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[Continued on next page]

(54) Title: MAGNETIC PIPETTE TIP

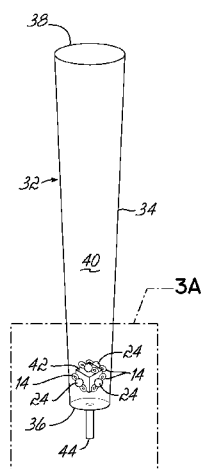


FIG. 3

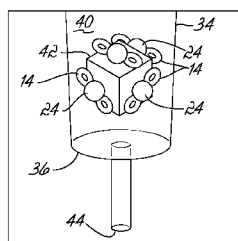


FIG. 3A

(57) Abstract: A magnetic pipette tip (32) is disclosed including a pipette tip housing (34) with proximal and distal ends (38, 36) and a lumen (40) extending between the proximal and distal ends (38, 36). At least one magnet (42) is located within the lumen (40) of the pipette tip housing (34) between the proximal and distal ends (38, 36). The magnetic pipette tip (32) is configured for use in magnetic isolation of biological molecules.



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INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER

INV. B01L3/02

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)

B01L

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 practicable, 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	EP 2 138 234 A1 (HOFFMANN LA ROCHE [CH]; ROCHE DIAGNOSTICS GMBH [DE]) 30 December 2009 (2009-12-30) paragraph [0030] -----	1,42
X	DE 196 42 777 A1 (VETTER DIRK DR [DE]) 28 May 1998 (1998-05-28) column 4, lines 55-65; figure 1 -----	1,9,10, 24,26, 27,42
X	US 2010/006509 A1 (HORNES ERIK [NO]) 14 January 2010 (2010-01-14) paragraphs [0024], [0025], [0035] - [0038], [0059]; figures 1,2,4 -----	1-7,24, 25,42



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 application or patent but published on or after the international filing date

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"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

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"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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INTERNATIONAL SEARCH REPORT

International application No.
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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.:

3-7, 9, 10, 24-27(completely); 1, 2(partially)

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 3-7, 9, 10, 24-27(completely); 1, 2(partially)

A pipette tip comprising a magnet inside

2. claims: 8, 22, 23(completely); 1, 2(partially)

A pipette tip comprising a magnet and having a functionalised inner surface

3. claims: 11-14, 28(completely); 1(partially)

A pipette tip having two magnets inside

4. claims: 15-21, 29-46(completely); 1(partially)

A pipette tip having a magnet inside provided with a lumen, magnetic beads and a correlated method of use

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/022545

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 2138234	A1	30-12-2009	EP	2138234	A1	30-12-2009
			EP	2140941	A1	06-01-2010
			US	2009317303	A1	24-12-2009

DE 19642777	A1	28-05-1998	DE	19642777	A1	28-05-1998
			DE	29718238	U1	02-04-1998
			WO	9816312	A1	23-04-1998

US 2010006509	A1	14-01-2010	EP	1874468	A1	09-01-2008
			GB	2425498	A	01-11-2006
			JP	2008538725	A	06-11-2008
			US	2010006509	A1	14-01-2010
			WO	2006114608	A1	02-11-2006
