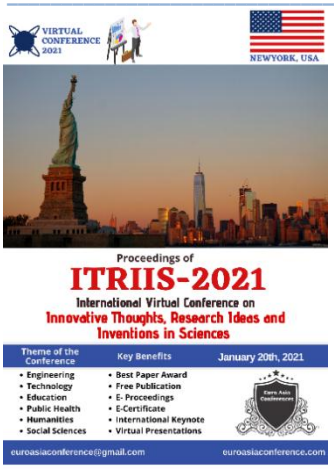

DETERMINATION OF HEAVY METALS, THAT CAN BE FOUND IN THE COMPOSITION OF TARAXACUM OFFICINALE WIGG AND TARAXACUM KOK-SAGHYZ RODIN PLANTS

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Key words:
Heavy metals, sample, Taraxacum officinale Wigg. and Taraxacum kok-saghyz Rodin plants.

Currently, the need for production and transport is increasing, associated with an increase in the population. Due to anthropogenic factors, every year millions of tons of toxic gases (aerosol, dust, smoke, microbes, pollen), gaseous substances and water vapor, hydrogens, sulfates, sulfur gases, hydrogen sulfide, nitrogen oxide, nitrates, lead, fluorine, manganese, radioactive substances, pesticides iron are released into the atmosphere. Because of human activity, 20 billion tons of carbon dioxide (CO2) are released into the atmosphere every year [1].

Poisonous gases and heavy metals released into the atmosphere accumulate in the environment and on plants. In medicinal plants, the formation and accumulation of biologically active substances, being a changing and dynamic process in the ontogenesis of these plants, is associated with numerous environmental factors, including anthropogenic factors. The presence of the relationship between the environment and heavy metals in the composition of plants determines the use of plants as their natural and anthropogenic-landscape indicator [2,3].

In Uzbekistan, after collecting samples of introduced plants Taraxacum kok-saghyz Rodin and Taraxacum officinale Wigg (dandelion) in various regions, it was revealed that heavy metals can be found in the composition of plants.

When determining the amount of chemicals and heavy metals, macro and micro elements in the composition of the collected raw materials, the inductively connected plasma mass spectrometry method was used.

As a result of conducted research, samples of the studied plants were collected mainly along the main routes of Tashkent city, a gas filling station, around a chemical plant of Chirchik town, along the Chirchik river of Gazalkent town, Bostanlyk region, samples of plants Taraxacum officinale Wigg, as well as Taraxacum kok- saghyz Rodin, acclimatized in the conditions of Tashkent Botanical Garden named after academician F.N. Rusanov. The amount of heavy metals, macro and micro elements in the composition of the collected plant samples was determined using the inductively connected plasma mass spectrometry method. For this, 0.0500-0.5000 g of a specific sample of the tested substance is weighed on an analytical scales and transferred to a Teflon autoclave, then the prescribed amount of purified concentrated mineral acids, acid nitrate and hydrogen peroxide are placed in the autoclave. The autoclaves are closed and placed in BERGHOJJ microwave decomposing apparatus with

MWS-3 software, indicating the degree of decomposition and the number of autoclaves. After decomposition, the contents of the autoclave, depending on the quantity, are placed in vials with a capacity of 50 or 100 ml and brought to the indicator with 2% acid nitrate. When considering the sequence of analyzes, the amount is indicated in mg and the level of dilution in ml. After obtaining the data, the true quantitative composition of the substance of the experimental sample is automatically calculated and entered as % with the rcd error limit in mg / kg or mg / g.

Name	Pb	Cd	Hg	As	Zn	Cu	Fe	Mg
Sample №.1 Around the canal of the chemical plant of Chirchik town. 14.06.2020	6,778	0,223	0,282	0,747	83,873	11,839	1486,09	5812,31
Sample №2. Taraxacum kok-saghyz Rodin grown in a botanical garden. 17.06.2020	6,124	0,257	0	0,522	35,586	12,695	1398,66	4226,62
Sample №3 Along the road of Mashinosozlar mahalla Yunusabad district. 15.05 2019	7,986	0,175	0,026	0,424	30,256	14,530	1080,37	2887,83
Sample №4. Around the gas station in Yunusabad region (gas station near the Tashkent prison). 15.04 2020	5,534	0,312	0,212	0,538	45,426	17,247	1073,37	2265,43
Sample №5 Near the Chirchik river, Gazalkent town, Bostanlyk district.	5,084	0,618	0	1,808	38,732	31,348	1518,98	4091,55

21.06.2020								

Reagents used for the determination of heavy metals in plant samples: for multi-element No. 3 (29 elements for OES) Hg (mercury for OES), a standard sample of nitric acid (chemically pure), hydrogen peroxide (chemically pure), bidistilled water, argon (gas purity 99.995%) are taken.

Indicators of the amount of heavy metals (mg / kg or mg / g), determined from the analysis of plants Taraxacum officinalis Wigg and Taraxacum kok-saghyz Rodin collected in different areas.

Conclusions:

Indicators of the amount of heavy metals found in the composition of plant samples of Taraxacum officinale Wigg. and Taraxacum kok-saghyz Rodin, collected from different areas, were defined by the help of modern physicochemical methods of analysis

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