CHEMICAL AND BIOLOGICAL EVALUATION OF PALM OIL, PALM KERNEL OIL AND GHEE

By

MONA AHMED ABDEL HAMEED KATRY
B.Sc. Agric. Sci. (Food Science), Fac. Agric., Cairo Univ., 2007

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APPROVAL SHEET

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ABSTRACT

The influence of high fat diets (HFD) containing single fat; palm oil (PO), palm kernel oil (PKO), or ghee on feed efficiency, lipid profile, kidney function and histopathological status of liver and heart of rats were studied. Male adult albino rats were fed on basal diet contained 10% corn oil or HFD that contained either of PO, PKO, corn oil or ghee and 1% cholesterol for twelve weeks. Results showed that feeding rats on HFD containing PO or PKO significantly increased serum total cholesterol, triglycerides and VLDL-C levels compared with those of rats that were fed on basal diet or HFD containing corn oil or ghee. The highest LDL cholesterol level and the lowest total antioxidant capacity level were recorded in rats that were fed on PKO diet. Results indicated that PO and PKO caused significant increase in cholesterol level in liver cells compared to ghee and corn oil. The histopathological examination showed that feeding rats on HFD diet containing ghee for 12 weeks caused minimum damage to liver cells .Feeding rats on PKO diet caused undesirable histopathological changes in heart cells.

Keywords: Ghee, lipid profile, palm oil, palm kernel oil, cholesterol.

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