

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 March 2003 (06.03.2003)

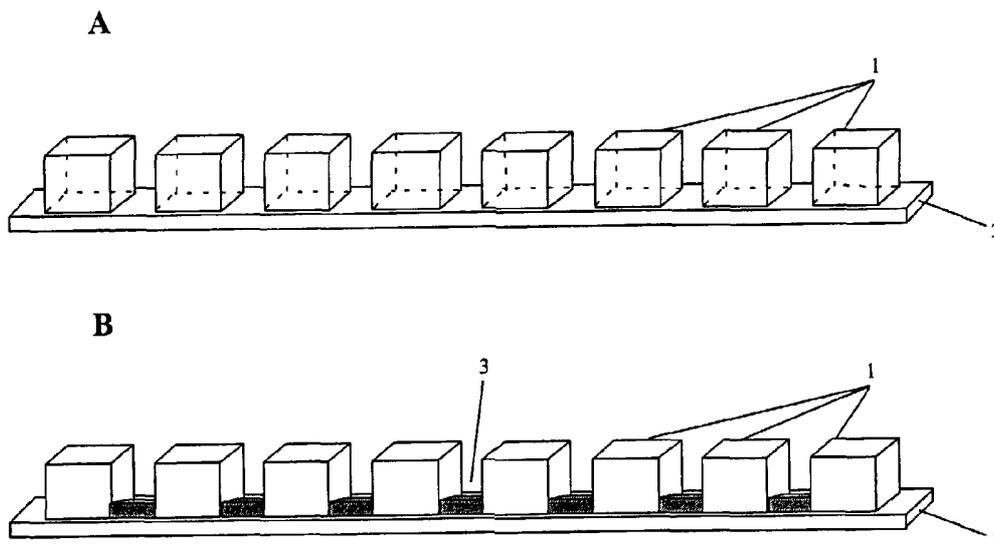
PCT

(10) International Publication Number
WO 03/019172 A3

- (51) International Patent Classification⁷: G01N 27/447
- (21) International Application Number: PCT/EP02/10369
- (22) International Filing Date: 30 August 2002 (30.08.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0121189.5 31 August 2001 (31.08.2001) GB
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR SEPARATING AN ANALYTE



(57) Abstract: The present invention relates to an apparatus and method for the separation and purification of charged and neutral compounds in an analyte solution by electrophoretic means using a plurality of compartments (1) to contain the analyte solution, an immobilized chemical buffering system (2) to fix a pH value or a pH gradient in its portion(s) contacting the analyte solution and an electrical field imposed by electrical means (4) disposed in at least two of said compartments. This invention allows one to differentially separate charged and neutral compounds, to extract the migrating compounds from the chemical buffering system (2), to recover the purified compounds mainly in solution and to collect them in the various compartments (4), preferably at various pI.



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(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.

INTERNATIONAL SEARCH REPORT

Int. Application No
PCT/EP 02/10369

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N27/447

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 G01N B01D

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, PAJ, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 01 86279 A (ROSSIER JOEL STEPHANE ;ECOLE POLYTECH (CH); GIRAULT HUBERT H (CH);) 15 November 2001 (2001-11-15) cited in the application page 4, paragraph 2 -page 11, last paragraph; figure 9 ---	1-6,8,9, 11, 15-17, 23,25, 28-37
P,X	WO 01 75432 A (WISTAR INST) 11 October 2001 (2001-10-11) page 11, line 9-16; figure 9 ---	1-6,21, 26,28-37
P,A	WO 01 68225 A (CAHILL MICHAEL ;NORDHEIM ALFRED (DE); PROTEOSYS AG (DE); DRUKIER A) 20 September 2001 (2001-09-20) the whole document --- -/--	1-37

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search 24 June 2003	Date of mailing of the international search report 03/07/2003
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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 <p style="text-align: center; font-size: 1.2em;">Müller, T</p>
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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 02/10369

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 74850 A (UNIV WASHINGTON) 14 December 2000 (2000-12-14) the whole document -----	1-37

INTERNATIONAL SEARCH REPORT
Information on patent family members

International Application No
PCT/EP 02/10369

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0186279	A	15-11-2001	AU	6745501 A		20-11-2001
			WO	0186279 A1		15-11-2001
			EP	1281073 A1		05-02-2003
			US	2003104449 A1		05-06-2003

WO 0175432	A	11-10-2001	AU	4786101 A		15-10-2001
			EP	1269178 A2		02-01-2003
			WO	0175432 A2		11-10-2001

WO 0168225	A	20-09-2001	WO	0168225 A1		20-09-2001
			AU	3812000 A		24-09-2001

WO 0074850	A	14-12-2000	EP	1190241 A2		27-03-2002
			JP	2003501639 T		14-01-2003
			WO	0074850 A2		14-12-2000
