

ANNOTATION
of report on Research Practice of a two-year student, group BT-51m
specialty 8.05140101 - Industrial Biotechnology
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on the topic «Biotechnology processes of nitrification and denitrification in
wastewater treatment»

Report on Research Practice is written on 46 pages of printed text. The report consists of: introduction, three chapters, conclusion, list of references and contains 11 figures, 12 formulas and 6 tables.

The report on Research Practice includes: review of the literature, materials and methods, results and discussion.

The introduction proved the relevance of the chosen topic of the research, described the goal of practice and its problems.

The object of the research was chosen simultaneous nitrification-denitrification at wastewater treatment of mineral nitrogen compounds.

The work used photocolorimetric methods that allowed to determine nitrate and ammonium ions in the wastewater treatment process. For processes of nitrification and denitrification research used laboratory reactor.

The main results are identifying patterns of simultaneous nitrification-denitrification at different concentrations of dissolved oxygen; establishing the optimal dissolved oxygen concentration at which maximizes the efficiency of water treatment from mineral nitrogen.

As a result of Research Practice have been resolved following tasks: have been considered possible mechanisms of simultaneous nitrification and denitrification, and factors affecting the efficiency of the process of removing nitrogen mineral compounds in technological schemes; have been investigated the influence of dissolved oxygen on the rate of nitrification and denitrification in a laboratory reactor using the sludge taken from the current treatment facilities; have been established that the optimum concentration of dissolved oxygen is in the area of ~ 1.0 mg/L.