

Electronic Supplementary Information

A portable sperm cell purification instrument based on continuous flow acoustophoretic separation of sperm cells for on-site forensic sample pretreatment

Kai Sun,^a Han Wang,^{*a} Lei Wang,^b Ying Lu,^a Ran Liu,^a Peng Liu,^a and Jing Cheng^{*a,b}

^a Department of Biomedical Engineering, School of Medicine, Tsinghua University, Beijing, 100084, China.

^b National Engineering Research Center for Beijing Biochip Technology, Beijing, 102206, China.

*Correspondence should be addressed to Han Wang (hanwang@tsinghua.edu.cn).

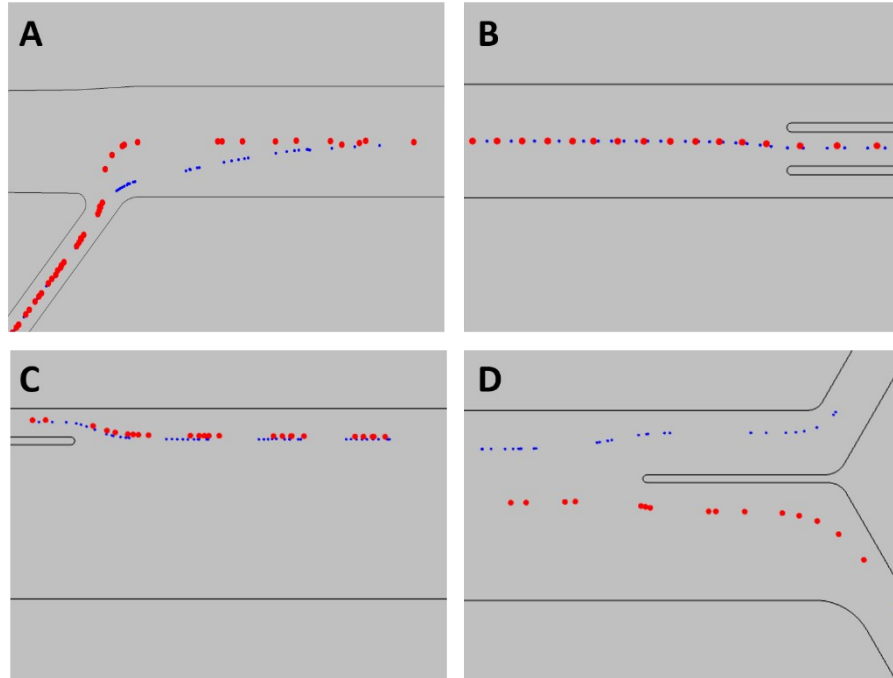


Fig. S1 The simulation results of the two-step acoustofluidic sperm cell separation chip. (A) shows the trajectories of cell mixtures from the entry into the cell rinsing part. (B) shows both sperm and epithelial cells focused at the channel center in the cell rinsing part. (C) shows the trajectories of cell mixtures entering the cell separation part. (D) shows the separation of sperm cells and epithelial cells in the cell separation part. The red spheres represent epithelial cells and the blue spheres represent sperm cells.