

# BIODEGRADATION OF SODIUM DODECYL SULPHATE (SDS) BY ACTIVATED SLUDGE IN THE FLOW SYSTEM

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## Summary

Surfactants can interfere with the biological wastewater treatment processes. They contribute to the changes in activated sludge flocs structure. In order to quantify the influence of surfactants on sludge flocs morphology the series of experiments in the flow continuous system were conducted. Sodium dodecyl sulphate, which belongs to the most ubiquitous anionic surfactant in everyday use, was selected to be the object of investigations. The results of its biodegradation in continuous flow system at influent concentration of  $250 \text{ mg}\cdot\text{dm}^{-3}$  are presented. It turned out that SDS diminished the mean projected area of flocs from 50 000 to  $15\,000 \mu\text{m}^2$  with the increase of dilution rate from 0.029 to  $0.192 \text{ h}^{-1}$ . At the same time the obtained data confirmed that there was a correlation between the morphological parameters of flocs and other biomass indicators. The linear relation between mean projected area of flocs and volatile suspended solids was found.