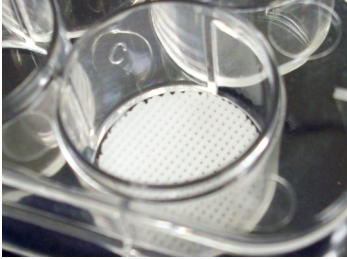


3D Biotek - 3D Insert™-PCL

Features and Benefits



Polycaprolactone (PCL) is a biodegradable polymer used in many FDA approved implants, drug delivery devices, sutures, as well as for a wide variety of applications in tissue engineering research.



Well-Known Scaffold Biomaterial for Tissue Engineering Research

PCL has been widely used in the following tissue engineering applications:

Bone/Cartilage
Tendon/Ligament

Cardiovascular
Liver

Nerve
Skin

100% Connectivity

The pores of the 3D Inserts are 100% open, making it easy for cells to be seeded throughout the porous scaffolds and for efficient nutrient/waste exchange. Furthermore, this feature makes the products especially suitable for conducting dynamic cultures where the medium can perfuse through the open porous structure.

Well-Defined Pore Size and Porous Structure

3D Biotek's 3D precision microfabrication technology produces a well-defined fiber/pore size and ensures the reproducibility of the porous structure from batch to batch.

Organic Solvent Free

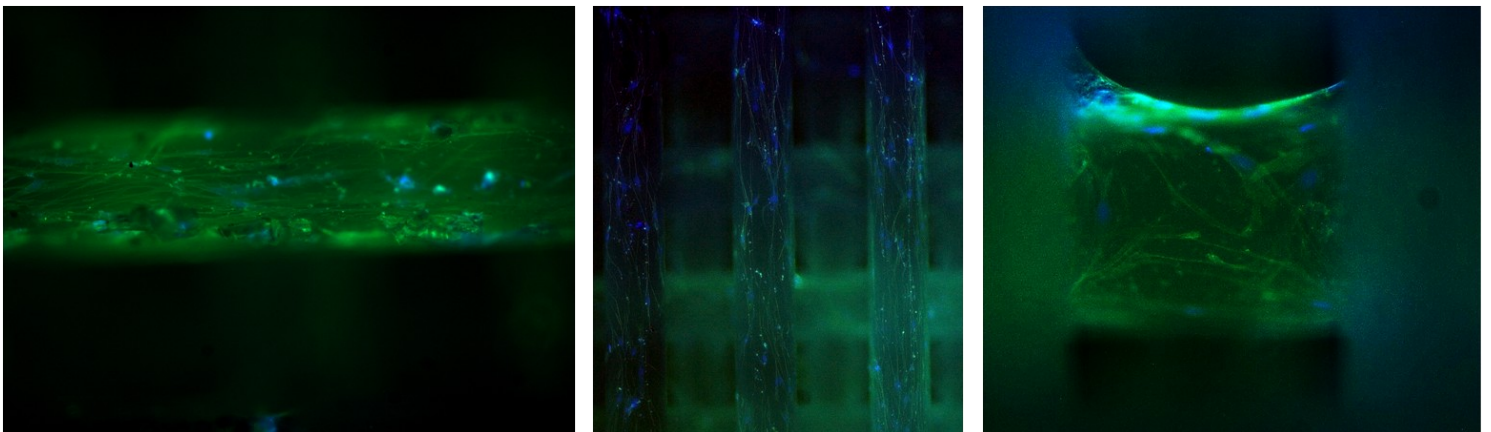
Cytotoxic organic solvents, such as chloroform and methylene chloride, are often used in fabricating PCL scaffolds. 3D Biotek's 3D precision microfabrication technology is a solvent-free manufacturing process, producing a 3D Insert™- PCL free of organic solvent.

Improved Cell Culture Efficiency

3D Biotek's scaffolds have increased surface areas as compared to 2D cell culture plates. As a result, more cells can be cultured on our 3D Insert than on the same-sized culture dish/plate/flask/bioreactor.

Fit Into Any Bioreactor

The size and configurations of the 3D Insert™- PCL can be customized to fit into the bioreactor of your choice.



Human fibroblasts proliferating on polycaprolactone (PCL) scaffolds. F-actin (green), DAPI (blue).

Depending on your research needs, **3D Insert™-PCL** can be made in many combinations of fiber diameters and spacings. Our technical support team will work with you and customize the scaffolds to meet the specific needs of your research project. For more information, please visit our website at **www.3DBiotek.com**.

PCL Catalog Numbers

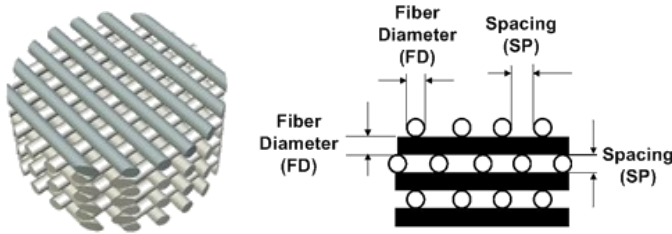
Catalog Number	Fiber Diameter (μ)	Pore Size (μ)	Size	PS Inserts in Package
PCL303006-3	300	300	6-well	3
PCL303012-6	300	300	12-well	6
PCL303024-12	300	300	24-well	12
PCL303048-16	300	300	48-well	16
PCL303096-24	300	300	96-well	24
PCL305006-3	300	500	6-well	3
PCL305012-6	300	500	12-well	6
PCL305024-12	300	500	24-well	12
PCL305048-16	300	500	48-well	16
PCL305096-24	300	500	96-well	24

Storage: Opened plates containing scaffolds can be stored at room temperature in sterile conditions.

Nominal Cell Growth Area

	2D	3D Insert™-PCL
6 well		
9.6 cm ²	3030	99.2 cm ²
	3050	75.6 cm ²
12 well		
4 cm ²	3030	39.3 cm ²
	3050	27.9 cm ²
24 well		
1.9 cm ²	3030	18.3 cm ²
	3050	13.7 cm ²
48 well		
1 cm ²	3030	7.7 cm ²
	3050	6.1 cm ²
96 well		
0.32 cm ²	3030	2.0 cm ²
	3050	1.5 cm ²

3D Insert™-PCL Structural Parameters



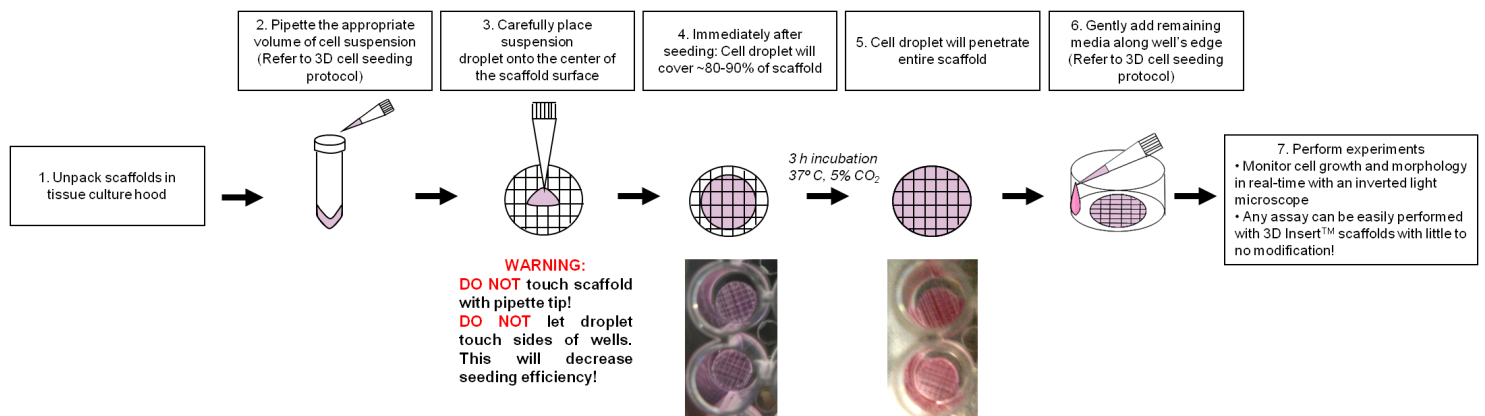
Average Thickness

3D Insert™-PCL	
3030	1.6 mm
3050	1.6 mm

Average Diameter

3D Insert™-PCL	
6 well	33.6 cm ²
12 well	20.7 cm ²
24 well	14.4 cm ²
48 well	9.0 cm ²
96 well	5.2 cm ²

Seeding Protocol (available on www.3dbiotek.com/3dprotocols.aspx):



Related Products

Related Products	Size	Catalog Number
Untreated tissue culture plates	6-well	TCP001006
	12-well	TCP001012
	24-well	TCP001024
	48-well	TCP001048
	96-well	TCP001096
Treated tissue culture plates <i>*not to be used for 3D cell culture</i>	6-well	TCP011006
	12-well	TCP011012
	24-well	TCP011024
	48-well	TCP011048
	96-well	TCP011096

Human fibroblasts cultured on 3D Insert™-PCL scaffolds show a continuous increase in proliferation.

