

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
15 November 2007 (15.11.2007)

PCT

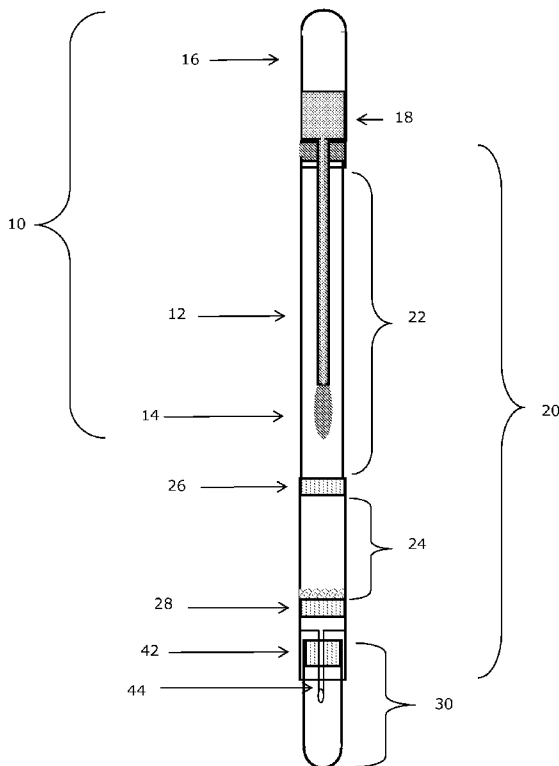
(10) International Publication Number  
**WO 2007/131138 A3**

- (51) International Patent Classification:  
A61M 35/00 (2006.01)
- (21) International Application Number:  
PCT/US2007/068186
- (22) International Filing Date: 3 May 2007 (03.05.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/797,395 3 May 2006 (03.05.2006) US
- (71) Applicants (for all designated States except US): **MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH** [US/US]; 200 First Street S.W., Rochester, Minnesota 55905 (US). **ROCHE MOLECULAR SYSTEMS** [US/US]; 1145 Atlantic Avenue, Alameda, California 94501 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **UHL, James R.** [US/US]; 711 9th Street SW, Rochester, Minnesota

- 55902 (US). **COCKERILL III, Franklin R.** [US/US]; 709 9th Avenue SW, Rochester, Minnesota 55905 (US). **AICHINGER, Christian** [DE/DE]; Gysisstr.7, D-81379 Munchen (DE).
- (74) Agents: **PARSONS, M. Angela** et al.; Fish & Richardson P.C., P.O. Box 1022, Minneapolis, Minnesota 55440-1022 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: SWAB EXTRACTION DEVICE AND METHODS OF USING



(57) Abstract: This disclosure describes a swab extraction device that can be used to collect a medical specimen, transport the specimen to a laboratory, and process and analyze the specimen.

WO 2007/131138 A3



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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

17 January 2008

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/68186

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC(8) - A61M 35/00 (2007.01)  
 USPC - 604/1  
 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)  
 IPC8 - A61M 35/00 (2007.01)  
 USPC - 604/1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 IPC8 - A61F 13/15, A61F 13/38, A61F 13/40, A61B 10/00, A61B 10/02, C12M 1/30 (2007.01)  
 USPC - 600/572

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 PubWEST (PGPB,USPT,EPAB,JPAB), Google Scholar  
 Search terms - filter, sieve, strain, chamber, section, portion, tube, buffer, wash, rinse, dissolve, extract, elute, lysis, swab

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X - Y	US 5,266,266 A (NASON) 30 November 1993 (30.11.1993) see especially col 3, ln 62-67, col 4, ln 3-19, col 5, ln 18-30, col 5, ln 37-39, col 7, ln 2-21 and col 8, ln 5-11, figs 3, 10 and 13	1, 2, 4 and 5 ----- 3
Y	US 5,078,968 A (NASON) 7 January 1992 (07.01.1992) see especially col 8, ln 36-54, fig 16	3

Further documents are listed in the continuation of Box C.

\* 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 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 13 September 2007 (13.09.2007)	Date of mailing of the international search report <b>16 NOV 2007</b>
---	--

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
---	--