**INVESTIGATION OF ANTIOXIDANT PROPERTIES**

**OF WATER-ALCOHOL EXTRACTS OF BLACKBERRIES**

Slyvka S.M.a, Tsan’ko M.Yu.a, Slyvka M.V.a\*,Mariychuk R.T.b

***Uzhhorod National University, Uzhhorod, Ukraine***

***FHPS University of Presov, Presov, Slovakia***

*mikhailo.slivka@uzhnu.edu.ua*

The chemistry of natural compounds is an extremely relevant field of knowledge today. Given this, the search of optimal conditions and methods for effective extraction of valuable ingredients (anthocyanins, polyphenols, vitamins, etc.) from natural raw materials is in high demand.

The object of our research is the blackberry materials of the ecologically clean Carpathian region, which can be used to prepare a bio-active additives with a high content of antioxidants, vitamins and minerals, which can be used to prevent viral infections, which became the cornerstone present in the world (COVID-19, different resistant to antibiotics mutated bacteria, etc.).

There are known several compositions (bio-active additives) based on plant and fruit raw materials of the Carpathian region, which have certain pharmacological parameters, but their multicomponent composition causes an imbalance in the overall pharmacological action. This was partially offset by us via the exclusion of walnuts and plants from raw materials. The main idea of the present study is to eliminate the factors of imbalance of pharmacological action of natural biologically active ingredients of berry raw materials of the Carpathian region by identifying berry extract with optimal content of polyphenols, and anthocyanins.

As a result of performed investigation we have found that the water-alcohol extract of blackberry materials obtained at room temperature from frozen at the time of ripening blackberries allows to preserve its valuable properties. Selected extraction conditions allow you to remove up to 80% of antioxidants from natural material. Photometric studies performed analysis of the total amount of polyphenols /antioxidants/. A high indicator of the quantitative content of polyphenols (154.1 mg of polyphenols per 100 g of berry raw materials) was revealed, which indicates the high pharmacological value of the product obtained by us.

The identification of water-alcohol extracts of blackberries as the berry extract with optimal content of polyphenols, and anthocyanins; as well as the evolution of optimal conditions for extraction gives the possibility for creation of test-sample of bio-active additive with promising antioxidant activity on a base of eco-friendly berries raw from Carpathian region.