

## **ABSTRACT**

### **THE EFFECT OF ADDING 15% TURMERIC POWDER IN USED COOKING OIL ON WATER CONTENT WITH VARIATIONS IN THE LENGTH OF ADSORPTION TIME**

**Nafi'ah Rizky Amalia**

Used cooking oil or often called used cooking oil is oil that is used repeatedly by the community either in households or traders. The process that can be used to reduce used cooking oil waste is by purification using natural materials as adsorbents. The use of adsorbents from turmeric powder is one way to purify used cooking oil, which aims to determine the effect of adding turmeric powder as an adsorbent. The results of this study using turmeric powder adsorbent as much as 15 grams with an adsorption process of 35, 45, 50, 55, 60 minutes and heated with a temperature of 130 °C for 30 minutes 3 times replication decreased the water content respectively with an average of 0.134920477% to 0.129603414%, 0.103022206%, 0.100379581%, 0.083795539%, and 0.077205173%. The lowest moisture content after the used cooking oil was adsorbed with the heating process was obtained at 60 minutes, which was 0.077205173%. The purification results meet the quality requirements of cooking oil because according to SNI-7709: 2019 the water content in used maximum of 0.1%.

**Keywords:** Used Cooking Oil, Turmeric Powder, Water Content, Time Duration.