

Panyarad Luekhajon 2010: Development of Thai Snack Food for Schoolchildren. Master of Science (Home Economics), Major Field: Home Economics, Department of Home Economics. Thesis Advisor: Assistant Professor Anchane Utaipatanacheep, D.Sc. 182 pages.

The objectives of this study were to, 1) develop the nutritional values of 3 Thai snack foods, Krayasart, Khaw Tang Nam Prik Oong, and Khanom Tong Moun, by increasing calcium, vitamin A and fiber contents, reducing fat and sugar, 2) assess sensory acceptance of consumer, 3) compare nutrition values of each product with the original formulas, 4) analyze nutritional value of final products and, 5) determine the shelf-life products in 2 kinds of packaging. For the consumer test, 204 pupils were selected by multi-stage cluster sampling techniques from grade 3 to 6 of Saint John's Private School and Wat Ladplakhao, which is belonged to Bangkok Education Service School.

By adding black sesame seed and carrot, reducing coconut milk, vegetable oil and sugar in these 3 products, were found that Krayasart, Khaw Tang Nam Prik Oong and Khanom Tong Moun were accepted by consumers at level of slightly like. Calcium contents of these 3 products were increased 172.69, 28.29 and 202.42 % respectively, vitaminA was 12.12, 2.97 and 1322.85 % respectively, and fiber content was increased 127.87, 8.56 and 1222.22 % respectively. Fat contents of Krayasart and Khaw Tang Nam Prik Oong were reduced 8.25 and 42.00 % respectively, and sugar content of Khanom Tong Moun was reduced 21.71 %. Chemical analysis of these 3 products for one serving were found that they provided 39.27, 20.20 and 34.50 mg., respectively for calcium, 19.76, 73.36 and 58.58 mcg, respectively for vitaminA and 1.46, 4.08 and 1.70 g., respectively for fiber. Shelf-life study within 8 weeks of these products in Aluminum foil and polyethylene packages were assessed for texture, color, moisture, peroxide value and sensory property. The results revealed that peroxide value of these products were in the acceptable range. The crispness of Khaw Tang Nam Prik Oong and Tong Moun in polyethylene package were not acceptable at 6th and 4th week, respectively. The result was consistent with the hardness and crispness values from texture analyzer, while the products in Aluminum foil were acceptable through the period of study.

Student's signature

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