

Development of an Instant Fried Rice and Suitable Seasoning Powder Mix, Incorporated with Powdered Leaves of *Moringa oleifera*

**Chandradasa B.A.R.I.S., Mendis B.E.P., Senarathne S.M.A.C.U.^{1*}
and Rajapakse R.P.N.P.**

Department of Food Science and Technology,
Faculty of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka

Rice is the staple food and the main energy source in most Asian countries, including Sri Lanka. Modern people are having hectic daily schedules and do not spend much time preparing their food. This accelerated pace of modern life has promoted new quick-cook type rice products, which can rehydrate or thaw within a few minutes. This research was conducted to develop instant fried rice which could be stored under frozen conditions (-18 °C) and a suitable seasoning powder mixture to incorporate into fried rice by using powdered leaves of *Moringa oleifera* and oyster mushrooms as the main ingredients. Moringa leaf powder incorporated (1.92%) 15 g of seasoning powder was added to 250 g of rice. The amounts of added constituents were determined based on sensory data, which was determined using a 9-point hedonic test involving 50 untrained panelists. Determination of a suitable cooking procedure for Bg 360 (*Keeri samba*) was done using an electric rice cooker, an electric multi-cooker and the steaming procedure by mainly considering cooking yield and cooking in the rice cooker was selected. The prepared fried rice was vacuum packed and stored at three different temperatures (4 °C, 12 °C and 25 °C) for the prediction of the shelf life using the accelerated shelf life test with an Arrhenius model. The moisture content varied between 62 - 67%, and there was no significant difference in color ($P < 0.05$). According to the acid value, the shelf life was 29 days, and according to the peroxide value, the shelf life was 36 days. After 30 days of frozen storage total plate count was measured upon thawing using, the microwave oven (74 °C), boiling water (≤ 100 °C) and steaming (100 °C) and the product was acceptable for consumption. The new product developed has a potential to be marketed.

Keywords: Accelerated shelf life, Instant fried rice, *Moringa oleifera*, Oyster mushroom, Seasoning powder

¹Food Research Unit, Horticulture Crop Research and Development Institute, Department of Agriculture, Gannoruwa, Peradeniya, Sri Lanka

*upulasen@gmail.com