**Nutritional and nutraceutical properties in fresh and dried peaches grown in San Pedro**

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ABSTRACT

Peach fruit possess antioxidant activity and it is a source of bioactive compounds such as flavonoids, vitamins A and C. However, it is perishable, having a short shelf life. Different processing procedures have been used to add value and to increase its commercialization. Among them, drying is a conventional process applied to peaches. The objective of this work was to analyze the effect of drying on nutritional and nutraceutical properties of four peach cultivars grown in San Pedro, Buenos Aires, Argentina. In addition, the comparison of the characteristics of fresh fruit from each cultivar was also conducted. To this aim, peaches from Dixiland (DX), Flordaking (FD), Gold Prince (GP) and Elegant Lady (EL) cultivars were harvested at commercial maturity. Fruit firmness were as follows: 3.8±1.4 kg.cm-2 (DX), 4.2±1.3 kg.cm-2 (FD), 5.2±1.2 (GP) and 4.1±1.4 kg.cm-2 (EL). Fruit were washed and disinfected, cut in slices and immersed in anti-browning solutions containing ascorbic and citric acids. Half of the slices were analyzed as fresh material (F) and the other half was dried at 58ºC until reaching an average humidity of 14 % (D). Total protein, glucose, sucrose, ascorbic acid, total phenolics, carotenoids, flavonoids, tannin contents and antioxidant activity were measured in fresh and dried slices. Soluble solid content, titratable acidity and pulp colour were also measured in fresh slices. While glucose content, in a fresh weight basis, didn´t differ among cultivars in F slices, differences in other parameters were found. Remarkable is FD which exhibited the highest levels of carotenoids, ascorbic acid, total phenolics, tannins and antioxidant activity measured by DPPH and ABTS methods, and which showed the lower levels of proteins and sucrose. On the other hand, when parameters measured in D slices were expressed in a dry weight basis and compared to the F ones of the same cultivar, it was found a decrease in all values with the following exceptions. In DX neither sucrose, glucose, tannins and antioxidant activity measured by ABTS method decrease upon drying. While in EL tannins and flavonoids didn´t decrease upon hot air exposure, in GP ascorbic acid, antioxidant activity measured by DPPH method and flavonoids weren´t reduced in comparison with the fresh slices. In the case of FD, only total phenolic content didn´t decrease upon drying. Collectively, based on the results presented it can be concluded that while FD is the richest cultivar on the measured nutritional and nutraceutical parameters for the fresh market, it is the most susceptible cultivar to the drying treatment with hot air.

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Key words: fruit slices, bioactive compounds, antioxidant capacity, Prunus persica