

CELLINK®

HAPPY PRINTING!

Get ready to print
living tissue



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APPLICATION NOTE



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CELLINK[®]

CELLINK[™] is the first universal bioink optimized for 3D Bioprinting of human tissues with any commercially available and in-house 3D Bioprinting system. As a polysaccharide hydrogel (non-animal derived), CELLINK[™] is ideal for 3D cell culturing.

The biological functionality of CELLINK[™] has been evaluated extensively for cartilage tissue engineering applications, where the redifferentiation capacity of human chondrocytes bioprinted with CELLINK[™] has been studied on gene expression and protein levels. Besides providing a good printability and shape fidelity, CELLINK[™] also supports the neo-synthesis of cartilage-specific extracellular matrix components by human chondrocytes.

CELLINK[™] comes in sterile, ready-to-use 3mL and 10mL cartridges, depending on the size of the desired bioprinted structure. What can you bioprint with a 3mL bioink cartridge? You can bioprint 48 tissue models with dimensions 5x5x1 mm³, for example.



Storage

This ink has a shelf life of three months. It should be stored in a refrigerator at 4°C.



4°C



3 Months

Compatibility

CELLINK[™] has a wide range of applications since Mesenchymal Stem Cells can be mixed with it. It can also be used with more specific cells to bioprint cartilage or skin tissue.

Cellmixing

We suggest you mix CELLINK[™] with a high concentration of cells and bioprint everything in one run with one printhead. You can either mix the cells manually or use our revolutionary STARTINK-Kit with our CELLMIXER, which is specifically designed to simplify the mixing process and offers a homogeneous suspension with an increased cell viability.



Printing parameters

For optimal printability we suggest you use the following parameters.

Temperature: room temperature

Printing speed: 10 mm/s

Nozzle size (G):	25	22	20
Layer height (mm):	0.3	0.4	0.6
Print pressure (kPa):	~25	~15	~10



~22°C



10 mm/s



≥25G



≥0.3 mm



25 kPa

Crosslinking

CELLINK[™] is simply crosslinked with our proprietary crosslinking solution. Once your construct is bioprinted, you only need to pour some drops of this ionic binding agent on it. A 5min bath is sufficient for structures bioprinted in a well-plate. After that time, remove the Crosslinking Solution and replace it with media.

