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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/045417 A1

(51) International Patent Classification[7]: G01N 27/327, C12Q 1/00

(21) International Application Number: PCT/GB2004/004599

(22) International Filing Date: 29 October 2004 (29.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/516,252	31 October 2003 (31.10.2003)	US
60/558,424	31 March 2004 (31.03.2004)	US
60/558,728	31 March 2004 (31.03.2004)	US

(71) Applicant *(for all designated States except US)*: **LIFESCAN SCOTLAND LIMITED** [GB/GB]; Beechwood Park North, Inverness IV2 3ED (GB).

(72) Inventors; and

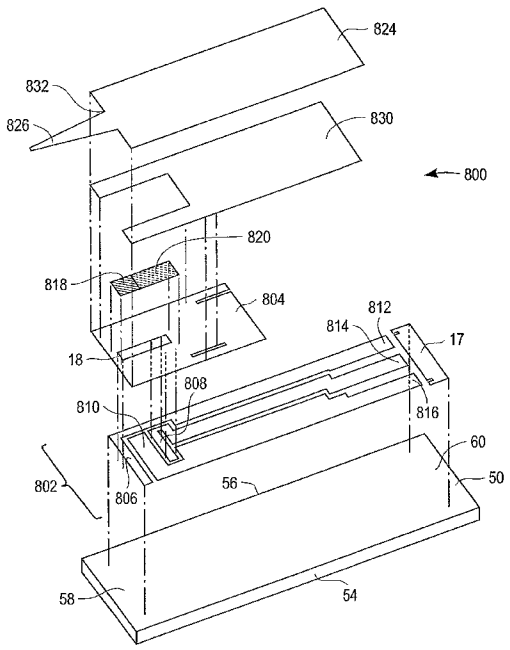
(75) Inventors/Applicants *(for US only)*: **DAVIES, Oliver, William, Hardwicke** [GB/GB]; An Cluaran, Croy, Inverness IV2 5PG (GB). **MARSHALL, Robert** [GB/GB]; 72 Braes of Conan, Conon Bridge, Ross-Shire IV7 8AX (GB). **BASKEYFIELD, Damian, Edward, Haydon** [GB/GB]; Craigends Cottage, Auldearn, Mairnshire IV12 5TH (GB). **WHYTE, Lynsey** [GB/GB]; 101 Ardness Place, Lochardil, Inverness IV2 4PE (GB). **LEIPER, Elaine** [GB/GB]; Tarnash, Dores Road, Inverness IV2 4QU (GB).

(74) Agents: **MERCER, Christopher, Paul** et al.; Carpmaels & Ransford, 43-45 Bloomsbury Square, London WC1A 2RA (GB).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

[Continued on next page]

(54) Title: METHOD OF REDUCING THE EFFECT OF DIRECT AND MEDIATED INTERFERENCE CURRENT IN AN ELECTROCHEMICAL TEST STRIP



(57) Abstract: The present invention is directed to a method of reducing interference in an electrochemical sensor (800) wherein the method includes the step of measuring a first current at a first working electrode (808), the first working electrode (808) being covered by an active reagent layer (820), the step of measuring a second current at a second working electrode (806), the second working electrode (806) being covered by an inactive reagent layer (818) and the step of calculating a corrected current value representative of a glucose concentration using a ratio of an active area of the first working electrode (808) to an inactive area of the second working electrode (806). The present invention is further directed to a method of reducing interferences in an electrochemical sensor (1000) wherein the method includes the step of measuring a first current at a first working electrode (100), the first working electrode (100) being covered by an active reagent layer (820), the step of measuring a second current at a second working electrode (102), wherein the active reagent layer (820) is disposed on an active region (102a) of the second working electrode (102) and an inactive region (102i) of the second working electrode (102) is covered by an inactive reagent layer (818) and the step of calculating a corrected current value representative of a glucose concentration using a ratio of an active region on the first and second working electrodes and an inactive region on the second working electrode.

WO 2005/045417 A1

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.