

**INCORPORATION OF DURIAN (*Durio zibethinus*)
SEED GUM TO FRUIT NECTAR AS A SUBSTITUTE
FOR XANTHAN GUM**

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ABSTRACT

Xanthan gum is a widely used thickening agent which enhances the customer acceptability in ready to serve fruit nectar industry. This study determines the possibility of using durian seed gum as a substitute for xanthan gum to prevent layer separation. Blanched and raw durian seed slices were pulverized and dried in 03 methods; sun drying, oven drying and cooling in dehumidifier (CDH process). Six quantity levels (1, 2, 3, 4, 5 and 6 g) of those seed particles were mixed with 100 ml of hot (80 °C) and normal water to get the gum. Treatment with the least quantity of seed particles, having a viscosity similar to the 0.5% xanthan gum solution (6 centipoise) was selected as the best preservation method. Gum formed by mixing 5 g of raw CDH processed seed particles in normal water had a viscosity of 6 centipoise.

This was used in experiment 02, where durian seed gum was incorporated at 08 dosage levels (5 - 40 % in 5 % increments) and compared with the fruit nectar added with fresh seed gum and without any added thickening agents. Visual observations were taken for layer separation for 7 days at 24 hrs intervals. No layer separation was observed in both fresh and CDH processed gum added nectar at 20 % level and they were similar to xanthan gum incorporated nectar soon after the preparation ($\alpha = 0.05$). To evaluate the keeping quality, fresh seed gum, CDH processed seed gum and xanthan gum added fruit nectar samples were stored in ambient and refrigerated conditions for three months. In sensory analysis, layer separation and overall acceptability of fresh and CDH processed gum added non-cooled nectars and xanthan gum added cooled and non-cooled nectars changed with time. But sensory properties of fresh seed gum and processed seed gum added cooled nectars did not changed significantly with time.

Key words: Durian seed gum, xanthan gum, thickening, dry, dehumidifier, viscosity, layer separation