## CLAIMS

What is claimed is:

1. A dentifrice composition comprising (i) calcium-containing silicates, wherein the silicates are selected from nesosilicates (or orthosilicates), sorosilicates, cyclosilicates, tectosilicates, inosilicates (single chain), inosilicates (double chain), and phyllosilicates, and combinations thereof, or calcium-containing silica, wherein the silica is colloidal silica or silica gel, (ii) magnesium-containing silicates, wherein the silicates are selected from nesosilicates (or orthosilicates), sorosilicates, cyclosilicates, tectosilicates, inosilicates (single chain), inosilicates (double chain), and phyllosilicates, and combinations thereof, or magnesium-containing silica, wherein the silica is colloidal silica or silica gel, or a combination of (i) and (ii), in an amount effective to treat or prevent erosive damage to an enamel surface of a tooth.

2. The composition of claim 1, wherein the amount effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.01 wt. % to 30 wt. % based on the weight of the composition.

3. The composition of claim 1, wherein the amount effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.05 wt. % to 20 wt. % based on the weight of the composition.

4. The composition of claim 1, wherein the amount effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.1 wt. % to 10 wt. % based on the weight of the composition.

5. The composition of claim 1, wherein the amount effective to treat or prevent erosive damage to an enamel surface of a tooth is 1 wt. % to 5 wt. % based on the weight of the composition.

6. The composition of claim 1 further comprising an abrasive, binder, surfactant, humectant, source of fluoride, and combinations thereof.

7. The composition of claim 1, wherein the composition is a toothpaste.

8. Use of an effective amount of at least one material selected from a cationically modified silica, calcium-containing silicates, wherein the silicates are selected from nesosilicates (or orthosilicates), sorosilicates, cyclosilicates, tectosilicates, inosilicates (single chain), inosilicates (double chain), and phyllosilicates, and combinations thereof, or calcium-containing colloidal silica or silica gel, magnesium-containing silicates wherein the silicates are selected from nesosilicates (or orthosilicates), sorosilicates, cyclosilicates, tectosilicates, inosilicates (single chain), inosilicates (double chain), and phyllosilicates, and combinations thereof, or magnesium-containing colloidal silica or silica gel, and combinations thereof in the manufacture of a composition for treating or preventing erosive damage to an enamel surface of a tooth of a subject in need thereof.

9. The use of claim 8, wherein the subject is a mammal.

10. The use of claim 8, wherein the subject is a human.

11. The use of claim 8, wherein the subject is a companion animal.

12. The use of claim 8, wherein the effective amount is 0.01 wt. % to 30 wt. % based on the weight of the composition.

13. The use of claim 8, wherein the effective amount is 0.05 wt. % to 20 wt. % based on the weight of the composition.

14. The use of claim 8, wherein the effective amount is 0.1 wt. % to 10 wt. % based on the weight of the composition.

15. The use of claim 8, wherein the effective amount is 1 wt. % to 5 wt. % based on the weight of the composition.

16. The use of claim 8, wherein the composition further comprises an abrasive, binder, surfactant, humectant, source of fluoride, and combinations thereof.

17. The use of claim 8, wherein the composition is a toothpaste.

CLAIMS

What is claimed is:

1. A dentifrice composition comprising a cationically modified silica in an amount effective to treat or prevent erosive damage to an enamel surface of a tooth.

2. The composition of claim 1, wherein the cationically modified silica comprises silica covalently bonded to positively charged amino acid.

3. The composition of claim 2, wherein positively charged amino acid is lysine.

4. The composition of claim 1, wherein the cationically modified silica comprises silica covalently bonded to positively charged peptide.

5. The composition of claim 1, wherein the positively charged peptide is polylysine.

6. The composition of claim 1, wherein the cationically modified silica comprises silica covalently bonded to a silane.

7. The composition of claim 1, wherein the silane includes aminosilanes, glycidoxysilanes, mercaptosilanes, and combinations thereof.

8. The composition of claim 1, wherein the aminosilane comprises (3-aminopropyl)-triethoxysilane, (3-aminopropyl)-diethoxy-methylsilane, (3-aminopropyl)-dimethyl-ethoxysilane, and combination thereof.

9. The composition of claim 1, wherein the glycidoxysilane comprises (3-glycidoxypropyl)-dimethyl-ethoxysilane.

10. The composition of claim 1, wherein the mercaptosilane comprises (3-mercaptopropyl)-trimethoxysilane, (3-mercaptopropyl)-methyl-dimethoxysilane, and combinations thereof.

11. The composition of claim 1, wherein the amount of cationically modified silica effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.01 wt. % to 30 wt. % based on the weight of the composition.

12. The composition of claim 1, wherein the amount of cationically modified silica effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.05 wt. % to 20 wt. % based on the weight of the composition.

13. The composition of claim 1, wherein the amount of cationically modified silica effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.1 wt. % to 10 wt. % based on the weight of the composition.

14. The composition of claim 1, wherein the amount of cationically modified silica effective to treat or prevent erosive damage to an enamel surface of a tooth is 1 wt. % to 5 wt. % based on the weight of the composition.

15. The composition of claim 1 further comprising an abrasive, binder, surfactant, humectant, source of fluoride, and combinations thereof.

16. The composition of claim 1, wherein the composition is a toothpaste.

17. A dentifrice composition comprising calcium containing silicates and silica, magnesium containing silicates and silica, and combinations thereof in an amount effective to treat or prevent erosive damage to an enamel surface of a tooth.

18. The composition of claim 17, wherein the silicates include nesosilicates (or orthosilicates), sorosilicates, cyclosilicates, tectosilicates, inosilicates (single chain), inosilicates (double chain), and phyllosilicates, and combinations thereof.

19. The composition of claim 17, wherein the silica is colloidal silica.

20. The composition of claim 17, wherein the silica is silica gel.

21. The composition of claim 17, wherein the amount of calcium containing silicates and silica, magnesium containing silicates and silica, and combinations thereof effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.01 wt. % to 30 wt. % based on the weight of the composition.

22. The composition of claim 17, wherein the amount of calcium containing silicates and silica, magnesium containing silicates and silica, and combinations thereof effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.05 wt. % to 20 wt. % based on the weight of the composition.

23. The composition of claim 17, wherein the amount of calcium containing silicates and silica, magnesium containing silicates and silica, and combinations thereof effective to treat or prevent erosive damage to an enamel surface of a tooth is 0.1 wt. % to 10 wt. % based on the weight of the composition.

24. The composition of claim 17, wherein the amount of calcium containing silicates and silica, magnesium containing silicates and silica, and combinations thereof effective to treat or prevent erosive damage to an enamel surface of a tooth is 1 wt. % to 5 wt. % based on the weight of the composition.

25. The composition of claim 17 further comprising an abrasive, binder, surfactant, humectant, source of fluoride, and combinations thereof.

26. The composition of claim 17, wherein the composition is a toothpaste.

27. A method of treating or preventing erosive damage to an enamel surface of a tooth comprising administering to a subject in need thereof an effective amount of at least one materials selected from a cationically modified silica, calcium containing silicates and silica, magnesium containing silicates and silica, and combinations thereof.

28. The method of claim 27, wherein the subject is a mammal.

29. The method of claim 27, wherein the subject is a human.

30. The method of claim 27, wherein the subject is a companion animal.

31. The method of claim 27, wherein the effective amount is 0.01 wt. % to 30 wt. % based on the weight of the composition.

32. The method of claim 27, wherein the effective amount is 0.05 wt. % to 20 wt. % based on the weight of the composition.

33. The method of claim 27, wherein the effective amount is 0.1 wt. % to 10 wt. % based on the weight of the composition.

34. The method of claim 27, wherein the effective amount is 1 wt. % to 5 wt. % based on the weight of the composition.

35. The method of claim 27, wherein the composition further comprises an abrasive, binder, surfactant, humectant, source of fluoride, and combinations thereof.

36. The method of claim 27, wherein the composition is a toothpaste.