Supporting Information for

Extrusion-based 3D printing of poly(ethylene glycol) diacrylate hydrogels containing positively and negatively charged groups

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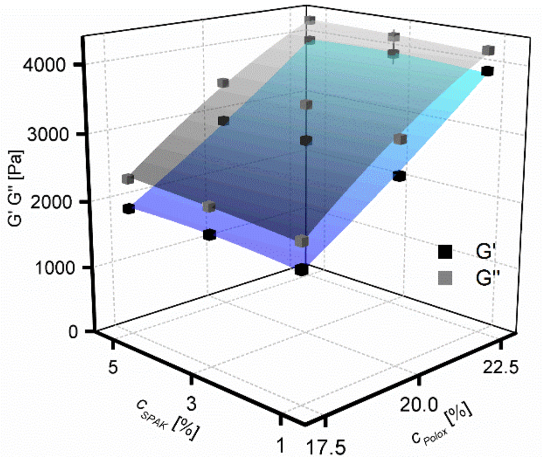
1. Storage and loss moduli of physical hydrogels



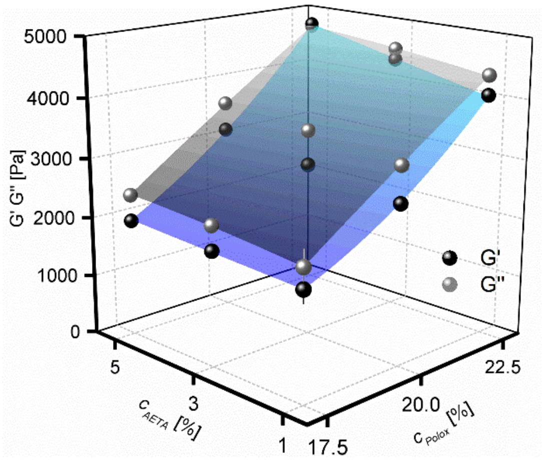


FIGURE S1 Storage moduli G‘ and loss moduli G‘‘ of hydrogel formulations containing SPAK (left) and AETA (right) measured 10 °C above the gel transition temperature. The surface fits to the data are for the guidance of the eye only.

2. Recovered yield of Poloxamer 407 upon hydrogel washing

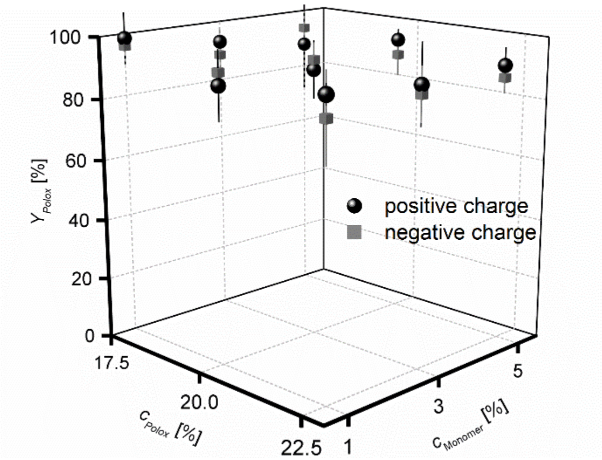


FIGURE S2 Recovered yield of Poloxamer 407 upon washing of the hydrogels.

3. Temperature-dependent rheology of hydrogel formulations

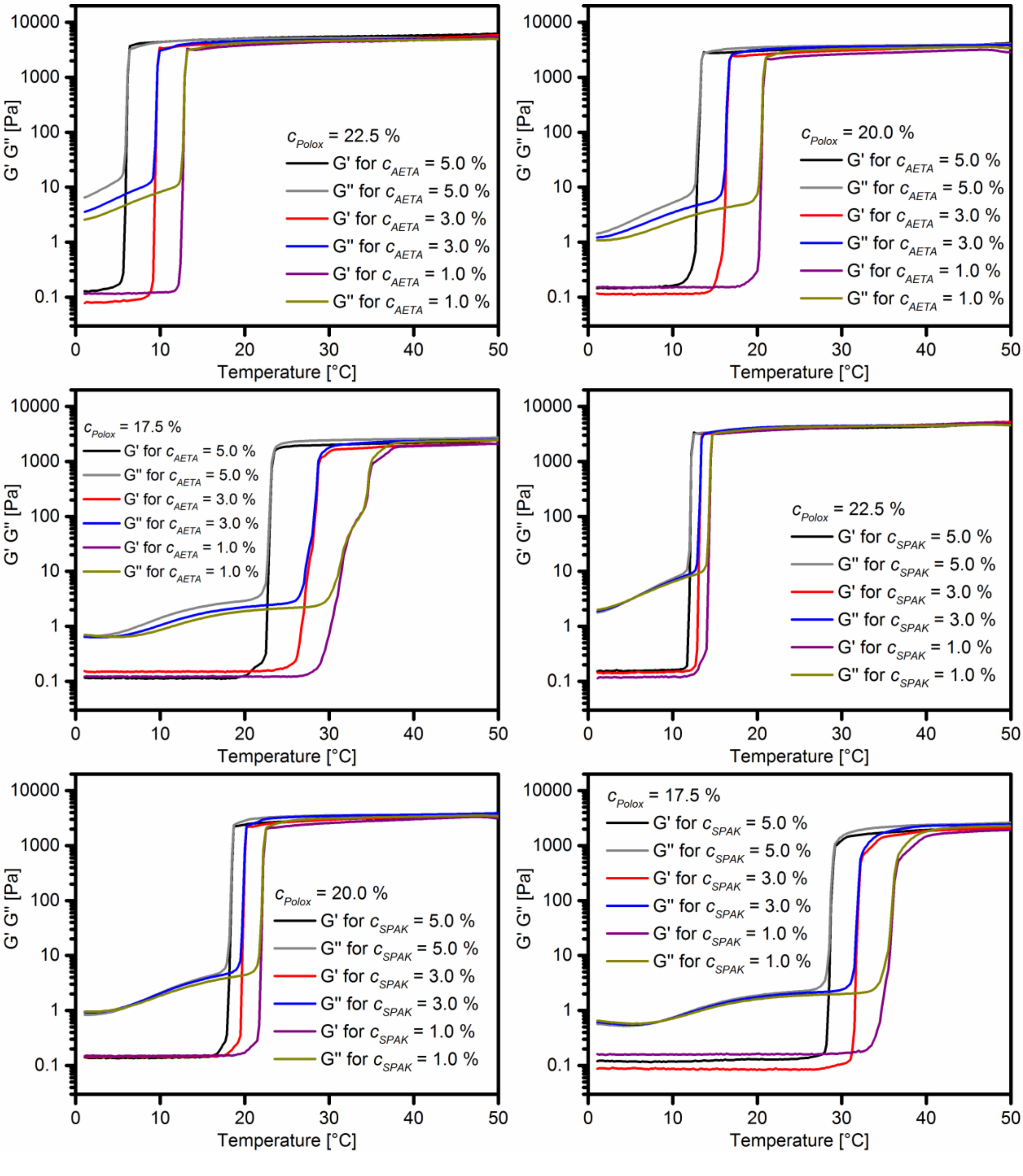


FIGURE S3 Temperature-dependent rheological measurements of all hydrogel formulations used in this study.

4. Shear stress during 3D printing according to the Herschel-Bulkley model

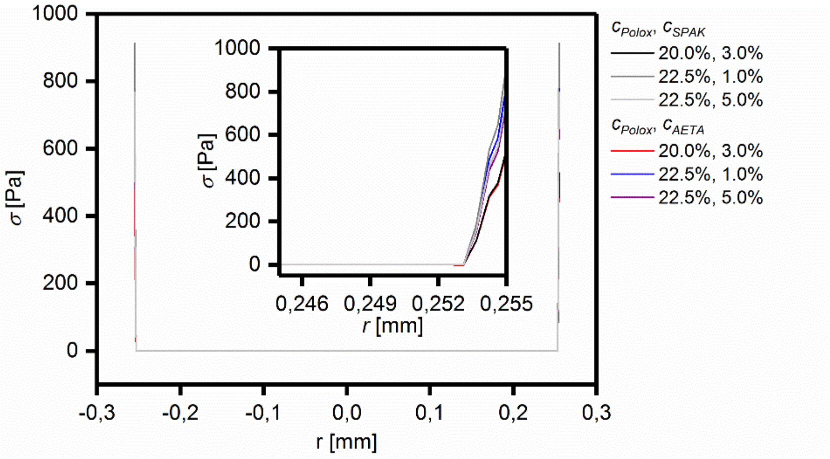


FIGURE S4 Calculated shear stress profiles of the different Herschel-Bulkley liquids from the manuscript which have a c_{Polox} ≥ 20%.

5. Viscosity recovery of hydrogel formulations after shearing

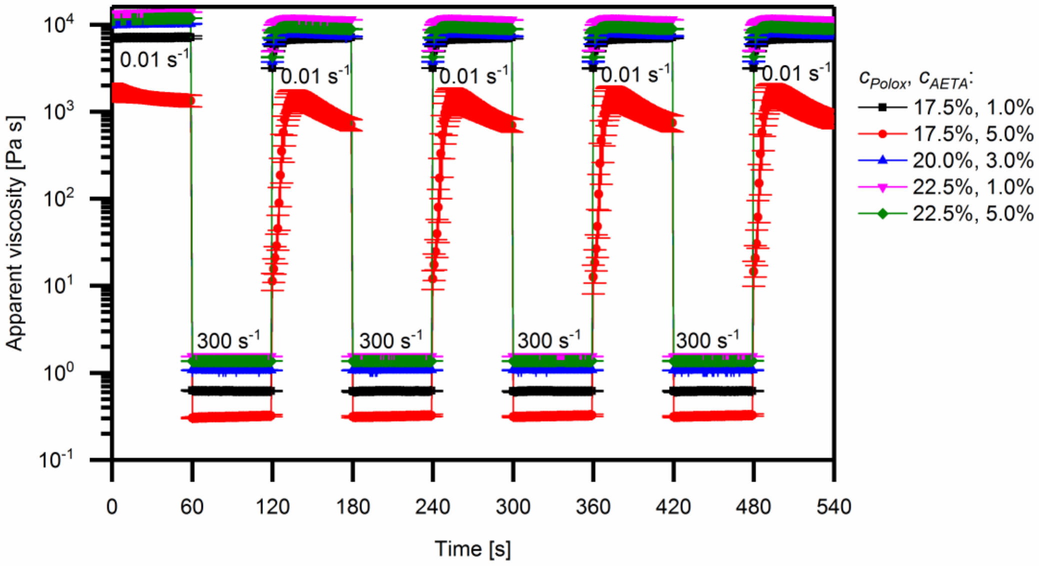


FIGURE S5 Viscosity recovery of hydrogel formulations containing AETA in an experiment with sudden changes between low shear rates (0.01 s^{-1}) and high shear rates (300 s^{-1}).

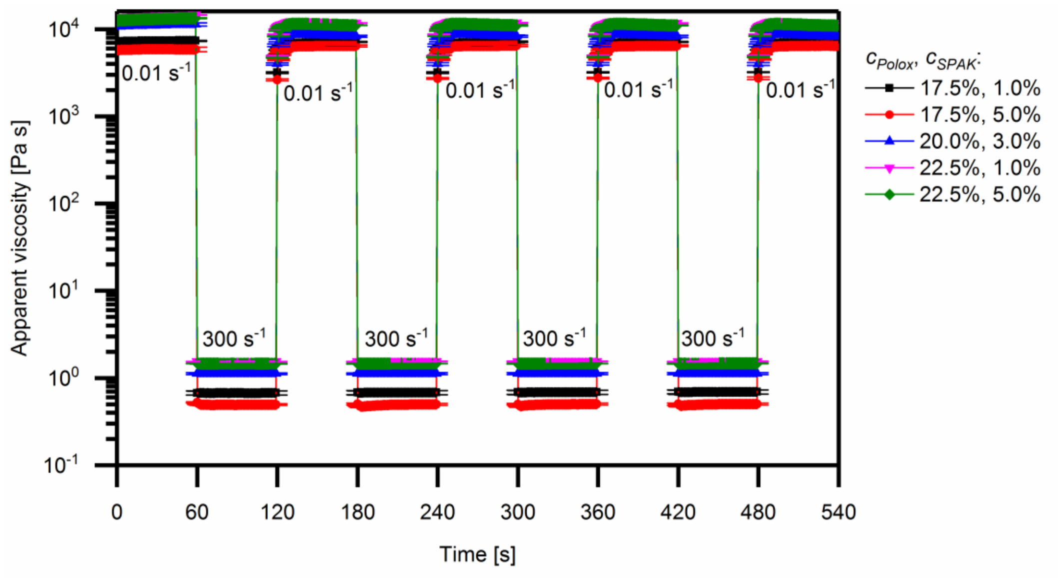


FIGURE S6 Viscosity recovery of hydrogel formulations containing SPAK in an experiment with sudden changes between low shear rates (0.01 s^{-1}) and high shear rates (300 s^{-1}).