

Abstract Submitted
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Continuous separation of serum from human whole blood within a microfluidic device JOHN DAVIS, Princeton University, DAVID INGLIS, Princeton University, JAMES STURM, Princeton University, ROBERT AUSTIN, Princeton University — We were able to demonstrate separation of red and white blood cells from their native blood plasma, using a technique known as deterministic lateral displacement. The device takes advantage of asymmetric bifurcation of laminar flow around obstacles. This asymmetry creates a size dependent deterministic path through the device. All components of a given size follow equivalent migration paths, leading to high resolution. A subsequent version of the device will focus on the removal of platelets from whole blood. Samples will be extracted from the microfluidic device and analyzed by conventional flow cytometry.

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