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SEPARATION AND CHARACTERIZATION OF ANTHOCYANINS BY ANALYTICAL AND ELECTROCHEMICAL METHODS

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Abstract

Anthocyanins are one of the most attractive plant phenolic pigments of the group of flavonoids. Their visual impact allied to their health properties make them potentially useful as natural food colorants being used as food additives (E163).
The aim of this work was to develop a fast method for extraction and analysis of anthocyanins in different natural sources: rose, red wine, poppy, apple red, peony, anion, cherry, radish, pepper, eggplant, pimpernel. The HCl 2M was used as an extremely efficient extraction solvent at 100 ºC (reflux). It is preferable the extraction in acid medium, because other solvents used such: mineral ether, hexane or benzene are less ecological. Anthocyanins analysis and separation were investigated using analitical methods (UV-VIS, HPLC) and the antioxidant activity estimation (autooxidation potential) using electrochemical methods (cyclic voltammetry). The anthocyanidins present were identified according to their Rf values (TLC) and UV-VIS. HPLC/DAD with a C18 column was used to accomplish a fast analysis, 3 anthocyanins were identified in peony extracts.

Key words: anthocyanins, anthocyanides, flavonoids

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