

Bio Inks

Black Drop offers a selected portfolio of bioinks that are well tested with our available printheads. The bioinks are delivered sterile and ready-to-use.

Bioink	Available Concentrations (w/v)	Printheads*	Crosslinking
Cure Drop	Cure Drop is a photocurable and animal-free hydrogel based on recombinant collagen peptides. Based on LAP it can be crosslinked using 365 or 405 nm photocuring wavelength.		
Collagen (recombinant)	8%	DoD, DoD-μEx, SX	Photocuring
Blue Drop	Blue Drop Hydrogels are polysaccharide-based and derived from plants. The crosslinked constructs can possess high mechanical strength, while the polymers are relatively bioinert making them well suited for encapsulation applications or as base material for a hydrogel blend.		
Agarose	1 – 6%	DoD, DoD-μEx, SX	Temperature
Alginate	1 – 4%	DoD, DoD-μEx, PE, SX	Ionic
Blue Drop Fiber-Blast!	Blue Drop FiberBlast! are Blue Drop hydrogels that are blended with bovine collagen microfibers. These microfibers enhance biocompatibility, post printing mechanical strength and shape retention during incubation.		
Agarose	4%	DoD, DoD-μEx, SX	Temperature
Alginate	4%	DoD, DoD-μEx, PE, SX	Ionic
Green Drop	Green Drop hydrogels are protein-based and derived from mammals. The crosslinked constructs possess high biological relevance and are often blended with Blue Drop Hydrogels to improve mechanical properties.		
Collagen (bovine)	1 – 2%	DoD, DoD-μEx, PE, SX	pH, Temperature
Fibrinogen (bovine)	5%	DoD, DoD-μEx, PE, SX	Enzymatic
Red Drop	Red Drop hydrogels are sacrificial bioinks, e.g. to create cavities or perfusable vessel-like structures in bioprinted tissue models. The crosslinking of bioprinted constructs is not permanent, so that the structures can be dissolved post-printing under certain conditions.		
Gelatine (porcine)	5 – 10%	DoD, DoD-μEx, PE, SX	Temperature

*DoD = Drop on Demand, DoD-μEx = Drop on Demand Microextrusion, PE = Pneumatic Extrusion, SX = Screw Extrusion