

Title (en)
MICROFLUIDIC SYSTEMS WITH CAPILLARY PUMPS

Title (de)
MIKROFLUIDISCHE SYSTEME MIT KAPILLARPUMPEN

Title (fr)
SYSTÈMES MICROFLUIDIQUES ÉQUIPÉS DE POMPES CAPILLAIRES

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Abstract (en)
[origin: WO2019025630A1] The present invention relates to a fluid conduit system and manufacture thereof, for the propulsion of fluids. The micro- or millifluidic system is useful within LOC, POC diagnostics digital ELISA, drug delivery applications or sampling. The system includes a capillary pump and a fluid conduit operationally connected to the pump, and a gas-permeable liquid-sealed unit with a vent hole gas-permeable to the outside. The fluid conduit includes a first conduit (1804) zone prefilled or pre-fillable with a first volume of trigger liquid (1817), upstream of the unit with the vent hole, a third conduit zone (1806) with a further volume, upstream of the capillary pump, and a second conduit zone (1805) pre-filled or pre-fillable with a working liquid (1817) between the first and third conduit zones (1804, 1806), connected to both, and directly connected to the first conduit zone (1804). The first volume is proportionally larger than or equal to the volume of the third conduit zone (1806).

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