

Development of Fresh cut (minimally processed) vegetabales (Elabatu, Banana blossom, and Immature Jak fruit)

S M P T Priyadarshana¹, S Ekanayake² and K M Somawathie^{1*}

¹ Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka, Buttala

² Food Research Unit, Department of Agriculture, Gannoruwa, Peradeniya

Minimally processing is one of the modern food preservation techniques. Now it is gradually popularized even in Sri Lanka due to busy lifestyles of the consumers.

This study was conducted to develop preparation of fresh cut (Minimally processed), immature jak fruits, Banana blossoms and Elabatu. Also, to select best preservative with its concentration, suitable packing material, desirable storage temperature and evaluation of shelf life. Because still not done proper quality in Sri Lanka about fresh cut products.

Prior to preparation raw materials were properly washed. Then sorting and grading was done. Just after cutting above three types of vegetables were dipped into different SMS (Sodium metabisulphate) solution and kept 5 minutes. Allow to few minutes to drain-off excess solution. Then these vegetables were packed and heat sealed. Finally store under refrigerated condition.

To determine the best preservative, fresh cuts were prepared by using Citric acid and SMS. Among them SMS treated samples presented high visual quality during the storage period. So SMS selected as a best preservative. Then fresh cuts were prepared by using 0.1% - 0.5% SMS solution. To select the best strength, visual quality was checked every day. Residual SO₂ amount was measured by using Monier Willium method.

Fresh cut were packed by using Polyethelene, Polypropilene, Styroform boxes and Plastic boxes. Visual quality and weight loss were measured every day to select the best packing material.

Prepared fresh cut were stored in three different temperature (8 °C, 10 °C, 12 °C). To select the best temperature visual quality were checked daily.

To evaluate the shelf life overall acceptability of fresh cuts were checked daily and microbiological test was done. Finally, sensory evaluation was done to evaluate the cooking quality of fresh cut vegetables.

After the experiment following conclusion were obtained, Best preservative is 0.1%, 0.3% and 0.4% SMS solutions for Banana blossoms, Immature jak fruit and Elabatu respectively, best packing material is Low-density polypropylene, suitable storage temperature is 8 °C

for above three types of vegetables. Optimum shelf life is the fresh cut Banana blossom is 7 days. Immature jack fruit and Elabatu can kept 4 and 5 days respectively.

Fresh cut products are microbiologically desirable. According to the results of sensory evaluation there is no significant different at 5% level in between cooked fresh cut samples and cooked unprocessed vegetables.

Tel: