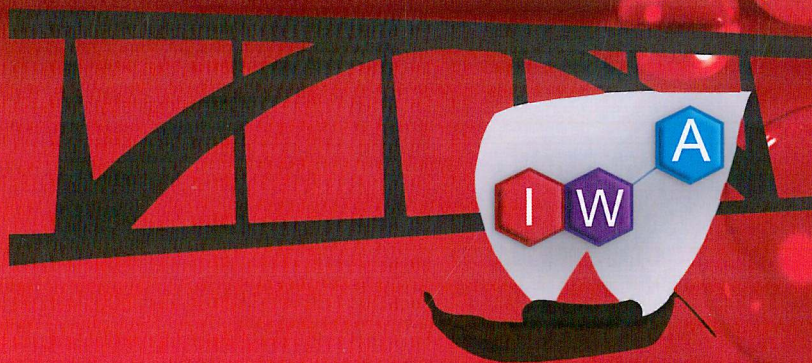


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7th International Workshop on Anthocyanins

"Tasting new colourful sensations"



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P46-Composition in anthocyanins of wild fruits from Northeastern Portugal

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Flavonoids represent the most common and widely distributed group of plant phenolic compounds, and can be further broken into classes including flavones, flavonols, flavanones, flavanols, isoflavonoids and anthocyanins (1). Anthocyanins are widespread in nature mainly in flowers, fruits and vegetables, and are responsible for their orange, red and blue colors. They are nontoxic, water-soluble compounds of great interest in nutrition and medicine because of their potent antioxidant capacity (2), ability to regulate adipocytokine gene expression (3), and therefore, possible protective effects on human health (4). They are also used in dyes industry to replace synthetic pigments by natural ones (5). This study aimed to analyze the composition in anthocyanins of wild fruits of *Arbutus unedo* L. (strawberry-tree), *Prunus spinosa* L. (blackthorn), *Rosa canina* L. and *Rosa micrantha* Borrer ex Sm. (wild roses) from northeastern Portugal. The fruits were extracted using methanol with 0.5% trifluoroacetic acid, purified with a C-18 SepPak® cartridge and analyzed by HPLC-DAD-ESI/MS.

Cyanidin 3-*O*-glucoside was found in all the studied fruits, being the major anthocyanin in most of them, with the exception of *P. spinosa* sample, in which cyanidin-3-*O*-rutinoside and peonidin-3-*O*-rutinoside predominated. *P. spinosa* sample presented the more complex anthocyanin profile among the analyzed fruits and also the highest anthocyanin concentrations (100.40 µg/100 g dry weight), which was coherent with its greater pigmentation. *R. canina* fruits presented the lowest concentration (0.68 µg/100 g). Overall, the studied fruits may have great potential for food industries as a source of colors and flavors, as well as bioactive molecules for dietary supplements or functional foods.

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