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Effects of elevated 4-chlorophenol loads on components of polysaccharides and proteins and toxicity in an activated sludge process

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Abstract: In this study, the effects of elevated influent 4-chlorophenol (4-CP) loads on components of polysaccharides and proteins and toxicity as well as their correlation in an activated sludge process were investigated. The toxicity in sludge was evaluated via a luminescent bacterium acute toxicity bioassay. Activated sludge, which was gradually acclimated via elevating influent 4-CP loads in a sequencing batch bioreactor (SBR), was used as the acclimated SBR. Another operated SBR without influent 4-CP was used as the control SBR. Results showed that after activated sludge was successfully acclimated with 10 mg/L influent 4-CP, the influence of gradually elevated 4-CP loads on acclimated SBR was insignificant and the

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