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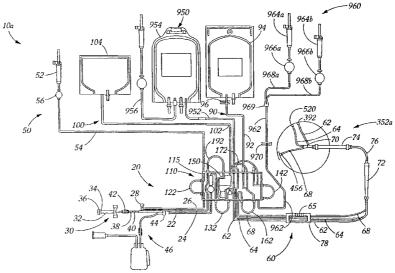
- with international search report
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: EXTRACORPOREAL BLOOD PROCESSING METHOD AND APPARATUS



(57) Abstract: Methods and apparatus particularly involving the separation of blood into blood components and the collection of such components are disclosed. In one aspect, an extracorporeal method for the collection of plasma and red blood cells is provided, wherein the collection of plasma and red blood cells may occur simultaneously or subsequently utilizing the same dual stage blood processing vessel. The flow of blood to the blood processing vessel and return of uncollected blood components may be provided via a single needle, wherein blood is removed from and returned to a donor/patient during alternating blood removal and blood return submodes. Platelet separation and collection options are also described. In either case, prior to red blood cell collection, a set-up phase may be carried out to set a predetermined hematocrit and AC ratio. Replacement fluid delivery may optionally also be provided either substantially continuously during any collection phase(s) and/or in a bolus mode.



INTRNATIONAL SEARCH REPORT

Intel .onal Application No PCT/US 01/07706

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A. CLASSIF	. classification of subject matter PC 7 A61M1/36						
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) I PC 7 A61M							
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched							
Electronic de	ata hase consulted during the international search (name of data bas	e and, where practical, search terms used)					
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal							
C. DOCUMENTS CONSIDERED TO BE RELEVANT							
Category °			Relevant to claim No.				
Х	US 5 941 842 A (GARRISON DENISE C ET AL) 24 August 1999 (1999-08-24)		38				
Υ	column 16, line 11 -column 19, l	ine 30	39				
•	column 38, line 16 -column 41, liftigures 1,2A,8-9B						
γ	US 5 348 533 A (PAPILLON JEAN ET AL) 20 September 1994 (1994-09-20) claim 1; figure 1		39				
A	EP 0 303 765 A (MCLAUGHLIN WILLIAM F) 22 February 1989 (1989-02-22) page 14, paragraph 2; figure 9		39				
Further documents are listed in the continuation of box C. X Patent family members are listed in annex.							
° Special categories of cited documents: "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							
"E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention							
filing date "L" document which may throw doubts on priority claim(s) or cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone							
which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the							
"O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but "O" document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.							
later t	amily						
Date of the actual completion of the international search Date of mailing of the international search report							
31 October 2001 26. 03. 2002							
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 Authorized officer							
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	VILLENEUVE, J					

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INTERNATIONAL SEARCH REPORT

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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. X Claims Nos.: 1-37, 40-49 because they relate to subject matter not required to be searched by this Authority, namely: Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery					
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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)					
This International Searching Authority found multiple inventions in this international application, as follows:					
see additional sheet					
1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.					
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.:					
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.: 38, 39					
Remark on Protest The additional search fees were accompanied by the applicant's protest. 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: 38, 39

A device for separation and collection of blood components with two-stage blood processing chanel.

2. Claims: 50-61

A system for extracorporeal collection of blood components comprising a machine adapted to use a donor / patient characteristic.

INTRNATIONAL SEARCH REPORT

Information on patent family members

Inte. .onal Application No
PCT/US 01/07706

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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