

Specification Sheet

Chitoink

Product description	Chitoink is a chitosan based bioink, chitosan is a cationic polysaccharide extensively used in research related to cartilage tissue engineering. Formulated with glucomannan and a glycerol phosphate to provide good printability and biocompatibility. Chitotink crosslinks easily with the included TPP 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 <i>in vitro</i> diagnostics or <i>in vivo</i> uses. Not intended for administration in humans or animals. Produced under sterile and aseptic conditions.
Product number	IKE10000
Shelf life	3 months, expiration date stated on package.
Storage and handling	Store at 4-8°C. DO NOT FREEZE. Avoid temperature fluctuations. 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, Mixing with cells Protocol as well as Safety Data Sheet can be downloaded from our website https://cellink.com/product/chitoink/ or scan the QR code below.



Property	Specification	Method
<i>Appearance</i>	Semi translucent gel	Visual inspection.
<i>Sterility</i>	Sterile	Tested for the presence of bacteria, fungi and yeast. Tested on raw materials.
<i>Endotoxin level</i>	<20 EU/mL	Limulus Amoebocyte Lysate assay, Pharmacopoeia 2.6.14 "Bacterial endotoxins": Method D, accredited by SWEDAC. Accreditation Certification 1240: ISO 15189, 2010-11-22. Tested on raw materials.
<i>Cell viability</i>	≥70% live cells	3D cell culture performed with mesenchymal stem cells for 14 days. Based on routine QC performed every fourth month.
<i>pH</i>	6.5-7.4	Assessed with pH paper.
<i>Viscosity</i>	330 Pa·s (±10 Pa·s)	At a shear rate of 1 s ⁻¹ . Tested using rotational 20 mm plate-plate HR-2 TA Instruments Rheometer. Flow sweep parameters: shear rate from 0.002 s ⁻¹ to 500 s ⁻¹ , 25°C.