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RESEARCH PAPER

Study on the effect of different storage conditions on ascorbic acid content in fresh fruits (Guava and Lime)

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SUMMARY : Post harvest losses are severe problem in the handling and marketing of highly perishable fruits and vegetables. These losses can be substantially reduced by adopting proper handling, packaging and storage. The present study was carried out to analyze ascorbic acid content in fresh guava and kagzi lime and the effect of packaging and various storage conditions on ascorbic acid. For the study, three storage conditions including light, dark and refrigeration were chosen and the fruits were kept in perforated and non perforated polythene bags in each condition. It was observed that when guava and kagzi lime were stored, a significant decrease in ascorbic acid was observed. Guava performed best when stored in non perforated polythene bag kept under light condition whereas kagzi lime retained maximum ascorbic acid when it was stored in perforated polythene bag under light condition.

Key Words : Ascorbic acid, Storage, Refrigeration

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Fresh fruits and vegetables constitute the main source of vitamins especially ascorbic acid in India, where the food habit of majority of population is vegetarian. Vitamin C or ascorbic acid is a least stable water soluble vitamin. The reduced form of ascorbic acid generates dehydroascorbate spontaneously by oxidization, which ultimately looses its nutritional value.

Succulent fruits contain a very high percentage of moisture consequently they exhibit relatively high metabolic activity when compared to other plant derived foods such as seeds etc. This metabolic activity continues even after harvest and fruits start loosing their vitality, turgidity and food value particularly vitamin C on storage. Being a highly perishable commodity, fruits require proper and careful post harvest handling and storage. In order to regulate the marketing and to make fruits available during off season for longer duration, proper storage is quite essential. It is a general practice in home to keep the market purchased fruits in plastic packets, bag, crate etc. for several days, without knowing the losses in ascorbic acid and other nutrients that are taking place during storage. Therefore, it is quite necessary to know the quantity of ascorbic acid lost during storage and what should be the proper method to minimize them.

Objective of the study:

In view of the above facts, the present work was taken with the objective:

To find out the effect of different storage conditions on the ascorbic acid content of fresh fruits namely guava and kagzi lime.

EXPERIMENTAL METHODS

The present study was carried out at Department of Horticulture, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi during winter season.

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