

ABSTRACT

EFFECT OF JACKFRUIT BANANA PEEL ADSORBENT MASS ON PEROXIDE NUMBER OF COOKING OIL

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Cooking oil is commonly used for food processing. Cooking oil that is used repeatedly is called used cooking oil. Oil that is used repeatedly is not good for health because it contains peroxide compounds. Therefore, it is necessary to purify the used cooking oil using adsorption method. This study aims to find the effect of mass variation on the reduction of peroxide number of used cooking oil. In this study, the adsorption of used cooking oil was carried out using 20% KOH-activated jackfruit banana peel adsorbent with adsorbent mass variations of 2, 4, 6, 8, and 10 grams. Banana peels were cut, washed, dried in the sun for 7 hours and then dried using an oven at 105°C and then blended until smooth. Before being used as adsorbent, the banana peels were activated using 20% KOH solution. Peroxide value testing was carried out on used cooking oil using the iodometric method. Based on the results showed that the more the addition of activated adsorbent mass, the peroxide number decreased. The purified results meet the requirements of SNI 3741: 2013, namely with a maximum peroxide number value of 10 meq O₂/kg. The best peroxide number reduction value is at a mass of 10 grams of adsorbent with a value of 7.8004 meq O₂/kg with a reduction efficiency of 35.46%.

Keywords: Used Cooking Oil, Peroxide, Adsorption, Jackfruit King Banana Peels