

Title The influence of drying on the chemical properties of the chestnuts
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Abstract

The chestnut, whether fresh or dry, could be used as an ingredient in ice-cream, yoghurt or other confectionary products such as cakes, jams and puddings. This project is a contribution to improve production and the industrial transformation of the chestnut, to recognise a resource with a great potential in Portugal. The nutritional value of three varieties (Longal, Martainha and Viana) was studied before drying by analysis of moisture, crude protein, crude fat, ash, total starch, crude fibre, and reduced sugar. After drying chestnuts at three different temperatures, they were analysed again, namely for moisture, total protein and reduced sugar, because they were the most susceptible and affected components of heat treatment. We concluded that chestnuts present a high level of starch and a low level of protein and fat. Comparing the results before and after drying, we found that the total protein and reduced sugar levels decreased with drying treatment and the reduced sugar level was less affected than the total protein level. In fact, they presented a significant variance with the increased rate of temperature, which confirms their high sensitivity to heat.