

POLITEKNIK KESEHATAN TANJUNGPINANG  
JURUSAN KESEHATAN LINGKUNGAN  
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Gambaran Nilai Parameter Limbah Cair Cucian Nanas PT. Great Giant Pineapple PG4 Lampung Timur Sebagai Penentu Tingkat Efektivitas Pengolahan Limbah Cair Tahun 2022

Xvi + 89 halaman, 6 tabel, 18 gambar, 5 Lampiran

### **RINGKASAN**

PT. Great Giant Pineapple PG4 merupakan perusahaan berbasis pertanian dengan hasil produksi buah segar seperti nanas madu, pisang cavendish, dan jambu kristal. Sebagai penghasil buah segar, PT. Great Giant Pineapple PG4 memiliki perkebunan seluas 3.757,2 hektar di Lampung Timur. Pengolahan buah segar pasca panen meliputi proses pencucian sampai pengemasan produk. Proses pencucian menghasilkan limbah cair yang akan menyebabkan pencemaran lingkungan. Tujuan penelitian untuk mengidentifikasi proses pengolahan limbah cair cucian nanas sebelum dialirkan ke badan air serta dapat membandingkan kualitas air limbah cucian nanas dengan baku mutu Peraturan Menteri Lingkungan Hidup Republik Indonesia Nomor 5 Tahun 2014.

Penelitian ini bersifat deskriptif untuk mengetahui gambaran nilai parameter limbah cair cucian nanas PT Great Giant Pineapple PG4 Lampung Timur sebagai penentu tingkat efektivitas pengolahan limbah cair tahun 2022.

Berdasarkan hasil penelitian yang didapat dari observasi proses pengolahan air limbah cucian nanas PT Great Giant Pineapple PG4 Lampung Timur menggunakan kolam IPAL dan 1 kolam pengendapan penampungan akhir. Nilai parameter pada limbah cucian nanas dengan hasil COD inlet tertinggi 405 mg/L dan terendah 385 mg/L, COD outlet tertinggi 89 mg/L dan terendah 63 mg/L, COD pengendapan penampungan akhir tertinggi 20 mg/L dan terendah 9 mg/L. BOD inlet tertinggi 215 mg/L dan terendah 165 mg/L, BOD outlet tertinggi 42 mg/L dan terendah 23 mg/L, BOD pengendapan penampungan akhir tertinggi 12 mg/L dan terendah 4 mg/L, pH inlet tertinggi 7,50 dan terendah 7,30, pH outlet tertinggi 7,20 dan terendah 6,76, pH pengendapan penampungan akhir tertinggi 7,15 dan terendah 6,38. TSS inlet tertinggi 360 mg/L dan terendah 295 mg/L, TSS outlet tertinggi 69 mg/L dan terendah 31 mg/L, TSS pengendapan penampungan akhir tertinggi 20 mg/L dan terendah 8 mg/L. Jika dibandingkan dengan Baku Mutu Peraturan Menteri Lingkungan Hidup Republik Indonesia Nomor 5 Tahun 2014, nilai parameter COD, BOD, TSS, pH tersebut sudah memenuhi standar baku mutu dan jika dialirkan ke badan air aman bagi lingkungan.

Kata Kunci : Kualitas Air Limbah Cucian nanas

Daftar Bacaan : 18 (2007-2020)

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Description of the parameter value of pineapple washing wastewater in PT Great Giant Pineapple PG4 East Lampung as a determinant of the level of effectiveness of wastewater treatment in 2022

Xvi + 89 pages, 6 table, 18 picture, 5 Attachments

### **ABSTRACT**

PT. Great Giant Pineapple PG4 is an agriculture-based company that produces fresh fruit such as honey pineapple, Cavendish banana, and crystal guava. As a producer of fresh fruit, PT. Great Giant Pineapple PG4 has a plantation area of 3,757.2 hectares in East Lampung. Post-harvest processing of fresh fruit includes the washing process to product packaging. The washing process produces liquid waste which will cause environmental pollution. The purpose of the study was to identify the process of processing pineapple washing liquid waste before it was channeled into water bodies and to compare the quality of pineapple washing wastewater with the quality standards of the Regulation of the Minister of the Environment of the Republic of Indonesia Number 5 of 2014.

This research is descriptive in nature to describe the parameter values of pineapple washing liquid waste at PT Great Giant Pineapple PG4 East Lampung as a determinant of the effectiveness of wastewater treatment in 2022.

Based on the research results obtained from the observation of the pineapple washing wastewater treatment process at PT Great Giant Pineapple PG4 East Lampung using an WWTP pond and 1 settling pond for the final reservoir. Parameter values in pineapple washing waste with the highest COD inlet 405 mg/L and the lowest 385 mg/L, the highest COD outlet 89 mg/L and the lowest 63 mg/L, the highest COD for final disposition 20 mg/L and the lowest 9 mg/L. The highest inlet BOD is 2015 mg/L and the lowest is 165mg/L, the highest outlet BOD is 42 mg/L and the lowest is 23 mg/L, the highest final depositional BOD is 12 mg/L and the lowest is 4mg/L, the highest inlet pH is 7.50 and the lowest is 7.30, The highest outlet pH was 7.20 and the lowest was 6.76, the highest final depositional pH was 7.15 and the lowest was 6.38. The highest inlet TSS was 360 mg/L and the lowest was 295 mg/L, the highest outlet TSS was 69 mg/L and the lowest was 31 mg/L, the highest final depositional TSS was 20 mg/L and the lowest was 8 mg/L. When compared with the Quality Standards of the Regulation of the Minister of the Environment of the Republic of Indonesia Number 5 of 2014, the parameter values of COD, BOD, TSS, pH already meet the quality standards and if flowed into water bodies it is safe for the environment.

Keywords : Description of Pineapple Washing Wastewater

Reading List : 18 (2007-2020)