

**EFFICIENCY OF BIOLOGICAL METHODS
FOR SEWAGE WATER TREATMENT**

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The hydrosphere is affected by intensive anthropogenic impacts main source of which is sewage water. Sewage water is formed as a result of production activity from industry enterprises, agrarian and municipal sectors. Full reserved production water cycle consists of extraction and water purification corresponding to suitable ecological standards, using water in technological processes, taking away, cleaning of sewer drains.

The agrarian sector, first of all, livestock intensively develops. The technologies applied lead to formation of considerable volumes of sewage. It is known, that livestock sector in Belarus produces 20 million m³ of liquid manure annually. Most part of this sewage is released to the surface water. The systems of cleaning do not provide high efficiency therefore a pollution of the hydrosphere takes place, including contamination with pathogenic microorganisms.

In enterprises of meat industry, classical biological methods of sewage water treatment are used, as well as physical-chemical methods – coagulation and flocculation. Development of complex cleaning methods using bio-flocculants is relevant. High effective bio-flocculant is activated sludge, enriched with microorganisms [1]. Unlike chemical flocculants, sludge is of high efficiency and stability in purification, cheaper and can be produced in unlimited quantities. Using activated sludge as bio-flocculants essentially reduces all kinds of contaminations. The solution of objectives may be reached due to introduction in practice of innovative technologies, responsibility of managers of all levels.

References

1. Chyrykava, M. Biological wastewater treatment of poultry farms / M. Chyrykava // «Актуальні проблеми розвитку природничих наук». – Ukrain, 2019 – P. 78–81.