

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 September 2003 (25.09.2003)

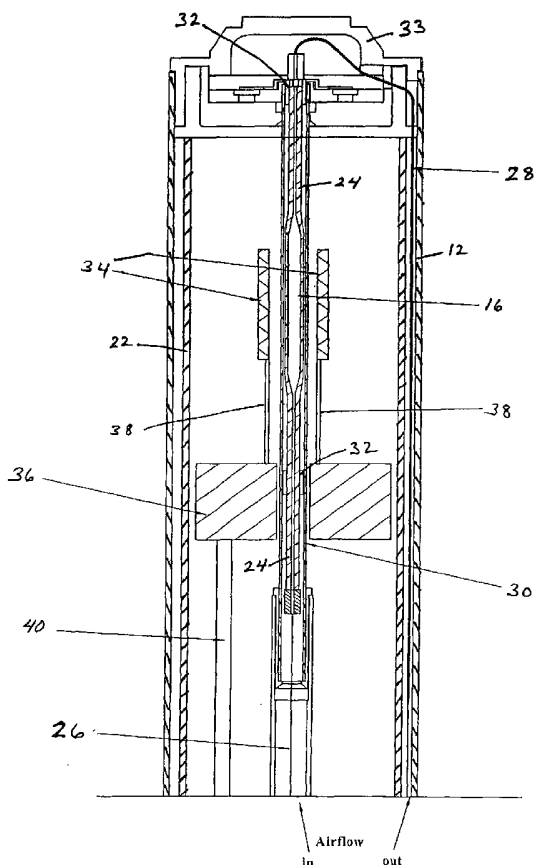
PCT

(10) International Publication Number
WO 03/079034 A3

- (51) International Patent Classification⁷: G01R 33/30
 - (21) International Application Number: PCT/IB03/02430
 - (22) International Filing Date: 13 March 2003 (13.03.2003)
 - (25) Filing Language: English
 - (26) Publication Language: English
 - (30) Priority Data: 60/364,559 15 March 2002 (15.03.2002) US
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 - (81) Designated State (national): JP.
 - (84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).
- 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: 18 December 2003

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.

(54) Title: FLOW-THROUGH CRYOGENIC NMR PROBE



(57) Abstract: A nuclear magnetic resonance (NMR) spectroscopy probe has a sample cell into and out of which a room temperature liquid sample may be directed. The cell is surrounded by a radio frequency coil that is used to perform NMR measurements of the liquid sample, and which is maintained at cryogenic temperatures. The coil is separated from the sample cell by a thermally insulative boundary, such as a vacuum. The sample may enter the cell through an input path, and may exit through an output path. The input path, output path and sample cell may be surrounded by a sheath through which flows room temperature gas. The ends of the sample cell may be tapered to promote thorough flow through the cell, and flow diverters may be included in the sample cell adjacent to the input and output paths to force flow to the outer wall of the sample cell.



WO 03/079034 A3

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/02430

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01R33/30		
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 7 G01R		
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) INSPEC, WPI Data, PAJ, EPO-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 5 508 613 A (V. KOTSUBO, R.D. BLACK) 16 April 1996 (1996-04-16) column 2, line 53 -column 7, line 22 figures 2,4,6,7	1-4, 14-18, 24-28, 38-42
A	GB 2 253 704 A (BRUKER ANALYTISCHE MESSTECHNIK GMBH) 16 September 1992 (1992-09-16) the whole document	1-47
A	WO 97 38325 A (VARIAN ASSOCIATES) 16 October 1997 (1997-10-16) the whole document	1, 24, 25
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in 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 document 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. *Z* document member of the same patent family		
Date of the actual completion of the international search 3 October 2003		Date of mailing of the international search report 10/10/2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Volmer, W

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/02430

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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