

ABSTRACT

Plastics used by the public as shopping bags to beverage cups take 30 years to decompose. one solution is the manufacture of edible cups. The making of this edible cup uses red algae and kawista as an antidiabetic. This study aims to determine the characteristics of edible cups from red algae and determine the decrease in glucose levels by kawista extract that will be added to edible cups. The manufacture of edible cups begins with the extraction of red algae with 10% KOH, then the extract is made carrageenan and added glycerol with formulations F1 (0.5%), F2 (1%), F3 (2.5%), F4 (5%), and F5 (7.5%). The resulting edible cup will be tested for moisture content, thickness test, tensile test, leakage test, and water absorption test. Edible cup was then added with Kawista fruit extract as an antidiabetic. Extract testing was carried out by mixing extracts with formulations of 0.2%, 0.4%, 0.6%, 8%, 1% into glucose solution. The results showed that the best formulation in making edible cups was formula F3 because it produced edible cups with high tensile strength, low thickness and the smallest water absorption. Edible cup formulation F3 has a characteristic water content of 0.25%, thickness of 2.49 mm, tensile strength of 7.3%, absorbency of 0.28%. The higher the concentration of kawista extract used, the greater the decrease in glucose. A concentration of 60 ppm of kawista extract reduced glucose levels by 42%.

Keywords: Edible cup, red algae, kawista fruit