

# **Product Development of Thai Rice Cereal (Khao-Mao) Bar with Garlic Flavor and Its Shelf-life using Accelerated Method**

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## **ABSTRACT**

The garlic flavored Thai rice cereal bar was developed under financial support of the Industrial Area 8 project, titled "Increasing of efficiency and technology to improve value added and productivity of SME" for Be Rich at Ease Co., Ltd., the producer of rice snack under the brand of "Rice Pok Pok". The company has planned to expand the product line using their current bestselling product of Garlic flavored Thai rice flake (Khao-Mao) to transform into a bar. Glucose syrup was selected to use as a binder in this snack due to its availability in Thailand and its lower price compared to the other binders. The preliminary experiment had done to determine the suitable range amount of glucose syrup used, then the screening process was carried out further to investigate the effect of glucose syrup concentration on sensory properties and texture of the bar. The sensory analysis was held with 30 panels. The 35% glucose syrup was found to be the most preferable level. The results from texture analysis also support the use of 35% glucose syrup concentration based on 100 grams of rice with the addition of baked stick almond by 10% rice based to be the final formula for this Thai rice cereal (Khao-Mao) bar with garlic flavored. The prototype product had further analyzed for their fat and moisture contents as of 2.04, and 21.45% respectively. Consumer acceptance of the product was performed by using 100 panelists. The product was accepted by 90% of the consumer and they were willing to buy at the price of 20-24 Baht when 4 pieces of the bar sold in one package. Furthermore, to launch this product in the market, the shelf life of the product must be evaluated using the accelerated storage method. The Khao-Mao bar was packed in the nitrogen sealed package and store under 55°C for 4 weeks. The changes in moisture content, texture, rancidity indicators and sensory quality were weekly analyzed. The

shelf life of the bar was 7 months with the acceptable level of the consumers. Moreover, the acidity value was 0.23 mgKOH/g when the product had 50% acceptance. This AV is relatively low and safe to consume according to the CODEX committee on fat and oil in 2017 stated that the acid value of refined oil must not exceed 0.6 mgKOH/g (CODEX, 2017).

