Your best choice for laboratory and medical consumables

NEST Liquid Storage and Transfer Solutions

One-stop solution service for bioindustry

NEST®

www.cell-nest.com

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Liquid Storage and Transfer Solutions

Company Profile

A leading life science plastic consumables manufacturer.

Wuxi NEST Biotechnology Co., Ltd. (hereinafter referred to as "NEST") was founded in 2009 and created the NEST brand. Adhering to the belief of "making high-end consumables and creating an internationally renowned brand", NEST focuses on the research and development and manufacturing of products in the field of life science. NEST has a 6,800m2 Class 100,000 clean room and a 2,700m2 Class 10,000 clean room, mature production processes, advanced machinery and equipment, a professional R&D center, and a senior management team. It is a leading medical device and life science consumables manufacturer in China.

In 2020, the company was officially renamed Wuxi NEST Biotechnology Co., Ltd.

NEST Liquid Storage and Transfer Solutions

NEST is dedicated to providing an all-encompassing solution for liquid storage and transfer needs in the bio-pharmaceutical, biotechnology, and reagent development industries through its range of lab consumables. These consumables are designed to be highly versatile, making them perfect for storing and transporting a variety of substances, including culture media, serum, buffer solutions, intermediates, and reagents.

Product Quality Certification

√ High Quality Raw Materials:

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

√ High-Precision Technology:

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

√ Multiple Specifications:

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

√ High Quality Standards:

Certified by ISO13485 and ISO 9001, with batch stability.

√ Economical and Environmentally Friendly:

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

Complete stability and safety verification reports are available

Manufacturing certification		Production process, quality standards, storage, transportation, and usage verification		Inspection and testing from professional third-party authoritative agencies		
Quality Certification	ISO 9001, ISO 13485	Process testing	Injection molding machine and mold performance verification	Biological testing: GB/T 16886.5-2017 GB/T 16886.4-2003 GB/T 16886.10-2017 GB/T 16886.11-2021	In vitro cytotoxicity test	
	FDA, CE		Drop and transportation verification		Skin sensitization test	
	Radiation: ISO 13485,ISO 11137	Performance testing	Sealing test		Skin irritation test	
Environmental testing for Sterility testing laboratory	ISO 7 requirements		Pressure resistance test		Acute systemic toxicity test	
	GB 50591-2010		Freezingdetection test		Hemolysis test	
	GB/T16294-2010		Endotoxin detection test	Physical and chemical testing: GB/T 14233.1-2008	IMaterial heavy metal content Dissolution testing	Lead, tin, cadmium, chromium, iron, zinc
Environmental testing for Class 100,000 clean room	ISO 8 requirements		Nucleic acid enzymetest		Dissolution testing	Reducing substances
	GB 50073-2013	Sterility and particle assurance	Radiation process verification			Acidity and alkalinity
	YY0033-2000		Sterile packaging verification			Evaporative residue
Purified water system verification	GMP regulations		Product sterility testing			Ultraviolet absorbance
Raw materia verification	Physical and chemical testing		Insoluble particle testing			Appearance determination test
	Dissolution testing					Ignition residue determination test

PETG/PET

PET is a type of polyester plastic with high strength and rigidity. It has high transparency and good chemical stability and is not easily deformed. PET can be widely used in food packaging, beverage bottles, medical devices, and other fields.

PETG is a modified version of PET, with better impact resistance and chemical resistance. Its glass-like transparency, toughness, and excellent gas barrier properties make it an ideal choice for storing biological products. In tests with various cell lines, PETG has been shown to be non-cytotoxic, and the media stored in PETG bottles exhibit good proliferation and morphology characteristics. PETG can be sterilized using radiation or compatible chemicals, but cannot undergo high-temperature and high-pressure sterilization. PETG is used to manufacture sterile disposable containers suitable for cell culture and media because of the properties mentioned above.

Polypropylene (PP)

Polypropylene(PP) is a polymer polyolefin with a chemical structure similar to that of polyethylene, but each unit is linked to a methyl group. Like all polyolefins, polypropylene is non-toxic and non-polluting, and its density is lighter than water.

PP is a natural milky white semi-transparent material that can be colored to make it opaque and various colors. It can be sterilized at high temperature and pressure and has no known solvents at room temperature. Compared with polyethylene, PP is more sensitive to strong oxidants. It has the best impact resistance among polyolefins.

Polycarbonate (PC)

Polycarbonate (PC) is a special type of polyester that is formed by the linkage of carbonate bonds and diols. It is has high transparency and strength, and can withstand high temperature and pressure sterilization with no toxicity produced, making it one of the strongest thermoplastic materials. The carbonate bonds in PC can undergo hydrolysis reactions with bases and concentrated acids at high temperatures (such as during high temperature and pressure sterilization), which poses a risk of being dissolved by organic solvents.

High Density Polyethylene

The structural basis of the polyethylene molecule is a straight-chain polymer hydrocarbon, and the relative branching degree of the polyethylene molecule structure can be controlled using selective catalysts. The side chain branching degree of HDPE is smaller than that of LDPE, which gives it a more compact three-dimensional structure. Therefore, HDPE has less flexibility than LDPE and a higher heat distortion temperature (121°C).

Like other polyolefins, HDPE is chemically inert. Strong oxidants will eventually cause oxidation and embrittlement. HDPE is not soluble in solvents at room temperature, and corrosive solvents will cause softening or expansion deformation, but these effects are usually reversible. Long-term exposure to ultraviolet light may cause damage.

Product Application Table &Chemical Reagent Tolerance Table

Physical Properties

Characteristics	PETG/PET	PC	PP	HDPE
Temperature Range	Maximum Temperature limit: 50℃ Minimum Temperature limit:-80℃	Maximum Temperature limit:121℃ Minimum Temperature limit: -135℃	Maximum Temperature limit:121℃ Minimum Temperature limit:-196℃	Maximum Temperature limit:121℃ Minimum Temperature limit:-196℃
Mechanical Strength Transparency	Medium flexibility Highly Transparent	Sturdy Highly Transparent	Sturdy Transluscen	Semi-rigid Transluscent
Sterilization	High-temperature and high-pressure : not possible EtO sterilization: possible Dry heat sterilization: not possible Radiation sterilization: possible Disinfectant: partial	High-temperature and high-pressure sterilization: possible EtO sterilization: possible Dry heat sterilization: not possible Radiation sterilization: possible Disinfectant: partial	High-temperature and high-pressure sterilization: possible EtO sterilization: possible Dry heat sterilization: not possible Radiation sterilization: may turn yellow and brittle unless stabilizers are added Disinfectant: possible	High-temperature and high-pressure sterilization: not possible EtO sterilization: possible Dry heat sterilization: not possible Radiation sterilization: possible Disinfectant: possible
Cytotoxity	Non-cytotoxic Suitable for food and beverage applications	Non-cytotoxic Suitable for food and beverage applications	Non-cytotoxic Suitable for food and beverage applications	Non-cytotoxic Suitable for food and beverage applications

Sterilization instructions:

1.High-temperature and high-pressure sterilization (121℃, 15 psig, 20 minutes): clean and rinse the item with distilled water in advance.

Notes: Some chemicals that do not have a significant impact on the resin at room temperature may have adverse effects on the plastic at high-temperature and high-pressure sterilization temperatures.

2.EtO sterilization: Use 100% ethylene oxide (EtO), EtO-nitrogen mixture, or EtO-HCFC mixture for sterilization.

3.Dry heat sterilization: exposed to 160°C for 120 minutes, and make sure no stress/load on product components.

4.Radiation sterilization: electron beam (β-ray) or γ-irradiation sterilization with a dose of 25 kGy (2.4 MRad).

5.Disinfectant: clean with benzalkonium chloride, formalin/formaldehyde, hydrogen peroxide, ethanol, etc

Chemical Reagent Tolerance Table

Reagents	PETG/PET	PC	PP	HDPE
Dilute acid/ weak acid	G	E	E	E
High concentration strong acid (except strong oxidant)	N	N	G	G
Fatty alcohols	G	G	E	E
Aldehydes	G	F	G	G
Alkalis	N	N	E	E
Esters	F	N	G	G
Aliphatic hydrocarbons	G	G	G	G
Aromatic hydrocarbons	N	N	N	N
Halogenated hydrocarbons	N	N	N	N
Aromatic ketones	N	N	N	N
Strong oxidants	F	F	F	F

E (Excellent): No damage after continuous exposure for 30 days, and can even withstand several years of exposure.

G (Good): No damage or only slight damage after continuous exposure to reagents for 30 days.

F (Fair): Some effects after continuous exposure for 7 days, such as plastic cracking, cracking, reduced strength, or discoloration.

N (Not recommended): Not recommended for continuous use. Damage may occur immediately, including severe cracking, cracking, reduced strength, discoloration, deformation, dissolution, or permeation loss.

Cap

• The mold used for these bottles is expertly crafted, allowing for the lid to be formed in one piece without requiring an inner pad.This results in a tight seal that fits snugly to the bottle body.

Bottle neck

• The smooth bottle neck reduces the liquid retention inside the bottle.

Bottle body

• High transparency, high mechanical strength, and strong impact resistance, making it easy to observe and transport.

• The smooth inner wall minimizes residue. The wall thickness is uniform, providing better anti-breakage and anti-puncture properties.

Bottom

• The bottom of the bottle features a curved inner corner that is easy to clean, and the raw material information is injection molded at the bottom.

High-quality raw materials

• The raw materials fully comply with the USP Class VI USP<661> biocompatibility requirements, the ISO10993 requirements, and have strong tolerance, low-temperature resistance, UV resistance, and are not easy to crack.

Sterility assurance

• Non-cytotoxic, non-thermal, and free from animal-derived components.

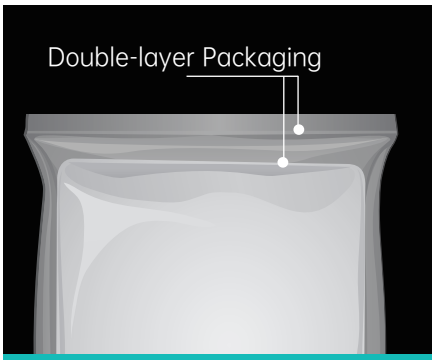
Square Storage Bottle

High-quality packaging Square Storage Bottle

NEST square reagent bottle is available in a variety of materials with excellent performance. The small packaging option reduce the risk of contamination during use and meet high-quality liquid storage requirements.

Economical packaging Square Storage Bottle

Suitable for light and general laboratory applications, such as storing samples and daily working solutions (buffer solutions and laboratory reagents). Like NEST Square Storage Bottles in other specifications, the ones with economical packaging also ensures leak prevention and has been simplified in packaging to reduce costs, making it both affordable and high-quality. In addition, a new PET square bottle with larger packaging option is now available, which is more suitable for industrial customers by avoiding frequent small feedings and reduce contamination in cleanrooms. The bag is made of PE which is durable, waterproof, acid-resistant, alkali-resistant, and organic solvent-resistant, and can be stored for a long time without oxidation.



Double-layer packaging


Large double-layer packaging


Tray Packaging

Double-layer Packaging

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

Double-layer Large Packaging

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

Tray-packed

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

Product information

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

More packaging modes

NEST's unique custom service can meet your diverse needs, providing bulk and un-assembled options for production-scale filling, as well as higher-specification packaging solutions such as triple-layer packaging. Submit your requirements by visiting http://www.nestscientificusa.com/.

Square Storage Bottle FAQ

Q: What is the temperature range for using your PETG/PET square reagent bottles?

A: -80°C to 50°C, and 56°C water bath for 30 minutes will not produce cell toxicity or deformation.

Q: What grade is your PETG material?

A: The material we selected is imported and meets the USP Class VI level and ISO10993.

Q: What validations have been done for your Square Storage Bottles?

A: 1. Sealing test 2. Low-temperature -80℃ 30-day freezing test 3. Cold transport test 4. Acid and alkali resistance test 5. Repeated freezing and thawing test 6. Biological safety test 7. Physical and chemical safety test 8. Transportation test 9. Endotoxin detection 10. Nucleic acid enzyme detection 11. Sterility test

Q: Can the Cap of your PETG reagent bottle be compatible with Nalgene's?

A: The Cap of the PETG reagent bottle from NEST can substitute that from Nalgene.

Q: How should we choose between PET and PETG reagent bottles?

A: Both PET and PETG Square Storage Bottles can be used to store active pharmaceutical ingredients, bulk intermediates, and can also be used for the preparation and storage of buffers, culture media, etc. PETG's biggest feature is that it complies with the concept of environmental protection and food FDA certification, and is receiving more and more attention from related products at home and abroad. PETG has high rigidity, hardness, and good toughness, and its permeability to CO2 and O2 is lower than that of PET.

Square Storage Bottle Closed System Solution

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

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

Generate custom graphics by submitting your request on www.nestscientificusa.com

Step 1

- Choose the bottle capacity
- Choose the bottle material

Bottle Material(☐PETG ☐PET ☐PC)

Notes: you may order the transfer cap only

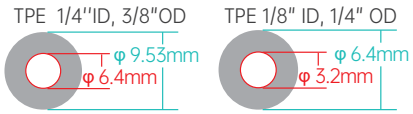
Step 2

- Choose the cap type

Notes: Compatible with diverse connectors

Step 3

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

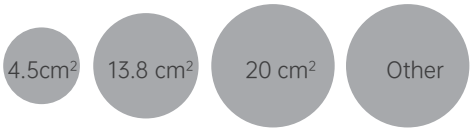


Inlet and outlet liquid tubing

(☐ vulcanized silicone tube ☐P welded tube)

Step 4

- Choose the membrane area Air filter (PVDF membrane)



Membrane(☐4.5cm² ☐13.8cm² ☐20cm² ☐Other)

Step 5

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

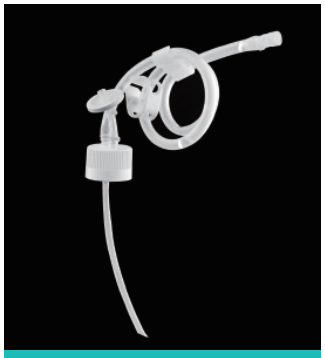
MPC Connector (male/female) | Luer Connector (male/female) | Heat Seal (no connector)

= Results

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

Square Storage Bottle Closed System Solution


Closed System Solution
(Bi-Directional Transfer Cap)


Bi-Directional Transfer Cap


Closed System Solution
(3-Port Transfer Cap)


3-Port Transfer Cap

Product introduction

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.

Features

- 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.

Product information

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

Round Storage Bottle

Select imported high-quality polypropylene PP and polyethylene HDPE raw materials, which have excellent physical and chemical indicators, strong compressive strength, impact resistance, and acid and alkali resistance; PP material can withstand 121℃ high-temperature and high-pressure sterilization, and HDPE material can withstand low-temperature -80℃ refrigeration.

Features

- Available in white and amber. The amber ones have excellent light-shielding properties and can be used to store photosensitive substances.
- Complete specifications, 8/15/30/60/125/250/500 mL are available.
- Produced in a 100,000-level purification workshop environment, with multiple quality system certifications.
- No washing, no cumbersome pre-cleaning treatment, ready to use after opening.
- Professional anti-leak bottle mouth design, excellent sealing performance.
- Thickened inner bag packaging to ensure transportation and storage safety.
- A superior import substitution option, featuring a comfortable grip, consistent thickness, sleek inner and outer surfaces, and a glossy finish with no discernible color variations. Leaves no residue on surfaces.
- No biological toxicity, no Dnase/Rnase, proteases, exogenous DNA/RNA, and no pyrogens.
- Electron beam sterilization, SAL=10^{-6}.

Application

- NEST Round Storage bottles are suitable for packaging and storage requirements of products in the fields of molecular biology and cell biology, laboratory medicine, genomics, and proteomics research.

Volume(mL)	Specifications(mm)			Packaging		Natural		Amber	
	Neck Diameter	Bottom Diameter	Heigh	/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/Transport Tube

Product Upgrades

- Products are made of transparent polypropylene (PP) which meets USP Class VI standards， Less liquid residue, less sample loss
- GMP production environment, Non-Pyrogenic, DNase/Rnase free.
- Silicone O-ring inside the screw caps ensures secure sealing
- Withstands a maximum centrifugal force up to 20,000 xg
- Caps have 6 color Caps (blue, red, yellow, purple and natural) personalize the identification of different reagents in a fast and convenient way.
- Electron beam sterilization, SAL=10^{-6}
- New product specifications

Sample Vials without Cap

Specification	Package		Bottom type	Cat.No.
	/Pack	/Case		
0.5 mL	500	4	Self Standing	633901
1.5 mL	500	4	Self Standing	634901
1.5 mL	500	4	Conical	634911
2.0 mL	500	4	Self Standing	635901

Sample Vials Cap

Colour	Package		External Thread Cap	External Thread Cap(Hinged Cap)
	/Pcak	/Case		
Blue	500	4	633951B	633961B
Red	500	4	633951R	633961R
Yellow	500	4	633951Y	633961Y
Purple	500	4	633951P	633961P
Natural	500	4	633951N	633961N
Green	500	4	633951G	633961G

Transport Tube

Features

- Vials are made of polypropylene which meets USP Class VI standards.
- Dnase/Rnase free and endotoxin free.
- Vials are available in 5 mL/10 mL sizes.
- The self-standing bottom is convenient for handling.
- Excellent sealing performance, no liquid leakage under pressure of -70kPa, ensuring safe and effective air transportation.
- E-beam sterilized, SAL=10^{-6}.

Volume(mL)	specifications	/Pack	/Case	Cat.No.
5 mL	caps screwed on	50	20	619011
5 mL double-threaded	screw caps separated	200	5	619107
10 mL	caps screwed on	50	20	625001
10 mL	screw caps separated	200	5	625007

Tip: 1 set=1 cap+1 tube

Carboy

Autoclavable

• The barrel, the tap and the screw cap are made from polypropylene (PP) and the gasket is made from thermoplastic elastomer(TPE), all of which are autoclavable for sterilization.

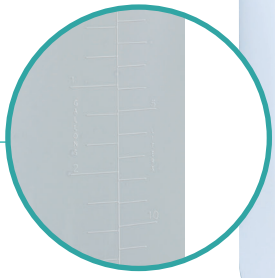
Details Taken into Account

• Moulded carrying handles for convenient transport

• The sealing performance is secured by the TPE gasketand the thread on the finish, which is well matched to the cap.

Clear Scale

• Die-cast scales in 1 gal. and 5 L allow the user to easily identify the liquid level during operation.



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

Specifications

Name	Sterilization	Package	With Tap	Without Tap
10 L Carboy, Autoclavable, with Handle	No	4/case	789001	789011
20 L Carboy, Autoclavable, with Handle	No	3/case	789101	789111

Container Use and Maintenance Guide

General Cleaning

We recommend using non-alkaline cleaners to clean plastic laboratory containers, especially polycarbonate products that are particularly sensitive to alkaline erosion.

Ultrasonic Cleaning Machine

Ultrasonic cleaning devices can be used to clean containers as long as the containers are not placed directly on the transducer diaphragm.

- Do not use abrasive cleaners or scouring pads to clean any plastic containers;
- Regularly disassemble and clean the threads of the bottle mouth and cap to prevent the accumulation of solution precipitants that can cause leakage.
- Most plastics, especially polyolefins (LDPE, HDPE, PP, PMP, and PPCO) and fluoropolymers (FEP and PFA), have non-wettable surfaces that are resistant to corrosion and easy to clean.

Special Issues

Cleaning of Fatty Substances

For many applications, the use of mild detergents can remove fats. When more rigorous cleaning is required, organic solvents should be used with caution. Prolonged exposure to these solvents may cause some swelling of the polyolefin. For PC material containers, only alcohol can be used.

Cleaning of Organic Substances

Chromic acid solution can remove organic substances, but it also makes the plastic brittle. To minimize the effect, the soaking time of the plastic container should not exceed 4 hours. The following formula is a recommended cleaning agent: In a fume hood, dissolve 120g of sodium dichromate in 1000mL of water, carefully add 1600 mL of sulfuric acid to the solution, and stir until completely dissolved. The solution can be used after cooling.
This solution aims to produce an excess of chromic acid precipitate to clean containers. The chromic acid solution can be reused until it turns green due to the excess of chromic acid salt built into this formula, making it more durable than commercially available solutions. Additionally, sodium hypochlorite solution (bleach) can effectively remove organic matter at room temperature.

High-pressure sterilization

We recommend using the high-pressure sterilization cycle of 121℃ and 15 psi for 20 minutes to ensure proper sterilization of the container both inside and outside. The container should not be sealed or covered with any other objects at the opening to ensure proper sterilization. Remove the cap and place it tilted on top of the container before high-pressure sterilization. Clean and rinse the items with steam before high-pressure sterilization. Some chemicals may be compatible with the material at room temperature but may cause changes under high-pressure sterilization temperature.

Precautions for High Pressure Sterilization

1. Don't stack bottles during sterilization.
2. Don' t place other items on top of the products in the high-pressure sterilization basket
3. Don't seal the bottle
4. Don' t wrap aluminum foil, gauze, cotton cloth, or tape around the bottle opening.

These guidelines apply to empty containers. Due to the uncontrollable variables involved in the high-pressure sterilization process, we will not make any product quality or expected lifespan statements for products after high-temperature and high-pressure sterilization.

NEST®

Tel: +86-510-6800 6788
E-mail: info@nest-wuxi.com
Website: www.cell-nest.com