ESCO HEALTHCARE
"Discovery to Delivery"

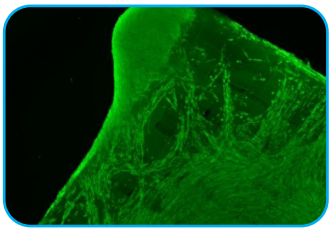
BioMESH®

Macroporous Carriers for High-Density Cell Harvesting

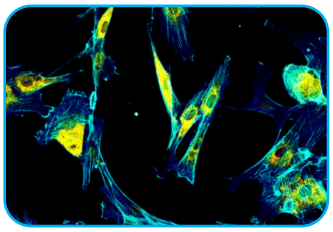
BioMESH® is a patented low-lint macrocarrier designed specifically for cell harvesting applications. It is suitable for use with skin fibroblasts, cardiac fibroblasts, multipotent/ pluripotent stem cells, epithelial cells, and chondrocytes.

Cells can grow undisturbed in 3D while maintaining a stable environment with minimal shear stress. The Tide Motion bioreactor enables adherent cells to grow at high density and produce larger volumes of biomass, secreted or non-secreted products, with low lint and particulate contamination.

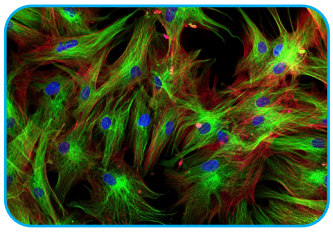
Cultured Mesenchymal Stem Cells, Fibroblasts, Fibroblast-Like Cells



MSCs



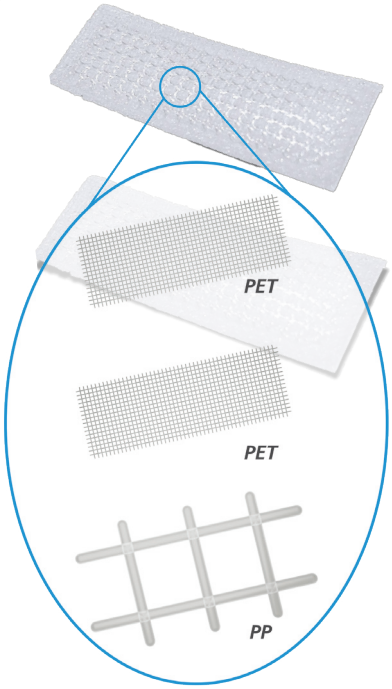
Fibroblast

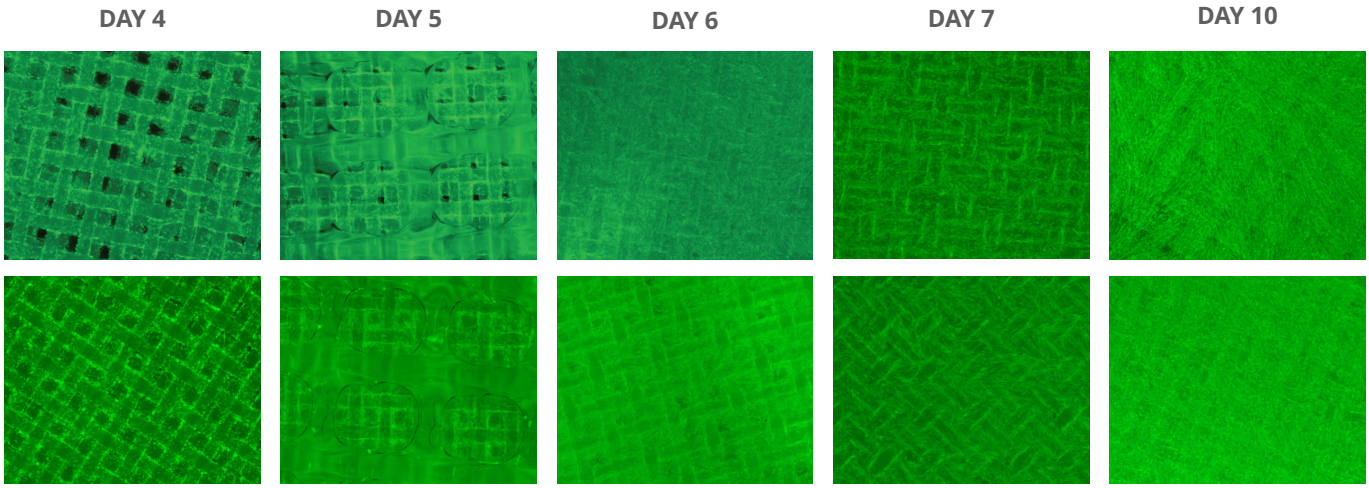


Skin Cells

Key Features:

- Made of a combination of polypropylene (PP) netting and PET mesh
- Complies to USP <83> <87> <788>, USP Class VI, ISO 10993-5
- High porosity (200 µm space between PET fiber; 670 µm space between PP fiber)
- High surface area for cell growth: up to 10,000 cm^2 per 0.1 L packed bed volume for MSCs
- Enhanced hydrophilicity, coating factors can be added





Day 4 to day 10 of umbilical cord derived stem cells (MSCs) cultured in BioMESH® carriers

Applications

Application/ Macrocarriers	EV/Exosomes	Cell Therapy *(when harvesting the cells as final product)*	Intracellular Virus *(when harvesting the cells containing the virus)*	Secreted Bioproducts *(Virus, Viral Vectors, Proteins)*	Cultivated Meat	Biomass Production	Stem Cell Expansion
BioMESH®	+++	+++	+++	++	+++	+++	+++

Specifications

	BioMESH®
Material	Polyethylene terephthalate (PET) and polypropylene (PP)
Dimension	23.0 +/- 1.0 mm × 9.0 +/- 0.5 mm
Dimension for cell growth	20.4 × 6.4 mm
Base weight per piece	0.06 +/- 0.01 g/pc
Occupied bed volume	5.5 mL/g of carriers
Inoculum requirement	2~2.5 × 10^5 cells/mL bed
Maximum cell density	1×10^8 cells/g of carriers
Sterilization	Autoclave 121 °C, 30 mins; EO or γ-irradiation (pre-packed)
Endotoxin	<0.25 EU/mL
Bioburden	<1 CFU/gram of carriers
Cytotoxicity	Non-toxic
Biosafety	Compliant with USP Class VI, ISO 10993-5, ISO10993-6, ISO10993-11, ISO10993-18, ISO 10993-23, USP<661.1>, USP<788>

Ordering Information

Item Code	Product Name	Package
1400396	BioMESH® Cell Culture Carriers (50 g)	50 grams per bottle
1400397	BioMESH® Cell Culture Carriers (100 g)	100 grams per bottle
1400398	BioMESH® Cell Culture Carriers (250 g)	250 grams per bottle

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Esco Phealthcare BioMesh Sellsheet A4_vE_01222025