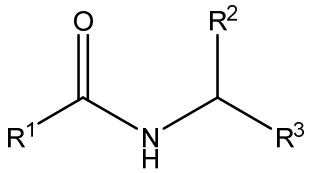
CLAIMS

What is claimed is the following:

1. A composition comprising:

an aqueous phase;

a neutral surfactant comprising at least one compound having a structure of



wherein:

R^1 is a saturated or unsaturated hydrocarbyl group having about 8 to about 30 carbon atoms;

R^2 is C_1-C_4 optionally branched alkyl, CH_2OH, $CH_2O(CH_2CH_2O)_xCH_2CH_2OH$, or $CH(OH)CH_2OH$; and

R^3 is H or C_1-C_4 optionally branched alkyl;

wherein R^2 and R^3 are not simultaneously CH_2OH and H, respectively, and x is 0 or a positive integer; and

a reaction product of a saccharide polymer and a fatty acid or a fatty ester, the saccharide polymer comprising a dextran, a dextrin compound, or any combination thereof, and the reaction product of the saccharide polymer and the fatty acid or the fatty ester being formed in the presence of a hydroxide base;

wherein the fatty acid consists of one or more straight-chain fatty acids or the fatty ester consists of one or more straight-chain fatty acid components.

2. The composition of claim 1, further comprising:

glycerol.

3. The composition of claim 2, wherein the reaction product is formed from a fatty ester, and at least a portion of the glycerol originates from the fatty ester, optionally wherein the fatty ester comprises a glycerol ester

comprising up to three types of fatty acid components having about 4 to about 30 carbon atoms.

4. The composition of claim 1, wherein the saccharide polymer comprises a dextrin compound, and the dextrin compound comprises a maltodextrin.

5. The composition of claim 1, wherein a molar ratio of fatty acid to saccharide polymer in the reaction product is about 0.2 or above on a basis of $moles_{\text{fatty acid or fatty acid in fatty ester}}$:$moles_{\text{glucose monomers in saccharide}}$ polymer, optionally wherein a molar ratio of fatty acid to saccharide polymer in the reaction product is about 0.2 to about 0.9 on a basis of $moles_{\text{fatty acid or fatty acid in fatty ester}}$:$moles_{\text{glucose monomers in saccharide polymer}}$.

6. The composition of claim 1, wherein the reaction product of the saccharide polymer comprises a fatty ester saccharide reaction product.

7. The composition of claim 1, wherein R^1 is a linear saturated or unsaturated hydrocarbyl group.

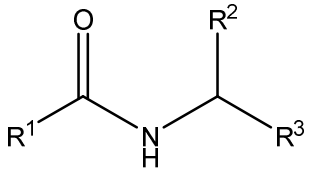
8. The composition of claim 1, wherein x is 0, 1, 2, or 3.

9. A personal care product comprising the composition of claim 1.

10. A method comprising:

heating a saccharide polymer, a fatty acid or a fatty ester, a neutral surfactant, and a hydroxide base in an aqueous phase, the saccharide polymer comprising a dextran, a dextrin compound, or any combination thereof;

wherein the neutral surfactant comprises at least one compound having a structure of



wherein:

R^1 is a saturated or unsaturated hydrocarbyl group having about 8 to about 30 carbon atoms;

R^2 is C_1-C_4 optionally branched alkyl, CH_2OH, $CH_2O(CH_2CH_2O)_xCH_2CH_2OH$, or $CH(OH)CH_2OH$; and

R^3 is H or C_1-C_4 optionally branched alkyl;

wherein R^2 and R^3 are not simultaneously CH_2OH and H, respectively, and x is 0 or a positive integer; and

obtaining a reaction product of the saccharide polymer and the fatty acid or the fatty ester in the aqueous phase, the aqueous phase also containing the neutral surfactant;

wherein the fatty acid consists of one or more straight-chain fatty acids or the fatty ester consists of one or more straight-chain fatty acid components.

11. The method of claim 10, wherein the aqueous phase further comprises glycerol.

12. The method of claim 11, wherein the reaction product is formed from a fatty ester, and at least a portion of the glycerol originates from the fatty ester, optionally wherein the fatty ester comprises a glycerol ester comprising up to three types of fatty acid components having about 4 to about 30 carbon atoms.

13. The method of claim 10, wherein the saccharide polymer comprises a dextrin compound, and the dextrin compound comprises a maltodextrin.

14. The method of claim 10, wherein a molar ratio of fatty acid to saccharide polymer in the reaction product is about 0.2 or above on a basis of $moles_{\text{fatty acid or fatty acid in fatty ester}}$:$moles_{\text{glucose monomers in saccharide polymer}}$, optionally wherein a molar ratio of fatty acid to saccharide polymer in the reaction product is about 0.2 to about 0.9 on a basis of $moles_{\text{fatty acid or fatty acid in fatty ester}}$:$moles_{\text{glucose monomers in saccharide polymer}}$.

15. The method of claim 10, wherein one or both of the following apply:

- R^1 is a linear saturated or unsaturated hydrocarbyl group;
- x is 0, 1, 2, or 3.