

Abstract:

The effect of different packaging materials, e.g. OPP-Coex-film (Polypropylene) and biodegradable film (Cellophane) were evaluated with respect to their suitability to prevent quality loss in highly perishable fresh cut white asparagus during shelf life. OPP-Coex-film packaging material, comprising of microperforation and antifog layer, developed a beneficial gaseous atmosphere composition after 18 hour of shelf life, i.e. an increase in carbon dioxide (3%) and a decrease of oxygen (15%). OPP-Coex-film at 2°C and 20°C and biodegradable film at 10°C inhibited fresh cut white asparagus spears from undesired changes in textural properties. These changes were associated with the ratio of water soluble pectic fraction to insoluble pectic fraction. Only OPP-Coex-film led to a favourable ratio of sugar to acid at all storage temperatures (2°C, 10°C and 20°C), indicating the retardation of physiological processes. In both packaging films peeled asparagus tissue showed a strong reduction in the contamination with pathogenic fungi at 10°C and 20°C.