CLAIMS

WHAT IS CLAIMED IS:

1. A low water dentifrice composition comprising in a single phase:
a source of metal ions;
at least one polyphosphate salt selected from the group consisting of inorganic polyphosphate salts which have four or more phosphorous atoms; and
a thickening agent comprising a cross-linked polyvinylpyrrolidone;
wherein the dentifrice composition is a paste or gel.

2. The composition of claim 1, wherein the thickening agent consists essentially of a cross-linked polyvinylpyrrolidone.

3. The composition of claim 1, wherein the metal ion source comprises ions of stannous, zinc or copper.

4. The composition of claim 1, wherein the at least one polyphosphate is an alkali metal salt of a hexapolyphosphate.

5. The composition of claim 4, wherein the at least one polyphosphate is sodium hexapolyphosphate.

6. The composition of claim 1, wherein the at least one polyphosphate salt comprises from 1 to 10 wt % of the composition.

7. The composition of claim 6, wherein the at least one polyphosphate salt comprises from 3 to 7 wt % of the composition.

8. The composition of claim 1, wherein the dentifrice composition has a total water content of less than about 6% based on the weight of the composition.

9. The composition of claim 8, wherein the dentifrice composition has a total water content of less than 4% based on the weight of the composition.

10. The composition of claim 3, wherein the metal ion source comprises a zinc salt of an organic acid.

11. The composition of claim 10, wherein the source of zinc ions comprises zinc citrate.

12. The composition of claim 1, further comprising an aqueous buffer system for the source of metal ions.

13. The composition of claim 12, wherein the buffer system is adapted to chelate the metal ions in the composition.

14. The composition of claim 13, wherein the buffer system comprises at least one of an organic acid or an alkali metal salt thereof.

15. The composition of claim 14, wherein the organic acid is citric acid.

16. The composition of claim 14, wherein the buffer system comprises a mixture of citric acid and trisodium citrate.

17. The composition of claim 14, wherein the buffer system comprises from 0.1 to 10 wt % of the composition.

18. The composition of claim 14`, wherein the buffer system is present, by weight, in an amount which is greater than the amount, by weight, of the source of metal ions.

CLAIMS

WHAT IS CLAIMED IS:

1. A low water dentifrice composition comprising in a single phase:
a source of metal ions;
at least one polyphosphate salt selected from the group consisting of inorganic polyphosphate salts which have four or more four phosphorous atoms; and
a thickening agent comprising a cross-linked polyvinylpyrrolidone.

2. The composition of claim 1, wherein the thickening agent consists essentially of a cross-linked polyvinylpyrrolidone.

3. The composition of claim 1, wherein the metal ion source comprises ions of stannous, zinc or copper.

4. The composition of claim 1, wherein the at least one polyphosphate is selected from the group consisting of an alkali metal salt of a pyrophosphate, an alkali metal salt of a hexapolyphosphate, and mixtures thereof.

5. The composition of claim 4, wherein the at least one polyphosphate is selected from the group consisting of hexasodium pyrophosphate, sodium hexapolyphosphate, and mixtures thereof.

6. The composition of claim 5, wherein the at least one polyphosphate comprises a mixture of hexasodium pyrophosphate and sodium hexapolyphosphate.

7. The composition of claim 6, wherein the mixture of hexasodium pyrophosphate and sodium hexapolyphosphate comprises hexasodium pyrophosphate and sodium hexapolyphosphate in about a 2:3 weight ratio.

8. The composition of claim 1, wherein the at least one polyphosphate salt comprises from 1 to 10 wt % of the composition.

9. The composition of claim 8, wherein the at least one polyphosphate salt comprises from 3 to 7 wt % of the composition.

10. The composition of claim 1, wherein the dentifrice composition has a total water content of less than about 6% based on the weight of the composition.

11. The composition of claim 10, wherein the dentifrice composition has a total water content of less than about 6% based on the weight of the composition.

12. The composition of claim 3, wherein the metal ion source comprises a zinc salt of an organic acid.

13. The composition of claim 12, wherein the source of zinc ions comprises zinc citrate.

14. The composition of claim 1, further comprising an aqueous buffer system for the source of metal ions.

15. The composition of claim 14, wherein the buffer system is adapted to chelate the metal ions in the composition.

16. The composition of claim 15, wherein the buffer system comprises at least one of an organic acid or an alkali metal salt thereof.

17. The composition of claim 16, wherein the organic acid is citric acid.

18. The composition of claim 16, wherein the buffer system comprises a mixture of citric acid and trisodium citrate.

19. The composition of claim 16, wherein the buffer system comprises from 0.1 to 10 wt % of the composition.

20. The composition of claim 16, wherein the buffer system is present, by weight, in an amount which is greater than the amount, by weight, of the source of metal ions.