



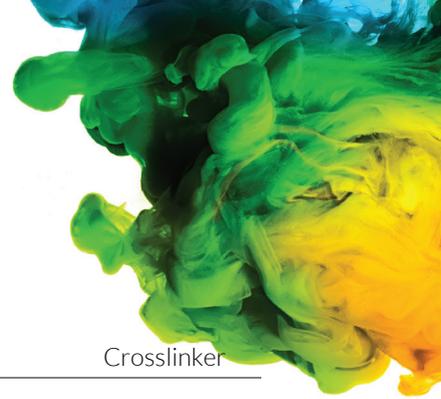
# BIOINK PORTFOLIO

THE FUTURE OF MEDICINE IS HERE

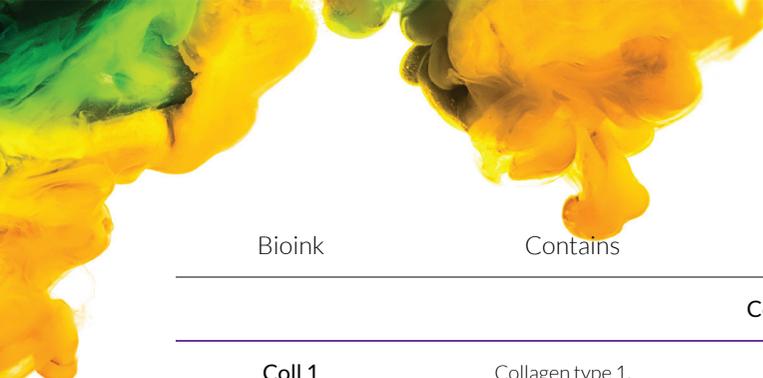
CELLINK developed the world's first universal bioink. Today, hundreds of labs use it in more than 50 countries worldwide. We develop new bioinks with good printability and bioactive properties to guide cellular fate processes.

Our goal is to support tissue engineers, cell biologists and clinicians and bring innovative 3D bioprinting technology to the clinic.





Bioink	Contains	Recommended Use	Crosslinker
<b>CELLINK Series</b>			
<b>CELLINK</b>	Alginate. Nanofibrillar cellulose.	For use with a wide range of cell types. Has shown compatibility with skin and tumor engineering applications.	Ionic solution.
<b>CELLINK BONE</b>	CELLINK. Tricalcium phosphate.	Cell types and tissue applications related to the bones, joints, and interfaces such as the bone-ligament and bone-cartilage transition regions.	Ionic solution.
<b>CELLINK FIBRIN</b>	CELLINK. Fibrinogen.	Fabrication of constructs for many tissues. Is compatible with a wide variety of cell types. Can be used to create vascular structures and regenerative models.	Ionic solution. Thrombin.
<b>CELLINK RGD</b>	CELLINK. Alginate coupled with L-arginine-Glycine-L-aspartic acid peptide.	For use with a wide range of cell types. The RGD sequence has also been utilized for the surface treatment of bone and vascular implants to improve integration within the body.	Ionic solution.
<b>CELLINK SKIN</b>	CELLINK. Fibrinogen.	Fabrication of skin tissue models. The multi layered structures can comprise of fibroblasts, keratinocytes, melanocytes and other skin related cell types.	Ionic solution. Thrombin.
<b>CELLINK LAMININK 111</b>	CELLINK. Laminin $\alpha 1\beta 1\gamma 1$ .	Specialized applications include the culture of liver, neural, lung, kidney and intestinal cells. Can be used to model Parkinson's disease and cancer.	Ionic solution.
<b>CELLINK LAMININK 121</b>	CELLINK. Laminin $\alpha 1\beta 2\gamma 1$ .	Particularly suitable as a base material for the culture of cell types such as skeletal muscle, kidney, brain and liver cells.	Ionic solution.
<b>CELLINK LAMININK 411</b>	CELLINK. Laminin $\alpha 4\beta 1\gamma 1$ .	Supports the culture of various cell types, such as hematopoietic, vascular and immune cells. It may also be utilized as a base material for the development of pancreas models and the study of brain and nerve tissue.	Ionic solution.
<b>CELLINK LAMININK 521</b>	CELLINK. Laminin $\alpha 5\beta 2\gamma 1$ .	Suggested for expansion and facilitates self-renewal of human pluripotent and embryonic stem cells. Can be used as a base for many specialized cells including hepatocytes, cardiomyocytes, and neurons.	Ionic solution.
<b>CELLINK LAMININK+</b>	CELLINK. Laminin blend.	Can be used as a great starting point for the culture of many cell types. Our blend of laminins within this bioink has been optimized to maximize cell viability.	Ionic solution.
<b>A Series</b>			
<b>CELLINK A</b>	Alginate.	An easy to use hydrogel for various research applications, such as bone and cartilage tissue engineering, or drug delivery.	Ionic solution.
<b>CELLINK A-RGD</b>	Alginate coupled with L-arginine-Glycine-L-aspartic acid peptide.	The RGD-sequence improves bone- and vascular-implant integration. Optimized to enhance cell adhesion for most cell types.	Ionic solution.
<b>GelMA Series</b>			
<b>GelMA</b>	Gelatin methacrylate.	Biocompatible hydrogel for 3D cell culture of various cell types including chondrocytes, fibroblasts and endothelial cells.	LAP (365 and 405 nm light).
<b>GelMA A</b>	Gelatin methacrylate. Alginate.	Compatible with most mammalian cells. It can be utilized as a base material for a wide range of tissues.	LAP (365 and 405 nm light). Ionic solution.
<b>GelMA C</b>	Gelatin methacrylate. Nanofibrillar cellulose. Alginate.	Compatible with most mammalian cells. It can be utilized as a base material for a wide range of tissues.	LAP (365 and 405 nm light). Ionic solution.
<b>GelMA HA</b>	Gelatin methacrylate. Methacrylated hyaluronic acid.	Compatible with most mammalian cells. Can be utilized for culturing a wide range of tissues such as connective, neural, cartilage, bone and skin.	LAP (365 and 405 nm light).
<b>GelMA HIGH</b>	High-concentration gelatin methacrylate.	Most cells, including skin, bone, muscle, neural and mesenchymal stem cells.	Mix in photoinitiator.
<b>Bio Conductink</b>	Gelatin methacrylate. Carbon nanotubes. Ploxamer.	Designed for neural lineage, cardiac and skeletal muscle cells. Facilitates cellular communication through electrical potential variations.	LAP (365 and 405 nm light).



Bioink	Contains	Recommended Use	Crosslinker
<b>Collagen Series</b>			
<b>Coll 1</b>	Collagen type 1.	Most cells, including skin, bone, muscle, neural and mesenchymal stem cells. Thermo-reversible.	Self-assembly.
<b>ColMA</b>	Collagen methacrylate.	Most cells, including skin, bone, muscle, neural and mesenchymal stem cells. Thermo-reversible if not photocrosslinked.	Self-assembly. LAP (365 and 405 nm light). Irgacure 2959 (365 nm light).
<b>GelX Series</b>			
<b>GelXA</b>	Gelatin methacrylate. Xanthan gum. Alginate.	Compatible with most mammalian cells. This is an excellent bioink for the fabrication of a wide range of tissue types.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXA BONE</b>	Gelatin methacrylate. Xanthan gum. Alginate. Tricalcium phosphate. Hydroxyapatite.	Tailored for tissue applications related to bones, joints, and interfaces such as the bone-ligament or bone-cartilage transition region.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXA FIBRIN</b>	Gelatin methacrylate. Xanthan gum. Alginate. Fibrinogen.	Has been optimized for the fabrication of constructs for many tissues and studies of wound healing environment.	LAP (365 and 405 nm light). Ionic solution. Thrombin.
<b>GelXA SKIN</b>	Gelatin methacrylate. Xanthan gum. Alginate. Fibrinogen.	Has been developed for fabrication of skin and skin related constructs. The multi layered structures can comprise of fibroblasts, keratinocytes, melanocytes and other skin related cell types.	LAP (365 and 405 nm light). Ionic solution. Thrombin.
<b>GelXA LAMININK 111</b>	Gelatin methacrylate. Xanthan gum. Alginate. Laminin $\alpha 1\beta 1\gamma 1$ .	Specialized applications include the culture of liver, neural, lung, kidney and intestinal cells. Can be used to model Parkinson's disease and cancer.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXA LAMININK 121</b>	Gelatin methacrylate. Xanthan gum. Alginate. Laminin $\alpha 1\beta 2\gamma 1$ .	Particularly suitable as a base material for the culture of cell types such as skeletal muscle, kidney, brain and liver cells.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXA LAMININK 411</b>	Gelatin methacrylate. Xanthan gum. Alginate. Laminin $\alpha 4\beta 1\gamma 1$ .	Supports the culture of various cell types, such as hematopoietic, vascular and immune cells. It may also be utilized as a base material for the development of pancreas models and the study of brain and nerve tissue.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXA LAMININK 521</b>	Gelatin methacrylate. Xanthan gum. Alginate. Laminin $\alpha 5\beta 2\gamma 1$ .	Suggested for expansion and facilitates self-renewal of human pluripotent and embryonic stem cells. Can be used as a base for many specialized cells including hepatocytes, cardiomyocytes, and neurons.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXA LAMININK+</b>	Gelatin methacrylate. Xanthan gum. Alginate. Laminin blend.	Can be used as a great starting point for the culture of many cell types. Our blend of laminins within this bioink has been optimized to maximize cell viability.	LAP (365 and 405 nm light). Ionic solution.
<b>GelXG</b>	Gelatin methacrylate. Xanthan gum.	Compatible with most mammalian cells.	LAP (365 and 405 nm light).
<b>Support</b>			
<b>CELLINK PCL</b>	Polycaprolactone	An excellent base material for the creation of scaffolds that can resist mechanical loading for the fabrication of a wide range of tissue types.	Solid at room temperature. Melting point at 60°C.
<b>CELLINK PLURONICS</b>	Ploxamer.	Designed for use as a sacrificial material and has been optimized for the fabrication of vascularized tissues, channels in microfluidic devices, and support for complex tissue constructs. Can be washed away.	Gel at room temperature. Liquid at 4°C.
<b>CELLINK START</b>	Polypropylene gel.	Can be utilized as a sacrificial material for structural support, for the generation of perfusable conduit networks and for demonstrations. Can be washed away.	No crosslinker.
<b>CELLINK START X</b>	CELLINK PLURONICS. Photocrosslinkable polymer.	Can be utilized for structural support, as a soft surface for bioprinting and fabricating permanent models for educational and training purposes	LAP (365 and 405 nm light).

Kit	Components	Description	Crosslinker
<b>Powder Kits</b>			
<b>CoIMA kit</b>	Methacrylated type I collagen powder.	For customization of photocurable collagen hydrogels for bioprinting and other application.	LAP (365 and 405 nm light). Irgacure 2959 (365 nm light).
<b>GelMA-HAMA kit</b>	Methacrylated gelatin powder. Methacrylated hyaluronic acid powder.	The GelMA and HAMA powders are supplied in individual vials for tailoring of own blends.	LAP (365 and 405 nm light). Irgacure 2959 (365 nm light).
<b>GelMA-Alginate kit</b>	Methacrylated gelatin powder. Alginate powder.	This kit enables you to make your own blend of GelMA and alginate.	LAP (365 and 405 nm light). Irgacure 2959 (365 nm light). Ionic solution.
<b>Alginate kit</b>	Alginate powder.	Dissolve the powder at your target concentration to prepare as a bioink or biomaterial.	Ionic solution.
<b>GelMA kit</b>	Methacrylated gelatin powder.	This kit is easy to use and makes it easy to get started making and customizing your own GelMA-based bioinks.	LAP (365 and 405 nm light). Irgacure 2959 (365 nm light).
<b>HAMA kit</b>	Methacrylated hyaluronic acid powder.	Dissolve the powder at desired concentration to start incorporating HAMA into your bioinks and other 3D cell culture constructs.	LAP (365 and 405 nm light). Irgacure 2959 (365 nm light).
<b>Tissue Model Kits</b>			
<b>VasKit</b>	VasKit perfusion device. GelMA C. CELLINK PLURONICS. Bioprinting nozzles. Two luer adapters.	VasKit is a perfusion bioreactor that is customized by the users to model vascular structures to investigate advanced cellular and tissue phenomena.	LAP (365 and 405 nm light) and/or ionic solution.
<b>Liver Tissue Model Kit A</b>	CELLINK LAMININK 111. ABCC2 antibody. Collagen type 1 antibody. CYP3A43 antibody.	The complete solution for generating and analyzing liver tissue models based on CELLINK LAMININK 111.	Ionic solution.
<b>Liver Tissue Model Kit B</b>	GeXA LAMININK 111. ABCC2 antibody. Collagen type 1 antibody. CYP3A43 antibody.	The complete solution for generating and analyzing liver tissue models based on GeXA LAMININK 111.	LAP (365 and 405 nm light). Ionic solution.
<b>Skin Tissue Model Kit A</b>	CELLINK SKIN. Collagen type 1 antibody. Elastin antibody. Keratin antibody.	Everything you need to generate skin tissue models of CELLINK SKIN bioink and antibodies for targeted analysis.	Ionic solution. Thrombin.
<b>Skin Tissue Model Kit B</b>	GeXA SKIN. Collagen type 1 antibody. Elastin antibody. Keratin antibody.	Everything you need to generate skin tissue models of GeXA SKIN bioink and antibodies for targeted analysis.	LAP (365 and 405 nm light). Ionic solution. Thrombin.





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