

ABSTRACT

EFFECTIVENESS OF BOD LEVEL REDUCTION IN RESTAURANT WASTE WATER WITH AERATION AND BIOFILTRATION METHODS USED FERMENTATION BOTTLE MEDIA

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ABSTRACT

Wastewater is water that is removed from an industry from the production process. In waste water has a lot of content in it which if discharged directly into the environment without any treatment will cause pollution. One of them is the content of BOD levels. The purpose of this study was to reduce the BOD drive in restaurant wastewater by aeration method for 6 hours and biofiltration with variations in media thickness of 10cm, 15cm, 20cm.

The type of research and analysis in this study is descriptive and effective, namely research with an effort to express the solution to a problem that is currently based on data, which presents, analyzes and interprets. The object of this research is the waste water of the roast chicken restaurant in Gandu Hamlet and the decrease in BOD levels.

The results of the research BOD levels after aeration and biofiltration treatment with a thickness of 10 cm obtained an average of 142 mg/L. The media thickness of 15 cm obtained an average of 129 mg/L. And the media thickness of 20 cm obtained an average of 82.33 mg/L. All of which still cannot meet the quality standards.

The effectiveness is obtained from aeration and biofiltration treatment with a media thickness of 20cm. The average yield was 82.33 mg/L and an average decrease was 121.6 mg/L or if it was presented it was 54.26%. However, it has not been able to meet the quality standards that have been set in the East Java Governor Regulation No. 72 of 2013 which is 30 mg/L.

Keywords: Wastewater, BOD Level, Aeration, Biofiltration.

