

**Your Best Choice For Laboratory And Medical Consumables** 

# $BioFactory^{TM}$



# Company Profile







ISO 9001

ISO 13485

ISO 11137







**FDA** 

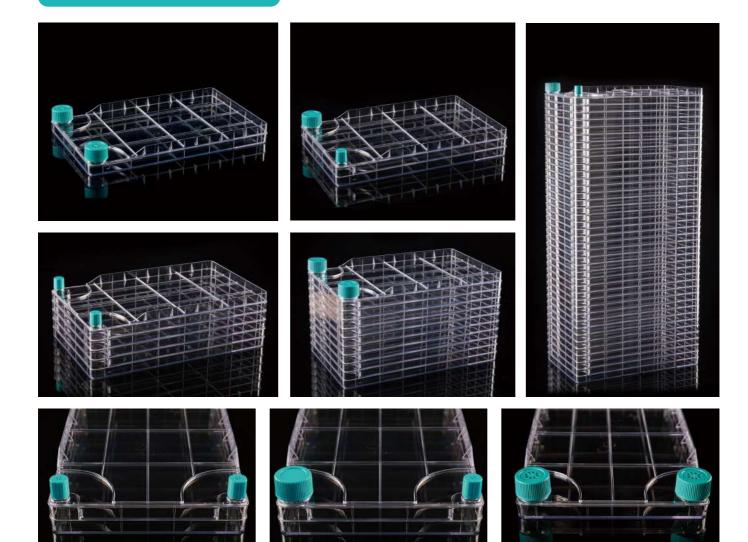
CE

CE (Medical Consumables)



**JSDA** 

# BioFactory<sup>TM</sup>



NEST BioFactory™ Systems are compact, multi-layer, single-use cell culture systems designed for easy scale-up cell culture applications such as production of vaccines, monoclonal antibodies or pharmaceuticals. They're versatile and easy-to-use system for medium to large scale research or commercial production with reduced contamination risk.Narrow mouth caps available for tubing solutions.

#### **Features**

- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10-6.
- · Non-Pyrogenic, DNase/Rnase free.
- · 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.
- · 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.
- Growth kinetics are the same as cells grow in the cell culture flasks. Applicable to large-scalely culture adherent cells.
- · Large growing area. Just a single operate, you can cultivate a large number of cells and reduce contamination risk.
- · Applicable to automatic machine.
- · Standardize operations to reduce batch differences.

# BioFactory<sup>TM</sup>

Cat.No.	Layer	Cultivation Area (cm²)	Descriptions	/Case
172513	1	647	Wide Vent Caps     with extra 16 sterile wide plug seal caps packaged separately	8
172514	2	1,279	2 Wide Vent Caps with extra 16 sterile wide plug seal caps packaged separately	8
172515	5	3,175	2 Wide Vent Caps with extra 8 sterile wide plug seal caps packaged separately	4
172516	10	6,335	2 Wide Vent Caps with extra 12 sterile wide plug seal caps packaged separately	6
172517	40	25,295	Wide Vent Caps     with extra 4 sterile wide plug seal caps packaged separately	2
172518	1	647	Narrow Vent Cap + 1Narrow Plug Seal Cap with extra 8 sterile narrow vent caps & 8 sterile narrow plug seal caps packaged separately	8
172519	2	1,279	1 Narrow Vent Cap + 1Narrow Plug Seal Cap with extra 8 sterile narrow vent caps & 8 sterile narrow plug seal caps packaged separately	8
172520	5	3,175	1 Narrow Vent Cap + 1Narrow Plug Seal Cap with extra 4 sterile narrow vent caps & 4 sterile narrow plug seal caps packaged separately	4
172521	10	6,335	Narrow Vent Cap + 1Narrow Plug Seal Cap with extra 6 sterile narrow vent caps & 6 sterile narrow plug seal caps packaged separately	6
172522	40	25,295	Narrow Vent Cap + 1Narrow Plug Seal Cap with extra 2 sterile narrow vent caps & 2 sterile narrow plug seal caps packaged separately	2
172523	1	647	1 Wide Vent Cap & 1 Narrow Plug Seal Cap with extra 8 sterile wide plug seal caps & 8 sterile narrow vent caps packaged separately	8
172524	2	1,279	1 Wide Vent Cap & 1 Narrow Plug Seal Cap with extra 8 sterile wide plug seal caps & 8 sterile narrow vent caps packaged separately	8
172525	5	3,175	1 Wide Vent Cap & 1 Narrow Plug Seal Cap with extra 4 sterile wide plug seal caps & 4 sterile narrow vent caps packaged separately	4
172526	10	6,335	1 Wide Vent Cap & 1 Narrow Plug Seal Cap with extra 6 sterile wide plug seal caps & 6 sterile narrow vent caps packaged separately	6
172527	40	25,295	1 Wide Vent Cap & 1 Narrow Plug Seal Cap with extra 2 sterile wide plug seal caps & 2 sterile narrow vent caps packaged separately	2

Large mouth design for easy pouring of the medium directly;

The 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.



# Biofactor 10 Chamber, Pre-installed with Transfer Cap System

"NEST BioFactory (10 Chambers) pre-installed with transfer cap system" is a BioFactory pre-installed a set of transfer tubes and filter, which can directly transfer culture media and cells to or out of BioFactory in a sterile environment by connecting tubes, without change caps or connect tubes, greatly reduce the risk of exogenous pollution in the drug development and production process, simultaneously omit the operations of tube design, assemble and sterilization, improve the production efficiency.

Cat.No.	Descriptions	/Case	
172637	Biofactor 10 Chamber Pre Installed with a Vent Filter (0.22 $\mu m_{\textrm{\tiny T}}$	2	
172037	62 mm Diameter) and a 80 mm Hose(1/4" ID, 3/8" OD )	۷	

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# **BioFactory Accessories**

## Individually Wrapped, Sterile



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



Cat.No.	Description		/Case
172532	HDPE Adaptor Cap Wide Mouth to Narrow Mouth		10
172533	HDPE Adaptor Cap Wide Mouth to 3/8 Inches(9.5 mm) Hose		10
740302	PP Adaptor Cap Wide Mouth to 3/8 Inches(9.5 mm) Hose NEW	1	10



Cat.No.	Description	/Pack	/Case
172528	HDPE Wide Mouth Seal cap for BioFactory	1	10
172529	HDPE Wide Mouth Vent cap for BioFactory	1	10
172530	HDPE Narrow Mouth Seal cap for BioFactory	1	10
172531	HDPE Narrow Mouth Vent cap for BioFactory	1	10



172538 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



172539 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



172537 Hose Clamp Hose clamp for 12-18 mm diameter hose 10 pcs / pack



172541 Y Shape Connector
Y Shape CPC Connector for Inner Dia
#3/8 Hose
1 pcs / pack, 5 pcs / case



172534 Adaptor Connector
Adaptor Connector to 3/8 Inches
(9.5 mm)Hose
1 pcs / pack



172542 T Shape Connector
T Shape CPC Connector for Inner Dia
#3/8 Hose
1 pcs / pack, 5 pcs / case



172540 Connector
CPC & PC
(Inner Dia #3/8) for Hose to Hose
Connecting
1 pcs / pack, 5 pcs / case



**0.22µm**, **Vent Filter 172535** Dia 62 mm **172536** Dia 56 mm 1 pcs / pack, 5 pcs / case

# **BioFactory Accessories**

## Individually Wrapped, Sterile



	Cat.No.	Description	/Case
NEW	745041	BioFactory Adaptor Cap, Pre-assembled with a 42 mm Vent Filter (0.22 μm)	4
	745031	BioFactory Adaptor Cap, Pre-assembled with a 50 mm Vent Filter (0.22 μm)	4



NEW	Cat.No.	Description	/Case
	745043	33 mm Polypropylene Filling Cap with a Male MPC Polycarbonate with a 1/4 (6.4 mm) ID Coupling and a Female MPC Polycarbonate End Cap	4
	745033	33 mm Polypropylene Filling Cap with a Male MPC Polycarbonate with a 3/8 (9.5 mm) ID Coupling and a Female MPC Polycarbonate End Cap	4







Cat.No.	Description	/Case
172543	BioFactory Accessory Lite Package  Hose Clamp*1+50 mm Vent Filter*1+15 cm SPT-50 Hose*1+Silicone Ring*2	2
745011	BioFactory Accessory Basic Package  Hose Clamp*1+50 mm Vent Filter+15 cm SPT-50 Hose*1+Adaptor Connector*1+Silicone Ring*2	2
745021	BioFactory Accessory Premium Package 2 different Adaptor Caps*1+Hose Clamp*1+Adaptor Connector*1 +50 mm Vent Filter*1+Hose Clamp*1+15 m SPT-50 Hose*1	2

## BioFactory<sup>TM</sup>

## Guidelines for use Cell culture



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



Turn the BioFactory  $^{\text{TM}}$  Chamber  $90^{\circ}$  make sure the liquid at the same horizontal.



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



Gently lower the BioFactory<sup>™</sup> 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

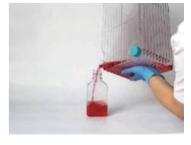
- 1. Please pre-heat the cell factory and culture medium to the culture temperature: since it takes a long time for a large incubator to reach the set culture temperature, pre-heating the cell factory and culture medium to the culture temperature before starting the experiment may speed up cell attachment 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 min at 1000 rpm, remove the digestion solution and collect cells.
- 5. Washing: wash the incubator with CMF-PBS or culture medium after digestion.

#### **Precautions**

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

















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