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Development of rice based instant soup cubes

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Ready to use soup cubes are a very popular food item among the people in every community in Sri Lanka. They are used as a soup drink or as a flavour enhancer in preparation of different food items. However, the existing soup cubes in the market are prepared by mixing different ingredients, especially salt, spices, corn starch, flavours, and flavour enhancers. The nutritive values of these products are also problematic. Hence, this study was carried out to develop nutritious ready to serve soup cube using rice as the main ingredient and to evaluate the shelf life of the product.

Preliminary studies were carried out to determine the optimum mixture for soup cube preparation and to develop the process for soup cube production. An organoleptically acceptable soup cube was prepared by using 50% pre-gelatinized rice flour, 10% pre-gelatinized green gram flour, 4% carrot powder, 2% green beans powder, 3% curry leaves powder, 2.5% onion powder, 0.5% garlic powder, and the rest with salt, sugar, pepper, turmeric, citric acid, and oil as the ingredients. Proximate composition of the developed product was also determined. The storability of the product was tested with and without an antioxidant (vitamin E) after packing in a cardboard box, poly-ethylene terephthalate (PET) bottle and nylon/ linear low density poly-ethylene (LLDPE) laminated bag. The storage study was conducted under ambient conditions for six months and the effect of the treatments on the quality of the product were determined based on moisture content, colour, free fatty acid content, microbiological and sensory quality.

The study revealed that the soup cubes with and without antioxidant, packed in plastic bottles (PET) and nylon/LLDPE bags could be stored for more than six months with acceptable physico-chemical, microbiological, and organoleptic qualities.

Keywords: rice, instant soup cube, pre-gelatinized flour, storage, antioxidant.