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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.



WO 00/64456 A3

(54) Title: SUBSTITUTION INFUSION FLUID AND CITRATE ANTICOAGULATION

(57) Abstract: The invention relates to a substitution infusion fluid for hemofiltration of a specific composition. The use of said substitution infusion fluid significantly reduces the risk of the occurrence of abnormalities in a patient undergoing hemofiltration. The invention also relates to a process for hemofiltration of blood wherein said substitution infusion fluid is used. The invention also relates to a citrate anticoagulation fluid of a specific composition. The invention also relates to a process for hemofiltration of blood wherein said substitution infusion fluid is used in combination with said citrate anticoagulation fluid. The use of said substitution infusion fluid in combination with said citrate anticoagulation fluid significantly further reduces the risk of the occurrence of abnormalities in a patient undergoing hemofiltration.

INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K33/42 A61K33/14 A61K33/06 A61K31/70

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)
IPC 7 A61K

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)
PAJ, CHEM ABS Data, EPO-Internal, EMBASE, WPI Data, BIOSIS, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>SIEBERTH H.G.: "Composition of the rinsing water for extracorporeal hemodialysis in acute and chronic renal failure!. ZUSAMMENSETZUNG DES WASCHWASSERS FUR DIE EXTRACORPORALE HAMODIALYSE DER AKUTEN UND CHRONISCHEN NIERENINSUFFIZIENZ." MEDIZINISCHE TECHNIK, (1974) 94/2 (28-32). CODEN: METEAV, XP000856013 abstract page 31, column 2; table 1 ----- -/--</p>	1-17

Further documents are listed in the continuation of box C.

Patent family members are listed in 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 filing 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 filing date but later than the priority date claimed

- *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
- *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
- *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.
- *&* document member of the same patent family

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Gonzalez Ramon, N

INTERNATIONAL SEARCH REPORT

 International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	VAN STONE J.C.: "Individualization of the dialysate prescription in chronic hemodialysis." DIALYSIS AND TRANSPLANTATION, (1994) 23/11 (624-625+628-635)., XP000856008 abstract the whole document page 634 ---	1-17
X	WO 93 24108 A (MINNTECH CORP) 9 December 1993 (1993-12-09) page 5, line 2-30; claims 9,24 page 7, line 25-35 ---	1-12
P,X	CHEMICAL ABSTRACTS, vol. 131, no. 19, 8 November 1999 (1999-11-08) Columbus, Ohio, US; abstract no. 262653, HARADA, MINORU ET AL: "Dialyzing compositions for hemodialysis in renal failure patients" XP002123553 abstract & JP 11 279051 A (NIKKISO CO., LTD., JAPAN) 12 October 1999 (1999-10-12) ---	1-17
Y	PATENT ABSTRACTS OF JAPAN vol. 013, no. 579 (C-668), 20 December 1989 (1989-12-20) & JP 01 242531 A (NIPPON SEIYAKU KK), 27 September 1989 (1989-09-27) abstract ---	1-17
Y	PATENT ABSTRACTS OF JAPAN vol. 016, no. 273 (C-0953), 18 June 1992 (1992-06-18) & JP 04 069341 A (OTSUKA PHARMACEUTICAL FACTORY INC), 4 March 1992 (1992-03-04) abstract ---	1-19
A	PATENT ABSTRACTS OF JAPAN vol. 006, no. 003 (C-086), 9 January 1982 (1982-01-09) & JP 56 128711 A (HIKARI SEIYAKU KK), 8 October 1981 (1981-10-08) abstract --- -/--	1-17

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 00/03583

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>ONO K. ET AL: "Glucose in the dialyzate does not reduce the free amino acid loss during routine hemodialysis of non-fasting patients." CLINICAL NEPHROLOGY, (1984) 21/2 (106-109). CODEN: CLNHBI, XP000856986 abstract</p> <p style="text-align: center;">---</p>	7-12
X	<p>PALSSON R ET AL: "Regional citrate anticoagulation in continuous venovenous hemofiltration in critically ill patients with a high risk of bleeding." KIDNEY INTERNATIONAL, (1999 MAY) 55 (5) 1991-7. , XP000978115 abstract</p> <p style="text-align: center;">---</p>	18,19
X	<p>ASHTON D N ET AL: "Recent advances in continuous renal replacement therapy: citrate anticoagulated continuous arteriovenous hemodialysis." ANNA JOURNAL, (1991 JUN) 18 (3) 263-7, 329. , XP000978120 abstract page 265</p> <p style="text-align: center;">---</p>	18,19
Y	<p>MACIAS W.L.: "Choice of replacement fluid/dialysate anion in continuous renal replacement therapy." AMERICAN JOURNAL OF KIDNEY DISEASES, (1996) 28/5 SUPPL. 3 (S15-S20). , XP000978102 abstract page S15 -page S16 page S19</p> <p style="text-align: center;">---</p>	1-19
E	<p>WO 00 33853 A (GLOBAL HEMOSTASIS INST MGR AB ;RAANBY MATS (SE)) 15 June 2000 (2000-06-15) abstract</p> <p style="text-align: center;">---</p>	18,19
X	<p>WO 90 15612 A (UNIV JEFFERSON) 27 December 1990 (1990-12-27) abstract; claims 1-6</p> <p style="text-align: center;">-----</p>	18,19

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 00/03583

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. 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 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.
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.
- 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: 20 partially, 1-17 complete

Substitution infusion fluid for hemofiltration. Optionally in combination with citrate anticoagulation solution.
Process for hemofiltration of blood using the same

1.1. Claims: 17 complete, 20 partially

Substitution infusion fluid for hemofiltration in combination with citrate anticoagulation solution.
Process for hemofiltration of blood using the same.

2. Claims: 20 partially, 18, 19 complete

Citrate anticoagulation solution for hemofiltration.
Process for hemofiltration of blood using the same excluding the subject matter of invention 1

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Application No
PCT/EP 00/03583

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9324108 A	09-12-1993	AU 4239593 A CA 2137088 A EP 0647130 A HU 68062 A JP 7504591 T	30-12-1993 09-12-1993 12-04-1995 29-05-1995 25-05-1995
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