

Supanisa Suttipong 2010: Development of the Processes for Nutrition Addition for Making Sheet Dried Banana. Master of Engineering (Agricultural Engineering), Major Field: Agricultural Engineering, Department of Agricultural Engineering. Thesis Advisor: Assistant Professor Siwalak Pathaverat, Ph.D. 206 pages.

This research was studied on the effect of temperature and time on the level of consumer acceptance of dried banana and using a hedonic scale for the tested texture and total color different. The results showed that the suitable conditions for making sheets dried banana was at 65 °C for 11 hours and then a changed of temperature to 55 °C for 3 hours. Studies of the brown color development of sheet banana by the 4 kinds of chemicals and the different durations for scalded banana, found  $\text{Na}_2\text{S}_2\text{O}_3$  solution at 1000 ppm was suitable for dipped banana before drying. 2 kind of sheet banana were developed: sheet dried banana with cereal and crispy sheet banana with added protein isolated from soybean. The results showed that the sheet dried banana product with cereal which receive maximum consumer acceptance had a quantity of cereal in the ratio of quantity of all cereal between dried sunflower seed 40%, dried pumpkin seed 30% and black and white sesame seed 30% and had the ratio by weight of all cereal seed and sheet banana of 0.1:1. For crispy sheet banana had the suitable condition in formula which had the quantity of ingredient of banana, protein isolate from soybean and sugar 31.46%. Percentage between banana, protein isolate from soybean and sugar were 72, 5 and 23%. And had stable of starch 18.75% which had the ratio between wheat flour and banana starch 2:1, coconut milk 25.46%, NaCl 0.52% and black sesame 1.67% and water 18.39%. The resulted of consumer acceptance with sheet dried banana and crispy sheet banana were got all liking 7.41 and 8.03 respectively. Studies on preserving condition of sheet dried banana and crispy sheet banana by packed product in polyethylene plastic and laminate bag which both bag were packed in vacuum and normal condition. The results showed that sheet dried banana and crispy sheet banana had maximum preserving times in laminate bag at 9 and more than 12 week respectively.

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Thesis Advisor's signature