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Specification Sheet

GelXA CARTILAGE

Product description	GelXA CARTILAGE is designed to mimic the biological microenvironment of cartilage tissue by incorporating hyaluronan and laminin 521. GelXA CARTILAGE is based on GelMA and incorporates xanthan gum (purified from endotoxins) and alginate to enhance printability, ease-of-use and stability post-printing. GelXA CARTILAGE offers dual-crosslinking capabilities through photocuring and treatment with the included Crosslinking Agent. For description on how to mix with cells, bioprint and crosslink, follow the **Bioprinting Protocol**.
Intended use	Biocompatible material for 3D bioprinting, ***Research Grade***. For research use ONLY. Not intended for in vitro diagnostics or in vivo uses. Not intended for administration in humans or animals. Produced under aseptic conditions.
Product number	IKB118L3
Shelf life	Minimum 1.5 months, expiration date stated on package.
Storage and handling	Store and handle at 2-10°C. **DO NOT FREEZE.** Avoid temperature fluctuations. Protect from light both during storage and handling of the product. Ensure that the bioink container is capped prior to storage to prevent drying.
Safety	Handle in accordance with good hygiene and laboratory safety practices. Read **Safety Data Sheet** for more information regarding ingredients and potential hazardous compounds.
Related documents	Bioprinting Protocol as well as Safety Data Sheet can be downloaded from our website https://www.cellink.com/product/gelxa-cartilage/.

Property	Specification	Method
Appearance	Semi-translucent gel	Visual inspection.
Sterility	Sterile	Raw materials tested for the presence of bacteria, fungi and yeast with method adapted from Ph Eur 2.6.1 and USP <71>. Produced under aseptic conditions from sterilized materials.
pH	6.5-7.4	Assessed with pH paper.
GelMA degree of methacrylation	45-65%	Determined by quantifying free amines with TNBSA and comparing to the unmodified precursor.
HAMA degree of methacrylation	45-65%	1H NMR performed at room temperature, acquired with a spectral width of 8013 Hz, or 16 ppm, averaged over 64 scans using 64K time domain points. Acrylate peaks present at 5.6 and 6.0, methyl at 1.8 ppm.
Viscosity	90–390 Pa·s at 1 s^{-1} *	Tested using HR-10 TA Instruments Rheometer with 20 mm plate-plate geometry. Steady-state rotational flow sweep: 24°C, shear rate from 0.001 s^{-1} to 200 s^{-1}. * Characteristic values, not tested on every batch.