

Description

The present invention relates to a shampoo composition. More particularly, the invention relates to a shampoo composition based on an anionic surfactant, to which a sucrose/fatty acid ester surfactant and a nonionic cellulose ether derivative are incorporated which forms smooth, creamy foams during shampooing, making smooth combing possible after shampooing and preventing shampooed, dried hair from becoming "fly-away".

Ordinary shampoo compositions are based on an anionic surfactant such as a salt of an alkyl sulfate or polyoxyethylenealkyl sulfate; a nonionic surfactant such as a polyoxyethylene alkyl ether or fatty acid alkylolamide; or an amphoteric surfactant such as an alkylbetaine or alkylamine oxide, alone or in the form of a mixture. However, such shampoo compositions tend to remove sebaceous matters and other oils excessively from hair, which worsens the feel of the shampooed hair and makes smooth combing or brushing impossible. Furthermore, hair cannot be set easily after drying. Particularly in winter, in which the humidity in air is low, hair acquires a static charge by brushing causing it to "fly away", as a result, the hair is kinked and combing and brushing are made more difficult. This results in the hair splitting or breaking. To overcome these disadvantages, an oil or the like is incorporated in the shampoo base. However, the amount of such additive is limited and, usually they remain emulsified or solubilized with a surfactant in the shampoo, and, therefore, it is difficult to leave a sufficient amount of the oil on the scalp and hair.

Additionally, when the oil is used in a large amount, the essential functions of the shampoo, i.e. foaming and deterging powers, are extremely reduced damaging the commercial value of the shampoo seriously, though the amount of the oil absorbed on the hair is increased. Though various shampoo compositions containing a cationic polymer, so as to exhibit a rinsing effect on the shampooed hair have been proposed recently, the shampooed hair has often a greasy touch under wet conditions, also it has a sticky touch and causes flaking under dry conditions.

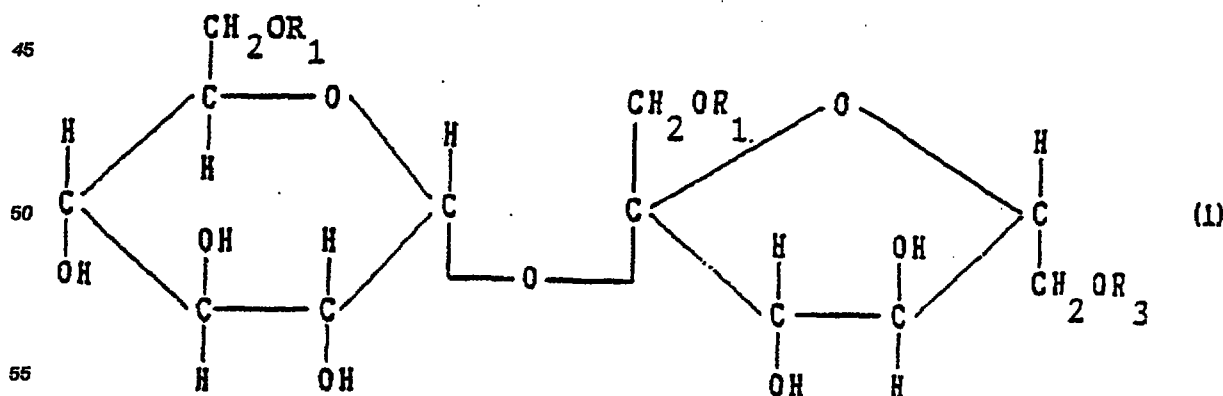
Patent Abstracts of Japan 3 (No. 157) (C-68) (194) page 131 C68 describes a shampoo composition comprising from 5 to 30% of a shampoo base component and 1 to 20% of a lactate.

GB-A-2140452 describes a shampoo based on more than 0.1% (wt.) of a sugar alcohol acrylic ester where the ester is a mono- or diester of a C₁₀ to C₁₈ sugar.

After intensive investigations made for the purpose of developing a shampoo composition which does not cause the kinking of hair during shampooing, thus facilitating shampooing, and which has conditioning effects to make smooth combing of the shampooed hair possible and to smoothen hair by overcoming the disadvantages of the conventional shampoo compositions, the inventors have found that, when a specific sucrose/fatty acid ester surfactant and a specific nonionic cellulose ether derivative are incorporated in an ordinary shampoo base selected from anionic surfactants, nonionic surfactants (excluding sucrose/fatty acid ester surfactants), cationic surfactants and amphoteric surfactants, smooth creamy foams can be formed during shampooing, entanglement can be prevented facilitating shampooing, and conditioning can be obtained to smoothen the shampooed hair and to prevent the sticky touch after drying. The present invention has been completed on the basis of this finding.

The present invention provides a shampoo composition comprising from 5 to 30 percent by weight of a shampoo base component, characterised in that it also includes:

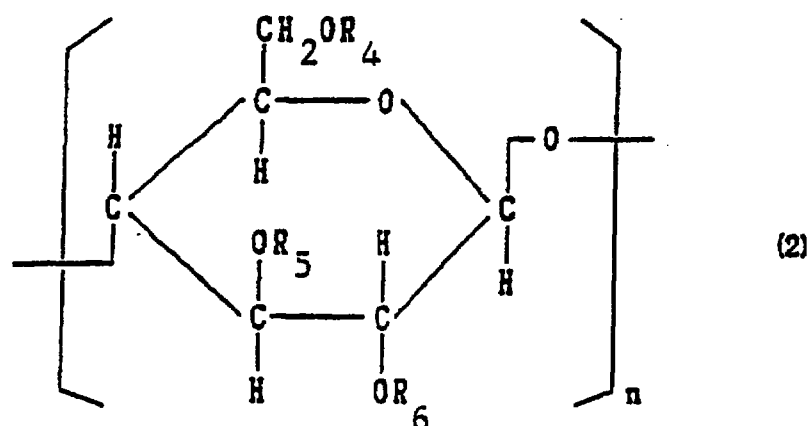
(A) 0.1 to 10 percent by weight of a mixture of mono-, di-, and triacylated fatty acid esters of sucrose having the formula (1):



In which mono-, di-, and triacylated esters respectively one, two, and all three of the group R₁, R₂ and R

are acyl groups having 8 to 24 carbon atoms, straight chain or branched, saturated or unsaturated, and any remaining R_1 , R_2 , or R_3 groups are hydrogen, and wherein the weight ratio of the monoacylated ester to the sum of the di- and triacylated esters is from 70:30 to 30:70 and

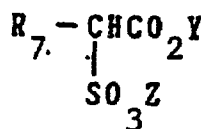
(B) 0.05 to 5 percent by weight of a nonionic cellulose ether compound having the formula (2):



in which R_4 , R_5 and R_6 are hydrogen, the group $(CH_2CH_2O)_mH$ in which m is 1 to 5, $-CH_3$ or $-C_3H_6OH$ and n is 100 to 10,000, and the balance is water.

A conventional surfactant is used as the shampoo base component. Some examples thereof are listed below.

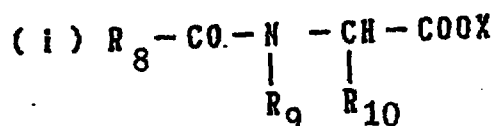
- (1) salts of straight-chain or branched alkylbenzenesulfonic acids in which the alkyl group has 10 to 16 carbon atoms on average,
- (2) salts of alkyl or alkenyl ether sulfates in which the straight-chain or branched alkyl or alkenyl group has 10 to 20 carbon atoms on average and to which is added 0.5 to 8 mol, on average per molecule, of ethylene oxide, propylene oxide, butylene oxide, a combination of ethylene oxide with propylene oxide in a ratio of 0.1/9.9 to 9.9/0.1 or a combination of ethylene oxide with butylene oxide in a ratio of 0.1/9.9 to 9.9/0.1,
- (3) salts of alkyl or alkenyl sulfates in which the alkyl or alkenyl group has 10 to 20 carbon atoms on average,
- (4) salts of olefinsulfonic acids having 10 to 20 carbon atoms on average in the molecule,
- (5) salts of alkanesulfonic acids having 10 to 20 carbon atoms on average in the molecule,
- (6) salts of saturated or unsaturated fatty acids having 10 to 24 carbon atoms on average in the molecule,
- (7) salts of alkyl or alkenyl ether carboxylates in which the alkyl or alkenyl group has 10 to 20 carbon atoms on average and to which is added 0.5 to 8 mol, on average per molecule, of ethylene oxide, propylene oxide, butylene oxide, a combination of ethylene oxide with propylene oxide in a ratio of 0.1/9.9 to 9.9/0.1 or a combination of ethylene oxide with butylene oxide in a ratio of 0.1/9.9 to 9.9/0.1,
- (8) salts and esters of α -sulfo fatty acids of the following formula:



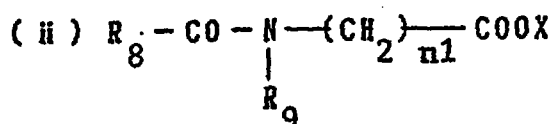
in which Y represents an alkyl group having 1 to 3 carbon atoms or a counter ion and R_7 represents an alkyl or alkenyl group having 1 to 20 carbon atoms,

Wherein the counter ions of the anionic surfactants include, for example, alkali metal ions such as sodium and potassium, alkaline earth metal ions such as calcium and magnesium, ammonium ion and alkanolamines having 1 to 3 alkanol groups with 2 or 3 carbon atoms, such as monoethanolamine, diethanolamine, triethanolamine and triisopropanolamine,

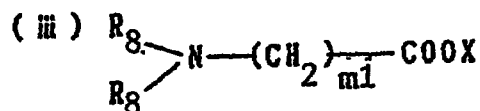
(9) amino acid-type surfactants of the following general formulae:



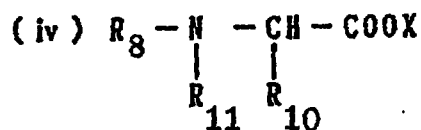
in which R_8 represents an alkyl or alkenyl group having 8 to 24 carbon atoms, R_9 represents a hydrogen atom or an alkyl group having 1 or 2 carbon atoms, R_{10} represents an amino acid residue and X represents an alkali metal or alkaline earth metal ion,



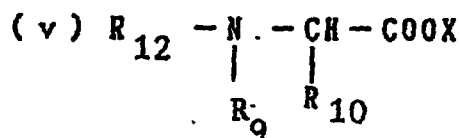
in which R_8 , R_9 and X are as defined above and n_1 represents an integer of 1 to 5,



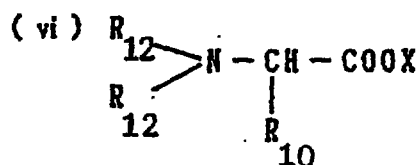
in which R_8 and X are as defined above and m_1 represents an integer of 1 to 8,



in which R_8 , R_{10} and X are as defined above and R_{11} represents a hydrogen atom or an alkyl or hydroxyalkyl group having 1 or 2 carbon atoms,



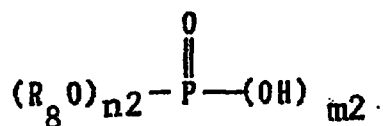
in which R_9 , R_{10} and X are as defined above and R_{12} represents a β -hydroxyalkyl or β -hydroxyalkenyl group having 6 to 28 carbon atoms,



in which R_{10} , R_{12} and X are as defined above,

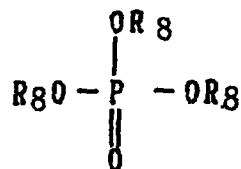
(10) phosphoric ester surfactants:

(i) acid alkyl (or alkenyl) phosphates of the formula:



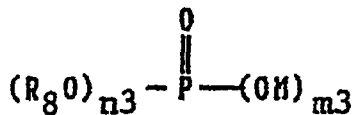
in which R_8 is as defined above and n_2 and m_2 represent each such a number that the total of them is 3 and n_2 represents a number of 1 or 2,

(ii) Alkyl (or alkenyl) phosphates of the formula:



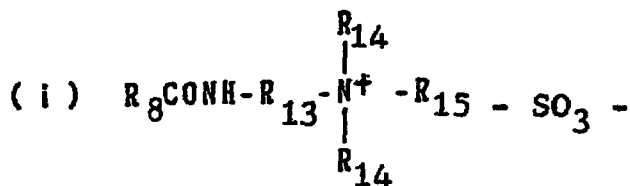
in which R_8 is as defined above,

(iii) salts of alkyl (or alkenyl) phosphates of the formula:

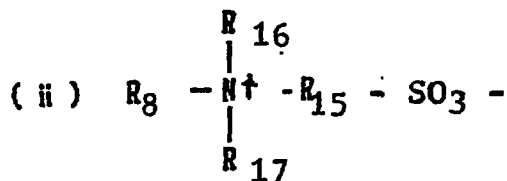


in which R_8 is as defined above, M represents sodium, potassium or calcium, n_3 and m_3 each represent such a number that the total of them is 3 and n_3 represents a number of 1 to 3,

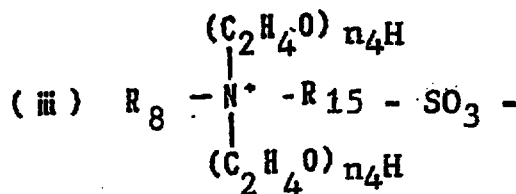
(11) sulfonic acid-type amphoteric surfactants of the formulae:



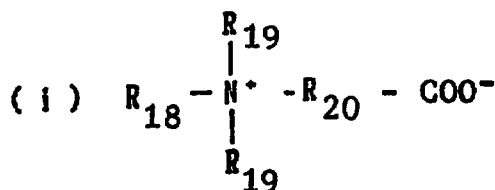
in which R_8 is as defined above, R_{13} represents an alkylene group having 1 to 4 carbon atoms, R_{14} represents an alkyl group having 1 to 5 carbon atoms and R_{15} represents an alkylene or hydroxyalkylene group having 1 to 4 carbon atoms,



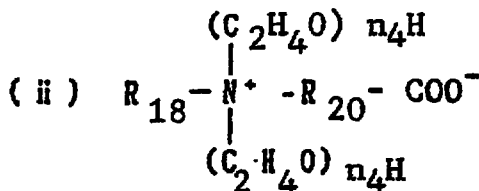
in which R_8 and R_{15} are as defined above and R_{16} and R_{17} represent each an alkyl or alkenyl group having 8 to 24 or 1 to 5 carbon atoms,



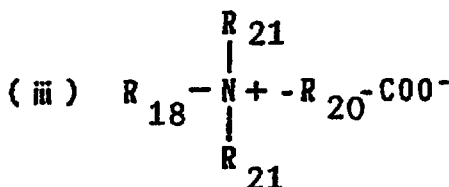
in which R_8 and R_{15} are as defined above and n_4 represents an integer of 1 to 20,
 (12) betaine-type amphoteric surfactants of the following general formulae:



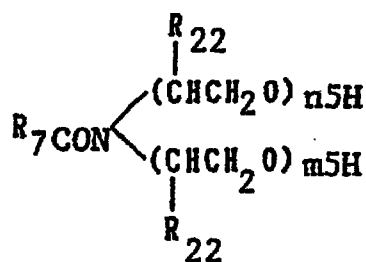
in which R_{18} represents an alkyl, alkenyl, β -hydroxyalkyl or β -hydroxyalkenyl group having 8 to 24 carbon atoms, R_{19} represents an alkyl group having 1 to 4 carbon atoms and R_{20} represents an alkylene or hydroxyalkylene group having 1 to 6 carbon atoms,



in which R_{18} , R_{20} and n_4 are as defined above,



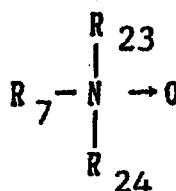
in which R_{18} and R_{20} are as defined above and R_{21} represents a carboxyalkyl or hydroxyalkyl group,
 (13) polyoxyethylene alkyl or alkenyl ethers in which the alkyl or alkenyl group has 10 to 20 carbon atoms on average and to which 1 to 20 mol of ethylene oxide is added,
 (14) polyoxyethylene alkylphenyl ethers in which the alkyl group has 6 to 12 carbon atoms on the average and to which 1 to 20 mol of ethylene oxide is added,
 (15) polyoxypropylene alkyl or alkenyl ethers in which the alkyl or alkenyl group has 10 to 20 carbon atoms on average and to which 1 to 20 mol of propylene oxide is added,
 (16) polyoxybutylene alkyl or alkenyl ethers in which the alkyl or alkenyl group has 10 to 20 carbon atoms on average and to which 1 to 20 mol of butylene oxide is added,
 (17) nonionic surfactants having an alkyl or alkenyl group having 10 to 20 carbon atoms on average and to which 1 to 30 mol, in total, of a combination of ethylene oxide with propylene oxide or a combination of ethylene oxide with butylene oxide is added (the ratio of ethylene oxide to propylene or butylene oxide being 0.1/9.9 to 9.9/0.1),
 (18) higher fatty acid alkanolamides of the following formula and alkylene oxide adducts thereof:



in which R_7 is as defined above, R_{22} represents a hydrogen atom or a methyl group, n_5 represents an integer of 1 to 3 and m_5 represents an integer of 0 to 3,

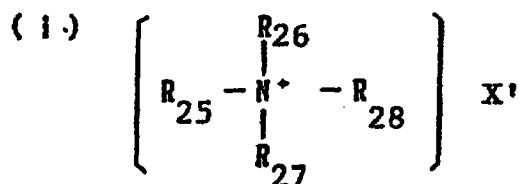
(19) fatty acid/glycerol monoesters comprising a fatty acid having 10 to 20 carbon atoms on average and glycerol,

(20) alkylamine oxides of the following formula:

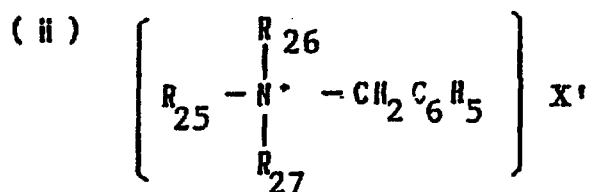


in which R_7 is as defined above and R_{23} and R_{24} represent each an alkyl group having 1 to 3 carbon atoms,

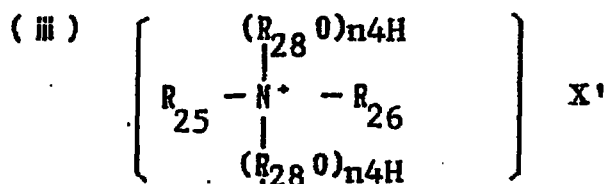
(21) cationic surfactants of the following formulae:



in which at least one of R_{25} , R_{26} , R_{27} and R_{28} represent an alkyl or alkenyl group having 8 to 24 carbon atoms and the balance represents an alkyl group having 1 to 5 carbon atoms and X' represents a halogen atom,



in which R_{25} , R_{26} , R_{27} and X' are as defined above,



in which R_{25} , R_{26} , X' and n_4 are as defined above and R_{28} represents an alkylene group having 2 or 3 carbon atoms.

Among the above-mentioned shampoo bases, particularly preferred are anionic surfactants such as: salts of straight-chain or branched alkyl sulfates having 10 to 16 carbon atoms on average; salts of polyoxyethylene alkyl sulfates in which the alkyl group has 8 to 20 carbon atoms on average (average molar number of addition: 0.5 to 8); alkyl phosphates having 8 to 16 carbon atoms on average and salts of olefinsulfonic acids having 10 to 16 carbon atoms on average; nonionic surfactants such as: higher fatty acid mono- or dialkanolamides in which the alkyl group has 10 to 14 carbon atoms; and amphoteric surfactants of alkylamine oxide, alkylbetaine and imidazoline types. The above-mentioned shampoo bases may be used either alone or in the form of a mixture of two or more of them and their concentration is 5 to 30 % (by weight; all percentages given hereinafter are by weight), preferably 10 to 25%, based on the shampoo composition.

The amount of the sucrose/fatty acid ester used in the present invention is 0.1 to 10 %, preferably 0.2 to 5 %, based on the shampoo composition.

Examples of the preferred nonionic cellulose ether derivatives of the above general formula (2) used as the component (B) in the present invention include hydroxyethylcellulose, hydroxypropylcellulose, hydroxypropylmethylcellulose and methylcellulose.

Of the above-mentioned cellulose derivatives, hydroxyethylcellulose is available on the market under the name of "Cellosize" (Union Carbide Corp.) or "Natrosol" (Hercules). To attain the object of the present invention, those in which 1.0 to 4.0, particularly 1.8 to 3.0, molecules of ethylene oxide is added per glucose residue are preferred.

It is preferable that methylcellulose has a content, based on the total weight of -OR4, -OR5 and -OR6 in the formula (2), of methoxy group (methylation extent) in the range of 10 to 40 wt. %, particularly 20 to 30 wt. %. Hydroxypropylcellulose is preferred to have a content of hydroxypropoxy group to the same effect at 1 to 20 wt.%, preferably 5 to 15 wt.%.

The nonionic cellulose ether compound (B) may have any of -R4, -R5 and -R6 at either terminals of the molecule having the formula (2). The component (B) may be used, mixed with another nonionic cellulose ether compound of the formula (2). The component (B) is used in an amount of 0.05 to 5 wt.%, preferably 0.1 to 2 wt.%.

The form of the composition of the present invention must be paste or liquid containing water as the medium. The amount of water is preferably 40 to 90 % and the pH of the liquid is preferably 4 to 8.

The shampoo composition of the present invention may contain, in addition to the above-mentioned indispensable components, other known constituents of shampoos such as solubilizers, e.g., propylene glycol, glycerol or urea, viscosity modifiers, e.g., ethanol, inorganic salts, higher alcohols or polyacrylic acids, perfumes, colorants, U.V. absorbers, antioxidants, dandruff removers, sterilizers and antiseptics.

[Examples]

The following examples will further illustrate the present invention, and by no means limit the invention. In the following examples, the properties of the shampoos were evaluated as follows:

(1) Touch of foams:

30 g of human hair was wet with water (40 °C) to impregnate it with 20 g of water. Then, the hair was shampooed with 1 g of a shampoo composition and the feel of the foams was judged by 20 female panelists organoleptically.

Items:

The easiness of passing the fingers through hair during shampooing was shown in terms of "slippiness of foams" and the appearance of the foams was evaluated from the viewpoint of "creaminess".

Criteria of the evaluation:

The smoothness of foams was superior to that of the standard or the appearance of the foams was creamy.

X The smoothness and appearance of foams were equivalent to that of the standard.

Standard:

	sodium polyoxyethylene(3)lauryl sulfate	15%
5	coconut fatty acid-diethanolamine	3
	flavor	a suitable amount
10	water	the balance
		(pH 7.2)

15 (2) Easiness of combing:

30 g of human hair was shampooed by shaking in 10 cc of an aqueous solution of a shampoo composition (concentration: 10 %) for about 30 sec, then rinsed in running water for 1 min, squeezed and arranged on a strain gauge. The hair was combed and the force required for the combing was measured (wet test). Separately, the hair rinsed in running water was squeezed, dried with a dryer and left to stand in an air-conditioned room at 25° C overnight while the relative humidity was kept at 65 % and the hair was arranged on the strain gauge. The hair was combed and the force required for the combing was measured (dry test).

The lower the load, the easier the combing.

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(3) Hair "Fly Away":

A change of the hair by the static electricity in the dry test of the easiness of combing was observed macroscopically.

- 30 O: No hair "fly away" was caused at all.
 X: Hair "fly away" was recognised.

Example 1

35 Shampoo compositions as shown in Table 1 were prepared by an ordinary process and the effects of the indispensable components were examined to obtain the results shown in Table 1.

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Table 1

Components (%)	No.	Examples of the present invention										Comparative Examples				
		1	2	3	4	5	6	7	8	9	10	11	12			
	triethanolamine polyoxyethylene(3) lauryl sulfate	15			15	15	15				15	15	15			
	triethanolamine α -olefin (C16) sulfonate		15					15								
	Ammonium polyoxyethylene(3)lauryl ether carboxylate			15					15							
	ester of sucrose and fatty acid (lauric acid as fatty acid)(ratio of mono to di and tri = 7/3)	0.5	0.5	0.5	-	0.5	15	0.5	0.05	0.5	1.0	-	-			
	Methylcellulose (viscosity of 2 % aqueous solution: 4.0 Nsm ⁻² /4,000 cP)	0.5	0.5	0.5	0.5	-	0.5	6	0.5	0.03	-	1.0	-			
	Perfume, water	the balance														
Properties	Touch of foams	○	○	○	x	x	x	x	x	x	x	x	x			
		○	○	○	x	x	x	x	x	x	x	x	x			
	Finish	178	180	174	472	406	190	342	396	412	388	442	480			
		82	84	88	286	200	92	128	248	222	244	280	296			
	Hair "fly away"	○	○	○	x	x	○	x	x	x	x	x	x			

Example 2

A shampoo composition as shown below was prepared and the effects of various sucrose/fatty acid surfactants were examined to obtain the in Table 2.

Composition:

	triethanolamine lauryl sulfate	15 %
5	lauric acid diethanolamide	5
	hydroxyethylcellulose (viscosity of 1 % aqueous solution: 2.4 Nsm ⁻² (2,400 cP)	0.8
10	sucrose/fatty acid ester (see Table 2)	1
	fragrance	a suitable amount
15	water	to balance (pH 7.5)
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Table 2

	Sucrose/fatty acid ester		Properties					
	Fatty acid	ratio of mono to di and tri esters	Touch of foams		Easiness of combing		Hair "fly away"	
			Slippiness	Creaminess	Wet	Dry		
Examples of the present invention	Lauric acid	100/0	○	○	210	98	○	
	"	60/40	○	○	180	78	○	
	"	30/70	○	○	198	94	○	
	"	0/100	○	○	214	100	○	
	Palmitic acid	70/30	○	○	198	92	○	
	"	30/70	○	○	208	98	○	
	Stearic acid	60/40	○	○	188	82	○	
	Eicosanoic acid	70/30	○	○	228	104	○	
Comparative Example	Behenic acid	50/50	○	○	232	112	○	
	No ester added		x	x	468	284	x	

Example 3

A shampoo composition as shown below was prepared and the effects of various nonionic cellulose ether derivatives were examined to obtain the results shown in Table 3.

Composition:

5	triethanolamine α -olefin (C16) sulfonate	15 %
	nonionic cellulose ether derivative (see Table 3)	0.5
10	ester of sucrose and fatty acid (palmitic acid as fatty acid) (ratio of mono to di and tri = 50/50)	0.7
15	fragrance	a suitable amount
	water	the balance (pH 5.0)

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Table 3

	nonionic cellulose ether derivative	Properties				
		Touch of foams		Easiness of combing		Hair "fly away"
		Slippliness	Creaminess	Wet	Dry	
Examples of the present invention	Hydroxyethylcellulose (viscosity of 1 % aqueous solution: 5,000 mPas (cP))	○	○	192	88	○
	Hydroxyethylcellulose (viscosity of 1 % aqueous solution: 10,000 mPas (cP))	○	○	178	82	○
	Hydroxypropylmethylcellulose (viscosity of 1 % aqueous solution: 6,000 mPas (cP))	○	○	182	78	○
	Hydroxypropylmethylcellulose (viscosity of 1 % aqueous solution: 12 Nsm -2/12,000 cP)	○	○	188	92	○
	Methylcellulose (viscosity of 2 % aqueous solution: 4,000 mPas (cP))	○	○	180	86	○
	Hydroxypropylcellulose (viscosity of 2 % aqueous solution: 2,500 mPas (cP))	○	○	178	84	○
Comparative Example	Not used	x	x	398	236	x

Claims

1. A shampoo composition comprising from 5 to 30 percent by weight of a shampoo base component, characterised in that it also includes:
 - (A) 0.1 to 10 percent by weight of a mixture of mono-, di-, and triacylated fatty acid esters of sucrose



Table 3

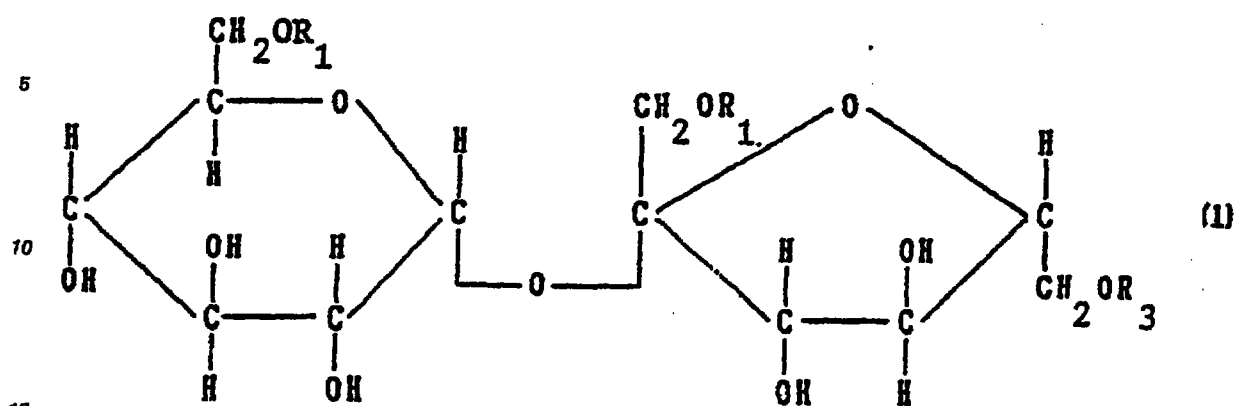
	nonionic cellulose ether derivative	Properties					
		Touch of foams		Ease of combing		Hair "fly away"	
		Slippiness	Creaminess	Wet	Dry		
Examples of the present invention	Hydroxyethylcellulose (viscosity of 1 % aqueous solution: 5,000 mPas (cP))	○	○	192	88	○	
	Hydroxyethylcellulose (viscosity of 1 % aqueous solution: 10,000 mPas (cP))	○	○	178	82	○	
	Hydroxypropylmethylcellulose (viscosity of 1 % aqueous solution: 6,000 mPas (cP))	○	○	182	78	○	
	Hydroxypropylmethylcellulose (viscosity of 1 % aqueous solution: 12 Nsm -2/12,000 cP)	○	○	188	92	○	
	Methylcellulose (viscosity of 2 % aqueous solution: 4,000 mPas (cP))	○	○	180	86	○	
Comparative Example	Hydroxypropylcellulose (viscosity of 2 % aqueous solution: 2,500 mPas (cP))	○	○	178	84	○	
	Not used	x	x	398	236	x	

Claims

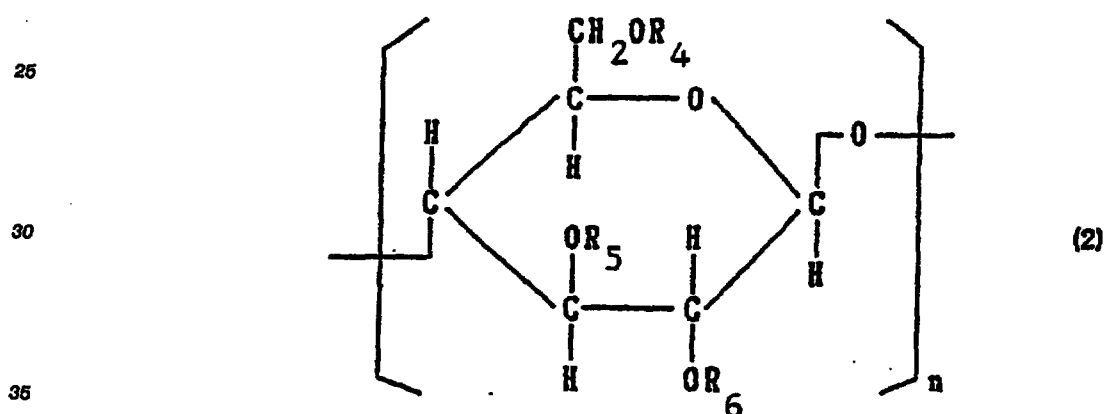
1. A shampoo composition comprising from 5 to 30 percent by weight of a shampoo base component, characterised in that it also includes:
 - (A) 0.1 to 10 percent by weight of a mixture of mono-, di-, and triacylated fatty acid esters of sucrose



having the formula (1):



in which mono-, di-, and triacylated esters respectively one, two, and all three of the group R_1 , R_2 and R_3 are acyl groups having 8 to 24 carbon atoms, straight chain or branched, saturated or unsaturated, and any remaining R_1 , R_2 or R_3 groups are hydrogen, and wherein the weight ratio of the monoacylated ester to the sum of the di- and triacylated esters is from 70:30 to 30:70 and (B) 0.05 to 5 percent by weight of a nonionic cellulose ether compound having the formula (2):



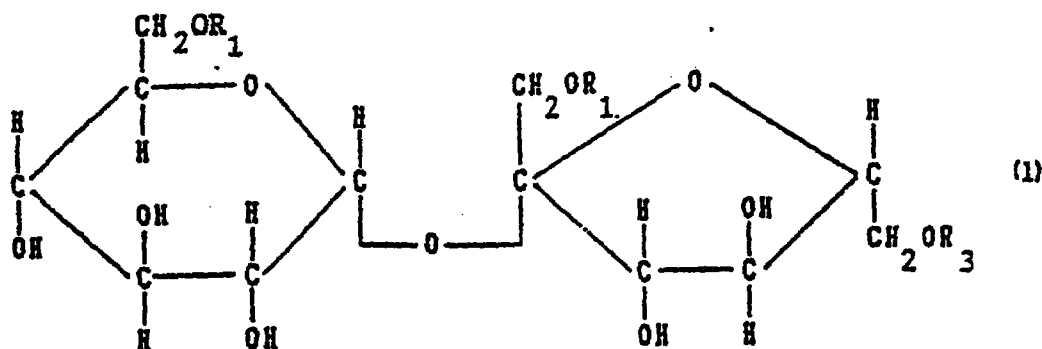
in which R_4 , R_5 and R_6 are hydrogen, the group $(CH_2CH_2O)_mH$ in which m is 1 to 5, $-CH_3$ or $-C_3H_6OH$ and n is 100 to 10,000, and the balance is water.

- 40
2. A shampoo composition as claimed in Claim 1, which has a pH of 4 to 8.
3. A shampoo composition as claimed in Claim 1, which comprises 40 to 90 percent by weight of water.
- 45
4. A shampoo composition as claimed in Claim 1, in which n is from 100 to 1,000 in the formula (2).
5. A shampoo composition as claimed in Claim 1, in which the content of methoxy groups, based on the total of $-OR_4$, $-OR_5$ and $-OR_6$, in (B) the nonionic cellulose ether compound is 10 to 40 percent by weight.

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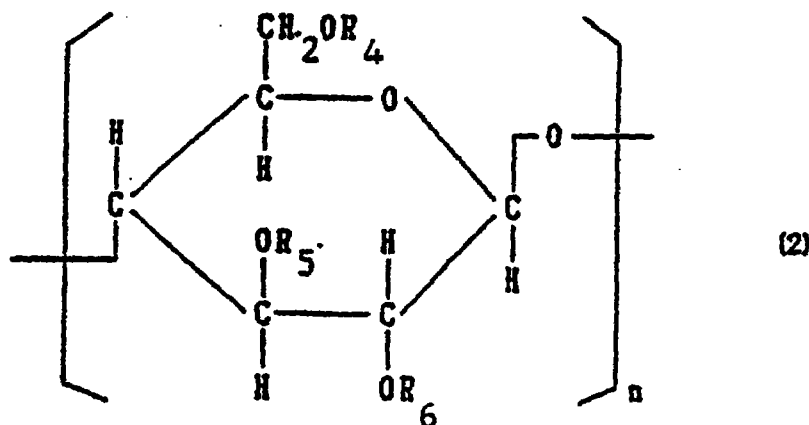
Revendications

1. Composition de shampooing comprenant 5 à 30 pour cent en poids d'un composant de base de shampooing, caractérisée en ce qu'elle contient également :
- 55
- (A) 0,1 à 10 pour cent en poids d'un mélange d'esters d'acides gras de Saccharose mono-, di- et triacylés répondant la formule (1) :



15 où, dans les esters mono-, di- et triacylés, respectivement un, deux ou les trois des groupes R_1 , R_2 et R_3 sont des groupes acyle ayant 8 à 24 atomes de carbone à chaîne droite ou ramifiée, saturés ou insaturés, et tous les groupes R_1 , R_2 ou R_3 qui restent éventuellement sont de l'hydrogène, et où le rapport en poids de l'ester monoacylé à la somme des esters di- et triacylés est de 70:30 à 30:70, et

20 (B) 0,05 à 5 pour cent en poids d'un éther de cellulose non ionique répondant à la formule (2) :

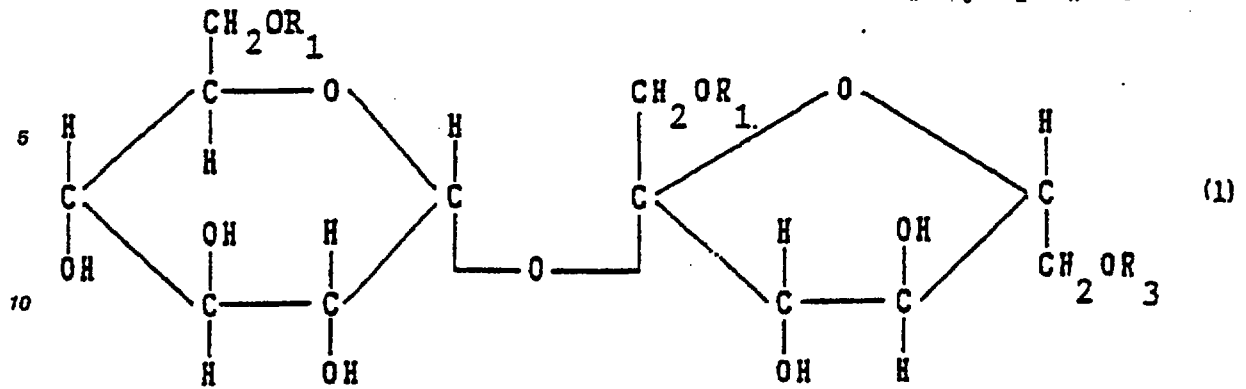


dans laquelle R_4 , R_5 et R_6 sont de l'hydrogène, le groupe $(CH_2CH_2O)_mH$ où m est 1 à 5, $-CH_3$ ou $-C_3H_5OH$ et n est de 100 à 10 000, le reste étant de l'eau.

- 40 2. Composition de shampoing selon la revendication 1, qui a un pH de 4 à 8.
3. Composition de shampoing selon la revendication 1, qui contient 40 à 90 pour cent en poids d'eau.
- 45 4. Composition de shampoing selon la revendication 1, dans laquelle n est compris entre 100 et 1000 dans la formule (2).
5. Composition de shampoing selon la revendication 1, dans laquelle la teneur en groupes méthoxy, par rapport au total de $-OR_4$, $-OR_5$ et $-OR_6$, dans l'éther de cellulose non ionique (B) est de 10 à 40 pour cent en poids.

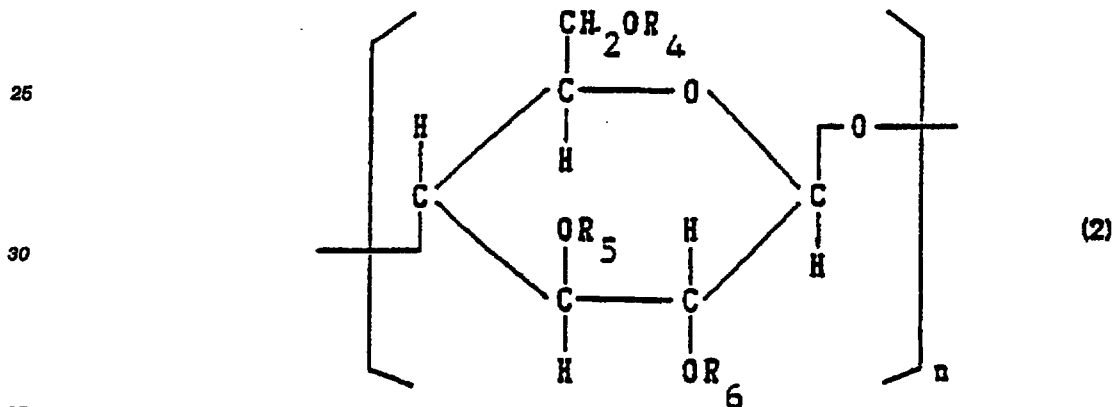
Patentansprüche

- 55 1. Shampoo-Zusammensetzung umfassend 5 bis 30 Gew.-% einer Shampoo-Basiskomponente, dadurch gekennzeichnet, daß sie weiterhin enthält:
- (A) 0,1 bis 10 Gew.-% einer Mischung aus mono-, di- und triacylierten Fettsäureestern von Sucrose mit der Formel (1):



15 worin mono-, di- und triacylierte Ester bzw. eine, zwei oder alle drei Gruppen R_1 , R_2 und R_3 geradkettige oder verzweigte, gesättigte oder ungesättigte Acylgruppen mit 8 bis 24 Kohlenstoffatomen sind und irgendeine der verbleibenden Gruppen R_1 , R_2 und R_3 Wasserstoff bedeuten, wobei das Gewichtsverhältnis des monoacylierten Esters zu der Summe der di- und triacylierten Ester 70:30 bis 30:70 beträgt und

20 (B) 0,05 bis 5 Gew.-% einer nichtionischen Celluloseetherverbindung der Formel (2):



worin R_4 , R_5 und R_6 ein Wasserstoffatom, die Gruppe $(CH_2CH_2O)_mH$, wobei m für 1 bis 5 steht, $-CH_3$ oder $-C_3H_5OH$ bedeuten, n für 100 bis 10.000 steht und der Rest Wasser ist.

- 40 2. Shampoo-Zusammensetzung nach Anspruch 1, dadurch gekennzeichnet, daß der PH-Wert 4 bis 8 ist.
3. Shampoo-Zusammensetzung nach Anspruch 1, enthaltend 40 bis 90 Gew.-% Wasser.
4. Shampoo-Zusammensetzung nach Anspruch 1, wobei n in Formel (2) 100 bis 1000 ist.
- 45 5. Shampoo-Zusammensetzung nach Anspruch 1, wobei der Gehalt der Methoxygruppen, bezogen auf die Gesamtmenge von $-OR_4$, $-OR_5$ und OR_6 , in der nichtionischen Celluloseetherverbindung (B) 10 bis 40 Gew.-% beträgt.