

ANALISIS PENURUNAN KADAR DETERJEN DAN ANGKA KUMAN PADA LIMBAH CAIR CUCI TANGAN PAKAI SABUN (CTPS) DENGAN SISTEM *CONSTRUCTED WETLAND* MENGGUNAKAN TANAMAN KAYU APU (*Pistia Stratiotes L.*)

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ABSTRAK

Pada akhir tahun 2019 yaitu pada bulan desember. Ditemukan virus jenis terbaru yang dikenal dengan nama virus corona (covid-19). Setiap orang dapat terinfeksi jika menyentuh area tubuh seperti mata, wajah, dan hidung, dapat menyebabkan seseorang terinfeksi. Salah satu upaya pencegahan covid-19 adalah mencuci tangan menggunakan sabun. Meningkatnya kasus covid-19, volume air limbah dari aktifitas cuci tangan pakai sabun juga akan semakin meningkat. Air limbah dari aktifitas ini umumnya jarang diolah terlebih dahulu sebelum di buang ke perairan. Hal ini dapat menimbulkan pencemaran air maupun tanah sekitarnya. Penelitian ini dilakukan dengan tujuan untuk mengetahui nilai sebelum, nilai sesudah dan nilai efisiensi perlakuan fitoremediasi menggunakan tanaman kayu apu (*Pistia stratiotes L.*) dalam penurunan kadar deterjen dan angka kuman dalam limbah cuci tangan tangan pakai sabun (CTPS). Penelitian ini menggunakan metode fitoremediasi menggunakan tanaman kayu apu sistem *constructed wetland*. Tanaman kayu apu yang digunakan berjumlah 12 tanaman. Hasil penelitian menunjukkan bahwa sesudah perlakuan fitoremediasi kadar deterjen mengalami penurunan, sedangkan untuk angka kuman mengalami peningkatan.

Kata Kunci : Air limbah cuci tangan pakai sabun, *constructed wetland*, fitoremediasi, tanaman kayu apu

**ANALYSIS OF DECREASING DETERGENT CONTENT AND GERMAN NUMBER IN LIQUID WASTE OF HAND WASHING WITH SOAP WITH THE CONSTRUCTED WETLAND SYSTEM USING APU WOOD PLANTS
(*Pistia Stratiotes L.*)**

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ABSTRACT

*At the end of 2019 in December a new type of virus was discovered known as the corona virus (covid-19). Everyone can be infected if touching areas of the body such as the eyes, face and nose, can cause someone to become infected. One way to prevent COVID-19 is to wash your hands with soap. With the increase in Covid-19 cases, the volume of waste water from washing hands with soap will also increase. Waste water from this activity is generally rarely treated before being discharged into the waters. This can cause water and soil pollution in the vicinity. This research was conducted with the aim of knowing the before, after and efficiency values of the phytoremediation treatment using watercress (*Pistia stratiotes L.*) in reducing detergent levels and the number of germs in hand washing waste with soap. This study used the phytoremediation method using apu wood plants with a constructed wetland system. Apu wood plants used amounted to 12 plants. The results showed that after the phytoremediation treatment, the detergent content decreased, while the germ count increased.*

Keywords: *Hand Washing With Soap Waste Water, Constructed Wetland, Phytoremediation, Apu Wood Plants*