Identifikasi dan karakterisasi limbah cair serta evaluasi instalasi pengolahan air limbah (IPAL) pasar tradisional (Study kasus: Pasar Tradisional Glodok, Jakarta Barat) = Identification and characterization of traditional market wastewater and evaluation of its sewage treatment plant (Case study : Glodok Traditional Market, West Jakarta)

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Abstrak

The purposes of this research are to identify & characterize the wastewater, discharged from a traditional market and also to evaluate its Sewage Treatment Plant performance. Case study is done in Glodok Traditional Market from November until December 2010. Wastewater identification and characterization took place in wet lot, which consist of fish lot, chicken lot, and meat lot. The source of fish lot wastewater are fish washing and rinsing, shrimp shell and squid cleaning, melting ice cube from fish storage, and hand washing from the seller itself; in chicken lot, wastewater is discharge from chicken slaughter; while in meat lot, the wastewater is released from washing cow stomach wall activities (in the making of tripe).
Result of the research in identification showed that the discharge of waste water can be identified using flow rate based on selling volume. Meanwhile, the result of characterization are: Fish lot : pH = 6.153, TSS = 786.667 mg/L, Total N = 123.330, Ammonia = 101.333, Total P = 24.981, BOD = 1109.388, COD = 2037.248, Oil and grease = 1004.5 ; Chicken lot : pH = 5.893, TSS = 666.667 mg/L, Total N = 75.557 mg/L, Ammonia = 54 mg/L, Total P = 16.247 mg/L, BOD = 598.963 mg/L, COD = 1392.304 mg/L, oil and grease = 518 mg/L; Meat lot : pH = 10.553 mg/L, TSS = 460 mg/L, Total N = 32.720 mg/L, Ammonia = 12 mg/L, Total P = 9.43 mg/L, BOD = 100.031 mg/L, COD = 1536.240 mg/L, oil and grease = 668 mg/L.
Result of STP evaluation showed that STP plan which is made based on office and hotel biological loading causing the performance of STP is not optimum. It can be displayed from the value of TSS and oil & grease of the effluent, whose not meet by the quality standard of Kepmenlh 112 tahun 2003. The low performance of STP also can be seen from high amount of ammonia in effluent because the process itself only can remove BOD without followed by nitrification.