



- (51) **International Patent Classification:**
A61L 2/28 (2006.01) *G01N 21/78* (2006.01)
- (21) **International Application Number:**
PCT/US2014/042886
- (22) **International Filing Date:**
18 June 2014 (18.06.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
13/927,139 26 June 2013 (26.06.2013) US
- (71) **Applicant:** EASTMAN KODAK COMPANY [US/US];
343 State Street, Rochester, NY 14650-2201 (US).
- (72) **Inventors:** NAIR, Mridula; 343 State Street, Rochester,
NY 14650-2201 (US). LOFFTUS, Kevin, D.; 343 State
Street, Rochester, NY 14650-2201 (US). BRICK, Mary,
Christine; 343 State Street, Rochester, NY 14650-2201
(US).
- (81) **Designated States** (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

(88) **Date of publication of the international search report:**
2 April 2015



WO 2014/209710 A3

(54) **Title:** REACTIVE INDICATOR COMPOSITIONS AND ARTICLES CONTAINING SAME

(57) **Abstract:** An indicator composition can be used to detect various environmental conditions stimuli such as in sterilization or storage processes. This indicator composition has a) a first polymeric particle comprising a solid continuous polymeric phase and a first reactant, the first polymeric particle having a mode particle size equal to or less than 50 µm; and b) a second reactant outside of the first polymeric particle, which second reactant is capable of reacting with the first reactant when exposed to a chosen environmental condition stimulus. The indicator composition can be used by exposing it to the environmental condition stimulus for a sufficient time to cause a detectable change in the indicator composition such as a detectable color change.

INTERNATIONAL SEARCH REPORT

International application No PCT/US2014/042886
--

A. CLASSIFICATION OF SUBJECT MATTER INV. A61L2/28 G01N21/78 ADD.				
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) A61L				
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 practicable, search terms used) 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 A A A A	US 2010/249560 A1 (LEVINSON DOUGLAS A [US] ET AL) 30 September 2010 (2010-09-30) paragraphs [0132], [0154], [0248] ----- WO 2013/016080 A2 (EASTMAN KODAK CO [US]; NAIR MRIDULA [US]; JONES TAMARA K [US]) 31 January 2013 (2013-01-31) claims 1,4 ----- WO 2006/021953 A2 (SKYRAD LTD [IL]; FARAN ORI [IL]) 2 March 2006 (2006-03-02) claim 1; figure 1 ----- WO 82/03127 A1 (ALFA LAVAL AB [SE]; BJOERLING KARL TORSTEN [SE]; GROENBERG ANN MARIE M) 16 September 1982 (1982-09-16) claim 1; figures 1-2 -----	1,9,12 2-8,10, 11,13-19 1-19 1-19 1-19		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> "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 </td> <td style="width: 50%; border: none; vertical-align: top;"> "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 </td> </tr> </table>			"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
"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	Date of mailing of the international search report			
26 January 2015	10/02/2015			
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Tiercet, Marc			

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2014/042886

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010249560 A1	30-09-2010	US 2010249560 A1 WO 2010101625 A2	30-09-2010 10-09-2010

WO 2013016080 A2	31-01-2013	CN 103703063 A EP 2736965 A2 WO 2013016080 A2	02-04-2014 04-06-2014 31-01-2013

WO 2006021953 A2	02-03-2006	AU 2005276116 A1 BR PI0517351 A CA 2577994 A1 EP 1810005 A2 JP 2008510987 A US 2008009067 A1 WO 2006021953 A2	02-03-2006 07-10-2008 02-03-2006 25-07-2007 10-04-2008 10-01-2008 02-03-2006

WO 8203127 A1	16-09-1982	DE 3275011 D1 EP 0085678 A1 FI 831048 A JP S58500182 A SE 427389 B US 4454094 A WO 8203127 A1	12-02-1987 17-08-1983 28-03-1983 03-02-1983 28-03-1983 12-06-1984 16-09-1982
