Supplementary Information

Three-Dimensional Printed Cell Culture Model Based on Spherical Colloidal Lignin Particles and Cellulose Nanofibril-alginate Hydrogel

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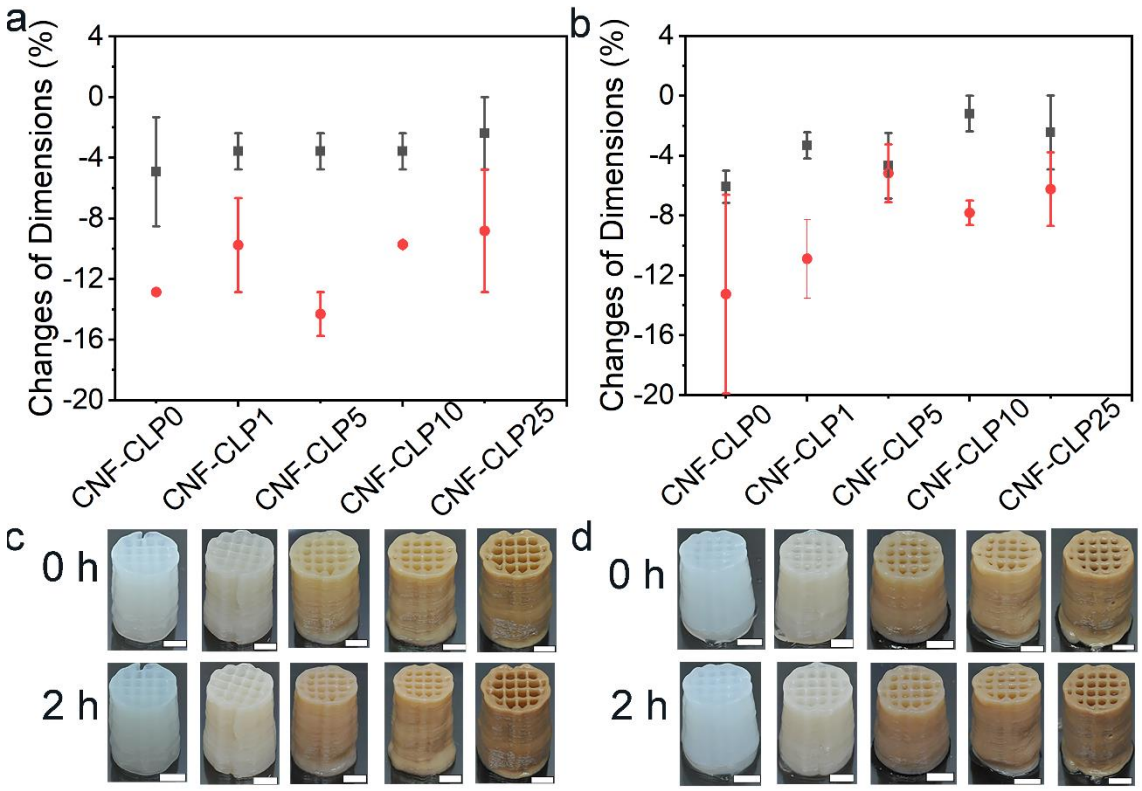

Figure S1. Dimensional change ratio in height (■ black) and cross section (● red) of printed scaffolds were measured in different conditions (a) Scaffolds were stored at ambient conditions for 2 hours without crosslinking. (b) Scaffolds were cross-linked, dimensions were measured immediately after crosslinking and after 2 hours of storage at ambient conditions. The dimensional changes were calculated with 2 scaffolds. The corresponding photos of the printed scaffolds after (c) 0 h and 2 h standing at ambient conditions (d) 0 h – immediately after cross-linking and after 2 h of standing at ambient conditions. The scale bars in all the photos are 0.5 cm. All the scaffolds were printed into cylinder shape with a diameter of 1.5 cm and height of 2 cm.

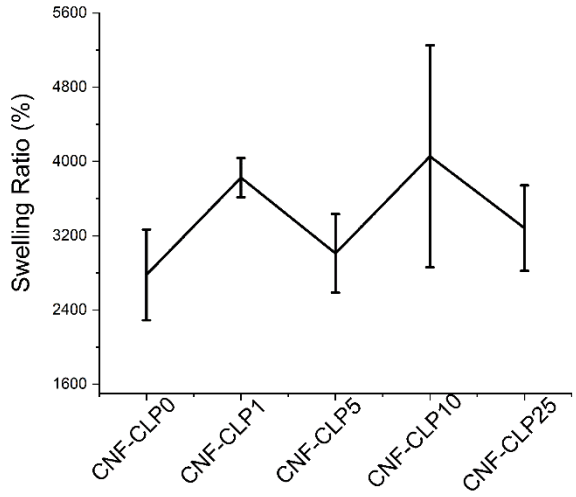

Figure S2. Swelling ratio behavior of freeze-dried scaffolds of different formulations calculated by dividing the weight of rewetted scaffolds with the weight of dry scaffolds.

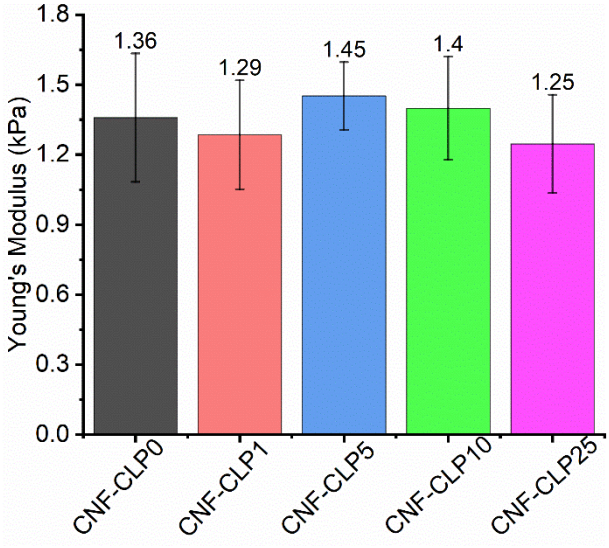

Figure S3. Compressive Young's modulus of printed solid constructs of 100% infill of different formulations after storage in DPBS+ for 48 h. Mean values from six samples were calculated and plotted for each formulation.