

Monitoring the Effect of Deep Frying and the Type of Food on the Quality of Oil

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Abstract : Different types of food like banana, potato and chicken affect the quality of oil during deep fat frying. The changes in the quality of oil were evaluated and compared. Four different types of edible oils, namely, corn oil, soybean, canola, and palm oil were used for deep fat frying at $180^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 5 h/d for six consecutive days. A potato was sliced into 7-8 cm length wedges and chicken was cut into uniform pieces of 100 g each. The parameters used to assess the quality of oil were total polar compound (TPC), iodine value (IV), specific extinction $E_{1\%}^{1\text{cm}}$ at 233 nm and 269 nm, fatty acid composition (FAC), free fatty acids (FFA), viscosity (cp) and changes in the thermal properties. Results showed that, TPC, IV, FAC, Viscosity (cp) and FFA composition changed significantly with time ($P < 0.05$) and type of food. Significant differences ($P < 0.05$) were noted for the used parameters during frying of the above mentioned three products.

Keywords : frying potato, chicken, frying deterioration, quality of oil

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020