Title (en)

Cartridge, centrifuge and method for mixing a first and a second component

Title (de)

Kartusche, Zentrifuge sowie Verfahren zum Mischen einer ersten und zweiten Komponente

Title (fr)

Cartouche, centrifugeuse ainsi que procédé de mélange d'un premier et d'un deuxième composant

Publication

**EP 2532428 A3 20130403 (DE)**

Application

**EP 12163532 A 20120410**

Priority

DE 102011077134 A 20110607

Abstract (en)

[origin: EP2532428A2] The cartridge (100) has a mixing chamber (124) including a container that receives two components e.g. amino acids, and electromagnetic particles, where the particles are movable by electromagnetic force to mix the components. A displacement device rotates a drum (108) about a center axis when centrifugal force (142) exceeds a predetermined threshold value to connect two chambers (120) conductively. A force mechanism e.g. coil, generates the electromagnetic force, and is integrated into cartridge housings (102). The particles are made of non-sterile materials, iron and nickel. The first component is formed as a biochemical probe and the second component is formed as a receptor molecule that binds the biochemical probe. The cartridge housings and the drum are made of same or different polymers including thermoplastic, elastomer, and/or thermoplastic elastomer e.g. cyclic olefin polymer, cyclic olefin copolymer, polycarbonate, polyamide, polyurethane, polypropylene, polyethylene terephthalate and polymethyl methacrylate. Independent claims are also included for the following: (1) a centrifuge (2) a method for mixing two components in a cartridge.

IPC 8 full level

**B01L 3/14** (2006.01); **B01F 31/42** (2022.01)

CPC (source: EP US)

**B01F 29/15** (2022.01 - EP US); **B01F 29/321** (2022.01 - EP US); **B01F 31/42** (2022.01 - EP US); **B01F 33/4533** (2022.01 - EP US); **B01F 35/7137** (2022.01 - EP US); **B01F 35/7161** (2022.01 - EP US); **B01F 35/71725** (2022.01 - EP US); **B01L 3/5021** (2013.01 - EP US); B01L 2200/16 (2013.01 - EP US); B01L 2300/0672 (2013.01 - EP US); B01L 2300/0841 (2013.01 - EP US); B01L 2400/0409 (2013.01 - EP US); B01L 2400/043 (2013.01 - EP US)

Citation (search report)

- [E] EP 2514515 A1 20121024 - BOSCH GMBH ROBERT [DE]
- [AD] US 2009269854 A1 20091029 - KAGEYAMA YASUHISA [JP]
- [E] EP 2535108 A1 20121219 - BOSCH GMBH ROBERT [DE]
- [E] EP 2532426 A2 20121212 - BOSCH GMBH ROBERT [DE]
- [E] EP 2532427 A2 20121212 - BOSCH GMBH ROBERT [DE]
- [A] US 2009023610 A1 20090122 - PEYTAVI REGIS [CA]
- [XP] EP 2388067 A1 20111123 - ROCHE DIAGNOSTICS GMBH [DE], et al
- [XP] EP 2329877 A1 20110608 - ROCHE DIAGNOSTICS GMBH [DE], et al
- [X] GRUMANN, MARKUS: "Readout of Diagnostic Assays on a Centrifugal Microfluidic Platform", 30 October 2005, DISSERTATION UNI FREIBURG IM BREISGAU, http://ebookbrowse.com/051228-grumann-phd-thesis-pdf-d45217302, XP002691220

Cited by

EP2532426A3; EP2532427A3; EP2774676A1; WO2015049074A1; WO2014117908A1; US9399214B2

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)

**EP 2532428 A2 20121212**; **EP 2532428 A3 20130403**; **EP 2532428 B1 20140702**; CN 102814240 A 20121212; CN 102814240 B 20161214; DE 102011077134 A1 20121213; US 2012314531 A1 20121213; US 9475043 B2 20161025

DOCDB simple family (application)

**EP 12163532 A 20120410**; CN 201210184002 A 20120606; DE 102011077134 A 20110607; US 201213490882 A 20120607