

A study on reducing fat content of fried banana chips using a sweet pretreatment technique

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Abstract

Knowledge and concerns of the bad health implications of high fat intake in consumers has resulted in a rising demand for low-fat foods. Consequently, the use of sweet pre-treatment as alternative food source is gaining attention among producers and consumers. The study of reducing oil uptake of fried banana chips using sweet pre-treatment was done. In the preparation of fried banana chips, the sliced banana was blanched at 80°C. Then, the sliced banana was dipped in the treatment for 4 g, 8 g and 12 g of sugar solution. Next, the sliced banana was deep fried at temperature 180°C for 5 minutes. The result showed increased in percentage of moisture reduction (86.65 %, 86.99%, 88.37% and 90.51%) for control and other three fried banana chips as the concentration of sugar used for treatment was increased. For fat content, it showed a decreased in percentage (0.66%, 0.63%, 0.62% and 0.54%) as the sugar concentration used for the treatment was increased. Sugar treatment does not affect the colour of fried banana chips as p-value for lightness (L*) is 0.426 and the p-value for yellowness (b*) is 0.468. This showed that the null hypothesis was accepted and there was no significant difference in lightness and yellowness of all four fried banana chips. Finally, sensory evaluation showed that there was a significant difference in crispiness, colour, sweetness, oiliness and overall acceptance between all four fried banana chips. As the conclusion, sweet pre-treatment gives positive effect on reducing fat content in fried banana chips and can be used as one of the alternative method in producing banana chips with lower amount of fat.

Keywords

Fried banana chips, Reduced fat content