DEVELOPMENT OF FRUIT INCORPORATED NUTRITIONALLY RICH RICE MILK SHAKE

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by

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ABSTRACT

Rice milk which is grain milk made from rice, does not contain lactose or cholesterol. It can be used as a dairy substitute for vegans. This study was carried out to formulate nutritionally rich rice milk shakes with preferable sensory qualities by using both high amylose and low amylose containing rice. Four white pericarp rice varieties- (At 309, At 405, Bg 300 and Bg 360) were used for the preliminary studies and variety At 309 was selected through a sensory evaluation. The rice milk shake base was prepared using At 309 variety rice flour (3.5%), sugar (8.76%), salt (0.17%) and water (87.57%). Pineapple and wood apple fruit pulp into 10%, 15%, 20% and 25% ratios and rice bran obtained from rice variety At 362 (1%, 2%, 3% and 4%ratios) were incorporated with the base of the rice milk shake. Sensory evaluation was done in order to select the best treatment using 9-point hedonic scale. Pineapple, wood apple and wood apple with rice bran added rice milk shakes were prepared as the final products. These final products were packaged in 190 ml glass bottles and stored at room temperature after water sterilized them. Quality of the final product and shelf life were evaluated in once a fortnight by using brix value, acidity, pH value like physicochemical properties, total plate count and yeast and mould count like microbial properties and sensory properties. The results of proximate analysis revealed that wood apple with rice bran added rice milk shake had higher nutritional value than others. Any significant differences among high (Bg 300, Bg 360) and low (At 309, At 405) amylose content rice varieties were not observed. No significant differences were observed in physicochemical properties during the storage period. The product can be safely stored for 1 month period at ambient temperature. Rice milk shake is a good way to add value to the *Oryza sativa indica* sub species.

Keywords: Nutritionally rich, Pineapple, Rice bran, Rice milk shake, Wood apple