

Study on Preparation and Storage of Composite Vegetable Squash of Tomato, Pumpkin and Ginger

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Abstract : In the present world, production and consumption of fruit and vegetable beverages have increased owing to the healthy life style of the people. Therefore, a study was conducted to develop composite vegetable squash by incorporating nutritional, medicinal and organoleptic properties of tomato, pumpkin and ginger. Considering the finding of several preliminary studies, five formulations in different combinations tomato pumpkin were taken and their physico-chemical parameters such as pH, TSS, titrable acidity, ascorbic acid content and total sugar and organoleptic parameters such as colour, aroma, taste, nature, overall acceptability were analyzed. Then the best sample was improved by using 1 % ginger (50% tomato+ 50% pumpkin+ 1% ginger). Best three formulations were selected for storage studied. The formulations were stored at 30 °C room temperature and 70-75% of RH for 12 weeks. Physicochemical parameters , organoleptic and microbial activity (total plate count, yeast and mold, E-coil) were analyzed during storage periods and protein content, fat content, ash were also analysed%.The study on the comparison of physico-chemical and sensory qualities of stored Squashes was done up to 12 weeks storage periods. The nutritional analysis of freshly prepared tomato pumpkin vegetable squash formulations showed increasing trend in titratable acidity, pH, total sugar, non-reducing sugar, total soluble solids and decreasing trend in ascorbic acid and reducing sugar with storage periods. The results of chemical analysis showed that, there were the significant different difference ($p < 0.05$) between tested formulations. Also, sensory analysis also showed that there were significant differences ($p < 0.05$) for organoleptic character characters between squash formulations. The highest overall acceptability was observed in formulation with 50% tomato+ 50% pumpkin+1% ginger and all the all the formulations were microbiologically safe for consumption. Based on the result of physico-chemical characteristics, sensory attributes and microbial test, the Composite Vegetable squash with 50% tomato+50% pumpkin+1% ginger was selected as best formulation and could be stored for 12 weeks without any significant changes in quality characteristics.

Keywords : nutritional analysis, formulations, sensory attributes, squash

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