

Three-dimensional stable alginate-nanocellulose gels for biomedical applications: towards tunable mechanical properties and cell growing

Priscila Siqueira ^a, Éder Siqueira ^b, Ana Elza de Lima ^b, Gilberto Siqueira ^c, Ana Délia Pinzón García ^b, Ana Paula Lopes ^b, Maria Esperanza Cortés Segura ^d, Augusta Isaac ^e, Fabiano Vargas Pereira ^{b*}, Wagner Roberto Botaro ^{f*}

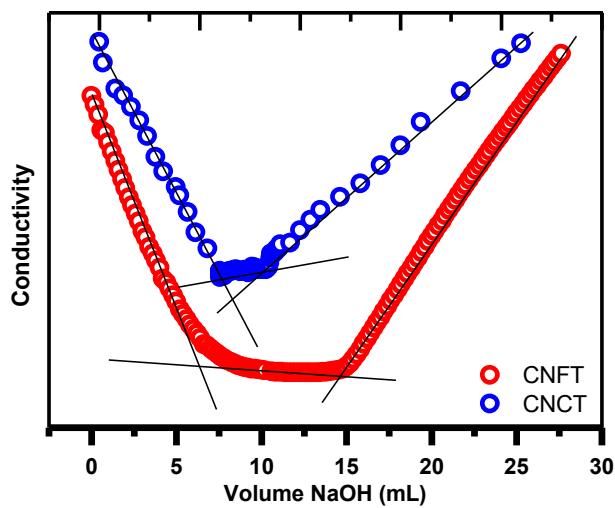
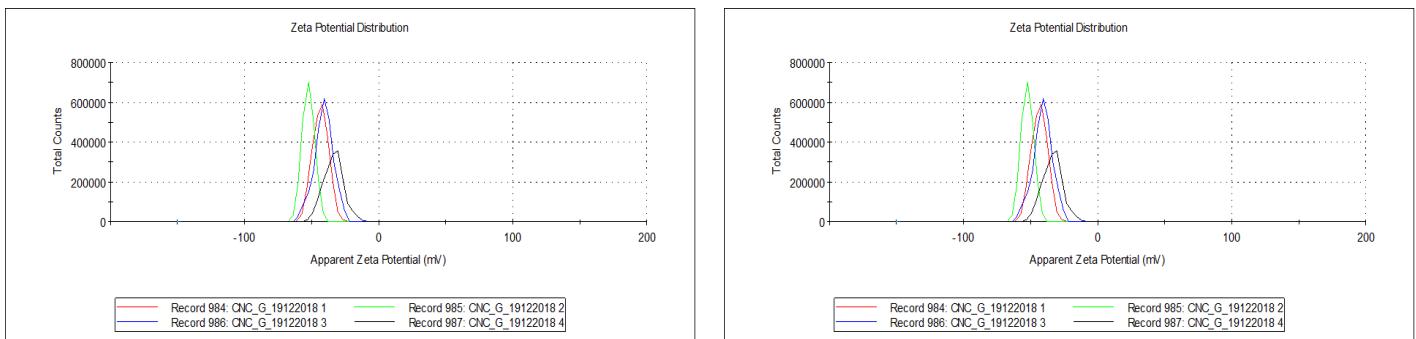
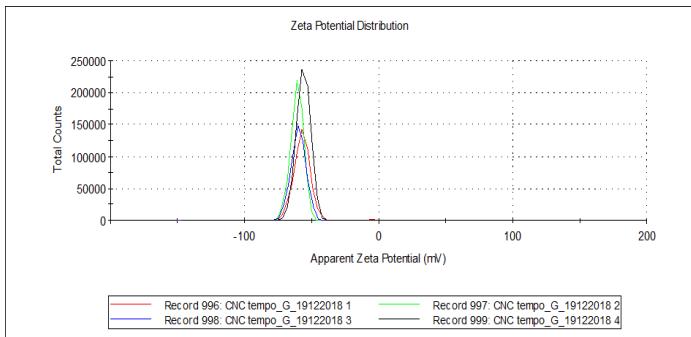


Figure S1: Conductometric titration curves for TEMPO-oxidized cellulose nanofibers (CNFT) and TEMPO-oxidized cellulose nanocrystals (CNCT)

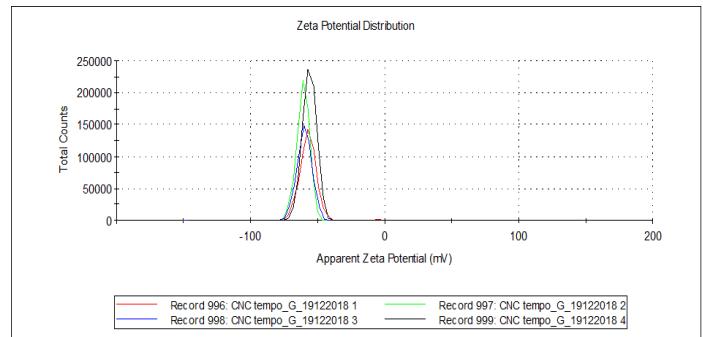


CNC



CNF

CNCT



CNFT

Figure S2: Zeta potential (ζ) measurements obtained by electrophoretic mobility for CNC, CNCT, CNF and CNFT.

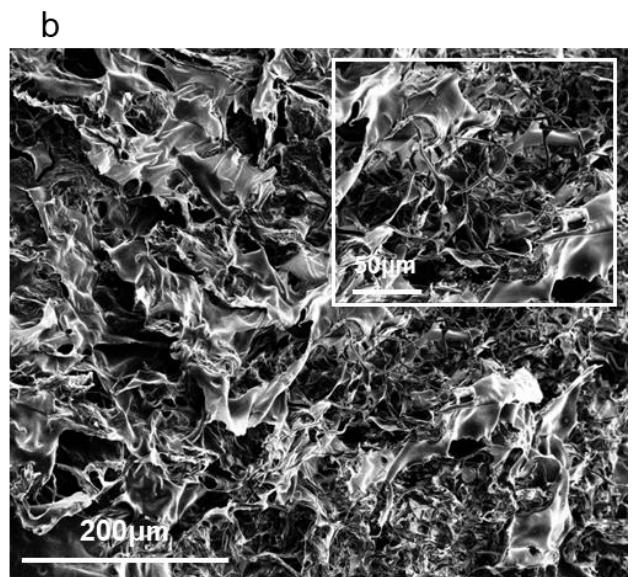
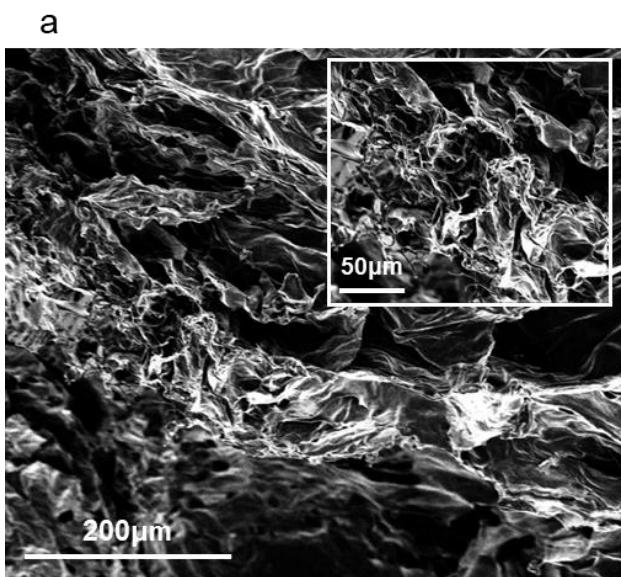


Figure S3: SEM images of the cross-section for crosslinked gels (a) alginate/CNC 50 wt% and 500 x magnification; (b) alginate/CNF 50 wt% 500 x magnification. The inset represents a magnification of 1500 x.

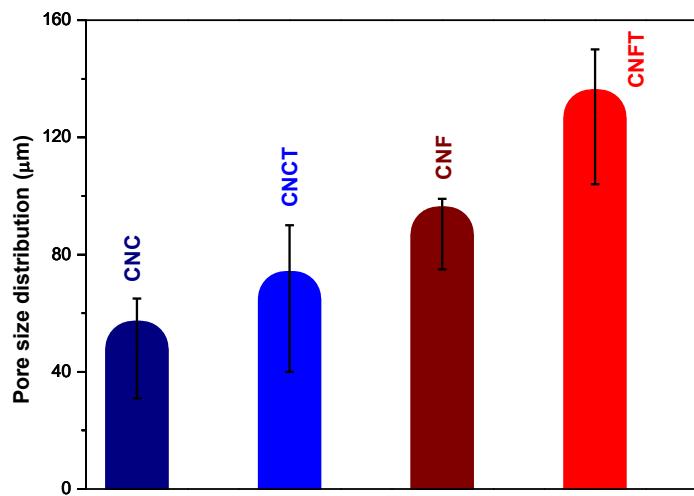


Figure S4: Pore sizes distribution and standard mean values obtained by SEM micrographs for CNC, CNCT, CNF and CNFT.

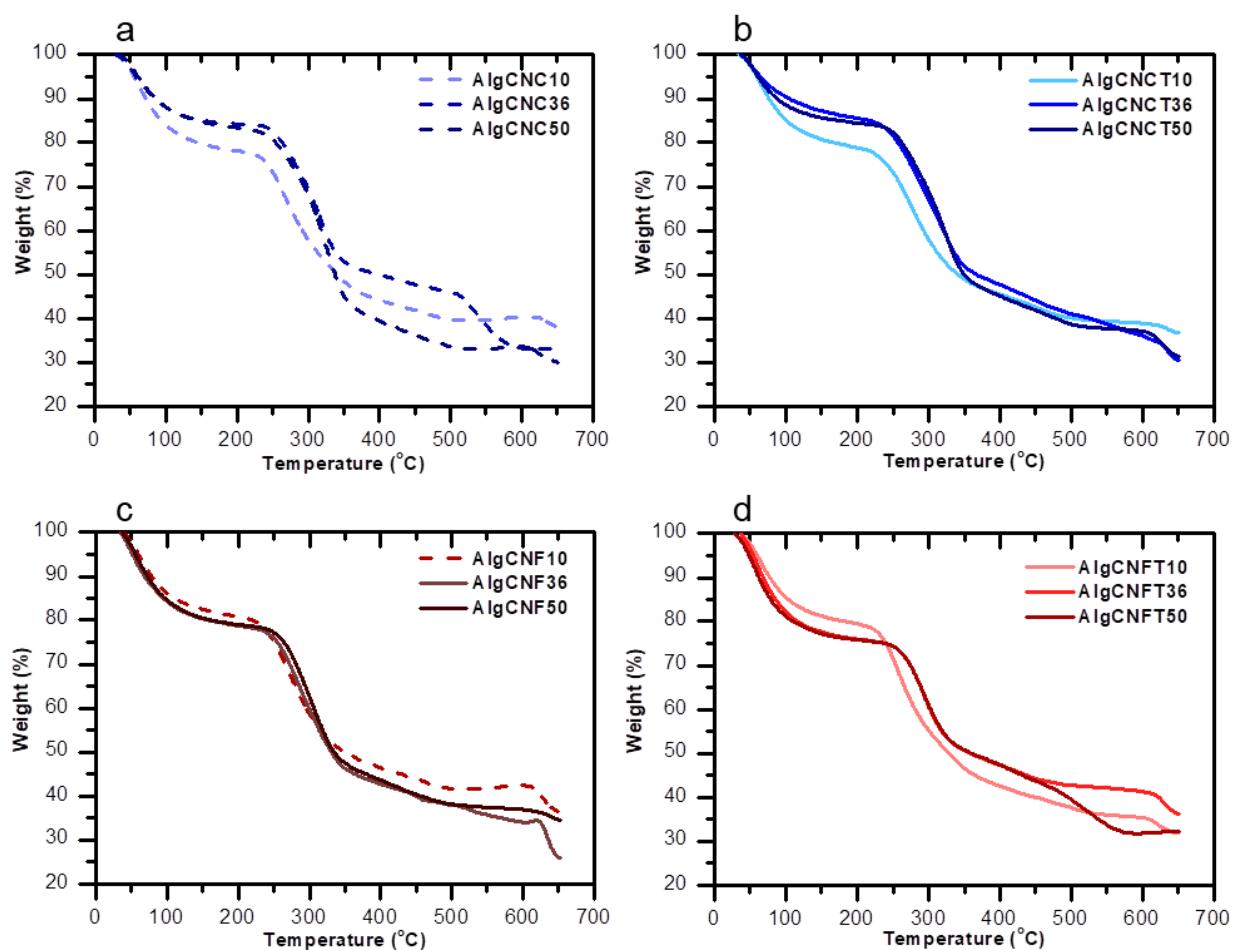


Figure S5: Influence of the nanocellulose concentration on the thermal stability of aginate-gels: (a) CNC (10, 36 and 50 wt%); (b) CNCT (10, 36 and 50 wt%); (c) CNF (10, 36 and 50 wt%); (d) CNFT (10, 36 and 50 wt%).