(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 25 October 2001 (25.10.2001)

PCT

(10) International Publication Number WO 01/079840 A3

(51) International Patent Classification⁷: G01N 33/543, 33/569, 33/52, 33/545

(21) International Application Number: PCT/US01/12478

(22) International Filing Date: 16 April 2001 (16.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

09/550,779 17 April 2000 (17.04.2000) US

(71) Applicant: TOXIN ALERT, INC. [US/US]; 6354 Viscount Road, Mississauga, Ontario L4V 1H3 (CA).

(71) Applicant and

(72) Inventor: BODENHAMER, William, T. [US/US]; 101 Hawksbill Way, Jupiter, FL 33458 (US).

(74) Agent: SLAVIN, Michael; McHale & Slavin, P.A., Suite 402, 4440 PGA Boulevard, Palm Beach Gardens, FL 33410 (US)

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, DM, DZ, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

(88) Date of publication of the international search report:
4 September 2003

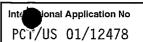
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



(54) Title: METHOD AND APPARATUS FOR SELECTIVE BIOLOGICAL MATERIAL DETECTION

(57) Abstract: The present invention relates to bioassay materials useful for the detection of toxic substances and, more particularly, to packaging materials for food and other products, along with methods for their manufacture and use. The invention provides a unique composite material capable of detecting and identifying multiple biological material within a single package. The biological material identification system is designed for incorporation into existing types of flexible packaging material such as polyvinylchloride or polyolefin films, and its introduction into the existing packaging infrastructure will require little or no change to present systems and procedures.

INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01N33/543 G01N33/569 G01N33/52 G01N33/545

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 7-601N

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, BIOSIS

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Ρ,Χ	WO 00 37934 A (TOXIN ALERT INC ;BODENHAMER WILLIAM T (US)) 29 June 2000 (2000-06-29) the whole document	1-29
Χ	US 4 870 005 A (AKIYOSHI YUTAKA ET AL) 26 September 1989 (1989-09-26)	17-29
Α	column 4, paragraph 6 -column 5, paragraph 1 column 8, paragraph 6 claim 1	1-16
X	EP 0 347 839 A (FUJIREBIO KK ;FUJI PHOTO FILM CO LTD (JP)) 27 December 1989 (1989-12-27)	17–29
Α	the whole document	1-16

Further documents are listed in the continuation of box C.	χ 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. *&* document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
23 July 2002	31/07/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Pellegrini, P

INTERNATIONAL SEARCH REPORT

Inte nal Application No
PCT/US 01/12478

	Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT						
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.					
X	EP 0 327 918 A (KONISHIROKU PHOTO IND) 16 August 1989 (1989-08-16)	17-29					
A	the whole document	1–16					
(WO 98 29746 A (FIBERCHEM INC) 9 July 1998 (1998-07-09)	17–29					
A	claim 14	1-16					
		·					

INTERNATIONAL SEARCH REPORT

onal Application No Pur/US 01/12478

					31,700	, ,
Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0037934	A	29-06-2000	US	6051388 A		18-04-2000
	•		ΑÜ	3448100 A		12-07-2000
			CN	1331799 T		16-01-2002
			EP	1141700 A	\ 1	10-10-2001
			WO	0037934 A	A 1	29-06-2000
			US	6376204 E	31	23-04-2002
			US	6379908 B	31	30-04-2002
			US	2002009811 A	\1	24-01-2002
			US	2002045200 A	\1	18-04-2002
US 4870005	Α	26-09-1989	JP	57067860 A		24-04-1982
			DE	3176387 D)1	01-10-1987
			EP	0051183 A	۱1	12-05-1982
EP 0347839	Α	27-12-1989	 ЈР	1321360 A		27-12-1989
			ĴΡ	2616805 B		04-06-1997
			JP	1321361 A		27-12-1989
			JP	2616806 B	32	04-06-1997
			DE	68918504 D)1	03-11-1994
			DE	68918504 T	Γ2	09-03-1995
			EP	0347839 A	12	27-12-1989
			US	5093081 A	1	03-03-1992
EP 0327918	A	16-08-1989	EP	0327918 A	 \1	16-08-1989
			JP	1280253 A	4	10-11-1989
WO 9829746	Α	09-07-1998	US	5780251 A	·	14-07-1998
			WO	9829746 A	۱1	09-07-1998