

Harvesting of freshwater microalgae through electro-flocculation with addition of seasalt

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The electrolytic method harvesting microalgae is known as an economical way in aspect of cost and energy. However, the electrolytic harvesting method can only be applied to marine microalgal species to achieve economic feasibility. With freshwater microalgae, its harvesting efficiency is low due to low electric conductivity of growth medium. In this study, the electrolytic harvesting method was modified to enhance the harvesting efficiency of freshwater microalgae, *Scenedesmus obliquus*, by salinity adjustment of growth medium. Salinity adjustment was performed with artificial seasalt and natural seasalt to increase the electric conductivity and to compare difference in harvesting efficiency as well as energy consumption. The addition of artificial seasalt improved the energy consumption compared to that of freshwater microalgae. Moreover, the addition of natural seasalt showed higher harvesting efficiency with lower energy consumption than that of artificial seasalt.