ABSTRAK

Nurhayati Lambayu, 2021. "Efektivitas Penambahan Bakteri *Bio treatment* dalam Menurunkan Kadar COD, BOD, dan TSS Limbah Cair Tahu". Skripsi program studi S-1 Kimia, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Gorontalo (UNG). Pembimbing I Nita Suleman, S.T, M.T dan Pembimbing II Dr. Akram La Kilo, M.Si.

Tujuan dari penelitian ini adalah: Efektivitas penambahan bakteri *Bio treatment* dalam menurunkan kadar BOD, COD, dan TSS dalam pengolahan limbah tahu. Efektifitas penambahan *Bio treatment* ini terdiri dari tahap pengujian BOD, COD, dan TSS sebelum dan sesudah pengolahan. Pengolahan limbah dimasukkan kedalam reaktor anaerobik dengan menambahkan bakteri *Bio treatment* 500mL/hari. Tahap pengujian BOD, COD, dan TSS dilakukan dengan analisis titrimetri dan gravimetri. Hasil penelitian menunjukkan bahwa penambahan Bakteri *Bio treatment* ini memberikan hubungan yang signifikan terhadap hasil pengolahan limbah cair tahu. Efektifitas BOD 55%, efektifitas COD 50%, dan efektifitas TSS 58%.

Kata Kunci : Limbah cair tahu, Bakteri *Bio treatment*

ABSTRACT

Nurhayati Lambayu, 2021. "Effectiveness of Adding Bio-treatment Bacteria in Reducing COD, BOD, and TSS Levels of Tofu Liquid Waste". Thesis of S-1 Chemistry Study Program, Faculty of Mathematics and Natural Sciences, State University of Gorontalo (UNG). Supervisor I Nita Suleman, S.T, M.T and Supervisor II Dr. Akram La Kilo, M.Sc.

This research aims to the effectiveness of adding Bio-treatment bacteria in reducing the levels of BOD, COD, and TSS in the treatment of tofu waste. The effectiveness of the addition of this Bio treatment consists of the BOD, COD, and TSS testing stages before and after processing. Waste treatment is put into an anaerobic reactor by adding 500mL/day of Bio treatment bacteria. The BOD, COD, and TSS testing stages were carried out by titrimetric and gravimetric analysis. The results showed that the addition of this bio treatment bacteria gave a significant relationship to the results of the tofu liquid waste treatment. The effectiveness of BOD is 55%, the effectiveness of COD is 50%, and the effectiveness of TSS is 58%.

Keywords: Tofu liquid waste, Bacteria Bio treatment