

Abstract

Quality improvement of fried palm oil by adsorption with rice husk ash (burned at 550 ° C, 12 hr). Study the effect of temperature, time and percentage of rice husk ash to improve the quality of used fried chicken palm oil. It was found that the adsorption of rice husk ash at 80±2 and 105±2 ° C could improve the quality of used fried oil better than the adsorption at room temperature (about 27±2 ° C). The study conditions on treated of used palm oil with rice husk ash were percentage of rice husk ash 20, 25 and 30% and adsorption time 10, 20 and 30 min. The results showed more amount of rice husk ash could regenerate better both physical and chemical qualities of treated oils in terms of PV, FFA, p-AV, TPC, and viscosity. In this experiment, 30% of rice husk ash gave the best results. The adsorption time for 20 min and 30 min showed non-significant difference ($P>0.05$) on the oil quality parameters, but they were much more improved than that treated for 10 min.

The study in mixing proportion of fresh palm oil to improved oil; 100:0 75:25 50:50 and 25:75 on frying nugget oil qualities e.g. FFA, p-AV, TPC and viscosity, it was found to increase constantly during repeated of frying for 7 days. In contrast, PV increased first three days and decrease thereafter for all mixing proportion. Higher proportion of improved oil resulted in higher values of FFA, TPC, p-AV, viscosity and chroma (C^*) of mixed oil, while lower of PV and color lightness (L^*). Changing rate of all quality indices was almost the same for every oil proportion during frying of nugget.

The study quality during storage of frying nugget in mixing proportion of fresh palm oil to improved oil; 100:0 75:25 50:50 and 25:75. Fried nuggets from higher proportion of improved oil got higher TBA values compared to the same storage period, repeated oil also made higher TBA values. TBA changing rate for all oil proportion showed non-significant difference.