

SPECIFICATION

TITLE OF THE INVENTION: CORNECOYTE DESQUAMATING AGENT

BACKGROUND OF THE INVENTION

(1) FIELD OF THE INVENTION

5 The present invention relates to a corneocyte desquamating agent suitably used as an agent which improves or reduces roughness of a heel and a palm, an agent for improving skin conditions for make-up, an agent for improving dullness of skin-color, or an agent for preventing and improving roughness
10 of a comedo, a keratotic plugging or a skin pore, an agent for improving skin texture, and an agent for improving fine wrinkles.

(2) DESCRIPTION OF THE RELATED ART

 Conventionally, many corneocyte desquamating agents have been well known such as an agent which improves or reduces
15 roughness of a heel and a palm, an agent for improving skin conditions for make-up, an agent for improving dullness of skin-color, or an agent for preventing and improving roughness of a comedo, a keratotic plugging or a skin pore, an agent for improving skin texture, and an agent for improving fine wrinkles,
20 and the like.

 The technologies, which promote corneocyte desquamation are classified into a chemical corneocyte desquamating technology and a physical corneocyte desquamating technology.

 In the chemical corneocyte desquamating technology, for
25 example, it has been known that the compound in which 0.5 to

3 mass % of salicylic acid is contained or the compound in which
1 to 10 mass % of sulfur and resorcine are contained has a good
effect on preventing and improving an acne and a dandruff
(Shin-Kesyohingaku, written by Takeo Mitsui, published by
Nanzando on January 12, 1993). It has been disclosed that 50
to 100% (w/v) of glycolic acid according to the prescription
by a doctor also has a good effect on alleviating acne, dullness
of skin-color, fine wrinkles, blotch and furrow, skin-texture,
and comedo (Aesthetic Dermatology Vol. 9:1~6(1999), written by
Yuri Okabe, and Rene du Cloo). Furthermore, it has been disclosed
in Japanese Patent Application Laid-Open No. Hei 11-71232 that
the compound in which serine and alanine are contained in the
amount of 0.001 to 20 mass % are used to improve dullness of
skin-color and prevent an acne in the early stage.

On the other hand, in the physical corneocyte desquamating
technology, for example, it has been disclosed in Japanese Patent
Application Laid-Open No. Hei 9-104615 that a pack material such
as a skin-pore sheet into which a stick-shape titanium oxide
or a fine particle metal oxide is blended is made to be absorbed
into skin, and then keratotic plugging or aged corneum is removed.

However, the salicylic acid or the sulfur used in the
chemical corneocyte desquamating technology has problems in that
a sufficient effect can not be obtained and skin gets dried,
etc., when used in a range of safe amount. In addition, serine
or alanine also has an insufficient effect, and has a problem

in causing bad smell or uncomfortable stickiness when in use. The glycolic acid exposes an immature stratum corneum and causes an inflammation and a bulla, thereby having a problem in safety, and it must be used only under medical supervision when it is used in a high-concentration, and it has an insufficient effect when used in a safe concentration. Moreover, the pack material such as skin-pore sheet used in the physical corneocyte desquamating technology has problems in that pain is accompanied with peeling it off, the pack material itself remains, and it is time-consuming to prepare the pack.

On the other hand, it has been known that piroctone olamine (Octopirox) (A trade-mark: Octopirox, product by Clariant (Japan) K.K.), a hydroxypyridone derivative, has various pharmacological activities such as an antibacterial activity, an abnormal cornification inhibition activity, a DNA synthesis inhibition activity, a melanin synthesis inhibition activity, a cornificating enzyme activation activity, and an in-vivo antioxidation activity.

On the basis of this knowledge, usages as an antidandruff agent (Japanese Patent Application Laid-Open No. Sho 49-50142) and an antiacne agent (European Patent Application Laid-Open No. 218410) based on the antibacterial activity, a curing agent for skin disease such as a psoriasis, an ichthyosys and a housewife's eczema (Japanese Patent Application Laid-Open No. Sho 60-215625) based on abnormal cornification inhibition

activity, antiviral agent (Japanese Patent Application Laid-Open No. Sho 60-215626) based on the DNA synthesis inhibition activity, a pigment removing agent (Japanese Patent Application Laid-Open No. Hei 10-7560) based on the melanin synthesis inhibition activity, a skin-roughness improving agent (Japanese Patent Application Laid-Open No. Hei 8-20521) based on cornificating enzyme activation activity, and an anti-photoaging agent (Japanese Patent Application Laid-Open No. Hei 1-265018) based on in-vivo antioxidation activity as a chelating agent are known.

However, it is not known that the piroctone olamine (octopirox) has a corneocyte desquamating activity, even in the technology disclosed in said respective publications, and has an effect on improving dullness of skin-color, keratotic plugging, comedo and roughness of a heel and a skin-pore as well as an effect on improving skin texture or fine wrinkles due to the corneocyte desquamating activity.

However, as described above, it is reported that the piroctone olamine (octopirox) has an effect on improving an acne due to antibacterial activity thereof. But the antibacterial agent is not used to remedy keratotic plugging or comedo although the keratotic plugging or comedo is a starting stage of an acne, because activity of *Propionibacterium acnes* (*P. acnes*) is low.

Moreover, as described above, although the effect on skin trouble accompanied with parakeratosis according to an

over-growth such as the roughness of a hand, has already been known, the effect on dullness of skin-color or roughness of a heel, a skin texture and a fine wrinkle, etc. is newly invented by discovery of the corneocyte desquamating activity effect according to the present invention.

Conventionally, proline has been known as a moisturizing agent for skin (Japanese Patent Application Laid-Open No. Hei 5-339140, Japanese Patent Application Laid-Open No. Hei 8-48612, Japanese Patent Application Laid-Open No. Hei 8-208423 and Japanese Patent Application Laid-Open No. Hei 11-139951), an agent for imparting silkiness to hair (Japanese Patent Application Laid-Open No. Sho 57-179110) or an agent for retaining moisture (Japanese Patent Application Laid-Open No. Hei 6-263619 and Japanese Patent Application Laid-Open No. Hei 6-263620), an agent for dissolving and stabilizing hardly soluble components in water (Japanese Patent Application Laid-Open No. Sho 57-209211, Japanese Patent Application Laid-Open No. Sho 61-50918, and Japanese Patent Application Laid-Open No. Hei 6-32712), an agent for protecting hair (Japanese Patent Application Laid-Open No. Hei 3-153616 and Japanese Patent Application Laid-Open No. Hei 3-153617), and an agent for improving dullness of skin-color (Japanese Patent Application Laid-Open No. Hei 11-335236). However, the corneocyte desquamating effect has not been reported until now, even in the technologies disclosed in said respective publications.

Besides, oxidized CoA has also been reported as an agent for improving skin-roughness and wrinkle due to a cell activating effect (Japanese Patent Application Laid-Open No. Sho 61-289016 and Japanese Patent Application Laid-Open No. Sho 62-4215), and
5 a hair whitening protection and improving agent due to a growth activating effect for melanocytes in the hair root (Japanese Patent Application Laid-Open No. Hei 6-305940).

Conventionally, ellagic acid has been known as a plaque formation inhibitor due to its glucosyl transferase inhibiting
10 effect (Japanese Patent Application Laid-Open No. Hei 1-10985), a skin-whitening agent due to a melanin synthesis inhibition activity (Japanese Patent Application Laid-Open No. Hei 1-79103), an astringent / polishing / protecting agent (Japanese Patent Application Laid-Open No. Hei 5-112441), but the corneocyte
15 desquamating activity associated with the oxidized CoA or ellagic acid has not been known until now, even in the technologies disclosed in said respective publications.

SUMMARY OF THE INVENTION

20 Therefore, an object of the present invention is to solve the aforementioned problem of conventional technology and the like. In other words, new usage including improvement of dullness of skin-color in accordance with the corneocyte desquamating activity of the hydroxypyridone derivatives,
25 oxidized CoA and ellagic acid, and new usage of getting rid of

dullness of skin-color in accordance with the corneocyte desquamating activity of the proline are obtained.

That is, the object of the present invention is to provide a corneocyte desquamating agent which can be suitably used as an agent for improving and reducing roughness of a heel or a palm, an agent for improving skin conditions for make-up, an agent for preventing roughness of a comedo or a keratotic plugging and a skin-pore, an agent for improving skin texture, and an agent for improving fine wrinkles.

The present inventors have studied the conventional problems to find that hydroxypyridone derivatives such as piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid have a corneocyte desquamating activity and that an agent for improving roughness of a heel or a palm, and skin conditions for make-up, an agent for preventing and improving roughness of a comedo, a keratotic plugging and a skin-pore, and an agent for improving fine wrinkles and skin texture having a good effect and a good usage feeling and without any troubles such as irritation and immature of corneocyte in spite of the daily use thereof can be obtained by blending at least one selected from the hydroxypyridone derivatives, oxidized CoA, and ellagic acid, and thus eventually completed the present invention.

As described above, the novel usage including improvement of dullness of skin-color in accordance with corneocyte desquamating activity of the hydroxypyridone derivatives,

oxidized CoA and ellagic acid, and the novel usage of getting rid of dullness of skin-color in accordance with corneocyte desquamating activity of the proline are obtained. In other words, the novel usage as an agent for improving and reducing roughness of a heel or a palm, an agent for improving skin conditions for make-up, an agent for preventing roughness of a comedo or a keratotic plugging and a skin-pore, an agent for improving skin texture, and an agent for improving fine wrinkles can only be achieved by the present invention. The corneocyte desquamating agent of the present invention is characterized by comprising at least one selected from the group of consisting of hydroxypyridone derivatives, proline, oxidized CoA and ellagic acid.

BRIEF DESCRIPTION OF THE DRAWING

Fig.1 (a) and (b) are characteristic diagrams representing the number of stratum corneum and the inhibition ratio (%) according to Examples 1 to 11 and Comparative Examples 1 to 4 (including the Control), respectively.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Hereafter, the embodiments of the present invention will be described in detail.

The corneocyte desquamating agent of the present invention is characterized by comprising at least one selected from the

hydroxypyridone derivatives, proline, oxidized CoA and ellagic acid.

Specifically, the hydroxypyridone derivatives used in the present invention include piroctone olamine [Alias:

5 1-hydroxy-4-methyl-6-(2,4,4-trimethylpentyl)-2(1H)-pyridone monoethanolamine] (A trade-mark: Octopirox, product by Clariant (Japan) K.K.), 1-hydroxy-4-methyl-pyridone,

1-hydroxy-4,6-dimethyl-2-pyridone,

1-hydroxy-4-methyl-6-isobutyl-2-pyridone,

10 1-hydroxy-4-methyl-6-nonyl-2-pyridone,

1-hydroxy-6-undecyl-2-pyridone,

1-hydroxy-4-methyl-6-undecyl-2-pyridone,

1-hydroxy-4,6-diundecyl-2-pyridone,

1-hydroxy-6-tridecyl-2-pyridone,

15 1-hydroxy-4-methyl-6-tridecyl-2-pyridone,

1-hydroxy-3,4,5-trimethyl-6-tridecyl-2-pyridone,

1-hydroxy-4,6-ditridecyl-2-pyridone,

1-hydroxy-4-methyl-6-pentadecyl-2-pyridone,

1-hydroxy-4-methyl-6-heptadecyl-2-pyridone,

20 1-hydroxy-4-methyl-6-nonadecyl-2-pyridone,

1-hydroxy-4-methyl-6-tricosyl-2-pyridone,

1-hydroxy-4-methyl-6-cyclopropyl-2-pyridone,

1-hydroxy-6-cyclopentyl-2-pyridone,

1-hydroxy-4-methyl-6-cyclopentyl-2-pyridone,

25 1-hydroxy-4-methyl-6-cyclooctyl-2-pyridone,

1-hydroxy-4-methyl-6-benzyl-2-pyridone,

1-hydroxy-4-methyl-6-phenyl-2-pyridone, and the like.

Among these, piroctone olamine [Alias:
1-hydroxy-4-methyl-6-(2,4,4-trimethylpentyl)-2(1H)-pyridone
5 monoethanolamine] is preferable.

Furthermore, specific examples of the proline used in the
present invention include proline, hydroxyproline,
N-methylproline, 4,5-dioxoproline, N-acetylhydroxyproline,
3,4-didehydropoline, N-carbobenzoxyproline,
10 5-oxo-3-phenylproline, proline benzylester and salts thereof,
and proline methylester and salts thereof.

In addition, the oxidized CoA used in the present invention
is a CoA dimer where SH groups located at the terminals of two
CoA molecules are combined each other by S-S bonding by means
15 of oxidation. And, dephospho-oxidized CoA can also be used other
than the oxidized CoA or salts thereof (salt of sodium, salt
of calcium, etc.).

Moreover, specific examples of the ellagic acid used in
the present invention include ellagic acid,
20 3,4-di-o-methylellagic acid, 3,3'-di-o-methylellagic acid,
3,3',4-tri-o-methylellagic acid,
3,3',4,4'-tetra-o-methyl-5-methoxyellagic acid,
3-o-ethyl-4-o-methyl-5-hydroxyellagic acid, amritoside, and
the like, or alkaline metal salts of these compounds.

25 In the corneocyte desquamating agent of the present

invention can be used one or a mixture of two or more selected from the group consisting hydroxypyridone derivatives, proline, oxidized CoA and ellagic acid.

5 The type of the application of the corneocyte desquamating agent of the present invention may be a type of leave-on cosmetics such as a lotion, cosmetic water and cream as well as a type of wash-off agent such as face-washing composition and body soap. Furthermore, it may also be a type of cataplasms such as wet dressing and patch, or a type of bath additive.

10 In the present invention, the content of the corneocyte desquamating agent can be varied in accordance with a kind of component or a type of agent. For example, the content of the piroctone olamine (octopirox, product by Clariant (Japan) K.K.) as the leave-on cosmetics is 0.01 mass % or more, preferably
15 0.1 to 10 mass %, more preferably 0.1 to 2.5 mass % in view of safety based on the total weight of the composition containing the corneocyte desquamating agent.

20 The hydroxypyridone derivatives, proline, oxidized CoA and ellagic acid used in the present invention can inhibit abnormal thickness of stratum corneum due to mild corneocyte desquamating activity. These essential components have an excellent improving effect compared to salicylic acid which is used as the conventional corneocyte desquamating agent and have no trouble such as drying-off in spite of continuous usage thereof.
25 The hydroxypyridone derivatives, proline, oxidized CoA and

ellagic acid used in the present invention also have an excellent effect on preventing keratotic plugging or comedo, dullness of skin-color and roughness, etc.

In addition to the essential components, the corneocyte
5 desquamating agent of the present invention may further contain
blending agents used as in leave-on cosmetics, cataplasms, or
bath additives and the like, for example, surfactants, cleaning
agents, oil contents, alcohols, high-molecular compounds,
thickeners, moisturizing agents, antiseptics, inclusion
10 compounds, oxidation-inhibitors or antioxidants, chelating
agents, pH conditioners, perfumes, dyes, absorbents
scattering agents of ultraviolet ray, vitamins, amino acids,
anti-inflammatory agents, skin whitening agents, crude drugs,
concentrated extracts from plants, active components, agents
15 for imparting warmth and coolness, and water, etc.

In addition, said optional components are not limited to
the exemplary ones mentioned above, and can be blended freely
into a mixture.

The present invention will be described in greater detail
20 with reference to the following examples. However, the present
invention should not be construed as being limited thereto.
Furthermore, a unit of blending amount is mass %, and total weight
is 100 mass %. Piroctone olamine used in the Examples hereinbelow
means octopirox manufactured by Clariant (Japan) K.K.

EXAMPLES 1 TO 11 AND COMPARATIVE EXAMPLES 1 TO 4,

(The corneocyte desquamating effect exhibited by the piroctone
olamine, proline, oxidized CoA, and ellagic acid)

On the basis of the method invented by Elias et al. (J.
Clin. Invest. Vol. 74 1414~1421(1984)), stratum corneum on the
skin of a hairless mouse was thickened by cholesterol sulfate,
and the inhibition ratio of thickening of the stratum corneum
by using drug agents shown in Table 1 was calculated according
to the calculation formula described below. Then, the
corneocyte desquamating effect was evaluated. The higher is
the inhibition ratio (%), the higher is the inhibition effect.

The drug agents shown in the Table 1 below was dissolved
in the dimethylsulfoxide/ethanol (1/1) solution to be applied
on the back portion of the hairless mice nearly in the amount
of 1 ml/cm². The mice which were only treated by a cholesterol
sulfate were used as the control having an inhibition ratio of
0%.

The inhibition ratio (%)=

{1-(the number of stratum corneum on a sample applying portion
- the number of stratum corneum in normal group)
/(the number of stratum corneum in control group - the number
of stratum corneum in normal group)}
× 100

The results thereof are shown in Table 1 below.

Table 1

	Component	Concentration (%)	Number of stratum corneum	The difference from normal group	The ratio of the difference from normal group (control group =100)	Inhibition ratio
Normal group			8.3	0	0	100
Example1	Piroctone olamine	0.05	8.3	0	0	100
Example2	Piroctone olamine	0.1	8.1	-0.2	-10	110
Example3	Piroctone olamine	0.25	7.2	-1.1	-55	155
Example4	Piroctone olamine	0.5	6.6	-1.7	-85	185
Example5	Piroctone olamine	1	6.4	-1.9	-95	195
Example6	Piroctone olamine	2	6.3	-2	-100	200
Example7	Piroctone olamine	5	7	-1.3	-65	165
Example8	Piroctone olamine	10	8.4	0.1	5	95
Example9	Proline	1	7.5	-0.8	-40	140
Example10	Oxidized CoA	0.1	7.2	-1.1	-55	155
Example11	Ellagic acid	0.5	7.3	-1	-50	150
Control group	Control (treated only by cholesterol sulfate)		10.3	2	100	0
Comparative example1	Glycol acid	1	9.3	1	50	50
Comparative example2	Glycol acid	2	8.6	0.3	15	85
Comparative example3	Salicylic acid	0.2	8.7	0.4	20	80
Comparative example4	Salicylic acid	2	9.6	1.3	65	35

From the results shown in the Table 1 and Fig. 1, it has been found that the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid exhibit the corneocyte desquamating effect in the amount of 0.05 to 10 mass % by concentration. In particular, as for the piroctone olamine (octopirox), it has also been found that it exhibits much higher desquamating effect in the amount of 0.25 or more mass % by concentration, as compared with the conventional corneocyte desquamating agent. Moreover, it has also been found that the corneocyte desquamating effect of the proline, oxidized CoA, and ellagic acid is superior to that of salicylic acid.

EXAMPLES 12 TO 45 (in the case of being applied as lotion, cream, hand cream, emulsion, and cosmetic water) AND COMPARATIVE EXAMPLES 5 TO 20

Lotion (shown in Table 2 below), cream (shown in Table 3 below), hand cream (shown in Table 4 below), emulsion (shown in Table 5 below), and cosmetic water (shown in Table 6 below) containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid were prepared, and then, the effects (shown in Tables 2 to 6 below) against troubles caused by excessive accumulation of corneocyte were evaluated according to the following evaluation method.

The results thereof are shown in Tables 2 to 6 below.

Evaluation method

The corneocyte desquamating agent of the present invention was used twice a day to one side, i.e., right or left side of five or three panels for two months. Pustule of a comedo or a skin pore and roughness of a palm or a heel were evaluated by touching with one's hand, and dullness of skin-color, mark on the wings of a nose or a forehead, and skin conditions for make-up, etc. were visually evaluated by comparing the one side to the other side. Then, in each case, the difference between applied portion and non-applied portion of corneocyte desquamating agent was evaluated according to the following criteria for evaluation.

Criteria for evaluation:

◎: Very effective compared to non-applied portion.

○: Effective compared to non-applied portion.

△: Little effective compared to non-applied portion.

×: No effect.

Here, the above evaluation marks (◎○△×) in respective evaluation columns represent the evaluation results taken from one panel (hereinafter, the same rule is applied).

Table 2

Lotion

Component	Example 12	Example 13	Example 14	Example 15	Example 16	Example 17	Example 18	Comparative Example 5	Comparative Example 6	Comparative Example 7	Comparative Example 8
Piroctone olamine	0.05	0.125	0.25				0.1				
Proline				1.0							
Oxidized CoA					0.5						
Ellagic acid						0.5					
Salicylic acid									0.2		5.0
Glycolic acid										1.0	
Polyoxyethylene (30) cholesteryl ether*							1.5				
Trimethylglycine							0.5				
Polyoxyethylene hydrogenated castor oil monopyroglutamate monoisostearate							1.0				
Xanthan gum							0.05				
Methyl para-hydroxybenzoate							0.3				
Propyl para-hydroxybenzoate							0.1				
Allantoin							0.2				
Glycerine	5.0	5.0	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	5.0
1,3-butylene glycol	5.0	5.0	5.0	5.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0
Carboxyvinylpolymer (Mw:1000000~1500000)	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5
Potassium hydroxide	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Tocopheryl acetate	0.2	0.2	0.2	0.2	0.2	0.2	-	0.2	0.2	0.2	0.2
Decaglyceryl Monoisostearate	1.0	1.0	1.0	1.0	1.0	1.0	-	1.0	1.0	1.0	1.0
Decaglyceryl tristearate	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5
Ethanol	1.0	1.0	1.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0	1.0
Polyoxyethylene (40) hydrogenated castor oil	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5
Perfume	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Effect on preventing comedo	△△△××	○○○○△	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	△××××	△△△××	△△△××	○△×××
Effect on preventing and improving pustule (keratotic plugging) of skin pore	△△△××	○○○○△	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	△××××	△△△××	△△△××	○△×××
Effect on improving roughness of a palm or a heel	△△△××	○○○○△	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	△××××	△△△××	△△△××	○△×××
Irritation and drying-off on skin	None	None	None	None	None	None	None	None	None	None	None

*: EMALX CS-30 (product by NIHON EMULSION CO., LTD)

TABLE 3

Cream

Component	Example 19	Example 20	Example 21	Example 22	Example 23	Example 24	Example 25	Example 26	Example 27	Comparative example 9	Comparative example 10	Comparative example 11
Piroctone olamine	0.05	0.10	0.25	0.50				0.05	0.25			
Proline					0.30							
Oxidized CoA						1.00						
Ellagic acid							1.00					
Salicylic acid											0.20	
Glycolic acid												1.00
Bentonite	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Polyoxyethylene (30) cholesteryl ether*									1.50			
Polyoxyethylene (20) polyoxypropylene (6) decyltetradecylether**									0.30			
Hexaglyceryl monostearate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Diglyceryl monoisostearate	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Glyceryl monostearate	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Polyethyleneglycol monostearate (20EO)								0.50				
Liquid paraffin	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Solid paraffin	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hydrogenated soybean phospholipid									3.00			
Dimethyl silicone	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		3.00	3.00	3.00
Cetyl palmitate	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Cetostearyl alcohol	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Trimethylglycine									2.00			
Glycerine	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1,3-butylene glycol	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
UV-absorbent: paramethoxy-2-ethylhexyl cinnamate								0.50				
Sodium alginate									0.10			
Carboxyvinylpolymer (Mol.wt.:1000000 to 1500000)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		0.08	0.08	0.08
Stearyl glycerylretinate									0.20			
Xanthan gum	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10		0.10	0.10	0.10
Propyl para-hydroxybenzoate	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Methyl para-hydroxybenzoate	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Sodium hydroxide	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity

Table 3 (continued from the previous page)

Cream

Component	Example 19	Example 20	Example 21	Example 22	Example 23	Example 24	Example 25	Example 26	Example 27	Comparative example 9	Comparative example 10	Comparative example 11
Perfume	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Effect on improving dullness of skin-color	△△△××	○○○△△	○○○○○	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	○○○○○	△××××	△△△××	△△△××
Effect on improving skin texture	△△△××	○○○△△	○○○○○	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	○○○○○	△××××	△△△××	△△△××
Effect on improving fine wrinkles	△△△××	○○○△△	○○○○○	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	○○○○○	△××××	△△△××	△△△××
Effect on improving roughness of a heel	△△△××	○○○△△	○○○○○	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	○○○○○	△××××	△△△××	△△△××
Effect on preventing and improving mark of skin pore on the wings of a nose or a forehead	△△△××	○○○△△	○○○○○	○○○○○	○○○△×	○○○○○	○○○○×	○○○○○	○○○○○	△××××	△△△××	△△△××

*: EMALEX CS-30 (NIHON EMULSION CO., LTD.)

**: NIKKOL PEN-4620 (NIKKO CHEMICALS CO., LTD.)

Table 4

Hand cream

Component	Example 28	Example 29	Example 30	Example 31	Example 32	Example 33	Comparative Example 12	Comparative Example 13	Comparative Example 14
Piroctone olamine	0.05	0.25	1						
Proline				0.30					
Oxidized CoA					1.00				
Ellagic acid						1.00			
Salicylic acid							0.2		
Glycolic acid								1	
Liquid paraffin	5	5	5	5	5	5	5	5	5
Vegetable squalane	5	5	5	5	5	5	5	5	5
Jojoba oil	3	3	3	3	3	3	3	3	3
Dimethyl silicone	2	2	2	2	2	2	2	2	2
Cetyl palmitate	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Polyethyleneglycol monostearate (40EO)	2	2	2	2	2	2	2	2	2
Glyceryl monostearate	2	2	2	2	2	2	2	2	2
Hexaglyceryl monostearate	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cetostearyl alcohol	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Polyoxyethylene (20) glyceryl monostearate	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Stearyl glycyrrhetinate	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Glycerine	3	3	3	3	3	3	3	3	3
1,3-butylene glycol	5	5	5	5	5	5	5	5	5
Rose hips oil	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Triisopropanol amine	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Hydrogenated soybean phospholipid	1	1	1	1	1	1	1	1	1
Bentonite	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Carboxyvinylpolymer (Mol.wt.:1000000 to 1500000)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Citric acid	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Methyl para-hydroxybenzoate	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Perfume	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Effect on improving roughness of palm	○○△	○○○	○○○	○○△	○○△	○○△	△△△	△△△	△△△

Table 5
Emulsion

Component	Example 34	Example 35	Example 36	Example 37	Example 38	Comparative example 15	Comparative example 16	Comparative example 17
Piroctone olamine	0.25				0.05			
Proline		1.00						
Oxidized CoA			1.00					
Ellagic acid				1.00				
Salicylic acid						0.20		
Glycolic acid							1.00	
Polyoxyethylene (20) cholesteryl ether*					1.00			
Polyoxyethylene (20) polyoxypropylene cetyl ether**					0.30			
Trimethylglycine					1.00			
Montmorillonite	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Decaglyceryl trisostearate	0.50	0.50	0.50	0.50		0.50	0.50	0.50
Decaglyceryl monostearate	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Polyoxyethylene (20) sorbitan monooleate	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Stearyl glycyrrhetinate	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Dimethyl silicone	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Vegetable squalane	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Jojoba oil	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Almond oil	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Macadamia nut oil	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Sunflower seed oil	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Lecithin	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Behenyl alcohol	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Stearyl alcohol					1.00			
Glycerine	10.00	10.00	10.00	10.00		10.00	10.00	10.00
Dipropylene glycol	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Carboxyvinyl polymer (Mw:1000000~1500000)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Xanthan gum	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Propyl para-hydroxybenzoate	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Methyl para-hydroxybenzoate	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Tocopheryl acetate	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Ethanol	2.00	3.00	4.00	5.00	3.00	3.00	4.00	4.00
Perfume	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Effect on preventing comedo	○○○	○○○	○○○	○○○	○○○	△	△	×
Effect on preventing and improving pustule (keratotic plugging) of skin pore	○○○	○○○	○○○	○○○	○○○	△	△	×
Effect on improving skin conditions for make-up	○○○	○○○	○○○	○○○	○○○	△	△	×
Effect on improving roughness of a palm or a heel	○○○	○○○	○○○	○○○	○○○	△	○	△
Irritation and drying-off on the skin	None	None	None	None	None	None	None	None

*: EMALX CS-20 (NIHON EMULSION CO., LTD.)

** : NIKKOL PBC-34 (NIKKO CHEMICALS CO., LTD.)

A minute quantity is "A minute quantity."

Table 6
Cosmetic water

Component	Example 39	Example 40	Example 41	Example 42	Example 43	Example 44	Example 45	Comparative example 18	Comparative example 19	Comparative example 20
Piroctone olamine	0.10	0.25				0.10	0.12			
Proline			2.00							
Oxidized CoA				2.00						
Ellagic acid					0.30			0.20		
Salicylic acid									1.00	
Glycolic acid										
Polyoxyethylene (30) cholesteryl ether*							1.50			
Trimethylglycine							3.00			
Dipropylene glycol							4.00			
Durvillea concentrated extract							0.50			
Rose water							0.20			
Sodium alginate							0.02			
Polyoxyethylene hydrogenated castor oil monopyroglutamate monoisostearate	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Polyoxyethylene (30) sorbitol tetraoleate						1.00				
Polyoxyethylene (11)stearyl ether						0.20				
Polyoxyethylene (20) behenyl ether						0.10				
Polyethyleneglycol monostearate (20EO)						0.10				
Glycerine	6.00	6.00	6.00	6.00	6.00	6.00	5.00	6.00	6.00	6.00
1,3-butylene glycol	2.00	2.00	2.00	2.00	2.00	2.00		2.00	2.00	2.00
Methyl para-hydroxybenzoate	0.30	0.30	0.30	0.30	0.30	0.30	0.50	0.30	0.30	0.30
Dipotassium glycyrrhizinate (GK2)						0.20	0.20			
Propyl para-hydroxybenzoate	0.10	0.10	0.10	0.10	0.10	0.10		0.10	0.10	0.10
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Ethanol	8.00	9.00	10.00	11.00	12.00	8.00	6.00	9.00	10.00	11.00
Perfume	A minute quantity	a minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Effect on preventing comedo	○○○	○○○	○○○	○○○	○○△	○○○	○○○	△△△	△△△	×××
Effect on improving dullness of skin-color	○○○	○○○	○○○	○○○	○○△	○○○	○○○	△△△	△△△	×××
Effect on preventing and improving pustule (keratotic plugging) of skin pore	○○○	○○○	○○○	○○○	○○△	○○○	○○○	△△△	△△△	×××
Effect on improving skin conditions for make-up	○○○	○○○	○○○	○○○	○○△	○○○	○○○	△△△	△△△	×××
Effect on improving roughness of a palm or a heel	○○○	○○○	○○○	○○○	○○△	○○○	○○○	△△△	△△△	×××
Irritation and drying-off on the skin	None	None	None	None	None	None	None	None	None	None

*: EMALX CS-30 (product by NIHON EMULSION CO., LTD)

From the results shown in Tables 2 to 6 above, it has been found that said agents (lotion, cream, hand cream, emulsion, and cosmetic water) containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid have an excellent effect on preventing and improving pustule of a comedo or a skin pore, roughness of a palm or a heel, dullness of skin-color, mark on the wings of a nose or a forehead, and improper skin conditions for make-up without any troubles such as irritation or drying-off in comparison with using salicylic acid or glycolic acid.

EXAMPLES 46 TO 66 (in the case of being applied as soap, hand soap, body soap, and face-washing compositions) AND COMPARATIVE EXAMPLES 21 TO 24.

Soap (shown in Table 7 below), hand soap (shown in Table 8 below), body soap (shown in Table 9 below), and face-washing composition (shown in Table 10 below) containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid were prepared, and then effects (the effects shown in Tables 7 to 10 below) against troubles caused by excessive accumulation of corneocyte were evaluated according to the following evaluation method.

The results thereof are shown in Tables 7 to 10 below.

Evaluation method

The corneocyte desquamating agent of the present invention

containing the effective components was used twice a day to one side, i.e., right or left side of three or one panels for two months while the basic composition was used on the other side. Pustule of a skin pore or a comedo, and roughness of a palm or
5 a heel were evaluated by touching with one's hand, and dullness of skin-color, mark on the wings of a nose, and skin conditions for make-up, etc. were visually compared and evaluated with respect to both left and right sides according to the following criteria for evaluation.

10

Criteria for evaluation:

◎: Very effective compared to the basic composition.

○: Effective compared to the basic composition.

△: Little effective compared to the basic composition.

15

×: No effect.

Table 7

Soap

Component	Example 46	Example 47	Example 48	Example 49	Example 50	Example 51	Comparative example 21	Basic composition
Piroctone olamine	2.0	1.0	0.5					
Proline				3.0				
Oxidized CoA					4.0			
Ellagic acid						1.0		
Salicylic acid							0.2	
Sodium salt of coconut/palm oil fatty acid (coconut/palm oil fatty acid=30/70)	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
Coconut/palm oil(30/70) fatty acid	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Dibutylhydroxy toluene	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Disodium edetate	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1-Hydroxyethane-1,1-diphosphonic acid	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Citric acid	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sodium chloride	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Perfume	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Titanium oxide	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Effect on preventing and improving pustule of skin pore on a back or a chest	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	△△×	
Effect on improving roughness of a palm or a heel	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	⊙⊙⊙	△△×	

Table 8
Medicated hand soap

Component	Example 52	Example 53	Example 54	Example 55	Example 56	Example 57	Comparative example 22	Basic composition
Piroctone olamine	2.0	1.0	0.5					
Proline				3.0				
Oxidized CoA					4.0			
Ellagic acid						1.0		
Salicylic acid							0.2	
Potassium laurate	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Potassium myristate	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Potassium N-lauroyl-N-methyl- β -alaninate	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Potassium N-lauroyl-L-glutamate	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Glycerine	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Propylene glycol	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Coconut fatty acid diethanol amide	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lauryl dimethylamine oxide	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Sorbitol	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Cationated cellulose*1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Alkyl methacrylate polymer(R=butyl/ethyl)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
1-Hydroxyethane-1,1-diphosphonic acid	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tetrasodium edetate tetrahydrate	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Vegetable squalane	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Potassium chloride	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Bentonite	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Potassium hydroxide	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Perfume	2.0	3.0	4.0	5.0	6.0	7.0	5.0	6.0
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Effect on improving roughness of a palm	○	○	○	○	○	○	△	

*1: O-[2-hydroxy-3-(trimethylammonio)propyl] hydroxyethylcellulose chloride : LEOGUARD GP (product by LION CHEMICAL CO., LTD.)

Table 9
Body soap

Component	Example 58	Example 59	Example 60	Comparative example 23	Basic composition
Piroctone olamine	2.0	1.0	0.5		
Salicylic acid				0.2	
Potassium laurate	10.0	10.0	10.0	10.0	10.0
Potassium myristate	10.0	10.0	10.0	10.0	10.0
Potassium N-lauroyl-N-methyl- β -alaninate	2.0	2.0	2.0	2.0	2.0
Potassium N-lauroyl-L-glutamate	2.0	2.0	2.0	2.0	2.0
Coconut fatty acid diethanolamide	3.0	3.0	3.0	3.0	3.0
Lauryl dimethylamine oxide	1.0	1.0	1.0	1.0	1.0
Propylene glycol	6.0	6.0	6.0	6.0	6.0
Hydroxypropyl methylcellulose	0.5	0.5	0.5	0.5	0.5
Ethyleneglycol distearate	1.0	1.0	1.0	1.0	1.0
Cationated cellulose *1	0.1	0.1	0.1	0.1	0.1
Polystyrene (n=300)	0.1	0.1	0.1	0.1	0.1
Tetrasodium edetate tetrahydrate	0.2	0.2	0.2	0.2	0.2
Vegetable squalane	0.5	0.5	0.5	0.5	0.5
Dimethyl polysiloxane (100cs)	0.5	0.5	0.5	0.5	0.5
Potassium chloride	0.1	0.1	0.1	0.1	0.1
Bentonite	1.0	1.0	1.0	1.0	1.0
Potassium hydroxide	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Perfume	A minute quantity	A minute quantity	A minute quantity	A minute quantity	A minute quantity
Purified water	Balance	Balance	Balance	Balance	Balance
Effect on preventing and improving skin pore on a back or a chest	○	○	○	△	
Effect on improving roughness of a palm or a heel	○	○	○	△	

*1: O-[2-hydroxy-3-(trimethylammonio)propyl] hydroxyethylcellulose chloride : LEOGUARD GP product by LION CHEMICAL CO., LTD.

Table 10

Face-washing composition

Component	Example 61	Example 62	Example 63	Example 64	Example 65	Example 66	Comparative example 24	Basic composition
Piroctone Olamine	2.0	1.0	0.5					
Proline				5.0				
Oxidized CoA					3.0			
Ellagic acid						5.0		
Salicylic acid							0.2	
Lauric acid	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Myristic acid	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Palmitic acid	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Stearic acid	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Potassium N-lauroyl-N-methyl- β -alaninate	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Potassium N-lauroyl-L-glutamate	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Potassium hydroxide	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Glycerine	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Polyethylene glycol 4000	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Sorbitol	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Oleyl alcohol	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Purified lanoline	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Vegetable squalane	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cationated cellulose	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
1-Hydroxyethane-1,1-diphosphonic acid	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tetrasodium edetate tetrahydrate	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Potassium chloride	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Bentonite	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Perfume	2.0	3.0	4.0	4.0	4.0	4.0	5.0	6.0
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Effect on preventing comedo	○○○	○○○	○○○	○○△	○○○	○○○	△△×	
Effect on preventing and improving pustule of skin pore on wings of a nose	○○○	○○○	○○○	○○△	○○○	○○○	△△×	
Effect on preventing and improving pustule of skin pore on a forehead	○○○	○○○	○○○	○○△	○○○	○○○	△△×	
Effect on improving dullness of skin-color	○○○	○○○	○○○	○○△	○○○	○○○	△△×	

From the results shown in the Tables 7 to 10 above, it has been found that the agents (soap, hand soap, body soap, and face-washing composition) containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid have an excellent effect on improving pustule of a comedo or a skin pore, roughness of a palm or a heel, dullness of skin-color, mark on the wings of a nose or a forehead, and improper skin conditions for make-up in comparison with the conventional corneocyte desquamating agent.

EXAMPLES 67 TO 86 (in the case of being applied as spray containing powder antiperspirant, rollon-type antiperspirant, cataplasm, and medicated liquid-type bath additive) AND COMPARATIVE EXAMPLES 25 TO 32.

Spray containing powder antiperspirant (shown in Table 11 below), rollon-type antiperspirant (shown in Table 12 below), cataplasm (shown in Table 13 below), and medicated liquid-type bath additive (shown in Table 14 below) containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid were prepared, and then effects (the effects shown in Tables 11 to 14 below) against trouble caused by excessive accumulation of the corneocyte were evaluated according to the following evaluation method.

In addition, the cataplasm was admixed in kneader until it becomes paste, whereby the composition of cataplasm was

prepared. The composition of the cataplast was applied uniformly on the non-woven sheet such that thickness would become 150g/cm², and then the cataplast was prepared by being covered with polyethylene film.

5 The results thereof are shown in Tables 11 to 14 below.

Evaluation method

10 The corneocyte desquamating agent of the present invention containing the effective components was used once a day by one panel for one month. Then, the results thereof were compared with no usage. Pustule of a skin pore or a comedo, and roughness of a palm or a heel were evaluated by touching with one's hand, and dullness of skin-color, mark on the wings of a nose or a forehead, and skin conditions for make-up, etc. were visually
15 compared and evaluated according to the following criteria for evaluation.

Criteria for evaluation:

- 20 ◎: Very effective compared to before usage.
- : Effective compared to before usage.
- △: Little effective compared to before usage.
- ×: No effect.

Table 11
Spray containing powder antiperspirant

Component	Example 67	Example 68	Example 69	Example 70	Example 71	Example 72	Example 73	Example 74	Comparative example 25	Comparative example 26
Piroctone olamine	1.0	0.5	0.25	0.10	0.05					
Proline						1.00				
Oxidized CoA							1.00			
Ellagic acid								1.00		
Salicylic acid									0.2	
Aluminium hydroxychloride	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Magnesia · silica	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Silicate anhydride	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Isopropyl myristate	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Methyl cyclopolsiloxane	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Decamethyl pentasiloxane	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Sorbitan trioleate	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Stearyl glycyrrhetinate	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Vegetable Squalane	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Bentonite	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Perfume	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LPG	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Effect on improving roughness of a heel	○	○	○	○	○	○	○	○	△	×
Effect on preventing and improving pustule of skin pore on a back or a chest	○	○	○	○	○	○	○	○	△	×

Table 12
Rollon-type antiperspirant

Component	Example 75	Example 76	Example 77	Comparative example 27	Comparative example 28
Piroctone olamine	2.0	1.0	0.5		
Salicylic acid				0.2	
Aluminium hydroxychloride	20.0	20.0	20.0	20.0	20.0
Ethanol	35.0	35.0	35.0	35.0	35.0
Hydroxyethyl cellulose *1	0.6	0.6	0.6	0.6	0.6
PPG5-CETETH-20	2.0	2.0	2.0	2.0	2.0
Chlorohexidine gluconate	0.2	0.2	0.2	0.2	0.2
Kunipia F *2	0.8	0.8	0.8	0.8	0.8
Perfume	0.5	1.5	2.5	3.5	4.5
Purified water	Balance	Balance	Balance	Balance	Balance
Effect on improving roughness of a heel	○	○	○	△	×

*1: HEC-600 (product by DAICEL CHEMICAL INDUSTRIES, LTD.)

*2: Kunipia F (product by KUNIMINE INDUSTRY CO., LTD.)

TABLE 13
Cataplasm

Component	Example 78	Example 79	Example 80	Comparative example 29	Comparative example 30
Piroctone olamine	2.0	1.0	0.5		
Salicylic acid				0.2	
Trimethylglycine	0.2	0.2	0.2	0.2	0.2
Polyacrylic acid	4.0	4.0	4.0	4.0	4.0
Sodium polyacrylate	1.5	1.5	1.5	1.5	1.5
Carboxymethyl cellulose	4.0	4.0	4.0	4.0	4.0
Glycerine	15.0	15.0	15.0	15.0	15.0
Sorbitol	10.0	10.0	10.0	10.0	10.0
Dihydroxyaluminium aminoacetate	0.10	0.10	0.10	0.10	0.10
Kaoline	0.05	0.05	0.05	0.05	0.05
Montmorillonite	4.0	4.0	4.0	4.0	4.0
Polysorbate 80	1.0	1.0	1.0	1.0	1.0
1,3-butylene glycol	3.0	3.0	3.0	3.0	3.0
Dimethylpolysiloxane (30cst)	1.0	1.0	1.0	1.0	1.0
Purified water	Balance	Balance	Balance	Balance	Balance
Effect on preventing and improving pustule of skin pore on wings of a nose	○	○	○	△	×
Effect on preventing and improving pustule of skin pore on a forehead	○	○	○	△	×
Effect on improving dullness of skin-color	○	○	○	△	×

Table 14
Medicated liquid-type bath additive

Component	Example 81	Example 82	Example 83	Example 84	Example 85	Example 86	Comparative example 31	Comparative example 32
Piroctone olamine	5.0	2.0	0.5					
Proline				5.0				
Oxidized CoA					5.0			
Ellagic acid						10.0		
Salicylic acid							0.2	
Bentonite	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Coated titanium oxide	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
70% sorbitol	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Sodium benzoate	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
95% Ethanol	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Citric acid	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Liquid paraffin	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Decaglyceryl diisostearate *1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Rice bran oil	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Perfume	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Effect on preventing comedo on a back or a chest	◎	○	○	○	○	○	△	×
Effect on improving dullness of skin-color	◎	○	○	○	○	○	△	×
Effect on preventing and improving pustule (keratotic plugging) of a skin pore	◎	○	○	○	○	○	△	×
Effect on improving roughness of a palm or a heel	◎	○	○	○	○	○	△	△

*1 Decaglyn 2-IS: (product by NIKKO CHEMICALS CO., LTD.)

From the results shown in Tables 11 to 14 above, it has been found that the agents (spray containing powder antiperspirant, rollon-type antiperspirant, cataplasma, and medicated liquid-type bath additive) containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid have an excellent effect on improving pustule of a comedo or a skin pore, roughness of a palm or a heel, dullness of skin-color, mark on the wings of a nose or a forehead, and improper skin conditions for make-up in comparison with the conventional corneocyte desquamating agent.

EXAMPLES 87 TO 118 AND COMPARATIVE EXAMPLES 33 TO 38

Prepared was the corneocyte desquamating agents in which effective components (piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid) were compounded with various optionally selected components (anionic surfactants, amphoteric surfactants, semipolar surfactants, cationic surfactants, nonionic surfactants, nonionic polymers, cationic polymers, oil components, and perfumes), and then were evaluated according to the following evaluation method with respect to the effect on preventing and improving roughness and dryness of a skin and pustule of a skin pore, the effect on improving dullness of skin-color, and the effect on preventing comedo and keratotic plugging.

The results thereof are shown in Tables 15 to 21 below.

Furthermore, Examples 87 to 98 are shown in Table 15, and Examples 99 to 110 are shown in Table 16, and Examples 111 to 118 and Comparative Examples 33 to 38 are shown in Table 17. And, common components as well as optional components used in Examples 87
5 to 118 and Comparative Examples 33 to 38 are shown in Table 18.

Evaluation method

The corneocyte desquamating agent of the present invention was used twice a day to one side, i.e., right or left side of
10 one panel for two months. Pustule of a comedo or a skin pore and roughness of a palm or a heel were evaluated by touching with one's hand, and dullness of skin-color, mark on the wings of a nose or a forehead, keratotic plugging, etc. were visually compared to the other side. Then, the difference between
15 portions applied with the corneocyte desquamating agent and portions not applied therewith was evaluated according to the following criteria for evaluation.

Criteria for evaluation:

- 20 ◎: Very effective compared to non-applied portion.
- : Effective compared to non-applied portion.
- △: Little effective compared to non-applied portion.
- ×: No effect.

Table 15

	Example											
	87	88	89	90	91	92	93	94	95	96	97	98
Piroctone olamine	2.5	2	2	1.5	1	0.3	0.8	1	1.5	1.5	2.5	2
Potassium laurate	10		5	5								
Potassium myristate	5				5							
Potassium palmitate		5				2.5	2					
Potassium cocoate		5				2.5	2		10			
Potassium palm kernel oil fatty acid		5	5									
Potassium oleate			5									
N-monolauryl malicamide potassium salt								10				
Diethanolamine myristate		2.5										
Diethanolamine oleate		2.5										
Triethanolamine laurate			2.5									
Triethanolamine myristate			2.5									
Triethanolamine palmitate								3				
Triethanolamine cocoate								3				
Potassium N-lauroyl-L-glutamate *2				10								
Potassium N-lauroyl-N-methyl-β-alaninate					5							
Sodium N-lauroyl sarcosine *3					5							
Disodium polyoxyethylene laurylsulfosuccinate (3E.O.) *4						5	5					
Sodium lauroylmethyl taurate *6							5					
Sodium polyoxyethylene laurylether sulfate (3E.O.)*7	5											
Sodium polyoxyethylene laurylether acetate (4E.O.)*8		5										
Sodium cocoyl ethyl ester sulfonate*9			5									
Potassium N-cocoyl glycinate*10				5								
Sodium hydroxyether acetate					5							
Lauryl dimethylaminoacetic acid betaine *13		1	3									
Lauryl dimethylaminoacetic acid betaine *14		1		2.5								
Lauroyl amide propyl betaine *15					5							
2-alkyl-N-carboxymethyl-N-hydroxyethyl imidazolium betaine *18						1						
Lauroyl amide propyl hydroxysulfo betaine *19						1						
Lauryl dimethylamine oxide *21	1.5					2.5						
Polyoxyethylene cocoalkyldimethyl amine oxide *22			1.5				5					
Dihydroxyethyl laurylamine oxide *23				1					2.5			
Dodecyltrimethylammonium chloride *24										0.5		
Cetyltrimethylammonium chloride *25										0.5		
Stearyl trimethyl ammonium chloride *26											1	
Distearyldimethylammonium chloride *27												0.5
Stearyldimethylbenzylammonium chloride *28												0.3
Polyoxyethylene (3) lauryl ether HLB6 *33								3		4		
Polyoxyethylene (9) lauryl ether HLB11 *34										4		
Polyoxyethylene (2) cetyl ether HLB3 *35											4	

Table 15 (continued from the previous page)

	Example											
	87	88	89	90	91	92	93	94	95	96	97	98
Polyoxyethylene (3) stearyl ether HLB4 *36												5
Polyoxyethylene (5) lauryl ether stearate HLB3 *39											4	
Propylene glycol monolaurate HLB4 *40												5
Methylcellulose (SM1500) *48	0.5										0.2	
Hydroxyethylcellulose (SP550) *49		0.1										0.2
Hydroxyethylmethylcellulose (SEB04T) *50		0.2										0.1
Hydroxypropylmethylcellulose (60SH50) *51			0.2									
Hydroxypropylmethylcellulose (65SH1500) *52			0.1									
Highly polymerized polyethylene glycol *53				0.2								
Polyvinyl alcohol *54					0.2							
Carrageenan *55					0.1							
Guar gum *56					0.1							
Alkyl acrylate copolymer (MS100) *57							0.3					
Alkyl acrylate copolymer (MS200) *58							0.3					
Alkyl acrylate copolymer (carbopol1342) *59								0.3				
Alkyl acrylate copolymer (PEMULEN TR-2) *60						0.5						
Alkyl acrylate-alkyl methacrylate-polyoxyethylene (20) stearyl ether copolymer *61						0.3			0.3			
Ethyl acrylate-methacrylic acid copolymer *62								0.3				
Poly(acrylic acid) *63									0.5			
O-[2-hydroxy-3-(trimethylammonio)propyl] hydroxyethylcellulose chloride (LEOGUARD GP) *64										0.3		
O-[2-hydroxy-3-(trimethylammonio)propyl] hydroxyethylcellulose chloride (LEOGUARD LP) *65										0.3		
Dimethyldiallyl ammonium chloride acrylamide copolymer *67											0.2	
Acrylamide-acrylic acid-dimethyldiallyl ammonium chloride copolymer *68												0.5
Squalane	1											
Jobba oil	0.5											
Sunflower seed oil	0.5											
Olive oil		1										
Carnauba wax		0.5										
Avocado oil		0.2										
Camellia oil			1									
Macadamia nut oil			0.5									
Palm kernel oil			0.5									
Anhydrous lanoline				1								
Petrolatum				0.2								

Table 15 (continued from the previous page)

	Example												
	87	88	89	90	91	92	93	94	95	96	97	98	
Liquid paraffin				0.2									
Liquid isoparaffin					1								
α -olefin oligomer					0.3								
Methyl polysiloxane (SH200C-30cs) *69					0.3								
Methyl polysiloxane (SH200~10,000cs) *70						1							
Methyl polysiloxane (SH200~100,000cs) *71							0.2						
Methyl polysiloxane (SH200~1,000,000cs) *72						0.3							
Decamethylcyclopentasiloxane (SH245) *73						0.2							
Methylphenyl polysiloxane (SH556) *74							0.5						
Polyoxyethylene · methylpolysiloxane copolymer (SH3771M) *75								0.5					
Polyoxyethylene · methylpolysiloxane copolymer (SH3775M) *76							0.5						
Poly(oxyethylene · oxypropylene) methylpolysiloxane copolymer (SH3748) *77								0.5					
Lauryl methicone copolyol (DC5200) *78								0.5					
Aminomethylaminopropyl siloxane-dimethylsiloxane copolymer emulsion (SM8702C) *79									0.2				
Methylpolysiloxane emulsion (BY22-009) *80									0.2				
Methylpolysiloxane high copolymer emulsion (BY22-050A) *81										0.2			
Methylpolysiloxane and methylpolysiloxane high copolymer emulsion (BY22-055) *82											0.2		
Methylpolysiloxane and methylpolysiloxane high copolymer emulsion (BY22-060) *83												0.2	
Triglyceryl-2-ethyl hexanoate									0.5				
2-octyldodecyl myristate										0.2			
Isopropyl myristate										0.2			
Glyceroyl-tri-2-ethyl hexanoate											0.3		
Isononyl isononanoate												0.1	
Oleic acid											0.1		
Cetostearyl ether												0.1	
Perfume	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	
Total(%)	100	100	100	100	100	100	100	100	100	100	100	100	

Table 15 (continued from the previous page)

	Example											
	87	88	89	90	91	92	93	94	95	96	97	98
Reducing roughness and dryness of skin	○	○	○	○	○	○	○	○	○	○	○	○
Effect on preventing and improving pustule of skin pore	○	○	○	○	○	○	○	○	○	○	○	○
Effect on improving dullness of skin-color	○	○	○	○	○	○	○	○	○	○	○	○
Effect on preventing comedo	○	○	○	○	○	○	○	○	○	○	○	○
Effect on preventing keratotic plugging	○	○	○	○	○	○	○	○	○	○	○	○

Table 16

	Example											
	99	100	101	102	103	104	105	106	107	108	109	110
Piroctone olamine	2	1.5	1	0.8	0.4	1	1.5	1.5	2	0.4	0.4	
Proline												2.5
Potassium laurate				5								
Potassium myristate			5		5				2.5	2		5
Potassium palmitate			5		5				2.5	2	2	5
Potassium cocoate					5	5					2	5
Potassium palm kernel oil fatty acid						5						
N-monolauryl malicamide potassium salt					2.5							2.5
Diethanolamine oleate						2.5						
Triethanolamine cocoate						2.5						
Mixture of L-arginine, coconut fatty acid, potassium hydroxide *1							10					
Potassium N-lauroyl-L-glutamate*2								7.5				
Potassium N-lauroyl-N-methyl-β-alaninate								7.5				
Sodium lauroyl sarcosine*3									5	5		
Disodium polyoxyethylene laurylsulfosuccinate (3E.O.) *4											5	
Sodium lauryl phosphate *5										5		
Sodium lauroylmethyl taurate *6				5							5	
Sodium polyoxyethylene lauryl ether sulfate (3E.O.) *7					5							5
Sodium polyoxyethylene laurylether acetate (4E.O.) *8						5						
Sodium cocoyl ethyl ester sulfonate *9							5					
Potassium N-cocoyl acylglycinate*10								5				
Polyoxyethylene cocoyl alkyl dimethyl amine oxide *22											5	
Tri(polyoxyethylene)stearyl ammonium chloride (5E.O.) *29	0.3											
N-[3-(dimethylamino)propyl]octadecanamide *30	0.3											
N(N'-lanolin fatty acid amide propyl)N-ethyl-N,N-dimethyl ammonium ethylsulfate *31		1										
DL-pyrrolidonecarboxylic acid salt of L-cocoyl arginine ethyl ester *32			1									
Polyoxyethylene (3) lauryl ether HLB6 *33								2				
Polyoxyethylene (9) lauryl ether HLB11 *34									10	5		
Polyoxyethylene (11) stearyl ether HLB11 *37			3									
Polyoxyethylene (5) octyldodecyl ether HLB6 *38			3									
Polyoxyethylene (10) glyceryl trisostearate HLB3 *41				8								
Polyoxyethylene (40) glyceryl trisostearate HLB11 *42					2							2
Polyoxyethylene (30) hydrogenated castor oil HLB11 *44	10											
Polyoxyethylene (10) hydrogenated castor oil monoisostearate HLB4 *45		5										
Sorbitan sesquioleate HLB5 *46		5										
Di- Polyoxyethylene (5) octyldodecyl ether N-lauroyl glutamate HLB5 *47						8						
Hydroxypropylmethylcellulose (60SH50) *51						0.2						

Table 16 (continued from the previous page)

	Example												
	99	100	101	102	103	104	105	106	107	108	109	110	
Hydroxypropylmethylcellulose (65SH1500) *52							0.2						
Highly polymerized polyethylene glycol *53							0.1	0.5					
Polyvinyl alcohol *54							0.1						
Alkyl acrylate copolymer (carbopol1342) *59									0.5				
Methyl vinylimidazolium chloride-vinyl pyrrolidone (30:70) copolymer *66	0.3									0.5			
Dimethyldiallyl ammonium chloride-acrylamide copolymer *67			1										
Acrylamide-acrylic acid-dimethyldiallyl ammonium chloride copolymer *68			0.5										
Squalane			0.5					0.5					
Jojoba oil				1									
Sunflower seed oil				0.5									
Olive oil				0.2									
Carnauba wax					1							1	
Avocado oil					0.5							0.5	
Camellia oil					0.5							0.5	
Macadamia nut oil													
Palm kernel oil						0.2							
Anhydrous lanolin						0.2							
Petrolatum							1						
Liquid paraffin							0.3						
Liquid isoparaffin							0.3						
α -olefin oligomer													
Methyl polysiloxane (SH200C-30cs) *69								0.5					
Isostearic acid	0.1												
Perfume	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	
Total (%)	100	100	100	100	100	100	100	100	100	100	100	100	
Reducing roughness and dryness of skin	⊙	○	⊙	⊙	○	⊙	⊙	⊙	○	○	○	○	
Effect on preventing and improving pustule of skin pore	⊙	○	⊙	⊙	○	⊙	⊙	⊙	○	○	○	○	
Effect on improving dullness of skin-color	⊙	○	⊙	⊙	○	⊙	⊙	⊙	○	○	○	○	
Effect on preventing comedo	⊙	○	⊙	⊙	○	⊙	⊙	⊙	○	○	○	○	
Effect on preventing keratotic plugging	⊙	○	⊙	⊙	○	⊙	⊙	⊙	○	○	○	○	

Table 17

	Example								Comparative example					
	111	112	113	114	115	116	117	118	33	34	35	36	37	38
Piroctone olamine						0.4	1	0.5						
Proline	0.5					0.4		0.5						
Oxidized CoA		2.5	0.5			0.4								
Ellagic acid				2.5	0.5	0.4								
Potassium myristate		5		5		5							5	
Potassium palmitate		5		5		5				5				
Potassium cocoate		5		5		5				5				10
Potassium palm kernel oil fatty acid											5			
Potassium oleate									10		5			
N-monolauryl malicamide potassium salt		2.5		2.5		2.5		5						
Mixture of L-argine, coconut fatty acid, potassium hydroxide								10						
Diethanolamine myristate										2.5				
Diethanolamine oleate										2.5				
Triethanolamine laurate											2.5			
Triethanolamine myristate									3		2.5			
Triethanolamine palmitate									3					
Potassium N-lauroyl-L-glutamate *2	7.5		7.5		7.5		20					10		
Potassium N-lauroyl-N-methyl-β-alaninate	7.5		7.5		7.5		8						5	
Sodium lauroyl sarcosine *3								5					5	
Disodium polyoxyethylene laurylsulfosuccinate (3E.O.) *4							3							
Sodium lauryl phosphate *5								5						
Sodium polyoxyethylene lauryl ether sulfate (3E.O.) *7		5		5		5								
Sodium polyoxyethylene lauryl ether acetate (4E.O.) *8										5				
Sodium cocoyl ethyl sulfonate *9											5			
Potassium N-cocoyl acylglycinate *10	5		5		5							5		
Sodium hydroxyether acetate													5	
Sodium laurylaminodipropionate *11										1				
Sodium N-lauryl-β-aminopropionate *12										1				
Lauryl dimethylaminoacetic acid betaine *13											3			
Lauryl dimethylaminoacetic acid betaine *14												2.5		
Sodium N-cocoylacyl-N'-carboxy methyl-N'-hydroxyethyl ethylenediamine *16													3	
Sodium N-lauroyl-N'-carboxy methyl-N'-hydroxyethyl ethylenediamine *17														2
N-[3-alkyl(12,14)oxy-2-hydroxypropyl]-L-arginine hydrochloride *20														1
Polyoxyethylene cocoalkyldimethyl amine oxide *22											1.5			
Dihydroxyethyl laurylamine oxide *23												1		2.5

Table 17 (continued from the previous page)

	Example								Comparative example					
	111	112	113	114	115	116	117	118	33	34	35	36	37	38
Polyoxyethylene (3) lauryl ether HLB 6 *33	2		2		2									
Propylene glycol mono laurate HLB 4 *40							5							
Polyoxyethylene (40) glyceryl trisostearate HLB 11 *42		2		2		2								
Polyoxyethylene (25) glyceryl monopyroglutamate mono isostearate (25E.O.) *84							3	2						
Polyoxyethylene (6) glyceryl monostearate (6E.O.) *85							1.5	2						
Polyoxyethylene (3) glyceryl monoisostearate (3E.O.) *86							1.5	1						
Polyethylene glycol *87							20	22						
Hydroxyethylcellulose (SP550) *49										0.1				
Hydroxyethylmethylcellulose (SEB04T) *50										0.2				
Hydroxypropylmethylcellulose (60SH50) *51											0.2			
Hydroxypropylmethylcellulose (65SH1500) *52											0.1			
Highly polymerized polyethylene glycol *53	0.5		0.5		0.5							0.2		
Polyvinyl alcohol *54													0.2	
Carrageenan *55													0.1	
Guar gum *56													0.1	
Alkylacrylate-alkylmethacrylate-polyoxyethylene (20) stearyl ether copolymer emulsion *61														0.3
Poly(acrylic acid) *63														0.5
Squalane	0.5		0.5		0.5									
Carnauba wax		1		1		1								
Avocado oil		0.5		0.5		0.5								
Camellia oil		0.5		0.5		0.5								
Methyl polysiloxane (SH200C-30cs) *69	0.5		0.5		0.5									
Poly(oxyethylene-oxypropylene) methylpolysiloxane copolymer (SH3748) *77									0.2					
Lauryl methicone copolyol (DC5200) *78									0.2					
Amminomethylaminopropyl siloxane-dimethyl siloxane copolymer emulsion (SM8702C) *79										0.2				
Methylpolysiloxane emulsion (BY22-009) *80											0.2			
Methylpolysiloxane high polymer emulsion (BY22-050A) *81												0.2		
Methylpolysiloxane and methylpolysiloxane high copolymer emulsion (BY22-055) *82									0.5					
Methylpolysiloxane and methylpolysiloxane high copolymer emulsion (BY22-060) *83										0.2				
Triglycerol-2-ethyl hexanoate										0.2				

Table 17 (continued from the previous page)

	Example								Comparative example					
	111	112	113	114	115	116	117	118	33	34	35	36	37	38
2-octyldodecyl myristate											0.3			
Isopropyl myristate												0.1		
Glyceroyl-tri-2-ethyl hexanoate													0.1	
Isononyl isononanoate											0.1			
Isostearic acid												0.1		
Perfume	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Total	100	100	100	100	100	1000	100	100	100	100	100	100	100	100
Reducing roughness and dryness of skin	⊙	○	⊙	○	⊙	○	⊙	⊙	×	×	×	×	×	×
Effect on preventing and improving pustule of skin pore	⊙	○	⊙	○	⊙	○	⊙	⊙	×	×	×	×	×	×
Effect on improving dullness of skin-color	⊙	○	⊙	○	⊙	○	⊙	⊙	×	×	×	×	×	×
Effect on preventing comedo	⊙	○	⊙	○	⊙	○	⊙	⊙	×	×	×	×	×	×
Effect on preventing keratoic plugging	⊙	○	⊙	○	⊙	○	⊙	⊙	×	×	×	×	×	×

Table 18

The common components of Examples 87 to 118 and Comparative Examples 33 to 38 shown in Tables 15 to 17 are described below.

Compounds used as marked by *1 to *87 which are described in Tables 15 to 17 above are shown below.

Common components: propylene glycol 10%, edetic acid 0.2%, and dibutylhydroxytoluene 0.1%

- | | |
|---|---|
| *1: amisoap AR- 11(product by AJINOMOTO CO., INC.) | *2: amisoft LK-12(product by AJINOMOTO CO., INC.) |
| *3: SOYPON SLE(product by KAWAKEN FINE CHEMICALS CO., LTD.) | *4: BEAULIGHT LSS(product by SANYO CHEMICAL INDUSTRIES, LTD.) |
| *5: NIKKOL HOSTEN HLP-N(product by NIKKO CHEMICALS CO., LTD.) | *6: NIKKOL LMT(product by NIKKO CHEMICALS CO., LTD.) |
| *7: SUNNOL LMT-1430(product by LION CHEMICAL CO., LTD.) | *8: ENAGICOL EC-30(product by LION CHEMICAL CO., LTD.) |
| *9: ELFAN AT-84(product by LION CHEMICAL CO., LTD.) | *10: amilite CGK-12(product by AJINOMOTO CO., INC.) |
| *11: ENAGICOL DP-30(product by LION CHEMICAL CO., LTD.) | *12: LEBON APL(product by SANYO CHEMICAL INDUSTRIES, LTD.) |
| *13: NIKKOL AM-301 (product by NIKKO CHEMICALS CO., LTD.) | *14: OBAZOLIN LB-SF(product by TOHO CHEMICAL INDUSTRY CO., LTD.) |
| *15: ENAGICOL L-30B(product by LION CHEMICAL CO., LTD.) | *16: MIRANOL C2M-NP-HV(product by NIKKO CHEMICALS CO., LTD.) |
| *17: softazoline HL-R (product by KAWAKEN FINE CHEMICAL CO., LTD.) | *18: softazoline CL (product by KAWAKEN FINE CHEMICAL CO., LTD.) |
| *19: softazoline LSB(product by KAWAKEN FINE CHEMICAL CO., LTD.) | *20: amisafe LMA-60(product by AJINOMOTO CO., INC.) |
| *21: AROMOX DM12DW(C) (product by LION CHEMICAL CO., LTD.) | *22: SOFTAMIN C-3(product by TOHO CHEMICAL INDUSTRY CO., LTD.) |
| *23: SOFTAMIN LD(product by TOHO CHEMICAL INDUSTRY CO., LTD.) | *24: CATION BB(product by NOF CORPORATION) |
| *25: AQUAD 16-29(product by LION CHEMICAL CO., LTD.) | *26: AQUAD T-28(product by LION CHEMICAL CO., LTD.) |
| *27: AQUAD 2HT Flake (product by LION CHEMICAL CO., LTD.) | *28: CATINAL OB-80E(product by TOHO CHEMICAL INDUSTRY CO., LTD.) |
| *29: CATINAL SPC-20AC(product by TOHO CHEMICAL INDUSTRY CO., LTD.) | *30: CATINAL MPAS(product by TOHO CHEMICAL INDUSTRY CO., LTD.) |
| *31: Ianoquat DES 50(product by NIKKO CHEMICALS CO., LTD.) | *32: CAE(product by AJINOMOTO CO., INC.) |
| *33: EMALEX 703(product by NIPPON EMULSION CO., LTD.) | *34: EMALEX 709(product by NIPPON EMULSION CO., LTD.) |
| *35: EMALEX 102 (product by NIPPON EMULSION CO., LTD.) | *36: EMALEX 603(product by NIPPON EMULSION CO., LTD.) |
| *37: EMALEX 611(product by NIPPON EMULSION CO., LTD.) | *38: EMALEX OD-5(product by NIPPON EMULSION CO., LTD.) |
| *39: EMALEX LWS-5(product by NIPPON EMULSION CO., LTD.) | *40: EMALEX PGML(product by NIPPON EMULSION CO., LTD.) |
| *41: EMALEX GWIS-310(product by NIPPON EMULSION CO., LTD.) | *42: EMALEX GWIS-340(product by NIPPON EMULSION CO., LTD.) |
| *43: EMALEX HC-5(product by NIPPON EMULSION CO., LTD.) | *44: EMALEX HC-30(product by NIPPON EMULSION CO., LTD.) |
| *45: EMALEX RWIS-110(product by NIPPON EMULSION CO., LTD.) | *46: EMALEX SPO-150(product by NIPPON EMULSION CO., LTD.) |
| *47: EMALEX LGOD-5(product by NIPPON EMULSION CO., LTD.) | *48: METOLOSE SM1500(product by SHIN-ETSU CHEMICAL CO., LTD.) |
| *49: HEC DAICEL SP550(product by DAICEL CHEMICAL INDUSTRIES LTD.) | *50: METOLOSE SEB04T(product by SHIN-ETSU CHEMICAL CO., LTD.) |
| *51: METOLOSE 60SH50(product by SHINETSU CHEMICAL INDUSTRY CO., LTD.) | *52: METOLOSE 65SH1500(product by SHINETSU CHEMICAL INDUSTRY CO., LTD.) |
| *53: POLYOX WSR-750(product by UNION CARBIDE U.K. Ltd.) | *54: GOHSENL EG-25(product by THE NIPPON SYNTHETIC CHEMICAL INDUSTRY CO., LTD.) |
| *55: CARRAGEENIN CSK-1(product by San-Ei Gen F.F.I., Inc.) | *56: NEOSOFT G-11(product by TAIYO KAGAKU CO., LTD.) |
| *57: LEOAR MS100(product by LION CHEMICAL CO., LTD.) | *58: LEOAR MS200(product by LION CHEMICAL CO., LTD.) |
| *59: carbopol 1342(product by B.F. Goodrich Chemical Company) | *60: PEMULEN TR-2(product by B.F. Goodrich Chemical Company) |
| *61: aculyn 22(product by Rohm and Haas Company) | *62: Iuviflex soft(product by BASF JAPAN) |

Table 18 (continued from the previous page)

*63: carbopol 9402(product by B.F. Goodrich Chemical Company)	*64: LEOGUARD GP(product by LION CHEMICAL CO., LTD.)
*65: LEOGUARD LP(product by LION CHEMICAL CO., LTD.)	*66: luviquat FC370(product by BASF JAPAN)
*67: MERQUAT 550(product by CALGON CORPORATION)	*68: MERQUAT PLUS 3330(product by CALGON CORPORATION)
*69: SH200C-30cs(product by TORAY DOW CORNING SILICONE CO., LTD.)	*70: SH200-10,000cs(product by TORAY DOW CORNING SILICONE CO., LTD.)
*71: SH200-100,000cs (product by TORAY DOW CORNING SILICONE CO., LTD.)	*72: SH200-1,000,000cs(product by TORAY DOW CORNING SILICONE CO., LTD.)
*73: SH245 (product by TORAY DOW CORNING SILICONE CO., LTD.)	*74: SH556(product by TORAY DOW CORNING SILICONE CO., LTD.)
*75: SH3771M(product by TORAY DOW CORNING SILICONE CO., LTD.)	*76: SH3775M(product by TORAY DOW CORNING SILICONE CO., LTD.)
*77: SH3748(product by TORAY DOW CORNING SILICONE CO., LTD.)	*78: DC5200(product by TORAY DOW CORNING SILICONE CO., LTD.)
*79: SM8702C(product by TORAY DOW CORNING SILICONE CO., LTD.)	*80: BY22-009(product by TORAY DOW CORNING SILICONE CO., LTD.)
*81: BY22-050A(product by TORAY DOW CORNING SILICONE CO., LTD.)	*82: BY22-055(product by TORAY DOW CORNING SILICONE CO., LTD.)
*83: BY22-060(product by TORAY DOW CORNING SILICONE CO., LTD.)	*84: EMALEX GPI-25(product by NIPPON EMULSION CO., LTD.)
*85: EMALEX GM-1000 (product by NIPPON EMULSION CO., LTD.)	*86: EMALEX GWIS-103(product by NIPPON EMULSION CO., LTD.)
*87: PEG #1540H(product by LION CHEMICAL CO., LTD.)	

From the results shown in Tables 15 to 18 above, it has been found that the corneocyte desquamating agents containing the piroctone olamine (octopirox), proline, oxidized CoA, and ellagic acid as effective components in Examples 87 to 118 have excellent effects such as effect on preventing and improving roughness and dryness of a skin and pustule of a skin pore, effect on improving dullness of skin-color and effect on improving face wrinkle and keratotic plugging when compared to Comparative Examples 33 to 38 which do not contain the effective components.

EXAMPLES 119 TO 128

From the results shown in Examples 1 to 118 and Comparative Examples 1 to 38, and Tables 1 to 18, it has been found that the corneocyte desquamating agents containing at least one selected from the group of consisting of hydroxypyridone derivatives, proline, oxidized CoA, and ellagic acid of the present invention are used suitably as an agent for improving or reducing roughness and dryness of a heel or a palm, an agent for improving skin conditions for make-up, an agent for improving dullness of skin-color, or an agent for preventing and improving roughness of a comedo or a keratotic plugging and a skin pore, an agent for improving skin texture, and an agent for improving fine wrinkles.

Hereafter, specific examples of the blended compositions such as liquid-type cleaning agent composition, shampoo

composition, cream-type cleaning agent composition, solid soap-type composition, liquid type composition for filling up foaming container, sheet-type composition for cleaning skin, and gel-type composition containing the corneocyte desquamating agent of the present invention are shown in Tables 19 to 28 below.

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Table 19

Liquid-type cleaning agent composition

Composition	Example 119
Potassium malicamide-N-monolaurate	8.0
Potassium laurate	4.0
Potassium myristate	5.0
Potassium palmitate	3.0
Potassium stearate	1.0
Lauryldimethylamine oxide	2.0
Poragel NF(product by American Colloid CO., LTD.)	0.2
Hydroxyethylcellulose (HEC DAICEL SP550, product by DAICEL CHEMICAL INDUSTRIES, LTD.)	0.3
Carboxyvinylpolymer (carbopol 941, product by BF Goodrich chemical company)	1.0
Propyleneglycol	15.0
1,3-butyleneglycol	2.0
Squalane	2.0
Silicone emulsion (BY22-055, product by TORAY DOW CORNING SILICONE CO., LTD.)	2.0
Styrene polymer emulsion (Saibinol PE-21, product by SAIDEN CHEMICAL INDUSTRY CO., LTD.)	0.5
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	1.0
Potassium chloride	0.3
Tetrasodium edetate tetrahydrate	0.2
Dibutylhydroxytoluene	0.1
Concentrated extract from melissa	1.0
Dipotassium glycyrrhizinate	0.1
Perfume	1.0
Blue No. 403	A desired quantity
Yellow No. 4	A desired quantity
Purified water	Balance

Table 20

Liquid-type cleaning agent composition

Component	Example 120
N-monolauryl malicamide potassium salt	5.0
Potassium myristate	8.0
Potassium palmitate	5.0
Potassium stearate	1.5
Lauryldimethylamino acetic acid betaine (ENAGICOL EC-30, product by LION CHEMICAL CO., LTD.)	2.5
Hydroxyethylpropyl cellulose (METOLOSE 65SH1500, product by SHIN-ETSU CHEMICAL CO., LTD.)	0.5
Propyleneglycol	10.0
1,3-butyleneglycol	5.0
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	0.8
Tetrasodium edetate tetrahydrate	0.2
Dibutylhydroxytoluene	0.1
Perfume	1.0
Potassium hydroxide	A quantity required to make pH 10
Purified water	Balance

Table 21

Shampoo composition (including cleaning agent for head-skin)

Component	Example 121
N-monolauryl malicamide triethanolamine	8.0
Sodium polyoxyethylene lauryl ether sulfate (3E.O.)	12.0
Lauryl dimethylaminoacetic acid betaine	1.0
Diethanolamide laurate	2.0
Bengel FW (product by HOJUN KOGYO K.K.)	0.2
Cationated cellulose (LEO GUARD GP, product by LION CHEMICAL CO., LTD.)	0.5
Lauryl dimethylamine oxide	1.0
Hexyleneglycol	6.0
Ethanol	1.0
Methyl para-hydroxybenzoate	0.2
Propyl para-hydroxybenzoate	0.1
Oil-soluble cocentrated extract from liquorice	2.0
Triclosan	0.2
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	0.5
L-menthol	0.3
Silicone emulsion (BY22-020, product by TORAY DOW CORNING SILICONE CO., LTD.)	2.0
1,3-butyleneglycol	5.0
Ethyleneglycoldistearate	1.0
Perfume	1.0
Blue No. 403	A desired quantity
Purified water	Balance

Table 22
Cream-type cleaning agent composition

Component	Example 122
Stearic acid	8.0
Palmitic acid	8.0
Myristic acid	18.0
N-monolauryl malicamide	7.0
Potassium hydroxide	5.5
Polyoxyethylene (16) cetyether (EMALEX 116, product by NIHON EMULSION CO., LTD.)	2.0
Hydroxypropylcellulose (NISSO HPC, product by NIPPON SODA CO., LTD.)	1.0
Glycerine	15.0
Polyethylene glycol 4000	5.0
Sorbitol	6.0
Purified lanolin (Purified lanolin, product by CRODA JAPAN KK)	0.5
Orange oil (orange sweet oil, product by IKEDA BUSSAN)	1.0
Highly polymerized methyl polysiloxane (SH200-10,000cs, product by TORAY DOW CORNING SILICONE CO.,LTD.)	2.0
Highly polymerized polyethylene glycol (polyox WSR-N750, product by UNION CARBIDE CORPORATION)	0.5
Durvillea concentrated extract (Concentrate extract powder of Sea weed, product by ALPS Pharmaceutical Ind. CO., LTD.)	1.0
Concentrated extract from white birch (extracted liquid from white birch, product by MARUZEN Pharmaceuticals CO., LTD.)	1.0
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	1.0
L-proline(product by AJINOMOTO CO., LTD.)	0.4
Oxidized CoA	0.4
Ellagic acid	0.4
Poragel NF (product by AMERICAN COLLOID CO., LTD.)	0.3
Titanium oxide (average particle diameter 0.25 μ m, rutile-type)	1.0
Ultramarine blue pigment (average particle diameter 0.3 to 2 μ m)	0.1
Red Iron Oxide (average particle diameter 0.03 μ m)	0.1
Powder of nylon (average particle diameter 100 μ m)	0.1
Tetrasodium edetate tetrahydrate	0.3
Perfume	1.0
Potassium hydroxide	A quantity required to make pH 9
Purified water	Balance

Table 23

Cream-type cleaning agent composition

Component	Example 123
Sodium N-myristoyl-L-glutamate (amisoft MS-11, product by AJIMOTO CO., LTD.)	18.0
Sodium N-lauroyl-β-alanine (alanone ALE, product by KAWAKEN FINE CHEMICAL CO., LTD.)	5.0
Disodium laurylsulfosuccinate (tekisine SS, product by HENKEL JAPAN CO., LTD.)	5.0
Stearyl glycyrrhetinate (CO. Gretinol, product by MARUZEN Pharmaceuticals CO., LTD.)	0.3
N-monolauryl malicamide	7.0
Polyoxyethylene (16) cetyl ether (EMALEX 116, product by NIHON EMULSION CO., LTD.)	2.0
Hydroxypropylcellulose (NISSO HPC, product by NIPPON SODA CO., LTD.)	1.0
Glycerine	15.0
Polyethylene glycol 4000	5.0
Sorbitol	6.0
Purified lanolin (Purified lanolin, product by CRODA JAPAN KK)	0.5
Orange oil (orange sweet oil, product by IKEDA BUSSAN)	1.0
Highly polymerized methyl polysiloxane (SH200-10,000cs, product by TORAY DOW CORNING SILICONE CO., LTD.)	2.0
Highly polymerized polyethylene glycol (polyox WSR-N750, product by UNION CARBIDE CORPORATION)	0.5
Durvillea concentrated extract (concentrated extract powder of Sea weed, product by ALPS Pharmaceutical Ind. CO., LTD.)	1.0
Concentrated extract from white birch (extracted liquid from white birch, product by MARUZEN Pharmaceuticals CO., LTD.)	1.0
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	1.0
L-proline (product by AJINOMOTO CO., LTD.)	0.5
Oxidized CoA	0.9
Ellagic acid	1.2
Poragel NF (product by AMERICAN COLLOID CO., LTD.)	0.3
Titanium oxide (average particle diameter 0.25μm, rutile-type)	1.0
Ultramarine blue pigment (average particle diameter 0.3~2μm)	0.1
Red Iron Oxide (average particle diameter 0.03μm)	0.1
Powder of nylon (average particle diameter 100μm)	0.1
Tetrasodium edetate tetrahydrate	0.3
Perfume	1.0
Citric acid	A quantity required to make pH 5.5
Purified water	Balance

Table 24

Cream-type cleaning agent composition

Component	Example 124
Sodium N-lauroyl-L-glutamate (amisoft LK-12, product by AJIMOTO CO., LTD.)	20.0
Sodium N-lauroyl- β -alanine (alanone ALE, product by KAWAKEN FINE CHEMICAL CO., LTD.)	5.0
N-monolauryl malicamide	7.0
Polyoxyethylene (30) hydrogenated castor oil (EMALEX HC-30, product by NIHON EMULSION CO., LTD.)	1.5
Glycerine	5.0
Polyethylene glycol 1500	3.0
Sorbitol	5.0
1,3-butyleneglycol	10.0
Jojoba oil (product by KOEI KOGYO K.K.)	1.0
Highly polymerized methyl polysiloxane (SH200-10,000cs, product by TORAY DOW CORNING SILICONE CO., LTD.)	1.5
Piroctone olamine (octopirox, product by Clariant (Japan) K.K.)	0.6
Tetrasodium edetate tetrahydrate	0.3
Perfume	1.0
Citric acid	A quantity required to make pH 7
Purified water	Balance

Table 25

Solid soap-type cleaning agent composition

Component	Example 125
Potassium malicamide-N-monolaurate	5.0
Sodium cocoyl ethyl ester sulfonate (ELEFANAT-84, product by LION CHEMICAL CO., LTD.)	10.0
Sodium palm kernel oil/coconut oil fatty acid (palm kernel oil/coconut oil fatty acid=65/35)	50.0
Palmitic acid	3.0
Laurylhydroxysulfo betaine (sokudazoline AHS-103, product by TOHO CHEMICAL INDUSTRY CO., LTD.)	3.0
Polyoxyethylene (10) glyceryltriostearate (HLB3, EMALOX GWIS-10, product by NIHON EMULSION CO., LTD.)	4.0
Hydroxypropylcellulose (NISSO HPC, product by NIPPON SODA CO., LTD.)	1.0
Kunipia G (product by KUNIMINE INDUSTRIES, CO., LTD.)	5.0
Sunflower seed oil (sunflower seed oil, product by NIKKO CHEMICALS CO., LTD.)	1.0
Dimethylpolysiloxane (SH200-30cs, product by TORAY DOW CORNING SILICONE CO., LTD.)	1.0
Highly polymerized polyethylene glycol (polyox WSR-N750, product by UNION CARBIDE CORPORATION)	0.3
Piroctone olamine (octopirox, product by Clariant (Japan) K.K.)	1.0
Dibutylhydroxytoluene	0.1
Tetrasodium edetate tetrahydrate	0.1
Hydroxyethanediphosphonic acid	0.1
Sodium chloride	0.5
Isopropylmethylphenol	0.1
Titanium dioxide	0.2
Perfume	1.0
Purified water	Balance

Table 26

Liquid type composition for filling up formal container

Component	Example 126
Triethanolamine mallicamide-N-monolaurate	5.0
Arginine laurate	5.0
Amidepropylbetaine laurate	3.0
Hydroxypropyl methyl cellulose (METOLOSE HPMC 60SH 15, product by SHIN-ETSU CHEMICAL CO., LTD.)	0.5
Polyoxyalkylene-modified methylpolysiloxane (SH3775M, product by TORAY DOW CORNING SILICONE CO., LTD.)	0.5
Kunipia F (product by KUNIMINE INDUSTRIES CO., LTD.)	0.1
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	0.5
Propylene glycol	15.0
Concentrated extract from rosemary (liquid from rosemary, product by MARUZEN Pharmaceuticals CO., LTD.)	1.0
Tetrasodium edetate tetrahydrate	0.1
Hydroxyethanediphosphonic acid	0.1
Perfume	1.0
Purified water	Balance

Table 27

Sheet-type composition for cleaning skin

Component	Example 127
Polyoxyethylene (7) glyceryl cocoate (Cetyl HE, Cognis Japan Ltd.)	6.0
Hydroxypropyl methyl cellulose (METOLOSE HPMC 60SH15, product by SHIN-ETSU CHEMICAL CO., LTD.)	0.5
Squalane	1.0
Polyoxyalkylene-modified methylpolysiloxane (SH3775M, product by TORAY DOW CORNING SILICONE CO., LTD.)	0.5
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	1.0
Isononyl isononanoate	1.0
Sorbit	2.5
Methyl para-hydroxybenzoate	0.3
Ethanol	8.0
Perfume	0.02
Purified water	Balance

Non-woven sheet comprising the fibers shown below was used
as the above sheet-type composition for cleaning skin.

Composition: cellulose-based fiber (rayon 40 mass %), and
synthetic-resin based fiber [(PET/PE)(divided) 60 mass %]

5 Preparation method: bridged according to the direction of
water-flow

Average weight (g/m^2): 60

Average denier: 0.75

Magnification in case of impregnating (weight relative to the
10 non-woven sheet): 3.25

Table 28

Gel-type composition

Component	Example 128
Triethanolamine myristate	6.0
Potassium N-lauroyl-N-methyl- β -alanine	2.0
Diethanolamide cocoate (homelead CD, product by LION CHEMICAL CO., LTD.)	3.0
Lauryldimethylamine oxide (AROMOX DM12DW(C), product by LION CHEMICAL CO., LTD.)	1.0
Polyoxyethylene (10) behenylether	3.0
Triethanolamine N-lauroyl-N-methyl- β -alaninate (EMALEX BHA-10, product by NIHON EMULSION CO., LTD.)	1.0
Highly polymerized polyethylene glycol (polyox WSR-750, product by UNION CARBIDE CORPORATION)	1.0
Dimethylpolysiloxane (SH200-30cs, product by TORAY DOW CORNING SILICONE CO., LTD.)	1.0
Isononyl isononanoate	2.0
Hydroxypropyl methyl cellulose (METOLOSE HPMC 60SH 4000, product by SHIN-ETSU CHEMICAL CO., LTD.)	0.5
Alkyl acrylate copolymer emulsion (REO AR MS-200, product by LION CHEMICAL CO., LTD.)	0.2
Piroctone olamine (Octopirox, product by Clariant (Japan) K.K.)	1.0
Propylene glycol	5.0
Isopropylmethylphenol	1.0
Ellagic acid	0.1
Laponite XLG (product by NIPPON SILICA INDUSTRIAL CO., LTD.)	0.1
Powder of polyethylene (average particle diameter 100 μ m)	0.1
Perfume	0.02
Triethanolamine	A quantity required to make pH 8
Purified water	Balance

In accordance with the present invention, there can be provided the corneocyte desquamating agent suitably used as an agent for improving roughness of a heel or a palm, an agent for improving skin conditions for make-up, an agent for improving dullness of skin-color, and an agent for preventing and improving roughness of a skin pore and a comedo or a keratotic plugging. The corneocyte desquamating agent of the present invention also has no problem in terms of safety and no change in performance is observed in spite of daily usage. Furthermore, it also has an excellent corneocyte desquamating activity.

While the invention has been described in detail and with reference to specific examples thereof, it will be apparent to one skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope thereof.



WHAT IS CLAIMED IS:

1. A corneocyte desquamating agent which comprises at least one selected from the group consisting of hydroxypyridone derivatives, proline, oxidized CoA (coenzyme A), and ellagic acid.

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