



ALGAE AERATED WASTE WATER TREATMENT PLANT

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ADVANTAGES OF USING ALGAE FOR AERATION

- Cost-effectiveness → aerators inefficiënt
- Sustainability → circular economy
- Post treatment by nutrient removal
- CO₂ capturing

PROOF OF CONCEPT

- Building a photobioreactor to measure oxygen production
- Exploring the amounts of oxygen algae can produce
- Proving the feasibility for aeration with algae

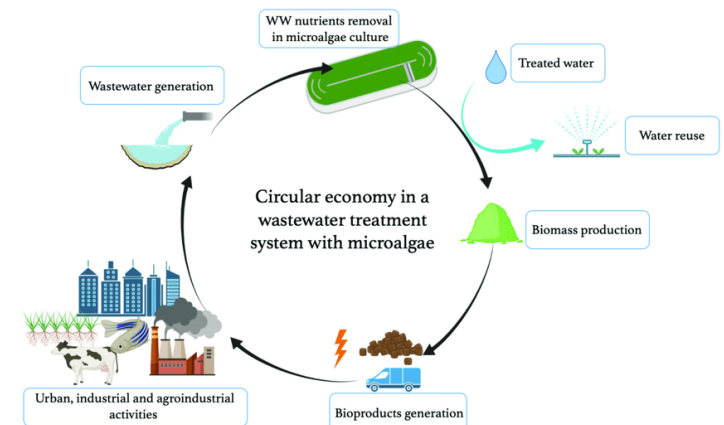


Figure 1: implementation of algae in circular economy

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RESULTS

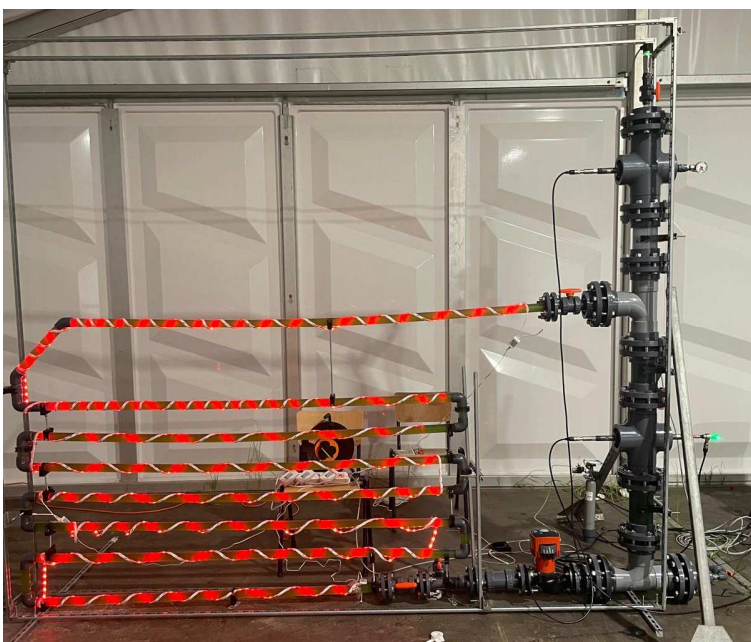


Figure 3: Photobioreactor

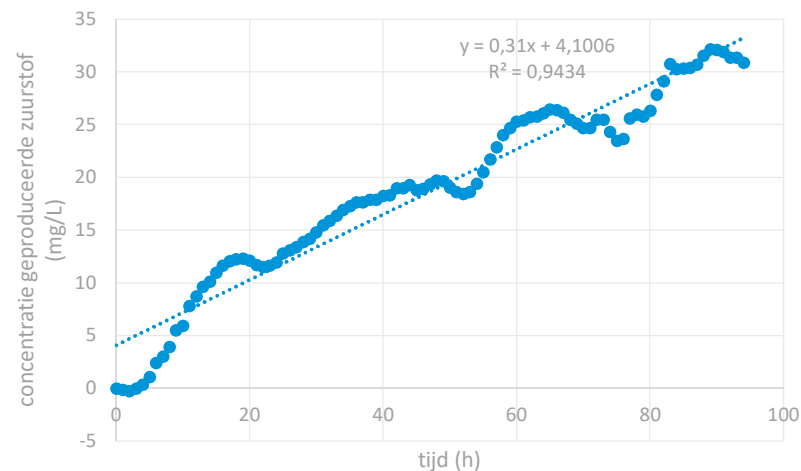


Figure 2: calibration line of oxygen production rate

Tijd (dagen)	SOPR (mg O ₂ /g droge stof/h)	OPR (mg O ₂ /L/h)
15	97	0,166
16	106	0,213
22	226	0,549
23	162	0,493
27	104	0,310