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**Intellectual Property
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Anti-Cariou Dentrifices, Rinses, Lozenges, Candies and Chewing Gums

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Background

Fluoride is well known to be effective in the prevention of dental caries by reducing demineralization and promoting remineralization. It is widely used in compositions in the form of toothpastes, gels, rinses and varnishes. The prevention of caries from the use of these products is due to their ability to deposit fluoride in plaque and saliva and also on the surfaces of teeth and other tissues. However, existing compositions generally produce very small amounts of orally retained fluoride compared to the total fluoride content of the product.

Invention Description

ADA researchers have developed non-toxic soluble calcium-containing materials that, when used prior to administration of a fluoride-containing compound, increase the effectiveness of the fluoride treatment by enabling a larger and longer-lasting labile oral fluoride reservoir of calcium fluoride to be formed, than can be achieved when using fluoride alone. Calcium-containing compounds are selected from a number of commercially-available and other compounds that are recognized as food additives in other contexts, and so are safe. They can be incorporated into a variety of consumer dental products intended for home use.

Potential Applications

The compositions can be included in products specially formulated to produce high levels of calcium release immediately before the release of fluoride, including

- Mouth rinses
- Lozenges
- Chewing gums
- Candies
- Dentifrices (tooth pastes)

Benefits and Advantages

- Safe, non-toxic materials that may also be used as food additives
- Easy-to-use
- Large labile calcium fluoride reservoir: allows extended fluoride release
- Longer lasting: more than 5 X saliva fluoride retention overnight, when compared to a fluoride-only rinse.
- Allows reduced fluoride content products: doubles the saliva fluoride retention compared to only a higher fluoride-containing rinse.