

## ABSTRACT

**Hardiyanti Nur Cholifah. B.1710264.** Physicochemical and Microbiological Analysis of Well Water as Raw Material for Drinking Water in the Industrial Waste Area of Muara Jaya Village. Supervised by Titi Rohmayanti and Intan Kusumaningrum.

*Water consumed by the community must be sourced from good sources and free from pollution. The quality of ground water for drinking water needs is based on physical, chemical, and biological parameters. The purpose of this study was to determine the physicochemical and microbiological quality of well water due to industrial waste in Muara Jaya Village, Bogor Regency, West Java Province. The type of research used is descriptive research. The samples of Muara Jaya Village was carried out by purposive sampling method. Total sample taken is 6 samples. The samples is analyzed in the laboratory. The data from the analysis of the parameter tests that have been obtained are then compared with the established quality standards. The results of the study of well water samples in Muara Jaya Village showed that the six well water samples were not suitable for daily use. This is because the physicochemical and microbiological parameters exceed the maximum allowable threshold according to the standard requirements for clean water quality according to the Minister of Health Republic Indonesian Number 416 of 1990. However, after going through the heating process, the well water is suitable for consumption as drinking water. It might be happened because the physical, chemical and biological parameters do not exceed the maximum permissible threshold based on drinking water quality standard.*

**Keywords:** Groundwater quality, Industrial Waste, Drinking Water, Muara Jaya Village

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**Hardiyanti Nur Cholifah. B.1710264.** Analisis Fisikokimia dan Mikrobiologi Air Sumur Sebagai Bahan Baku Air Minum Di Kawasan Limbah Industri Desa Muara Jaya. Dibawah bimbingan Titi Rohmayanti and Intan Kusumaningrum.

Air yang dikonsumsi masyarakat harus bersumber dari bahan baku yang baik dan bebas dari pencemaran. Kualitas air tanah untuk kepentingan air minum didasarkan pada parameter fisika, kimia, dan mikrobiologi. Tujuan dilakukan penelitian ini adalah agar masyarakat mengetahui kualitas fisikokimia dan mikrobiologi air sumur akibat limbah industri di Desa Muara Jaya, Kabupaten Bogor, Provinsi Jawa Barat. Jenis penelitian yang digunakan adalah penelitian deskriptif. Pengambilan sampel dilakukan dengan metode *purposive sampling*. Keseluruhan sampel yang digunakan dalam penelitian ini adalah 6 sampel. Sampel tersebut dianalisis di laboratorium. Data hasil analisa uji parameter yang telah didapatkan selanjutnya dibandingkan dengan standar parameter baku mutu yang telah ditetapkan. Hasil penelitian sampel air sumur di Desa Muara Jaya menunjukkan bahwa keenam sampel air sumur tidak layak digunakan untuk kebutuhan sehari hari, hal ini disebabkan karena parameter fisikokimia dan mikrobiologinya melebihi ambang batas maksimum yang diperbolehkan menurut standar syarat kualitas air bersih menurut Menkes RI nomor 416 tahun 1990. Namun, setelah melalui proses pemanasan air sumur layak dikonsumsi sebagai air minum. Hal ini disebabkan hasil analisa parameter fisika, kimia, dan mikrobiologinya tidak melebihi ambang batas maksimum kualitas air minum yang diperbolehkan.

**Kata kunci:** Kualitas Air Sumur, Limbah Industri, Kebutuhan Air Minum, Desa Muara Jaya