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- (71) Applicant (for all designated States except US): **SEQUENOM, INC.** [US/US]; 3595 John Hopkins Court, San Diego, CA 92121 (US).
- (72) Inventor; and
(73) Applicant (for all designated States except US): **VAN DEN BOOM, Dirk, Johannes** [DE/US]; 638 Bonair Way, Unit A, La Jolla, CA 92037 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **HONISCH, Christiane** [DE/US]; 1380 1/2 Park Row, La Jolla, CA 92037 (US). **TIMMS, Andrew** [GB/US]; 347 W. Olympic Boulevard, Seattle, WA 98119 (US). **CHITNIS, Smita** [US/US]; 10482 Hollingsworth Way, Unit #185, San Diego, CA 92127 (US).
- (74) Agents: **GRANT, Bruce D.** et al.; Grant Anderson LLP, c/o PortfolioIP, P.O.Box 52050, Minneapolis, MN 55402 (US).
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[Continued on next page]

(54) Title: PRODUCTS AND PROCESSES FOR MULTIPLEX NUCLEIC ACID IDENTIFICATION

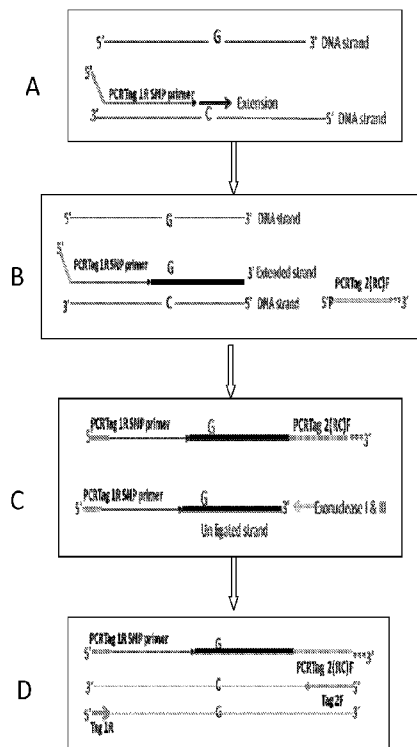


Figure 1

(57) Abstract: Provided herein are products and processes for detecting the presence or absence of multiple target nucleic acids. Certain methods include amplifying the target nucleic acids, or portion thereof; extending oligonucleotides that specifically hybridize to the amplicons, where the oligonucleotides include distinguishable labels and a capture agent; capturing the extended oligonucleotides to a solid phase via the capture agent; releasing and detecting the distinguishable label, and thereby determining the presence or absence of each target nucleic acid by the presence or absence of the distinguishable label.



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Published:

- with international search report (*Art. 21(3)*)
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10 September 2010

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/062239**A. CLASSIFICATION OF SUBJECT MATTER***C12Q 1/68(2006.01)i, C12N 15/11(2006.01)i*

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)

IPC 8: C12Q 1/68, C40B 20/08, G01N 33/53, C12P 19/34

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)
eKOMPASS(KIPO 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 2006/0166201 A1 (Philipp Schatz et al.) 27 July 2006 See claims 1-14; paragraphs [0009], [0035] and [0036]; and abstract.	1-9, 45-48, 50, 51
X	US 2007/0292861 A1 (Trillion Genomics Limited) 20 December 2007 See claims 1, 10 and 22; figures 1, 2 and 4; and abstract.	1-9, 45-48, 50, 51
X	US 2008/0167197 A1 (ELECTROPHORETICS LIMITED) 10 July 2008 See claims 34, 35 and 43-47; and abstract.	1-9, 45-48, 50, 51
X	US 2003/0022225 A1 (Joseph A. Monforte et al.) 30 January 2003 See claims 1 and 54-70; figure 2; and abstract.	1-9, 45-48, 50, 51
A	US 2008/0305479 A1 (SEQUENOM, INC.) 11 December 2008 See the whole document.	1-9, 45-48, 50, 51

☐ 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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Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

CHANG, BONG HO

Telephone No. 82-42-481-8289



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2009/062239**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.: 19-27, 29, 30, 32, 34, 36, 44
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 19-27, 29, 30, 32, 34, 36 and 44 refer to multiple dependant claims that refer to other multiple dependant claims. Therefore, they are vague and unclear, and leave the reader in doubt as to the meaning of the technical feature to which they refer.
3. ☒ Claims Nos.: 10-18, 28, 31, 33, 35, 37-43, 49
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/US2009/062239

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