

Abstract

The experiment was conducted at the Department of Agricultural Research (DAR), Yezin, Myanmar from May to June 2004. Five treatments were given under two pre-storage preparation techniques: only washing with tap water and washing with hot water ($55\pm 1^{\circ}\text{C}$) for 5 minutes. Seintalone (STL) and Yingwe (YG) mango varieties were tested for all treatments. Treatments were T_1 –unpackaging; T_2 – unperforated packaging; T_3 – packaging with 3 pores perforated; T_4 – packaging with 6 pores perforated; T_5 – packaging with 9 pores perforated. The size of each bag was 15 cm \times 20.5 cm and in which each fruit was packed. Perforation was made by pores and each was 0.2 cm in diameter. The fruits were kept under cold storage (16°C). Data were taken at 10, 20, 30 and 40 days after storage (DAS) for weight loss percentage, °Brix, hardness, peel colour, shrinkage, stem rot and body rot.

Packaging could reduce weight loss percentage significantly for both tested mango varieties up to 40 DAS. And the shrinkage was also entirely reduced by both perforated and non perforated packaging. If the STL mango fruits were unpacked under cold storage, hot water treatment before cold storage could reduce the shrinkage significantly. But YG variety is not resistant to shrinkage by hot water pre-storage treatment. Hardness of both mango varieties can be maintained by non perforated packaging up to 40 DAS.

Unpacked fruits showed the highest sweetness level. Fruits kept with 9 pores perforated packed were relatively higher in sweetness level compared to other perforated and non-perforated packed fruits of both STL and YG. The sweetness of STL is higher than that of YG and it might be due to the varietals character.

Non-perforated packaging fruits showed delay colour development comparing unpacked control and perforated packed fruits. The rate of peel colour development became higher with time when exposed area to atmosphere was greater.

The body rot and stem end rot were the minimum when the fruits were packed by non-perforated bags. Hot water treatment before cold storage could significantly reduce the body rot and stem end rot of both varieties throughout the study.