fibers

MDPI

SUPPLEMENTARY MATERIALS:

A Spectroscopic Study of Solid-Phase Chitosan/Cyclodextrin-Based Electrospun Fibers

Chen Xue and Lee D. Wilson *

Department of Chemistry, University of Saskatchewan, 110 Science Place, Saskatoon, SK, S7N 5C9, Canada; chx257@mail.usask.ca

* Correspondence: lee.wilson@usask.ca; Fax: +1-306-966-4730; Tel: +1-306-966-2961

Received: 1 April 2019; Accepted: 16 May 2019; Published: 22 May 2019

Experimental Methods

^{13}C solid state NMR Spectroscopy

^{13}C solid state NMR spectra were obtained with a Bruker AVANCE III HD spectrometer equipped with a 4 mm DOTY CP-MAS (cross-polarization with magic angle spinning; cp-mas) solids probe operating at 125.77 MHz (^{1}H spectral frequency at 500.23 MHz). The ^{13}C CP-TOSS (Cross-polarization with total suppression of spinning sidebands) spectra were obtained at a spinning speed of 6 to 7.5 kHz, a ^{1}H 90° pulse of 3.5 μs, variable contact time (0.75 to 3 ms) with a ramp pulse on the ^{1}H channel, and 1000-4000 accumulated scans with a recycle delay of 2 s for all samples.

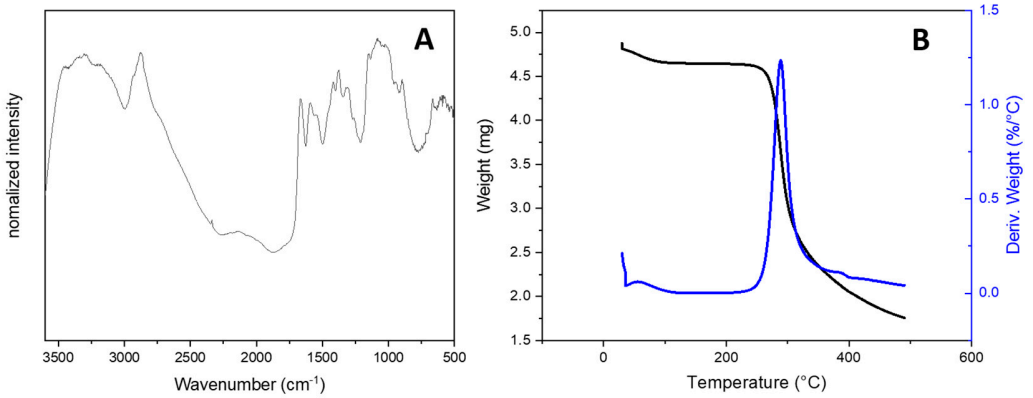

Figure S1. FT-IR spectrum (A) and DTG plot (B) of pristine chitosan.

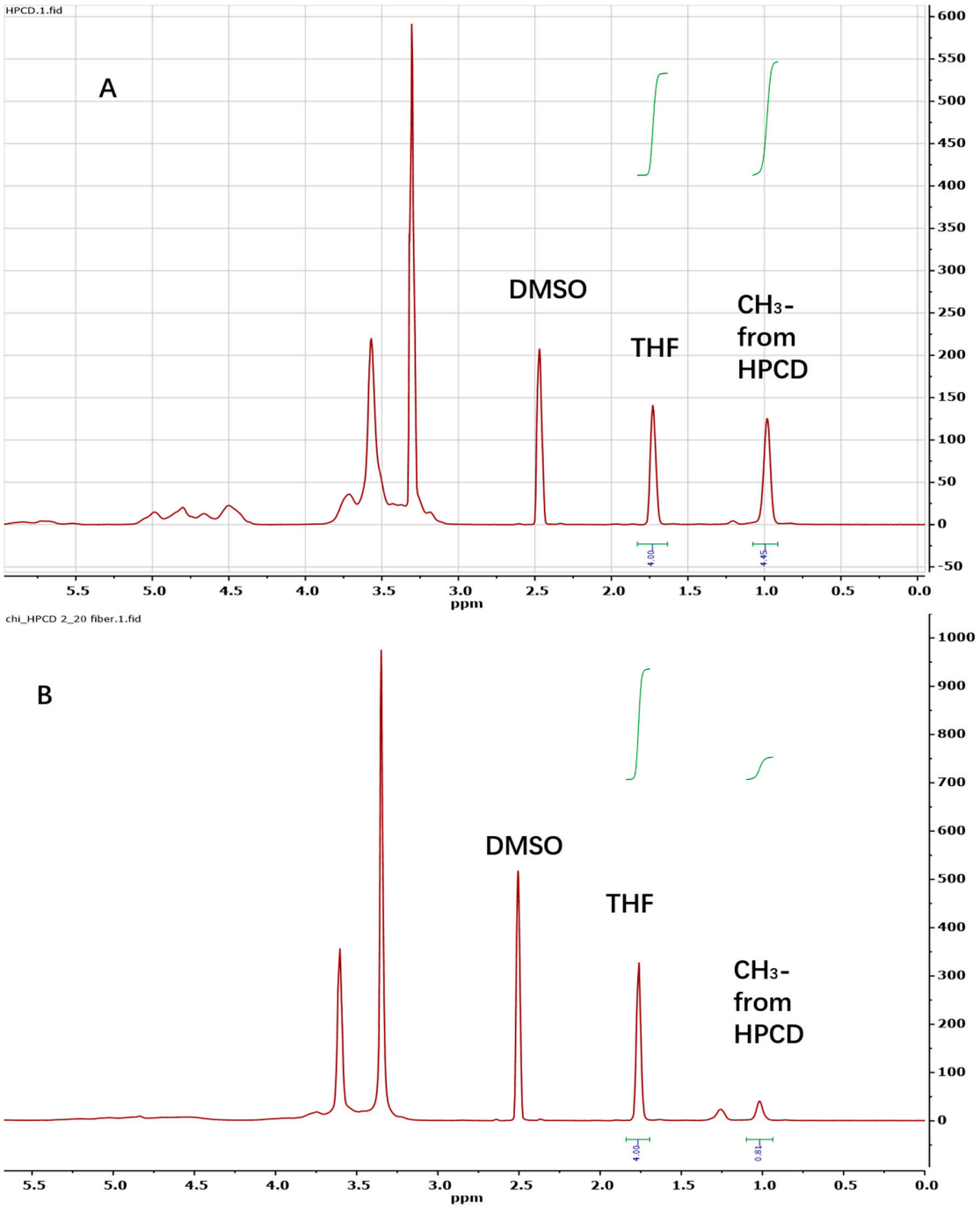

Figure S2. ^{1}H NMR spectra of pure HPCD (**A**) and Chi:HPCD 2:20 fiber (**B**) prepared in 1% (w/w) THF/DMSO-d_6 solution for HPCD content determination.

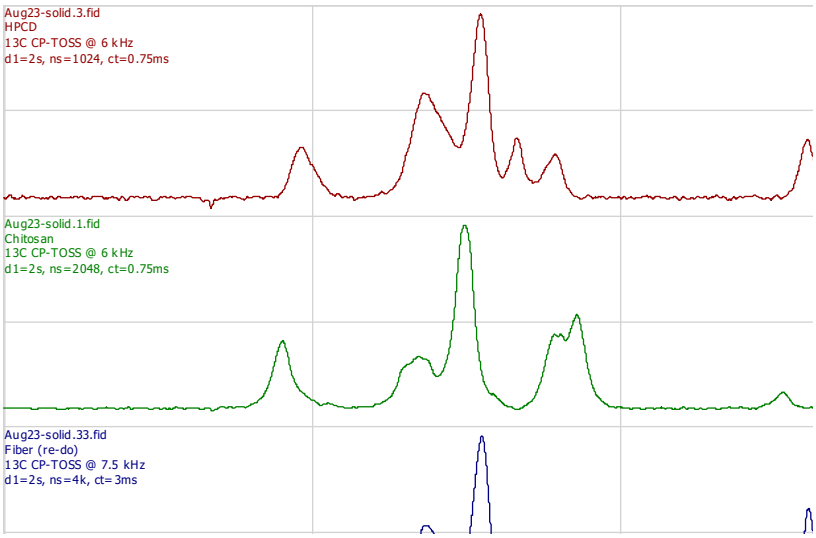

Figure S3. Solid-state 13C CP-TOSS NMR spectra of HPCD (A), Chitosan (B), and Chi:HPCD (C) 2:50 fiber (from top to bottom, respectively).