Electronic Supplementary Material (ESI) for RSC Applied Polymers.

Triple click chemistry for crosslinking, stiffening, and annealing of gelatin-based microgels

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Supplementary information

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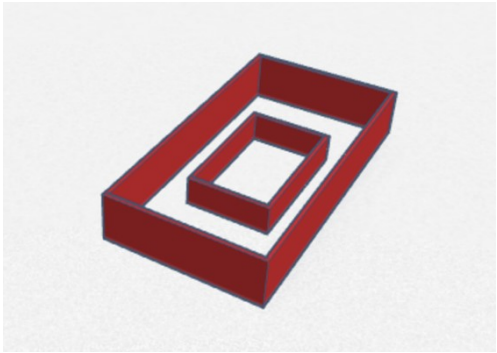

Figure S1. Screenshot of the STL file for 3D printing of mold/reservoir to create TC-MAP gel for cell culture. TC-MAP gel was deposited in the center mold (width x length x height = 5.6 mm x 9.6 mm x 4 mm), while the outer space served as a reservoir for cell culture media (width x length x height = 11 mm x 22 mm x 7 mm). Wall thickness = 0.25 mm.

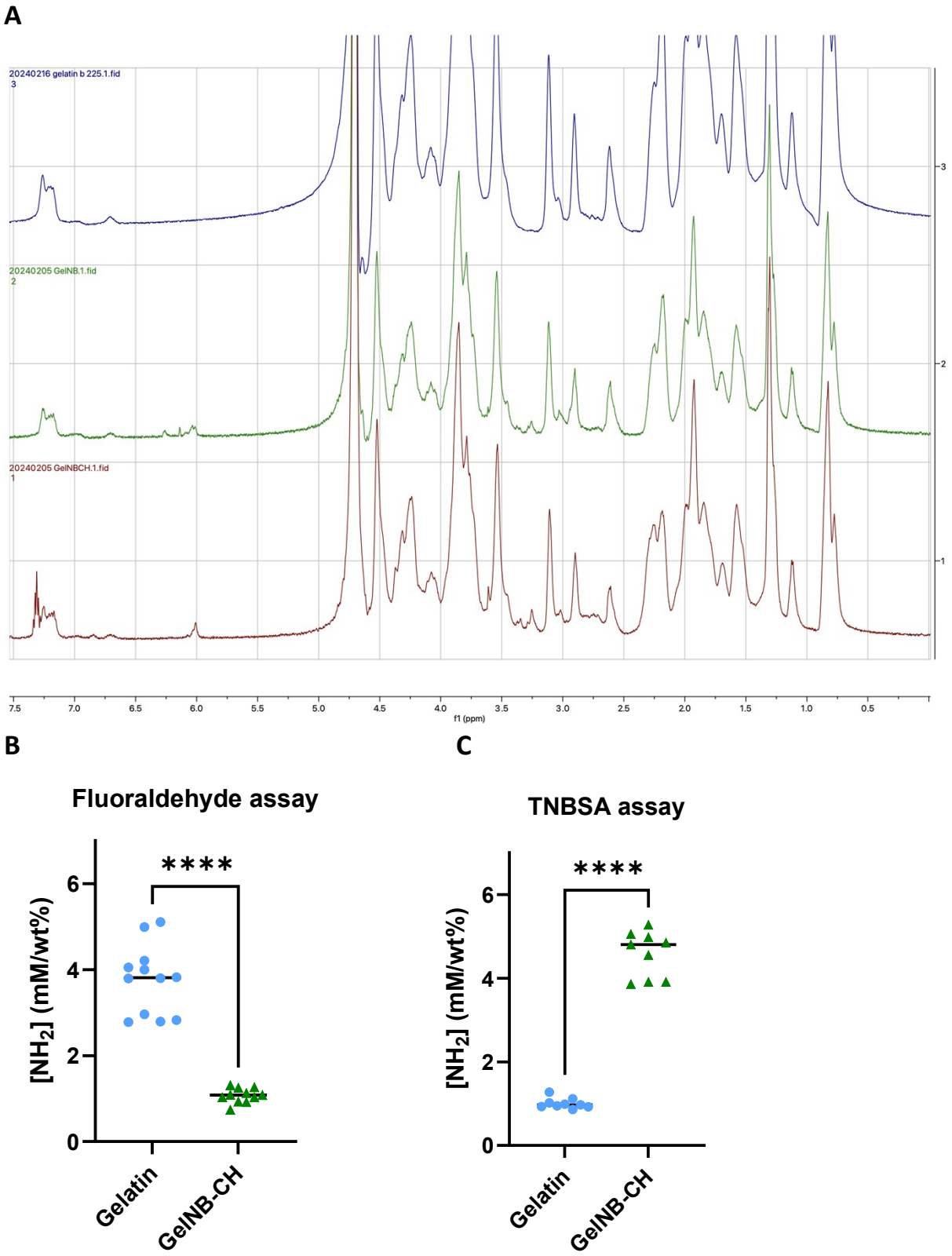

Figure S2. (A) NMR spectra of gelatin, GelNB, and GelNB-CH. The peak at 6 ppm is assigned to the vinyl protons on the norbornene group, and the peak at 2.2 ppm is assigned to glutamic acid and hydroxyproline.[7] (B) Fluoraldehyde assay results for amine concentrations on gelatin and GelNB-CH. (C) TNBSA assay results for acid concentrations on gelatin and GelNB-CH (**** $p<0.0001$).

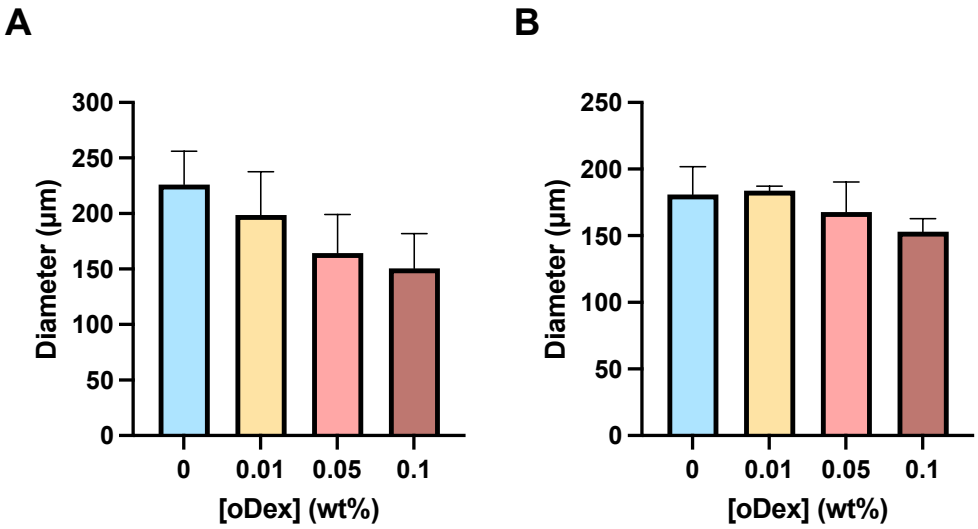

Figure S3. Changes of microgel diameters as a function of oDex concentration. (A) Microgels prepared by microfluidic droplet generator. (B) Microgels prepared by the emulsion method. Data represents the average diameters of three independent experiments (N=3, Mean ± SEM). There is no significant statistical difference between any stiffened and non-stiffened microgel size.

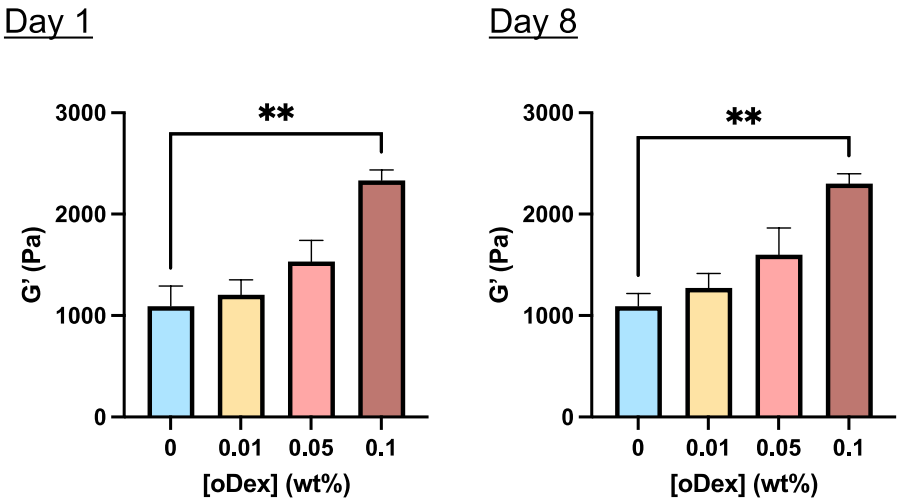

Figure S4. MAP gel bulk stiffness on D1 and D8. Data represents the average moduli of three independent experiments (Mean ± SEM). **: $p < 0.01$.