

Substitution of rice flour and kurakkan flour in the preparation of wheat flour cakes

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Cake is the most popular bakery product around the world. Normally most cake types are prepared by using wheat flour as its major ingredient. The purpose of using flour in cakes is to allow an aerated structure to be retained after the cake has been made.

Rice production in Sri Lanka has increased during the past thirty years and the country is now almost self sufficient. Both Kurakkan and rice have a large potential to be used to formulate value added products, due to several reasons, e.g. high nutritional value, medicinal value, special taste and the year around availability.

Therefore, the objectives of this study were to formulate high quality nutritive cake by substituting wheat flour with rice flour and kurakkan flour, and also to examine the sensory properties of the formulated cakes.

Three cakes were prepared by using 100% wheat flour (250g), 100% rice flour (250g), and 95% rice flour + 5% kurakkan flour (237.5g +12.5g). Margarine and sugar were creamed until light and fluffy by using an electric mixer. Eggs (4) were gradually added, one at a time while beating. Flour sifted together with baking powder (5g) was added little by little to the cream and finally vanilla essence and baked in the pre-heated oven at 190 °C for 40 minutes. Sensory evaluation was conducted for prepared cakes by a panel of ten panelists using five point hedonic scale for color, taste, texture, odor and overall acceptability. Obtained results were analysed by Kruskal-wallis test method.

The results of the sensory evaluation revealed that 100% wheat flour and 100% rice flour cakes were not significantly different in color, texture and overall acceptability. Panelists rated cakes highest in taste and odor when it was prepared with 100% wheat flour and lowest made with kurakkan mixed flour. Scores obtained for kurakkan mixed cake were between 2 to 3 in all the attributes. Hence, it cannot be considered as completely rejected. This study reveals that the wheat flour can be substituted with rice flour and kurakkan flour to make high value cakes. Further development is necessary to increase the sensory properties of kurakkan mixed cakes.

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