

ABSTRACT

EFFECT OF 10% TURMERIC POWDER IN WASTED COOKED OIL ON WATER CONTENT WITH VARIATIONS IN ADSORPTION TIME

(Time Length Variations 35,40,50,55,60 Minutes)

Intan Puspitasari

Used cooking oil is oil that has been used more than two or three times for frying. It can be categorized as waste because it damages the environment and causes various diseases. Water content is related to the hydrolysis reaction of fat, if there is water in fat or oil then the oil will be hydrolyzed to produce water content. To reduce the water content of used cooking oil, a substance is needed that can prevent, inhibit and delay the oxidation process, called an antioxidant. One method that can be used to purify used cooking oil is by adsorption. Turmeric is used as an adsorbent because it contains chemical compounds, namely essential oils and curcuminoids which contain curcumin compounds and their derivatives. What is taken into consideration in this research is the water content in used cooking oil after adsorption using turmeric powder adsorbent for varying lengths of time, where variations in the length of adsorption time can affect the amount of water content in used cooking oil. The aim of this research was to determine the effect of adding 10% turmeric powder to used cooking oil on the content of used cooking oil. water with varying lengths of time 35,40,50,55 and 60 minutes. The test results show that a long adsorption time can reduce the water content from 0.1319% to 0.1186%; 0.1099%; 0.1006%; 0.0946% and 0.0786%. The best results were obtained at an adsorption time of 60 minutes.

Keywords: Used cooking oil, Air content, Turmeric, Time variation, Adsorption.