

IMPROVEMENT OF THE PRODUCTIVITY OF SOFT DOUGH BISCUITS BY REGULATING TEMPERATURE AND QUANTITY OF PALM OLEIN

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ABSTRACT

Soft dough is characterized by their composition based upon three major ingredients namely flour, fat and sugar. Palm olein is an important ingredient in bakery products and it plays numerous roles by providing desirable textural properties of baking products. It has good resistance to oxidation and formation of breakdown products at frying temperatures and longer shelf life of finished products, particularly biscuits. The amount and the temperature of palm olein affect the structural and textural characteristics of soft dough biscuits and quality parameters of biscuits. This research was carried out to determine the most appropriate palm olein quantity and temperature without compromising the final quality of soft dough biscuits. In order to study the influence of temperature regulation (34 °C, 32 °C and 30 °C) and the amount of the incorporated palm olein (56 kg, 54 kg, 52 kg and 50 kg) on the biscuit characteristics; twelve different treatments were conducted. Palm olein temperature was regulated by using the oil heating system in mixing area. Final quality of the biscuit was evaluated using raw weight, bake weight, bake height, pH of the biscuit and moisture content of the biscuit. The study revealed that the texture of biscuits was greatly depending on the texture of the biscuit dough. Besides being responsible for a soft dough biscuit texture, palm olein also imparts flavour, taste, mouth feel, and lubricity to the product. The present study showed that in spite of significant alteration achieved in biscuit quality. Consequently 54 kg of palm olein with 32 °C of temperature was selected as the best treatment combination because it gave the values within the standard range with preferable sensory attributes of final biscuit.

Keywords: Palm olein, Sensory analysis, Soft dough biscuits, Texture, Quality Characteristic