Development of a rice flour based deep fried cracker and evaluation of its storability

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Utilization of rice flour in the commercial food processing industry in Sri Lanka is limited to few products. Therefore the purpose of this research was to develop a deep fried cracker using rice flour as the main ingredient and to evaluate the shelf life stability of the product.

Preliminary studies were carried out to determine the optimum formulation for rice cracker and develop a process for cracker production. A cracker was prepared with high organoleptic acceptability using rice flour (85%), wheat flour (5%), corn flour (10%), carboxymethyl cellulose (1%), salt (2%), pepper (1%), sugar (2%), and coconut oil (5%), as ingredients. The dough which prepared with above mix was sheeted (1cm thickness), steamed (95-98 ^{o}C, 45 min), then cooled to room temperature and placed in a refrigerator (5 ^{o}C, 10 h.). Then sliced (25 x 12 x 1.5 mm), oven dried (55 ^{o}C, 3 h) and deep fried in oil (220 ^{o}C, 5 s).

The storability of the product was tested with two types of packaging materials (polypropylene and oriented polypropylene/metalized cast polypropylene laminated bags) under ambient conditions (31±3 ^{o}C, 70±5% RH). During storage period physico-chemical, microbiological, and sensory qualities of the samples were evaluated monthly up to three months. Study revealed that deep fried cracker could be formulated using rice flour as the major ingredient and could be stored more than three months in oriented polypropylene/metalized cast polypropylene laminated packaging material without altering the sensory characteristics.