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Book of Abstracts of the 1st Congress on Food Structure Design

Fundação Dr. António Cupertino de Miranda, Porto, Portugal

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Phenolic compounds content and antioxidant activity of wild strawberries (*Fragaria Vesca* L.)

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Abstract

Strawberries are usually consumed in high quantities and can thus be a valuable source of phenolic compounds, vitamin C and other antioxidant compounds. The main phenolic compounds in strawberries are anthocyanins, responsible for the red color in strawberry flesh, combined with flavonoids, flavanols, and derivatives of hydroxycinnamic and ellagic acid (Aaby *et al*, 2007; Pinto *et al*, 2008). Wild strawberries (*Fragaria Vesca L.*) are usually claimed as more antioxidant and more rich in specific phenolic compounds. So the aim of this work was to characterize the phenolic compounds profile and evaluate the antioxidant capacity of wild strawberries in order to ascribe the relevant nutritional and functional properties of these strawberries. Total phenolics were assessed by Folin Ciocalteau's method, total anthocyanins by spectrophotometric methods, total antioxidant activity by the ABTS method and the phenolic compounds were analyzed by high performance liquid chromatography (HPLCDAD). The results obtained reveal that wild strawberries are indeed a great source of phenolic compounds (catechin, epigallocatechin gallate, rutin and ellagic acid) and anthocyanins (cyanidin-3-*O*-galactoside, cyanidin-3-*O*-glucoside, pelargonidin-3-*O*-glucoside, pelargonidin-3-*O*-rutinoside). All of these compounds have importance for the high antioxidant activity demonstrated by these strawberries. Thus, this study highlights the potential of these wild strawberries as a source of bioactive compounds consumed in human diet.

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