

ABSTRACT

Zalfa Nurul Zahirah. EFFECTS OF VIRGIN COCONUT OIL (VCO) ON LEE INDEX, ABDOMINAL FAT, FEED DIGESTIBILITY, AND BLOOD GLUCOSE IN MICE INDUCED BY TRANS OIL. Thesis of Biology Study Program, Faculty of Mathematics and Natural Sciences, State University of Jakarta. Under supervised by ATIN SUPIYANI, TRI HANDAYANI KURNIATI.

Trans oil is an oil that contains unsaturated fatty acids with double bonds in the trans configuration, and could be bad for health if consumed in excess. This study aims to determine the effect of giving virgin coconut oil (VCO) on Lee index, abdominal fat, feed digestibility, and blood glucose of mice given trans oil (MT). A total of 25 male DDY strain mice 2 months in age were divided into 5 treatment groups, two control groups and 3 other groups given VCO with different doses. Lee index was obtained from the cube root of body weight (g) divided by nasoanal length (cm) and multiplied by 1000 and abdominal fat was taken from the abdominal cavity of mice. Food digestibility was calculated from the ratio of the amount of feed absorbed by the body with the amount of feed consumed. Measurement of blood glucose levels was carried out by taking blood from the tail vein of mice and was measured using the Easy Touch GCU tool. The results showed that the giving of trans oil and VCO in mice were Lee index 293.2-321.2; abdominal fat 0.4-1.0 g; feed digestibility 71.1-74.2%; and blood glucose 146.6-188.6 mg/dL. In this study, VCO affected the reduction of abdominal fat, change in blood glucose status to normoglycemia, and enhancement of feed digestibility, but VCO did not affect the Lee index of mice given trans oil for 8 weeks.

Keywords. *Blood Glucose, Food Digestibility, Lee index, Trans Oil, VCO.*