Electrical conductivity, thermo-mechanical properties and cytotoxicity of Poly(3,4-ethylenedioxythiophene):poly(styrene sulfonate) (PEDOT:PSS)/sulfonated polyurethane blends

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SUPPLEMENTARY INFORMATION

NMR Data

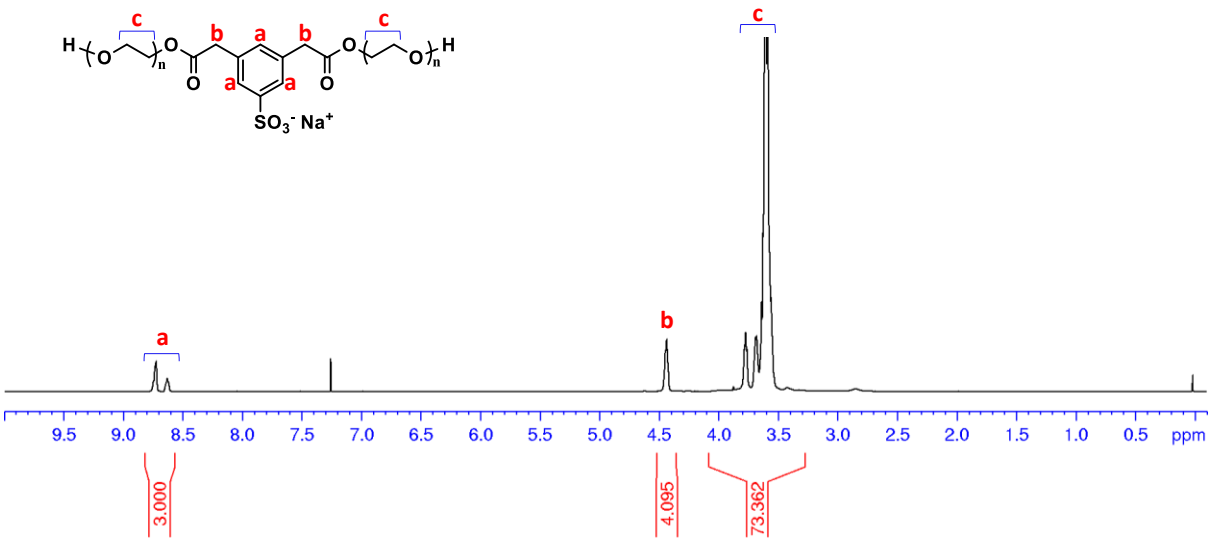

Figure S1: ^{1}H NMR of sulfonated polyol.

FTIR Plots

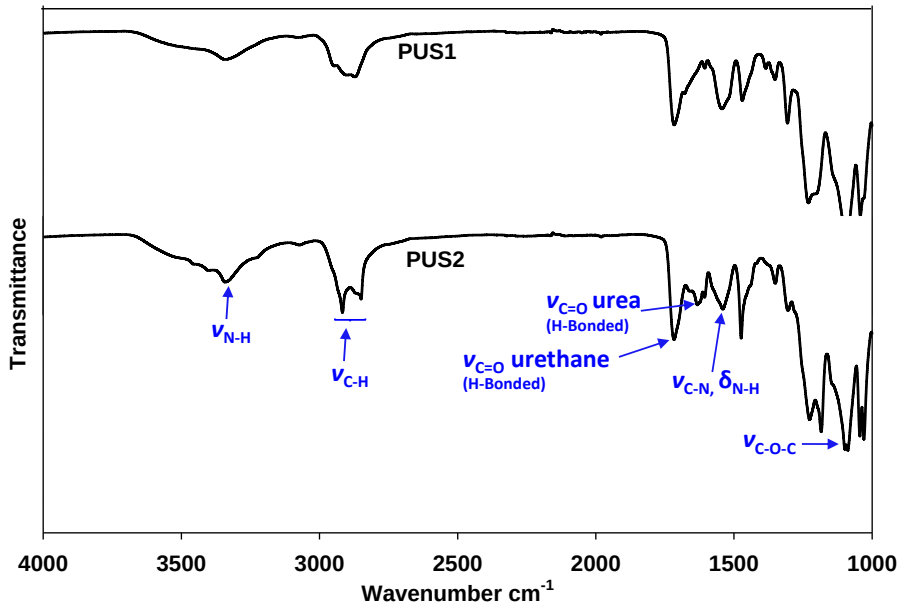

Figure S2: FTIR transmittance spectra of sulfonated polyurethanes (ν = stretching, δ = bending).

Figure S2 shows the characteristic FTIR transmittance plots of the synthesized PUS in the wavelength range of 1000-4000 cm^{-1}. A band around 1540 cm^{-1} corresponding to urethane N-H bending and C-N stretching confirmed the formation of urethane linkage in both polyurethanes. In agreement with literature, hydrogen bonded C=O stretching was observed at 1716 cm^{-1} for PUS1 and at 1717 cm^{-1} for PUS2. A peak corresponding to hydrogen bonded urea C=O stretching at around 1632 cm^{-1} was also present. This peak was more prominent in PUS2 than in PUS1. Furthermore, the absence of a peak at 2250-2270 cm^{-1} corresponding to free isocyanate confirmed the complete consumption of starting materials in both polyurethanes. Furthermore, the two bands observed at 2917 and 2850 cm^{-1} for PUS2 (broad band at ~2872 cm^{-1} for PUS1) were attributed to asymmetric and symmetric stretching, respectively, of the C-H bond of the PEG soft segments. The bands around 1088-1100 cm^{-1} were attributed to C-O-C stretching of ether from PEG and CO-O-C stretching from urethane.

Cytotoxicity Data

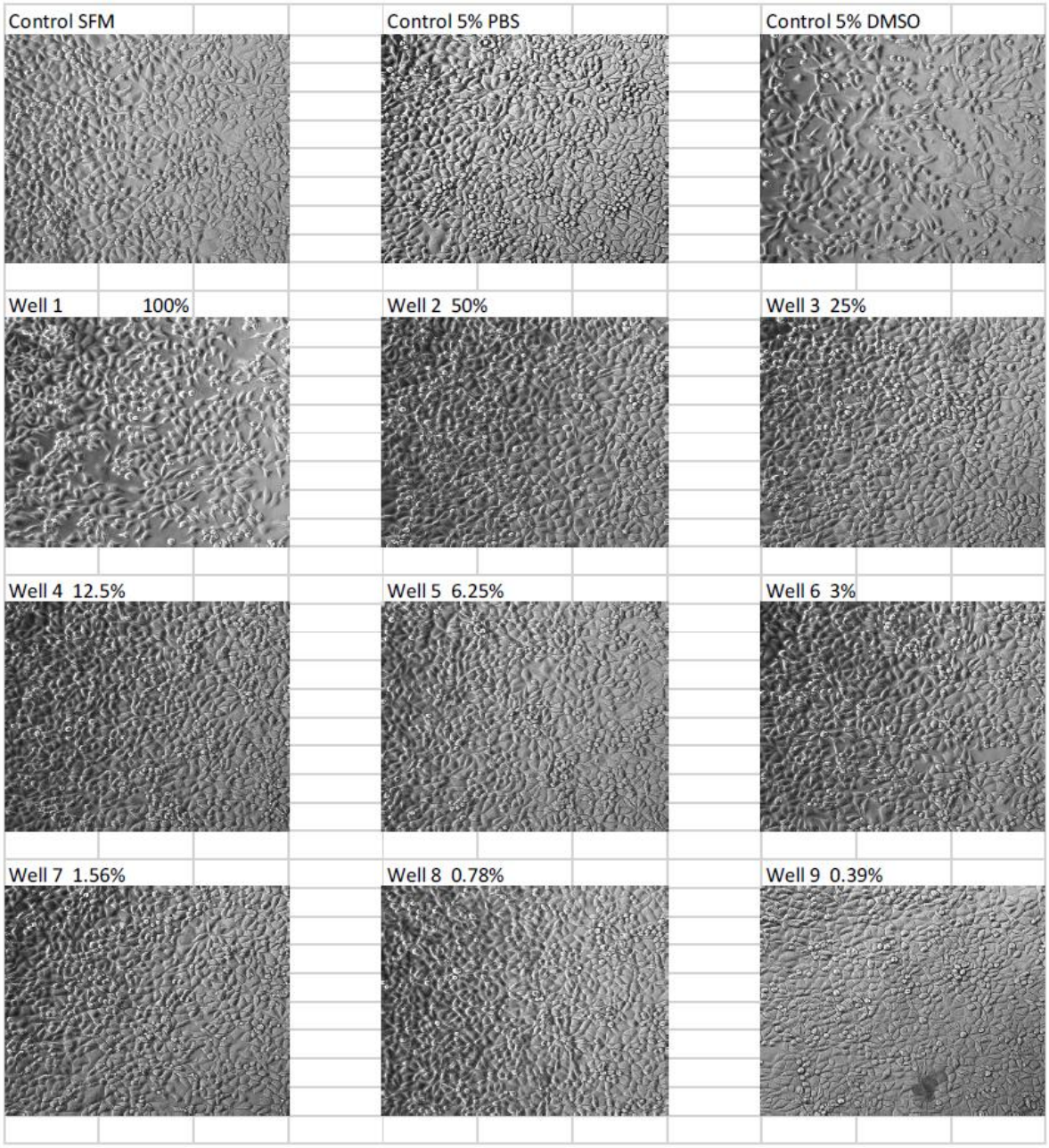

Figure S3: Representative images showing cell morphology after exposure to a diluting series of the PUS2 extract