Book of Abstracts

Innovation in Mediterranean Traditional Foods: Novel Products and Processes

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Nutritional, chemical, and antioxidant evaluation of different Armuña lentil cultivars (*Len culinaris* spp): Influence of soil composition and year

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Lentils (*Lens culinaris* Medik) are a fast-cooking legume widely consumed around the world due to their valuable nutritional and chemical profiles. Here, the nutritional and chemical profiles of 34 Armuña lentil samples were assessed, as well as their antioxidant assets. Additionally, the influence of the meteorological conditions during the growing season, along with the type of soil in which they grow (Luvisol and Cambisol), on both nutritional and chemical profiles were also evaluated. Our results showed high amounts of valuable nutrients, such carbohydrates, of which approximately 47.06% and 29.11% are made by fibers and starch, respectively, and significant amounts of proteins (20.47 to 25.56 g/100 g fw) and ashes. Fatty acids assessment showed the prevalence of PUFAs (45.3 to 63.7%). A good antioxidant capacity (TBARS and OxHLIA) was also observed. Our results indicates that the growing season significantly impact major nutrients in lentils, such as the concentration of fat, ashes, fibers, and fructose and, to a lesser extent, proteins, and sucrose. Additionally, the two different types of soil in this study seem not to affect none of the analyzed parameters.

The attained results support the idea that different edaphoclimatic factors during cultivation must be considered, since the quality traits that stand out in lentils seems to be affected by these factors.

Keywords: *Lens culinaris*; Armuña lentil; Nutritional Value; Chemical Composition; Bioactive Properties