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**Title of Thesis:** Studies on the loss of processed Mango, Orange and Guava Juices components and utilization of some of their wastes.

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### **ABSTRACT**

Recent processed Orange, Guava and Mango Juices packed in tetra-pack, aluminum, plastic and glass containers were collected from the local market and evaluated chemically and microbiologically periodically every two months, during in 12 months storage at refrigeration temperature (4°C) and room temperature (25°C). Results showed that total acidity (TA) of the Juices decreased in a descending order as following aluminum packages, tetra-pack, plastic bottles and glass bottles for Juices stored at 4°C and at room temperature. However, non-enzymatic browning increased in an ascending order as follows: Tetra-pack, aluminum, plastic bottles and glass bottles up to 6 months, then started to decrease in the same order. The flavanones content was only affected by the time of storage, while the effect of storage temperature and packaging material was quite slight. The material which presented the lowest retention of slight. The material which presented the lowest retention of both ascorbic acid and  $\beta$ - carotene was found to be in glass follow up plastic containers. The aluminum package presented a poor retention of ascorbic acid Fruit Juice stored at the refrigeration temperature retained the desired quality attributes better than those stored at room temperature. Glass bottles gave greater protection against degradation of the chemical attributes of the fruit Juices.

Supplementation of beef burger with Mango kernel powder 3%, 5% improved organoleptic characteristics of the produced product. The group of rats fed with fiber free diet had the highest value of body weight and food in take level. Mean while the groups of rats fed with 5%, 3% showed the lowest amount of serum cholesterol, triglycerides LDL and HDL. . A significant decrease was observed in serum total lipids, total cholesterol, triglycerides and LCD, while there was a significant increase in HDL in rats fed on diet containing 5% Mango kernel powder, compared with group fed on hyper holes terolemnlic diet.

**Key words:** Juices, Mango kernel Powder, Beef burger, cholesterol, triglycerides.

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