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SUGAR COMPOSITION OF ROCHA PEAR (*PYRUS COMMUNIS* L.) – INFLUENCE OF DRYING TREATMENTS

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Abstract

Rocha Pear (*Pyrus communis* L.) is the main cultivar produced in Portugal, and is classified as Protected Designation of Origin (PDO). Pear production represents a significant economic activity in Portugal (c.a. 190.000 tonnes per year), and the cultivar Rocha represents 95 % of the National Product¹. The pear contains sugars, vitamins, organic acids, polyphenols and minerals in considerable concentrations². Pears are, usually, eaten fresh when ripe. However, the increase in the supply of processed products, particularly subjected to drying³, may provide an opportunity for development and enable the provision of alternative products to consumers. The drying of fruits is a very ancient practice for food preservation still in use nowadays, once the process significantly reduces water activity⁴.

In this work, pears of the variety Rocha harvested at different orchards (five different origins) were studied, fresh and dehydrated at two temperatures, 40 and 60 °C, to determine and compare their sugar composition. This determination was made separately to the pulp and peel from each location.

The results showed that pulps contained a higher amount of sugars (6–15 %) than peels, both fresh and dried. Additionally, it was possible to verify that the drying treatment caused a reduction (35–50 %) in the total amount of sugars.

Sugar analysis showed that the relative composition of fresh pulps and peels was similar, both composed mainly by mannose, followed by sorbitol and glucose. The drying process reduced glucose levels and increased the relative amount of mannose in pulps, while sorbitol and manose increased in peels.

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