Inhibitory Power of Bacterial Growth in the Composition Formulation for Making Liquid Soap Based on Waste of Cooking Oil

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Abstract. Utilization of waste cooking oil as a raw material in the manufacture of liquid soap is to process it into goods that have economic value and prevent environmental pollution. The purpose of this study was to determine the composition of used cooking oil and KOH which has a very strong inhibitory effect on bacterial growth. The composition ratio (w/w) used between waste cooking oil and KOH is 425:75, 400:100, and 325:125. The process of making liquid soap is carried out experimentally using hot process of method, which begins with refining waste of cooking oil using actived of charcoal. Testing the inhibition of bacterial growth was carried out In Vitro using Staphylococcus Aureus bacteria contamination. The results achieved in this study are liquid soap with a composition of 375 grams of used cooking oil and 125 grams of KOH which has a very strong inhibition of bacterial growth.

Keyword: liquid soap, bacteria, cooking oil, environment