

3D Bioprinting of Novel κ -Carrageenan Bioinks: An Algae-Derived Polysaccharide

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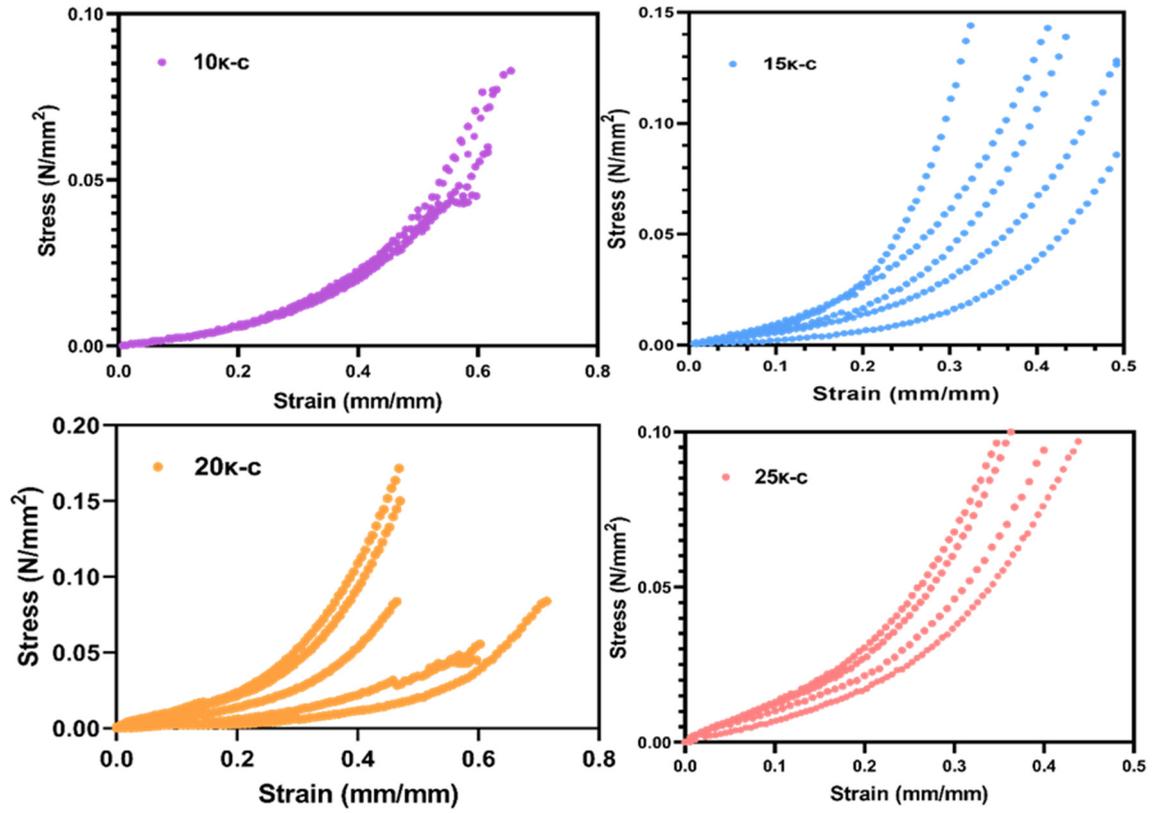


Figure S1. Stress-strain curves for the four κ -based inks.

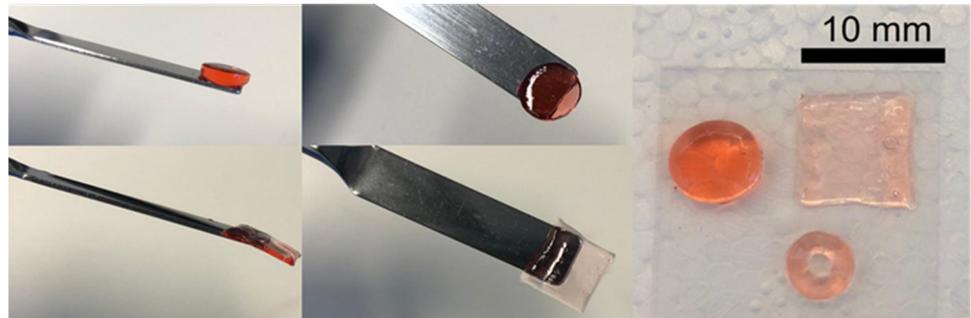


Figure S2. 3D printed structures using the 15 κ -c ink.

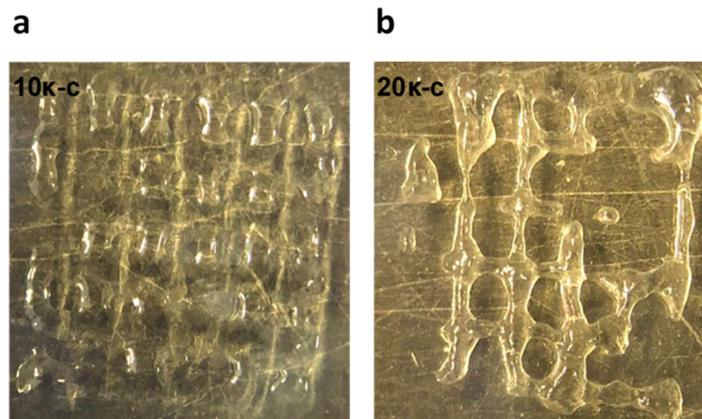


Figure S3. 3D printed squared meshes of (a) 10 κ -c and (b) 20 κ -c.

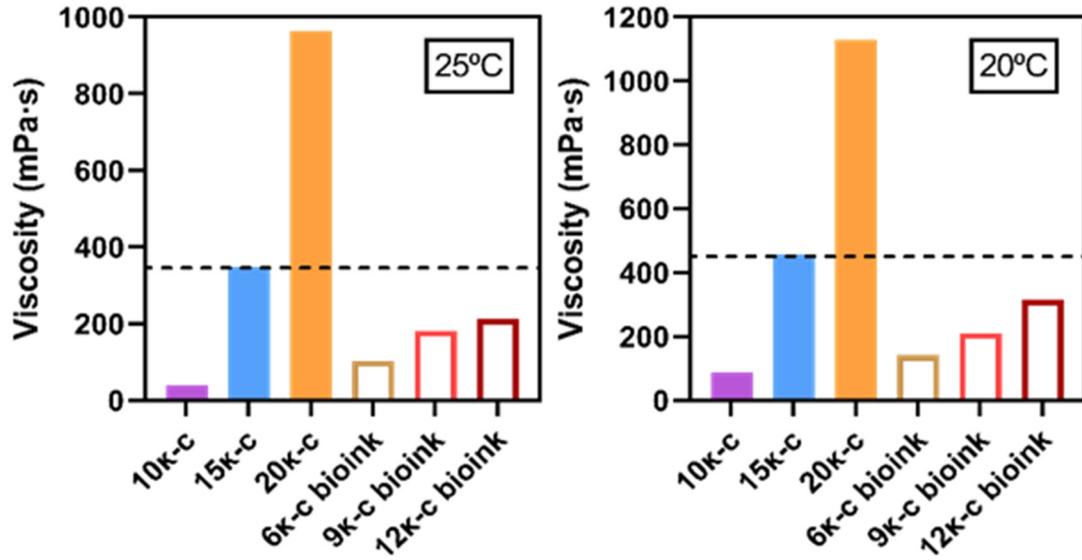


Figure S4. Specific viscosity of 10κ-c, 15κ-c, 20κ-c inks and 6κ-c, 9κ-c, and 12κ-c bioinks at 25°C and 20°C. Three samples were analysed in each assay ($n=3$).

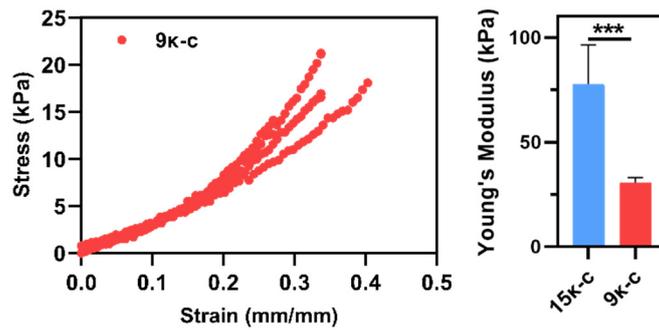


Figure S5. A) Stress-strain curves of 9κ-c bioink during a compression test, at room temperature, and respective B) Young modulus value comparing o the 15κ-c ink.

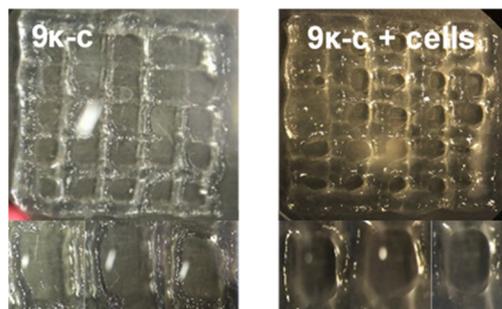


Figure S6. 3D bio-/printed squared meshes used in the calculation of the printability factor of 9κ-c ink and the 9κ-c bioink and higher magnification images of the pores used for this.

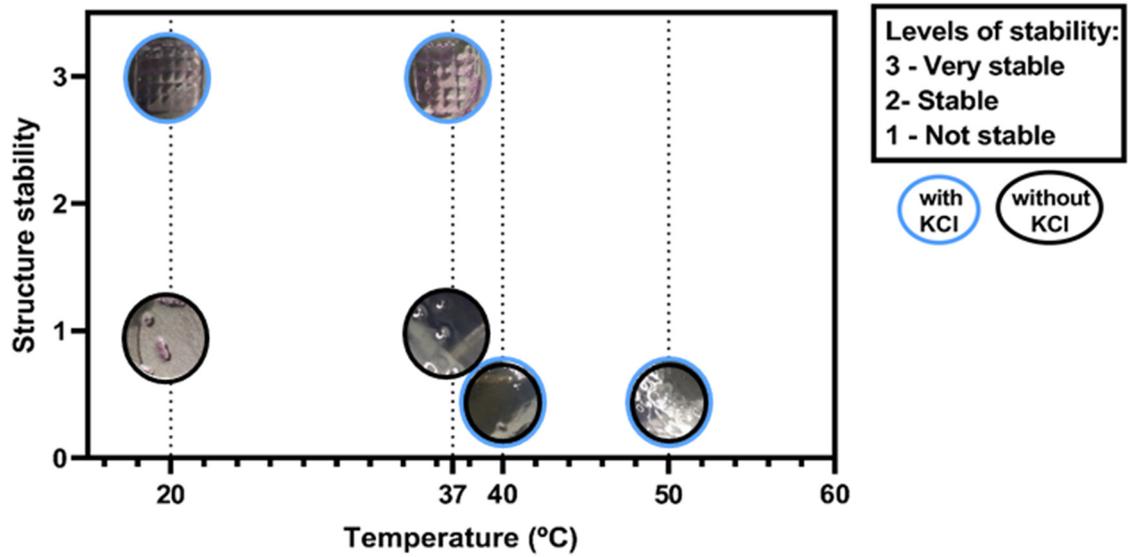


Figure S7. Structure stability of 3D printed 9κ-c bio-inks at different temperatures (20, 37, 40, and 50 °C), with (blue circle) or without the supplementation of KCl (black circle). Different levels were defined to describe the stability of each scaffold (3 – very stable; 2 – stable; 1 – not stable).

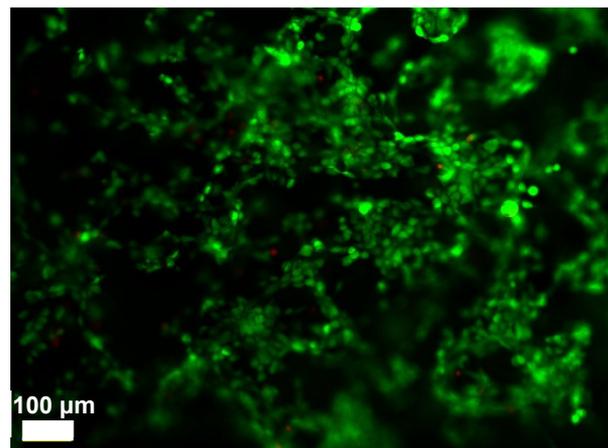


Figure S8. Fluorescence microscopy images of the fibroblasts encapsulated on bioprinted structures after Live/Dead staining with ethidium homodimer 1 (dead cells) and calcein-AM (viable cells).