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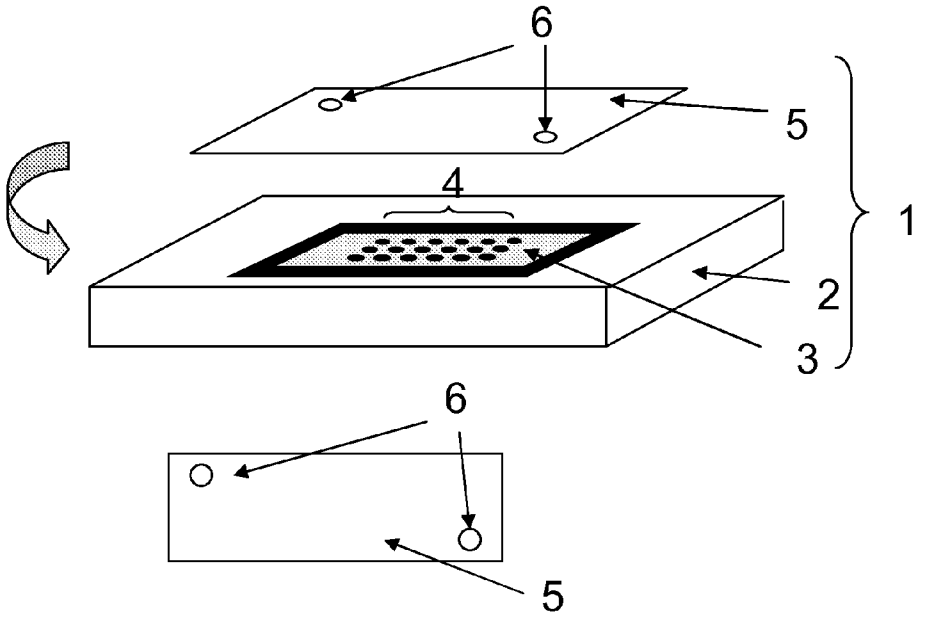
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[Continued on next page]

(54) Title: IDENTIFICATION AND QUANTIFICATION OF A PLURALITY OF BIOLOGICAL (MICRO)ORGANISMS OR THEIR COMPONENTS



(57) Abstract: Disclosed is a system and method conducting real-time PCR. Capture molecules of a specific design are immobilized on a solid support, and contacted with amplicons produced in one or more PCR cycles. Detection of amplicons may take place during or between the PCR cycles while the solid support is in fluidic contact with the PCR solution. In one embodiment detection of the amplicons takes place when the solid support is not in fluidic contact with the PCR solution. In another embodiment, labeled amplicons are detected using an evanescent field while hybridized to capture probes immobilized on a solid support in the Real-time PCR reaction chamber. The method is suitable for the simultaneous detection and quantification of closely homologous target molecules.

WO 2008/034896 A3

PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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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 C12Q

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, WPI Data, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/088844 A1 (XU LIANG [CN]) 27 April 2006 (2006-04-27) claims 1-4 and [0011]-[0014] -----	1-35, 37-42, 45,46
X	SCHENA MARK: "Microarray Analysis" 2003, JOHN WILEY & SONS , NEW JERSEY , XP002463284 p. 96, par. 2, p. 106, last par., tab. 5.1, p. 109 end of the par. 2 , fig. 5.16, and p. 113 ----- -/--	36,43,44

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"E" earlier document but published on or after the international filing date

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/	Authorized officer
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LEHR H-P ET AL: "REAL-TIME DETECTION OF NUCLEIC ACID INTERACTIONS BY TOTAL INTERNAL REFLECTION FLUORESCENCE" ANALYTICAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. COLUMBUS, US, vol. 75, no. 10, 15 May 2003 (2003-05-15), pages 2414-2420, XP001170913 ISSN: 0003-2700 -----	1-46
A	US 6 620 623 B1 (YERSHOV GENNADIY [US] ET AL) 16 September 2003 (2003-09-16) abstract; figure 1 -----	5
A	STIMPSON D I ET AL: "REAL-TIME DETECTION OF DNA HYBRIDIZATION AND MELTING ON OLIGONUCLEOTIDE ARRAYS BY USING OPTICAL WAVE GUIDES" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, DC, US, vol. 92, July 1995 (1995-07), pages 6379-6383, XP002912130 ISSN: 0027-8424 page 6370, column 2; figure 1 -----	1-10
A	HEALEY B G ET AL: "FIBEROPTIC DNA SENSOR ARRAY CAPABLE OF DETECTING POINT MUTATIONS" ANALYTICAL BIOCHEMISTRY, ACADEMIC PRESS, SAN DIEGO, CA, US, vol. 251, no. 2, 5 September 1997 (1997-09-05), pages 270-279, XP000703841 ISSN: 0003-2697 abstract -----	1-10
A	ROBIN HUI LIU ET AL: "SELF-CONTAINED, FULLY INTEGRATED BIOCHIP FOR SAMPLE PREPARATION, POLYMERASE CHAIN REACTION AMPLIFICATION, AND DNA MICROARRAY DETECTION" ANALYTICAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. COLUMBUS, US, vol. 76, no. 7, 1 April 2004 (2004-04-01), pages 1824-1831, XP001196720 ISSN: 0003-2700 page 1825, column 2 - page 1826, column 1 -----	26-46

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006088844 A1	27-04-2006	NONE	
US 6620623 B1	16-09-2003	US 2004077099 A1	22-04-2004