RESEARCH ON THE SYRINGIN CONTENT IN THE FLOWERS OF COMMON LILAC OF BUFFON VARIETY

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Introduction. Nowadays medicinal plants which contain biologically active substances of phenylpropanoidal nature are widely studied. The representatives of Syringa genus are known to be a promising raw material for obtaining phenylpropanoids, and especially syringin (eleutheroside B) as the main one. Bark is the only part of the plants of the Syringa genus, which is used in officinal medicine, so research on the syringin content in the flowers of common lilac of Buffon variety is a task of current interest of pharmaceutical science.

Aim. The aim of the research was quantitative determination of syringin in the flowers of common lilac of Buffon variety.

Materials and methods. Quantitative content of eleutheroside B was determined by spectrophotometer Mecasys Optizen POP (Korea). Extraction of eleutheroside B was carried out by the following procedure. 1.0 g of the crushed flowers were put to a flask with capacity of 100 ml and fractional extraction with 20 ml 70%, 95% of ethanol and mixture chloroform-ethanol (5:1) was carried out. Extracts were combined, filtered and evaporated. Than 10 ml of water were added to the evaporated residue in the flask and purification of water phase by the triple extraction with 10 ml of tetrachloromethane was made. The purified fraction was placed in a separation funnel, syringin was extracted by the mixture chloroform-ethanol (5:1). The extract was filtered through a paper filter with 1.0 g of sodium sulfate anhydrous into a measuring flask with capacity of 100 ml, where the mixture chloroform-ethanol (5:1) was added till the mark. Quantitative determination was made using specific absorption value of syringin at the wavelength 278 nm, taking mixture chloroform-ethanol (5:1) as a reference solution. The content of eleutheroside B (X, %) was calculated using the formula: $X = A \cdot 100 \cdot 50 \cdot 100 / A_{1cm}^{1\%} 20 \cdot m \cdot (100 - W)$, where A – absorbance of the solution studied; $A_{1cm}^{1\%}$ – – specific absorption value of syringin at 278 nm; m – – weight of the plant material, g; W – weight loss on the plant material drying, %.

Results and discussion. Content of syringin in the flowers of common lilac of Buffon variety in terms on absolutely dry plant material was 1.5±0.01 %.

Conclusions. The results of the studies carried out are encouraging to use eleutheroside B (syringin) as a marker for analysis of extracts of common lilac flowers of Buffon variety.