

Abstract

Matured harvested pummelo fruits in Myanmar are sensitive to severe peel shrinkage and fruit rot during marketing and this is a significant commercial problem for this produce. Peel shriveling prevents the market acceptability for pummelo display under ambient storage. In this experiment, gibberellic acid (GA_3 -20 and 50 ppm) and Benomyl (500 and 1,000 ppm) were applied as postharvest dip compared with untreated fruit on four pummelo cultivars (three Myanmar cultivars-Jade, Ruby, Pink-2 and one Thailand cultivar-Kao-Thondee) in factorial CRD design. Peel shriveling was significantly retarded by GA_3 (50 ppm) treated fruits in all pummelo varieties, until 33 days under ambient. GA_3 (20 ppm) was also effective to prevent peel shrinkage in all cultivars except Pink-2. Shelf life could extend up to 33 days in GA_3 (50ppm) treated fruits and 29 days in Benomyl (1,000 ppm) treated fruits with market acceptable appearance, while control last only for 12 days under ambient. The longest shelf life (33 days) was observed in Pink-2 and Jade cultivars with GA_3 (50ppm) treated fruits. Fruit rot percentage was reduced by Benomyl (1,000 ppm) to 78.12%, Benomyl (500 ppm) for 67.33%, GA_3 (50 ppm) for 79.11%, and GA_3 (20 ppm) for 73.19% after 30 days on shelves under ambient condition. No significant changes in peel and pulp flavour and quality was observed, except for slight decrease in TSS content in Pink-2 cultivar for GA_3 treated fruits. The highest cost/benefit ratio was found in GA_3 (20 ppm) treated fruits, followed by Benomyl (500 ppm) treated fruits.