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EFFECTS OF ENVIRONMENTAL CONDITIONS ON SUBSTANCE OF FLAVONOIDS IN LEAVES

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In January, 2020 the study for the identification quantity of flavonoids in the leaves *Salvia tesquicola* was conducted on the platform of Samara National Research University. In the process of this work we have used three herbarium specimens. They were gathered on the following territories: Village of Malaya Ryasan, Stavropolskiy Region (1998), Krasnosamarskoye Forestry, Kinelskiy Region (2019), Village of Belovka, Bogatovskiy Region (2012). Phenol compounds were identified by T. Sweyn and W. Hillis' method. We took samples of about 0,21 g and added 10 milliliters of ethyl alcohol and one drop of Pholina-Chokalteu reagent. This mixture was boiled by reflex condenser. The painted solutions were controlled for intensity of coloration by a photoelectric colorimeter KFK-2 with the yellow filter (λ =590 nanometers).

The most common group of flavonoids belongs to C_3-C_6-C_3 series. Molecule of flavonoids has two benzyl rings, connected to each other by three-carbon fragment. Most of flavonoids are derivatives of flavan and chroman. Flavonoids are basic substances of secondary metabolism of plants. They play a huge role in functioning of plants and their biochemical reactions. Different colors of these chemical compounds help to establish an ecological relationship between microorganisms, plants, animals. Transferring chemical information, they serve as attractants and repellents for different organisms. Flavonoids are connected with the processes of photophosphorylation and take part in the catalysis of electrons transporting. They govern the work of ion channels. Other function of phenol compounds is protecting of chloroplast from solar radiation. They serve as source components of lignin structure.

The subject study of my work is Salvia tesquicola, described by Klock and Pobed. It grows in prairie and stony slopes, dry meadows and forest edges. This plant has a polymorphic form. We can observe its blossom from May to July. Morphologically this plant has a straight tetrahedral stem. The stalk is hairy, its height is 30-60 cm. Double-breasted flowers have two stamens and different spectrum of colors: blue, pink, purple. The inflorescence is false whorl. Its fetus is nutlet. It has melliferous and medicinal value.

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The results obtained showed that the maximum concentration of flavonoids was during the blossom period in the Krasnosamarskoye forestry (824,8 mg/100 g leaves). The concentration of flavonoids is 750,2 mg/100 g in the sample from Stavropolskiy Region and 443,1 mg/100 g in the sample from the Village of Belovka. Having compared annual total radiation in the regions of *Salvia tesquicola* growing and its ability to accumulate phenol compounds, a positive correlation was identified. Now we have come to the conclusion that this concentration is dependent on the total Annual radiation. On the basis of the data obtained, we can recommend picking *Salvia tesquicola* in the places with heightened annual sun radiation.

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ОТНОШЕНИЕ СТУДЕНТОВ К ФОРМАТАМ СВОБОДНОГО ОБРАЗОВАНИЯ

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Ключевые слова: свободное образование, liberalarts, форматы свободного образования

Сегодня мы можем наблюдать кризис в системе российского высшего образования. Обучаясь в современном университете по привычной, устоявшейся модели, мы получаем на выходе стандартного выпускника с вполне стандартным набором знаний и взглядов. Мировоззрение такого выпускника сформировано утвержденными государством образовательными стандартами. Однако требования рынка труда меняются так часто, что предсказать необходимый набор компетенций молодого специалиста становится все труднее.

Объектом исследования являются форматы свободного образования.

Цель работы – выявить отношение студентов Самарского университета к форматам свободного образования. Мы провели анкетный опрос и выяснили отношение студентов Самарского университета к форматам свободного образования.

Результаты исследования показывают необходимость внедрения свободного формата образования в Самарский университет. Студенты Самарского университета достаточно хорошо осведомлены о существовании свободных форматов получения высшего образования, однако не информированы о том, в каких университетах России внедрены такие форматы.

Наиболее предпочтительный формат свободного образования для студентов Самарского университета - это система распределительных

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