QUALITY AND SHELF-LIFE IMPROVEMENT OF FRESH FIG TREATED BY ETHYLENE ABSORBER AND OZONE AT THE ChILLED STATE

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With the goal to extend the shelf-life of the climacteric fig in retained good quality, this study compares the two more used post-harvest technologies to remove the volatiles and ethylene from the surrounding atmosphere on the climacteric fruits, i.e. ozone and ethylene absorber. Mature–unripe and ripening fresh figs (Ficus carica L.), cultivated in the middle of Spain cv. “Melar” and “Cuello de Dama”, once being cooled and maintained at the temperature of -0.5±0.5 °C and 95% r.h., were exposed at different treatments, at continuous air flow, in atmosphere of ozone at the low dose of 0.3 ppm (O₃) and two doses of ethylene absorber using KMnO₄ as the active agent impregnating extruded round rods of the natural clay mineral sepiolite, with 3 or 6 sachets of the absorber of 7g for each six plastic container of about 500g fresh fig each included in one 3kg box, which is enveloped with PE bag of 30µm thick (R-3 and R-6); other is with the same PE bag but without absorber to considerer as control (R-0); the same but without PE bag in the six containers box, is the Test lot (T). With ”Melar” temperatures of +2°C and -2°C were also essays through periods between 14-18 days. Changes in weight losses, external and puree colour, firmness, soluble solids, titratable acidity, total and reducer sugars, organic acids, respiration and ethylene production are analysed. The higher dose of ethylene absorber and the low temperature has a direct influence on the reduction of the global metabolism and physical properties of the fruit, with important changes in function of the length of the storage period, being the most drastic changes in sugars and organic acids by effect of the induced stress by the treatments applied.