Assessment of arsenic removal using a coupled method of phytoremediation and membrane filtration

Heavy metal contamination of drinking water has caused many health problems around the world. Therefore investigation of new technologies with higher efficiency and economical feasibility will be very useful. In this study, a new method of Arsenic removal consisting of microfiltration and ultrafiltration combining with phytoremediation is presented. The approach is to feed the contaminated source water into a membrane system and the concentrate or reject waste accumulated on the upstream side of the membrane is sent to the phytoremediation system. Data has been gathered from a study in Southern Thailand where Arsenic has been the main contamination in the groundwater. The results show the significance value of the proposed method to remove heavy metals from drinking water which is economically advantageous especially in developing countries.

Keywords:
Membrane Filtration, Phytoremediation, Arsenic, Drinking Water

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