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**APPLICATION OF AQUATIC AND SOIL INVERTEBRATES FOR THE SYSTEM  
FOR ESTABLISHING HAZARD CLASS OF INDUSTRIAL WASTE**

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As a result of the rapid development of promising areas related to the development and modernization of production processes, there are significant amounts of waste. The relevance of the effective development of the direction associated with the secondary processing of industrial waste in the conditions of constantly increasing anthropogenic and technogenic press on natural landscapes and urbanized territories is beyond doubt. At the same time, the presence of toxic compounds (heavy metals, petroleum products, etc.) with mutagenic, carcinogenic, reprotoxic effects in recycled and transported to landfills can pose a threat to human health and well-being of the natural environment.

According to the technical regulations in force in Belarus, a number of industrial waste generated in the Republic of Belarus with an unspecified hazard class for various hazardous properties ("toxicity", "ecotoxicity", "explosion hazard", "fire hazard", etc.) is subject to sanitary and hygienic tests in order to establish the hazard class. Thus, non-hazardous waste and industrial waste that belong to the fourth and third hazard classes (low-hazard and moderately hazardous waste, respectively) are subject to recycling according to the classifier of waste generated in the Republic of Belarus. The absence of legally established mechanisms for regulating waste management could lead to negative consequences for the health of the population and the normal functioning of natural and artificially created ecosystems.

In turn, the feasibility of testing a number of wastes for the dangerous property "ecotoxicity" with the use of aquatic and soil organisms is due to the possibility of migration to the soil, air and water environment of toxic substances contained in production waste to be disposed of and disposed of. Studies of industrial waste on the dangerous property of ecotoxicity in our country today can be carried out using such test objects as freshwater mollusk *Lymnaea stagnalis*, earthworms *Eisenia foetida*, ciliated infusoria *Tetrahymena pyriformis*, as well as agricultural crops (oats, cucumbers, radishes, etc.), the assessment of the length of seedlings of which is the basis of the phytotest.

In general, the use of freshwater mollusks in the practice of biotesting is justified by the methodological simplicity and cost-effectiveness, as well as the feasibility of evaluating a wide range of toxic substances (components of industrial waste) with the registration of the response at various levels of the organization: subcellular and cellular levels – in the micronucleus assay, on the organism – in embryotoxicity test, based on the assessment of the success of hatching young from clutches incubated in aqueous solutions (extracts) from the studied production waste.

An equally representative test model used for the study of industrial waste on the dangerous property "ecotoxicity" is the laboratory culture of earthworms *Eisenia foetida*. The methodology of this test model is based on the assessment of such indicators as the increase in columellar weight, the assessment of morphological and behavioral changes in earthworms after 7-day exposure to waste added to the soil substrate in specified concentrations. The prospects of using such test models as *Lymnaea stagnalis* and *Eisenia foetida* in the system of determining hazard degree and hazard class of industrial waste are confirmed both by the literature data and by the results of experience in the field of laboratory bioassays.