

UNIVERSITI TEKNOLOGI MARA

**REMOVAL OF SUSPENDED SOLID (SS)
FROM PALM OIL MILL EFFLUENT
(POME) FINAL DISCHARGE USING
CHEMICAL TREATMENT**

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Final year project report submitted in partial fulfillment of the
requirements for the degree of

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Management**

Faculty of Plantation and Agrotechnology

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
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DECLARATION

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In the event that my Final Year Project is found to violate the conditions mention above, I voluntarily waive the right of conferment of my bachelor degree and agree to be subjected to the disciplinary rules and regulations of UniversitiTeknologi MARA.

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ABSTRACT

One of the sources of water pollution comes from Palm oil mill effluent (POME) that contains high concentration of organic matter and high COD, BOD and SS value as well. However, the primary and secondary treatment of POME seems not much efficient because it's still have the higher value of COD, BOD, SS and the others composition that can harm marine life. This study is to measure the value of SS removal from POME using chemical treatment method. This study is aimed to determine the effect of optimum coagulant dosage on POME, the effect of the different pH on the optimum coagulant dosage and also to identify the effect of different flocculants dosage on the wastewater (POME). The result of the study showed that coagulation and flocculation were able to reduce SS by 84 % at the pH 7.0. The optimum dosage of aluminium sulphate (coagulant) is 12 ml at 1.0 % and optimum dosage of polymer (flocculants) is 6 ml at 0.5 %. From the analysis paired t-test, the coagulation method showing significant reducing on suspended solid of the palm oil mill effluent. The significance of this experiment also are to look upon the impact of this effluent treatment by using the jar test apparatus on the economic in term of cost, management, and environmental.

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