PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : **C11D 1/72, 17/00, A61K 7/50** | **A3**

(11) International Publication Number: **WO 00/50549**

(43) International Publication Date: 31 August 2000 (31.08.00)

(21) International Application Number: PCT/US00/04185

(22) International Filing Date: 18 February 2000 (18.02.00)

(30) Priority Data:
60/121,171 22 February 1999 (22.02.99) US

(71) Applicant *(for all designated States except US)*: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: SCHEPER, William, Michael [US/US]; 2393 Picnic Woods Drive, Lawrenceburg, IN 47025 (US). KLUESENER, Bernard, William [US/US]; 11619 New Biddinger Road, Harrison, OH 45030 (US). SIVIK, Mark, Robert [US/US]; 2434 Sheffield Court, Ft. Mitchell, KY 41017 (US). JORDAN, Glenn, Thomas, IV [US/US]; 5750 Ridgeview Drive, Indian Springs, OH 45011 (US). VINSON, Philip, Kyle [US/US]; 5803 Windermere Lane, Fairfield, OH 45014 (US).

(74) Agents: REED, T., David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).

(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), 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, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, 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), 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:
2 November 2000 (02.11.00)

(54) Title: CLEANING COMPOSITIONS CONTAINING SELECTED NONIONIC SURFACTANTS

(57) Abstract

A cleaning composition, e.g. granular or liquid laundry detergent, dishwashing liquid shampoo, personal cleansing commposition or hard surface cleaning composition, contains a capped nonionic surfactant with an X/y number greates than 1.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	**ES**	Spain	**LS**	Lesotho	**SI**	Slovenia
AM	Armenia	**FI**	Finland	**LT**	Lithuania	**SK**	Slovakia
AT	Austria	**FR**	France	**LU**	Luxembourg	**SN**	Senegal
AU	Australia	**GA**	Gabon	**LV**	Latvia	**SZ**	Swaziland
AZ	Azerbaijan	**GB**	United Kingdom	**MC**	Monaco	**TD**	Chad
BA	Bosnia and Herzegovina	**GE**	Georgia	**MD**	Republic of Moldova	**TG**	Togo
BB	Barbados	**GH**	Ghana	**MG**	Madagascar	**TJ**	Tajikistan
BE	Belgium	**GN**	Guinea	**MK**	The former Yugoslav Republic of Macedonia	**TM**	Turkmenistan
BF	Burkina Faso	**GR**	Greece			**TR**	Turkey
BG	Bulgaria	**HU**	Hungary	**ML**	Mali	**TT**	Trinidad and Tobago
BJ	Benin	**IE**	Ireland	**MN**	Mongolia	**UA**	Ukraine
BR	Brazil	**IL**	Israel	**MR**	Mauritania	**UG**	Uganda
BY	Belarus	**IS**	Iceland	**MW**	Malawi	**US**	United States of America
CA	Canada	**IT**	Italy	**MX**	Mexico	**UZ**	Uzbekistan
CF	Central African Republic	**JP**	Japan	**NE**	Niger	**VN**	Viet Nam
CG	Congo	**KE**	Kenya	**NL**	Netherlands	**YU**	Yugoslavia
CH	Switzerland	**KG**	Kyrgyzstan	**NO**	Norway	**ZW**	Zimbabwe
CI	Côte d'Ivoire	**KP**	Democratic People's Republic of Korea	**NZ**	New Zealand		
CM	Cameroon			**PL**	Poland		
CN	China	**KR**	Republic of Korea	**PT**	Portugal		
CU	Cuba	**KZ**	Kazakstan	**RO**	Romania		
CZ	Czech Republic	**LC**	Saint Lucia	**RU**	Russian Federation		
DE	Germany	**LI**	Liechtenstein	**SD**	Sudan		
DK	Denmark	**LK**	Sri Lanka	**SE**	Sweden		
EE	Estonia	**LR**	Liberia	**SG**	Singapore		

INTERNATIONAL SEARCH REPORT

Inte .ional Application No
PCT/US 00/04185

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C11D1/72 C11D17/00 A61K7/50

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 C11D A61K

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)
WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 22651 A (PROCTER & GAMBLE) 26 June 1997 (1997-06-26)	1-3,6,9
A	abstract page 54, paragraph 3; claim 1; examples XI-XIII	7,8
X	WO 98 10051 A (HENKEL KGAA) 12 March 1998 (1998-03-12)	6,8,9
A	page 4, paragraph 2; table 1	7
X	US 4 443 363 A (KLINGER WOLFGANG ET AL) 17 April 1984 (1984-04-17)	6,8,9
A	claim 1; examples 5-7	7
X	US 4 548 729 A (SCHMID KARL ET AL) 22 October 1985 (1985-10-22)	6,8,9
A	abstract; examples 5,6,8,9	7

-/--

[X] Further documents are listed in the continuation of box C.

[X] 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
28 June 2000	23/08/2000

Name and mailing address of the ISA	Authorized officer
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	Saunders, T

1

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Inte ..ional Application No
PCT/US 00/04185

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 05441 A (HENKEL KGAA) 23 February 1995 (1995-02-23)	6,9
A	abstract; examples 4.1,4.5	7,8
X	WO 97 04058 A (HENKEL KGAA) 6 February 1997 (1997-02-06) claims 1,6,20; example 1	1,9
X	EP 0 054 366 A (ICI PLC) 23 June 1982 (1982-06-23) examples	1,9
X	WO 92 15664 A (CIBA GEIGY AG) 17 September 1992 (1992-09-17) page 7, paragraph 10 -page 8, paragraph 2; examples 6,9	3,9
X	EP 0 661 043 A (KAO CORP) 5 July 1995 (1995-07-05) example 15	5,9
X	EP 0 224 167 A (HENKEL KGAA) 3 June 1987 (1987-06-03) page 2, line 1 - line 9; examples 1B-1I	5,9
X	GB 2 158 080 A (ABM CHEMICALS LTD) 6 November 1985 (1985-11-06) example 5	6,9
A	EP 0 859 044 A (PROCTER & GAMBLE) 19 August 1998 (1998-08-19) examples C-F	6-9
A	US 4 780 237 A (SCHMID KARL-HEINZ ET AL) 25 October 1988 (1988-10-25) abstract; examples 8,9	6-9
A	EP 0 709 450 A (PROCTER & GAMBLE) 1 May 1996 (1996-05-01) page 11, line 40 - line 45; claim 1; example 2	2,3,5,6, 9
A	WO 99 06466 A (PROCTER & GAMBLE) 11 February 1999 (1999-02-11) examples 13,15,16	4,6-9

1

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. ..ional Application No
PCT/US 00/04185

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9722651	A	26-06-1997	NONE		
WO 9810051	A	12-03-1998	DE	19635554 A	05-03-1998
US 4443363	A	17-04-1984	DE	3048642 A	15-07-1982
			AT	8659 T	15-08-1984
			CA	1160534 A	17-01-1984
			DE	3165129 D	30-08-1984
			EP	0054895 A	30-06-1982
			JP	1681706 C	31-07-1992
			JP	3045120 B	10-07-1991
			JP	58109598 A	29-06-1983
US 4548729	A	22-10-1985	DE	3315951 A	08-11-1984
			AT	40716 T	15-02-1989
			BR	8402023 A	11-12-1984
			CA	1225409 A	11-08-1987
			DE	3476680 D	16-03-1989
			DK	94584 A,B,	03-11-1984
			EP	0124815 A	14-11-1984
			ES	532061 D	01-05-1985
			ES	8504917 A	16-07-1985
			JP	1863771 C	08-08-1994
			JP	5076519 B	22-10-1993
			JP	59207997 A	26-11-1984
			ZA	8403244 A	24-12-1984
WO 9505441	A	23-02-1995	DE	4327327 A	16-02-1995
			EP	0724621 A	07-08-1996
WO 9704058	A	06-02-1997	DE	19526483 A	23-01-1997
EP 0054366	A	23-06-1982	AU	7822981 A	24-06-1982
WO 9215664	A	17-09-1992	AT	138972 T	15-06-1996
			AU	1228192 A	06-10-1992
			BR	9205707 A	02-08-1994
			DE	69211334 D	11-07-1996
			EP	0574413 A	22-12-1993
			ES	2088576 T	16-08-1996
			JP	6505059 T	09-06-1994
			KR	195844 B	15-06-1999
			MX	9200907 A	01-09-1992
			US	5559273 A	24-09-1996
EP 0661043	A	05-07-1995	JP	7197083 A	01-08-1995
			US	5554315 A	10-09-1996
EP 0224167	A	03-06-1987	DE	3541535 A	27-05-1987
			JP	62136235 A	19-06-1987
GB 2158080	A	06-11-1985	NONE		
EP 0859044	A	19-08-1998	WO	9836042 A	20-08-1998
US 4780237	A	25-10-1988	AT	68519 T	15-11-1991
			DE	3773781 A	21-11-1991
			EP	0254208 A	27-01-1988

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. ..ional Application No
PCT/US 00/04185

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4780237 A		JP 2533555 B	11-09-1996
		JP 63035697 A	16-02-1988
EP 0709450 A	01-05-1996	CA 2203268 A	02-05-1996
		CN 1170426 A	14-01-1998
		JP 10507788 T	28-07-1998
		WO 9612782 A	02-05-1996
WO 9906466 A	11-02-1999	EP 0998514 A	10-05-2000