

STUDI EFEKTIFITAS INSTANSI PENGELOLAAN AIR LIMBAH RUMAH SAKIT
DALAM MENURUNKAN KADAR PHOSPAT DAN BAKTERI COLIFORM AIR
LIMBAH I RS.St.ANTONIUS PONTIANAK.

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(2004 - Skripsi)

RS. St. Antonius Pontianak adalah Rumah Sakit Swasta Katholik dengan type Madya mempunyai kapasitas tempat tidur 266 unit, dengan rata-rata BOR 81% (Desember 2003). Adapun dampak negatif yang diakibatkan dari kegiatannya, maka RS.St. Antonius Pontianak membangun sebuah Instalasi Pengelolaan Air Limbah (IPAL), yang mengolah limbah cair 95m^3 per hari. Kualitas effluen IPAL tahun 2004, dari parameter yang sesuai dengan Kep. Men LH. No.58/12/12/95, tentang buku mutu limbah cair bagi kegiatan rumah sakit, kadar phospat dan kadar bakteri coliform masih melebihi persyaratan yang diperbolehkan, untuk kadar phospat syarat 2,0 mg/liter dan Bakteri Coliform dipersyaratkan $10^4/100\text{ml}$. Mengingat hal tersebut dan memperhatikan dampak yang ditimbulkan akibat tingginya kadar phospat dan kadar bakteri Coliform maka peneliti mencoba mendiskritkan penurunan kadar phospat dan kadar bakteri coliform sebelum diolah melalui IPAL. Tujuan Penelitian ini adalah untuk mengukur efektifitas IPAL dalam menurunkan kadar phospat dan bakteri coliform. Penelitian bersifat eksperimen semu dengan rancangan pretest - posttest. Variabel bebas dalam penelitian ini adalah Kadar phospat dan bakteri coliform sebelum dan sesudah perlakuan IPAL dan variabel terikat kadar phospat dan Bakteri Coliform air limbah. Berdasarkan hasil penelitian serta analisa data, dapat disimpulkan bahwa ada perbedaan bermakna secara statistik dengan taraf signifikansi 95%. Sehubungan dengan kesimpulan tersebut di atas, maka penulis memberikan saran kepada pihak pengelola limbah cair, untuk melakukan pengelolaan penurunan kadar phospat pada lokasi bak sedimentasi dengan kapur dan kadar bakteri coliform dengan pemberian desinfektan pada effluen.

Kata Kunci: Limbah cair, Phospat dan Cliform

*THE STUDY OF THE HOSPITAL'S WASTE WATER TREATMENT SYSTEM
INSTALLATION EFFECTIVITY IN LESSENING THE DEGREE OF PHOSPHATE
AND COLIFORM BACTERIA WASTE WATER RESEARCH AT St.ANTONIUS
HOSPITAL, PONTIANAK*

Pontianak's St. Antonius Hospital is a Catholic private hospital with a middle type, which has a bed capacity of 266 units with an average BOR of 81% (December 2003). As for the negative outcome, which is resulted from its activity, thus Pontianak's St. Antonius Hospital has built a waste water treatment installation (WWTI), which manufactures 95m³ liquid deposits per day.

The Effluent quality WWTI in the year 2004, in accordance to the parameter by Kep.Men LH.No. 58/12/12/95, about the standard quality of waste water for hospital activities, the degree of phosphate and degree of coliform bacteria still exceeds the level which are allowed, for the degree of phosphate the level which is conditioned is 2,0 mg/litre and for coliform bacteria it is conditioned 10⁴/100 ml. In consideration with this matter and paying attention to the effect, which is resulted from the high degree of phosphate and degree of coliform bacteria hence, the researcher attempts to explain regarding to the lessen of the degree of phosphate and degree of coliform bacteria before manufactured through WWTI. The aim of the research is to calculate the affectivity of WWTI in lessening the degree of phosphate and coliform bacteria.

The research is done through an abstract experiment with a pretest-posttest scheme. The independent variable in this research is the degree of phosphate and coliform bacteria before and after exposed to WWTI and the dependent variable is the degree of phosphate and coliform bacteria in waste water. In accordance to the result of the research and data analysis, it can be concluded that there is a significant difference statistically with level of significance of 95%. In connection with the conclusion stated above, the writer offers a suggestion to the waste water treatment system, to manage the decrease in the degree of phosphate at the sedimentation tank area with lime and for the degree of coliform bacteria with the allocation of disinfectant to the effluent.

Keyword : Waste water, Phosphate and Coliform