gels

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Supplementary

Impact of Glucose on the Nanostructure and Mechanical Properties of Calcium-Alginate Hydrogels

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Citation: Lopez-Sanchez, P.; Assifaoui, A.; Cousin, F.; Moser, J.; Bonilla, M.R. Impact of Glucose on the Nanostructure and Mechanical Properties of Calcium-Alginate Hydrogels. *Gels* **2022**, *8*, 71. https://doi.org/10.3390/gels8020071

Academic Editors: Maria Valentina Dinu

Received: 7 December 2021
Accepted: 18 January 2022
Published: 22 January 2022

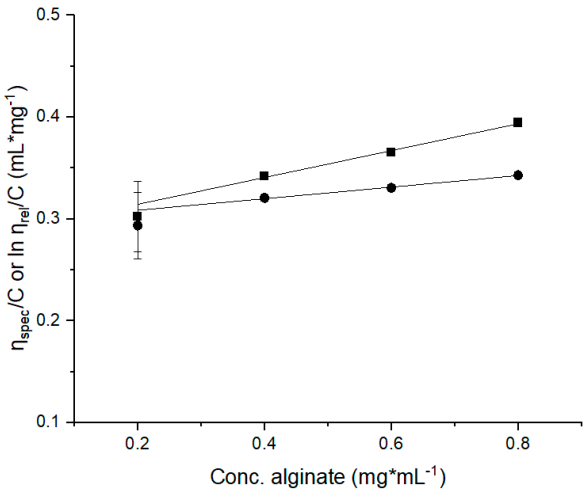

Figure S1. Huggins and Kraemer plots constructed for the determination of intrinsic viscosity of alginate. Huggins (η_{spec}/C) [squares], and ln η_{rel}/C [circles] against the concentration of alginate in 0.1 M NaCl. All measurements were performed at T = 25 °C. The error bars correspond to the standard deviation from 5 runs. Note that above a concentration of 0.2 mg/mL the errors bars are very small and not visible at the selected scale.

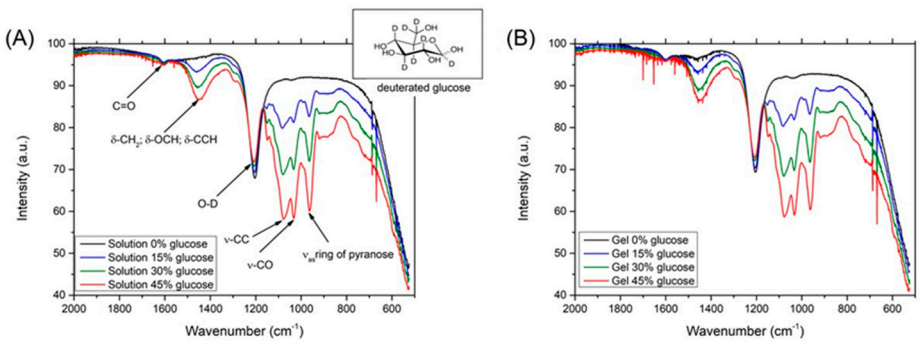

Figure S2. FTIR spectra of alginate solution (**A**) and calcium-alginate gels (**B**) with different concentrations of deuterated glucose (0, 15, 30 and 45 wt %) Notice that typical alginate peaks are very weak in 0% glucose due to low concentration of the sample.

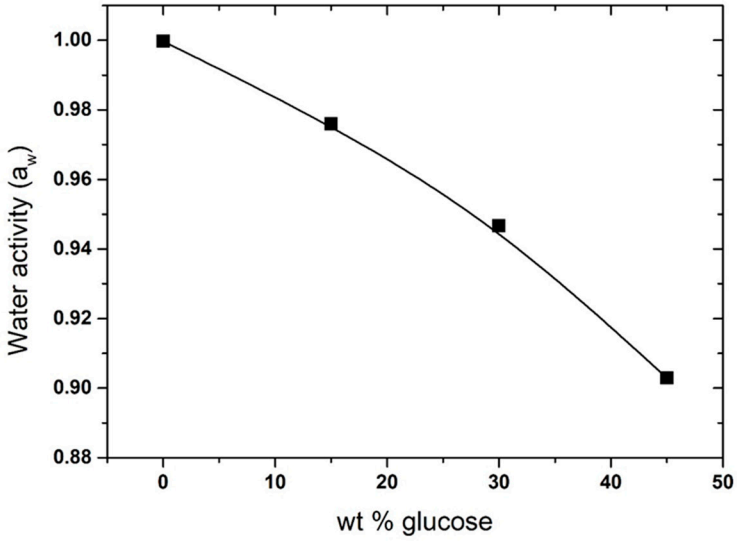

Figure S3. Evolution of the water activity (aw) for alginate solutions with different glucose concentrations (0, 15, 30 and 45 wt %). Line is a guide for the eye.

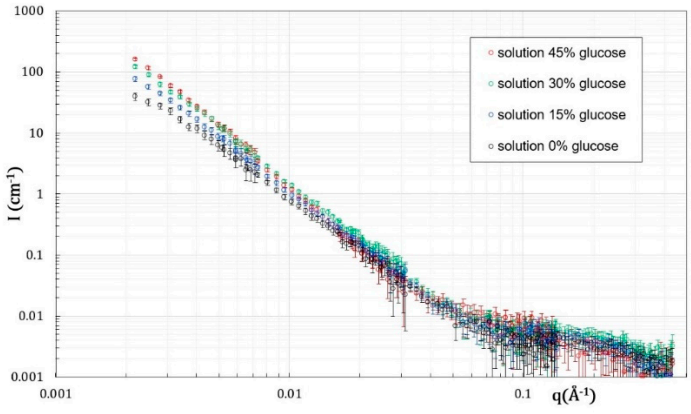

Figure S4. SANS scattering curves for alginate/deuterated glucose solutions prepared in D2O. Unshifted curves. Errors bars are calculated from standard deviation.

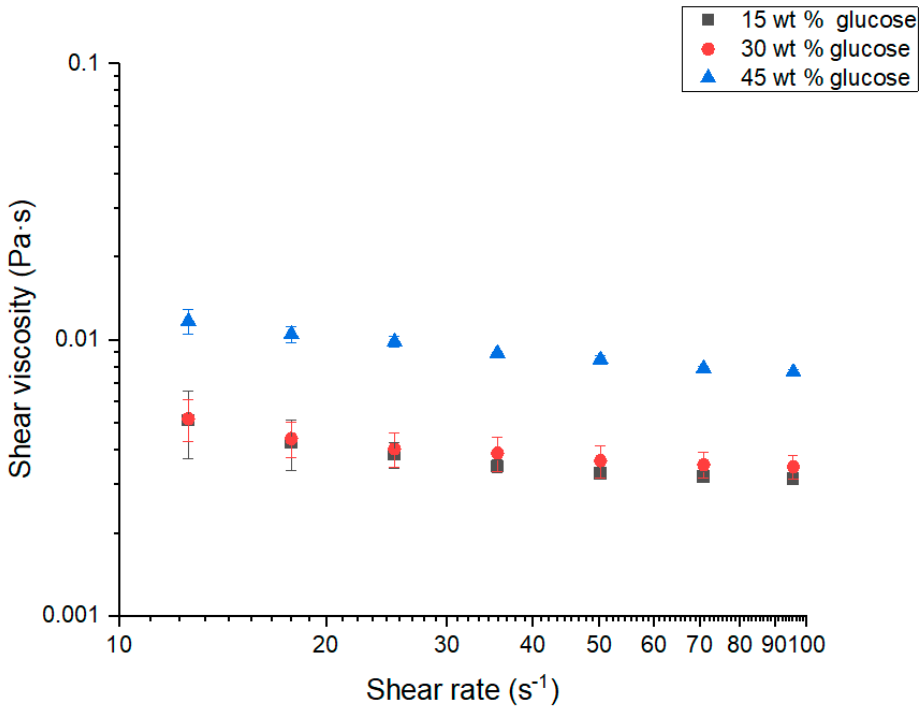

Figure S5. Shear viscosity of glucose solutions at different concentrations (15, 30 and 45 wt %). Error bars represent standard error of two replicates.