one type of cleansing surfactant selected from higher fatty acid salts and/or betaine-type amphoteric surfactants; (B) a polyoxyethylene glyceryl fatty acid ester or a polyoxyethylene sorbitol fatty acid ester having a HLB of 8 to 12; (C) diethylene glycol laurate; (D) 2 to 10% by mass of an ester oil that is made from a $C_{12-18}$ higher fatty acid and a $C_{2-6}$ monohydric alcohol and is in a liquid state at 25°C; and (E) water.

Citation List

Patent Literature

[0005]

Patent Literature 1: Japanese Patent No. 4831609B

Patent Literature 2: Japanese Unexamined Patent Publication No. 2011-132221A

Summary

Technical Problem

[0006]

The following analysis is provided from the perspective of the present disclosure.

[0007]

The cleansing compositions disclosed in Patent Literatures 1 and 2 are insufficient in terms of cleansing capability with respect to waterproof-type makeup.

[0008]

An excellent foaming ability is also demanded of cleansing compositions in order to offer a comfortable feel upon use in addition to enhancing cleansing ability thereof.

[0009]

Thus, there is a demand for cleansing compositions providing an excellent foaming ability along with excellent cleansing ability.

Solution to Problem

[0010]

The ratio (referred to herein as "ionicity ratio") of the total mass of (A) the anionic surfactant and (B) the amphoteric surfactant to the total mass of (A) the anionic surfactant, (B) the amphoteric surfactant, (C) the nonionic surfactant, and (D) the oily component, as represented by Math. 1 below, is preferably 0.35 or greater, more preferably 0.4 or greater, even more preferably 0.5 or greater. If the ionicity ratio is less than 0.35, foaming ability and foam quality from a pump foamer become poor. The ionicity ratio is preferably 0.9 or less. If the ionicity ratio is greater than 0.9, cleansing capability becomes poor. In Math. 1, the symbols represent the mass of the respective components.

[0059]

[Math. 1]

$$\text{Ionicity ratio} = \frac{(A)+(B)}{(A)+(B)+(C)+(D)}$$

[0060]

The ratio (referred to herein as "anionicity ratio") of the mass of (A) the anionic surfactant to the total mass of (A) the anionic surfactant and (B) the amphoteric surfactant, as represented by Math. 2 below, is preferably 0.1 or greater, more preferably 0.15 or greater, even more preferably 0.2 or greater, even more preferably 0.3 or greater, even more preferably 0.4 or greater, even more preferably 0.5 or greater. If the anionicity ratio is less than 0.1, cleansing capability and foaming ability become poor. The anionicity ratio is preferably 0.9 or less, more preferably 0.8 or less. If the anionicity ratio is greater than 0.9, the composition will become clouded and opaque, and also, foaming ability and foam quality from a pump foamer become poor. In Math. 2, the symbols represent the mass of the respective components.

[0061]

[Math. 2]

$$\text{Anionicity ratio} = \frac{(A)}{(A)+(B)}$$

[0062]

Others:

group having eight carbon atoms in the compound represented by the aforementioned Chem. 6, was able to achieve sufficient ratings in all of the evaluation items. Similarly, Test Example 10, which employed a monoglyceryl ether including an alkyl group having eight carbon atoms, achieved good results. In contrast, Test Example 54, which employed a monoglycerin ester having an acyl group having ten carbon atoms, yielded an opaque composition and had insufficient cleansing ability, foam durability, and foam quality. It is thus considered that the number of carbon atoms in the acyl group and alkyl group in the compound represented by Chem. 6 is preferably 8 or less.

[0149]

Test Examples 55 and 56, which employed diglycerin esters including an acyl group having eight and ten carbon atoms, respectively, in the compound represented by the aforementioned Chem. 5, could not achieve sufficient foam durability and foam quality. The result was the same for Test Example 30, which employed a diglycerin ester including an acyl group having twelve carbon atoms. It is thus considered that diglycerin esters having the acyl group or alkyl group having eight or more carbon atoms do not function as foaming agents but impair foaming ability.

[0150]

[Table 14]

| Test Examples | | 53 | 54 | 55 | 56 |
|---|---|---|---|---|---|
| (A1) | | 9.5 | 9.5 | 9.5 | 9.5 |
| (B1) | | 4.5 | 4.5 | 4.5 | 4.5 |
| (C3) | | 7 | 7 | 7 | 7 |
| (D1) | | 1 | 1 | 1 | 1 |
| (E5) | | 2 | - | - | - |
| (E6) | | - | 2 | - | - |
| (E7) | | - | - | 2 | - |
| (E8) | | - | - | - | 2 |
| (F) | | balance | balance | balance | balance |
| Total | | 100 | 100 | 100 | 100 |
| Ionicity ratio | | 0.64 | 0.64 | 0.64 | 0.64 |
| Anionicity ratio | | 0.68 | 0.68 | 0.68 | 0.68 |
| Evaluation | Cleansing ability | B | C | B | B |
| | Foam durability | B | C | C | C |
| | Appearance stability | B | D | B | B |
| | Foam quality | B | C | C | C |