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#### Declaration under Rule 4.17:

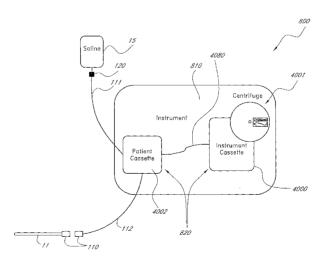
of inventorship (Rule 4.17(iv))

#### Published:

with international search report

[Continued on next page]

#### (54) Title: FLUID HANDLING CASSETTE SYSTEM FOR BODY FLUID ANALYZER



(57) Abstract: A fluid handling system for use in bodily fluid analysis. The system comprises a first fluid handling module (4002) configured to interface with a main instrument (810). The first fluid handling module has a first fluid handling network and the first fluid handling network includes an infusate passage and an infusion fluid pressure member suitable for moving fluid within the infusate passage. The fluid handling system also has a second fluid handling module (4000) separate from the first module which is configured to interface with the main instrument. The second fluid handling module has a second fluid handling network and at least one sample analysis cell (2448) which is accessible via the second fluid handling network. The first and second modules are configured to interconnect and provide fluid communication between the first and second fluid handling network and the sample cells.



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 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments 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.

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### INTERNATIONAL SEARCH REPORT

International application No PCT/US2006/039201

A. CLASSIFICATION OF SUBJECT MATTER INV. A61B5/15 A61M5/172

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)

A61B A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 017 318 A1 (GAUTHIER ROBERT T [US] ET AL) 25 January 2000 (2000-01-25)	1,2,6-14
Y	column 21, lines 21,22; figure 15 column 18, lines 6-10 column 25, paragraphs 3,4 column 17, lines 8-25; figures 20-22	3–5
Υ	US 2002/045525 A1 (MARZIALI ANDREA [US]) 18 April 2002 (2002-04-18) abstract	3,4,17, 18,47,57
Y A	US 4 796 644 A1 (POLASCHEGG HANS-DIETRICH [DE]) 10 January 1989 (1989-01-10) column 2, lines 44-50; figure 2	3,5,17, 19 47,57
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[V]	V 0	

Further documents are listed in the continuation of Box C.	X See patent family annex.			
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filling date  "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  "P" document published prior to the international filling date but later than the priority date claimed	<ul> <li>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> <li>"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 the art.</li> <li>"&amp;" document member of the same patent family</li> </ul>			
Date of the actual completion of the international search  31 May 2007	Date of mailing of the international search report $06/06/2007$			
Name and mailing address of the ISA/  European Patent Office, P.B. 5818 Patentlaan 2  NL – 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  Fax: (+31-70) 340-3016	Authorized officer  Clevorn, Jens			

## INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/039201

C(Continua	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	PC1/US2006/039201
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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2006/039310 A (GLUCON INC [US]; GOLDBERGER DANIEL [US]; SHREVE ERIC [US]; SIEBRECHT W) 13 April 2006 (2006-04-13) page 30, paragraph 2; figure 1a page 32, paragraph 2 page 39, paragraphs 2,LAST; figures 6a,6b,7-9 page 29, paragraph 2 page 24, paragraph 2	1-3,5-14
	page 19, paragraph 3 	-
X Y	US 3 910 256 A (CLARK JUSTIN S ET AL) 7 October 1975 (1975-10-07) abstract; figures 1-5 column 4, lines 45-55 column 13, line 59 - column 15, paragraph 2	33-46, 48-56 47,57
	column 6, paragraph 1	
Х Y	US 5 134 079 A (CUSACK ROBERT F [US] ET AL) 28 July 1992 (1992-07-28) column 9, paragraph 2; figures 3,6 column 7, lines 39,40	15,16, 20-32 17-19
X A	US 5 097 834 A (SKRABAL FALKO [AT]) 24 March 1992 (1992-03-24) column 15, paragraph 2 - column 17, last paragraph; figures 12,14	15,16, 20-32 17-19
	,	
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International application No. PCT/US2006/039201

## INTERNATIONAL SEARCH REPORT

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This International Searching Authority found multiple inventions in this International application, as follows:
see additional sheet
1. X As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest  The additional search fees were accompanied by the applicant's protest.  X  No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-14

fluid component separator

2. claims: 15-32

first housing engaging the instrument

3. claims: 33-57

return of the balance of said drawn volume to the patient in less than five minutes after said drawing was completed

# INTERNATIONAL SEARCH REPORT

information on patent family members

International application No
PCT/US2006/039201

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 6017318	A1		NONE			
US 2002045525	A1	18-04-2002	NONE			
US 4796644	A1		NONE			
WO 2006039310	Α	13-04-2006	AU CA US	2005292117 2580524 2006079809	A1	13-04-2006 13-04-2006 13-04-2006
US 3910256	A	07-10-1975	NONE			
US 5134079	Α	28-07-1992	EP	0389719	A2	03-10-1990
US 5097834	A	24-03-1992	WO BR DK EP JP JP	8805643 8805089 535688 0300008 3505821 5062542	A A A1 T	11-08-1988 15-08-1989 30-09-1988 25-01-1989 19-12-1991 08-09-1993