

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
14 November 2019 (14.11.2019)



(10) International Publication Number
WO 2019/215273 A1

- (51) International Patent Classification:
G01N 33/543 (2006.01) *G01N 33/569* (2006.01)
- (21) International Application Number:
PCT/EP2019/061902
- (22) International Filing Date:
09 May 2019 (09.05.2019)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
62/669,357 09 May 2018 (09.05.2018) US
62/785,752 28 December 2018 (28.12.2018) US
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(54) Title: DEVICES AND METHODS FOR DETERMINING PARTICLE CONCENTRATION IN A SAMPLE

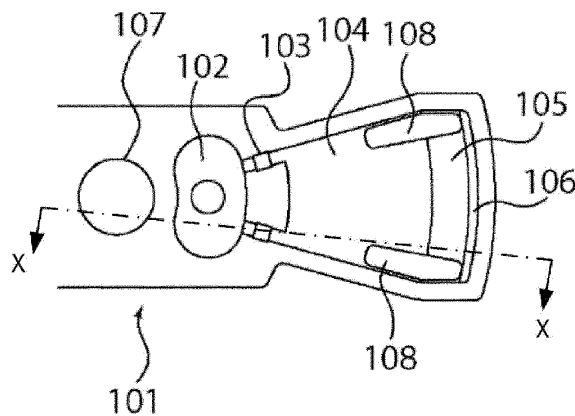


FIG. 1

(57) Abstract: A cartridge for determining a concentration of target cells within a sample includes a separation portion and a detection portion. The separation portion includes a first and second surface defining a separation chamber. The separation portion can contain a density medium having a density greater than a density of a first portion of the sample and less than a density of a second portion of the sample (that includes the target cells). The separation chamber can be fluidically coupled to an inlet reservoir such that the sample can pass from the inlet reservoir to the separation chamber during rotation. The detection portion includes a detection surface that forms a boundary of a detection chamber. The detection surface is nonparallel to the first surface such that the target cells impinge on the detection surface when passing into the detection chamber. The detection surface is configured to capture the target cells.

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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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

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