

Wastewater treatment biotechnology with electricity production

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3. **Results.**

It allows withstanding of large changes of contaminants concentrations at the entrance, intensifying treatment process in 2-5 times, reducing the probability of freely floating activated sludge bulking, providing a higher quality of treated water, increasing the concentration of biomass. Thanks to the anaerobic process and bioconveyer the air flow consumption is decreased, and thus electricity consumption is decreased by 2-3 times too, also sludge growth reduced (30% – 50%). Developed biotechnology is environmentally safe because of little impact on the environment.

The scientific basis for obtaining electricity and biohydrogen on anaerobic stage of wastewater treatment is created.

Results of the work is entered in the educational process of specialty "Environmental biotechnology and bioenergy" during teaching subjects such as Water treatment biotechnologies, Hydroecology, Biophysics, Biological and chemical sensory systems.