

## عنوان مقاله:

Phytoremediation of Palm Oil Mill Effluent Using Pistia Stratiotes Plant and Algae Spirulina sp for Biomass Production

## محل انتشار:

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## خلاصه مقاله:

Producing crude palm oil (CPO) generates significant amount of palm oil mill effluent (POME). Besides high COD /BOD contents, POME contains high amount of nutrients (nitrogen, phosphor and mineral). Traditional treatment of POME using facultative anaerobic method do not reduce COD and BOD into allowable limit. The objective of this research was to utilize two stage phytoremediation (water lettuce and algae) to reduce COD, and nutrients in POME with variables of retention times and activated sludge concentration. The residence time was varied from 1-5 days and activated sludge was in the range of 35-60% vol. The result showed that water lettuce as aquatic plant in the first remediation process could reduce the COD content up to 39.1-59.66%, absorb nitrogen and phosphorous contents up to 17.73 -30.78%, and 6.14 -18.46%, respectively. At the second remediation process using algae Spirulina, about .90% of nutrients could be absorbed.

## کلمات کلیدی:

Palm Oil Mill Effluent (POME) Aquatic Plant Spirulina Algae Biomass

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/369289>

