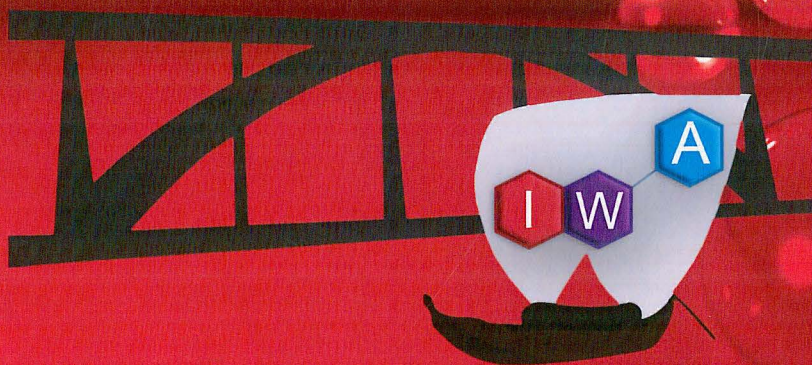


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"Tasting new colourful sensations"



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P47-Anthocyanin profiles of *Crataegus monogyna* Jacq. fruits in different maturity stages

João C.M. Barreira^{a,b,c*}, Sandra Rodrigues^a, Montserrat Dueñas^b, Ana Maria Carvalho^a, Celestino Santos-Buelga^b, Isabel C.F.R. Ferreira^a

^aCentro de Investigação de Montanha (CIMO), ESA, Instituto Politécnico de Bragança, Apartado 1172, 5301-855 Bragança, Portugal.

^bGIP-USAL, Facultad de Farmacia, Universidad de Salamanca, Campus Miguel de Unamuno, 37007 Salamanca, Spain.

^cREQUIMTE, Departamento de Ciências Químicas, Faculdade de Farmácia, Universidade do Porto, Rua Jorge Viterbo Ferreira, n.º 228, 4050-31

*jbarreira@ipb.pt

The vast structural diversity of natural compounds found in plants provides unique opportunities for discovering new drugs. Anthocyanins are an example of bioactive compounds with possible beneficial effects on human health (1). *Crataegus monogyna* Jacq. (hawthorn) has been extensively studied due to its various alleged health benefits (2). Herein, samples from fruits on three different maturity stages (unripe, ripened and over ripened fruits) were extracted with acidified (trifluoroacetic acid) methanol. Extracts were purified on a C₁₈ SepPak® Vac 3 cc cartridge (Phenomenex) and filtered through a 0.22-µm disposable LC filter disk. The HPLC system consisted of a Hewlett-Packard 1100 chromatograph (Agilent Technologies) with a quaternary pump and a diode array detector (DAD) coupled to an HP Chem Station (rev. A.05.04) data-processing. Double detection was carried out by DAD, using 520 nm as the preferred wavelength, and MS detection, performed in an API 3200 Qtrap (Applied Biosystems) equipped with an ESI source and a triple quadrupole-ion trap mass analyzer that was controlled by the Analyst 5.1 software. Further details were given by Rodrigues et al. (3).

The anthocyanin profiles obtained for ripened and over ripened fruits were quite similar, consisting of five different compounds, whereas the profile in unripe fruits was simpler (only two anthocyanins). Cyanidin 3-*O*-glucoside, pelargonidin 3-*O*-glucoside and peonidin 3-*O*-glucoside were positively identified by comparison with standards. The presence of cyanidin 3-*O*-rutinoside and cyanidin pentoside was also confirmed by comparison of its chromatographic and UV and mass spectral characteristics with data in our library. Cyanidin-3-*O*-glucoside was the major anthocyanin in all the samples, and over ripened fruits were, by far, the phenological stage with the highest anthocyanin concentrations, which was coherent with its higher pigmentation. Accordingly, *C. monogyna* might be considered as a potential natural source of anthocyanins, whose bioactive properties might have several applications.

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