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Electronic Supplementary Information

Title: Ultrahigh-throughput sorting of microfluidic drops with flow cytometry

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Figure S1. FSC-A (Front Scatter-Area) against SSC-A (Side Scatter-Area) log-log plots and FITC channel fluorescence frequency histograms for 10,000 events. Device-made and shaken double emulsions contain 20 μg ml^{-1} FITC-BSA. Fluorescence plots are derived by gating events in defined areas on the FSC-A/ SSC-A plots. Here, we gate two main clusters of events—high FSC-A and SSC-A, which are the double emulsions, and low FSC-A and SSC-A, which are oil drops.

Figure S2. Monitoring fluorescein dye leakage from double emulsions. The left column shows double emulsions made with 5% BSA added to the outer phase and 200 μg ml^{-1} Fluorescein in the inner phase, while the right column shows double emulsions omitting BSA in the outer phase. Fluorescein dye leaks so quickly out of the double emulsions that 20 min after generating them minimal fluorescence is observed when no BSA is added to the outer phase. Scale bars are 50 μm.

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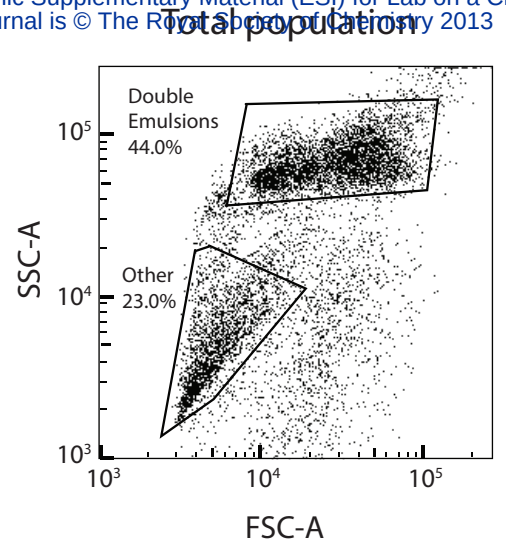

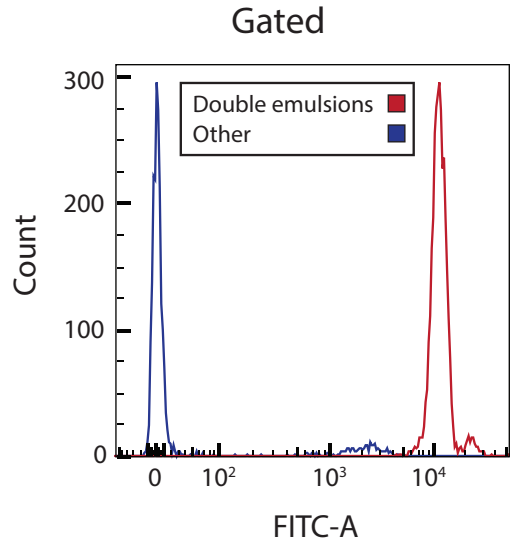

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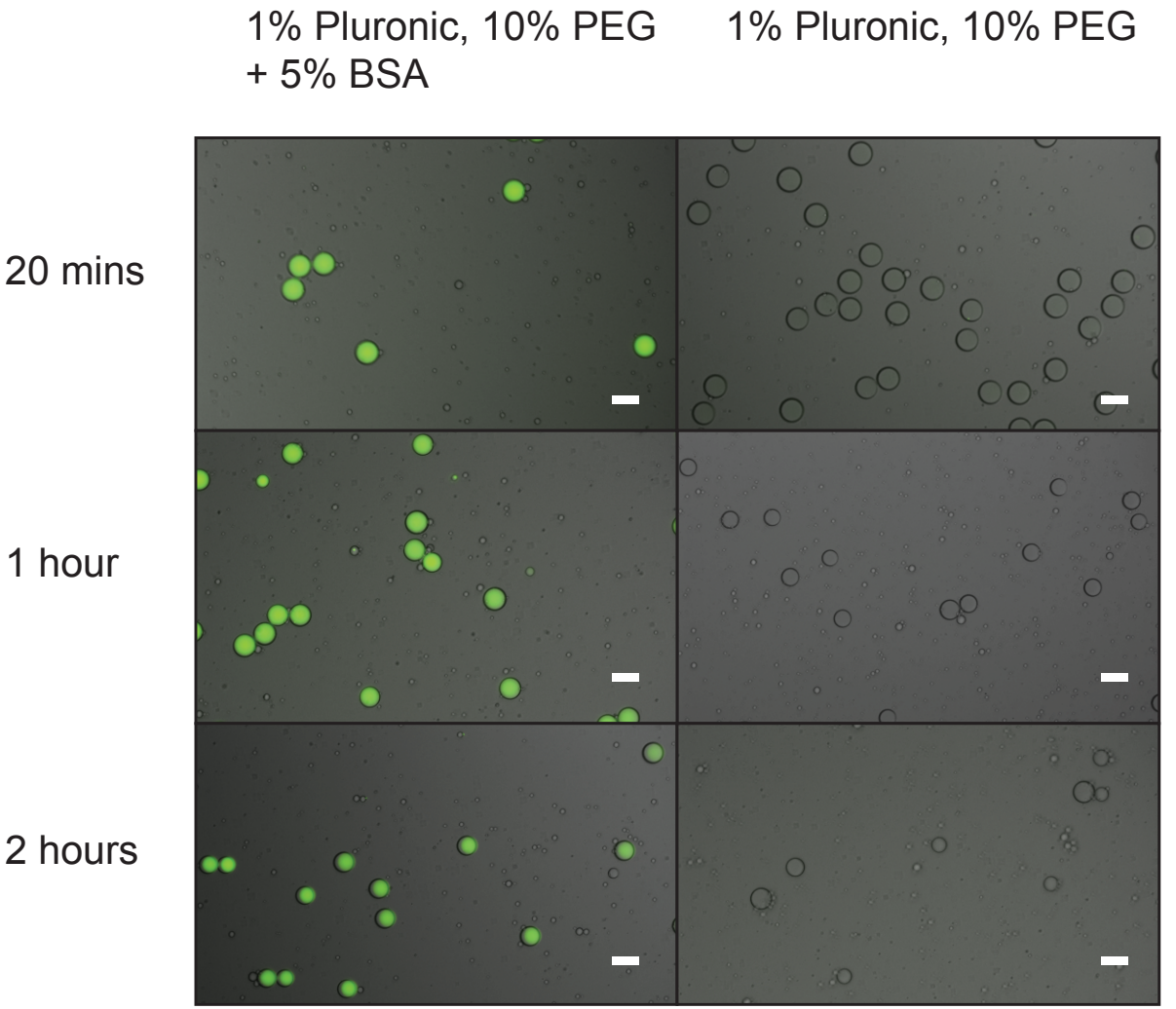

Note: Double emulsions for both sets of experiments were formed with the same set of single emulsion containing fluorescein at 2.5 μM