mouth care product in the normal way and, while the product is being used, the odor neutralizing agent captures malodor molecules in the mouth so as to reduce or eliminate the malodor.

The method in an alternate embodiment provides that the mouth care product incorporating the odor neutralizing agent may be used in a different or non-traditional way than is typical for the product, which is also encompassed within the present invention.

Embodiments of the present invention also provide a product, such as a mouth care product, that incorporates an odor neutralizing agent. The product may be any of a variety of products such as products for oral or dental care including mouth rinse, mouthwash, and tooth paste, as well as products used more for odor control including lozenges, breath mints, breath freshening wafers, chewing gum, and the like. The product may also be a nasal care product or even an ingestible product. The odor neutralizing agent is incorporated into the product in an effective amount so that, as the user uses the product, the neutralizing agent captures and thereby eliminates the bad odor causing capability of the malodor compounds.

Embodiments of the present invention also provide a method of manufacture for products used to reduce or eliminate mouth odors. In one such embodiment, concentrated flavoring agents are provided with a quantity of an odor neutralizing agent. The concentrated flavor material with the odor neutralizing agent therein is mixed into the materials during manufacture of the mouth care product so that the resulting product includes not only the flavoring agent but also the odor neutralizing agent. The flavoring agent with the neutralizing agent may be provided in the usual quantities for flavoring agents during the manufacture of the product.

In one embodiment, there is provided an oral care product, comprising:
a base oral care product; and
an odor neutralizing compound incorporated with said base oral care product, wherein the odor neutralizing compound includes a combination of ionone, irone, and cyclamen aldehyde with zinc salt and a natural, wherein the cyclamen aldehyde is 0.02 wt % to 10.00 wt % of the odor neutralizing compound and wherein the natural is at least one of oil of violet leaves and orris absolute, wherein the oil of violet leaves and orris absolute are collectively 0.002 wt % to 0.10 wt % of the odor neutralizing compound, the odor neutralizing compound is about 0.0025 wt % to about 5.00 wt % of the oral care product, the odor neutralizing compound has a chemical structure able to undergo molecular nucleophilic substitution upon contact with odor causing chemicals having a sulfur component to thereby neutralize malodors caused by the odor causing chemicals having the sulfur component, the oral care product being effective to neutralize malodors in the mouth upon use of the oral care product, the odor neutralizing compound being free of bactericidal agents.

In one embodiment, there is provided an oral care product made by a process comprising the steps of:
providing a flavoring agent having a flavor to be used in an oral care product;
adding an odor neutralizing agent to the flavoring agent to provide a mixture of the flavoring agent with the odor neutralizing agent, wherein the odor neutralizing agent includes a combination of ionone, irone, and cyclamen aldehyde with zinc salt and a natural, wherein the cyclamen aldehyde is 0.02 wt % to 10.00 wt % of the odor neutralizing compound and wherein the natural is at least one of oil of violet leaves and orris absolute, wherein the oil of violet leaves and orris absolute are collectively 0.002 wt % to 0.10 wt % of the odor neutralizing compound, the odor neutralizing agent has a chemical structure able to undergo molecular nucleophilic substitution upon contact with odor causing chemicals having a sulfur component to thereby neutralize malodors caused by the odor causing chemicals having the sulfur component, the odor neutralizing agent being free of a bactericidal agent; and
adding the mixture to ingredients of an oral care product during manufacture of the oral care product to produce the oral care product, the oral care product being effective to neutralize malodors in the mouth upon use of the oral care product.

In one embodiment, there is provided an oral care product, comprising:

a base oral care product; and

an odor neutralizing compound incorporated with said base oral care product, wherein the odor neutralizing compound comprises irone, one or more aldehydes, one or more naturals, and one or more zinc complexes, wherein the natural is one or more of oil of violet leaves and orris absolute, and wherein the aldehyde is cyclamen aldehyde, and wherein the zinc complex is one or more of zinc acetate, zinc citrate, zinc lactate, and zinc gluconate, wherein the cyclamen aldehyde is 0.02 wt % to 10.00 wt % of the odor neutralizing compound and wherein the oil of violet leaves and orris absolute are collectively 0.002 wt % to 0.10 wt % of the odor neutralizing compound, the odor neutralizing compound being free of bactericidal agent.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a flow chart of steps in an embodiment of the method according to the principles of the present invention;

Figure 2 is a schematic illustration of a product according to the present invention; and

I Claim:

1. An oral care product, comprising:
a base oral care product; and
an odor neutralizing compound incorporated with said base oral care product, wherein the odor neutralizing compound includes a combination of ionone, irone, and cyclamen aldehyde with zinc salt and a natural, wherein the cyclamen aldehyde is 0.02 wt % to 10.00 wt % of the odor neutralizing compound and wherein the natural is at least one of oil of violet leaves and orris absolute, wherein the oil of violet leaves and orris absolute are collectively 0.002 wt % to 0.10 wt % of the odor neutralizing compound, the odor neutralizing compound is about 0.0025 wt % to about 5.00 wt % of the oral care product, the odor neutralizing compound has a chemical structure able to undergo molecular nucleophilic substitution upon contact with odor causing chemicals having a sulfur component to thereby neutralize malodors caused by the odor causing chemicals having the sulfur component, the oral care product being effective to neutralize malodors in the mouth upon use of the oral care product, the odor neutralizing compound being free of bactericidal agents.

2. An oral care product as claimed in claim 1, wherein said odor neutralizing compound is mixed into said base oral care product.

3. An oral care product as claimed in claim 2, wherein said base oral care product is a product selected from the group consisting of: mouth rinse, mouthwash, tooth paste, lozenges, breath mints, breath freshening wafers, and chewing gum.

4. An oral care product as claimed in claim 1, wherein said odor neutralizing compound is coated onto said base oral care product or impregnated into said base oral care product.

5. An oral care product as claimed in claim 4, wherein said oral care product is a product selected from the group consisting of: toothpicks, a tooth brush, dental floss, oral swab, tongue scraper, and tongue cleaner.

6. An oral care product as claimed in claim 1, wherein the zinc salt includes at least one of zinc acetate, zinc citrate, zinc lactate, and zinc gluconate.

7. An oral care product as claimed in claim 1, further comprising: a flavoring agent and a sweetening agent.

8. An oral care product as claimed in claim 7, wherein said flavoring agent is one of oil peppermint, oil spearmint, oil clove, oil wintergreen, and oil sassafras.

9. An oral care product as claimed in claim 7, wherein said sweetening agent is one of aspartame, saccharin, and dextrose.

10. An oral care product as claimed in claim 7, wherein said flavoring agent and said sweetening agent are in the oral care product at a level of 0.002 percent to 3.0 percent by weight.

11. The oral care product of claim 1, wherein the cyclamen aldehyde is 0.02 wt % to 1.00 wt % of the odor neutralizing compound.

12. The oral care product of claim 1, wherein the natural is 0.005 wt % to 0.100 wt % of the odor neutralizing compound.

13. An oral care product made by a process comprising the steps of:
providing a flavoring agent having a flavor to be used in an oral care product;
adding an odor neutralizing agent to the flavoring agent to provide a mixture of the flavoring agent with the odor neutralizing agent, wherein the odor neutralizing agent includes a combination of ionone, irone, and cyclamen aldehyde with zinc salt and a natural, wherein the cyclamen aldehyde is 0.02 wt % to 10.00 wt % of the odor neutralizing compound and wherein the natural is at least one of oil of violet leaves and orris absolute, wherein the oil of violet leaves and orris absolute are collectively 0.002 wt % to 0.10 wt % of the odor neutralizing compound, the odor neutralizing agent has a chemical structure able to undergo molecular nucleophilic substitution upon contact with odor causing chemicals having a sulfur component to thereby neutralize malodors caused by the odor causing chemicals having the sulfur component, the odor neutralizing agent being free of a bactericidal agent; and
adding the mixture to ingredients of an oral care product during manufacture of the oral care product to produce the oral care product, the oral care product being effective to neutralize malodors in the mouth upon use of the oral care product.

14. The oral care product of claim 13, wherein the cyclamen aldehyde is 0.02 wt % to 1.00 wt % of the odor neutralizing compound.

15. The oral care product of claim 13, wherein the natural is 0.005 wt % to 0.100 wt % of the odor neutralizing compound.

16. An oral care product, comprising:
a base oral care product; and
an odor neutralizing compound incorporated with said base oral care product, wherein the odor neutralizing compound comprises irone, one or more aldehydes, one or more naturals, and one or more zinc complexes,
wherein the natural is one or more of oil of violet leaves and orris absolute, and wherein the aldehyde is cyclamen aldehyde, and wherein the zinc complex is one or more of zinc acetate, zinc citrate, zinc lactate, and zinc gluconate, wherein the cyclamen aldehyde is 0.02 wt % to 10.00 wt % of the odor neutralizing compound and wherein the oil of violet leaves and orris absolute are collectively 0.002 wt % to 0.10 wt % of the odor neutralizing compound, the odor neutralizing compound being free of bactericidal agent.

17. An oral care product as claimed in claim 16, wherein said odor neutralizing compound is about 0.0025 wt % to about 5.00 wt % of the oral care product.

18. The oral care product of claim 16, wherein the cyclamen aldehyde is 0.02 wt % to 1.00 wt % of the odor neutralizing compound.

19. The oral care product of claim 16, wherein the natural is 0.005 wt % to 0.100 wt % of the odor neutralizing compound.

I Claim:

1. A method of making an oral care product, comprising the steps of:
providing a concentrated flavoring agent having a flavor to be used in an oral care product;
adding an odor neutralizing agent to the concentrated flavoring agent to provide a mixture of the flavoring agent with the odor neutralizing agent; and
adding the mixture to ingredients of an oral care product during manufacture of the oral care product to produce the oral care product.

2. A method as claimed in claim 1, wherein the oral care product is one product selected from the group consisting of: mouth rinse, mouthwash, tooth paste, lozenges, breath mints, breath freshening wafers, oral swab, and chewing gum.

3. A method as claimed in claim 1, wherein said odor neutralizing agent is O.M. Complex oral compound.

4. A method as claimed in 1, wherein said odor neutralizing agent is mixed into said concentrated flavoring agent in an amount of 0.20 to 5.00 percent by volume of the odor neutralizing agent.

5. A method as claimed in claim 1, wherein said odor neutralizing agent has a concentration in the final oral care product of 0.00020 to 0.01 percent per volume.

6. A method as claimed in claim 1, wherein said odor neutralizing agent has a concentration in the oral care product of 0.000001 to 0.000006 parts per million.

7. A method as claimed in claim 1, wherein said flavoring agent is an agent selected from the group consisting of: peppermint, spearmint, wintergreen, cinnamon, bubblegum, anise, fruit flavors, chocolate, peanut butter, pine, tea, fennel, lavender, ginger, neem, and vanilla.

8. An oral or nasal care product, comprising:

a base oral or nasal care product; and

an odor neutralizing compound incorporated with said base oral or nasal care product.

9. An oral or nasal care product as claimed in claim 8, wherein said odor neutralizing compound is mixed into said base oral or nasal care product.

10. An oral or nasal care product as claimed in claim 9, wherein said oral or nasal care product is a product selected from the group consisting of: mouth rinse, mouthwash, tooth paste, lozenges, breath mints, breath freshening wafers, chewing gum, nasal spray, nasal swab, nasal flush.

11. An oral or nasal care product as claimed in claim 8, wherein said odor neutralizing compound is coated onto said base oral or nasal care product or impregnated into said base oral or nasal care product.

12. An oral or nasal care product as claimed in claim 11, wherein said oral or nasal care product is a product selected from the group consisting of: toothpicks, a tooth brush, dental floss, oral swab, tongue scraper, and tongue cleaner.

13. An oral or nasal care product as claimed in claim 8, wherein said odor neutralizing compound comprises: an O.M. Complex of about 0.0025 to 5.00 percent; an ionone alpha, ionone beta, or ionone gamma containing a carbonyl group; an aldhyde at 0.02 to 10.00 percent; and a natural at 0.002 to 0.10 percent.

14. An oral or nasal care product as claimed in claim 13, wherein the natural is one of oil of cardamom, oil of violet leaves, orris concrete, ionone, irone, cyclamen, zinc acetate, zinc citrate, zinc lactate, and zinc gluconate.

15. An oral or nasal care product as claimed in claim 8, further comprising:

a flavoring agent and a sweetening agent.

16. An oral or nasal care product as claimed in claim 15, wherein said flavoring agent is one of oil peppermint, oil spearmint, oil clove, oil wintergreen, and oil sassafras.

17. An oral or nasal care product as claimed in claim 15, wherein said sweetening agent is one of aspartame, saccharin, and dextrose.

18. An oral or nasal care product as claimed in claim 15, wherein said flavoring agent and said sweetening agent are in the oral care product at a level of 0.002 percent to 3.0 percent by weight.

19. An oral or nasal care product as claimed in claim 8, further comprising: ionone, irone, cyclamen aldehyde, zinc salts splits and a natural, wherein said natural is one of oil of cardamon, violet leaves, and orris absolute.

20. An oral or nasal care product as claimed in claim 8, further comprising: a bactericidal agent.

21. A method of neutralizing malodors in a persons mouth, comprising the steps of:
using an oral care product including an odor neutralizing agent in a manner typical for that type of oral care product; and
reacting thiol groups of volatile sulfur compounds with the odor neutralizing agent during use of the oral care product.

22. An oral care product made by a process comprising the steps of:
providing a concentrated flavoring agent having a flavor to be used in an oral care product;
adding an odor neutralizing agent to the concentrated flavoring agent to provide a mixture of the flavoring agent with the odor neutralizing agent; and

adding the mixture to ingredients of an oral care product during manufacture of the oral care product to produce the oral care product.

23. A method of making an oral care product, comprising the steps of:

providing a concentrated flavoring agent having a flavor to be used in an oral care product;

adding an odor neutralizing agent to the concentrated flavoring agent to provide a mixture of the flavoring agent with the odor neutralizing agent; and

adding the mixture to ingredients of an oral care product during manufacture of the oral care product to produce the oral care product.