Development of Value Added Yoghurt with Rice *(Oryza sativa)* Flour and Sesame (*Sesamum indicum*)

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Abstract

Brown rice *(Oryza sativa)* is an abundant cereal which possesses high levels of carbohydrates, fiber, vitamins (B_2, B_3 and B_1) and minerals like Iron, Phosphorus, Potassium and Calcium and protein lesser cholesterol (HARTI, 2011).Yoghurt is a highly consumed fermented product in the market. This study was carried out to develop a set type yoghurt by incorporating brown rice flour and sesame seeds to assess the effect of brown rice flour and sesame seeds on the physicochemical and sensory properties of yoghurt.Best gelatin percentage was selected by sensory evaluation using 07 trained panelistswith varying the gelatin percentage as 0.3%, 0.4%, 0.5%, 0.6% (% by weight). There were three treatments varying the levels of brown rice flour percentages as 3%, 4% and 5% (% by weight) and evaluated using 30 untrained panelists. Titratable acidity, pH, Total Colony Count (TCC), Coliform,yeast and molds were determined for 15 days of storage for selected yoghurt samples based on sensory evaluation. Fat %, Protein content, Total Solids and Carbohydrates were analyzed. Data were analyzed using one way ANOVA and Friedman non parametric test.According to sensory evaluation I, yoghurts prepared by incorporating 0.4% (w/v) gelatin and according to sensory evaluation II, yoghurts prepared by incorporating 4% (w/v) brown rice flour and 2%(w/v) sesame seeds have shown significantly higher preference ($P<0.05$) with all sensory attributes. There was a significant ($P< 0.05$) difference in Titratable acidity, pH, TCC, Coliform,yeast and molds value during refrigerated storage of control and selected sample. Proximate composition of the final product is 73.32% Moisture, 3.75 % protein, 3.95% fat, 17.23% carbohydrates, 0.33% fiber and 1.42 % ash.Best incorporation level of brown rice flour, sesame seed and gelatins 4% and 2% and 0.4% respectively. The shelf life of selected sample is 11 days at 4±1°C.