Claims

1. Use of a surface-reacted calcium carbonate in the manufacture of a medicament for remineralisation and/or whitening of teeth, wherein the surface-reacted calcium carbonate is a reaction product of natural or synthetic calcium carbonate with carbon dioxide and at least one acid.

2. Use of the surface-reacted calcium carbonate according to claim 1, wherein the at least one acid is selected from the group consisting of hydrochloric acid, sulphuric acid, sulphurous acid, phosphoric acid, citric acid, oxalic acid, acetic acid, formic acid, and mixtures thereof, preferably the at least one acid is selected from the group consisting of hydrochloric acid, sulphuric acid, sulphurous acid, phosphoric acid, oxalic acid, and mixtures thereof, and more preferably the at least one acid is phosphoric acid.

3. Use of the surface-reacted calcium carbonate according to any one of the preceding claims, wherein the surface-reacted calcium carbonate is in form of particles having a volume median grain diameter (d_{50}) of equal to or less than 15 μm, preferably from 1 to 10 μm, more preferably from 2 to 8 μm, and most preferably from 3 to 7 μm, and/or a volume determined top cut particle size (d_{98}) of equal to or less than 25 μm, preferably from 7 to 22 μm, more preferably from 10 to 20, and most preferably from 15 to 18 μm.

4. Use of the surface-reacted calcium carbonate according to any one of the preceding claims, wherein the surface-reacted calcium carbonate is in form of particles having a specific surface area of from 5 m^2/g to 200 m^2/g, more preferably 20 m^2/g to 80 m^2/g, and even more preferably 30 m^2/g to 60 m^2/g, measured using nitrogen and the BET method according to ISO 9277.

5. Use of the surface-reacted calcium carbonate according to any one of the preceding claims, wherein the surface-reacted calcium carbonate is used in combination with a fluoride compound, preferably selected from the group consisting of sodium fluoride, stannous fluoride, sodium monofluorophosphate, potassium fluoride, potassium stannous fluoride, sodium fluorostannate, stannous chlorofluoride, amine fluoride, and mixtures thereof, and more preferably the fluoride compound is sodium monofluorophosphate and/or sodium fluoride.

6. Use of the surface-reacted calcium carbonate according to any one of the preceding claims, wherein at least one active agent is associated with the surface-reacted calcium carbonate, preferably the active agent is at least one additional desensitizing agent, and more preferably the at least one additional desensitizing agent is selected from the group consisting of potassium nitrate, gluteraldehyde, silver nitrate, zinc chloride, strontium chloride hexahydrate, sodium fluoride, stannous fluoride, strontium chloride, strontium acetate, arginine, hydroxylapatite, calcium sodium phosphosilicate, potassium oxalate, calcium phosphate, calcium carbonate, bioactive glasses, and mixtures thereof.

7. Use of the surface-reacted calcium carbonate according to any one of the preceding claims, wherein the surface-reacted calcium carbonate is obtained by a process comprising the steps of:

a) providing a suspension of natural or synthetic calcium carbonate,

b) adding at least one acid having a pKa value of 0 or less at 20°C or having a pKa value from 0 to 2.5 at 20°C to the suspension of step a), and

c) treating the suspension of step a) with carbon dioxide before, during or after step b).

8. Use of the surface-reacted calcium carbonate according to any one of the preceding claims, wherein the surface-reacted calcium carbonate is obtained by a process comprising the steps of:

A) providing a natural or synthetic calcium carbonate,

B) providing at least one water-soluble acid,

C) providing gaseous CO_2,

D) contacting said natural or synthetic calcium carbonate of step A) with the at least one acid of step B) and with the CO_2 of step C),

characterised in that:

i) the at least one acid of step B) has a pKa of greater than 2.5 and less than or equal to 7 at 20°C, associated with the ionisation of its first available hydrogen, and a corresponding anion is formed on loss of this first available hydrogen capable of forming a water-soluble calcium salt, and

ii) following contacting the at least one acid with natural or synthetic calcium carbonate, at least one water-soluble salt, which in the case of a hydrogen-containing salt has a pKa of greater than 7 at 20°C, associated with the ionisation of the first available hydrogen, and the salt anion of which is capable of forming water-insoluble calcium salts, is additionally provided.

9. Use of an oral care composition in the manufacture of a medicament for remineralisation and/or whitening of teeth, comprising a surface-reacted calcium carbonate, wherein the surface-reacted calcium carbonate is a reaction product of natural or synthetic calcium carbonate with carbon dioxide and at least one acid.

10. Use of the oral care composition according to claim 9, wherein the oral care composition comprises from 1 to 40 wt.-%, preferably from 1.5 to 35 wt.-%, more preferably from 2 to 30 wt.-% of the surface-reacted calcium carbonate, based on the total weight of the composition.

11. Use of the oral care composition according to claim 9 or 10, wherein the oral care composition is a toothpaste, a toothpowder, or a mouthwash, and wherein preferably the surface-

reacted calcium carbonate is a reaction product of natural or synthetic calcium carbonate with carbon dioxide and phosphoric acid.

12. Use of the oral care composition according to any one of claims 9 to 11, wherein the oral composition further comprises a fluoride compound, preferably the fluoride compound is selected from the group consisting of sodium fluoride, stannous fluoride, sodium monofluorophosphate, potassium fluoride, potassium stannous fluoride, sodium fluorostannate, stannous chlorofluoride, amine fluoride, and mixtures thereof, and more preferably the fluoride compound is sodium monofluorophosphate and/or sodium fluoride.

13. Use of the oral care composition according to any one of claims 9 to 12, wherein the oral care composition further comprises an additional remineralisation and/or whitening agent, preferably selected from the group consisting of hydroxylapatite, e.g. nano-hydroxylapatite, calcium carbonate, e.g. amorphous calcium carbonate, and combinations thereof with casein phospholipids, hydrogen peroxide, carbamide peroxide, fluoride compounds, and mixtures thereof.

14. Use of the oral care composition according to any one of claims 9 to 13, wherein the oral care composition has a pH between 7.5 and 10, preferably between 8 and 9.

15. Use of a surface-reacted calcium carbonate in the manufacture of a medicament for remineralisation of teeth, wherein the surface-reacted calcium carbonate is a reaction product of natural or synthetic calcium carbonate with carbon dioxide and at least one acid.

16. Use of a surface-reacted calcium carbonate in the manufacture of a medicament for whitening of teeth enamel, wherein the surface-reacted calcium carbonate is a reaction product of natural or synthetic calcium carbonate with carbon dioxide and at least one acid.