

*The degree of pollution of wastewater* is characterized by *water quality*-a set of physical, chemical, biological and bacteriological indicators.

These include:

- T°C;
- odour;
- chromaticity;
- Pt-Co gradient scale (PCSh);
- the concentration of hydrogen ions (pH);
- the concentration of suspended solids mg/l (mg/m<sup>3</sup>);
- dry and calcined residue, reflecting the total content of solutes and its mineral part mg/l (g/m<sup>3</sup>);
- BOC (biological oxygen consumption);
- ChOC (chemical oxygen consumption) mg/l (g/m<sup>3</sup>);
- the content of components specific to this type of production, for example, phenols, turpentine, etc. mg/l (g/m<sup>3</sup>).

*The quantity and quality of industrial wastewater* depends on:

- the type of raw materials and products produced;
- production capacity;
- standards of sanitation;
- specific consumption of fresh water per unit of production;
- perfection of technological process;
- the completeness of waste production,
- variety and type of equipment used;
- equipment of process control and instrumentation etc.

There are sanitary and hygienic requirements for the MPC of pollutants in industrial wastewater.

Under the water quality standard is understood MPC, physical, chemical and biological composition of wastewater and their properties that meet the requirements of different consumers.

Such properties include:

- temperature,
- suspended solids,
- mineralized (dry residue),
- chlorides,
- sulfates,
- dissolved oxygen,
- pH,
- BOC,
- pathogens,
- toxic substances and many others.

Assessment of the content of various chemicals in water is carried out according to the MPC set for more than 700 chemical compounds.

Standards on the composition and properties of industrial waters are established for two categories of water use:

- 1) economic-drinking and cultural-household water use;
- 2) fisheries water use.

*Water treatment* is a complex of operations to remove harmful impurities from natural water. Water treatment includes operations of clarification, softening, degassing, and in some cases desalination and disinfection for drinking water.

Water clarification is achieved by its sedimentation, followed by its filtration through granular material of various dispersion. To coagulate colloidal impurities and absorb colored substances contained in water, electrolytes, aluminum and iron sulfates are added to it.

*Water disinfection* is provided by its chlorination or ozonation.