CLAIMS

1. A composition comprising:

an aqueous phase comprising an aqueous carrier fluid;

a fatty acid amide alkanolamine or a reaction product thereof; and

a reaction product of a saccharide polymer and a fatty acid, the saccharide polymer comprising a dextran, a dextrin compound, or any combination thereof;

wherein the fatty acid consists of one or more straight-chain fatty acids having 4 to 30 carbon atoms, and a molar ratio of fatty acid to saccharide polymer in the reaction product is 0.2 or above on a basis of $moles_{fatty\ acid}$:$moles_{glucose\ monomers}$;

wherein the fatty acid amide alkanolamine or the reaction product thereof and the reaction product of the saccharide polymer and the fatty acid are dissolved as a solution in the aqueous phase; and

wherein the reaction product of the saccharide polymer and the fatty acid is present in the aqueous phase at a concentration effective to lower the surface tension of the aqueous phase compared to an aqueous phase containing the fatty acid amine alkanolamine alone at a like concentration.

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

3. The composition of claim 1 or claim 2, wherein the fatty acid comprises at least one fatty acid selected from the group consisting of butyric acid, valeric acid, caproic acid, enanthic acid, caprylic acid, pelabonic acid, capric acid, undecylic acid, lauric acid, tridecylic acid, myristic acid, pentadecylic acid, palmitic acid, margaric acid, stearic acid, nonadecylic acid, arachidic acid, heneicosylic acid, behenic acid, tricosylic acid, lignoceric acid, pentacosylic acid, cerotic acid, carboceric acid, montanic acid, nonacosylic acid, melissic acid, crotonic acid, cervonic acid, linoleic acid, linolelaidic acid, linolenic acid, arachidonic acid, docosatetraenoic acid, myristoleic acid, palmitoleic acid, sappenic acid, vaccenic acid, paullinic acid, oleic acid, pinolenic acid, stearidonic acid, eleostearic acid, elaidic acid, gondoic acid, gadoleic acid, erucic acid, eicosenoic acid, eicosadiencoic acid, eicosatrienoic acid, eicosatetraenoic acid, docosadienoic acid, nervonic acid, mead acid, adrenic acid, and any combination thereof.

4. The composition of any one of claims 1 to 3, wherein the fatty acid amide alkanolamine comprises cocamide diethanolamine.

5. The composition of any one of claims 1 to 4, wherein the reaction product of the saccharide polymer and the fatty acid is formed in the presence of the fatty acid amide alkanolamine.

6. The composition of any one of claims 1 to 5, wherein the reaction product of the saccharide polymer is obtained in the presence of water and a hydroxide base.

7. The composition of any one of claims 1 to 6, wherein the reaction product of the saccharide polymer comprises a fatty ester reaction product.

8. The composition of any one of claims 1 to 7, wherein a molar ratio of fatty acid to saccharide polymer in the reaction product is 0.2 to 1.0 on a basis of $moles_{fatty\ acid}$:$moles_{glucose\ monomers}$.

9. A foamable formulation comprising the composition of any one of claims 1 to 8.

10. The foamable formulation of claim 9, wherein the foamable formulation comprises a soap.

11. A method comprising:

providing an aqueous fluid comprising the composition of any one of claims 1 to 8; and

inducing foam formation in the aqueous fluid.

12. The method of claim 11, wherein inducing foam formation comprises agitating the aqueous fluid to introduce gas thereto as a plurality of bubbles.

13. A composition comprising:

an aqueous phase comprising an aqueous carrier fluid;

a fatty acid amide alkanolamine or a reaction product thereof; and

a reaction product of a saccharide polymer and a fatty acid, the saccharide polymer comprising a dextran, a dextrin compound, or any combination thereof;

wherein the fatty acid comprises one or more straight-chain fatty acids having 4 to 30 carbon atoms, and a molar ratio of fatty acid to saccharide polymer in the reaction product is 0.05 to 0.8 on a basis of $moles_{fatty\ acid}$: $moles_{glucose\ monomers}$;

wherein the fatty acid amide alkanolamine or the reaction product thereof and the reaction product of the saccharide polymer and the fatty acid are dissolved as a solution in the aqueous phase; and

wherein the reaction product of the saccharide polymer and the fatty acid is present in the aqueous phase at a concentration effective to lower the surface tension of the aqueous phase compared to an aqueous phase containing the fatty acid amine alkanolamine alone at a like concentration.

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

15. The composition of claim 13 or claim 14, wherein the fatty acid comprises at least one fatty acid selected from the group consisting of butyric acid, valeric acid, caproic acid, enanthic acid, caprylic acid, pelabonic acid, capric acid, undecylic acid, lauric acid, tridecylic acid, myristic acid, pentadecylic acid, palmitic acid, margaric acid, stearic acid, nonadecylic acid, arachidic acid, heneicosylic acid, behenic acid, trioscylic acid, lignoceric acid, pentacosylic acid, cerotic acid, carboceric acid, montanic acid, nonacosylic acid, melissic acid, crotonic acid, cervonic acid, linoleic acid, linolelaidic acid, linolenic acid, arachidonic acid, docosatetraenoic acid, myristoleic acid, palmitoleic acid, sappenic acid, vaccenic acid, paullinic acid, oleic acid, pinolenic acid, stearidonic acid, eleostearic acid, elaidic acid, gondoic acid, gadoleic acid, erucic acid, eicosenoic acid, eicosadiencoic acid, eicosatrienoic acid, eicosatetraenoic acid, docosadienoic acid, nervonic acid, mead acid, adrenic acid, and any combination thereof.

16. The composition of any one of claims 13 to 15, wherein the reaction product of the saccharide polymer and the fatty acid is formed in the presence of the fatty acid amide alkanolamine.

17. The composition of any one of claims 13 to 16, wherein a molar ratio of fatty acid to saccharide polymer in the reaction product is 0.2 to 0.8 on a basis of $\text{moles}_{\text{fatty acid}}$: $\text{moles}_{\text{glucose monomers}}$.

18. The composition of any one of claims 13 to 17, wherein the fatty acid consists of one or more straight chain fatty acids comprising about 4 to about 30 carbon atoms.

19. The composition of any one of claims 13 to 18, wherein the reaction product of the saccharide polymer is obtained in the presence of water and a hydroxide base.

20. The composition of claim 19, further comprising:
a fatty acid carboxylate.

21. The composition of claim 20, wherein the fatty acid carboxylate comprises an alkali metal carboxylate.

22. The composition of any one of claims 19 to 21, wherein the reaction product of the saccharide polymer comprises a fatty ester reaction product.

23. The composition of any one of claims 19 to 22, wherein the fatty acid consists of one or more straight chain fatty acids comprising about 4 to about 30 carbon atoms.

24. The composition of any one of claims 13 to 19, further comprising:
a fatty acid carboxylate.

25. The composition of any one of claims 13 to 24, further comprising:
a zwitterionic surfactant.

26. The composition of any one of claims 13 to 25, wherein the aqueous carrier fluid comprises an aqueous salt solution.

27. A treatment fluid comprising the composition of any one of claims 13 to 26.

28. A method comprising:
providing a treatment fluid comprising the composition of any one of claims 13 to 26; and
introducing the treatment fluid into a subterranean formation.

29. A composition comprising:
an aqueous phase comprising an aqueous carrier fluid;
a zwitterionic surfactant;
a fatty acid amide alkanolamine or a reaction product thereof; and

a reaction product of a saccharide polymer and a fatty acid, the saccharide polymer comprising a dextran, a dextrin compound, or any combination thereof;

wherein the fatty add comprises one or more straight chain fatty acids having4 to 30 carbon atoms, and a molar ratio of fatty acid to saccharide polymer in the reaction product is 0.05 to 0.8 on a basis of $moles_{fatty\ acid}$: $moles_{glucose\ monomers}$;

wherein the fatty acid amide alkanolamine or the reaction product thereof and the reaction product of the saccharide polymer and the fatty acid are dissolved as a solution in the aqueous phase.