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Valorization of *Arbutus unedo* L. berries: a study on their nutritional and phytochemical composition

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In the Mediterranean region, fruits and leaves of *Arbutus unedo* L. (Ericaceae) are traditionally used due to their therapeutic benefits (antiseptic, diuretic, laxative, hypotensive). The fruits are also used in the production of jams, or fermented and distilled into liquors [1], common practices in rural areas of Portugal. As they are still considered an underutilized fruit-tree species [1], the aim of this study was to study the nutritional and phytochemical composition of fresh *A. unedo* L. berries harvested in the North of Portugal (Minho), to promote their consumption and valorization.

Nutritional composition was evaluated according to AOAC methodologies [2]. Total phenolics, flavonoids, anthocyanins, and carotenoids contents were evaluated by spectrophotometric methods [3-5].

Berries moisture was approximately 56 %. Carbohydrates were the most representative components of the nutritional profile of *Arbutus unedo* L. fruits (~42%), followed by protein (~1.1%), ash (0.3%) and lipids (0.3%). Total phenolics, flavonoid and anthocyanin contents per gram of fresh fruit were, respectively, 1.50 mg gallic acid eq., 1.29 mg catechin eq., and 16.5 μg cyanidine-3-glucoside eq. Chlorophyll a (1.9 μg/g), chlorophyll b (2.7 μg/g), lycopene (0.7 μg/g) and β-carotene (2.4 μg/g) were also found in the samples. These results suggest that *Arbutus unedo* L. fruits may exert biological activity and health promoting effects, and that their consumption should be valorized.

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