Title Determination of ascorbic acid content in Asian leaf vegetables during storage

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Abstract

The objective of this study was to measure the changes in the ascorbic acid (AA) content of fresh-cut Asian leaf vegetables during storage. Mizuna, Mibuna, and Chinese mustard were chosen for this study because of their growing importance in recent years. Each of these vegetables is prized for its high nutritional value and relatively short production time. Storage conditions simulated a packed salad stored in home refrigerator (9°C, 100% RH), in order to study the changes in AA levels which take place in these products after purchase by the consumer. The analyses of the AA were performed by HPLC after 0, 2, 5 and 7 days of storage. The average levels of AA which were observed in the three chosen species varied between 47 - 81 mg. $100g^{-1}$ of fresh product. The highest values were seen in Chinese mustard. After 7 days of storage the average amount of AA had decreased by 33 - 53 % in the vegetables investigated. This experiment shows that these Asian leaf vegetables, when stored in the given conditions, can be classified as medium or medium-low retentive plants for ascorbic acid.