

UDC 628.3 (075.8)

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## **CHARACTERISTICS OF WASTEWATER FROM BIOFUEL PRODUCTION**

Wastewater is water contaminated with waste from industrial or agricultural production and household waste. Wastewater also includes water that is formed as a result of atmospheric precipitation within settlements and industrial facilities, sometimes called stormwater runoff.

Wastewater treatment is the treatment for destroying or removing harmful pollutants from it. According to the degree of aggressiveness, wastewater is divided into weakly aggressive (slightly acidic with  $\text{pH} = 6-6.5$  and weakly alkaline with  $\text{pH} = 8-9$ ); strongly aggressive (strongly acidic with  $\text{pH} < 6$  and strongly alkaline with  $\text{pH} > 9$ ) and non-aggressive (with  $\text{pH} = 6.5-8$ ).

The water purification process of industrial enterprises, usually, includes several stages, at each of which it is possible to use different methods of wastewater purification and the corresponding technological equipment [1, 2]. Industrial enterprises use the following standard methods for wastewater treatment (filtering, settling with or without the use of chemical reagents); chemical (neutralization, coagulation, flocculation); physicochemical (flotation, sorption, extraction, evaporation, as well as electrochemical methods associated with the application of an electric field – electrocoagulation, electroflotation) and combined.

The production of fuel from biomass is an urgent issue today as an alternative to conventional fuel [3]. However, a feature of biomass is its high moisture content, which is released during heat treatment. Currently, many enterprises that were engaged in the processing of solid fossil fuels use biomass in production, which leads to the formation of a large amount of wastewater. It is natural that the quality of wastewater changes from the use of heat treatment of biomass. Therefore, the task of the scientific work was to determine the characteristics of wastewater from the process of processing biomass to produce biofuel both in individual pyrolysis and in co-pyrolysis with hard coal. The technological approach of obtaining fuels through the combined processing of biomass and coal is promising at the current stage of the transition to the implementation of environmentally friendly technologies.

### **References**

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