SUPPORTING INFORMATION FOR

On-chip titration of an anticoagulant argatroban and determination of clotting time within whole blood or plasma using a plug-based microfluidic system

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Movie 1. (file name: merging_juction.avi)

Merging of $CaCl_2$ droplets with the plugs of whole blood. Image acquisition rate was 2 Hz.

Movie 2. (file name: clotting_in_single_plug_of_whole_blood.avi)

Using brightfield microscopy to observe clots within plugs of whole blood. A single plug of whole blood was followed as it traveled through the microchannel. Image acquisition rate was 2 Hz.

Figure S-1.

Graph for the dependence of the length of the aqueous plug on the water fraction *wf* at various U_{total}. Water fraction $wf = U_{aqueous} / U_{total}$, $U_{aqueous}$ [μL/min] is the total volumetric flow rates of the aqueous streams for blood and Alexin, U_{total} [μL/min] is the total volumetric flow rates of the blood, Alexin and carrier fluid streams. Each symbol represents the measurement of six plugs.

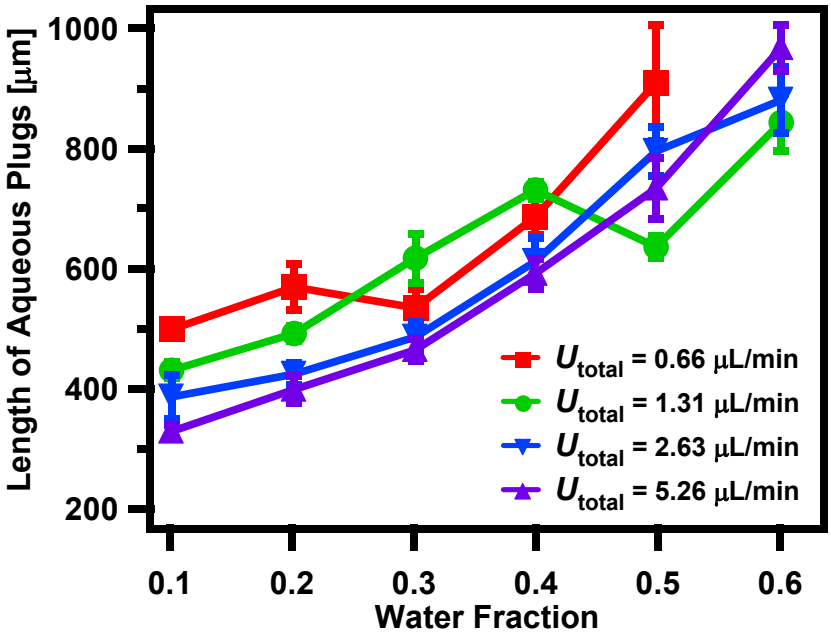

Figure S-2.

Graph for the dependence of the length of the carrier fluid spacing between plugs on the water fraction *wf* at various U_{total}. Each symbol represents the measurement of six plugs.

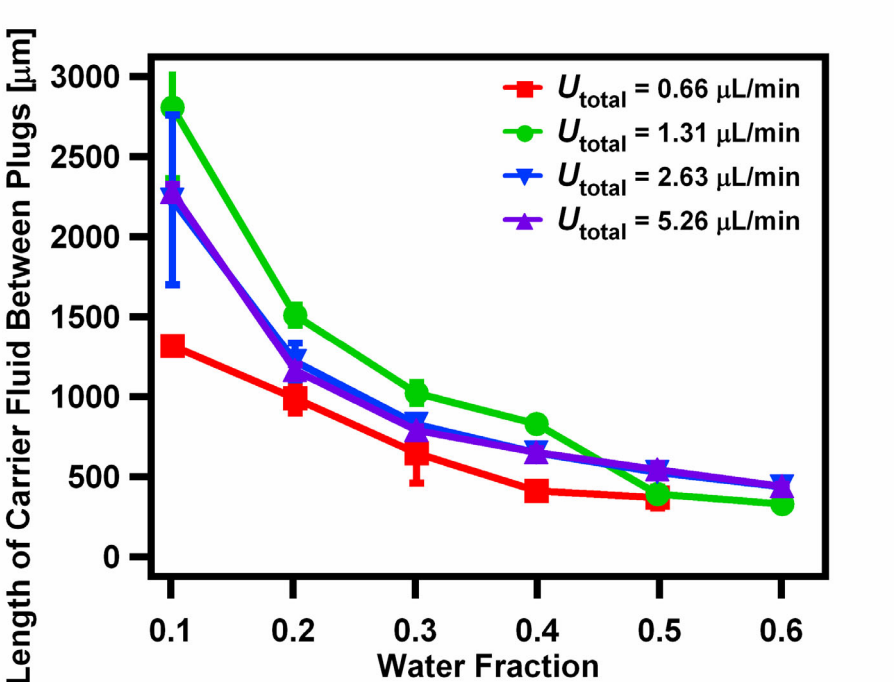

Figure S-3.

Graph for the dependence of the average length of the aqueous plug (◇) and the average length of the carrier fluid spacing between the plugs (□) on the water fraction *wf*. Average lengths and standard deviations were calculated according to data in Figure S-1 and Figure S-2.