

EFEKTIVITAS KETEBALAN SABUT KELAPA (*COCO FIBER*) SEBAGAI MEDIA FILTRASI TERHADAP PENURUNAN BOD DAN TSS LIMBAH CAIR DI KANTIN SEHATI POLTEKKES KEMENKES YOGYAKARTA

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INTISARI

Latar Belakang: Limbah cair kantin termasuk ke dalam limbah cair domestik. Limbah cair di kantin SEHATI Poltekkes Kemenkes Yogyakarta yang terlalu lama menggenang di *grease trap* menimbulkan bau yang tidak sedap dan menjadi sarang vektor penyakit. Setelah dilakukan studi pendahuluan didapatkan hasil bahwa kandungan BOD sebesar 235,0 mg/L sedangkan untuk parameter TSS sebesar 130 mg/L. Melihat masalah yang ditimbulkan peneliti membuat alternatif lain untuk meringankan beban kerja *grease trap* dan menjadi opsi pengolahan lain dari limbah cair yang dihasilkan oleh kantin dengan memanfaatkan bahan organik yang terdapat di sekitar kita. Sabut kelapa merupakan bahan organik yang digunakan sebagai salah satu media pada filtrasi untuk menurunkan kandungan BOD dan TSS.

Tujuan: Mengetahui efektivitas ketebalan sabut kelapa sebagai media filtrasi terhadap penurunan BOD dan TSS limbah cair di kantin SEHATI Poltekkes Kemenkes Yogyakarta

Metode: Jenis penelitian ini adalah penelitian eksperimen semu. Teknik pengambilan sampel menggunakan metode *grab sample*. Sampel yang digunakan ialah pre test dan post test dari proses filtrasi. Dengan analisis deskriptif dan inferensial menggunakan program SPSS.

Hasil: Hasil penelitian menunjukkan penurunan pada setiap perlakuan. Variasi kontrol mendapatkan hasil kadar BOD 23,3% dan TSS 52,3%, variasi A mendapatkan hasil kadar BOD 27,3% dan TSS 57,6%, dan variasi B mendapatkan hasil paling maksimal dengan kadar BOD sebesar 38 % dan TSS 61,3%

Kesimpulan: Pada penelitian ini semua variasi filtrasi mampu menurunkan kadar BOD dan TSS pada limbah cair, namun hasil dari filtrasi belum memenuhi baku mutu.

Kata kunci: sabut kelapa, filtrasi, BOD, TSS, limbah cair, kantin.

**EFFECTIVENESS OF COCONUT FIBER THICKNESS (COCO FIBER)
AS A FILTRATION MEDIA ON REDUCING BOD AND TSS OF LIQUID
WASTE IN THE SEHATI CANTEEN OF THE YOGYAKARTA
KEMENKES POLTEKKES**

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ABSTRAK

Background: Canteen liquid waste is included in domestic liquid waste. Liquid waste in the SEHATI canteen of the Health Polytechnic, Ministry of Health, Yogyakarta, which has been stagnant in the grease trap for too long, causes an unpleasant odor and becomes a nest for disease vectors. After conducting a preliminary study, the results showed that the BOD content was 235.0 mg/L, while the TSS parameter was 130 mg/L. Seeing the problems caused by researchers, they created another alternative to lighten the workload of grease traps and become another processing option for liquid waste produced by canteens by utilizing organic materials found around us. Coconut fiber is an organic material that is used as a media in filtration to reduce BOD and TSS content.

Objective: This study aims to determine the effectiveness of coconut fiber thickness as a filtration media in reducing BOD and TSS of liquid waste in the SEHATI canteen of the Health Polytechnic, Ministry of Health, Yogyakarta.

Purpose: This study aims to determine the effectiveness of coconut fiber thickness as a filtration media in reducing BOD and TSS of liquid waste in the SEHATI canteen of the Health Polytechnic, Ministry of Health, Yogyakarta.

Method: All types of research are experimental research. The sampling technique uses the grab sample method. The samples used are pre-test and post-test from the filtration process. With descriptive and inferential analysis using the SPSS program.

Results: The results showed that there was a decrease in each treatment. The control variation got BOD levels of 23.3% and TSS 52.3%, variation A got BOD levels of 27.3% and TSS 57.6%, and variation B got the maximum results with BOD levels of 38% and TSS 61.3%

Conclusion: The conclusion of this research is that all variations of filtration are able to reduce BOD and TSS levels in liquid waste, but the results of filtration do not meet quality standards.

Keywords: coconut fiber, filtration, BOD, TSS, liquid waste, canteen.