

Effect of Repetitive Frying on Nutritive Value of Soybean

Gayson Srichindarat, author

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Abstrak

ABSTRACT

Soybean oil was used for deep frying with chicken at 180 C. 60 min for 2 and 4 times. The Fresh or heated oils were then supplemented with the basal diet for 10% (w/w). Thirty-three male albino rats, 5 weeks old, were used in this study. They were divided into 3 groups based on their initial body weights and blood cholesterol levels and were fed diet supplemented with fresh, 2-time heated, or 4-time heated soybean oils. During 3 week period that 3 diets were given, body weight and food intake were determined. After this 3-weeks testperiod, the rats were weighed and sacrificed. Blood samples were taken from the heart. Livers and kidneys were removed and weighed. Iodine number, peroxide number, and vitamin E content of oils were also measured. There were no differences between rats fed fresh, 2-time heated or, 4-time heated soybean oils for body weight, food intake, liver and kidney weights, and blood cholesterol levels ($p > 0.05$). Iodine number which expresses the degree of unsaturation of fatty acids in the oil was decreased significantly in both 2-time heated and 4-time heated soybean oil compared to fresh soybean oil ($p < 0.001$). In this study, it could be concluded that soybean oil which has been used for deep frying at 180 C for 60 min for 4 times still retain its nutritive value