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CELLINK
A BICO COMPANY

Specification Sheet

Nanofibrillated Cellulose

Product description	Nanofibrillated cellulose (NFC) is a natural material consisting of 5–20 nm wide and several microns long fibrils. NFC demonstrates shear thinning behavior as a hydrogel, which makes it a perfect fit as a thickener for improvement of bioinks printability. For description on how to dilute NFC, mix with other biomaterials and cells and bioprint, follow the **Preparation Protocol**.
Intended use	Thickener of hydrogels and bioinks to be used in cell culture. ***Research Grade***. For research use ONLY. Not intended for in vitro diagnostics and in vivo uses. Not intended for administration in humans or animals. Produced under aseptic conditions.
Product number	CL-BI-NFC-50
Shelf life	Minimum 6 months, expiration date stated on package.
Storage and handling	Store at 2-25°C. **DO NOT FREEZE.** Handling can be done at room temperature. Avoid temperature fluctuations. Keep container tightly closed in a dry and well-ventilated place.
Safety	Handle in accordance with good hygiene and laboratory safety practices. Read **Safety Data Sheet** for more information regarding potential hazardous compounds.
Related documents	Preparation Protocol as well as Safety Data Sheet can be downloaded from our website https://www.cellink.com/product/nanofibrillated-cellulose/.

Property	Specification	Method
Appearance	White semi-translucent gel	Visual inspection.
Sterility	Sterile	Raw material tested for the presence of bacteria, fungi and yeast. Produced under aseptic conditions.
pH	6.0-7.4	Assessed with pH paper for a 2% dispersion in water.
Viscosity	3.5-6.5 kPa·s at 0.01 s^{-1}; 1.0-1.5 Pa·s at 200 s^{-1}*	Tested on 2% NFC product using HR-10 TA Instruments rheometer with 20 mm plate-plate geometry. Steady-state rotational flow sweep: 25°C, shear rate from 0.001 s^{-1} to 200 s^{-1}. * Characteristic values, not tested on every batch.