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## **POLLUTION OF WATERS BY HEAVY METALS AND EFFECTS ON THE POPULATION HEALTH IN PLACES OF WASTE WATER DUMP FROM THE MINING ENTERPRISES OF TAJIKISTAN**

Korsakova IA<sup>1</sup>, Vakhobova RU<sup>2</sup>, Daburov KN<sup>1</sup>

<sup>1</sup>*Tajik State Medical University, Rudaki, Republic of Tajikistan*

<sup>2</sup>*Tajik State National University, Rudaki, Republic of Tajikistan*

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Tajikistan has the large stocks of poly-metal ores, which basic deposits are concentrated on Pamir, in Central and Northern Tajikistan. In case rich ore deposits are located in places of a mass settlement of the people, the enterprises of a mining industry represent in the certain sense „a bomb of the slowed down action“ as at normal work of ore dressing enterprise the huge amounts of industrial wastes with high content of heavy metals in ores are formed, the part of which together with waste water regularly contaminates sources of drinking water. Such metals according to an industrial structure of ore dressing combines are mercury, lead, cadmium, zinc, copper and other metals. In our presentation the results of the carried out monitoring of quality of waters of rivers being a source of drinking water for the population settled along them (rivers Varzob, Siama, Zimchurud, Zeravshan) are submitted. These rivers are presumably polluted with waste water of the ore dressing enterprises. Besides the content of heavy metals, the hydrogen parameter and electro conductivity, content of nitrites, nitrates, ammonium nitrogen, fluorine were defined. In most cases quality of waters corresponded to the requirements of the State Department of Standards. However, close to Takob ore dressing combine an appreciable excess of extreme allowable concentration on such indicators as the content of copper  $25.0-7.3 \times 10^{-4}$  ( $3.0 \times 10^{-4}$ ) mg/l (in brackets the extreme allowable concentration), fluorine anions 4.16 (1.5) mg/l, ammonium nitrogen 0.06 (0.02) were revealed. The greatest concentration of ions cadmium was found out in dumps of waters of Takob combine  $2.2 \times 10^{-4}$  mg/l and on the river Zimchurud  $3.7 \times 10^{-4}$  mg/l, however, these parameters fall below the extreme allowable concentration ( $1.0 \times 10^{-2}$  mg/l). The parameters on mercury in all cases have appeared to be below the extreme allowable concentration. The analytical data on quality of water were used for correlation with prevalence of most common diseases in places of detection of pollution. In the report the wide spectrum of diseases is presented with a probable explanations for found out anomalies.