

**EFFECT OF ORGANIC SUBSTRATE ON REMOVAL OF NITRATES
FROM INDUSTRIAL WASTEWATER**

**VLIV ORGANICKÉHO SUBSTRÁTU NA PRŮBĚH ODSTRAŇOVÁNÍ DUSIČNANŮ
Z PRŮMYSLOVÝCH ODPADNÍCH VOD**

Evelína Erbanová, Jana Vlačihová, Jiří Palarčík, Miloslav Slezák, Petr Mikulášek
*University of Pardubice, Faculty of Chemical Technology, Studentská 95, 532 10 Pardubice,
Czech Republic, e-mail: evelina.ermanova@upce.cz*

Abstract:

This paper deals with the treatment of industrial wastewater using activated sludge. Attention was paid to the organic substrate, as one of the most important factors that determine the denitrification process. Three kinds of substrate were used - methanol, ethanol and glucose, and the effect of the type and quantity of the substrate to the denitrification process in an activated sludge were investigated. Experiments have shown that the response of the activated sludge to a particular substrate is mainly dependent on the composition of the substrate on which the sludge was grown. It was also shown that increasing the amount of substrate also increases the efficiency of wastewater treatment.

Keywords:

Removal of nitrates, denitrification, activated sludge, organic substrate, methanol, ethanol, glucose, wastewater treatment