

**Non-swellable F127-DA hydrogel with concave microwells for formation of  
uniform-sized vascular spheroids**

Supporting Information

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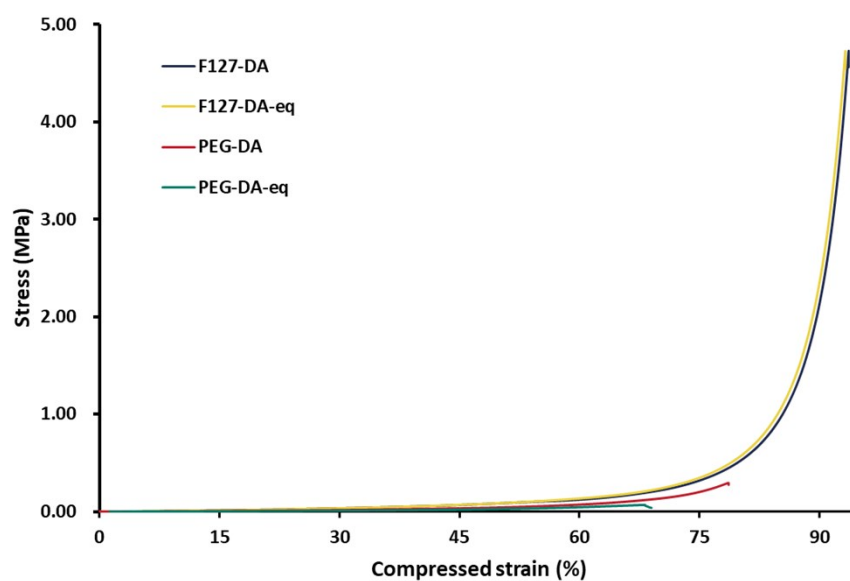
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## Swelling property and mechanical strength of hydrogels

Swelling property of hydrogels was displayed by placing the hydrogel microwell arrays (1 mm × 1 mm × 0.25 mm) in PBS solution at 37 °C with the consideration of cell culture condition. The hydrogels were gently shaken for 24 h and measured to assess the hydrated volume. Diameters of microwells were also measured in the same way.

The mechanical properties of hydrogels as prepared and equilibrated at 37 °C were measured by compressive testing using the Instron Series IX automated Materials System (Zwick/Roell Z020)<sup>22</sup>. Hydrogel cylinders with 12 mm in diameter and 13 mm in height were placed on the center of the lower compression plate at 37 °C with humidity of 50%. The sample was then compressed by the upper plate, by connecting to a 500 N load cell, at a crosshead speed of 2 mm/min. The fracture stress and strain were determined as the nominal stress and strain at the failure point, respectively. Young's modulus was determined as the slope at the 0-0.1 strain range from the stress-strain curve. Measurements were performed six times for each sample.



**Figure S1.** Fracture-strain curve of two hydrogels as prepared and equilibrated