## (19) World Intellectual Property Organization International Bureau

International Bureau

Om



# (43) International Publication Date 14 May 2010 (14.05.2010)

- (51) International Patent Classification: *A61M 5/44* (2006.01) *A61M 1/36* (2006.01)
- (21) International Application Number:

PCT/IL2009/001059

(22) International Filing Date:

10 November 2009 (10.11.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/193,248 10 November 2008 (10.11.2008) US 61/253,893 22 October 2009 (22.10.2009) US

- (71) Applicant (for all designated States except US): RF DY-NAMICS LTD. [GB/GB]; Washington Mall West, 2nd Floor, 7 Reid Street, Hamilton 11 (BM).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BILCHINSKY, Alexander [IL/IL]; 26/40 Moshe Dayan, 56450 Monosson-Yahud (IL). BEN-SHMUEL, Eran [IL/IL]; 4/22 HaCarmel Street, 55900 Ganei Tikva (IL). KARNIELI, Ohad [IL/IL]; 57 HaTamar Street, 36015 Kiryat-Tivon (IL). ATZMONY, Daniella [IL/IL]; 60 Tavor Street, 60850 Shoham (IL).
- (74) Agents: G.E EHRLICH (1995) LTD. et al.; 11 Menachem Begin Street, 52521 Ramat Gan (IL).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
- (88) Date of publication of the international search report:

12 August 2010

(54) Title: METHOD AND SYSTEM FOR HEATING AND/OR THAWING BLOOD PRODUCTS

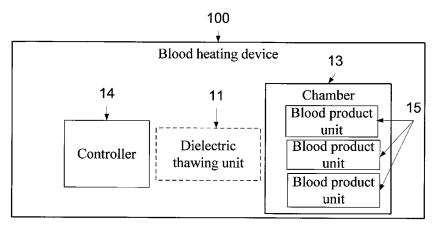


FIG. 1

(57) Abstract: A device of heating one or more blood product units using electromagnetic (EM) energy. The device comprises a chamber sized and shaped for containing at least one frozen blood product unit, a dielectric heating unit for applying electromagnetic (EM) energy at a plurality of frequencies to the at least one blood product unit, and a controller for operating the dielectric heating unit to heat the at least one frozen blood product unit to about a body temperature in less than 3 minutes according to a heating pattern.





#### **INTERNATIONAL SEARCH REPORT**

International application No PCT/IL2009/001059

A. CLASSIFICATION OF SUBJECT MATTER INV. A61M5/44 A61M A61M1/36 ADD. 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) 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. DOCUMENTS CONSIDERED TO BE RELEVANT Category\* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X US 5 616 268 A (CARR KENNETH L [US]) 1,2,23 1 April 1997 (1997-04-01) claim 1 X EP 0 615 763 A2 (TRANSMED MEDTECH GMBH 1,2,23 [DE]) 21 September 1994 (1994-09-21) column 3, line 32 - column 5, line 3 Α US 2005/080373 A1 (WANG XIAOLING [US]) 1,2,23 14 April 2005 (2005-04-14) the whole document Further documents are listed in the continuation of Box C. See patent family 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 "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-"X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "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) "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 docu-"O" document referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled "P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 17 June 2010 24/06/2010 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016 Neiller, Frédéric

#### FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 3-22, 24-55

The present application contains 55 claims, of which 6 are independent product claims and 9 are independent method claims. There is no clear distinction between the independent claims because of overlapping scope. There are so many claims, and they are drafted in such a way that the claims as a whole are not in compliance with the provisions of clarity and conciseness of Article 6 PCT, as it is particularly burdensome for a skilled person to establish the subject-matter for which protection is sought. The non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search (PCT Guidelines 9.19 and 9.25). The search was based on the subject-matter that, as far as can be understood, could reasonably be expected to be claimed later in the procedure, and the corresponding claims, namely 1-2 and 23.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

### INTERNATIONAL SEARCH REPORT

International application No. PCT/IL2009/001059

Box No. 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:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. X Claims Nos.: 3-22, 24-55 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:
see FURTHER INFORMATION sheet PCT/ISA/210
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 No. 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:
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 fees, this Authority did not invite payment of additional fees.
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 and, where applicable, the payment of a protest fee.
The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
No protest accompanied the payment of additional search fees.

#### **INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No
PCT/IL2009/001059

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5616268	Α	01-04-1997	NONE		
EP 0615763	A2	21-09-1994	DE	4308360 C1	27-10-1994
US 2005080373	A1	14-04-2005	NONE		