MORPHOLOGICAL AND CHEMICAL STUDIES OF *ROSA GALLICA* L. FLORES

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Garden purslane – *Rosa gallica* L. belongs to genus *Rosa*, family *Rosaceae*. This species gave rise to the old roses in Europe.

A plant is a perennial well branched shrub. Bush size is 130*100cm, of 90-150cm high. Underground stems are present. The leaves are dark green, oval, pointed, leathery. The blooming is profuse, long termed and single-shot.

Flowers are gathered in inflorescences. On one peduncle 3-5 flowers are present. The single flower is 4-6cm in diameter with 17-25 notched petals. Heart-shaped petals have 2.5cm-3cm in length, 1.5-2.5cm wide with a wedge-shaped base and a twin tip. Average petals are oval or broadly lanceolate with wedge-shaped base and a rounded base. Surface is velvety. Color of petal's base is white or pale pink, color of petal is dark red. Flowers have a rich flavor.

False fruits are round-ovate with sepals. Length is from 1.5 to 2cm, diameter is 1.0-1.6cm. Fruits are brilliant, colour ranges from orange to brown-red. At the top of the fruit a pentagonal areola is present.

The fruit consist of the overgrown fleshy receptacle – hypanthium – within which coccus are present. Coccus are small, spherical with weak pale yellow faces. Very small, dark undeveloped coccus are present. Inside the fruit is lined with stiff bristly hairs. Fruits are odorless. Taste is sweet and sour, astringent.

Rose is a vitamin and general tonic agent. This plant possesses choleretic, anti-inflammatory and wound-healing effects.

By Pharmacopoeia method the content of ascorbic acid in fruits and petals of *Rosa galica* have been determined. In petals the content of vitamin C was 0.06%. In an aqueous infusion of petals the content of vitamin C was 0,055%. The content of vitamin C in fruits was 0.176%.

Rose petals are the source of volatile oil.

The analysis of the volatile compounds of Purslane flowers was performed using chromatography-mass spectrometric method on Agilent Technologies 6890 chromatograph with a mass spectrometer detector 5973. The sample was injected into a chromatographic column in a mode "splitless", rate of the sample injection – 1.2ml/min for 0.2min. Experiment was carried out under the next conditions: chromatographic capillary column INNOWAX with an inner diameter of 0.25mm and 30m long. The gas flow rate (helium) – 1.2ml/min, the temperature of the heater

of the sample input – 250 °C, the thermostat temperature was from 50 °C to 320 °C, the heating rate was 4 °C/min. The detector temperature was 250 °C.

The identification of compounds was performed by comparing the mass spectra of obtained compounds with database of mass spectra libraries NIST05 and WELEY 2007 in conjunction with the identification programs AMDIS and NIST.

The quantification was performed using the concentration of the internal standard and expressed on the herbal drugs.

30 Compounds have been identified and quantified. Among identified dominant volatile components next substances were: *β*-phenylethyl alcohol – 2,12%; *α*-evdesmol – 0,98%; 10-epi-□-evdesmol – 4,16%; *β*-evdesmol – 3,0%; *α*-evdesmol –1,83%; quniper-camphor – 0,64%.

The chromatographic profile of Purslane flowers volatile oil is represented on the figure.

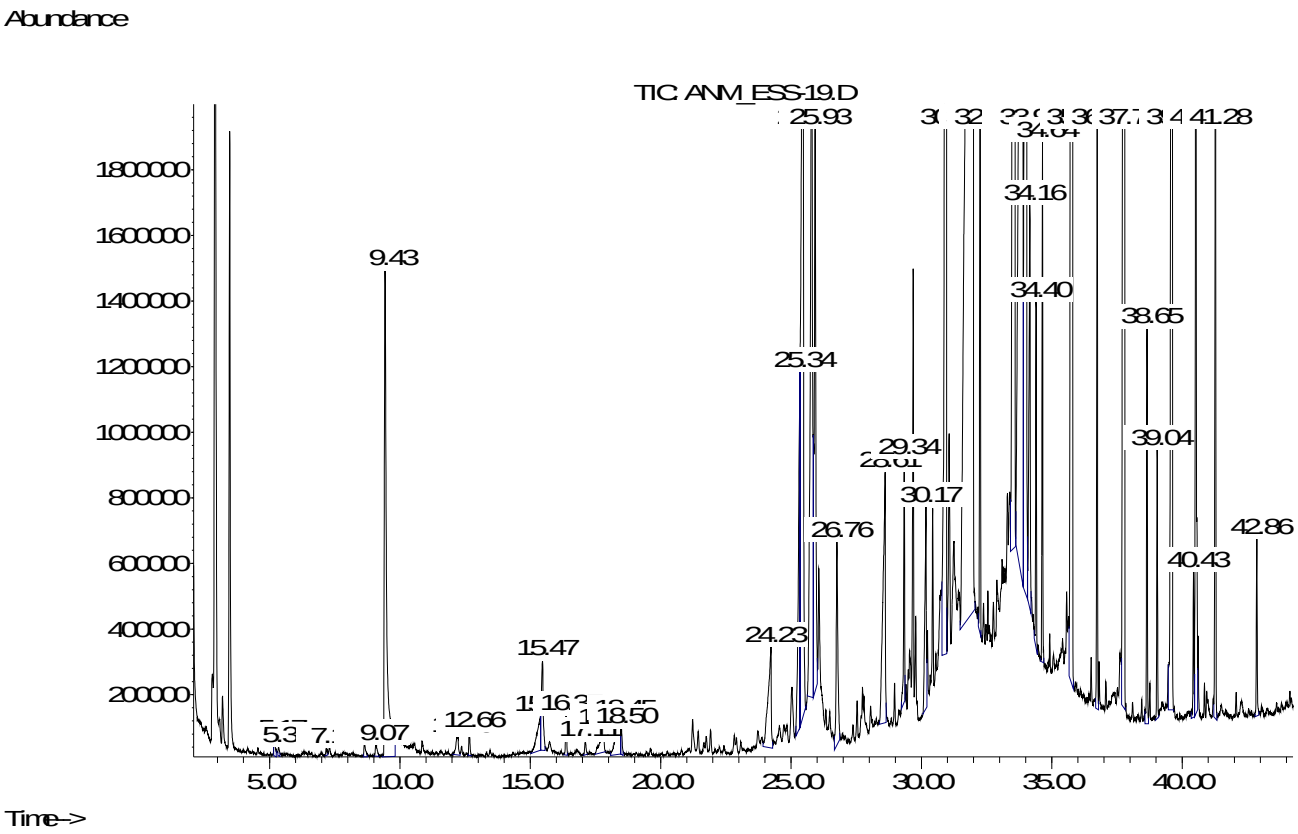

Figure. The chromatographic profile of Purslane flowers volatile oil

Rich chemical composition is the base for further in-depth research of *Rosa gallica* L.