Sewage treatment, a new efficient approach

We offer a method of preliminary water treatment so that the sewage water at the entrance to the water treatment plant will have relatively low values of the measured parameters. The idea of the method is that small portions of aqueous solutions of special microorganisms should be poured into the sewer manholes every day. Then, by the time the sewage flows through the pipes to the treatment plant, the main indicators that determine water pollution will be significantly improved, and the treatment plant will easily bring the degree of purification to the required standards with the help of usual aerobic treatment.

As the attachment please find the test analysis of an independent lab that professionally measures water samples. The document is in Ukrainian, but at the bottom the main Table with the parameters translated to English is added. From the Table (a control sample and experimental one) one can see that after our pre-treatment, the water at the end of the pipeline has much better parameters that determine the quality of water.

This pre-treatment then will allow the water treatment plant quite easily to purify the water to the indicators for which the water can be discharged into the reservoir (a river, lake or sea).

We are looking for the possibility to install our technology in the appropriate place. For instance, it can be a town with a population of, for example 20,000 people. A typical value of sewage produced by such a number of people is 5,000 cubic metre per day. So, we need an agreement with the company that cleans sewage for such a town. The experiment can be conducted during half a year. Every day, the company's employees will pour portions of the aqueous solution of these microorganisms into the town’s sewers.

Please see below the Table in which we show how our approach works in a typical case of a small town; that is, we demonstrate the water pollution parameters at the end of the sewer pipe (a control sample and the experimental sample).

Sample of sewage effluents – at the end of the sewer pipe

Name of the parameter	**Indicator of units of measurement**	**Control sample (result of measurement)**	**Experimental sample (result of measurement)**
Oxygen Consumption Rate	$mgO_2/(dm)^3$	1560.0	**594.0**
Fats	$mg/(dm)^3$	105.08	**34.6**
Sulfates	$mg/(dm)^3$	3.52	**4.31**
Ammonium ions	$mg/(dm)^3$	279.5	**215.9**
pH	units of pH	6.4	**7.7**
Suspended substances	$mg/(dm)^3$	224.0	**63.4**
Phosphates	$mg/(dm)^3$	76.89	**54.03**
Biochemical Consumption of Oxygen 5	$mgO_2/(dm)^3$	348.5	**175.0**