

## Supplemental Information Available

### Rapid and efficient sample preparation from complex biological samples using a Sliding Lid for Immobilized Droplet Extractions (SLIDE)

Benjamin P. Casavant<sup>ab</sup>, David J. Guckenberger<sup>ab</sup>, David J. Beebe<sup>a</sup>, and Scott M. Berry<sup>a</sup>

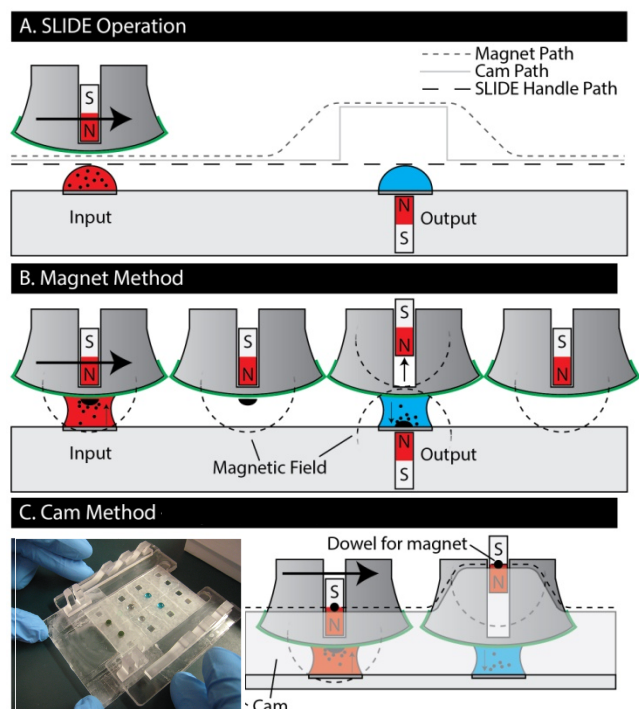
<sup>a</sup> Department of Biomedical Engineering, Wisconsin Institutes for Medical Research, University of Wisconsin, Madison

<sup>b</sup> Authors contributed equally to this work

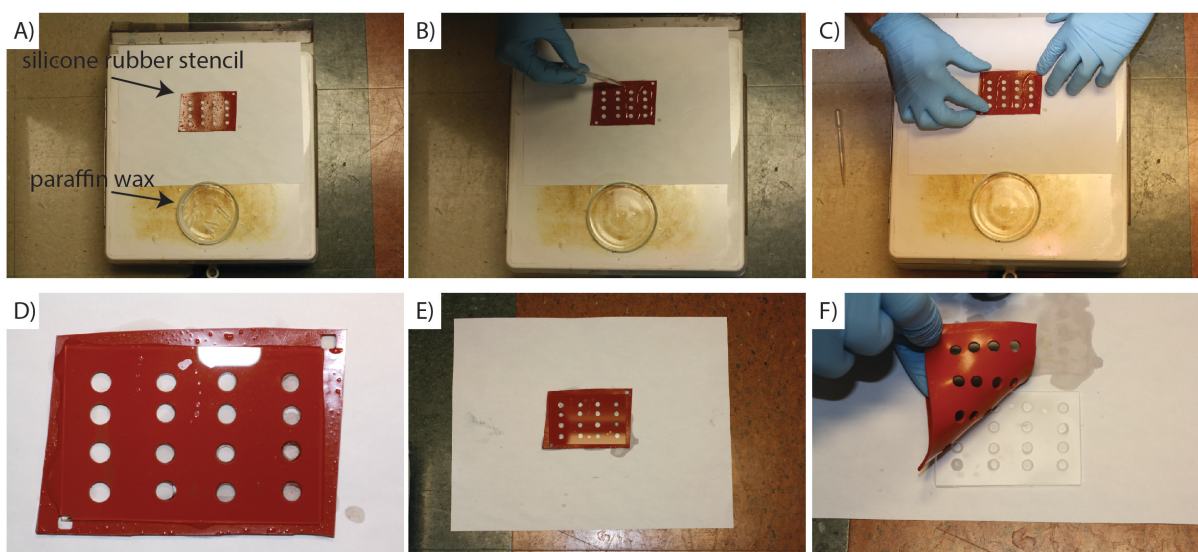
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1. Supplementary Figure 1 – Description of the original SLIDE concept, which used cams rather than repulsing magnets to control the position of the magnets within the SLIDE handle.
2. Supplementary Figure 2 – Step-by-step instructions detailing the manufacture of the sample plates used by the SLIDE device.
3. Supplementary Figure 3 – Data illustrating the effect of solution viscosity on SLIDE performance.

## Supplemental Figures



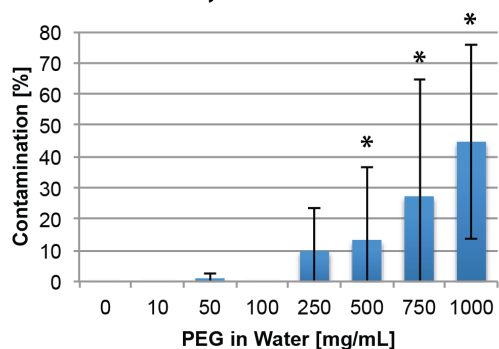
**Supplementary Figure 1:** The SLIDE cam versus magnet method. A) SLIDE operation showing either a CAM path to move the magnet or the magnetic displacement force. B) Detailed description of the magnetic method to move PMPs from the top surface to the bottom drop. C) The cam-based SLIDE is shown (left) with the physical motion (right).



**Supplementary Figure 2:** The method for making the SLIDE disposables A) paraffin wax is melted on a hot plate. B) Paraffin wax is pipetted onto the silicone stencil. C) A glass slide is placed onto the silicone stencil. D) A close-up showing the melted wax spreading to coat the glass surface where the stencil contacts the glass. E) The stencil and glass are removed from

the hot plate and allowed to cool at room temperature. F) The stencil is peeled from the glass disposable, showing the patterned paraffin on the disposable glass part.

#### A. SLIDE - Viscosity



**Supplementary Figure 3:** The amount of carryover from various viscosity fluids was evaluated in the SLIDE. \* bars represent failure of the PMPs to be removed from the liquid, as the fluid acts as a ferrofluid.