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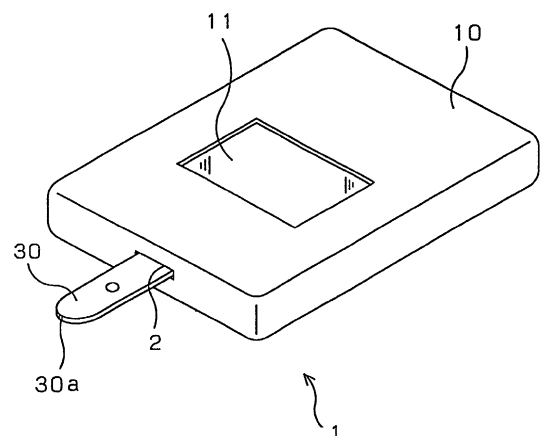
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(54) **Biosensor, Measuring Instrument for Biosensor, and Method of Quantifying Substrate**

(57) A method of measuring a quantity of a substrate contained in sample liquid is provided. This method can reduce measurement errors caused by a biosensor. The biosensor includes at least a pair of electrodes on an insulating board and is inserted into a measuring device which includes a supporting section for supporting detachably the biosensor, plural connecting terminals to be coupled to the respective electrodes, and a driving power supply which applies a voltage to the respective electrodes via the connecting terminals. One of the electrode of the biosensor is connected to the first and second connecting terminals of the measuring device only when the biosensor is inserted into the measuring device in a given direction, and has a structure such that the electrode becomes conductive between the first and second connection terminals due to a voltage application by the driving power supply.

FIG. 1





EUROPEAN SEARCH REPORT

Application Number
EP 11 17 6149

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 94/29704 A2 (BOEHRINGER MANNHEIM CORP [US]) 22 December 1994 (1994-12-22) * column 6, line 9 - column 7, line 27; figure 6 * * column 8, line 13 - line 15 * * column 10, line 15 - line 23 * * column 14, line 32 - column 16, line 16 *	1-5	INV. G01N33/487 G01N27/327 C12Q1/00
X	WO 97/02487 A1 (BOEHRINGER MANNHEIM CORP [US]) 23 January 1997 (1997-01-23) * page 12, line 1 - page 14, line 17 *	1,2	
X	US 5 695 623 A (MICHEL PETER [CH] ET AL) 9 December 1997 (1997-12-09) * column 5, line 1 - line 15; figure 6 *	1,2	
X	US 5 508 171 A (WALLING P DOUGLAS [US] ET AL) 16 April 1996 (1996-04-16) * column 12, line 16 - line 40 *	1,2	
X	EP 0 878 713 A2 (BAYER AG [US] BAYER CORP [US]) 18 November 1998 (1998-11-18) * the whole document *	1	TECHNICAL FIELDS SEARCHED (IPC) G01N C12Q
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 14 March 2013	Examiner Komenda, Peter
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9429704	A2	22-12-1994	AU 6832494 A 03-01-1995
			CA 2153878 A1 22-12-1994
			DE 702787 T1 02-11-2000
			DE 69433476 D1 12-02-2004
			DE 69433476 T2 14-10-2004
			EP 0702787 A1 27-03-1996
			ES 2153333 T1 01-03-2001
			JP 2634699 B2 30-07-1997
			JP H08503304 A 09-04-1996
			US 5405511 A 11-04-1995
			WO 9429704 A2 22-12-1994
WO 9702487	A1	23-01-1997	AU 712527 B2 11-11-1999
			AU 6345196 A 05-02-1997
			CA 2224308 A1 23-01-1997
			DE 874984 T1 05-10-2000
			DE 69617464 D1 10-01-2002
			DE 69617464 T2 29-08-2002
			EP 0874984 A1 04-11-1998
			ES 2154250 T1 01-04-2001
			JP 3819936 B2 13-09-2006
			JP 2001511881 A 14-08-2001
			US 5762770 A 09-06-1998
			WO 9702487 A1 23-01-1997
US 5695623	A	09-12-1997	CH 677149 A5 15-04-1991
			DE 59005357 D1 19-05-1994
			EP 0436679 A1 17-07-1991
			US 5695623 A 09-12-1997
			WO 9100998 A1 24-01-1991
US 5508171	A	16-04-1996	NONE
EP 0878713	A2	18-11-1998	AT 424558 T 15-03-2009
			AU 729232 B2 25-01-2001
			AU 6481898 A 12-11-1998
			CA 2236314 A1 12-11-1998
			DK 0878713 T3 02-06-2009
			EP 0878713 A2 18-11-1998
			EP 2048499 A1 15-04-2009
			EP 2264451 A1 22-12-2010
			ES 2321348 T3 04-06-2009
			JP 4124513 B2 23-07-2008
			JP 10318963 A 04-12-1998
			NZ 329792 A 25-02-1999
			TW 565695 B 11-12-2003

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 17 6149

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-03-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 6391645 B1	21-05-2002

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	生物传感器，生物传感器测量仪器和基质量化方法		
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代理机构(译)	GRÜNECKER, KINKELDEY, STOCKMAIR & SCHWANHÄUSSER		
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其他公开文献	EP2388585A2 EP2388585B1		
外部链接	Espacenet		

摘要(译)

提供一种测量样品液体中含有的基质量的方法。该方法可以减少由生物传感器引起的测量误差。生物传感器包括在绝缘板上的至少一对电极并插入测量装置中，该测量装置包括用于可拆卸地支撑生物传感器的支撑部分，多个连接端子以连接到相应的电极，以及驱动电源，其应用于通过连接端子向各个电极施加电压。只有当生物传感器沿给定方向插入测量装置中时，生物传感器的一个电极才连接到测量装置的第一和第二连接端子，并且具有使得电极在第一和第二之间导电的结构。由于驱动电源施加电压而产生的连接端子。

FIG. 1

