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Influence of hydraulic retention time and carbon loading rate on the production of algae

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Highlights

- Algae production depends on light color, being green illumination the best choice
- The higher the HRT and CLR, the higher is the resulting algae production
- Ratio COD/TSS of the algae produced is ca. 3.13 mg COD mg⁻¹ TSS
- Maximum algae production of 44 mg COD d⁻¹ L⁻¹ are obtained within the conditions studied
- Quality of product as fuel (as MOSC) improves with longer HRT and for CLR around 10 mg C d⁻¹ L⁻¹

Abstract

This paper is focused on the assessment of the production of algae in batch bioreactors. Hydraulic retention time, carbon loading rate and light color were the inputs of the study and algae production the main output. Bioreactors were operated in semi-continuous

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