

Title (en)

Multi-chamber plate and method for filling it with a sample fluid

Title (de)

Mehrkammerplatte und Verfahren zu ihrer Befüllung mit einer Probenflüssigkeit

Title (fr)

Plaque à plusieurs chambres et son procédé de remplissage avec un échantillon liquide

Publication

EP 2436446 B1 20160921 (EN)

Application

EP 11183447 A 20110930

Priority

- EP 10186392 A 20101004
- EP 11183447 A 20110930

Abstract (en)

[origin: EP2436446A1] A multi-chamber plate (110) is disclosed: preferably for analytical purposes, the multi-chamber plate (110) has a plurality of chambers (112) and a channel system (114) for filling the chambers (112) with at least one sample fluid (113). The multi-chamber plate (110) has a proximal end (116) and a distal end (118). A radial direction (120) is defined from the proximal end (116) to the distal end (118). A centrifugal force (122) is applicable parallel to the radial direction (120). The channel system (114) comprises at least one application site (124) for applying the sample fluid (113) to the channel system (114). The chambers (112) each have at least one inlet opening (126) and at least one outlet opening (128) being separate from the inlet opening (126). Both the inlet opening (126) and the outlet opening (128) are positioned on a proximal side (130) of the chambers (112). The chambers (112) are fillable through the inlet openings (126) with the sample fluid (113) driven by the centrifugal force (122). The chambers (112) are vented through the outlet openings (128). At least one reagent (200) is located in the chambers (112). The channel system (114) has at least one main feeding line (132) and has at least one main venting line (134). The inlet openings (126) are connected to the main feeding line (132) at inlet channel junctions (136) and the outlet openings (128) are connected to the main venting line (134) at outlet channel junctions (138). The inlet channel junctions (136) are located further towards the distal end (118) than the respective outlet channel junctions (138). The inlet openings (126), the outlet openings (128), the inlet channel junctions (136) and the outlet channel junctions (138) are arranged such that, during the filling with the sample fluid (113), a venting of each chamber (112) is possible until the respective chamber (112) is completely filled with the sample fluid (113). Described layouts provide controlled, complete filling of the chambers (112) while strongly reducing the risk of cross-contamination of reagents (200), contained in the chambers (112), and trapping of gas bubbles in the chambers (112).

IPC 8 full level

B01L 3/00 (2006.01)

CPC (source: EP)

B01L 3/502723 (2013.01); **B01L 2200/0621** (2013.01); **B01L 2200/0684** (2013.01); **B01L 2300/0816** (2013.01); **B01L 2300/0864** (2013.01); **B01L 2300/087** (2013.01); **B01L 2400/0409** (2013.01)

Cited by

EP4056274A1; JP2015521293A; LU102655B1; US2021394181A1; CN114832873A; US9994805B2; US10364411B2; US11566213B2; WO2016204638A3; WO2022013875A1; WO2017013561A1; US10775370B2

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

DOCDB simple family (publication)

EP 2436446 A1 20120404; EP 2436446 B1 20160921

DOCDB simple family (application)

EP 11183447 A 20110930