

## Antioxidant Face Mask from Purple Sweet Potato (*Ipomea Batatas*) with Oleum Citrus

**Authors :** Lilis Kistriyani, Dine Olisvia, Lutfi Rahmawati

**Abstract :** Facial mask is an important part of every beauty treatment because it will give a smooth and gentle effect on the face. This research is done to make edible film that will be applied for face mask. The main ingredient in making this edible film is purple sweet potato powder with the addition of glycerol as plasticizer. One of the ingredients in purple sweet potato is a flavonoid compound. The purpose of this study was to determine the effect of increasing the amount of glycerol to flavonoids release and the effect on the physical properties and biological properties of edible film produced. The stages of this research are the making of edible film, then perform some analysis, among others, spectrophotometer UV-vis analysis to find out how many flavonoids can be released into facial skin, tensile strength and elongation of break analysis, biodegradability analysis, and microbiological analysis. The variation of edible film is the volume of glycerol that is 1 ml, 2 ml, 3 ml. The results of spectrophotometer UV-vis analysis showed that the most flavonoid release concentration is 20.33 ppm in the 2 ml glycerol variation. The best tensile strength value is 8,502 N, and the greatest elongation of break value is 14% in 1 ml glycerol variation. In the biodegradability test, the more volume of glycerol added the faster the edible film is degraded. The results of microbiological analysis showed that purple sweet potato extract has the ability to inhibit the growth of *Propionibacterium acnes* seen in the presence of inhibiting zone which is 18.9 mm.

**Keywords :** face mask, edible film, plasticizer, flavonoid

**Conference Title :** ICBE 2018 : International Conference on Biochemical Engineering

**Conference Location :** Singapore, Singapore

**Conference Dates :** March 22-23, 2018