

Quality Control of Food Material Using Ultra-Grinding Method

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Quality of rice bread prepared with different particle sizes of rice flour was studied to evaluate the effect of ultra-grinding method. *Japonica* (Koshihikari) and *Indica* (Rinks-nakate) rice varieties ground with hammer mill and jet mill methods were used to prepare bread samples at 20, 30 and 40% rice flours. The sample prepared from wheat flour was used as control sample. The results showed that increasing of rice flours caused decrease of expansion volume and increase of hardness characteristics. The bread substituted with jet-milled rice flours had the lowest volume in both of the rice varieties. Moreover, the texture values of all samples were increased with increase of storage time. The addition of water in the formula increased expansion volume and decreased hardness of bread samples. In the second experiment, the pretreatment of raw rice with cooking process was studied to improve bread quality. The bread samples substituted with cooked Koshihikarai and Khao Dawk Mali 105 (Jasmine rice) rice having different particle size resulted to the loaf volume and hardness values were improved. A suitable gelatinization process for making rice bread must be more studied in future years.