EFEKTIFITAS KINERJA IPAL DALAM MENURUNKAN KADAR NH_3 DAN PHOSPHAT PADA AIR LIMBAH DI RSUD SRAGEN KABUPATEN SRAGEN.

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Pengolahan limbah di RSUD Sragen, menggunakan Instalasi Pengolahan Air limbah dengan sistem Extended Aeration. Sebelum menggunakan pengolahan lumpur aktif system extended aeration NH_3 dan phosphat masih melebihi nilai ambang batas: NH_3(0,1 mg/l) dan phosphat (2 mg/l). Keberadaan amoniak (NH_3) dalam limbah cair rumah sakit dapat menyebabkan penurunan kadar oksigen terlarut, sehingga dapat merusak kehidupan dari limbah cair rumah sakit tersebut. Seadangkan phosphat dalam limbah cair rumah sakit dapat menyebabkan pencemaran lingkungan, karena akan meracuni tumbuhan yang hidup di saluran yang dilalui air limbah rumah sakit. Tujuan penelitian ini adalah untuk mengetahui perbedaan kadar NH_3 dan perbedaan kadar phosphat pada air rumah sakit Umum daerah Sragen, juga untuk mengetahui kadar NH3 dan Kadar phosphat pada air limbah di Rumah Sakit Umum Daerah Sragen setelah diberi perlakuan aerasi, untuk mengetahui menurunnya kadar NH3 dengan perbandingan menurunnya kadar phosphat dari keefektifan aerasi. Metode observasi sejalan dengan tujuan penelitian populasi air limbah di RSUD Sragen. Sedangkan kadar NH3 dan phosphat pada dua titik influent dan effluent. Untuk mengetahui perbedaan sebelum dan sesudah diberi perlakuan dengan menggunakan rumus t-test. Kesimpulan dari penelitian: 1) Terdapat perbedaan kadar NH3 air limbah sebelum diberi perlakuan aerasi, dan sesudah diberi perlakuan aerasi. Dengan analisis data menunjukan bahwa probabilitas = 0,000, karena $p<0,05$ artinya ada perbedaan rata-rata kadar NH3 sebelum diberi perlakuan aerasi pada pengolahan air limbah RSUD Sragen. Rata-rata influen = 33,6250 sedangkan rata-rata influen = 0,1969. 2). Terdapat perbedaan kadar phosphat air limbah sebelum diberi perlakuan aerasi dan sesudah diberi perlakuan aerasi. Dari data analisis menunjukan probabilitas = 0,000, karena $p < 0,05$ artinya air limbah RSUD Sragen sebelum dan sesudah diberi perlakuan aerasi ada perbedaan kadar phosphat. Rata-rata influen = 23,5712 mg/l, sedangkan rata-rata influent = 2,3231 ml/l. Dengan kadar phosphat yang masih tinggi, ini dapat diatasi dengan memberikan saran, agar aerasi yang selama ini sudah beroperasi selama 10 menit dan istirahat 60 menit, diubah untuk dioperasikan menjadi 15 menit dan istirahat 60 menit.

Kata Kunci: NH3, Phosphat, aerasi, limbah air rumah sakit.

THE EFFECTIVENEES INTALLATION OF WASTE WATER PROCESSING TO DECREASE NH_3 RATE AND PHOSPHAT ON WASTE WATER IN SRAGEN REGIONAL PUBLIC HOSPITAL, SRAGEN REGENCY

Waste Processing in Regional Public Hospital of Sragen, uses Intallation of waste Processing with the extending aeration svstem before using active mud Processing of extending aeration system NH3 and Phosphat which still exceed the value float the boundary : NH3 (0,1 mg/l) and Phosphat on waste water (2mg/l). Ammonia existence (NH3) on waste in Regional Public Hospital can cause the decreation of oxygen rate so it can destroy the life from liquid waste the hospital, while phosphat in liquid waste hospital can cause environmental population, because it will give poisen the plant which live in the casinel which ispassed by the waste water hospital. The aim of the research is to know the difference NH3 rate and the difference phosphat rate on waste water Regional Public Hospital Of Sragen, also it is to know the difference NH3 rate and phosphat rate on waste water on Regional Public Hospital of Sragen after being give the treatment of aeration, to know the decreasing NH3 rate with the comparation decreasing phosphat rate from the aeration effectiviness, the observation method in line with the aim of population research on waste water in Regional Public Hospital of Sragen. While NH3 rate and phosphat on two dots of influent and enffluent. To know the difference before and after being given, whit using t-test furmula. Conclution from research 1)There is difference rate NH3 the waste water before being given the treatment of aeration. And after being given the treatment aeration on waste water aeration in Regional Public Hospital of Sragen. The Influent average=33,6250 while the enfluent rate=0,1969. 2)There is difference of rate phosphat the waste water before being given the treatment of aeration. From the data analysis data shows that probabilyty = 0,000. because p<0,05 means the waste water Regional Public Hospital of Sragen before and after being given the treatment of aeration, There is difference the phosphst rate influent average = 23,5712 mg/l. While the enfluent average = 2,3231 mg/l. With the phosphat rate is still high, it can be solved by suggestion to Regional Public Hospital of Sragen. Aeration which has operated for 10 minutes and break 60 minutes, is changed for operating to be 15 minutes and break 60 minutes.

Keyword : NH3, Phosphat, aeration, the waste water hospital