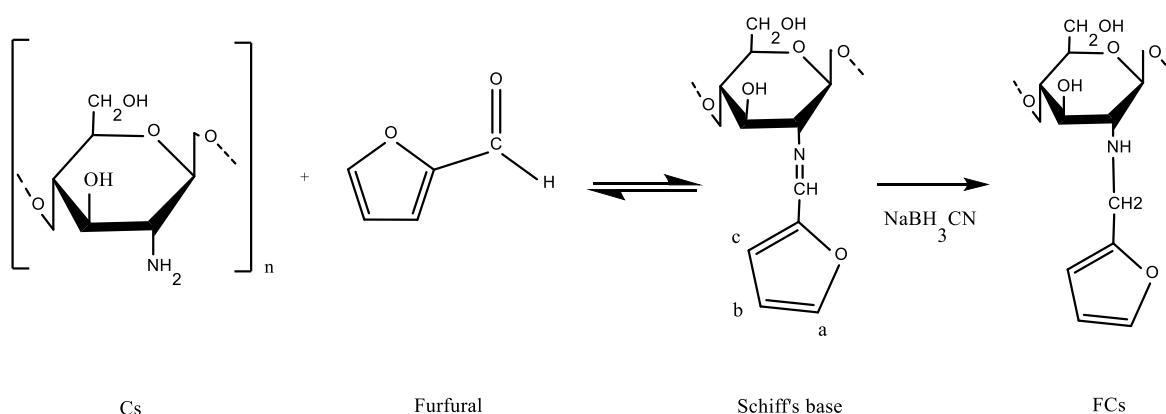*Article*

Chitosan Hydrogels Based on the Diels–Alder Click Reaction: Rheological and Kinetic Study

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[2] Facultad de Química, Universidad de la Habana, Vedado 10400, La Habana, Cuba; cpeniche2015@yahoo.com
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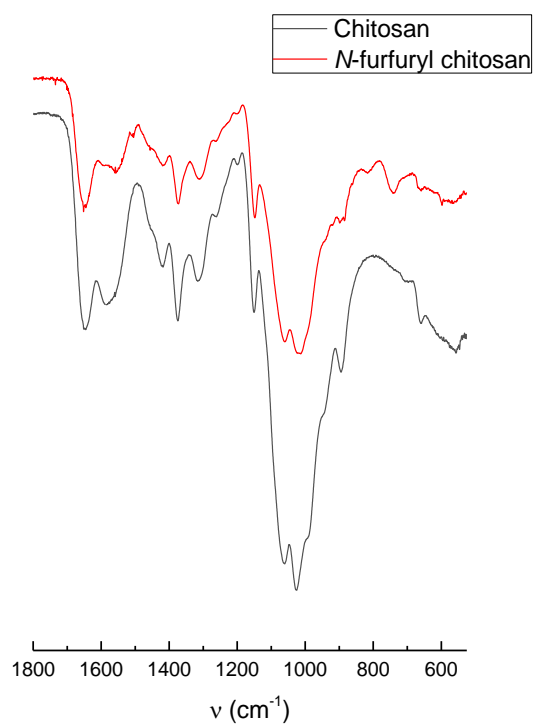
Scheme S 1. Synthesis of *N*-furfuryl chitosan.

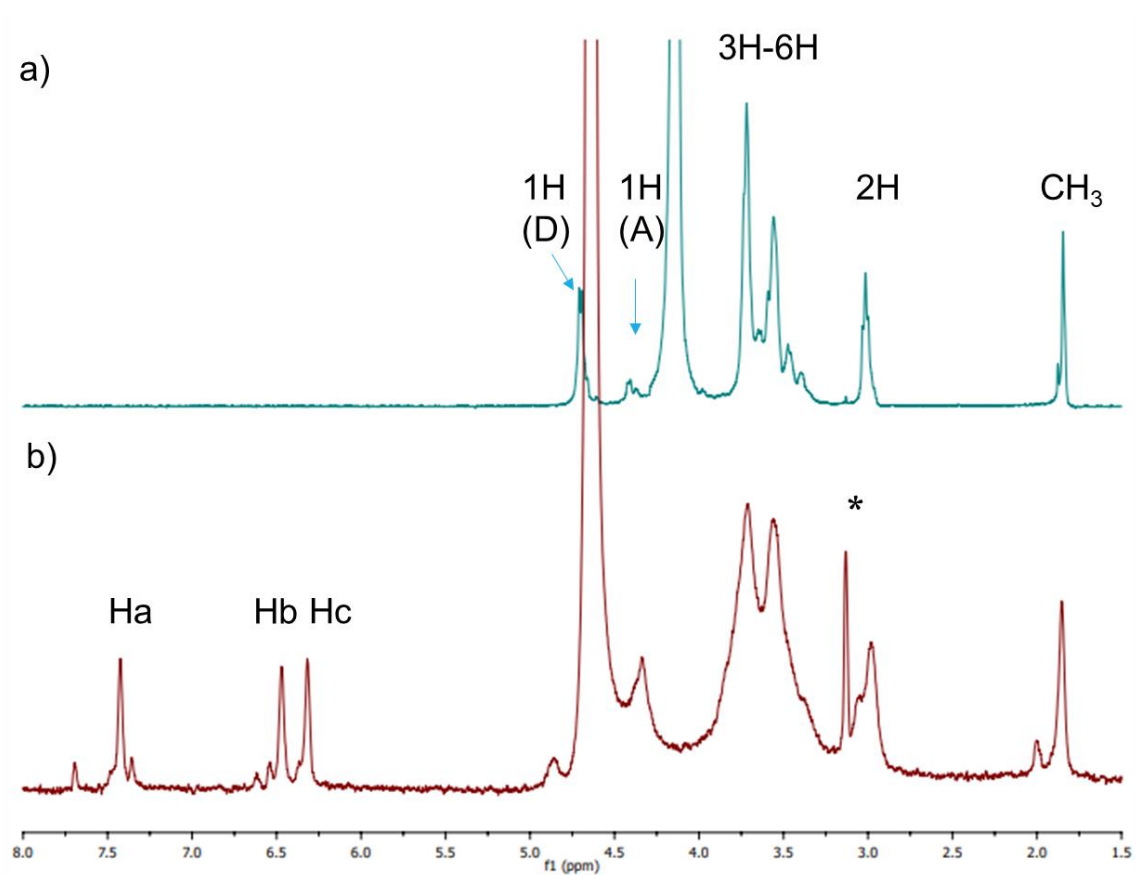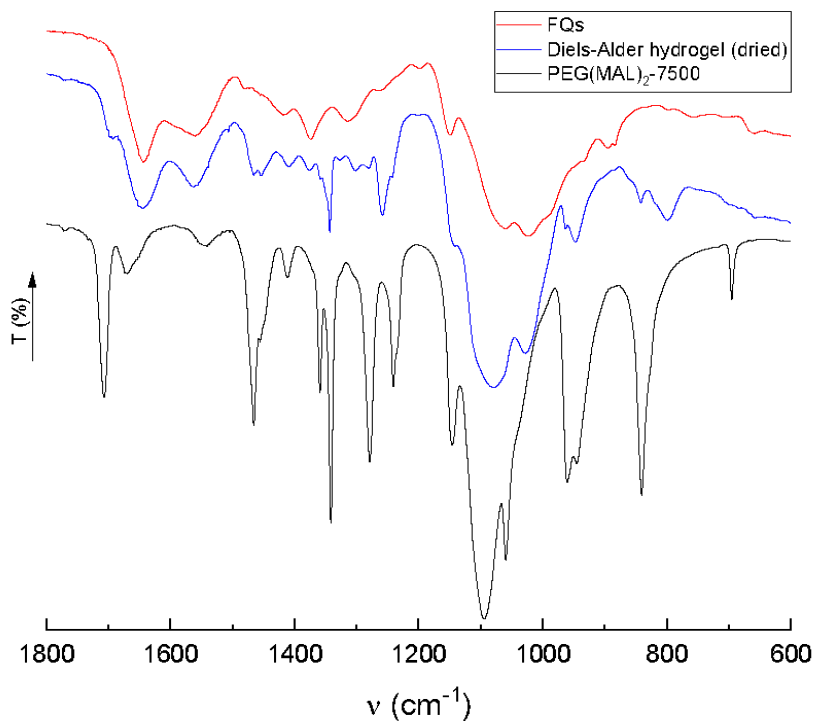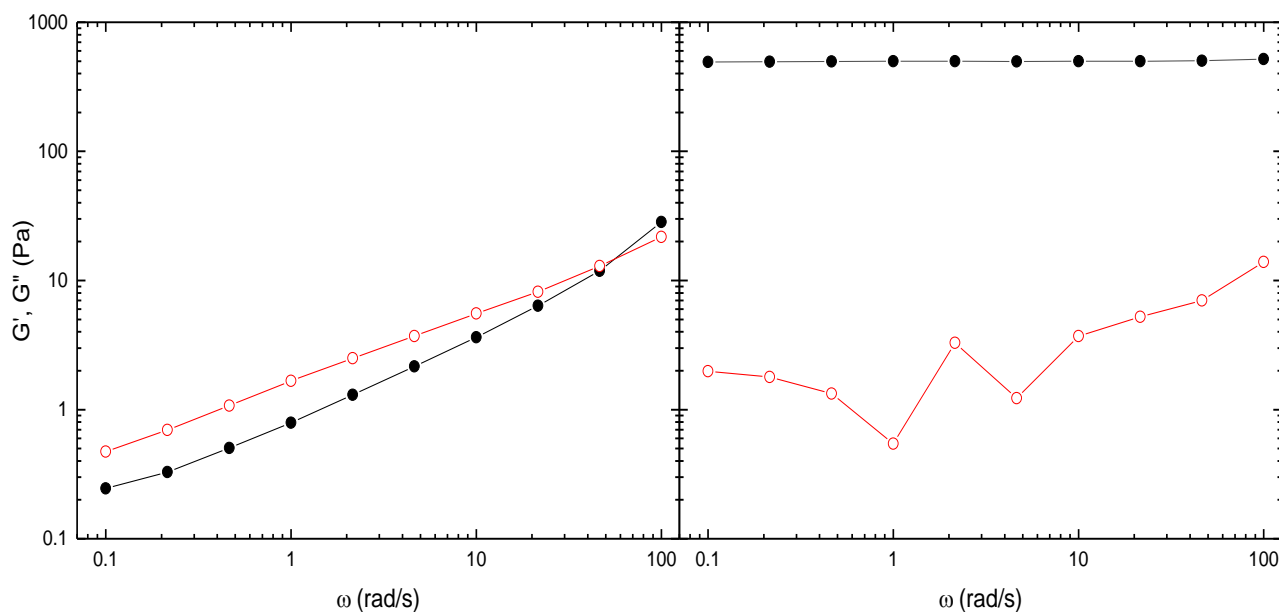**Figure S1.** FT-IR spectra of chitosan and *N*-furfuryl chitosan.

Figure S2. ¹H NMR spectra of (**a**) chitosan and (**b**) *N*-furfuryl chitosan.

Figure S3. FTIR spectra of the *N*-furfuryl chitosan, PEG-bismaleimide and Diels–Alder cycloadduct.

Figure S4. Mechanical spectra at 25 °C of the system of *N*-(furfuryl)-chitosan (1 %-*w/w*) and PEG(mal)$_2$-7500 with R = 0.25 in 2% acetic acid a) before gelation and b) after gelation at 50 °C. G′, closed symbols, and G′′, open symbols.
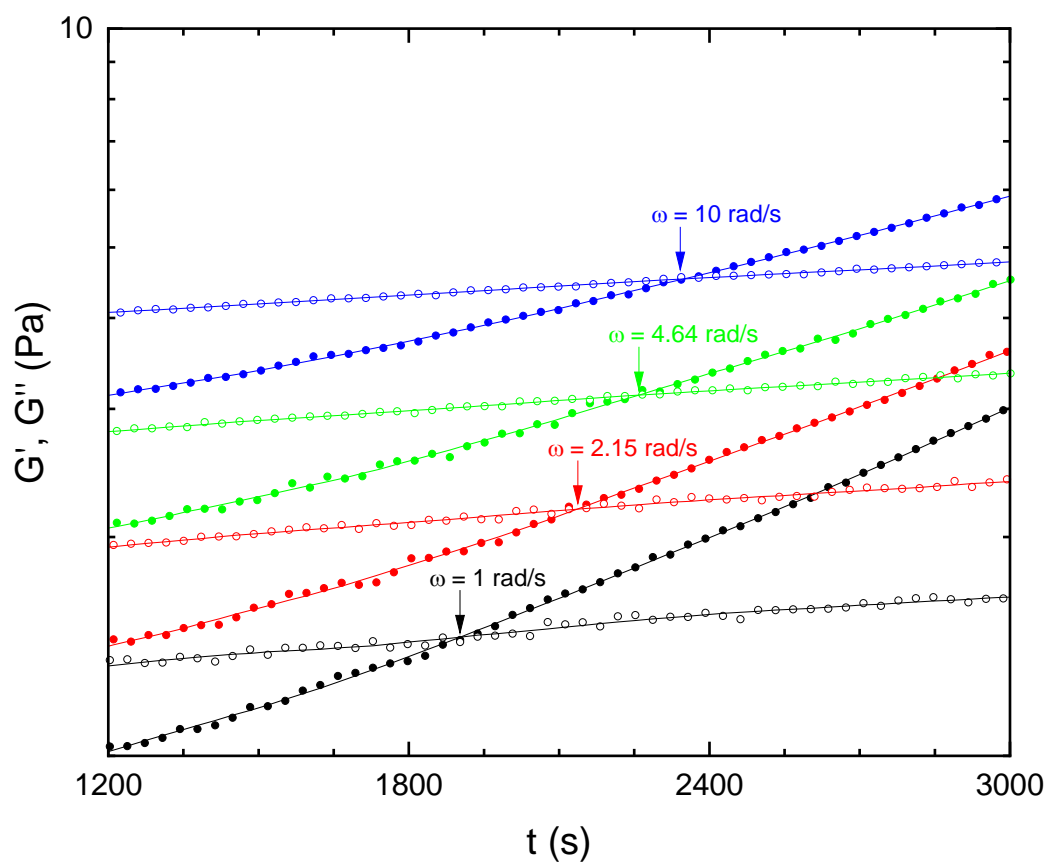
Figure S5. Storage and loss moduli as a function of the reaction time of the gelation process at 50 °C. *N*-furfuryl chitosan (21% degree of substitution) and PEG(mal) 2 -7500 dissolved in 2% acetic acid. Curves at different frequencies as marked in the graph. The frequency-dependence of moduli crossover point is obvious. Polymer concentration: 1 wt.%, R = 0.25.