Performance of *organo-floc* compared to aluminum sulphate was studied during coagulation and flocculation process. From the coagulation-flocculation *organo-floc* shows capability to treat anaerobic POME wastewater as great as alum does whereby *organo-floc* can remove almost 71% of solid from the wastewater by comparing to alum which only can remove at 65% of solid but for COD removal alum show 50% removal higher efficiencies of removal compared to *organo-floc*.

The Response Surface Methodology (RSM) has designed 2-level factorial of variables with percentage of COD removal and percentage of solid removal as a response in this design of study and four (4) factor of operating conditions that affecting these two (2) response are (i) dosage of coagulant; (ii) Mixing time ; (iii) Speed of stirrer; and (iv) type of coagulant.The performance of the SBR was dependent of COD and Solid removal efficiencies.

From Central Composite Design (CCD) which is has been design to see optimal conditions of *organo-floc* as a coagulant shows that the set of data gained from the experiment in slightly same.That shows the accuracy of the data of experiment have been done in this research.The optimum operating condition that has been predicted by RSM in this study were at dosage of 5.05 mg/L *organo-floc* with speed of 75rpm will resulted in 34.16% of COD removal and 65.67% of solid removal.

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