(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 23 June 2005 (23.06.2005) (10) International Publication Number WO 2005/057168 A3

(51) International Patent Classification: *A61B 5/05* (2006.01) *A61B 5/00* (2006.01)

(21) International Application Number:

PCT/US2004/040476

(22) International Filing Date:

3 December 2004 (03.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/527,323 5 December 2003 (05.12.2003) US 60/587,787 13 July 2004 (13.07.2004) US 60/614,683 30 September 2004 (30.09.2004) US

(71) Applicant (for all designated States except US): DEX-COM, INC. [US/US]; 5555 Oberlin Drive, San Diego, California 92121 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KAMATH, Apurv, Ullas [US/US]; 143 S. Rios Avenue, Solana Beach, California 92075 (US). SIMPSON, Peter, C. [US/US]; 1236 Stratford Court, Del Mar, California 92014 (US). BRAUKER, James, H. [US/US]; 10831 Riesling Drive, San Diego, California 92131 (US). GOODE, JR., Paul, V. [US/US]; 39724 Via Las Palmas, Murrieta, California 92563 (US).

- (74) Agent: HART, Daniel; KNOBBE, MARTENS, OLSON & BEAR, LLP, 2040 Main Street, 14th Floor, Irvine, California 92614 (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, 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, 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).

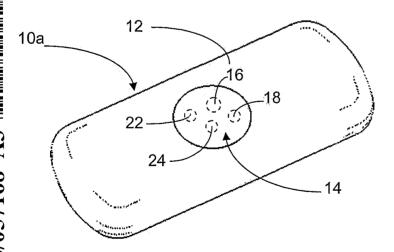
Published:

with international search report

(88) Date of publication of the international search report: 22 March 2007

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: CALIBRATION TECHNIQUES FOR A CONTINUOUS ANALYTE SENSOR



(57) Abstract: Disclosed herein are systems and methods for calibrating a continuous analyte sensor, such as a continuous glucose sensor. One such system utilizes one or more electrodes to measure an additional analyte. Such measurements may provide a baseline or sensitivity measurement for use in calibrating the sensor. Furthermore, baseline and/or sensitivity measurements may be used to trigger events such as digital filtering of data or suspending display of data.





INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/40476

A. CLASSIFICATION OF SUBJECT MATTER IPC: A61B 5/05(2007.01),5/00(2007.01)				
USPC: 600/347,365 According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) U.S.: 600/347,365				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched none				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) none				
C. DOCI				
Category *	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.	
Y	US 6,233,471 B1 (Berner et al) 15 May 2001 (15.05.	2001), See entire document.	34-37, 65-68	
 А			1-17, 19-29, 38-56, 69- 82	
A US 6,001,067 A (Shults et al) 14 December 1999 (14.		4.12.1999), See entire document.	1-82	
X US 2003/0187338 A1 (Say et al) 02 October 2003 (02.10.2003)		2.10.2003), See entire document.	18, 30-33, 58-64	
 Y			34-37, 65-68	
•				
			<u></u>	
Further documents are listed in the continuation of Box C.		See patent family annex.		
* Special categories of cited documents:		"T" later document published after the inte	ation but cited to understand the	
"A" document particular	defining the general state of the art which is not considered to be of relevance	principle or theory underlying the invention with the invention of particular relevance; the		
"E" earlier app	plication or patent published on or after the international filing date	considered novel or cannot be conside when the document is taken alone	red to involve an inventive step	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means		"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination		
		being obvious to a person skilled in th		
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family		
Date of the actual completion of the international search Date		Date of mailing of the international search	NOV 2006	
16 October 2006 (16.10.2006)			1 140 4 7000	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US		Authorized officer		
Commissioner for Patents		Robert L. Nasser		
P.O Ale:	. Box 1450 xandria, Virginia 22313-1450	Telephone No. 571-272-4731		
Facsimile No. (571) 273-3201				