

## VOLATILE COMPOUNDS OF *Salix triandra* SHOOTS OF THE UKRAINIAN FLORA

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Willows are one of the largest genera of wood species in temperate climate. It is believed that in the world there are about 350-370 species. Of these, 23-25 species are naturally growing in Ukraine. They are the sources of highly active natural compounds used in folk medicine for a long time for the treatment of many diseases.

As a result of the research conducted at the Department of Pharmacognosy of the National University of Pharmacy of Ukraine the presence of phenolic glycosides, salicylates, flavonoids, tannins (mainly condensed group), coumarins, hydroxycinnamic acids, volatile compounds, polysaccharides, amino acids, higher fatty acids, macro- and microelements in the raw material of the *Salix* genus has been found.

Therefore, special attention is given to the study of biologically active substances of shoots of plants of the Salicaceae family. It gives the possibility for the rational and complex use of the herbal raw material of the components of the phytomass of tree species. The aim of the present research was to study the composition of the volatile compounds of *Salix triandra* L. shoots.

The plant raw material was collected in the National Botanical Gardens, named after M. M. Grishko National Academy of Sciences of Ukraine in June 2017, with the herbarium voucher stored at the Herbarium of Pharmacognosy Department of the National University of Pharmacy.

The study of volatile compounds was also performed by GC/MS on an Agilent Technologies 6890 chromatograph with a mass spectrometric detector 5973 using the DB-5 capillary column with the internal diameter of 0.25 mm and the length of 30 m; the rate of the sample injection was 1.2 mL/min for 0.2 min; the flow rate of the carrier gas (helium) was 1.2 mL/min; the temperature of the sample injection heater was 250 °C; the thermostat temperature was from 50 °C to 320 °C at the rate of 4 °C/min.

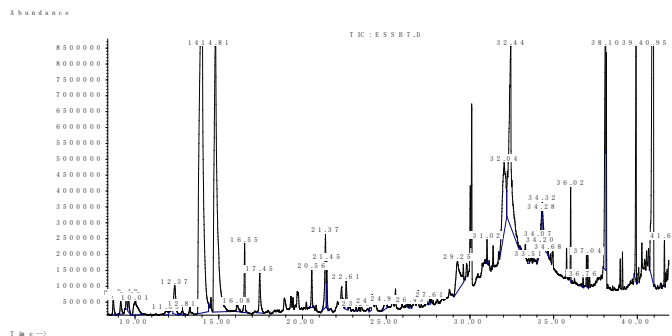


Fig. 1 The chromatogram of the volatile substances of *Salix triandra* L. shoots.

40 components in the investigated raw material were identified, among which nerol (1440.80 mg/kg), geraniol (915.00 mg/kg) and squalene (966.98 mg/kg) prevailed, there were also terpene hydrocarbons and their oxygenated derivatives, aromatic and heterocyclic compounds, 10 fatty acids (6 saturated and 4 unsaturated fatty acids).

The results indicate the prospects of using *Salix triandra* L. shoots, and they will be used in further study of this raw material.