

## **THE CHOICE OF OPTIMAL EXTRACTANT FOR OBTAINING EXTRACT FROM BORAGE'S ROOT**

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Borage (*Borago officinalis* L.) of Boraginaceae L. family is grown up in many countries of the world as decorative, melliferous, vegetable and medicinal plant. In folk medicine the herb, flowers and fruits which use for treatment of cardiovascular, gastrointestinal diseases, diseases of the upper airways, kidneys and an urinary excretive system, rheumatism, malignant tumors, a depression are applied. Previously we carried out the phytochemical studying of the rosette leaves, herb and fruits. Studying of borage's roots was the following stage of our work.

The aim of our study is to define the optimal extractant for obtaining extract from borage's root.

Materials and methods. The roots of the borage were prepared during mass fruiting (June, 2012) in Kharkov region. Extractant was being chosen among traditional solvents: refined water, water-ethanol mixture with such concentration of ethanol: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, and also 96%. Ratio raw material – extractant was 1:50. Extraction was carried out on the boiling water bath for 2 hours. The content of the oxidized phenols phenols sum and the yield of extractive substances were chosen as assessment criteria. For determination of the sum of the oxidized phenols USSR SF technique, edition XI was used. The content of extractive substances was determined according to the technique given in SF of Ukraine, edition I.

The received results. As a result of the conducted researches it is established that the content of the oxidized phenols sum was higher at extraction by water-ethanol mixtures (concentration of ethanol 30%, 40% and 50%) and made 3,30%, 3,31% and 3,38% accordingly. The yield of extractive substances was the greatest in the extracts received by water – ethanol mixtures 30% and 40% (33,29% and 28,06% accordingly). The ratio of the quantitative content of the oxidized phenols sum and extractive substances doesn't correlate accurately with a type of an extractant.

Conclusions. Thus, we established that from the point of view of the yield of extractive substances and the oxidized phenols sum, an optimal extractant for receiving substance made of a borage's root is water-alcohol mixture with concentration of ethanol 30%. The obtained data will be used for carrying out further researches.