Electronic Supplementary Material (ESI) for Lab on a Chip.

Supplementary Information

Hydrogel-driven paper-based microfluidics

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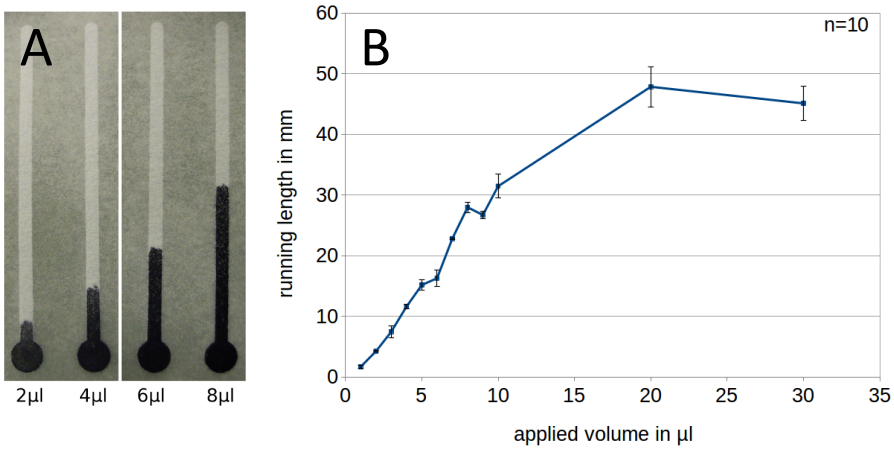

Figure S1. Fluid run length in a paper-based microfluidic channel depending on the applied fluid volume. (A) Images showing a microchannel (48mm long and 2mm wide) that was supplied with different volumes of black ink (linear regime). (B) Fluid run length along the channel shown in (A) as a function of the applied liquid volume. Mean values and standard deviations are shown, measurements were repeated 10 times. For volumes below 10µl the run length increases linear with the applied volume. Above 10µl, the run length saturates due to increased evaporation of the applied liquid.

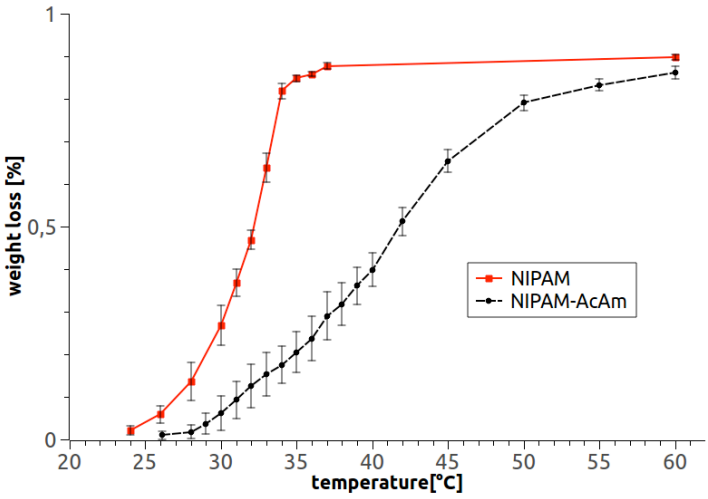

Figure S2. Collapse characteristics of the pure NIPAM hydrogel in comparison to the composite NIPAM-AcAm hydrogel in a bulk experiment. The weight loss due to liquid release is plotted as a function of temperature. Mean values and standard deviations are shown, the measurements were repeated 8 time.