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Effects of influent composition on activated sludge protozoa

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ABSTRACT

In the present study the characteristics of activated sludge protistan community in two sequential batch reactors operating with activated sludge (SBR) and with activated sludge and plastic biofilm carriers (SBBR) was assessed in terms of species present, biovolumes of the species and their statistical importance to the treatment efficiency. The study identified two important factors affecting the protistan community. These factors were the influent composition and the presence of biofilm carriers. Statistical analysis revealed that protozoan species observations may be used as indicators for the determination of trophic relations in the activated sludge and thus comprise precursors for the prediction of effluent quality.

Keywords: Activated sludge; Factor analysis; Municipal wastewater; Protistan microfauna; Synthetic wastewater

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