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CHEMICAL SAFETY PROBLEMS OF DRINKING WATER

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**Annotation:** *In the article, the sanitary-chemical indicators of drinking water in the populated area were analyzed dynamically from 2017 to 2018. They generally met hygienic requirements, but only in some observation points where compliance was not observed. This issue is subject to further study in order to develop the necessary preventive measures.*

**Keywords:** *drinking water, hygienic requirements, chemicals, bacteriological indicators, hygienic standards.*

Relevance: Water is not only the most abundant substance on the planet, but for many, it is the most accessible. One of its distinguishing characteristics is that it is unrivaled in its health benefits. Depending on environmental conditions and the state of the body, a person can survive without water for anywhere from a few days to 10 days [3,6,8,9].

Sanitary and hygienic supervision of water quality is a pressing issue. According to statistics from the World Health Organization (WHO), approximately 5 million people die annually worldwide due to poor water quality [5, 7]. Currently, drinking water is a social, political, medical, geographical, engineering, and economic issue.

Improving drinking water quality is of a national nature and requires sanitary and hygienic, technological, planning, and legislative measures aimed at solving this problem [4].

In an urbanized environment, high-quality water, i.e., water that meets sanitary and hygienic, toxicological, parasitological, and epidemiological requirements, is an essential condition for maintaining public health [1,2]. In this regard, we conducted laboratory studies of drinking water and determined bacteriological and chemical indicators.

Materials and methods of research

We analyzed the chemical parameters of drinking water over two years. The study was conducted to determine chemical contamination of water from the source, municipal water supplies, and other sources.

Results and discussion In 2017, a total of 107 samples were taken from water sources, of which 90 samples, i.e. 84.1%, did not meet hygienic standards; 162 samples were taken from municipal water supply systems, of which 51 samples were taken;

371 samples were taken from departmental water supply systems, of which 2 samples did not meet the standard.

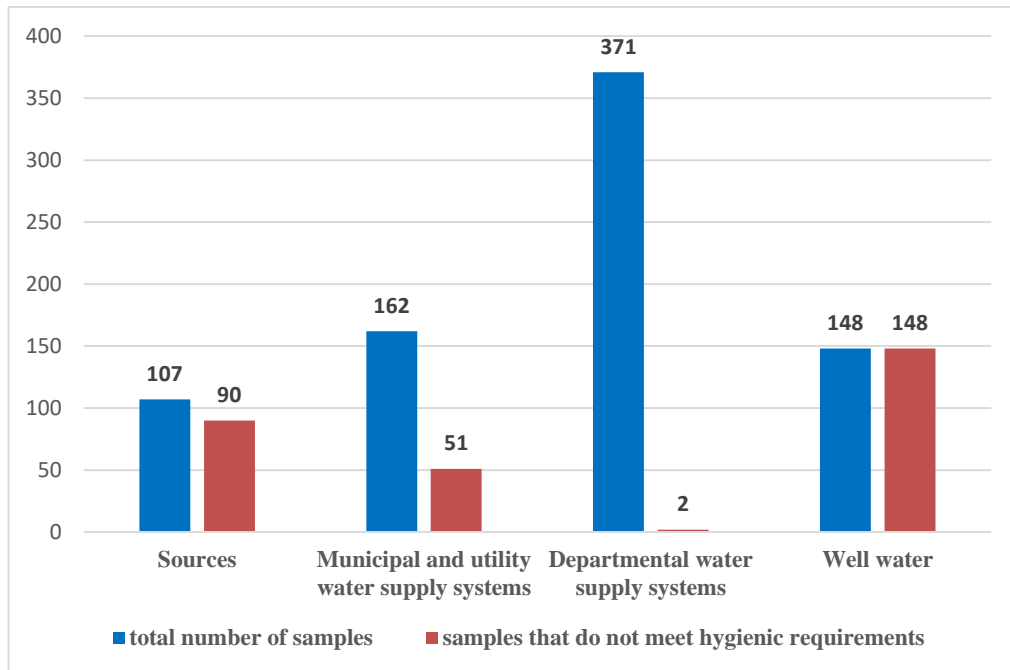
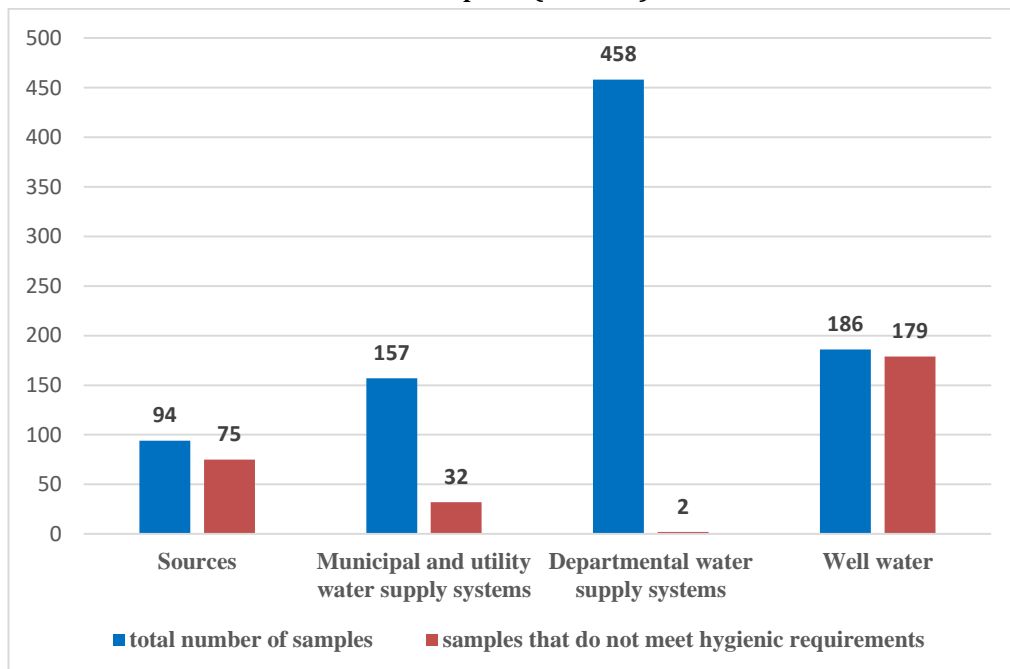


Figure 1. Results of sanitary and chemical indicators of water (2017)

In 2018, a total of 94 samples were taken from water sources, of which 75 samples, i.e. 79.7%, did not meet hygienic standards; 157 samples were taken from municipal water supply systems, of which 32 samples were not met; 458 samples were taken from departmental water supply systems, of which 71 (15.5%); 180 samples were taken from wells, of which 179 samples (99.4%) did not meet standards.



2- Figure. Results of sanitary and chemical analysis of water in 2018.

**Conclusion:**

Based on the data obtained, it can be concluded that drinking water in populated areas, in dynamics from 2017 to 2018, met sanitary and chemical indicators of

hygienic requirements. Only in some observation points where compliance was not observed, this issue is subject to further study to develop health and preventive measures.

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