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Compatibility
Reference Tool



Closed System Customization

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#### A leading life science plastic consumables manufacturer.

Established in 2009, Wuxi NEST Biotechnology Co., Ltd. (NEST) is renowned for its brand "NEST" and is dedicated to the research, development, and manufacturing of high-quality life sciences products. As our International business expands, our products have been successfully exported to numerous countries such as North America, Europe, Japan, Korea, India, and more.

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.



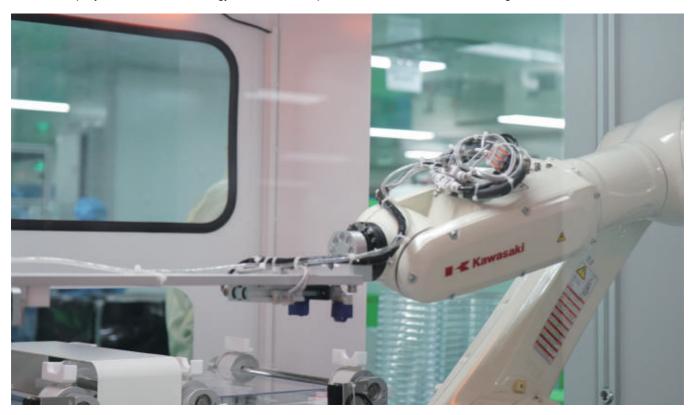


#### Wuxi NEST Biotechnology Co., Ltd.



#### 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)



**FDA** 

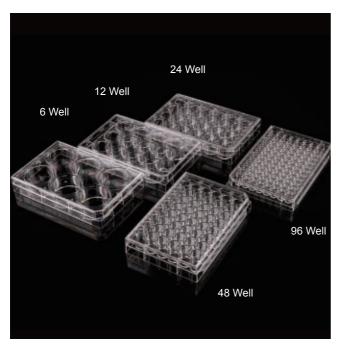
HISTORY

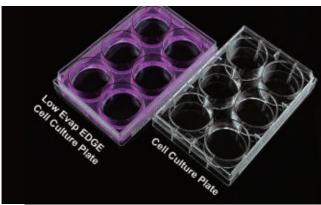


Cytology

## Cytology

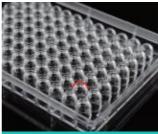
## **Cell Culture Plate**

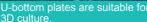




#### Low Evap EDGE Cell Culture Plate

 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.

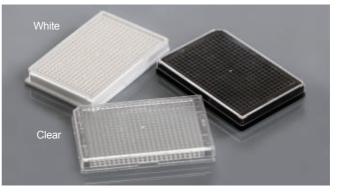






V-bottom plates are suitable for agglutination experiments.

- 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 one are suitable for suspension cell culture.

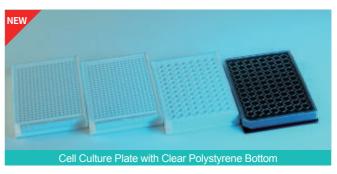


#### 384 Well Cell Culture Plate

- 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.



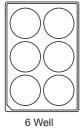


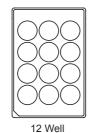


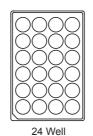
#### Cell Culture Plate

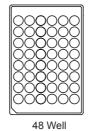
Mall Niverban	Cell Growth Area	Recommended Medium	Bottom	Colour	Packing	9		Cat.	No.	
Well Number	(cm²)	Volume (mL)	Туре	Colour	Packaging	/Pack	/Case	TC Treated	Non-Treated	
0.14/-11					Individually Packaged	1	50	703001	703011	
6 Well	9.5	1.9-2.9			Plastic Bag Package	10	50	703002	703012	
6 Well Low Evap EDGE Plate						Individually Packaged	1	50	714011	714001
42.14/5/1	2.0	0.70.4.44	Ш	Clear	Individually Packaged	1	50	712001	712011	
12 Well	3.6	0.76-1.14			Plastic Bag Package	10	50	712002	712012	
24 \\\-11	4.0	0.20.0.57			Individually Packaged	1	50	702001	702011	
24 Well	1.9	0.38-0.57			Plastic Bag Package	10	50	702002	702012	
48 Well	0.88	0.19-0.285			Individually Packaged	1	50	748001	748011	
46 Well	0.00	0.19-0.265			Plastic Bag Package	10	50	748002	748012	
	0.00				Individually Packaged	1	100	701001	701011	
	0.32		Ш	Clear	Plastic Bag Package	10	100	701002	701012	
	0.66		U	Oleai	Individually Packaged	1	100	701101	701111	
96 Well	0.41	0.1-0.2	V		Individually Packaged	1	100	701201	701211	
		0.1 0.2		White	Individually Packaged	1	100	701301	701311	
	0.32			Black	Individually Packaged	1	1	1	1	
	0.52		Ц	Ц	White, transparent bottom	Individually Packaged	1	1	1	1
				Black, transparent bottom	Individually Packaged	1	1	1	1	
96 Well Low Evap EDGE Plate	0.32	0.1-0.2	Ш	Clear	Individually Packaged	1	100	713011	713001	
				Clear	Individually Packaged	1	100	761001	761011	
				Clear	Plastic Bag Package	10	100	761002	761012	
				Black	Individually Packaged	1	100	761301	761311	
		0.025-0.05 Ц		White	Individually Packaged	1	100	761601	761611	
384 Well	384 Well 0.11		Ш	White, transparent bottom	Individually Packaged	1	1	1	1	
				Black, transparent bottom	Individually Packaged	/	1	/	1	

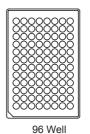
#### Technical Drawing of Cell Culture Plates





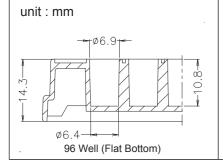




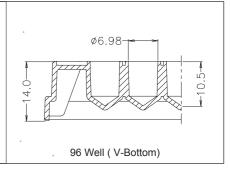




.....



96 Well (U-Bottom)



## **Cell Culture Insert**

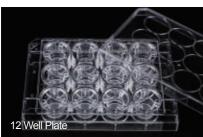
Cell and tissue culture technologies have an increasing importance in the fields of basic and applied life science. New culture vessels and new surfaces for cell adsorption are continuously emerging, in order to simulate the internal environment as much as possible for culture of some special cell lines. 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.

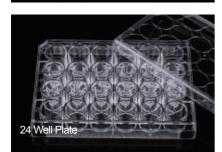
#### **Features**

- Sterilized by E-beam, SAL=10-6.
- · 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.

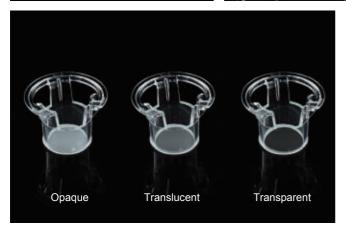
- Cell culture plates are made of high clarity, 100% virgin polystyrene.
- · Clear lot number for batch traceability.
- · Innovative edge design for convenient sample loading.
- · Low protein binding to ensure accurate results.
- · Compatible with most solvents used for fixing and staining.













#### **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 μm	
Co-culture and cell differentiation, cell imaging	Primary cells, tumor, stem cells	0.4 μm, 1.0 μm	
Cell migration and invasion (angiogenesis)	Endotheliocytes		
Cyto-chemotaxis (migration) or endothelial migration	Leukocytes	3.0 µm	
Axonal hyperplasia	Neurons		
Tumor cell migration and invasion	Tumor-derived cells		
Hematostaxis or migration through endotheliocytes	Leukocytes	8.0 µm	
Co-culture	Tumor stem cells		
Transport and secretion of macromolecules or viruses		1.0 µm, 3.0 µm	

#### **Product Specification**



Specifications	配套小室数量 (个/块板)	Insert Diameter (mm)		Volume of Each Well (mL)		Inner Volume of Insert (mL)			mbrane Growth Area of Insert (cm²)
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	6.5	0.6			0.1		0.33
100mm Dish	1	7	75	13		9		44	
Pore Size of Membrane (µm)		0.4 1.0			3.0		5.0		8.0
Membrane Densi	ty (Well/cm²)	x10 <sup>8</sup>	2x10 <sup>7</sup>	,	2x10 <sup>6</sup>		4x10⁵		1x10 <sup>5</sup>

Transparent

Translucent

Translucent

Translucent

Translucent

Transparent

#### Cell Culture Insert

Pore Size	Description	Pac	king	PC Mei	mbrane	PET Membrane	
(µm)	Description	/Pack	/Case	TC Treated	Non-Treated	TC Treated	Non-Treated
	6 Cell Culture Inserts + 6 Well Plate	6	60	723101	723111	723121	723131
0.4	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
	6 Cell Culture Inserts + 6 Well Plate	6	60	1	1	723421	723431
1	12 Cell Culture Inserts + 12 Well Plate	12	120	1	1	724421	724431
	12 Cell Culture Inserts + 24 Well Plate			1	1	725421	725431
	6 Cell Culture Inserts + 6 Well Plate	6	60	723001	723011	723021	723031
3	12 Cell Culture Inserts + 12 Well Plate	12	120	724001	724011	724021	724031
Ü	12 Cell Culture Inserts + 24 Well Plate	12	120	725001	725011	725021	725031
	100 mm Cell Culture Insert-Dish	1	10	726001	1	1	1
5	12 Cell Culture Inserts + 12 Well Plate	12	120	724201	724211	1	1
	12 Cell Culture Inserts + 24 Well Plate	12	120	725201	725211	1	1
	6 Cell Culture Inserts + 6 Well Plate	6	60	723301	723311	723321	723331
8	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

Opaque

Opaque

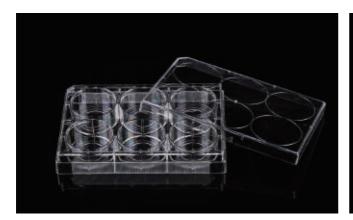
PET Membrane Transparence

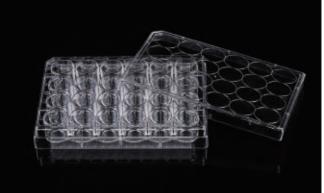
## Glass Bottom Cell Culture Dish & Plate

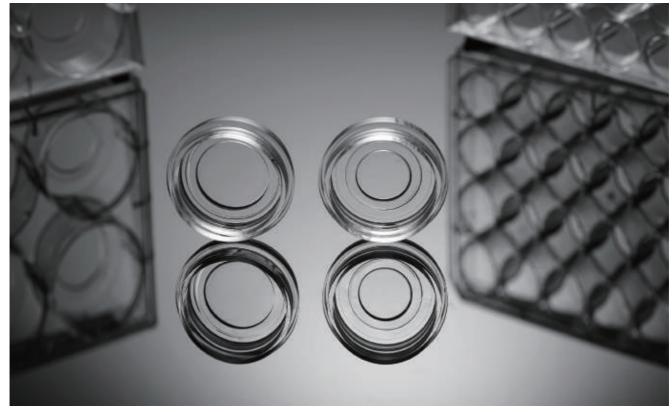
NEST glass bottom series are applied in confocal microscope, high resolution microscope, differential interference contrast microscope, polarized light microscope and phase contrast microscope for cell observation.

#### **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**

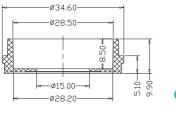
Cat.No.	Type (mm)	Glass Diameter (mm)	Cultivation Area (cm²)	тс	/Pack	/Case
801002	28.2	15	6.2	Yes	10	200
801001	28.2	20	6.2	Yes	10	200

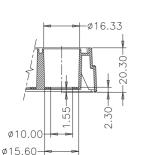


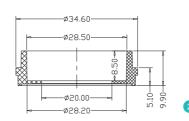
#### **Glass Bottom Culture Plate**

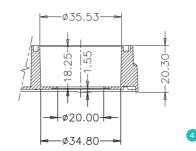
Cat.No.	Spec (Well)	Glass Diameter (mm)	Cultivation Area (cm²)	тс	/Pack	/Case
801004	6	34.8	9.5	Yes	1	10
801006	24	15.6	1.9	Yes	1	10











#### **Unit: mm**

- 1 Φ15 Glass Bottom Dish
- 2 Ф20 Glass Bottom Dish
- 3 24 Well Glass Bottom Plate
- 4 6 Well Glass Bottom Plate

### **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 adsorption.
- · Stackable for easy storage and handling.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.

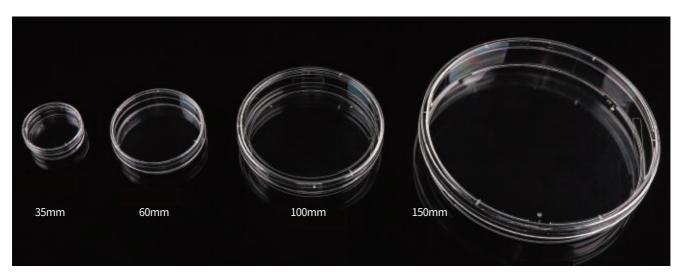




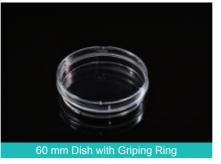


## vtology

## **Feature**









#### Cell Culture Dish

On a differentiant of	Halabi	Cell Growth Area	Rcommended	T	Pac	king		
Specification (mm)	pecification (mm) Height (mm)		Medium Volume (mL)	Types	/Pack	/Case	Cat.No.	
0.7	40		4007	Regular	20	25	706001	
35	12	8.5	1.8-2.7	Easy Grip	20	25	706201	
00	45			Regular	20	25	705001	
60	60 15	22.9	4.2-6.3	Easy Grip	20	25	705201	
		57.6		Regular	5	60	704004	
					10	30	704002	
100	20		11-16.5		20	15	704001	
	59.3	50.0		- o:	10	30	704202	
			Easy Grip	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 Flask**

NEST's Cell Culture Flasks whose cell growth areas ranging from 25cm² to 225cm² 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=10-6.
- 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.



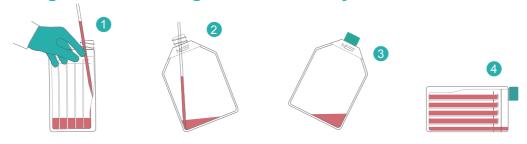
T150 U-Shaped Canted Neck Cell Culture Flask





## **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**

- Rinse off the residual serum with buffer, add digestion solution (≥5mL per layer) and mix evenly. Then, follow Steps 3-4 to distribute to dissociating reagent to each layer.
- Let stand for 2 min, then neutralize and mix with inactivating solution following steps 3-4. Gently swirl to dislodge cells completely.
- 3. 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		Rcommended Medium	Size(mm)			Packing		TC Treated		Non-Treated	
Area (cm²)	Graduated Volume (mL)	Volume (mL)	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 (3-layer)	50	60-100	60.1	120.5	203	1	12	731301	731302	1	1
870 (5-Layer)	50	100-150	84.3	120.5	203.6	1	8	731001	731002	1	1



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





#### **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=10-6.
- · Non-Pyrogenic, DNase/Rnase free.
- · Suitable for used for centrifugation.

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





## **Bioprocessing Solutions**



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<sup>TM</sup> 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

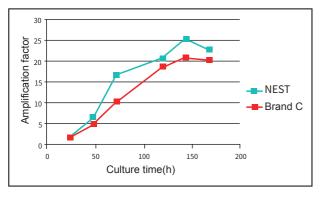
#### **Quality Assurance from Professional Testing Agencies**

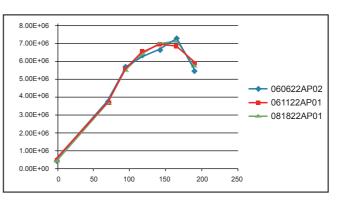
NEST ensures top product quality, stability, safety, applicability, and effectiveness through the implementation of state-of-the-art production technology and a strict quality control system. All our product ranges have undergone rigorous validation by professional testing institutions possessing national 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
	Cell count	3.82×10 <sup>6</sup>	5.78×10 <sup>6</sup>	6.46×10 <sup>6</sup>	6.79×10 <sup>6</sup>	7.48×10 <sup>6</sup>	5.59×10 <sup>6</sup>
060622AP02	Amplification factor	12.72	19.25	21.53	22.63	24.94	18.62
0044004 004	Cell count	3.69×10 <sup>6</sup>	5.67×10 <sup>6</sup>	6.66×10 <sup>6</sup>	7.09×10 <sup>6</sup>	7.05×10 <sup>6</sup>	5.95×10 <sup>6</sup>
061122AP01	Amplification factor	12.30	18.91	22.19	23.62	23.51	19.83
0818224P01	Cell count	3.72×10 <sup>6</sup>	5.60×10 <sup>6</sup>	6.58×10 <sup>6</sup>	7.13×10 <sup>6</sup>	7.32×10 <sup>6</sup>	5.88×10 <sup>6</sup>
0010224P01	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(1/5KMnO4)=0.01mol/L)	≤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 , µg/mL	<0.05	Below the detection limit
Tin content, μg/mL	<0.04	Below the detection limit
Cadmium content, µg/mL	<0.02	Below the detection limit
Chromium content, µg/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 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
- Vent caps with 0.22 µm 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.

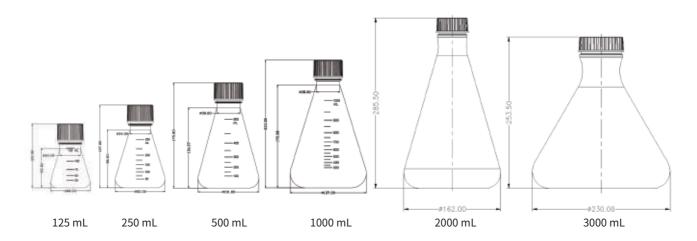


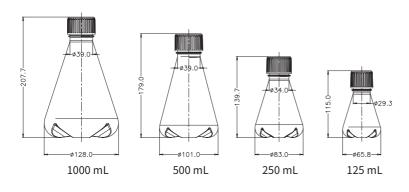
## **Feature**

- 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		Size(mm)		Packing		PETG Erlenmeyer Flask		PC Erlenmeyer Flask							
(mL)	Height	Bottleneck Diameter	Bottom Diameter	Cap Style	/Pack	/Case	Flat-bottom	Baffled	Flat-bottom	Baffled					
405	400.0	24	00	Seal Cap	1	24	781001	781301	781101	781201					
125	106.8	34	66	Vent Filter Cap	1	24	781011	781311	781111	781211					
050	407.0	0.4	00	Seal Cap	1	12	782001	782301	782101	782201					
250	137.8	34	83	Vent Filter Cap	1	12	782011	782311	782111	782211					
500	475.0	39	101	Seal Cap	1	12	783001	783301	783101	783201					
500	175.8			Vent Filter Cap	1	12	783011	783311	783111	783211					
4000	040.0	39	39	39	407	Seal Cap	1	6	784001	784301	784101	784201			
1000	213.3				39	39	127	Vent Filter Cap	1	6	784011	784311	784111	784211	
2000	285	47	47	47	47	47	47	100	Seal Cap	1	6	1	1	785001	1
2000	200		162	Vent Filter Cap	1	6	1	1	785011	1					
2000	253	62	220	Seal Cap	1	4	1	1	786001	1					
3000	200	02	230	Vent Filter Cap	1	4	1	1	786011	1					





## **Optiflask** Erlenmeyer Flask, High Efficiency





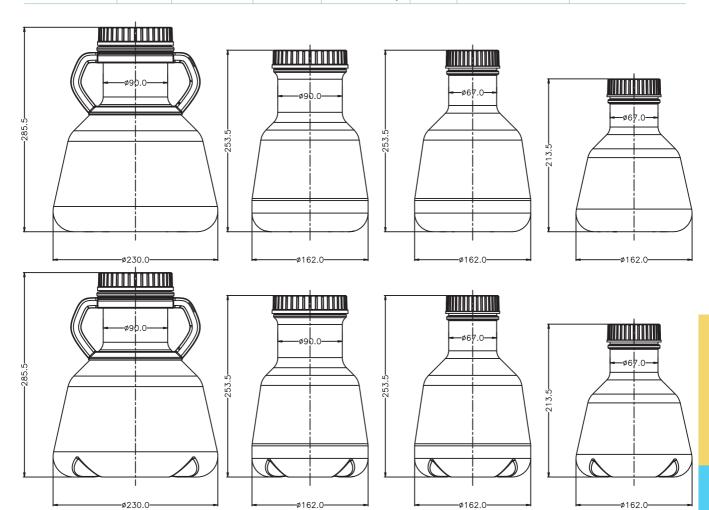
High-efficiency, large-volume culture flasks allow cells to show strong viability with large expression amount of proteins in the culture of mammalian cells and insect cells. During the culturing process, the use rate of the shaker is significantly increased, and the survival rate and viability of cells 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  $\mu m$  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

Valuma (L)		Dimension (r	nm)	Con Chilo	10000	Cat.No.		
Volume (L)	Height	Bottleneck Dia	Bottom Dia	Cap Style	/Case	Flat-bottom	With Baffles	
0.0	213.5	67	162	Seal Cap	4	785101	785105	
2.0	213.5	67	162	Vent Filter Cap	4	785111	785115	
0.0	253.5	67	162	Seal Cap	4	786101	786105	
3.0	253.5	67	162	Vent Filter Cap	4	786111	786115	
20 (Mida mauth)	253.5	90	162	Seal Cap	4	786501	786505	
3.0 (Wide-mouth)	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=10-6.
- · 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.



# **Bioprocessing Solutions**

## Erlenmeyer Flask Closed System Solution

To customize a Erlenmeyer Flask Closed System Solution that meets your needs, follow





- Choose the bottle capacity
- Choose the bottle material



# 1000mL 500mL 250mL 125mL 1000mL 500mL 250mL 125mL 5L 3L \( \triangle \) 3L 2L 5L 3L \( \triangle \) 1 2L Bottle Materia (\( \triangle \) PET \( \triangle \) PC) Notes: you may order the transfer cap only

Generate custom graphics by submitting your request on www.cell-nest.com



#### Step 2

· Choose the cap type



#### Step 3

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





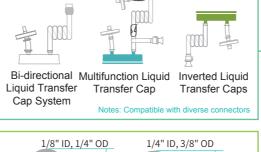
• Choose the membrane area Air filter (PVDF membrane)

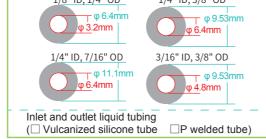




- Choose the connector
   type
- ①Luer connector (male and female) ②MPC connector (male and female)

(no connector)











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

#### • High Efficient Erlenmeyer Flask Closed System

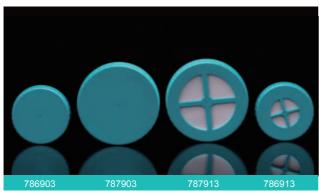
			Tran	<u> </u>	h Efficient Erlenmeyer F	lasks		Closed	System
Volume (mL)	Cap Style							Cat	.No.
(1112)		External Liquid Transfer Tube 材质		Connector Filter Membrane area		Cat.No.	Flat-bottom	With Baffles	
405 1					MPC Male Connector		C30821-EAC050B		
125 mL					Male Luer Connector		C30821-EFC050B		
050 1	Bi-				MPC Male Connector		C30921-EAC050B		
250 mL	directional				Male Luer Connector		C30921-EFC050B		
	Liquid	Silicon Tube	50	1/8" ID, 1/4" OD	MPC Male Connector	Ф42mm	C31021-EAC050B		
500 mL	Transfer				Male Luer Connector		C31021-EFC050B		
					MPC Male Connector		C31121-EAC050B		
1000 mL					Male Luer Connector		C31121-EFC050B		
	Multifun-	TPE Tube	52	1/8" ID, 1/4" OD	Heat Seal (Supports sampling)	Ф50mm	C10111-AJE052B		
	ction Liquid	TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Ф24mm	C10111-DZB050B		
		Silicon Tube	100	3/16" ID, 3/8" OD	MPC Male Connector	Ф24mm	C10111-GBB100B		
2L	Bi-	TPE Tube	50	1/8" ID, 1/4"OD	Heat Seal	Ф24mm	C10122-AZB050B	C10122-AZB050A	C20122-AZB050A
High	directional	TPE Tube	50	1/4" ID, 3/8" OD	Heat Seal	Ф42mm	C10123-BZC050B	C10123-BZC050A	
Efficiency	Liquid Transfer	Silicon Tube	50	1/4" ID, 3/8" OD	MPC Male Connector	Ф42mm	C10123-FBC050B		
	Transici	Silicon Tube	50	1/4" ID, 3/8" OD	MPC Female Connector	Ф42mm	C10123-FDC050B		
	Inverted Liquid	TPE Tube	50	1/8" ID, 1/4" OD	Heat Seal	Ф42mm	C10131-AZC050B		
	Transfer	TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Ф42mm	C10133-DZC050B		
	Multifun- ction Liquid Transfer	TPE Tube	52	1/8" ID, 1/4" OD	Heat Seal (Supports sampling)	Ф50mm	C10211-AJE052B		
		TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Ф24mm	C10211-DZB050B		
		Silicon Tube	100	3/16" ID, 3/8" OD	MPC Male Connector	Ф24mm	C10211-GBB100B		
3L	Bi-	TPE Tube	50	1/8" ID, 1/4"OD	Heat Seal	Ф24mm	C10222-AZB050B		C20222-AZB050A
High		TPE Tube	50	1/4" ID, 3/8" OD	Heat Seal	Ф42mm	C10223-BZC050B	C10223-BZC050A	
Efficiency		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Male Connector	Ф42mm	C10223-FBC050B		
		Silicon Tube	50	1/4" ID, 3/8" OD	MPC Female Connector	Ф42mm	C10223-FDC050B		
		TPE Tube	50	1/8" ID, 1/4" OD	Heat Seal	Ф42mm	C10231-AZC050B		
		TPE Tube	50	1/4" ID, 7/16" OD		Ф42mm	C10233-DZC050B		
	Multifun-	TPE Tube	52	1/8" ID, 1/4" OD	Heat Seal (Supports sampling)	Ф50mm	C10311-AJE052B		
	ction Liquid	TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Ф24mm	C10311-DZB050B		
3L	Transfer	Silicon Tube	100	3/16" ID, 3/8" OD	MPC Male Connector	Ф24mm	C10311-GBB100B		
Wide-	Bi-	TPE Tube	50	1/8" ID, 1/4"OD	Heat Seal	Ф24mm	C10322-AZB050B		C20322-AZB050A
mouth		TPE Tube	50	1/4" ID, 3/8" OD	Heat Seal	Ф42mm	C10323-BZC050B	C10323-BZC050A	
High	Liquid Transfer	Silicon Tube	50	1/4" ID, 3/8" OD	MPC Male Connector	Ф42mm	C10323-FBC050B		
Efficiency	Inverted	Silicon Tube	50	1/4" ID, 3/8" OD	MPC Female Connector	Ф42mm	C10323-FDC050B		
	Inverted Liquid	TPE Tube	50	1/8" ID, 1/4" OD	Heat Seal	Ф42mm	C10331-AZC050B		
	Transfer	TPE Tube	50	1/4" ID, 7/16" OD	Heat Seal	Ф42mm	C10333-DZC050B		
	Multifun-	TPE Tube	30	1/8" ID, 1/4" OD	Heat Seal	No Filter	1	C10442-AKA060A	
	ction	TPE Tube	92	1/8" ID, 1/4" OD	Heat Seal (Supports sampling)	Ф50mm	C10411-AJE092B		
	Liquid Transfer	TPE Tube	90	1/4" ID, 7/16" OD		Ф24mm	C10411-DZB090B		
5L		Silicon Tube		3/16" ID, 3/8" OD		Ф24mm	C10411-GBB100B	040400 475000	
High	Bi-	TPE Tube	90	1/8" ID, 1/4"OD	Heat Seal	Ф24mm	C10422-AZB090B		
Efficient	directional Liquid	TPE Tube	90	1/4" ID, 3/8" OD	Heat Seal	Ф42mm	C10423-BZC090B	C10423-BZC090A	
	Transfer	Silicon Tube		1/4" ID, 3/8" OD	MPC Male Connector	Ф42mm	C10423-FBC090B		
	Inverted	Silicon Tube	90		MPC Female Connector	Ф42mm	C10423-FDC090B		
	Liquid	TPE Tube	90	1/8" ID, 1/4" OD	Heat Seal	Ф42mm	C10431-AZC090B		
	Transfer	TPE Tube	90	1/4" ID, 7/16" OD	Heat Seal	Ф42mm	C10433-DZC090B		

## **Accessories**

#### Erlenmeyer Flasks Accessories







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.

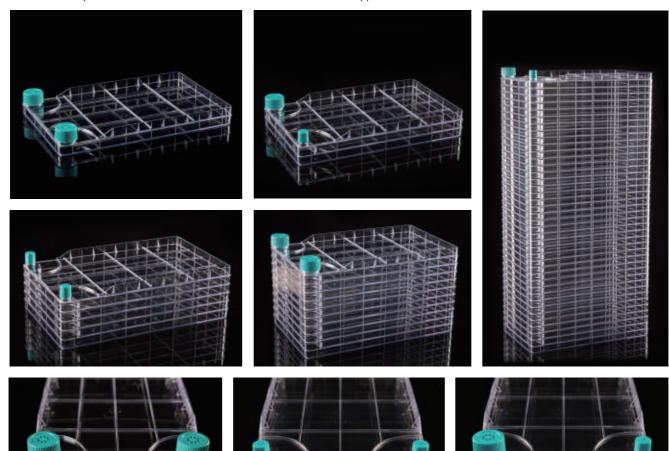


- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.
- Non-Pyrogenic, DNase/Rnase free.
- Excellent welding line design can avoid producing particles during welding and make the biofactory stronger (Under Features 7th line).
- $\bullet\,$  Vent caps with 0.22  $\mu m$  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.

1 Wide + 1 Narrow Plug Seal Cap

· Applicable to automatic machine.



#### BioFactory

2 Wide Plug Seal Caps

Layor	Cultivation			(mm)	/Casa	Seal Caps	Vent Filter	Cat.No.		
Layer	Area (cm²)	Length	Width	Height	Case	Seal Caps	Caps	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

2 Narrow Plug Seal Caps

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<sup>™</sup> 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**

- 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.



# loprocessing solutions

# **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.



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° 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.

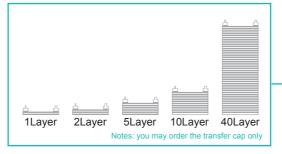
Lover	Cultivation Dimension (mr Area (cm²) Length Width He		ension	(mm)	Description	Package	Cat No	
Layer			Height	Description	i ackage	Cat.No.		
10	6320	335	205	201	Double Large mouth, TC , sterile	Double bag package, 1 pc / bag, 6 pcs / case	771392	

# **Biofactory Closed System Solution**

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



· Choose the Layer



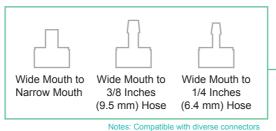
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### Step 2

· Choose the cap type





### Step 3

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



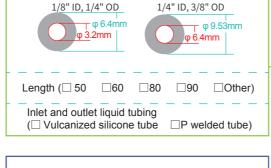


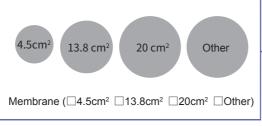
 Choose the membrane area Air filter (PVDF membrane)





- Choose the connector type
- ①Luer connector (male and female) ②MPC connector (male and female) ③Heat 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 =  $10^{-6}$ .
- No endotoxin and no components of animal origin.



Accessory information can be found on page 35.

Layer	Cultivation Area (cm²)	External Liquid Dia.	Transfer Tube Length Connector		0.2µm Filter Membrane area	/Case	Cat.No.	
	71100 (0111)	Dia.	Lengui	Connector	Membrane area			
5	3160	TPE Tube: 1/4" ID, 3/8" OD	80 cm	Heat Seal	20 cm²	2	C71754-BZD080A	
10	6320	φ 9.53mm φ 6.4mm	00 0111	Heat Seal	20 cm²	2	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) ID OD		Size(mm)   /Pack   /Case   Function		Cat.No.	
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  $\mu$ m  $\Phi$ 42mm), without BioFactory , Sterile

1 /Pack, 4 /Case

#### C71255-ZMD000B

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

BioFactory Cap with PTFE Vent Filter (0.22  $\mu m$   $\Phi 50 mm),$  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

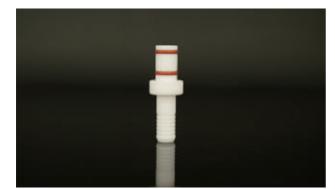
1 /Pack, 4 /Case

#### 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:  $0.2~\mu m$  Membrane area:  $20~cm^2$ .

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:  $0.2~\mu m$  Membrane area:  $20~cm^2$ .

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:

①Position 2 or 3 is recommended(Recommended working volume for each layer of BioFactory:150ml to 200ml)

②It 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 is convenient for observation and transportation.

- The material has strong tolerance, low temperature resistance, UV resistance, and is not easy to crack.
- The smooth inner surface minimizes the residue on the inner wall.
- Non-cytotoxic, non-pyrogenic, and free of animal-derived components

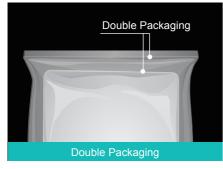


### **Square Bottle**



#### 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 thet hickness 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 celan, and the bottom is injection molded with raw material inform ation







#### **Double-layer Packaging**

- Enhanced protection: double-layer packaging offers additional protection for safety in case the bottles were damaged by extenral forces such as extrusion, vibration, and collision during rtansportation.
- 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 laboratoryr ation.

- 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, spurrnig 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.

Volume (mL)		Double Packaging				Double V	Double Whole Bag Package		Tray package			
volume (me)	/Pack	/Case	PET	PETG	PC	/Pack	/Case	PET	/Pack	/Case	PETG	PC
30	5	40	1	354111	354314	1	1	1	40	280	354113	354313
60	6	48	354611	354511	354714	40	200	354614	40	200	354513	354713
125	6	48	353611	353511	353314	24	192	353614	24	96	353513	353313
250	6	48	352611	352511	352314	30	120	352614	30	60	352513	352313
500	8	24	333001	333511	333314	20	80	333004	20	40	333513	333313
1000	4	12	334001	334511	334314	12	48	334004	12	24	334513	334313

### **Square Storage Bottle Closed System Solution**

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



- · Choose the bottle capacity
- · Choose the bottle material



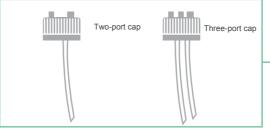
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### Sten 2

· Choose the cap type

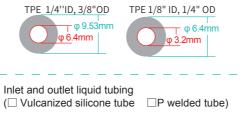


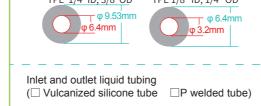
Notes: Compatible with diverse connectors





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







### Step 4



· Choose the membrane area Air filter (PVDF membrane)





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







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

# Square Storage Bottle Closed System Solution









#### 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.

### Closed System Solution (Bi-Directional Transfer Cap)

Values (ml.)	Tu	Tube Material			/Case	Cat.No	o.
Volume (mL)	Dia.	Length	Connector	Membrane area	/Case	Closed System Solution	Aseptic Transfer Caps
250	TPE 1/4"ID, 3/8"OD		Female Luer Lock Connector with	4.5cm <sup>2</sup>	10	C50921-BHB060A	C50921-BHB060B
500	φ 9.53mm φ 6.4mm	60cm			10	C51021-BHB060A	C51021-BHB060B
1000	Ψ 0.4ππ		Luer Plug		10	C51121-BHB060A	C51121-BHB060B
250	TPE 1/4"ID, 3/8"OD		Male MPC connector with Female Sealing Cap	4.5cm <sup>2</sup>	10	C50921-BBB060A	C50921-BBB060B
500	φ 9.53mm φ 6.4mm	60cm			10	C51021-BBB060A	C51021-BBB060B
1000	Ψ 0.4πππ				10	C51121-BBB060A	C51121-BBB060B
250	TPE 1/8" ID, 1/4" OD		Female Luer Lock		10	C50922-AGB060A	C50922-AGB060B
500	φ 6.4mm φ 3.2mm	60cm	Connector with	4.5cm <sup>2</sup>	10	C51022-AGB060A	C51022-AGB060B
1000	Ψ 3.211111		Luer Plug		10	C51122-AGB060A	C51122-AGB060B
250	TPE 1/8" ID, 1/4" OD		Male MPC		10	C50922-AAB060A	C50922-AAB060B
500	φ 6.4mm φ 3.2mm	60cm	connector with	4.5cm <sup>2</sup>	10	C51022-AAB060A	C51022-AAB060B
1000	ψ 3.211111		Female Sealing Cap		10	C51122-AAB060A	C51122-AAB060B

#### Closed System Solution (3-Port Transfer Cap)

\/al.una (mal.)	Tube Material			0.2µm Filter Membrane	/Case	Cat.No.	
Volume (mL)	Dia.	Length	Connector	area	/Case	Closed System Solution	Aseptic Transfer Caps
1000	TPE 1/8" ID, 1/4" OD  φ 6.4mm  φ 3.2mm	60cm	Female Luer Lock Connector with Luer Plug	4.5cm²	10	C511AB-AGB060A	C511AB-AGB060B



### 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



### **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: linking tubings for filling and draining operations



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: linking tubings for filling and draining operations, heat weldable.



747001 CPC Connector
CPC & PC Material
Packaging: individual sterile packaging, 5
prs/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
PP Material
Y Shape CPC Connector for Inner Dia #3/8
Hose
1 pcs / pack, 5 pcs / case



749001 T Shape Connector
PP Material
T Shape CPC Connector for Inner Dia #3/8
Hose
1 pcs / pack, 5 pcs / case



**742011 0.22μm Vent Filter**Pore size:0.22 μm Membrane area: 13.8 cm² 1 pcs / pack, 5 pcs / case

742001 0.22µm Vent Filter
Hydrophobic membrane : PTFE

Pore size:0.2 µm Membrane area: 20 cm<sup>2</sup>

Packaging: individual sterile packaging, 1 pcs / pack, 5 pcs / case

Application: Hose fitting





## **Biobank System**

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:

Top-quality and food grade resin, which complies with UPS class 6, pharmaceutical and laboratory standards, is adopted. It contains much lower concentrations of trace element extractables than 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.SBS Format Cryogenic Tubes fits automated equipment.

√ 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

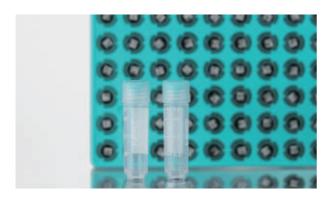
Manufacturing e	enterprise certification		cess, quality standards, tation and use verification	Testing by third-party authoritative professional inspection and testing organizations			
	ISO 9001, ISO13485	Process test	Injection molding machine, mold performance verification	Biological testing	In vitro cytotox	cicity test	
Qualification certificate	FDA, CE		Sealing test	GB/T16886.5-2017 GB/T16886.4-2003 St GB/T16886.10-2017	Skin sensitivit	y test	
	Irradiation ISO 13485, ISO 11137		Cryogenic test		Skin irritation	test	
Sterility testing	ISO 7 requirements	Performance test	High-temperature sterilization test		Acute systemic toxicity test		
laboratory Environmental	GB 50591-2010		DNase/RNase	GB/T16886.11-2021	Hemolysis test		
testing	GB/T 16294-2010		Endotoxin		Heavy metal content of materials	Pb, Sn, Cd, Cr	
	ISO 8 requirements		Bottom 2D barcode integrity test			Reducing	
workshop environmental	GB 50073-2013		Irradiation process verification	Physical and		substances	
testing	YY0033-2000		Sterile packaging verification	chemical testing	Leachable	рН	
Purified Water System Validation	GMP requirements	Sterility and particle assurance	Product sterility test	GB/T14233.1-2008	testing	Evaporation	
Raw material	Physical and chemical testing		Insoluble particle detection			residue	
verification	Extractable testing		Drop and transportation verification			UV absorbance	





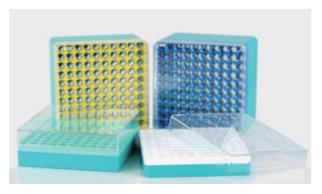
#### Volume optimization

Volume selection based on quantity and type of sample.



#### Material upgrade

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



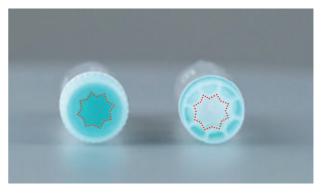
#### More specifications

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



#### · Improved sealing effect

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



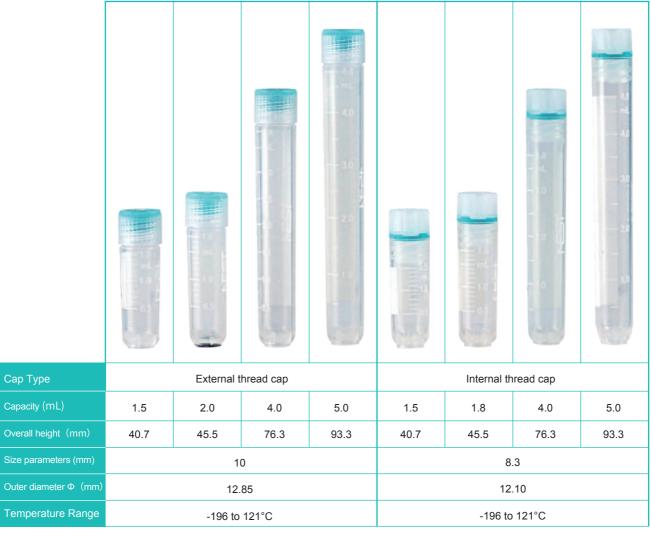
#### Suitable for automation

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



#### Multi-color cap inserts

Color-coded cap inserts for easy sample identification.



#### 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 (without 2D barcode) – Bag Package

Product Number	Capacity (mL)	Сар Туре	Quantity /Bag	Bags /Box	Box /Case
618901	1.0	External thread	96	1	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



<sup>\*</sup>The dimensions of the cryogenic box are detailed on page 09

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

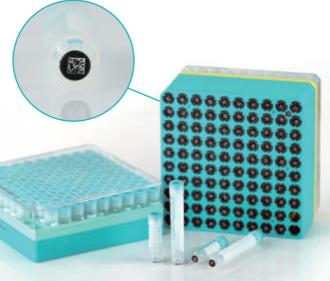
Product Number	Capacity (mL)	Сар Туре	Pack- aging	Quantity /Rack	Racks /Case
618906	1.0	External thread	8*12	96	10
606902	1.5	External thread	10*10	100	14
607402	2.0	External thread	10*10	100	12
608402	4.0	External thread	10*10	100	8
609402	5.0	External thread	10*10	100	6
606802	1.5	Internal thread	10*10	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

Product Number	Capacity (mL)	Сар Туре	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.
- · Hgh 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

#### **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=10-6.

achieve a safer sample traceability.

#### External thread cap Internal thread cap

- **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
- 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.





### **SBS Format Cryogenic Tubes**

	Vánna)			-18 m10 -10 -10 -10 -10 -10 -10 -10 -10 -10	-14 -10 -20 -ti	-15 -10 -10 -10 -11 -11 -11	-7.5 -7.1 -4.1 -5.1 -1.1 -2.1 -1.0	Valuation 2013			
Сар Туре			Exte	ernal thread	d cap			Internal t	hread cap	External t	hread 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 10.		.3	6.	55			
Outer diameter Φ (mm)	8.85		12.85 17.8		8.7		12	1.8			
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.





Yellow Cap



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

Product Number	Capacity (mL)	Сар Туре	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
612041	1.9	External thread	48	10
614041	4.0	External thread	48	10

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

	Product Number	Capacity (mL)	Сар Туре	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
,	612051	1.9	External thread	48	10
	614051	4.0	External thread	48	10

## Cap Inserts, Cryogenic Box

#### Cap Inserts



Product Number	Color	Sterilization	Packa	aging
(NEW)	Coloi	Sterilization	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









1.5 mL

2.0 external thread/1.8 internal thread

4.0 ml



- 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.

• PC transparent cover, PC-ABS high-strength composite material base.

#### 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

### **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 ° 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**









Repeat the process multiple times until the frost is completely removed

Product name	Defrosting device
Product number	106001
Base material	Aluminum alloy
Defrosting part	High-quality sponge
Supporting reagent	Ethanol

Consumables for the defrosting device	Sponge
Product number	106003/106004
Material	High-quality sponge
Color	White/Brown
Packaging method	1 piece/pack

# iobank System

### **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



200101

### 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.

#### 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)
200002 Cald same	0.5°C~4°C	-20°C	4h+	105 x 100 x 26		
è	200902	Cold core	0.5°C~4°C	-80°C	2h+	105 x 100 x 26
	200903 Freezing core	Freezing	-18°C~-4°C	-20°C	6h+	105 x 100 x 26
		core	-18°C~-4°C	-80°C	3h+	105 x 100 x 26

#### Module

Product name	Size (mm)	Application
2 mL module	119*101*38	30 holes for 2 mL cryogenic vials
1.5 mL module	119*101*38	48 holes for 1.5 mL cryogenic vials
5 mL module	119*101*38	30 holes for 5 mL cryogenic vials
PCR module	119*101*38	96 PCR holes
1	2 mL module .5 mL module 5 mL module	2 mL module 119*101*38 .5 mL module 119*101*38 5 mL module 119*101*38

20010	_
• Used for freezing various cell types, including stem	ı
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
- · Zero addition and zero emissions, permanent use, and responds to the call of environmental protection.

#### **Cell Freezing Box**

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



## **Liquid Transfer**

### **Automation Tips**

#### Brand T Automation Tips





#### **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:  $190 / 250 \mu L$ 

Compatible with Brand B Systems

(Available in various packagings with or without filters)

#### Brand H Automation Tips







#### 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.



#### Brand T Automation Tips









Robotic Tips, Boxed

Robotic Tips, Clear, Blister Packed

Robotic Tips , Clear, Boxed

\/ala ()	Packing			Automation C	onductive Tips	Robotic Tip	
Volume (µL)	Specification	/Pack	/Case	No Filter	Filter	No Filter	Filter
E0	Blister Packed (96 Tips*2)	96	24	332002	332012	332003	332013
50	Boxed	96	50	1	332016	332007	332017
200	Blister Packed (96 Tips*2)	96	24	332102	332112	332103	332113
200	Boxed	96	50	1	332116	332107	332117
1000	Blister Packed (96 Tips*2)	96	24	332202	332212	332203	332213
1000	Boxed	96	50	1	332216	332207	332217

#### Brand H Automation Tips







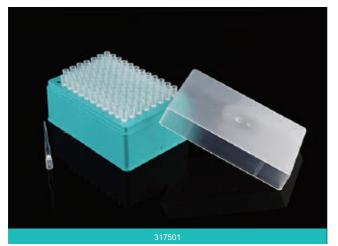


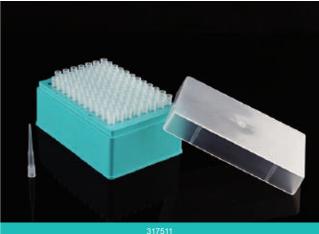




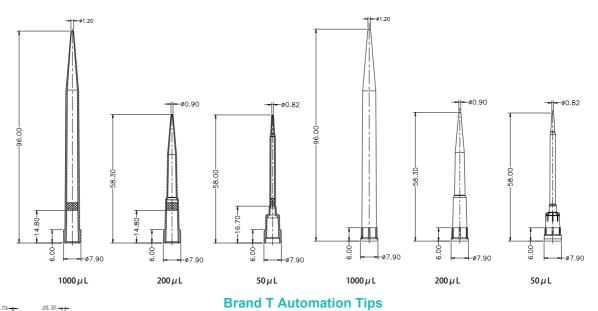
Malara a Gal X	Pac	king	Automation C	onductive Tips	Robotic Tip	
Volume (µL)	Specification	Packaging	No Filter	Filter	No Filter	Filter
	Blister Packed	96 pcs/rk 24 rks/pk	345002	345012	/	1
50	With Barcode, 96 Tips*5 Blisters/Pk	96 pcs/rk 60 rks/pk	345005	345015	/	1
50	With Barcode, 96 Tips/Pk	96 pcs/rk 24 rks/pk	1	345013	345503	345513
	Boxed, With Barcode	96 pcs/box, 10 boxes/pk, 5 pks/cs	1	345069	345509	345519
	Blister Packed	96 pcs/rk 24 rks/pk	345102	345112	/	1
	With Barcode, 96 Tips*5 Blisters/Pk	96 pcs/rk 60 rks/pk	345105	345115	/	1
300	With Barcode, 96 Tips/Pk	96 pcs/rk 24 rks/pk	1	345113	345603	345613
	Boxed, With Barcode	96 pcs/box, 10 boxes/pk, 5 pks/cs	1	345169	345609	345619
	Blister Packed	96 pcs/rk 24 rks/pk	345202	345212	/	1
1000	With Barcode, 96 Tips*5 Blisters/Pk	96 pcs/rk 60 rks/pk	345205	345215	/	1
1000	With Barcode, 96 Tips/Pk	96 pcs/rk 24 rks/pk	1	345213	345703	345713
	Boxed, With Barcode	96 pcs/box, 10 boxes/pk, 5 pks/cs	1	345269	345709	345719

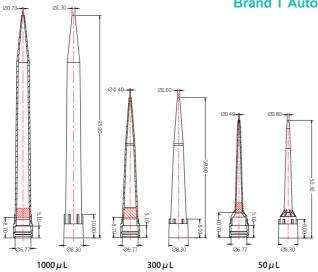
#### Brand B Automation Tips





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





01.24 01

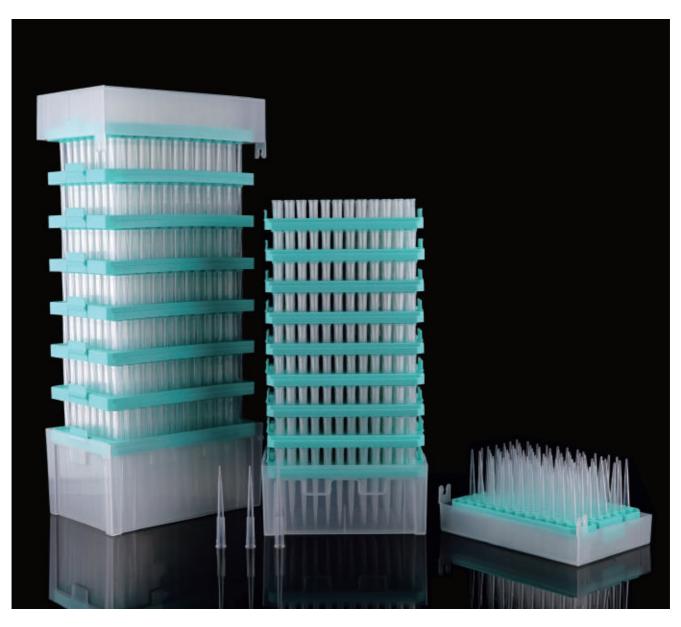
**Brand H Automation Tips** 

**Brand B Automation Tips** 

### Stackable Tip Refill

#### 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.

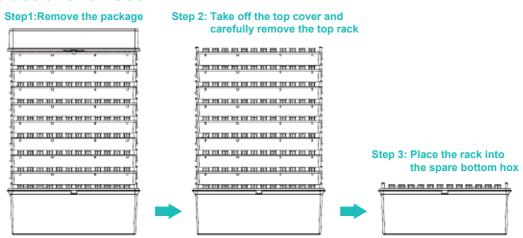
#### Product Usage and Application Direction

- 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.

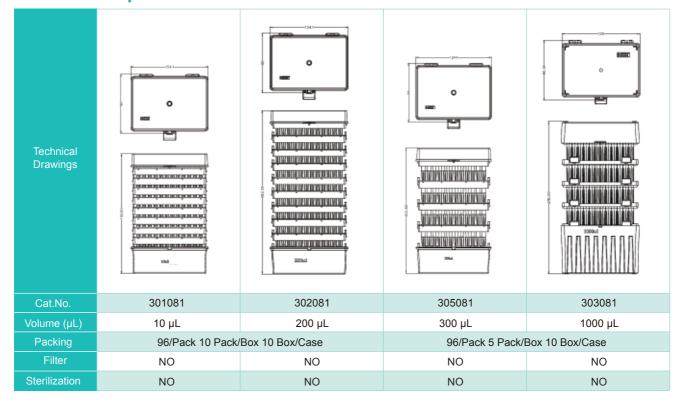
#### Product features

- 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.

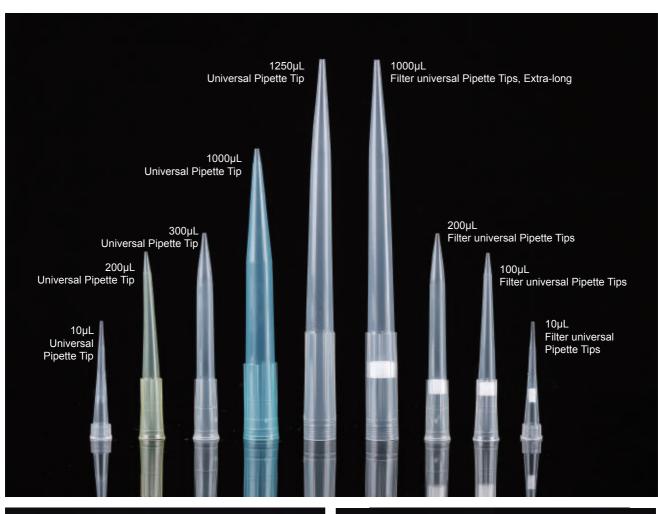
#### Instructions for Use

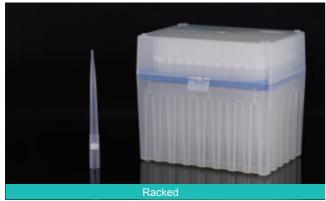


#### Product specifications



## **Pipette Tips**







### **Feature**

- Standard size: suitable for major pipettes on the market.
- · Smooth interior: minimizes residue and ensures accurate pipetting.
- High-quality materials: the imported PP materials is in line with USP Class VI.
- · High-quality filter: pure UHMW polyethylene through unique processing technology.
- Super hydrophobicity: hydrophobic filter forms a solid barrier to aerosols, eliminating the risk of cross-contamination between sample and pipette.
- Optimal pore size: ensures smooth aspiration
- · Advanced technology: ultra-fine grinding and moulding technique without mould release agent ensures better product quality.
- · Innovative design: ensures good flexibility, sealing and compatibility.
- Standard workshop: Class 100,000 cleanroom to ensure the products are free of pyrogen and DNase/RNase.
- Transparency: good transparency make it easy to observe the liquid level during use.
- · Resistant to organic solvents: used to pipette various organic solvents.
- Individual labelling: each package has a Cat. NO for quality tracking and traceability.
- Highly efficient sterilization- Larger effective membrane filtration area of 4.9 cm<sup>2</sup>.
- · High flow rate and throughput.

#### Pipette Tip Bulk, Non-Sterile

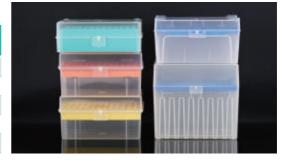
Values (d.)		Universal F	Pipette Tips		Filter Universal Pipette Tips				
Volume (µL)	Colour	/Pack	/Case	Cat.No.	Colour	/Pack	/Case	Cat.No.	
10	Clear	1000	20	301006	Clear	1000	10	311001	
10 (Extra-long)	Clear	1000	10	314001	Clear	1	1	1	
100	1	1	1	1	Clear	1000	10	316001	
200	Yellow	1000	20	302106	Clear	1000	10	312001	
300	Clear	1000	10	305006	Clear	1	1	1	
1000	Blue	1000	5	303206	Clear	1000	5	313006	
1000 (Extra-long)	1	1	1	1	Clear	500	10	313001	
1250	Clear	500	10	304006	/	1	1	1	

#### Pipette Tip Racked, Sterile

Maluma (III)	Universal Pipette Tips					Filter Universal Pipette Tips				
Volume (µL)	Colour	/Box	/Pack	/Case	Cat.No.	Colour	/Box	/Pack	/Case	Cat.No.
10	Clear	96	10	5	301016	Clear	96	10	5	311012
10 (Extra-long)	/	1	1	1	1	Clear	96	10	5	314016
20	/	1	1	1	1	Clear	96	10	5	310012
100	/	1	1	1	1	Clear	96	10	5	316012
200	Yellow	96	10	5	302116	Clear	96	10	5	312012
300	Clear	96	10	5	305016	/	1	1	1	1
1000	Blue	100	10	5	303216	Clear	96	10	5	313016
1000 (Extra-long)	/	/	/	1	1	Clear	96	10	5	313012
1250	Clear	96	10	5	304016	/	1	1	1	1

#### • Tip Box, Box without tips

	Volume (µL) Universal Tip Box Filter Tip Box		Packing	Cat.No.	
Offiversal Tip Box	I litter Tip Dox	holes			
10	1	96	50 pcs/cs (Box only)	351001	
200	20/100	96	50 pcs/cs (Box only)	351101	
300	200	96	50 pcs/cs (Box only)	351401	
1000	1000	100	50 pcs/cs (Box only)	351201	
1250	1250	96	50 pcs/cs (Box only)	351301	



## **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-butadi ene-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.



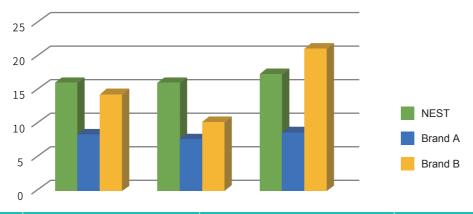


#### Features

- · High flow rates and flux.
- · Low protein binding and low chemical extractability.
- Pore size: 0.22 μm.
- Non-Pyrogenic, DNase/Rnase free.
- Sterilized by E-beam, SAL=10-6.
- · 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 sterling filtration of aqueous solutions, buffers, serum and culture media, as well as filtration of the moving phase of HPLCD.	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	TSB
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

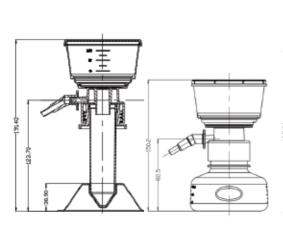
Volume (µL)	Pore Density		ms (Sterile)1/Pack, 12/Case		The state of the s
(1)	(µm)	PES Membrane	PVDF Membrane	PES Membrane	PVDF Membrane
	0.10	347002	347102	347012	347112
50	0.22	347001	347101	347011	347111
	0.45	347003	347103	347013	347113
	0.10	346002	346102	346012	346112
150	0.22	346001	346101	346011	346111
	0.45	346003	346103	346013	346113
	0.10	342002	342102	342012	342112
250	0.22	342001	342101	342011	342111
	0.45	342003	342103	342013	342113
	0.10	343002	343102	343012	343112
500	0.22	343001	343101	343011	343111
	0.45	343003	343103	343013	343113
	0.10	344002	344102	344012	344112
1000	0.22	344001	344101	344011	344111
	0.45	344003	344103	344013	344113

#### Polystyrene Storage Bottles (Sterile)

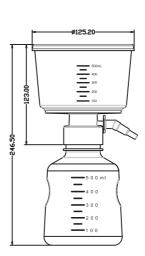
	Size (mm)		Packing			
Volume (μL)	Height	Bottleneck Diameter	Bottom Diameter	/Pack	/Case	Cat.No.
150	80		89.15	1	24	346021
250	105	42	88	1	24	342021
500	145	42	96	1	24	343021
1000	178.5		122	1	12	344021

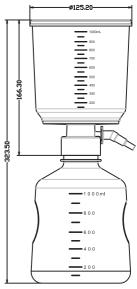
#### Warning

- 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**



Syringe filters are used in fields like life sciences, pharmaceuticals, environment, biotechnology, food and beverages, agricultural testing laboratories, etc. In particular, they are widely used in life science laboratories to sterilize samples of small volume, such as proteins, additives, buffers, reagents and drugs. The one-piece injection molded package of syringe filters is made of medical polypropylene, which is resistant to high pressure and product leakage.

#### Features

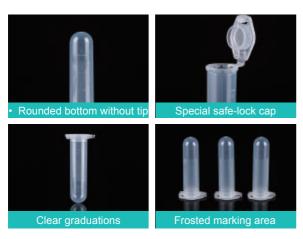
- · Highly efficient sterilization
- Larger effective membrane filtration area of 4.9 cm².
- · High flow rate and throughput.
- Sterilized by E-beam, SAL=10-6.
- Non-Pyrogenic, DNase/Rnase free.

Size (mm)	Doro Cizo (um)	Mambrana	Pac	Cot No	
	Pore Size (µm)	Membrane	/Pack	/Case	Cat. No.
30	0.22	PES	100	10	331011
30	0.22	PVDF	100	10	331001

#### Precautions

- · When handling chromatography samples, avoid introducing other impurities during the filtration process.
- Do not use a syringe with a volume less than 10 cc, which may cause excessive pressure in the injection tube thus resulting in membrane damage or personal injury.
- Single use only.
- Discard the initial few filtrates, of which the volume is about the volume of the filter.

### Microcentrifuge Tube



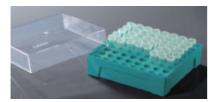


• RCF: 30,000 xg.

· Autoclavable at 121°C/15psi

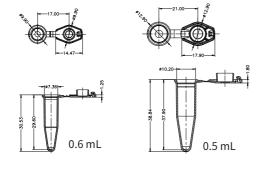
- USP VI grade polypropylene material, free from heavy metal.
- Sterilized by E-beam, SAL=10-6.
- RNase free, endotoxin level less than 0.1EU.
- Each package is individually labelled with a Cat.NO for easy quality tracking and traceability.
- Brown colour provides protection from light, especially for light-sensitive substances.
- /Pack /Case Non-sterile 1000 / 605001 Clear 10 605601 Clear Sterile 50 15 10 0.6 Round Amber Sterile 50 15 10 605401 Amber Non-sterile 50 15 10 605501 Clear Non-sterile 500 10 615001 1.5 Sterile 50 8 10 615601 Round Clear Amber Sterile 50 8 10 615401 Clear Non-sterile 500 10 620011 Conical 2.0 Clear Sterile 50 8 10 620611 Clear Non-sterile 200 1 10 603011 Conical Sterile 200 603111 Clear 10

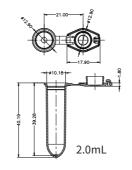
#### Micro Tube Box

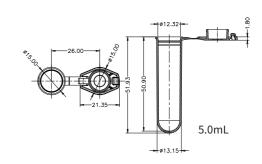


- Withstand temperature ranging from -80 °C to 121 °C.
- · Solid polypropylene base and polycarbonate cover.

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

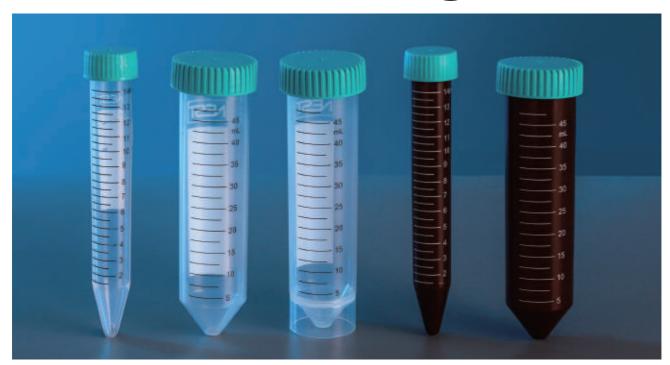






· Non-sterile.

### 15/50 mL Centrifuge Tube









#### 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.

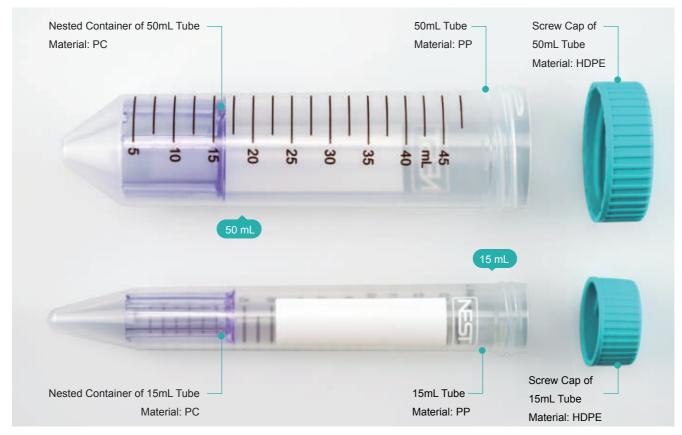
#### Centrifuge Tube Rack

- 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	Dockooing	Max.RCF(xg)	Sterile	Packing		Cat.No.	
	Color	Packaging		Sterile	/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	1
	Clear	PS Rack	12000		25	20	602001	602051
50	Clear	Bulk	12000		25	20	602002	602052
	Amber	PS Rack	12000		25	20	602201	1
50 (Self-Standing)	Clear	Bulk	5000		25	20	1	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=106.
- · 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.

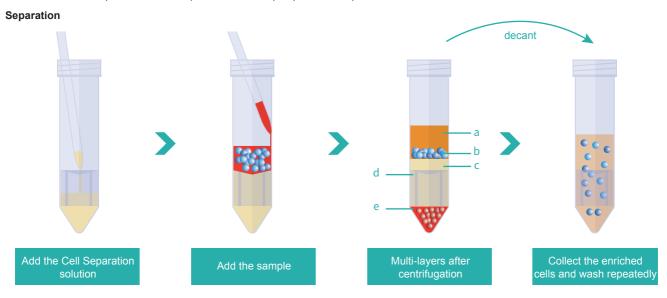
Values (ed.)	Capacity(mL)	Okavila	Packing		Cat.No.	
Volume (mL)	Capacity(IIIL)	Sterile	/Pack	/Case	<u> </u>	
15	4.0		50	10	601852	
	4-9	Voc	50	3	601851	
50	13-30	Yes	25	20	602852	
	13-30		25	4	601851	



#### 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.



- 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

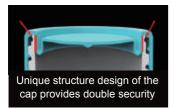




The 250 mL & 500 mL centrifuge tubes can process a large number of samples at one time and are suitable for the separation and harvest of large amounts of cells, supernatants, bacteria, yeast and tissue samples. Therefore, they are widely used in the field of life sciences and clinical.

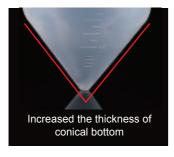
#### Application

- 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.





Newly added o-ring



- · 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.

- 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 Ma	Tube Material			/Case	Cat.No.	
volume (mc)	Dia.	Length	Connector	Membrane area	/Case	Cat.NO.	
50	1/8" ID, 1/4" OD		Male Luer		4	C60622-EFB050A	
250	φ 6.4mm φ 3.2mm	50 cm Connector 4.5ci	4.5cm <sup>2</sup>	4	C60922-EFB050A		
500	Ψ 3.211111				4	C61022-EFB050A	

# **Pasteur Pipette**



- · 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	Length	Dealersias	Otovilo	Pac	king	Cat Na
(mL)	(mm)	Packaging	Sterile	/Pack	/Case	Cat.No.
4	444	Individually Packed	Sterile	4	500	318012
1	144	Bulk	Non-sterile	10	500	318031
2	2 150	Individually Packed	Sterile	4	500	318112
2	130	Bulk	Non-sterile	10	500	318131
	162	Individually Packed	Sterile	4	500	318212
3	162	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**







NEST serological pipettes can be used in biological research such as tissue culture and bacterial culture. They are made of highly transparent polystyrene and are individually packaged in paper-plastic bags. Pipettes of different specifications are distinguished by different colors.

- Edged color-coded band for identification.
- Made of high clarity, 100% virgin polystyrene.
- Negative graduations for extra volume.
- Polyolefin fiber filter to reduce contamination.
- Each package is individually labelled with the batch number for easy quality tracking and traceability.
- Non-Pyrogenic, DNase/Rnase free.
- Sterilized by E-beam, SAL=10<sup>-6</sup>.

Volume (mL)	Sterile	Packaging	/Box	/Case	Cat.No.
4	Yes	Individually Plastic-plastic Wrapped	500	6	324003
1	Yes	Individually Plastic-plastic Wrapped	500	6	324001
2	Yes	Individually Plastic-plastic Wrapped	400	6	325003
2	Yes	Individually Plastic-plastic Wrapped	400	6	325001
5	Yes	Individually Plastic-plastic Wrapped	200	4	326003
5	Yes	Individually Plastic-plastic Wrapped	200	4	326001
40	Yes	Individually Plastic-plastic Wrapped	200	4	327003
10	Yes	Individually Paper-plastic Wrapped	200	4	327001
10 (Ink-free laser printed)	Yes	Individually Paper-plastic Wrapped	50	10	327303
05	Yes	Individually Paper-plastic Wrapped	200	4	328003
25	Yes	Individually Paper-plastic Wrapped	200	4	328001
50	Yes	Individually Paper-plastic Wrapped	100	6	329003
50	Yes	Individually Paper-plastic Wrapped	100	6	329001
100	Yes	Individually Paper-plastic Wrapped	50	6	329501

# Reagent Reservoir



#### Features

- · Made of USP Class VI compliant polypropylene.
- The V shape bottom is compatible with single or multi-channel pipettes during cell culture, immunoassays, etc.
- · A large capacity of 60 ml; injection-moulded with scale lines
- Individually labelled with the Cat.NO for easy quality tracking and traceability.
- Non-Pyrogenic, DNase/Rnase free.

Volume (mL)	Sterile	Сар	/Pack	/Case	Cat.No.
60	No	Yes	5	25	360002
60	Yes	Yes	5	25	360012

### Reservoir









- Perfectly overcomes the surface tension of liquids during automated pipetting and minimizes liquid residues.
- Made of USP Class VI compliant polypropylene, and is chemically stable and resistant to chemical corrosion.
- Freezable down to -80° C
- Less residue and wall hangings
- Conforms to ANSI (American National Standards Institute) SBS standards.
- · Each package is individually labelled with the batch number for easy quality tracking and traceability.
- Non-Pyrogenic, DNase/Rnase free. Low heavy metal content.
- Sterilized by E-beam, SAL=10-6.

Channel Troughs	Volume	/Pack	/Case	Cat.No.		
Chariner Houghs	(mL)	// ack	/Case	Non-sterile	Sterile	
8	22	5	10	360101	360111	
12	14	5	10	360102	360112	
96	195	5	10	360103	360113	
384	185	5	10	360104	360114	

# **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

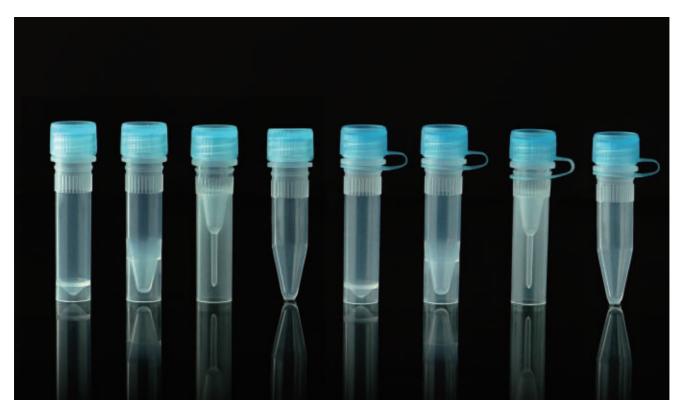
- by GAMMA-ray.
- Introduction of imported digital-controlled production equipment with high precision. The products are fine in details and comfortable to
- hold, with high uniformity among batches. The walls have high gloss but no color difference.
- High-class molding technologies and surface processing 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

• NEST Round Storage Bottle is designed for liquid storage in molecular and cellular biology, laboratory medicine, genomics and proteomics research.

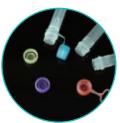
Volume		Size(mm)		Pac	king	Polypropy	lene (PP)	Polypropy	rlene (PP)
(mL)	Bottleneck Diameter	Bottom Diameter	Height	/Pack	/Case	Material	Cat.No.	Material	Cat.No.
8	13.8	24.8	42.3	20	20	HDPE	335101	PP	335201
15	13.8	24.8	56.1	20	20	HDPE	336101	PP	336201
30	21	33.9	59.05	10	20	HDPE	337101	PP	337201
60	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.



Available in 6 colors

#### Sample Vial

Volume (mL)	Pac /Pack	king /Case	Bottom	Cat.No.
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

#### Sample Vial Cap

Color	Pac /Pack	king /Case	External Thread Cap	External Thread Cap Hinged Cap
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.



# Cluster tube



#### **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.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  $^{\circ}$ C, and autoclavable.

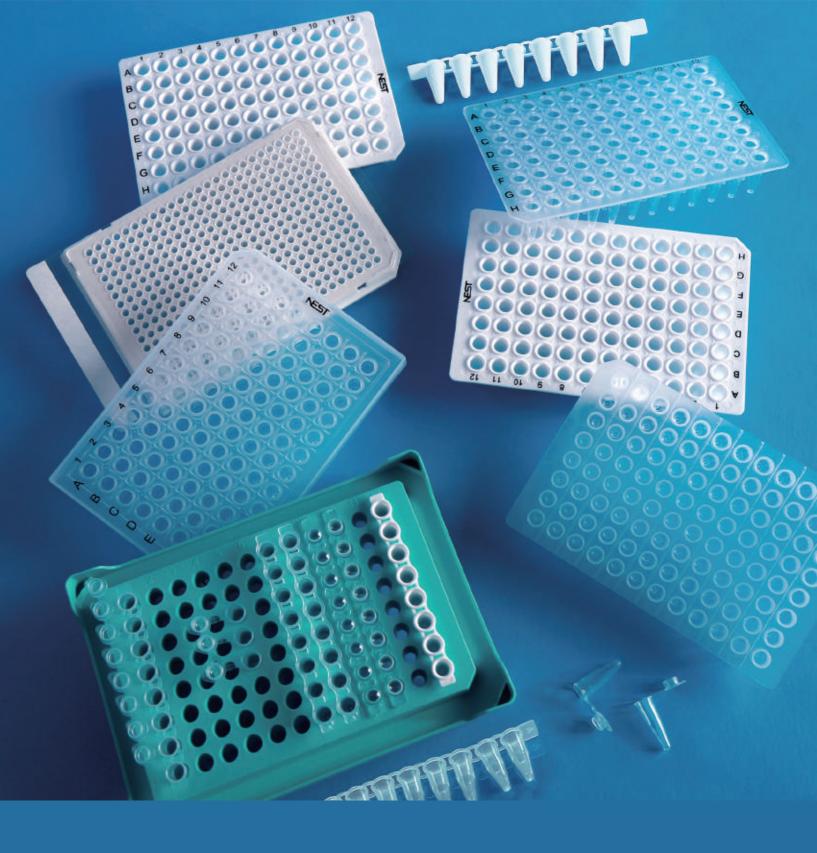


#### Cluster Tube

Schematic Diagram	Name	Packaging			Material	Sterile Cat.No.	Non-sterile Cat.No.
	4 April Oirente Objeten Tube	Bagged	960 pcs/bag	5 bags/case	PP	1	628111
	1.1mL Single Cluster Tube	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	1	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	1	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.
-66000000.	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

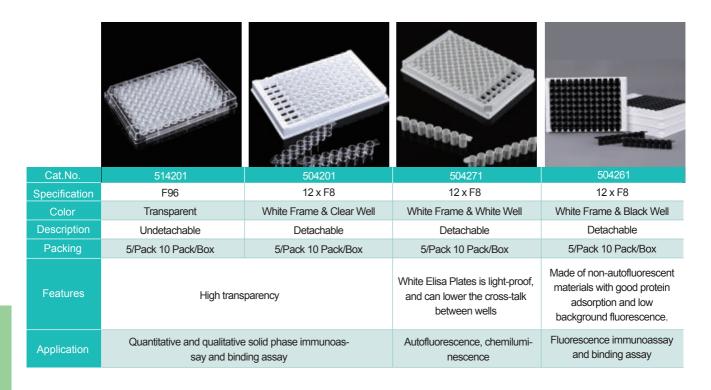
- The plates are made of polystyrene and are designed specifically for ELISAs.
   They present good adsorption performance and low baseline value.
- · Uniform thickness and size.
- High batch-to-batch stability and low coefficient of variation (CV) value.
- Both detachable and non-detachable flat-bottom 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.

# Brand A NEST

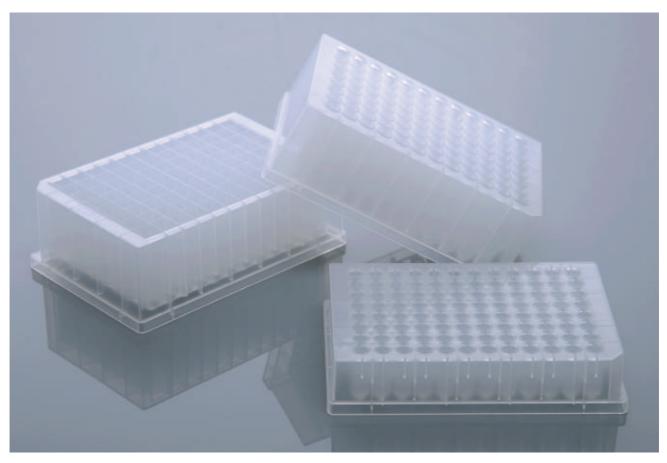
White Elisa Plates is light-proof, and can lower the cross-talk between wells

#### 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.



# **Deep Well Plate**



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

- · High quality imported PP material employed for high stability and no chemical reactions with test reagents.
- · Compatible with DMSO and inert to water.
- · Maximum sustainable centrifuge force 4000g.
- Autoclavable at 20Psi, 121  $^{\circ}$  for 20 minutes, great heating uniformity.
- · Minimum residual liquid, low heavy metal content.
- · Certified DNase/RNase and Pyrogen Free.
- · Conformed to international SBS Standards.
- Good flat and can be transported for long distance if sealed by heat sealable film.
- Produced and packed in Class 100,000 clean workshop.
- · Alphabetical sorting and corner cut marking for convenient tracking of samples.
- Each package has a separate article number/batch number identification, facilitating the quality tracking.

#### Application

Genomic DNA extraction, plasmid DNA 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.













#### Round Well

Specification	Volume (mL)	Bottom	/Pack	/Case	Non-sterile Cat.No.	Sterile Cat.No.
48-Round well	3.5	U-Bottom	10	5	504102	504162
	0.36	V-Bottom	10	5	500101	500161
	0.4	U-Bottom	10	5	501102	501162
96-Round well	0.5	V-Bottom	10	5	501101	501601
	1	U-Bottom	5	10	1	502162
	2	U-Bottom	5	10	503102	503162
	1.3	U-Bottom	5	10	507001	507101

#### Plastic Tip Comb

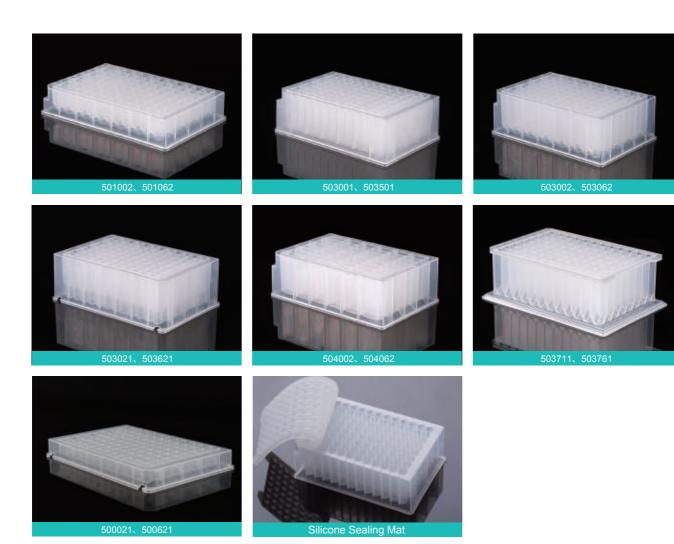
Specification	Bottom	/Bag	/Pack	/Case	Non-sterile Cat.No.	Sterile Cat.No.
8 Tip Combs	U-Bottom	2	25	10	509211	509261
8 Tip Combs	V-Bottom	1	/	25		509001
MagPure 96 Tip Combs	V-Bottom	5	1	10	503311	503361

503361、503311 Compatible with KingFisher Flex&Presto









#### Square Well

Specification	Volume (mL)	Bottom	/Pack	/Case	Non-sterile Cat.No.	Sterile Cat.No.
24 Square Well	16	V-Bottom	1	25	1	510001
24 Square Well with 24 Well Plastic Comb	16	V-Bottom	1	25	510071	510011
48 Square Well	4.6	U-Bottom	5	10	504062	504002
	0.5	V-Bottom	5	10	500021	500621
	1	U-Bottom	10	5	501002	501062
OS Saucra Wall	1.6	U-Bottom	5	10	502002	502062
96 Square Well	2	V-Bottom	5	10	503001	503501
	2.2	U-Bottom	5	10	503002	503062
	2.2	V-Bottom	5	10	503021	503621
96 I Shape Square Wells	2.2	U-Bottom	5	10	503711	503761

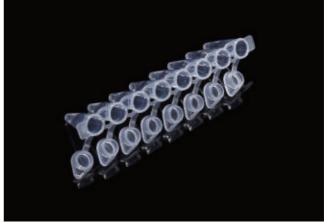
500021、500621、503021、503621 Compatible with King Fisher Flex&Presto

#### Silicone Sealing Mat

Compatibility	Volume	Piercibility	/Pack	/Case	Cat.No.
96 Well Round well	≤ 1.0 mL	Can been punctured	10	5	506005
96 Well Roulld Well	2.0 mL	Can been punctured	10	5	506006
	0.5.0.0		10	5	506003
96 Well Square well	0.5-2.2mL	Can been punctured	10	5	506004

# 8-Strip PCR Tube & Tube & Cap





#### PCR Tube

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

#### Features

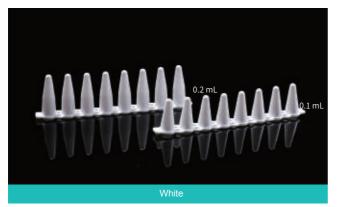
- Made of polypropylene.
- Compatible with all major PCR and real-time PCR instruments on the market. Thin-wall design produces high thermal conductivity, allowing the reaction solution inside to reach the target temperature as quickly as possible.
- The cap has excellent sealing performance and is easy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

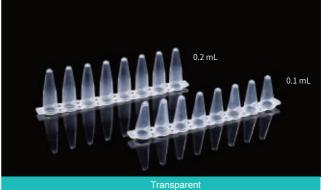
#### PCR 8-strip Tube with Individual Cap Attached

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

- 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





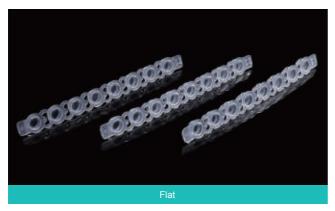
Volume (ml.)	Color	Pac	king	Non-sterile	Sterile
Volume (mL)	Color		/Case	Cat.No.	Cat.No.
• 4	Transparent	125	10	403102	403122
0.1	White	125	10	403112	403132
0.0	Transparent	125	10	403002	403022
0.2	White	125	10	403012	403032

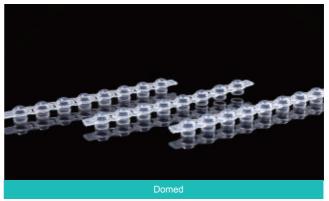
The transparent version is suitable for ordinary PCR reactions, and the white version is suitable for qPCR reactions.

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 0.1ml 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	Pac	king	Non-sterile	Sterile	
Сар Туре	Coloi	/Pack	/Case	Cat.No.	Cat.No.	
Flat	Transparent	125	10	406012	406022	
Domed	Transparent	125	10	406112	406122	

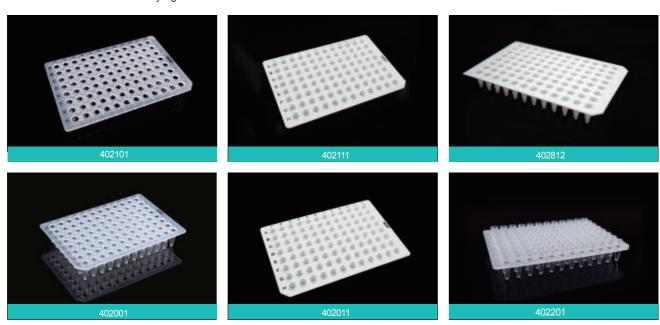
- Compatible with NEST 8-strip PCR Tubes or 96-well PCR plates.
- The cap design allows for easy opening and closing, securing better sealing performance.
- The flat caps are better for qPCR experiments.
- The domed cap can better prevent liquid evaporation.

### **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

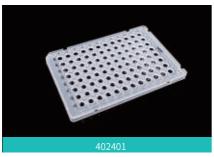
- Made of high-quality polypropylene to ensure minimal loss of reaction solution.
- Flat surface, thick and solid, not easy to deform.
- · The black ink-printing marks on the surface are easy to read and identify.
- Elevated edge of the hole can better prevent cross contamination.
- · Compatible with 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.



#### PCR Plate, No Skirt

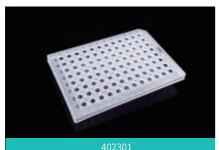
Volume (mL)	Cut Position	Color	Tube	Notes	Pa	Cat.No.		
volume (mL)	Cut Position	Coloi	Tube	NULES	/Pack	/Case	Oat.110.	
96-well 0.1	H12	Transparent	Low profile	/	25	4	402101	
	H12	White	Low profile	/	25	4	402111	
	A12/H12	White	Low profile	Compatible with Roche	10	5	402812	
	H1	Transparent	High profile	/	25	4	402001	
96-well 0.2	H1	White	High profile	/	25	4	402011	
	H12	Transparent	Elevated Wells	/	25	4	402201	

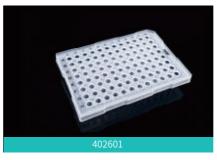
- The low-profile design minimizes the condensate contamination and evaporation of reaction solution.
- 0.1ml tube and 0.2ml tube





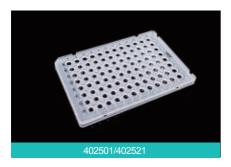


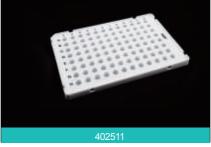




#### PCR Plate, Semi Skirt

Volume (ml.)	Clairt Tuno	Notos	Cut Position	Color	Tube	Packaging		Cat No.
Volume (mL)	Skirt Type	Notes	Cut Position	Coloi	Tube	/Pack	/Case	Cat.No.
	Semi Skirt	Compatible with ABI models	A1	Transparent	Low profile	25	4	402401
96-well 0.1	Elevated Semi Skirt	1	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	1	A12	Transparent	High profile	25	4	402301
30-WEII 0.2	Semi Skirt	Compatible with ABI models	A12	Transparent	High profile	25	4	402601







#### PCR Plate, Semi Skirt

Volume (mL) Skirt Type	Notes	Cut Position	Color	Tube	Packaging		Cat.No.	
volume (mL)	Skirt Type	Notes	Notes Gut Position Color Tub	SILIOIT COIOI TUD	Tube	/Pack	/Case	Cat.No.
	Full Skirt	1	H1	Transparent	Low profile	25	4	402501
96-well 0.1 mL	Full Skirt	1	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
33on 10 pz	Full Skirt	Compatible with Roche, Sterile	A24+P24	White	Low profile	10	5	409033

#### Compatibility

402712 Compatible with lightcycler 480  ${}^{}_{}$  lightcycler 480  ${}^{}_{}$  lightcycler 96 402812 Compatible with lightcycler 96 409013  ${}^{}$  409033 Compatible with lightcycler 480  ${}^{}_{}$ 

#### 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

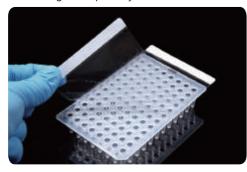


- · Fits all NEST PCR products.
- · Stackable.
- · Autoclavable.

	Cap Type Color		Pac	0.11	
Specification			/Pack	/Case	Cat.No.
(1 Rack+1 Cap)/ Set, 8*12 Format	Flat	Blue rack+Transparent lid	1 rack +1 lid	25	407001
(5 Rack+1 Cap)/ Set, 8*12 Format	Flat	Blue rack+Transparent lid	5 rack +1 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:

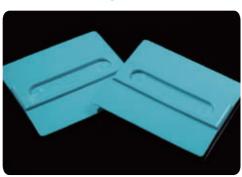
- Material: non-permeable soft film; the adhesive is medical grade strong adhesive.
- Thickness: 100 µm.
- Economical and easy to use; compatible with a majority of PCR plates on the market.
- · Good sealing performance.

0 15 11	0: ( )		Pac	king	0.41
Specification	Size (mm)	Color	/Pack	/Case	Cat.No.
Standard Sealing Film	146 × 81	Transparent	100	5	410001
Advanced Sealing Film	141 × 78	Transparent	100	5	410011
New 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

		401001	403002/404001	403102/403122	403112/403132	403012/403032 404001/403022	404001/403022	402001	402301	402501	402401	402101	402812	402601 4	402201
Brand	Model				T. P.						900				
				PC	PCK Lube						PCK Plates	ates	Ī		
	2720	401001	403002/404001				404001/403022	402001	402301					402601	
	0096	401001	403002/404001				404001/403022	402001	402301					402601	
	9700	401001	403002/404001				404001/403022	402001	402301					402601	
	9800Fast			403102/403122							402401	402101			
	Veriti/Fast			403102/403122				402001	402301		402401	402101		402601	
	7000	401001	403002/404001			403012/403032 404001/403022	404001/403022	402001	402301					402601	
	7300	401001	403002/404001			403012/403032	404001/403022	402001	402301					402601	
	7500/Fast	401001	403002/404001	403102/403122		403012/403032	404001/403022	402001	402301		402401	402101		402601	
	7700	401001	403002/404001				404001/403022	402001	402301					402601	
Applied Biosystems®	7900HT/Fast	401001	403002/404001	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		
	ProflexPCRSystem	401001	403002/404001				404001/403022	402001	402301					402601	
	QuantStudio 12K	401001	403002/404001				404001/403022	402001	402301					402601	
	ViiA7/Fast	401001	403002/404001	403102/403122		403012/403032	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					
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	Mastercycler nexus flat	401001					404001/403022								
	Mastercycler nexus flat eco	401001	403002/404001				404001/403022								

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Prime Ellie         401001         403002404001         A02001404001         A02001404002         A0200140302         402001         40200140302         402001         40200140302         402001         40200140302         402001	(C)	Genius(TC412)	401001	403002/404001			404001/403022	402001	402301	402501	4	402101		
Prime Elite         401001         403002404001         A03002404001         A03102403122         A04001403022         A02001         A02301         A02501         A0		Prime	401001	403002/404001			404001/403022	402001	402301	402501				
Prime Ellie Satellile         401001         403002404001         403102403122         404001/403022         402001         402501 <td></td> <td>Prime Elite</td> <td>401001</td> <td>403002/404001</td> <td></td> <td></td> <td>404001/403022</td> <td>402001</td> <td>402301</td> <td>402501</td> <td></td> <td></td> <td></td> <td></td>		Prime Elite	401001	403002/404001			404001/403022	402001	402301	402501				
PrimeG         401001         403002/404001         403102/40301         403102/40301         403102/40301         403102/40301         403102/40312         404001/40302         402001         402501         402501         402501           Touchgene®Gradient(TC512)         401001         4038002/404001         403102/40312         404001/40302         402001         402501         402501         402501           PrimeQ         401001         4038002/404001         403102/40312         404001/40302         402001         402301         402501         402501         402501           PrimeQ         401001         4038002/404001         403102/40312         404001/40302         402001         402301         402501		Prime Elite Satellite	401001	403002/404001			404001/403022	402001	402301	402501				
Touchgene® Cradient(TC512)         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           Touchgene® X         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           PrimeQ         401001         403002/404001         403102/40312         404001/403022         402001         402301         402501         402501           T1 Thermal Cycler         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           T Personal         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           T Personal         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           T Professional/Basic         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           T Professional/Basic         401001         403002/404001         403102/403122         404001/4030302         402001		PrimeG	401001	403002/404001			404001/403022	402001	402301	402501				
Touchgene®X         401001         403002/404001         403102/403122         404001/403022         402001         402501         402501           PrimeQ         401001         403002/404001         403002/404001         403102/403122         404001/403022         402001         402501         402501           T1 Thermal Cycler         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           TGradient         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           Tpersonal         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           Tpersonal         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           Tpersonal/Basic         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501		Touchgene®Gradient(TC512)	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
PrimeQ         401001         403002404001         A03002404001         A03002404001         A03002404001         A03002404001         A03002404001         A03002404001         A03102/403122         A04001/403022         A04001/403022         A02001         A02501         A02501           T1 Thermal Cycler         401001         403002/404001         403102/403122         A04001/403022         402001         402301         402501         402501           TGradient         401001         403002/404001         403102/403122         A04001/403022         402001         402501         402501           TProfessional/Basic         401001         403002/404001         403102/403122         A04001/403022         402001         402301         402501           TProfessional/Basic         401001         403002/404001         403102/403122         A04001/403022         402001         402301         402501		Touchgene®X	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
Quantica®         401001         403002404001         403102/403122         404001/403022         402001         402501         402501           T1 Thermal Cycler         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           TGradient         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           TPersonal         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501           TProfessional/Basic         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501		PrimeQ	401001	403002/404001			404001/403022	402001	402301	402501				
FlexCycler         401001         403002404001         403102/403122         404001/403022         402001         402501         402501           T1 Thermal Cycler         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501         402501           TGradient         401001         403002/404001         403102/403122         404001/403022         402001         402501         402501           TProfessional/Basic         401001         403002/404001         403102/403122         404001/403022         402001         402301         402501		Quantica®	401001	403002/404001			404001/403022	402001	402301	402501				
T1 Thermal Cycler 401001 403002/404001 403102/403122 404001/403022 402001 402301 402501 402501 Theresional/Basic 401001 403002/404001 403102/403122 404001/403022 402001 402301 402501 402501 402501 401001 403002/404001 403102/403122 404001/403022 402001 402301 402501 402501		FlexCycler	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
TGradient 401001 403002/404001 403102/403122 404001/403022 402001 402301 402501 402501 TProfessional/Basic 401001 403002/404001 403102/403122 402001 404001/403022 402001 402301 402501		T1 Thermal Cycler	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
401001         403002/404001         403102/403122         404001/403022         402001         402501         402501           401001         403002/404001         403102/403122         404001/403022         402001         402501         402501	nalytik Jena/ Biometra	TGradient	401001	403002/404001	403102/403122			402001	402301	402501	4	402101		
401001         403002/404001         403102/403122         404001/403022         402001         402501         402501		Tpersonal	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
		TProfessional/Basic	401001	403002/404001	403102/403122			402001	402301	402501	4	402101		

	TProfessional/Standard	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
	TProfessional/TIRO	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
	TRobot	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
Analytik Jena/	Uno	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
Biometra	Uno II	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
	q TOWER	401001	403002/404001				402001	402301	402501				
	SpeedCycler <sup>2</sup>	401001	403002/404001				402001	402301	402501				
	TOptical	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 <sup>TM</sup>	401001	403002/404001			404001/403022	402001	402301	402501				
	PTC-100®	401001	403002/404001			404001/403022	402001	402301	402501				
	PTC-200	401001	403002/404001			404001/403022	402001	402301	402501				
	PTC-225 Tetrad	401001	403002/404001			404001/403022	402001	402301	402501				
	S1000 <sup>TM</sup>	401001	403002/404001			404001/403022	402001	402301	402501				
	T100 <sup>TM</sup>	401001	403002/404001			404001/403022	402001	402301	402501				
	CFX Connect™	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	4	402101		
Biorad®/	CFX96 <sup>TM</sup> Touch/CFX96	401001		403102/403122	403112/403132	404001/403022			402501	4	402101	402812	
MJ Researsh®	Chromo4 <sup>TM</sup>	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 <sup>TM</sup> 5	401001	403002/404001			404001/403022	402001	402301	402501				
	MiniOpticon <sup>TM</sup>	401001	403002/404001			404001/403022	402001	402301	402501				
	MyiQ™	401001	403002/404001			404001/403022	402001	402301	402501				
	Opticon			403102/403122	403112/403132				402501	4	402101		
	miniOpticon				403112/403132							402812	
	BaseStation <sup>TM</sup>							402301	402501				
	MJ research option											402812	
	Opticon2			403102/403122					402501	4	402101	402812	

	Multiblock System	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501		402101			
	T1 Thermal Cycler	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501		402101			
	Omn-E	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501		402101			
	Omnigene	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			
	Deltacycler I	401001	403002/404001	403102/403122		404001/403022	402001	402301			402101			
Ericom	Single Block	401001	403002/404001	403102/403122		404001/403022	402001	402301			402101			
	Twin Block	401001	403002/404001	403102/403122		404001/403022	402001	402301			402101			
	NK3000®	401001	403002/404001				402001	402301						
Ottoschert	Mx3000P®	401001	403002/404001				402001	402301						
Oll atagaile	NK3005®	401001	403002/404001				402001	402301						
	Mx4000®	401001	403002/404001				402001	402301						
ţo.	SureCycler®8800	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501	402401				
Agriefit	ARIA MX G8830A				403112/403132							402812		
Oispen®	Flexigene®	401001	403002/404001			404001/403022	402001	402301	402501					
Glagala	Rotor-Gene® Q	401001				404001/403022								
MWG®	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-IV				403112/403132									
	TP3000	401001	403002/404001	403102/403122		404001/403022	402001	402301	402501		402101			
Americham@CE@	MegaBACE®500							402301	402501					
	MegaBACE1000							402301	402501				,	402201
Beckman Coulter®	CEQ <sup>TM</sup>							402301						
Transgenomic	WAVE®System							402301	402501					

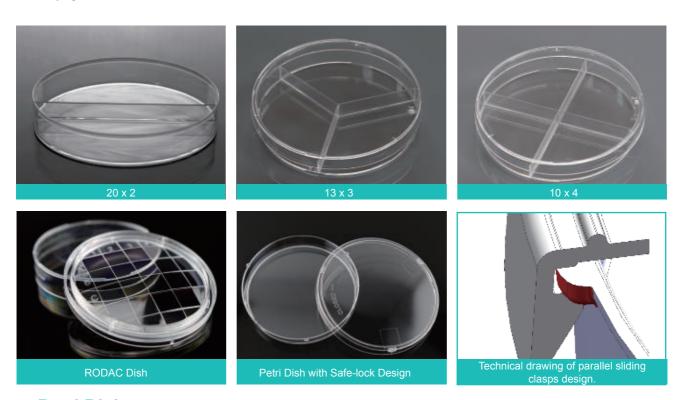


# Bacteria

# **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.

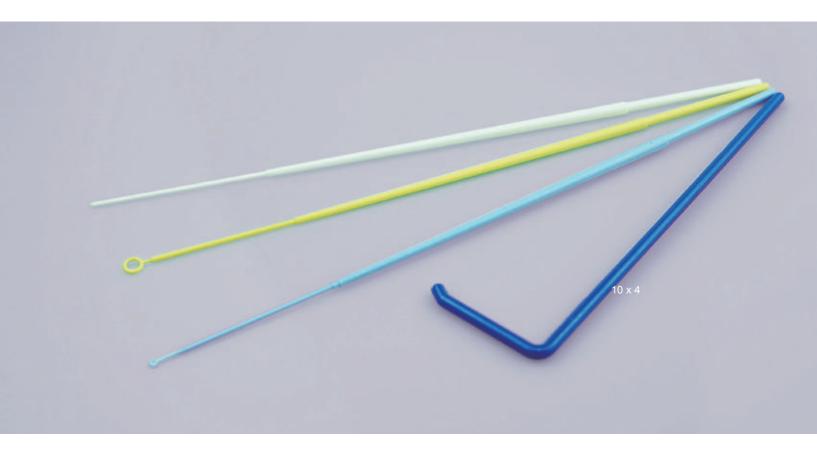
- Made of high clarity, 100% virgin polystyrene.
  Numeric marks at 3/6/9/12 o'clock at the bottom, making it convenient for users to determine the position of bacteria.
- Flat, transparent surface.
- PA/PE composite film packaging.
- · Stackable for easy storage and handling.
- Each package has an independent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



#### Petri Dishes

					Pac	king	
Spec (mm)	Height (mm)	Volume (mL)	TC	Sterile	/Pack	/Case	Cat.No.
35	12	5	NO	Sterile	20	25	706011
60	15	15	NO	Sterile	20	25	754001
	15	40	NO	Sterile	20	25	752001
	15	40	NO	Sterile	20	25	752002 Double-layer
	15	40	NO	Sterile	10	50	752004
90	15	40	NO	Sterile	5	100	752003
	15	20 x 2 Compartments	NO	Sterile	20	25	752011
	15	13 x 3 Compartments	NO	Sterile	20	25	752021
	15	10 x 4 Compartments	NO	Sterile	20	25	752031
	15	40 Safe-lock Design	NO	Sterile	20	25	752101
100	20	40	NO	Sterile	20	15	752401
450	15	60	NO	Sterile	10	10	715011
150	25	1	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 (ul.)	Nama	Color	Pa	acking	Cot No.
Volume (μL)	Name	Color	/Pack	/Case	Cat.No.
1	Inoculating Needle	White	400	10	716001
1	Inoculating Loop	Blue	400	10	717101
10	Inoculating Loop	Yellow	400	10	718201
1	L-Spreader	Blue	200	10	711001



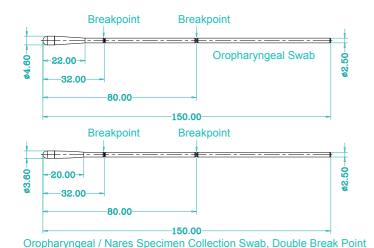
# **Medical Consumables**

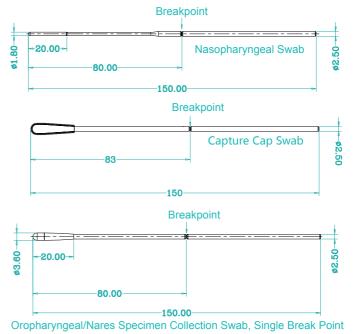
# **Disposable Swab**



#### **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.





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

# **Viral Transport Medium**



- Used for collection, storage and transportation of human nasopharyngeal virus samples.
- Unused VTM medium can be transported at room temperature.
- Sample transport temperature requirement & storage time: 2 to 4 C°, 48 h.

Cat.No.	Description	/Pack	/Case
202011	Disposable Sampler, 5 mL Vial with 2.5 mL VTM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202015	Disposable Sampler, 5 mL Vial with 2.5 mL VTM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202012	Disposable Sampler, 5 mL Vial with 2.5 mL VTM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202014	Disposable Sampler, 5 mL Vial with 2.5 mL VTM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100
202115	Disposable Sampler, 5 mL Vial with 2.5 mL VTM, 10 Vials/pk, 100 Vials/cs	10	100
202117	Disposable Sampler,10 mL Vial with 3 mL VTM, 10 Vials/pk, 100 Vials/cs	10	100
202061	Disposable Sampler, 10 mL Vial with 3 mL VTM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202065	Disposable Sampler, 10 mL Vial with 3 mL VTM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202016	Disposable Sampler, 10 mL Vial with 3 mL VTM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202017	Disposable Sampler, 10 mL Vial with 3 mL VTM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100
202019	Disposable Sampler, 5 mL Vial with 2.5 mL VTM, with Individually Wrapped and Sterile Oropharyngeal & Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk 1 Oral Swab/pk, 100 pk/cs	1	100
202018	Disposable Sampler, 10 mL Vial with 3 mL VTM, with Individually Wrapped and Sterile Oropharyngeal & Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk 1 Oral Swab/pk, 100 pk/cs	1	100

# **Inactivation Transport Medium**



- ITM medium serves to both inactivate viruses and prevent nucleic acid degradation.
- Room temperature transport.
- Samples can be stored at room temperature for 20 days.
- Used for collection, storage and transportation of viruses, chlamydia, mycoplasma and urea plasma.

Cat.No.	Description	/Pack	/Case
202001	Disposable Sampler, 5 mL Vial with 2 mL ITM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202005	Disposable Sampler, 5 mL Vial with 2 mL ITM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202008	Disposable Sampler, 5 mL Vial with 2 mL ITM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100
202039	Disposable Sampler, 5 mL Vial with 2 mL ITM, with Individually Wrapped and Sterile  Oropharyngeal & Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk +1 Oral Swab/pk, 100 pk/cs	1	100
202006	Disposable Sampler, 10 mL Vial with 3 mL ITM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202007	Disposable Sampler, 10 mL Vial with 3 mL ITM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100
202038	Disposable Sampler, 10 mL Vial with 3 mL ITM, with Individually Wrapped and Sterile  Oropharyngeal & Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk 1 Oral Swab/pk, 100 pk/cs	1	100
202872	Disposable Sampler Pooling Kits, 10 mL Vial with 2 mL ITM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 vial + 5 swabs pool testing; 10 Vials/pk, 50 Vials/cs, 5 swabs/pk, 250 swabs/cs	1	50

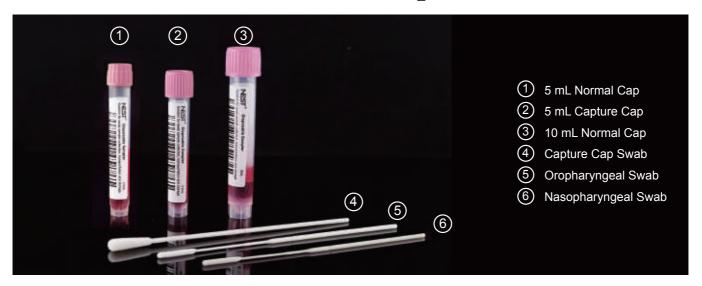
# **Saline Transport Medium**



- Non-toxic, safe and effective for home collection.
- Produced according to the FDA standard.
- Room temperature for transportation and storage.
- After collection of the sample transportation requirement: room temperature within 48h.
- Used for collection, storage and transportation of viruses, chlamydia, mycoplasma and urea plasma.
- Validation: 2 x LoD (low positives) and 10 x LoD (high positives) virus samples for 56 hours (40 °C for 12 hours, then 32 °C for 42 hours) in this product can be detected by RT-PCR.

Cat.No.	Description	/Pack	/Case
202041	Disposable Sampler, 5 mL Vial with 1.2 mL Saline Solution, with Individually Wrapped and Sterile Oropharyngeal Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202045	Disposable Sampler, 5 mL Vial with 1.2 mL Saline Solution, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202042	Disposable Sampler, 5 mL Vial with 1.2 mL Saline Solution, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202044	Disposable Sampler, 5 mL Vial with 1.2 mL Saline Solution, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202049	Disposable Sampler, 5 mL Vial with 1.2 mL Saline Solution, with Individually Wrapped and Sterile Oropharyngeal & Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk 1 Oral Swab/pk, 100 pk/cs	1	100
202141	Disposable Sampler, 5 mL Vial with 1.2 mL Saline Solution, 10 Vials/pk, 100 Vials/cs	10	100
202046	Disposable Sampler, 10 mL Vial with 3 mL Saline Solution, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100

# **AMIES Transport Medium**



NEST disposable sampler (AMIES) is a collection and transport system which is used for aerobic, anaerobic and fastidious bacteria. In addition, NEST disposable sampler (AMIES) can be used for nucleic acid test of bacteria.

#### Features

- Simplify specimen collection, transport and processing.
- Fewer samples need to be collected offering a more comfortable experience.
- Better preservation ability: the colony number of samples was reduced by no more than 1.5log10 after preservation for 48h.

#### **Transport Temperature Requirement**

Before using: AMIES solution can be stored at room temperature (5 to 25 degree centigrade) for twelve months.

After using: sample could maintain viability for up to 48 hours at room or refrigerator temperature (Neisseria gonorrhoeae survival at 24 hours per CLSI standard).



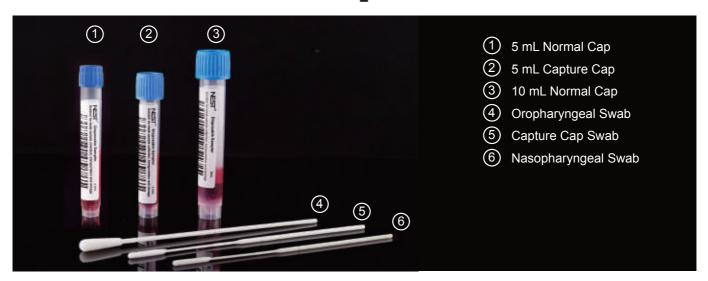
#### Capture Cap & Swab

- Reducing the extra costs of stocking numerous swab types.
- Just screw the cap, the swab will be stuck onto the cap automatically without handling.

Cat.No.	Description		/Case
202451	Disposable Sampler, 5 mL Vial with 1.2 mL ATM, with Individually Wrapped and Sterile Capture Cap Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202452	Disposable Sampler, 5 mL Vial with 1.2 mL ATM, with Individually Wrapped and Sterile Capture Cap Swabs, 1 Vial + 1 Swab/pk, 100 pk/cs	1	100

Cat.No.	Description		/Case
202051	Disposable Sampler, 5 mL Vial with 1.2 mL ATM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202055	Disposable Sampler, 5 mL Vial with 1.2 mL ATM, with Individually Wrapped and Sterile Nasopharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202052	Disposable Sampler, 5 mL Vial with 1.2 mL ATM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs		100
202054	Disposable Sampler, 5 mL Vial with 1.2 mL ATM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100
202081	Disposable Sampler, 10 mL Vial with 3 mL ATM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202085	Disposable Sampler, 10 mL Vial with 3 mL ATM, with Individually Wrapped and Sterile Nasopharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202056	Disposable Sampler, 10 mL Vial with 3 mL ATM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202057	Disposable Sampler, 10 mL Vial with 3 mL ATM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100

### **Universal Transport Medium**



#### Features

- · Simplify specimen collection, transport and processing.
- Used for collection, storage and transportation of viruses, bacteria, chlamydia, mycoplasma and urea plasma. The specimen transported in the universal transport media can be used in the laboratory to perform pathogen isolation and detection.
- · Disposable use.

#### **Transport Temperature Requirement**

This product can be transported at ambient temperature. The samples collected can be stored at the temperature of 2-8 °C if transported to the laboratory within 48 hours for the subsequent examination, inoculation and sample separation. Otherwise, please store the samples at -70 °C. Please store the samples at minus 70 degrees celsius, if they cannot be transported to the laboratory within 48 hours, please examine, inoculate, or separate the sample as soon as possible after being sent to the laboratory. Those that can be inoculated or separated within 48 hours can be stored at 4 degrees Celsius. Those that cannot be inoculated or separated within 48 hours should be stored at minus 70 degrees Celsius.



#### Capture Cap & Swab

- Reducing the extra costs of stocking numerous swab types.
- Just screw the cap, the swab will be stuck onto the cap automatically without handling.

Cat.No.	Description	/Pack	/Case
202421	Disposable Sampler, 5 mL Vial with 1.2 mL UTM, with Individually Wrapped and Sterile Capture Cap Swabs, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202422	Disposable Sampler, 5 mL Vial with 1.2 mL UTM, with Individually Wrapped and Sterile Capture Cap Swabs, 1 Vial + 1 Swab/pk, 100 pk/cs	1	100

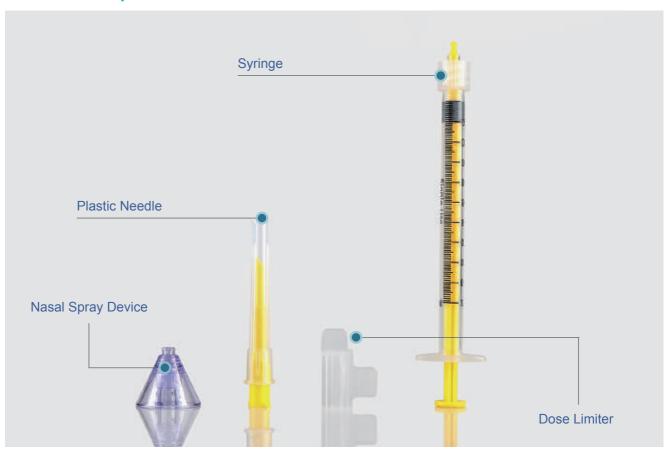
Cat.No.	Description		/Case
202021	Disposable Sampler, 5 mL Vial with 1.2 mL UTM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202025	Disposable Sampler, 5 mL Vial with 1.2 mL UTM, with Individually Wrapped and Sterile Nasopharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202022	Disposable Sampler, 5 mL Vial with 1.2 mL UTM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202024	Disposable Sampler, 5 mL Vial with 1.2 mL UTM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100
202028	Disposable Sampler, 10 mL Vial with 3 mL UTM, with Individually Wrapped and Sterile Oropharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202029	Disposable Sampler, 10 mL Vial with 3 mL UTM, with Individually Wrapped and Sterile Nasopharyngeal Swab, 10 Vials/pk, 50 Vials + 50 Swabs/cs	10	50
202026	Disposable Sampler, 10 mL Vial with 3 mL UTM, with Individually Wrapped and Sterile Oropharyngeal Swabs, 1 Vial + 1 Oral Swab/pk, 100 pk/cs	1	100
202027	Disposable Sampler, 10 mL Vial with 3 mL UTM, with Individually Wrapped and Sterile Nasopharyngeal Swabs, 1 Vial + 1 NP Swab/pk, 100 pk/cs	1	100

# **Disposable Intranasal Atomization Device**

#### Product Presentation

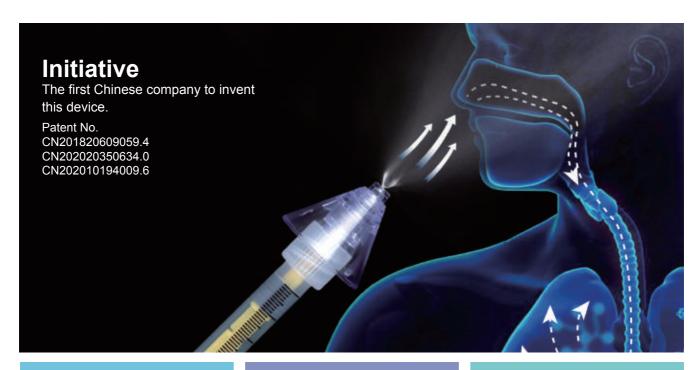
- The device provides a painless and rapid absorption medication delivery option for non-invasive intranasal medication delivery. It improves safety for both caregivers and patients by avoiding needle-sticking injuries.
- It is an atomizing device for drug administration intended to convert liquid preparations 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

Product 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





Rapid Absorption



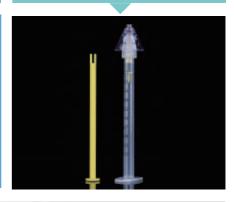
Non-invasive & Painless



Self-Destruct Device



Special Dose Limiter







## **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	Screw Funnel 10 mL Vial Sterile 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	Wedged Funnel Sterile 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.

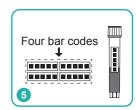
#### Instructions











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,	4	400	202044
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.
	Paper Box Package	1	100	203051
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	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 olefincopolymer (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 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 mLAccureVial <sup>™</sup> COP Bottle	1	10	207001

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



# Pharmaceutical packaging

## **Pre-fillling 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 devise 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-distruct 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 analgesicAnalginum 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.

# harmaceutical packaging

## Pre-fillling 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

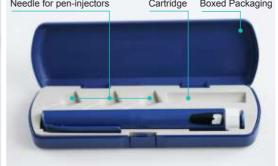
- Anti-coagulants
- Anti-inflammatory agents
- Multiple sclerosis therapies
- Obstetric agents
- Pain relievers



## **Pen Injector**











Large Window

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, horomones (e.g. testosterone cypionate) and others.

#### **Features**

**Enlarged** view window

The clear scale provides a convenient observation of the dosage.

**Portable** and convenient

The small and delicate package makes it highly portable.

**Flexible** adjustment

The dosage adjustment knob can be adjusted in both directions, allowing for easy correction in case of excessive dosage.

**Precision** iniection

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

Smooth injection

The transmission mechanism is completely made of special materials with high lubrication, ensuring a smooth injection process with It is easy for beginners to use, eliminating the a required pressure of less than 30N.

**User-friendly** 

need for professional guidance.





#### 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

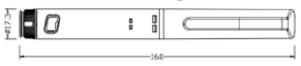
Dosage can be pre-set according to individual needs, granting patients the flexibility for their liquid medicine administration.

Supports customization

Supports customization in multiple colors.

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	Suitable for a variety of disposable injection needles: such as BD, Jierui injection needles, etc. The needles must comply with ISO 11608-2.  Applicable to the injection of standard 3 mL cartridge solution: 3 mL cartridge refills must comply with ISO 11608-3.				

#### Technical Drawing





#### 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.

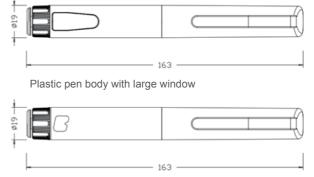
Long service

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.

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 Injecto	r (NEST)		
Single Minimum Dose	1 unit (0.01 mL)			
Application	Compatible with disposable injection needles in line with ISO 11608-2, including BD, Jierui injection needles, etc; Compatible with standard 3 mL cartridge that complies with ISO 11608-3.			



Plastic pen body with small Window



## **Lab Safety**

## **Nitrile Examination Glove**



### **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



#### Anti-Oxidation

Protects skin from oxidative damage



#### Protect

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



#### Restoring pH

Maintains skin's protective barrier function by restoring pH balance



#### Soothing

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



#### Clean

Acts as a natural cleanser to remove dead skin cells

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

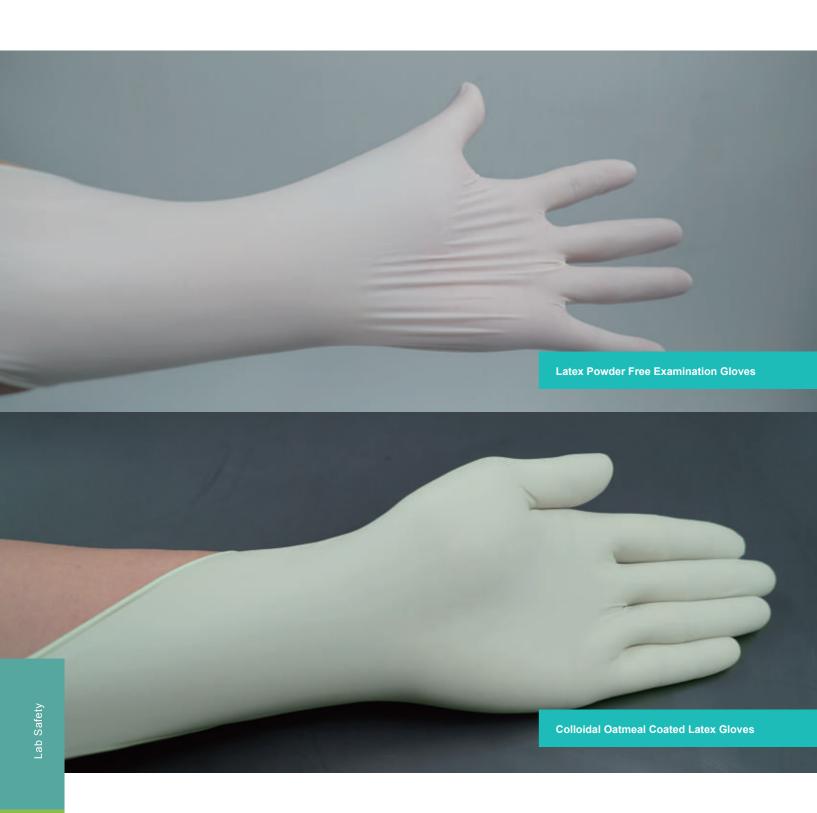
#### Nitrile Powder Free Examination Glove

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

#### Nitrile Powder Free Examination Glove

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

## **Latex Examination Glove**



## **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, powder free.
- · 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



#### **Anti-Oxidation**

Protects skin from oxidative damage



#### **Protect**

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



#### Restoring pH

Maintains skin's protective barrier function by restoring pH balance



#### Soothing

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



#### Clean

Acts as a natural cleanser to remove dead skin cells

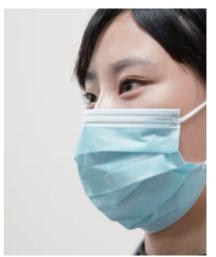
Cat.No.	Size	Palm Width (mm)±4 mm	Length (mm)	/Pack	/Case
904001	XS	76		100	1000
904011	S	84	≥230	100	1000
904021	М	94		100	1000
904031	L	105		100	1000

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

#### Latex Powder Free Examination Glove

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







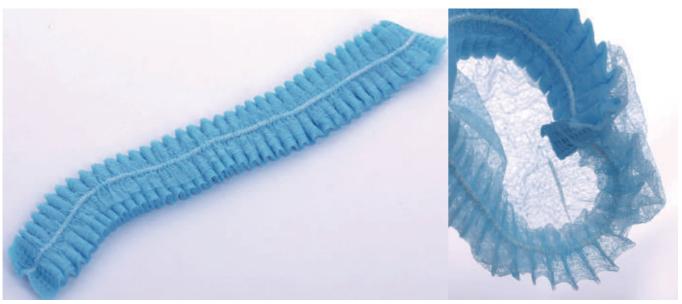


#### Features

- 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.

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

## 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.

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



#### Features

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

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



## 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	6 Dubbar String
Standard in Packaging	6 Rubber Strips
Ambient Temperature	<b>5~40</b> ℃
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



## **Mini Vortex Mixer**

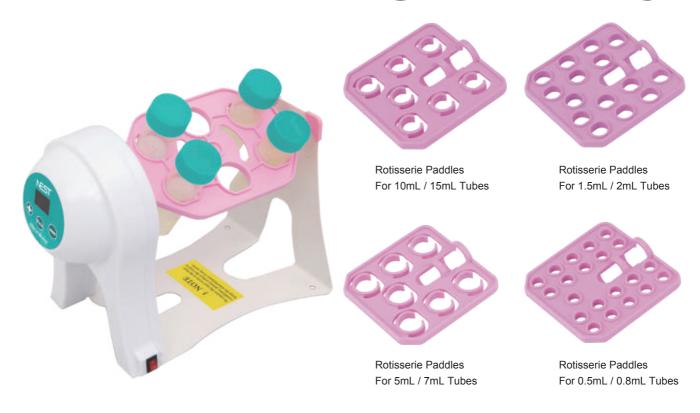
#### Features

- 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	Ф4.5mm
Max. Capacity	80mL
Max. Tube Diameter	Ф30mm
Speed	3000rpm
IP rating (DIN EN 60529)	IP40
Ambient Temp.	5~40℃
Outside Dimensions	Ф96xH85mm
Power	5W
Power Supply	AC100~240V,50/60Hz
Weight	0.55kg



## Variable Speed Tube Revolver with Digital Display



#### Features

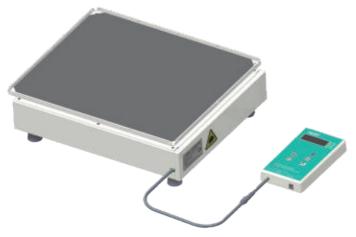
- Small footprint, "Plug and Play" operation;
- Includes five different interchangeable rotisseries;
- Rotation direction can be changed by slightly touching the rotisseries;
- · Paddle angle is adjustable for different purposes;
- · High quality, maintenance-free motor with little noise.

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



Rotisserie Paddles For 50mL Tubes

## 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, 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	Ф19mm
Platform Dimensions	355mmx300mm
Max.Capacity	50mL x30 / 100mL x15 / 150mL x15 / 200mL x15 / 250mL x15
Max.Capacity	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
The Unit: 360 x 405 x 96mm	
Power 30W	
Power Supply	AC100~240V, 50Hz/60Hz
Weight	Machine Body :17.5kgs Control box: 1kg



Aluminum Platform

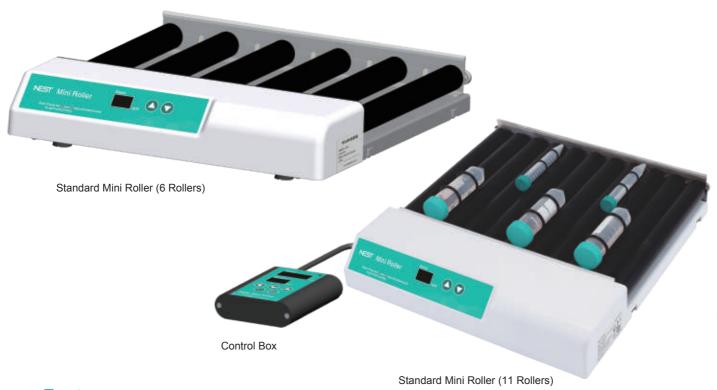
#### Flask clamp feature

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

Cat.No.	Name	
	100mL Flask Clamp * 2	
	250mL Flask Clamp * 4	
105901▲	500mL Flask Clamp * 4	
103901—	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	Rollers: 11	Rollers: 6
	O Ring (23.5x3.6mm): 20	O Ring (23.5x3.6mm): 20
in Packaging	O Ring (13.2x2.7mm): 20	O Ring (13.2x2.7mm): 20
Roller Speed	0.5~80rpm	0.5~80rpm
Operating Mode	Way forward	Way forward
Roller Dimensions (DXL)	Ф28mmx259mm	φ28mmx259mm
Available Tubes or Bottles	Max. Ø120mm bottles; tubes	Max. Ø120mm bottles; tubes
Positions	Centrifuge tubes can be placed randomly	Centrifuge tubes can be placed randomly
Positions	or three 1500ml standard bottles	or three 1500ml standard bottles
Max.Load	6.5kgs	6.5kgs
Ambient	5℃~60℃	5℃~60℃
Relative Humidity	≤95%	≤95%
Display	LED	LED
Timer (Control Box)	999min or continuous	1
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	British standard plug	South Africa /	American
	standard plug		India standard plug	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

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



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

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.

Туре	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 ℃
Time set	1-999min or 1-999sec
Temperature control accuracy	±0.1℃
Temperature uniformity	±0.3℃
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





### **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 con sumables 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 con nection ports to connect to the devices you need and use replaceable rubber rollers to optimize printing effects for different labels.

Model	15100
Handheld/Desktop	Desktop
Power Supply	100 - 240V AC, 50/60 Hz, PFC
Printing Method	Thermal transfer (300 or 600dpi) / direct thermal (300dpi - depending on material and printhead)
Printing Resolution	300 dpi / 600 dpi
Maximum Printing Width	4.16 inches (106mm)
Maximum Label Width	0.20 inches (5mm) to 4.33 inches (110mm)
Maximum Printing Speed	Maximum 11.8 inches (300mm)/second (300 dpi) Maximum 5.9 inches (150mm)/ second (600 dpi)
Printing Color	Single color

Memory	256MB
Connectable to Computer	Yes
Interfaces	USB 2.0, RS232-C, Ethernet 10/100 BASE-T, SD slot
Keyboard	External
Display Screen	Color LCD touch screen
Dimensions	12.5 inches (318mm) x 9.5 inches (241mm) x 17.1 inches (434mm)
Weigh	14.6 pounds (6.6kg)
Maximum Power Consumption	Standby <10W / Normal 150W / Maximum 300W
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



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

Interconnection

Data interface makes it

easy to connect sample

information with other

related information

systems, saving you

valuable storage space.

#### Efficient and flexible

Pre-set with information about storage equipment. cryogenic boxes, and data interfaces, allowing for quick and easy customiza-

#### User-friendly

Designed for easy use, with a virtual model that allows for simple and intuitive sample operations.

#### Secure and reliable

Permission system and operation log ensure the security and integrity of your data, giving you peace of mind.

#### Adaptability

Compatible with NEST cryogenic boxes and other ANSI-SBS standard specifications, making sample storage quick and

#### 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
- Label printing: human-readable barcodes and custom adhesive labels can
- 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 Number	Product Specification
106131	NEST Sample Management Software-20 terminal devices
106132	NEST Sample Management Software-15 terminal devices
106133	NEST Sample Management Software-10 terminal devices
106134	NEST Sample Management Software-5 terminal devices
106135	NEST Sample Management Software-3 terminal devices















## 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 guickly 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 gra

#### Cryogenic box plate rack

#### Decoding entire boxes of cryogenic tubes

- Decoding rules can be customized according to the cryo genic 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
- Cryogenic box code decoding does not require an external device.
- · Cryogenic box code location can be automatically set by software.

#### **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.

#### 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.

#### 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

- USB data cable/power switch · Standard USB2.0 interface, no external power supply
- · Standby power consumption less than 1W, and photo decoding power consumption is less than 4W.

required, low power consumption (1W-4W).

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

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
- Full-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
- · Compatible with various scanning racks to meet different quantity requirements.



Product number	106212
Product model	Multi-rack reader NSScanner, English
Product type	Flatbed
Maximum scanning range	216×297mm
Scanning component	CCD
Optical resolution	4800×9600dpi
Scanning speed	Full-frame scanning ≤ 6 seconds

Scanning light source	LED light source
Rack types	SBS box + traditional square box, 2 traditional square boxes, 3 SBS boxes
Product size and weight	443.5×278.6×54mm 2.14kg
Power/power consumption	220V/18W
Data interface	Provides HTTP access service to return a JSON string containing the position and cryogenic tube code
Support system	Windows2000/XP/Vista/7/10
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.



## Lab Instrument

## 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 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 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.

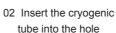
Product Name	NEST Cell Thawing Device
SKU	106007
Model	LA-G002
Throughput	2 holes, each hole can be used independently
Application	2.0ml standard cryogenic tubes
Filling volume	0.8-1.5ml
Thawing time	3 minutes
Alarm	Low temperature alarm, error operation alarm
Prompt sound	Preheating end prompt, thawing 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



01 Power on

NEST





03 The thawing instrument automatically thaws



03 After thawing is complete, the cryogenic tube pops out

## **Pipette**

Autoclavable





- 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.
- 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.



## ğ

## **Mechanical Pipette Volume Selection**

Specifications This volume list is for MicroPette and MicroPette platsleAdjdsRixed volume)

Single-channel Adjustable Volume Pipettes												
	Volume Donge	Inoxomont	Test Volume	Error limits in accordance with IS08655-2								
Cat.No.	Volume Range	Increment	162f Animile	Systema	atic Error	Rando	m Error					
	μL	μL	μL	μL	%	μL	%					
			2.5	±0.0625	±2.50	±0.05	±2.00					
104011	0.1-2.5	0.05	1.25	±0.0375	±3.00	±0.0375	±3.00					
101011			0.25	±0.03	±12.00	±0.015	±6.00					
			10	±0.1	±1.00	±0.08	±0.80					
104012	0.5-10	0.1	5	±0.075	±1.50	±0.075	±1.50					
			1	±0.025	±2.50	±0.015	±1.50					
			20	±0.18	±0.09	±0.08	±0.04					
104013	2-20	0.5	10	±0.12	±1.20	±0.1	±1.00					
			2	±0.06	±3.00	±0.04	±2.00					
			50	±0.3	±0.60	±0.15	±0.30					
104014	5-50	0.5	25	±0.225	±0.90	±0.15	±0.60					
			5	±0.1	±2.00	±0.1	±2.00					
			100	±0.8	±0.80	±0.15	±0.15					
104015	10-100	1	50	±0.5	±1.00	±0.2	±0.40					
			10	±0.3	±3.00	±0.15	±1.50					
			200	±1.2	±0.60	±0.3	±0.15					
104016	20-200	1	100	±0.8	±0.80	±0.3	±0.30					
			20	±0.6	±3.00	±0.2	±1.00					
			1000	±6	±0.60	±2	±0.20					
104017	100-1000	5	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 Desciription	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	√	<b>√</b>					
_	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

CHEWIICAL	10		OII	711,													
	ABS	Acetal	HDPE	LDPE	PC	PP	Santo- prene	Sili	Reagent	ABS	Acetal	HDPE	LDPE	PC	PP	Santo- prene	Sili
Acetaldehyde	D	A	С	С		A <sup>1</sup>	_	Α	Benzene	D	A <sup>1</sup>	D	D	D	D	D	D
Acetamide	_	A	Ā	Ā	C¹ D	A¹	_	В	Benzene Sulfonic Acid	_	_	Ā	A¹	D	D	_	D
Acetate Solvent	_	_	A	A	-	B¹ B	-	С	Benzoic Acid	_	В	Α	A¹	B¹ D	B¹ B	_	В
Acetic Acid Acetic Acid 20%	D C	D C	A A	A <sup>2</sup>	B¹	A	A A	C B	Benzol Benzonitrile	D —	A _	_	C¹		В	D —	D
Acetic Acid 80%	D	D	Â	Ď	A¹ B¹	A	C	В	Benzyl Chloride	D	A	_	_	A¹	C¹	_	A¹ D
Acetic Acid, GlacialD	D	A	D	B¹	A <sup>1</sup>	D	В		Bleach	В	D	_	_	_	D	_	_
Acetic Acid, Vapors	_	_	_	_	_	-	_	A	Bleaching Liquors	-	_	-	A¹	-	A¹ B	-	В
Acetic Anhydride Acetone, 50% water	C1 D	D _	C	D –	D _	B¹ A	D -	C	Borax (Sodium Borate) Boric Acid	_	B A	A A	A <sup>2</sup>	_	A	-   A	B A
Acetone Acetone	l b	A	D	B¹		Ā	A	A² D	Brewery Slop	_	B	_	A <sup>2</sup>	_	_		_
Acetonitrile	D	-	Α	A	D		D	D	Bromine	D	D	D	D	C¹ D	D	-	D
Acetophenone	-	-	С	D	D	A¹ C	_	-	Bromoform	-	_	D	D		D	-	_
Acetyl Bromide Acetyl Chloride (dry)	_ D	_ D	_	D D	-   D	_ D	— А	_ C	Butadiene Butane	— В	A A	D _	D	D D	С	_	D D
Acetylene (dry)		A	-	D		A¹	_	В	Butanol (Butyl Alcohol)	_	Â	_	C¹ B²	B¹	A <sup>1</sup> A <sup>1</sup>	В	В
Acrylonitrile	D	-	Α	A	D	A <sup>1</sup>	D	D	Butter	В	Α	-	_	_	_	D	В
Adipic Acid	-	-	A	A	-	B <sup>2</sup>	_	-	Buttermilk	В	A	_	$A^1$	A¹ D	A¹	-	A
Alanine	-	_	A	A	A	Α	_	-	Butyl Amine Butyl Ether	_	C¹ D	_	C¹	– U	B¹ D	_	B¹ D
	Δ1	Α	A	B <sup>2</sup>	B¹	B¹	Α	D	Butyl Phthalate	_	-	A	C¹	D	B <sup>2</sup>	_	
- Benzyl	A¹ D	A	В	D	=	Α	D	_	Butyl acetate	-	A	В	C¹	D	B¹	-	A¹ D
- Butyl - Diacetone	A¹	A A	_ A	A	A <sup>2</sup>	A	B -	B D	Butylene Butyric Acid	_ D	A A	_ D	B¹ D	D D	_	_ A	D D
- Diacetone - Ethyl	_ В¹	A A¹	A	B¹ B	— В <sup>2</sup>	$\overset{B^2}{A}$	_ A	В	Butyric Acid Calcium Bisulfate	_	A   –	– U	_	D D	B¹	A _	C
- Hexyl	-	A	-	Ā	-   B <sub>1</sub>	_	_	В	Calcium Bisulfide	_	D	-	B¹	_	Α	-	č
- Isobutyl	В	A	A	A <sup>2</sup>	-	$A^1$	-	A	Calcium Bisulfite	-	D	Α	$A^1$	D	Α	-	Α
- Isopropyl - Methyl		A A	A A	A <sup>2</sup>	A <sup>2</sup>	$A^2$	_ A	A A	Calcium Bromide 38% Calcium Carbonate	_	_ A	_	-	-	_ A	_	— А
- Octyl	A <sup>1</sup>	A	A   -	A <sup>1</sup>	B¹ _	A <sup>2</sup>	– A	В	Calcium Chlorate	_	A	_	B¹	C <sup>2</sup>	_ A	_	- A
- Propyl		A	-	A <sup>2</sup>	-	Α	Α	Α	Calcium Chloride (30% in water)	В	D	Α	B <sup>2</sup>	-	$A^2$	_	Α
Allyl Chloride	B¹ D	-	A	-	-	A	-	_ D	Calcium Chloride (saturated)	Α	D	A	-	-	A² A	-	Α
Aluminium Acetate (satured) Aluminium Chloride	_ A	_	_ A	-	_	A A	_	D B	Calcium Fluoride Calcium Hydroxide 10%	_	_ A	_ A	-	_	— А	_	— А
Aluminium Chloride 20%	_	C	Ä	B <sup>2</sup> B <sup>2</sup>	A <sup>1</sup>	A	_	В	Calcium Hydroxide (saturated)	A		A	_	_	A	_	Ä
Aluminium Fluoride	Α	С	A	A <sup>2</sup>		Α	_	В	Calcium Hydroxide	-	D	A	$A^2$	D	A <sup>2</sup>	-	A
Aluminium Hydroxide	В	A	Α	A <sup>2</sup>	B¹	Α	_	_	Calcium Hypochlorite 30%	-	-	A	-	-	Α	-	-
Aluminium Nitrate Aluminium Phosphate	_	B¹	_	A <sup>2</sup>	A¹	A <sup>2</sup>	_	B A	Calcium Hypochlorite (saturated) Calcium Hypochlorite	A	-   D	A A	-	_ D	A	_	— В
Aluminium Potassium Sulfate 10%	_	C	A	A2	A1	Ā	_	A	Calcium Nitrate	A	D	B	A¹ A¹	A <sup>2</sup>	A¹ A²	_	B <sup>1</sup>
Aluminium Potassium Sulfate 100%	-	Č	A	A <sup>2</sup>		Α	_	Α	Calcium Oxide	D	Α	_	B¹	_	Ä	-	A A
Aluminium Sulfate	A <sup>2</sup>	B¹	A	A <sup>2</sup>	A² A	A	A	Α	Calcium Sulfate	С	D	_	B¹	$A^2$	A	-	-
Alums Amines	_	_ D	— В			A	_	A¹ B	Calcium Sulfide Calgon	_	_ A	_	_	_	A A	_	— А
Ammonia 10%	_	D	Ā	C1	D	B <sup>2</sup> Δ <sup>2</sup>	_	_	Cane Juice	_	A	_	_	_		_	Ä
Ammonia Nitrate	-	С	-	C¹ A	_	A <sup>2</sup>	_	-	Carbolic Acid (Phenol)	D	D	_	D	D	C¹ B	-	D
Ammonia, anhydrous	D	D D	A	B <sup>2</sup>	D D	Α	_	С	Carbon Bisulfide	— В	A	-	-	_	D	-	— В
Ammonia, liquid Ammonium Acetate	_		A A	C¹ A		$A^2$	_	_	Carbon Dioxide (dry) Carbon Dioxide (wet)	В	A A	_	A¹ A¹	_	A <sup>2</sup>	_	В
Ammonium Bifluoride	A <sup>2</sup>	D		A <sup>2</sup>	_	Ā	_	_	Carbon Disulfide	_		D	Ď	D	A <sup>2</sup> D	_	
Ammonium Carbonate	A <sup>2</sup>	D	В	B <sup>2</sup>	-	Α	-	С	Carbon Monoxide	-	Α	_	A <sup>2</sup>	-	Α	-	A² D
Ammonium Caseinate Ammonium Chloride	-	D B	_ A	_	_	_ A	_	_ C	Carbon Tetrachloride Carbon Tetrachloride (dry)	D D	B¹	C	D D	D	D D	-	D D
Ammonium Fluoride 25%	A <sup>2</sup> D	_	A	A <sup>2</sup>	A <sup>2</sup>	A A⁴	_	_	Carbon Tetrachloride (wet)	D	_ A1	C	_	_	D	_	D
Ammonium Hydroxide	B	С	A	A1	D	Ä	_	Α	Carbonated Water	_	Ä	_	Α	-	В	_	
Ammonium Glycolate	-	-	A	Ä	В	Α	-	_	Carbonic Acid	-	B¹	В	R <sup>2</sup>	$A^1$	Α	-	A
Ammonium Nitrate Ammonium Oxalate	_	A² B	A A	A <sup>1</sup>	_	A	_	_	Catsup Cellulose Acetate	B	B -	_	-	_	A	_	
Ammonium Persulfate	A <sup>2</sup>	l b	Ä	A <sup>2</sup>	A <sup>1</sup>	A A	_	D	Chloral Hydrate	Α	_	D	_	_	A D	_	_
Ammonium Phosphate, Dibasic	A <sup>2</sup>	B <sup>2</sup> B	-	A <sup>2</sup> A	A <sup>2</sup>	Α	_	Α	Chloric Acid	-	D	-	-	-	-	-	-
Ammonium Phosphate, Monobasic	-		_		-	A	-	A	Chlorinated Glue	-	D	_	-	-	_	-	_
Ammonium Phosphate, Tribasic Ammonium Sulfate	l	B	_ A	C		A A	_	A A	Chlorine Water Chlorine Anhydrous Liquid	_	D A1	C	B¹ D	_ C	D D	_	D D
Ammonium Sulfite	A <sup>2</sup>	B¹ D	B	A¹ B²	A <sup>2</sup>	Ä	_	-	Chlorine (dry)	_	A¹ D	В	D	-	D	-	D
Ammonium Thiosulfate	_	В	-	B² A	_	-	_	_	Chloroacetic Acid	_	D	A	D	D	C¹	D	D
Amyl Acetate Amyl Alcohol	D	B¹ A	_ A	C¹	D	B¹	D A	D D	Chlorobenzene (Mono) Chlorobromomethane	D —	D _	D _	C¹ A	D –	C¹ A	D _	D D
Amyl Chloride	A¹ D	A	B	B <sup>2</sup> D	B¹	B¹ D	– A	D	Chloroform	D	_ A	D D		D D		_ D	D
Aniline	D	A <sup>1</sup>	В	Č	D	A¹	D	В	Chlorosulfonic Acid	-	D	D	C¹ D	C¹ A	C¹ D	_	Ď
Chloralhydrate	_	-	-	_	_	_	-	_	Chocolate Syrup	_	A	_	-		A² D	-	_
Aniline Hydrochloride Antifreeze	D I B	–   D	<u>-</u>	D –	D	D D	_	D C	Chromic Acid 5% Chromic Acid 10%	B B	D D	A A	A A	B B	D D	D D	C
Antimony Trichloride	A <sup>2</sup>	D	В _	— В <sup>2</sup>		A	_ A	_	Chromic Acid 10%  Chromic Acid 30%	В	D	A	A	C	D	D	C
AquaRegia (80% HCI, 20% HNO <sub>3</sub> )	Ď	D	D	R <sup>1</sup>	A² D	B¹ D	D	D	Chromic Acid 50%	D	D	A	Α	D	D	D	С
Arochlor 1248	-	_	-	C¹ C	-		-	В	Chromium Salts	-	_	-	В	_	_	-	- 1
Aromatic Hydrocarbons Arsenic Acid	_ A2	A D	–   B		_   	D A	— В	D A	Cider Citric Acid	_ D	A D1	–   A	B D	A A1	A A	_ A	B¹ A
Arsenic Acid Arsenic Salts	A <sup>2</sup>	_	_	B <sup>2</sup> B	A¹	_	_ D	_	Citric Acid Citric Oils	_	B¹ B	В	_	A¹	A	_	_
Asphalt	-	B <sup>2</sup>	-	A <sup>1</sup>	D	B¹ A	-	D	Coffee	-	A	_	-	-	Α	_	Α
Barium Carbonate	A <sup>2</sup>	A	— В	B <sup>2</sup>	A² A		-	_	Copper Chloride	Α	A	_	-	_ D	A	_	A¹ A
Barium Chloride Barium Cyanide	A <sup>2</sup>	A B	_   B	A¹ B	A	A D	_	A _	Copper Cyanide Copper Fluoborate	_	A B	_	B <sup>2</sup>	– U	A _	_	A _
Barium Hydroxide	A <sup>2</sup>	D	_	B <sup>2</sup>	D	В	_	A	Copper Nitrate	_	A	_	B <sup>2</sup>	D	A	_	
Barium Nitrate	~	B <sup>2</sup>	_	B <sup>2</sup>	D	Ā	-	В	Copper Sulfate 5%	-	D	A	A <sup>2</sup>	A¹	Α	-	A
Barium Sulfate	A <sup>2</sup>	B <sup>2</sup> A	В	B <sup>2</sup>	D	B¹ B	-	A	Copper Sulfate >5%	-	D	A	$A^2$	A¹	A	-	A
Barium Sulfide Beer	A <sup>2</sup>		A A	B <sup>2</sup>	-		_	A A	Cream Creosote	_ A	A D	_ A	-	_	A _	_	_ D
Beet Sugar Liquids	A <sup>2</sup> B	A¹ B	_	A <sup>2</sup> A <sup>1</sup>	A <sup>2</sup>	A¹ Δ1	_	A	Cresols	D	D	D	C¹	D D	D	_ D	D
Benzaldehyde	В	Ā	В	A <sup>1</sup>	D	A¹ D	D	D					C.		-		-
Benz enamine	-	-	В	Ä	D	Α	-	-									

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)

#### **9** USA NEST Scientific Inc.

**\** Tel: +1-732 381 0268

E-mail: sales@nestscientificusa.com

Website: www.nestscientificusa.com

## Netherland NEST Scientific Europe B.V.

∠ E-mail: info@nestscieu.com

Website: www.nestscieu.com

## **9** Japan NEST Scientific Co.,Ltd.

➤ E-mail: info@nestscijp.com

Website: www.nestscijp.com

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## **♀** China Wuxi NEST Biotechnology Co., Ltd.

Tel: +86-510-6800 6788

E-mail: info@nest-wuxi.com

Website: www.cell-nest.com

#### **9** United Arab Emirates Nest Scientific MENA FZE.

∠ E-mail: info@nestsciuae.com

Website: www.nestsciuae.com







No. 530, Xida Road, New District, Wuxi, Jiangsu, China

1-888-593-5969 • www.biolynx.ca • tech@biolynx.ca