ABSTRAK

Regina Olii. 811411068. Perbedaan kualitas air minum depot isi ulang sistem *Ultrafiltrasi* dengan sistem *Hiperfiltrasi* di Kecamatan Kabila. Jurusan Kesehatan Masyarakat, Fakultas Ilmu-Ilmu Kesehatan dan Keolaharagaan, Universitas Negeri Gorontalo. Pembimbing I, Dr. Hj. Rani Hiola, Dra., M.Kes. dan Pembimbing II, Ekawaty Prasetya, S.Si., M.Kes.

Alternatif pemenuhan air minum diperoleh melalui adanya air minum isi ulang dengan berbagai proses pengolahannya seperti sistem *Ultrafiltrasi* maupun *Hiperfiltrasi.* Penelitian ini merupakan jenis komparatif dengan jumlah sampel sebanyak 4 sampel air minum dari kedua jenis pengolahan yang ada di Kecamatan Kabila dengan merujuk pada Permenkes RI No. 492/Menkes/Per/IV/2010.

Hasil penelitian menunjukkan berdasarkan parameter mikrobiologi tidak memenuhi standar kesehatan, dengan nilai maksimal pada sampel air *Hiperfiltrasi* adalah 1,2 sel bak/ml dan sistem *Ultrafiltrasi* adalah 4,4 sel bak/ml. Berdasarkan parameter kimia perubahan yang terjadi pada sampel air minum *Hiperfiltrasi* adalah perubahan warna oleh ion sedangkan sistem *Ultrafiltrasi* terdapat gumpalan lendir dan perubahan struktur air yang disebabkan oleh indikasi logam berat.

Berdasarkan hasil uji statistik menunjukan bahwa tidak adanya perbedaan diantara kedua sistem pengolahan nilai $p > \alpha$ (0,121 > 0,05). Maka dengan demikian H_0 diterima sehingga dapat disimpulkan tidak terdapat perbedaan total bakteri *E. coli* pada DAMIU sistem *Hiperfiltasi* dengan *Ultrafiltrasi.*

Kata Kunci : **Air minum, sistem *Ultrafiltrasi*, sistem *Hiperfiltrasi*.**

ABSTRACT

Regina Olii. 811411068. The Difference between Refill Drinking Water Depot Using *Ultrafiltration* and *Hyperfiltration* system in Kabila Subdistrict. Department of Public Health, faculty of Health and Sport Sciences, State University of Gorontalo. The principal supervisor was Dr. Hj. Rani Hiola, Dra., M.Kes and the co-supervisor was Ekawaty Prasetya, S.Si., M.Kes.

The alternative of drinking water fulfillment was refill drinking water with several processes such as Ultrafiltration and Hyperfiltration. The research was a comparative research by having 4 drinking water as samples of research with the two kinds of process in Subdistrict of Kabila. It referred to the Permenkes RI No. 492/Menkes/Per/IV/2010.

The research result showed that based on microbiology parameter, the samples did not fulfill the health standard with the maximum value of water proceed by Hyperfiltration was 1,2 sel bak/ml and by Ultrafiltration was 4,4 sel bak/ml. Based on Chemical parameter, the change occurred in Hyperfiltration water was the change of color due to ion, and Ultrafiltration water was the change of water structure in which it was caused by heavy metal indication and there was mucus in Ultrafiltration water.

Based on the result of statistical test, it showed that there was no difference between the two process systems in which the value of $p > \alpha$ (0,121 > 0,05). Thus, H_0 was accepted. It can be concluded that there was no difference between the total of *E. coli* bacteria found in water using Hyperfiltration system and Ultrafiltration system.

Keywords:

Drinking Water, Ultrafiltration System, Hyperfiltration System