

Title Flavonoids changes in fresh-cut onions during storage in different packaging systems
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Abstract

Consumers demand healthy, natural and fresh foods, which require only a minimum amount of effort and time for preparation. This was the reason for comparing the effects of different mild preservation technologies on onion flavonoids. Onions were minimally processed to produce fresh-sliced onions, which were packed either in closed plastic cups or under vacuum conditions, taking into account the effect of light exposure. In all cases, the commodity was acceptable after the storage period, with the exception of vacuum packaging (score 5, fair/poor, on a 1–9 scale), due to water loss (about 4%) colour loss and a glassy appearance. In general, after storage in the dark, a slight increase in flavonols was observed, whereas a clear decrease in the relatively low amounts of anthocyanins was evident. However, the best performance was obtained when the more transparent polystyrene cups were stored under light. Both types of flavonoids increased, with an enhanced increase of total flavonols by 58%, and an increase in total anthocyanins of 39%.