

Title Influence of citric acid, ascorbic acid and calcium lactate applications on the shelf life of minimally processed horticultural products

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Abstract

The market share of minimally processed fruits and vegetables has continuously increased in the past years due to consumer life style. These products have high expectations regarding quality and shelf-life. The objective of the present work was to evaluate the effect of additives applied externally after cutting in fresh-cut kiwifruit, pears, strawberries, tomatoes, and peppers. Fruit were washed in water, cut longitudinally in quarters and dipped in solutions of 2% citric acid, 2% ascorbic acid or 2% calcium lactate. Subsequently, fruit were packed in plastic trays, covered with 15 µm thick polyethylene film and stored at 4°C for 9 d. At intervals of 0, 3, 6 and 9 d, measurements of firmness and total phenolics content were performed. Calcium lactate was efficient in maintaining firmness in most fresh-cut fruit. Total phenolics content were higher in kiwifruit, strawberries and peppers than in pears and tomatoes. Ascorbic acid was the most efficient dip to maintain or increase the total phenolics content of the fresh-cut fruit studied.