

Abstract

This study was to investigate an appropriation of ripening stage of banana and processing for development of fried banana chips. The result showed that the product from banana at ripening stage No. 1 provided yellow appearance and had the highest sensory evaluation scores in color, flavor and overall liking. Sliced banana were soaked in sodium chloride (NaCl) and sodium metabisulfite ($\text{Na}_2\text{S}_2\text{O}_5$) solution before frying to inhibit browning reaction. The results showed that both solutions did not have effect on brown color because CIE (L^* a^* b^*) and sensory evaluation scores in appearance, color and flavor were not significantly different from control sample ($p > 0.05$). The appropriate frying temperature and time were then studied. It was found that frying at 160°C for 4 min made fried banana for the most yellowness (b^*). Drying of fried banana by food dehydrator at 60°C for 10, 20 and 30 minutes indicated that CIE (a^* and b^*) and sensory evaluation score in all aspects were not significantly different ($p > 0.05$). However, the drying reduced moisture and fat content but increased L^* as compared with the product without drying. The formula of caramel coating for fried banana chips was composed of water 40%, sugar 36%, butter 22% and salt 2%. Fried banana chips were coated by caramel with the ratio of 1:2. Cashew nuts, sesame or anchovy was then placed on the coated fried banana chips. The accelerated (at 30 45 and 55°C) shelf life of fried banana chips in laminated bag was studied for 7 weeks. The resulted showed that product was more brown and higher a_w and TBA number by time and temperature. Furthermore, the total plate count and yeast and mold of products were higher than Thai commodity product standard of fried banana chips at the seventh week. Accepted evaluation scores in appearance, color, flavor, fracturability and overall were decreased. The shelf life at 25°C of this product was estimated by using TBA number. It was showed that cashew nut, sesame and anchovy topping fried banana had shelf life for 49, 44 and 16 weeks, respectively. The consumer study showed that seventy one percents of the consumers were interested these products and seventy two percents were interesting to buy and accepted in the price of 30 bahts for 100 grams.