

## Abstract

The aim of this project is to develop instant pancake mix containing fruit or vegetable to provide healthy choice of product to consumers. A survey was conducted to study consumer's behavior on consumption of pancake and revealed that consumers were willing to buy new pancake product containing fruit or vegetable or fruit and vegetable. Among four top vegetables, consumers ranked carrot as number three following pumpkin and green tea. Carrot was selected for economic purpose. Carrot pulp obtained from carrot juice extraction from vendors around ABAC, Hua Mak campus, was dried at 65°C for 4 hours in a hot air oven and ground into powder to mix with pancake. Three pancake formulas were tried and formula containing 100 cake flour, 5 baking powder, 13.3 sugars, and 1.7 salt mixed with one egg and 150 pasteurized milk was selected as a base formula. Dried carrot powder was varied from 0, 10, 20 to 30% to substitute cake flour. As the amount of dried carrot increased, pancake became flatter, wider and darker correlated to an internal crumb structure of reduced amount of air cells, denser and darker crumb. Sensory evaluation indicated that pancake containing 10% carrot had the highest scores in flavor, carrot aroma and overall acceptance and was not significant difference from control (0%) in color, saltiness, texture and overall acceptance at  $p < 0.05$ . TPA showed that increase in the amount of carrot significantly increased hardness, chewiness and gumminess. Though there were significant differences in springiness, cohesiveness and resilience but not trend was implicated among samples. JAR test on 10% carrot pancake indicated that more than 50% of the test panelists gave 'just right' in color, carrot aroma, flavor, saltiness, and texture. Less than 30% of the test panelists gave 'somewhat too less' in carrot aroma, flavor, saltiness and texture indicating trend with increasing the amount of carrot and salt in the formula. Six new adjusted formulas varying amount of carrot from 5, 10 and 15% and salt 5 and 6% were tested and sensory evaluation resulted in formula containing 15% carrot and 5% salt was most preferred in all attributes and significantly different ( $p < 0.05$ ) from other samples in overall acceptance. The final formula for instant carrot pancake mix containing 85 flour, 15 dried carrot powders, 5 baking powder, 13.3 sugar, and 5 salt to mix with one egg and 150 pasteurized milk received moderately like scores in consumer test with 150 consumers. TPA of final product agreed with TPA results from 0, 10, 20, and 30% carrot pancake.