

New 'dissolvable tobacco' products may increase risk of mouth disease

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The first study to analyze the complex ingredients in the new genre of dissolvable tobacco products has concluded that these pop-into-the-mouth replacements for cigarettes in places where smoking is banned have the potential to cause mouth diseases and other problems. The report appears in ACS's *Journal of Agricultural and Food Chemistry*.

John V. Goodpaster and colleagues point out that the first dissolvable tobacco products went on sale in 2009 in test markets in Indianapolis, Ind., Columbus, Ohio, and Portland, Ore. The products contain finely-ground tobacco and other ingredients processed into pellet, stick, and strip forms that are advertised as smoke and spit-free. Health officials are concerned about whether the products, which dissolve inside the mouth near the lips and gums, are in fact a safer alternative to cigarette smoking. Goodpaster and colleagues note the possibility that children may be accidentally poisoned by the nicotine in these products. "The packaging and design of the dissolvables may also appeal to children, and some dissolvables, such as Orbs, may be mistaken for candy," the report states.

The researchers' analysis found that the products contain mainly nicotine and a variety of flavoring ingredients, sweeteners, and binders. They note abundant scientific evidence about the potential adverse health effects of nicotine, including those involving the teeth and gums. Other ingredients in dissolvables have the potential to increase the risk of tooth decay and one, coumarin, has been banned as a flavoring agent in food because of its link to a risk of liver damage.

"The results presented here are the first to reveal the complexity of dissolvable [tobacco products](#) and may be used to assess potential health effects," said Goodpaster, noting that it is "therefore important to understand some of the potential toxicological effects of some of the ingredients of these products." [Nicotine](#) in particular, he noted, is a toxic substance linked to the development of oral cancers and gum disease.

More information: "Chemical Characterization of Dissolvable Tobacco Products Promoted To Reduce Harm", *Journal of Agricultural and Food Chemistry*.

Provided by American Chemical Society

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