

## **PERFORMANCE EVALUATION OF ACTIVATED SLUDGE PROCESS IN TREATING SEWAGE**

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### **ABSTRACT**

This research work aims to study the efficiency of activated sludge process in treating sewage. A typical sewage has BOD & COD concentrations in the range of 200-300 mg/l and 450-700 mg/l respectively. However, in this lab scale research study, the sewage waste water was directly treated to aerobic treatment- activated sludge process and its performance has been evaluated. A aeration tank of 40 lit of capacity was fabricated and a plastic jar of capacity 10 lit was used as a settling unit. aerobic microorganisms were generated from cow dung slurry and sewage. artificial aeration was provided on a continuous basis for mixing and oxygen transfer. a dual media filter of diameter 20 cm and height 100 cm was also fabricated for removal of TSS from final treated waste water. The activated sludge process achieved BOD reduction of 95.50% & COD reduction of 94.19%. however after aerobic treatment the TSS concentration was 82%. Thus the aerobically treated waste water was passed through a dual media filter, which achieved 94.29% of TSS removal.

**KEYWORDS:** Chlorination, Clarifier, Dual Media Filter, Activated Sludge Process, Sewage