

# Nutritional characterization of chestnut varieties using different cooking methods

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In Portugal, there are many varieties of Chestnuts (*Castanea sativa Mill.*) with different nutritional potential. Chestnut fruits have complex structure carbohydrates such as starch, minerals, and the existence of vitamins, proteins, and low amounts of lipids. From the various compositions and health studies, it is clear that chestnut fruits have enormous nutritional resources for human health. Additionally, chestnuts have considerable potential as a functional food or children's dietary supplementation to prevent diseases, allergy reduction and immune system booster. However, some nutritional compounds suffer modifications and/or are lost during the cooking process. This is paramount to assess so, industrialized processing of chestnut fruits can be optimized for nutritional value optimization and could conserve health beneficial compounds.

Three different cooking methods were selected: boiled, roasted and dehydrated. Four varieties, Longal, Martaínha, Judia and Rebordã, were harvested from Sabugal municipality, at the Martim Rei Colony. Compared to fresh, boiled were characterized with high value on fatty acids (saturated, unsaturated, polyunsaturated) average ranging 0.31 to 0.52<sub>[CS1]</sub>, roasted were characterized with high value on protein (3.61 to 4.21) and carbohydrates (44.8 to 50.0), while dehydrate were characterized with slight decrease (3 % to 5 %).

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