Politeknik Kesehatan Kemenkes Bandung
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Abstrak

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VARIASI KETEBALAN MEDIA FILTER ARANG AKTIF TONGKOL JAGUNG TERHADAP PENURUNAN KADAR BESI (Fe) PADA AIR BERSIH DI PT. XYZ

xii + 102 Halaman + 10 Tabel + 4 Lampiran
Air merupakan kebutuhan pokok bagi kehidupan manusia di bumi ini. Sesuai dengan kegunaannya Air sangat penting bagi kegiatan perindustrtian, kebutuhan air bersih di industri terbagi menjadi dua yaitu air untuk produksi dan higiene sanitasi, untuk itu air bersih harus memenuhi persyaratan baik secara fisik, kimia, dan biologi. Kualitas kimia air di PT.Xyz untuk kadar Fe tidak memenuhi syarat dengan kadar Fe sebesar 1,56 mg/l, untuk itu perlu dilakukan pengolahan air dengan cara filtrasi. Filtrasi menggunakan media arang aktif tongkol jagung. Perlakuan dalam penelitian ini menggunakan variasi ketebalan media filter arang aktif tongkol jagung dengan ketebalan media filter 30 cm,40 cm, dan 50 cm, dengan tujuan untuk mengetahui perbedaan variasi media filter terhadap penurunan kadar Fe. Jenis penelitian ini yaitu eksperimen dengan desain penelitian *pretest and post test without control*. Teknik pengambilan sampel yang dilakukan yaitu *grab sampling*. Berdasarkan hasil penelitian filtrasi dengan media filter arang aktif tongkol jagung ketebalan 30 cm mampu menurunkan kadar Fe 89,04%, media filter arang aktif tongkol jagung ketebalan 40 cm mampu menurunkan kadar Fe 94,53 %, dan media filter arang aktif tongkol jagung ketebalan 50 cm mampu menurunkan kadar Fe 96,50%. Dalam penelitian ini industri dapat menggunakan media filter Arang Aktif Tongkol Jagung ketebalan 50 cm . karena berdasarkan penelitian dengan media filter Arang Aktif Tongkol Jagung ketebalan 50 cm dapat menurunkan kadar Fe sebesar 0,046 mg/l dan persentase penurunan sebesar 96,50 %.

Daftar Pustaka : 20 (1978-2020)
Kata Kunci : Air Bersih, Besi (Fe), Filtrasi,Arang Aktif Tongkol Jagung

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Abstract

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VARIATION OF THE THICKNESS OF CORN COB ACTIVE CHARCOAL FILTER MEDIA TOWARDS REDUCTION OF IRON (Fe) LEVELS IN CLEAN WATER IN PT. XYZ

xii + 102 Pages + 10 Tables + 4 Appendices
Water is a basic need for human life on this earth . In accordance with its use Water is very important for industrial activities , the need for clean water in the industry is divided into two, namely water for production and sanitation hygiene , for that clean water must meet good requirements in physical , chemical , and biological . Quality Chemical water in PT. Xyz for levels of Fe does not meet the requirements with levels of Fe of 1 , 56 mg / l, for it needs to do the processing of water by means of filtration . Filtration using a medium charcoal activated cob of corn . The treatment in research is to use variations of the thickness of the filter medium charcoal activated cob of corn with the thickness of the filter medium 30 cm, 40 cm and 50 cm, with the purpose to know the difference variation filter media to decrease the levels of Fe. This type of research is an experimental research design with *pretest and post test without control* . Mechanical taking samples that do that *grab sampling* . Based on the results of research filtration with a filter media charcoal activated cob corn thickness of 30 cm was able to lower the levels of Fe 89.04% , the filter medium charcoal activated cob corn thickness of 40 cm was able to lower the levels of Fe 94.53 %, and the media filter charcoal activated cob corn thickness 50 cm was able to reduce Fe content of 96.50%. In the study of this industry can use the media filter Charcoal On Cobs Corn thickness of 50 cm . because it is based on research by media filters Charcoal On Cobs Corn thickness of 50 cm can lower the levels of Fe of 0.046 mg / l and percent tase a decrease of 96.50%.

List of References : 20 (1978-2020)
Said Key : Air Clean , Iron (Fe) , Filtration, Charcoal On Cob Corn