

*Variation Of Pre-Cook Methods And Addition Of Sodium Citrate Concentration
On Physical And Chemical Characteristics Of Instant Multigrain Rice
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ABSTRACT

Instant multigrain rice defines as rice that has been processed with various treatments to improve the hydration characteristics of a product with various food ingredients, including more than one type of grains and beans. This instant multigrain rice uses brown rice, edamame, sorghum, and beans as raw materials. The study aimed to determine the effect and best treatment of variations in precooking and the addition of $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$ on the physical and chemical characteristics of instant multigrain rice. This study used a two-factorial research method: variation of precooking with three treatment levels (no precooking, steaming, and roasting) and $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$ with two treatment levels (2% and 5%). The data analysis method used was SPSS ANOVA and determination of the best treatment using the Zeleny method. The study included ingredient weighing, size reduction of edamame and kidney beans, washing, soaking ($\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$ 2% and 5%), washing, precooking (roasting and steaming), cooking, cooling, freezing, thawing, drying, and rehydration. Variations in preprocessing method and the addition of $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$ concentration significantly affected moisture, fiber, protein, fat, color, and rehydration time. In contrast, the development ratio had no significant. The best treatment was obtained in the roasting treatment with the addition of 5% $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$, with a fiber content value of 5.43%, moisture of 3.47%, protein of 12.66%, fat of 3.98%, development ratio of 1.08 cm, rehydration time of 5.43 minutes, and color obtained by (L^) of 53.22%, (a^*) of 6.52%, and (b^*) of 14.22%. The percentage of RDA obtained is 5.94% fat, 15.51% fiber, and 21.1% protein.*

Keywords: *Instant Rice, Multigrain Rice, Pre-Cooking, Sodium Citrate*