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(71) Applicant (for all designated States except US): **ECOLAB INC.** [US/US]; Ecolab Center, St. Paul, MN 55102 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SMITH, Kim, R.** [US/US]; 8774 Rainier Alcove, Woodbury, MN 55125 (US). **BESSE, Michael, E.** [US/US]; 7450 Winnetka Heights, Golden Valley, MN 55427 (US). **TJELTA, Brenda, L.** [US/US]; 2136 Watson Avenue, St. Paul, MN 55116 (US). **SANDERS, Lisa, M.** [US/US]; 4730 Walden Drive, Eagan, MN 55122 (US). **OLSON, Keith, E.** [US/US]; 13966 Edenwood Court, Apple Valley, MN 55124 (US).

(74) Agent: **SORENSEN, Andrew, D.**; ECOLAB INC., 655 Lone Oak Drive, Eagan MN 55121 (US).

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(54) Title: WATER SOLUBLE MAGNESIUM COMPOUNDS AS CLEANING AGENTS AND METHODS OF USING THEM

(57) Abstract: The present invention relates to compositions and methods employing a water soluble magnesium compound. In certain embodiments, the composition includes water and water soluble magnesium compound, but lacks other materials commonly used in cleaning compositions. The methods and compositions can provide magnesium ion at predefined ratios to calcium ion in water, such as magnesium ion in a molar amount equal to or in excess over a molar amount of calcium ion. A water soluble magnesium salt including an anion of a water soluble calcium salt is more effective than a magnesium salt with an anion of a water insoluble calcium salt. These compositions can be used for reducing lime scale or precipitate formation from hard water, removing soap scum, or the like.



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A. CLASSIFICATION OF SUBJECT MATTER*C11D 3/04(2006.01)i, C11D 1/00(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)

IPC 8 C11D

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 since 1975

Japanese Utility models and applications for Utility models since 1975

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

eKIPASS (KIPO internal)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,863,877 A (CHARLES D. CARR et al.) 26 January 1999 See claims 1-13	1-79
A	JP 2003-525104 A (HERCULES INCORPORATED) 26 August 2003 See claims 1-10	1-79
A	JP 07-292389 A (LION CORPORATION) 07 November 1995 See claim 1	1-79
A	US 2006/0069001 A1 (BRIAN XIAOQING SONG) 30 March 2006 See claims 1-22	1-79

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

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"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

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Authorized officer

Park, Jong Chul

Telephone No. 82-42-481-8306



INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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