

CHARACTERIZATION OF ANTHOCYANIN EXTRACTS FROM DIFFERENT PLANT MATRICES

Adina Căta¹, Ioana M. C. Ienașcu^{1,2}, Mariana N. Ștefănuț¹

¹*National Institute of Research and Development for Electrochemistry and Condensed Matter, 144 Dr. A. P. Podeanu, 300569, Timișoara, Romania*

²*“Vasile Goldiș” Western University of Arad, Faculty of Pharmacy, Department of Pharmaceutical Sciences, 86 Liviu Rebreanu, 310045, Arad, Romania
adina.cata@yahoo.com*

Abstract

Anthocyanins represent the largest group of natural water-soluble pigments, including more than 635 different anthocyanins identified in plant tissues [1]. These pigments are well known for their coloring properties but also for their potential health benefits as dietary antioxidants. The purpose of this study was the preliminary characterization of some anthocyanin extracts from different plant matrices in order to select the most suitable for future studies involving encapsulation in cyclodextrins. Native vegetable sources (fruits, vegetables, flowers) were chosen for the extraction of anthocyanins, namely: black mulberries, black currants, sweet cherries, sour cherries, red onions, red radishes, purple potatoes, wild poppy and red peony. Anthocyanins extraction was carried out with acidified alcohol in ultrasonic condition (59 kHz, 30 min., 25°C). The concentrated extracts were analyzed for anthocyanin content [2], total phenolics [3], and antioxidant capacity [4,5]. The highest anthocyanins content were obtained for the extracts of wild poppy petals (9.031±0.062 mg/g plant material), sweet cherries skins (3.959±0.204 mg/g plant material) and red onion skin (2.714±0.030 mg/g plant material).

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