EFEKTIFITAS INSTALASI PENGOLAHAN AIR LIMBAH RUMAH SAKIT BHAKTI WIRA TAMTAMA SEMARANG

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Air limbah rumah sakit merupakan salah satusumber pencemar bagi lingkungan yang dapat memberi dampak negatif berupa gangguan terhadap kesehatan,kehidupan biotik serta gangguan terhadap keindahan sehingga harus diolah terlebih dahulu sebelum dibuang kelingkungan.Rumah sakit Bhakti Wira Tamtama semarang mempunyai Instalai Pengolahan Air limbah (IPAL) namun selama ini belum diketahui effektifitasnya.Tujuan dari penelitian ini adalah mengetahui effektifitas instalasi IPAL Rumah sakit Bhakti Wira Tamtama semarang untuk menurunkan kadar COD dan TSS. Uji statistik yang digunakan adalah *Uji Paired Sample T-Test* dan *Wilcoxon Rank Test*. Metode yang digunakan adalah observasional dengan menggunakan *cross sectional*. sampel diambil 2 hari pengambilan pada pukul 7.00,8.00,9.00,10.00,11.00,15.00,16.00 dan 17.00 WIB.Hasil pemeriksaan rata-rata kadar COD *effluent* hari 1 sebesar 73,26 mg/lt,hari 2 sebesar 59,63mg/lt dan rata-rata 2 hari sebesar 65,82 mg/lt sedangkan kadar TSS *effluent* hari 1 sebesar 6 mg/lt, hari 2 sebesar 2 mg/lt dan rata-rata 2 hari 4mg/lt. Hasil uji statistik menunjukkan ada perbedaan yang bermakna kadar COD sebelum dan setelah diolah di IPAL Rumah sakit Bhakti Wira Tamtama semarang untuk hari I(p=0,002)rat-rata selama 2 hari (p=0,003)serta kadar TSS untuk hari ke II (p=0,003)dan rata-rata selama 2 hari (p=0,000).Effektifitas IPAL dalam menurunkan kadatr COD sebesar 45,63% dan TSS sebesar 89,19%.Hasil pengolahan tsb masih memenuhi Baku Mutu Limbah Cair sesuai dengan Peraturan Daerah Propinsi Jateng No.10 Tahun 2004 tentang Baaku Mutu Limbah Cair bagi kegiatan Rumah Sakit di Jateng.Pemeliharan mikroorganisme di bak biodetox perlu dilakukan sehingga proses penguraian zat-zat organik air limbah oleh mikroorganisme bisa lebih maksimal.

Kata Kunci: Efektifitas,Instalasi Pengolahan Air Limbah,Rumah Sakit Bhakti Wira Tamtama Semarang

THE EFFECTIVITY OF WASTEWATER PROCESSING UNIT ATBHAKTI WIRA TAMTAMA HOSPITAL SEMARANG

The hospital waste is one of pollution sources in the environment,which can give anegative impact,namely health disturbance in biotical life,and the eastithical disturbance,so that it must be processed before to be thrown a way to the environment. Bhakti Wira Tamtama Hospital semarang has a instalation of Wastewater Processing Unit,however,its effectivity has not been revealed. The aim of this research is to know about yhe effectivity of wastewater Processing Unit at Bhakti Wira Tamtama Hospital semarang for decreasing the degree of COD (Chemical Oxigen Demand) and TSS (Total Suspended Solid). The statistic methods that use in this research are Paired sample T-Test and Wilcoxon Signet Ranks Test.The method that was used in this research was an observationalwith cross sectional approach.TRhe sample was taken in 2 ,days at 7.00,8.00,9.00,10.00,11.00,15.00,16.00 and 17.00. The COD effluent rate in 1st day was 73,26 mg/lt,in 2nd day was 59,63mg/lt,and the average for 2 days was 65,82 mg/lt,meanwhile the degree of TSS efflued in 1st day was 6 mg/lt,2nd day was 2 mg/lt,and the average for 2 days was 4 mg/l.The result of the paired sample T-Test and Wilcoxon Signet Ranks Test indicates that there is significant difference between the degree of COD before and after being processed at wastewater processing unit of Bhakti Wira Tamtama Hospital semarang for the 1st day(p =0,002),the average for 2 days (p=0,003),and the degree of TSS for the 2nd day (p=0,003)and the average for 2 days (p=0,000).The Wastewater Processing Unit effectifity in decreasing COD rate is 45,63% and TSS is 89,19%.The output of the processing unit still meet the requirement from the Liquid Waste Quality standards of in accordance with the regional rules of Central Java province No.10 in the year of 2004 about the quality standart of wastewater for Central Java Hospital activities.It is important to maintenance microorganism in biodetox pol so organic decomposition of wastewater can be maximized.

Keyword : *Effectivity,Wastewater Processing Unit,Bhakti Wira Tamtama Hospital*