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(81) Designated States (unless otherwise indicated, for every
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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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
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(54) Title: METHOD AND SYSTEM FOR DETECTION OF AN ORGANISM

(57) Abstract: Provided herein are systems and method of detecting an organism, such as a microbe, microorganism or pathogen. The system can comprise one or more probi for detecting a strain with high sensitivity. The system can also detect the strain within a short time frame.



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A. CLASSIFICATION OF SUBJECT MATTER**C12Q 1/68(2006.01)i, C12N 15/11(2006.01)1, C12Q 1/04(2006.01)1**

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)

C12Q 1/68

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & keywords: capture primer, circularizing capture primer, probe, molecular inversion probe

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HARDENBOL et al., Multiplexed genotyping with sequence-tagged molecular inversion probes Nature Biotechnology, Vol. 21, No. 6, pp. 673-678 (June 2003)	25
A	See the whole document, especially abstract; pages 673-674; figure 2.	1-3, 34-36
A	US 2007-0264642 A1 (WILLIS et al.) 15 November 2007 See abstract; claims 69 and 80.	1-3, 25, 34-36
A	LI et al., Multiplex padlock targeted sequencing reveals human hypermutable CpG variations Genome Research, Vol. 19, No. 9, pages 1606-1615 (September 2009) See the whole document, especially abstract; figure 1.	1-3, 25, 34-36
A	US 2006-0281098 A1 (MIAO et al.) 14 December 2006 See abstract; claim 1.	1-3, 25, 34-36



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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of 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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Name and mailing address of the ISA/KR

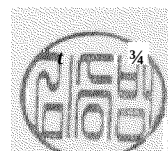


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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/063042

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.: **5,7-14, 16-24,29,38,40**
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:

Claims 5, 7-8, 12, 14, 16, 24, 29, 38 and 40 are unclear since they are referring to the multiple dependent claims which do not comply with PCT Rule 6.4(a); Claims 9-24 are contrary to PCT Rule 6.2(a) because they rely on unnecessary reference to the description and drawings.
3. ☒ Claims Nos.: **4,6,11,13, 15,23,26-28,30-33,37,39**
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 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 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/US2012/063042

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