

**Title** Effects of passive and active modified atmosphere packaging conditions on ready-to-eat table grape

**Author** C. Costa, A. Lucera, A. Conte, M. Mastromatteo, B. Speranza, A. Antonacci and M.A. Del Nobile

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### **Abstract**

The effects of passive and active modified atmosphere packaging conditions (MAP) on quality of packaged table grape were investigated. To this aim, three films made up of oriented polypropylene and characterized by a different thickness (20, 40 and 80  $\mu\text{m}$ , respectively) were used to package the grape in air (passive MAP) and under three different initial headspace gas compositions (active MAP). As controls, grape samples were also stored without packaging. During a prolonged storage period at refrigerated temperature (5 °C) the headspace gas concentrations, the mass loss, the microbiological stability and the sensory acceptability were monitored. Results obtained highlight that all selected packaging films significantly prevent product decay, thus promoting a substantial shelf life prolongation, if compared to the unpackaged product. In particular, the best results were recorded with the thickest polymeric matrix sealed in air, that assured a shelf life more than 70 days. The active MAPs were not found significant for a shelf life prolongation, due to the fast equilibrium of gas reached in the bags and due to a more pronounced product dehydration.