

ABSTRACT

EFFECT OF CONTACT TIME OF RAJA NANGKA PEEL ADSORBENT ON FREE FATTY ACID USED COOKING OIL

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Cooking oil is a basic necessity that is needed in food processing. However, cooking oil that is used continuously or better known as used cooking oil can have a negative impact on health because there are carcinogenic compounds, such as high free fatty acids in used cooking oil. Therefore, it is necessary to conduct research to reduce the acid number contained in used cooking oil using the adsorption method. The adsorbent used was jackfruit banana peel. The length of adsorption time is one of the influential factors in the adsorption process so that the purpose of this study is to determine the effect of the length of contact time of jackfruit plantain peel adsorbent on reducing the acid number of used cooking oil.

The variations of contact time used in this study are 30, 60, 90, 120 and 150 minutes. The method used to analyze free fatty acids in used cooking oil is alkalimetric titration. The results obtained in this study were the highest percent reduction in acid number at 150 minutes of contact time with a result of 49.2433%.

Keyword : Raja Nangka Banana Peel, Used Cooking Oil, Free Fatty Acid, Adsorption.