International Journal of Processing and Post Harvest Technology
Volume 3 | Issue 1 | June, 2012 | 59-64
RESEARCH PAPER

# Studies on the effect of different storage conditions on the quality and shelf life of kokum (*Garcinia indica* Choisy) fruits

■ G.P. RAORANE, A.G. DESAI, N.A. NALAGE AND S.S. BHOSALE

**SUMMARY :** The kokum fruits stored at ambient temperature recorded the maximum PLW. The shelf life of fruits stored at ambient temperature, cool chamber + waxol 12 per cent and cold storage + waxol 12 per cent was 5, 15 and 28 days, respectively. The shrivelling and the spoilage started from 3rd day at ambient temperature, 5th day of storage at cool chamber and 7th day of storage at cold storage. The shrivelling was the maximum in the fruit stored at ambient temperature, followed by cool chamber while cold storage did not show any shrivelling. Moreover, spoilage (microbial) was the maximum at ambient temperature, as compared to other storage conditions (Cool chamber and cold storage). The moisture content of kokum fruits decreased throughout the storage. The maximum decrease in moisture content was observed in the fruits stored at ambient temperature and the minimum in the fruits stored at cold storage and treated with waxol-0-12 per cent. The minimum retention of moisture content in kokum fruits was observed in fruits stored at cold storage with perforated polythene (80.44%) at the end of shelf life. The total soluble solids increased at the end of storage period irrespective of storage conditions. The fruits stored at ambient temperature recorded the maximum T.S.S. (14.17$^0$B) followed by cool chamber and cold storage (14.05 and 13.61$^0$B, respectively). The total sugars of kokum fruits increased at the end of storage period, irrespective of storage conditions. The fruits stored at ambient temperature recorded the maximum reducing and the total sugars followed 6.53 and 14.23 per cent, respectively by cool chamber (4.38 and 14.09%) and cold storage (4.42 and 14.05), respectively. Titrable acidity of the kokum fruits declined throughout the storage period at all storage conditions. The fruit stored at cool chamber and treated with waxol-0-12 per cent recorded the maximum acidity (3.53%), followed by the fruits at cool chamber (3.45%) and at ambient temperature storage (3.18%). Ascorbic acid of kokum fruits showed a continuous decline trend during storage at all storage conditions. The maximum retention of ascorbic acid was in the fruits stored in cold storage and placed in perforated polythene bag (5.34 mg/100g), followed by the fruits of cold storage treated with wax (4.92 mg/100 g) and cool chamber fruits treated with wax (4.87 mg/100 g). The ambient temperature stored fruits showed poor retention of ascorbic acid (2.86 mg/100 g).

**Key Words :** Storage, Quality, Shelf Life and Kokum

**How to cite this paper :** Raorane, G.P., Desai, A.G., Nagale, N.A. and Bhosale, S.S. (2012). Studies on the effect of different storage conditions on the quality and shelf life of kokum (*Garcinia indica* Choisy) fruits *Internat. J. Proc. & Post Harvest Technol.,* **3** (1) : 59-64.

**Research chronicle :** Received : *16.02.2012;* Sent for revision : *01.04.2012;* Accepted : *23.04.2012*

Kokum (*Garcinia indica* Choisy) belongs to the genus *Garcinia*, which is large genus of polygamous evergreen trees and shrubs native of Asia, Southern Africa and Polynesia (Anthony, 1997). The scientific name *Garcinia* is derived from Garcias, who described it in 1974 (Subash Chandran, 1996). The genus belongs to a botanical family clusiaceae, which consists of tropical trees, lianes (vines) and herbs.

Storage is one of the most important aspect of the post harvest handling of fruits.The main object of storage of fresh fruits is to extend period of availability. A substantial quality of fruits go waste in our country due to lack of proper storage facility. As the fruits are living entities and under go physiological and bio-chemical changes after harvest.The purpose of storage is to control the rate of transpiration, respiration, ripening and also many undesirable bio-chemical

MEMBERS OF THE RESEARCH FORUM

Author for Correspondence :
**G.P. RAORANE,** Agriculture Collge, BARAMATI (M.S.) INDIA

Coopted Authors:
**A.G. DESAI,** B.S. Konkan Krishi Vidyapeeth, Dapoli, RATNAGIRI (M.S.) INDIA

**N.A. NALAGE AND S.S. BHOSALE,** Ratnai College of Agriculture, AKLUJ (M.S.) INDIA