INVESTIGATION OF RAW MATERIAL XANTHIUM STRUMARIUM OF ASTERACEAE FAMILY

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Xanthium strumarium, zobnik; turitsa (Asteraceae) is a one-year herbaceous plant, woolly, gray-green in color, with an unpleasant odor.

In Romania this plant is officinal and on its basis herbal drug "Adenostop" for the treatment of enuresis and BPH is created. High content of iodine plant helps reduce the thyroid. This plant has antibacterial, antifungal, anti-inflammatory, diaphoretic, antipyretic and diuretic effects.

The chemical composition is studied insufficiently. The leaves contain a lot of iodine, alkaloids, vitamins C (almost 31.8 mg). Seeds contain fatty oil, resins, glycosides ksantostrumarin and iodine.

One of the stages of research the Xanthium strumarium grass is to identify the dynamics of the recovery of extractives. As extractants were used purified water and water-ethanol mixture. Looking at the exit of extractives, we can say that the largest number of substances was extracted when we used as an extractant 30% alcohol aqueous, 20% alcohol aqueous and water.

Also, for this series of extractants studied the dynamics of extraction the amount of phenol oxidation. For this group of substances optimum extractants were 50% aqueous alcohol (5.20±0.01%) and 40% aqueous alcohol (5.04±0.01%). In view of these two factors, for further technological research we selected 50% alcohol like the optimal extractant.

We the qualitative and quantitative composition of fatty acids studied. A result of research we identified and quantified, in lipophilic complex of leaves and stem, 7 fatty acids: lauric, myristic, palmitic, stearic, oleic, linoleic and linolenic acids. In lipophilic complex of leaves and stems prevailed the content of unsaturated fatty acids. Of saturated fatty acids prevailed content of palmitic acid, it was 24.13% (for leaves) and 17.20% (for stem) of the amount of fatty acids. Of unsaturated fatty acids dominated content of linolenic acid, it was 43.99% (for leaves) and 44.28% (for stem) of the amount of fatty acids. Among of identified fatty acids the minimal content had the lauric acid, it was less than 1% of the amount of fatty acids.

The obtained results will be used in future research and in development of new drugs based on lipophilic complexes of Xanthium strumarium leaves and stem.