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Effect of Salicylic Acid on Some Characteristics of Lime Fruits (*Citrus aurantifolia* L.) in Storage

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Lime fruits have economic and nutritional value but the fresh consumption of this fruit compared with processing methods is less, because of its low storage capacity. This research was designed to study the effects of different concentrations of salicylic acid (0, 1, 2 and 3 mM) on quantitative and qualitative characteristics of lime fruit in storage period (0, 20, 40 and 60 days). The experiment was as factorial based on completely randomized design with four replications (10 fruit per each replication). Each treatment was immersed in salicylic acid for 5 minutes and after drying, was packed in disposable containers and transferred to storage with temperature of 4±1 ° C and relative humidity 85 ± 5 ° C. The results showed during storage, fruit acidity and aroma were decreased and fruit bitterness increased. Sixty days after storage, salicylic acid 3 and 2 mM, compare to the control recorded the highest fruit acidity (60%). At the end of the storage salicylic acid 1 mM compare to the control had the lowest fruit bitterness (20%), flavedo browning and malondialdehyde. After 60-day storage, the lowest chilling percentage and decay and highest acidity and phenolic compound (66%) belonged to salicylic acid 3 mM compare to control. Salicylic acid maintained fruit acidity and antioxidant activity and prevented decay, chilling injury, browning and malondialdehyde. It seems that the use of salicylic acid 2 and 1 mM can maintain some qualitative and quantitative properties of lime fruit during 60 days of storage at 4 ± 1 °C.

Keywords: Browning felavdo, Chilling injury, Citrus, Decay, Storage.

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