

# A Novel, Compact and Efficient tau-Shaped Microchannel for Blood Plasma Separation

## ABSTRACT

**Micro device for separating blood plasma from whole human blood and method for making the same.** The micro device (1) comprises a polymer material microchip (2) having an open micro channel pattern (3) and a glass plate (4) bonded against the open side of the micro channel pattern. The micro channel pattern comprises a blood flow channel (5) connected to a corpuscles flow channel (9) and a sine shaped plasma flow channel (13) through a curved constriction channel (17). The diameters of the blood flow channel, constriction channel, corpuscles flow channel and plasma flow channel are 200 – 400  $\mu\text{m}$ , 80 – 150  $\mu\text{m}$ , 300 – 600  $\mu\text{m}$  and 100 – 150  $\mu\text{m}$ , respectively. The constriction channel extends through an angular distance of 90 - 270°. The microdevice is efficient, user friendly, economical and reliable (Fig 2).

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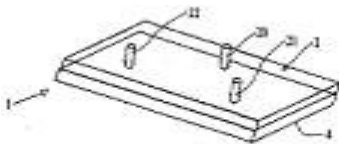


Fig 1