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Development of Sea Water Filtration System Using Membranes of Biomass Plastics

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Summary

Removal of bacteria by filtration is one of the key technologies to produce more safe food materials from sea water and maintain the production equipments. We developed a sea water filtration system using a biomass plastic membrane which can dispose in composting facilities after clogging of the membranes. Poly(1,4-butylene succinate) membranes were used as biomass plastic membranes in this study. A constant pressure filtration system where the filtration rate was regulated by a personal computer with an electronic pressure gauge and an analog input/output module was applied. The filtration system showed a high bacteria reduction ($LRV > 2$) in sea water.