Title Hypobaric pre-storage and ethylene absorbant enhances shelf-life of red delicious apple

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Abstract

Mature and ripe of "Red Delicious" apple fruits treated pre-storage under hypobaric atmospheric storage of 200 mm Hg for 4 h and held in High Density Polyethylene Plastic bags (30 µm thickness) containing 0,25,50 and 75 g potassium permanganate and stored at ambient air temperature of 20°C for four weeks in order to increase shelf-life. Generally, apples treated by potassium permanganate were firmer (ca. 18 N) after 4 weeks storing at 20°C in compare to the non-treated control (ca. 12 N). Also, during the storage period, apples from the treated bags were higher vitamin C, total soluble solid (TSS) and acid content to the control. Pre-treatment of apples by only 4 h under 200 mmHg hypobaric conditions in combination with potassium permanganate (75 g/kg fruits) was more marked after 35 days. It was estimated that about one week additional storage life was obtained by pre-treated fruits using hypobaric storage and then packaging in sealed polyethylene bag by potassium permanganate.