CLAIMS

WHAT IS CLAIMED IS:

1. An oral care composition comprising an effective amount of calcium silicate particles, wherein the calcium silicate particles have an average diameter of less than 5 microns.
2. The composition according to claim 1, wherein the particles have a d50 of 2 μm to 5 μm, and a d90 of 5 μm to 10 μm, and a CVP 3.95 of at least 50%.
3. The composition according to any of the preceding claims wherein the calcium silicate has a pH between 8.4 and 11.2 in a 5% solution.
4. The composition according to any of the preceding claims, wherein the calcium silicate has a surface area 20 – 400 m2/g and a pore volume of 0.01 – 1 cc/g.
5. The composition according to any of the preceding claims further comprising potassium salts.
6. The composition according to claim 5, wherein the potassium salts is present at a concentration of 1-10 wt.% based on a weight of the composition.
7. The composition according to any of the preceding claims, wherein the oral care composition provides a fluid flow rate of no greater than about 45% of the fluid flow rate of etched dentin.
8. The composition according to any of the preceding claims, wherein the effective amount of calcium silicate particles is 5-20 wt.% based on a weight of the composition.
9. The composition according to any of the preceding claims, wherein the average diameter of the calcium silicate particles is from 2 microns to 5 microns.
10. The composition according to any of the preceding claims, further comprising precipitated calcium carbonate or silica.
11. The composition according to any of the preceding claims, further comprising a soluble fluoride salt, an anionic surfactant and an antibacterial agent.
12. The composition according to any of the preceding claims, wherein the composition is aqueous.
13. Use of the composition of any of the preceding claims in the manufacture of a medicament for:

reducing or inhibiting formation of dental caries;

reducing, repairing or inhibiting pre-carious lesions of the enamel;

reducing or inhibiting demineralization and promoting remineralization of the teeth;

reducing hypersensitivity of the teeth;

reducing or inhibiting gingivitis;

promoting healing of sores or cuts in the mouth;

inhibiting microbial biofilm formation in the oral cavity;

raising and/or maintaining plaque pH at levels of at least pH 5.5 following sugar challenge;

reducing plaque accumulation;

treating, reducing, relieving or alleviating dry mouth;

whitening teeth;

reducing erosion;

promoting systemic health;

immunizing teeth against cariogenic bacteria; and/or

cleaning teeth and the oral cavity.

14. The use of claim 13, wherein the composition is to be applied to the oral cavity in an amount effective to reduce hypersensitivity of the teeth.

15. An oral care composition according to any of claims 1 to 12 for use to:

reduce or inhibit formation of dental caries;

reduce, repair or inhibit pre-carious lesions of the enamel;

reduce or inhibit demineralization and promote remineralization of the teeth;

reduce hypersensitivity of the teeth;

reduce or inhibit gingivitis;

promote healing of sores or cuts in the mouth;

inhibit microbial biofilm formation in the oral cavity;

raise and/or maintain plaque pH at levels of at least pH 5.5 following sugar challenge;

reduce plaque accumulation;

treat, reduce, relieve or alleviate dry mouth;

whiten teeth;

reduce erosion;

promote systemic health;

immunize teeth against cariogenic bacteria; and/or

clean teeth and the oral cavity.

CLAIMS

WHAT IS CLAIMED IS:

1. An oral care composition comprising an effective amount of calcium silicate particles, wherein the calcium silicate particles have an average diameter of less than 5 microns.
2. The composition according to claim 1, wherein the particles have a d50 of 2 μm to 5 μm, and a d90 of 5 μm to 10 μm, and a CVP 3.95 of at least 50%.
3. The composition according to any of the preceding claims wherein the calcium silicate has a pH between 8.4 and 11.2 in a 5% solution.
4. The composition according to any of the preceding claims, wherein the calcium silicate has a surface area 20 – 400 m2/g and a pore volume of 0.01 – 1 cc/g.
5. The composition according to any of the preceding claims further comprising potassium salts.
6. The composition according to claim 5, wherein the potassium salts is present at a concentration of 1-10 wt.% based on a weight of the composition.
7. The composition according to any of the preceding claims, wherein the oral care composition provides a fluid flow rate of no greater than about 45% of the fluid flow rate of etched dentin.
8. The composition according to any of the preceding claims, wherein the effective amount of calcium silicate particles is 5-20 wt.% based on a weight of the composition.
9. The composition according to any of the preceding claims, wherein the average diameter of the calcium silicate particles is from 2 microns to 5 microns.
10. The composition according to any of the preceding claims, further comprising precipitated calcium carbonate or silica.
11. The composition according to any of the preceding claims, further comprising a soluble fluoride salt, an anionic surfactant and an antibacterial agent.
12. The composition according to any of the preceding claims, wherein the composition is aqueous.
13. An oral care method comprising applying to an oral cavity of a subject the composition of any of the preceding claims in an amount effective to:

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reduce or inhibit formation of dental caries;

reduce, repair or inhibit pre-carious lesions of the enamel;

reduce or inhibit demineralization and promote remineralization of the teeth;

reduce hypersensitivity of the teeth;

reduce or inhibit gingivitis;

promote healing of sores or cuts in the mouth;

inhibit microbial biofilm formation in the oral cavity;

raise and/or maintain plaque pH at levels of at least pH 5.5 following sugar challenge;

reduce plaque accumulation;

treat, reduce, relieve or alleviate dry mouth;

whiten teeth;

reduce erosion;

promote systemic health;

immunize teeth against cariogenic bacteria; and/or

clean teeth and the oral cavity.

14. The method of claim 13, wherein the composition is applied to the oral cavity in an amount effective to reduce hypersensitivity of the teeth.

15. An oral care composition according to any of claims 1 to 12 for use to:

reduce or inhibit formation of dental caries;

reduce, repair or inhibit pre-carious lesions of the enamel;

reduce or inhibit demineralization and promote remineralization of the teeth;

reduce hypersensitivity of the teeth;

reduce or inhibit gingivitis;

promote healing of sores or cuts in the mouth;

inhibit microbial biofilm formation in the oral cavity;

raise and/or maintain plaque pH at levels of at least pH 5.5 following sugar challenge;

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reduce plaque accumulation;

treat, reduce, relieve or alleviate dry mouth;

whiten teeth;

reduce erosion;

promote systemic health;

immunize teeth against cariogenic bacteria; and/or

clean teeth and the oral cavity.

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