

**819/B**

**Development of a supplementary stabilizing agent for xanthan gum in manufacturing of fruit Nectar**

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Xanthan gum is a popular thickening agent, which is used widely in the fruit processing industry as an ingredient to stabilize the layer separation of fruit Nectar. Though the product is popular, because of its availability and price it is beyond the reach of most manufactures. Hence, an alternative gum sauce from Durian seed extract was used as a supplementary product for xanthan gum in manufacturing of fruit Nectar. Threshold level of Durian (*Durio zibethinus*) seed extract in thickening of fruit Nectar was determined by incorporation of the seed extract into a commercial recipe in different proportions to par with the thickness to xanthan gum. Results revealed that consistency of 0.2% of Durian seed extract was equitant to 0.02% of Xanthan gum. Thereafter, 21 bottles from each treatment (0.2% of Durian seed extract and 0.02 of xanthan gum) of fruit Nectar samples were prepared with respect to a commercial recipe. All treatments were replicated thrice and stored under normal environment condition for 06 months. Samples were drawn from two treatments monthly for a period of 06 months to evaluate changes occurring in pH value, Brix value, layer separation and organoleptic properties as against the commercial product.

Results revealed that pH variation of both treatments remained within the standard value (3.5-4.5) even after six months of shelf life. Durian seed gum is fairly stable over a wide range of pH (2-10). Layer separation character of Durian seed extract incorporated fruit Nectar samples was also well controlled with the dosage of 0.2% throughout testing period as against stander dosage of xanthan gum at 0.02%. Because C6 sugars particularly L-raphinoze in the seed extract is capable of developing into a thick gel mass by combining with hydrolyzed sugar molecules together. Incomplete sentence

Organoleptic properties with respect to Duo trio test revealed that Durian seed extract incorporated fruit Nectar samples are similar to the commercial product during the six months testing period. Smell, taste, color, thickness and overall acceptability of both treatments are not significantly different to each other after analyzing the data statistically using the ISO 5495:1985E statistical table.

**Keywords:** Xanthan gum, *Durio zibethinus*, L- raphinoze, C6 sugars