(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 November 2011 (10.11.2011)

PCT

(10) International Publication Number
WO 2011/139234 A1

(51) International Patent Classification:
*C12M 1/00* (2006.01)

(21) International Application Number:
PCT/SG2011/000174

(22) International Filing Date:
4 May 2011 (04.05.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
201003158-1 4 May 2010 (04.05.2010) SG

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published**:

— *with international search report (Art. 21(3))*

— *with sequence listing part of description (Rule 5.2(a))*

(54) **Title**: REAGENT FLUID DISPENSING DEVICE, AND METHOD OF DISPENSING A REAGENT FLUID

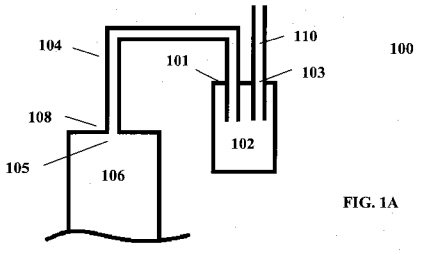



FIG. 1A

(57) **Abstract**: According to various embodiments, a reagent fluid dispensing device may be provided. The reagent fluid dispensing device may include a chamber for receiving a reagent fluid, the chamber having a first opening and a second opening; a first fluid conduit connected to the first opening of the chamber; a reservoir connected to the first fluid conduit, the reservoir having a first opening, wherein the first opening of the reservoir is connected to the first fluid conduit to form a passive valve, wherein the reservoir is dimensionalized for storing a predetermined volume of the reagent fluid; and a pneumatic conduit connected to the second opening of the chamber, wherein selective application of pneumatic pressure to the chamber through the pneumatic conduit transfers the reagent fluid from the reservoir to the chamber through the first fluid conduit. According to various embodiments, a microfluidic device including the reagent fluid dispensing device, and a method of dispensing a reagent fluid may be provided.

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