Materials and methods. The study object was the *Onosma rigida* herb, collected in the Odessa region during the period of mass flowering in June 2020. The shadow-dried raw materials were crushed, sieved, extracted with various solvents and examined for the presence of biologically active substances using qualitative reactions, chromatography on paper and in a thin layer of sorbent in various solvent systems. Standard samples of substances were used for identification.

Research results. To identify free sugars, the extracts were additionally purified from phenolic compounds and hydrolysis was carried out. Fehling's reagent was used to detect sugars. Chromatography was carried out by the PC method in solvent systems: n-butanol – glacial acetic acid – purified water (4:1:2) with reliable samples of substances. D-glucose and D-fructose were identified. The study of the amino acid composition was carried out by the PC method in the solvent system n-butanol – glacial acetic acid – purified water (4:1:2), developer – 0.2% alcohol solution of ninhydrin, T=105°C. Arginine, leucine, and methionine were identified. Using the PC method in solvent systems ethyl acetate – formic acid – purified water (3:1:1) and n-butanol – formic acid – purified water (4:1:5) malic acid and ascorbic acid in the solvent system ethyl acetate – glacial acetic acid (8:2) were identified. Phenolic compounds were detected using qualitative reactions with a 1% aqueous solution of iron (III) chloride and a 10% alcoholic solution of sodium hydroxide. Hydroxycinnamic acids by the two-dimensional PC method in solvent systems of 2% acetic acid and n-butanol – glacial acetic acid – purified water (4:1:2) were determined. Caffeic and rosmarinic acids have been identified. The flavonoid rutin was detected by chromatography in the system n-butanol – glacial acetic acid – purified water (4:1:2) and TLC (chloroform – methanol system (9:1)).

Conclusions. For the first time, the qualitative composition of the main groups of biologically active substances in *Onosma rigida* Ledeb. herb was studied. Free carbohydrates, amino acids, organic acids and substances of phenolic nature were discovered for the first time. The obtained research results will be used in further work.

DETERMINATION CATECHIN CONTENT IN GREEN TEA LEAVES BY HPLC METHOD

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Introduction. Tea has been used as a traditional medicine in China for more than 1000 years. Today, tea is used as a beverage and as an ingredient in cosmetics because of its antiaging properties. There are different types of tea, for example, white, green, oolong, black and Pu-erh tea and all of them are being produced from *Camellia sinensis*.

Aim. Determination catechin content in green tea leaves by HPLC method.

Materials and methods. Green tea leaves used for the analysis were collected in Anhui Province, China. The extract for the HPLC analysis was obtained by the maceration method with 60 % ethanol twice in the rawmaterial / extractant ratio of 1 : 20. In the case of the spectrophotometric analysis, green tea leaves were extract-ed with 70 % ethanol twice by the maceration method inthe raw material / extractant ratio of 1 : 20. The analysis of theextract from green tea leaves was performed by high performance liquid chromatography using a ProminenceLC-20 Shimadzu chromatographic system (Japan) with a SPD-20AV spectrophotometric detector, an

AgilentTechnologies Microsorb-MV-150 column (reversed phase, C18 modified silica gel, length – 150 mm, diameter –4.6 mm, particles size – 5 μm). Substances in the extract were identified by comparing the retention time and the spectral characteristics of the test substances with the same characteristics of the reference standards.

Research results. Using high performance liquid chromatography 5 catechins were identified. Among them epigallocatechin-3-O-gallate (10.85 %) predominated, while catechin (0.61 %) had the lowest con-centration. The total amount of catechins in green tea leaves was 30.56% in the dry raw material.

Conclusions. The qualitative composition and the quantitative content of catechins have been determined in the extract from green tea leaves by high performance liquid chromatography. The high content of catechins makes the extract promising for further study and creation of new herbal medicinal products and dietary supplements.

COMPARISON OF CHEMICAL COMPOSITION AND ANTIOXIDANT ACTIVITY OF EXTRACTS FROM FRESH AND DRIED FRUITS OF 20% ETHANOL EXTRACT OSAGE ORANGE

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Introduction. Osage orange (*Maclura pomifera*) is a tree belonging to the Moraceae family. Its fruits reach full size (weighing 500 g) every autumn, and each fruit can contain up to 300 seeds. One of the main bioactive compounds (BAC) in the fruits is isoflavonoid derivatives – osajin and pomiferin. Dried raw materials are used for the production of extracts, infusions, and tinctures. However, some changes in the BAC of the raw material occur during drying due to oxidation and etherification reactions.

Aim. Comparison of the chemical composition and antioxidant activity of extracts obtained from fresh and dried osage orange fruits using 20% ethanol.

Materials and methods. The research objects were fresh and dried osage orange fruits. The fruits were collected during the fruiting period near the village of Kalanchak in the Kherson region. The extracts were obtained as follows: 10.0 g of crushed osage orange fruits (1-2 mm) were extracted with 20% ethanol at a raw material/solvent ratio of 1/20 (*w/v*) in a water bath at 80°C with a reflux condenser for 1 hour. After cooling, the solutions were filtered and concentrated to 10 mL using a rotary evaporator at 40°C under vacuum.

The total phenolic compounds were determined using the Folin-Ciocalteu method, and the optical density was measured at a wavelength of 760 nm. The total flavonoids were determined by the differential spectrophotometry method with $AlCl_3$, and the optical density was measured at a wavelength of 417 nm. The total hydroxycinnamic acids were determined based on complex formation with $NaNO_2$-Na_2MoO_4, and the optical density was measured at a wavelength of 525 nm.

The antioxidant activity of the extracts was assessed using a potentiometric method.

Research results. In the obtained 20% ethanol extracts from fresh and dried fruits, the content of phenolic compounds, flavonoids, and hydroxycinnamic acids was higher in the extracts obtained