

The hourly rate of radiation or 0% of living organisms are 400 ber for humans 1000-2000 for fishes and avis 100000 ber for insects. Even this level of radiation is not problem for invertebrate organisms. It was studied radioactivity of  $^{226}\text{Ra}$ ,  $^{234}\text{Th}$ ,  $^{40}\text{K}$  of bivalves mollusks from difterenut water reserves of Zaravshan river basin, with using semiconductor gamma spectrometer.

The were obtained following results

Animal	Ra	Th	K
	Tusinsay watar reserve (premountaius)		
Bivalves	5,9± 0,6	5,0± 0,5	32,0±3,3
molluscs	Dargom water reserve (walley)		
	5,0 ± 0,5	6,0± 0,6	30.0± 3.0
	Katta-kurgan water reserue (walley)		
	6,1±0,6	6,9±0,7	33.0± 3,4

The obtained results showed radioactivity of bivalves mollusks. From investigated water reserves varies from Ra 5,0-6,0 Bk/kg, Th-5.0-6.9 Bk/kg, K 30.0-33,0 Bk/kg. The radionuclides content depends not only from water, but from location, origin and other factors. The lower is location of water reserve the higher is concentration of radionuclides in the animals. The main explanation for this phenomena could be low accumulation of organic compounds- the principal food this animals. In general, radionuclides accumulation in the mollusks depends from different eco-physiological factors, as well as individual requirements to these radionuclides. The basin of Zaravshan river is not polluted by radionuclides.



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## RADIOACATIVE PARAMETERS OF WATERS OF THE SYRDARIA RIVER BASIN ON THE TERRITORY OF THE KYRGYZ REPUBLIC

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Within the framework of the International Cooperation Program in the sphere of the transboundary monitoring of the rivers between the Republics of Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan, and the United States of America ("Navruz", ISTC KR-850 Project), in addition, in the Kyrgyz Republic, the isotopic content (isotopic ratio of  $^{234}\text{U}/^{238}\text{U}=\gamma$ ), and the uranium content ( $C_U$ ) in the waters was measured.

The isotopic ratio  $^{234}\text{U}/^{238}\text{U}=\gamma$  of the waters of the rivers Naryn and Kara-Daria basins has no anomalous values of  $^{234}\text{U}/^{238}\text{U}$ , which indicates the absence of the man-caused uranium in these rivers. The results of determination of the activity ratio of  $^{234}\text{U}/^{238}\text{U}$  and uranium content in the Mailuu-Suu river basin are of great interest. In the upper reaches of the Mailuu-Suu

river the uranium content is  $0.4 \cdot 10^{-6}$  g/l ( $0.8 \cdot 10^{-6}$  g/l in the flood period), in Mailuu-Suu town (after the tailing dump) –  $(3 \div 4) \cdot 10^{-6}$  g/l, i.e. this value is an order of magnitude higher, and at the border with Uzbekistan –  $1.8 \cdot 10^{-6}$  g/l ( $3.2 \cdot 10^{-6}$  g/l in the period of flooding), which is lower as compared with the town. Correspondently, there are changes in the activity ratio from 1.39 (in the upper reaches of the river) to 1.05 (in the town), and 1.32 (1.12 during the flood period) at the border with Uzbekistan. This situation indicates, first, the enrichment of the waters of the rivers with the man-caused uranium ( $\gamma=1$ ), and its subsequent sorption along the river stream.

The obtained results indicate the absence of the man-caused uranium in the whole stream of the Naryn and Kara-Daria rivers on the territory of the Kyrgyz Republic, and lack of noticeable contamination of the waters of the Mailuu-Suu river with the man-caused uranium from the tailing dumps of the Western Mining-Chemical Plant (WMCP, Mailuu-Suu). It also should be noted that the share of the man-caused uranium, transported to Uzbekistan by the Mailuu-Suu river does not exceed 20-30%, and the total uranium content in these waters is much lower than MPC, and lower than that in the drinking water of the Chui valley of the Kyrgyz Republic.