

UGM Students Develop Antibacterial Gum from Onion Skin Extract

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Red onion is one of the plants that are commonly used as spice in cooking and has many benefits for the health. Another part of this plant which is its skin turns out to have many benefits for our body.

In the hands of five UGM students, onion skin which becomes waste is processed into an innovative product. They turn the waste of the peel into an effective gum, namely Alice Wonder Gum, to repel the bacteria in the teeth and mouth.

“All this while, onion skin has yet to be utilized maximally by the society. On the other hand, it contains compounds that are good for maintaining the body health,” said Sofia Maulida, research team leader, on Monday (19/6) at UGM.

Sofia said the skin of onion (*Allium cepa* var *ascalonicum*) contains antibacterial ingredients, including flavonoid and phenol. Those compounds can obstruct the growth of microorganisms in the oral cavity which can cause dental diseases, such as caries.



“The prevalence of dental and oral health cases in Indonesia is still high. Therefore, we try to find an alternative solution to solve this issue,” said Sofia.

Together with Derana Widyastika, Irma Prasety Ayu, and Lely Sintya from Faculty of Dentistry, as well as Rizqi Dinni Fauzia from Faculty of Pharmacy, Sofia develops antibacterial gum through the Students Creativity Programme under the supervision of Dr. drg. Alma Linggar Jonarta, M.Kes.

The onion skin extract is packed in the form of chewing gum. Sofia said it can help to clean up the leftovers that stick on the teeth. Moreover, the chewing gum movement can also increase the production of saliva as an oral flushing as well as antibacterial. Therefore, the process of the oral cavity cleaning can be more optimal.

“The amount of bacteria in the saliva significantly decreases after chewing Alice Wonder Gum. The result is not different from chewing gum which contains xylitol,” she added.

In order to disguise the taste of onion, mannitol is added into the product to produce a sweet taste. Fortunately, it does not cause caries in the teeth.

“Alice Wonder Gum can be an alternative solution of antibacterial for the teeth and mouth health that is safe and effective for all ages,” said Sofia.

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