

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 December 2019 (19.12.2019)



(10) International Publication Number
WO 2019/238500 A1

- (51) **International Patent Classification:**
G01N 21/84 (2006.01) *G01N 21/27* (2006.01)
- (21) **International Application Number:**
PCT/EP2019/064671
- (22) **International Filing Date:**
05 June 2019 (05.06.2019)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
18176998.5 11 June 2018 (11.06.2018) EP
- (71) **Applicant (for all designated States except DE, US): F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, 4070 Basel (CH).
- (71) **Applicant (for DE only): ROCHE DIABETES CARE GMBH** [DE/DE]; Patent Department Sandhofer Strasse 116, 68305 Mannheim (DE).
- (71) **Applicant (for US only): ROCHE DIABETES CARE, INC.** [US/US]; 9115 Hague Road, Indianapolis, Indiana 46250 (US).
- (72) **Inventors: BERG, Max;** c/o Roche Diabetes Care GmbH Sandhofer Strasse 116, 68305 Mannheim (DE). **KLEIN,**
- Timo;** c/o Roche Diabetes Care GmbH Sandhofer Strasse 116, 68305 Mannheim (DE).
- (74) **Agent: RIWOTZKI, Karsten;** Sandhofer Straße 116, 68305 Mannheim (DE).
- (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).

(54) **Title:** A CALIBRATION METHOD FOR CALIBRATING A CAMERA OF A MOBILE DEVICE FOR DETECTING AN ANALYTE IN A SAMPLE

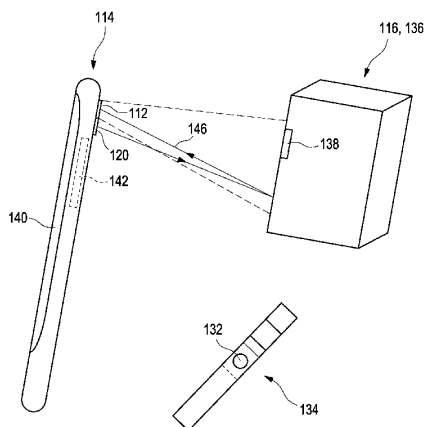


Fig. 2

(57) **Abstract:** A calibration method (110) for calibrating a camera (112) of a mobile device (114) for detecting an analyte in a sample is disclosed. The method comprising: a)(118) capturing at least one image of at least one object (116) by using the camera (112), wherein during said capturing an illumination source (120) of the mobile device (114) is turned on; b) (122) determining from the image captured in step a) at least one first area (124) in the image which is affected by direct reflection of light originating from the illumination source (120) and being reflected by the object (116); and c)(126) determining at least one second area (128) in the image which essentially does not overlap with the first area (124) and returning the second area (128) as a target area (130) for the location of a test field (132) of a test strip (134) in a subsequent detection step.

WO 2019/238500 A1

[Continued on next page]

Declarations under Rule 4.17:

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

Published:

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