous filtration of filter tip ensures optimum performance. And the super hydrophobicity of the tip forms a strong barrier against aerosols thus eliminates the risk of cross-contamination among samples.
- **Strong package:** The package of thickened high-strength blister card is resistant to impact and dropping, which ensures the integrity and safety of the product under harsh transport conditions.
- **Good air tightness and adaptability:** The structure mapping is conducted as per the original adapter and the proven injection-molding ensures that the products have good air tightness and adaptability, improving the mechanical precision of the products during work.
- **Strict quality management and control test:** Class 100,000 clean workshop, effective quality inspections are conducted under strict quality management including tests for DNA, RNA, proteases, and pyrogens, satisfying clients' needs.
- Air tightness test: Precise equipment is used to test the air tightness between the tip and the adapter, to ensure good air tightness for each batch of products.
- Tests for resistance and CV values: A certain number of products are sampled for each batch for inspection, which is conducted by precise and unique measuring tools for accuracy and reliability of the test results to ensure the uniform conductivity of products.

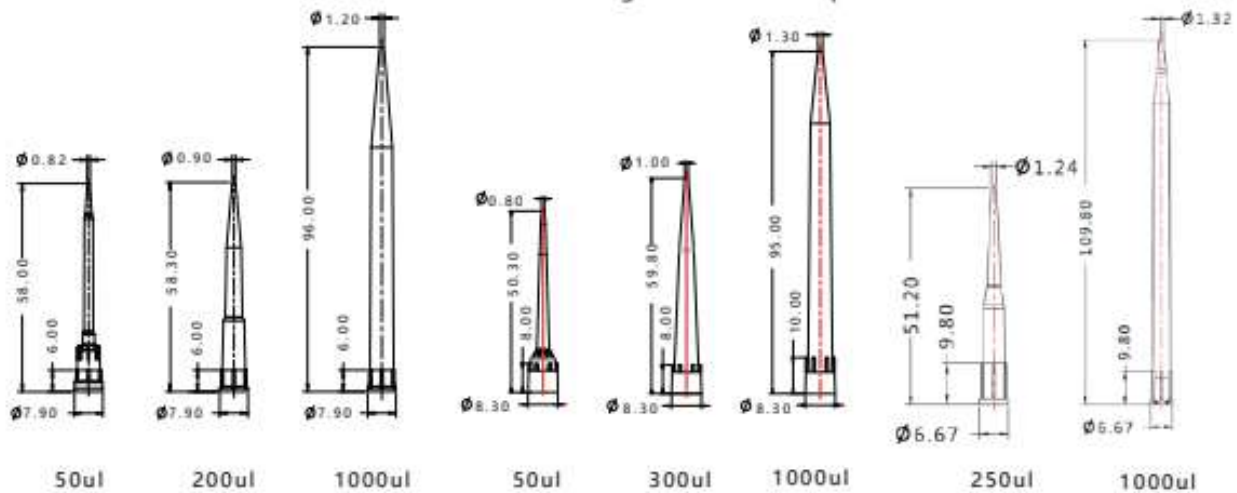
## ● Adaptation model

- Brand T automation conductive tips may be used with the TECAN Freedom EVOlyzers and fully automatic sampling systems.
- Brand H automation conductive tips are used in conjunction with Hamilton series workstations.
- Brand B robotic tips are used in Beckman FX/NX, Biomek i5/ i7 and Biomek 3000.

## Advantages

- Medical grade high-tenacity polypropylene (PP) material is imported and selected strictly in line with the industry requirements to ensure the stability of materials between batches.
- The production is manufactured automatically in Class 100, 000 clean workshop, to ensure no DNA, RNA, protease and heat source.
- Tips of each box share the same cavity number to ensure the product traceability and the conductivity uniformity and to improve the accuracy of experimental results, greatly reducing the difference among individual products.
- The smooth inner surfaces of tips supported by the unique processing technology greatly reduces the amount of residual liquid.
- The structure mapping is conducted as per the original adapter and the proven injection-molding ensures that the products have good air tightness and adaptability, improving the mechanical precision of the products during work.
- Effective quality inspections are conducted under strict quality management including tests for DNA, RNA, proteases, and pyrogens, satisfying clients' needs.
- Air tightness detection: the precision detector is used to check the air tightness between the tips and the adapter, to ensure that each batch of products have good air tightness.
- The test equipment is used online to control the size and concentricity of products in production line, saving time and improving product quality.
- The porous tissue of filter tip ensures optimum performance. And the super hydrophobicity of the tip forms a strong barrier against aerosols thus eliminates the risk of cross-contamination among samples.

Technical Drawing of Automation Tips



## Brand T Automation Tips



Blister Packed, 96 tips \*2 Blisters/Pk



Robotic Tips, Boxed



Robotic Tips, Clear, Blister Packed



Robotic Tips, Clear, Boxed

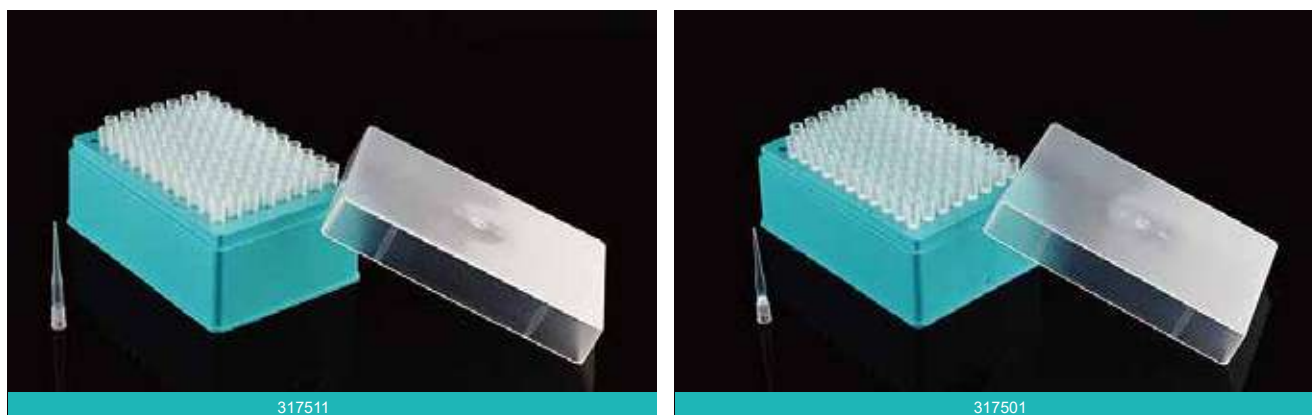
Volume (μL)	Packing			Automation Conductive Tips		Robotic Tip	
	Specification	/Pack	/Case	No Filter	Filter	No Filter	Filter
50	Blister Packed (96 Tips*2)	96	24	332002	332012	332003	332013
	Boxed	96	50	/	332016	332007	332017
200	Blister Packed (96 Tips*2)	96	24	332102	332112	332103	332113
	Boxed	96	50	/	332116	332107	332117
1000	Blister Packed (96 Tips*2)	96	24	332202	332212	332203	332213
	Boxed	96	50	/	332216	332207	332217

## • Brand H Automation Tips



Volume (μL)	Packing		Automation Conductive Tips		Robotic Tip	
	Specification	Packing	No Filter	Filter	No Filter	Filter
50	Blister Packed	96 pcs/rk 24 rks/pk	345002	345012	/	/
	With Barcode, 96 Tips*5 Blisters/Pk	96 pcs/rk 60 rks/pk	345005	345015	/	/
	With Barcode, 96 Tips/Pk	96 pcs/rk 24 rks/pk	/	345013	345503	345513
	Boxed, With Barcode	96 pcs/box, 10 boxes/pk, 5 pks/cs	/	345069	345509	345519
300	Blister Packed	96 pcs/rk 24 rks/pk	345102	345112	/	/
	With Barcode, 96 Tips*5 Blisters/Pk	96 pcs/rk 60 rks/pk	345105	345115	/	/
	With Barcode, 96 Tips/Pk	96 pcs/rk 24 rks/pk	/	345113	345603	345613
	Boxed, With Barcode	96 pcs/box, 10 boxes/pk, 5 pks/cs	/	345169	345609	345619
1000	Blister Packed	96 pcs/rk 24 rks/pk	345202	345212	/	/
	With Barcode, 96 Tips*5 Blisters/Pk	96 pcs/rk 60 rks/pk	345205	345215	/	/
	With Barcode, 96 Tips/Pk	96 pcs/rk 24 rks/pk	/	345213	345703	345713
	Boxed, With Barcode	96 pcs/box, 10 boxes/pk, 5 pks/cs	/	345269	345709	345719

## • Brand B Automation Tips



Volume (μL)	Filter	Sterilization	/Pack	/Bag	/Case	Cat.No.
250	NO	YES	96	10	5	317511
190	YES	YES	96	10	5	317501

# Robotic Tips

## Features

- Adopt medical grade polypropylene material, which is manufactured by precision mold, and the material batch is stable.
- DNase-and RNase-free, no heat source contamination.
- Electron beam sterilization.
- Manufacturing facility equipped with class 100,000 clean-room, products packing under sterile condition.
- Unique process technology ensures that the inner surface of the tip is smooth and reduces liquid residue.
- Carry out structural drawing and measurement according to the original adapter to ensure that the product has good air tightness and adaptability.
- Online testing equipment is used to control the size and concentricity of products in the production line.



Effective quality inspections are conducted for strict quality management and control per the client's needs, including tests for DNase, RNase, proteases and pyrogens.

### • Air Tightness Test

Precise equipment are used to test the air tightness between the tip and the adapter, to ensure good air tightness for each batch of products.

### • Tests for Resistance and Cv Values

A certain number of products are sampled for each batch for inspection, which is conducted using precise and unique measuring tools to ensure the accuracy and reliability of the test results to ensure the uniform conductivity of products.

### • Online equipment testing ( $\leq 3\%$ )

Tests for Resistance and CV Values of Automation Conductive Tips.

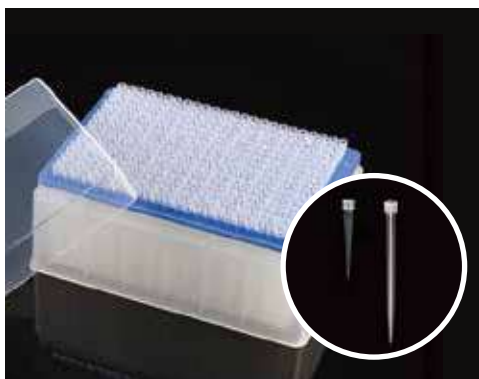
## Clear Robotic Tips, Compatible with Agilent Systems NEW



### Low-retention Tips, Boxed, Sterile

Low-retention tips are an excellent choice for transferring viscous liquid, which can effectively reduce the phenomenon of liquid hanging on the wall and make the experiment more accurate.

Descriptions	/Pack	/Case	Cat.No.
30μL Robotic Tips for Agilent, Low-retention, Clear	384	19200	352003
70μL Robotic Tips for Agilent, Low-retention, Clear	384	19200	352103
250μL Robotic Tips for Agilent, Low-retention, Clear	96	4800	352203
250μL Robotic <b>Filter</b> Tips for Agilent, Low-retention, Clear	96	4800	352213



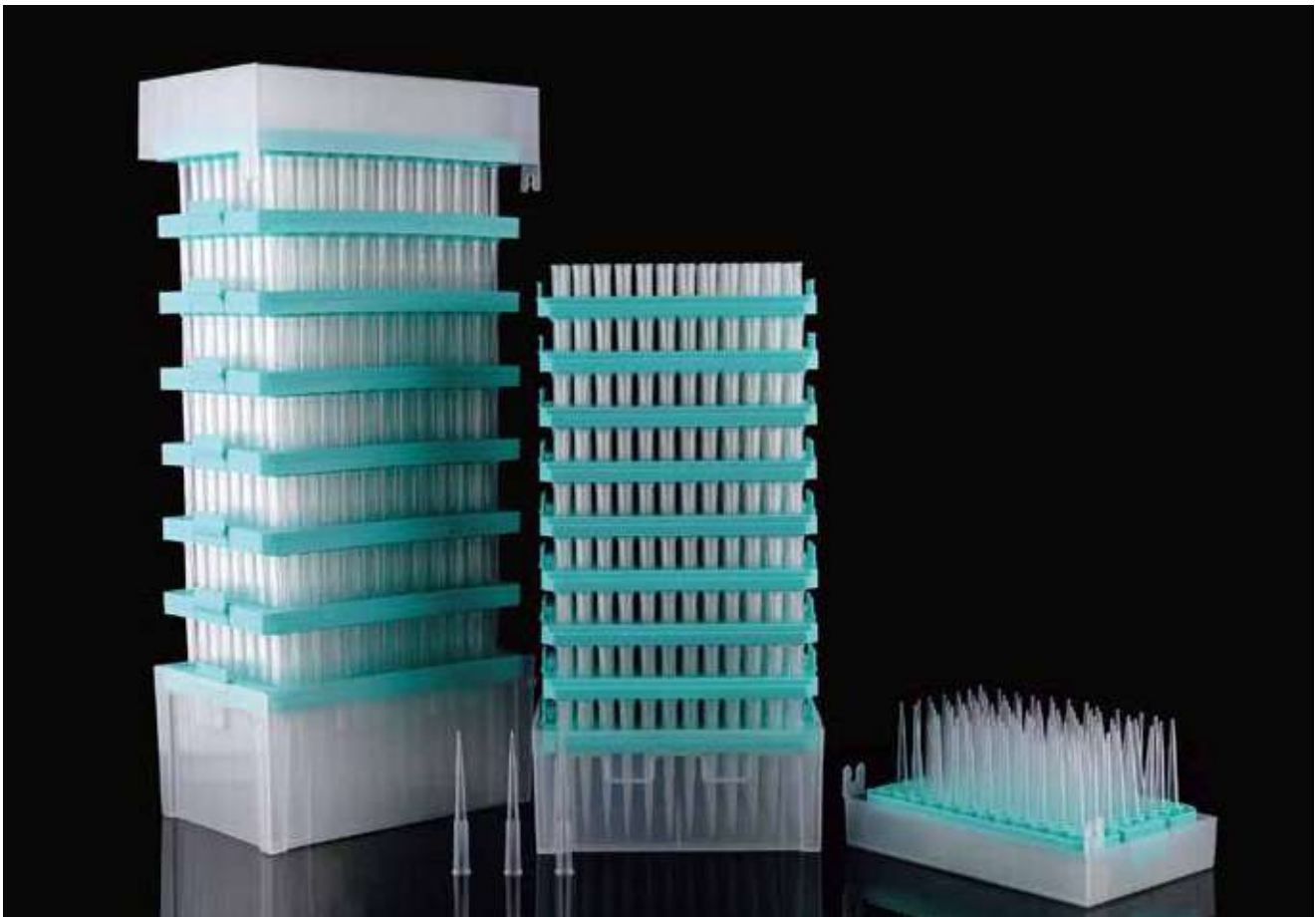
### Boxed, Sterile

Descriptions	/Pack	/Case	Cat.No.
30μL Robotic Tips for Agilent, Clear	384	19200	352002
70μL Robotic Tips for Agilent, Clear	384	19200	352102
250μL Robotic Tips for Agilent, Clear	96	4800	352202
250μL Robotic <b>Filter</b> Tips for Agilent, Clear	96	4800	352212

# Refill Pipette Tip

## ● Features

- NEST Refill Pipette Tips, Bulk are more convenient for customers to use, saving work and shortening work time, and improving work efficiency.
- NEST Refill Pipette Tips, Bulk are used for quantitative transfer of liquid consumables. They are used in experimental fields with liquid transfer operations, such as in biology and chemistry, and for liquid transfer in cell culture laboratories, liquid addition, liquid suction, or other liquid transfer uses.



## ● Product Introduction

The stacked tips are assembled by stacking 5-10 different-sized tips into the tip box holder. They are convenient for customers to use, reduce costs, and have a high utilization rate. Only one box bottom is needed, and when one box is used up, another one can be loaded into the box holder.

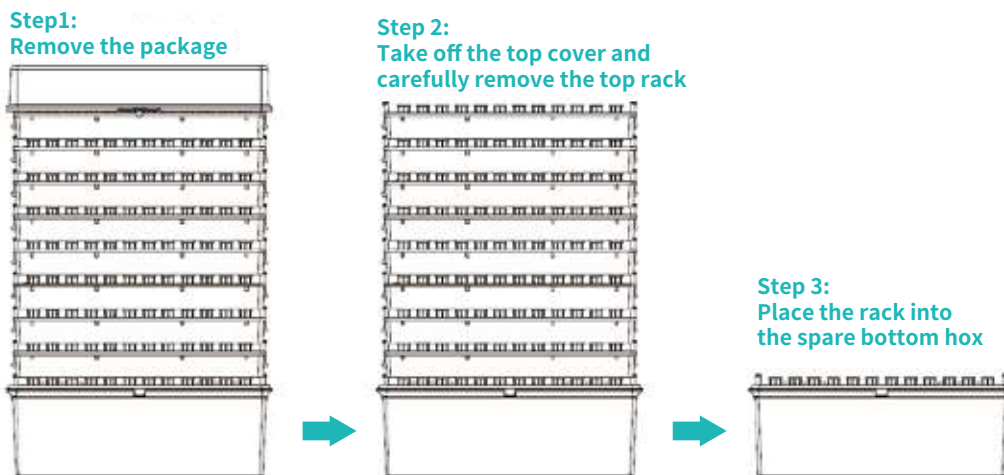
## ● Product Usage and Application Direction

- Product usage: more convenient than bagged pipette tips and more economical than single-box packaging, improving work efficiency and saving work time.
- Application direction: genomics, proteomics, cytology, immunodetection, metabolomics, biopharmaceutical research and development, and other commonly used high-throughput liquid transfer uses.

## ● Product features

- Experimental-grade polypropylene (PP) is used for all injection-molded parts of the product.
- The whole set of products is assembled by stacking 5-10 pieces, which is convenient for customers to use.

## ● Instructions for Use



## ● Product specifications

Technical Drawings				
	Cat.No.	301081	302081	305081
Volume (µL)	10 µL	200 µL	300 µL	1000 µL
Packing	96/Pack 10 Pack/Box 10 Box/Case		96/Pack 5 Pack/Box 10 Box/Case	
Filter	NO	NO	NO	NO
Sterilization	NO	NO	NO	NO

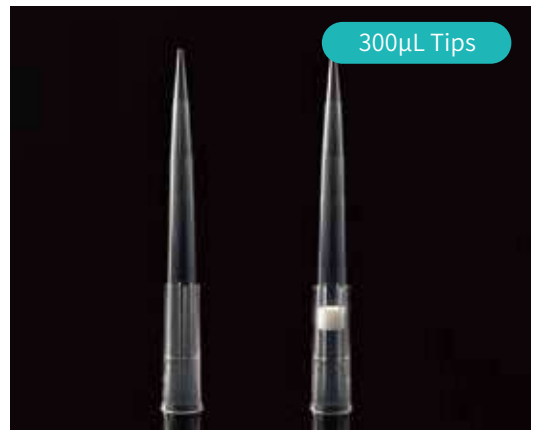
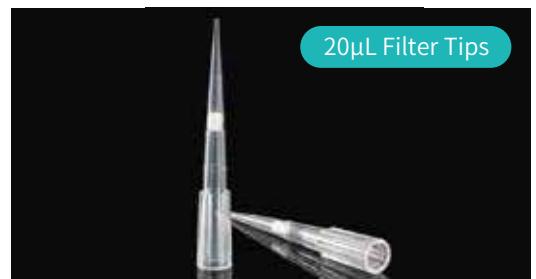
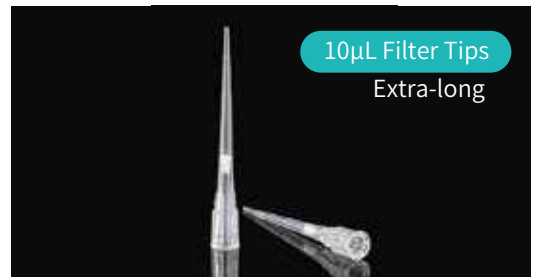
## ● Refill Pipette Tips



### Pipette Tips, Refills, Clear Non-Sterile

Descriptions	/Rack	/Pcak	/Case	Cat.No.
10µl Pipette Tips, Refills	96	960	9600	301023
10µl Pipette Tips, Extra-long, Refills	96	960	9600	304023
200µl Pipette Tips, Refills	96	960	9600	302023
300µl Pipette Tips, Refills	96	960	9600	305023
1000µl Pipette Tips, Refills	96	960	4800	303023
1250µl Pipette Tips, Refills	96	960	4800	306023

# Universal Pipette Tips



NEST Aerosol Filter Pipet Tips are designed and manufactured using premium-grade 100% polypropylene for the most critical molecular biology liquid handling applications. All Nest Aerosol Filter Tips are gamma irradiated Sterile and Certified RNase/DNase-Free, human DNA-Free, and Pyrogen-Free. In addition, Nest Aerosol Filter Tips are Ultra-Clear with a Fine-Point design for the convenient, precise pipetting of precious nucleic acid and protein samples and are designed to be Universal-fit for the majority of research-grade pipettors.

## Features

- Certified RNase, DNase, Human DNA, Pyrogen-Free.
- Low-Retention, Fine-Point design for lowest sample adhesion.
- Ultra-Clear polymer withstands organic solvents and provides clear, error-free pipetting.
- Effective hydrophobic aerosol barrier eliminates carry-over and pipettor contamination.
- Gamma-irradiated Sterile and Graduated.
- Universal-fit for most single and multichannel pipettors.

## Filtered Pipette Tips, Clear

Bulk, Non-sterile

Descriptions	/Pack	/Case	Cat.No.
10 µl Filter universal Pipette Tips	1000	10000	311001
20 µl Filter Universal Pipette Tips	1000	10000	315001
100 µl Filter universal Pipette Tips	1000	10000	316001
200 µl Filter universal Pipette Tips	1000	10000	312001
1000 µl Filter universal Pipette Tips	1000	5000	313001
1250 µl Filter universal Pipette Tips	1000	5000	317001

## Pipette Tips, Clear

Bulk, Non-sterile

Descriptions	/Pack	/Case	Cat.No.
10µl Pipette Tips	1000	10000	301001
10µl Pipette Tips, Extra-long	1000	10000	304001
200µl Pipette Tips	1000	10000	302001
200 µl Universal Pipette Tips, Yellow	1000	20000	302106
300µl Pipette Tips	1000	10000	305001
1000µl Pipette Tips	1000	10000	303001
1000 µl Universal Pipette Tips, Blue	1000	5000	303206
1250µl Pipette Tip	1000	10000	306001

## Filtered Pipette Tips, Clear

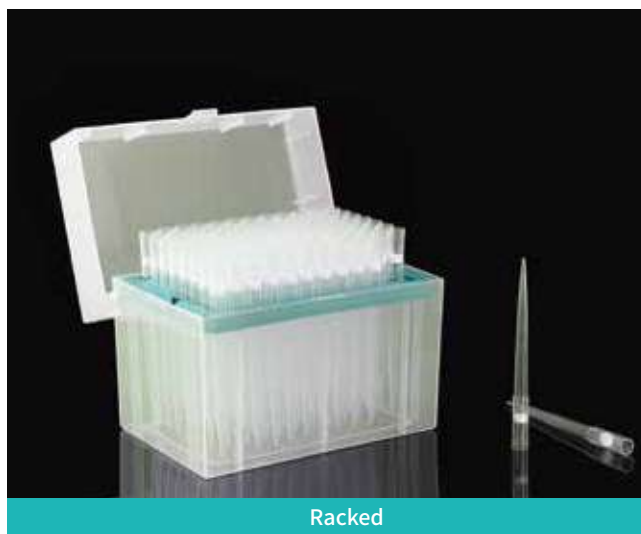
Racked, Sterile

Descriptions	/Pack	/Case	Cat.No.
10 µl Filtered Pipette Tips	960	4800	311012
10 µl Filtered Pipette Tips, Extra-long	960	4800	314012
20 µl Filtered Pipette Tips	960	4800	315012
100 µl Filtered Pipette Tips	960	4800	316012
200 µl Filtered Pipette Tips	960	4800	312012
300 µl Filtered Pipette Tips	960	4800	319012
1000 µl Filtered Pipette Tips	960	4800	313012
1250 µl Filtered Pipette Tips	960	4800	317012

## Pipette Tips, Clear

Racked, Sterile

Descriptions	/Pack	/Case	Cat.No.
10µl Pipette Tips	960	4800	301012
10µl Pipette Tips, Extra-long	960	4800	304012
200µl Pipette Tips	960	4800	302012
300µl Pipette Tips	960	4800	305012
1000µl Pipette Tips	960	4800	303012
1250µl Pipette Tips	960	4800	306012







DoubleStack Racked

## Pipette Tips, DoubleStack Racked, Clear, Sterile

Descriptions	/Wafer	/Pack	/Case	Cat.No.
10ul Pipette Tips, DoubleStack	96	960	9600	301052
10µl Pipette Tips, Extra-long, DoubleStack	96	960	9600	304052
200ul Pipette Tips, DoubleStack	96	960	9600	302052
300ul Pipette Tips, DoubleStack	96	960	9600	305052

## Empty Pipette Tip Boxes, Includes Racks, without Tips

Descriptions	/Pack	/Case	Cat.No.
Empty Tip Boxes for 1250µl Tips	10	50	351301
Empty Tip Boxes for 1000µl and 1250µl Tips	10	50	351201
Empty Tip Boxes for 200µl and 300µl Tips	10	50	351101
Empty Tip Boxes for 10µl and 10µl Extra Long Tips	10	50	351001



## 5ml and 10ml tips - Sterile, Racked

Descriptions	/Pack	/Case	Cat.No.
5ml Pipette Tips For Eppendorf, Sartorius, Watson, Gilson, Bulk	100	1000	307011 <b>NEW</b>
5ml Pipette Tips For Thermo, Bulk	100	1000	307021 <b>NEW</b>
10m Pipette Tips For Eppendorf, Sartorius, Gilson, Bulk	100	1000	307111 <b>NEW</b>
10ml Pipette Tips For Thermo, Bulk	100	1000	307121 <b>NEW</b>

Descriptions	/Rack	/Pack	/Case	Cat.No.
55ml Pipette Tips For Eppendorf, Sartorius, Watson, Gilson, racked	24	10	30	307012 <b>NEW</b>
5ml Pipette Tips For Thermo, racked	24	10	30	307022 <b>NEW</b>
10ml Pipette Tips For Eppendorf, Sartorius, Gilson, racked	40	10	30	307112 <b>NEW</b>
10ml Pipette Tips For Thermo, racked	24	10	30	307122 <b>NEW</b>

# Low retention Pipette Tips



## Low Retention Treated Pipette Tips, Racked, Sterile

Descriptions	/Pack	/Case	Cat.No.
10ul Pipette Tips, Clear, Racked, Low Retention	960	4800	301013 <b>NEW</b>
10ul Pipette Tips, Extra-long, Clear, Racked, Low Retentions	960	4800	304013 <b>NEW</b>
200ul Pipette Tips, Clear, Racked, Low Retention	960	4800	302013 <b>NEW</b>
300ul Pipette Tips, Clear, Racked, Low Retention	960	4800	305013 <b>NEW</b>
1000ul Pipette Tips, Clear, Racked, Low Retentione	960	4800	303013 <b>NEW</b>
1250ul Pipette Tips, Clear, Racked, Low Retention	960	4800	306013 <b>NEW</b>

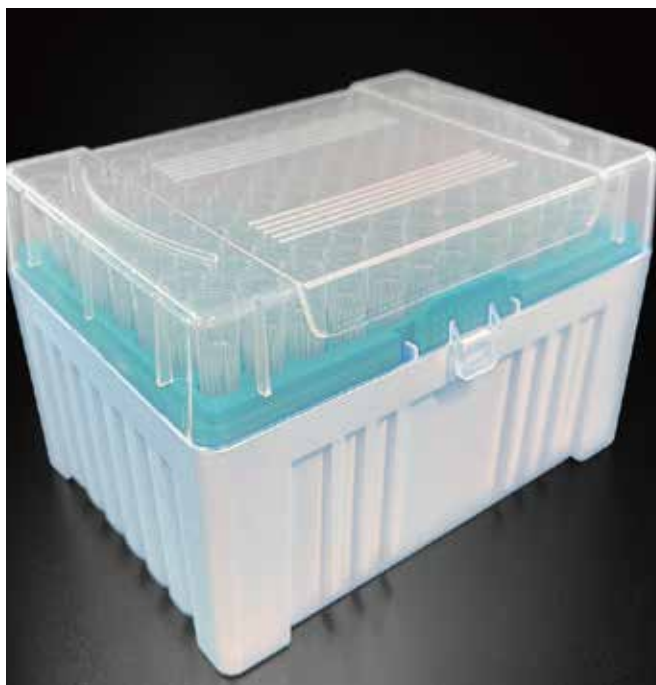
## Low Retention Treated Pipette Tips, Re-fill, Non-sterile

Descriptions	/Pack	/Case	Cat.No.
10ul Pipette Tips, Clear, Refills, Low-retention	960	4800	301213 <b>NEW</b>
10ul Pipette Tips, Extra-long, Clear, Refills, Low-retention	960	4800	304213 <b>NEW</b>
200ul Pipette Tips, Clear, Refills, Low-retention	960	4800	302213 <b>NEW</b>
300ul Pipette Tips, Clear, Refills, Low-retention	960	4800	305213 <b>NEW</b>
1000ul Pipette Tips, Clear, Refills, Low-retention	960	4800	303213 <b>NEW</b>
1250ul Pipette Tips, Clear, Refills, Low-retention	960	4800	306213 <b>NEW</b>

## Low Retention Treated Pipette Tips, Filtered, Sterile

Descriptions	/Pack	/Case	Cat.No.
10ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	311013 <b>NEW</b>
10ul Filtered Pipette Tips, Extra-long, Clear, Racked, Low Retention, Sterile	960	4800	314013 <b>NEW</b>
20ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	315013 <b>NEW</b>
100ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	316013 <b>NEW</b>
200ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	312013 <b>NEW</b>
300ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	319013 <b>NEW</b>
1000ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	313013 <b>NEW</b>
1250ul Filtered Pipette Tips, Clear, Racked, Low Retention	960	4800	317013 <b>NEW</b>

# **NEW** Rainin LTS Pipette Tips



With the constant efforts and many tests of our engineers, we are glad to announce that the alternative RAININ LTS tips are also available for purchase. This kind of tip is different from the universal tips. With a similar design to RAININ LTS Pipette Tips, it could be compatible well with RAININ LTS pipettes.

Meanwhile, like all other pipette tips, it is made from virgin polypropylene and manufactured in a Class 100,000 cleanroom. Also, our smart production line ensures minimal human contact during production. Thus, these tips are free of DNase, RNase, human DNA, and endotoxins.

## Features

- Made from virgin polypropylene.
- Compatible well with RAININ LTS pipettes.
- RNase, DNase, Human DNA, Pyrogen-Free.
- Sterilized by E-beam SAL=10<sup>-6</sup>

## Rainin LTS Filter Pipette Tips, Clear

Racked, Sterile

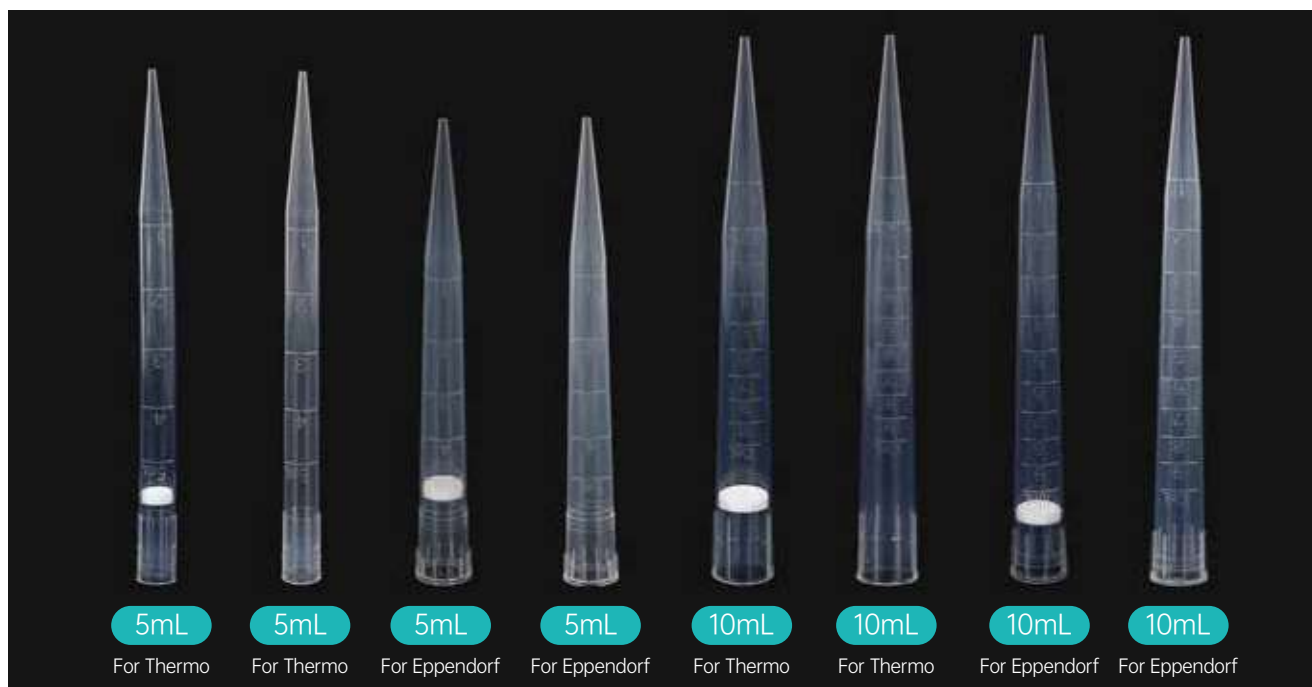
Descriptions	/Box	/Case	Cat.No.
Rainin LTS 10uL Filter Pipette Tips	96	4800	311061
Rainin LTS 200uL Filter Pipette Tips	96	4800	312061
Rainin LTS 300uL Filter Pipette Tips	96	4800	319061
Rainin LTS 1000uL Filter Pipette Tips	96	4800	313061

## Rainin LTS Pipette Tips, Clear

Racked, Sterile

Descriptions	/Box	/Case	Cat.No.
Rainin LTS 10uL Pipette Tips	96	4800	301061
Rainin LTS 200uL Pipette Tips	96	4800	302061
Rainin LTS 300uL Pipette Tips	96	4800	305061
Rainin LTS 1000uL Pipette Tips	96	4800	303061

# 5mL and 10mL tips



NEST 5mL and 10mL pipette tips are precision-molded from high purity, DNase RNase and pyrogen free, virgin polypropylene. They are available in 5mL and 10mL, filtered or non-filtered. Choose from compatible pipettors either for Eppendorf, Sartorius, Gilson, or for Thermo pipettors. They allow pipetting from narrow volume measuring equipment. Clean, hydrophobic surfaces reduce sample retention, and increase accuracy and reproducibility.



## ISO Class 08

DNase RNase and DNA free,  
No human DNA, endotoxin free



## Autoclavable

Autoclavable at +121°C



## Graduations

Meet a wider range of volumetric pipetting needs for more precise pipetting

Cat.No.	Description	Sterilized	/Pack	/Case
307011	5mL Pipette Tips For Eppendorf, Sartorius, Watson, Gilson, Bulk,	Non-Sterile	100	1000
307012	5mL Pipette Tips For Eppendorf, Sartorius, Watson, Gilson, racked, Sterile,	Sterile	240	1000
307013	5mL Filtered Pipette Tips For Eppendorf, Sartorius, Watson, Gilson, racked,	Sterile	240	1000
307021	5mL Pipette Tips For Thermo, Bulk,	Non-Sterile	100	1000
307022	5mL Pipette Tips For Thermo, racked,	Sterile	400	720
307023	5mL Filtered Pipette Tips For Thermo, racked,	Sterile	400	1200
307111	10mL Pipette Tips For Eppendorf, Sartorius, Gilson, Bulk,	Non-Sterile	100	720
307112	10mL Pipette Tips For Eppendorf, Sartorius, Gilson, racked,	Sterile	240	720
307113	10mL Filtered Pipette Tips For Eppendorf, Sartorius, Gilson, racked,	Sterile	240	720
307121	10mL Pipette Tips For Thermo, Bulk,	Non-Sterile	700	1200
307122	10mL Pipette Tips For Thermo, racked,	Sterile	240	720
307123	10mL Filtered Pipette Tips For Thermo, racked,	Sterile	240	720

# Vacuum Filtration System

NEST Disposable Vacuum Filtration System is useful for large volume sample separation and sterilization of tissue culture media and other biological buffers. The units include PES or PVDF membrane filters with graduated filter tops made with polystyrene, and acrylonitrile-butadiene-styrene necks with polystyrene receiving bottles. A separated sterile polyethylene cap is included. Filtration system is manufactured from raw material of high transparency polystyrene (PS) in three different volumes: 250 mL / 500 mL / 1000 mL. They are available in three styles: complete filter/storage bottle systems, bottle top filters, and receiving bottles only.

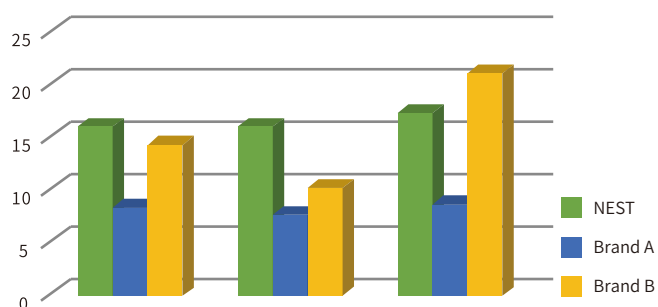


## • Features

- High flow rates and flux.
- Low protein binding and low chemical extractability.
- Pore size: 0.22  $\mu\text{m}$ .
- Non-Pyrogenic, DNase/Rnase free.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Individually packaged in sterile bag.
- No endotoxin, no pyrogen.
- For laboratory use only.
- If the package is damaged, please do not use.

Membrane Type	Hydrophilicity	Features	Application Directions	Cautions
PES	Hydrophilic	Low protein adsorption, high flow rate, wide PH range, high chemical compatibility, good heat resistance.	For general culture media and aqueous solutions, polar or middle-polar solvents, neutral aqueous solutions.	Not applicable for chloroform, esters, amides and strong acids or strong bases.
PVDF	Hydrophilic	Wide practicability, good oxidation resistance and heat resistance.	May be used for aqueous solutions and most solvents, including strong non-polar solvents. Ideal for preparations of HPLC and GC.	Not applicable for strong acids and bases.
MCE	Hydrophilic	Strong chemical compatibility and low protein adsorption, the optimum pH range is 3-6.	Used for particle analysis of general culture media and aqueous solutions. HPLC sample preparation.	The set should not be used for filtration of ethanol and alkaline solutions. The working temperature should not be over 40°C.
CA	Hydrophilic	High flow rate and heat stability as well as very low adsorption, stable within the range of pH 4-8.	It may resist most alcohols and oils, and is suitable for sterile filtration of aqueous solutions, buffers, serum and culture media, as well as filtration of the moving phase of HPLC.	The CA membrane may accommodate a smaller volume of buffer since it has low hydrophilia.

## Comparison of the flow rate of different brands of vacuum filters



	DMEM+10%FBs	RPMI1640+10%FBs	TBS
NEST	16	16	17.39
Brand A	8.33	7.69	8.7
Brand B	14.29	10.26	21.1

## Product Parameters

Volume (mL)	Membrane Dia(mm)	Capacity(mL)	Max.Temp (°C)	Neck Dia(mm)	Height (mm)	Material of Neck
250	50	250	45	45	198	ABS
500	90	500	45	45	247	ABS
1000	90	1000	45	45	280	ABS

## • Vacuum Filtration System

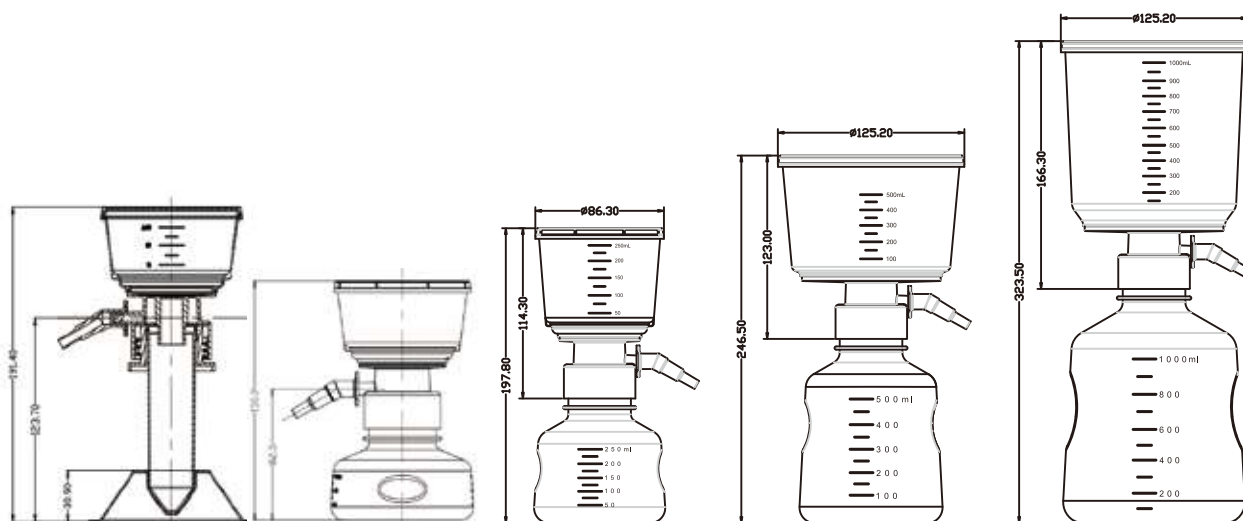
Volume (μL)	Pore Density (μm)	Vacuum Filtration Systems (Sterile) 1/Pack, 12/Case				Bottle Top Vacuum Filter (Sterile) 1/Pack, 24/Case			
		PES Membrane	PVDF Membrane	MCE Membrane	CA Membrane	PES Membrane	PVDF Membrane	MCE Membrane	CA Membrane
50	0.10	347002	347102	347202	347302	347012	347112	347212	347312
	0.22	347001	347101	347201	347301	347011	347111	347211	347311
	0.45	347003	347103	347203	347303	347013	347113	347213	347313
150	0.10	346002	346102	346202	346302	346012	346112	346212	346312
	0.22	346001	346101	346201	346301	346011	346111	346211	346311
	0.45	346003	346103	346203	346303	346013	346113	346213	346313
250	0.10	342002	342102	342202	342302	342012	342112	342212	342312
	0.22	342001	342101	342201	342301	342011	342111	342211	342311
	0.45	342003	342103	342203	342303	342013	342113	342213	342313
500	0.10	343002	343102	343202	343302	343012	343112	343212	343312
	0.22	343001	343101	343201	343301	343011	343111	343211	343311
	0.45	343003	343103	343203	343303	343013	343113	343213	343313
1000	0.10	344002	344102	344202	344302	344012	344112	344212	344312
	0.22	344001	344101	344201	344301	344011	344111	344211	344311
	0.45	344003	344103	344203	344303	344013	344113	344213	344313

## • Polystyrene Storage Bottles (Sterile)

Volume (μL)	Size (mm)			Packing		Cat.No.
	Height	Mouth diameter	Base diameter	/Pack	/Case	
150	80	42	89.15	1	24	346021
250	105		88	1	24	342021
500	145		96	1	24	343021
1000	178.5		122	1	12	344021

## Warning

- Do not use plastic bottles, glass bottles, flasks or containers that are not designed for filtration and cannot withstand negative pressure to connect to the upper cup .
- Not suitable for culture flasks larger than 2L.
- Working temperature: 4-37°C.
- Working pressure: 0.03-0.06Mpa, if there is foam, please reduce pressure appropriately.
- Tighten the upper cup and bottle mouth by hand, but do not over tighten.
- Personal protective equipment must be used at all times, and goggles must be worn when using vacuum equipment.
- Work on the aseptic operating table.
- It is not recommended to recycle any hazardous substances, hazardous substances, wastes or biochemically hazardous materials.



# Syringe Filter

## Features

- For sample volumes of 2mL to 100mL.
- Retention volume <115µL.
- Maximum operating temperature: 100°C autoclave at 125°C for 15 min.
- Maximum operating pressure approximately 100 psi.
- Individually wrapped.
- Non – pyrogenic, Non – cytotoxic.
- DNase / RNase – free, Human DNA – free.



PES Membrane Cat.No.	PVDF Membrane Cat.No.	Volume (mL)	Pore Density (µm)	/Case
380111	380121	25	0.22	50
380211	380221	25	0.45	50
380112	380122	13	0.22	50
380212	380222	13	0.45	50

# Microcentrifuge Tube



- RNase free, endotoxin level less than 0.1EU.
- USP VI grade polypropylene material, free from heavy metal.
- Brown colour provides protection from light, especially for light-sensitive substances.
- Each package is individually labelled with a Cat.NO for easy quality tracking and traceability.
- RCF: 30,000 xg.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Autoclavable at 121°C/15psi

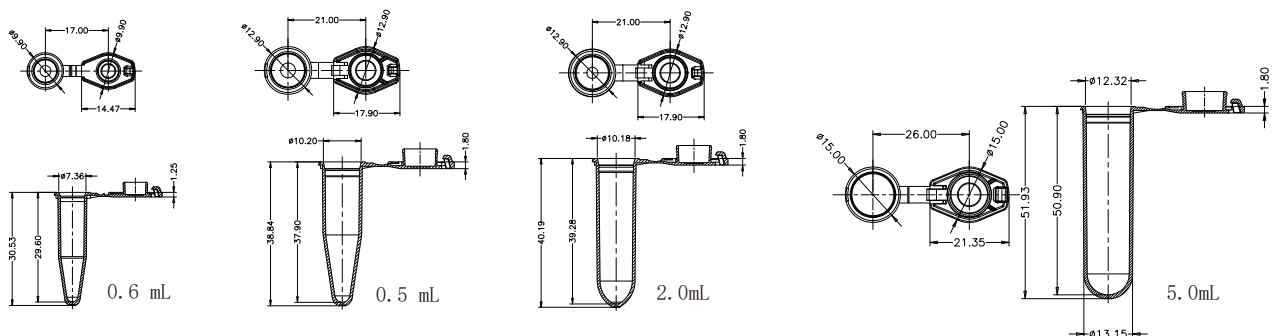
Volume (mL)	Bottom	Color	Sterile	/Pack	/Bag	/Case	Cat.No.
0.6	Round	Clear	Non-sterile	1000	/	10	605001
		Clear	Sterile	50	15	10	605601
		Amber	Sterile	50	15	10	605401
		Amber	Non-sterile	50	15	10	605501
1.5	Round	Clear	Non-sterile	500	/	10	615001
		Clear	Sterile	50	8	10	615601
		Amber	Sterile	50	8	10	615401
2.0	Conical	Clear	Non-sterile	500	/	10	620011
		Clear	Sterile	50	8	10	620611
5.0	Conical	Clear	Non-sterile	200	1	10	603011
		Clear	Sterile	200	1	10	603111

## • Micro Tube Box



- Withstand temperature ranging from -80°C to 121°C.
- Solid polypropylene base and polycarbonate cover.
- Non-sterile.

Application (mL)	Spec (well)	/Pack	/Case	Cat.No.
0.6	10*10	5	8	613001
1.5/2	8*8	5	8	613111





# 15/50 mL Centrifuge Tube



PS Rack



Bulk



Centrifuge Tube Rack

## • Features

- Printed Graduations (with marking area).
- Polypropylene tube and high-density polyethylene cap.
- High centrifugal strength up to 12,000xg.
- Flat markable cap with leakproof seal.
- One-hand operation design for the caps is easy to handle.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.

## • Premium Level

- Up to the standards of biological analysis.
- High strength non-toxic materials.
- Raw material comply with USP VI complies.

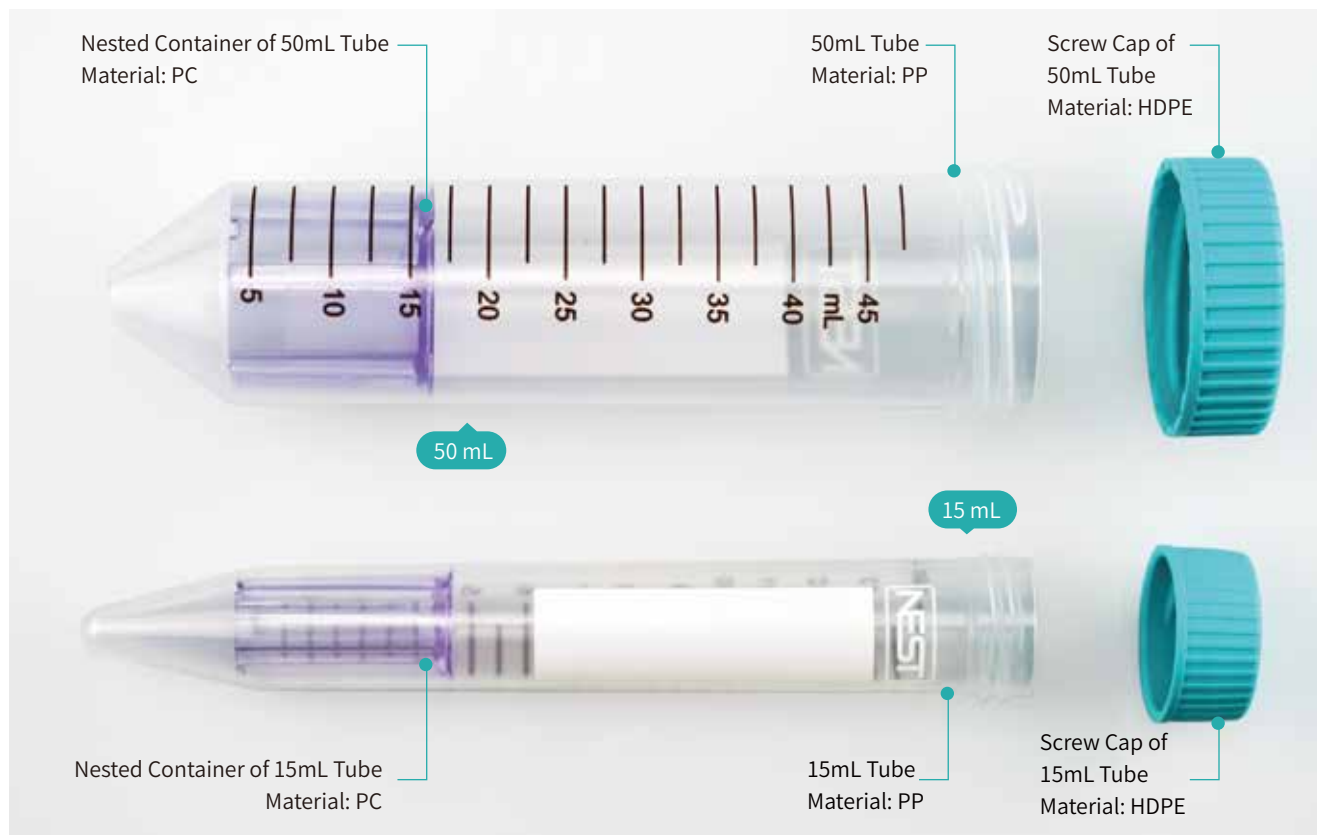
## • Centrifuge Tube Rack

- Made of virgin polypropylene.
- Reusable and economic.
- Non-sterilized.

Application	/Case	Cat.No.
For 15 mL Tubes	50	610001
For 50 mL Tubes	50	610101

Volume (mL)	Color	Packaging	Max.RCF(xg)	Sterile	Packing		Cat.No.	
					/Pack	/Case	Premium Level	Standard Level
15	Clear	PS Rack	12000	Yes	50	10	601001	601051
	Clear	Bulk	12000		50	10	601002	601052
	Amber	PS Rack	12000		50	10	601201	/
50	Clear	PS Rack	12000		25	20	602001	602051
	Clear	Bulk	12000		25	20	602002	602052
	Amber	PS Rack	12000		25	20	602201	/
50 (Self-Standing)	Clear	Bulk	5000		25	20	/	602072

# Peripheral Blood Lymphocyte Separation Tube



This product separates and purifies cells with separation solution by means of density gradient centrifugation according to the difference in cell density. With the density gradients generated inside, the target cells can be retained on top of the nested container in the tub, which is designed specifically to separate the target sample from the density gradient medium to the utmost extent; while erythrocytes and granulocytes will sink at the bottom after centrifugation, and the PBMC (Peripheral Blood Mononuclear Cell, including lymphocytes and monocytes, etc.) will float on the surface. Only the simple operation of decanting is involved in the final stage, and no other professionally technical operations required.

## • Features

- Rapid separation and purification for PBMC within only 15 min.
- Simple operation procedures: no need to slowly and laboriously add samples into the solution; when collecting samples, simply decant the centrifuge tube. No other professionally technical operations are required.
- Good reproducibility for reduced errors and less operation variation among users.
- E-beam sterilized with SAL=10<sup>-6</sup>.
- No heat source; no nucleases.

## • Usages and Application Directions

Peripheral Blood Lymphocyte Separation Tube is mainly applied to separate Peripheral Blood Mononuclear Cell (lymphocytes and monocytes) from whole blood or bone marrow through density gradient centrifugation. For research use only.

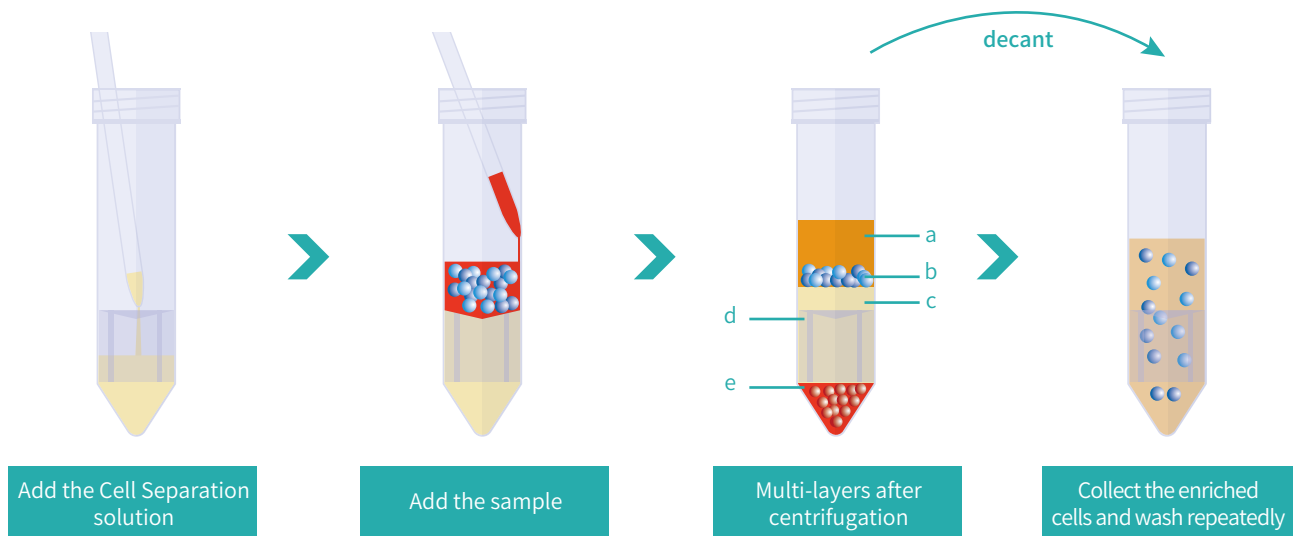
Volume (mL)	Capacity(mL)	Sterile	Packing		Cat.No.
			/Pack	/Case	
15	4-9	Yes	50	10	601852
			50	3	601851
50	13-30		25	20	602852
			25	4	602851

## • Instructions

### Preliminary Preparation

- Cool off the separation solution away from light to the room temperature (RT) .
- Add the separation solution by a serological pipette through the central hole of the nested container: for a 15 mL tube, add approximately 4 mL separation solution; for a 50 mL tube, add approximately 13 mL separation solution; Please ensure the separation solution on top of the nested container throughout the procedure.
- Add the drawn anticoagulated blood and bone marrow into the separation tube cooled off to the room temperature. Besides, adding saline to dilute the specimen is not requisite but can help improve the separation result.

### Separation



- Slowly pour or pipette the anticoagulated sample (blood or bone marrow, diluted with saline if needed) along the tube wall into the tube slowly: for a 15 mL separation tube, 4-9 mL of the sample is recommended; for a 50 mL separation tube, 13-30 mL of the sample is recommended.
- Centrifuge at room temperature with a centrifugal force of 1200 x g for 10 minutes, then turn off the centrifuge. For samples left for more than 24h, longer centrifugation time is recommended.
- Liquid separation condition after centrifugation (from top to bottom): A. plasma; B. enriched cell fractions (intermediate phase contains lymphocytes/PBMCs cells); C. separation solution; D. nested container; E. precipitation (erythrocytes and granulocytes). Collect or directly discard the plasma layer of 5-10 mm above the enriched cells to prevent the enriched cells from re-contamination by platelets.
- Collect the enriched cells (lymphocytes/PBMCs cells) and pour the supernatant from the separation tube into another clean centrifuge tube, during which the nested container works to prevent the enriched cells from re-contamination by erythrocytes and granulocytes. Don't invert the separation tube for more than 2s.
- Wash the enriched cells (lymphocytes/PBMCs cells) with Phosphate Buffer Solution (PBS) then centrifuge them at 250 xg for 10 min.
- Repeat the washing 2 times as in step 5 and finally re-suspend cells with 5 mL PBS.

## • Precautions

- This product should be operated by professionally trained personnel under the guidance of good laboratory practices.
- Do not re-use the separation tube.
- Specific separation effects may vary due to the difference in centrifuges' performance from different brands and the difference in regional temperature and environment. Users may adjust the speed and time of centrifugation to find out the best separation conditions (up to respective laboratory).
- The product is applicable to the sample of human peripheral blood, bone marrow and umbilical cord blood, but not to leukocyte isolation samples, samples with brownish yellow layer of erythrocyte sedimentation nor samples over 48 hours.
- After centrifugation, cells may aggregate on the tube wall above the enriched layer, which is a normal phenomenon influenced by the quality, sample placement time and anticoagulant type of sample, but independent of the use of the separation tube. Cells can be removed by scraping the interior wall with a pipette tip.
- When specimens of any biological origin are involved, operate the blood taking needles, blood collection tubes and related instruments, etc. cautiously in accordance with strict protocols. Do treat specimens as hidden dangerous sources of infectious diseases such as HIV, HBV, HCV, etc, in which case disposable gloves are necessary in order to avoid the risk of infection during operation.

# 250/500 mL centrifuge tube



**500 mL Racked**



**250 mL Racked**

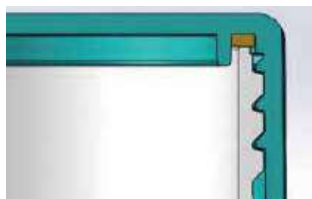
The 250 mL & 500 mL centrifuge tubes can process a large number of samples at one time and are suitable for the separation and harvest of large amounts of cells, supernatants, bacteria, yeast and tissue samples. Therefore, they are widely used in the field of life sciences and clinical.

## ● Application

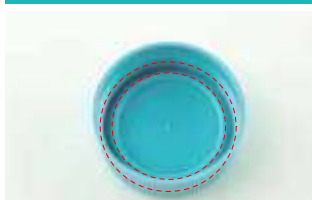
- Separation of sediments after chemical reactions for harvest and application.
- Harvest of biomacromolecules, inorganics and organics.
- In biochemistry and other biological fields, usually used to centrifuge and collect a large volume of cells, biomacromolecules and supernatants.



Increased the thickness of conical bottom



Unique structure design of the cap provides double security



Newly added o-ring

## ● Features

- Unique structure design of the cap provides double security, further improving the tight seal ability.
- Increased the thickness of conical bottom in order to improve the maximum centrifugal limit.
- Polypropylene tube and high density polyethylene cap.
- Max. centrifugal limit 7000xg.
- Temperature range: -80 °C~120 °C.
- Clear scale.
- DNase, RNase and pyrogen free.
- Electron beam sterilization, SAL=10<sup>-6</sup>.
- Separation of sediments after chemical reactions for harvest and application.
- Harvest of biomacromolecules, inorganics and organics.
- In biochemistry and other biological fields, usually used to centrifuge and collect a large volume of cells, biomacromolecules and supernatants.

Packaging	Sterile	Volume (mL)	/Pack	/Case	Cat.No.
Bulk	Yes	250	6	102	622001
Bulk	Yes	500	6	36	623001
Racked	Yes	250	6	24	622002
Racked	Yes	500	4	24	623002

# Centrifuge Tube Closed System Solution



## Product Description

The pre-assembled Closed System of Centrifuge Tube is convenient for aseptic sampling and transfer during biological production procedures. Each is double-packed and equipped with a seal cap which can be used to substitute the pipes in case of subsequent centrifugation and analysis.

The pre-assembled Closed System of Centrifuge Tube is convenient for customers in biomedical/biopharmaceutical/vaccine production industries to aseptically sample and transfer the tissue and cell culture/ vaccine solutions, which can effectively save the assembling and sampling time and lower the cost.

## Features

- The pre-assembled Closed System is ready to use at hand. The closed liquid transfer avoids the contamination risk of open transfer and eliminates the necessity of subsequent cleaning validation.
- The pipeline material meets the requirements of industrial pharmaceutical enterprises, and is connected to male taper at the connector, which prevents accidental disconnection and offers convenience.
- The double aseptic packaging suits GMP production. Pipelines can be customized according to demand.

Volume (mL)	Tube Material			0.2µm Filter Membrane area	/Case	Cat.No.
	Dia.	Length	Connector			
50	1/8" ID, 1/4" OD	50 cm	Male Luer Connector	4.5cm <sup>2</sup>	4	C60622-EFB050A
250					4	C60922-EFB050A
500					4	C61022-EFB050A

# Pasteur Pipette



Conventional consumables for quantitative transfer of liquids, in the field of experimental direction of pipetting operations such as biology and chemistry. Cell culture laboratory liquid transfer, dosing, aspiration or other liquid transfer.

## • Features

- Good chemical stability.
- Transparent with clear graduations for easy observation.
- Pipette can be twisted for use with micro vessels and special-shaped containers.
- Good resilience for rapid liquid transfer
- High precision and good repeatability.
- Each package is individually labelled with the batch number for easy quality tracking and traceability.
- DNase/RNase, endotoxin and pyrogenic free.
- Individually wrapped, sterilized by EO, SAL=10<sup>-6</sup>.

Volume (mL)	Length (mm)	Packaging	Sterile	Packing		Cat. No.
				/Pack	/Case	
1	144	Individually Packed	Sterile	4	500	318012
		Bulk	Non-sterile	10	500	318031
2	150	Individually Packed	Sterile	4	500	318112
		Bulk	Non-sterile	10	500	318131
3	162	Individually Packed	Sterile	4	500	318212
		Bulk	Non-sterile	10	500	318231
	182 (Extra Long)	Individually Packed	Sterile	10	200	318314
5	200	Individually Packed	Sterile	4	250	318516
10	285	Individually Packed	Sterile	4	125	318417

# Serological Pipette



2ml Aspirating Pipette  
No Printing, No plug



## Features

- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- Edged color-coded band for identification.
- Negative graduations for extra volume.
- Polyolefin fiber filter to reduce contamination.

## Serological Pipette, Individually Wrapped, Sterile

Cat.No.	Volume (mL)	/Pack	/Case
324001	1ml Serological Pipette	500	3000
325001	2ml Serological Pipette	400	2400
326001	5ml Serological Pipette	200	800
327001	10ml Serological Pipette	200	800
328001	25ml Serological Pipette	200	800
329001	50ml Serological Pipette	100	600
<b>NEW</b> 329501	100ml Serological Pipette	50	300
325011	2ml Aspirating Pipette, No Printing, No plug	200	800



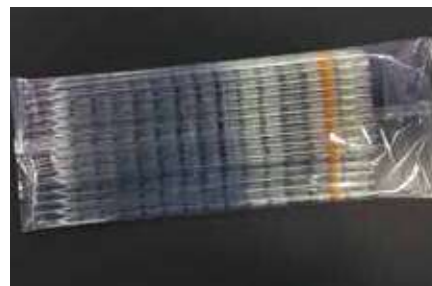
## Serological Pipettes, Individually Plastic-plastic Wrapped

Cat.No.	Volume (mL)	/Pack	/Case
<b>NEW</b> 324003	1ml Serological Pipette	500	3000
<b>NEW</b> 325003	2ml Serological Pipette	400	2400
<b>NEW</b> 326003	5ml Serological Pipette	200	800
<b>NEW</b> 327003	10ml Serological Pipette	200	800
<b>NEW</b> 328003	25ml Serological Pipette	200	800
<b>NEW</b> 329003	50ml Serological Pipette	100	600

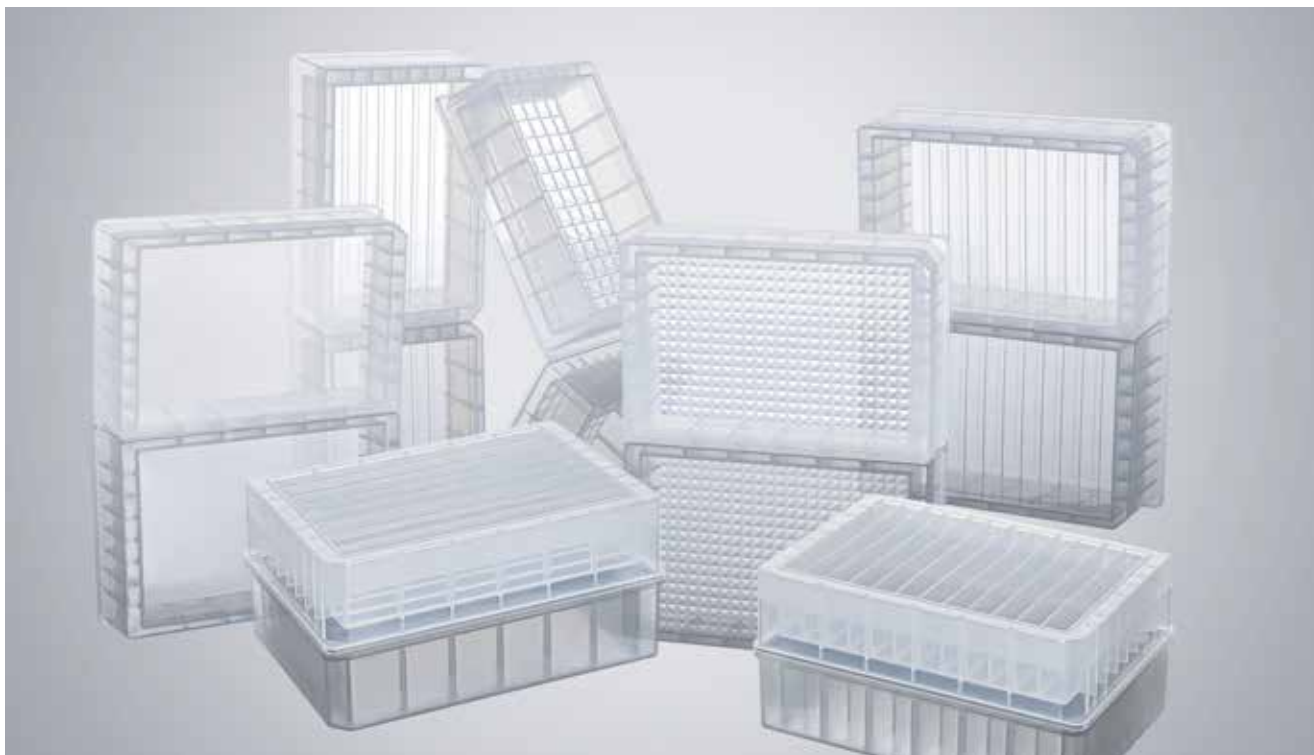


## Serological Pipette, Bulk Bag, Sterile

Cat.No.	Volume (mL)	/Pack	/Case
324002	1ml Serological Pipette, 20 per Bulk Bag	1000	3000
325002	2ml Serological Pipette, 20 per Bulk Bag	1000	3000
326002	5ml Serological Pipette, 20 per Bulk Bag	500	1500
327002	10ml Serological Pipette, 20 per Bulk Bag	500	1500
328002	25ml Serological Pipette, 20 per Bulk Bag	200	800
329002	50ml Serological Pipette, 20 per Bulk Bag	100	600



# Reservoir



8 Channel



12 Channel



96 Channel



384 Channel

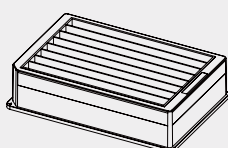
Nest reservoirs have the standard SBS size, which is suitable for all kinds of automatic liquid handling systems. The built-in groove at the bottom of the reservoirs can reduce the dead volume of reagent and ensure the consistency of the liquid volume being handled.

## Features

- SBS International Standard
- Medical grade polypropylene (PP).
- Autoclavable at 121C/ 15psi.
- Non - pyrogen, DNase/RNase Free.
- Lot traceability.
- Low and Medium profile designs to satisfy your liquid handling needs.
- They come without caps, 10/pk, 50/cs.



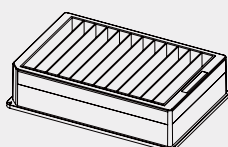
# Reservoir



127.76\*85.48\*31.4 mm

## Multi Well, 8 Channel, Low Profile

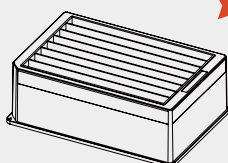
Non-sterile Cat.No.	
Sterile Cat. No.	360161
Well Volumn	
Packing	5/pk,50/cs



127.76\*85.48\*31.4 mm

## Multi Well, 12 Channel, Low Profile

Non-sterile Cat.No.	
Sterile Cat. No.	360162
Well Volumn	
Packing	5/pk,50/cs

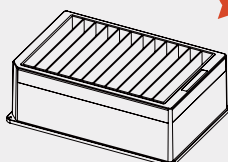


127.76\*85.48\*44.5 mm

NEW

## Multi Well, 8 Channel, Medium Profile

Non-sterile Cat.No.	360201 <b>NEW</b>
Sterile Cat. No.	360261 <b>NEW</b>
Well Volumn	32 mL
Packing	5/pk, 50/cs

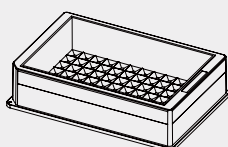


127.76\*85.48\*44.5 mm

NEW

## Multi Well, 12 Channel, Medium Profile

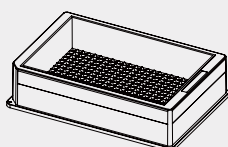
Non-sterile Cat.No.	360202 <b>NEW</b>
Sterile Cat. No.	360262 <b>NEW</b>
Well Volumn	22 mL
Packing	5/pk,50/cs



127.76\*85.48\*31.4 mm

## Single Well, 96 Troughs, Low Profile

Non-sterile Cat.No.	360103
Sterile Cat. No.	360163
Well Volumn	195 mL
Packing	5/pk,50/cs



127.76\*85.48\*31.4 mm

## Multi Well, 8 Channel, Low Profile

Non-sterile Cat.No.	360104
Sterile Cat. No.	360164
Well Volumn	195 mL
Packing	5/pk,50/cs

# Reservoir



Multi Well, 96 Troughs, Medium Profile	
Non-sterile Cat.No.	360203 <b>NEW</b>
Sterile Cat. No.	360263 <b>NEW</b>
Well Volumn	290 mL
Packing	5/pk, 50/cs



Multi Well, 384 Troughs, Medium Profile	
Non-sterile Cat.No.	360204 <b>NEW</b>
Sterile Cat. No.	360264 <b>NEW</b>
Well Volumn	290 mL
Packing	5/pk,50/cs



Multi Well, 8 Troughs, Medium Profile	
Non-sterile Cat.No.	360205 <b>NEW</b>
Sterile Cat. No.	360265 <b>NEW</b>
Well Volumn	290 mL
Packing	5/pk,50/cs



Single Well, 12 Troughs, Medium Profile	
Non-sterile Cat.No.	360206 <b>NEW</b>
Sterile Cat. No.	360266 <b>NEW</b>
Well Volumn	290 mL
Packing	5/pk,50/cs

# Reagent Reservoirs



Cat.No.	Volume (mL)	Sterilized	/Pack	/Case
360002	60	Non-sterile	5	25
360012	60	Sterile	5	25

# Round Storage Bottle



Round Storage Bottle is sterile and made from enzyme-free plastic in line with product packaging and storage requirements in molecular biology and cell biology, laboratory medicine, genomics and proteomics, etc. Improvement in the quality of product packaging helps to improve the company image and brand value, make our products' packaging comply with international standards and enter the international market.

## Features

- The raw materials, premium polypropylene (PP)/polyethylene (HDPE), are excellent in physical and chemical index and resistant to pressure, impact and acid-base. PP materials can undergo autoclave sterilization at 121°C ; HDPE can be stored at -80°C.
- A full range of choices to meet different packaging and storage requirements.
- The properties of wash-free and ready to use mean no need for tedious pro-cleaning processing work. The internal packaging is thickened to ensure transportation and storage safety.
- The professional leak-proof design of bottle mouth guarantees excellent seal ability and exempts the need for inner cover or inner gasket for protection.
- 100% leaking-proof guarantee ensures safety even during air transportation; wide-mouthed design makes it easy to access liquid inside.

No biotoxicity, pyrogen-free, DNase/RNase-free, manufactured in Class 100,000 clean workshop. The plastic bottles are sterilized using by GAMMA-ray.

- Introduction of imported digital-controlled production equipment with high precision. The products are fine in details and comfortable to hold, with high uniformity among batches. The walls have high gloss but no color difference.

High-class molding technologies and surface processing technologies produce smooth interior and exterior surfaces of the plastic bottles without wicking effect of reagents during the process, subsequently significantly reducing sample wastage. With paralleled quality, our products can perfectly replace the imported competitors.

## Application

- Suitable for product packaging and storage requirements in molecular biology, laboratory medicine, genomics and proteomics research.

Volume (mL)	Size(mm)			Packing		Polypropylene (PP)		Polypropylene (PP)	
	Bottleneck Diameter	Bottom Diameter	Height	/Pack	/Case	Material	Cat.No.	Material	Cat.No.
8	13.8	24.8	42.3	20	20	HDPE	335101	PP	335201
15	13.8	24.8	56.1	20	20	HDPE	336101	PP	336201
30	21	33.9	59.05	10	20	HDPE	337101	PP	337201
60	21	38.6	81.5	10	20	HDPE	338101	PP	338201
125	28	50.8	95.5	10	10	HDPE	339101	PP	339201
250	33	60.5	127.6	10	10	HDPE	340101	PP	340201
500	43.8	73	161.6	5	10	HDPE	341101	PP	341201

# Sample Vial



## ● Application

- Caps have 6 color Caps (blue, red, yellow, purple and natural) personalize the identification of different reagents in a fast and convenient way.
- Cap color is encoded in the product code.
- Products are made of transparent polypropylene (PP) which meets USP Class VI standards and is free of heavy metal ions. Products can be used in proteomics, drug development, genomics and other fields.
- Special knurling design on the vial body enables the vial to be stuck in the special base and to be tightened with a single hand.
- Silicone O-ring inside the screw caps ensures secure sealing. ADR & IATA compliant, no liquid leakage in negative pressure test under a pressure of -0.95 bar.
- Withstands a maximum centrifugal force up to 20,000 xg.



Six Cap Colors

## ● Sample Vials, without Cap

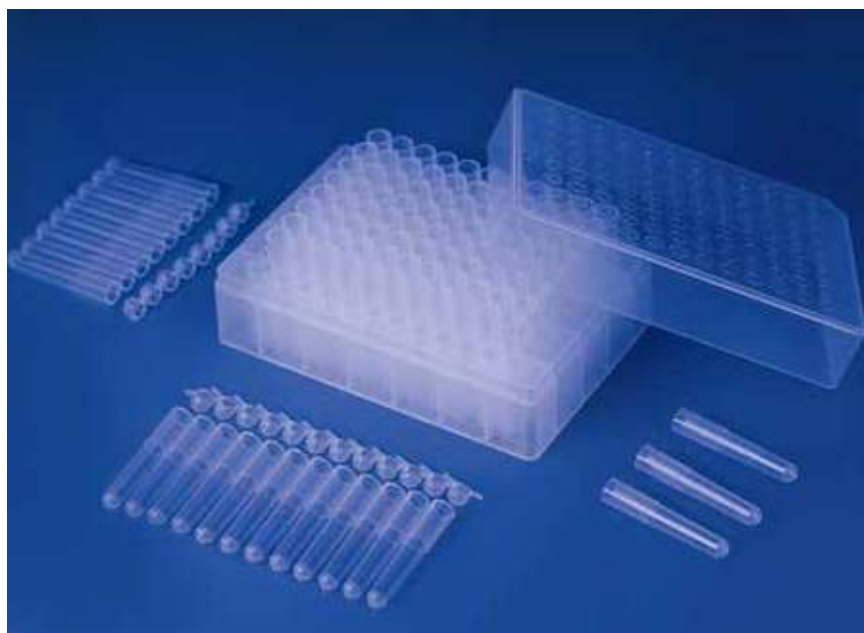
Volume (mL)	Packing		Bottom shape	Cat.No.
	/Pack	/Case		
0.5	500	4	Self Standing	633901
1.5	500	4	Self Standing	634901
1.5	500	4	Self Standing	634911
2.0	500	4	Conical	635901

## ● External Thread Cap

Color	Packing		External Thread Cap	External Thread Cap Hinged Cap
	/Pack	/Case		
Blue	500	4	633951B	633961B
Red	500	4	633951R	633961R
Yellow	500	4	633951Y	633961Y
Purple	500	4	633951P	633961P
Natural	500	4	633951N	633961N
Green	500	4	633951G	633961G

# Cluster tube

NEST 1.1mL 96-well Cluster Tube Box conforms to the ANSI-SBS standard and is compatible with multi-channel pipettes and automated liquid workstations. The raw material of tube body is imported PP, which meets the USP-CLASS 6 standard. It has high transparency and good chemical stability, and is suitable for low-temperature storage of cells, drugs, tissues, sera, and other reagents.



## Complete Specifications

- NEST 1.1mL Cluster Tubes are available in single tube, 8-strip, and 12-strip, and the tube caps are available in 8-strip and 12-strip for customers to choose from.
- They are compatible with multi-channel pipettes and automated liquid workstations with SBS standard size carriers.

## Exquisite Design

- The one-way cap design, with letter and number grids, ensures positive identification of samples.
- The bottom and side walls of the box holder are hollowed out for good thermal conductivity, and the box supports direct immersion in a water bath.

## High Quality Raw Materials

- The raw material is imported PP, which conforms to USP class 6 standards. The 8-strip and 12-strip caps are made of TPE, which has better sealing performance.
- Resistant to low temperature storage at -80°C, and autoclavable.



## Cluster Tube

Schematic Diagram	Name	Packaging			Material	Sterile Cat.No.	Non-sterile Cat.No.
	1.1mL Single Cluster Tube	Bagged	960 pcs/bag	5 bags/case	PP	/	628111
		Boxed	96 pcs/box 10 boxes/pack	5 bags/case	PP	628114	628112
	1.1mL 8-strip Cluster Tube	Bagged	120 pcs/bag	5 bags/case	PP	/	628121
		Boxed	12 pcs/box 10 boxes/pack	5 bags/case	PP	628124	628122
	1.1mL 12-strip Cluster Tube	Bagged	80 pcs/bag	5 bags/case	PP	/	628131
		Boxed	8 pcs/box 10 boxes/pack	5 bags/case	PP	628134	628132

## Cluster Tube Cap

Schematic Diagram	Name	Packaging			Material	Sterile Cat.No.	Non-sterile Cat.No.
	8-strip Cluster Tube Cap	Bagged	120/bag	5 bags/case	TPE	628923	628921
	12-strip Cluster Tube Cap	Bagged	80/bag	5 bags/case	TPE	628933	628931



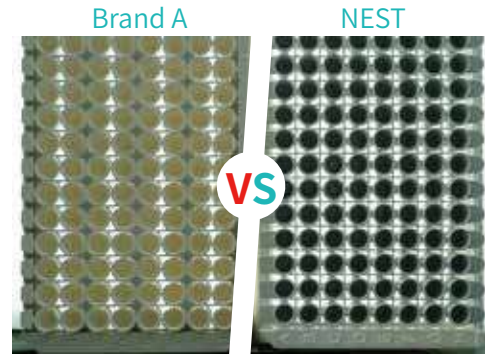
# Molecular Biology

# ELISA Plate

NEST ELISA plate, made of polystyrene, is a safe, reliable and effective supporter in enzyme-linked immuno-absorbent assay (ELISA). The features of the plates are crucial for the adsorption of antigens, antibodies and antigen-antibody complexes. ELISA plates from NEST adopts a unique surface treatment process, allowing to obtain ideal results in ELISA tests which are extensively employed in vitro diagnostics in medical and clinical laboratories.

## • Features

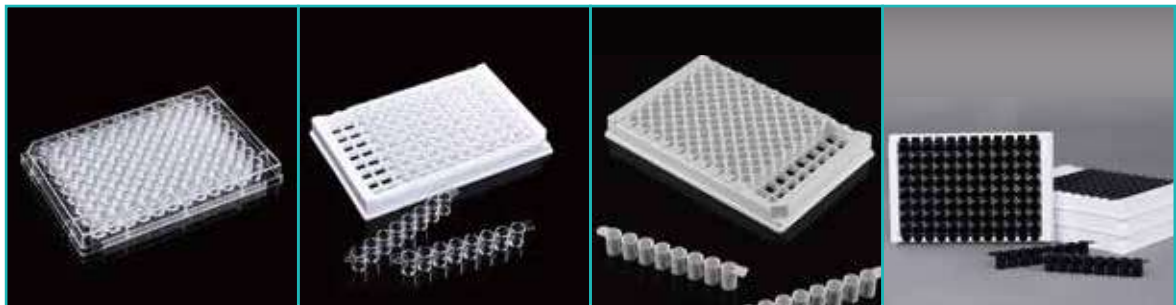
- The plates are made of polystyrene and are designed specifically for ELISAs. They present good adsorption performance and low baseline value.
- Uniform thickness and size.
- High batch-to-batch stability and low coefficient of variation (CV) value.
- Both detachable and non-detachable flat-bottom plates are offered for customers to choose from based on their applications.
- The letters and numbers on the frame of the plates are convenient for detection and identification in experiments.
- High transparency of clear plate bottom.
- White plates are best suited for luminescence measurements as they reflect the signal instead of absorbing it and hence enhance the luminescence signals.
- Raw materials show good light-proof properties, which greatly reduce well-to-well signal interference.



The white ELISA plate has good light avoidance

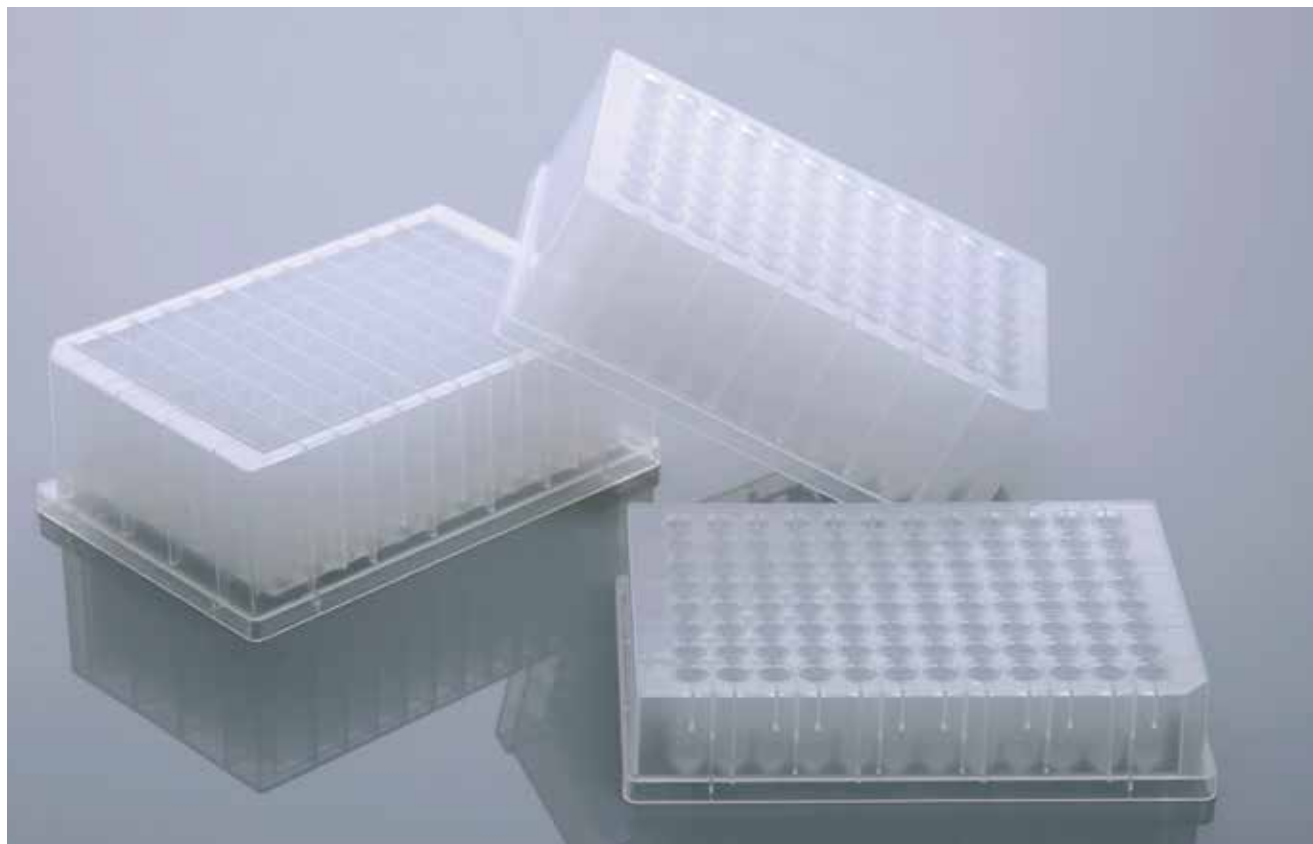
## • Features of detachable 96-well ELISA plate

- Greatly improves the flexibility in diagnostic testing.
- Each well is locked in the frame, all at the same horizontal.
- The design of 8-well strip allows for uniform reading and washing.



Cat.No.	514201	504201	504271	504261
Specification	F96	12 x F8	12 x F8	12 x F8
Color	Transparent	White Frame & Clear Well	White Frame & White Well	White Frame & Black Well
Description	Undetachable	Detachable	Detachable	Detachable
Packing	5/Pack, 10 Pack/Box	5/Pack, 10 Pack/Box	5/Pack, 10 Pack/Box	5/Pack, 10 Pack/Box
Features	High transparency		White Elisa Plates is light-proof, and can lower the cross-talk between wells	Made of non-autofluorescent materials with good protein adsorption and low background fluorescence.
Application	Quantitative and qualitative solid phase immunoassay and binding assay		Autofluorescence, chemiluminescence	Fluorescence immunoassay and binding assay

# Deep Well Plates



The length and width of the deep well plate comply with the SBS international standards. The deep well plates of NEST have a variety of specifications, conforming to the needs of fully automatic workstations and experiments.

## Features

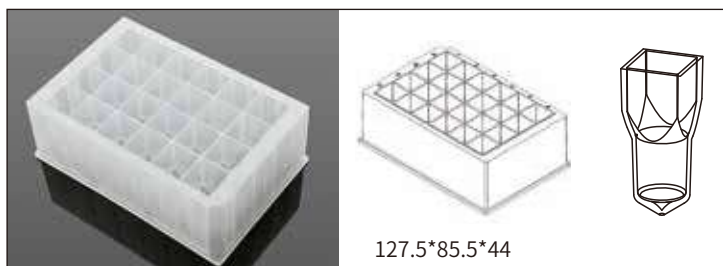
- Made of high-quality, Class VI level PP material with high stability, can be used to store most types of organic solutions, acidic and alkaline solutions, etc.
- The dimension of deep well plates conforms to ANSI standard and international SBS standard, compatible with multi-channel pipette and automation equipment.
- Autoclavable at 20Psi, 121°C for 20 minutes, great heating uniformity.
- Can be stored under the subzero temperature of 80°C.
- Maximum sustainable centrifuge force from 3000g to 4000g. Uniform bottom, wells, and the thickness of the sidewall. The flat upper of the plates, easy to seal.
- Minimum residual liquid, low heavy metal content.
- Alphabetical sorting and cut angle mark for convenient tracking of samples.
- Each package has a separate article number/batch number identification, facilitating quality tracking. Can be sealed by three materials: self-adhesive sealing mat, silicone sealing mat, or heat-sealing film.
- Produced and packed in Class 100,000 clean workshop.
- Non-Pyrogenic, DNase/Rnase free.
- Wide applications, such as high-throughput screening (HTS), tissue culture, continuous dilution, reagent transfer, and nucleic acid extraction, etc.
- Optional sterilization methods: ethylene oxide (default), gamma-ray, electron beam.

## Application

Genomic DNA extraction, plasmid DNA extraction, and nucleic acid extraction and purification of various samples. High-throughput automatic liquid operation to achieve high-throughput operations, such as protein precipitation, liquid extraction, and processing of animal tissues, bacteria, plants, soil, clinical samples, yeasts, etc.



# Deep Well Plates (Square Well)



## 10.4 ml 24-Well Deep Well Plate, V-Bottom, Square Well

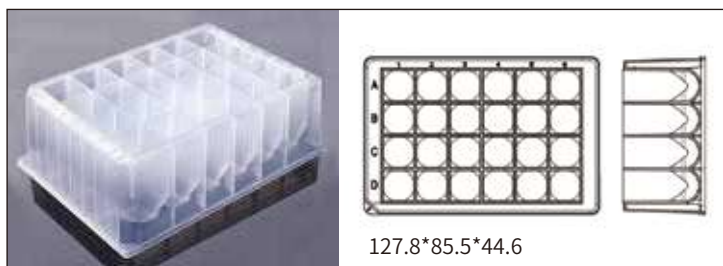
Non-sterile Cat.No. 504301

Sterile Cat.No. 504361

Packing 5/pk, 50/cs

Matching Mat Item: 506002/506062

**King Fisher Purification System Compatible**



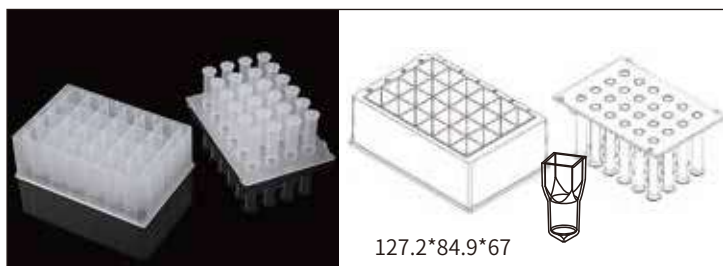
## 10.4 ml 24-well Deep Well Plate, U-Bottom, Square Well

Non-sterile Cat.No. 504302

Sterile Cat.No. 504362

Packing 5/pk, 50/cs

Matching Mat Item: 506002/506062



## 16 ml 24-Well Deep Well Plates, V Bottom, Square Well, with 24 Well Plastic Comb

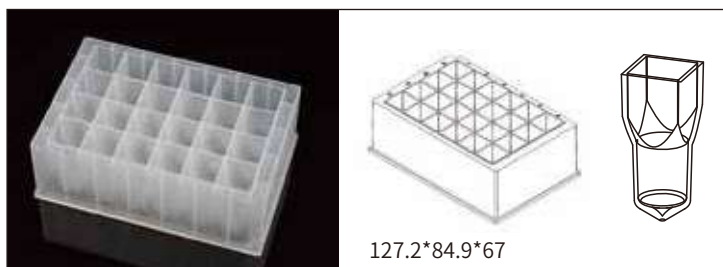
Non-sterile Cat.No. /

Sterile Cat.No. 510011

Packing 1/pk, 25/cs

Matching Mat Item: 506002/506062

**King Fisher Purification System Compatible**



## 16 ml 24-Well Deep Well Plates, V Bottom, Square Well

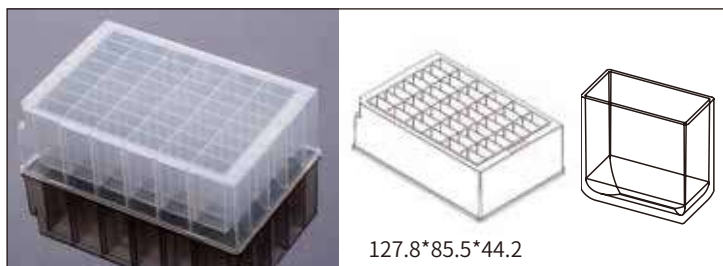
Non-sterile Cat.No. /

Sterile Cat.No. 510001

Packing 1/pk, 25/cs

Matching Mat Item: 506002/506062

**King Fisher Purification System Compatible**



## 4.6 ml 48-Well Deep Well Plate, U-Bottom, Square Well

Non-sterile Cat.No. 504002

Sterile Cat.No. 504062

Packing 5/pk, 50/cs

Matching Mat Item: 506102/506162



### 0.5 ml 96-Well Deep Well Plate, V Bottom, Square Well

Non-sterile Cat.No. 500021

Sterile Cat.No. 500621

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064

**King Fisher Purification System Compatible**



### 1.0 ml 96-Well Deep Well Plate, V-Bottom, Square Well

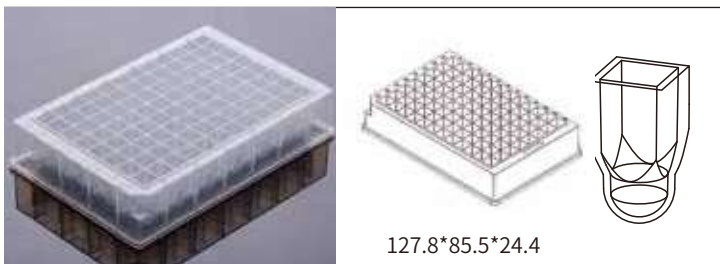


Non-sterile Cat.No. 501021

Sterile Cat.No. 501621

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064



### 1.0 ml 96-Well Deep Well Plate, U-Bottom, Square Well

Non-sterile Cat.No. 501002

Sterile Cat.No. 501062

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064



### 1.6 ml 96-Well Deep Well Plate, U-Bottom, Square Well

Non-sterile Cat.No. 502002

Sterile Cat.No. 502062

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064



### 2.2 ml 96-Well Deep Well Plate, U-Bottom, Square Well

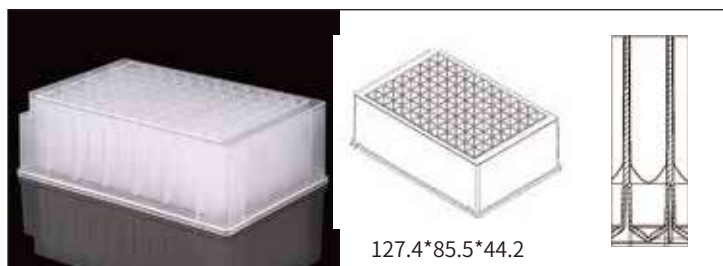
Non-sterile Cat.No. 503002

Sterile Cat.No. 503062

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064

# Deep Well Plates (Square Well)



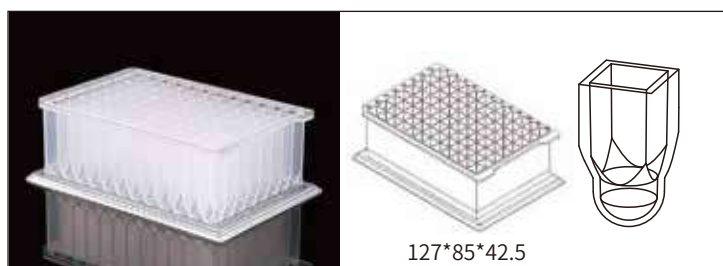
## 2.2 ml 96-Well Deep Well Plate, V-Bottom, Square Well

Non-sterile Cat.No. 503001

Sterile Cat.No. 503501

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064



## 2.2 mL 96-Well Deep Well Plate, I-Shaped, U-Bottom, Square Well

NEW

Non-sterile Cat.No. 503711

Sterile Cat.No. 503761

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064



## 2.2 ml 96-Well Deep Well Plate, V Bottom, Square Well

Non-sterile Cat.No. 503021

Sterile Cat.No. 503621

Packing 5/pk, 50/cs

Matching Mat Item: 506003/506063/506004/506064

King Fisher Purification System Compatible



## 120 ul 384 well Deep Well Plates, V Bottom, Square Well

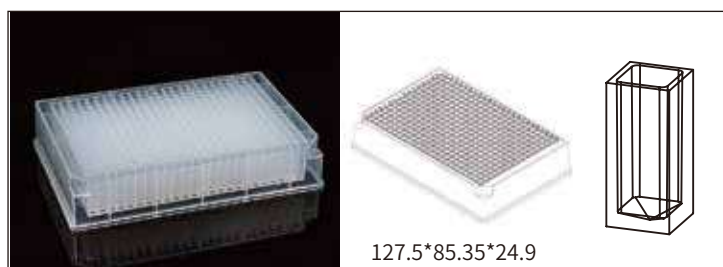
NEW

Non-sterile Cat.No. 504701

Sterile Cat.No. 504761

Packing 5/pk, 50/cs

Matching Mat Item: 506001/506061



## 240 ul 384 well Deep Well Plates, V Bottom, Square Well

NEW

Non-sterile Cat.No. 504703

Sterile Cat.No. 504763

Packing 5/pk, 50/cs

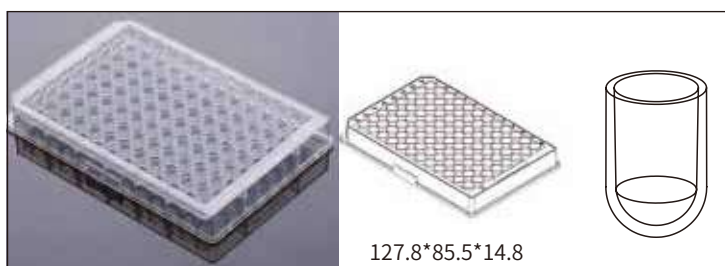
Matching Mat Item: 506001/506061

# Deep Well Plates (Round Well)



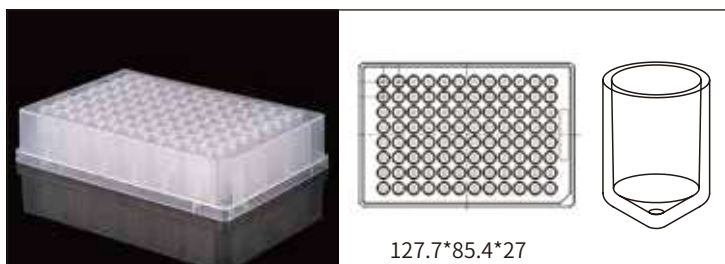
## 0.36 ml 96-Well Deep Well Plate, V-Bottom, Round Well

Non-sterile Cat.No.	500101
Sterile Cat.No.	500161
Packing	5/pk, 50/cs
Matching Mat Item: 506005/506065	



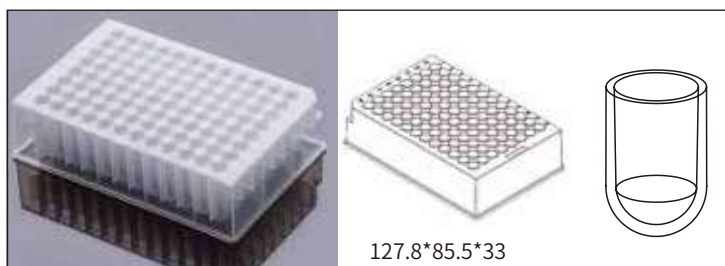
## 0.4 ml 96-Well Deep Well Plate, U-Bottom, Round Well

Non-sterile Cat.No.	501102
Sterile Cat.No.	501162
Packing	10/pk, 50/cs
Matching Mat Item: 506005/506065	



## 0.5 ml 96-Well Deep Well Plate, V-Bottom, Round Well

Non-sterile Cat.No.	501101
Sterile Cat.No.	501601
Packing	5/pk, 50/cs
Matching Mat Item: 506005/506065	



## 1.0 ml 96-Well Deep Well Plate, U-Bottom, Round Well

Non-sterile Cat.No.	502102
Sterile Cat.No.	502162
Packing	5/pk, 50/cs
Matching Mat Item: 506005/506065	



## 1.1 ml 96-Well Deep Well Plate, U-Bottom, Round Well

Non-sterile Cat.No.	502202
Sterile Cat.No.	502262
Packing	5/pk, 50/cs
Matching Mat Item: 506005/506065	

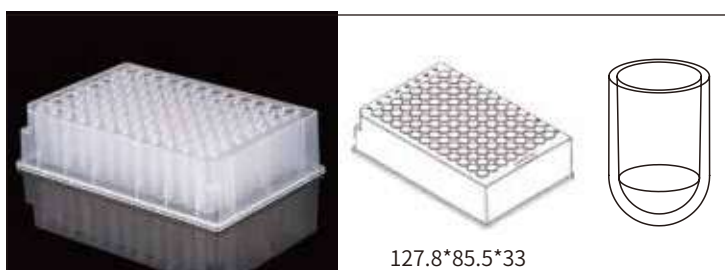
NEW

# Deep Well Plates (Round Well)



## 1.3 ml 96-Well Deep Well Plate, V-Bottom, Round Well

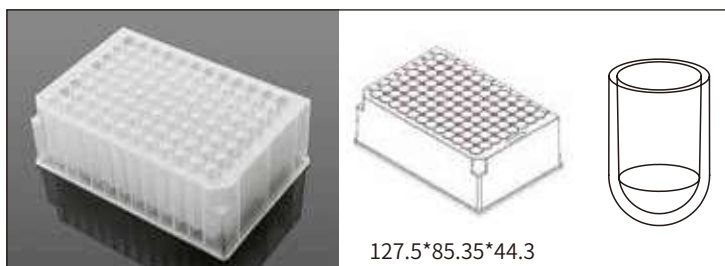
Non-sterile Cat.No.	502101
Sterile Cat.No.	502601
Packing	5/pk, 50/cs
Matching Mat Item: 506005/506065	



## 1.3 ml 96-Well Deep Well Plate, U-Bottom, Round Well

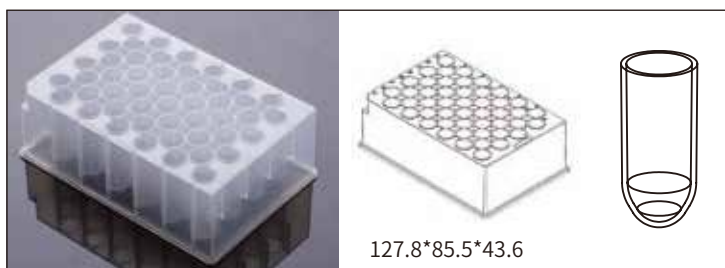
**NEW**

Non-sterile Cat.No.	507001
Sterile Cat.No.	507101
Packing	5/pk, 50/cs
Matching Mat Item: 506005/506065	



## 2.0 ml 96-Well Deep Well Plate, U-Bottom, Round Well

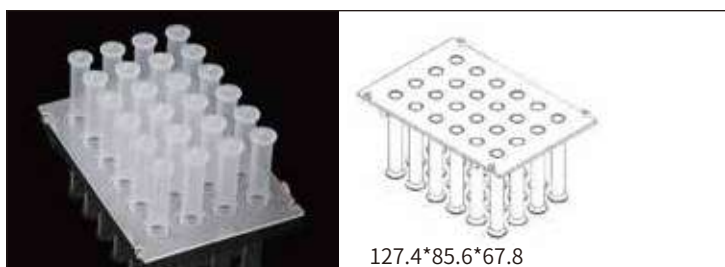
Non-sterile Cat.No.	503102
Sterile Cat.No.	503162
Packing	5/pk, 50/cs
Matching Mat Item: 506006/506066	



## 3.5 ml 48-Well Deep Well Plate, U-Bottom, Round Well

Non-sterile Cat.No.	504102
Sterile Cat.No.	504162
Packing	5/pk, 50/cs
No Matching Mat Yet	

## Plastic Comb



## 24 Well Plastic Comb Compatible with 510001, 16ml 24-Well Plate

Non-sterile Cat.No.	/
Sterile Cat.No.	509001
Packing	1/pk, 25/cs

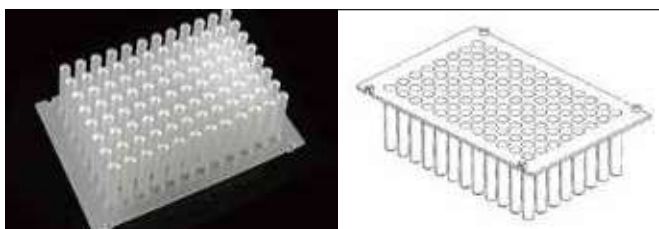
# Accessories

## Plastic Comb



### 8-strip Plastic Comb, Compatible with 503711 & 503761

Non-sterile Cat.No.	509211
Sterile Cat.No.	509261
Packing	2/pk, 50/box, 500/cs

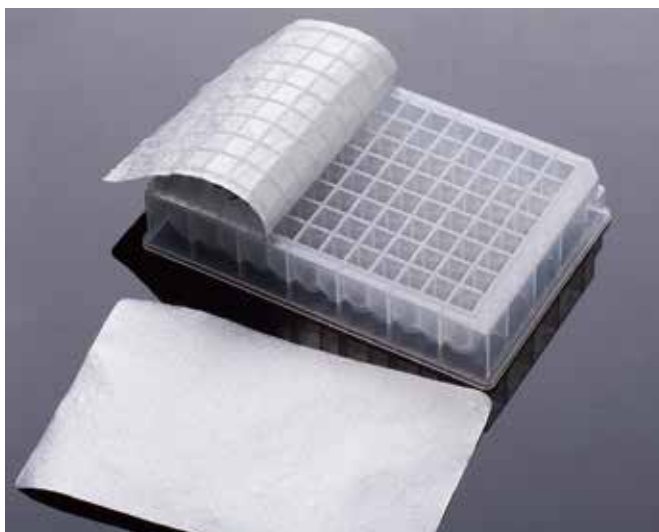


### 96 Tip Combs for Magnetic Applications

Non-sterile Cat.No.	503311
Sterile Cat.No.	503361
Packing	2/pk, 50/cs

King Fisher Purification System Compatible

## Sealing Film



### Aluminum Sheet for Deep Well Plates & PCR Plates

#### Features

- Widely used in sealing of plates and PCR for liquid store.
- 100% leakage, heat sealing technology has been proved superior to other sealing methods.
- Effectively used for long-distance transportation, with low temperature sterilization.
- No adhesives, avoid contamination of samples.
- Not easily dissolved by organic solvents, such as DMSO.
- Easy to peel.

Cat.No.	520002	Thickness	0.18 mm
Temp/Time	170~175°C, 4~5s	Packing	100/pk
Size	125*84 mm		

Should use with heat sealing instruments.



### Adhesive Sealing Film for Deep Well Plates

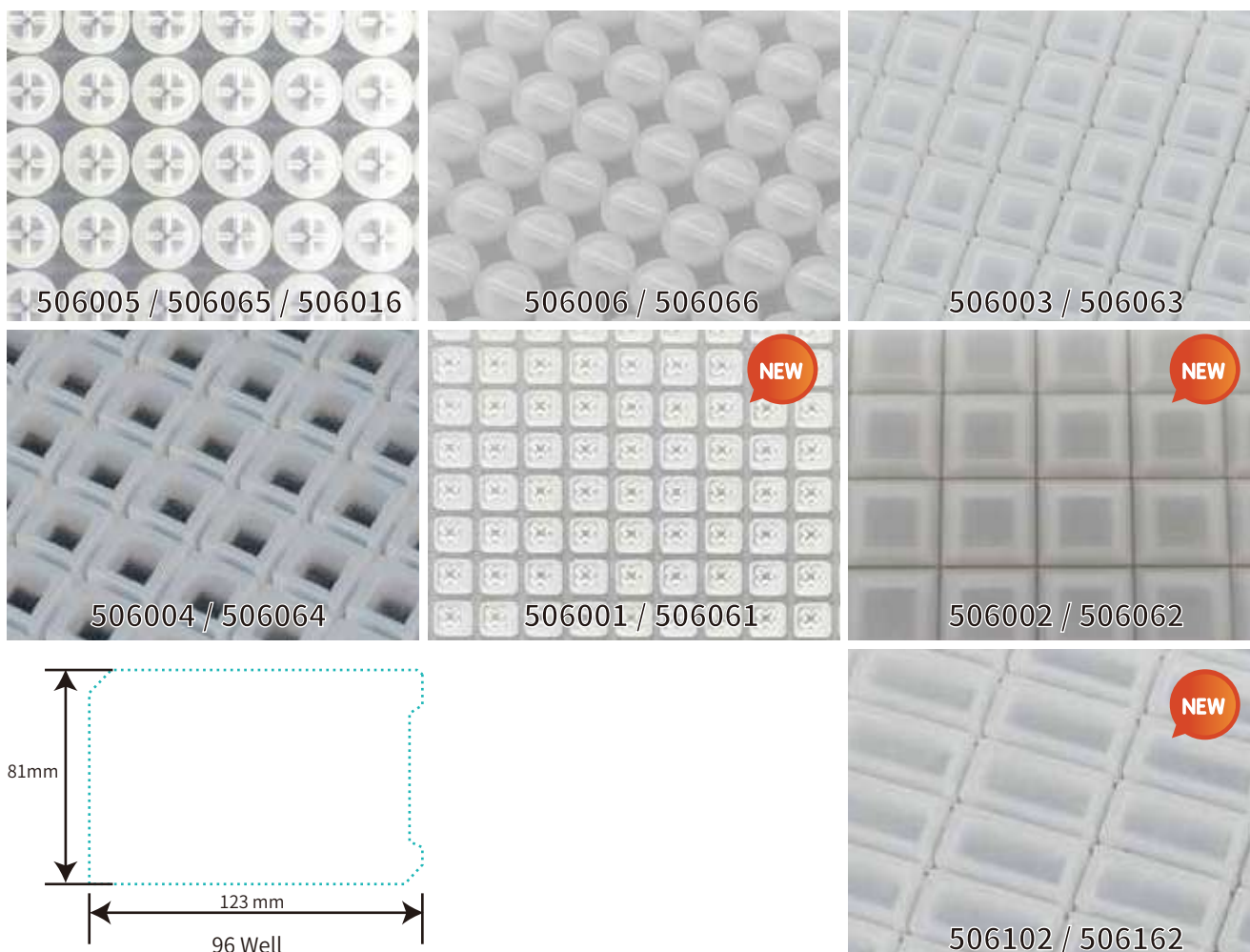
Cat.No.	520001	Thickness	0.18 mm
Temp/Time	/	Packing	100/pk
Size	144*87 mm	Can be used directly.	



### Adhesive aluminum Sheet for deep well plates and PCR plates

Cat.No.	520003	Thickness	0.18 mm
Temp/Time	-20~120°C	Packing	100/pk
Size	130mm x 80mm	Can be used directly.	

# Accessories



## Features of Silicone Sealing Mat

- The product is easy to open and close, and can effectively seal the deep well plate, which is convenient for operation and saves time.
- Good sealing performance can prevent the volatilization of a variety of solvents.
- Withstand a wide temperature range (- 50 °C - 200 °C) and is suitable for various experiments.
- Excellent chemical corrosion resistance and is used for low-temperature preservation.
- The pre-opening design allows the pipette tip to enter the hole without damage to the silicone sealing mat cover.

## Silicone Sealing Mat

Description	/Pack	/Case	Non-sterile Cat.No.	Sterile Cat.No.
24 Well Square well Silicone Sealing Mat <b>NEW</b>	10	50	506002	506062
48 Well Square well Silicone Sealing Mat <b>NEW</b>	10	50	506102	506162
96 Well Round well Silicone Sealing Mat, can be punctured, <=1.0 ml	10	50	506005	506065
96 Well Round well Silicone Sealing Mat, 2.0 ml	10	50	506006	506066
96 Well Round well Silicone Sealing Mat, pre-slit, 2.0 ml	10	50	506016	/
96 Well Square well Silicone Sealing Mat	10	50	506003	506063
96 Well Square well Silicone Sealing Mat, can been punctured	10	50	506004	506064
384 Well Square well Silicone Sealing Mat <b>NEW</b>	10	50	506001	506061

# 8-Strip PCR Tube & Tube & Cap



## • PCR Tube

Volume (mL)	Cap Type	Color	/Pack	/Case	Cat.No.
0.2	Flat	Transparent	1000	10	401001

## • Features

- Made of polypropylene.
- Compatible with all major PCR and real-time PCR instruments on the market. Thin-wall design produces high thermal conductivity, allowing the reaction solution inside to reach the target temperature as quickly as possible.
- The cap has excellent sealing performance and is easy to open; the loss of reaction volume can be controlled within 5% when a PCR heated lid is applied.
- A maximum capacity of 250  $\mu$ L.
- No human DNA, no DNase/RNase, no PCR inhibitors.
- Zip-lock bag.

## • PCR 8-strip Tube with Individual Cap Attached

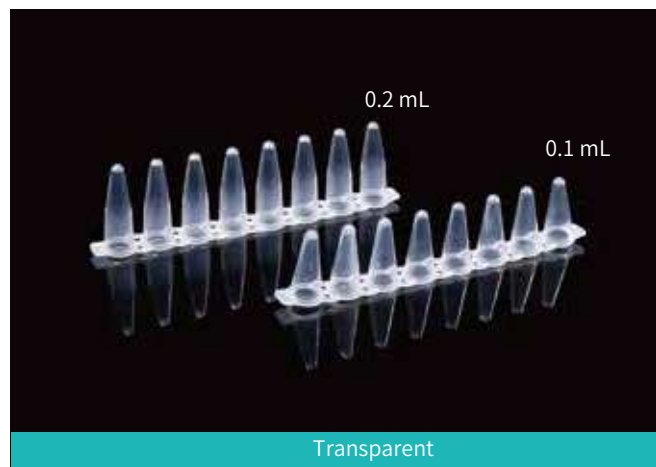
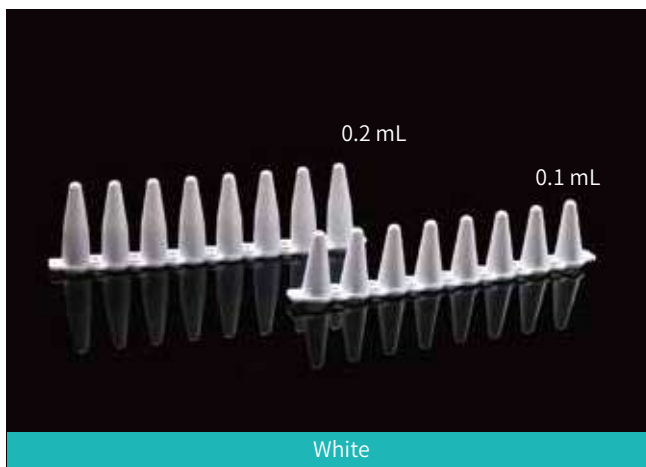
Volume (mL)	Cap Type	Color	/Pack	/Case	Cat.No.
0.2	Flat	Transparent	120	10	404001

## • Features

- No human DNA, no DNase/RNase, no PCR inhibitors.
- Zip-lock bag.
- White PCR 8-strip tubes can effectively prevent signal interference, increase signal strength, and improve experimental efficiency.



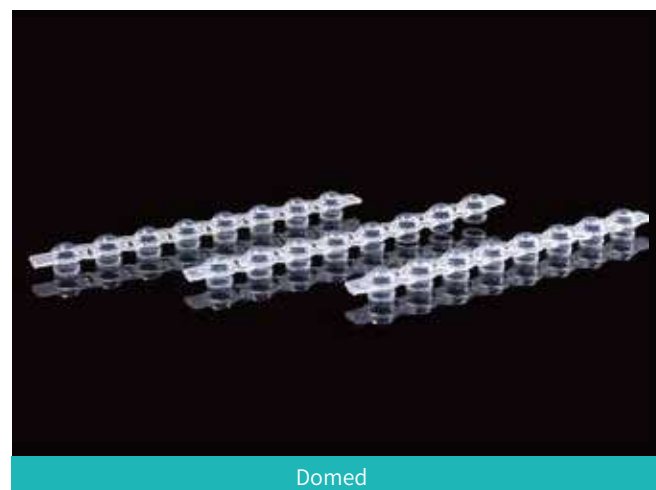
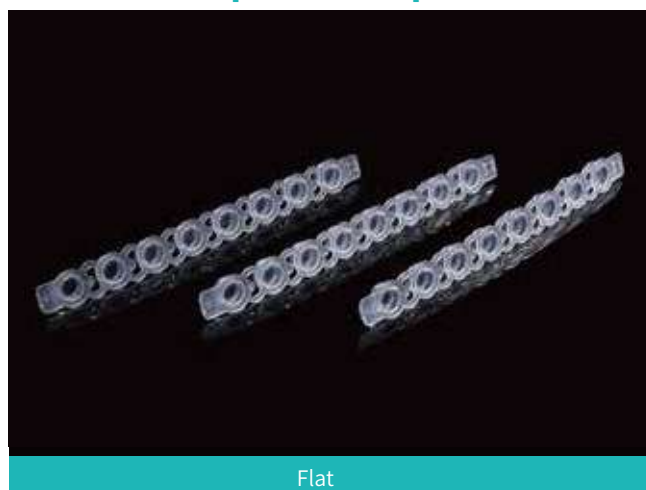
## ● PCR 8-strip Tube



Volume (mL)	Color	Packing		Non-sterile Cat.No.	Sterile Cat.No.
		/Pack	/Case		
0.1	Transparent	125	10	403102	403122
	White	125	10	403112	403132
0.2	Transparent	125	10	403002	403022
	White	125	10	403012	403032

The transparent version is suitable for ordinary PCR reactions, and the white version is suitable for qPCR reactions. The 0.1 mL tube is intended for overnight incubation experiments. It is specifically designed to be shorter than standard tubes to reduce contamination caused by condensation and the evaporation of the reaction solution. The design also increases the penetration intensity of fluorescent signals in qPCR. The maximum capacity of the 0.1 mL tube is 150  $\mu$ L, and that of a 0.2 mL tube is 250  $\mu$ L.

## ● PCR 8-strip Tube Cap



Cap Type	Color	Packing		Non-sterile Cat.No.	Sterile Cat.No.
		/Pack	/Case		
Flat	Transparent	125	10	406012	406022
Domed	Transparent	125	10	406112	406122

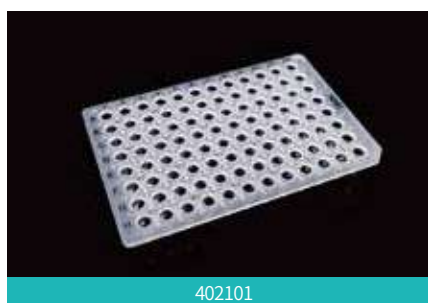
- Compatible with NEST 8-strip PCR Tubes or 96-well PCR plates.
- The cap design allows for easy opening and closing, securing better sealing performance.
- The flat caps are better for qPCR experiments.
- The domed cap can better prevent liquid evaporation.

# PCR 96 Well Plate

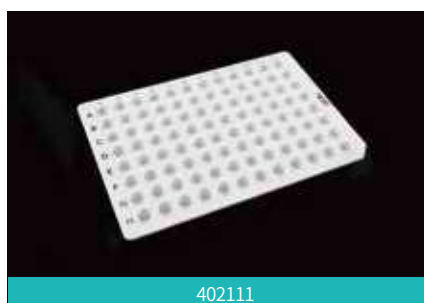
When using a thermal cycler with the fluorescence detector above the samples, NEST white PCR plates effectively mutual interference between wells. The Nest white PCR plate also allows for high accuracy of detection when signal intensity is low, while Nest clear PCR plates are designed for PCR machines where the fluorescence detector is located below the sample plate.

## ● Features

- Made of high-quality polypropylene to ensure minimal loss of reaction solution.
- Flat surface, thick and solid, not easy to deform.
- The black ink-printing marks on the surface are easy to read and identify.
- Elevated edge of the hole can better prevent cross contamination.
- Compatible with NEST pressure sensitive film, self-adhesive film and hot sealing film.
- Autoclavable.
- The tube wall of transparent 96-well PCR Plate is thin, allowing for good light transmission.
- White PCR 96-well plate is better for qPCR experiments.
- The maximum capacity of the 0.1ml tube is 150  $\mu$ L, and that of a 0.2 mL tube is 250  $\mu$ L.
- Certified DNase/RNase and Pyrogen Free.



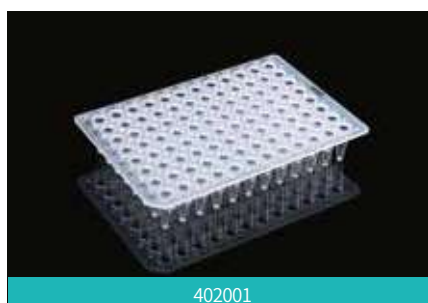
402101



402111



402812



402001



402011

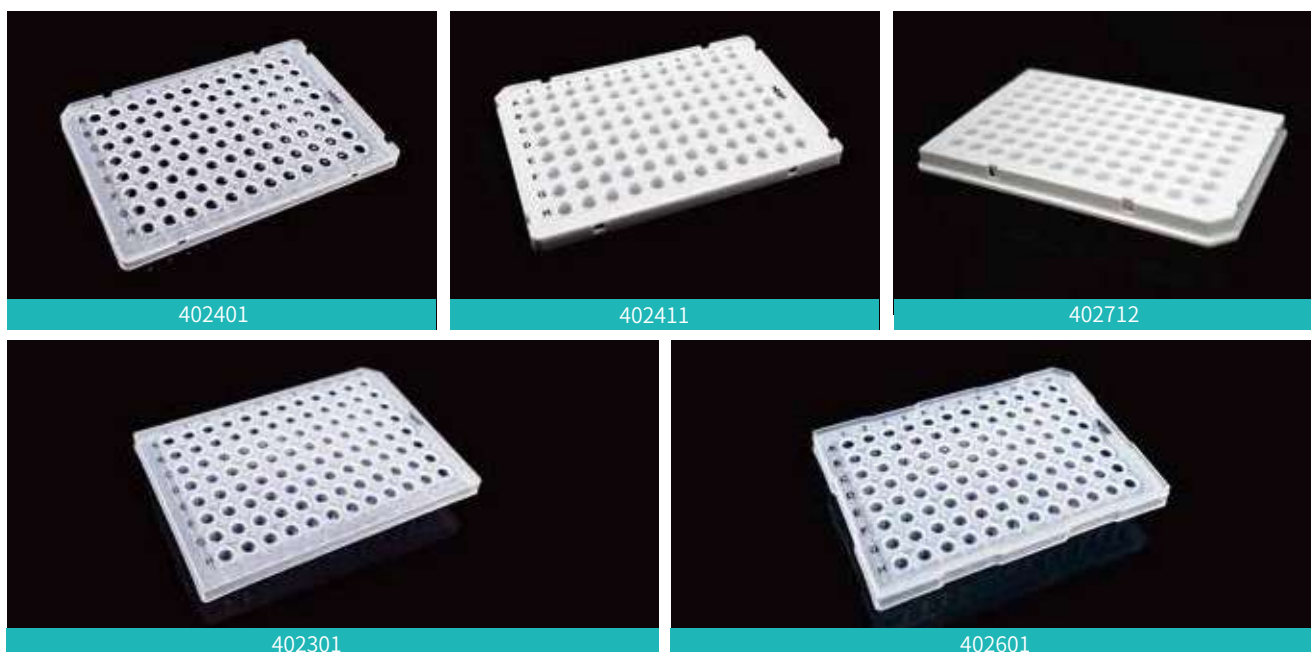


402201

## ● PCR Plate, No Skirt

Volume (mL)	Cut Position	Color	Cap Type	Notes	Packing		Cat.No.
					/Pack	/Case	
96Well 0.1 mL	H12	Transparent	Low profile	/	25	4	402101
	H12	White	Low profile	/	25	4	402111
	A12 / H12	White	Low profile	Compatible with Roche	10	5	402812
96Well 0.2 mL	H1	Transparent	High profile	/	25	4	402001
	H1	White	High profile	/	25	4	402011
	H12	Transparent	Elevated Wells	/	25	4	402201

- The low-profile design minimizes the condensate contamination and evaporation of reaction solution.
- 0.1ml tube and 0.2ml tube



## ● PCR Plate, Semi Skirt

Volume (mL)	Skirt Type	Notes	Cut Position	Color	Tube	Packing		Cat.No.
						/Pack	/Case	
96-well 0.1	Semi Skirt	Compatible with ABI models	A1	Transparent	Low profile	25	4	402401
	Elevated Semi Skirt	/	A1	White	Low profile	25	4	402411
	Semi Skirt	Compatible with Roche	H12	White	Low profile	10	5	402712
96-well 0.2	Semi Skirt	/	A12	Transparent	High profile	25	4	402301
	Semi Skirt	Compatible with ABI models	A12	Transparent	High profile	25	4	402601



## ● PCR Plate, Semi Skirt

Volume	Skirt Type	Notes	Cut Position	Color	Tube	Packing		Cat.No.
						/Pack	/Case	
96-well 0.1 mL	Full Skirt	/	H1	Transparent	Low profile	25	4	402501
	Full Skirt	/	H1	White	Low profile	25	4	402511
	Full Skirt	Sterile	H1	Transparent	Low profile	25	4	402521
384-well 40 µL	Full Skirt	Compatible with Roche	A24+P24	White	Low profile	10	5	409013
	Full Skirt	Compatible with Roche, Sterile	A24+P24	White	Low profile	10	5	409033

## ● Compatibility

402712 Compatible with lightcycler 480, lightcycler 480 II , lightcycler 96  
 402812 Compatible with lightcycler 96  
 409013, 409033 Compatible with lightcycler 480 II

## ● Precautions

- Select the appropriate plate according to the equipment
- During the experiment, the PCR film must be tightly attached to the plate to prevent evaporation

## PCR Rack



- Fits all NEST PCR products.
- Stackable.
- Autoclavable.

Specification	Cap Type	Color	Packing		Cat.No.
			/Pack	/Case	
(1 Rack+1 Cap)/ Set, 8*12 Format	Flat	Blue Rack & Transparent Lid	One Rack & One Lid	25	407001
(5 Rack+1 Cap)/ Set, 8*12 Format	Flat	Blue Rack & Transparent Lid	Five Racks & One Lid	5	407101

## PCR Sealing Film

NEST PCR sealing film is compatible with NEST 96-well ELISA Plates and 96-well PCR Plates in various applications such as the ELISA/PCR amplification reaction and PCR fluorescence quantification, etc. Both the regular PCR sealing film and high-transparency film are available.



### High Transparency PCR Sealing Film:

- NEST High Transparency PCR Sealing Film is made of a layer of transparent polypropylene film and a layer of transparent silicon-based pressure-sensitive adhesive.
- Applicable temperature is -70°C to 100°C.
- Pressure-sensitive film is non-adhesive to skin and gloves, which is convenient for experimental operation and does not affect optical analysis.
- Does not react with the experimental sample, the experimental results are more reliable.
- No autofluorescence.

### Sealing Film:

- Material: non-permeable soft film; the adhesive is medical grade strong adhesive.
- Thickness: 100 μm.
- Economical and easy to use; compatible with a majority of PCR plates on the market.
- Good sealing performance.

Specification	Size (mm)	Color	Packing		Cat.No.
			/Pack	/Case	
Standard Sealing Film	146 × 81	Transparent	100	5	410001
<b>NEW</b> Advanced Sealing Film	141 × 78	Transparent	100	5	410011
PCR Sealing Film	141 × 83	Transparent	100	5	410021

Note: for life science laboratory research only, not for clinical drug treatment.

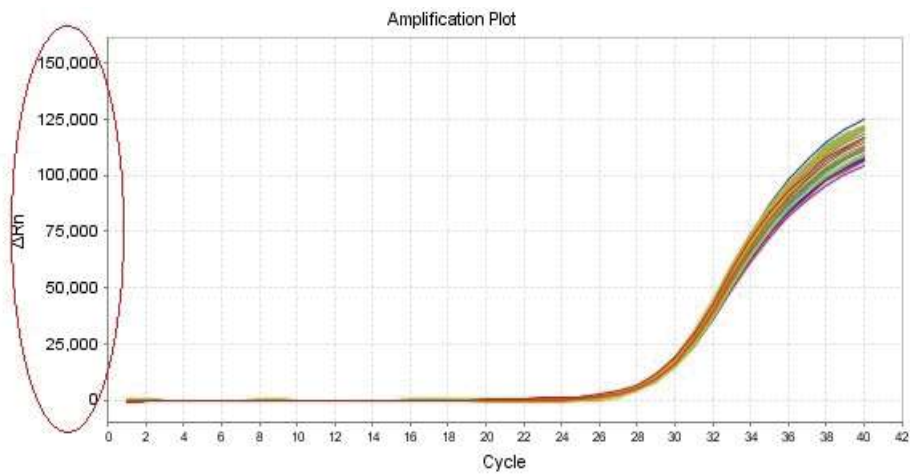
Recommended storage conditions: temperature range of 10-27 °C; humidity range of 40%-60%.

## PCR Scraper

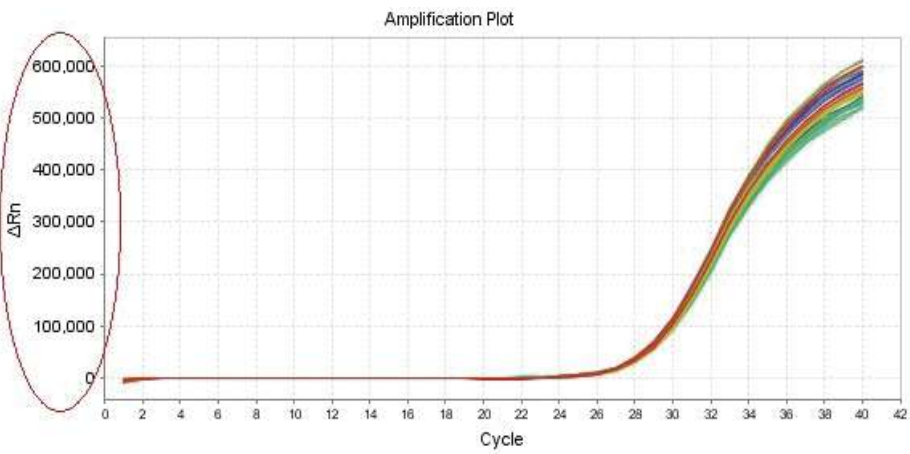


- NEST PCR Scraper is compatible with NEST High-transparency Sealing film and Standard Sealing Film, enabling the filming attached to the plates closer and ensuring better sealing performance.

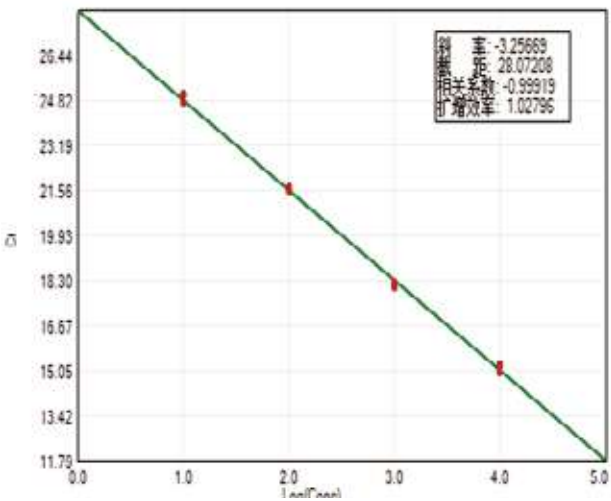
Size (mm)	/Pack	Cat.No.
70*78	1	411001



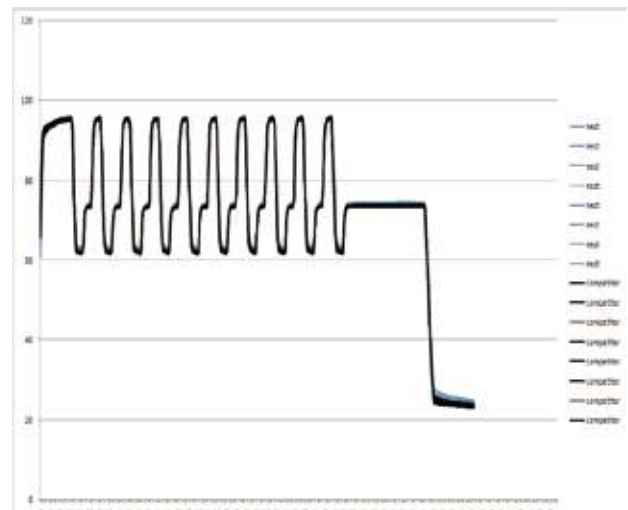
Legend  
 A B C D E F G H  
 NEST Product 402401 0.1mL Semi Skirt, Transparent, PCR 96 well, amplified curve



Legend  
 A B C D E F G H  
 NEST Product 402411 0.1mL Semi Skirt, White, PCR 96 well, amplified curve



NEST Product  
 403002 Standard curve linear, PCR inhibition



NEST Product  
 403002 NEST products and imported brand thermal conductivity is consistent



Brand	Number / Model		PCR Tube				PCR Plates							
	401001	403002/404001	403102/403122	403112/403132	403012/403032	404001/403022	402001	402301	402501	402401	402101	402812	402601	402201
Applied Biosystems®	401001	403002/404001				404001/403022	402001	402301					402601	
	401001	403002/404001				404001/403022	402001	402301					402601	
	401001	403002/404001				404001/403022	402001	402301					402601	
		9800Fast	403102/403122							402401	402101			
		Veriti/Fast	403102/403122				402001	402301		402401	402101		402601	
		7000			403012/403032	404001/403022	402001	402301					402601	
		7300			403012/403032	404001/403022	402001	402301					402601	
		7500/Fast	403102/403122		403012/403032	404001/403022	402001	402301		402401	402101		402601	
		7700				404001/403022	402001	402301					402601	
		7900HT/Fast	403102/403122			404001/403022	402001	402301		402401	402101		402601	
		StepOne	403102/403122	403112/403132						402401	402101	402812		
		StepOnePlus	403102/403122	403112/403132						402401	402101	402812		
		ProflexPQSystem	403002/404001			404001/403022	402001	402301					402601	
		QuantStudio 12K	403002/404001			404001/403022	402001	402301					402601	
		ViiA7/Fast	403002/404001	403102/403122		404001/403022	402001	402301		402401	402101		402601	
	3100					402001	402301					402601		
	3130					402001	402301					402601		
	3700					402001	402301					402601		
	3730/3730x					402001	402301					402601		
	Mastercycler®	401001	403002/404001			404001/403022	402001	402301	402501					
	Mastercycler® ep realplex	401001	403002/404001			404001/403022	402001	402301	402501					
	Mastercycler ep	401001	403002/404001			404001/403022	402001	402301	402501					
	Mastercycler nexus	401001	403002/404001			404001/403022	402001	402301	402501					
	Mastercycler nexus eco	401001	403002/404001			404001/403022	402001	402301	402501					
	Mastercycler nexus flat	401001				404001/403022								
	Mastercycler nexus flat eco	401001	403002/404001			404001/403022								
	Mastercycler nexus gradient	401001	403002/404001			404001/403022	402001	402301	402501					

Eppendorf®

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Analytik Jena/ Biometra	TRobot	401001	403002/404001	403102/403122				404001/403022	402001	402301	402501		402101		
	Uno	401001	403002/404001	403102/403122				404001/403022	402001	402301	402501		402101		
	Uno II	401001	403002/404001	403102/403122				404001/403022	402001	402301	402501		402101		
	q TOWER	401001	403002/404001						402001	402301	402501				
	SpeedCycler <sup>2</sup>	401001	403002/404001						402001	402301	402501				
	Topical	401001	403002/404001						402001	402301	402501				
	C1000™ Touch™	401001	403002/404001					404001/403022	402001	402301	402501				
	DNA Engine Dyad@Dyad Disciple	401001	403002/404001					404001/403022	402001	402301	402501				
	Engine Tetrad@2	401001	403002/404001					404001/403022	402001	402301	402501				
	MyCycler™	401001	403002/404001					404001/403022	402001	402301	402501				
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	PTC-200	401001	403002/404001					404001/403022	402001	402301	402501				
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	T100™	401001	403002/404001					404001/403022	402001	402301	402501				
	CFX Connect™	401001	403002/404001	403102/403122				404001/403022	402001	402301	402501		402101		
	CFX96™ Touch/CFX96	401001		403102/403122	403112/403132			404001/403022			402501		402101	402812	
	Chromod™	401001	403002/404001					404001/403022	402001	402301	402501				
	DNA Engine Opticon@2	401001	403002/404001					404001/403022	402001	402301	402501				
	iCycler	401001	403002/404001					404001/403022	402001	402301	402501				
iQ™5	401001	403002/404001					404001/403022	402001	402301	402501					
MiniOpticon™	401001	403002/404001					404001/403022	402001	402301	402501					
MyiQ™	401001	403002/404001					404001/403022	402001	402301	402501					
Opticon			403102/403122	403112/403132						402501		402101			
miniOpticon				403112/403132									402812		
BaseStation™										402301	402501				
MJ research option														402812	
Opticon2				403102/403122										402101	
Multiblock System	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501		402101		



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	T1 Thermal Cycler	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
	Omni-E	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
	Omni gene	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
Thermo Hybaid	PCR Express	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
	PCR Sprint	401001	403002/404001						404001/403022						
	Px2	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
	PxE	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
	Touchdown	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
Ericom	DeItacycler I	401001	403002/404001	403102/403122					404001/403022	402001	402301		402101		
	Single Block	401001	403002/404001	403102/403122					404001/403022	402001	402301		402101		
	Twin Block	401001	403002/404001	403102/403122					404001/403022	402001	402301		402101		
	Mx3000®	401001	403002/404001							402001	402301				
	Mx3000P®	401001	403002/404001							402001	402301				
Stratagene	Mx3005®	401001	403002/404001							402001	402301				
	Mx4000®	401001	403002/404001							402001	402301				
Agilent	SureCycler®8800	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402401		
	ARIA MX 68830A							403112/403132						402812	
Qiagen®	Flexigene®	401001	403002/404001						404001/403022	402001	402301	402501			
	Rotor-Gene® Q	401001													
MMG®	Primus 96	401001	403002/404001	403102/403122						402001	402301	402501	402101		
PeqLab®	peqSTAR 96	401001	403002/404001						404001/403022	402001	402301	402501			
SensoQuest	Thermocycle 96	401001	403002/404001							402001	402301	402501			
Stratagene	Robocycler	401001	403002/404001						404001/403022	402001	402301	402501			
	TP240	401001	403002/404001							402001	402301	402501			
Takara®	天隆TL988-1V							403112/403132							
	TP3000	401001	403002/404001	403102/403122					404001/403022	402001	402301	402501	402101		
Amersham®GE®	MegaBACE®500										402301	402501			
	MegaBACE1000										402301	402501			402201
Beckman Coulter®	CEQ™										402301				
Transgenomic	WAVE®System										402301	402501			



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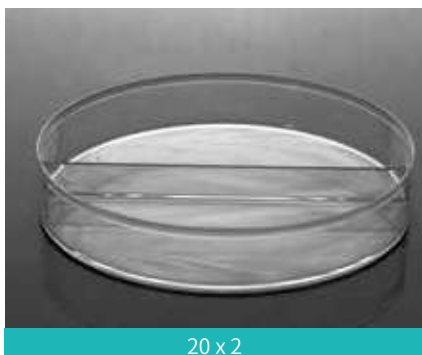


# Bacteria

# Petri Dishes

These non-treated polystyrene plates are transparent and DNase/RNase-Free. The bottom has a ridge allowing for easy handling and stacking. The plate has three vents for gas exchange.

- Made of high clarity, 100% virgin polystyrene.
- Numeric marks at 3/6/9/12 o'clock at the bottom, making it convenient for users to determine the position of bacteria.
- Flat, transparent surface.
- PA/PE composite film packaging.
- Stackable for easy storage and handling.
- Each package has an independent item number and batch number identification, which is convenient for quality tracking and traceability.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/RNase free.



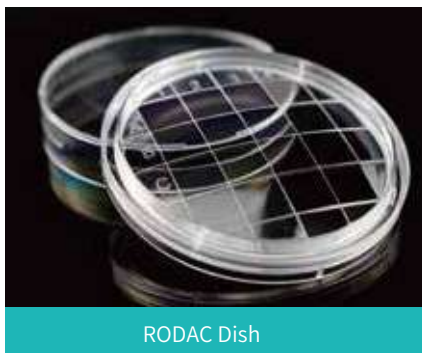
20 x 2



13 x 3



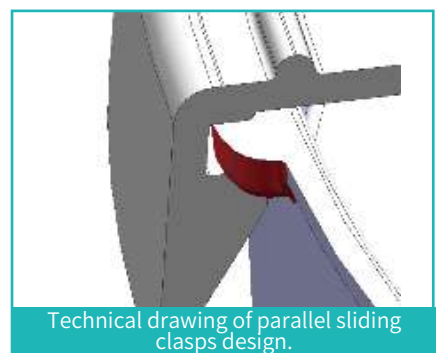
10 x 4



RODAC Dish



Petri Dish with Safe-lock Design



Technical drawing of parallel sliding clasps design.

## • Petri Dishes

Spec (mm)	Height (mm)	Volume (mL)	TC	Sterile	Packing		Cat.No.
					/Pack	/Case	
35	12	5	NO	Sterile	20	25	706011
60	15	15	NO	Sterile	20	25	754001
90	15	40	NO	Sterile	20	25	752001
	15	40	NO	Sterile	20	25	752002 <small>Double-layer Packed</small>
	15	40	NO	Sterile	10	50	752004
	15	40	NO	Sterile	5	100	752003
	15	20x2 Compartments	NO	Sterile	20	25	752011
	15	13x3 Compartments	NO	Sterile	20	25	752021
	15	10x4 Compartments	NO	Sterile	20	25	752031
	15	40 Safe-lock Design	NO	Sterile	20	25	752101
100	20	40	NO	Sterile	20	15	752401
150	15	60	NO	Sterile	10	10	715011
	25	/	NO	Sterile	5	20	755001
65	15	13-15	NO	Sterile	20	25	722011

# Innoculating Needles / Loops L-Spreader



## • Inoculating Needle / Loop

- PP material, hydrophilic.
- Flexible handles for easier collection and inoculation.
- Applied in microbiology experiments.
- Different colors for identification.
- Easy-tear sterile individual packaging.
- Each package has an independent item number and batch number identification, which is convenient for quality tracking and traceability.
- Sterilized by Ethylene Oxide.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.

## • L-Spreader

- Sterile L-Spreader, made of using medical PS.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Smooth and flat surface that avoids problems such as contamination or uneven application of spread plate in bio-labs.
- Length of handle: 144mm, diagram of spreading: 33mm, suitable for 3.5cm, 6cm, 9cm, 10cm petri dishes and etc. Ideal for spreading cells or bacteria evenly in the culture dish.

Volume (μL)	Name	Color	Packing		Cat.No.
			/Pack	/Case	
/	Inoculating Needle	White	400	10	716001
1	Inoculating Loop	Blue	400	10	717101
10	Inoculating Loop	Yellow	400	10	718201
/	L-Spreader	Blue	200	10	711001



**Medical Consumable**

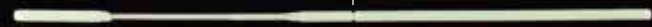
# Disposable Swab



Registration Certification of Class II Medical Devices Registration No. : 2021.2221578.

Nasopharyngeal Swab

Breakpoint



Oropharyngeal Swab

Breakpoint

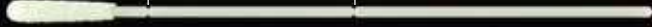
Breakpoint



Oropharyngeal/Nares Specimen Collection Swab, Double Break Point

Breakpoint

Breakpoint



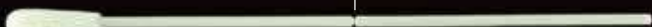
Oropharyngeal/Nares Specimen Collection Swab, Single Break Point

Breakpoint



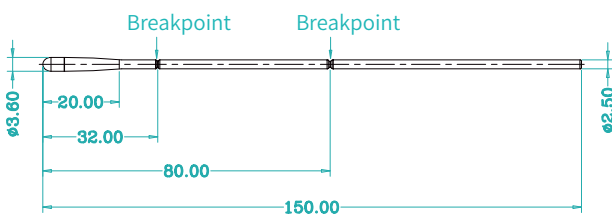
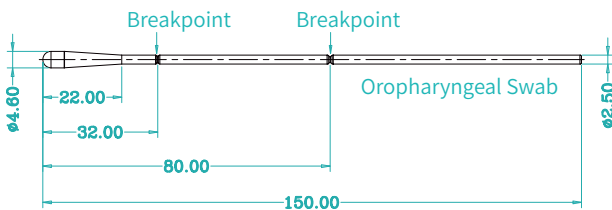
Capture Cap Swab

Breakpoint

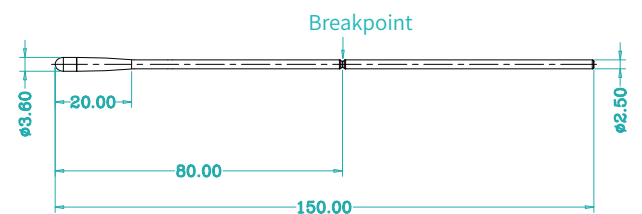
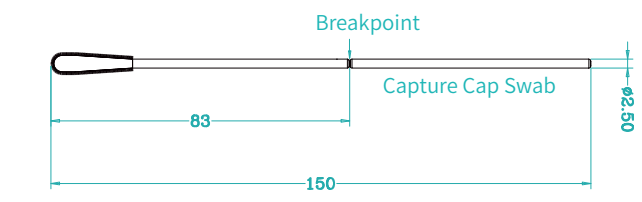
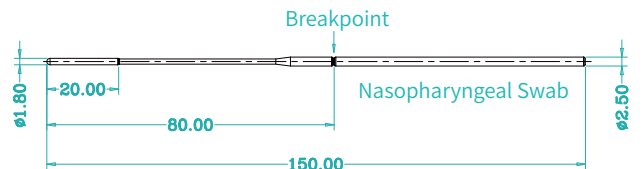


## ADVANTAGE:

- Swab head is flocked nylon, and swab shaft is made of ABS (Acrylonitrile butadiene styrene).
- Non-toxic.
- Individually wrapped and sterile.
- CE, FDA, ISO certified.



Oropharyngeal / Nares Specimen Collection Swab, Double Break Point



Oropharyngeal/Nares Specimen Collection Swab, Single Break Point

Descriptions	/Pack	/Case	Cat.No.
Oropharyngeal Specimen Collection Swab, Individually Wrapped, Sterile	100	5000	202003
Nasopharyngeal Specimen Collection Swab, Individually Wrapped, Sterile	100	5000	202004
Oropharyngeal Specimen Collection Swab, Capture Cap Swabs, Individually Wrapped, Sterile	100	5000	202401
Oropharyngeal/Nares Specimen Collection Swab, Double Break Point, Individually Wrapped, Sterile	100	5000	202095 <b>NEW</b>
Oropharyngeal/Nares Specimen Collection Swab, Single Break Point, Individually Wrapped, Sterile	100	5000	202098 <b>NEW</b>
Disposable Sampler, 2 mL Vial, with Individually Wrapped and Sterile Oropharyngeal Swabs	10	50	202695
Disposable Sampler, 5 mL Vial, with Individually Wrapped and Sterile Nasopharyngeal Swabs	10	50	202091

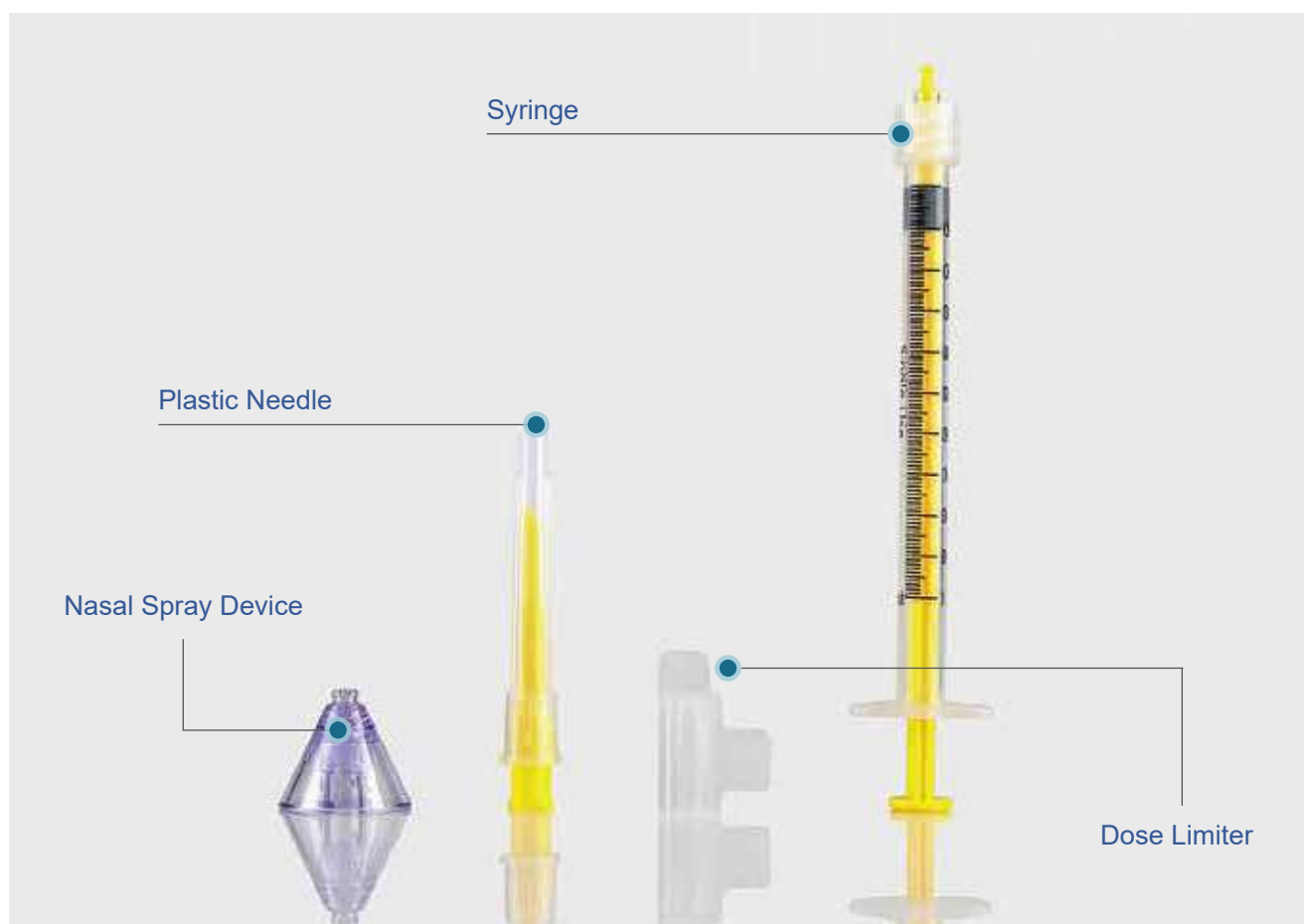


# Disposable Intranasal Atomization Device

## ● Product Presentation

- The device provides a painless and rapid absorption medication delivery option for non-invasive intranasal medication delivery. It improves safety for both caregivers and patients by avoiding needle-sticking injuries.
- It is an atomizing device for drug administration intended to convert liquid preparations into atomized particles and spray on the surface of human body tissues (or organs) for full contact to maximize the administration effect. Meanwhile, the reasonable and effective self-destructive structure ensures that the product can only be used once to provide users with safe and hygienic products.

## ● Main Components



## ● Product Parameters

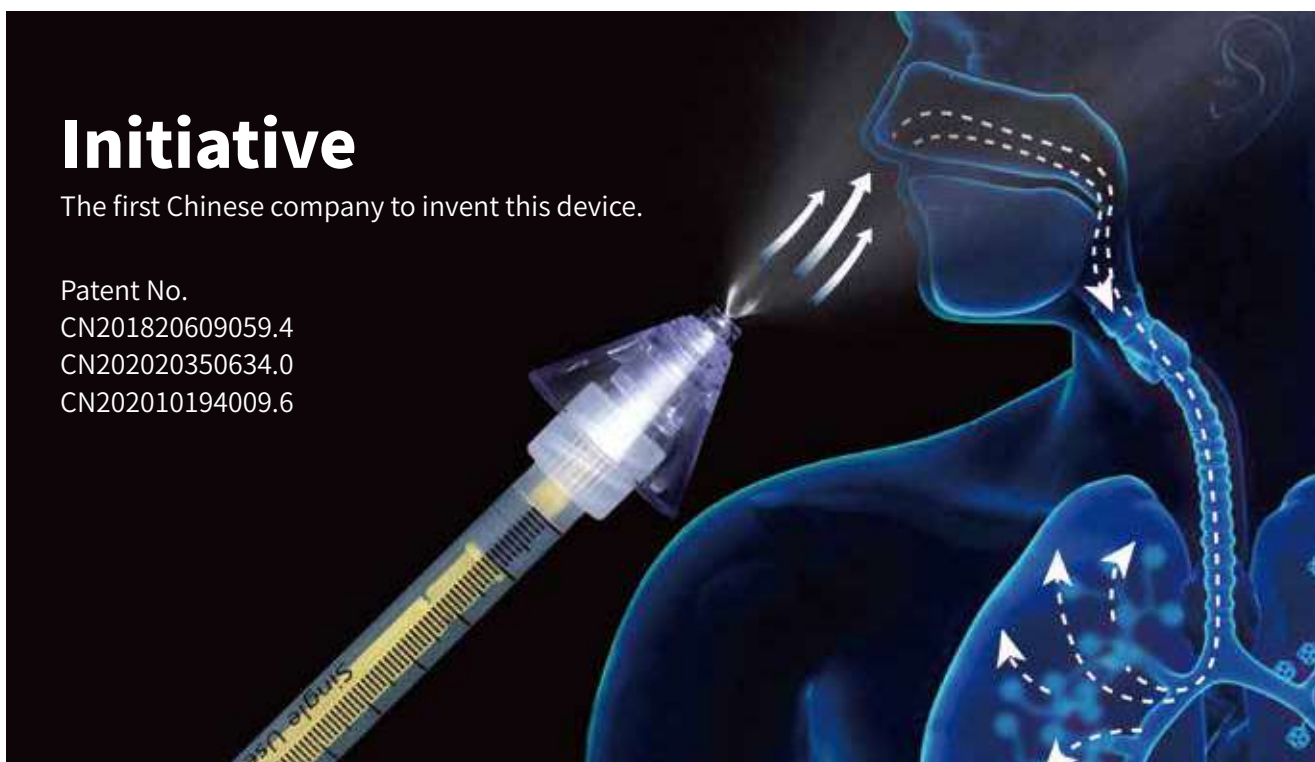
Description	Color	/Pack	/Case	Cat.No.
Disposable Intranasal Atomization Device, White, with Plastic Needle, Syringe, Nasal Spray Device, Dose Limiter, Individually Packed	White	1	1000	201003
Disposable Intranasal Atomization Device, Yellow, with Plastic Needle, Syringe, Nasal Spray Device, Dose Limiter, Individually Packed	Yellow	1	1000	201113



# Initiative

The first Chinese company to invent this device.

Patent No.  
CN201820609059.4  
CN202020350634.0  
CN202010194009.6



**Rapid  
Absorption**



**Non-invasive &  
Painless**



**Self-Destruct  
Device**



**Special Dose  
Limiter**



**Inoculate  
Precisely**





# Dry Saliva Collection Kits

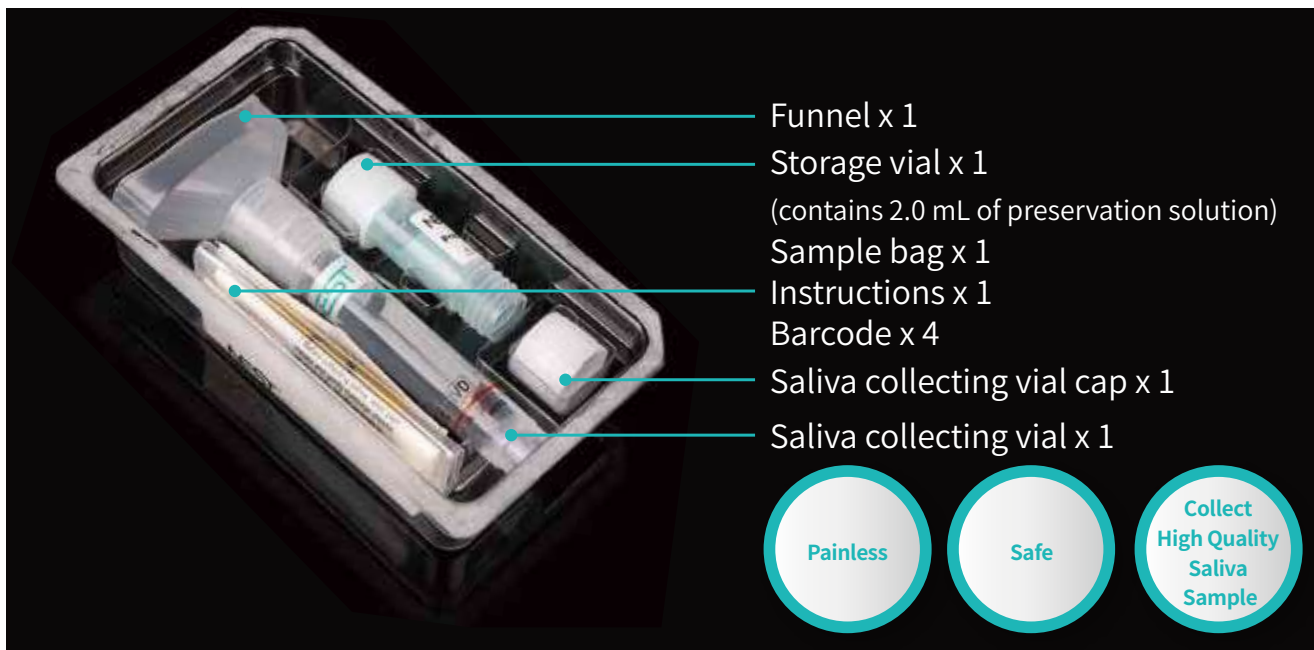
## ● Features

- USP VI Polypropylene Tubes.
- Collection process is painless and safe.
- The humanized design of funnel conforms to the mouth shape of human, making the collection process simple and easy.
- Good sealing performance effectively prevents leakage and specimens contamination safely and reliably, making it easy to preserve and transport specimen.
- The bottom of the collecting vial is conical, making it easy to process concentrated sample.
- Bar codes makes digital management easier, and labels with writing areas are convenient for users to record information.
- RNase/DNase free, non-pyrogenic.

Cat.No.	Volume (mL)	Upper Cup	Sterile	Contents	/Pack	/Case
 203101	5 mL	Screw Funnel	Sterile	Screw Funnel 5 mL Vial Specimen Bag Cap	1	100
 203102	10 mL	Screw Funnel	Sterile	Screw Funnel 10 mL Vial Specimen Bag Cap	1	100
 203111	5 mL	Wedged Funnel	Sterile	Wedged Funnel 5 mL Vial Specimen Bag Cap	1	100
 203112	10 mL	Wedged Funnel	Sterile	Wedged Funnel 10 mL Vial Specimen Bag Cap	1	100
 203901	Wedged in Funnels		Sterile	Compatible with different tube diameters ranging from 9.5-20.0 mm	1	100



# Dry Saliva Collection Kits



## ● Features

- Applied at room temperature.
- The 5 mL preservation solution vial is filled with 2 mL ITM solution.
- Samples can be stored and transported at room temperature.
- DNA samples can be stored stably for 12 months.
- RNA samples can be stored steadily for 1 month.
- With good antibacterial performance and strong storage stability, the preservation solution can guarantee the integrity of viral nucleic acids in the sample if it is used to store inactivated viral samples.

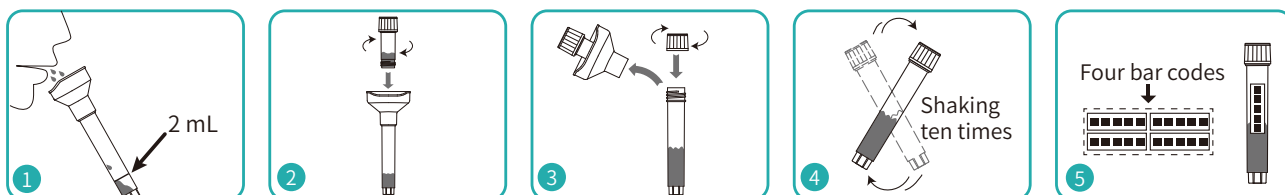
## ● Introduction

- The product is used to collect high-quality DNA/RNA samples in the saliva.
- The collection process is painless and won't cause any injury or discomfort to the human body.
- The collected samples can be used for various biological experiments such as enzymatic hydrolysis, PCR and next-generation sequencing and are widely used in the collection and preservation of specimens in hospitals, scientific research institutions and households.

## ● Introduction

- The cap of the Preservation Solution Tube should always be securely fastened to prevent accidental ingestion.
- The delicate design allows the preservation solution automatically to flow into the storage vial, eliminating direct contact with the preservation solution at all stages.
- The ITM Inactivation Preservation Solution, which deactivates viruses while preventing nucleic acid degradation, effectively prevents accidental contact or infection during transportation and testing.
- The device can be conveniently stored or transported at room temperature.
- It ensures a comfortable collection process without causing pain or damage to the human body. It is particularly suitable for children and patients who cannot provide a blood sample.

## ● Instructions

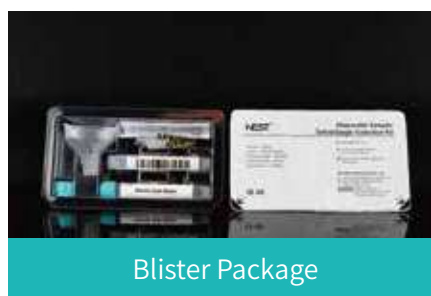


Take a barcode out and stick it on the saliva collection tube. Then place the tube with the attached barcode and two additional barcodes into the sample bag for later storage, transportation or testing. The user should retain the remaining barcode for future reference or feedback.

Description	/Pack	/Case	Cat.No.
Disposable Sampler, Saliva Collection Kit with ITM, each kit Includes a 10 mL Vial with a funnel, a separate 5 mL Vial filled with 2.0 mL ITM, Sterile Pack, 100 kits/case	1	100	203011



# Saliva/gargle Collection Kit



## ● Introduction

The disposable sampler saliva/gargle collection kit is intended for the collection and transport of clinical samples from the collection site to the testing laboratory. As it will not cause any discomfort to the collection object, it is easy to be accepted. Both saliva and gargling method will be presented in this IFU either method is at your choice. This product is easy to carry and operate.

## ● Features

- Applied at normal ambient temperature.
- The kit process is simple, convenient and easy to operate.
- Flexible to use, can be easily collected in the laboratory, clinic, or even at home.
- It is suitable for a wide range of target group, especially for children and patients who do not meet the blood sample collection conditions.
- The non-invasive collection of samples will not cause any discomfort to the collection objects, reducing the chance of infection and improving safety.

Description	Packing	/Pack	/Case	Cat.No.
Disposable Sampler, Saliva/Gargle Collection Kit, each kit Includes a funnel, an empty 5mL vial, a 5 mL Vial Filled with 4.0 mL saline, Sterile	Paper Box Package	1	100	203051
	PE Bag Package	1	100	203061
	Blister Package	1	100	203071





# Pharmaceutical Packaging

# AccureVial™ COP Bottle



## ● Product introduction

The main raw material for NEST AccureVial™ COP Bottle is cyclic olefin copolymer (COP). As a substitute for borosilicate glass, COP has the characteristics of high transparency, high rigidity, high heat resistance, low refractive index, low protein adsorption, and drug compatibility test producing no flake. The applicable temperature range of the bottle body is 121°C~ -196°C. NEST AccureVial™ COP Bottle is featured with good steam tightness and resistance against acid, alkali, and abrasion. This product is sterilized by electron beam and can be directly used for prefilling of injection solution, freeze-dried powder, and other kinds of drugs and is easy to be stored and transported.

## ● Product features



### Certified quality

COP raw materials meet USP Class VI standards and products are 100% fully inspected. Production and packaging are carried out in a GMP standard workshop which conforms to ISO 9001 and ISO 15378 standards.



### Precision detection

Relying on imported injection molding equipment and sophisticated testing instruments, the precise size and optimized appearance are obtained to ensure the high quality of the products.



### Easy to use

Sterilized by E-beam, SAL=10<sup>-6</sup>, Non-Pyrogenic, Can be directly applied to prefilling



### Tailor-made for customers

Various specifications are available, customers can choose according to the required specifications. Special packaging customization is also available.

## ● Applications

NEST AccureVial™ COP Bottle is mainly used in the packaging of highly stable complex molecules and sensitive drugs, such as anti-cancer, anti-tumor, cardiovascular and cerebrovascular biological reagents, which usually have high added value. For drugs or high protein content drugs with PH value greater than 9, NEST Penicillin COP Bottle is suitable for packaging and transportation.

Description	/Pack	/Case	Cat.No.
5 mL AccureVial™ COP Bottle	1	10	207001

Notes: This specification is presented as a model. It can be tailored to meet your specific requirements.

# Pre-filling Disposable Glass Intranasal Atomization Device



## ● Introduction

NEST Pre-filled Disposable Glass Intranasal Atomization Device, a kind of pharmaceutical packaging material with good stability and compatibility, is intended for long-term storage of medicine. During administration, it can convert the liquid preparation into uniformly atomized particles and spray them on the surface of the patients' mucous membrane (nasal and oral mucosa) to maximize medication effect. The device is pre-filled with liquid preparation and sealed for storage and transportation. Therefore, both the process of transferring liquid preparation into syringe and the manual work involved are saved. Besides, medicine loss or waste for residue is solved. Meanwhile, safety and sanitation problems are also decreased since the contamination risk for liquid and device during transfer is reduced.

## ● Features

### • Stable Material

Made of high quality medium borosilicate glass, which is extensively applied in pharmaceutical packaging including biological agents and vaccines, the product possesses strong chemical durability and shock resistance.

### • Hermetically Sealed

The spray is equipped with a protection cap, which is embedded with sealing ring to ensure its leak-proofness and virus-resistance during transfer and transportation.

### • Perfect Atomization Effect

Atomization cavity with precision turbine design ensures uniformly atomized particles evenly distributed on human mucous membrane for ideal liquid atomization effect.

### • Precise Dose

The precise Dose Limiter ensures the uniformity of each dose .

### • Single Use Design

The device is set with self-destruct design. After administration, the stopper will stick in the syringe and can't be taken out for a second use.

## ● Application

Intranasal Medication through mucous membrane absorption is an efficient treatment method. Nasal mucosa is moist and smooth with rich blood vessels. Nasal drug droplets and intranasal atomization medication can not only locally diminish inflammation, resist the bacteria and viruses, unblock a stuffy nose and stop bleeding, etc., but also can act throughout the body. For instance, Antipyretic analgesic An- alginum can abate fever if nasally delivered in droplets.

Compared with intravenous drug delivery and other modes of administration, Intranasal medication has more advantages: For example, the activity of nasal mucosal hydrolase is lower than that of the gastrointestinal tract, which reduces the degradation of polymer compounds such as polypeptides, hormones, vaccines and other drugs and ensures drug delivery effect; Secondly, it can avoid the liver first-off effect and the damage to the liver caused by oral drugs, etc.; Thirdly, its high bioavailability can achieve brain targeted drug delivery; Finally, it is easy to operate and convenient for infants and children with few adverse reactions and good compliance.

In recent years, due to the special advantages of intranasal administration, nasal spray vaccines have also become a new direction for research and application. Studies have shown that nasal mucosal immunity can induce not only local mucosal immune responses, but also the systemic immune responses, whose effects are similar to subcutaneous immunization, and even more effective and intense than oral immunization. Nasal spray vaccines further enlarge the application of intranasal administration.

# Pre-filling COP Syringe with Luer Lock

## ● Introduction

NEST Pre-filled COP Syringe with Luer Lock is a syringe made from Cycloolefin Copolymer (COP), mainly intended for the packaging and storage of high-end drugs and vaccines which can be used directly for injection, as well as other surgical irrigation in ophthalmology, otology, orthopedics, etc..

Compared with traditional syringes, NEST Pre-potting COP Syringe with Luer Lock have clear edges in terms of process and application.

## ● Advantages

### • Secondary Contamination Avoided

Pre-injection drug dispensing process saved and drug contamination risk reduced.

### • Precise Drug Ingredients Proportion

The proportion of drug ingredients is set at the factory to avoid changes in the proportion of on-site dispensing.

### • COP Merits

- Cycloolefin Copolymer (COP) are amorphous transparent polymers with a cyclic olefin structure that can be better dimensionally controlled than glass.
- High transparency, rigidity, heat/ fracture resistance; good water vapor tightness; and low birefringence, water absorption, etc.;
- Stable physical and chemical properties, low protein adsorption, good compatibility with drugs without de-tableting. Mature application cases indicate that COP material is used as the pharmaceutical packaging material by many drugs series globally ;
- Suitable for ethylene oxide sterilization and steam sterilization.

### • Luer Lock

The Luer Lock adopts the national standard design size and is compatible with other products which can connect with Luer Lock such as injection heads, spray heads, and infusion sets etc.. The connection is firm with top sealing strength.

## ● Product Design

It adopts the design of Luer Cone head and Luer Lock in one, inside which the Luer Hole can connect to the needleless connection device.

It consists of ① the syringe ② butyl Protection Cap ③ piston ④ Push Assistor ⑤ Push Rod

## ● Product application

Pre-filled COP Syringe with Luer Lock is mainly intended for the packaging and storage of vaccines, biological agents and high value-added medicine. Currently, the proportion of therapeutic injectable drugs in the market is increasing year by year, and the application of pre-potting has been broadened to many of the following fields:

- Vaccines
- Anti-infectives
- Haematological agents
- Hormone therapies
- Cancer therapies
- Anti-coagulants
- Anti-inflammatory agents
- Multiple sclerosis therapies
- Obstetric agents
- Pain relievers



# Reusable Pen Injector



Pen Injector is a type of reusable liquid medicine injection device that contain liquid medicine solution with a syringe. The Liquid medicine medication is placed in the pen in a cartridge, eliminating the need to extract liquid medicine each time. Simply remove the pen cap, adjust the dial to the desired dose, and then perform the liquid medicine injection. Currently, NEST Pen Injector are available in two categories: Reusable Pen Injector and Disposable Pen Injector.

In addition to being used for liquid medicine injections, this device is suitable for administering various medications, including growth hormone, liquid medicine, antibiotics, interferon, beauty products, biochemical emergency prevention, hemostatic pain relief, first aid for heart disease, detoxification, antipyretic analgesics, anesthetic sedatives, and more.





Pen Injector is a type of reusable liquid medicine injection device that contain liquid medicine solution with a syringe. The Liquid medicine medication is placed in the pen in a cartridge, eliminating the need to extract liquid medicine each time. To administer the medication, simply remove the pen cap, adjust the dial to the desired dose, and then perform the liquid medicine injection.

Currently, NEST Pen Injector are available in two categories: Reusable Pen Injector and Disposable Pen Injector. NEST Pen Injectors have been developed specifically for use with standardized 3mL injection vials and needles as outlined in ISO 11068-3 and 11068-2. This user-friendly device is not only reusable but also offers the convenience of dose adjustments according to individual needs, granting patients flexibility in self-administration. To pre-set the desired dosage, simply adjust the dosage adjustment knob to the required dose. The plunger handle of the injector operates by engaging gears, which in turn drives a screw thread to move radially. This radial movement simultaneously pushes the cartridge plunger within the medication chamber, causing the medication to be injected into patient's body through a disposable needle in a precise and accurate way.

## ● Application

NEST Pen Injectors have been developed specifically for use with standardized 3mL injection vials and needles as outlined in ISO 11608-3 and 11608-2. This product can be used for a wide variety of self-injectable medications such as insulin, weight-loss drugs (e.g. semaglutide), interferon, hormones (e.g. testosterone cypionate) and others.

## ● Features

<p><b>Enlarged view window</b></p> <p>The clear scale provides a convenient observation of the dosage.</p>	<p><b>Portable and convenient</b></p> <p>The small and delicate package makes it highly portable.</p>	<p><b>Flexible adjustment</b></p> <p>The dosage adjustment knob can be adjusted in both directions, allowing for easy correction in case of excessive dosage.</p>
<p><b>Precision injection</b></p> <p>The injection-moulded screw thread ensures high precision and low margin of error, resulting in a stable injection process. The injection increment is 1IU, and the reusable pen injector range 1IU-60IU, the disposable pen injector range 1IU-60IU/1IU-80IU</p>	<p><b>Smooth injection</b></p> <p>The transmission mechanism is completely made of special materials with high lubrication, ensuring a smooth injection process with a required pressure of less than 30N.</p>	<p><b>User-friendly</b></p> <p>It is easy for beginners to use, eliminating the need for professional guidance.</p>



### ● Disposable Pen Injector

After use, throw away the pen with the refill and replace it with a new one.

#### Convenient

Liquid medicine solution can be pre-filled into, eliminating the need for multiple refilling.

#### Hygienic and safe

It provides a hygienic and safe solution as it appears as a new pen for each use, eliminating the need for cleaning and disinfection and reducing the risk of cross-contamination.

#### Accurate dosage

Dosage can be pre-set according to individual needs, granting patients the flexibility for their liquid medicine administration.

#### Supports customization

Supports customization in multiple colors.



### ● Reusable Pen Injector

When the refill is used up, replace the refill for reuse.

#### Cost-effective

Compared to disposable pen injectors, it is more affordable and economical.

#### Environmental-friendly

By generating less plastic waste than disposable products, the reusable pen injector promotes a greener approach.

#### Long service life

The device maintains precise and accurate medication even after prolonged use.

#### High compatibility

It is compatible with a wide range of needles and 3ml cartridges available in the market, allowing for convenient refilling.

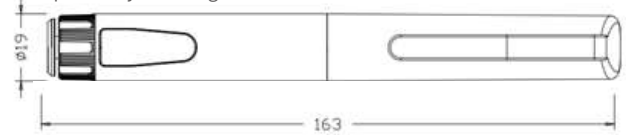
Cat. No.	206301	206321
Injection range	0~80 units (0.8mL)	0~60 units (0.6mL)
Packaging	1 pc/pk, 200 pcs/cs	
Material	Pen body: ABS	
Name	Disposable Pen Injector (NEST)	
Single Minimum Dose	1 unit (0.01 mL)	
Application	<p>Suitable for a variety of disposable injection needles: such as BD, Jierui injection needles, etc. The needles must comply with ISO 11608-2.</p> <p>Applicable to the injection of standard 3 mL cartridge solution: 3 mL cartridge refills must comply with ISO 11608-3.</p>	

Bagged Packaging	<b>206211</b> (1 pc/pk, 200 pcs/cs)	<b>206321</b> (1 pc/pk, 200 pcs/cs)
Boxed Packaging	<b>206212</b> (1 pc/box, 100 boxes/case)	<b>206232</b> (1 pc/box, 100 boxes/case)
Description	Plastic pen body with large window	Plastic pen body with small window
Model No.	NIVR-01	NIVR-02
Material	Pen body: ABS	
Injection range	0 ~ 60 units (0.6 mL)	
Name	Reusable Pen Injector (NEST)	
Single Minimum Dose	1 unit (0.01 mL)	
Application	<p>Compatible with disposable injection needles in line with ISO 11608-2, including BD, Jierui injection needles, etc;</p> <p>Compatible with standard 3 mL cartridge that complies with ISO 11608-3.</p>	

### ● Technical Drawing



Plastic pen body with large window



Plastic pen body with small Window





**Lab Safety**

# Nitrile Examination Glove



Nitrile Powder Free Examination Gloves



Colloidal Oatmeal Coated Nitrile Gloves

There is color difference in the picture, please refer to the actual product.

# Feature

- Made of nitrile, an alternative solution for people allergic to natural latex.
- Suitable for both left and right hand.
- Tensile Strength: Minimum 18.0 MPa (Before Aging).
- Rolled cuff design makes it easy to wear and prevents rollback.
- Textured fingertips increase friction for better gripping.
- Powder-free.
- Non-Sterile. Single use only, powder free.
- Boxed pull-out packaging.
- Made in Malaysia.
- Powder-free nitrile gloves weigh 3.5 grams.



## • Colloidal Oatmeal Coated Nitrile Glove

### Oats Extractions

Oats extractions is a patented coating recognized by the FDA as a skin protectant, which have been proven by clinical studies could reduce and control rash and dry skin symptoms. Clinical studies have shown that colloidal oatmeal could reduce and control rash, dry skin.



#### Moisturizing

Keep skin moist through its moisture-locking capacity



#### Protect

Forms an adhesive, closed barrier to protect skin from external stimuli



#### Soothing

Relieves inflammation, irritation and itchiness and boosts skin's restoration process



#### Anti-Oxidation

Protects skin from oxidative damage



#### Restoring pH

Maintains skin's protective barrier function by restoring pH balance



#### Soothing

Acts as a natural cleanser to remove dead skin cells

Size	Palm Width (mm) ±4 mm	Length (mm)	/Pack	/Case	Cat.No.
XS	76	≥230	100	1000	903001
S	84		100	1000	903011
M	94		100	1000	903021
L	105		100	1000	903031

## • Nitrile Powder Free Examination Glove

Size	Palm Width (mm) ±4 mm	Length (mm)	/Pack	/Case	Cat.No.
XS	76	≥230	100	1000	902001
S	86		100	1000	902011
M	98		100	1000	902021
L	107		100	1000	902031
XL	115		90	900	902041

## • Nitrile Powder Free Examination Glove

Size	Palm Width (mm) ±5 mm	Length (mm)	/Pack	/Case	Cat.No.
XS	≤80	≥230	100	1000	902101
S	80		100	1000	902111
M	95		100	1000	902121
L	110		100	1000	902131
XL	≥110		90	900	902141

# Latex Examination Glove



Latex Powder Free Examination Gloves



Colloidal Oatmeal Coated Latex Gloves

There is color difference in the picture, please refer to the actual product.

# Feature



- Made of synthetic latex.
- Suitable for both left and right hand.
- Tensile Strength: Minimum 18.0 MPa (Before Aging).
- Rolled cuff design makes it easy to wear and prevents rollback.
- Textured fingertips increase friction for better gripping.
- powder free.
- Non-Sterile, single use only,
- Boxed pull-out packaging.
- Made in Malaysia.
- Powder-free latex gloves weigh 5.5 grams

## ● Colloidal Oatmeal Coated Latex Glove

Oats extractions is a patented coating recognized by the FDA as a skin protectant. Clinical studies have shown that colloidal oatmeal could reduce and control rash, dry skin symptoms.



### Moisturizing

Keep skin moist through its moisture-locking capacity



### Protect

Forms an adhesive, closed barrier to protect skin from external stimuli



### Soothing

Relieves inflammation, irritation and itchiness and boosts skin's restoration process



### Anti-Oxidation

Protects skin from oxidative damage



### Restoring pH

Maintains skin's protective barrier function by restoring pH balance



### Soothing

Acts as a natural cleanser to remove dead skin cells

Size	Palm Width (mm) ±4 mm	Length (mm)	/Pack	/Case	Cat.No.
XS	76	≥ 230	100	1000	904001
S	84		100	1000	904011
M	94		100	1000	904021
L	105		100	1000	904031

Tip: Please store in a cool, dry place, and avoid direct sunlight.

## ● Latex Powder Free Examination Glove

Size	Palm Width (mm) ±4 mm	Length (mm)	/Pack	/Case	Cat.No.
XS	76	≥ 230	100	1000	901001
S	86		100	1000	901011
M	98		100	1000	901021
L	107		100	1000	901031
XL	115		100	1000	901041

# NestShield® Extra Thick Nitrile Powder Free Examination Gloves



As one of our thicker glove offerings, NestShield Extra Thick Nitrile Examination Gloves offer even more protection in a high-quality disposable glove, designed for a great fit no matter how many times you apply or remove them.

At 6 mil, these powder-free black gloves give you high-performing nitrile material with extra thickness for heavy-duty performance, whether you're handling heavy machinery or industrial cleaning chemicals. These nitrile gloves have been certified with the FDA 510K registration and meet the rigorous testing standards of the American Society for Testing and Materials.

Plus, they're latex-free and powder-free nitrile. That way, you never need to worry about allergic skin reactions. Samples are available upon ask.



#### Extra Thick - 6mil

Extra Thick Nitrile Powder Free Examination Gloves provide a higher level of protection.



#### Anti-slip

Fingertip pitting design provides enhanced anti-slip performance.



#### Comfort

A comfortable feel similar to natural latex.



#### Safety

Tensile Strength: Minimum 14.0 MPa (Before Aging)  
Palm thickness: Minimum 0.09mm



#### Protection

No natural latex protein, very low risk of allergy.



#### Ambidextrous

Ambidextrous, standard beaded cuff and fingertip, flexible operation.

## • NestShield® Extra Thick Nitrile Powder Free Examination Gloves

Size	Length	Description	/Pack	/Case	Cat.No.
S	240mm	NestShield® Extra Thick Nitrile Examination Gloves, Black, 6 mil, powder free, small,	100	1000	902811
M		NestShield® Extra Thick Nitrile Examination Gloves, Black, 6 mil, powder free, medium,			902821
L		NestShield® Extra Thick Nitrile Examination Gloves, Black, 6 mil, powder free, large,			902831
XL		Nest Shield® Extra Thick Nitrile Examination Gloves, Black, 6 mil, powder free, extra large,	90	900	902841



# Nonwoven Mask

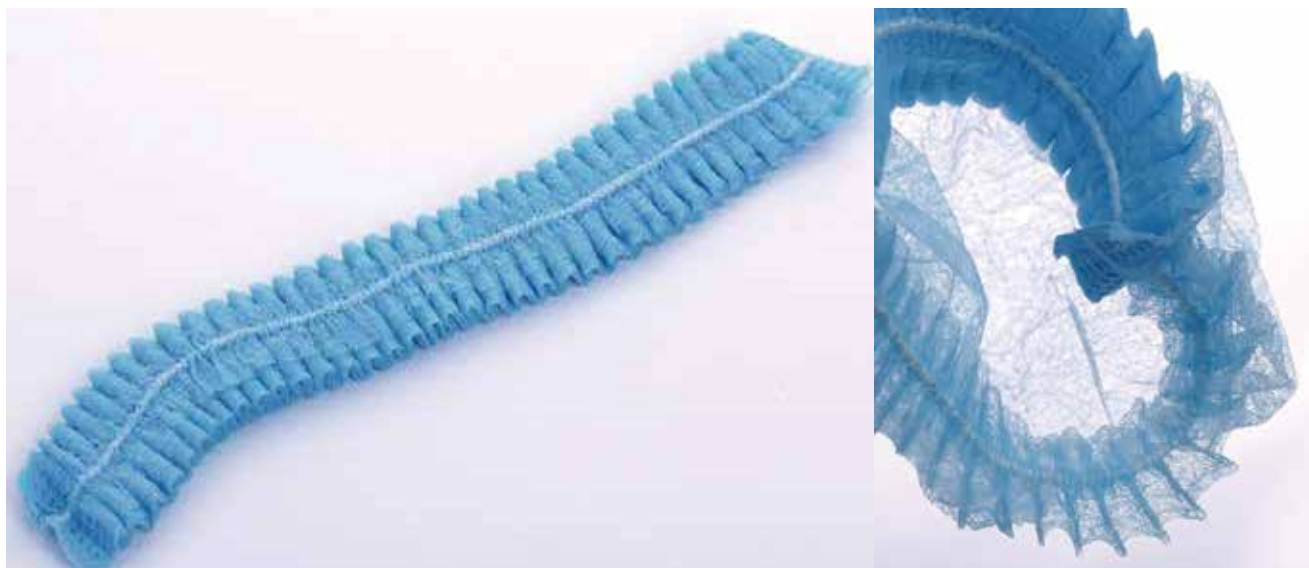


## • Features

- Can filter some toxic and harmful substances, odor gases, dust, etc. in the air.
- Bendable nose clip to ensure a better fit between the mask and the face.
- Foldable, easy to store, light weight, easy to carry.
- The four-layer activated carbon protection mask is made of activated carbon fiber of high adsorption, which is more effective in filtering than the ones protection mask without activated carbon fiber.

Name	Size (±0.5cm)	Color	/Pack	/Case	Cat.No.
Three-layer PP Non-woven Lab Protection Mask	17.5 x 9	Blue	50	500	922001
Four-layer PP Activated Carbon Non-woven Lab Protection Mask	17.8 x 9.3	Dark Gray	50	500	922101

# Mushroom Cap & Non-woven Shoe Cover



## • Features

- Breathable, dustproof, able to block dust and microorganisms.
- Not feeling tight for long-time wearing, no allergic reaction.

Name	/Pack	/Case	Cat. No.
Blue Mushroom Cap	100	1,000	921001



## • Features

- Breathable, non-slip, with rubber bands, comfortable to wear.

Size(cm)	/Pack	/Case	Cat. No.
42 * 17	100	1,000	923001



We, TingRo, major stock since commence with producing digital-inkjet side transparency business in 1992, have been building outstanding success.

# Lab Instrument

# 7° Digital Nutating Mixer

## ● Features

- The adjustable and gentle motion is ideal for many staining applications;
- Includes a large platform and non-slip mat;
- Low voltage power supply provides safe cold room operation and low energy consumption;
- Continuous or timed operation with automatic switch-off;
- Continue to run by last set speed and the remaining time when the power recovers;
- Audible and visual alarm: In timed mode, alarm will sound 5 times and then the time window shows "End" and flicker 5 times when the time reaches zero.

Cat. No.	105005
Speed	2~80rpm
Speed Accuracy	1rpm
Tilt Angle	7°
Timer	0~99h59min
Platform Dimensions	307x297mm
Max. Load	0.8kg
Display	LED
Included Accessory Standard in Packaging	6 Rubber Strips
Ambient Temperature	5~40°C
Relative Humidity	≤80%
Power Supply	AC100~240V, 50 / 60Hz
Max. Power	6.5W
Dimensions	440(L)x296(W)x189(H)mm
Net Weight	7.3kgs
Protection Level	IP21



Rubber Strip

# Mini Vortex Mixer

## ● Features

- Extremely compact and easy operate;
- Powerful vortex for tubes up to 30mm;
- Head is made of durable material to ensure long life;
- Refined steel base is designed to ensure product stability.

Cat. No.	105003
Oscillation Mode	Circumference Oscillation
Orbital Diameter	Φ4.5mm
Max. Capacity	80mL
Max. Tube Diameter	Φ30mm
Speed	3000rpm
IP rating (DIN EN 60529)	IP40
Ambient Temp.	5~40°C
Outside Dimensions	Φ96xH85mm
Power	5W
Power Supply	AC100~240V,50/60Hz
Weight	0.55kg



# Variable Speed Tube Revolver with Digital Display



Rotisserie Paddles  
For 10mL / 15mL Tubes



Rotisserie Paddles  
For 1.5mL / 2mL Tubes



Rotisserie Paddles  
For 5mL / 7mL Tubes



Rotisserie Paddles  
For 0.5mL / 0.8mL Tubes



Rotisserie Paddles  
For 50mL Tubes

## • Features

- Small footprint, “Plug and Play” operation;
- Includes five different interchangeable rotisseries;
- Rotation direction can be changed by slightly touching the rotisseries;
- Paddle angle is adjustable for different purposes;
- High quality, maintenance-free motor with little noise.

Cat. No.	105004
Rotation Speed	10~40rpm
Capacity	84x0.5mL tubes, 60x1.5mL / 2.0mL tubes, 28x5mL / 7mL tubes, 24x10mL tubes, 6x50mL tubes
Holder for Tubes Standard Configuration	Rotisserie Paddles for 10mL / 15mL Tubes 2pcs Rotisserie Paddles for 5mL / 7mL Tubes 2pcs Rotisserie Paddles for 1.5mL / 2mL Tubes 2pcs Rotisserie Paddles for 0.5mL / 0.8mL Tubes 2pcs Rotisserie Paddles for 50mL Tubes 1pcs
Ambient	4~60°C
Outside Dimensions	260(W)x148(D)x195mm(H)
Power	10W
Power Supply	AC100V~240V 50Hz/60Hz
Weight	1kg

# CO<sub>2</sub> Orbital Shaker



## • Features

- Orbital shaking through magnetic power eliminates the need to replace belts;
- Small footprint ideal for use in a CO<sub>2</sub> incubator;
- Specially treated mechanical components protect up to 20% CO<sub>2</sub> and 95% humidity conditions;
- Convenient external control box with LED display allows for easy adjustments without opening the chamber door;
- Minimal heat dissipation assures conditions within the CO<sub>2</sub> chamber are not effected;
- CO<sub>2</sub> resistant shaker can be used outside of CO<sub>2</sub> incubator for maximum value.

Cat. No.	105008 (No Accessories) / 105009 (Contains Accessories)
Speed Range	30rpm~300rpm
Timer	0~99h59min (0, continuous)
Orbit Diameter	Φ19mm
Platform Dimensions	355mmx300mm
Max.Capacity	50mL x30 / 100mL x15 / 150mL x15 / 200mL x15 / 250mL x15 500mL x9 / 1000mL x6 / 2000mL x4 / 3000mL x2 / 5000mL x1
Display	LED
Max.Load	6kgs
Ambient	Temp.: 5 ~ 60 Humidity: <99%RH
Outside Dimensions (WxDxH)	Machine Body: 360 x 300 x 96mm Control Box: 360 x 105 x 75mm The Unit: 360 x 405 x 96mm
Power	30W
Power Supply	AC100~240V, 50Hz/60Hz
Weight	Machine Body :17.5kgs Control box: 1kg

## • Flask clamp feature

Made of polished stainless stainless-steel. They can be fixed on any platform of all models of incubator shakers.



Flask Clamp



Aluminum Platform

Cat.No.	Name
105901 ▲	100mL Flask Clamp * 2
	250mL Flask Clamp * 4
	500mL Flask Clamp * 4
	1000mL Flask Clamp * 2
	2000mL Flask Clamp * 2
	Aluminum Platform * 1
105902 ▲	100mL Flask Clamp
105903 ▲	250mL Flask Clamp
105904 ▲	500mL Flask Clamp
105905 ▲	1000mL Flask Clamp
105906 ▲	2000mL Flask Clamp
105907 ▲	Aluminum Platform 300mm*360mm

▲ Make to Order

# Standard Mini Roller



## • Features

- Variable speed to accommodate numerous applications.
- Anti-corrosive and wear-resistant construction for use in humid and CO<sub>2</sub> environments.
- Remote control box makes it easy to operate the unit while it is in an incubator.

Product Name	Standard Mini Roller (11 Rollers)	Standard Mini Roller (6 Rollers)
Cat. No.	105007	105006
Included Accessory Standard in Packaging	Rollers: 11 O Ring (23.5x3.6mm): 20 O Ring (13.2x2.7mm): 20	Rollers: 6 O Ring (23.5x3.6mm): 20 O Ring (13.2x2.7mm): 20
Roller Speed	0.5~80rpm	0.5~80rpm
Operating Mode	Way forward	Way forward
Roller Dimensions (DXL)	Φ28mmx259mm	Φ28mmx259mm
Available Tubes or Bottles	Max. Ø120mm bottles; tubes	Max. Ø120mm bottles; tubes
Positions	Centrifuge tubes can be placed randomly or three 1500ml standard bottles	Centrifuge tubes can be placed randomly or three 1500ml standard bottles
Max.Load	6.5kgs	6.5kgs
Ambient	5°C~60°C	5°C~60°C
Relative Humidity	≤95%	≤95%
Display	LED	LED
Timer (Control Box)	999min or continuous	/
Outside Dimensions (WxDxH)	378mmx360mmx72mm	378mmx360mmx72mm
Power	10w	10W
Power Supply	AC100~240V,50/60Hz	AC100~240V,50/60Hz
Weight	6.5kgs	6.5kgs

# Automatic Decapper Instruction manual



## • Product Introduction

The device is equipped with the functions of automatic capping g/uncapping and automatic counting, which is small and light, out of ergonomic inclination design. It is of ergonomic inclination design, small and light. With a single hand holding the tube, automatic capping/uncapping can be realized, effectively reducing the working intensity of testers and greatly improving the working efficiency.

## • Features

**Flexible & Easy-to-use** Multiple working modes available (Continuous uncapping; continuous capping; and capping after uncapping), The device can customize the parameters such as torque, clamping force and number of turns to avoid sealing failure and prevent sample contamination.

**Intelligent & Efficient** The device is fitted with a high-safety automatic trigger starting mechanism, without need for manual trigger of key, The processing speed less than 4s/sample.

**Compatible** The device is suitable for the sampling tubes with screw caps (the cap diameter is 8-22mm) and can be customized for other sizes.

**Safe & Portable** The software interface is simple and easy to understand, with counting display, counting re-set and module re-set functions. With a small size, it is flexible to move and can be used in the working scenarios such as biosafety cabinet and super clean bench, and disinfectant like alcohol can be used to directly spray for disinfection.

Product Model	European / German standard plug	British standard plug	South Africa / India standard plug	American standard plug
Cat.No.	107001	107002	107003	107004
Clamping force	40-150N			
Capping/torque	1N*m			
Starting mode	Push up the tube to automatically trigger the startup			
Working mode	Continuous uncapping; continuous capping; and capping after uncapping			
Settable functions	Torque, clamping force, number of turns, uncapping mode			
Applicable specifications	The sampling tubes with screw caps (the cap diameter is 8-22mm)			
Weight	10 kgs			
Dimensions	250mm×245mm×420mm			

## • Application sites



## • Application scenarios

1

Sample collection link  
(Sample collection for COVID-2019 testing)

2

Sampling and testing link  
(Sampling for COVID-2019 testing)

3

Packaging  
(Reagent packaging)



# Centrifuge

## • Feature

- Electronic locks. Centrifugation only when the lid is locked.
- The lid opens automatically after centrifugation.
- Fast Lifting Speed, the electronic brake.
- Low Noise.
- Capacitive touchpad, responsive.
- LCD display. Real-time display of speed, time and operating status.
- Centrifugal time and speed adjustable. Adjustable speed during centrifugation.
- Size: 260\*220\*150mm.
- Voltage: 110-220V, 50-60HZ.



Type	Name	Centrifuge Range (RPM)	Max RCF (g)	Rotor
102001	Universal Centrifuge	500-6,000	2,400	General Rotor (1.2/05/1.5/5.0ml)
102002	5 mL Centrifuge	500-6,000	2,400	For 5 mL Centrifuge Tubes
102101	High - Speed Centrifuge	500-12,000	8,800	For 1.5 mL & 2.0 mL Centrifuge Tubes



General Rotor



5 mL Centrifuge



High - Speed Centrifuge

# Mini Dry Bath

## • Feature

- Manual mode & automatic mode.
- Fast heating, with overheat protection switch to prevent overheating.
- Display setting parameters and real-time parameters simultaneously, easy to observe and use.

Range of Application	0.2/0.5/1.5/2.0ml Centrifuge tube
Temperature Range	Indoor temperature-100°C
Time set	1-999min or 1-999sec
Temperature control accuracy	±0.1°C
Temperature uniformity	±0.3°C
Heating up time	About 5min
Touch screen	Capacitive touch screen
Display	LCD
Voltage	100-220V, 50-60HZ
Size	157*115*100mm (L*W*H)
Weight	About 0.5kg



# Intelligent Biobank Management System



## Product Advantages

### Identification in Seconds

Complete whole box identification and storage in 3-5 seconds.

### High Compatibility

Support cryogenic vials of different sizes. 9\*9, 10\*10 and 12\*8 are all suitable.

### Permanent Storage

Permanently store historical records, making all operating information clear at a glance.

### Easy to Use

Intelligent judgment of warehousing type and guide users to operate.

### Multiple-terminal

Storage at service terminals, support simultaneous use of multiple terminals.

### Intelligent Selection

Intelligent selection of storage location.

### High Efficiency

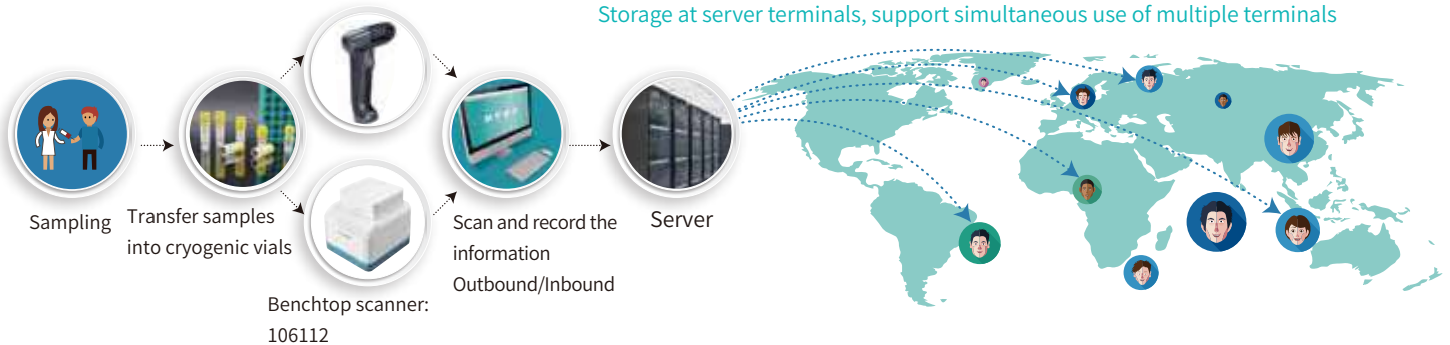
Support simultaneous use of multiple terminals such as refrigerators, liquid nitrogen tanks, etc.

### Easy to Manage

Hierarchical management design, to prevent accidental deletion of information.

Handheld scanner:  
106111

Storage at server terminals, support simultaneous use of multiple terminals



## Benchtop scanner:

Cat. No.	106112
Scan time of whole box	3-5s
Normal identification rate	≥99.99%
System interface	USB
Operating system	Windows 10 64bit
Input power	AC 100-240V~,10W
Working temperature	0-40°C

## Handheld scanner:

Cat. No.	106111
Scan time of single vial	0.5s
Normal identification rate	≥99.99%
System interface	USB
Operating system	Windows 10 64bit
Input power	5V, 2W
Working temperature	0-40°C

## Application



Medical and health service providers



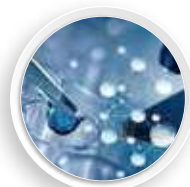
Scientific research institutions



Biopharmaceutical companies



Biological labs



Cell&sperm banks,...

# Label Printer

## ● BradyPrinter i5100 Label Printer

Brady i5100 label printer supports batch printing and integrates intelligent printing technology, making various complex printing tasks within your enterprise easier to accomplish.

## ● Product Performance Advantages:

- Simple settings changes: The touch screen is easy to use for adjusting printer settings quickly.
- Comprehensive feature set: The printer has all the features needed for high-performance printing.
- Intelligent Printing (IP) technology: Software and consumables that communicate with the printer eliminate debugging after consumable replacement and allow you to get back to work quickly.
- Intelligent loading design: Specially designed ribbon rewind spools and automatic centering label roll holders make consumables easy to replace without additional steps.
- Multiple hardware options: You can use a variety of connection ports to connect to the devices you need and use replaceable rubber rollers to optimize printing effects for different labels.



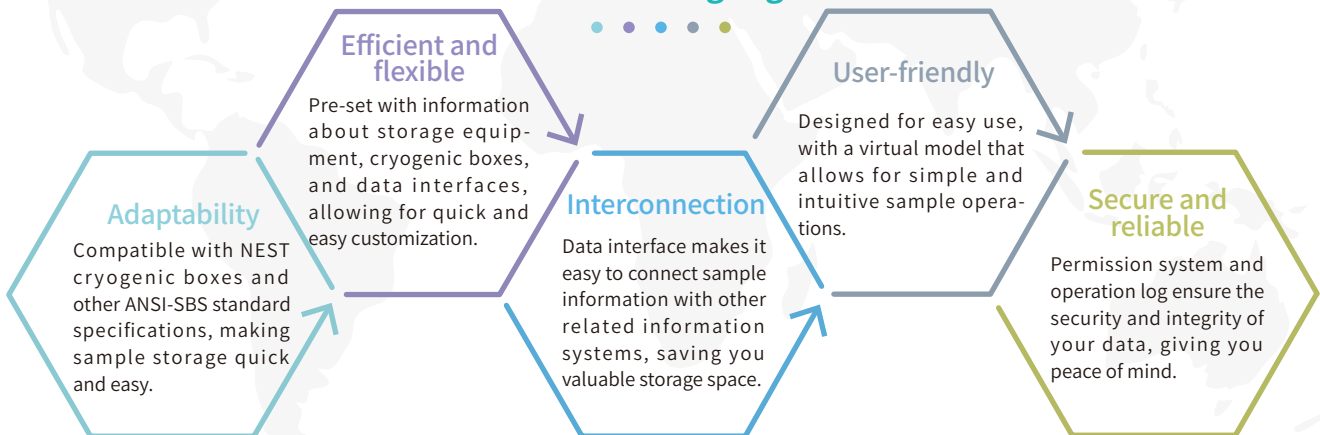
Model	I5100	Memory	256MB
Handheld/Desktop	Desktop	Connectable to Computer	Yes
Power Supply	100 - 240V AC, 50/60 Hz, PFC	Interfaces	USB 2.0, RS232-C, Ethernet 10/100 BASE-T, SD slot
Printing Method	Thermal transfer (300 or 600dpi) / direct thermal (300dpi - depending on material and printhead)	Keyboard	External
Printing Resolution	300 dpi / 600 dpi	Display Screen	Color LCD touch screen
Maximum Printing Width	4.16 inches (106mm)	Dimensions	12.5 inches (318mm) x 9.5 inches (241mm) x 17.1 inches (434mm)
Maximum Label Width	0.20 inches (5mm) to 4.33 inches (110mm)	Weigh	14.6 pounds (6.6kg)
Maximum Printing Speed	Maximum 11.8 inches (300mm)/second (300 dpi) Maximum 5.9 inches (150mm)/second (600 dpi)	Maximum Power Consumption	Standby <10W / Normal 150W / Maximum 300W
Printing Color	Single color	Software	Brady Workstation (v4.1 or higher) and Workstation applications, Brady LabelMark software (v6.6.1 or higher)

Consumables Number	106091	106092
Consumables Name	Cryogenic Labels	Thermo Ribbon
Consumables Model	THT-163-499-3127mm*37.4mm	IP-R4302
Packaging	3000 pcs/roll	1 roll/box

# Sample Management Software

NEST Sample Management System (SMS) is a comprehensive sample information management system for laboratories, medical units, and scientific research institutions. It streamlines multiple steps in the sample information process, including pre-processing, storage, queries. NEST SMS supports custom configurations according to on-site needs, without the need for special customization development. It links functional modules efficiently, ensuring simple and smooth inbound and outbound steps, complete information, and reducing the workload and human error risks associated with sample library management.

## Software highlights

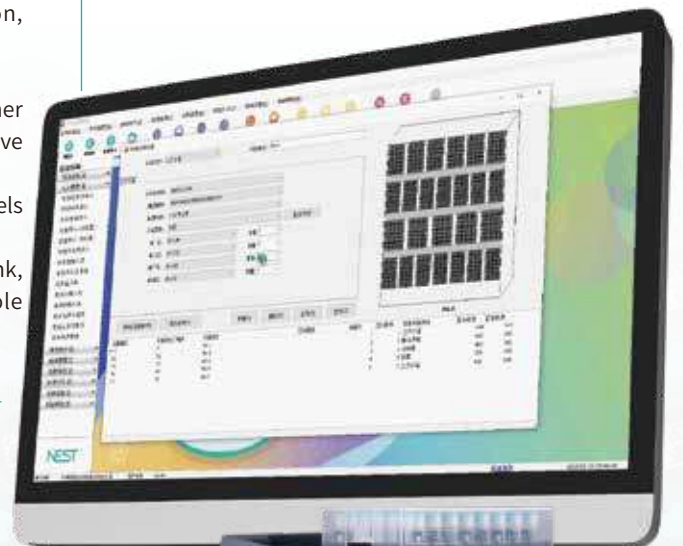


## Basic Functional Modules

- Regional equipment: visual equipment structure overview
- Sample management: custom, pre-entry, sample storage and retrieval
- Query and statistics: query and statistics of samples by location, custom fields, association information, and scanning
- Data management: data backup, batch editing of samples
- Associated information: can be docked with HIS, LIS, PACS, and other information systems to quickly improve sample information and save local space
- Label printing: human-readable barcodes and custom adhesive labels can be added
- Settings: custom storage equipment (refrigerator, liquid nitrogen tank, freezer rack, cryogenic box), custom sample information, user role settings, etc.

## Advanced Functions

- Pre-set SQL Server, Oracle, MySQL data interface
- Quick association pre-entry
- Custom sample number, encoding rule settings
- User permission management, log information inquiry
- Label printing scene settings.



Product Specification	Product Number
NEST Sample Management Software-20 terminal devices	106131
NEST Sample Management Software-15 terminal devices	106132
NEST Sample Management Software-10 terminal devices	106133
NEST Sample Management Software-5 terminal devices	106134
NEST Sample Management Software-3 terminal devices	106135

# Single-Rack Reader

The NEST Single-rack reader is a device that rapidly decodes entire boxes of biological samples in biobanks and high-throughput laboratories. It is lightweight, compact, and can quickly decode various types of cryogenic boxes on-site. The device can simultaneously decode the entire box and read the cryogenic box code. When used with the NEST sample management software, it can directly decode and store entire boxes of samples. The device was granted a utility model patent in 2020.

## ● Cryogenic box plate rack

### Decoding entire boxes of cryogenic tubes

- Decoding rules can be customized according to the cryogenic box specification (8\*12, 6\*8, 5\*5, 9\*9, 10\*10, etc.)
- Non-standard decoding area can be specified for each position.

### Cryogenic box code

- Can be a one-dimensional or two-dimensional barcode on any side of the cryogenic box or a two-dimensional code at a certain position on the bottom of the cryogenic box.
- Cryogenic box code decoding does not require an external device.
- Cryogenic box code location can be automatically set by software.



## ● Matching software and interface services

- Operating system: Windows XP or higher version.
- One-click cryogenic box numbering and entire box cryogenic tube decoding.
- Cryogenic box template can be customized.
- Decoding results can be displayed through graphics, lists, and images.
- Decoding results can be exported to Excel files.
- HTTP service interface can be started with one-click to automatically generate URL addresses.
- HTTP service call return results consistent with the direct software interface operation results.

## ● Data interface

- Enabling data integration with systems such as HIS, LIS, PACS, EMR, etc.
- Open database interface can be implemented through the pre-configured Oracle, SQL Server, MySQL of the system without the need for customized development.

## ● Mainframe framework

- Small and portable size: 220\*175\*220mm (length \* width \* height).
- Light weight: about 1.5 kg.
- Operating environment -20°C ~ 35°C.

## ● Camera

- Dust-proof and waterproof tempered glass protection above the camera
- Plug and play, no need to install drivers.

## ● USB data cable/power switch

- Standard USB 2.0 interface, no external power supply required, low power consumption (1W-4W).
- Standby power consumption less than 1W, and photo decoding power consumption is less than 4W.



Product number	106211
Product model	Single-rack reader NSSnap, English

# Multi-Rack Reader

## Multi-Rack Reader

- Partial scanning according to the number of cryogenic boxes.
- Scanning results in various ways such as graphics, lists, and imagFull-frame decoding less than 10 seconds, single-box scanning within 3-5 seconds.
- Excel export of a single box or merged multiple boxes.
- Decoding application for scanning bottom QR codes for integration (single-rack/multi-rack) based on the Windows system.
- Fast scanning of inbound and outbound barcodes, greatly improving work efficiency.
- Number and type of cryogenic boxes customization.
- Compatible with major brands of cryogenic tubes on the market.
- Compatible with various scanning racks to meet different quantity requirements.



Product number	106212	Scanning light source	LED light source
Product model	Multi-rack reader NSScanner, English	Rack types	SBS box + traditional square box, 2 traditional square boxes, 3 SBS boxes
Product type	Flatbed	Product size and weight	443.5×278.6×54mm 2.14kg
Maximum scanning range	216×297mm	Power/power consumption	220V/18W
Scanning component	CCD	Data interface	Provides HTTP access service to return a JSON string containing the position and cryogenic tube code
Optical resolution	4800×9600dpi	Support system	Windows2000/XP/Vista/7/10
Scanning speed	Full-frame scanning ≤ 6 seconds	Machine brand	EPSON

## Barcode Scanner

The barcode and DATAMATRIX code on the cryogenic tube can be scanned using a barcode scanner to quickly obtain information related to the sample. The scanning result can be directly input into the sample library management system, facilitating the subsequent sample tracking and management. The barcode scanner has the following features: high efficiency, high accuracy, easy to operate, and strong durability.

- Quick recognition of electronic screen codes: can scan one-dimensional and two-dimensional codes and traditional paper barcodes, and has strong decoding ability for electronic screen QR codes.
- High-speed rebound button: 5 million fatigue tests, still maintaining good button effects.
- Adaptus6.0 imaging technology: upgraded barcode image acquisition technology combined with custom sensors to achieve extended depth of field and fast reading.
- Sturdy and durable shell: using a new generation of high-strength ABS materials, it can withstand a 1.5m free fall impact.
- Classic commercial appearance: loved by international brands, simple and versatile design, naturally formed.



# Handheld Decapper for Cryogenic Vials



## ● Product introduction

NEST decapper is available in 1, 8, 24, 48, and 96 channel models, suitable for use in biobanks, genetic sequencing, disease control centers, blood centers, laboratory automation, pharmaceuticals, and other industries.

## ● Features

- Improved efficiency: significantly improves efficiency compared to manual operations
- Safety requirements: prevents laboratory personnel from contacting samples or reagents when opening or closing caps, reducing the risk of biological and chemical hazards.
- Sealing guarantee: the uniform torque design of the automated decapper prevents caps from being closed improperly or damaging the cryogenic vial due to uneven hand force.
- Wide compatibility: easily opens and closes all NEST 2D barcode cryogenic vials, and is also suitable for other brands with the same cap clasping mechanism.

## ● Product parameters

Product name	Handheld Decapper for Cryogenic Vials
Product number	106002
Empty load speed	170rpm
Manual torque	2N.m
Electric torque	0.25-0.35N.m
Battery type	Lithium battery
Battery voltage	3.7V
Battery capacity	260mAh
Charging time	45 minutes

# Cell Thawing Device

## ● Product Introduction

To better meet the needs of applications with small sample quantities and reduce user procurement costs, NEST has launched the NEST cell thawing device, which integrates real-time temperature data display. NEST cell thawing device uses "resistive heating", "programmed temperature control", "low temperature sensing" and other technologies to achieve cell thawing and resuscitation. The built-in temperature monitoring system identifies the surface temperature of cryogenic tubes and each stage temperature during the solid-to-liquid thawing and resuscitation process. Even if there are frozen storage labels and marker pens on the surface, the thawing effect will not be affected. Customizable thawing and recovery solutions for all types of frozen cell storage tubes, whether they are stored in liquid nitrogen or at -80°C.

The thawing time of the NEST cell thawing device is basically the same as that of a water bath. It takes 1 minute to preheat, about 1 minute and 10 seconds for the melting stage, and about 1 minute and 20 seconds for the thawing and resuscitation stage. The cell survival rate of thawing and resuscitation is similar to that of a water bath.

## ● Product Features

- Small size, less space on the workbench.
- Especially suitable for scenarios with few samples to be thawed and resuscitated.
- The LCD screen can display the real-time temperature of the sample.
- Has account management and data export functions
- Comes with a transfer container for transferring cryogenic tubes.



Product Name	NEST Cell Thawing Device
SKU	106007
Model	LA-G002
Throughput	2 holes, each hole can be used independently
Application	2.0ml standard cryogenic tubes
Filling volume	0.8-1.5ml
Thawing time	3 minutes
Alarm	Low temperature alarm, error operation alarm
Prompt sound	Preheating end prompt, thawing countdown prompt, thawing end prompt
Thawing and resuscitation end	Cryogenic tube pops out directly
Size (L * W * H)	23 * 14 * 16cm
Weight	3.5kg
Voltage	220V, 50Hz
Warranty	One-year warranty for the whole device

## ● Operating procedures



1

Power on



2

Insert the cryogenic tube into the hole



3

The thawing instrument automatically thaws



4

After thawing is complete, the cryogenic tube pops out



# Pipette



## ● Features

- Dispensing head rotates for effortless pipetting convenience.
- Individual piston and tip cone assembly.
- Spring loaded tip cones for easy cleaning and maintenance.
- Compound material-made tip cone secures high sealing performance.
- Available as Fixed Volume and Adjustable Volume formats.
- Streamlined shape design.
- Comprehensive volume range from 0.1 µL to 10mL.
- Easy calibration and maintenance.
- 8 and 12 channel pipette options.

# Mechanical Pipette Volume Selection

**Specifications** This volume list is for MicroPette and MicroPette plus (Adjust able and Fixed volume)

Single-channel Adjustable Volume Pipettes							
Cat.No.	Volume Range	Increment	Test Volume	Error limits in accordance with ISO8655-2			
				Systematic Error		Random Error	
	μL	μL	μL	μL	%	μL	%
104011	0.1-2.5	0.05	2.5	±0.0625	±2.50	±0.05	±2.00
			1.25	±0.0375	±3.00	±0.0375	±3.00
			0.25	±0.03	±12.00	±0.015	±6.00
104012	0.5-10	0.1	10	±0.1	±1.00	±0.08	±0.80
			5	±0.075	±1.50	±0.075	±1.50
			1	±0.025	±2.50	±0.015	±1.50
104013	2-20	0.5	20	±0.18	±0.09	±0.08	±0.04
			10	±0.12	±1.20	±0.1	±1.00
			2	±0.06	±3.00	±0.04	±2.00
104014	5-50	0.5	50	±0.3	±0.60	±0.15	±0.30
			25	±0.225	±0.90	±0.15	±0.60
			5	±0.1	±2.00	±0.1	±2.00
104015	10-100	1	100	±0.8	±0.80	±0.15	±0.15
			50	±0.5	±1.00	±0.2	±0.40
			10	±0.3	±3.00	±0.15	±1.50
104016	20-200	1	200	±1.2	±0.60	±0.3	±0.15
			100	±0.8	±0.80	±0.3	±0.30
			20	±0.6	±3.00	±0.2	±1.00
104017	100-1000	5	1000	±6	±0.60	±2	±0.20
			500	±3.5	±0.70	±1.25	±0.25
			100	±2	±2.00	±0.7	±0.70

User calibration should refer to the industrial standard ISO8655-2.

Bulk, Non-sterile	Racked, Sterile	Product Description	0.1-2.5μL 104011	0.5-10μL 104012	2-20μL 104013	5-50μL 104014	10-100μL 104015	20-200μL 104016	100-1000μL 104017
—	314016	10μL filter universal pipette tips, extra long, clear	√	√					
314001	—	10μL universal pipette tips, extra long, clear	√	√					
—	311012	10μL filter universal pipette tips, clear	√	√					
311001	—	10μL filter universal pipette tips, clear	√	■					
301006	301016	10μL universal pipette tips, clear	√	√					
—	310012	20μL filter universal pipette tips, clear			√				
316001	316012	100μL filter universal pipette tips, clear				√	√		
312001	312012	200μL filter universal pipette tips, clear					√	√	
302106	302116	200μL universal pipette tips, yellow			√	√	√	√	
305006	305016	300μL universal pipette tips, clear			√	√	√	√	
313001	313012	1000μL filter universal pipette tips, extra long, clear							√
303206	303216	1000μL universal pipette tips, blue							√
304006	304016	1250μL universal pipette tips, clear							√

■ Note: Due to the easy loosening of the filter of the bag-packaged tips, there may be a situation of not fitting in this combination. Not recommended.

# CHEMICAL RESISTANCE CHART

	ABS	Acetal	HDPE	LDPE	PC	PP	Santo-prene	Sili-cone	Reagent	ABS	Acetal	HDPE	LDPE	PC	PP	Santo-prene	Sili-cone
Acetaldehyde	D	A	C	C	C <sup>1</sup>	A <sup>1</sup>	-	A	Benzene	D	A <sup>1</sup>	D	D	D	D	D	D
Acetamide	-	A	A	A	D	A <sup>1</sup>	-	B	Benzene Sulfonic Acid	-	A	A	A <sup>1</sup>	D	D	-	D
Acetate Solvent	-	-	A	A	-	B <sup>1</sup>	-	C	Benzoic Acid	-	B	A	A <sup>1</sup>	B <sup>1</sup>	B <sup>1</sup>	-	B
Acetic Acid	D	D	A	A	B <sup>1</sup>	A	A	C	Benzonitrile	D	-	-	C <sup>1</sup>	-	-	-	A <sup>1</sup>
Acetic Acid 20%	C	C	A	A	A <sup>1</sup>	A	A	B	Benzyl Chloride	D	A	-	-	-	C <sup>1</sup>	-	D
Acetic Acid 80%	D	D	A	D	B <sup>1</sup>	A	C	B	Bleach	B	D	-	-	-	-	-	-
Acetic Acid, Glacial	D	A	D	B <sup>1</sup>	A <sup>1</sup>	D	B	-	Bleaching Liquors	-	-	-	-	-	A <sup>1</sup>	-	-
Acetic Acid, Vapors	-	-	-	-	-	-	-	A	Borax (Sodium Borate)	-	B	A	A <sup>1</sup>	-	A <sup>1</sup>	-	B
Acetic Anhydride	C <sup>1</sup>	D	C	D	-	B <sup>1</sup>	D	C	Boric Acid	-	A	A	A <sup>2</sup>	-	A	A	A
Acetone, 50% water	D	-	-	-	-	A	-	A <sup>2</sup>	Brewery Stop	-	B	-	-	-	-	-	-
Acetone	D	A	D	B <sup>1</sup>	D	A	A	D	Bromine	D	D	D	D	C <sup>1</sup>	D	-	D
Acetonitrile	D	-	A	D	D	A <sup>1</sup>	D	D	Bromine	D	D	D	D	C <sup>1</sup>	D	-	D
Acetophenone	-	-	C	D	D	C	-	-	Bromoform	-	-	D	D	D	C	-	-
Acetyl Bromide	-	-	-	D	D	-	-	-	Butadiene	-	A	D	D	D	C	-	-
Acetyl Chloride (dry)	D	D	-	D	D	D	A	C	Butane	B	A	-	C <sup>1</sup>	A <sup>1</sup>	-	D	D
Acetylene	-	A	-	D	D	A <sup>1</sup>	-	B	Butanol (Butyl Alcohol)	-	A	-	B <sup>2</sup>	B <sup>1</sup>	A <sup>1</sup>	B	B
Acrylonitrile	D	-	A	A	D	A <sup>1</sup>	D	D	Butter	B	A	-	-	-	-	D	B
Adipic Acid	-	-	A	A	A	B <sup>2</sup>	-	-	Buttermilk	B	A	-	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>	-	A
Alanine	-	-	A	A	A	A	-	-	Butyl Amine	-	C <sup>1</sup>	-	C <sup>1</sup>	D	B <sup>1</sup>	-	B <sup>1</sup>
- Benzyl	A <sup>1</sup>	A	A	B <sup>2</sup>	B <sup>1</sup>	B <sup>1</sup>	A	D	Butyl Ether	-	D	-	-	-	D	-	D
- Butyl	D	A	B	D	-	A	D	-	Butyl Phthalate	-	-	A	C <sup>1</sup>	D	B <sup>2</sup>	-	A <sup>1</sup>
- Diacetone	A <sup>1</sup>	A	A	A	A <sup>2</sup>	A	B	B	Butyl acetate	-	A	B	C <sup>1</sup>	D	B <sup>1</sup>	-	D
- Ethyl	-	A	A	B <sup>1</sup>	-	B <sup>2</sup>	-	D	Butylene	-	-	-	B <sup>1</sup>	D	-	-	D
- Hexyl	B <sup>1</sup>	A <sup>1</sup>	A	A	B <sup>2</sup>	A	A	B	Butyric Acid	D	A	D	D	D	B <sup>1</sup>	A	C
- Isobutyl	B	A	A	A <sup>2</sup>	-	A <sup>1</sup>	-	A	Calcium Bisulfate	-	-	-	-	D	-	-	-
- Isopropyl	-	A	A	A <sup>2</sup>	A <sup>2</sup>	A <sup>2</sup>	-	A	Calcium Bisulfide	-	D	-	B <sup>1</sup>	A	-	-	C
- Methyl	D	A	A	A <sup>1</sup>	B <sup>1</sup>	A <sup>2</sup>	A	A	Calcium Bisulfite	-	D	A	A <sup>1</sup>	D	A	-	A
- Octyl	A <sup>1</sup>	A	-	-	-	-	-	B	Calcium Bromide 38%	-	-	-	-	-	-	-	-
- Propyl	B <sup>1</sup>	A	-	A <sup>2</sup>	-	A	A	A	Calcium Carbonate	-	A	-	B <sup>1</sup>	C <sup>2</sup>	A	-	A
Allyl Chloride	D	-	A	-	-	A	-	-	Calcium Chlorate	-	A	-	-	-	-	-	-
Aluminium Acetate (saturated)	-	-	-	-	-	-	-	D	Calcium Chloride (30% in water)	B	D	A	B <sup>2</sup>	-	A <sup>2</sup>	-	A
Aluminium Chloride	A	-	A	B <sup>2</sup>	A <sup>1</sup>	A	-	B	Calcium Chloride (saturated)	A	D	A	-	-	A	-	A
Aluminium Chloride 20%	-	C	A	B <sup>2</sup>	A <sup>1</sup>	A	-	B	Calcium Fluoride	-	-	-	-	-	-	-	-
Aluminium Fluoride	A	C	A	A <sup>2</sup>	A	-	-	B	Calcium Hydroxide 10%	-	A	A	-	-	A	-	A
Aluminium Hydroxide	B	A	A	A <sup>2</sup>	B <sup>1</sup>	A	-	-	Calcium Hydroxide (saturated)	A	-	A	-	-	A	-	A
Aluminium Nitrate	-	B <sup>1</sup>	-	A <sup>2</sup>	A <sup>1</sup>	A <sup>2</sup>	-	B	Calcium Hydroxide	-	D	-	A <sup>2</sup>	D	A <sup>2</sup>	-	A
Aluminium Phosphate	-	-	-	-	-	-	-	A	Calcium Hypochlorite 30%	-	-	A	-	-	A	-	-
Aluminium Potassium Sulfate 10%	-	C	A	A <sup>2</sup>	A <sup>1</sup>	A	-	A	Calcium Hypochlorite (saturated)	A	-	A	-	-	A	-	-
Aluminium Potassium Sulfate 100%	-	C	A	A <sup>2</sup>	A <sup>2</sup>	A	-	A	Calcium Hypochlorite	-	D	A	A <sup>1</sup>	D	A <sup>1</sup>	-	B
Aluminium Sulfate	A <sup>2</sup>	B <sup>1</sup>	A	A <sup>2</sup>	A <sup>2</sup>	A	A	A	Calcium Nitrate	A	D	B	A <sup>1</sup>	A <sup>2</sup>	A <sup>2</sup>	-	B <sup>1</sup>
Alums	-	-	-	A	-	-	-	A <sup>1</sup>	Calcium Oxide	D	A	-	B <sup>1</sup>	A <sup>2</sup>	A	-	-
Amines	-	D	B	C <sup>1</sup>	-	B <sup>2</sup>	-	B	Calcium Sulfate	C	D	-	B <sup>1</sup>	A <sup>2</sup>	A	-	-
Ammonia 10%	-	D	-	C <sup>1</sup>	D	A <sup>2</sup>	-	-	Calcium Sulfide	-	-	-	-	-	A	-	-
Ammonia Nitrate	-	C	-	A	-	A	-	-	Calgon	-	A	-	-	-	A	-	A
Ammonia, anhydrous	D	D	A	B <sup>2</sup>	D	A	-	C	Cane Juice	-	A	-	-	-	C <sup>1</sup>	-	A
Ammonia, liquid	-	D	A	C <sup>1</sup>	D	A <sup>2</sup>	-	-	Carbolic Acid (Phenol)	D	D	-	D	D	B	-	D
Ammonium Acetate	-	-	A	A	D	A <sup>2</sup>	-	-	Carbon Bisulfide	-	A	-	-	-	D	-	-
Ammonium Bifluoride	A <sup>2</sup>	D	-	A <sup>2</sup>	-	A	-	-	Carbon Dioxide (dry)	B	A	-	A <sup>1</sup>	-	A <sup>2</sup>	-	B
Ammonium Carbonate	A <sup>2</sup>	D	B	B <sup>2</sup>	-	A	-	C	Carbon Dioxide (wet)	B	A	-	A <sup>1</sup>	-	A <sup>2</sup>	-	B
Ammonium Caseinate	-	D	-	-	-	-	-	-	Carbon Disulfide	-	-	D	D	D	D	-	-
Ammonium Chloride	A <sup>2</sup>	B	A	A <sup>2</sup>	A <sup>2</sup>	A	-	C	Carbon Monoxide	-	A	-	A <sup>2</sup>	D	A	-	A <sup>2</sup>
Ammonium Fluoride 25%	D	-	A	-	-	A <sup>4</sup>	-	-	Carbon Tetrachloride	D	B <sup>1</sup>	C	D	D	D	-	D
Ammonium Hydroxide	B	C	A	A <sup>1</sup>	D	A	-	A	Carbon Tetrachloride (dry)	D	-	C	D	-	D	-	D
Ammonium Glycolate	-	-	A	A	B	A	-	-	Carbon Tetrachloride (wet)	D	A <sup>1</sup>	C	-	-	D	-	-
Ammonium Nitrate	-	A <sup>2</sup>	A	A	-	A	-	-	Carbonated Water	-	A	-	A	-	B	-	-
Ammonium Oxalate	-	B	A	-	A <sup>1</sup>	A	-	-	Carbonic Acid	-	B <sup>1</sup>	B	B <sup>2</sup>	A <sup>1</sup>	A	-	A
Ammonium Persulfate	A <sup>2</sup>	D	A	A <sup>2</sup>	-	A	-	D	Catsup	B	B	-	-	-	A	-	-
Ammonium Phosphate, Dibasic	A <sup>2</sup>	B <sup>2</sup>	-	A <sup>2</sup>	A <sup>2</sup>	A	-	A	Cellulose Acetate	-	-	-	-	-	A	-	-
Ammonium Phosphate, Monobasic	-	B	-	C	-	A	-	A	Chloral Hydrate	A	-	D	-	-	D	-	-
Ammonium Phosphate, Tribasic	-	B	-	C	-	A	-	A	Chloric Acid	-	D	-	-	-	-	-	-
Ammonium Sulfate	A <sup>2</sup>	B <sup>1</sup>	A	A <sup>1</sup>	A <sup>2</sup>	A	-	A	Chlorinated Glue	-	D	-	-	-	-	-	-
Ammonium Sulfite	-	D	B	B <sup>2</sup>	-	A	-	-	Chlorine Water	-	D	C	B <sup>1</sup>	-	D	-	D
Ammonium Thiosulfate	-	B	-	A	-	-	-	-	Chlorine Anhydrous Liquid	-	A <sup>1</sup>	C	B <sup>1</sup>	C	D	-	D
Amyl Acetate	D	B <sup>1</sup>	-	C <sup>1</sup>	D	B <sup>1</sup>	D	D	Chlorine (dry)	-	D	B	D	D	D	-	D
Amyl Alcohol	A <sup>1</sup>	A	A	B <sup>2</sup>	B <sup>1</sup>	B <sup>1</sup>	A	D	Chloroacetic Acid	-	D	A	D	D	C <sup>1</sup>	D	D
Amyl Chloride	D	A	B	D	D	D	-	D	Chlorobenzene (Mono)	D	D	D	C <sup>1</sup>	D	C <sup>1</sup>	D	D
Aniline	D	A <sup>1</sup>	B	C	D	A <sup>1</sup>	D	B	Chlorobromomethane	-	-	-	A	-	A	-	D
Chloralhydrate	-	-	-	-	-	-	-	-	Chloroform	D	A	D	C <sup>1</sup>	D	C <sup>1</sup>	D	D
Aniline Hydrochloride	D	-	-	D	D	D	-	D	Chlorosulfonic Acid	-	D	D	D	C <sup>1</sup>	D	-	D
Antifreeze	B	D	-	-	-	D	-	C	Chocolate Syrup	-	A	-	-	-	A	-	-
Antimony Trichloride	A <sup>2</sup>	-	B	B <sup>2</sup>	A <sup>2</sup>	A	-	-	Chromic Acid 5%	B	D	A	A	B	D	D	C
Aqua Regia (80% HCl, 20% HNO <sub>3</sub> )	D	D	D	B <sup>1</sup>	D	B <sup>1</sup>	D	D	Chromic Acid 10%	B	D	A	A	C	D	D	C
Arochlor 1248	-	-	-	C	-	D	-	B	Chromic Acid 30%	B	D	A	A	C	D	D	C
Aromatic Hydrocarbons	-	A	-	C	-	D	-	D	Chromic Acid 50%	D	D	A	A	D	D	D	C
Arsenic Acid	A <sup>2</sup>	D	B	B <sup>2</sup>	A <sup>1</sup>	A	B	A	Chromium Salts	-	-	-	B	A	-	-	-
Arsenic Salts	-	-	-	B <sup>2</sup>	-	-	-	-	Cider	-	A	-	B	A	A	-	B <sup>1</sup>
Asphalt	-	B <sup>2</sup>	-	A <sup>1</sup>	D	B <sup>1</sup>	-	D	Citric Acid	D	B <sup>1</sup>	A	D	A <sup>1</sup>	A	A	A
Barium Carbonate	A <sup>2</sup>	A	-	B <sup>2</sup>	A <sup>2</sup>	A	-	-	Citric Oils	-	B	B	-	-	A	-	-
Barium Chloride	A <sup>2</sup>	A	B	A <sup>1</sup>	A	A	-	A	Coffee	-	A	-	-	-	A	-	A
Barium Cyanide	-	B	-	B	-	D	-	-	Copper Chloride	A	A	-	-	-	A	-	A <sup>1</sup>
Barium Hydroxide	A <sup>2</sup>	D	-	B <sup>2</sup>	D	B	-	A	Copper Cyanide	-	A	-	B <sup>2</sup>	D	A	-	-
Barium Nitrate	-	B <sup>2</sup>	-	B <sup>2</sup>	D	A	-	B	Copper Fluoborate	-	B	-	-	-	-	-	-
Barium Sulfate	A <sup>2</sup>	B <sup>2</sup>	B	B <sup>2</sup>	D	B <sup>1</sup>	-	A	Copper Nitrate	-	A	-	B <sup>2</sup>	D	A	-	-
Barium Sulfide	A <sup>2</sup>	A	A	B <sup>2</sup>	-	B	-	A	Copper Sulfate 5%	-	D	A	A <sup>2</sup>	A <sup>1</sup>	A	-	A
Beer	A <sup>2</sup>	A <sup>1</sup>	A	A <sup>2</sup>	A <sup>2</sup>	A <sup>1</sup>	-	A	Copper Sulfate >5%	-	D	A	A <sup>2</sup>	A <sup>1</sup>	A	-	A
Beet Sugar Liquids	B	B	-	A <sup>1</sup>	-	A <sup>1</sup>	-	A	Cream	-	A	-	-	-	A	-	-
Benzaldehyde	B	A	B	A <sup>1</sup>	D	D	D	D	Creosote	A	D	A	-	-	-	-	D
Benz enamine	-	-	B	A	D	A	-	-	Cresols	D	D	D	C <sup>1</sup>	D	D	-	D

A- No effect  
 B- Minor effect  
 C- Moderate effect

D- Severe effect;  
 not recommended  
 - No data available

Explanation of footnotes:

- 1- Satisfactory to 72 °F (22 °C)
- 2- Satisfactory to 120 °F (48 °C)
- 3- Satisfactory to 90 °F (32 °C)
- 4- Satisfactory to 200 °F (93 °C)

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ISO 9001



ISO 13485



ISO 11137



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