40 mass% or less, more preferably 35 mass% or less and further preferably 32.5 mass% or less from the viewpoint of undissolved residue.

[0054]

<Component (f)>

The detergent composition of the present invention can optionally contain a surfactant [hereinafter, referred to as component (f)] other than component (a), component (b) and component (c) from the viewpoints of washing performance and foaming.

Examples of the surfactant other than component (a), component (b) and component (c) include one or more selected from amphoteric surfactants.

[0055]

Examples of the amphoteric surfactant of component (f) can include one or more selected from N-alkanoylaminopropyl-N,N-dimethylamine oxide, N-alkyl-N,N-dimethylamine oxide, N-alkanoylaminopropyl-N,N-dimethyl-N-carboxymethyammonium betaine, N-alkyl-N,N-dimethyl-N-carboxymethyammonium betaine, N-alkyl-N,N-dimethyl-N-sulfopropylammonium sulfobetaine, N-alkyl-N,N-dimethyl-N-(2-hydroxysulfopropyl)ammonium sulfobetaine, N-alkanoylaminopropyl-N,N-dimethyl-N-sulfopropylammonium sulfobetaine, and N-alkanoylaminopropyl-N,N-dimethyl-N-(2-hydroxysulfopropyl)ammonium sulfobetaine. The alkanoyl groups in these are, for example, for example, lauroyl groups or myristoyl groups. Further, the alkyl

groups in these are, for example, lauryl groups or myristyl groups.

[0056]

When the detergent composition of the present invention contains component (f), the detergent composition of the present invention contains component (f) in an amount of preferably 0.1 mass% or more, more preferably 0.2 mass% or more and further preferably 0.3 mass% or more, and preferably 2 mass% or less, more preferably 1.5 mass% or less and further preferably 1.2 mass% or less from the viewpoints of washing performance and foaming.

[0057]

<Component (g)>

The detergent composition of the present invention can optionally contain one or more compounds selected from inorganic sulfates and inorganic halogen compounds, as component (g). Examples of component (g) include one or more compounds selected from sodium sulfate, magnesium sulfate, sodium chloride, and magnesium chloride. Component (g) may be a hydrate or an anhydride.

[0058]

When the detergent composition of the present invention contains component (g), the detergent composition of the present invention contains component (g) in an amount of preferably 2 mass% or more, more preferably 5 mass% or more, further preferably 10 mass%

CLAIMS

[Claim 1] A detergent article comprising a detergent composition and a water-soluble film for wrapping the detergent composition, wherein the detergent composition contains the following components (a), (b), (c), and (d), a mass ratio of a content of the component (b) to a content of the component (d), (b)/(d) is 0.15 or more and 0.30 or less, and the content of the component (d) is more than 5 mass%,

component (a): a nonionic surfactant,

component (b): an anionic surfactant,

component (c): a cationic surfactant, and

component (d): an alkali agent.

[Claim 2] The detergent article according to claim 1, wherein the detergent composition comprises the component (a) in an amount of 1 mass% or more and 40 mass% or less.

[Claim 3] The detergent article according to claim 1 or 2, wherein the component (a) is one or more selected from a nonionic surfactant represented by the following general formula (a1):

$R^{1a}(CO)_mO-(A^{1a}O)_n-R^{2a}$ (a1)

wherein R^{1a} is an aliphatic hydrocarbon group with 8 or more and 18 or less carbons, R^{2a} is a hydrogen atom or a methyl group, CO is a carbonyl group, m is a number of

0 or 1, $A^{1a}O$ group is one or more selected from alkyleneoxy groups with 2 or more and 4 or less carbons, and n is an average number of added moles of $A^{1a}O$ group and is a number of 1 or more and 30 or less.

[Claim 4] The detergent article according to any one of claims 1 to 3, wherein the detergent composition comprises the component (b) in an amount of 0.1 mass% or more and 10 mass% or less.

[Claim 5] The detergent article according to any one of claims 1 to 4, wherein the component (b) is one or more selected from a compound represented by the following general formula (b1) [hereinafter, referred to as component (b1)] and a compound represented by the following general formula (b2) [hereinafter, referred to as component (b2)]:

R^{1b}-B-SO_3M (b1)

wherein in the formula (b1), R^{1b} represents an alkyl group with 9 or more and 14 or less carbons, B represents a benzene ring, a carbon atom in R^{1b}, bonded with a carbon atom in B, is a secondary carbon atom, M represents a cation, and a sulfonic acid group is bonded at the ortho-, meta- or para-position to R^{1b} bonded to B;

R^{2b}-COOM (b2)

wherein in the formula (b2), R^{2b} represents an alkyl group or an alkenyl group with 10 or more and 18 or less carbons, and M represents a cation.

[Claim 6] The detergent article according to claim 5, wherein a mass ratio of a content of the component (b1) to a content of the component (b2), (b1)/(b2), in the detergent composition is 0.1 or more and 10 or less.

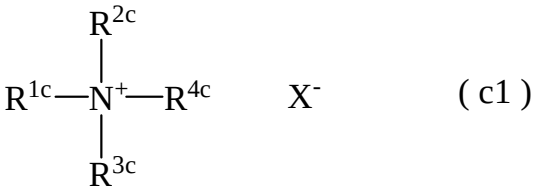
[Claim 7] The detergent article according to any one of claims 1 to 6, wherein the component (b) comprises a fatty acid or a salt thereof.

[Claim 8] The detergent article according to any one of claims 1 to 7, wherein the component (b) comprises a fatty acid sodium salt and a sodium alkylbenzene sulfonate.

[Claim 9] The detergent article according to any one of claims 1 to 8, wherein the detergent composition comprises the component (c) in an amount of 0.5 mass% or more and 20 mass% or less.

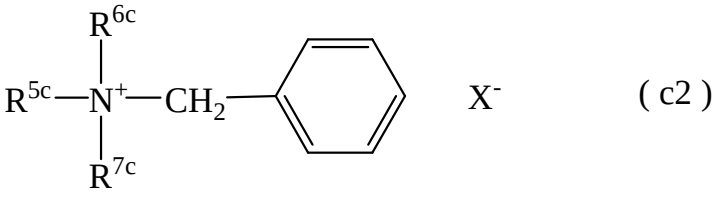
[Claim 10] The detergent article according to any one of claims 1 to 9, wherein the component (c) is one or more selected from compounds represented by the following

general formula (c1) and compounds represented by the following general formula (c2):



(c1)

wherein R^{1c} is an aliphatic hydrocarbon group with 8 or more and 18 or less carbons, R^{2c} is a group selected from aliphatic hydrocarbon groups with 8 or more and 18 or less carbons, alkyl groups with 1 or more and 3 or less carbons and hydroxyalkyl groups with 1 or more and 3 or less carbons, R^{3c} and R^{4c} each independently represent a group selected from alkyl groups with 1 or more and 3 or less carbons and hydroxyalkyl groups with 1 or more and 3 or less carbons, and X^- is an anion,



(c2)

wherein R^{5c} is an aliphatic hydrocarbon group with 8 or more and 18 or less carbons, R^{6c} and R^{7c} each independently represent a group selected from alkyl groups with 1 or more and 3 or less carbons and hydroxyalkyl groups with 1 or more and 3 or less carbons, and X^- is an anion.

[Claim 11] The detergent article according to any one of claims 1 to 10, wherein a mass ratio of a content of the component (c) to the content of the component (b) in the detergent composition, (c)/(b), is 0.1 or more and 5 or less.

[Claim 12] The detergent article according to any one of claims 1 to 11, wherein the detergent composition comprises the component (d) in an amount of more than 5 mass% and 50 mass% or less.

[Claim 13] The detergent article according to any one of claims 1 to 12, wherein the component (d) is one or more alkali agents selected from alkali metal carbonates, alkali metal hydrogen carbonates, alkali metal silicates and tripolyphosphates.

[Claim 14] The detergent article according to any one of claims 1 to 13, wherein the component (d) is sprayed with an acid precursor of the component (b).

[Claim 15] A method for washing a textile product comprising washing the textile product with a detergent liquid in which the detergent article according to any one of claims 1 to 14 is mixed with water.