**ABSTRAK**

Kementrian Kesehatan RI

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**EFEKTIFITAS AERASI-FILTRASI BATU KALI DAN ADSORBSI MEDIA ARANG AKTIF BATOK KELAPA TERHADAP PARAMETER BOD DAN COD LIMBAH TAHU**

Xi + 103 Halaman + 15 Tabel + 10 Lampiran

BOD dan COD merupakan dua indeks utama sebagai parameter indicator pencemar. Menurut pendapat Tedy Dian Pradana, dkk BOD dan COD dapat diturunkan dengan aerasi-filtrasi. Penelitian ini bertujuan untuk mengetahui efektifitas aerasi-filtrasi batu kali dan adsorbsi media arang aktif batok kelapa terhadap penurunan BOD dan COD dengan variasi waktu kontak 3 jam, 6 jam, 9 jam. Jenis penelitian yang digunakan merupakan penelitian Deskriptif, populasi pada penelitian ini seluruh air limbah tahu yang berasal dari proses pengolahan tahu Ngampin. Sampel yang digunakan sebanyak 20 sampel dengan 5 replikasi di setiap perlakan.

Hasil penelitian menunjukkan penurunan kadar BOD 3 jam 22,31%, 6 jam 71,74%, 9 jam 68,75%. Waktu optimum aerasi-filtrasi yang digunakan menurunkan kadar BOD Limbah Industri Tahu pada variasi waktu kontak 6 jam, dimana penurunan sebesar 71,74 %. Kadar COD 3 jam 10,42%, 6 jam 9,19%, 9 jam 7,13%. Pada kadar COD tidak terjadi penurunan karena, adanya faktor kadar TSS pada limbah tahu dan pH yang rendah. Penelitian perlu dilanjutkan dengan dilakukan penelitian terpisah antara parameter BOD dan COD.

Daftar Bacaan : 36 Bacaan (2005-2021)

Kata Kunci : Pengolahan Limbah Cair, aerasi, filtrasi, limbah tahu

**ABSTRACT**

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**THE EFFECTIVENESS OF RIVER STONE AERATION-FILTRATION AND ADSORBATION OF COCONUT SHELL ACTIVE CHARCOAL MEDIA ON REDUCING COD AND COD LEVELS OF TOFU WASTE**

Xi + 103 Page + 15 Table + 3 Attachment

BOD and COD are the two main indices as pollutant indicator parameters. According to Tedy Dian Pradana, et al., BOD and COD can be reduced by aeration-filtration. This study aims to determine the effectiveness of aeration-filtration of river stones and the adsorption of coconut shell activated charcoal media on the reduction of BOD and COD with variations in contact time of 3 hours, 6 hours, 9 hours. The type of research used is descriptive research, the population in this study is all tofu waste water originating from the Ngampin tofu processing process. The samples used were 20 samples with 5 replications in each treatment.

The results showed a decrease in BOD levels at 3 hours 22.31%, 6 hours 71.74%, 9 hours 68.75%. The optimal aeration-filtration time used decreased BOD levels in Tofu Industrial Waste at a contact time variation of 6 hours, where the decrease was 71.74%. COD 3 hours 10.42%, 6 hours 9, 19%, 9 hours 7.13%. There was no decrease in COD levels due to the presence of TSS levels in tofu waste and low pH. Research needs to be continued by conducting separate studies between BOD and COD parameters.

Reading list :36 Books (2005-2021)

Keywords : Liquid Wastes Treatment, Aeration, Filtration, Tofu Waste