

IPR ANALYTICS

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PATENTABILITY SEARCH

Submitted to:

Address:

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Client Reference No:

Date: 08-Jun-2016

Application Number: US20060089293

Title: Concentrated fabric softener active compositions

Features to Search

E1: A composition comprising: (a) from 70% to 95% by weight of the composition of a quaternary ammonium compound suitable for softening fabric; and from 5% to 30% by weight of the composition of a solvent comprising a Clog P of from about -2 to about 2.

E2: The compound comprises a monoester component and a di ester component the weight ratio being 15:85 to about 40:60 by the total weight of the quaternary ammonium compound.

E3: Iodine Value ("IV") of the quaternary ammonium compound is from about 1 to about 60 and the composition comprises less than 5% by weight of the composition of water and less than 5% by weight of the composition of a detergent surfactant.

Search Strategy

Database: AcclaimIP, USPTO, Patentscope, Espacenet, Google Patents.

Keywords:

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Set1	Quaternary ammonium compound, mono ester component, di ester component, Iodine
Set2	Surfactant, Detergent, Detergent Surfactant
Set 3	Composition, Constitution, Chemical Composition

US Classification Codes with definitions

510/515: Textile softening or antistatic composition (e.g., for use in the wash cycle, etc.)

510/329: Quaternary nitrogen or phosphorus, or heterocyclic nitrogen containing fabric softener or antistatic component

510/527: Liquid composition

International Classification Codes with definitions

C11D3/0015: Softening compositions liquid

C11D1/62: Quaternary ammonium compounds

C11D3/43: Solvents

C11D3/0084: Antioxidants; Free-radical scavengers

Search Results 1

Patent/Publication Number: [US6323172](#)

Title: Concentrated, stable fabric softening composition

Assignee/Applicant: Procter and Gamble Co

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Filing Date: 11-Jul-1996

Priority Date: 22-Mar-1996

Also Published as:

AR002814,AR002815,AT233804,AU2066597,AU3207097,AU6488996,AU6544396,AU663659
6 ,BR9609800,BR9609820,BR9609823,BR9710356,BR9710409,CA2226550,CA2226564,CA 22
26565 ,CA2249587,CA2260101,CA2438655,CN1219953,CN1098350,CN1196082,CN1107716,
CN1196081,CN1110541,CN1110541,CN1229433,CN1436890,CN1232692,CZ9800038,CZ980
0039 ,CZ9800062,CZ9803047,CZ9900049,DE69626521,EP0839179,EP0839180,EP0842250,EP
0888424,EP0918842,EP1352948,HU9802207,HU9802281,HU9802404,ID16310,ID16311,ID1
6312 ,JPH11507095,JP3102894,JPH11509277,JP3916666,JPH11511811,JP3935933,JPH
11506
810 ,JPH11514007,KR100262106,KR100263216,KR100263216,MX9800379,MX9800381,MX 9
800382,TR9800029,TR9801784,US5747443,US6369025,US6943144 ,US2003153483,US 2005
202998 ,US2006058215,US2006058216,WO9703169,WO9703170,WO9703172,WO9734972,
WO9802513,ZA9702149.

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Relevant Excerpt for E1	<p>Claims:</p> <p>1. An aqueous, stable, fabric softener composition comprising:</p> <p>A. from about 2% to about 80% of fabric softener active selected from the group consisting of:</p> <p>1. fabric softener compound having the formula: $[(R)_{4-m}-N^{(+)}-[(CH_2)_nY-R_1]_m]X^{(-)}$ (1) wherein each R substituent is H, or a short chain C₁C₆ alkyl or hydroxyalkyl group, benzyl, or mixtures thereof;</p> <p>3. B. less than about 40% by weight of the composition of principal solvent having a ClogP of from about 0.15 to about 0.64,</p> <p>Abstract:</p> <p>Principal solvents, especially mono-ol and diol principal solvents, having a ClogP of from about 0.15 to about 0.64, preferably from about 0.25 to about 0.62, and more preferably from about 0.40 to about 0.60, are disclosed that have the ability to make clear aqueous fabric</p>
	softener compositions containing relatively high concentrations of fabric softener actives having ester linkages in their long, hydrophobic chains.

Relevant Excerpt for E2	<p>Claims:</p> <p>1. each Y is $-\text{O}-(\text{O})\text{C}-$, $-(\text{R})\text{N}-(\text{O})\text{C}-$, $-\text{C}(\text{O})-\text{N}(\text{R})-$, or $-\text{C}(\text{O})-\text{O}-$, but not $-\text{OC}(\text{O})\text{O}-$; each R^1 is a long chain hydrocarbyl, or substituted hydrocarbyl substituent group;</p> <p>Abstract:</p> <p>Principal solvents, especially mono-ol and diol principal solvents, having a ClogP of from about 0.15 to about 0.64, preferably from about 0.25 to about 0.62, and more preferably from about 0.40 to about 0.60, are disclosed that have the ability to make clear aqueous fabric softener compositions containing relatively high concentrations of fabric softener actives having ester linkages in their long, hydrophobic chains.</p> <p>Summary:</p> <p>Col. 3, Lines 5-9</p> <p>[As used hereinafter, these biodegradable fabric softener actives containing ester linkages are referred to as "DEQA", which includes both diester, triester, and monoester compounds containing from one to three, preferably two, long chain hydrophobic groups.</p> <p>Col. 18, Lines 5-10</p>
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	<p>In the following, any disclosure, e.g., levels, for the monoester actives is also applicable to the monoamide actives. For softening, under no/low detergent carry-over laundry conditions the percentage of monoester should be as low as possible, preferably no more than about 5%.</p>
Relevant Excerpt for E3	<p>Claims:</p> <p>1.the Iodine Value of a fatty acid which contains this R¹ group is about 10 or less;</p> <p>Summary:</p> <p>Col.2 Lines 29-33 the Iodine Value (hereinafter referred to as IV) of the parent fatty acid of this R1 group is preferably from about 20 to about 140, more preferably from about 50 to about 130; and most preferably from about 70 to about 115.</p>

Search Results 2

Patent/Publication Number: [US5474690](#)

Title: Concentrated biodegradable quaternary ammonium fabric softener compositions containing intermediate iodine value fatty acid chains

Assignee/Applicant: Procter and Gamble Co

Filing Date: 14-Nov-1994

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Priority Date: 14-Nov-1994

Also Published as:

BR9510345,WO9615212,CA2205200,CZ9701417,DE69529761,EP0792335,FI972036,HUT770
10,JPH10508622,MX9703567,NO972192

Relevant Excerpt for E1

Claims:

1.A stable, homogeneous, liquid fabric softening composition comprising:

(A) from about 5% to about 50% of biodegradable quaternary ammonium fabric softening compound;

(B) from about 0% to about 5% of dispersibility modifier selected from the group consisting of:

1. single-long-chain, C₁₀ -C₂₂ alkyl, cationic surfactant; 2.

nonionic surfactant with at least 8 ethoxy moieties;

Description:

Col. 3, Lines 33-37

Specifically, the present invention relates to a stable, homogeneous, aqueous, fabric softening composition comprising: (A) from about 5% to about 50% of a biodegradable quaternary ammonium fabric softening compound;

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Relevant Excerpt for E2	<p>Claims:</p> <p>1 wherein the biodegradable quaternary ammonium fabric softening compound has the formula: ##STR9## wherein each Q is --O--(O)C-- or --C(O)--O--;</p> <p>Abstract:</p> <p>The present invention relates to stable, homogeneous, preferably concentrated, aqueous liquid textile treatment compositions that contain biodegradable diester quaternary ammonium compounds;</p>
	<p>wherein each Q is --O--(O)C-- or --C(O)--O--; n is 1 to 4;</p> <p>Description:</p> <p>Col. 7, Lines 40-49</p> <p>Substituents R1 and R2 can optionally be substituted with various groups such as alkoxy or hydroxyl groups. The preferred compounds can be considered to be diester variations of ditallow dimethyl ammonium chloride (DTDMAC), which is a widely used fabric softener. At least 80% of the biodegradable quaternary ammonium compound(s) is in the diester form, and from 0% to about 20%, preferably less than about 10%, more preferably less than about 5%, can be biodegradable quaternary ammonium compound(s) monoester (e.g., only one --Q--R2 group).</p>

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Relevant Excerpt for E3	<p>Claims:</p> <p>1. an Iodine Value of from greater than about 5 to less than about 100; (b) a cis/trans isomer weight ratio of greater than about 30/70 when the Iodine Value is less than about 25;</p> <p>25. wherein the compound is derived from C₁₁ -C₂₂ fatty acyl groups having an Iodine Value of from greater than about 20 to less than about 100 for optimum static control,</p> <p>Description:</p>
	<p>Col. 5, Lines 16-20</p> <p>When the Iodine Value of the fatty acyl groups is above about 20, the biodegradable quaternary ammonium compound(s) provides excellent antistatic effect. Anti-static effects are especially important where the fabrics are dried in a tumble dryer, and/or where synthetic materials which generate static are used.</p>

Search Results 3

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Patent/Publication Number: [US5545350](#)

Title: Concentrated fabric softener compositions containing biodegradable fabric softeners

Assignee/Applicant: Procter and Gamble Co

Filing Date: 03-No-1994

Priority Date: 12-May-1992

Also Published as:

AT181956,AT245689,AU4227393,CA2134640,CN1082101,CN1045109,CZ9402769,DE69325578,DE69325578,EP0640121,EP0894848,ES2133397,FI945327,HUT72231,HU215586,JPH07507107,JP3442387,JP2003253561,MX9302786,NO944302,PH30955,RU94046015,SK134694,W09323510

Relevant Excerpt for E1

Claims:

1. A concentrated fabric softening composition selected from the group consisting of:

I. a solid particulate composition comprising:

	<p>(A) from about 50% to about 95% of biodegradable diester quaternary ammonium fabric softening compound;</p> <p>Description:</p> <p>Col. 4, Lines 20-29</p> <p>The present invention contains DEQA as an essential component: I. for solid compositions: from about 50% to about 95%, preferably from about 60% to about 90%, and H. for liquid compositions: from about 15% to about 50%, preferably from about 17% to about 35%, more preferably from about 18% to about 30%, of said diester quaternary ammonium fabric softening compound (DEQA),</p>
<p>Relevant Excerpt for E2</p>	<p>Claims:</p> <p>1. A concentrated fabric softening composition selected from the group consisting of:</p> <p>I. a solid particulate composition comprising:</p> <p>(A) from about 50% to about 95% of biodegradable diester quaternary ammonium fabric softening compound;</p> <p>Description:</p> <p>Col. 4, Lines 20-29</p> <p>The present invention contains DEQA as an essential component: I. for solid compositions: from about 50% to about 95%, preferably from about 60% to about 90%, and H. for liquid compositions: from about 15% to about 50%, preferably from about 17% to about 35%, more preferably from about 18% to about 30%, of said diester quaternary ammonium fabric</p>

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	softening compound (DEQA),
Relevant Excerpt for E3	<p>Description:</p> <p>Col. 5 Lines 65-67, Col. 6 Lines 1-4</p> <p>Degrees of branching, substitution and/or non-saturation can be present in the alkyl chains. The anion X₋ in the molecule is preferably the anion of a strong acid and can be, for example, chloride, bromide, iodide, sulphate and methyl sulphate; the anion can carry a double charge in which case X' represents half a group.</p>