

## Optimization of POME anaerobic pond

### ABSTRACT

This study is to determine the effectiveness of physico-chemical and biological treatment on upstream of anaerobic pond in Palm Oil Mill Effluent (POME). The various effluent treatments are currently used with different efficiency. The purpose of this research is to reduce the total solid of POME by using acidification pond and flocculation treatment on upstream of anaerobic pond. The cationic polymer was used as a flocculant. In order to access the optimum total solid removal, different dosages of polymer were tested by jar testing. Matlab Software was used for regression and statistical analysis. A specific program was used to predict the reduction of total solid in flocculation process. The model prediction is in close agreement with the experimental results for polymer system.

**Keyword:** Acidification pond; Anaerobic pond; Flocculant; POME