

## Appeal decision

Appeal No. 2014- 22772

USA

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The case of appeal against the examiner's decision of refusal concerning Japanese Patent Application No. 2013-504924, entitled "Process for making liquid detergent composition" [International Publication No. WO2011/133305 published on October 27, 2011 and National Publication of the International Patent Application No. 2013-525520 published on June 20, 2013] has resulted in the following conclusion:

### Conclusion

The appeal of the case was groundless.

### Reason

## No. 1 History of the procedures

The application is based on an International Patent Application filed on March 31, 2011 (priority claim under the Paris Convention: April 19, 2010 (US)), a written amendment dated April 14, 2014 was submitted in reply to notice of reasons for refusal dated November 8, 2013, a decision for refusal dated July 9, 2014 was issued, and an appeal against the examiner's decision of refusal was filed on November 7, 2014 and a written amendment dated the same day was submitted at the same time.

## No. 2 Decision to dismiss the amendment dated November 7, 2014

[Conclusion of Decision to Dismiss Amendment]

The amendment dated November 7, 2014 shall be dismissed.

[Reason]

### 1. Details of the Amendment

The amendment dated November 7, 2014 (hereinafter referred to as the "Amendment"), corresponding to Article 17-2(1)(iv) of the Patent Act, is to amend the scope of claims, and the amendment regarding Claim 1 is as follows.

(1-1) Claim 1 before Amendment (that is to say, Claim 1 in the written amendment dated April 14, 2014)

"[Claim 1] A process for making a laundry liquid detergent composition comprising an anionic deterative surfactant, the process comprising the steps of:

- a) making an anionic deterative surfactant, and a base composition comprising alkanolamine and sodium ions in a mole ratio of from 0.1:1 to 60:1, wherein the anionic deterative surfactant comprises an alkyl alkoxyated sulphate; and
- b) adding water to the base composition."

(1-2) Claim 1 after Amendment (that is to say, Claim 1 in the written amendment dated November 7, 2014)

"[Claim 1] A process for making a laundry liquid detergent composition comprising an anionic deterative surfactant, the process comprising the steps of:

- a) making an anionic deterative surfactant, and a base composition comprising alkanolamine and sodium ions in a mole ratio of 5:1 to 35:1, wherein the anionic deterative surfactant comprises an alkyl alkoxyated sulphate; and
- b) adding water to the base composition." (hereinafter referred to as the "Amended Invention")

Comparing Claim 1 after the Amendment with Claim 1 before the Amendment, since the mole ratio as to the "alkanolamine and sodium ions", which is the matter

necessary for specifying the invention according to Claim 1 before the Amendment, is limited to "5:1 to 35:1", it can be said that the Amendment was made for the purpose of restriction of the scope of claims as prescribed in Article 17-2(5)(ii) of the Patent Act.

Thus, whether the Amended Invention falls under the provisions of Article 126(7) of the Patent Act which is applied mutatis mutandis pursuant to the provisions of Article 17-2(6) of the Patent Act (that is to say, whether the Amended Invention satisfies requirements for being independently patentable) is examined.

## 2. Examination on requirements for being independently patentable

### (2-1) Cited publications and their descriptions

Publication A: Japanese Unexamined Patent Application No. H6-299191 (Cited Document 3 in the examiner's decision)

#### (A-1) [Scope of claims]

"[Claim 1] A liquid detergent composition comprising following components (a) to (d), wherein the amount of alkali metal and/or alkali earth metal is 1.4% by weight or less:

(a) polyoxyalkylene alkyl or alkenyl ether having an alkyl group or alkenyl group with an average carbon number of 6 to 20 wherein an average addition mole number of ethylene oxide is 1 to 20 and an average addition mole number of propylene oxide is 0 to 5, and/or polyoxyalkylene alkyl or alkenyl phenyl ether having a substituted alkyl group or alkenyl group with an average carbon number of 6 to 20 wherein an average addition mole number of ethylene oxide is 1 to 20 and an average addition mole number of propylene oxide is 0 to 5;

(b) a sulfonate type or sulfate type anionic deterative surfactant wherein the amount of the components (a) and (b) is 30 to 75% by weight and the ratio of the component (b)/component (a) is 1/2 to 2/1;

(c) 5 to 20% by weight of an alkyl polysaccharide surfactant; and

(d) 1 to 15% by weight of a phase adjustor having no surface activity except water.

[Claim 2] The liquid detergent composition according to Claim 1, wherein the amount of the sulfonate type or sulfate type anionic deterative surfactant of monoethanolamine salt is 20% by weight or more with respect to the total amount of the component (b).

[Claim 3] The liquid detergent composition according to Claim 1 or 2, wherein the component (a) has an alkyl group or alkenyl group with an average carbon number of 10 to 20, and is one or more kinds of polyoxyalkylene alkyl or alkenyl ether with an average addition mole number of ethylene oxide of 1 to 20 mol."

#### (A-2) [0004]

"[0004]

[Means for solving the problem] The present inventors have completed the present invention by finding that a liquid detergent composition comprising a non-ionic surfactant, a sulfonate type or sulfate type anionic detergent surfactant, an alkyl polysaccharide surfactant, and a phase adjustor having no surface activity except water, in a specific ratio, has excellent cleaning performance and storage stability, which is the problem in the conventional liquid detergent composition, and can reduce the usage per unit of laundry."

(A-3) [0010] to [0013]

"[0010] An anionic detergent surfactant of the component (b) in the present invention is a sulfonate type or sulfate type anionic detergent surfactant. As the component (b), one or more kinds of component selected from the following (1) to (5) can be used, for example.

- (1) alkylbenzenesulfonate having an alkyl group with an average carbon number of 10 to 16
- (2) alkyl or alkenyl ether sulfate having a linear or branched alkyl group or alkenyl group with an average carbon number of 10 to 20 in which average of 0.5 to 8 mol of ethylene oxide is added in one molecule
- (3) alkyl or alkenyl sulfate having an alkyl group or alkenyl group with an average carbon number of 10 to 20
- (4) olefinsulfonate having average of 10 to 20 carbon atoms in one molecule
- (5) alkanesulfonate having average of 10 to 20 carbon atoms in one molecule

Counterions forming salt of the anionic detergent surfactant of the component (b) include positive ions including: alkali metal such as sodium and potassium; alkali earth metal such as magnesium and calcium; alkanolamine such as monoethanolamine, diethanolamine and triethanolamine; and a mixture thereof.

[0011] It is preferable that the anionic detergent surfactant of the component (b) in the present invention is monoethanolamine salt or diethanolamine salt. That is to say, when the amount of alkali metal and/or alkali earth metal included in the liquid detergent composition of the present invention is beyond 1.4% by weight, the composition becomes cloudy and precipitation occurs. Thus, the amount of alkali metal and/or alkali earth metal included in the liquid detergent composition of the present invention has to be 1.4% by weight or less as single metal. Alkali metal and/or alkali earth metal in the composition is an alkali metal salt and/or alkali earth metal salt of the anionic detergent surfactant of the component (b), or is derived from material forming alkali metal salt and/or alkali earth metal salt in the following

optional components. When mixing alkali metal salt and/or alkali earth metal salt as the component (b), it is required to adjust the amount of alkali metal and/or alkali earth metal included in the liquid detergent composition to 1.4% by weight or less as single metal, considering the weight of alkali metal and/or alkali earth metal in other components.

[0012] The amount of components (a) and (b) is 30 to 75% by weight in the composition, and the weight ratio of component (b)/component (a) ((b)/(a)) is within the range of 1/2 to 2/1. When the amount of components (a) and (b) is not within the range, sufficient cleaning performance cannot be obtained.

[0013] An alkyl polysaccharide surfactant of the component (c) in the present invention includes alkyl glucoside represented by general formula (I) of  $R_1(OR_2)_xG_y$  [where  $R_1$  is a linear or branched alkyl group, alkenyl group or alkylphenyl group with a carbon number of 8 to 18,  $R_2$  is an alkylene group with a carbon number of 2 to 4, G is a residue derived from reducing sugar with a carbon number of 5 or 6, x and y are average values, x is 0 to 5, and y is 1 to 10.]

In the formula, in terms of solubility, forming property, and detergency, it is preferable that a carbon number in  $R_1$  is 9 to 14. In terms of water solubility, it is preferable that a carbon number in  $R_2$  is 2 to 3. The value of x influences water solubility and crystallizability. When x becomes larger, water-solubility tends to be higher and crystallizability tends to be lower. A preferable range of x is 0 to 2, and it is especially preferable that x is 0. It is preferable that y is 1 to 4. Further, it is preferable that a property derived from a hydrophobic group of  $R_1$  is taken into account when selecting the value of y. For example, when  $R_1$  is a hydrophobic group with an average carbon number of 9 to 11, it is preferable that y is 1 to 1.4, and when  $R_1$  is a hydrophobic group with an average carbon number of 12 to 14, it is preferable that y is 1.3 to 4. An average degree y of polymerization of saccharides is measured by proton NMR. A binding mode of this carbohydrate chain is any of 1-2, 1-3, 1-4, or 1-6 bond,  $\alpha$ - or  $\beta$ -pyranoside bond or furanoside bond, or a combination thereof. The structure of G in the formula is determined by monosaccharide or polysaccharide of raw material. The monosaccharide includes, for example, glucose, fructose, galactose, xylose, mannose, lyxose, and arabinose. The polysaccharide includes maltose, xylobiose, isomaltose, cellobiose, gentiobiose, lactose, sucrose, nigerose, turanose, raffinose, gentianose, and melezitose. The monosaccharide or polysaccharide may be either one kind alone or a combination of two or more kinds. Five to 20% by weight of the component (c) is included in the liquid detergent composition of the present invention. When the amount of the component (c) is less

than 5% by weight, the storage stability becomes worse in a wide range of temperature, and when the amount of the component (c) is beyond 20% by weight, the flowability at low temperature and storage stability become worse."

(A-4) [0019] to [0020]

"[0019] The pH of raw material liquid of the liquid detergent composition of the present invention is 8 to 12, more preferably is 9 to 11.

[0020] As a process of the liquid detergent composition of the present invention, any mixing technology suitable for the process of the liquid detergent composition can be utilized. As described above, it is preferable that 20% by weight or more, more preferably 40% by weight or more, of alkanolamine salt is added and mixed with respect to the total component of the component (b). It is possible that as anionic deterative surfactant, alkali metal salt and alkali earth metal salt are added, and then a large amount of alkanolamine is added to perform ion exchange; however, as the composition may be opaque, this step is not preferable."

(A-5) [0022] to [0025]

"[0022]

[Examples] Hereinafter, the present invention will be described in more details by use of Examples. However, the scope of the present invention is not limited thereto.

[0023] Example 1

Components indicated in Table 1 were mixed using the batch method, thereby producing a liquid detergent composition having a pH of 9.3 to 9.6. Each liquid detergent composition obtained was evaluated in the following points.

(1) Storage stability

A sample was put in a screw tube (diameter: 4 cm, height 10 cm), and stored at 50°C, 40°C, room temperature, -5°C, or -20°C. Consolidation, separation, and precipitation a month after the storage were determined by the naked eye. The results are shown in Table 1.

○: uniformly transparent liquid

×: opaque liquid, or consolidation, separation, and precipitation were generated.

[0024]

[Table 1]

配合成分(重量%)		本発明品						比較品			
		1	2	3	4	5	6	1	2	3	4
(a)	ポリオキシエチレン(p=7)アルキル(C <sub>12</sub> ~C <sub>14</sub> )エーテル	30	20	24	24	24	24	24	24	24	24
	アルキル(C <sub>10</sub> ~C <sub>13</sub> )ベンゼンスルホネートモノエタノールアミン塩	15	20	12	12		24		12		12
	アルキル(C <sub>10</sub> ~C <sub>13</sub> )ベンゼンスルホネートナトリウム塩					12		12		24	
(b)	ポリオキシエチレン(p=2.5)アルキル(C <sub>12</sub> ~C <sub>14</sub> )エーテルサルフェートモノエタノールアミン塩	15	20	12		12			12		
	ポリオキシエチレン(p=2.5)アルキル(C <sub>12</sub> ~C <sub>14</sub> )エーテルサルフェートナトリウム塩				12			12			12
	アルキル(C <sub>12</sub> )サルフェートモノエタノールアミン塩		1								
(c)	アルキルグルコシド**	8	8	8	8	8	8	8	4	8	4
(d)	エタノール	2	2	2	2	2	2	2	2	2	2
	プロピレングリコール	5	5	5	5	5	5	5	5	5	5
	ヤシ油脂肪酸	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	クエン酸	3	3	3	3	3	3	3	3	3	3
	モノエタノールアミン**	7	7	7	7	7	7	7	7	7	7
	プロテアーゼ	2	2	2	2	2	2	2	2	2	2
	水	B**	B	B	B	B	B	B	B	B	B
	アルカリ金属の含有量(重量%)	0	0	0	0.7	0.85	0	1.55	0	1.7	0.7
保存安定性**	50℃	○	○	○	○	○	○	×	×	×	×
	40℃	○	○	○	○	○	○	○	×	×	×
	室温	○	○	○	○	○	○	○	○	×	○
	-5℃	○	○	○	○	○	○	×	×	×	×
	-20℃	○	○	○	○	○	○	×	×	×	×

配合成分(質量%) composition (mass%)

本発明品 liquid detergent composition of the invention

比較品 comparative liquid detergent composition

ポリオキシエチレン (p = 7) アルキル (C<sub>12</sub> ~ C<sub>14</sub>) エーテル

polyoxyethylene(p=7)alkyl(C<sub>12</sub> to C<sub>14</sub>)ether

アルキル (C<sub>10</sub> ~ C<sub>13</sub>) ベンゼンスルホネートモノエタノールアミン塩

alkyl(C<sub>10</sub> to C<sub>13</sub>)benzenesulfonate monoethanolamine salt

アルキル (C<sub>10</sub> ~ C<sub>13</sub>) ベンゼンスルホネートナトリウム塩

alkyl(C<sub>10</sub> to C<sub>13</sub>) benzenesulfonate sodium salt

ポリオキシエチレン (p = 2.5) アルキル (C<sub>12</sub> ~ C<sub>14</sub>) エーテルサルフェートモノエタノールアミン塩

polyoxyethylene(p=2.5)alkyl(C<sub>12</sub> to C<sub>14</sub>)ethersulfate monoethanolamine salt

ポリオキシエチレン (p = 2.5) アルキル (C<sub>12</sub> ~ C<sub>14</sub>) エーテルサルフェートナトリウム塩

polyoxyethylene(p=2.5)alkyl(C<sub>12</sub> to C<sub>14</sub>)ethersulfate sodium salt

アルキル (C<sub>12</sub>) サルフェートモノエタノールアミン塩

alkyl(C<sub>12</sub>)sulfate monoethanolamine salt

アルキルグルコシド alkyl glucoside

エタノール ethanol

プロピレングリコール propylene glycol  
ヤシ油脂肪酸 coconut oil fatty acid  
クエン酸 citric acid  
モノエタノールアミン monoethanolamine  
プロテアーゼ protease  
水 water  
アルカリ金属の含有量（質量%） amount of alkali metal (mass%)  
保存安定性 storage stability  
室温 room temperature

[0025] Note)

\*1: Alkyl glucoside has a structure of general formula (I) wherein R<sub>1</sub> is C<sub>9</sub> to C<sub>11</sub>, x is 0, y is 1.35, and G is a glucose residue.

\*2: Monoethanolamine is added to adjust pH.

\*3: B is a balance to make the total 100."

(2-2) Invention disclosed in Publication A

A According to the description of [Claim 1] of Publication A, "A liquid detergent composition comprising following components (a) to (d), wherein the amount of alkali metal and/or alkali earth metal is 1.4% by weight or less ..." (Indication (A-1)), it discloses an invention in which the amount of alkali metal and/or alkali earth metal in the liquid detergent composition is less than or equal to a certain amount. Taking into consideration [Table 1] at [0024] of Publication A (Indication (A-5)), regarding the "liquid detergent composition 5 of the invention", the following liquid detergent composition is disclosed.

"A liquid detergent composition comprising the following components, wherein the amount of alkali metal and/or alkali earth metal is 0.85% by weight,

<Components>

(a) polyoxyethylene(p=7)alkyl(C<sub>12</sub> to C<sub>14</sub>)ether: 24% by weight

(b)-1 alkyl(C<sub>10</sub> to C<sub>13</sub>)benzenesulfonate sodium salt: 12% by weight

(b)-2 polyoxyethylene(p=2.5)alkyl(C<sub>12</sub> to C<sub>14</sub>)ethersulfate monoethanolamine salt: 12% by weight

(c) alkyl glucoside: 8% by weight

(d)-1 ethanol: 2% by weight

(d)-2 propylene glycol: 5% by weight

coconut oil fatty acid: 3.2% by weight

citric acid: 3% by weight  
monoethanolamine: 7% by weight  
protease: 2% by weight  
water: 21.8% by weight"

Regarding a process of the composition, according to the description [0023] of Publication A, "Components indicated in Table 1 were mixed using the batch method, thereby producing a liquid detergent composition having a pH of 9.3 to 9.6", it discloses the following invention.

"A process of a liquid detergent composition comprising the following components, wherein the amount of alkali metal and/or alkali earth metal is 0.85% by weight,

<Components>

- (a) polyoxyethylene(p=7)alkyl(C<sub>12</sub> to C<sub>14</sub>)ether: 24% by weight
- (b)-1 alkyl(C<sub>10</sub> to C<sub>13</sub>)benzenesulfonate sodium salt: 12% by weight
- (b)-2 polyoxyethylene(p=2.5)alkyl(C<sub>12</sub> to C<sub>14</sub>)ethersulfate monoethanolamine salt: 12% by weight
- (c) alkyl glucoside: 8% by weight
- (d)-1 ethanol: 2% by weight
- (d)-2 propylene glycol: 5% by weight
- coconut oil fatty acid: 3.2% by weight
- citric acid: 3% by weight
- monoethanolamine: 7% by weight
- protease: 2% by weight
- water: 21.8% by weight,

wherein each component is mixed using the batch method." (hereinafter referred to as the "Cited Invention")

### (2-3) Comparison

The Amended Invention and the Cited Invention are compared.

A Both components (b)-1 and (b)-2 in the Cited Invention are anionic deterative surfactants. In addition, according to the description in [Means for solving the problem] of Publication A, "The present inventors have completed the present invention to find that a liquid detergent composition ... can reduce the usage per unit of laundry." (Indication (A-2)), the liquid detergent composition disclosed in the Cited Invention is used for washing. Therefore, the liquid detergent composition disclosed in the Cited Invention corresponds to the laundry liquid detergent composition comprising "an anionic deterative surfactant" of the Amended Invention.

B The component (b)-2 in the Cited Invention corresponds to "alkyl alkoxyated

sulphate" in the Amended Invention.

C In the Cited Invention, sodium salt is used as the component (b)-1, and monoethanolamine salt is used as the component (b)-2. Further, monoethanolamine is also used as a pH adjustor (see "\*2" in the margin note of [Table 1] (Indication (A-5))). Therefore, the liquid detergent composition disclosed in the Cited Invention and the laundry liquid detergent composition according to the Amended Invention are same in that "alkanolamine and sodium ions are included".

D The composition disclosed in the Cited Invention and the composition according to the Amended Invention are same in that water is included therein.

E Therefore, the Amended Invention and the Cited Invention have the following common features and differences.

[Common features]

"A process for making a laundry liquid detergent composition comprising an anionic deterative surfactant,

wherein the laundry liquid detergent composition comprises an anionic deterative surfactant, alkanolamine, and sodium ions,

wherein the anionic deterative surfactant comprises alkyl alkoxyated sulphate, and

wherein the composition comprises water."

[Differences]

While the Amended Invention includes a process comprising a step a) of making an anionic deterative surfactant and has a base composition comprising alkanolamine and sodium ions in a mole ratio of 5:1 to 35:1, and a step b) of adding water to the base composition, the Cited Invention relates to only a process for producing by mixing each component using the batch method.

F As described below, it is understood that the other components specified in the Cited Invention is allowed to be included in the Amended Invention, and thus there is no substantial difference between them as to the remaining components specified in the Cited Invention .

G Although the component, "(a) polyoxyethylene(p=7)alkyl(C<sub>12</sub> to C<sub>14</sub>)ether" is a non-ionic surfactant, since [Claim 8] after the Amendment says that "the process according to any one of claims 1 to 7, wherein the detergent comprises a non-ionic surfactant.", it is understood that the component (a) is a component which can be used in the Amended Invention.

H Regarding the component, "(c) alkyl glucoside", [0013] of Publication A says that "When the amount of the component (c) is less than 5% by weight, the storage

stability becomes worse in a wide range of temperature, and when the amount of the component (c) is beyond 20% by weight, the flow ability at low temperature and storage stability become worse." (Indication (A-3)), and thus it is understood that the component (c) is a "stabilizer". On the other hand, [0037] of the description of the Invention says that

"Laundry Washing Adjuncts

The detergent composition comprises ... a laundry washing adjunct. Such a laundry washing adjuncts can be selected from deterative enzymes, ..., stabilizers,... and perfumes and combinations of these adjunct types. All of these materials are of the type conventionally utilized in laundry detergent products."

Thus it is understood that the component (c) is a component which can be used in the Amended Invention.

I Both "(d)-1 ethanol" and "(d)-2 propylene glycol" are components of "organic solvent". [Claim 6] after the Amendment says that "the process according to any one of claims 1 to 5, wherein the base composition comprises an organic solvent", and [0013] of the description of the Invention says that "It is also preferred that the base composition comprises an organic solvent, preferably a non-amino functional solvent. ... Preferred non-amino functional solvents for use herein include alcohols, glycols, and mixtures thereof. Especially preferred non-amino functional solvent is a mixture comprising ethanol and propylene glycol and optionally diethylene glycol." Thus, it is understood that both components (d)-1 and (d)-2 are components which can be used in the Amended Invention.

J Regarding the component, "coconut oil fatty acid", [0029] of the description of the Invention says that "Preferably the detergent comprises ..., more preferably 1 to 5% by weight of the detergent of a fatty acid.", and Examples of [0057] of the description of the Invention shows that "13.) C<sub>12</sub> to 18 fatty acid" is added. Thus it is understood that coconut oil fatty acid is a component which can be used in the Amended Invention.

K Regarding the component, "citric acid", [Claim 7] after the Amendment says that "The process according to any one of Claim 1 to 6, wherein the detergent comprises 0 to 5% by weight of citric acid." Thus citric acid is a component which can be used in the Amended Invention.

L "Protease" is deterative enzyme used widely as a detergent, and as described in "H" above, is an optional component listed in [0037] of the description of the Invention.

M As described in "G" to "L" above, it is understood that the components which are not listed as [Common features] or [Differences] between the Amended Invention and

the Cited Invention but included in the Cited Invention can be included to the Amended Invention. Thus, the difference based on those components included in the Cited Invention cannot be substantial.

#### (2-4) Examination on Differences

A First, the matter of "Comprising anionic deterative surfactant, and alkanolamine and sodium ions in a mole ratio of 5:1 to 35:1", which specifies the Amended Invention, is examined.

B Regarding the meaning of the matter, [0008] to [0009] and [0026] of the application say that "anionic deterative surfactant such as alkyl alkoxyated sulphate is pre-neutralized." Besides, it is common general technical knowledge that "as for anionic deterative surfactant added to a detergent composition, it is usually added in the form of sodium salt". Thus, it is understood that the matter specifying the Amended Invention means (a) the technical art that most of anionic deterative surfactant is added not in the form of sodium salt, but in the form of alkanolamine salt such as monoethanolamine by pre-neutralizing, and (b) the matter that the mole ratio of alkanolamine such as monoethanolamine and sodium ions can be 5:1 to 35:1".

C However, regarding (a) the technical art, it is disclosed in [0011] of Publication A that when the amount of alkali metal and/or alkali earth metal included in the liquid detergent composition of the present invention is beyond 1.4% by weight, the composition becomes cloudy and precipitation occurs. Thus, the amount of alkali metal and/or alkali earth metal included in the liquid detergent composition of the present invention has to be 1.4% by weight or less as single metal." (Indication (A-3)). Further, [0020] of Publication A says that " it is preferable that 20% by weight or more, more preferably 40% by weight or more, of alkanolamine salt is added and mixed with respect to the total component of the component (b)." (Indication (A-4)). Thus, it should be said that reducing the amount of alkali metal of "0.85%" by weight in the Cited Invention (it is understood that the alkali metal is substantially only "sodium"), is taught in Publication A. In addition, in the liquid detergent compositions 1 to 3 of the invention indicated in [Table 1] (Indication (A-5)) of Publication A, "the amount of alkali metal" is "0", and it can be understood that the amount of sodium in the Cited Invention can be properly adjusted to "0".

D Meanwhile, by examining the mole ratio of monoethanolamine (alkanolamine) and sodium ions in the Cited Invention, the mole ratio is calculated as follows.

An average molecular weight of "polyoxyethylene(p=2.5)alkyl(C<sub>12</sub> to C<sub>14</sub>)ethersulfate monoethanolamine" of the component (b)-2, which is the component comprising monoethanolamine, is calculated as 450, a molecular weight of

monoethanolamine is calculated as 61, and an average molecular weight of alkyl(C<sub>10</sub> to C<sub>13</sub>)benzenesulfonate sodium salt, which is the component (b)-1 comprising sodium ions, is calculated as 341.

Thus, the mole ratio of monoethanolamine and sodium ions is  $(12/450+7/61):(12/341)$ =about 4.0:1.

E The amount of alkali metal in the Cited Invention (it is understood that the alkali metal is substantially only "sodium") is "0.85%" by weight. As described in "C" of (2-4) above, it can be interpreted that Publication A teaches that the amount of alkali metal can be reduced to zero at the most. Accordingly, for example, by using anionic deterative surfactant in which a certain amount of monoethanolamine salt is used instead of sodium salt of the (b)-1 component, the concentration of sodium can be reduced to less than 0.85% by weight and in result the ratio of sodium ions can be reduced to less than 4.0:1. Consequently, letting the mole ratio of monoethanolamine and sodium ions controlled in the range between 5:1 to 35:1 can be easily carried out by a person skilled in the art.

F In relation to this, in the descriptions of the Invention there is no technical evidence, such as quantitative data, which shows that the Amended Invention employing the mole ratio of monoethanolamine and sodium ions to 5:1 to 35:1 has a particular effect that a person skilled in the art cannot expect.

G In addition, in the Amended Invention, while the base composition is made in the "step a)" and water is added in the "step b)", it is not shown in the description of the application that employing such a process has a particular effect with the technical evidence such as quantitative data that a person skilled in the art cannot expect. Consequently, it cannot be helped to say that the order of adding ingredients to the composition is properly and discretionally decided by a person skilled in the art.

H Accordingly, it can be said that the matters specifying the Amended Invention could be easily arrived at by a person skilled in the art when letting a certain amount of sodium salt of the component (b)-1 of the Cited Invention substituted to monoethanolamine salt and the order of adding each ingredient properly and discretionally changed .

#### (2-5) Summary

Therefore, since the Amended Invention could be invented easily by a person skilled in the art on the basis of the invention described in Publication A, the appellant should not be granted a patent for the Invention independently at the time of patent application under the provisions of Article 29(2) of the Patent Act.

#### 3. Closing

As described above, the Amendment violates the provisions of Article 126(7) of the Patent Act which is applied mutatis mutandis pursuant to the provisions of Article 17-2(6) of the Patent Act, and the Amendment of the case shall be dismissed under the provisions of Article 53(1) of the Patent Act applied mutatis mutandis by replacing certain terms pursuant to Article 159(1) of the Patent Act.

No. 3 Regarding the present inventions of the application

1. The present inventions of the application

Since the amendment dated November 7, 2014 was dismissed as described above, the present inventions of the application shall be based on Claims 1 to 11 in the written amendment dated April 14, 2014.

Claim 1 is as follows.

"[Claim 1]

A process for making a laundry liquid detergent composition comprising an anionic deterative surfactant, the process comprising the steps of:

- a) making an anionic deterative surfactant, and a base composition comprising alkanolamine and sodium ions in a mole ratio of 0.1:1 to 60:1, wherein the anionic deterative surfactant comprises an alkyl alkoxyated sulphate; and
- b) adding water to the base composition." (hereinafter referred to as the "present Invention")

2. Judgment by the body

Taking into consideration the comparison between the Inventions before and after the Amended Invention indicated in the above paragraphs, "2. Examination on requirements for being independently patentable" of "No. 2 Decision to dismiss the amendment dated November 7, 2014", there seems only difference in that as regards the present Invention the mole ratio of alkanolamine and sodium ions expands from "from 5:1 to 35:1" to "from 0.1:1 to 60:1".

Thus, as described in the above paragraph, 2. (2-4) "D" in "No. 2", since the mole ratio in the Cited Invention is "about 4.0:1", the difference of the mole ratio regarding alkanolamine and sodium ions between the present Invention and the Cited Invention is not substantial.

Therefore, the followings are common features and differences between the present Invention and the Cited Invention described in the above paragraph, 2. (2-2) in "No. 2".

[Common features]

"A process for making a laundry liquid detergent composition comprising an

anionic deterative surfactant, wherein the laundry liquid detergent composition comprises an anionic deterative surfactant, and alkanolamine and sodium ions in a mole ratio of 0.1:1 to 60:1, the anionic deterative surfactant comprises an alkyl alkoxyated sulphate, and the laundry liquid detergent composition comprises water." [Difference]

While the present Invention comprises a) a step of making a base composition and b) a step of adding water to the base composition, the Cited Invention comprises only a production process with mixing each component by means of batch method.

The above Difference is examined. As already described in the paragraph of 2. (2-4) "G" in "No. 2" above, the description of the application shows no particular effect that a person skilled in the art cannot expect when employing, on purpose, "b) a step of adding water to the base composition" while the description of the present Invention discloses no technical evidences such as quantitative data that supports the effect. Further, the order of adding ingredients to the composition may be properly and discretionally decided by a person skilled in the art. Thus, it cannot be helped to say that employing the structure as to the Difference to the Cited Invention could be easily achieved by a person skilled in the art.

Therefore, the present Invention could be invented easily by a person skilled in the art on the basis of the invention disclosed in Publication A.

#### No. 4 Closing

As described above, the appellant should not be granted a patent for the present Invention according to Claim 1 in accordance with the provisions of Article 29(2) of the Patent Act, and the present application should be rejected.

Therefore, the appeal decision shall be made as described in the conclusion.

December 14, 2015

Chief administrative judge:	KUNISHIMA, Akihiro
Administrative judge:	HOSHINO, Shoei
Administrative judge:	HASHIMOTO, Shigekazu