

STUDI PENGARUH AERASI DAN RESIRKULASI LINDI TERHADAP LAJU PROSES DEGRADASI SAMPAH PADA *BIOREACTOR LANDFILL*

Dian Eni Sunarni, Syafrudin, Endro Sutrisno

ABSTRACT

On the conventional landfill, the waste degradation requires a lot of time to make it through and it produces a methane gas from an anaerobic which could be dangerous if there is not an optimal processing. On this research, the writer uses 7 experimental reactors, 6 reactors given aeration treatments and leachate recirculation. The variations which have been done in the research is leachate recirculation debit, namely (10 and 15) ml/minutes and continual leachate's flowing system and aeration variation, namely (3, 2, and 1) ml/minutes everyday. The parameter which is measured is the reduction of waste volume, temperature, PH, BOD and COD for weekly analysis. The results of the analysis are that the aeration of 1 ml/minutes with leachate recirculation of 15 ml/minutes is the best of aeration condition and it can increase the settlement process and reduction of BOD and COD concentration in a short time of leachate. This reactor can increase the volume reduction as much as 14,14 % in six weeks and it is bigger than control reactor. The concentration reduction of BOD is from 718,24 mg/l becomes 88,44 mg/l and the reduction of COD is from 1285,58 mg/l becomes 893,44 mg/l

Keywords : landfill, waste degradation, aerobic, aeration, leachate recirculation