

## C216433 : MAJOR ENVIRONMENTAL ENGINEERING

KEY WORD: BIODRUM / BAMBOO

THIRAWAT SOMWADI : WASTEWATER TREATMENT BY BIODRUM USING BAMBOO AS

MEDIA) THESIS ADVISOR : ASST. PROF. SUTTHIRUK SUJARITTANON , Ph.D.

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The experimental study of wastewater treatment on a 4-stage biodrum which using bamboo as media for treating synthetic wastes of 300 , 500 and 1,000 mg COD/l was carried on. The hydraulic loading varied in the range of 25 , 50 , 75 and 100 l/sq.m-d. Very good performance with the highest efficiency was shown when 1,000 mg. COD/l concentration being fed at the hydraulic loading of 25 l/sq.m-d or 25 g COD/sq.m-d organic loading. The COD efficiency at this condition was 95.31% while the BOD<sub>5</sub> was 98% , Results of nitrogen and phosphorus removal were also shown at the rate of 84.60% and 65.85% , respectively. The effluent quality was between 30-73 mg COD/l or 9-21 mg BOD<sub>5</sub>/l. At the highest efficiency the effluent quality was only 46 mg COD/l which equal to 14 mg BOD<sub>5</sub>/l.