

#### Abstract:

Different packaging films varying in their permeabilities for CO<sub>2</sub> and O<sub>2</sub> were used to study the effects on gas concentration and characteristic quality attributes of fresh-cut peeled and unpeeled asparagus (*Asparagus officinalis* L.) during shelf life of 4 days at 10°C and 95% RH, simulating commercial transport and marketing conditions. Unpeeled asparagus showed a higher loss of fresh weight (2-4%) in comparison to peeled and wrapped spears (<1%). Moreover, an undesirable increase in firmness occurred in unpeeled spears after 4 days of shelf life which was associated with changes in the insoluble:soluble pectin ratio and the increase of lignin. Packages with microporation developed an internal atmosphere leading to a retention of product quality in respect to fresh weight, firmness, textural properties and sugar/acid ratio, and thus a reduction of deterioration and prolonged shelf life.