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PIYANOOT KONGKITPISAL; COCONUT JELLY WASTEWATER TREATMENT BY ANAEROBIC FILTER. THESIS ADVISORS : USANEE UYASATIAN, M.Eng.(SANITATION ENGINEERING) , WINAI NUTMAGUL,Ph.D.(ENGINEERING SCIENCE) 86 p. ISBN 974-662-014-2

The objective of this experimental research was to study the efficiency of treatment process for Coconut jelly wastewater by using an anaerobic filter. The laboratory scale anaerobic filter in this research was composed of PVC pipe which was 15 cm. in diameter and 150 cm. in height, and filled with 120 cm. of plastic media which was rod shape,1.5 cm. in diameter and 3.0 cm. in height. The experiments were divided into 6 sections according to influent COD concentrations of wastewater which were 1,000 3,000 and 5,000 mg./l. and hydraulic retention time (HRT) which were 24 and 48 hours. This affected to organic loading rate (OLR) of 6 values from the experiment which were 0.48,1.38,2.27,0.98,2.80 and 4.57 kg./cu.m.-day, respectively.

The results showed that Coconut jelly wastewater characteristic was 1,954 - 4,943 mg/l COD. About 5 - 7 cu.m.wastewater was produced from a ton of product. Both COD and SS removal efficiency by anaerobic filter at the OLR of 0.48 kg./cu.m.-day , were 79.5 % and the trend of COD and SS removal efficiency would be decreasing as OLR was increasing. At the OLR of 4.57 kg./cu.m.-day, COD and SS removal efficiency were 60.1 and 66.9 %, respectively.In addition,the treatment efficiency for Coconut jelly wastewater by using anaerobic filter at 48 hours HRT was higher than at the 24 hours HRT .