

Supporting Materials

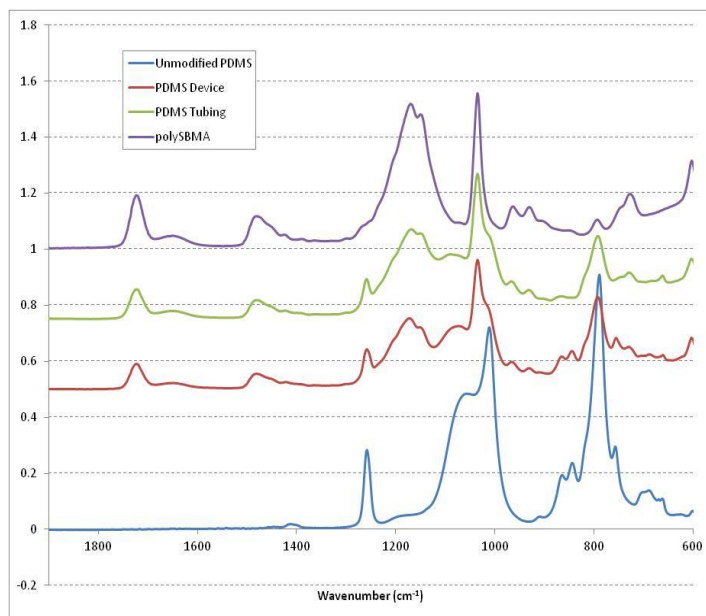
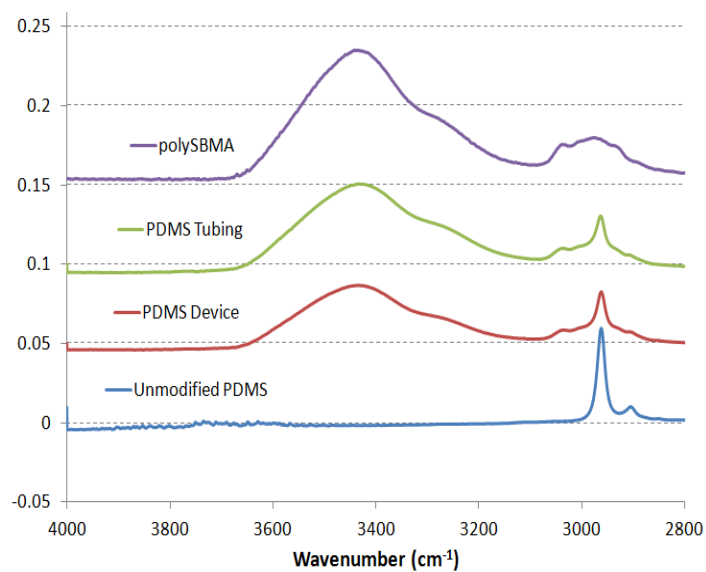


Figure SI1: ATR-FTIR spectra of unmodified PDMS device, betaine-modified device tubing (inner surface), betaine-modified device channel, and homopolymer of SBMA.

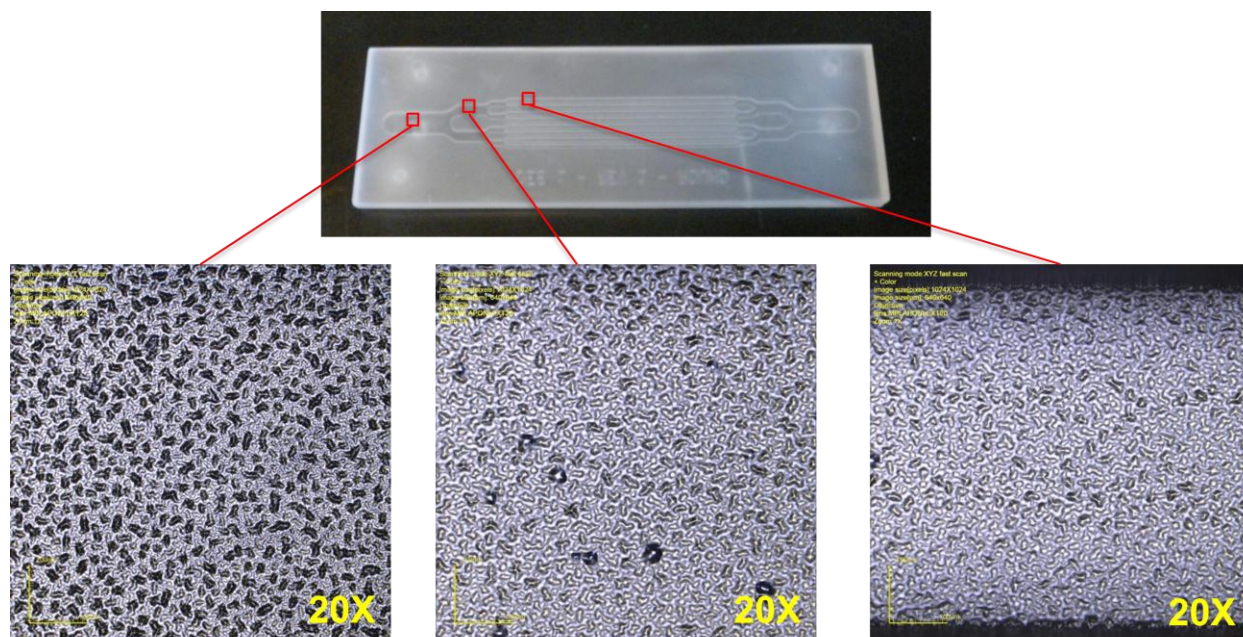
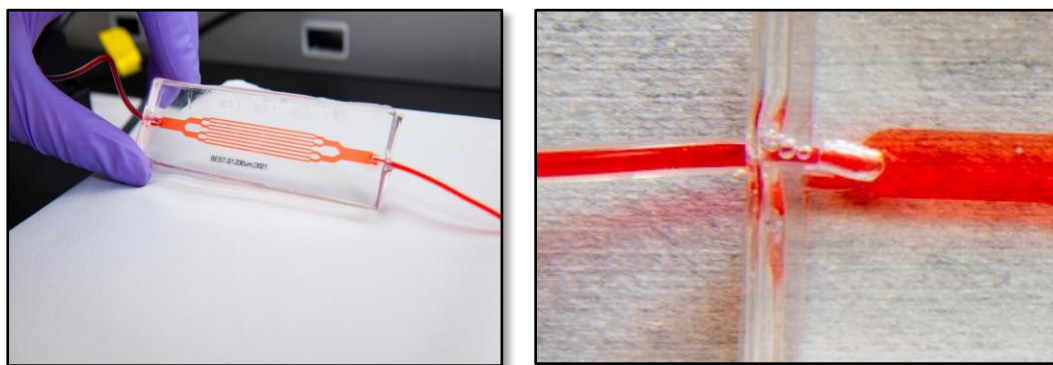


Figure SI2: Laser confocal microscope images of a modified microfluidic device. The modified PDMS surfaces appear rougher due to the dehydration of polySBMA.



(a)

(b)

Figure SI3: (a) Flow test of the microfluidic device, showing a smooth flow pattern through the channels. (b) The only remaining area of flow disturbance is the interconnect point between tubing and inlet channel (likewise in the outlet channel), which may introduce some unmodified defects during surface functionalization and activate thrombus formation. This defect could be addressed by implementing a microfluidic distribution manifold to replace the tubing connection.