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(71) Applicant (for all designated States except US): **ECOLAB USA INC.** [US/US]; 370 N. Wabasha Street, St. Paul, Minnesota 55102 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIESEL, Elizabeth** [US/US]; 2732 Aldrich Ave. S., Minneapolis, Minnesota 55408 (US). **ZURBEY, Matthew** [US/US]; 8243 Ideal Ave. S., Cottage Grove, Minnesota 55016 (US). **WILLIAMS, Dorothy** [US/US]; 2283 Brewster St., #3, St. Paul, Minnesota 55108 (US). **BESSE, Michael E.** [US/US]; 7450 Winnetke Height Drive, Golden Valley, Minnesota 55427 (US).

(74) Agent: **SORENSEN, Andrew D.**; Ecolab USA Inc., 655 Lone Oak Drive, Eagan, Minnesota 55121 (US).

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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:

19 July 2012

(54) Title: USE OF SUGARS IN A STABILIZATION MATRIX AND SOLID COMPOSITIONS

(57) Abstract: The use of sugars in a stabilization matrix and solid detergent compositions is disclosed along with methods of making and using the solid detergent compositions.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2011/053739**A. CLASSIFICATION OF SUBJECT MATTER***C11D 7/40(2006.01)i, C11D 7/10(2006.01)i, C11D 9/60(2006.01)i, C11D 17/06(2006.01)i*

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)

C11D 7/40; C11D 9/32; C11D 7/10; C11D 1/66; C11D 11/00; A61K 7/50; C11D 17/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: solidification matrix, sugar, carbonate, water, solid detergent, sugar alcohol, glycol, glycerol

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6017864 A (BRITAIN KENT R. et al.) 25 January 2000 See claims 1-19, 39-47; and column 12, lines 56-66.	1-3,9-11,15-17
A	US 7759300 B2 (BESSE MICHAEL E. et al.) 20 July 2010 See claim 1.	1-3,9-11,15-17
A	JP 2002-348594 A (ASAHI DENKA KOGYO KK et al.) 04 December 2002 See claims 1-2.	1-3,9-11,15-17
A	US 5786320 A (URFER; ALLEN D. et al.) 28 July 1998 See abstract.	1-3,9-11,15-17
A	US 6645931 B1 (YANAGISAWA; YUHKI et al.) 11 November 2003 See abstract.	1-3,9-11,15-17

☐ Further documents are listed in the continuation of Box C.☒ See patent family 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 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 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

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Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsu-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Choi Young Hee

Telephone No. 82-42-481-8156



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/IB2011/053739

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6017864 A	25.01.2000	AU 1998-95969 A1 CN 1197947 C0 CN 1283220 A0 GB 2345916 A JP 2002-500243 A JP 2010-174256 A JP 4558930 B2 WO 1999-033948 A1	19.07.1999 20.04.2005 07.02.2001 26.07.2000 08.01.2002 12.08.2010 06.10.2010 08.07.1999
US 7759300 B2	20.07.2010	AU 2008-272558 A1 CA 2685979 A1 CN 101679926 A EP 2171030 A2 JP 2010-531910 A US 2009-0011973 A1 US 2010-0311634 A1 WO 2009-004512 A2 WO 2009-004512 A3	08.01.2009 08.01.2009 24.03.2010 07.04.2010 30.09.2010 08.01.2009 09.12.2010 08.01.2009 08.01.2009
JP 2002-348594 A	04.12.2002	None	
US 5786320 A	28.07.1998	US 05888958 A US 05994288 A WO 97-28241 A1	30.03.1999 30.11.1999 07.08.1997
US 6645931 B1	11.11.2003	EP 1061126 A1 EP 1061126 B1 JP 2000-355698 A JP 3352977 B2 US 2004-0127387 A1 US 7067469 B2	20.12.2000 26.03.2003 26.12.2000 03.12.2002 01.07.2004 27.06.2006

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2011/053739**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 4-8, 12-14, 18-19
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.