

**PENGGUNAAN ALAT METAFILSI-4546
DALAM MENURUNKAN KADAR BOD COD TSS
AIR LIMBAH LAUNDRY DI ZOGI LAUNDRY
CILACAP SELATAN**

Asa Garis Dwi Nendri*, Bambang Suwerda**, Sarjito Eko Windarso***
Jl. Tata Bumi No.3 Banyuraden, Gamping, Sleman
Jurusan Kesehatan Lingkungan Sarjana Terapan Sanitasi Lingkungan Poltekkes
Kemenkes Yogyakarta
Email : asagarisdn@gmail.com

ABSTRAK

Latar Belakang : Air limbah *laundry* merupakan limbah domestik yang dihasilkan dari aktivitas industri, rumah tangga, maupun rumah jasa cuci pakaian (*laundry*). Terdapat beberapa parameter yang harus diperhatikan, salah satunya adalah parameter BOD, COD dan TSS pada air limbah laundry Zogi Laundry di Cilacap Selatan dengan hasil yang melebihi ambang batas berdasarkan Peraturan Daerah Provinsi Jawa Tengah nomor 5 tahun 2012 tentang air limbah yang akan menyebabkan masalah kesehatan dan lingkungan sehingga diperlukan pengolahan air limbah guna mengatasi masalah tersebut.

Tujuan Penelitian : diketahuinya perbedaan kadar BOD, COD dan TSS air limbah *laundry* penurunan sebelum dan sesudah perlakuan dengan penggunaan alat Metafilsi-4546.

Metode Penelitian : Penelitian ini merupakan penelitian *quasi eksperimen* dengan desain *Pre Test Post Test Control Group Design*. Penelitian dilaksanakan pada bulan Januari - April 2022. Obyek penelitian ini adalah air limbah *laundry* di Jalan Karang Kecamatan Cilacap Selatan, Jawa Tengah. Penelitian dilakukan dengan 5 sampel pre dan 5 sampel post.

Hasil penelitian : Kadar BOD, COD dan TSS sebelum dan sesudah dilakukan dengan hasil persentase analisis deskriptif yaitu kadar BOD 64,40 %, COD 57,40 % dan TSS 67,60%. Hasil analisis Inferensial yaitu *Kolmogorov Sminory* dengan hasil kadar BOD, COD dan TSS berdistribusi normal, lalu data diolah dengan Uji *T-Test* terikat dengan hasil kadar BOD, COD, dan TSS diperoleh nilai *sig(2-tailed)* $0,000 < 0,05$.

Kesimpulan : Ada perbedaan penurunan kadar BOD, COD dan TSS limbah cair Zogi *Laundry* sebelum dan sesudah dengan alat Metafilsi-4546.

Kata Kunci : *Laundry*, Metafilsi-4546

**USE OF METAFILSI-4546 TOOL IN REDUCING TSS COD BOD LEVEL
LAUNDRY WASTEWATER IN ZOGI LAUNDRY
SOUTH CILACAP**

Asa Garis Dwi Nendri*, Bambang Suwerda**, Sarjito Eko Windarso***
Department of Environmental Health Poltekkes Kemenkes Yogyakarta
Jl. Tata Bumi No.3 Banyuraden, Gamping, Sleman
Email : asagarisdn@gmail.com

ABSTRACT

Background: Laundry wastewater is domestic waste generated from industrial, household, and home laundry activities. There are several parameters that must be considered, one of which is the BOD, COD and TSS parameters in Zogi Laundry laundry wastewater in South Cilacap with results that exceed the threshold based on Central Java Provincial Regulation number 5 of 2012 concerning wastewater which will cause health problems and environment so that wastewater treatment is needed to overcome these problems.

Objective: to find out the difference in the levels of BOD, COD and TSS of laundry wastewater before and after treatment with the use of Metafilsi-4546.

Methods: This research is a quasi-experimental research with Pre Test Post Test Control Group Design. The research was carried out in January - April 2022. The object of this research is laundry wastewater on Jalan Karang, South Cilacap District, Central Java. The study was conducted with 5 pre samples and 5 post samples.

Results: BOD, COD and TSS levels before and after the treatment with the percentage results of descriptive analysis, namely BOD levels 64.40%, COD 57.40% and TSS 67.60%. The results of the Inferential analysis were Kolmogorov Smirnov with the results of normal distribution of BOD, COD and TSS levels, then the data was processed using a bound T-Test with the results of BOD, COD, and TSS levels obtained sig(2-tailed) $0.000 < 0.05$.

Conclusion: There is a difference in the decrease in BOD, COD and TSS levels of Zogi Laundry wastewater before and after using the Metafilsi-4546 tool.

Keywords: Laundry, Metafilsi-4546