

WATER POLLUTION

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The urbanization and industrialization create new problems of preservation of pure water. The crude or badly cleared drains of cities are dumped in reservoirs. Security clearing constructions still lags behind development of the industry. Unlike household sewage industrial drains considerably differ on the structure. They contain acids, alkalis, oils both other organic and inorganic connections. Poisons, synthetic and radioactive substances can contain a number of industrial drains.

It is known, that the natural water polluted by dumps of the industry and a municipal services, it is absolutely unacceptable for water supply of the population as a result of the maintenance in it of a lot of substances which negatively affect on health of the person and can serve as the reason of occurrence of a various sort of infectious diseases. Scientific judgements on this question have long history.

So, still Hippocrates on organoleptic data (the smell, taste, color, turbidity) distinguished "healthy" water from "unhealthy". The modern science about water is rather many-sided and complex. Are heaviest on the sanitary consequences of pollution of the reservoirs, arising at descent of the crude sewage. Their neutralization is the major not only hygienic, but also an economic problem. Now there are some methods of clearing:

1. A mechanical method. It is applied to branch of firm insoluble impurity. For this purpose use filtering, upholding, a filtration, removal of the weighed particles under action of centrifugal forces and pressing-up.
2. Chemical methods. Are used for removal from sewage of soluble impurity. Methods are connected with use of the reagents transforming harmful impurity either in less toxic, or in less soluble. Neutralization, oxidation and restoration, removal of ions of heavy metals concern to chemical methods
3. Physico-chemical methods. By means of them removal from sewage supported and emulsioned impurity, and also the dissolved organic and inorganic substances is made. The basic ways: coagulation and flotation, adsorption, an ionic exchange, extraction, return osmose and a ultrafiltration, desorbition, deodorization, decontamination and electron-chemical methods
4. A thermal method. It is used for removal from sewage of mineral salts (formed Ca, Mg and other metals) and organic substances. To them concern: concentrating sewage with the subsequent allocation of soluble substances, oxidation of organic substances at presence of catalysts at the atmospheric or raised pressure, liquidphase oxidation of organic substances and igneous neutralization
5. Biochemical methods. Are applied to sewage treatment from many dissolved organic and some inorganic substances. Process of clearing is based on ability of microorganisms and some plants to use these substances for a feed during ability to live - organic substances for microorganisms are a source of carbon.

We should make our water, soils and souls pure and leave something for the future generations!