[0103]

[Table 1]

	Component (mass%)	Example																		Comp. Ex.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	2
A	n-Octadecenylsuccinic acid cholesteryl monoester	1	1	1	1	1.25	1.25													1	
	n-Hexadecenylsuccinic acid cholesteryl monoester										1.5	2.15	1	1	1	1	7	7	0.05		
	Cholesterol hydrogen succinate (manufactured by Tokyo Chemical Industry Co., Ltd.)							0.2	0.2	0.2											
B	Phytosphingosine (manufactured by COSMOFERM)	0.1	0.1	0.1	0.1		0.05										1.5	1.5			0.1
	Pseudo sphingosine (II)					0.1		0.2	0.2	0.2	0.2	1.1	0.2	0.2	1.0	1.0			1		
G	L-arginine	0.5	0.5					0.2	0.2	0.2			0.5	0.5			3.5	3.5	0.05	0.5	
	Potassium hydroxide				0.3	0.017										0.38					0.3
H	L-glutamic acid			0.06	0.06		0.05				0.45										0.06
	Phosphoric acid		0.3	0.05	0.05									0.3	0.2	0.2	2	3	0.3	0.3	0.05
D	N-(hexadecyloxyhydroxypropyl)-N-hydroxyethylhexadecanamide					1	1	2	2	2	2						10	10	0.1		
	Ceramide (type 2)	1	1	1	1															1	1
E	Cholesterol	0.5	0.5	0.5	0.5	0.25	0.25		0.5	0.5	1.5						0.01	5	0.1	0.5	0.5
	Cholesteryl isostearate						0.1				1.5										
F	Stearic acid						0.1			0.5							5	0.3			
	Squalane					0.5	0.5				16										
	Dimethylpolysiloxane						1				3.25										
	Cetanol						0.2														
	1,3-butylene glycol					5	5				5	8.06									
	Glycerin	5	5	5	5	10	10													5	5

	Carboxyvinyl polymer					0.1					0.1										
	Hydroxyethyl(hydroxypropylpolyethyleneglycol dodecyl ether) cellulose						0.15				0.8	2.69									
	Q-[2-hydroxy-3-(trimethylammonio)propyl]hydroxyethyl cellulose chloride						0.5														
	Methyl paraoxybenzoate					0.2	0.2														
C	Ion exchange water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	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	100	100	100	100	100	100	100	100
pH: At the time of preparation		9.2	9.2	3.2	3.2	6.8	4.5	9.2	9.8	9.2	5.2	6.3	9.2	9.2	3.9	3	2	9.3	2.4	9.6	3.9
After component (G) or (H) was added after preparation			3.9		8.1									3.9		11.2	6.4	3.3	8.5	3.9	8.7
State of vesicle immediately after preparation		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
State of vesicle after pH was changed immediately after preparation			A		A									A		A	A	A	A	B	B
Storage stability: 50°C		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C	C
25°C		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C	C
5°C		A	A	A	A	A	A	C	B	A	A	A	A	A	A	A	A	A	A	C	C
Adaptability upon application (the number of panelists who evaluated as "adaptable")		7	8	7	7	7	9	8	8	9	7	5	5	5	5	5	6	6	5	2	4

[0106]

[Table 2]

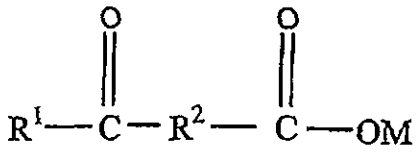
	Component (mass%)	Example					Comp. Ex.
		1	2	3	6	18	2
A	n-Octadecenylsuccinic acid cholesteryl monoester	1	1	1	1.25		
	n-Hexadecenylsuccinic acid cholesteryl monoester					0.05	
B	Phytosphingosine (manufactured by COSMOFERM)	0.1	0.1	0.1	0.05		0.1
	Pseudo sphingosine (ii)					1	
G	L-arginine	0.5	0.5			0.05	
	Potassium hydroxide						0.3
H	L-glutaminic acid			0.06	0.05		0.06
	Phosphoric acid		0.3	0.05		0.3	0.05
D	N-(hexadecyloxyhydroxypropyl)-N-hydroxyethylhexadecanamide				1	0.1	
	Ceramide (type 2)	1	1	1			1
E	Cholesterol	0.5	0.5	0.5	0.25	0.1	0.5
	Cholesteryl isostearate				0.1		
F	Stearic acid				0.1		
	Squalane				0.5		
	Dimethylpolysiloxane				1		
	Cetanol				0.2		
	1,3-Butylene glycol				5		
	Glycerin	5	5	5	10		5
	Hydroxyethyl(hydroxypropylpolyethylene glycol dodecyl ether)cellulose				0.15		
	O-[2-hydroxy-3-(trimethylammonio)propyl]hydroxyethylcellulose chloride				0.5		
	Methyl paraoxybenzoate				0.2		
C	Ion exchange water	Balance	Balance	Balance	Balance	Balance	Balance
	Total	100	100	100	100	100	100
	Water retention amount	14.2	13.9	14.8	19.7	7.5	2.7

Claims

[Claim 1]

A vesicle composition comprising the following components (A), (B) and (C):

(A) 0.0001 to 20 mass% of an organic acid represented by general formula (1):



(1)

wherein R^1 represents a natural sterin having a single hydroxy group or a hydrogenated product thereof or a residue which remains after a hydrogen atom is removed from the hydroxy group of bile acid, R^2 represents a divalent hydrocarbon group having 1 to 24 carbon atoms, M represents a hydrogen atom, an alkali metal, an alkali earth metal, ammonium, an alkanolammonium having 2 to 9 carbon atoms in total, an alkylammonium or alkenylammonium having 1 to 22 carbon atoms in total, pyridinium substituted with an alkyl group or alkenyl group having 1 to 18 carbon atoms or a basic amino acid,

(B) 0.0001 to 10 mass% of a sphingosine, and

(C) water, and

having a pH of 2 to 11.

[Claim 2]

The vesicle composition according to claim 1, wherein component (A) comprises a residue which remains after a hydrogen atom is removed from the hydroxy group of the compound in which R^1 in the formula (1) is cholesterol.

[Claim 3]

The vesicle composition according to claim 1 or 2, wherein the mass ratio of component (A) and component (B), (A)/(B), is 0.001 or more and 50 or less.

[Claim 4]

The vesicle composition according to any one of claims 1 to 3, further comprising (D) a ceramide.

[Claim 5]

The vesicle composition according to any one of claims 1 to 4, further comprising (E) cholesterol or a derivative thereof.

[Claim 6]

The vesicle composition according to any one of claims 1 to 5, further comprising (F) a fatty acid.

[Claim 7]

The vesicle composition according to any one of claims 1 to 6, further comprising at least one selected from (G) a base other than component (B) and (H) an acid other than component (A).

[Claim 8]

The vesicle composition according to any one of claims 4 to 7, wherein the content of component (D) is 0.01 to 10 mass% in the total composition.

[Claim 9]

The vesicle composition according to any one of claims 5 to 8, wherein the content of component (E) is 0.0001 to 10 mass% in the total composition.

[Claim 10]

The vesicle composition according to any one of claims 6 to 9, wherein the content of component (F) is 0.0001 to 10 mass% in the total composition.

[Claim 11]

The vesicle composition according to any one of claims 1 to 10 , being a cosmetic product.

[Claim 12]

A method for producing the vesicle composition according to any one of claims 1 to 11 comprising the following steps:

Step 1 of mixing an oil phase comprising components (A) and (B) with heating;

Step 12 of dissolving (G) a base other than component (B) or (H) an acid other than component (A) in part of component (C), and then adding the solution to the oil phase and mixing;

Step 13 of cooling after the Step 12; and

Step 2 of mixing a water phase comprising the remaining component (C) and stirring.

[Claim 13]

The method for producing the vesicle composition according claim 12, wherein the Step 12 is a step of controlling pH to be larger than 5.5 by dissolving component (G) in part of component (C) and adding the solution to the oil phase and mixing, and after the Step 2, Step 22 of controlling pH to 2 to 11 by dissolving component (H) in part of component (C) and adding the solution to the composition is provided.

[Claim 14]

The method for producing the vesicle composition according to claim 12, wherein the Step 12 is a step of controlling pH to be 5.5 or less by dissolving component (H) in part of component (C) and adding the solution to the oil phase and mixing, and after the Step 2, Step 22 of controlling pH to 2 to 11 by dissolving component (G) in part of component (C) and adding the solution to the composition is provided.

[Claim 15]

Use of the vesicle composition according to claims 1 to 11, for a cosmetic product.

[0103]

[Table 1]

	Component (mass%)	Example																		Comp. Ex.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	2
A	n-Octadecenylsuccinic acid cholesteryl monoester	1	1	1	1	1.25	1.25													1	
	n-Hexadecenylsuccinic acid cholesteryl monoester										1.5	2.15	1	1	1	1	7	7	0.05		
	Cholesterol hydrogen succinate (manufactured by Tokyo Chemical Industry Co., Ltd.)							0.2	0.2	0.2											
B	Phytosphingosine (manufactured by COSMOFERM)	0.1	0.1	0.1	0.1		0.05										1.5	1.5			0.1
	Pseudo sphingosine (ii)					0.1		0.2	0.2	0.2	0.2	1.1	0.2	0.2	1.0	1.0			1		
G	L-arginine	0.5	0.5					0.2	0.2	0.2			0.5	0.5			3.5	3.5	0.05	0.5	
	Potassium hydroxide				0.3	0.017										0.38					0.3
H	L-glutamic acid			0.06	0.06		0.05				0.45										0.06
	Phosphoric acid		0.3	0.05	0.05									0.3	0.2	0.2	2	3	0.3	0.3	0.05
D	N-(hexadecyloxyhydroxypropyl)-N-hydroxyethylhexadecanamide					1	1	2	2	2	2						10	10	0.1		
	Ceramide (type 2)	1	1	1	1															1	1
E	Cholesterol	0.5	0.5	0.5	0.5	0.25	0.25		0.5	0.5	1.5						0.01	5	0.1	0.5	0.5
	Cholesteryl isostearate						0.1				1.5										
F	Stearic acid						0.1			0.5							5	0.3			
	Squalane					0.5	0.5				16										
	Dimethylpolysiloxane						1				3.25										
	Cetanol						0.2														
	1,3-butylene glycol					5	5				5	8.06									
	Glycerin	5	5	5	5	10	10													5	5

	Carboxyvinyl polymer					0.1					0.1										
	Hydroxyethyl(hydroxypropylpolyethyleneglycol dodecyl ether) cellulose						0.15				0.8	2.69									
	O-[2-hydroxy-3-(trimethylammonio)propyl]hydroxyethyl cellulose chloride						0.5														
	Methyl paraoxybenzoate					0.2	0.2														
C	Ion exchange water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	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	100	100	100	100	100	100	100	100
pH: At the time of preparation		9.2	9.2	3.2	3.2	6.8	4.5	9.2	9.8	9.2	5.2	6.3	9.2	9.2	3.9	3	2	9.3	2.4	9.6	3.9
After component (G) or (H) was added after preparation			3.9		8.1									3.9		11.2	6.4	3.3	8.5	3.9	8.7
State of vesicle immediately after preparation		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
State of vesicle after pH was changed immediately after preparation			A		A									A		A	A	A	A	B	B
Storage stability: 50°C		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C	C
25°C		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C	C
5°C		A	A	A	A	A	A	C	B	A	A	A	A	A	A	A	A	A	A	C	C
Adaptability upon application (the number of panelists who evaluated as "adaptable")		7	8	7	7	7	9	8	8	9	7	5	5	5	5	5	6	6	5	2	4

[0106]

[Table 2]

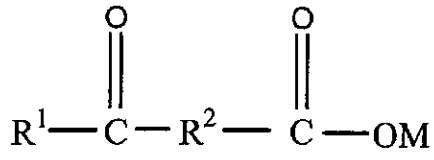
Component (mass%)		Example					Comp. Ex.
		1	2	3	6	18	2
A	n-Octadecenylsuccinic acid cholesteryl monoester	1	1	1	1.25		
	n-Hexadecenylsuccinic acid cholesteryl monoester					0.05	
B	Phytosphingosine (manufactured by COSMOFERM)	0.1	0.1	0.1	0.05		0.1
	Pseudo sphingosine (ii)					1	
G	L-arginine	0.5	0.5			0.05	
	Potassium hydroxide						0.3
H	L-glutaminic acid			0.06	0.05		0.06
	Phosphoric acid		0.3	0.05		0.3	0.05
D	N-(hexadecyloxyhydroxypropyl)-N-hydroxyethylhexadecanamide				1	0.1	
	Ceramide (type 2)	1	1	1			1
E	Cholesterol	0.5	0.5	0.5	0.25	0.1	0.5
	Cholesteryl isostearate				0.1		
F	Stearic acid				0.1		
	Squalane				0.5		
	Dimethylpolysiloxane				1		
	Cetanol				0.2		
	1,3-Butylene glycol				5		
	Glycerin	5	5	5	10		5
	Hydroxyethyl(hydroxypropylpolyethylene glycol dodecyl ether)cellulose				0.15		
	O-[2-hydroxy-3-(trimethylammonio)propyl]hydroxyethylcellulose chloride				0.5		
	Methyl paraoxybenzoate				0.2		
C	Ion exchange water	Balance	Balance	Balance	Balance	Balance	Balance
	Total	100	100	100	100	100	100
	Water retention amount	14.2	13.9	14.8	19.7	7.5	2.7

Claims

[Claim 1]

A method for producing a vesicle composition comprising the following components (A), (B) and (C):

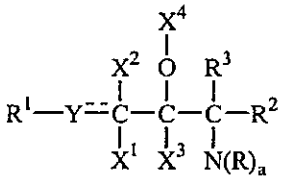
(A) 0.0001 to 20 mass% of an organic acid represented by general formula (1):



(1)

wherein R^1 represents a natural sterin having a single hydroxy group or a hydrogenated product thereof or a residue which remains after a hydrogen atom is removed from the hydroxy group of bile acid, R^2 represents a divalent hydrocarbon group having 1 to 24 carbon atoms, M represents a hydrogen atom,

(B) 0.0001 to 10 mass% of a sphingosine represented by general formula (2):



(2)

wherein R^1 represents a linear alkyl group having 4 to 30 carbon atoms, which is optionally substituted with a hydroxyl group, a carbonyl group or an amino group; Y represents a methylene group, a methine group or an oxygen atom; X^1, X^2, and X^3 each independently represent a hydrogen atom, a hydroxyl group or an acetoxy group; X^4 represents a hydrogen atom, an acetyl group or a glyceryl group, or forms an oxo group together with the adjacent oxygen atom, with the proviso that when Y is a methine group, either one of X^1 and X^2 is a hydrogen atom and the other is not present, and when X^4 forms an oxo group, X^3 is not present; R^2 and R^3 independently represent a hydrogen atom, a hydroxyl group, a hydroxymethyl group or an acetoxymethyl group; symbol

a represents an integer of 2 or 3; each of $(R)_a$ represents a hydrogen atom or an amidino group, or represents a linear alkyl group having 1 to 8 carbon atoms in total, which optionally has a substituent selected from the group consisting of a hydroxyl group, a hydroxyalkoxy group, an alkoxy group and an acetoxy group; and the broken line indicates that the bond may be an unsaturated bond, and

(C) water, and

having a pH of 2 to 11,

the method comprising the following steps:

Step 1 of mixing an oil phase comprising components (A) and (B) with heating;

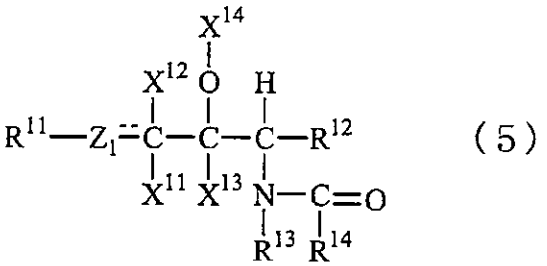
Step 12 of dissolving (G) a base other than component (B), or (H) an acid other than component (A) in part of component (C), and then adding the solution to the oil phase and mixing;

Step 13 of cooling after the Step 12; and

Step 2 of mixing a water phase comprising the remaining component (C) and stirring.

[Claim 2]

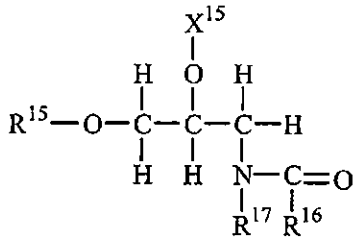
The method for producing the vesicle composition according to claim 1, wherein the vesicle composition comprising component (D) ceramide represented by general formula (5) or (6):



(5)

wherein R^{11} represents a linear, branched or cyclic, and saturated or unsaturated hydrocarbon group having 7 to 19 carbon atoms which is optionally substituted with a hydroxyl group; Z_1 represents a methylene group or a methine group; X^{11}, X^{12} and X^{13} each independently represent a hydrogen atom, a hydroxyl group or an acetoxy group; X^{14} represents a hydrogen atom or

forms an oxo group together with the adjacent oxygen atom, with the proviso that when Z_1 is a methine group, either X^{11} or X^{12} is a hydrogen atom and the other is not present, and when X^{14} forms an oxo group, X^{13} is not present; R^{12} represents a hydroxymethyl group or an acetoxymethyl group; R^{13} represents a hydrogen atom or an alkyl group having 1 to 4 carbon atoms; R^{14} represents a linear, branched or cyclic, and saturated or unsaturated hydrocarbon group having 5 to 30 carbon atoms, which is optionally substituted with a hydroxyl group, or represents a substituent in which a linear or branched, and saturated or unsaturated fatty acid having 8 to 22 carbon atoms which is optionally substituted with a hydroxyl group is ester-bonded to the ω terminal of the alkyl group; and the broken line indicates that the bond may be an unsaturated bond;



(6)

wherein R^{15} represents a linear, branched or cyclic, and saturated or unsaturated hydrocarbon group having 10 to 22 carbon atoms, which is optionally substituted with a hydroxyl group, or represents a hydrogen atom; X^{15} represents a hydrogen atom, an acetyl group or a glyceryl group; R^{16} represents a linear, branched or cyclic, and saturated or unsaturated hydrocarbon group having 5 to 22 carbon atoms, which is optionally substituted with a hydroxyl group or an amino group, or represents a substituent in which a linear or branched, and saturated or unsaturated fatty acid having 8 to 22 carbon atoms which is optionally substituted with a hydroxyl group is ester-bonded to the ω terminal of the alkyl group; and R^{17} represents a hydrogen atom or an alkyl group having 1 to 30 carbon atoms in total which is optionally substituted with a hydroxyl group, a hydroxyalkoxy group, an alkoxy group or an acetoxy group, and

wherein the Step 1 is mixing an oil phase comprising ingredients (A), (B) and (D) with heating.

[Claim 3]

The method for producing the vesicle composition according to claim 2, wherein the oil phase comprises component (E) cholesterol or a fatty acid cholesterol ester, and in Step 1 components an oil phase comprising (A), (B), (D) and (E) is mixed with heating.

[Claim 4]

The method for producing the vesicle composition according to claim 3, wherein the oil phase comprises component (F) fatty acid, and in Step 1 an oil phase comprising components (A), (B), (D), (E) and (F) is mixed with heating.

[Claim 5]

The method for producing the vesicle composition according to any one of claims 1 to 4, wherein the Step 12 is a step of controlling pH to be larger than 5.5 by dissolving component (G) in part of component (C) and adding the solution to the oil phase and mixing, and after the Step 2, Step 22 of controlling pH to 2 to 11 by dissolving component (H) in part of component (C) and adding the solution to the composition is provided.

[Claim 6]

The method for producing the vesicle composition according to any one of claims 1 to 4, wherein the Step 12 is a step of controlling pH to be 5.5 or less by dissolving component (H) in part of component (C) and adding the solution to the oil phase and mixing, and after the Step 2, Step 22 of controlling pH to 2 to 11 by dissolving component (G) in part of component (C) and adding the solution to the composition is provided.