

Search history

Search 1: SFT=(reactor and (ion near exchanger) and hydrogen) (Results 2059)
Search 2: SFT=(1) and IC=(C07C) (Results 830)
Search 3: 2 (fatty near alcohol*) (Results 0)
Search 4: 2 and (fatty near alcohol*) (Results 65)
Search 5: 2 and (hydrogen near (cool* or refrigerat*)) (Results 27)
Search 6: 5 and hydrogenation (Results 22)
Search 7: SFT=(hydrogenation and SS(hydrogen and cool+)) (Results 20)
Search 8: SFT=(hydrogenation and SS(hydrogen and (cool+ or refrigerat+))) (Results 20)
Search 9: SFT=(hydrogenation and (hydrogen 3w (cool+ or refrigerat+))) (Results 304)
Search 10: 9 and methanol (Results 74)
Search 11: SFT=(hydrogenation and SP=(hydrogen 3w (cool+ or refrigerat+)) and methanol) (Results 19)
Search 12: SFT=(9) and IC=(C07C) (Results 112)
Search 13: SFT=(hydrogenation and ((hydrogen near (cool+ or refrigerat+)) near stream)) (Results 45)
Search 14: SFT=(hydrogenation and ((hydrogen near (cool+ or refrigerat+)) near condens*)) (Results 1)
Search 15: 9 and alcohol+ (Results 91)
Search 16: 9 and alcohol* (Results 127)
Search 17: 9 and (alcohol* near condens*) (Results 6)

Title: Improvements relating to the production of fatty acids and fatty alcohols

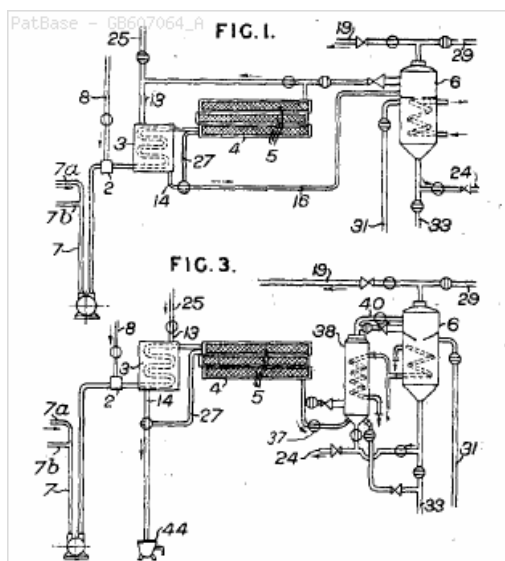
Abstract: An apparatus which is suitable either for the catalytic **hydrogenation** of fats, fatty oils or fatty acids to produce alcohols or for the hydrolysis of fats or fatty oils to produce fatty acids and glycerine comprises (i) a heat exchanger for preheating the fatty material; (ii) a reaction vessel in which the **hydrogenation** or hydrolysis takes place; (iii) a separator vessel in which waste hydrogen is separated or water is flashed off, and (iv) suitable branch and bypass ducts and associated control means for enabling either of the processes to be carried out. When using the apparatus of <PICT:0607064/III/1> <PICT:0607064/III/2> Fig. 1 for the **hydrogenation** reaction, the fatty starting material is introduced via lines 7a and 7 to the injector 2, where it is mixed with hydrogen entering via line 8. The mixture passes through heat exchanger 3 to the reaction vessel 4 containing removable catalyst carriers 5 and then through line 13 to the other side of heat exchanger 3. From there it passes through line 16 to separator 6, waste hydrogen leaving through line 19 and other reaction products leaving through line 24. When using the apparatus for hydrolysis, the fatty starting material is introduced via line 7b. Steam enters the heat exchanger 3 through line 25 and steam condensate from the heat exchanger passes to reaction vessel 4, from which the catalyst carriers have been removed, via lines 14 and 27. Reaction products pass directly from reaction vessel 4 to separator 6, water flashing off through line 29, fatty acids leaving through line 31 and glycerine water leaving through line 33. When using the apparatus of Fig. 3 for the **hydrogenation** reaction, the reaction products from reaction vessel 4 do not go to the heat exchanger but pass through valve 37 to condenser 38 and the uncondensed portion is then led to separator 6 through line 40. The heat exchanger is heated by a fluid such as steam, any condensate passing to steam trap 44. The condensate passes through line 27 to the reaction vessel 4 during the hydrolysis reaction as in the case of Fig. 1. Instead of employing catalyst carriers 5, the catalyst may be introduced into the reaction vessel in powder form and recovered from the reaction products.

Classifications:

International (IPC 8-9): C11C1/04 C11C3/12 (Advanced/Invention); C11C1/00 C11C3/00 (Core/Invention)

CPC: C11C1/04 C11C3/12

European: C11C1/04 C11C3/12



Family:

Publication number	Publication date	Application number	Application date
GB607064 A	19480825	GB19460002395	19460124

Priority:

GB19460002395 19460124

Probable Assignee: MATEJ KAREL SCHWITZER

Assignee(s): (std): BAMAG LTD ; MATEJ KAREL SCHWITZER ; WALTER WILLIAMS

Assignee(s): BAMAG LIMITED

Title: ALDOL CONDENSATION

Abstract: Production of unsaturated aldehydes by the aldol condensation of straight chain aldehydes, e.g. butyraldehyde, by contacting the aldehyde in the vapour phase with a particulate catalyst comprising at least one basic alkali metal compound supported on an inert substrate at a temperature above 175 degrees centigrade

Classifications:

International (IPC 8-9): B01J21/04 B01J21/08 B01J23/04 B01J23/63 B01J23/92 B01J23/96 B01J32/00 B01J38/02 C07B61/00 C07C29/141 C07C29/17 C07C31/125 C07C45/62 C07C45/73 C07C45/74 C07C47/02 C07C47/21 (Advanced/Invention); B01J21/08 B01J32/00 C07B61/00 C07C45/74 C07C47/02 (Advanced/Non-invention); B01J21/00 B01J23/04 B01J23/54 B01J23/90 B01J32/00 B01J38/00 C07B61/00 C07C29/00 C07C31/00 C07C45/00 C07C47/02 C07C47/20 (Core/Invention); B01J21/00 (Core/Non-invention); B01J C07C (Subclass/Invention)

International (IPC 1-7): B01J B01J21/04 B01J21/08 B01J23/04 B01J23/63 B01J23/92 B01J23/96 B01J32/00 B01J38/02 C07B61/00 C07C C07C29/141 C07C29/17 C07C31/125 C07C45/62 C07C45/72 C07C45/73 C07C45/74 C07C47/02 C07C47/21

CPC: C07B2200/09 C07C45/62 B01J21/08 B01J23/04 C07C29/141 C07C45/74

European: B01J23/04 C07C29/141 C07C45/62 C07C45/74 L01J21/08

US: 568/459 568/459P 568/461 568/463 568/464 568/881 568/885

Family:

Publication number	Publication date	Application number	Application date
AT285392 E	20050115	AT19990950986T	19991025
AU199963569 A1	20000613	AU19990063569	19991025
AU199963569 A5	20000613	AU19990063569	19991025
BRPI9915614 A	20010814	BR1999PI15614	19991025
CA2351475 AA	20010518	CA19992351475	19991025
CN1171841 C	20041020	CN19998013760	19991025
CN1328535 A	20011226	CN19998013760	19991025
DE69922836 D1	20050127	DE19996022836	19991025
EP1133463 A1	20010919	EP19990950986	19991025
EP1133463 B1	20041222	EP19990950986	19991025
GB9825703 A0	19990120	GB19980025703	19981125
GB9901324 A0	19990310	GB19990001324	19990122
ID28690 A	20010628	ID20010001117	19991025
IN245330 B	20110121	IN2001MN00561	20010516
JP2002530361 T2	20020917	JP20000583840T	19991025
KR20010080555 A	20010822	KR20017006502	19991025
PL348632 A1	20020603	PL19990348632	19991025
US2001044558 AA	20011122	US20010861529	20010522
US6586636 BB	20030701	US20010861529	20010522
WO0031011 A1	20000602	WO1999GB03534	19991025
ZA200103772 A	20020812	ZA20010003772	20010509

Priority:

GB19980025703 19981125 GB19980001324 19990122 GB19990001324 19990122
WO1999GB03534 19991025

Probable Assignee: JOHNSON MATTHEY PLC

Assignee(s): (std): IMP CHEMICAL IND LTD ; JOHNSON MATHUR PLC ; JOHNSON MATTHEY PLC ; KELLY GORDON JAMES ; ICI LTD ; ICI PLC

Assignee(s): IMP CHEMICAL IND ; JOHNSON MATTHEY PLC LONDON ; JOHNSON MATTHEY PUBLIC LIMITED COMPANY ; JOHNSON MATTHEY PUBLIC CO LTD ; IMP CHEMICAL IND PLC ; IMPERIAL CHEMICAL INDUSTRIES ; IMPERIAL CHEMICAL INDUSTRIES PLC ; IMPERICAL CHEMICAL IND PLC ; IMPERICAL CHEMICAL INDUSTRIES PLC

Inventor(s): (std): GORDON JAMES KELLY ; KELLY G J ; KELLY GORDON JAMES ; KELLY JAMES

Inventor(s): JAMES GORDON KELLY ; G J KELLY ; GJ KELLY

Agent(s): GOWAN INTELLECTUAL PROPERTY; RIDOUT AND MAYBEE LLP; MASUI CHUJI; TOMITA HIROYUKI; SHAMOTO ICHIO; KOBAYASHI YASUSHI; CHIBA AKIO; KURITA TADAHIKO

Designated states: AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR ID IE IN IT JP KR LI LU MC MX NL NZ PL PT RO RU SE SG US ZA

HYDROGENATION UNIT AND A DEHYDROGENATION-ISOMERIZATION UNIT

Classifications:

C07C5/333 (Advanced/Invention):

C07B61/00 (Advanced/Non-invention):

B01J27/06 B01J29/00 C07C1/00 C07C27/00 C07C29/00 C07C31/00

C07C5/00 (Core/Invention):

C07B61/00 (Core/Non-invention):

C07C (Subclass/Invention)

International (IPC 1-7): C07C29/16 C07C31/125

CPC: C07C29/16 C07C5/2775 C07C5/333 C07C5/3337

CFC: C07C2523/
C07C2523/62

European: C07C29/16 C07C5/27D2F C07C5/333 C07C5/333D2
M07C523/62



FIG. 2

Publication number	Publication date	Application number	Application date
AU2004282205 AA	20050428	AU20040282205	20041014
AU2004282205 BB	20080410	AU20040282205	20041014
CN1882521 A	20061220	CN200480033767	20041014
CN1882521 B	20100609	CN200480033767	20041014
EP1680388 A1	20060719	EP20040795268	20041014
JP2007509053 T2	20070412	JP20060535347T	20041014
JP4377411 B2	20091202	JP20060535347T	20041014
MXPA06004113 A1	20060705	MX2006PA04113	20041014
RU2006116508 A	20071120	RU20060116508	20041014
RU2352551 C2	20090420	RU20060116508	20041014
WO05037753 A1	20050428	WO2004US34081	20041014
ZA200602828 A	20070926	ZA20060002828	20060406

US20030511562P 20031015 WO2004US34081 20041014

Assignee(s): (std): **AYOUB PAUL MARIE ; DIRKZWAGER HENDRIK ; MURRAY BRENDAN DERMOT ; SHELL INT RESEARCH ; SHELL OIL CO ; SUMROW STEVEN CLOIS ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V**

Assignee(s): SHELL INTERNATIONALE RESEARCH MAATSHAPPIJ BV ; SHELL INTERNEHSHNL RISERCH
MAATSKHAPPIJ B V ; SHELL INTERNEHSHNL RISERCH MAATSKHAPPIJ BV ; SHELL INTERNATIONAL
RESEARCH MAATSCHAPPIJ B V ; SHELL OIL COMPANY ; SHELL INT RESEARCH MAATSHAPPIJ BV ;
SHELL INT RESEARCH MIJ BV

Inventor(s): (std): BRENDAN DERMOT MURRAY ; CLOIS AYOUB PAUL MARIE DIRKZWA ; CLOIS SUMROW STEVEN ; DERMOT MURRAY BRENDAN ; DIRKZWAGER HENDRIK ; HENDRIK DIRKZWAGER ; MARIE AYOUB PAUL ; MURRAY BRENDAN DERMOT ; PAUL MARIE AYOUB ; STEVEN CLOIS SUMROW ; SUMROW STEVEN CLOIS ; SAMROU STIVEN KLOIS ; MJURREJ BRENDAN DERMOT ; EHJUB POL MARI ; DIRKZVAGER KHENDRIK : AYOUB PAUL MARIE

Inventor(s): AYOUB PAUL MARIE DIRKZWAGER HENDRIK MURRAY ; AYOUB PAUL MARIE DIRKZWAGER HENDRIK MURRAY BRENDAN ; AYOUB PAUL MARIE DIRKZWAGER HENDRIK MURRAY BRENDAN DERMOT SUMROW STEVEN CLOIS

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; OSAKI KATSUMASA; TSUBOKURA MICHIAKI; KANAYAMA MASATAKA; KAWAGUCHI YOSHIO; ONO MAKOTO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: PREPARATION OF BRANCHED ALIPHATIC ALCOHOLS USING A PROCESS STREAM FROM A DEHYDROGENATION-ISOMERIZATION UNIT

Abstract: Systems and methods to produce branched aliphatic alcohols are described. Systems may include a dehydrogenation-isomerization unit and a hydroformylation unit. Methods for producing branched aliphatic alcohols may include isomerization of olefins in a process stream. The isomerized olefins may be hydroformylated to produce aliphatic alcohols. After hydroformylation of the aliphatic alcohols, unreacted components from the hydroformylation process may be separated from the aliphatic alcohols products. The unreacted components from the hydroformylation process may be recycled back into the main process stream or sent to other processing units. Addition of multiple streams to the dehydrogenation-isomerization unit and/or hydroformylation unit may be performed to control reaction conditions in the units.

Classifications:

International (IPC 8-9): C07C29/16 C07C31/02 C07C31/125

C07C5/27 C07C5/333 (Advanced/Invention);

C07B61/00 (Advanced/Non-invention);

C07C29/00 C07C31/00 C07C5/00 (Core/Invention);

C07B61/00 (Core/Non-invention);

C07C (Subclass/Invention)

International (IPC 1-7): C07C29/16 C07C31/125

CPC: C07C29/16 C07C5/2775 C07C5/333

European: C07C29/16 C07C5/27D2F C07C5/333

PatBase - WO05037752_A1

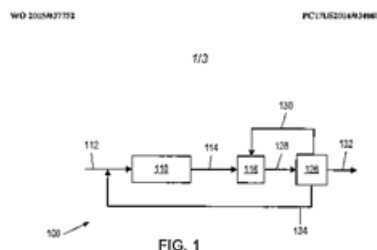


FIG. 1

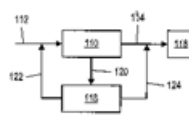


FIG. 2

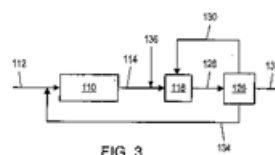


FIG. 3

Family:

Publication number	Publication date	Application number	Application date
AT372969 E	20070915	AT20040795267T	20041014
AU2004282204 AA	20050428	AU20040282204	20041014
AU2004282204 BB	20081002	AU20040282204	20041014
CN100447119 C	20081231	CN200480033096	20041014
CN1878739 A	20061213	CN200480033096	20041014
DE602004008956 D1	20071025	DE200460008956T	20041014
DE602004008956 T2	20080612	DE200460008956T	20041014
DK1680387 T3	20071105	DK20040795267T	20041014
EP1680387 A1	20060719	EP20040795267	20041014
EP1680387 B1	20070912	EP20040795267	20041014
JP2007518701 T2	20070712	JP20060535346T	20041014
JP4532498 B2	20100825	JP20060535346T	20041014
MXPA06003876 A1	20060703	MX2006PA03876	20041014
MY139122 A	20090828	MY20040004209	20041013
RU2006116497 A	20071120	RU20060116497	20041014
RU2349574 C2	20090320	RU20060116497	20041014
WO05037752 A1	20050428	WO2004US34080	20041014
ZA200602714 A	20071031	ZA20060002714	20060403

Priority:

US20030511524P 20031015 WO2004US34080 20041014

Probable Assignee: SHELL OIL CO

Assignee(s): (std): AYOUB PAUL MARIE ; DIRKZWAGER HENDRIK ; MURRAY BRENDAN DERMOT ; SHELL INT RESEARCH ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V ; SHELL OIL CO ; SUMROW STEVEN CLOIS

Assignee(s): SHELL INTERNEHSHNL RISERCH MAATSKHAPPIJ BV ; SHELL OIL COMPANY ; SHELL INTERNEHSHNL RISERCH MAATSKHAPPIJ B V ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ BV ; SHELL INT RESEARCH MIJ BV

Inventor(s): (std): BRENDAN DERMOT MURRAY ; CLOIS AYOUB PAUL MARIE DIRKZWA ; CLOIS SUMROW STEVEN ; DERMOT MURRAY BRENDAN ; HENDRIK DIRKZWAGER ; MARIE AYOUB PAUL ; PAUL MARIE AYOUB ; STEVEN CLOIS SUMROW ; SUMROW STEVE CLOIS ; SUMROW STEVEN CLOIS ; SUMROW STEVEN ; SAMROU STIVEN KLOIS ; MURRAY BRENDAN DERMOT ; MURRAY BRENDAN ; MJURREJ BRENDAN DERMOT ; EHJUB POL MARI ; DIRKZWAGER HENDRIK ; DIRKZVAGER KHENDRIK ; AYOUB PAUL MARIE ; AYOUB PAUL

Inventor(s): STEVE CLOIS SUMROW ; AYOUB PAUL MARIE DIRKZWAGER HENDRIK MURRAY ; AYOUB PAUL MARIE DIRKZWAGER HENDRIK MURRAY BRENDAN ; AYOUB PAUL MARIE DIRKZWAGER HENDRIK MURRAY BRENDAN DERMOT SUMROW STEVEN CLOIS

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; OSAKI KATSUMASA; TSUBOKURA

MICHIAKI; KANAYAMA MASATAKA; KAWAGUCHI YOSHIO; ONO MAKOTO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ
DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE
KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM
PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU
ZA ZM ZW

Title: METHODS OF PREPARING BRANCHED ALIPHATIC ALCOHOLS

Abstract: Systems and methods to produced branched aliphatic alcohols are described. Systems may include a dehydrogenation-isomerization unit, an olefin dimerization unit, an olefin isomerization unit, a hydroformylation unit, a dehydrogenation unit, a **hydrogenation** unit and/or combinations thereof. Methods for producing branched aliphatic alcohols may include isomerization of olefins in a process stream. The isomerized olefins may be hydroformylated to produce aliphatic alcohols. After hydroformylation of the aliphatic alcohols, unreacted components from the hydroformylation process may be separated from the aliphatic alcohols products. The unreacted components from the hydroformylation process may be recycled back into the main process stream or sent to other processing units. Addition of multiple streams to the units may be performed to control reaction conditions in the units.

Classifications:

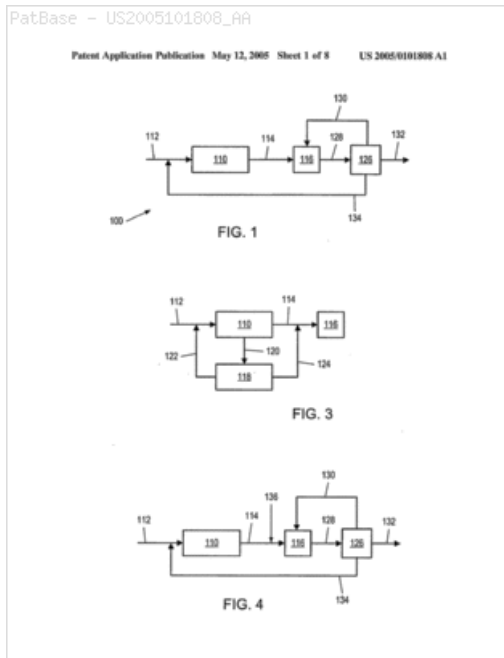
International (IPC 8-9): C07C27/22 C07C29/16 (Advanced/Invention); C07C27/00 C07C29/00 (Core/Invention)

International (IPC 1-7): C07C27/22

CPC: C07C29/16

European: C07C29/16

US: 558/39 568/698 568/840 568/883 568/909

**Family:**

Publication number	Publication date	Application number	Application date
US2005101808 AA	20050512	US20040965256	20041014
US2007142680 AA	20070621	US20070668997	20070130
US7335802 BB	20080226	US20040965256	20041014

Priority:

US2003051121P 20031015 US20040965256 20041014 US20070668997 20070130

Probable Assignee: SHELL OIL CO

Assignee(s): (std): AYOUB PAUL M ; DIRKZWAGER HENDRIK ; MURRAY BRENDAN D ; SHELL OIL CO ; SUMROW STEVE C

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): AYOUB PAUL M ; AYOUB PAUL MARIE ; DIRKZWAGER HENDRIK ; MURRAY BRENDAN D ; MURRAY BRENDAN DERMOT ; SUMROW STEVE C ; SUMROW STEVE CLOIS

Inventor(s): SUMROW STEVE ; MURRAY BRENDAN ; AYOUB PAUL

Agent(s): DONALD F HAAS SHELL OIL CO; SHELL OIL COMPANY; SHELL OIL CO

Title: LIQUID DETERGENT COMPOSITION COMPRISING A SOLUBILIZING NONIONIC SURFACTANT

Abstract: A liquid detergent composition comprising a limited amount of a solubilizing nonionic surfactant for increased speed of cooked grease cleaning and methods of using the same.

Classifications:

International (IPC 8-9): C11D1/14 C11D1/24 C11D1/29 C11D1/66 C11D1/68 C11D1/72 C11D1/722 C11D1/74 C11D1/75 C11D1/825 C11D1/83 C11D17/08 (Advanced/Invention);
C11D1/12 C11D1/14 C11D1/22 C11D1/29 C11D1/72 C11D1/75 (Advanced/Non-invention);
C11D1/722 C11D1/83 (Core/Invention);
C11D1/02 C11D1/72 C11D1/75 (Core/Non-invention)

International (IPC 1-7): C11D1/00 C11D1/66 C11D1/72 C11D1/74 C11D1/825 C11D1/83 C11D17/00

CPC: C11D1/12 C11D1/143 C11D1/22 C11D1/29 C11D1/72 C11D1/75 C11D1/83

European: C11D1/83 M11D1/12 M11D1/14B M11D1/22 M11D1/29 M11D1/72 M11D1/75

US: 510/237 510/417

Family:

Publication number	Publication date	Application number	Application date
CA2546998 AA	20060512	CA20042546998	20041112
CN1886493 A	20061227	CN200480035461	20041112
EP1682642 A1	20060726	EP20040800984	20041112
JP2007511640 T2	20070510	JP20060539851T	20041112
MXPA06005374 A1	20060801	MX2006PA05374	20060512
US2005107275 AA	20050519	US20040984087	20041109
US2005170990 AA	20050804	US20050098338	20050404
WO05049775 A1	20050602	WO2004US37629	20041112

Priority:

US20030520108P 20031114 US20040984087 20041109 WO2004US37629 20041112
US20050098338 20050404

Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): DELGADO RODOLFO ; HECHT STACIE ELLEN ; KIM BYONG KOO ; PROCTER AND GAMBLE ; SCHEIBEL JEFFREY JOHN ; THE PROCTER AND GAMBLE COMPANY ; SCHEIBEL JEFFREY J

Assignee(s): PROCTER AND GAMBLE CO ; KIM BYONG K ; HECHT STACIE E

Inventor(s): (std): DELGADO RODOLFO ; HECHT STACIE E ; HECHT STACIE E KIM BYONG K DEL ; HECHT STACIE ELLEN ; KIM BYONG K ; KIM BYONG KOO ; SCHEIBEL JEFFREY J ; SCHEIBEL JEFFREY JOHN

Inventor(s): SCHEIBEL JEFFREY ; KIM BYONG ; HECHT STACIE E KIM BYONG K DELGADO RODOLFO SCHEIBE ; HECHT STACIE

Agent(s): DIMOCK STRATTON LLP; THE PROCTER AND GAMBLE COMPANY, INTELLECTUAL PROPERTY DIVISION; PROCTER AND GAMBLE CO INTELLECTUAL PROPERTY DIVISION

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW