

ABSTRAK

Sinta Pritasari, 2015 pemanfaatan tanaman genjer (*Limnocharis flava*) dalam menurunkan kadar BOD dan COD berdasarkan variasi biomassa. Skripsi, Jurusan Kesehatan Masyarakat, Fakultas Ilmu-Ilmu Kesehatan Dan Keolahragaan, Universitas Negeri Gorontalo. Pembimbing I Dr. Hj. Reni J Hiola, Dra., M.Kes dan Pembimbing II Ekawaty Prasetya, S.Si, M.Kes.

Limbah proses pencucian pada laundry yang langsung dibuang ke saluran atau badan air akan menjadi sumber pencemar yang mengakumulasi BOD dan COD sehingga menjadi meningkat. Salah satu cara untuk mengurangi BOD dan COD yang berada pada limbah cair laundry yaitu dengan variasi biomassa menggunakan tanaman genjer (*Limnocharis flava*). Rumusan masalah dalam penelitian ini adalah apakah variasi biomassa tanaman genjer bisa menurunkan kadar BOD dan COD pada limbah laundry di salah satu laundry wilayah Kota Gorontalo. Tujuan penelitian ini untuk menganalisis pemanfaatan variasi biomassa (50gram, 100 gram, 150 gram dan 200 gram) tanaman genjer dalam menurunkan kadar BOD dan COD pada air limbah dari hasil usaha jasa *laundry*.

Penelitian ini adalah eksperimental dengan desain *posttest only control group design*. Populasi adalah seluruh usaha jasa laundry yang berada di kota gorontalo sebanyak 60 unit. Teknik analisis data yang digunakan dalam penelitian ini secara deskriptif analitik.

Penyerapan optimum BOD oleh tanaman genjer berada pada variasi biomassa 200 gram yaitu sebanyak 615,33 mg/l dan pada COD mengalami kenaikan setelah di beri perlakuan. Tetapi terdapat penurunan pada setiap variasi biomasanya. Penyerapan optimum COD oleh tanaman genjer berada pada variasi biomassa 100 gram yaitu sebanyak 95,33 mg/l. Sehingga peneliti berharap agar masyarakat ikut peduli terhadap pencemaran yang air yang disebabkan oleh limbah cair laundry.

Kata kunci : BOD, COD, Variasi Biomassa, Tanaman Genjer

ABSTRACT

Sinta Pritasari, 2015. The use of yellow velvetleaf plant (*Limnocharis flava*) in reducing level of BOD and COD based on biomass variation. Skripsi, Department of Public Health, Faculty of Health and Sports. State University of Gorontalo, The principal supervisor was Dr. Hj. Reni J Hiola, Dra., M.Kes and Co-supervisor was Ekawaty Prasetya, S.Si, M.Kes.

Process of washing waste at laundry which is directly discharged into canal or water body will be pollutant sources which accumulate BOD and COD so that it will increase. One of the ways to reduce BOD and COD at liquid waste of laundry is biomass variation used yellow velvetleaf plant (*Limnocharis flava*). The problem statement in this research was whether biomass variation of yellow velvetleaf plant can reduce the level of BOD and COD at laundry waste at one of laundry in Gorontalo city. The aim of this research was to analyze the use of biomass variation (50gram, 100gram, 150 gram and 200 gram) of yellow velvetleaf plant in reducing level of BOD and COD at liquid waste from result of laundry service business.

This research was experimental with posttest only control group design. The population were all laundry service businesses in Gorontalo City which were 60 units. The technique of analyzing the data in this research was analytic descriptive.

The optimum absorption of BOD by yellow velvetleaf plant which at biomass variation 200 gram were 615, 33 mg/l and COD has increased after getting treatment. However, there was decrease in every biomass variation. The optimum absorption of COD by yellow velvetleaf plant in every biomass variation 100 gram were 95, 33 mg/l. Therefore, the researcher expects that the society also cares toward water waste caused by liquid waste of laundry.

Keywords: BOD, COD, Biomass Variation, Yellow Velvetleaf Plant

