

## **Microbiological quality and sensory evaluation of shallot (*Allium ascalonium*) puree stored in modified atmosphere packaging**

### **ABSTRACT**

The optimum conditions of modified atmosphere storage were investigated to provide a basis for the development of modified atmosphere packaging for shallot puree. Microbiological and sensory qualities of shallot puree were evaluated at different atmospheric conditions (by mixing of 5, 10, 15 and 20% CO<sub>2</sub> with nitrogen and normal atmospheric condition as control). Samples were stored at 5 ± 1 °C by using Ony/LLDPE and PET/PE/Al/PE as packaging materials. The results showed that TPC and Lactobacillus spp. count increased slowly during storage period in all samples. However, the population of coliform, yeast and mould count and Pseudomonas spp. count were undetected in all samples. The sensory quality decreased significantly (p <0.05) throughout the storage period. Shallot puree packed in Ony/LLDPE with 10% CO<sub>2</sub> was found to be the best treatment for extending the storage life up to 12 weeks at 5 ± 1 °C (85-95% RH).

**Keyword:** Shallot puree; Modified atmosphere packaging; Microbial; Sensory; Storage