

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
1 December 2005 (01.12.2005)

PCT

(10) International Publication Number
WO 2005/114164 A3(51) International Patent Classification⁷: **G01N 27/48**,
33/487(21) International Application Number:
PCT/US2005/017009

(22) International Filing Date: 16 May 2005 (16.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/571,388 14 May 2004 (14.05.2004) US(71) Applicant (for all designated States except US): **BAYER HEALTHCARE LLC** [US/US]; 1884 Miles Avenue, Elkhart, IN 46514 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **WU, Huan-Ping** [US/US]; 14374 Shoreline Drive, Granger, IN 46530 (US).(74) Agent: **BLANCHARD, Jonathan, M.**; Evan Law Group LLC, 566 West Adams, Suite 350, Chicago, IL 60661 (US).

(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, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, 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, IS, IT, LT, 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).

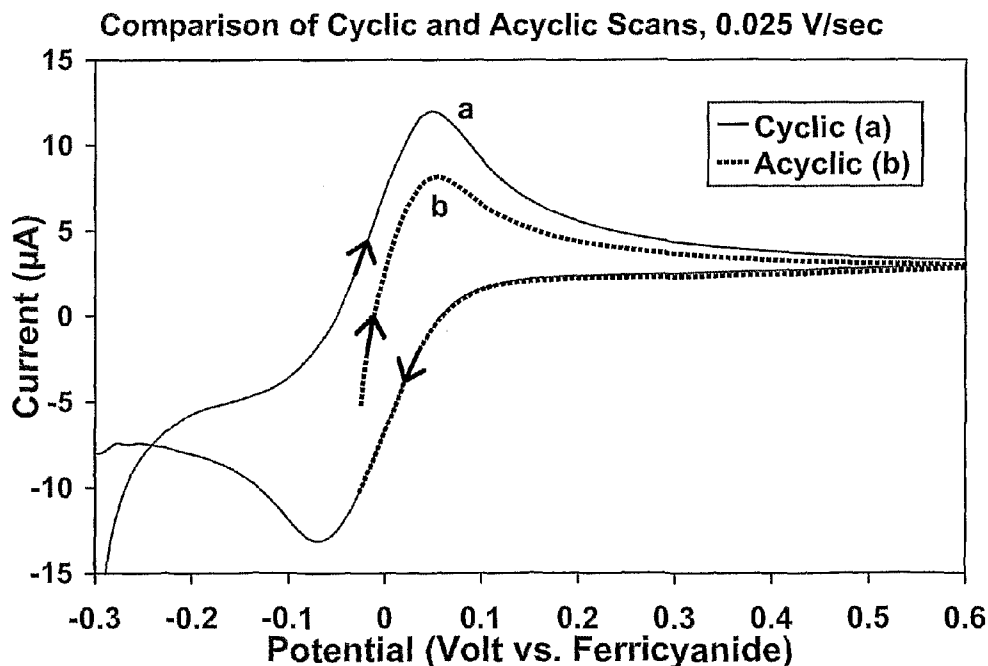
Published:

— with international search report
— with amended claims(88) Date of publication of the international search report:
26 January 2006

Date of publication of the amended claims: 23 March 2006

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.

(54) Title: VOLTAMMETRIC SYSTEMS FOR ASSAYING BIOLOGICAL ANALYTES



(57) **Abstract:** The present invention relates to systems, methods, and devices for determining the concentration of an analyte in a sample. The use of linear, cyclic, or acyclic voltammetric scans and/or semi-integral, derivative, or semi-derivative data treatment may provide for increased accuracy when determining the concentration of an analyte in a sample. Hematocrit compensation in combination with the data treatments may reduce the hematocrit effect with regard to a glucose analysis in whole blood. In another aspect, fast scan rates may reduce the hematocrit effect.

WO 2005/114164 A3