

HIGH-THROUGHPUT ISOLATION OF PLASMA AND
NANO/MICROPARTICLES FROM BLOOD AND CULTURE MEDIA USING
CURVED MICROCHANNELS

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ABSTRACT

Herein disclosed is a microfluidic device comprising: semi-spiral-shaped channels in fluid communication with (i) at least two inlet ports and (ii) at least two outlet ports, wherein the at least two inlet ports comprise: a sample inlet port and a sheath inlet port, wherein the sample inlet port is in fluid communication with sample inlet channels, each of the sample inlet channels is connected to one semi-spiral-shaped channel, and wherein the sheath inlet port is in fluid communication with sheath inlet channels, each of the sheath inlet channels is connected to one semi-spiral-shaped channel; wherein the at least two outlet ports comprise a first outlet port and each of the semi-spiral-shaped channels has a first outlet channel connected to the first outlet port, and wherein each first outlet channel is longer than any other outlet channel connected to the same semi-spiral-shaped channel. A method of fractionating particles of different sizes involving the microfluidic device is also disclosed herein.

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No suitable figure to be published with abstract