

**ABSTRACT**  
**(LITERATURE REVIEW)**

**THE EFFECT OF LENGTH TIME ADSORPTION TO THE PEROXIDE  
NUMBER OF USED COOKING OIL USING ACTIVE CHARCOAL  
ADSORBENT**

**Khoirun Nisa'**

Repeated use of cooking oil at high temperatures will cause used oil to be unsuitable for re-consumption. The oil will undergo changes in chemical composition that are carcinogenic due to the presence of a peroxide group. To reduce the risks that arise due to the use of used oil, it can be done by recovering used oil, one of which is using the adsorption method so that the oil can be reused without reducing the quality of the cooking oil. The method used in this literature review is to search for literature that is relevant to the research theme through Google Scholar. From the results of the study, 3 fulltext manuscripts were obtained which will be used as the main literature in this literature review. Based on the results of the literature review, it is known that the length of time of adsorption and the period of adsorbent affect the decrease in the number of peroxides that can meet the quality requirements of cooking oil according to SNI 01-3741-1995, namely a max of 2 meq/kg.

The study entitled the use of corn husks as bioadsorbents to regenerate used cooking oil resulted in a decrease in the number of peroxides that still meet SNI standards, which is optimal in adding bioadsorbents as much as 10 grams with a contact time of 90 minutes, which is 1.15 meq / kg.

The study entitled purification of used cooking oil with the adsorption process using peanut shell charcoal (*Arachis hypogaea L.*) showed that the lowest peroxide number was found at a purification time of 120 minutes, which was 1.83 meq/kg. The data is relatively low and in accordance with the quality requirements of cooking oil according to SNI 01-3741-1995, where the quality requirement of the peroxide number is max 2 meq/kg.

The study entitled the regeneration of used cooking oil by the adsorption process using pineapple pulp (*Ananas comosus*) showed that the antioxidants contained in pineapple pulp have effectiveness in improving the quality of used cooking oil, the result of a decrease in the optimum Peroxide number at the time of 24-hour soaking with an adsorbent mass of 15 grams obtained peroxide number which was previously 6 meq/Kg down by 5.2 meq/Kg.

**Keywords :** *Used cooking oil, adsorption, peroxide number.*