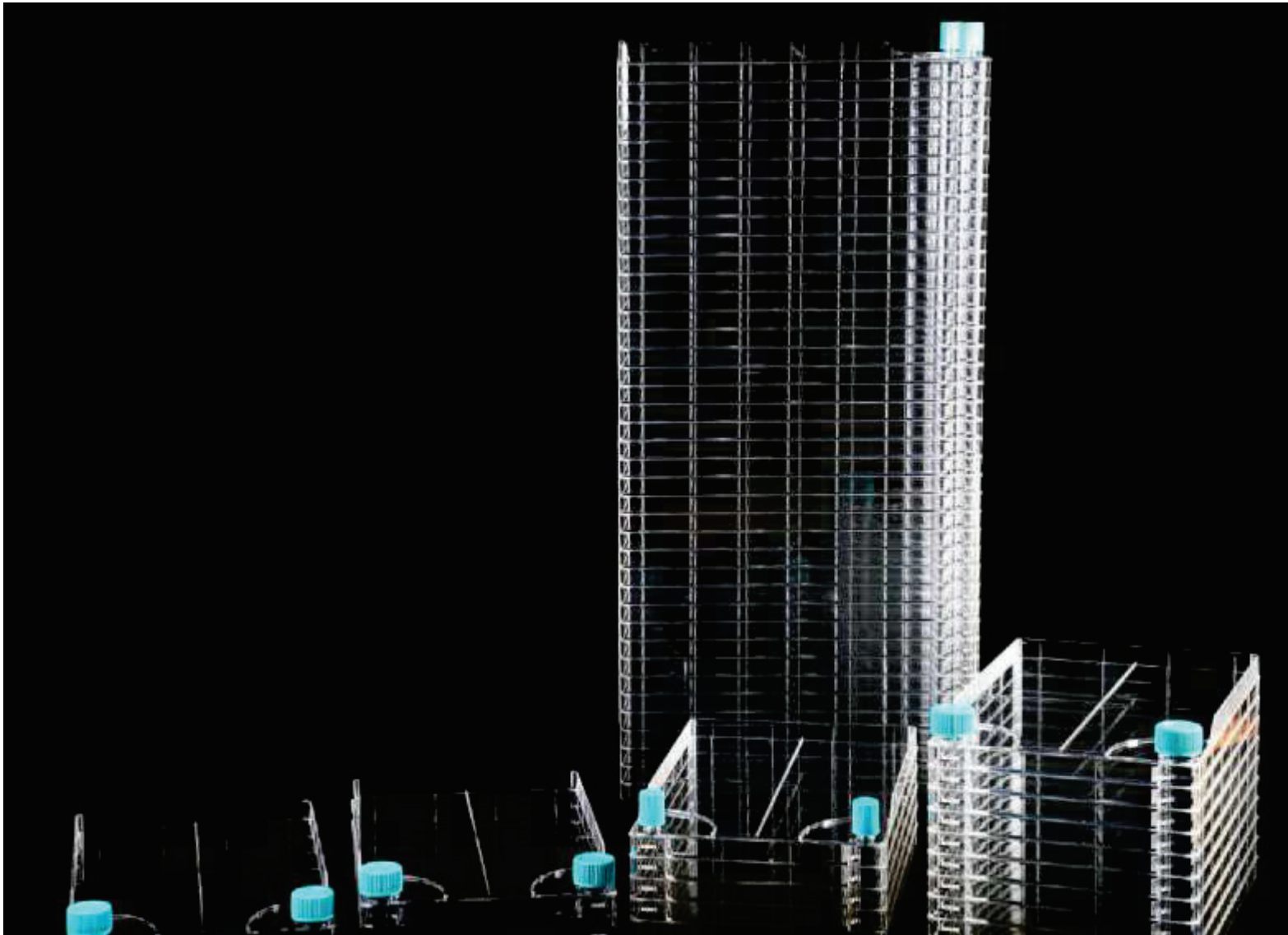


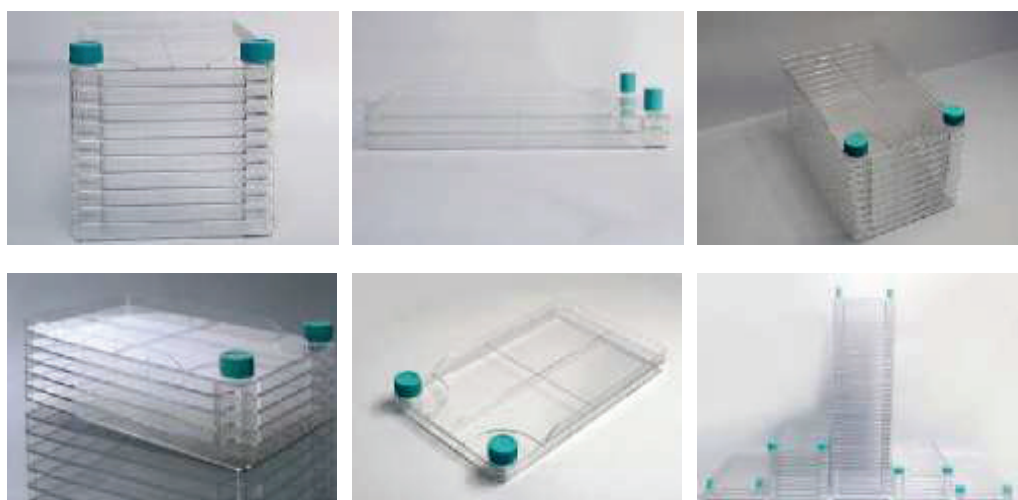
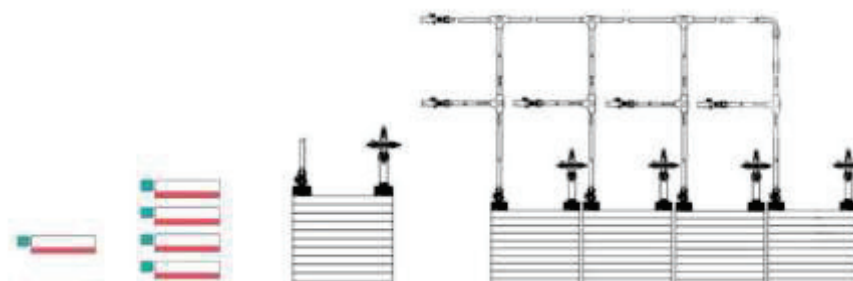
BIOFACTORY™



Cell Culture Products

PRODUCT FEATURES

Nest BioFactory™ Systems are compact, multi-layer, single-use cell culture systems designed for scale-up cell culture applications, such as production of vaccines, monoclonal antibodies and pharmaceuticals. This versatile and easy-to-use system for large scale research or industry production can reduce contamination risk. Narrow mouth caps are available for tubing solutions.



Multilayer Cell Culture Process

As a replacement for the roller bottle in the large scale cell culture, the multi-layer system has a history of 30 years with the characteristic as below:

- **Tissue culture treatment, excellent cell adherence**
- **Consistent cell growth, meet the requirements of linear scale-up culturing**
- **Large growth area, better efficiency**
- **Less manual operation to reduce contamination risk**
- **Standard operation procedure could be applied to maintain consistency in different batches**
- **Convenient traceability**
- **Applicable to automatic production line;**

Nest Biofactory™ Characteristics

With accumulated expertise in the field of tissue culture treatment technique, NEST Biofactory™ has quickly won the customer recognition. It has been widely used in large scale cultivation of Vero, MRC - 5, 2BS, CEF cells, etc.

- **Made of USP VI grade PS material**
- **100,000 grade cleaning room, rigorous validated process**
- **Tissue culture treatment surface, excellent cell adherence**
- **Ultrasonic welding without extrinsic ingredients, ingenious welding line design to avoid particulate formulation during welding**
- **Better structure strength**
- **100% integrity tests to guarantee zero leaking risk**
- **1, 2, 5, 10 and 40 chambers are available. Growth area is 636cm²/ chamber**
- **Two cap types are available to meet the requirements in different stage: Wide mouth is suitable for direct media pouring while narrow mouth is suitable for tubing system aseptic operation**
- **Large inner channels ensure fast media equilibrium and less bubbles**
- **Sterilized in accordance with ISO11137, aseptic level SAL=10⁻⁶**
- **Double layer inner package**
- **Vent cap with hydrophobic membrane filter for bacteria resistance and gas exchange; Vent cap could also avoid air bloating during media filling and balance the pressure during transportation**
- **Accessories available for convenient operation , such as seal cap, vent cap, transfer joint and connectors**

Wide Mouth+ Wide Mouth Biofactory™

Twin wide mouth with vent cap design makes it more convenient for direct media pouring and cell harvest. High-speed media filling is workable. Wide mouth vent cap has larger vent area for rapid gas exchange. Switch cap is available to change the wide mouth to narrow mouth to apply tubing aseptic operation.

Cat. No.	Description	Growth Area(cm ²)	Sterile	/Pack	/Case
771001	BioFacory™, 1 Chamber	647	+	1	8
771101	BioFacory™, 2 Chamber	1279	+	1	8
771204	BioFacory™, 5 Chamber	3175	+	1	4
771302	BioFacory™, 10 Chamber	6335	+	1	6
771403	BioFacory™, 40 Chamber	25295	+	1	2

Narrow Mouth+ Narrow Mouth Biofactory™

Twin narrow mouth with vent and seal cap is designed for aseptic operation to reduce contamination risk with the help of tubing system. It can connect with tube (1/2 "or 3/8" ID) directly, or use NEST transfer connector to connect with hose (5/16 or 1/4 " ID). The specification of NEST Narrow mouth Biofactory™ is the same with NUNC Cell Factory and all the accessories are compatible.

Cat. No.	Description	Growth Area(cm ²)	Sterile	/Pack	/Case
772001	BioFacory™, 1 Chamber	647	+	1	8
772101	BioFacory™, 2 Chamber	1279	+	1	8
772204	BioFacory™, 5 Chamber	3175	+	1	4
772302	BioFacory™, 10 Chamber	6335	+	1	6
772403	BioFacory™, 40 Chamber	25295	+	1	2

Wide Mouth+ Narrow Mouth Biofactory™

Wide mouth (vent cap) + Narrow mouth (seal cap) design: Wide mouth is designed for directly media pouring and Narrow mouth suits for tubing aseptic operation such as medium transferring. Wide mouth can facilitate gas exchange when filling media through the narrow mouth.

Cat. No.	Description	Growth Area(cm ²)	Sterile	/Pack	/Case
773001	BioFacory™, 1 Chamber	647	+	1	8
773101	BioFacory™, 2 Chamber	1279	+	1	8
773204	BioFacory™, 5 Chamber	3175	+	1	4
773302	BioFacory™, 10 Chamber	6335	+	1	6
773403	BioFacory™, 40 Chamber	25,295	+	1	2

Guidelines For Use

A Inoculating

1. Preheat the Biofactory™ and media to culturing temperature before use which can accelerate cell adhesion and increase cloning efficiency. Warming up is very important especially for Biofactory™ over 10 chambers because it takes longer time to reach the setting temperature for bigger size vessel
2. Pour the media directly into the Biofactory™ or with tubing system. Recommend media volume for each chamber is 150~200mL
3. Keep the Biofactory™ edge-on after filling the media. The media will be evenly dispensed to each chamber.
4. Turn the Biofactory™ 90 ° anti-clockwise slowly and steadily with the mouth on upside to equilibrate the media
5. Lay down the Biofactory™ to level position slowly to equilibrate the media without generating bubbles.
6. Put the Biofactory™ into an incubator

B Cell Harvest

1. Pour out the media when the cultivation is finished
2. Wash with CMF-PBS(40-50mL per chamber) at least once. Follow the operating steps to ensure the culturing surface soak in the CMF-PBS completely. Gently shake back and forth to wash away the residue media. Pour out the CMF-PBS and repeat the steps if necessary.
3. Add appropriate preheated cell digestive solution (20-40 ml/layer), follow the Biofactory™ operating guideline to equilibrate the digestive solution. Tilt the Biofactory™ back and force gently to ensure the culturing surface soak in the dissociating solution. Flap the Biofactory™ slightly to help the cell detach from the surface. Dissociation time could be referred with that of parallel condition in T Flasks or single chamber Biofactory™
4. Wash the Biofactory™ after dissociation, repeat the wash steps if many cell are found on the wash solution

Preheat:

Preheat the CMF-PBS can reduce the wash time while preheat the media can accelerate the cell attachment

Vent cap:

Keep the vent cap from alcohol which may wet the filter film, further affect the gas exchange and liquid equilibrium

Culture temperature:

Slight variation of temperature will affect the cell yield. Pay attention to the culture temperature is in accordance with the setting temperature.

