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Denitrification of groundwater using Brewer's spent grain as biofilter media
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ABSTRACT:

This study evaluated Brewer's spent grain as media for denitrification processes in treating groundwater. A laboratory scale reactor was inoculated with anaerobic sludge from a wastewater treatment plant. Optimization of running conditions were investigated under various parameters including: hydraulic retention time (HRT), influent nitrate loading and pH. The experimental results demonstrate that the optimum reaction parameters were: HRT=100min; N-NO₃=200 mg L⁻¹; pH=7.5-7.9. Vertical study showed that hydraulic retention time and pH affect significantly the nitrate removal, while nitrate loading do not affect the denitrification process.