

Title Volatile compound content of shallot (*Allium Ascalonium*) puree in modified atmosphere bulk packaging during storage

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Abstract

The changes in volatile compound content of modified atmospheric (10% CO₂) bulk packaging shallot (*Allium ascalonium*) puree were studied. Freshly prepared shallot puree was packed in unprinted pouches 45 x 35 cm made from Ony/LLDPE of 0.07 mm thickness as a primary packaging material. The packed samples were then put into secondary packaging by using telescopic carton box, flute B type of size 59 x 38 x 11.9 cm³. Both control and treated samples were stored at 5± 1°C; 85-90 % relative humidity for 3 months. Observation was made every two weeks interval to determine the changes of volatile compound content. Sulphur group was found as major compounds of shallot puree, while identified compounds were sulphide, disulphide, trisulphide and tetrasulphide. Results showed that a total of 15 compounds were presented in shallot puree throughout of storage period. However, the compound of sulphide, propenyl I-propenyl was not detected in control sample after week 4 of storage. Modified atmospheric bulk packaging containing 10% CO₂ in Ony/LLDPE provided better storage conditions for preserving the volatile compound of shallot puree for up to 12 weeks at 5± 1 °c.