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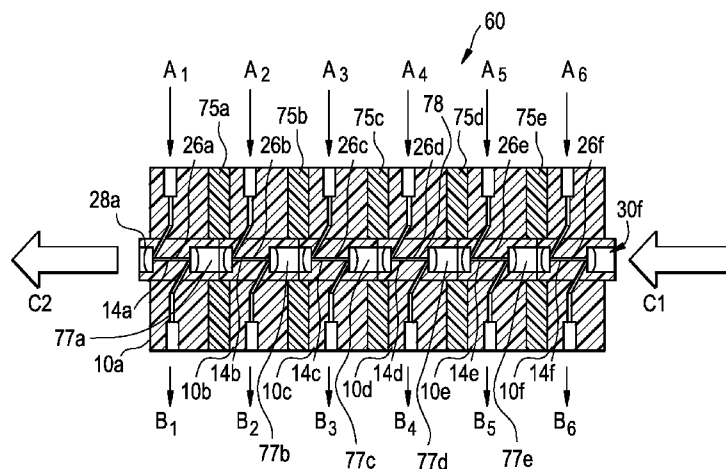
Published:

- 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))

[Continued on next page]

(54) Title: MULTI - STREAM OPTICAL INTERROGATION FLOW CELL

FIG. 5



(57) Abstract: A multi-stream optical interrogation flow cell (60) for a radiopharmaceutical includes a multiple flow cell body (10a-f) defining a first elongate fluid flowpath (A1-6;B1-6) therethrough for individually conducting a radiopharmaceutical therethrough in fluid isolation from other of the flow cell bodies. Each flow cell body further defines a first and second aligned UV transparent optical guides (36,38) and a first interrogation passageway (26a-f) extending between the first and second optical guides such that a portion of the elongate first fluid flowpath intersects the interrogation passageway such that the radiopharmaceutical flows in between the first and second optical guides. The first and second interrogation passageways of all of the flow cell bodies are optically aligned so that a single interrogation beam is able to extend through each of the interrogation passageways.

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**(88) Date of publication of the international search report:**  
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**INTERNATIONAL SEARCH REPORT**

International application No  
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A. CLASSIFICATION OF SUBJECT MATTER  
INV. G01N21/33  
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)  
G01N

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/182965 A1 (KAMLET LEONARD I [US] ET AL) 9 August 2007 (2007-08-09)	1-17,20
Y	paragraphs [0014], [0032] - [0045], [061]; figures 1, 2A	18
Y	----- US 2001/035947 A1 (FRY ROBERT C [US] ET AL) 1 November 2001 (2001-11-01)	18
	paragraphs [0074] - [0080], [0194]; figure 1C	
A	----- US 2008/135484 A1 (HAMMER MICHAEL R [AU]) 12 June 2008 (2008-06-12)	1,20
	paragraph [0071] - paragraph [0086]; figures 1-3	
A	----- US 5 432 096 A (ZHU JIANZHONG [US]) 11 July 1995 (1995-07-11)	1,20
	column 11, line 7 - line 30; figure 2	
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Further documents are listed in the continuation of Box C.

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 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  
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**25/05/2011**

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2010/051964

## 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:

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 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.:

1-20

### 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/US2010/051964

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007182965	A1	09-08-2007	NONE
US 2001035947	A1	01-11-2001	NONE
US 2008135484	A1	12-06-2008	WO 2006042365 A1 27-04-2006
US 5432096	A	11-07-1995	NONE

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

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

1. claims: 1-20

A multi-stream optical interrogation flow cell.

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2. claim: 21(partially)

A purification system.

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