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(54) Oxygen-saturation measuring apparatus

(57) An apparatus (8) for measuring an oxygen saturation of a living subject, comprising a light source (26) which emits, toward a tissue (14) of the subject, a first light having a first wavelength whose absorption coefficient with respect to hemoglobin changes depending upon oxygen saturation, and a second light having a second wavelength whose absorption coefficient with respect to hemoglobin does not change depending upon oxygen saturation; a light sensor (28) which detects a secondary light resulting from the first light, and a secondary light resulting from the second light, and produc-

es a first light signal representing the detected secondary light of the first light, and a second light signal representing the detected secondary light of the second light; and an oxygen-saturation determining means (64, S3) for determining the oxygen saturation of the subject, based on a ratio of a magnitude of one of the first and second light signals to a magnitude of the other of the first and second light signals, according to a predetermined linear relationship between oxygen saturation and signal-magnitude ratio. The first wavelength falls in a range of from 720 nm to 740 nm and the second wavelength falls in a range of from 800 nm to 840 nm.

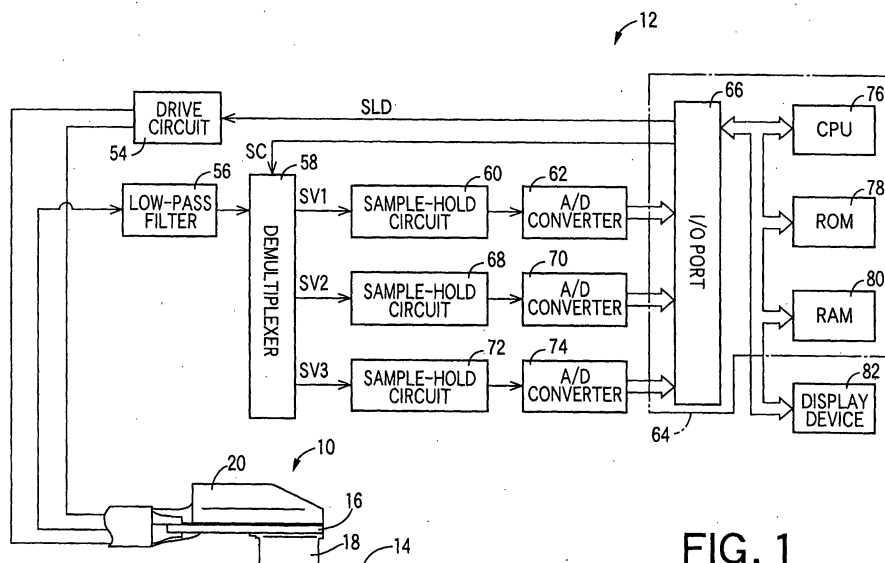


FIG. 1



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 01 13 0113

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	US 5 279 295 A (MARTENS GERHARD ET AL) 18 January 1994 (1994-01-18) * column 4, line 1 - column 8, line 44; claim 1 *	1-11	A61B5/00
A	US 6 192 261 B1 (FRANCESCHINI MARIA ANGELA ET AL) 20 February 2001 (2001-02-20) * column 5, line 50 - column 9, line 40; claim 1 *	1-11	
A	US 5 297 548 A (POLOGE JONAS A) 29 March 1994 (1994-03-29) * column 1, line 20 - column 4, line 60; claims 1,5 *	1-11	
A	WO 99 47039 A (AIHONEN JUKKA ;SIRKIAE JOUNI (FI); KIRVESKARI JUHA (FI); TUOMINEN) 23 September 1999 (1999-09-23) * claim 1; figure 1 *	1-11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A61B
Place of search	Date of completion of the search	Examiner	
MUNICH	13 January 2004	Chopinaud, M	
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 01 13 0113

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

专利名称(译)	氧饱和度测量装置		
公开(公告)号	EP1250885A3	公开(公告)日	2004-03-03
申请号	EP2001130113	申请日	2001-12-18
[标]申请(专利权)人(译)	日本柯林股份有限公司		
申请(专利权)人(译)	COLIN CORPORATION		
当前申请(专利权)人(译)	COLIN CORPORATION		
[标]发明人	TAKATANI SETSUO		
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IPC分类号	G01N33/72 A61B5/00 A61B5/145 A61B5/1455 G01N21/35 G01N21/3577 G01N21/359 G01N33/84		
CPC分类号	A61B5/14535 A61B5/1455 A61B5/14552		
优先权	2001107298 2001-04-05 JP		
其他公开文献	EP1250885A2		
外部链接	Espacenet		

摘要(译)

一种用于测量活体的氧饱和度的装置(8)，包括光源(26)，所述光源朝向所述对象的组织(14)发射具有第一波长的第一光，所述第一波长的相对于血红蛋白的吸收系数发生变化取决于氧饱和度，和具有第二波长的第二光，其相对于血红蛋白的吸收系数不随氧饱和度而变化；光传感器(28)，其检测由第一光产生的二次光，以及由第二光产生的二次光，并产生表示第一光的检测到的二次光的第一光信号，以及表示第二光的第二光信号。检测到第二光的二次光；氧饱和度确定装置(64，S3)，用于根据第一和第二光信号之一的大小与第一和第二光信号中另一个的大小的比值来确定对象的氧饱和度，根据氧饱和度和信号幅度比之间的预定线性关系。第一波长落在720nm至740nm的范围内，第二波长落入800nm至840nm的范围内。

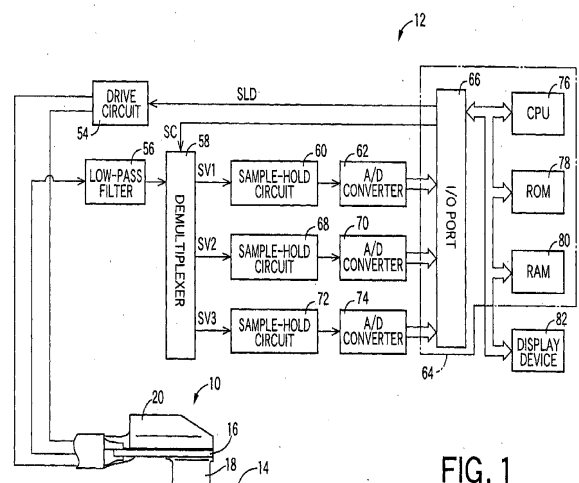


FIG. 1