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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/68173

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B05D 7/00, B01J 13/02, A61B 5/055 (2007.10)

USPC - 427/213.3; 424/9.321

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)
USPC: 427/213.3; 424/9.321Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Google Scholar Google Patent - see keywords below

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

Electronic Databases Searched: USPTO WEST (PGPUB, EPAB, JPAB, USPT), Google patent, Google Scholar, Google patents. Search Terms Used: drug or cancer or treat\$, capsule, electrohydrodynamic system, hollow tube, core fluid, myeloma or leukemia or lymphoma, encapsulated, polymer\$, amino or carbo\$ or mercapto, glycol or DNA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/0131673 A1 (Coffee et al.) 08 July 2004 (08.07.2004) entire document especially abstract; para [0012]; [0015]; [0017]; [0025]; [0041]; [0047]; [0050]; [0051]; [0055]-[0056]; [0075]; [0091]; [0110]; [0111]; [0136]- [0138]; [0142]; [0152]-[0153]	1-51 and 61-83
Y	US 2,387,747 A (Cowley) 30 October 1945 (30.10.1945); entire document, especially col 2-4	1-51 and 61-83
Y	US 4,419,383 A (Lee) 06 December 1983 (06.12.1983); entire document; especially abstract; col 2, ln 20-67	11-13 and 42
Y	US 5,595,758 A (Adusumilli et al.) 21 January 1997 (21.01.1997); entire document especially col 2, ln 37-65	14-16
Y	US 5,081,048 A (Okahata et al.) 14 January 1992 (14.01.1992); entire document especially example 1; col 2, ln 44-65; col 3, ln 07-12	17-30, 43-45, 50, and 51
Y	US 5,783,214 A (Royer) 21 July 1998 (21.07.1998); entire document especially col 7, ln 49-65	20, 23, and 26
Y	US 4,426,525 A (Hozumi et al.) 17 January 1984 (17.01.1984); especially col 6, ln 43-55	37, 38, and 45
Y	US 7,029,880 B2 (Weigel et al.) 18 April 2006 (18.04.2006) especially col 3, ln 01-16	50 and 51

 Further documents are listed in the continuation of Box C.

* 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 application or patent 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

Date of the actual completion of the international search

23 December 2007 (23.12.2007)

Date of mailing of the international search report

24 JAN 2008

Name and mailing address of the ISA/US

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/68173

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:

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 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:

Group I, claims 1-51, 61-83, is directed to a method of producing a capsule.
Group II, claims 52-60, is directed to a capsule.

The special technical feature of Group I is filling a hollow tube with a core fluid and subjecting the core fluid to an electric potential, which is not present in Group II that has a special technical feature of dispersing a functional group on the surface of the shell region. None of these technical features are common to the other groups, nor do they correspond to a special technical feature in the other groups. Accordingly, unity of invention is lacking under PCT Rule 13.1 because the groups do not share a same or corresponding special technical feature.

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 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.:
claims 1-51 and 61-83

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.