

## A deep red, cranberry-tinted lipstick that's also antimicrobial

December 16 2022



Adding cranberry extract to a lipstick cream allowed it to fight off viruses, bacteria and a type of fungus. Credit: *ACS Applied Materials & Interfaces* (2022). DOI: 10.1021/acsami.2c19460



Lipstick can be a confidence booster, enhance a costume and keep lips from chapping. But sharing a tube with a friend or family member can also spread infections. To develop a version with antimicrobial properties, researchers reporting in *ACS Applied Materials & Interfaces* have added cranberry extract to the formulation. Their deep red cream quickly inactivates disease-causing viruses, bacteria and a fungus that come in contact with it.

According to historians, people in ancient Egypt were the first to use make-up, applying pastes made from minerals and other substances in their environment. The formulations have evolved over the centuries, but now researchers have come full circle, looking again toward <u>natural</u> <u>ingredients</u>.

For example, recent studies have reported that lipstick formulas incorporating natural colorants, such as red dragon fruit, can result in products with both vibrant colors and antimicrobial activity. And previously, cranberry extract has been shown to inactivate viruses, bacteria and fungi. So, Ángel Serrano-Aroca and colleagues wanted to use cranberry extract to create a deep red lip tint with <u>antimicrobial</u> properties.

The research team mixed cranberry extract into a lipstick cream base, which contained shea butter, vitamin E, provitamin B5, babassu oil and avocado oil. In experiments, the reddened cream was added to cultures containing different viruses, bacteria and one fungal species. Both enveloped and non-enveloped virus types were completely inactivated within a minute of contact with the cranberry-containing cream.

And the multidrug-resistant bacteria, mycobacteria and fungus were substantially inactivated within five hours of applying the cream. The researchers suggest that their novel lipstick formula could offer protection against a variety of disease-causing microorganisms.



**More information:** Alberto Tuñón-Molina et al, Antimicrobial Lipstick: Bio-Based Composition against Viruses, Bacteria, and Fungi, *ACS Applied Materials & Interfaces* (2022). <u>DOI:</u> <u>10.1021/acsami.2c19460</u>

Provided by American Chemical Society

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