

Title (en)

MICROFLUIDIC SYSTEMS WITH CAPILLARY PUMPS

Title (de)

MIKROFLUIDISCHE SYSTEME MIT KAPILLARPUMPEN

Title (fr)

SYSTÈMES MICROFLUIDIQUES ÉQUIPÉS DE POMPES CAPILLAIRES

Publication

**EP 3661649 A1 20200610 (EN)**

Application

**EP 18753355 A 20180806**

Priority

- GB 201712561 A 20170804
- GB 201712562 A 20170804
- GB 201712564 A 20170804
- GB 201721699 A 20171222
- EP 2018071271 W 20180806

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).

IPC 8 full level

**B01L 3/00** (2006.01); **F04B 19/00** (2006.01)

CPC (source: EP)

**B01L 3/50273** (2013.01); **F04B 19/006** (2013.01); **B01L 2200/0621** (2013.01); **B01L 2300/069** (2013.01); **B01L 2300/0816** (2013.01); **B01L 2300/087** (2013.01); **B01L 2300/126** (2013.01); **B01L 2400/0406** (2013.01); **B01L 2400/0481** (2013.01); **B01L 2400/0694** (2013.01)

Citation (search report)

See references of WO 2019025630A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2019025630 A1 20190207**; EP 3661649 A1 20200610; EP 3661649 B1 20230607; EP 3661649 C0 20230607; ES 2950762 T3 20231013

DOCDB simple family (application)

**EP 2018071271 W 20180806**; EP 18753355 A 20180806; ES 18753355 T 20180806