

ABSTRACT

THE EFFECT OF ADDING 20% TURMERIC POWDER IN USED COOKING OIL ON ACID NUMBER WITH VARIATIONS IN THE LENGTH OF ADSORPTION TIME

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Cooking oil is one of the basic needs commonly used by the community in processing food. Cooking oil that is used repeatedly or referred to as used cooking oil can experience changes in chemical composition with carcinogenic compounds such as free fatty acids in the oil so that it is not suitable for consumption. Further research needs to be done to lower free fatty acids. The adsorbent used is turmeric. The length of adsorption time can reduce the acid number in used cooking oil. The variation in the length of time used in this study was 35, 45, 50, 55, and 60 minutes. The method used to analyze free fatty acids in used cooking oil is alkalimetric titration. The results of the acid number obtained in this study with a length of time of 35, 45, 50, 55 and 60 minutes respectively 1,6696; 1,4427; 1,2722; 1,1565; 0,9462 mg KOH/g with a percent decrease of 17,5750; 28,7766; 37,1939; 42,9058; 53,2879%. Based on the analysis of the kruskal wallis test using SPSS, it can be concluded that the length of adsorption time has an effect on reducing the acid number in minyak jelantah, showing a sig result of 0.010 namely < 0.05 . So it can be concluded that with the addition of 20 grams of turmeric powder with a temperature of 70°C, the highest decrease results were obtained at a variation in the length of adsorption time of 60 minutes with a percent decrease in acid number of 53,2879%.

Keywords : Used Cooking Oil, Acid Number, Adsorption, Turmeric