Czech Journal of FOOD SCIENCES

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Czech J. Food Sci.

Hohnová B., Šťavíková L., Karásek P.:

Determination of anthocyanins in red grape skin by pressurised fluid extraction and HPLC

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Grape anthocyanins not only play an important role in the colour quality of red wines but they also have many beneficial effects on human health, e.g., reduction of coronary heart disease incidence, or anticarcinogenic and antioxidant properties. Therefore, a rapid and efficient extraction technique prior to chromatographic analysis is of primary interest. Pressurised Fluid Extraction (PFE) presents a fast, effective, and environmentally friendly extraction method for the analysis of red grape pigments. In this study, PFE in static mode was utilised for the extraction of 3-monoglucoside anthocyanins from the grape skin of highly pigmented variety Alibernet. The effects of the type of the extraction solvent and the extraction temperature were studied. The

identification of the above given compounds were performed by high-performance liquid chromatography with diode array detection (HPLC-DAD) based on Synergi C-12 column separation. The wavelength was set at 520 nm. All compounds were determined and identified during 50 minutes.

Keywords:
flavonoids; grapes; PFE; HPLC analysis

[fulltext]