of 10% Hydroxypropyl-beta-cyclodextrin (formula no. 6, Table 2), however, appeared less turbid, with a lower amount of precipitate, and exhibited increased foaming.

Table 2: Aqueous solutions containing Sodium Lauryl Sulfate, Potassium Chloride and Hydroxypropyl-beta-cyclodextrin and their physical appearance and foaming attributes.

Ingredient	*Formula 5*	*Formula 6*
Sodium Lauryl Sulfate Powder	1.50%	1.50%
Potassium Chloride	3.75%	3.75%
Hydroxypropyl-beta-cyclodextrin	----	10%
Water	94.75%	84.75%
Appearance	Turbid and precipitate	Turbid and less precipitate
Foaming	No foaming	Some foaming

[0050] The reduced formation of precipitate and increased foaming with hydroxypropyl-beta-cyclodextrin was attributed by the present inventors to the ability of hydroxypropyl-beta-cyclodextrin to interfere with precipitation, leading to more free SLS. If this attribution was true, since the solubility of triclosan is dependent on the availability of SLS in solution, the addition of hydroxypropyl-beta-cyclodextrin was postulated by the present inventors to be likely to increase the solubility of triclosan.

Example 2

[0051] Results from the following experiments confirmed the increased solubility of triclosan in the presence and absence of KCl due to the addition of hydroxypropyl-beta-cyclodextrin.

[0052] In the first set of experiments, the solubility of triclosan in the presence/absence of KCl was measured using a filtration methodology in which the filtrate was analyzed for triclosan. Solubility results, shown in Table 3, suggest that addition of SLS increased the solubility of triclosan (compared to the control with no SLS). Addition of KCl showed precipitation and the analysis of the filtrate showed

Table 5: Solubility of triclosan in aqueous solutions containing SLS/KCl and Hydroxypropyl-beta-cyclodextrin.

Description	Triclosan solubility, %
0% SLS	0.012
1.5% SLS – 3.75% KCl	0.011
1.5% SLS – 3.75 KCl – 10%HPbCD	0.190
1.5% SLS – 3.75 KCl – 20%HPbCD	0.380

[0055] These results of these experiments suggest that by incorporating hydroxypropyl-beta-cyclodextrin, the solubility of triclosan in formulations can be improved.

Example 3: Comparative Example 1

[0056] Dentifrice formulations were prepared containing typical active constituents and orally acceptable vehicles.

[0057] In accordance with Example 1, a dentifrice composition had the formulation shown in Table 6, and included, inter alia, triclosan, SLS, KCl, and hydroxypropyl-beta-cyclodextrin in the amounts shown. A comparative dentifrice composition had the formulation shown in Table 6 for Comparative Example 1, and included, inter alia, triclosan, SLS, and KCl in the amounts shown, but did not include hydroxypropyl-beta-cyclodextrin.

[0058] The compositions were tested to determine the solubility of triclosan in the respective compositions and the results are shown in Table 7.

[0059] From Table 7 it may be clearly seen that the solubility of triclosan increased with the addition of the hydroxypropyl-beta-cyclodextrin to the dentifrice composition. The solubilized amount of triclosan from the dentifrice composition of Example 1 was measurable even after three-fold dilution with water, as shown in Table 7.

CLAIMS:

1. An oral composition comprising an orally acceptable vehicle, an effective therapeutic amount of an antibacterial compound, an effective therapeutic amount of a source of potassium cations, an anionic surfactant and a cyclodextrin, wherein the source of potassium cations comprises a water soluble potassium salt, which potassium salt is present in the composition at a concentration of 3 wt% to 15 wt% based on the weight of the composition, and wherein the anionic surfactant is sodium lauryl sulfate, present in the composition at a concentration of 0.5 wt% to 2 wt% based on the weight of the composition.

2. The oral composition of claim 1, wherein said antibacterial compound comprises a halogenated diphenyl ether.

3. The oral composition of claim 2, wherein the halogenated diphenyl ether comprises 2,4,4'-trichloro-2'-hydroxy-diphenyl ether.

4. The oral composition of claim 3, wherein the 2,4,4'-trichloro-2'-hydroxy-diphenyl ether is present in the composition at a concentration of 0.05 wt. % to 2 wt% based on the weight of the composition.

5. The oral composition of claim 1, wherein the potassium ion releasable compound is potassium chloride.

6. The oral composition of claim 1, wherein the cyclodextrin is hydroxypropyl-beta-cyclodextrin.

7. The oral composition of claim 1, wherein the cyclodextrin is present in the composition at a concentration of 1 wt. % to 15 wt. % based on the weight of the composition.

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8. The oral composition of claim 1, wherein said composition is a dentifrice.

9. A dentifrice composition comprising an orally acceptable vehicle for such composition, 0.05 wt. % to 2 wt% of an antibacterial compound comprising 2,4,4'-trichloro-2'-hydroxy-diphenyl ether, 3 wt. % to 15 wt . % of a source of potassium cations, 0.5 wt. % to 2 wt. % of an anionic surfactant comprising sodium lauryl sulfate and 1 wt. % to 15 wt. % hydroxypropyl-beta-cyclodextrin, all weights being based on the weight of the composition.

10. A method of solubilizing a halogenated diphenyl ether in a dentifrice composition comprising a source of potassium ions, wherein the source of potassium cations comprises a water soluble potassium salt, which potassium salt is present in the composition at a concentration of 3 wt% to 15 wt% based on the weight of the composition, and sodium lauryl sulfate present in the composition at a concentration of 0.5 wt% to 2 wt% based on the weight of the composition, the method comprising adding a cyclodextrin to the composition.

11. A method according to claim 10 wherein the halogenated diphenyl ether comprises 2,4,4'-trichloro-2'-hydroxy-diphenyl ether.

12. A method according to claim 10 wherein the cyclodextrin comprises hydroxypropyl-beta-cyclodextrin.

13. A method for the treatment and prevention of bacterial plaque accumulation with reduced discomfort and pain associated with dentinal hypersensitivity comprising administering to the oral cavity an oral composition according to claim 1.

14. An oral composition comprising an orally acceptable vehicle for such composition, an effective therapeutic amount of an antibacterial compound comprising a halogenated diphenyl ether, an effective therapeutic amount of an anti-hypersensitivity agent comprising a potassium salt, and a solubilizing agent for the antibacterial compound, the solubilizing

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agent comprising, in combination, sodium lauryl sulfate and a cyclodextrin, wherein the potassium salt is water soluble and is present in the composition at a concentration of 3 wt% to 15 wt% based on the weight of the composition, and wherein the solubilizing agent comprises 0.5 wt. % to 2 wt. % of sodium lauryl sulfate

15. The oral composition of claim 14, wherein the halogenated diphenyl ether comprises 2,4,4'-trichloro-2'-hydroxy-diphenyl ether.

16. The oral composition of claim 15, wherein the 2,4,4'-trichloro-2'-hydroxy-diphenyl ether is present in the composition at a concentration of 0.05 wt. % to 2 wt. % based on the weight of the composition.

17. The oral composition of claim 14, wherein the potassium salt is at least one of potassium chloride and potassium nitrate.

18. The oral composition of claim 14, wherein the solubilizing agent comprises 1 wt. % to 15 wt. % hydroxypropyl-beta-cyclodextrin, based on the weight of the composition

18. A method for the treatment and prevention of bacterial plaque accumulation with reduced discomfort and pain associated with dentinal hypersensitivity comprising administering to the oral cavity an oral composition according to claim 14.

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CLAIMS

1. An oral composition comprising an orally acceptable vehicle, an effective therapeutic amount of an antibacterial compound, an effective therapeutic amount of a source of potassium cations, an anionic surfactant and a cyclodextrin, wherein the source of potassium cations comprises a water soluble potassium salt selected from potassium nitrate, potassium citrate, potassium chloride, potassium bicarbonate and potassium oxalate; wherein the potassium salt is present in the composition at a concentration of 3 wt% to 15 wt% based on the weight of the composition; and wherein the anionic surfactant is sodium lauryl sulfate, present in the composition at a concentration of 0.5 wt% to 2 wt% based on the weight of the composition.

2. The oral composition of claim 1, wherein said antibacterial compound comprises a halogenated diphenyl ether.

3. The oral composition of claim 2, wherein the halogenated diphenyl ether comprises 2,4,4'-trichloro-2'-hydroxy-diphenyl ether.

4. The oral composition of claim 3, wherein the 2,4,4'-trichloro-2'-hydroxy-diphenyl ether is present in the composition at a concentration of 0.05 wt. % to 2 wt% based on the weight of the composition.

5. The oral composition according to any one of claims 1 to 4, wherein the source of potassium ions is potassium chloride.

6. The oral composition according to any one of claims 1 to 5, wherein the cyclodextrin is hydroxypropyl-beta cyclodextrin.

7. The oral composition according to any one of claims 1 to 6, wherein the cyclodextrin is present in the composition at a concentration of 1 wt. % to 15 wt. % based on the weight of the composition.

8. The oral composition of claim 1, wherein said composition is a dentifrice.

9. A method of solubilizing a halogenated diphenyl ether in a dentifrice composition comprising a source of potassium ions, wherein the source of potassium cations comprises a water

soluble potassium salt selected from potassium nitrate, potassium citrate, potassium chloride, potassium bicarbonate and potassium oxalate, wherein the potassium salt is present in the composition at a concentration of 3 wt% to 15 wt% based on the weight of the composition; and sodium lauryl sulfate present in the composition at a concentration of 0.5 wt% to 2 wt% based on the weight of the composition, the method comprising adding a cyclodextrin to the composition.

10. A method according to claim 9 wherein the halogenated diphenyl ether comprises 2,4,4' -trichloro-2' -hydroxy-diphenyl ether.

11. A method according to claim 9 or claim 10 wherein the cyclodextrin comprises hydroxypropyl-beta-cyclodextrin.

12. Use of an oral composition according to any one of claims 1 to 8 in the manufacture of a medicament for treatment and prevention of bacterial plaque accumulation with reduced discomfort and pain associated with dentinal hypersensitivity.

13. The oral composition according to any one of claims 1 to 4, wherein the potassium salt is at least one of potassium chloride and potassium nitrate.

14. The oral composition according to claim 13, wherein the cyclodextrin is hydroxypropyl-beta-cyclodextrin.

15. The oral composition according to claim 14, wherein the cyclodextrin is present in the composition at a concentration of 1 wt. % to 15 wt. % based on the weight of the composition.

16. Use of an oral composition according to any one of claims 13 to 15 in the manufacture of a medicament for treatment and prevention of bacterial plaque accumulation with reduced discomfort and pain associated with dentinal hypersensitivity.