

3 D B I O - P R I N T E R FOR TISSUE ENGINEERING

CREATE THREE-DIMENSIONAL ORGANOMIMETIC MODELS FOR TISSUE ENGINEERING



The 3DDiscovery® instrument is a cost-effective 3D bio-printing platform to explore the potential of 3D tissue engineering through the bio-printing approach. Spatial control of cells and morphogens in a three-dimensional scaffold is an innovative approach in order to construct designed organotypic in-vitro models of soft and hard tissues.



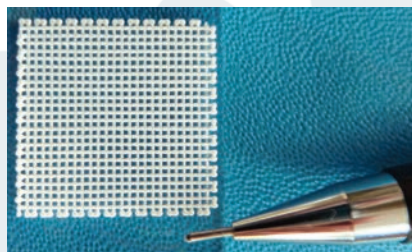
3D MODELS TO MIMIC WHAT HAPPENS IN LIVING ORGANISMS

The 3DDiscovery® platform is a versatile and cell-friendly instrument to create three-dimensional models, that more closely mimic what happens in living organisms. It allows researchers to pattern cells, biomolecules and a range of soft and rigid materials in desirable 3D composite structures in order to mimic biological processes providing much more similar results to in vivo studies than 2D cell cultures.

3D Discovery

MATERIAL CANDIDATES

- Biopolymers
- Calciums
- Cells
- Signal molecules (proteins)
- Hydrogels
- Collagen
- Polycaprolactone
- Polyester



KEY ADVANTAGES

- Combines up to 4 biomaterials, cell, signal molecules in one single model
- Unique technology providing spatial control of cells & biomolecules within extracellular matrix
- Modular and upgradable
- Easy tissue modelization via BioCAD software
- Printing under physiological conditions
- Lab bench or sterile hood integration
- Affordable instrument



SPECIFICATIONS OVERVIEW

- External dimensions: 580/540/570 mm
- Precision: $\pm 10\mu\text{m}$
- Working range: 130x90x60 mm
- 4 printing heads for viscosity range up to 10'000mPaS
- Nano liter dispensing resolution ; no dead volume
- 1 hot melt extrusion print head
- BioCAD software (compatible with BioFactory®)
- Temperature control up to 80°C