



ABSTRACT BOOK

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Schisandra chinensis (Turcz.) Baill seeds as a source of lipophilic compounds

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Introduction. *Schisandra chinensis* (Turcz.) Baill seeds are a rich source of various groups of biologically active compounds: essential oils, lignans, flavonoids, triterpenes, and polysaccharides. *S. chinensis* seeds are widely used due to their antitumor, antioxidant, antibacterial, antidiabetic, and tonic effects [1].

Aim. The aim of the work was to study *Schisandra chinensis* (Turcz.) Baill seeds lipophilic fraction.

Methods. The fruits were harvested during the period of full ripening at the experimental plots the National Botanical Garden named after M.M. Gryshko. After removing the juice from the fruits, the seeds were separated from the pericarp and dried at a temperature not higher than 45°C. The microchemical reaction was carried out with Sudan III. The lipophilic fraction was obtained in the Soxhlet extractor by exhaustive extraction with chloroform from seeds with different degrees of grinding: whole, 2.5-3.0 mm, and 1.0-1.5 mm. The analysis of fatty acids and volatile substances of the lipophilic fraction was carried out by GC/MS [2,3].

Results. A microchemical reaction confirmed the presence of fatty and essential oils in *S. chinensis* seeds (drops of fatty and essential oil were colored bright red). It was established that the yield of the lipophilic fraction from whole seeds of *S. chinensis* was the lowest: 16.2±0.64%. The yield of the lipophilic fraction of *S. chinensis* seeds with a grinding degree 1.0-1.5 mm was the highest: 35.79±0.7%. The GC/MS method established the presence of 5 fatty acids in the studied lipophilic extract. Linoleic acid is contained in the largest amount: 267.6±1.4 mg/g. Studies of volatile substances confirmed the presence of at least 26 compounds, of which the following components have the highest content: ylangen, α-cedrene, β-himachalene, β-chamigrene, cuparene.

Conclusions. The study of *S. chinensis* seeds lipophilic fraction confirms the presence of fatty and essential oils. Among fatty acids, linoleic acid predominates in terms of quantitative content; among volatile compounds, ylangen and α-cedrene predominate.

References:

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