CLAIMS

1. A stannous-associated casein phosphopeptide stabilized amorphous calcium phosphate (ACP) and/or amorphous calcium fluoride phosphate (ACFP) complex having a stannous ion content of at least 1 mole of stannous per mole of casein phosphopeptide.

2. A stannous-associated casein phosphopeptide stabilized amorphous calcium phosphate (ACP) and/or amorphous calcium fluoride phosphate (ACFP) complex according to claim 1, wherein the complex has a stannous ion content of at least 5 moles, 6 moles, 7 moles or about 8 moles of stannous per mole of casein phosphopeptide.

3. A stannous-associated casein phosphopeptide stabilized amorphous calcium phosphate (ACP) and/or amorphous calcium fluoride phosphate (ACFP) complex according to claim 1 or 2, wherein the stannous is provided by a compound selected from the group consisting of stannous fluoride, stannous chloride, potassium stannous fluoride, sodium stannous fluorozirconate, stannous chloride fluoride, stannous acetate, sodium stannous fluoride, stannous hexafluorozirconate, stannous sulfate, stannous tartrate, stannous gluconate, disodium monostannous citrate.

4. A stannous-associated casein phosphopeptide stabilized amorphous calcium phosphate (ACP) and/or amorphous calcium fluoride phosphate (ACFP) complex according to claim 3, wherein the compound is stannous fluoride.

5. A method of producing a stannous-associated casein phosphopeptide stabilized amorphous calcium phosphate (ACP) or stannous-associated casein phosphopeptide stabilized amorphous calcium fluoride phosphate (ACFP) comprising the step of admixing CPP-ACP or CPP-ACFP, and a stannous compound in an aqueous solution, while maintaining the pH at about 6.5 or below.

6. An oral care formulation comprising a stannous-associated casein phosphopeptide stabilized amorphous calcium phosphate (ACP) and/or amorphous calcium fluoride phosphate (ACFP) complex according to any one of claims 1 to 4.

7. An oral care formulation according to claim 6, wherein the composition is in the form applicable to the mouth selected from the group consisting of dentifrice including toothpaste, toothpowder and liquid dentifrice, mouthwash, mouthrinse, mouth spray, varnish, dental cement, troche, chewing gum, dental paste, gingival massage cream, gargle tablet, dairy product and other foodstuffs.

8. An oral care formulation according to claim 7, formulated as a dentifrice.

9. An oral care formulation according to claim 8, wherein the dentifrice is a toothpaste.

10. Use of a stannous-associated casein phosphopeptide stabilized ACP and/or ACFP according to any one of claims 1 to 4 in the manufacture of a medicament for mineralizing a dental surface or sub-surface.

11. The use according to claim 10, wherein the dental surface is a lesion in the enamel caused by caries, dental erosion or fluorosis.

12. The use according to claims 10 or 11, wherein the dental surface is exposed dentine causing dentinal hypersensitivity.

13. Use of a stannous-associated casein phosphopeptide stabilized ACP and/or ACFP according to any one of claims 1 to 4 in the manufacture of a medicament for forming a protective layer bonded to the surface of the tooth, wherein the layer comprises calcium and phosphate.

14. The use according to claim 13, wherein the layer has a calcium : phosphate ratio equivalent to normal apatite.

15. The use according to claims 13 or 14, wherein the layer contains peptides from casein phosphopeptides that stabilize the ACP or ACFP.

16. The use according to any one of claims 13 to 15, wherein the layer contains carbon, oxygen, fluoride, phosphate, calcium and stannous.

17. The use according to claim 16, wherein the layer contains 20 to 30wt% carbon, 35 to 45wt% oxygen, 0.1 to 1wt% fluoride, 8 to 12wt% phosphate, 16 to 24wt% calcium and 0.5 to 2wt% stannous.