



- (51) **International Patent Classification:**
B01L 3/00 (2006.01) *G01N 21/64* (2006.01)
C12Q 1/686 (2006.01)
- (21) **International Application Number:**
PCT/SG2021/050294
- (22) **International Filing Date:**
27 May 2021 (27.05.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
10202005023R 28 May 2020 (28.05.2020) SG
10202008413X 31 August 2020 (31.08.2020) SG
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(54) **Title:** MICROFLUIDIC CHIP AND SYSTEM

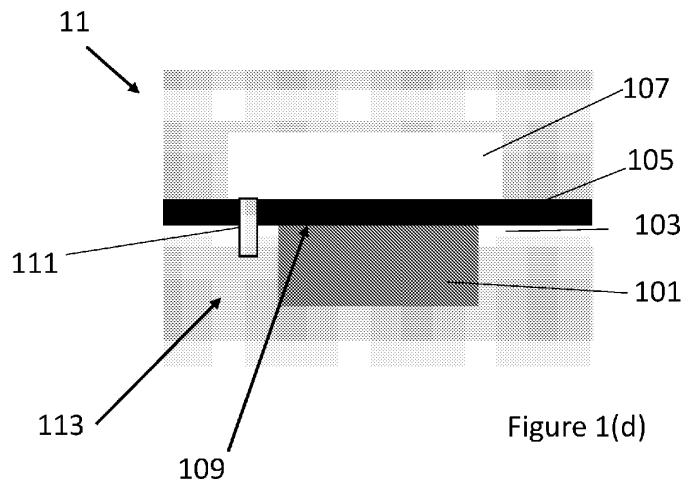


Figure 1(d)

(57) **Abstract:** The invention is to provide a microfluidic chip (1) comprising at least one microfluidic reservoir (101) having a wall portion and a heat transfer sealing layer (105) cooperating with the wall portion for receiving a sample to be tested, the heat transfer sealing layer (105) being arranged to be contiguous with the sample to be tested, and an active temperature control device (107) arranged to provide structural support to the heat transfer sealing layer (105) and operable to control a temperature of the sample via transmission of heat through the heat transfer sealing layer (105). A detection module is also disclosed. The detection module comprises an ambient light shielding cassette, and a slot configured to receive the plurality of samples, wherein the ambient light shielding cassette comprising a first light source and a first camera..

(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, IT, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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:

— *of inventorship (Rule 4.17(iv))*

Published:

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

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