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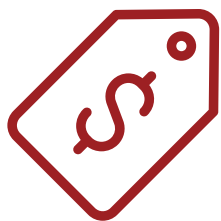
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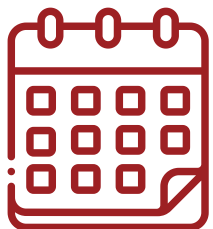
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**THE CONTENT OF RADIOACTIVE ISOTOPES IN ATMOSPHERIC AEROSOL AND SOILS OF
NORTHERN TAJIKISTAN**

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Annotation. The article presents the results of research to determine the environmental assessment of soil pollution and atmospheric aerosol by the content of radioactive isotopes. Of all the studied radioactive isotopes, only ^{137}Cs is an artificial isotope, the presence of which directly depends on anthropogenic human activity. When studying the elemental composition in atmospheric aerosol samples collected from various districts (Shahrستان, Istaravshan, Devashtich, Zafarabad, Farmonkurgan, Khujand and Asht district) In northern Tajikistan, the following radioactive isotopes have been isolated: ^{40}K , ^{210}Pb , ^{212}Pb , ^{214}Pb , ^{214}Bi and ^{228}Ac . An increased content of the isotope ^{40}K was found in aerosol particles – 1.3 times, ^{210}Pb – 5.23 times, ^{212}Pb – 1.24 times, compared with soil, which may be due to anthropogenic factors.

Keywords: atmospheric aerosol, CANBERRA gamma spectrometer, radioactive isotopes, specific activity, plastic baths, radioactive tailings.

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The tasks of foreseeing and preventing the "harmful consequences" of pollution of territories in the life and activities of mankind have become one of the most important scientific problems of our time. The study of the processes of distribution and dispersion, migration and chemical transformations of toxic substances, for example, radioactive isotopes and heavy metals (TM), polluting the biosphere, is widely deployed in all countries of the world [1, pp. 48-57; 2, pp.80-85; 3, pp.78-93], including in Northern Tajikistan.

The consequences of mining and geological development of radioactive ore deposits and extraction of strategic uranium for the nuclear industry of the former Soviet Union in the territory of Northern Tajikistan led to the emergence of high-capacity radioactive tailings dumps - tens of millions of tons of high activity – thousands of Ku and on large areas – hundreds of hectares [4, pp. 56-61; 5, pp.116–137]. Tailings dumps and dumps of industrial enterprises are enriched with TM, which, at certain concentrations exceeding the MPC, turn into toxic.

As shown in many studies [10, pp. 115-121; 11, pp.68-73; 12, pp. 142-146; 13, pp. 60-65], modern radiological and environmental problems of the CIS countries are the legacy of the industries of the former USSR that were intensively developed earlier. Naturally, at the same time, many useful farmland lands and pasture fields fell into disrepair, large quarries, mines and tunnels and non-condensing dump fields were formed.

The most unfavorable radioactive tailings dumps today are the "Waste of poor ores" of Taboshar, the Adrasman tailings dump located in Selersul and the largest, open to all winds "Digmayskoye" [10, pp. 115-121; 14, pp. 83-90; 15, pp. 36-55]. Information about the radioactive tailings dumps of Northern Tajikistan is given in many books and monographs of the authors [4, p.116].

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